

Obsolete

Onan

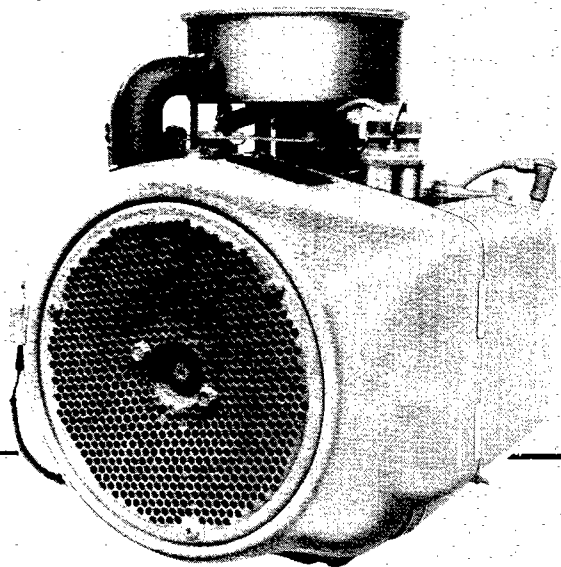
Parts Manual

B43M-GA016 Industrial Engines

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TECHNICAL LITERATURE



965-0254
11-88 (Spec A-C)
Replaces 5-85 (Spec A-C)
Printed in U.S.A.

General Information

For parts or service, contact the dealer from whom you purchased this equipment or refer to your Nearest Authorized Onan Parts and Service Center.

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.

The image shows a rectangular nameplate template for Onan equipment. At the top left and top right corners, there are two small circles representing mounting holes. Below these is the Onan logo in a bold, stylized font. Underneath the logo is a wide, empty rectangular box. Below this box is the text "MODEL AND SPEC NO." in bold, uppercase letters. Below that is another empty rectangular box. To the left of this second box is the text "SERIAL NO." in bold, uppercase letters. The bottom right corner of the nameplate is cut off at an angle. The number "M-1149" is printed in the bottom right corner of the form area.

For handy reference, insert "YOUR" nameplate information in the spaces above.

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Introduction

This catalog applies to the Standard B43M-GA016 Engines. Parts are arranged in groups of related items. Each illustrated part is identified by a reference number corresponding to the same reference number in the parts list for that group. Parts illustrations are typical. Using the MODEL and SPEC NO. from the nameplate, select the Parts that apply to your engine. Unless otherwise mentioned in the description, parts are interchangeable between models. Right and left sides are determined by facing the blower end (front) of the engine.

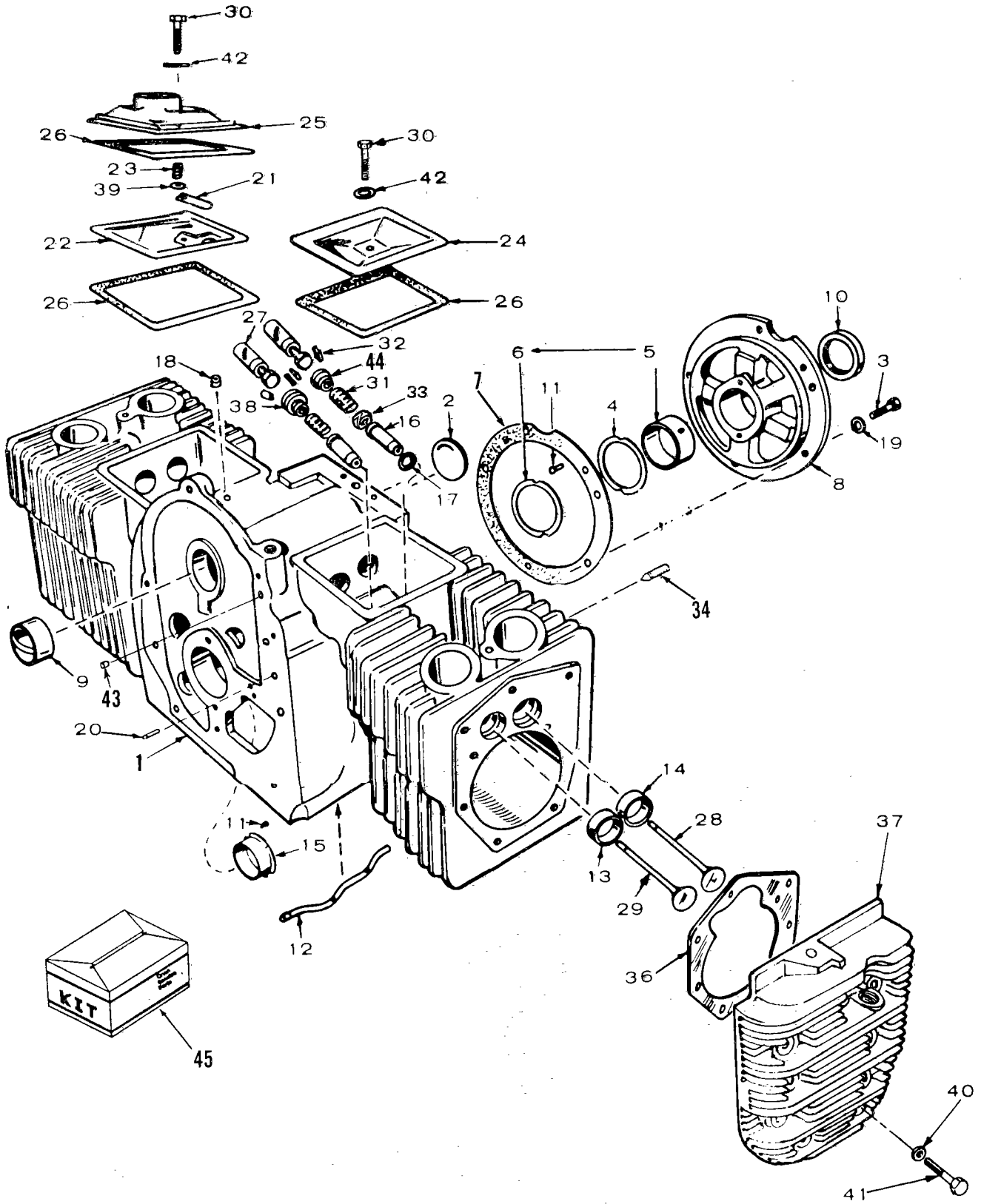
WARNING

This engine is not designed or intended for use in any type of aircraft. Use of this engine in aircraft may result in engine failure and cause serious bodily injury, death and/or property damage.

NOTICE !

Items referenced as optional indicate part is factory installed and may not be applicable to all models. For field conversions additional parts are usually required.

Cylinder Block

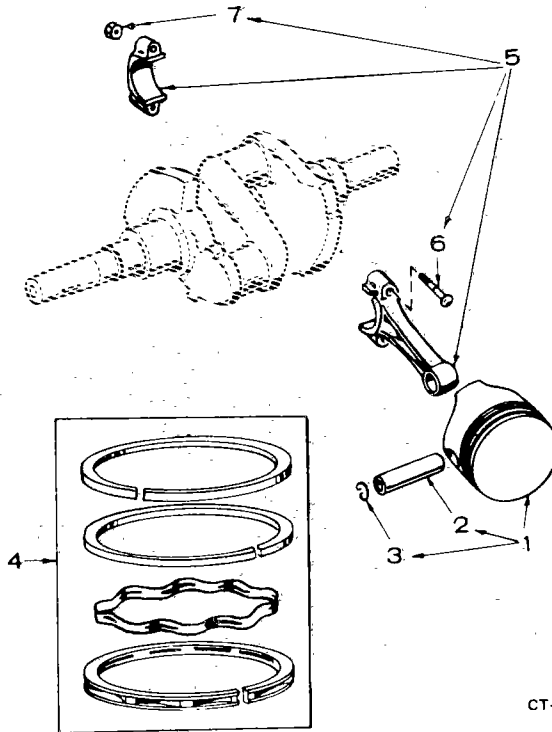


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Cylinder Block

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Block Assembly, Cylinder (All Replacement Cylinder Block Assemblies Use Intake Valve Seals and Include Parts Marked *)	17	110-0068	2	*Gasket Intake Valve Guide Vacuum Port
	110-3148	1	Engines with Standard Rear Bearing Plate	18	149-1299	1	Tube - Early Models
	110-3151	1	Engines with 4 Boss Bearing Plate		517-0120	1	Plug, Breather Hole - Later Models
	110-3154	1	Engines with SAE A or SAE B Rear Bearing Plate (Does Not Include Rear Bearing Plate)	19	850-0050	5	*Washer, Lock - Spring (3/8")
2	517-0048	1	*Plug, Welch (1-5/8") Camshaft Opening	20	516-0141	2	*Pin, Gear Cover Alignment
3	800-0051	5	*Screw, Cap - Hex Head (3/8-16 x 1-1/4")	21	123-1175	1	Reed, Breather Valve
4	104-0776	AR	*Shim, Crankshaft End Play (.005")	22	123-1173	1	Baffle, Breather Valve
5			Bearing, Crankshaft - Rear (Includes Thrust Washer)	23	123-1174	1	Spring, Breather Valve
	101-0450	1	*Standard	24	110-1879	1	Cover, Valve - RH
	101-0450-02	1	.002" Undersize	25	110-2274	1	Cover, Valve - LH
	101-0450-10	1	.010" Undersize	26	110-1921	3	Gasket, Valve Cover
	101-0450-20	1	.020" Undersize	27		4	Tappet, Valve Standard
	101-0450-30	1	.030" Undersize		115-0006	4	.002" Oversize
6	104-0575	2	*Washer, Thrust		115-0006-02	4	.005" Oversize
7	101-0415	1	*Gasket, Bearing Plate	28	110-2368	2	Valve, Intake
8			Plate, Bearing - Rear	29	110-1955	2	Valve, Exhaust
	101-0439	1	*Standard	30	800-0010	2	Screw, Cap - Hex Head (1/4-20 x 1-3/4")
	101-0551	1	Optional - 4 Boss	31	110-0539	4	Spring, Valve
	101-0430	1	Optional - SAE B	32	110-0639	8	Lock, Valve Spring
	101-0437	1	Optional - SAE A	33	509-0168	2	Seal, Valve - Intake (Optional)
9	101-0405	2	*Bearing, Camshaft	34	803-0071	2	Screw, Socket - Set (3/8-16 x 5/8")
10	509-0041	1	Seal, Oil - Crankshaft Rear	36		2	Gasket, Cylinder Head Standard
11	516-0072	4	*Pin, Drive - Bearing Stop		110-2287	2	Standard
12	120-0735	1	*Tube, Oil - Cylinder Block		110-3181	2	Optional (Graphoil)
13			Insert, Valve Seat - Exhaust	37		2	Head, Cylinder
	110-1824	2	*Standard		110-2564	1	Right Side - Spec A
	110-1824-02	2	.002" Oversize		110-2563	1	Left Side - Spec A
	110-1824-05	2	.005" Oversize		110-2561	1	Left Side - Begin Spec B
	110-1824-10	2	.010" Oversize		110-2562	1	Right Side - Begin Spec B
	110-1824-25	2	.025" Oversize	38	110-0904	4	Roto Cap - Valve
14			Insert, Valve Seat - Intake	39	526-0018	1	Washer, Flat (1/4" Screw)
	110-0197	2	*Standard	40	526-0122	18	Washer, Flat (5/16" Screw)
	110-0197-02	2	.002" Oversize	41		12	Screw, Cap - Hex Head (Special) 5/16-18 x 1-5/8"
	110-0197-05	2	.005" Oversize		800-0540	6	2" Long
	110-0197-10	2	.010" Oversize	42	526-0063	2	Washer, Flat - Copper (1/4" Screw)
	110-0197-25	2	.025" Oversize	43	517-0067	1	Plug, Core Hole
15			Bearing, Crankshaft - Front Flanged	44	110-0893	2	Washer, Intake Valve Spring Retainer (Optional)
	101-0432	1	*Standard	45		1	Kit, Gasket
	101-0432-02	1	.002" Undersize		168-0140	1	Valve Grind/Carbon Removal (Standard Head Gaskets)
	101-0432-10	1	.010" Undersize		168-0183	1	Valve Grind/Carbon Removal (Graphoil Head Gaskets)
	101-0432-20	1	.020" Undersize		168-0153	1	Gasket Kit, Complete (Standard Head Gaskets)
	101-0432-30	1	.030" Undersize		168-0182	1	Gasket Kit, Complete (Graphoil Head Gaskets)
16			Guide, Valve				
	110-1807	2	Engines w/o Intake Valve Seals Intake	* - Parts Included in the Cylinder Block Assembly.			
	110-1807	2	Engines with Intake Valve Seals Exhaust				
	110-1807	2	*Exhaust				
	110-3161	2	*Intake				

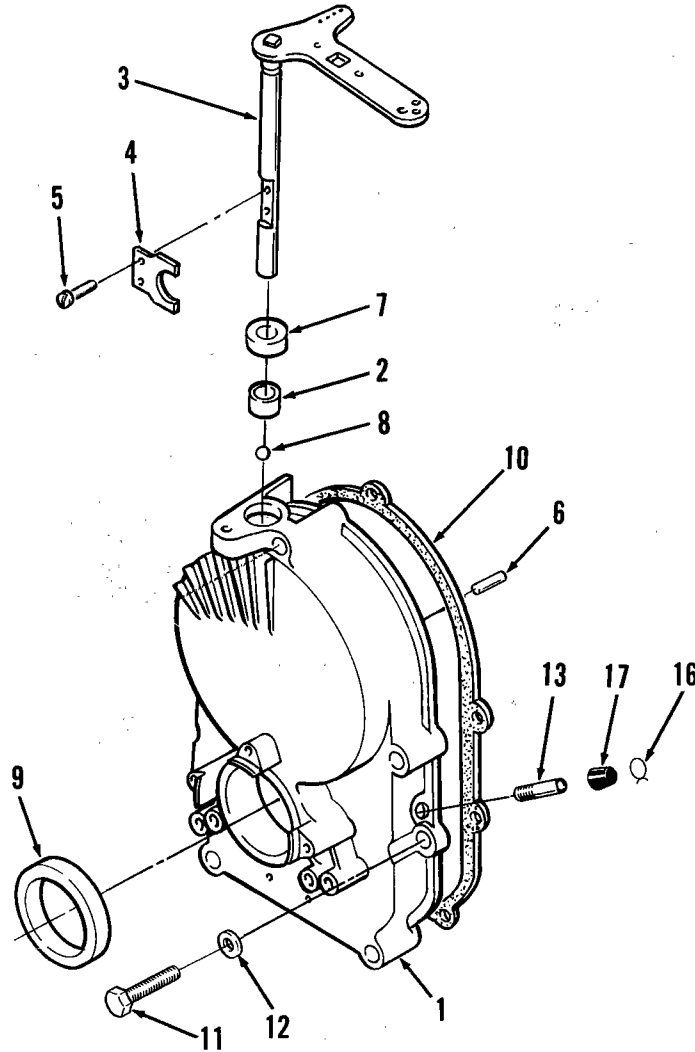
Piston and Rod



CT-1055

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Piston and Pin (Includes Retaining Rings)	5			Rod, Connecting (Includes Bolt and Nut)
	112-0186	2	Standard		114-0300	2	Standard
	112-0186-05	2	.005" Oversize		114-0300-10	2	.010" Undersize
	112-0186-10	2	.010" Oversize		114-0300-20	2	.020" Undersize
	112-0186-20	2	.020" Oversize		114-0300-30	2	.030" Undersize
	112-0186-30	2	.030" Oversize	6	114-0240	4	Bolt, Connecting Rod (Special)
	112-0186-40	2	.040" Oversize	7	870-0302	4	Nut, Hex - Crown Lock (5/16-24)
2	112-0229	2	Pin, Piston				
3	518-0311	4	Ring, Retaining				
4			Ring Set, Piston				
	113-0189	2	Standard				
	113-0189-05	2	.005" Oversize				
	113-0189-10	2	.010" Oversize				
	113-0189-20	2	.020" Oversize				
	113-0189-30	2	.030" Oversize				
	113-0189-40	2	.040" Oversize				

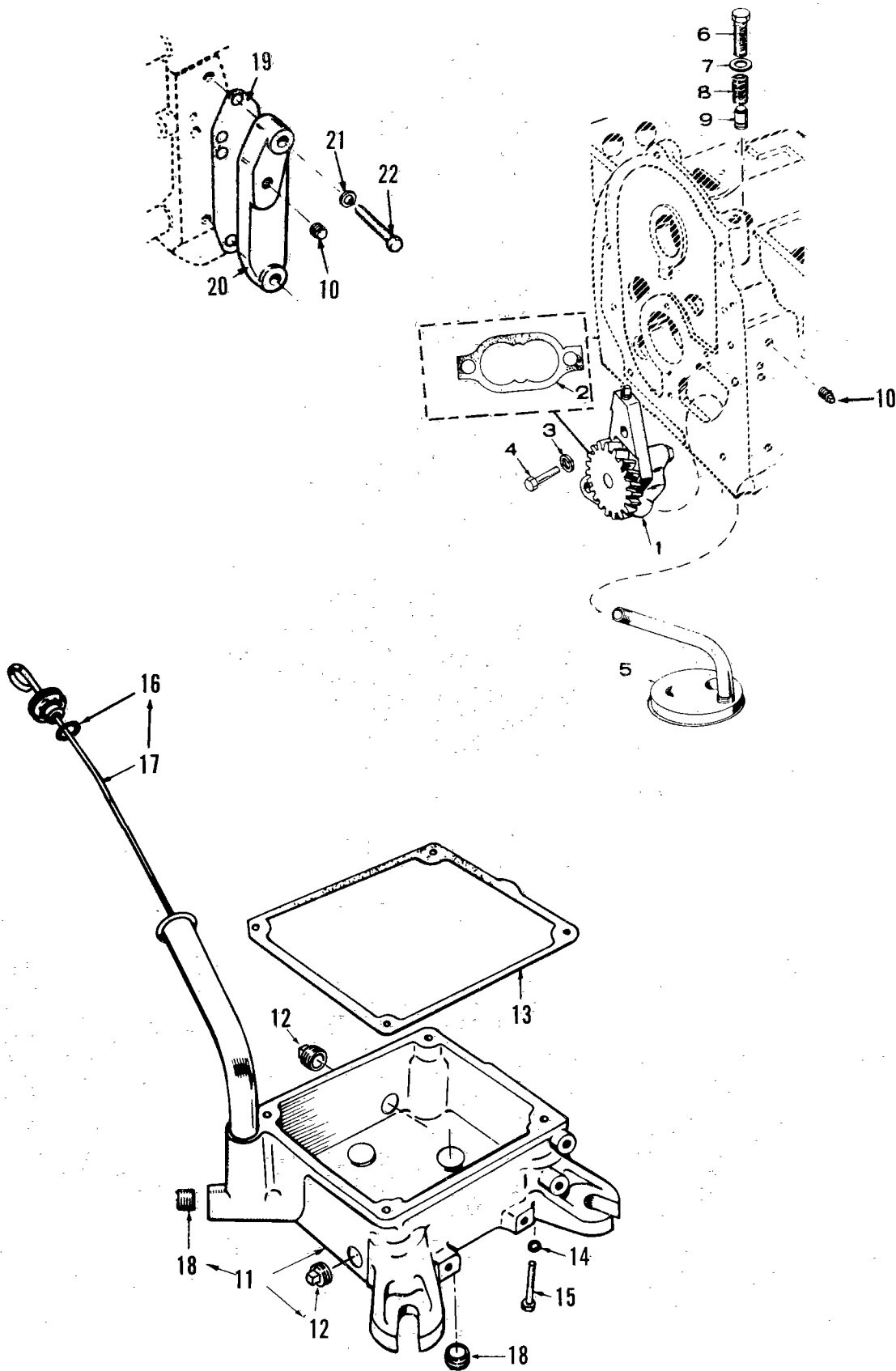
Gearcase



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	103-0738	1	Gearcase Assembly (Includes Parts Marked *)	9	509-0040	1	*Seal, Oil - Crankshaft
2	510-0105	1	*Bearing, Governor Shaft	10	103-0408	1	Gasket, Gearcase Mounting
3	150-1470	1	*Shaft and Arm, Governor	11		4	Screw, Cap - Hex Head 5/16-18 x 1-3/4"
4	150-1187	1	*Yoke, Governor Shaft		800-0032	1	5/16-18 x 2-3/4" (Special)
5	815-0046	2	*Screw, Machine - Pan Head (#8-32 x 3/8")	1	800-0545	1	5/16-18 x 2-3/4" (Special)
6	516-0130	1	*Pin, Dowel - Governor Cup Stop	12	526-0065	5	Washer, Flat - Copper (5/16" Screw)
7	509-0008	1	*Seal, Oil - Governor Shaft	13	149-1299	1	*Tube, Vacuum Port
8	510-0014	1	*Ball, Bearing - Governor Shaft	16	503-0301	1	*Clamp, Vacuum Port Cap
				17	149-1321	1	*Cap, Vacuum Port

* - Parts Included in 103-0738 Gearcase Assembly.

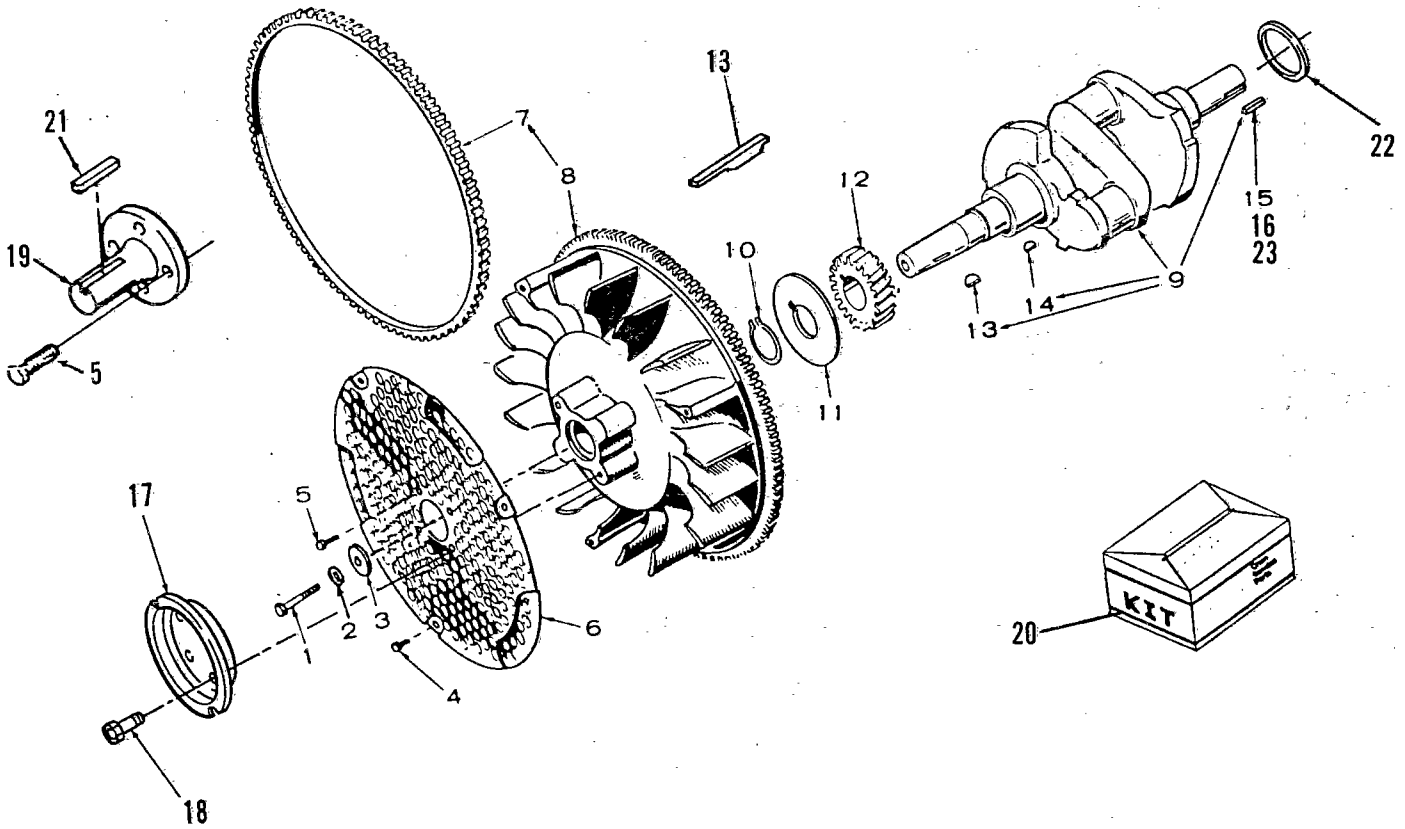
Oil System



Oil System

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	120-0491	1	Pump, Oil (Components Not Sold Separately)	13	102-1200	1	Gasket, Oil Base
2	120-0161	1	Gasket Kit, Oil Pump	14	850-0050	4	Washer, Lock - Spring (3/8")
3	850-0040	2	Washer, Lock Spring (1/4")	15	800-0056	4	Screw, Cap - Hex Head (3/8-16 x 2-1/2")
4	800-0007	2	Screw, Cap - Hex Head (1/4-20 x 1")	16	123-1292	1	Cap and Indicator, Oil Fill
5	120-0713	1	Cup, Intake - Oil Pump	17	509-0142	1	Gasket, Oil Fill Cap ("O" Ring)
6	801-0050	1	Screw, Cap - Hex Head (3/8-24 x 1")	18	505-0937	2	Plug, Pressure - Socket Head (3/8")
7	526-0066	1	Washer, Flat - Copper (3/8" Screw)	19	122-0375	1	Gasket, Oil Filter Adapter
8	120-0140	1	Spring, Bypass Valve	20	122-0438	1	Cover, Oil Filter Pad - Optional
9	120-0398	1	Plunger, Bypass Valve	21	526-0065	2	Washer, Flat - Copper (5/16" Screw)
10	505-0057	1	Plug, Pipe	22	800-0028	2	Screw, Cap - Hex Head (5/16-18 x 1")
11	102-0850	1	Base, Oil				
12	505-0056	2	Plug, Pipe - Oil Drain (1/2")				

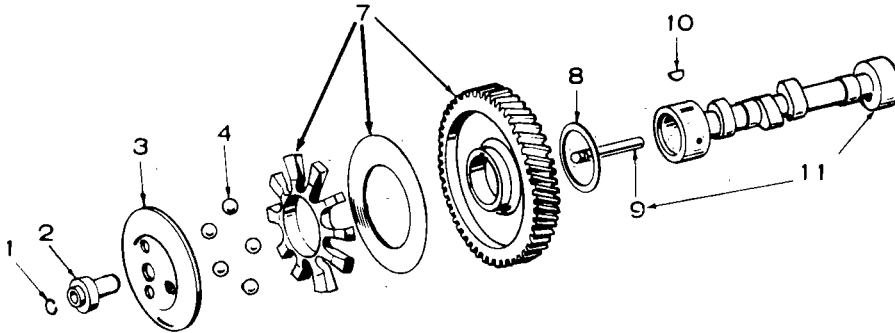
Crankshaft and Flywheel



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	104-0170	1	Screw, Cap - Hex Head (Special)	10	518-0014	1	Ring, Retaining
2	850-0055	1	Washer, Lock - Spring (7/16")	11	104-0043	1	Washer, Gear Retaining (Special)
3	526-0017	1	Washer, Flat (7/16" Screw)	12	104-0032	1	Gear, Crankshaft
4	815-0400	3	Screw, Machine - Truss Head (1/4-20 x 1/2")	13	515-0263	1	Key, Flywheel
5	821-0014	4	Screw, Cap - Hex Head Locking (5/16-18 x 1/2")		515-0284	1	**Kit, Woodruff +1.31" Long
6	134-3920	1	Guard, Flywheel	14	515-0001	1	+*Key, Crankshaft Gear
7	104-0779	1	Gear, Ring	15	515-0103	1	*Key, Crankshaft Stub
8	134-3871	1	Flywheel (Includes Ring Gear) Without Imbalance Weight	16	515-0198	1	+Key, Crankshaft Stub
	134-4734	1	With Imbalance Weight - Hi Flo (Identify by 1/2" Drilled Holes on Backside of Flywheel)	17	192-0398	1	Sheave, Rope - Engines with Magneto Ignition
	160-1301	1	Engines with Magneto Ignition - Electric Start - Hi Flo	18	821-0016	4	Screw, Cap - Hex Washer Head (5/16-18" x 3/4")
	160-1307	1	Engines with Magneto Ignition - Recoil Start - Hi Flo	19	190-0546	1	PTO Shaft (2" Pilot) 1-7/16" Diameter
9	104-1328	1	Crankshaft 1-1/8" Dia. Stub x 2.54" Lg. (Includes Parts Marked *)		190-0687	1	1" Diameter Kit, Shaft
	104-1699	1	1-7/32" Dia. Stub x 3.058" Lg. (Includes Parts Marked +)	20	190-0577	1	Front PTO, 1-7/16" Diameter
	104-1432	1	Taper Stub (Includes Parts Marked *)		541-0222	1	PTO, 1" Diameter
	104-1330	1	1.125" Dia. Stub x 3.776" Lg.	21	515-0007	1	Key, Machine (1/4 x 2")
				22	104-1694	1	+Spacer, Crankshaft
				23	515-0146	1	+Key, Woodruff - #18 (1/4 x 1-1/8")

* - Parts Included in 104-1432 Crankshaft Kit.
+ - Parts Included in 104-1350 Crankshaft Kit.
* - Parts Included in 104-1328 Crankshaft Kit.

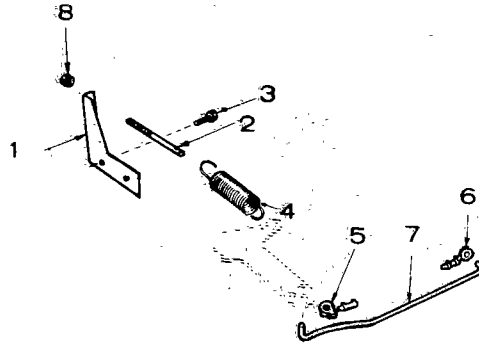
Camshaft



C-1084

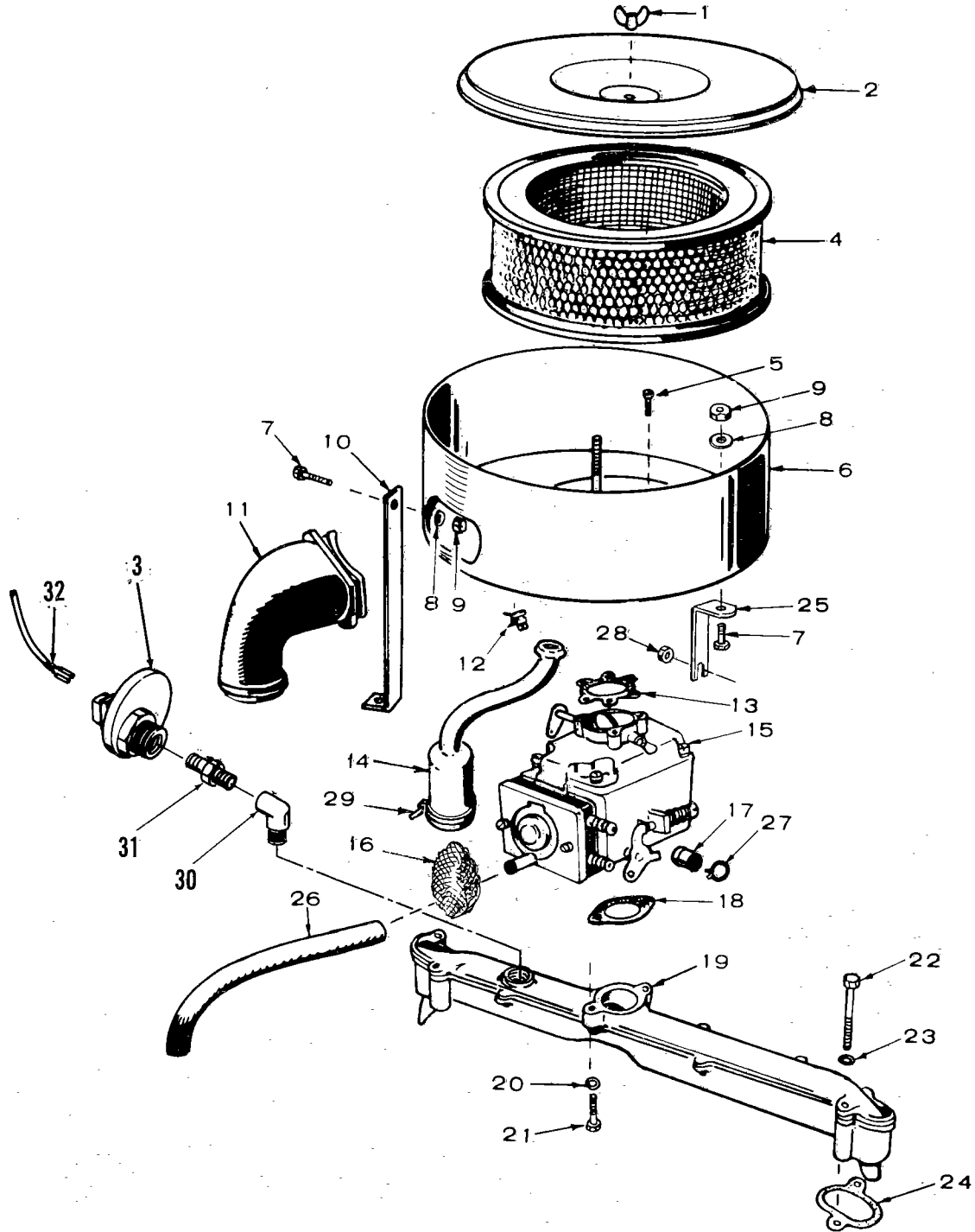
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-0078	1	Ring, Retaining	7	105-0332	1	Gear Assembly, Camshaft (Includes Plate and Spacer)
2	150-1519	1	Hub, Governor Cup	8	105-0541	1	Washer, Thrust (Special)
3	150-1520	1	Cup, Governor	9	150-0075	1	Pin, Center
4			Ball, Governor	10	515-0001	1	Key, Woodruff - Camshaft Gear
	510-0015	5	5 Ball Governor	11	105-0402	1	Camshaft (Includes Center Pin)
	510-0015	10	10 Ball Governor				

Governor



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-1433	1	Bracket, Governor Control	5	870-0278	1	Clip, Retaining - Control Rod
2	150-0694	1	Stud, Adjusting	6	518-0004	1	Clip, Retaining - Control Rod
3	821-0010	2	Screw, Cap - Hex Head Locking (1/4-20 x 1/2")	7	150-1350	1	Rod, Control
4	150-1214	1	Spring, Governor	8	870-0131	1	Nut, Governor Adjusting

Fuel System

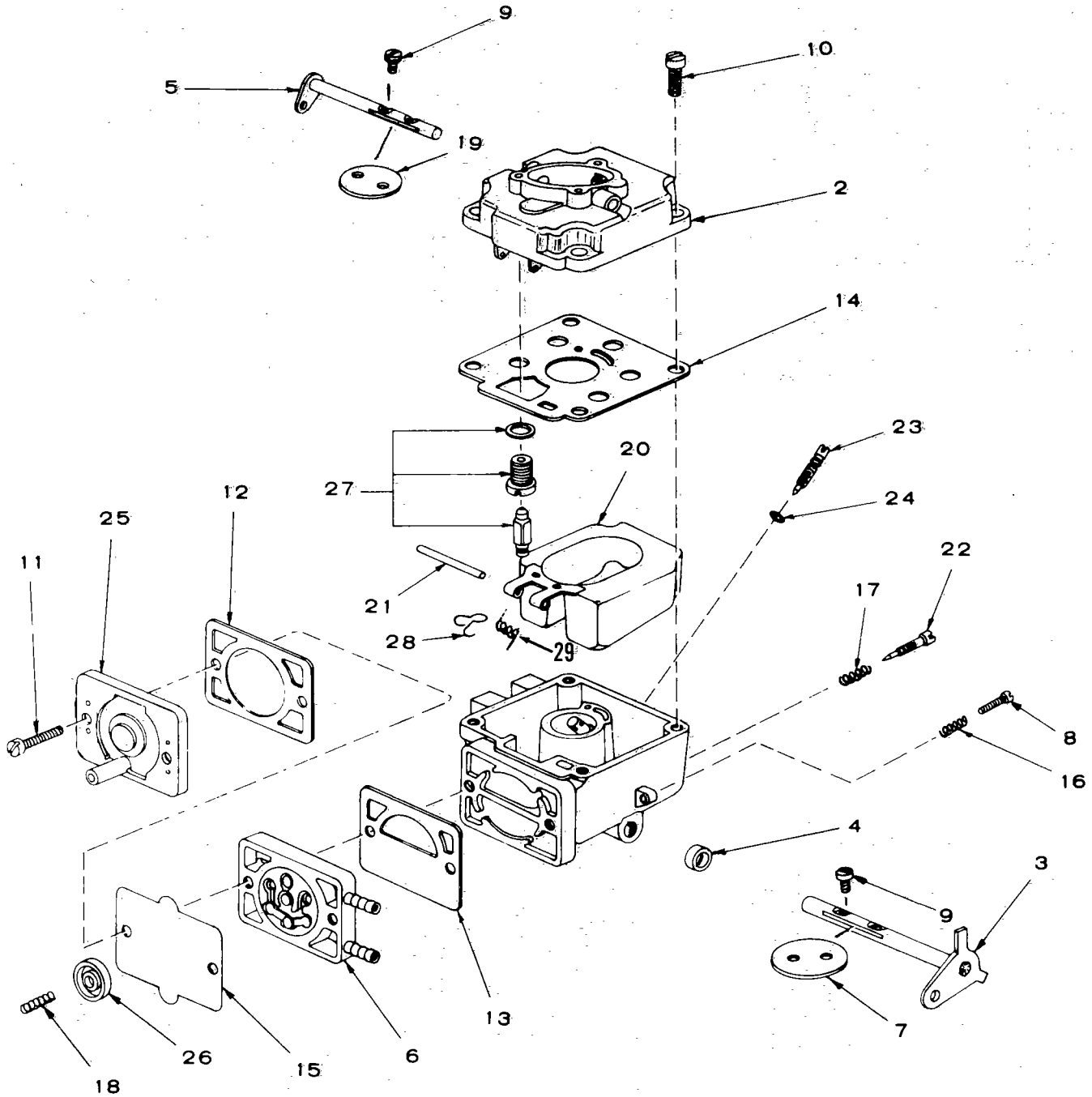


Fuel System

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	865-0020	1	Nut, Wing (1/4-20)	19			Manifold, Intake
2	140-1168	1	Cover, Air Cleaner		154-2206	1	Models Without Vacuum Switch
3	148-0367	1	Switch, Vacuum (Optional)		154-2339	1	Models With Vacuum Switch
4	140-1216	1	Filter, Air (Paper)	20	850-0040	2	Washer, Lock - Spring (1/4")
5	815-0463	3	Screw, Machine - Slotted Head (#10-32 x 3/8")	21	800-0023	2	Screw, Cap - Hex Head (1/4-20 x 1-3/8")
6	140-1213	1	Housing, Air Cleaner	22	800-0033	4	Screw, Cap - Hex Head (5/16-18 x 2")
7	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")	23	850-0045	4	Washer, Lock - Spring (5/16")
8	853-0013	3	Washer, Lock - ET (1/4")	24	154-1744	2	Gasket, Manifold to Block
9	862-0001	2	Nut, Hex (1/4-20)	25	140-1313	1	Support, Air Cleaner - Front (2.37" Lg)
10	140-1198	1	Support, Air Cleaner (4.4" Lg)	26	503-0707	1	Hose, Vacuum Port Tube (1/4" ID)
11	140-1549	1	Tube, Air Intake	27	503-0731	1	*Clamp, Loop
12	518-0328	2	Clip, Cable	28	870-0257	1	Nut, Hex - Selflock (5/16-18)
13	140-1215	1	*Gasket, Air Cleaner to Carburetor	29	332-0941	1	Tie, Breather Tube
14	123-1277	1	Tube, Crankcase Breather	30	502-0020	1	Elbow, Street
15	142-0660	1	Carburetor Assembly (See Separate Page for Components) (Includes Mounting Gasket) (Includes Parts Marked *)	31	502-0815	1	Nipple, Hex - Restricted
16	123-1417	1	Filter, Breather Tube	32	336-8464	1	Lead, Vacuum Switch to Oil Pressure Switch (18")
17	149-1321	1	*Cap, Fuel Outlet				
18	145-0438	1	*Gasket, Carburetor Mounting				

* - Parts Included in 142-0660 Carburetor Kit Assembly.

Carburetor (With Integral Fuel Pump) Components
(142-0660)

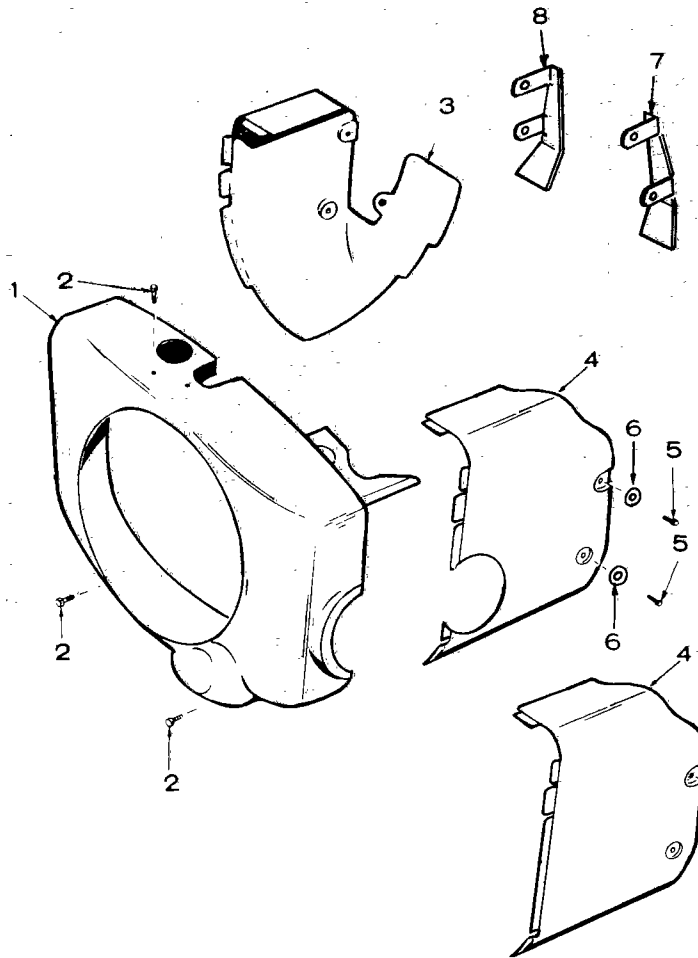


**Carburetor (With Integral Fuel Pump) Components
(142-0660)**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	142-0660	1	Carburetor, Complete (With Integral Fuel Pump)	11	142-0540	2	Screw, Pump Cover to Body
	142-0571	1	*Gasket Set (Includes Parts Marked †)	12	142-0541	1	†Gasket, Pump Cover
	142-0570	1	Repair Kit (Includes Parts Marked *)	13	142-0542	1	†Gasket, Inlet Plate
		1	Body, Lower - Not Sold Separately	14	142-0572	1	†Gasket, Carburetor Body
		1	Body, Upper - Not Sold Separately	15	142-0555	1	†Diaphragm, Fuel Pump
2		1	Shaft, Throttle	16	142-0544	1	Spring, Throttle Stop
3	142-0534	1	†"O" Ring, Throttle Shaft Seal	17	142-0282	1	*Spring, Idle Needle
4	142-0535	1	Shaft, Choke	18	142-0545	1	*Spring, Fuel Pump
5	142-0536	1	*Valve Assembly, Reed Fuel Pump	19	142-0546	1	Fly, Choke
6	142-0537	1	Fly, Throttle	20	146-0380	1	Float Assembly
7	142-0538	1	Screw, Throttle Stop	21	142-0548	1	*Shaft, Float
8	142-0064	1	*Screw, Fly to Shaft	22	142-0016	1	*Needle, Idle
9	142-0334	4	*Screw, Upper to Lower Body	23	142-0549	1	Needle, Power
10	142-0539	4		24	142-0550	1	†"O" Ring, Seal - Power Needle
				25	142-0551	1	Cover, Pump
				26	142-0552	1	*Plate, Drive - Fuel Pump
				27	142-0553	1	*Valve, Assembly, Float
				28	142-0554	1	Clip, Retaining - Float Valve
				29	146-0379	1	Spring, Float Assist

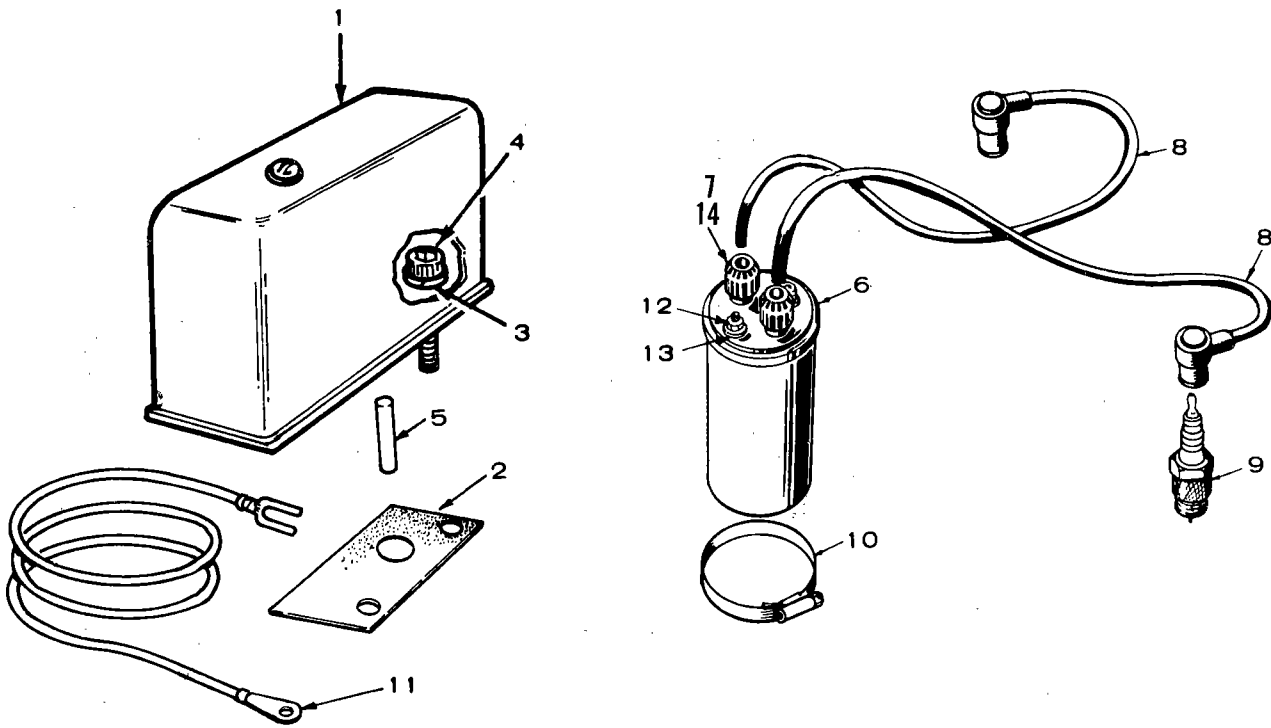
† - Parts Included in 142-0571 Gasket Set.
* - Parts Included in 142-0570 Repair Kit.

Air Housing



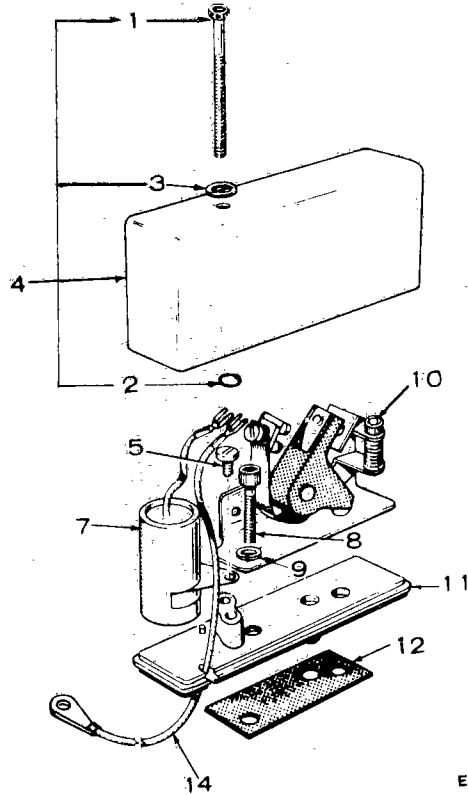
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	134-4430	1	Housing, Blower Sets Without Oil Filter	5	815-0290	4	Screw, Cap - Hex Head (1/4-20 x 5/8")
	134-4400	1	Sets With Oil Filter	6	526-0021	4	Washer, Flat (1/4" Screw)
2	815-0261	3	Screw, Cap - Hex Head (1/4-20 x 7/16")	7	134-3582	1	Baffle, Cylinder Head - Right Side
3	134-4371	1	Housing, Cylinder Air - Left Side	8	134-3583	1	Baffle, Cylinder Head - Left Side
4			Housing, Cylinder Air (Right Side)				
	134-3400	1	Use Sets without Oil Filter - Free Flo				
	134-3518	1	Use Sets with Oil Filter - Free Flo				

Ignition



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	160-1303	1	Box Assembly, Breaker (See Separate Page for Components) (Includes Mounting Gasket)	8	167-1602	2	Cable, Spark Plug
2	160-1150	1	Gasket, Breaker Box Mounting	9	167-0298	2	Plug, Spark
3	850-0038	2	Washer, Lock - Spring (1/4")	10	503-0311	1	Clamp, Coil
4	802-0034	2	Screw, Socket Head (1/4-20 x 3/4")	11	336-2378	1	Lead, Breaker Box to Coil
5	160-1151	1	Plunger, Breaker Points	12	166-0554	2	Nut, Hex (Special)
6	166-0772	1	Coil, Ignition	13	850-2005	2	Washer, Lock - Spring (Metric)
7	166-0604	2	Cap, Coil Terminal (Part of Coil)	14	166-0614	2	Bushing, Rubber (Inside of Cap 166-0604)

Breaker Box

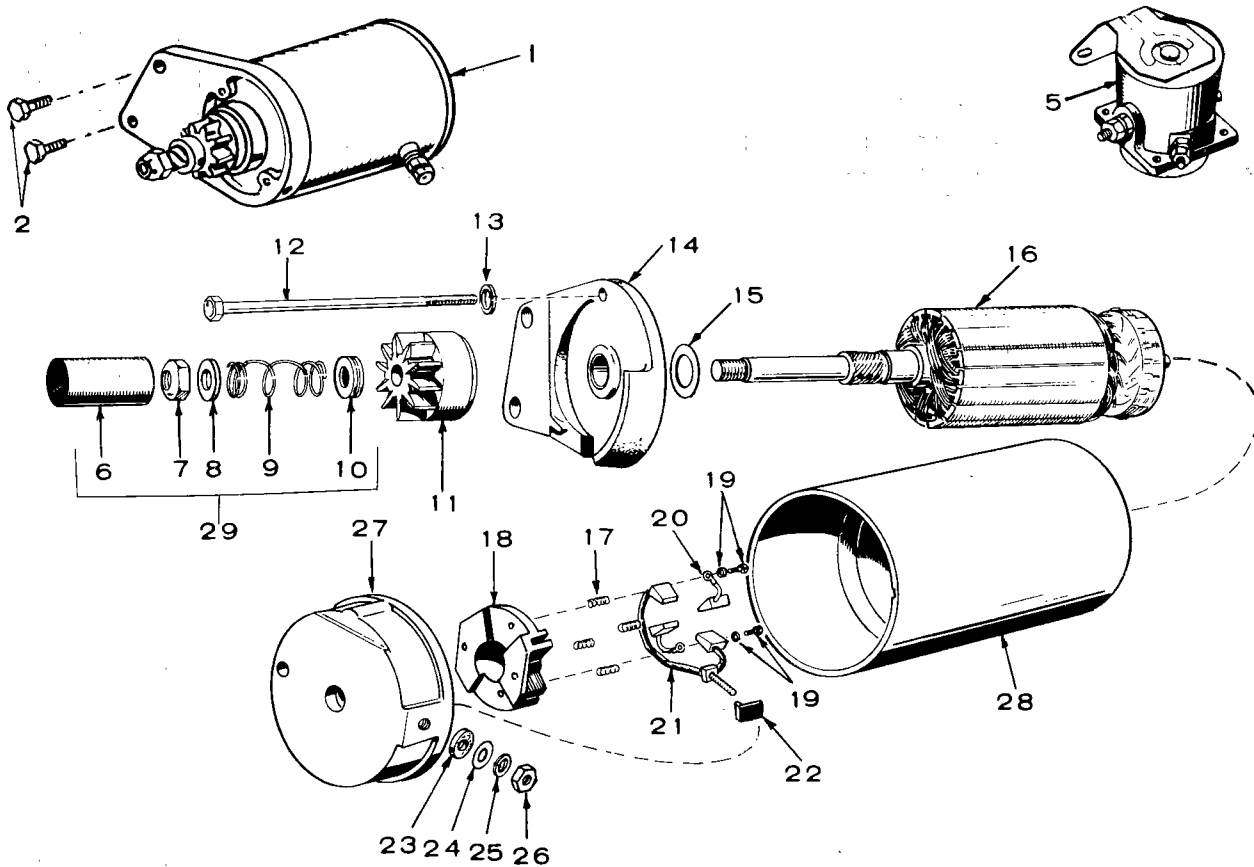


ES-1217

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	160-1303	1	Breaker Box (Includes Parts Marked *)	8	802-0034	2	*Screw, Cap - Socket Head (1/4-20 x 3/4")
1	802-0022	1	*Screw, Cap - Hex Socket (#10-24 x 1-1/2")	9	850-0040	2	*Washer, Lock (1/4")
2	509-0065	1	*Retainer ("O" Ring)	10	160-1183	1	*Point Set, Breaker
3	526-0008	1	*Washer, Flat (#10 Screw)	11	160-1219	1	*Base, Breaker
4	160-1285	1	*Cover, Breaker Box	12	160-1150	1	*Gasket, Breaker Box
5	815-0358	1	*Screw, Cap - Slotted (#8-32 x 5/16")	14	336-2378	1	Lead, Breaker Box to Coil
7	312-0246	1	*Condenser		160-1311	1	Tune Up Kit (Includes Points and Condenser)

* - Parts Included in 160-1303 Breaker Box.

Starter Motor



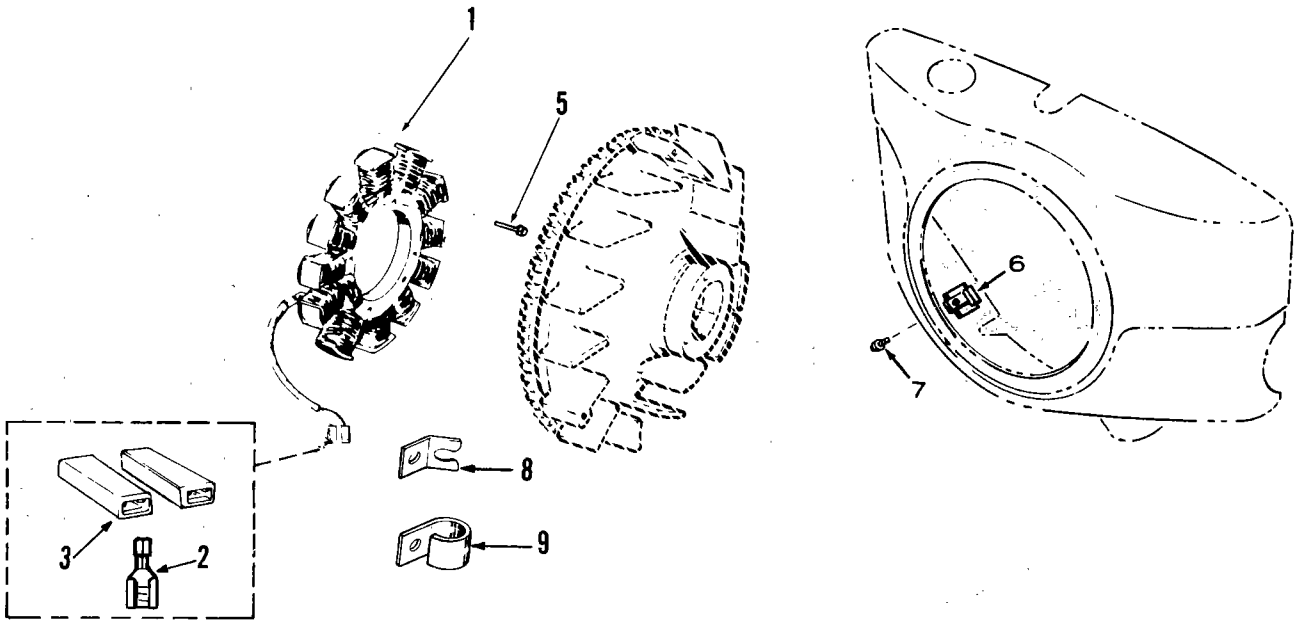
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1171	1	Starting Motor, Complete	18	#	1	+Brush Holder
2	815-0570	2	Screw, Cap - Hex Washer Head (5/16-18 x 1")	19	#	1	+Screw and Lock Washer
5	307-1031	1	Solenoid, Start - Relay	20	#	2	*+Brush, Ground
6	#	1	xCover, Dust	21	#	1	*+Stud and Brush Assembly, Input
7	#	1	xNut, Stop	22	#	1	+Bushing, Insulation
8	#	1	xWasher, Flat	23	#	1	Washer, Insulation
9	#	1	xSpring, Anti-Drift	24	#	1	+Washer, Flat
10	#	1	xSpacer, Dust Cover	25	#	1	+Washer, Lock
11	191-1156	1	Drive Assembly	26	#	1	+Nut
12	191-1220	2	Screw, Cap - Hex Head	27	191-1040	1	Cap Assembly, Commutator (Includes Parts Marked +)
13	850-0040	2	Washer, Lock - Spring (1/4")	28	#	1	Housing
14	191-1219	1	Cap Assembly, Drive End		191-1222	1	Repair Package (Includes Parts Marked *)
15	191-1038	1	Washer, Armature Thrust				
16	191-1221	1	Armature	29	191-1359	1	Dust Cover Assembly (Includes Parts Marked x)
17	#	4	*+Spring				

+ - Parts Included in 191-1040 Cap Assembly.
 * - Parts Included in 191-1222 Repair Package.
 # - Not Sold Separately.
 x - Parts Included in 191-1359 Dust Cover Assembly.

OPTIONAL EQUIPMENT SECTION

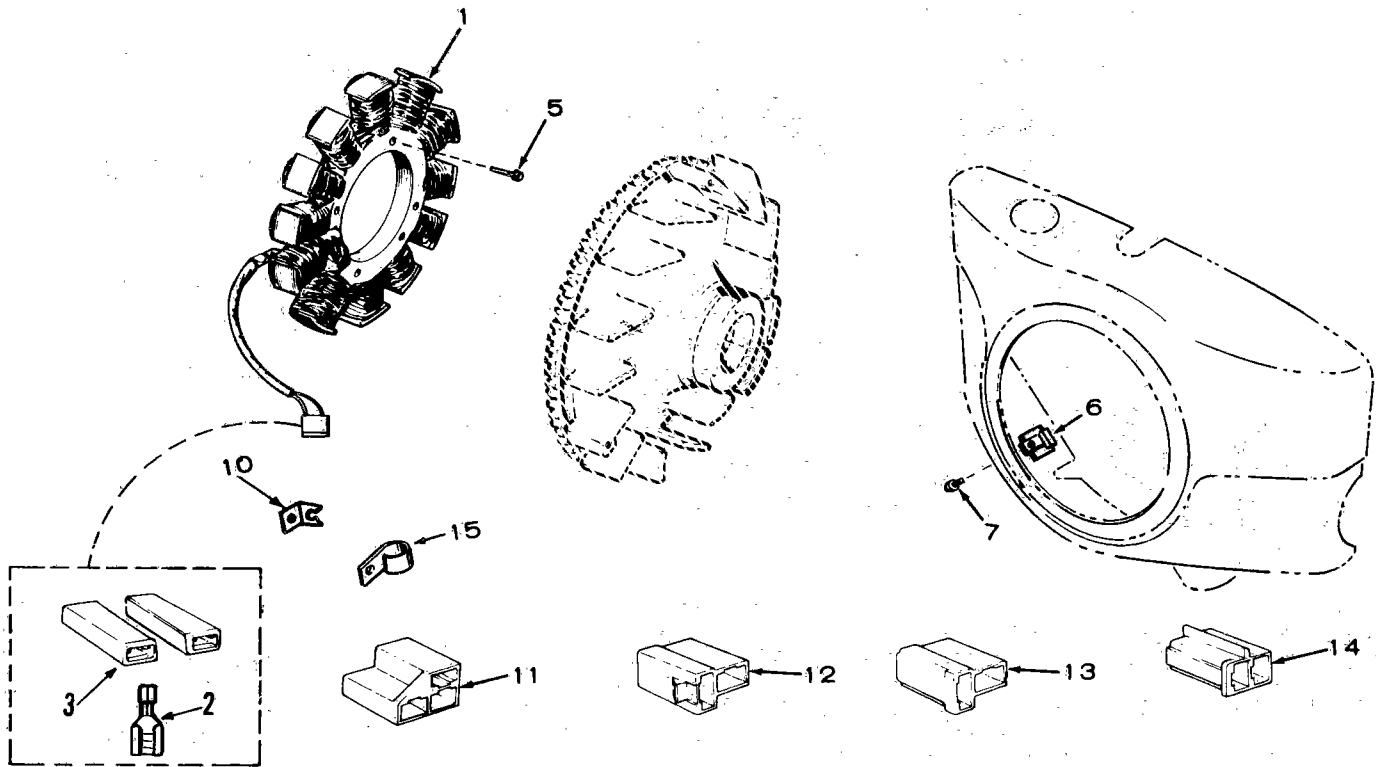
This section contains illustrated parts listing of factory installed options for these industrial engines. Options may not be applicable to all models; for field conversions additional parts are usually required. Optional parts listed in this section are in addition or in place of those shown in the standard engine parts section.

Option 1
Flywheel Alternator - 20 Ampere (Phelon)



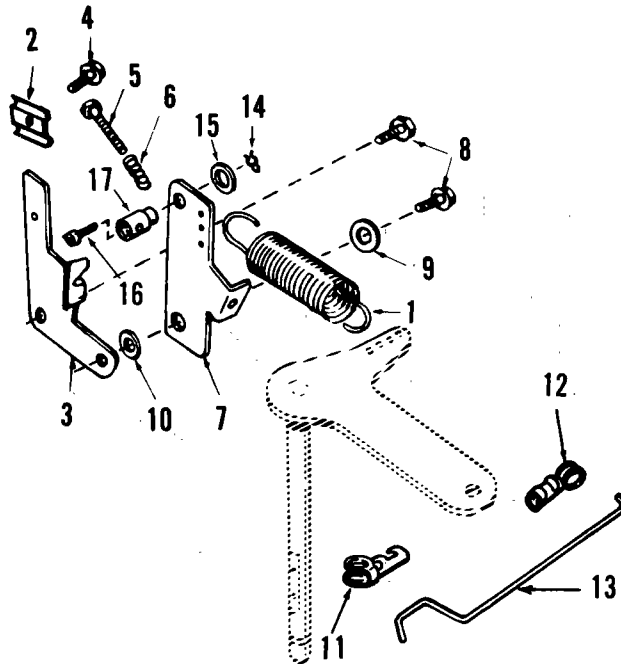
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1276	1	Stator (Includes Terminals and Connector Bodies)	6	191-1748	1	Regulator, Voltage
2	332-2423	2	Terminal, Stator Leads	7	821-0007	1	Screw, Cap - Hex Washer Head (1/4-20 x 1/4")
3	323-1257	2	Kit, Body Terminal Connector	8	167-0188	1	Clip, Cable
5	815-0470	3	Screw, Machine - Hex Head - Self Lock (#10-32 x 1-1/2")	9	332-2319	1	Clamp, Wire - Alternator Leads

Option 2
Flywheel Alternator - 15 Ampere (Phelon)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1256	1	Stator (Includes Terminals and Connector Bodies)	10	167-0188	1	Clip, Cable
2	332-2423	3	Terminal Stator Leads	11	323-0853	1	Body, Terminal Connector
3	323-1257	2	Kit, Body Terminal Connector	12	323-1085	1	Body, Terminal Connector
5	815-0593	3	Screw, Machine - Hex Head - Self-Lock (#10-32 x 1-3/8")	13	323-0892	1	Body, Terminal Connector
6	191-1206	1	Regulator, Voltage	14	323-0890	1	Body, Terminal Connector
7	821-0007	1	Screw, Cap - Hex Washer Head (1/4-20 x 1/4")	15	332-2319	1	Clamp, Wire - Alternator Leads

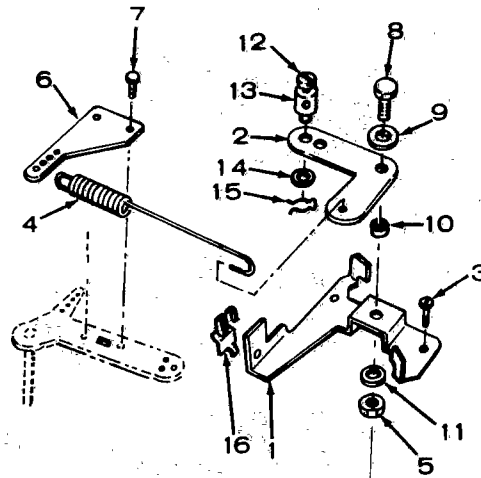
Option 3
Governor Control - Variable Speed
(Side Pull)



FS-1274

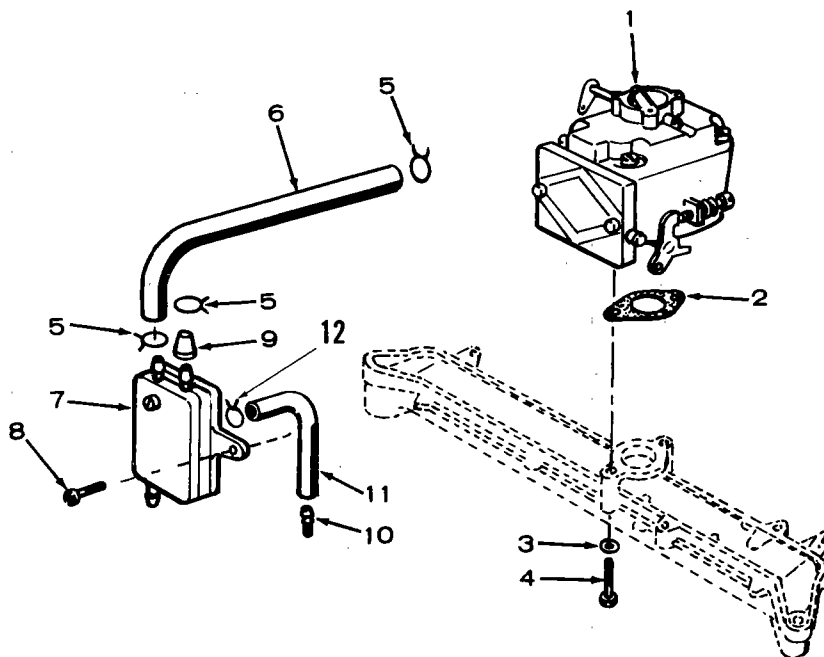
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-1214	1	Spring, Governor	9	526-0021	2	Washer, Flat (17/64" ID x 3/4" OD x 1/16")
2	153-0514	1	Clamp, Cable	10	150-1269	1	Bushing, Control Arm
3	150-1725	1	Bracket, Cable	11	518-0406	1	Clip, Retaining - Control Rod to Governor Shaft
4	815-0359	1	Screw, Tapping - Hex Head (#10-32 x 7/8")	12	518-0004	1	Clip, Retaining - Control Rod to Carburetor
5	815-0510	1	Screw, Tapping - Hex Head (#6-32 x 5/8")	13	150-1924	1	Rod, Governor Control
6	150-1398	1	Spring, Idle Setting	14	516-0059	1	Pin, Cotter
7	150-1345	1	Use With Swivel	15	526-0006	1	Washer, Flat (#12 Screw)
	150-1576	1	Use Without Swivel	16	815-0104	1	Screw, Machine - Fillister Head (#8-32 x 5/16")
8	815-0436	2	Screw, Cap - Hex Washer Head (1/4-20 x 1/2")	17	152-0155	1	Swivel, Cable Holding

**Option 4
Governor Control - Variable Speed
(Front Pull)**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-1810	1	Bracket, Governor Control	9	526-0021	1	Washer, Flat (1/4" Screw)
2	150-1366	1	Link, Governor Control	10	150-1269	1	Bushing, Governor Control
3	815-0439	3	Screw, Cap - Hex Head Locking (#8 x 1/2")	11	850-0040	1	Washer, Lock - Spring (1/4")
4	150-1369	1	Spring, Governor	12	815-0104	1	Screw, Machine - Fillister Head (#8-32 x 5/16")
5	862-0001	1	Nut, Hex (1/4-20)	13	152-0155	1	Swivel, Cable - Throttle
6	150-1367	1	Adapter, Governor Arm	14	526-0006	1	Washer, Flat (#12 Screw)
7	815-0181	2	Screw, Cap - Hex Head W/ET (#10-32 x 1/2")	15	516-0059	1	Pin, Cotter
8	800-0004	1	Screw, Cap - Hex Head (1/4-20 x 5/8")	16	518-0176	1	Clip, Cable - Throttle

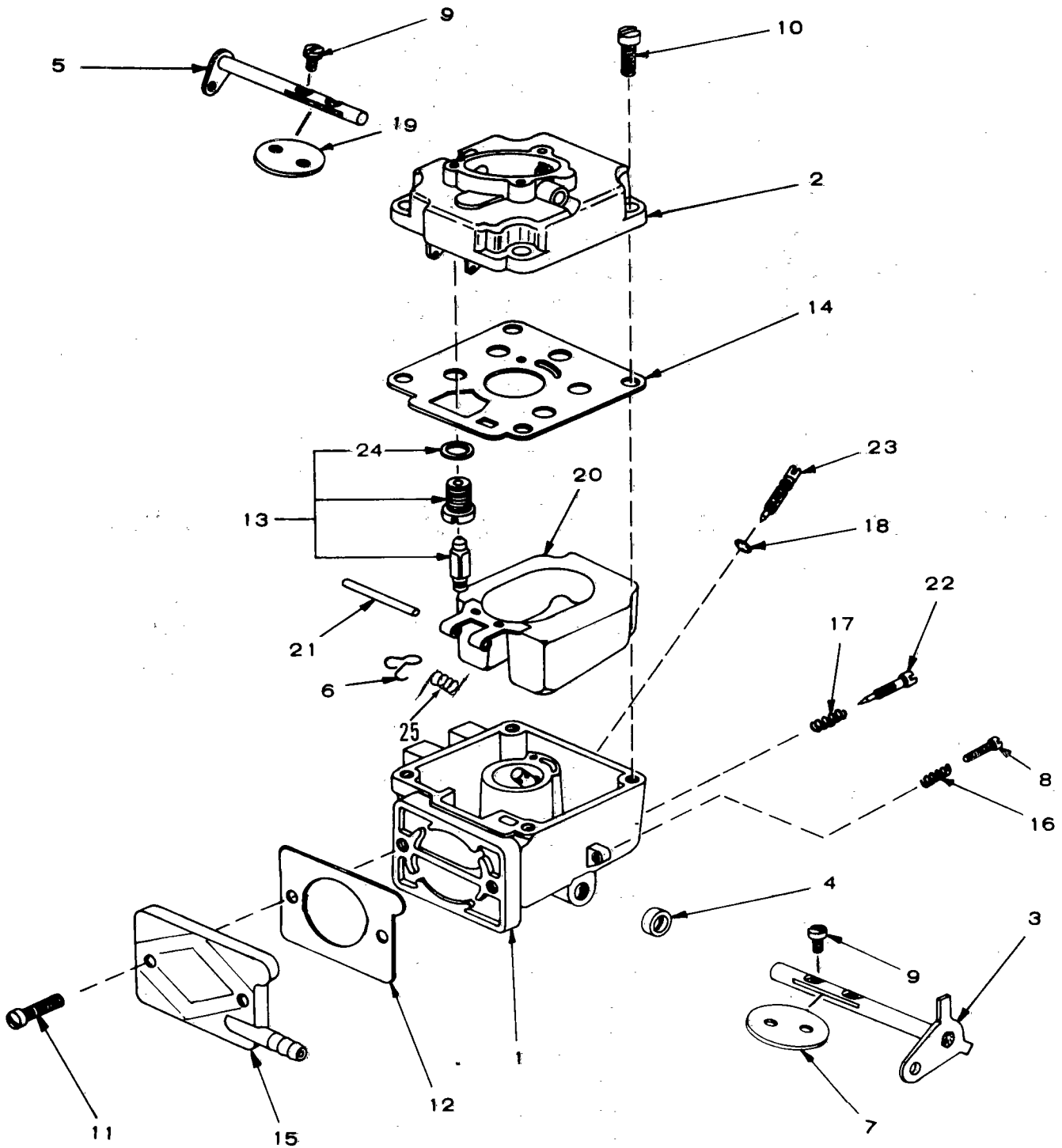
Option 5 Fuel System



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	142-0661	1	Carburetor Assembly - Gasoline (See Separate Page for Components) (Includes Mounting Gasket) (Includes Parts Marked +)	6	503-0664	1	Hose, Fuel (1/4" ID x 11" Lg)
2	145-0438	1	Gasket, Carburetor Mounting	7	149-2187-01	1	Pump, Fuel (Includes Parts Marked *)
3	850-0040	2	Washer, Lock - Spring (1/4")	8	815-0555	2	Screw, Tapping - Pan Head (10-24 x 5/8")
4	800-0023	2	Screw, Cap - Hex Head (1/4-20 x 1-3/8")	9	149-1321	1	+Cap, Fuel Outlet
5	503-0731	3	+Clamp, Hose (7/16")	10	149-1299	1	Tube, Vacuum Port
				11	503-0663	1	Line, Impulse
				12	503-0731	1	Clamp, Wire (1/2")

+ - Parts Included in 142-0661 Carburetor Assembly Kit.

Option 6
Carburetor Components
(Without Integral Fuel Pump)

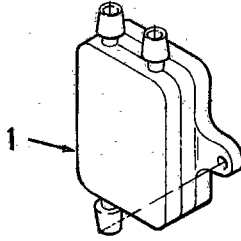


**Option 6
Carburetor Components
(Without Integral Fuel Pump)**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	142-0661	1	Carburetor, Gasoline (Includes Mounting Gasket)	10	142-0539	4	Screw, Upper to Lower Body
	142-0592	1	Repair Kit (Includes Parts Marked †)	11	142-0539	2	Screw, Inlet Plate
	142-0591	1	Gasket Kit (Includes Parts Marked *)	12	142-0559	1	*Gasket, Inlet Plate
1		1	Body, Lower (Not Sold Separately)	13	142-0553	1	†Valve Assembly, Float
2		1	Body, Upper (Not Sold Separately)	14	142-0572	1	*Gasket, Carburetor Body
3	142-0534	1	†Shaft, Throttle	15	149-1983	1	Plate, Inlet (Includes Cap and Clamp)
4	142-0535	1	*O-Ring, Packing - Throttle Shaft	16	142-0544	1	Spring, Throttle Stop
5	142-0536	1	Shaft, Choke	17	142-0282	1	†Spring, Idle Needle
6	142-0554	1	Clip, Retaining - Float Valve	18	142-0550	1	*O-Ring, Packing - Power Needle
7	142-0538	1	Fly, Throttle	19	142-0546	1	Fly, Choke
8	142-0064	1	Screw, Throttle Stop	20	146-0380	1	Float Assembly
9	142-0334	4	†Screw, Fly to Shaft	21	142-0548	1	†Shaft, Float
				22	142-0016	1	†Needle, Idle
				23	142-0549	1	Needle Assembly, Power
				24	142-0523	1	*Gasket, Float Valve Seat
				25	146-0379	1	Spring, Float Assist

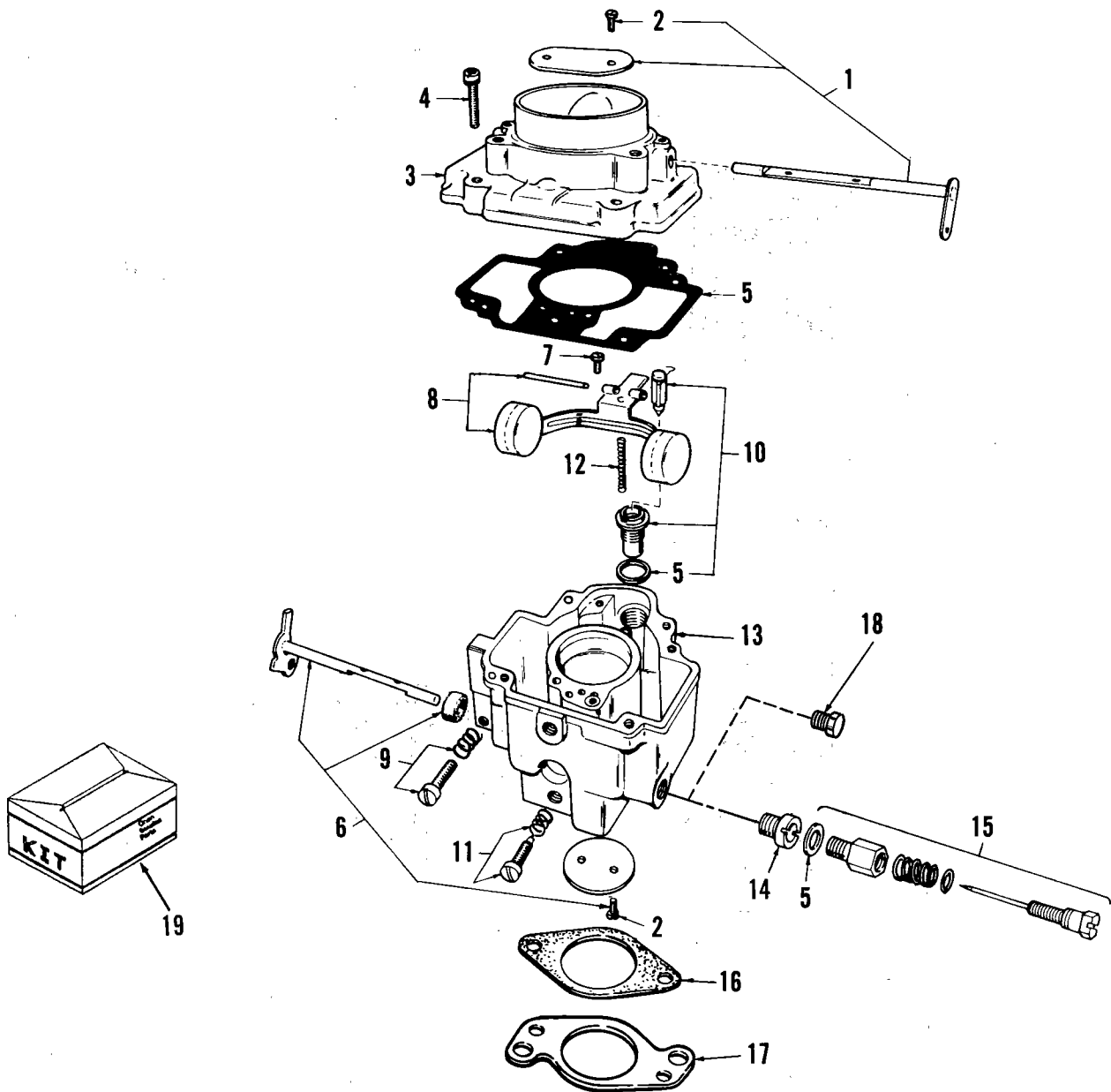
† - Parts Included in 142-0592 Repair Kit.
* - Parts Included in 142-0591 Gasket Kit.

Option 7
Fuel Pump



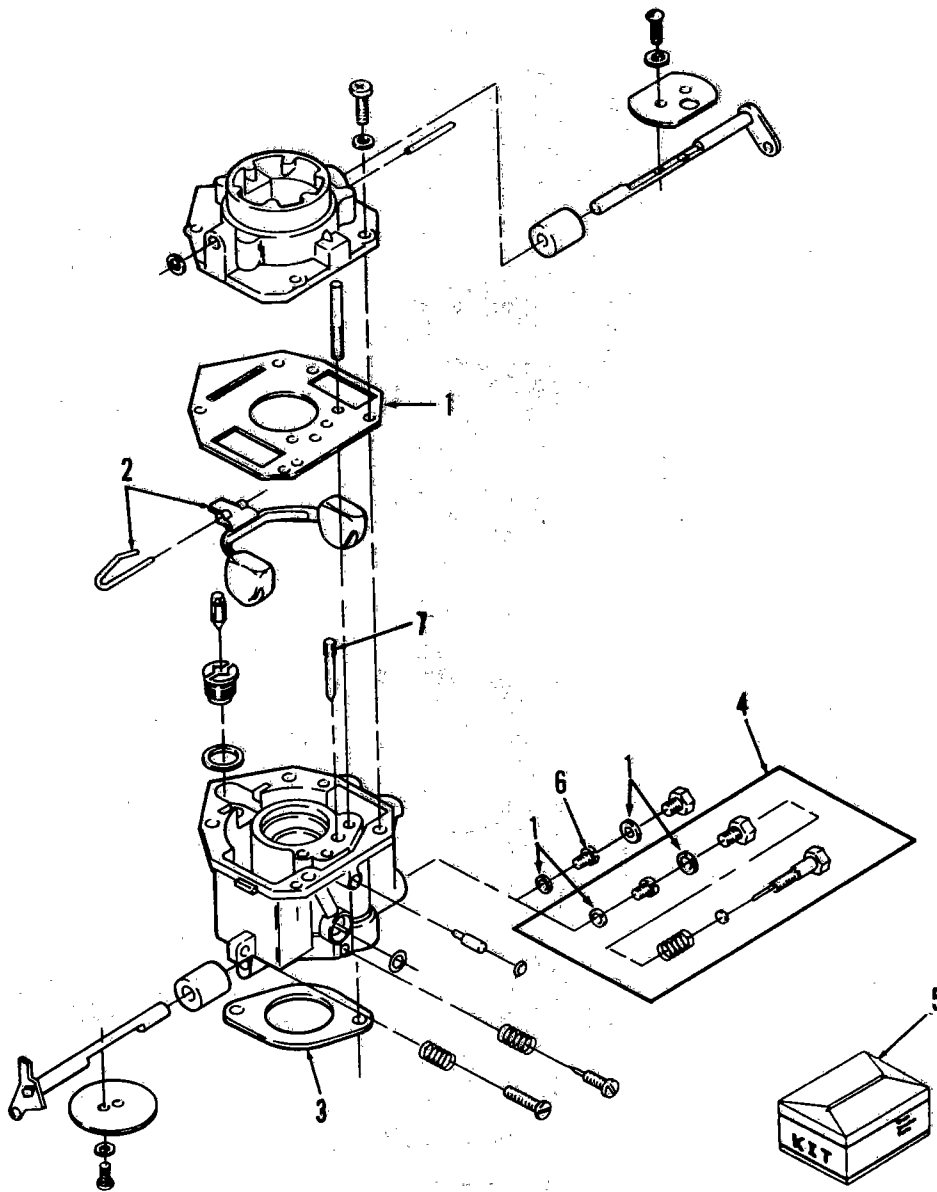
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	149-2187-01	1	Pump, Fuel - Vacuum, Pulse				

**Option 8
Carburetor Components
(Adjustable Main Jet) (Fixed Main Jet)**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Carburetor, Complete (Includes Mounting Gasket)	10	146-0289	1	Valve and Seat Package
	146-0309	1	Adjustable Main Jet	11	146-0209	1	Idle Needle Package
	146-0344	1	Fixed Main Jet	12	146-0208	1	Spring Buoyancy
1	146-0260	1	Choke Shaft Package	13		1	Body (Not Sold Separately)
2	146-0142	4	Screw, Valve Mounting	14	146-0238	1	Jet, Power
3		1	Intake, Air (Not Sold Separately)		146-0316	1	Adjustable (Use on Carburetor 146-0309)
4	146-0247	4	Screw, Body to Intake			1	Fixed (Use on Carburetor 146-0344)
5	146-0220	1	Gasket Kit	15	146-0214	1	Power Needle Package
6			Shaft, Throttle (Package)	16	154-0733	1	Gasket, Carburetor Mounting
	146-0267	1	Use on Carburetor 146-0309	17	154-1977	1	Adapter, Carburetor - Use on Carburetor 146-0344
	146-0259	1	Use on Carburetor 146-0344	18	146-0278	1	Screw, Plug - Fixed Main Jet
7	146-0222	1	Screw, Lever Pin	19	146-0228	1	Kit, Repair
8	146-0262	1	Float Package				
9	146-0261	1	Idle Speed Adjusting Screw Package				

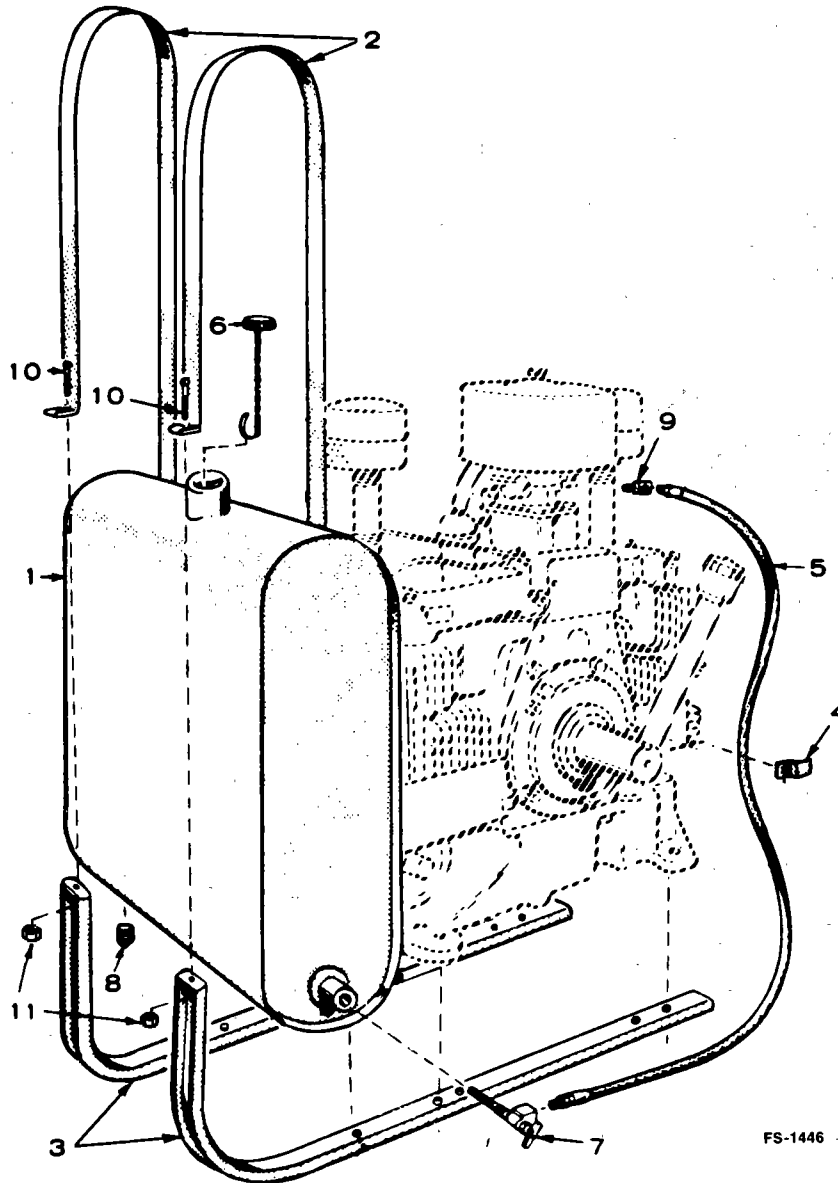
**Option 8A
Carburetor Components (Nikki)
Fixed Main Jet**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	146-0428	1	Carburetor, Complete (Includes Mounting Gasket) With Semi-Automatic Choke	4	146-0327	1	Kit, Variable Jet - Optional (High Altitude Application)
1	146-0438	1	+Kit, Gasket	5	146-0432	1	Kit, Repair (Includes Parts Marked +)
2	146-0437	1	Kit, Float	6	146-0396	1	Jet, Power
3	154-0733	2	+Gasket, Carburetor Mounting	7	146-0425	1	Jet, Idle

+ - Parts Included in 146-0432 Repair Kit.

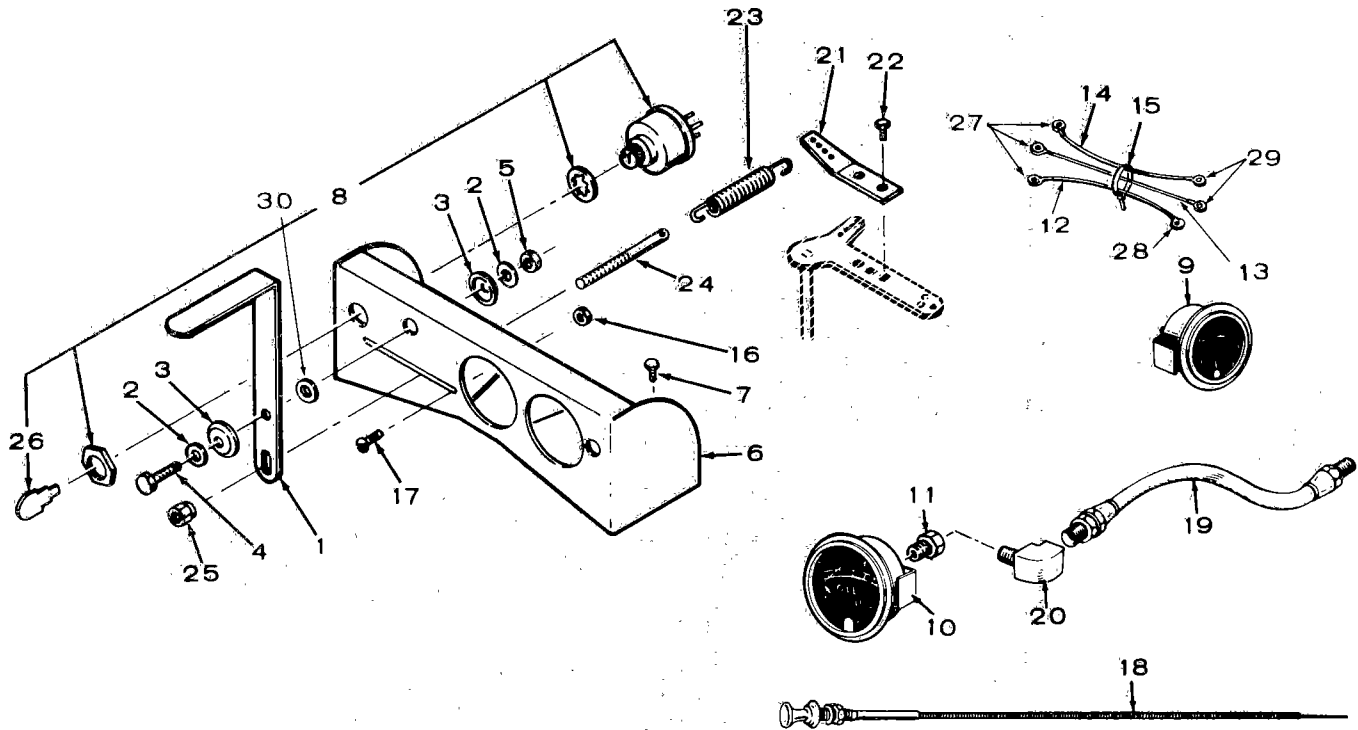
Option 9
Fuel Tank (Side Mounted)



FS-1446

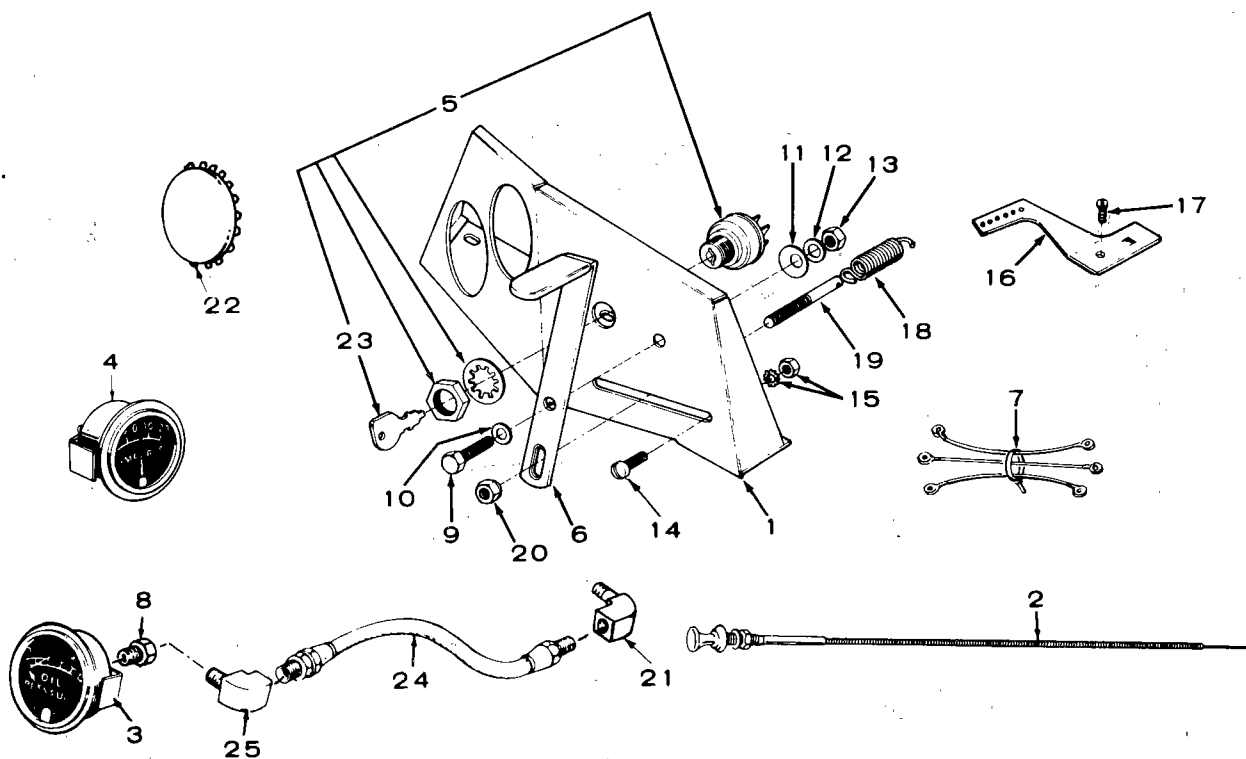
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	159-0597	1	Kit, Fuel Tank - Complete	7	504-0013	1	Valve, Shut-off
1	159-0981	1	Tank, Fuel (Less Cap)	8	505-0057	1	Plug, Tank Drain
2	159-0596	2	Strap, Fuel Tank	9	502-0020	1	Elbow, Carburetor Inlet
3	159-0595	2	Bracket, Fuel Tank	10	813-0108	2	Screw, Machine - Round Head (#10-32 x 1-1/2")
4	134-0599	1	Clip, Fuel Line	11	870-0053	2	Nut, Hex (#10-32)
5	501-0008	1	Line, Fuel				
6	159-0020	1	Cap, Fuel Tank				

Option 10 Control (Engine)



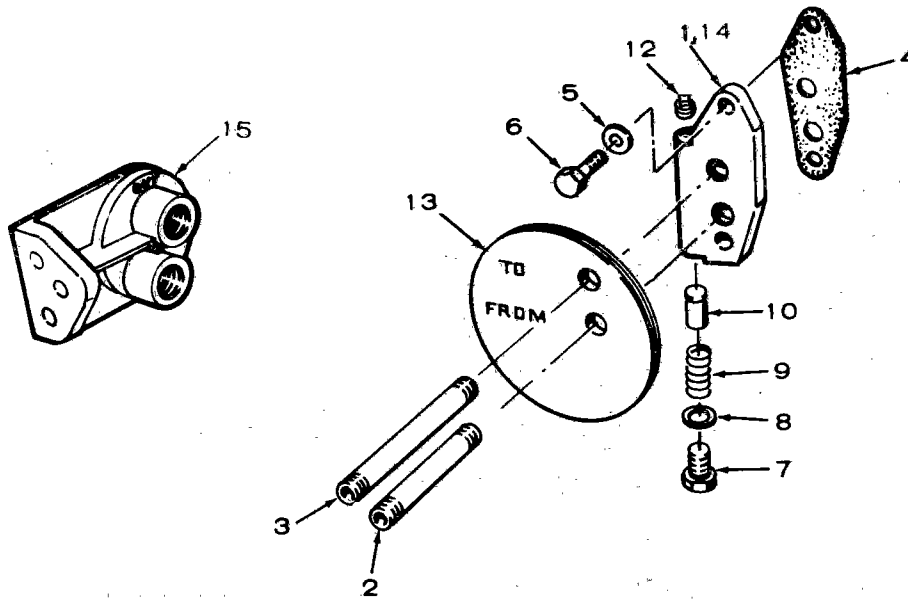
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	152-0198	1	Lever, Throttle Control	15	332-0942	1	Tie, Cable
2	526-0015	2	Washer, Flat (1/4" Screw)	16	870-0131	2	Nut, Hex (10-32)
3	152-0041	2	Washer, Tension - Cup	17	815-0199	2	Screw, Machine - Fillister Head (10-32 x 5/16")
4	800-0005	1	Screw, Cap - Hex Head (1/4-20 x 3/4")	18	153-0097	1	Cable, Choke
5	870-0065	1	Nut, Lock - Hex (1/4-20)	19	501-0004	1	Line, Oil - Flexible
6	301-4041	1	Panel, Control	20	502-0020	1	Elbow, Street (90°)
7	821-0009	2	Screw, Lock - Hex (1/4-20 x 5/16")	21	150-1544	1	Adapter, Governor Arm
8	308-0385	1	Switch and Key, Ignition	22	815-0194	2	Screw, Tapping (10-32 x 3/8")
9	302-0060	1	Ammeter, DC (20-0-20)	23	150-0098	1	Spring, Governor
10	193-0005	1	Gauge, Oil Pressure	24	150-0096	1	Stud, Speed Adjusting
11	502-0017	1	Connector, Inverted Female	25	150-0621	1	Nut, Special - Speed Adjusting Stud
12		1	Lead, Electrical - #16 Wire, 26" Lg.	26	308-0490	1	Key, Ignition Switch
13		1	Lead, Electrical - Switch to Coil - #16 Wire, 13" Lg.	27	332-0325	1	Terminal, Ring
14		1	Lead, Electrical - Switch to Ammeter - #16 Wire, 7" Lg.	28	332-1408	1	Terminal, Faston
				29	332-1993	1	Terminal, Receptacle
				30	526-0016	1	Washer, Flat (1/4" Screw)

Option 10A Control (Engine)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	301-5065	1	Panel, Control	14	815-0199	2	Screw, Machine - Fillister Head (#10-32 x 5/16")
2	153-0097	1	Cable, Choke	15	870-0131	2	Nut, Hex with ET (#10-32)
3	193-0005	1	Gauge, Oil Pressure	16	150-1749	1	Extension, Governor Arm
4	302-0060	1	Ammeter (20-0-20)	17	815-0181	1	Screw, Tapping - Hex Head with ET (#10-32 x 1/2")
5	308-0385	1	Switch, Ignition	18	150-1214	1	Spring, Governor
6	152-0224	1	Lever, Throttle Control	19	152-0177	1	Stud, Speed Adjusting
7	338-1219	1	Harness, Wiring	20	150-0621	1	Nut, Speed Adjusting Stud
8	502-0051	1	Coupling, Female	21	502-0005	1	Elbow, Inverted - Female (90°)
9	800-0005	1	Screw, Cap - Hex Head (1/4-20 x 3/4")	22	517-0009	AR	Plug, Dot Button
10	526-0016	1	Washer, Flat (1/4" Screw)	23	308-0490	1	Key, Ignition Switch
11	152-0041	1	Washer, Tension - Cup	24	501-0009	1	Line, Oil - Flexible (36" Lg)
12	526-0015	2	Washer, Flat (1/4" Screw)	25	502-0065	1	Elbow, Inverted - Male (45°)
13	870-0065	1	Nut, Hex - Self Locking (1/4-20)				

Option 11
Oil Filter (Remote)

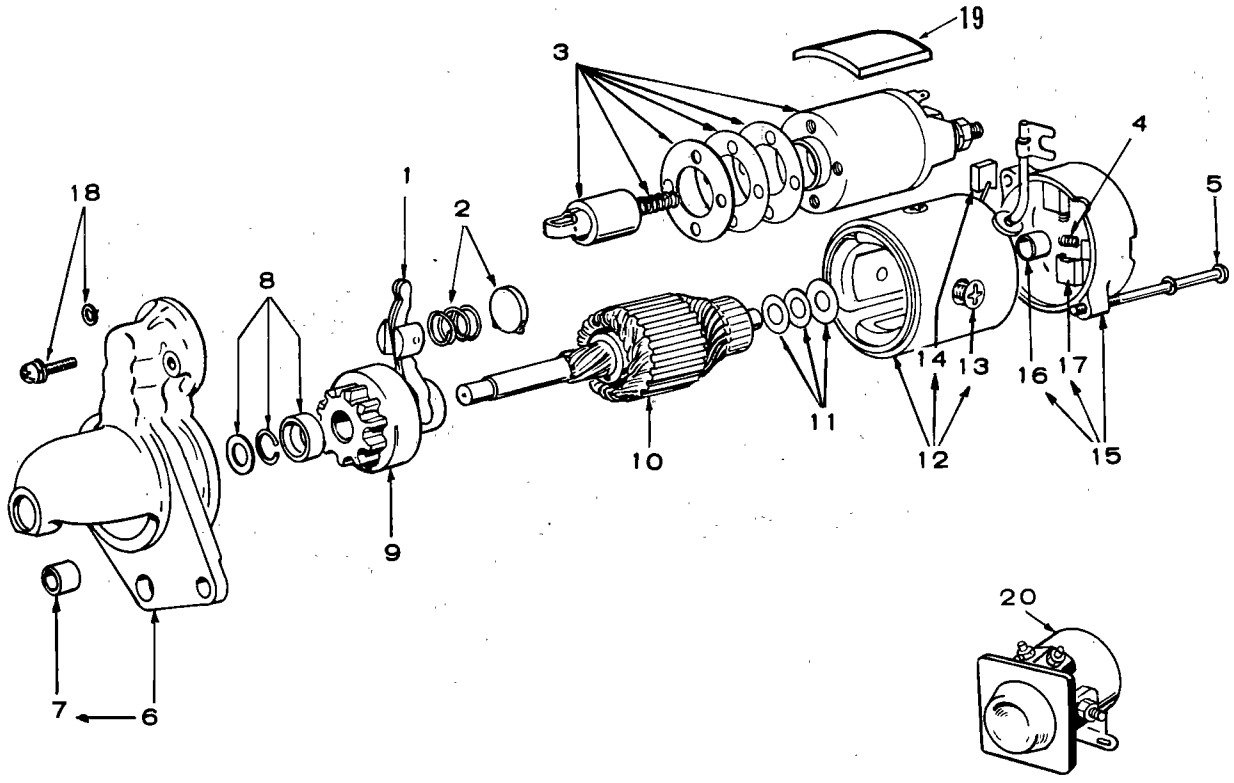


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	122-0369	1	+Adapter, Remote Oil Filter	8	526-0066	1	+Washer, Flat - Copper (3/8" Screw)
2	505-0791	1	Nipple, Pipe (1/4 x 7")	9	120-0140	1	+Spring, By-Pass Valve
3	505-0776	1	Nipple, Pipe (1/4 x 6")	10	120-0398	1	+Valve, By-Pass
4	122-0375	1	Gasket, Adapter	12	505-0057	1	+Plug, Pipe - Square Head
5	526-0065	2	Washer, Flat - Copper (5/16" Screw)	13	508-0184	1	Grommet, Air Seal
6	800-0031	2	Screw, Cap - Hex Head Prior to 6/86 (5/16-18 x 1-1/2")	14	122-0473	1	Adapter Assembly, Remote Oil Filter (Includes Parts Marked +)
	800-0030	2	Screw, Cap - Hex Head Begin 6/86 (5/16-18 x 1-1/4")	15	122-0476	1	Base Assembly, Remote Oil Filter
7	801-0047	1	+Screw, Cap - Hex Head (3/8-24 x 5/8")				

+ - Parts Included in 122-0473 Adapter Assembly.

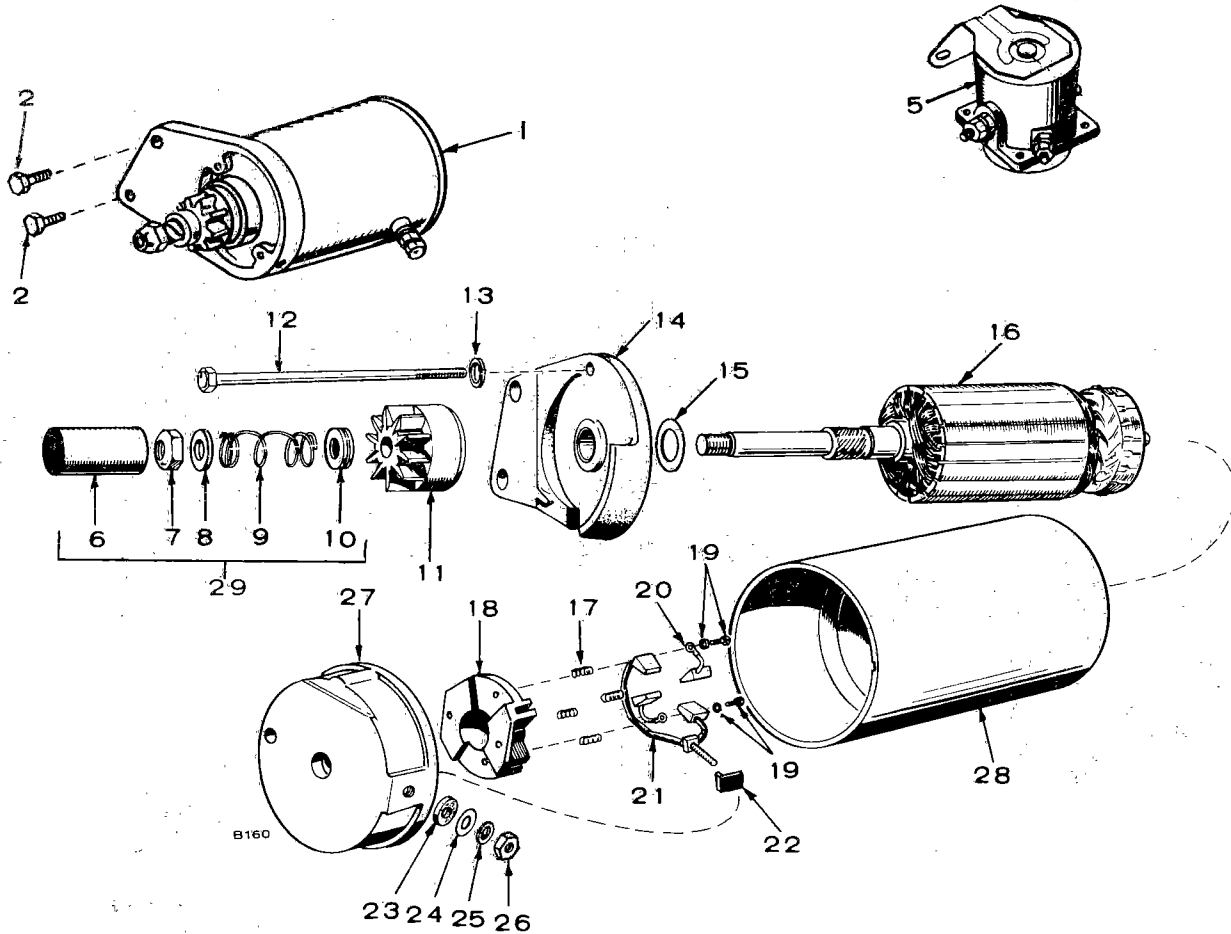
NOTE: Hoses vary with each installation. Purchase locally, hoses with a minimum pressure rating of 150 PSI (1035 kPa).

Option 12
Starter Motor Components - Solenoid Shift



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	191-0915	1	Motor, Starting	11	191-0975	1	Washer Set
1	191-0965	1	Lever Assembly	12	191-0976	1	Yoke Assembly (Includes Brush and Screws)
2	191-0966	1	Spring Set	13	191-0977	4	Screw, Flat Head Machine
3	191-0967	1	Switch Assembly	14	191-0978	1	Brush (+)
4	191-0968	2	Spring, Bush	15	191-0979	1	Rear Bracket Assembly (Includes Bearing and Brush)
5	191-0969	2	Bolt, Through	16	191-0980	1	Bearing, Rear
6	191-0970	1	Bracket Assembly, Front (Includes Bearing)	17	191-0981	1	Brush (-)
7	191-0971	1	Bearing Front	18	191-0982	1	Screw Set
8	191-0972	1	Stopper Set, Pinion	19	191-1076	1	Seal, Starter Air
9	191-0973	1	Clutch Assembly	20	307-0845	1	Relay, Start Solenoid
10	191-0974	1	Armature				

**Option 12A
Start Motor Components (Heavy Duty)**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-0933	1	Motor, Starter (Complete)	20	§	2	†*Brush, Ground
2	815-0570	2	Screw, Cap - Hex Washer Head (5/16-18 x 1")	21	§	1	†*Stud and Brush Assembly, Input
5	307-1031	1	Relay, Start Solenoid	22	§	1	†Brushing, Insulation - Input Stud
6	§	1	xCover, Dust	23	§	1	†Washer, Insulation - Input Stud
7	§	1	xNut, Stop	24	§	1	†Washer, Flat - Input Stud
8	§	1	xWasher, Stop Nut	25	§	1	†Washer, Lock - Input Stud
9	§	1	xSpring, Anti-drift	26	§	1	†Nut, Securing - Input Stud
10	§	1	xSpacer, Dust Cover	27	191-1040	1	Cap Assembly, Commutator (Includes Parts Marked †)
11	191-1036	1	Drive Assembly	28	§	1	Housing, Starter Motor
12	191-1048	2	Screw, Hex Cap - Special	191-1041	1	1	Repair Kit, Brush, Spring and Stud (Includes Parts Marked *)
13	850-0040	2	Washer, Lock (1/4")	29	191-1359	1	Dust Cover Assembly (Includes Parts Marked x)
14	191-1037	1	Cap Assembly, Drive End				
15	191-1038	1	Washer, Armature Thrust - Special				
16	191-1039	1	Armature				
17	§	4	†*Spring, Brush				
18	§	1	†Brush Holder				
19	§	2	†Screw and Lockwasher				

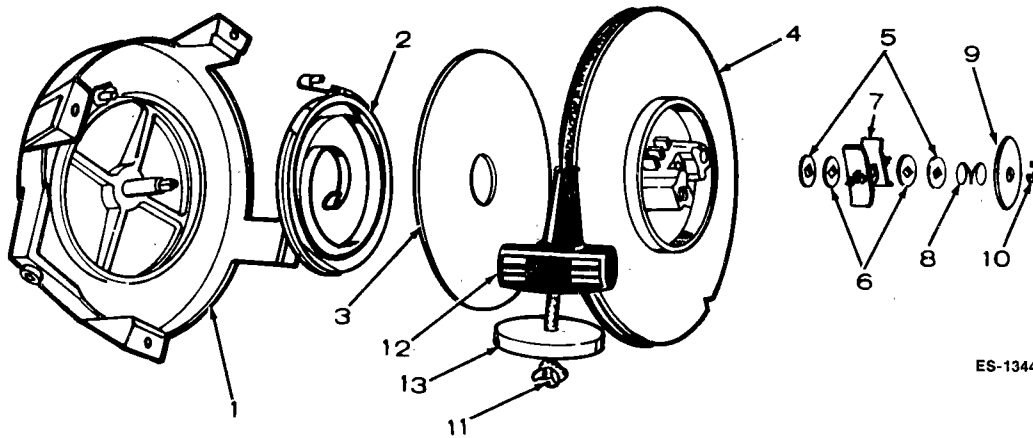
† - Included in the 191-1040 Cap Assembly.

* - Included in the 191-1041 Brush, Spring and Stud Kit.

§ - Not Sold Separately.

x - Included in 191-1359 Dust Cover Assembly.

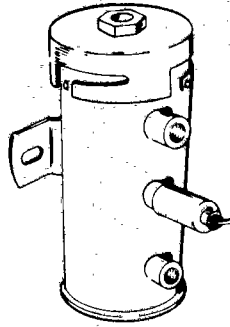
Option 13
Recoil Starter Components



ES-1344

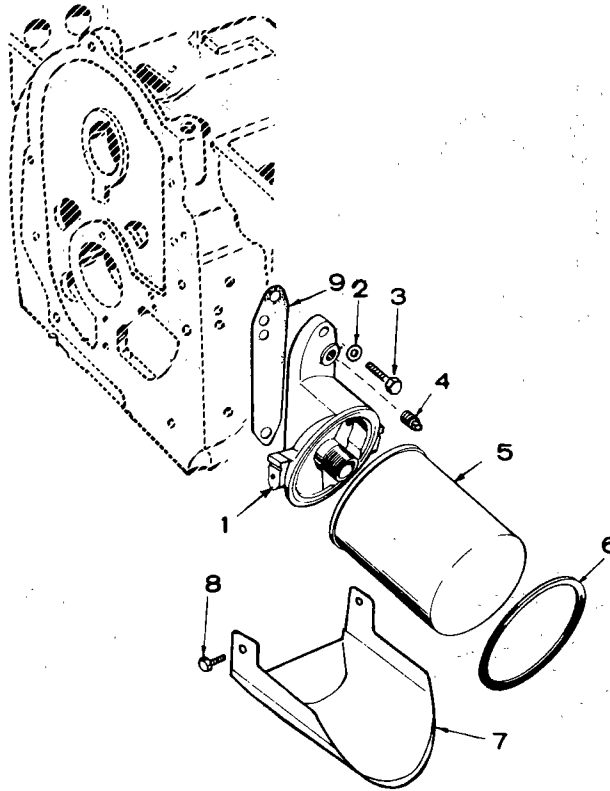
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	192-0392	1	Starter, Recoil - Complete	7	192-0416	1	Shoe Assembly, Friction
1	192-0422	1	Cover, Starter	8	192-0415	1	Spring, Brake
2	192-0421	1	Spring, Rewind	9	526-0142	1	Washer, Flat
3	192-0420	1	Shield Spring	10	518-0205	1	Ring, Snap
4	192-0419	1	Rotor	11	192-0412	1	Cord, Pull
5	192-0418	2	Washer, Steel	12	192-0411	1	Handle, Pull
6	192-0417	2	Washer, Fibre	13	192-0410	1	Insert, Handle

Option 14
Fuel Pump (Electric)



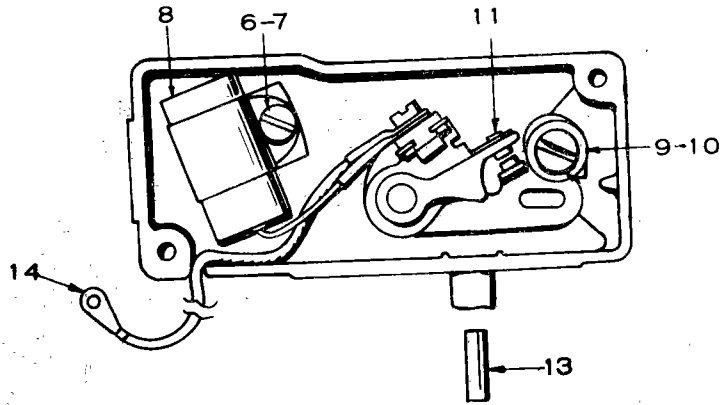
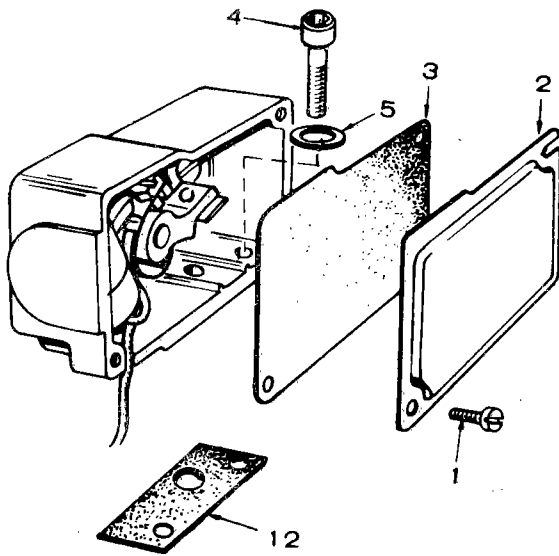
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	149-1828	1	Pump, Fuel

Option 15
Oil Filter (Spin-On)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	122-0320	1	Adapter, Oil Filter	5	122-0645	1	Filter, Oil
2	526-0065	2	Washer, Flat - Copper (5/16" Screw)	6	122-0347	1	Seal, Air - Filter to Housing
3	800-0028	2	Screw, Cap - Hex Head (5/16-18 x 1")	7	122-0360	1	Drain, Oil Filter
4	505-0057	1	Plug, Pipe (1/8")	8	815-0194	2	Screw, Cap - Hex Head w/ET (#10-32 x 3/8")
				9	122-0321	1	Gasket, Oil Filter Adapter

Option 16
Ignition Breaker Box (Side Adjustable)

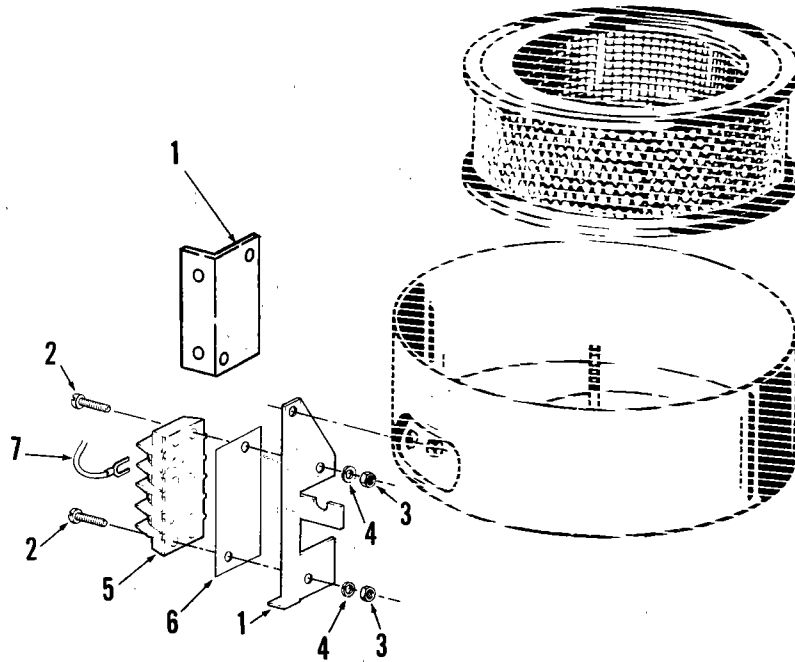


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	160-1158	1	Box Assembly, Breaker (Includes Parts Marked *)
1	815-0358	2	*Screw, Tapping - Hex Head, Slotted (#8-32 x 5/16")
2	160-1149	1	*Cover, Breaker Box
3	160-1148	1	*Gasket, Cover
4	802-0034	2	*Screw, Cap - Socket Head (1/4-20 x 3/4")
5	850-0038	2	*Washer, Lock - Spring (1/4")
6	815-0403	1	*Screw, Tapping - Pan Head (#8-32 x 5/16")
7	850-0025	1	*Washer, Lock - Spring (#8)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8	312-0069	1	*Condenser, Ignition
9	870-0221	1	*Nut, Hex with External Tooth Lockwasher (#8-32)
10	815-0405	1	*Screw, Machine - Pan Head, Cross-Recessed (#8-32 x 1/2")
11	160-1154	1	*Point Set, Breaker
12	160-1150	1	*Gasket
13	160-1151	1	Plunger, Breaker Points
14	336-2378	1	Lead, Breaker Box to Coil
	160-1161	1	Tune-Up Kit (Includes Points and Condenser)

* - Parts Included in 160-1158 Breaker Box Assembly.

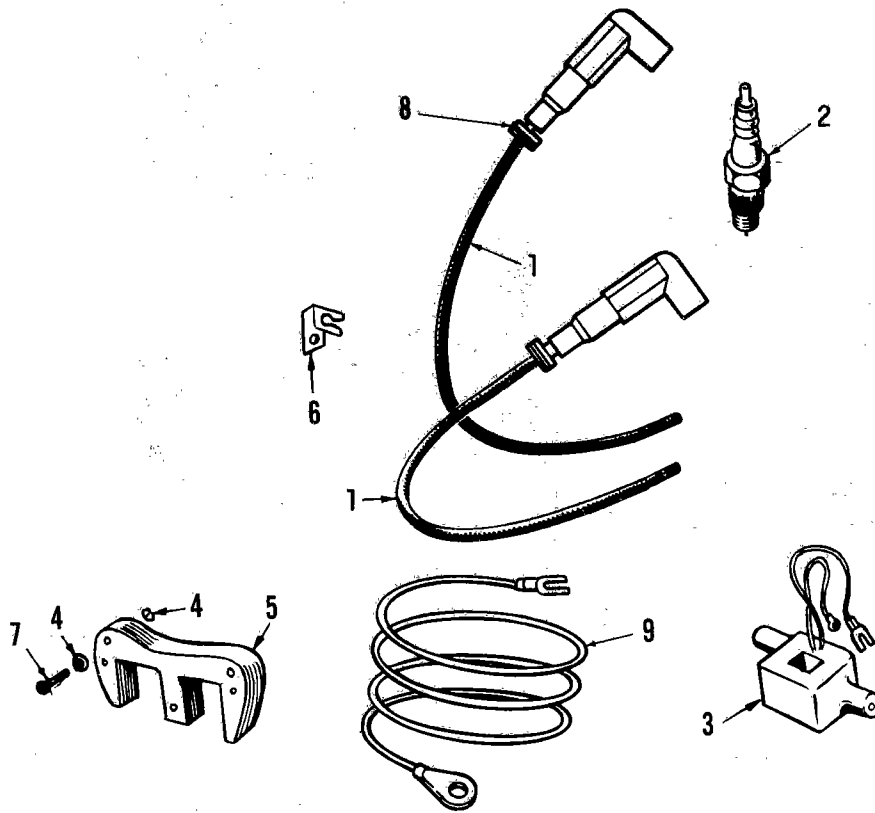
Option 17
Support and Terminal Block Assembly



ES-1481

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	140-1644	1	Support, Air Cleaner Units with Air Cleaner Housing	4	853-0005	2	Washer, Lock - ET (#8)
	301-5936	1	Units without Air Cleaner Housing	5	332-0537	1	Block Terminal (4 Place)
2	812-0081	2	Screw, Machine - Round Head (#8-32 x 5/8")	6	332-2208	1	Strip, Marker
3	860-0008	2	Nut, Hex (#8-32)	7	336-4385	1	Lead Assembly
					334-0028	1	Alternator (Use Bulk #16 Wire)
							Ignition

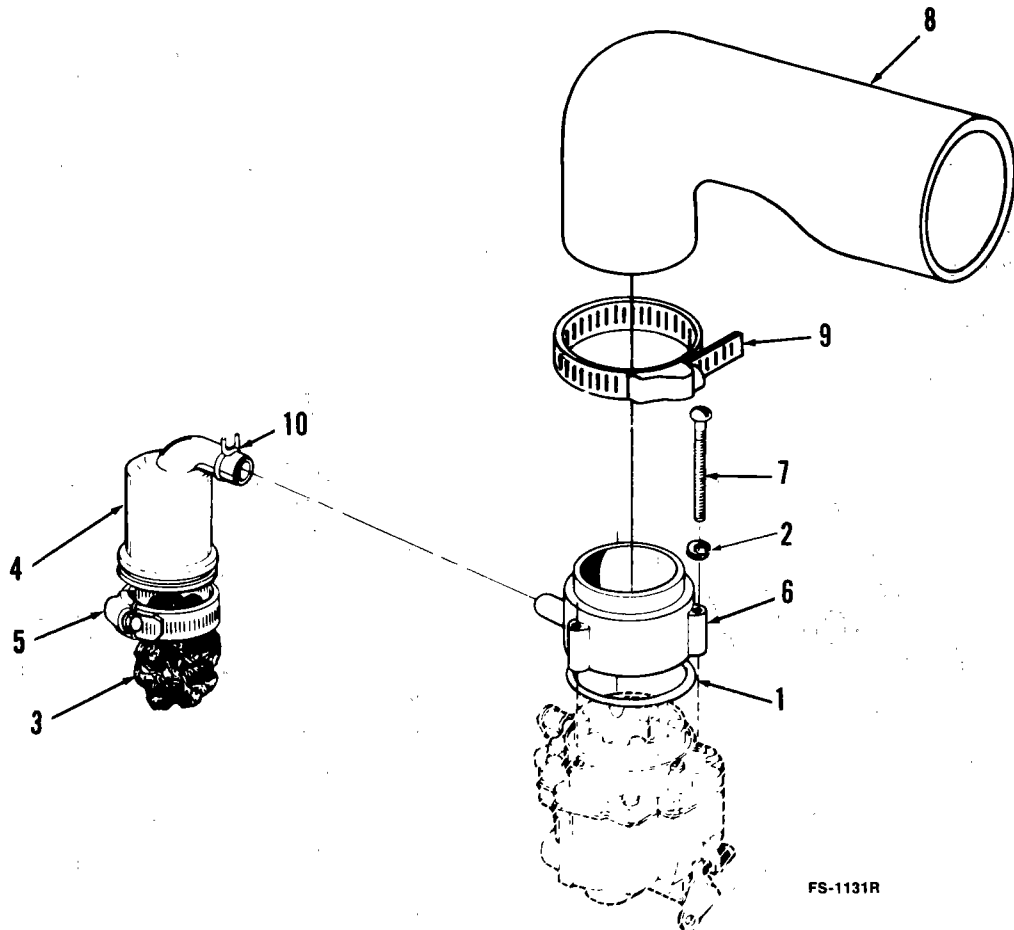
Option 18
Ignition (Magneto)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	160-1306	1	Stator Assembly (Includes Parts Marked *)	5	160-0749	1	*Pole Shoe, Stator - Magneto
1	167-1595	2	Cable, Spark Plug R.H.	6	167-0188	4	Clip, Spark Plug Cable
2	167-0298	2	Spark Plug	7	815-0259	2	Screw, Hex Cap
3	160-1305	1	*Coil, Magneto Stator	8	508-0095	2	Grommet, Rubber
4	526-0015	2	Washer, Flat - Stator	9	336-8466	1	Lead, Magneto to Ignition Breaker
	526-0184	2	1/4" Screw				
			17/64 ID x 5/8 OD x .1345" Thk)				

* - Parts Included in the 160-1306 Stator Assembly.

Option 19 Remote Air Cleaner Adapter

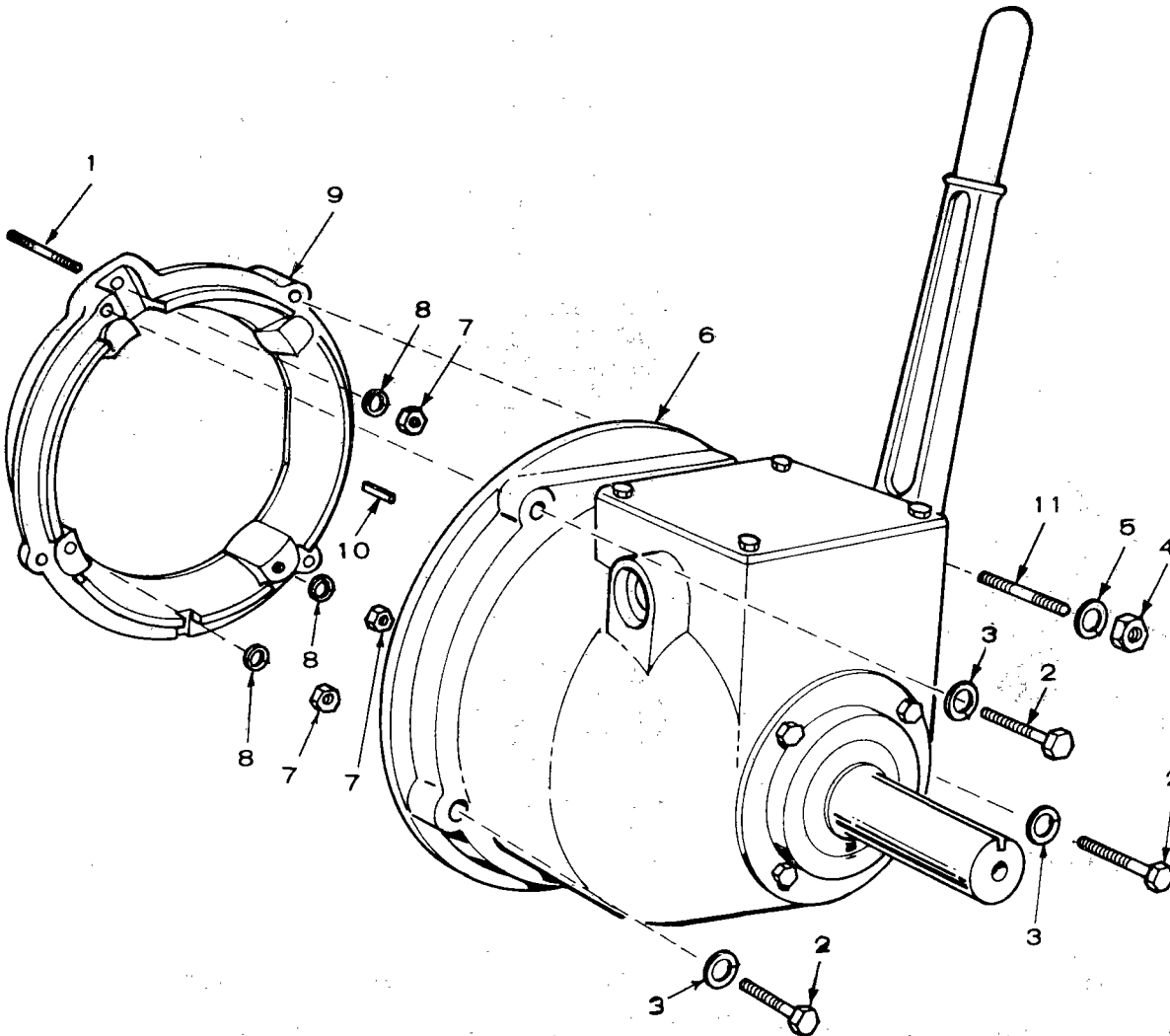


FS-1131R

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	140-1915	1	Kit, Remote Air Cleaner Adapter (Includes Parts Marked *)	6	140-1714	1	*Adapter, Carburetor Air Intake
				7	813-0106	3	*Screw, Machine - Round Head (#10-32 x 1-1/8")
1	509-0145	1	Seal, O-Ring	8	140-1428	1	*Elbow, Air Intake
2	850-0030	3	*Washer, Lock - Spring (#10)	9	503-0274	1	*Clamp, Hose - Air Intake
3	123-1417	1	*Filter, Breather Tube	10	503-0171	1	*Clamp, Hose
4	123-1539	1	*Tube, Crankcase Breather	11	517-0151	1	*Plug, Dot Button - Blower Housing Air Hole
5	503-0107	1	Clamp, Breather Tube				

* - Parts Included in 140-1915 Remote Air Cleaner Adapter Kit.

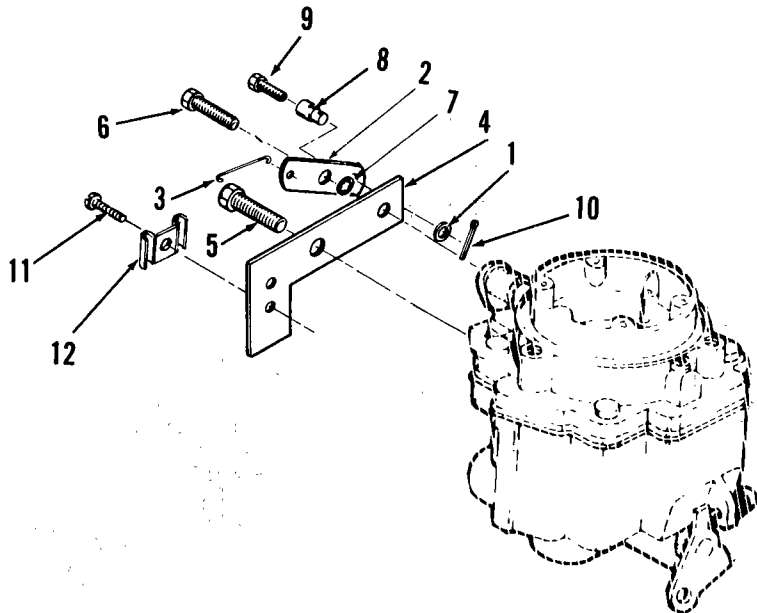
Option 20
Clutch



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	190-0289	1	Kit, Clutch Assembly (Includes All Parts Except Crankshaft)	5	850-0050	1	Washer, Lock - Spring (3/8")
1	520-0739	3	Stud (3/8-24 x 3/8-16 x 3")	6	190-0288	1	*Clutch Assembly
2	800-0075	3	Screw, Cap - Hex Head (7/16-14 x 2")	7	104-0091	3	Nut, Hex - Special
3	850-0055	3	Washer, Lock - Spring (7/16")	8	850-0050	3	Washer, Lock - Spring (3/8")
4	104-0091	1	Nut, Hex - Special	9	190-0171	1	Adapter, Clutch
				10	515-0041	1	Key, Drive - Special
				11	520-0738	1	Stud (3/8-24 x 3/8-16 x 4")

* - For Components, check nameplate and contact nearest Rockford Clutch Dealer.

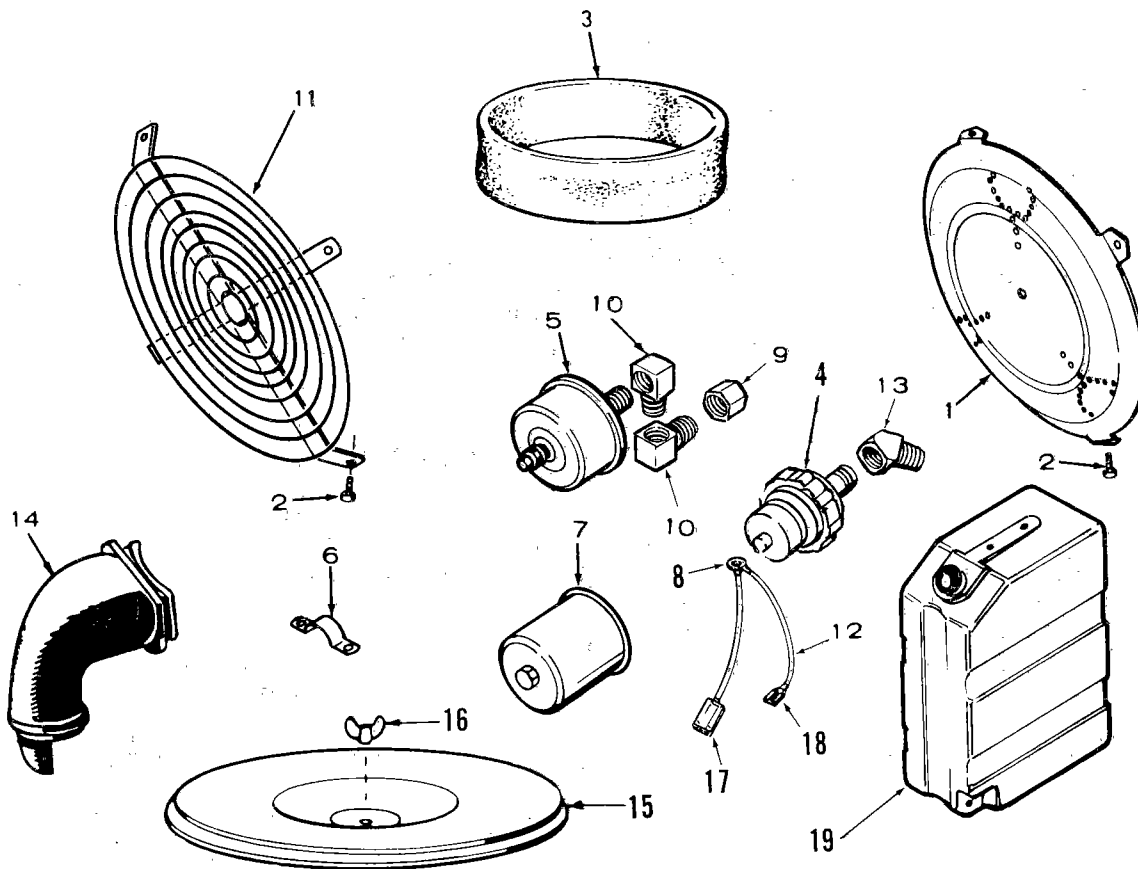
Option 21
Choke Control (Front Pull)



FS-1131R

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	526-0140	1	Washer, Flat (#10 Screw)	8	152-0155	1	Swivel, Choke Lever
2	153-0523	1	Lever, Choke	9	815-0693	1	Screw, Machine - Hex Head (#8-32 x .31")
3	153-0500	1	Link, Choke	10	516-0059	1	Pin, Cotted
4	153-0524	1	Bracket, Choke Cable	11	815-0359	1	Screw, Tapping - Slotted Hex Washer Head (#10-32 x 7/8")
5	821-0002	1	Screw, Cap - Hex Washer Head (#10-32 x 1/4")	12	153-0514	1	Clip, Choke Cable
6	815-0480	1	Screw, Shoulder (#10-32 x .34")				
7	854-0010	1	Washer, Lock - IT (#10)				

Miscellaneous Options



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	134-3213	1	Guard, Flywheel - Stationary	11		1	Guard, Flywheel - Stationary (Wire Type)
2	815-0378	4	Screw, Tapping - Hex Head (#14 x 1/2")		134-3527	1	Use without PTO
3	140-1218	1	Wrapper, Filter Element - Dry Type		134-4134	1	Use with PTO
4			Switch, Low Oil Pressure	12		1	Lead Assembly, Low Oil Pressure Switch - #16 Wire, 12" Lg (2)
	309-0237	1	Close at 8-10 PSI at Lowering Pressure	13	502-0053	1	Elbow, Street - 45°
	309-0510	1	Open at 4.5-7.5 PSI on Increasing Pressure	14	140-1169	1	Tube, Air Intake with Debris Lip
5	193-0108	1	Sender, Electric Oil Pressure Gauge	15	140-1747	1	Cover, Air Cleaner - Moisture Proof
6	403-1021	2	Bracket, Lifting	16	140-1750	1	Knob, Air Cleaner - Moisture Proof
7	122-0406	1	Filter, Oil (With Hex Nut)	17	332-1408	1	Terminal, Receptacle
8	332-0152	1	Terminal, Ring	18	332-1279	1	Terminal, Spade
9	502-0175	1	Adapter, Pipe	19	159-1150	1	Tank, Fuel - Plastic (3.5 Gallon Capacity)
10	502-0020	2	Elbow, Street - 90°				

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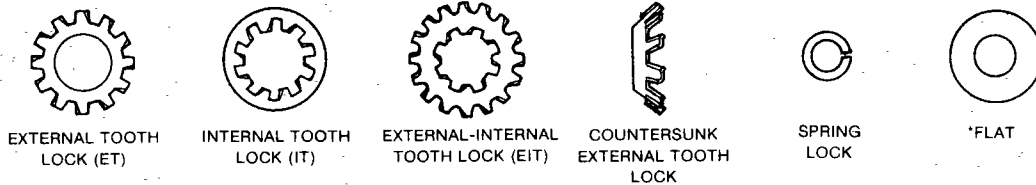
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HARDWARE IDENTIFICATION

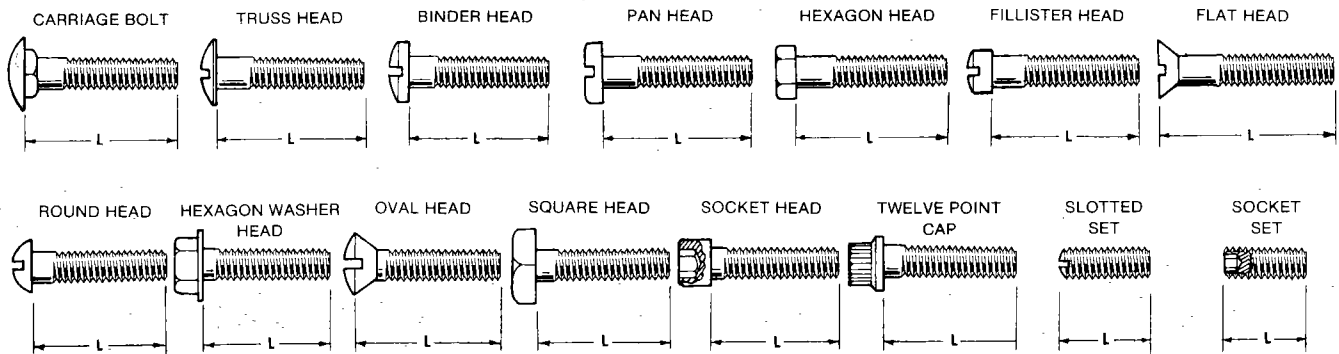
Illustrated hardware items are only for identification purposes. All hardware items listed throughout this parts catalog are steel SAE grade five (5) or lower (zinc plated with clear chromate dip) unless parts description indicates differently. All dimensions are in inches.

WASHER TYPES



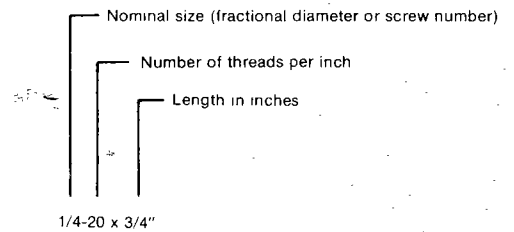
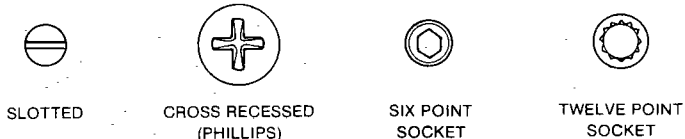
* - Flat washer dimensions given are: Inside Diameter (ID), Outside Diameter (OD) and Thickness (Thk).

BOLT AND SCREW TYPES



L - Measure length between these points.

INTERNAL DRIVE TYPES



NUT TYPES





Onan Corporation
1400 73rd Avenue N.E.
Minneapolis, Minnesota 55432

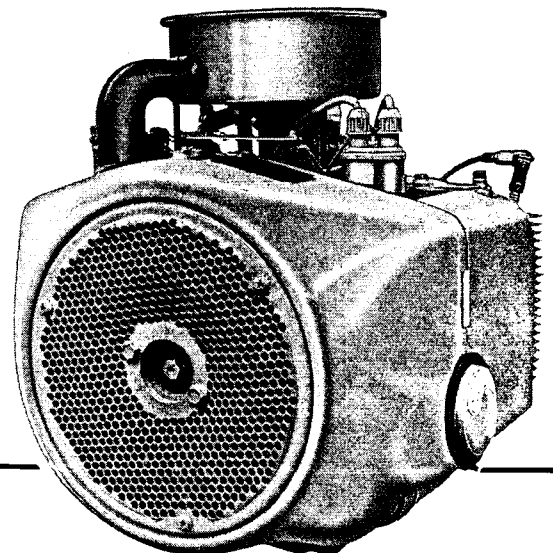
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Onan

Parts Manual

B48M-GA018
**Industrial
Engines**



965-0255
11-88 (Spec A)
Replaces 8-85 (Spec A)
Printed in U.S.A.

General Information

For parts or service, contact the dealer from whom you purchased this equipment or refer to your Nearest Authorized Onan Parts and Service Center.

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.

The diagram shows a rectangular nameplate with two circular mounting holes at the top. The Onan logo is prominently displayed in the upper left. Below the logo is a large rectangular box labeled "MODEL AND SPEC NO.". Underneath that is a smaller rectangular box labeled "SERIAL NO.". The bottom right corner of the nameplate is shown as being folded over, revealing a second identical nameplate underneath.

M-1149

For handy reference, insert "YOUR" nameplate information in the spaces above.

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Introduction

This catalog applies to the Standard B48M-GA018 Engines. Parts are arranged in groups of related items. Each illustrated part is identified by a reference number corresponding to the same reference number in the parts list for that group. Parts illustrations are typical. Using the MODEL and SPEC NO. from the nameplate, select the Parts that apply to your engine. Unless otherwise mentioned in the description, parts are interchangeable between models. Right and left sides are determined by facing the blower end (front) of the engine.

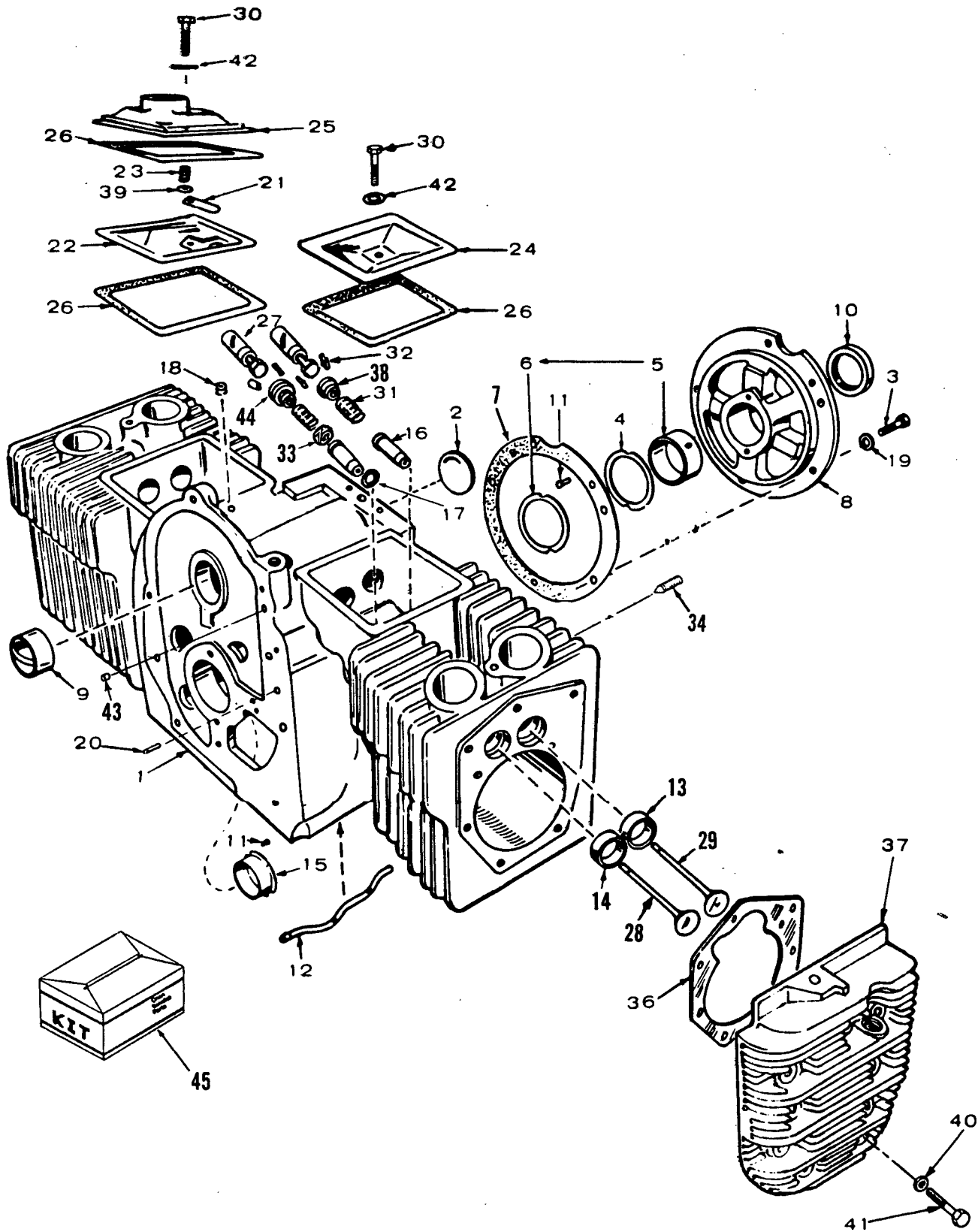
WARNING

This engine is not designed or intended for use in any type of aircraft. Use of this engine in aircraft may result in engine failure and cause serious bodily injury, death and/or property damage.

NOTICE !

Items referenced as optional indicate part is factory installed and may not be applicable to all models. For field conversions additional parts are usually required.

Cylinder Block

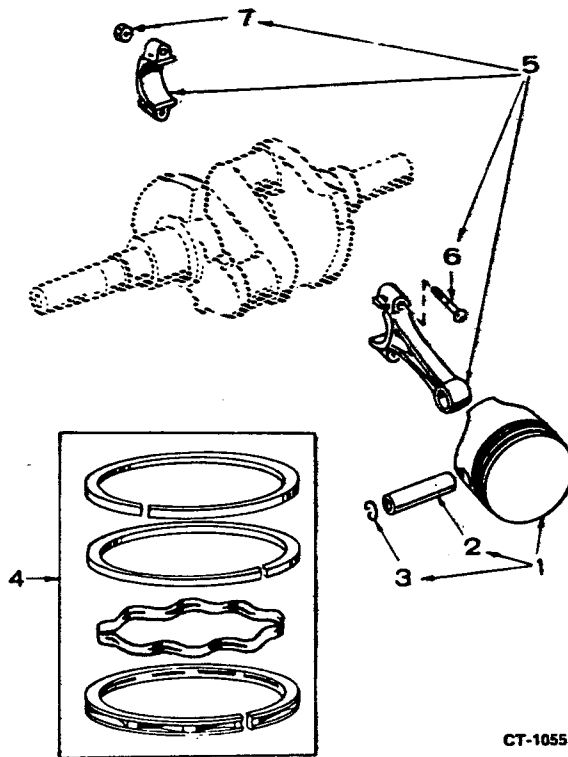


Cylinder Block

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Block Assembly, Cylinder (All Replacement Cylinder Block Assemblies Use Intake Valve Seals and Include Parts Marked *)	17	110-0068	2	*Gasket Intake Valve Guide Vacuum Port
	110-3148	1	Engines with Standard Rear Bearing Plate	18	149-1299	1	Tube - Early Models
	110-3151	1	Engines with 4 Boss Bearing Plate		517-0120	1	Plug, Breather Hole - Later Models
	110-3154	1	Engines with SAE A or SAE B Rear Bearing Plate (Does Not Include Rear Bearing Plate)	19	850-0050	5	*Washer, Lock - Spring (3/8")
2	517-0048	1	*Plug, Welch (1-5/8") Camshaft Opening	20	516-0141	2	*Pin, Gear Cover Alignment
3	800-0051	5	*Screw, Cap - Hex Head (3/8-16 x 1-1/4")	21	123-1175	1	Reed, Breather Valve
4	104-0776	AR	*Shim, Crankshaft End Play (.005")	22	123-1173	1	Baffle, Breather Valve
5			Bearing, Crankshaft - Rear (Includes Thrust Washer)	23	123-1174	1	Spring, Breather Valve
	101-0450	1	*Standard	24	110-1879	1	Cover, Valve - RH
	101-0450-02	1	.002" Undersize	25	110-2274	1	Cover, Valve - LH
	101-0450-10	1	.010" Undersize	26	110-1921	3	Gasket, Valve Cover
	101-0450-20	1	.020" Undersize	27		4	Tappet, Valve Standard
	101-0450-30	1	.030" Undersize		115-0006	4	.002" Oversize
6	104-0575	2	*Washer, Thrust		115-0006-02	4	.005" Oversize
7	101-0415	1	*Gasket, Bearing Plate	28	110-2368	2	Valve, Intake
8			Plate, Bearing - Rear	29			Valve, Exhaust Standard
	101-0439	1	*Standard		110-1955	2	Standard
	101-0551	1	Optional - 4 Boss		110-2438	2	Stellite
	101-0430	1	Optional - SAE B	30	800-0010	2	Screw, Cap - Hex Head (1/4-20 x 1-3/4")
	101-0437-01	1	Optional - SAE A	31	110-0539	4	Spring, Valve
9	101-0405	2	*Bearing, Camshaft	32	110-0639	8	Lock, Valve Spring
10	509-0041	1	Seal, Oil - Crankshaft Rear	33	509-0168	2	Seal, Valve - Intake (Optional)
11	516-0072	4	*Pin, Drive - Bearing Stop	34	803-0071	2	Screw, Socket - Set (3/8-16 x 5/8")
12	120-0735	1	*Tube, Oil - Cylinder Block	36			Gasket, Cylinder Head Standard
13			Insert, Valve Seat - Exhaust		110-2287	2	Standard
	110-1824	2	*Standard		110-3181	2	Optional (Graphoil)
	110-1824-02	2	.002" Oversize	37			Head, Cylinder
	110-1824-05	2	.005" Oversize		110-2564	1	Right Side
	110-1824-10	2	.010" Oversize		110-2563	1	Left Side
	110-1824-25	2	.025" Oversize	38	110-0904	4	Roto Cap - Valve
14			Insert, Valve Seat - Intake	39	526-0018	1	Washer, Flat (1/4" Screw)
	110-0197	2	*Standard	40	526-0122	18	Washer, Flat (5/16" Screw)
	110-0197-02	2	.002" Oversize	41			Screw, Cap - Hex Head (Special 5/16-18 x 1-5/8")
	110-0197-05	2	.005" Oversize		800-0540	12	2" Long
	110-0197-10	2	.010" Oversize	42	800-0571	6	Washer, Flat - Copper (1/4" Screw)
	110-0197-25	2	.025" Oversize		526-0063	2	Plug, Core Hole <i>exhaust</i>
15			Bearing, Crankshaft - Front Flanged	43	517-0067	1	Washer, Intake Valve Spring Retainer (Optional)
	101-0432	1	*Standard	44	110-0893	2	Kit, Gasket
	101-0432-02	1	.002" Undersize	45			Valve Grind/Carbon Removal (Standard Head Gaskets)
	101-0432-10	1	.010" Undersize		168-0140	1	Valve Grind/Carbon Removal (Graphoil Head Gaskets)
	101-0432-20	1	.020" Undersize		168-0183	1	Gasket Kit, Complete (Standard Head Gaskets)
	101-0432-30	1	.030" Undersize		168-0153	1	Gasket Kit, Complete (Graphoil Head Gaskets)
16			Guide, Valve		168-0187	1	Gasket Kit, Complete (Graphoil Head Gaskets)
			Engines w/o Intake Valve Seals				
	110-1807	2	Intake				
	110-1807	2	Exhaust				
			Engines with Intake Valve Seals				
	110-1807	2	*Exhaust				
	110-3161	2	*Intake				

* - Parts Included in the Cylinder Block Assembly.

Piston and Rod



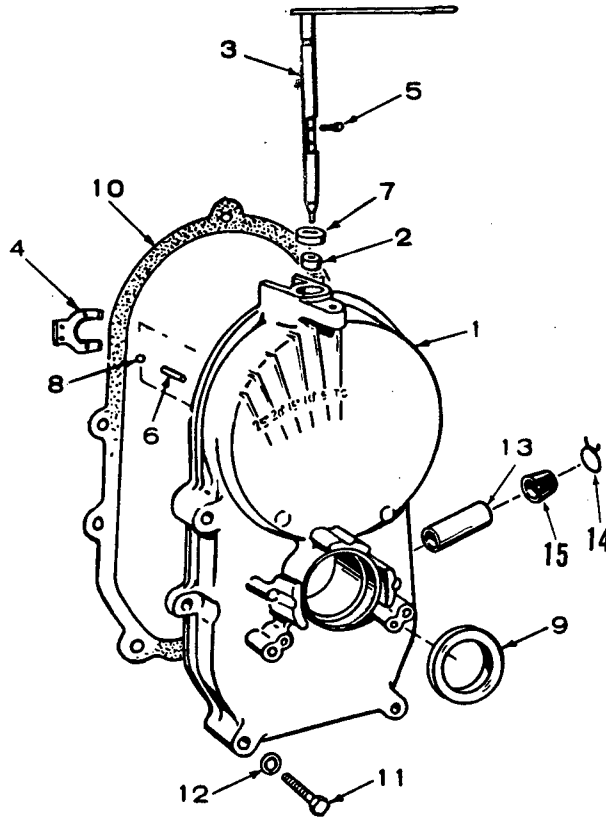
*Piston & Rings Kit
new
112-0264
(Thin)*

CT-1055

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Piston and Pin (Includes Retaining Rings)	5			Rod, Connecting (Includes Bolt and Nut)
<i>112-0264</i>	112-0186	2	Standard		114-0257	2	Standard
	112-0186-05	2	.005" Oversize		114-0257-10	2	.010" Undersize
	112-0186-10	2	.010" Oversize		114-0257-20	2	.020" Undersize
	112-0186-20	2	.020" Oversize		114-0257-30	2	.030" Undersize
	112-0186-30	2	.030" Oversize	6	114-0240	4	Bolt, Connecting Rod (Special)
	112-0186-40	2	.040" Oversize	7	870-0302	4	Nut, Hex - Crown Lock (5/16-24)
2	112-0229	2	Pin, Piston				
3	518-0311	4	Ring, Retaining				
4			Ring Set, Piston				
	113-0189	2	Standard				
	113-0189-05	2	.005" Oversize				
	113-0189-10	2	.010" Oversize				
	113-0189-20	2	.020" Oversize				
	113-0189-30	2	.030" Oversize				
	113-0189-40	2	.040" Oversize				

113-0310 Standard (new style) (Thin)

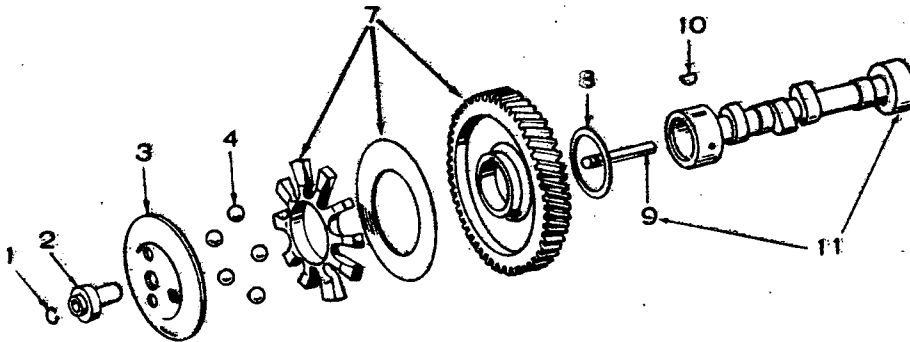
Gear 180



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	103-0738	1	Gearcase Assembly (Includes Parts Marked *)	9	509-0040	1	*Seal, Oil - Crankshaft
2	510-0105	1	*Bearing, Governor Shaft	10	103-0408	1	Gasket, Gearcase Mounting
3	150-1470	1	*Shaft and Arm, Governor	11	800-0032	4	Screw, Cap - Hex Head 5/16-18 x 1-3/4"
4	150-1187	1	*Yoke, Governor Shaft		800-0545	1	5/16-18 x 2-3/4" (Special)
5	815-0046	2	*Screw, Machine - Pan Head (#8-32 x 3/8")	12	526-0065	5	Washer, Flat - Copper (5/16" Screw)
6	516-0130	1	*Pin, Dowel - Governor Cup Stop	13	149-1299	1	*Tube, Vacuum Port
7	509-0008	1	*Seal, Oil - Governor Shaft	14	503-0301	1	*Clamp, Vacuum Port Cap
8	510-0014	1	*Ball, Bearing - Governor Shaft	15	149-1321	1	*Cap, Vacuum Port

* - Parts Included in 103-0738 Gearcase Assembly.

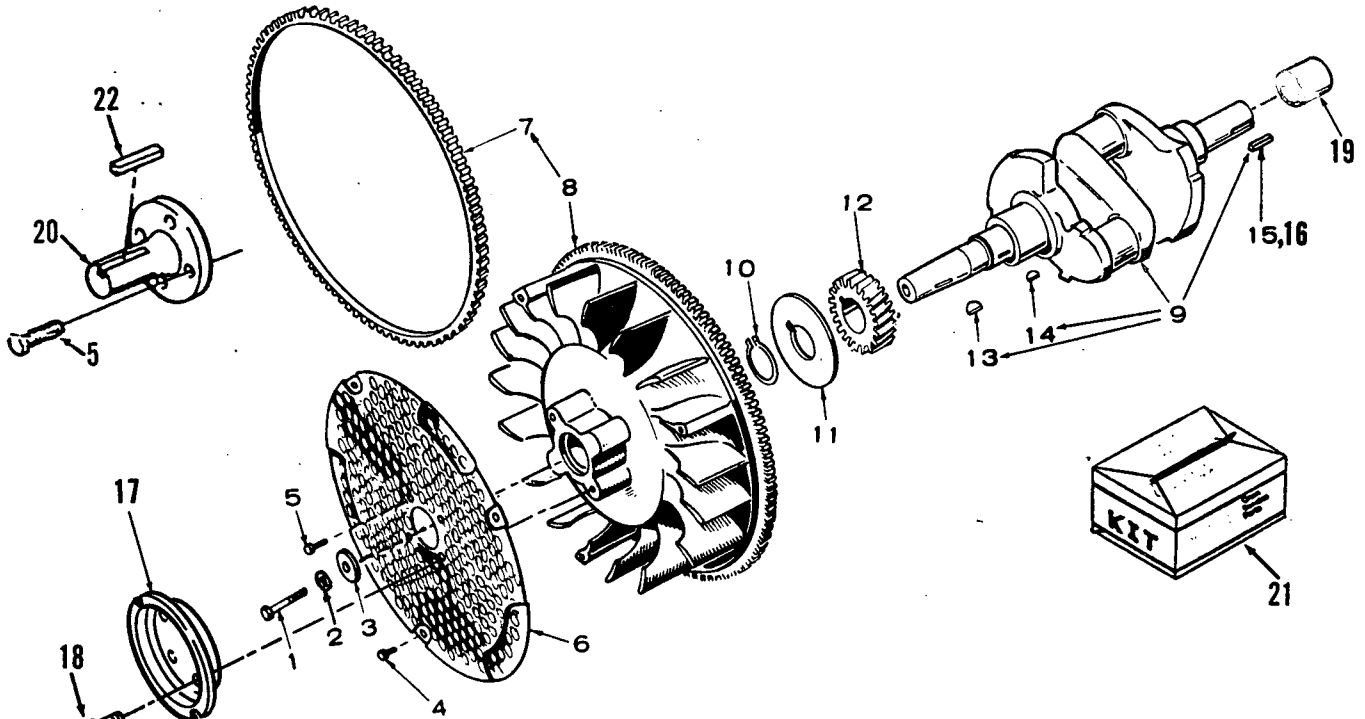
Camshaft



C-1084

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-0078	1	Ring, Retaining	7	105-0332	1	Gear Assembly, Camshaft (Includes Plate and Spacer)
2	150-1519	1	Hub, Governor Cup	8	105-0541	1	Washer, Thrust (Special)
3	150-1520	1	Cup, Governor	9	150-0875	1	Pin, Center
4			Ball, Governor	10	515-0001	1	Key, Woodruff - Camshaft Gear
	510-0015	5	5 Ball Governor	11	105-0402	1	Camshaft (Includes Center Pin)
	510-0015	10	10 Ball Governor				

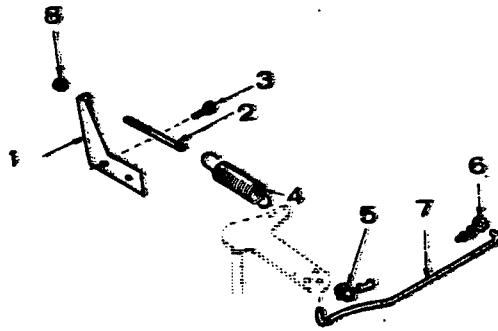
Crankshaft and Flywheel



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	104-0170	1	Screw, Cap - Hex Head (Special)	10	518-0014	1	Ring, Retaining
2	850-0055	1	Washer, Lock - Spring (7/16")	11	104-0043	1	Washer, Gear Retaining (Special)
3	526-0017	1	Washer, Flat (7/16" Screw)	12	104-0032	1	Gear, Crankshaft
4	815-0400	3	Screw, Machine - Truss Head (1/4-20 x 1/2")	13	515-0227	1	*Key, Flywheel
5	821-0014	4	Screw, Cap - Hex Head Locking (5/16-18 x 1/2")	14	515-0001	1	*Key, Crankshaft Gear
6	134-3920	1	Guard, Flywheel	15	515-0103	1	*Key, Crankshaft Stub
7	104-0779	1	Gear, Ring	16	515-0198	1	Key, Crankshaft Stub
8	104-0779	1	Gear, Ring	17	192-0398	1	Sheave, Rope - Engines with Magneto Ignition
	134-4734	1	Flywheel (Includes Ring Gear) With Imbalance Weight - Hi Flo (Identify by 1/2" Drilled Holes on Backside of Flywheel)	18	821-0016	4	Screw, Cap - Hex Washer Head (5/16-18" x 3/4")
	160-1301	1	Engines with Magneto Ignition - Electric Start - Hi Flo	19	190-0267	1	Bearing, Sleeve - Units use Clutch Housing
	160-1307	1	Engines with Magneto Ignition - Recoil Start - Hi Flo	20	190-0546	1	PTO Shaft - (2" Pilot) 1-7/16" Diameter
	104-0614	1	Clutch, Flywheel		190-0687	1	1" Diameter
9			Crankshaft (Includes Parts Marked *)	21			Kit, Shaft
	104-1351	1	1.125" Dia. Stub		190-0577	1	Front PTO, 1-7/16" Diameter
	104-1353	1	1-7/16" Dia. Stub		541-0222	1	PTO, 1" Diameter
	104-1352	1	Use with Clutch Flywheel	22	515-0007	1	Key, Machine (1/4 x 2")
	104-1359	1	1.530" Dia. Stub				
	104-1349	1	9 Tooth Spline				
	104-1028	1	1.626" Dia. Stub - Tapered (No Keys)				
	104-1348	1	1.125" Dia. Stub - Tapered				

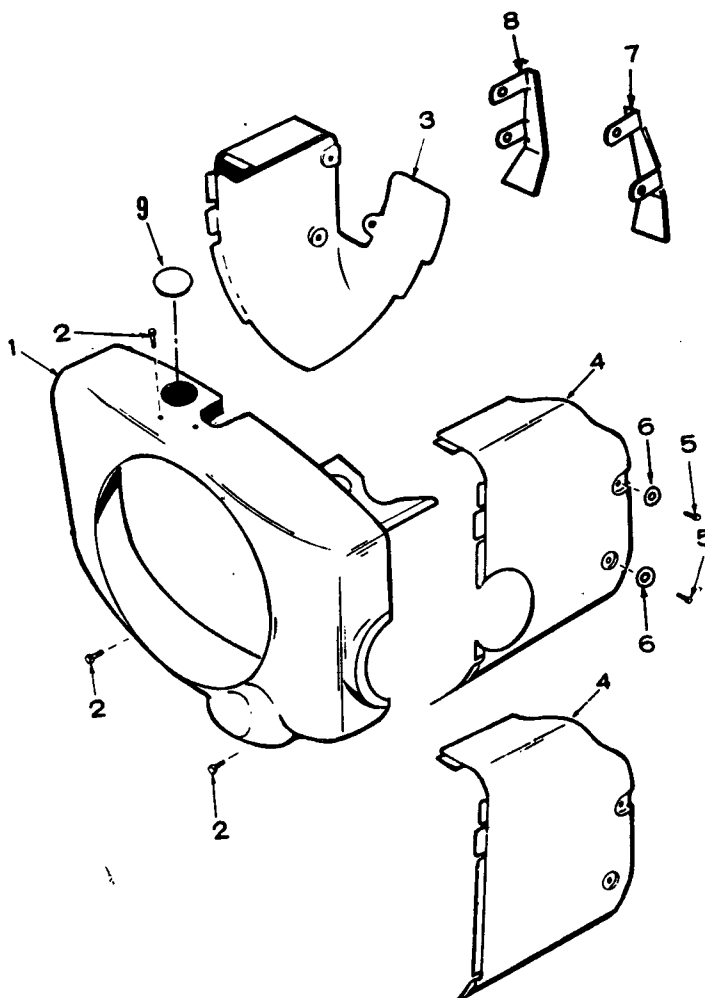
* - Parts Included in Crankshaft Kit.

Governor



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-1433	1	Bracket, Governor Control	5	870-0278	1	Clip, Retaining - Control Rod
2	150-0694	1	Stud, Adjusting	6	518-0004	1	Clip, Retaining - Control Rod
3	82I-0010	2	Screw, Cap Hex Head Locking (1/4-20 x 1/2")	7	150-1350	1	Rod, Control
4	150-1214	1	Spring, Governor	8	870-0131	1	Nut, Governor Adjusting

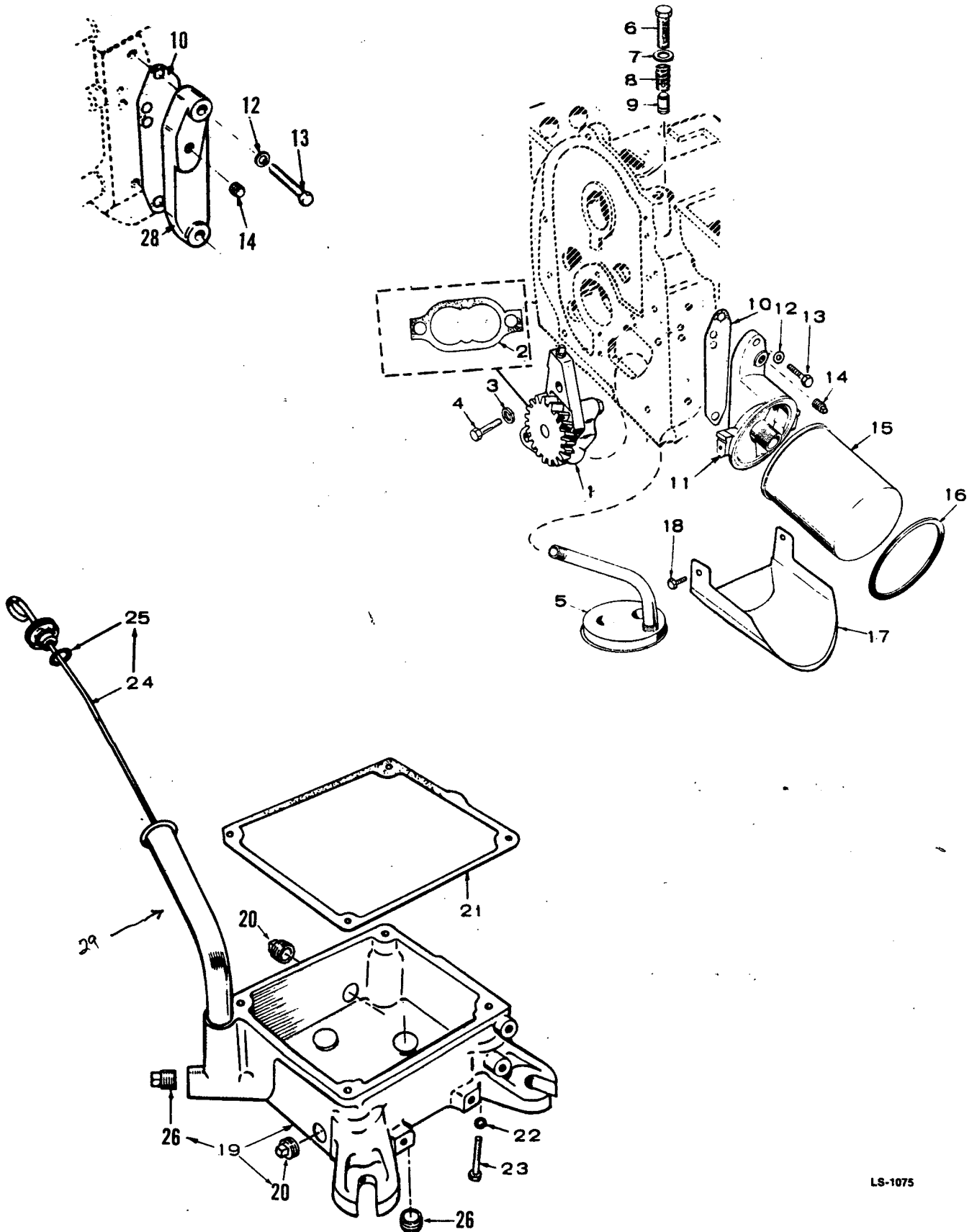
Air Housing



M-1463

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	134-3749	1	Housing, Blower Sets Without Oil Filter	5	815-0290	4	Screw, Cap - Hex Head (1/4-20 x 5/8")
	134-4400	1	Sets With Oil Filter	6	526-0021	4	Washer, Flat (1/4" Screw)
2	815-0261	3	Screw, Cap - Hex Head (1/4-20 x 7/16")	7	134-3582	1	Baffle, Cylinder Head - Right Side
3	134-4371	1	Housing, Cylinder Air - Left Side	8	134-3583	1	Baffle, Cylinder Head - Left Side
4			Housing, Cylinder Air (Right Side)	9	517-0129	1	Plug, Hole (Optional)
	134-3400	1	Use Sets without Oil Filter - Free Flo				
	134-3518	1	Use Sets with Oil Filter - Free Flo				

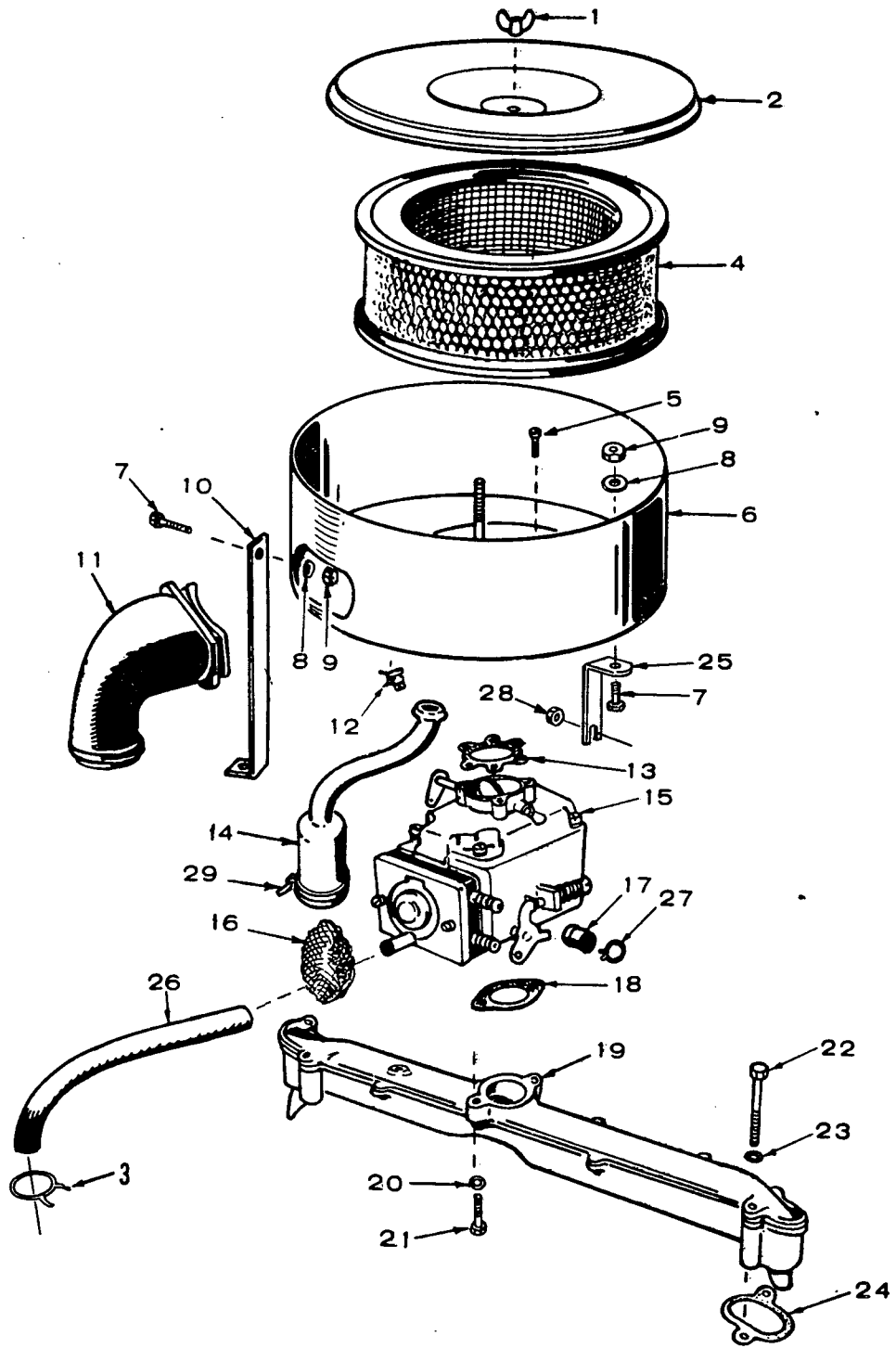
Oil System



Oil System

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	120-0491	1	Pump, Oil (Components Not Sold Separately)	13	800-0028	2	Screw, Cap - Hex Head (5/16-18 x 1")
2	120-0161	1	Gasket Kit, Oil Pump	14	505-0057	1	Plug, Pipe
3	850-0040	2	Washer, Lock Spring (1/4")	15	122-0645	1	Filter, Oil
4	800-0007	2	Screw, Cap - Hex Head (1/4-20 x 1")	16	122-0347	1	Seal, Air-Filter to Housing
5	120-0713	1	Cup, Intake - Oil Pump	17	122-0360	1	Drain, Oil Filter
6	801-0050	1	Screw, Cap - Hex Head (3/8-24 x 1")	18	815-0194	2	Screw, Cap - Hex Head w/ET (#10-32 x 3/8")
7	526-0066	1	Washer, Flat - Copper (3/8" Screw)	19	102-0850	1	Base, Oil
8	120-0140	1	Spring, Bypass Valve	20	505-0056	2	Plug, Pipe (1/2") Square Head - Oil Drain
9	120-0398	1	Plunger, Bypass Valve	21	102-1200	1	Gasket, Oil Base
10	122-0321	1	Gasket, Oil Filter Adapter Use with Adapter 122-0320	22	850-0050	4	Washer, Lock - Spring (3/8")
	122-0375	1	Use with Cover 122-0438	23	800-0056	4	Screw, Cap - Hex Head (3/8-16 x 2-1/2")
11	122-0320	1	Adapter, Oil Filter	24	123-1292	1	Cap and Indicator, Oil Fill
12	526-0065	2	Washer, Flat - Copper (5/16" Screw)	25	509-0142	1	Gasket, Oil Fill Cap ("O" Ring)
				26	505-0937	2	Plug, Socket Head (3/8")
				28	122-0438	1	Cover, Oil Filter Pad - Optional
				2A	123-1191	1	oil Fill Tube

Fuel System

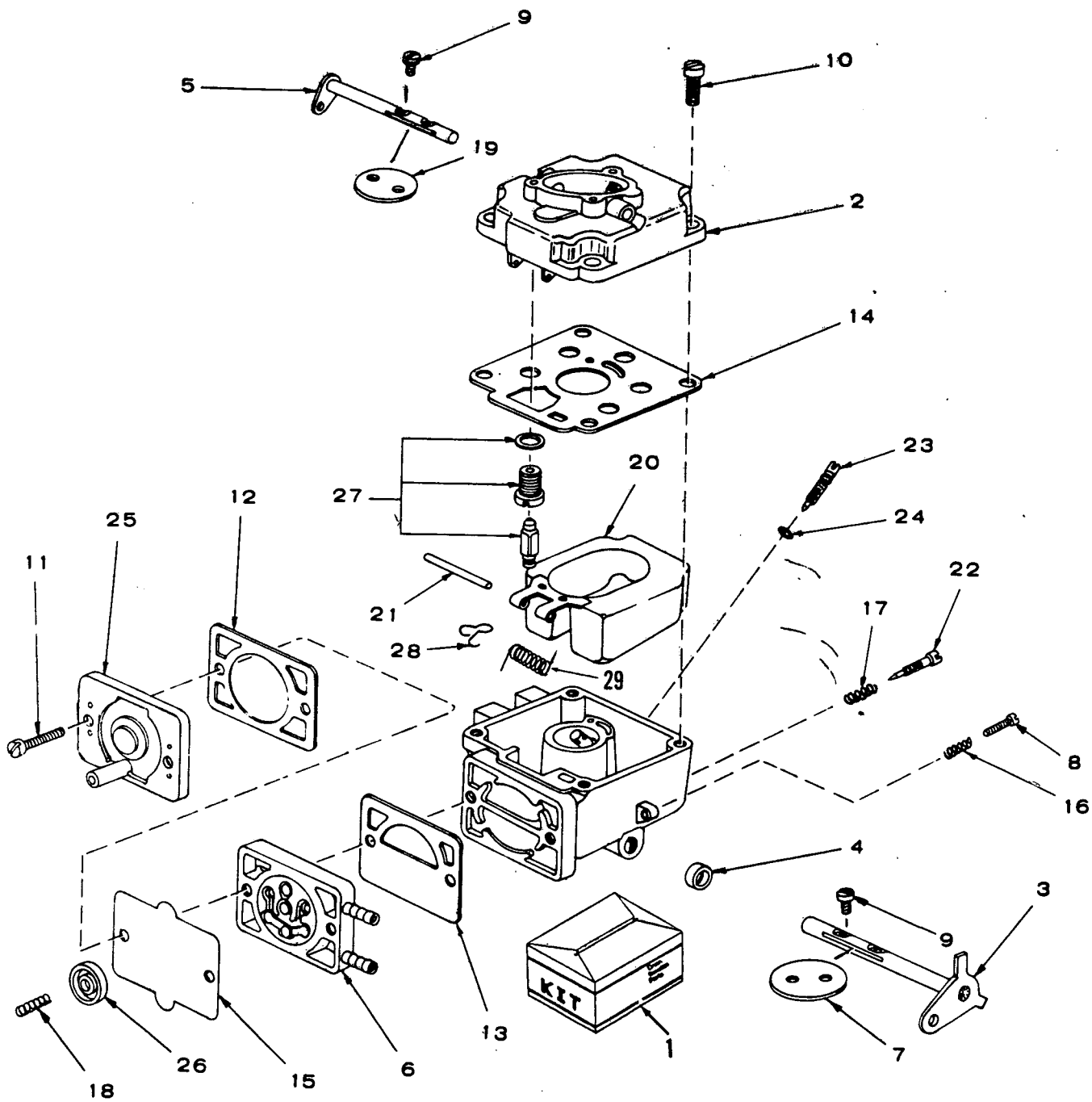


Fuel System

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	865-0020	1	Nut, Wing (1/4-20)	16	123-1417	1	Filter, Breather Tube
2	140-1168	1	Cover, Air Cleaner	17	149-1321	1	Cap, Fuel Outlet
3	503-0731	2	Clamp, Hose (1/2")	18	145-0438	1	*Gasket, Carburetor Mounting
4	140-1216	1	Filter, Air (Paper)	19	154-2666	1	Manifold, Intake
5	815-0463	3	Screw, Machine - Slotted Head (#10-32 x 3/8")	20	850-0040	2	Washer, Lock - Spring (1/4")
6	140-1213	1	Housing, Air Cleaner	21	800-0023	2	Screw, Cap - Hex Head (1/4-20 x 1-3/8")
7	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")	22	800-0033	4	Screw, Cap - Hex Head (5/16-18 x 2")
8	853-0013	3	Washer, Lock - ET (1/4")	23	850-0045	4	Washer, Lock - Spring (5/16")
9	862-0001	2	Nut, Hex (1/4-20)	24	154-1744	2	Gasket, Manifold to Block
10	140-1198	1	Support, Air Cleaner (4.4" Lg)	25	140-1313	1	Support, Air Cleaner - Front (2.37" Lg)
11	140-1549	1	Tube, Air Intake	26	503-0707	1	Hose, Fuel
12	518-0328	2	Clip, Cable	27	503-0301	1	*Clamp, Hose
13	140-1215	1	*Gasket, Air Cleaner to Carburetor	28	870-0257	1	Nut, Hex - Self-lock (5/16-18)
14	123-1277	1	Tube, Crankcase Breather	29	332-0941	1	Tie, Breather Tube
15	142-0660	1	Carburetor Assembly (See Separate Page for Components) (Includes Parts Marked *)				

* - Parts Included in 142-0660 Carburetor Kit Assembly.

Carburetor (With Integral Jet Pump) Components (142-0600)

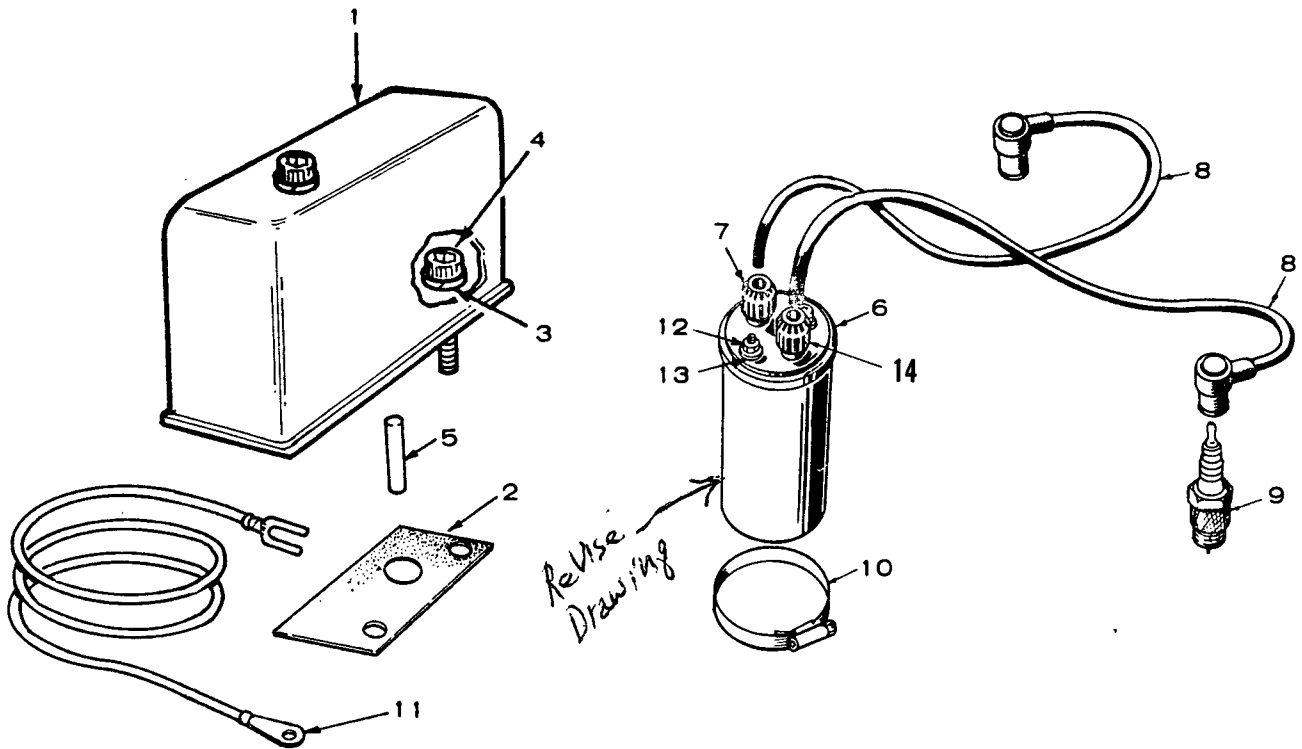


**Carburetor (With Integral Fuel Pump) Components
(142-0660)**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	142-0660	1	Carburetor, Complete (With Integral Fuel Pump)	12	142-0541	1	†Gasket, Pump Cover
	142-0571	1	*Gasket Set (Includes Parts Marked †)	13	142-0542	1	†Gasket, Inlet Plate
- /	142-0570	1	Repair Kit (Includes Parts Marked *)	14	142-0572	1	†Gasket, Carburetor Body
		1	Body, Lower - Not Sold Separately	15	142-0555	1	†Diaphragm, Fuel Pump
2		1	Body, Upper - Not Sold Separately	16	142-0544	1	Spring, Throttle Stop
3	142-0534	1	*Shaft, Throttle	17	142-0282	1	*Spring, Idle Needle
4	142-0535	1	†"O" Ring, Throttle Shaft Seal	18	142-0545	1	*Spring, Fuel Pump
5	142-0536	1	Shaft, Choke	19	142-0546	1	Fly, Choke
6	142-0537	1	*Valve Assembly, Reed Fuel Pump	20	146-0380	1	Float Assembly (Includes Assist Spring)
7	142-0538	1	Fly, Throttle	21	142-0548	1	*Shaft, Float
8	142-0064	1	Screw, Throttle Stop	22	142-0016	1	*Needle, Idle
- 9	142-0334	4	*Screw, Fly to Shaft	23	142-0549	1	Needle, Power
10	142-0539	4	*Screw, Upper to Lower Body	24	142-0550	1	†"O" Ring, Seal - Power Needle
- 11	142-0540	2	Screw, Pump Cover to Body	25	142-0551	1	Cover, Pump
				- 26	142-0552	1	*Plate, Drive - Fuel Pump
				27	142-0553	1	*Valve, Assembly, Float
				28	142-0554	1	Clip, Retaining - Float Valve
				29	146-0379	1	Spring, Float Assist

† - Parts Included in 142-0571 Gasket Set.
* - Parts Included in 142-0570 Repair Kit.

Ignition

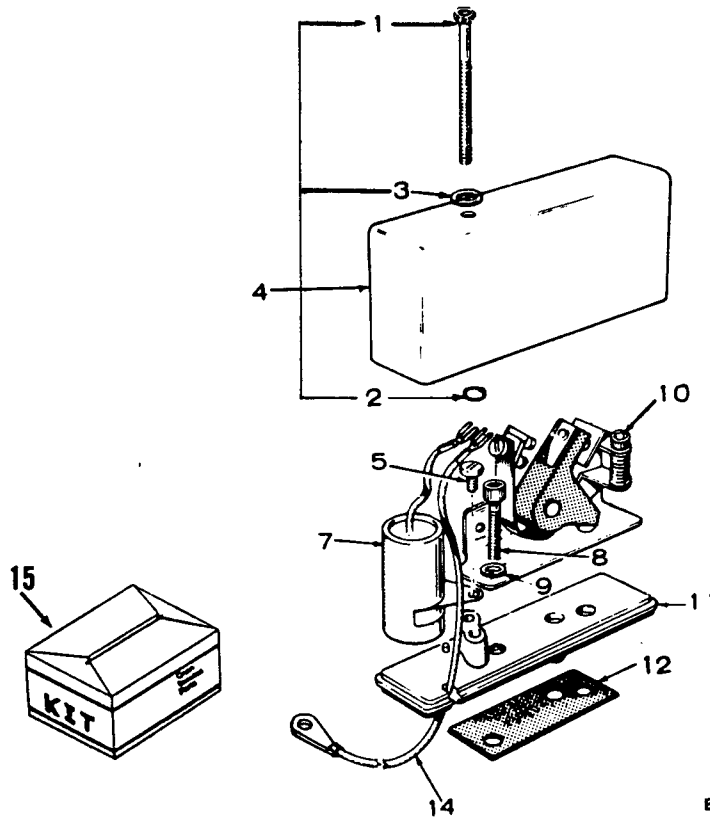


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	160-1303	1	Box Assembly, Breaker (See Separate Page for Components) (Includes Mounting Gasket)
2	160-1150	1	Gasket, Breaker Box Mounting
3	850-0038	2	Washer, Lock - Spring (1/4")
4	802-0034	2	Screw, Socket Head (1/4-20 x 3/4")
5	160-1151	1	Plunger, Breaker Points
6	166-0772	1	Coil, Ignition
7	166-0604	2	Cap, Coil Terminal (Part of Coil)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8	167-1602	2	Cable, Spark Plug
9	167-0298	2	Plug, Spark
10	503-0311	1	Clamp, Coil
11	336-2378	1	Lead, Breaker Box to Coil
12	166-0554	2	Nut, Hex (Special)
13	850-2005	2	Washer, Lock - Spring (Metric)
14	166-0614	2	Bushing, Rubber (Inside of Cap 166-0604)

160-1376 1 Kit, Electronic
 (converts Breaker
 Ignition to Electronic)
 PSB #556 (mic)

Breaker Box



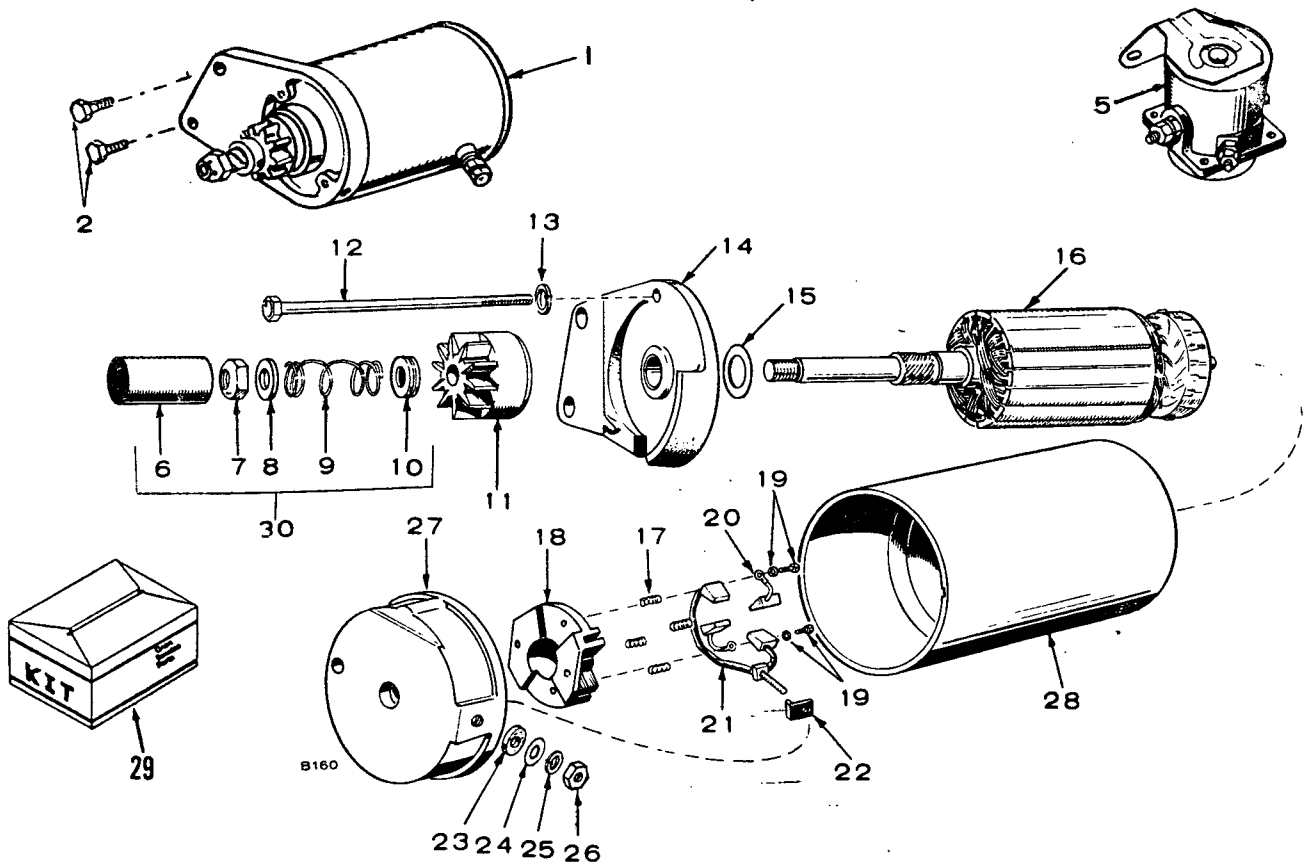
ES-1217

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	160-1303	1	Box, Breaker (Includes Parts Marked *)	8	802-0034	2	*Screw, Cap - Socket Head (1/4-20 x 3/4")
1	802-0022	1	*Screw, Cap - Hex Socket (#10-24 x 1-1/2")	9	850-0040	2	*Washer, Lock (1/4")
2	509-0065	1	*Retainer ("O" Ring)	10	160-1183	1	*Point Set, Breaker
3	526-0008	1	*Washer, Flat (#10 Screw)	11	160-1219	1	*Base, Breaker
4	160-1285	1	*Cover, Breaker Box	12	160-1150	1	*Gasket, Breaker Box
5	815-0358	1	*Screw, Cap - Slotted (#8-32 x 5/16")	14	336-2378	1	Lead, Breaker Box to Coil
7	312-0246	1	*Condenser	15	160-1311	1	Tune Up Kit (Includes Point and Condenser)

1328

* - Parts Included in 160-1303 Breaker Box.

Starter Motor Components (191-0933)



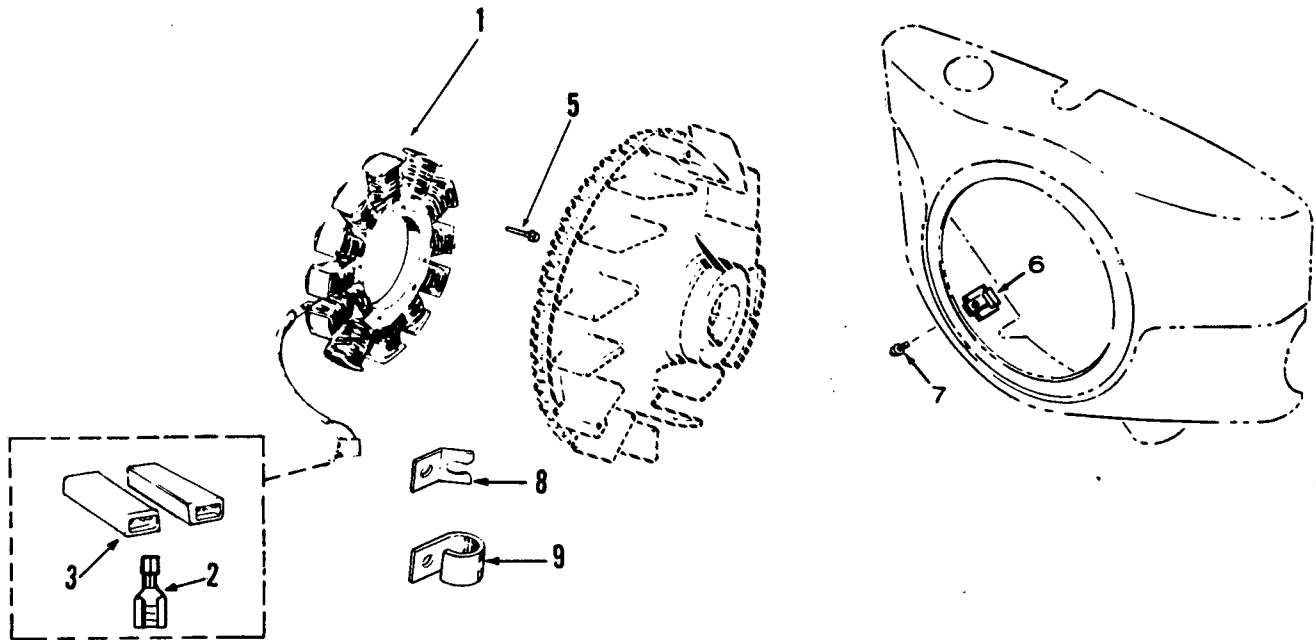
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-0933	1	Motor, Starter (Complete)	19	§	2	†Screw and Lock Washer
2	815-0570	2	Screw, Cap - Hex Washer Head (5/16-18 x 1")	20	§	2	†*Brush, Ground
5	307-1031	1	Relay, Start Solenoid	21	§	1	†*Stud and Brush Assembly, Input
6	§	1	#Cover, Dust	22	§	1	†Bushing, Insulation - Input Stud
7	§	1	#Nut, Stop	23	§	1	†Washer, Insulation - Input Stud
8	§	1	#Washer, Stop Nut	24	§	1	†Washer, Flat - Input Stud
9	§	1	#Spring, Anti-Drift	25	§	1	†Washer, Lock - Input Stud
10	§	1	#Spacer, Dust Cover	26	§	1	†Nut, Securing - Input Stud
11	191-1036	1	Drive Assembly	27	191-1040	1	Cap Assembly, Commutator (Includes Parts Marked †)
12	191-1048	2	Screw, Cap - Hex Head	28	§	1	Housing, Starter Motor
13	850-0040	2	Washer, Lock - Spring (1/4")	29	191-1041	1	Repair Kit, Brush, Spring and Stud (Includes Parts Marked *)
14	191-1037	1	Cap Assembly, Drive End	30	191-1359	1	Dust Cover Assembly (Includes Parts Marked #)
15	191-1038	1	Washer, Armature Thrust				
16	191-1039	1	Armature				
17	§	4	†*Spring, Brush				
18	§	1	†Brush Holder				

† - Parts Included in 191-1040 Cap Assembly.
 * - Parts Included in 191-1041 Brush, Spring, and Stud Kit.
 # - Included in the 191-1359 Dust Cover Assembly.
 § - Not Sold Separately.

OPTIONAL EQUIPMENT SECTION

This section contains illustrated parts listing of factory installed options for these industrial engines. Options may not be applicable to all models; for field conversions additional parts are usually required. Optional parts listed in this section are in addition or in place of those shown in the standard engine parts section.

Option 1
Flywheel Alternator - 20 Ampere (Phelon)

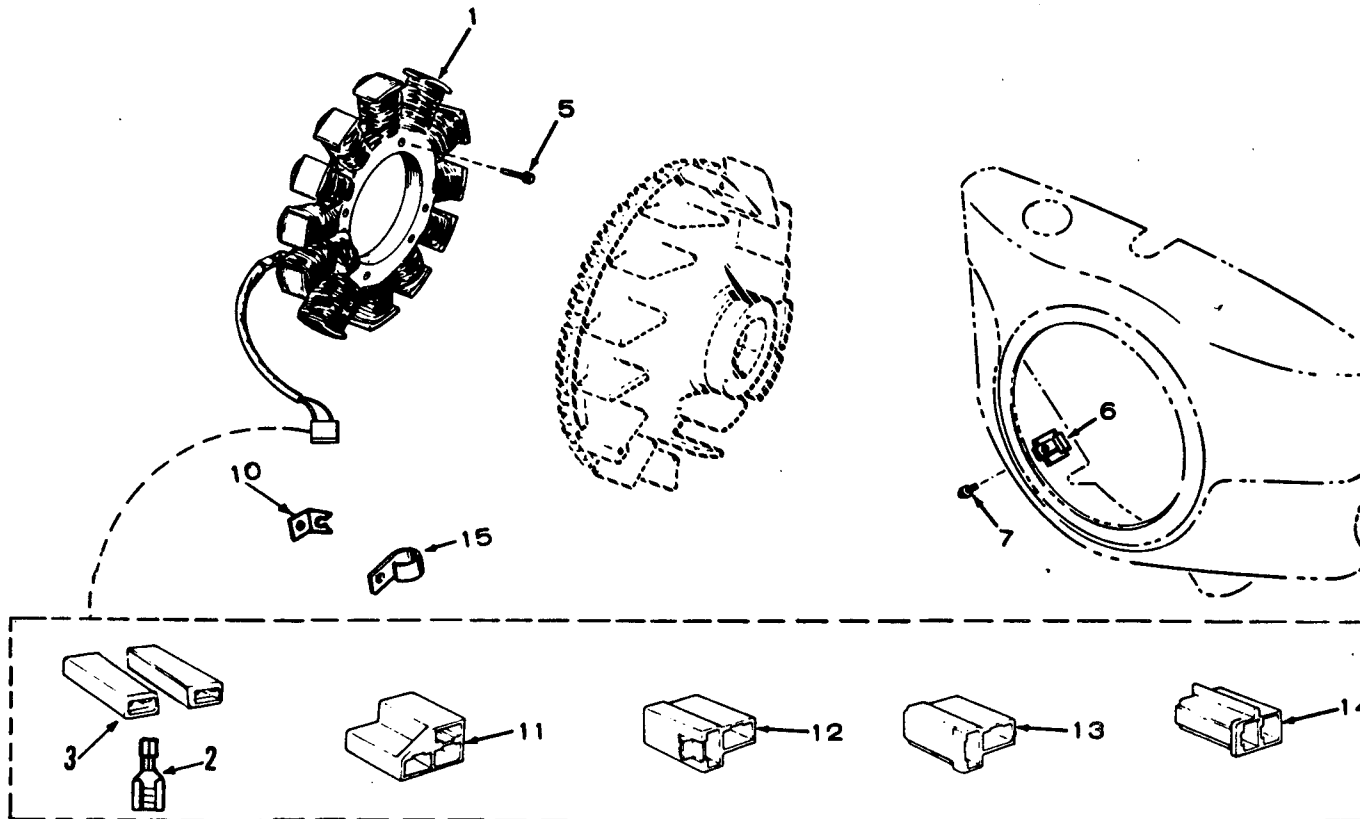


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1276	1	Stator (Includes Terminals and Connector Bodies)
2	332-2423	2	*Terminal, Stator Leads
3	323-1257	2	Kit, Body Terminal Connector (Includes Parts Marked *)
5	815-0470	3	Screw, Machine - Hex Head - Self Lock (#10-32 x 1-1/2")

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6	191-1748 S/S 191-2221	1	Regulator, Voltage
7	821-0007	1	Screw, Cap - Hex Washer Head (1/4-20 x 1/4")
8	167-0188	1	Clip, Cable
9	332-2319	1	Clamp, Wire - Alternator Leads

* - Parts Included in 323-1257 Alternator Connector Body Kit.

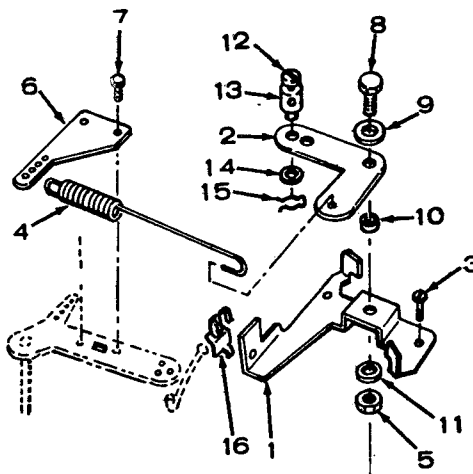
Opti 2
 Flywheel Alternator - 15 Ampere (Phelon)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1256	1	Stator (Includes Terminals and Connector Bodies)	10	167-0188	1	Clip, Cable
2	332-2423	3	+Terminal Stator Leads	11	323-0853	1	Body, Terminal Connector
3	323-1257	2	Kit, Body Terminal Connector (Includes Parts Marked +)	12	323-1085	1	Body, Terminal Connector
5	815-0593	3	Screw, Machine - Hex Head - Self-Lock (#10-32 x 1-3/8")	13	323-0892	1	Body, Terminal Connector
5 ⁰⁵	191-2227			14	323-0890	1	Body, Terminal Connector
6	191-1206	1	Regulator, Voltage	15	332-2319	1	Clamp, Wire - Alternator Leads
7	821-0007	1	Screw, Cap - Hex Washer Head (1/4-20 x 1/4")				

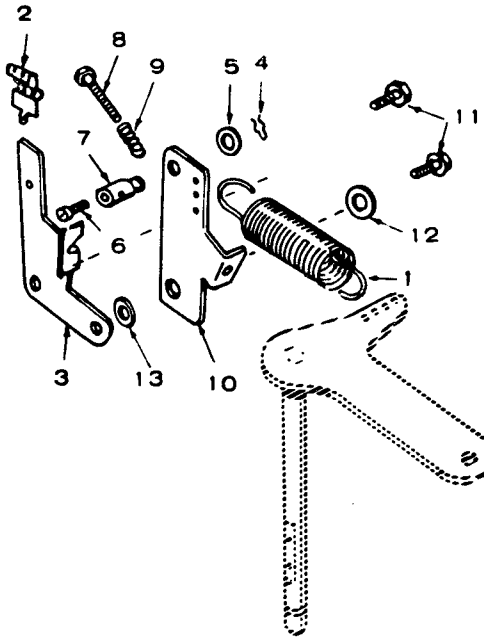
+ - Parts Included in 323-1257 Alternator Terminal Connector Body Kit.

**Option 3
Governor Control - Variable Speed
(Front Pull)**



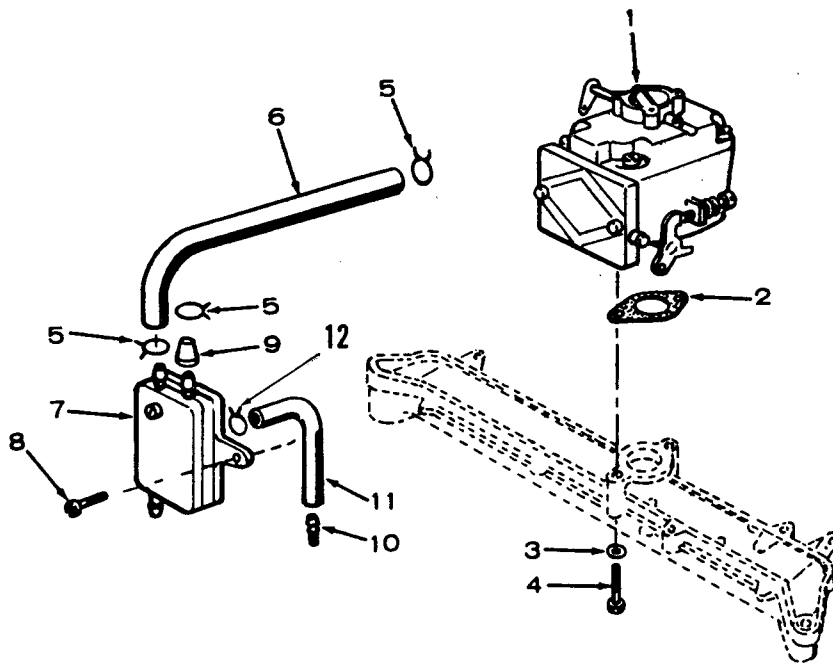
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-1368	1	Bracket, Governor Control	9	526-0021	1	Washer, Flat (1/4" Screw)
2	150-1366	1	Link, Governor Control	10	150-1269	1	Bushing, Governor Control
3	815-0439	3	Screw, Cap - Hex Head Locking (#8 x 1/2")	11	850-0040	1	Washer, Lock - Spring (1/4")
4	150-1369	1	Spring, Governor	12	815-0104	1	Screw, Machine - Fillister Head (#8-32 x 5/16")
5	862-0001	1	Nut, Hex (1/4-20)	13	152-0155	1	Swivel, Cable - Throttle
6	150-1367	1	Adapter, Governor Arm	14	526-0006	1	Washer, Flat (15/64" ID x 1/2" OD x 3/64" Thk)
7	815-0181	2	Screw, Cap - Hex Head w/ET (#10-32 x 1/2")	15	516-0059	1	Pin, Cotter
8	800-0004	1	Screw, Cap - Hex Head (1/4-20 x 5/8")	16	518-0176	1	Clip, Cable - Throttle

**Option 4
Governor Control Variable Speed
(Side Pull)**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-1214	1	Spring, Governor	9	150-1398	1	Spring, Idle Setting
2	518-0176	1	Clip, Cable	10	150-1345	1	Arm, Governor Control
3	150-1725	1	Bracket, Cable		150-1576	1	Use With Swivel
4	516-0059	1	Pin, Cotter	11	815-0436	2	Use Without Swivel
5	526-0006	1	Washer, Flat (#12 Screw)				Screw, Self-Locking - Hex
6	815-0104	1	Screw, Machine - Fillister Head (#8-32 x 5/16")	12	526-0021	2	Washer Head (1/4-20 x 1/2")
7	152-0155	1	Swivel, Cable Holding	13	150-1269	1	Washer, Flat (1/4" Screw)
8	815-0475	1	Screw, Machine - Hex Washer Head (#6-32 x 7/8")				Bushing, Control Arm

Option 5
Fuel System
(Carburetor W/O Integral Fuel Pump)

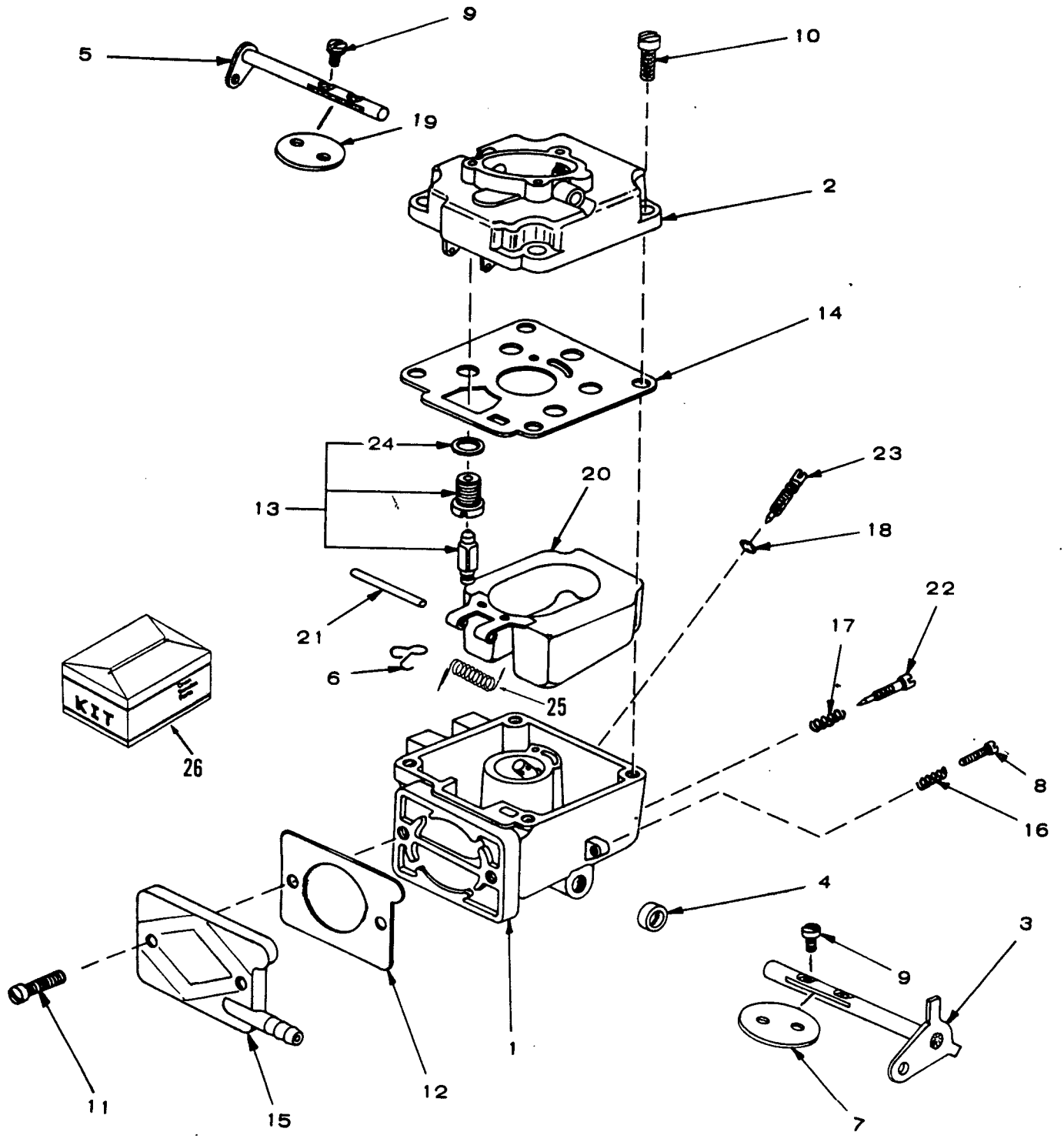


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	142-0661	1	Carburetor Assembly - Gasoline (See Separate Page for Components) (Includes Parts Marked +)	7	149-1982	1	Pump, Fuel (See Separate Page for Components) (Includes Parts Marked *)
2	145-0438	1	+Gasket, Carburetor Mounting	8	815-0555	2	Screw, Tapping - Pan Head (10-24 x 5/8")
3	850-0040	2	Washer, Lock - Spring (1/4")	9	149-1321	1	+*Cap, Fuel Outlet
4	800-0023	2	Screw, Cap - Hex Head (1/4-20 x 1-3/8")	10	149-1299	1	Tube, Vacuum Port
5	503-0301	3	+*Clamp, Hose (7/16")	11	503-0707	1	Line, Impulse
6	503-0664	1	Hose, Fuel (1/4" ID x 11" Lg)	12	503-0731	1	Clamp, Wire (1/2")

* - Parts Included in 149-1982 Fuel Pump Kit.
+ - Parts Included in 142-0661 Carburetor Assembly Kit.



Option 6
Carburetor Components
(Without Integral Fuel Pump)
(142-0561)

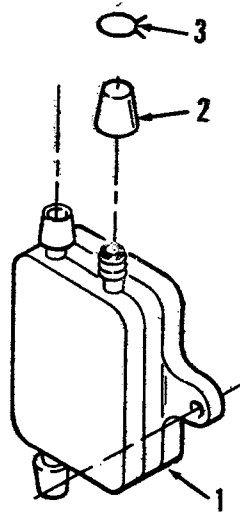


**Option 5
Carburetor Components
(Without Integral Fuel Pump)
(142-0661)**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	142-0661	1	Carburetor, Gasoline (Includes Mounting Gasket)	12	142-0559	1	*Gasket, Inlet Plate
	142-0591	1	Gasket Kit (Includes Parts Marked *)	13	142-0553	1	†Valve Assembly, Float
1		1	Body, Lower (Not Sold Separately)	14	142-0572	1	*Gasket, Carburetor Body
2		1	Body, Upper (Not Sold Separately)	15	149-1983	1	Plate, Inlet (Includes Cap and Clamp)
3	142-0534	1	†Shaft, Throttle	16	142-0544	1	Spring, Throttle Stop
4	142-0535	1	*O-Ring, Packing - Throttle Shaft	17	142-0282	1	†Spring, Idle Needle
5	142-0536	1	Shaft, Choke	18	142-0550	1	*O-Ring, Packing - Power Need
6	142-0554	1	Clip, Retaining - Float Valve	19	142-0546	1	Fly, Choke
7	142-0538	1	Fly, Throttle	20	146-0380	1	Float Assembly (Includes Assist Spring)
8	142-0064	1	Screw, Throttle Stop	21	142-0548	1	†Shaft, Float
9	142-0334	4	†Screw, Fly to Shaft	22	142-0016	1	†Needle, Idle
10	142-0539	4	Screw, Upper to Lower Body	23	142-0549	1	Needle Assembly, Power
11	142-0539	2	Screw, Inlet Plate	24	142-0523	1	*Gasket, Float Valve Seat
				25	146-0379	1	Spring, Float Assist
				26	142-0592	1	Repair Kit (Includes Parts Marked †)

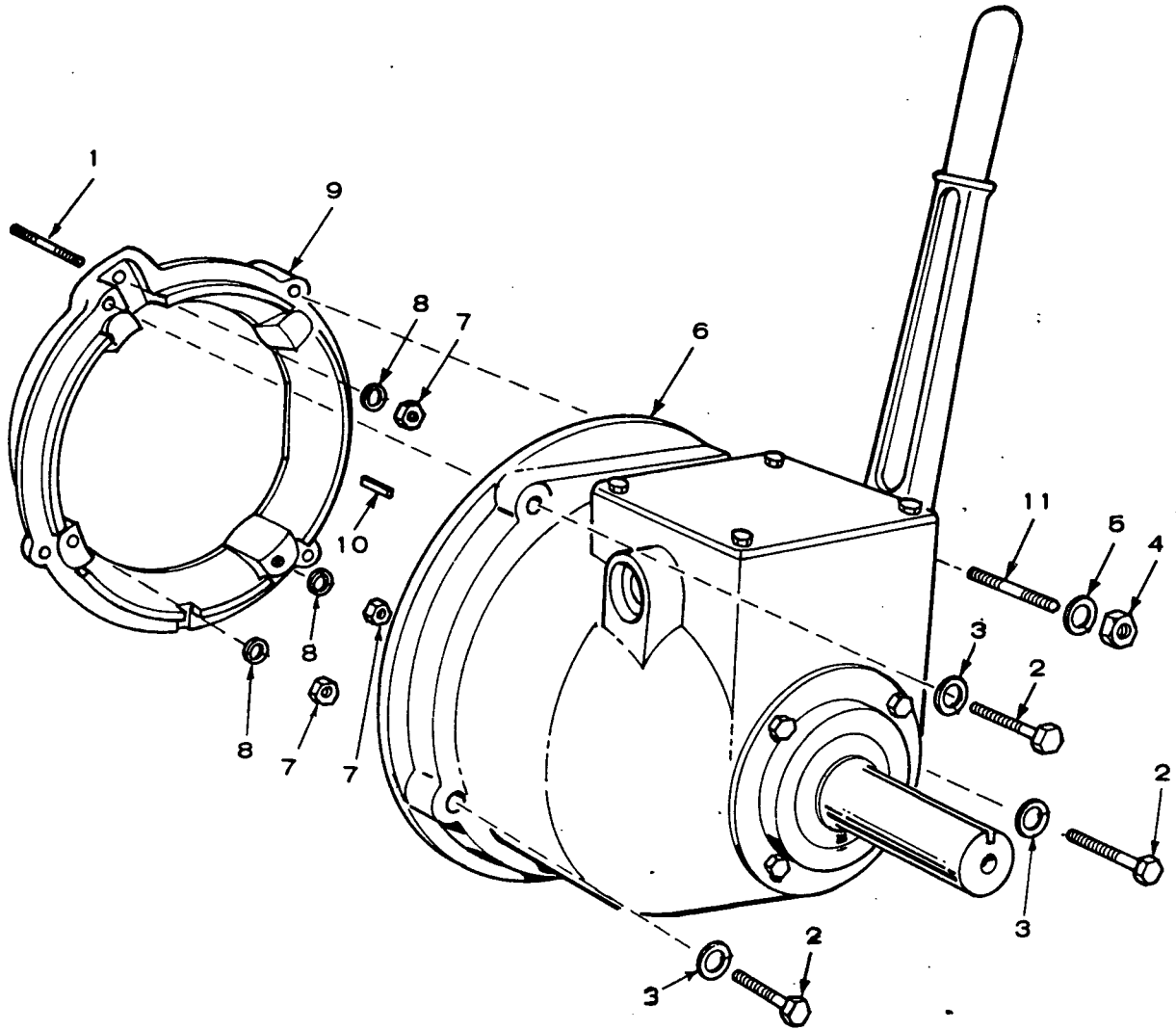
† - Parts Included in 142-0592 Repair Kit.
* - Parts Included in 142-0591 Gasket Kit.

Option 7
Fuel Puls



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	149-1982	1	Pump, Fuel - Vacuum, Pulse (Includes Cap and Clamp)	2	149-1321	1	Cap, Fuel Fitting
				3	503-0301	1	Clamp, Hose

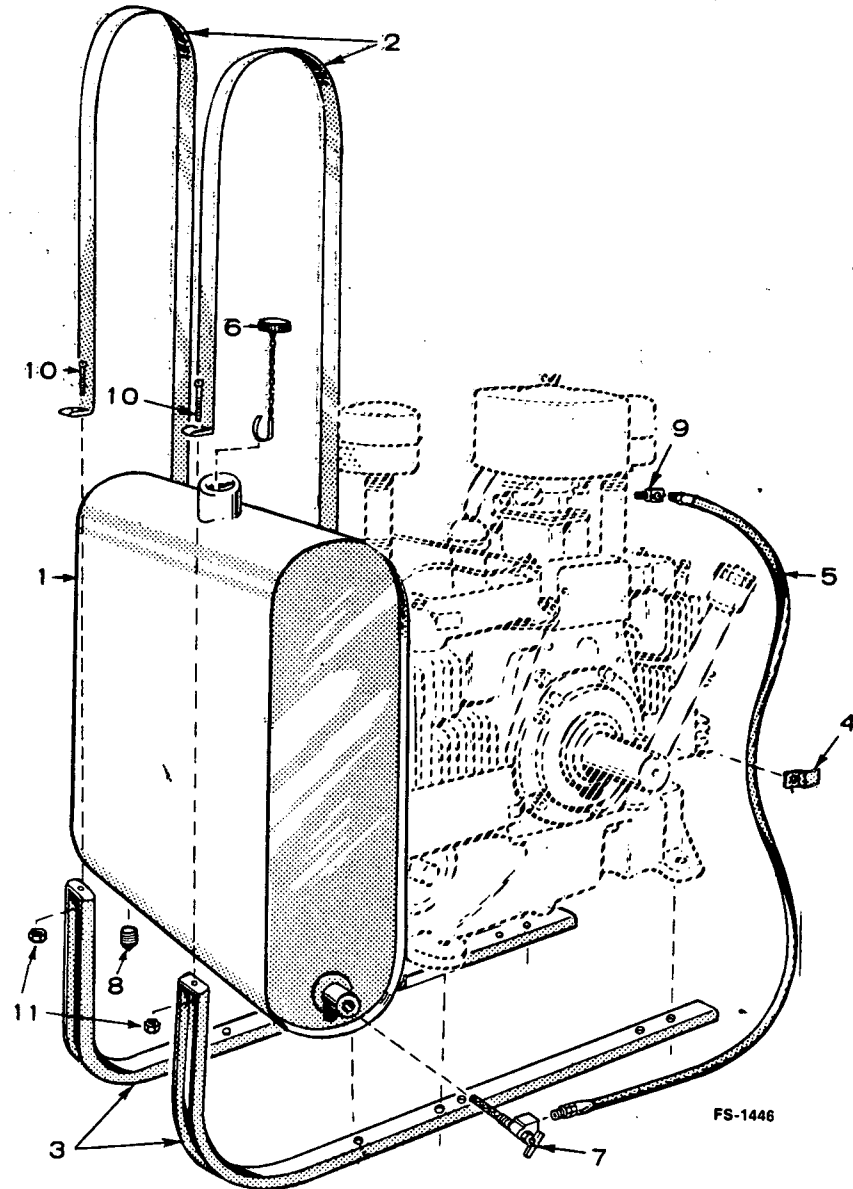
Option 8 Clutch



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	190-0289	1	Kit, Clutch Assembly (Includes All Parts Except Crankshaft)	5	850-0050	1	Washer, Lock - Spring (3/8
1	520-0739	3	Stud (3/8-24 x 3/8-16 x 3")	6	190-0288	1	*Clutch Assembly
2	800-0075	3	Screw, Cap - Hex Head (7/16-14 x 2")	7	104-0091	3	Nut, Hex - Hardened (3/8-2
3	850-0055	3	Washer, Lock - Spring (7/16")	8	850-0050	3	Washer, Lock - Spring (3/8
4	104-0091	1	Nut, Hex - Hardened (3/8-24)	9	190-0171	1	Adapter, Clutch
				10	515-0041	1	Key, Drive - Special
				11	520-0738	1	Stud (3/8-24 x 3/8-16 x 4"

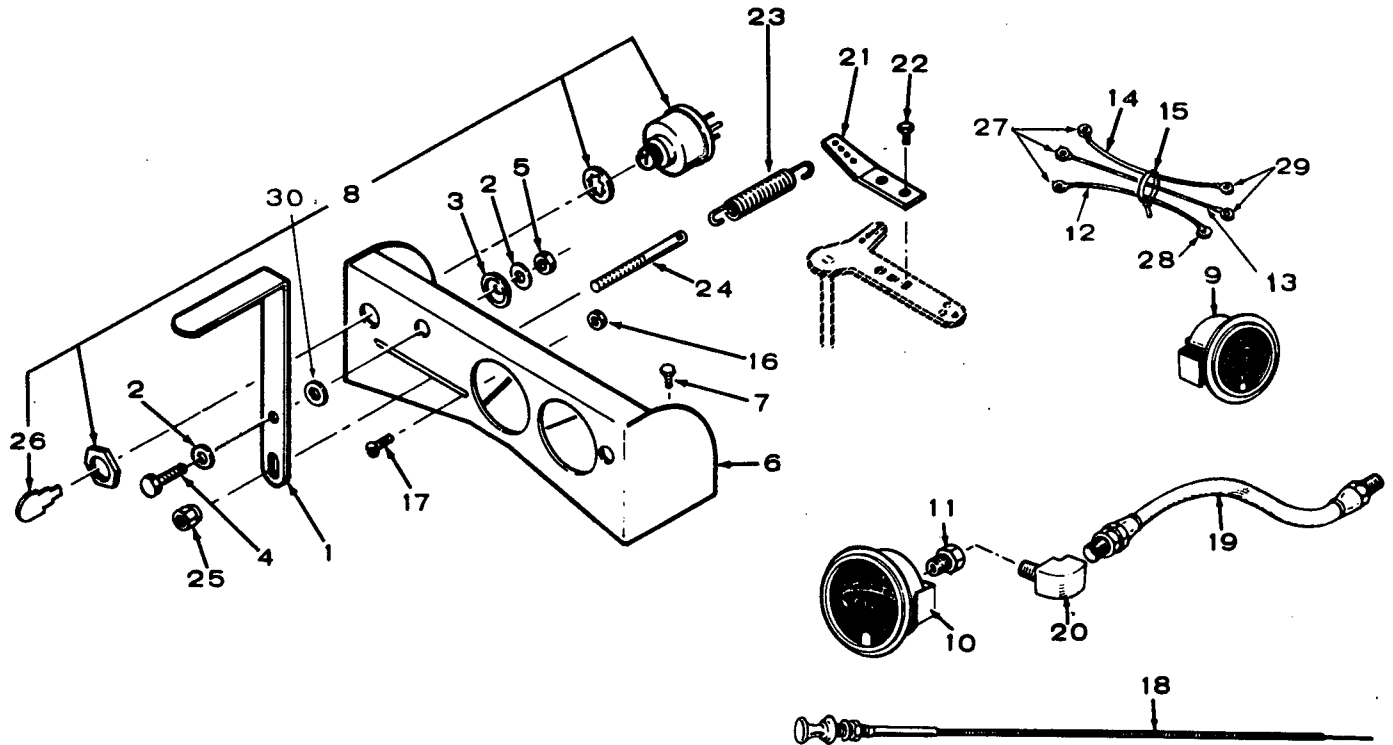
* - For Components, check nameplate and contact nearest Rockford Clutch Dealer.

**Option 9
Fuel Tank (Side Mounted)**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	159-0597	1	Kit, Fuel Tank	7	504-0013	1	Valve, Shut-off
1	159-0981	1	Tank, Fuel (Less Cap)	8	505-0057	1	Plug, Tank Drain
2	159-0596	2	Strap, Fuel Tank	9	502-0020	1	Elbow, Carburetor Inlet
3	159-0595	2	Bracket, Fuel Tank	10	813-0108	2	Screw, Machine - Round Head (#10-32 x 1-1/2")
4	134-0599	1	Clip, Fuel Line	11	870-0053	2	Nut, Hex (#10-32)
5	501-0008	1	Line, Fuel				
6	159-0020	1	Cap, Fuel Tank				

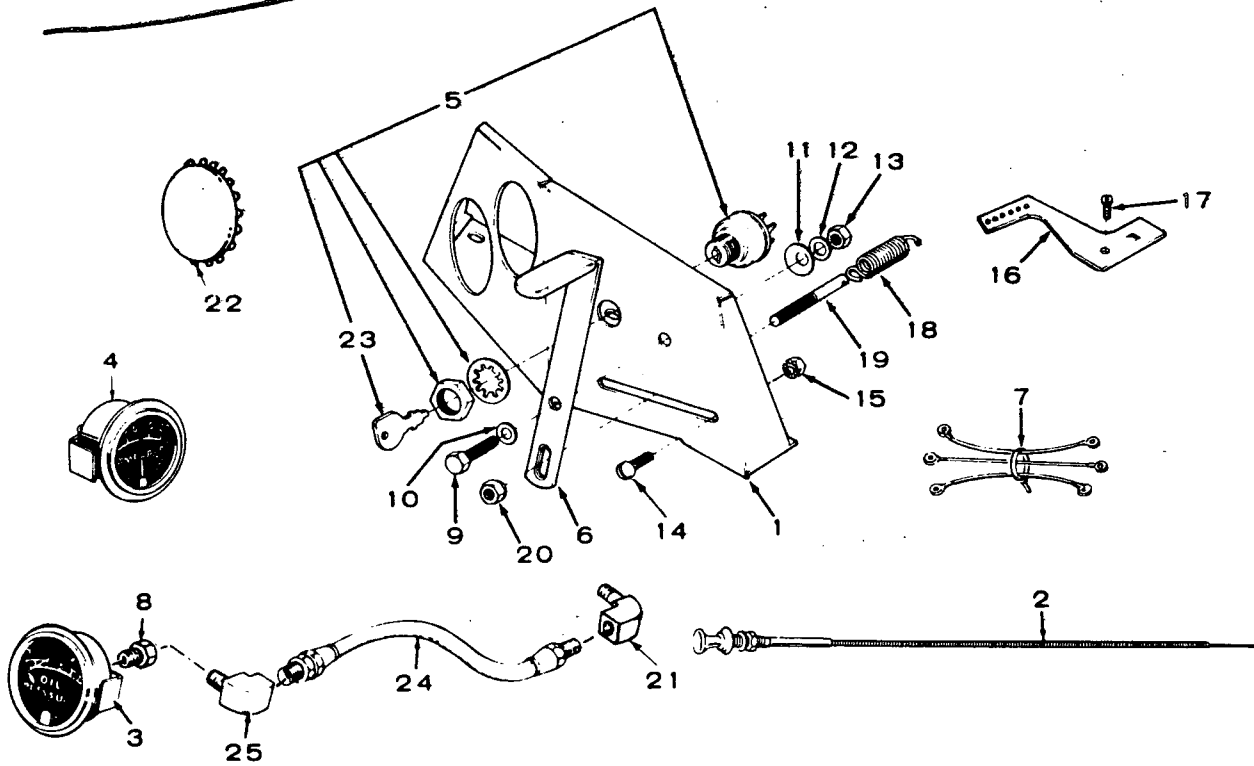
Option 10 Control (Engine)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	152-0198	1	Lever, Throttle Control	15	332-0942	1	Tie, Cable
2	526-0015	2	Washer, Flat (1/4" Screw)	16	870-0131	2	Nut, Hex (10-32)
3	152-0041	2	Washer, Tension - Cup	17	815-0199	2	Screw, Machine - Fillister Head (10-32 x 5/16")
4	800-0005	1	Screw, Cap - Hex Head (1/4-20 x 3/4")	18	153-0097	1	Cable, Choke
5	870-0065	1	Nut, Lock - Hex (1/4-20)	19	501-0004	1	Line, Oil - Flexible
6	301-4041	1	Panel, Control	20	502-0020	1	Elbow, Street (90°)
7	821-0009	2	Screw, Lock - Hex (1/4-20 x 5/16")	21	150-1544	1	Adapter, Governor Arm
8	308-0385	1	Switch and Key, Ignition	22	815-0194	2	Screw, Tapping (10-32 x 3/8)
9	302-0060	1	Ammeter, DC (20-0-20)	23	150-0098	1	Spring, Governor
10	193-0005	1	Gauge, Oil Pressure	24	150-0096	1	Stud, Speed Adjusting
11	502-0017	1	Connector, Inverted Female	25	150-0621	1	Nut, Special - Speed Adjusting Stud
12		1	Lead, Electrical - #16 Wire, 26" Lg.	26	308-0490	1	Key, Ignition Switch
13		1	Lead, Electrical - Switch to Coil - #16 Wire, 13" Lg.	27	332-0325	3	Terminal, Ring
14		1	Lead, Electrical - Switch to Ammeter - #16 Wire, 7" Lg.	28	332-1408	1	Terminal, Faston
				29	332-1993	2	Terminal, Receptacle
				30	526-0016	1	Washer, Flat (1/4" Screw)

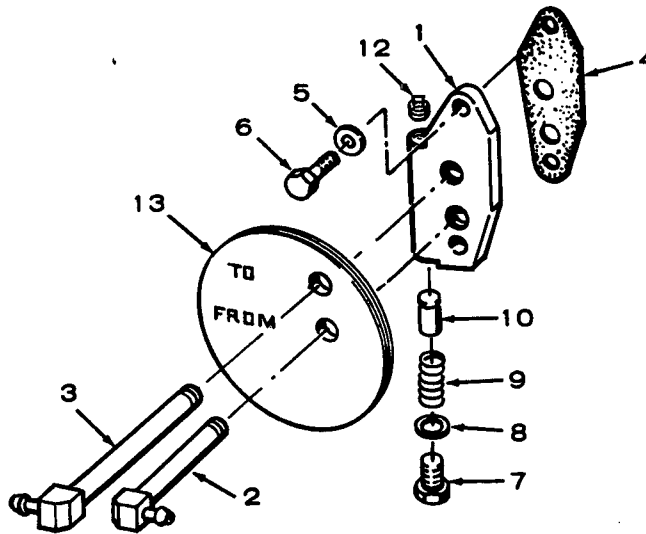
See 150-1716
Control Panel Kit

Option 10A
Control (Engine)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	301-5065	1	Panel, Control	15	870-0131	2	Nut, Hex with ET (#10-32)
2	153-0097	1	Cable, Choke	16	150-1749	1	Extension, Governor Arm
3	193-0005	1	Gauge, Oil Pressure	17	815-0181	1	Screw, Tapping - Hex Head with ET (#10-32 x 1/2")
4	302-0060	1	Ammeter (20-0-20)	18	150-1214	1	Spring, Governor
5	308-0385	1	Switch, Ignition	19	152-0177	1	Stud, Speed Adjusting
6	152-0224	1	Lever, Throttle Control	20	150-0621	1	Nut, Speed Adjusting Stud
7	338-1219	1	Harness, Wiring	21	502-0005	1	Elbow, Inverted - Female (90°)
8	502-0051	1	Coupling, Female	22	517-0009	AR	Plug, Dot Button
9	800-0005	1	Screw, Cap - Hex Head (1/4-20 x 3/4")	23	308-0490	1	Key, Ignition Switch
10	526-0016	1	Washer, Flat (1/4" Screw)	24	501-0009	1	Line, Oil - Flexible (36" Lg)
11	152-0041	1	Washer, Tension - Cup	25	502-0065	1	Elbow, -Inverted - Male (45°)
12	526-0015	2	Washer, Flat (1/4" Screw)	821-0010	4	Screw, Hex Washer Head - Self-Lock (Not Shown) Mounts Control Panel to Blower Housing (1/4-20 x 1/2")	
13	870-0065	1	Nut, Hex - Self Locking (1/4-20)				
14	815-0199	2	Screw, Machine - Fillister Head (#10-32 x 5/16")				

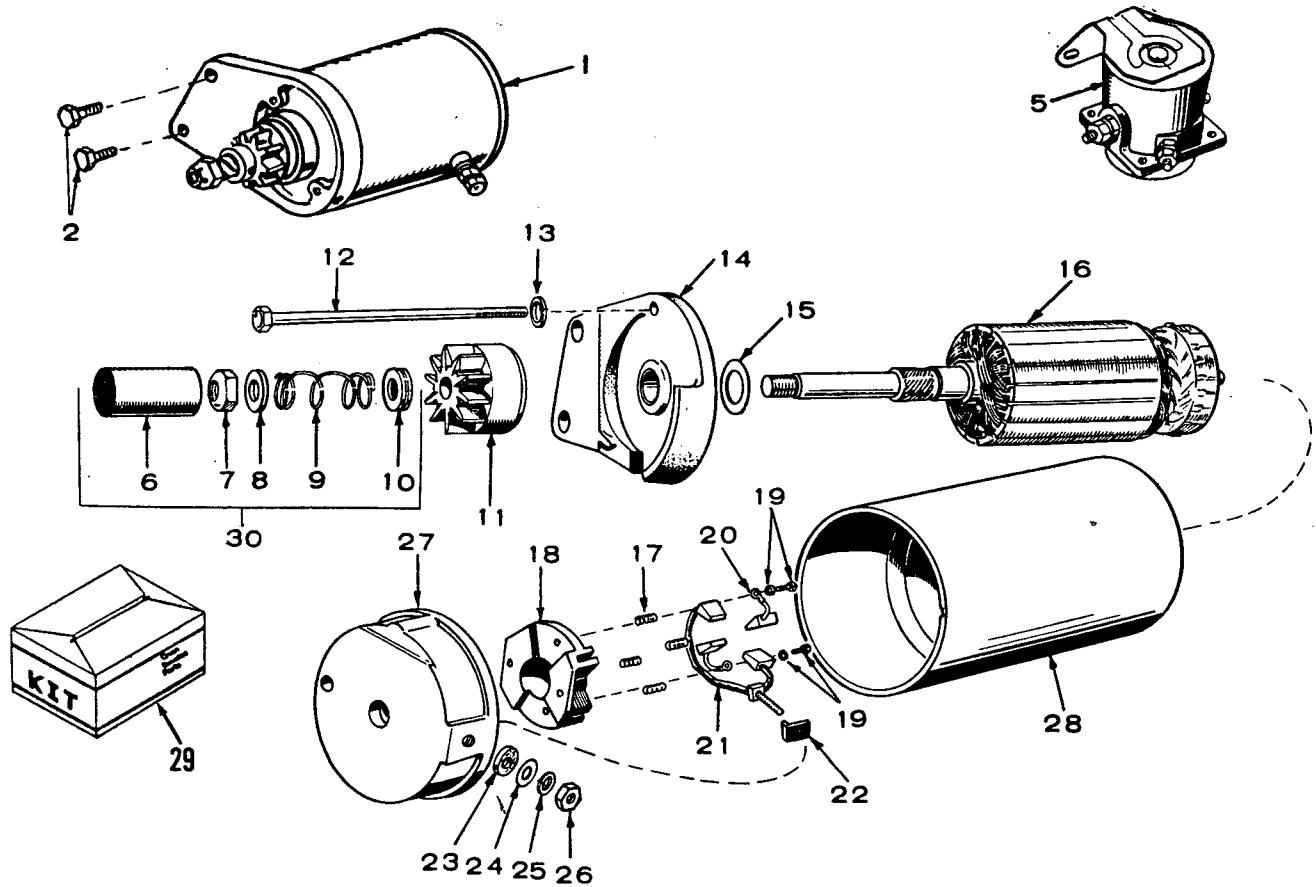
Option 11
Oil Filter (Remote)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	122-0369	1	Adapter, Remote Oil Filter	7	801-0047	1	Screw, Cap - Hex Head (3/8-24 x 5/8")
2	502-0580	1	Elbow, Adapter (90°)	8	526-0066	1	Washer, Flat - Copper (3/8" Screw)
3	502-0581	1	Elbow, Adapter (90°)	9	120-0140	1	Spring, By-Pass Valve
4	122-0375	1	Gasket, Adapter	10	120-0398	1	Valve, By-Pass
5	526-0065	2	Washer, Flat - Copper (5/16" Screw)	12	505-0057	1	Plug, Pipe - Square Head
6	800-0031	2	Screw, Cap - Hex Head Prior to 6/86 (5/16-18 x 1-1/2")	13	508-0184	1	Grommet, Air Seal
	800-0030	2	Begin 6/86 (5/16-18 x 1-1/4")				

NOTE: Hoses vary with each installation. Purchase locally, hoses with a minimum pressure rating of 150 PSI (1035 kPa).

**Option 12
Start Motor Components (Heavy Duty)
(191-120)**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1205	1	Motor, Starter (Complete)	20	§	2	†*Brush, Ground
2	815-0570	2	Screw, Cap - Hex Washer Head (5/16-18 x 1")	21	§	1	†*Stud and Brush Assembly, Input
5	307-1031	1	Relay, Start Solenoid	22	§	1	†Bushing, Insulation - Input Stud
6		1	xCover, Dust	23	§	1	†Washer, Insulation - Input Stud
7		1	xNut, Stop	24	§	1	†Washer, Flat - Input Stud
8		1	xWasher, Stop Nut	25	§	1	†Washer, Lock - Input Stud
9		1	xSpring, Anti-drift	26	§	1	†Nut, Securing - Input Stud
10		1	xSpacer, Dust Cover	27	191-1155	1	Cap Assembly, Commutator (Includes Parts Marked †)
11	191-1156	1	Drive Assembly	28	§	1	Housing, Starter Motor
12	191-1157	2	Screw, Hex Cap	29	191-1222	1	Repair Kit, Brush, Spring and Stud (Includes Parts Marked *)
13	850-0040	2	Washer, Lock				
14	191-1037	1	Cap Assembly, Drive End				
15	191-1038	1	Washer, Armature Thrust				
16	191-1154	1	Armature				
17		4	†*Spring, Brush	30	191-1359	1	Dust Cover Assembly (Includes Parts Marked x)
18		1	†Brush Holder				
19		2	†Screw and Lockwasher				

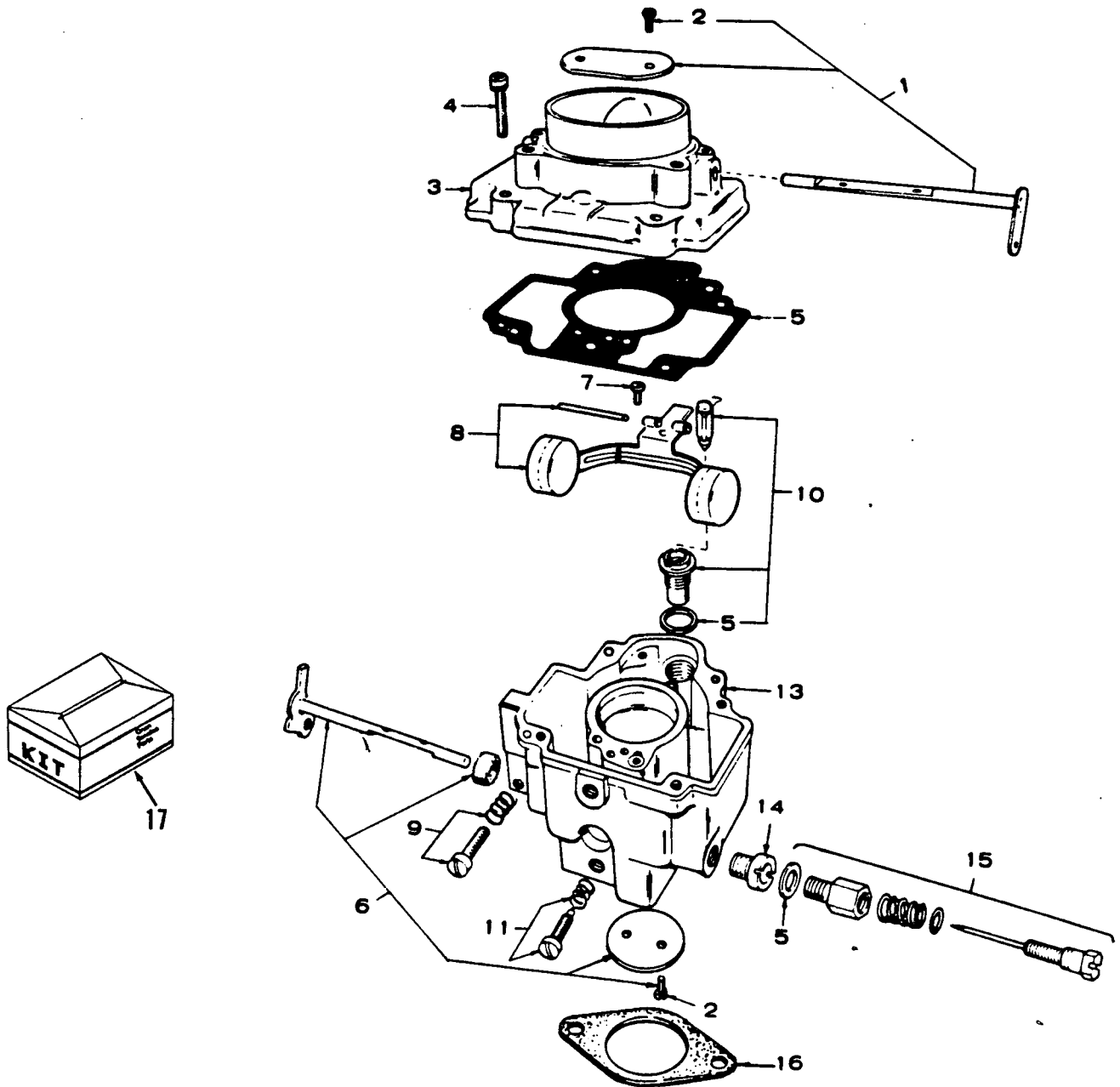
† - Included in the 191-1155 Cap Assembly.

* - Included in the 191-1222 Brush, Spring and Stud Kit.

x - Included in 191-1359 Dust Cover Assembly.

§ - Not Sold Separately.

Option 13
Carburetor Components
(Adjustable Main Jet)

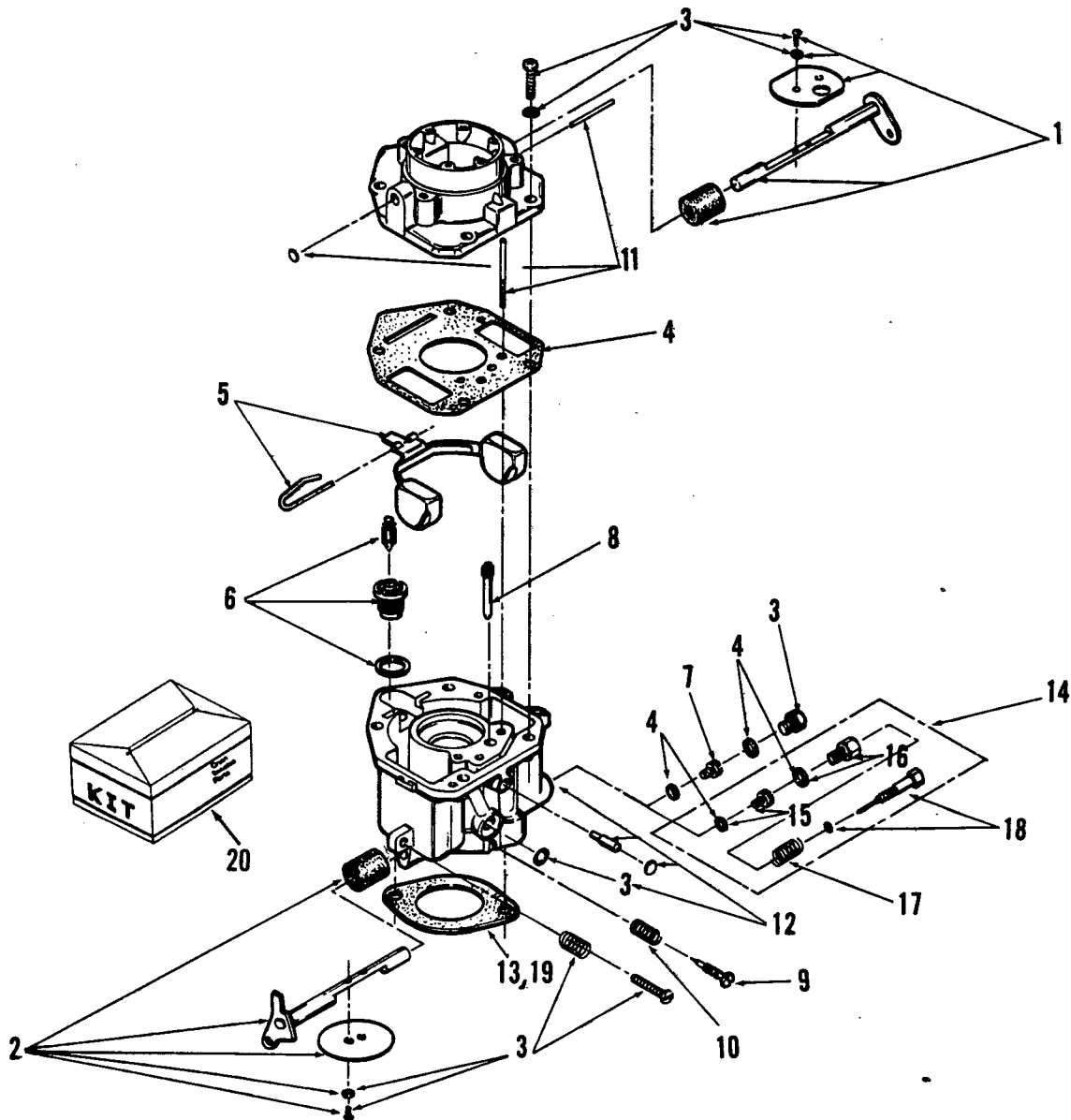


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	146-0311	1	Carburetor, Complete (Includes Mounting Gasket)	9	146-0261	1	Idle Speed Adjusting Screw Package
1	146-0281	1	Choke Shaft Package	10	146-0289	1	*Valve and Seat Package
2	146-0142	4	Screw, Valve Mounting	11	146-0209	1	*Idle Needle Package
3		1	Intake, Air (Not Sold Separately)	13		1	Body (Not Sold Separately)
4	146-0247	4	Screw, Body to Intake	14	146-0238	1	Jet Power
5	146-0220	1	Gasket Kit	15	146-0282	1	*Power Needle Package (var.)
6	146-0259	1	Throttle Shaft Package	16	154-0733	1	Gasket, Carburetor Mounting
7	146-0222	1	*Screw, Lever Pin	17	146-0292	1	Kit, Repair (Includes Parts Marked *)
8	146-0262	1	Float Package				

* - Parts Included in 146-0292 Repair Kit.

down draft
ca

Option 13A
Carburetor Components
(Fixed Main Jet)

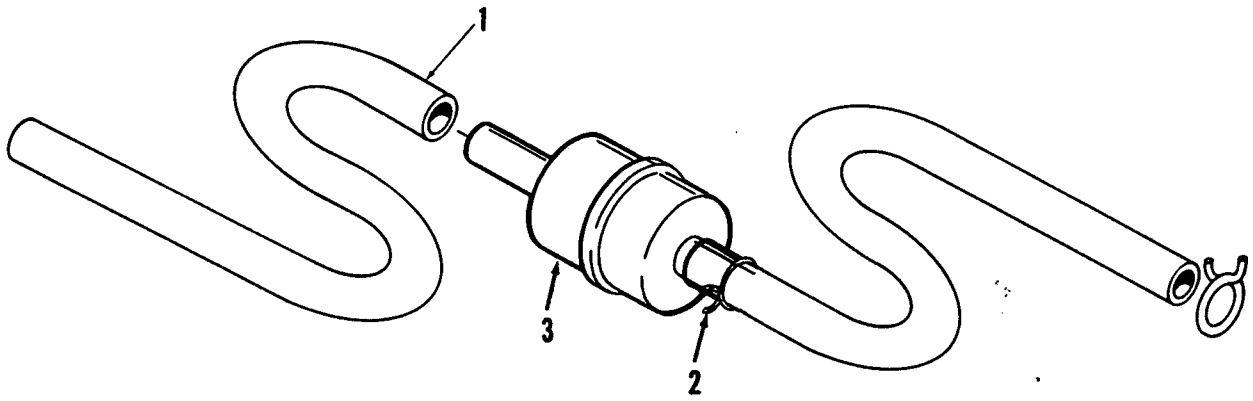


FS-1440

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	146-0381	1	Carburetor, Complete (Includes Mounting Gasket)	12		1	Body (Not Sold Separately)
1	146-0377	1	Choke, Shaft Kit	13	154-0733	1	*Gasket, Carburetor Mounting
2	146-0324	1	Throttle Shaft Kit	14	146-0327	1	Variable Jet Kit - Optional
3	146-0322	1	*Screw and Plug Kit				(High Altitude Application)
4	146-0326	1	*Gasket Kit				(Includes Parts Marked +)
5	146-0325	1	Float Kit	15	146-0343	1	*Power Jet, Variable
6	146-0329	1	*Valve and Seat Kit				(Includes Gasket)
7	146-0334	1	Jet, Power	16	146-0340	1	*Retainer, Power Needle
8	146-0337	1	Jet, Idle				(Includes Gasket)
9	146-0335	1	*Needle, Idle Adjusting	17	146-0341	1	*Spring, Power Needle
10	146-0331	1	*Spring, Idle Adjusting Needle	18	146-0342	1	*Needle, Complete - Power
11		1	Intake, Air (Not Sold Separately)	19	145-0438	1	*Gasket, Carburetor Mounting
				20	146-0356	1	Kit, Repair (Includes Parts Marked *)

* - Parts Included in 146-0356 Repair Kit.
~~Parts Included in 146-0327 Variable Jet Kit~~

Option 14
Fuel Line Filter

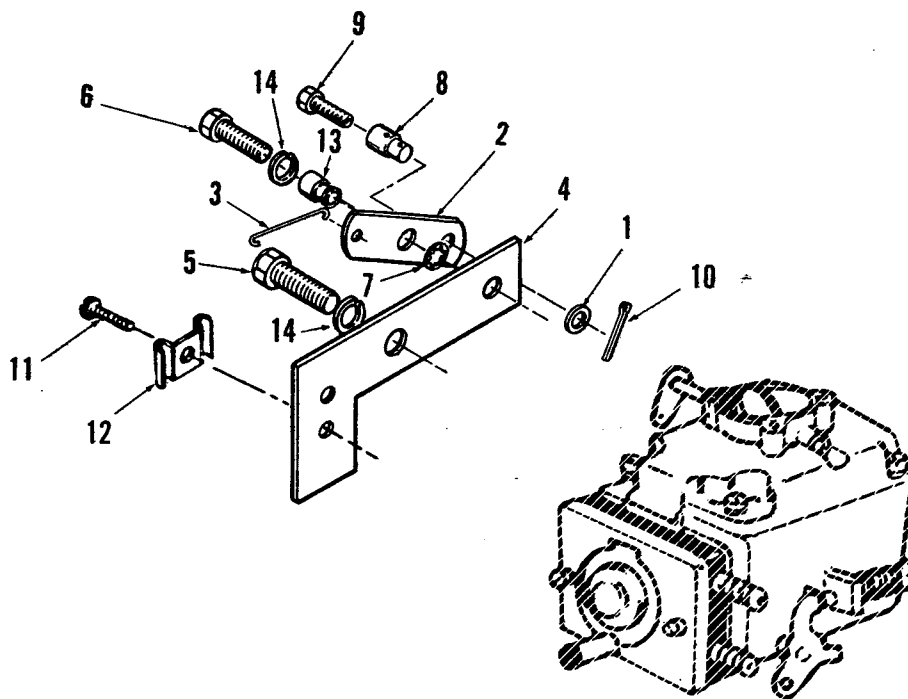


FS-1522

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0707	2	Hose (1/4" ID x 7/16" OD x 12" Long)	2	503-0731	3	Clamp, Hose (7/16")
				3	149-2005	1	Filter, Fuel

2204-01

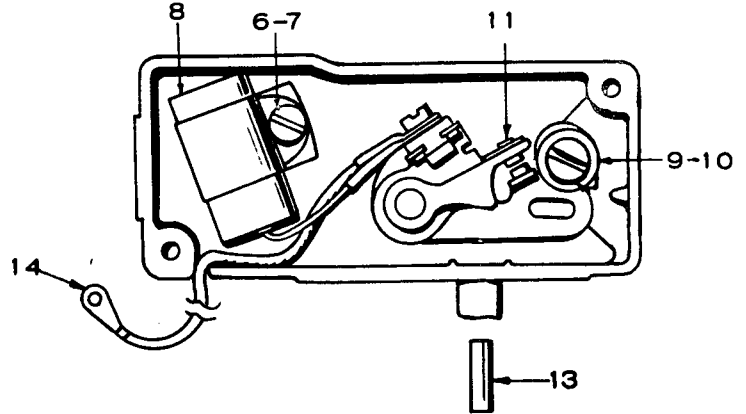
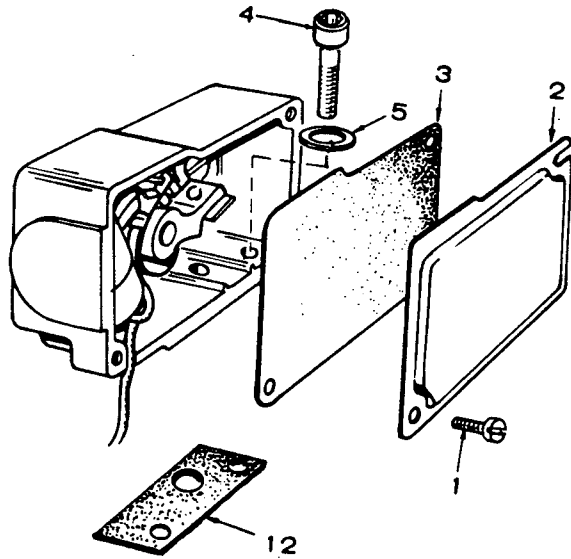
Option 15
Choke Control (Front Pull)



FS-1131-1

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	526-0140	1	Washer, Flat Use with Swivel 152-0155	7	854-0010	1	Washer, Lock - IT (#10) Use with Swivel 152-0155
	526-0108	2	Use with Choke Lever 153-0501	8	152-0155	1	Swivel, Choke Lever
2	153-0523	1	Lever, Choke Use with Swivel 152-0155	9	815-0104	1	Screw, Machine - Fillister Head (#8-32 x .31")
	153-0501	1	Use without Swivel 152-0155	10	516-0059	1	Pin, Cotter
3	153-0500	1	Link, Choke	11	815-0359	1	Screw, Tapping - Slotted Hex Washer Head (#10-32 x 7/8")
4	153-0524	1	Bracket, Choke Cable	12	153-0514	1	Clip, Choke Cable
5	812-0099	1	Screw, Round Head (10-24 x 7/16")	13	153-0502	1	Bushing, Flanged - Use with Choke Lever 153-0501
6	815-0480	1	Screw Pan Head (10-32 x .34") - Use with Choke Lever 153-0523	14	850-0030	2	Washer, Lock (#10) - Use with Choke Lever 153-0501
	812-0100	1	Round Head (10-24 x 1/2") - Use with Choke Lever 153-0501				

Option 16
Ignition Breaker Box (Side Adjustable)

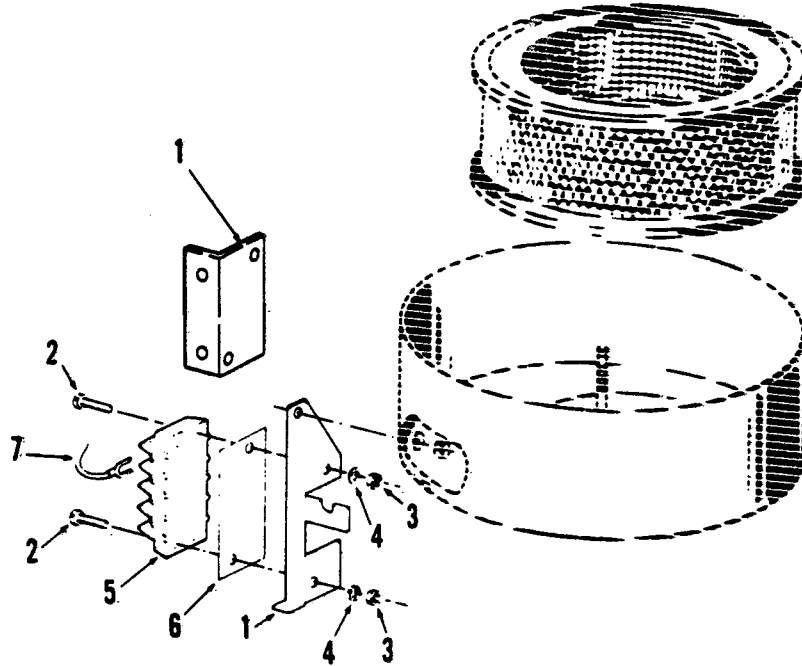


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	160-1158	1	Box Assembly, Breaker (Includes Parts Marked *)
1	815-0358	2	*Screw, Tapping - Hex Head, Slotted (#8-32 x 5/16")
2	160-1149	1	*Cover, Breaker Box
3	160-1148	1	*Gasket, Cover
4	802-0034	2	*Screw, Cap - Socket Head (1/4-20 x 3/4")
5	850-0038	2	*Washer, Lock - Spring (1/4")
6	815-0403	1	*Screw, Tapping - Pan Head (#8-32 x 5/16")
7	850-0025	1	*Washer, Lock - Spring (#8)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8	312-0069	1	*Condenser, Ignition
9	870-0221	1	*Nut, Hex with External Tooth Lockwasher (#8-32)
10	815-0405	1	*Screw, Machine - Pan Head, Cross-Recessed (#8-32 x 1/2)
11	160-1154	1	*Point Set, Breaker
12	160-1150	1	*Gasket
13	160-1151	1	Plunger, Breaker Points
14	336-2378	1	Lead, Breaker Box to Coil
	160-1161	1	Tune-Up Kit (Includes Points and Condenser)

* - Parts Included in 160-1158 Breaker Box Assembly

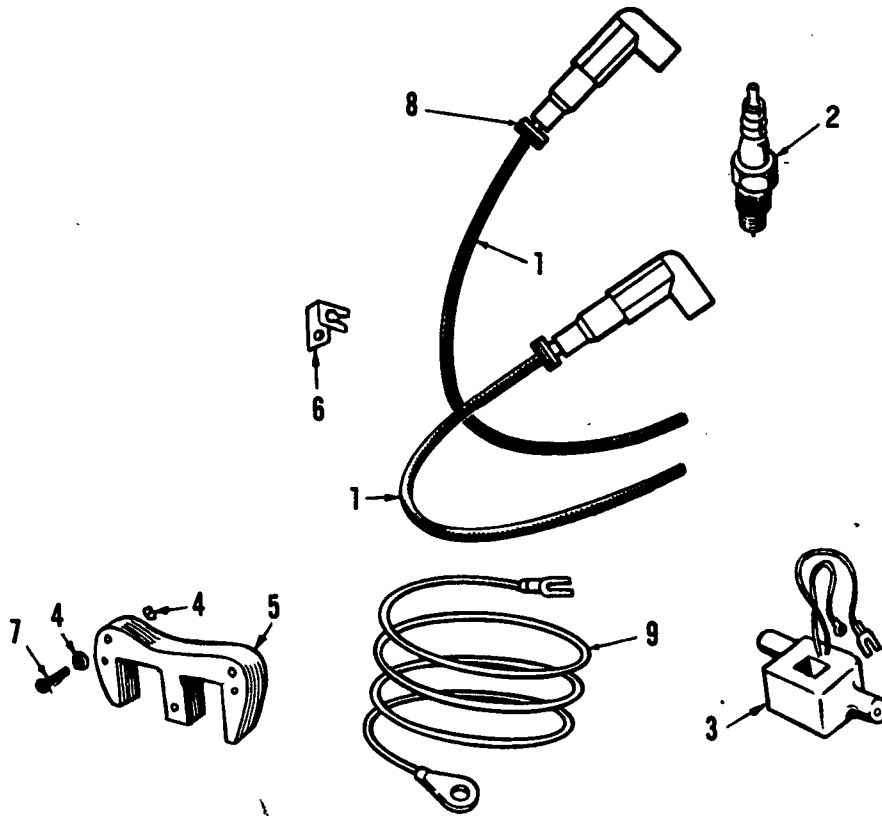
Option 7 Support and Terminal Block Assembly



ES-1481

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	140-1644	1	Support, Air Cleaner Units with Air Cleaner Housing	4	853-0005	2	Washer, Lock - ET (#8)
	301-5936	1	Units without Air Cleaner Housing	5	332-0537	1	Block Terminal (4 Place)
2	812-0081	2	Screw, Machine - Round Head (#8-32 x 5/8")	6	332-2208	1	Strip, Marker
3	860-0008	2	Nut, Hex (#8-32)	7	336-4385	1	Lead Assembly
					334-0028	1	Alternator Ignition

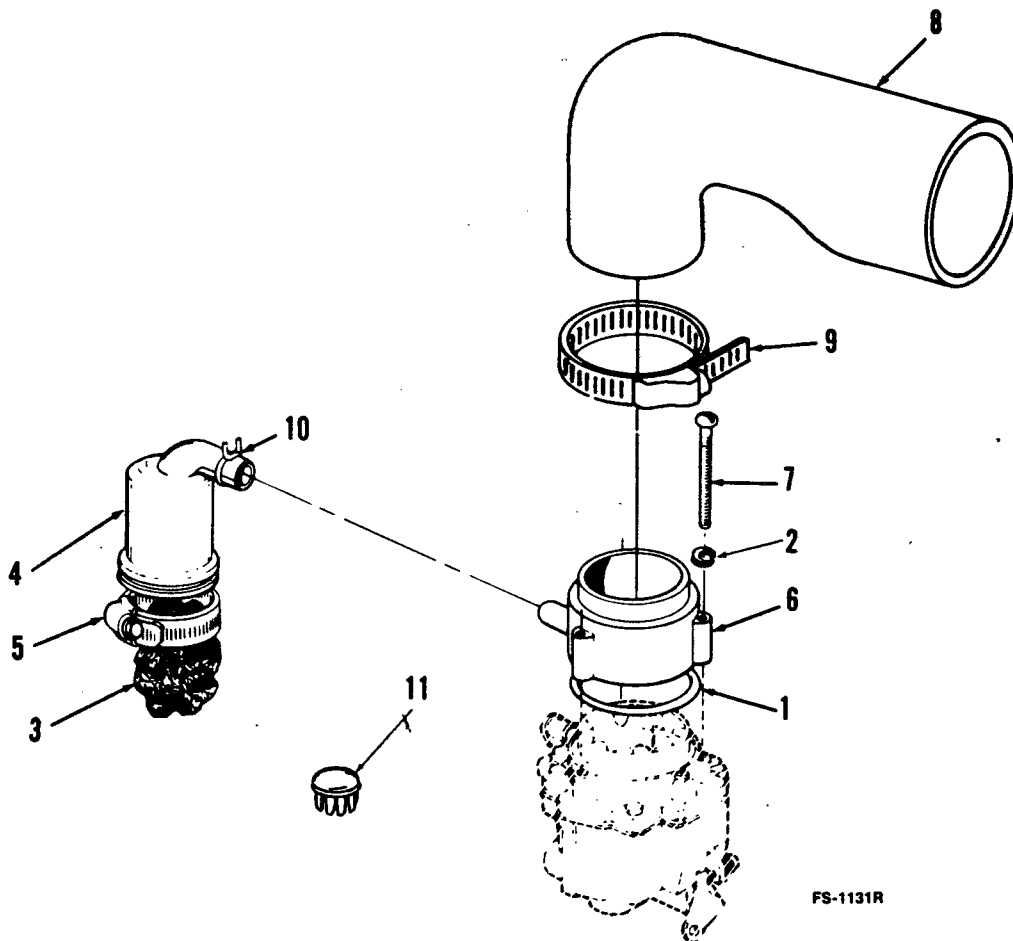
Option 18
Ignition (Magneto)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	160-1306	1	Stator Assembly (Includes Parts Marked *)	5	160-0749	1	*Pole Shoe, Stator - Magneto
1	167-1595	2	Cable, Spark Plug R.H.	6	167-0188	4	Clip, Spark Plug Cable
2	167-0298	2	Spark Plug	7	815-0259	2	Screw, Hex Cap
3	160-1305	1	*Coil, Magneto Stator	8	508-0095	2	Grommet, Rubber
4	526-0015	2	Washer, Flat - Stator	9	336-8466	1	Lead, Magneto to Ignition Breaker
	526-0184	2	1/4" Screw				
			17/64 ID x 5/8 OD x .1345" Thk)				

* - Parts Included in the 160-1306 Stator Assembly

Option 19 Remote Air Cleaner Adapter

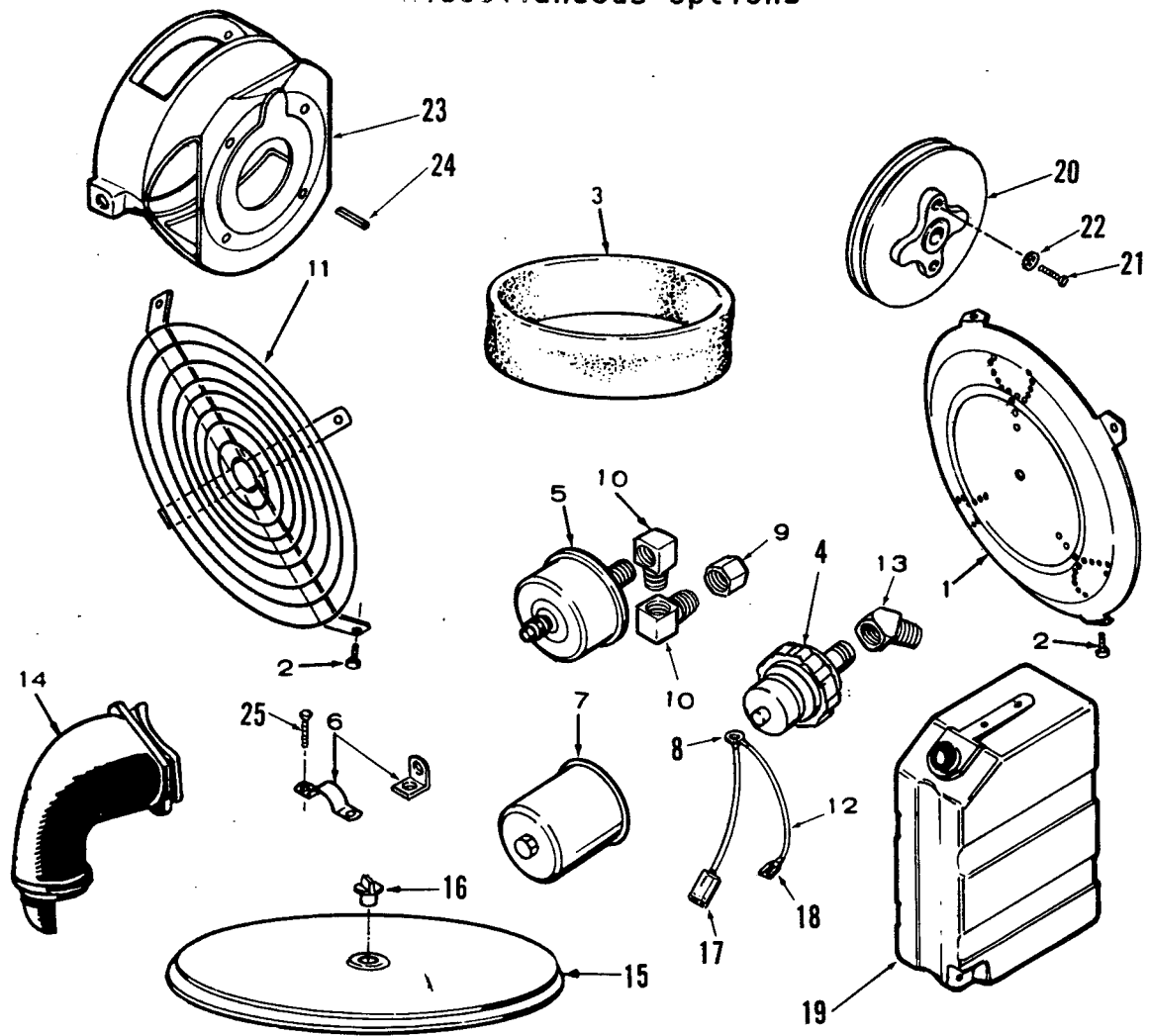


FS-1131R

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	140-1915	1	Kit, Remote Air Cleaner Adapter (Includes Parts Marked *)	6	140-1714	1	*Adapter, Carburetor Air Intake
				7	813-0106	3	*Screw, Machine - Round Head (#10-32 x 1-1/8")
1	509-0145	1	Seal, O-Ring	8	140-1428	1	*Elbow, Air Intake
2	850-0030	3	*Washer, Lock - Spring (#10)	9	503-0274	1	*Clamp, Hose - Air Intake
3	123-1417	1	*Filter, Breather Tube	10	503-0171	1	*Clamp, Hose
4	123-1539	1	*Tube, Crankcase Breather	11	517-0151	1	*Plug, Dot Button - Blower Housing Air Hole
5	503-0107	1	Clamp, Breather Tube				

* - Parts Included in 140-1915 Remote Air Cleaner Adapter Kit.

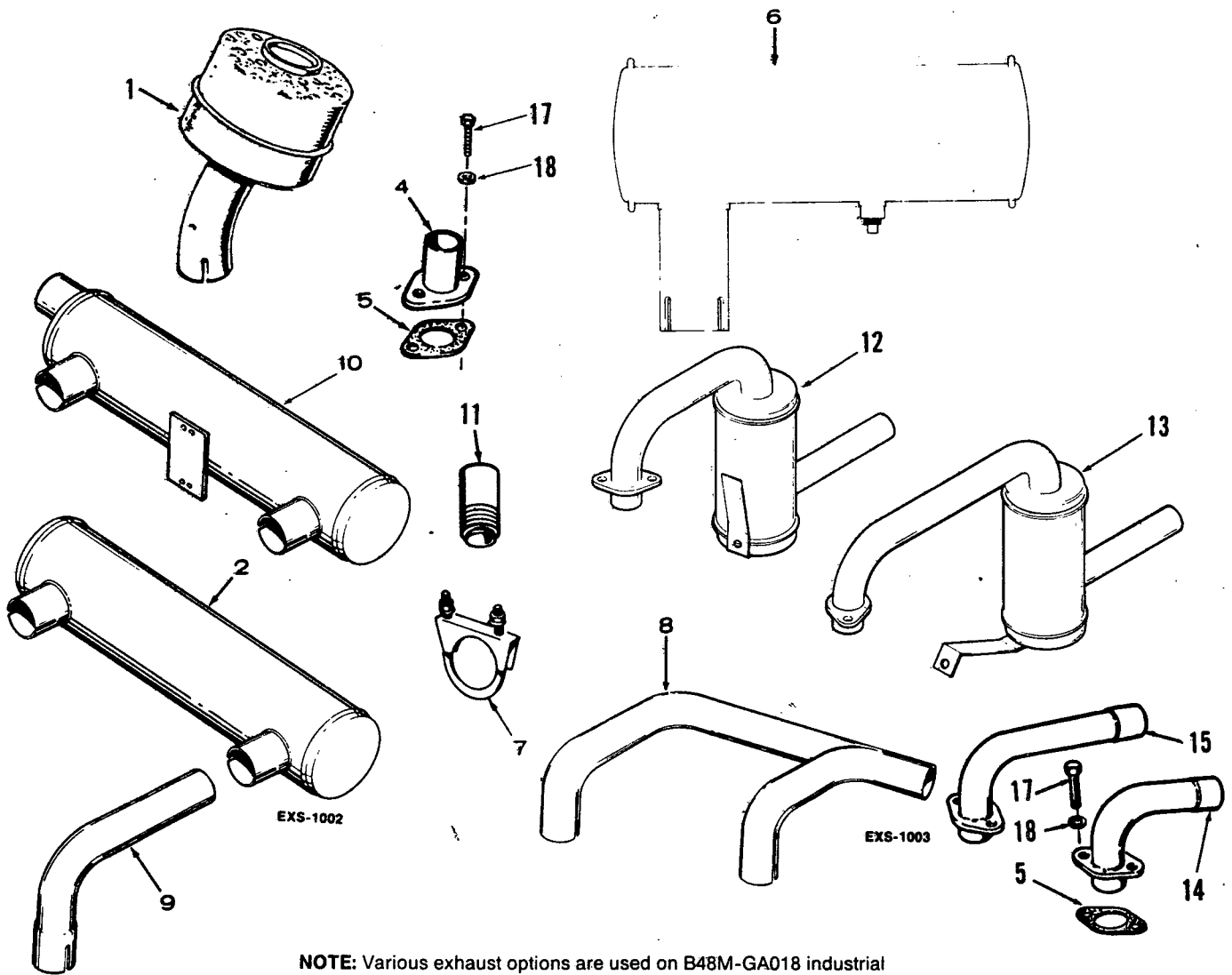
Miscellaneous Options



Miscellaneous Options

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	134-3213	1	Guard, Flywheel - Stationary	13	502-0053	1	Elbow, Street - 45°
2	815-0378	4	Screw, Tapping - Hex Head (#14 x 1/2")	14	140-1169	1	Tube, Air Intake with Debris Lip
3	140-1218	1	Wrapper, Filter Element - Dry Type	15	140-1747	1	Cover, Air Cleaner - Moisture Proof
4	309-0237	1	Switch, Low Oil Pressure Close at 8-10 PSI at Lowering Pressure	16	140-1750	1	Knob, Air Cleaner - Moisture Proof
	309-0510	1	Open at 4.5-7.5 PSI on Increasing Pressure	17	332-1408	1	Terminal, Receptacle
5	193-0108	1	Sender, Electric Oil Pressure Gauge	18	332-1279	1	Terminal, Spade
6	403-1490	2	Bracket, Lifting One Mounting Hole	19	159-1150	1	Tank, Fuel - Plastic (3.5 Gallon Capacity)
	403-1021	2	Two Mounting Holes	20	191-1210	1	Pulley, Drive - Alternator
7	122-0406	1	Filter, Oil (With Hex Nut)	21	800-0032	2	Screw, Hex Head Cap (5/16-18 x 1-3/4")
8	332-0152	1	Terminal, Ring	22	850-0045	2	Washer, Lock (5/16")
9	502-0175	1	Adapter, Pipe	23	190-0266	1	Housing, Clutch - Use with Warner 3-speed
10	502-0020	2	Elbow, Street - 90°	24	515-0146	1	Key, Drive - Units with Clutch
11	134-3527	1	Guard, Flywheel - Stationary (Wire Type)	25	800-0034	2	Screw, Cap - Hex Head (5/16-18 x 2-1/4")
	134-4134	1	Use without PTO		800-0034	4	One Mounting Hole Lifting Bracket
12		1	Use with PTO		800-0034		Two Mounting Holes Lifting Bracket
		1	Lead Assembly, Low Oil Pressure Switch - #16 Wire, 12" Lg (2) or 15" Lg (1)				

Miscellaneous Exhaust Options



NOTE: Various exhaust options are used on B48M-GA018 industrial engines. Select according to illustration.

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	155-1570	2	Muffler, Exhaust	9		1	Pipe, Exhaust (90°)
2	155-1692	1	Muffler, Exhaust		155-1703	1	Left
4	154-1958	2	Adapter, Exhaust (Flange Type)		155-1704	1	Right
5	154-1725	2	Gasket, Exhaust Adapter	10	155-1848	1	Muffler, Crossover
6	155-1697	2	Muffler, Exhaust - Raygun With Spark Arrestor	11	505-0775	2	Nipple, Half - Exhaust 1" x 1-13/16"
	155-1693	2	Muffler, Exhaust - Raygun Without Spark Arrestor		505-0755	2	1" x 3"
7	155-1256	2	Clamp, Muffler 1-1/4"		155-1381	2	1" x 3" (Includes Insert)
	155-1257	2	Clamp, Muffler 1-3/8"	12	155-1722	1	Muffler - RH
8			Manifold, Exhaust - Crossover	13	155-1723	1	Muffler - LH
	154-1986	1	Left Rear Outlet	14	154-2128	1	Adapter, Exhaust - Right (1-1/4" OD Outlet)
	154-1669	1	Left Front Outlet	15	154-2129	1	Adapter, Exhaust - Left (1-1/4" OD Outlet)
	154-1986	1	Right Front Outlet	17	800-0026	4	Screw, Cap - Hex Head (5/16-18" x 3/4")
	154-1669	1	Right Rear Outlet	18	850-0045	4	Washer, Lock - Spring (5/16")

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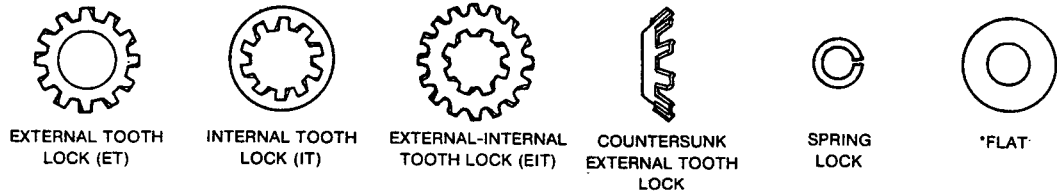
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HARDWARE IDENTIFICATION

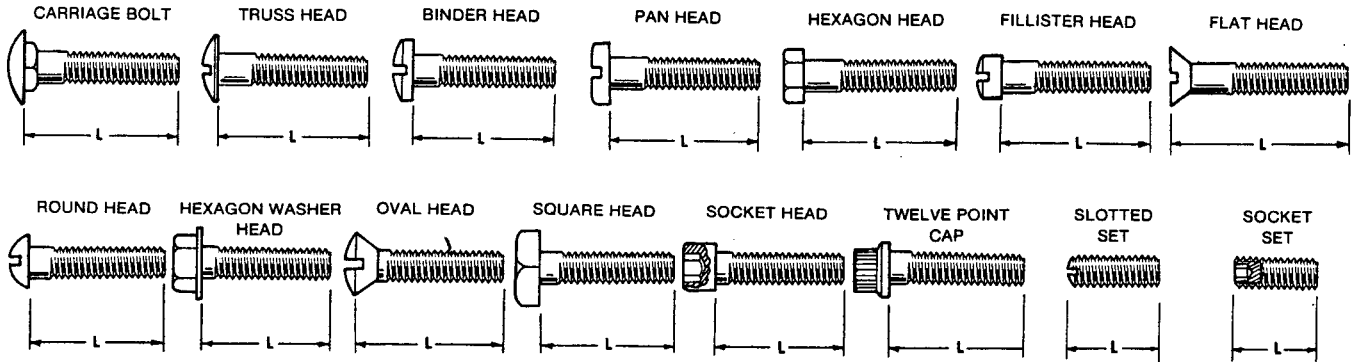
Illustrated hardware items are only for identification purposes. All hardware items listed throughout this catalog are steel SAE grade five (5) or lower (zinc plated with clear chromate dip) unless parts description indicates differently. All dimensions are in inches.

WASHER TYPES

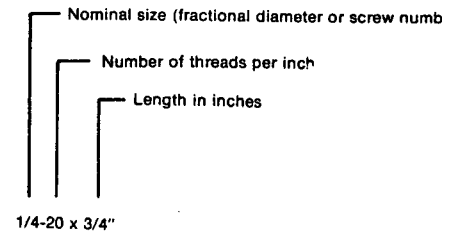
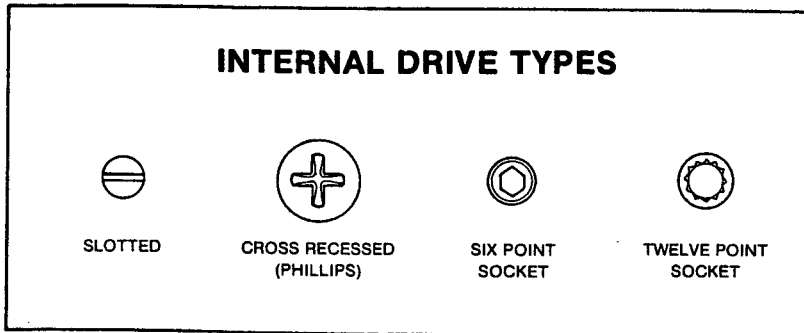


* - Flat washer dimensions given are: Inside Diameter (ID), Outside Diameter (OD) and Thickness (Thk).

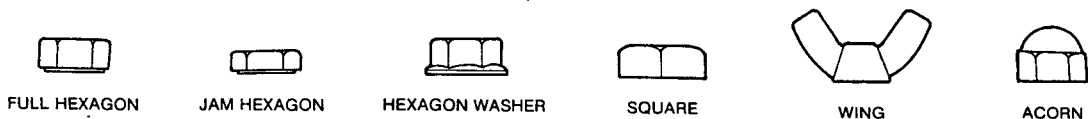
BOLT AND SCREW TYPES



L - Measure length between these points.



NUT TYPES





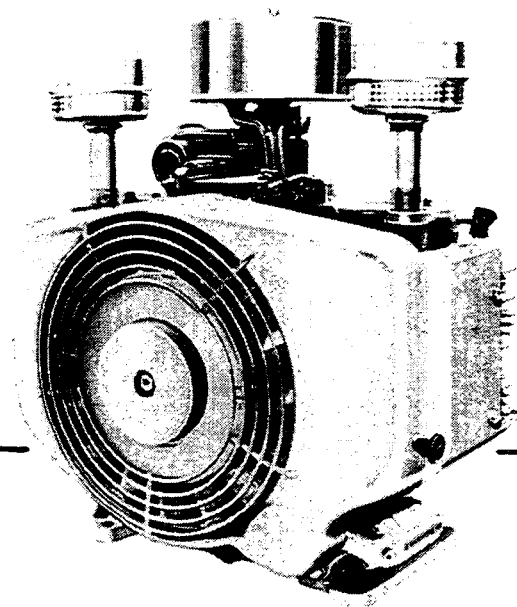
Onan Corporation

Telephone: (612) 574-5000

Onan

**Parts
Manual**

**CCK/CCKA
Industrial
Engine**



927-0253
6-86 (SPEC A-J)
Replaces 6-81 (Spec A-J)
Printed in U.S.A.

MODEL IDENTIFICATION

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.

For handy reference, insert your nameplate information in the spaces below.

MODEL AND SPEC NO.

SERIAL NO.

DIGITAL CONTROL SOFTWARE VERSION
AND DATE (IF APPLICABLE)

SAFETY PRECAUTIONS

The following symbols are used in Onan manuals to alert users to the potentially dangerous conditions relating to maintenance of equipment and replacement of parts. Please read and observe.

DANGER

This symbol warns of immediate hazards which will result in severe personal injury or death.

WARNING

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.

CAUTION

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or product or property damage.

PRODUCT SAFETY PRECAUTIONS

WARNING

Service and repair of Onan equipment must be performed by trained, experienced personnel only. Improper service or repair may result in property damage, severe personal injury or death. Do not use this catalog as a guide to servicing your equipment. Read and follow the IMPORTANT SAFETY INSTRUCTIONS in the Service Manual appropriate for the equipment you are working on.

WARNING

Contact with USED ENGINE OILS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking or changing engine oils take all necessary precautions not to ingest, breathe the fumes or contact the used oil.

WARNING

Contact with ASBESTOS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When handling engine gaskets take all necessary precautions not to ingest, breathe or contact the dust from the gaskets! Use adequate ventilation and wear protective gloves, masks and clothing!

WARNING

Contact with BENZINE and LEAD, found in gasoline, fuel additives and solvents has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking, draining or adding gasoline and fuel additives or using solvents take all necessary precautions not to ingest, breathe the fumes or contact the liquids. Use adequate ventilation and wear protective gloves, masks and protective clothing!

General Information

For parts or service, contact the dealer from whom you purchased this equipment or refer to your Nearest Authorized Onan Parts and Service Center.

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.

The diagram shows a rectangular nameplate with two circular mounting holes at the top. The word "Onan" is printed in a large, bold, stylized font. Below it is a wide rectangular box labeled "MODEL AND SPEC NO.". Underneath that is a narrower rectangular box labeled "SERIAL NO.". The bottom right corner of the nameplate is folded over, showing a second identical nameplate underneath. The reference code "M-1149" is printed at the bottom right of the diagram.

For handy reference, insert "YOUR" nameplate information in the spaces above.

▲WARNING

TAKE ALL NECESSARY PRECAUTIONS WHEN CHECKING OR CHANGING ENGINE OIL NOT TO INGEST, BREATHE THE FUMES OR CONTACT THE OIL. USED ENGINE OILS HAVE BEEN IDENTIFIED BY FEDERAL AND SOME STATE AGENCIES AS CAUSING CANCER.

▲WARNING

TAKE ALL NECESSARY PRECAUTIONS WHEN HANDLING ENINGE GASKETS. DO NOT INGEST, BREATHE, OR CONTACT DUST FROM GASKETS. USE ADEQUATE VENTILATION AND WEAR PROTECTIVE GLOVES, MASK AND CLOTHING. ASBESTOS HAS BEEN IDENTIFIED BY FEDERAL AND SOME STATE AGENCIES AS CAUSING CANCER.

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INTRODUCTION

This catalog applies to the industrial CCK and CCKA Engines listed below and factory installed options. Parts are arranged in groups of related items. Each illustrated part is identified by a reference number corresponding to the same reference number in the parts list for that group. Parts illustrations are typical. Using the *MODEL* and *SPEC NO.* from the engine nameplate, select the Parts Key No. (1, 2, etc., in the last column) that applies to your Engine Model and Spec No. This Parts Key No. represents parts that differ between models. Unless otherwise mentioned in the description, parts are interchangeable between models. Right and left engine sides are determined by *facing* the blower end (front) of the engine.

DATA TABLE

MODEL AND SPEC NUMBER	FEATURES	PARTS KEY NUMBER
CCK-S/*	Manual Start with Stub Shaft	1
CCK-F/*	Manual Start with Optional Clutch Drive	1
CCK-3G/*	Manual Start with Optional 3.3 to 1 Gear Reduction	1
CCK-4G/*	Manual Start with Optional 4 to 1 Gear Reduction	1
CCK-MS/*	Electric Start with Stub Shaft	2
CCK-MF/*	Electric Start with Optional Clutch Drive	2
CCK-3MG/*	Electric Start with Optional 3.3 to 1 Gear Reduction	2
CCK-4MG/*	Electric Start with Optional 4 to 1 Gear Reduction	2
CCKA-S/*	Manual Start with Stub Shaft	3
CCKA-F/*	Manual Start with Optional Clutch Drive	3
CCKA-MS/*	Electric Start with Stub Shaft	4
CCKA-MF/*	Electric Start with Optional Clutch Drive	4
CCKA-3MG/*	Electric Start with Optional 3.3 to 1 Gear Reduction	4
CCKA-4MG/*	Electric Start with Optional 4 to 1 Gear Reduction	4

* - The Specification Letter advances (A to B, B to C, etc.) with manufacturing changes.

NOTE: New model designations shown, begin during 1969. Previously a V was used in the model to designate Vacu-Flo (suction type) cooling.

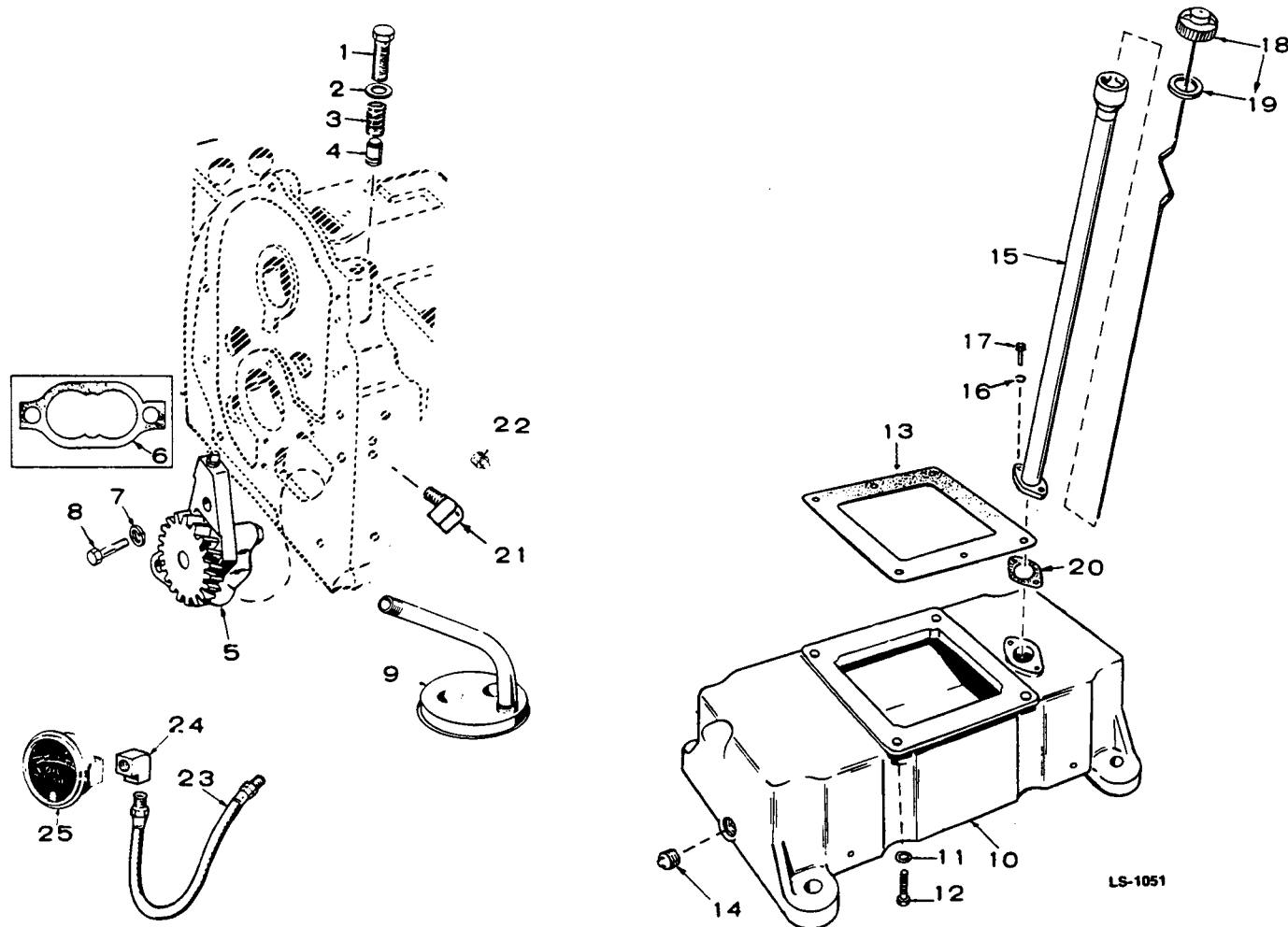
NOTICE!

ITEMS REFERENCED AS **OPTIONAL** INDICATE PART IS FACTORY INSTALLED AND MAY NOT BE APPLICABLE TO ALL MODELS. FOR FIELD CONVERSIONS ADDITIONAL PARTS ARE USUALLY REQUIRED.

STANDARD ENGINE PARTS SECTION

This section contains the engine parts used on standard engines listed in the Engine Data table.

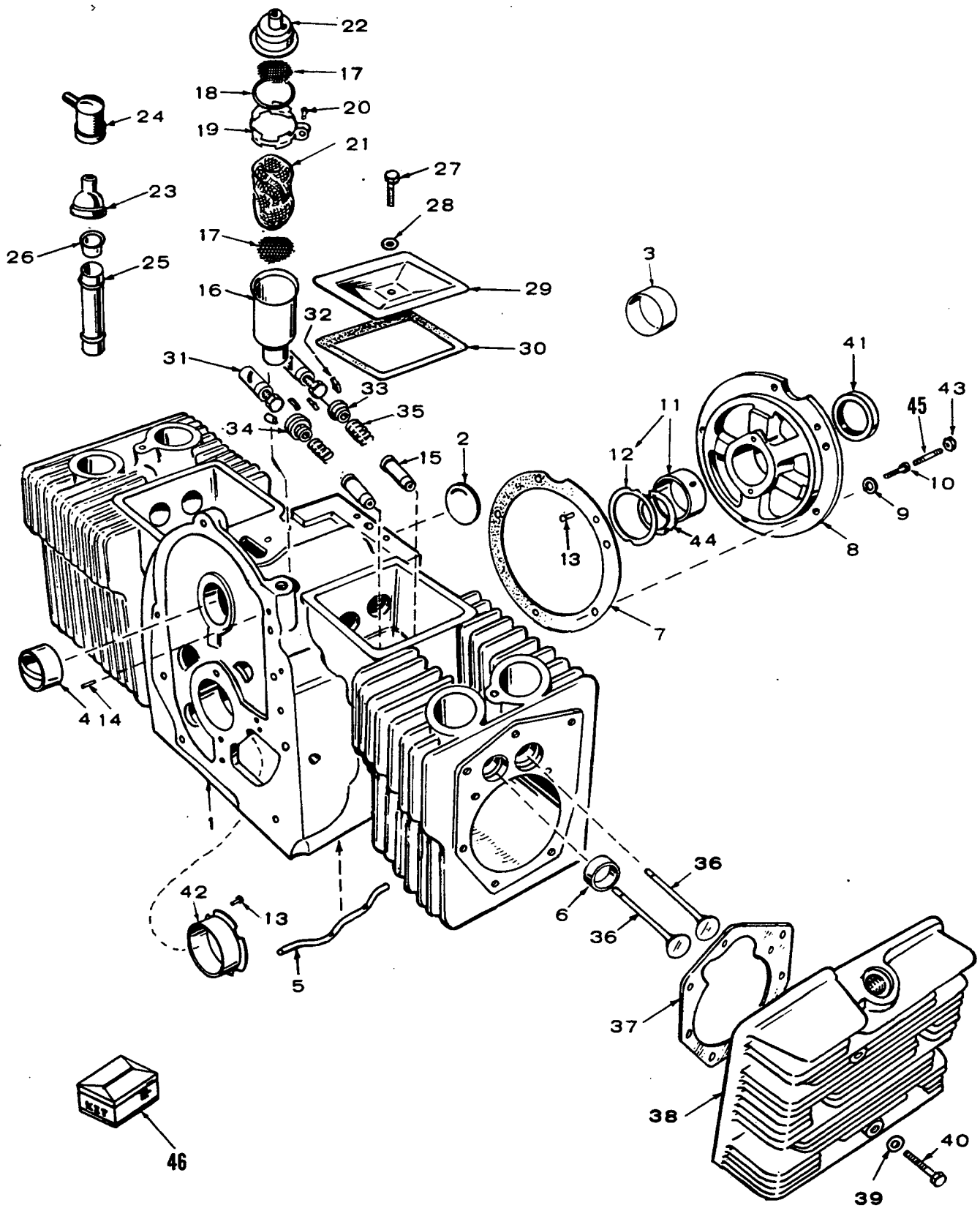
OIL SYSTEM



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	801-0048	1	Screw, Oil By-Pass Valve
2	526-0066	1	Washer, Flat - Copper (25/64" ID x 9/16" OD x 1/16" Thk)
3	120-0140	1	Spring, Oil By-Pass Valve
4	120-0398	1	Valve, Oil By-Pass
5	120-0491	1	Pump, Oil (Internal Parts not Sold Separately)
6	120-0161	1	Gasket Kit, Oil Pump
7	850-0040	2	Washer, Lock - Spring (1/4")
8	800-0007	2	Screw, Cap - Hex Head (1/4-20 x 1")
9	CUP, OIL PUMP INTAKE		
	120-0413	1	Key 1 and 3 Key 2 and 4
	120-0648	1	Begin Spec G
	120-0400	1	Spec A Through F
10	BASE, OIL		
			Key 1 and 3
	102-0468	1	Begin Spec J
	102-0301	1	Spec A Through H
			Key 2 and 4
	102-0861	1	Begin Spec J
	102-0339	1	Spec C Through H
	102-0301	1	Spec A Through B
11	850-0050	4	Washer, Lock - Spring (3/8")
12	102-0455	4	Screw, Cap - Hex Head (Special)
13	102-0158	1	Gasket, Oil Base

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
14	PLUG, OIL DRAIN		
	505-0110	1	3/8" Pipe (Used on Early Models)
	505-0056	1	1/2" Pipe (Used on Late Models)
15	TUBE, OIL FILL		
	123-0674	1	Begin Spec J
	123-0508	1	Spec A Through H
16	850-0040	2	Washer, Lock - Spring (1/4")
17	821-0018	2	Screw, Cap - Hex Head Locking (1/4-20 x 5/8")
18	CAP AND INDICATOR, OIL FILL		
			Key 1 and 3
	123-0762	1	Begin Spec J
	123-0506	1	Spec A Through H
			Key 2 and 4
	123-0694	1	Begin Spec J
	123-0527	1	Spec A Through H
19	123-0191	1	Gasket, Oil Fill Cap
20	141-0078	1	Gasket, Oil Fill Tube
21	502-0020	1	Elbow, Street - Oil Line Spec A Through H
22	505-0057	1	Plug, Oil Outlet in Block Begin Spec J
23	501-0004	1	Line, Oil - Spec A Through H
24	502-0005	1	Elbow, Oil Line to Gauge Spec A Through H
25	193-0005	1	Gauge, Oil Pressure - Spec A Through H

CYLINDER BLOCK



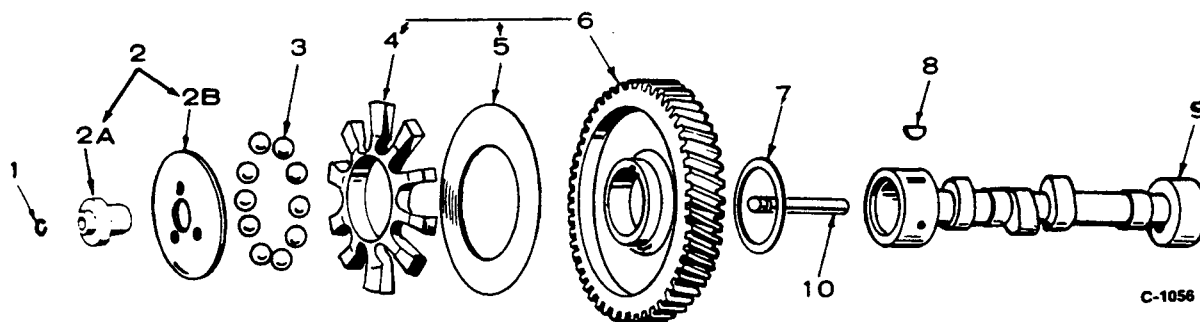
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CYLINDER BLOCK

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	BLOCK ASSEMBLY, CYLINDER			22	123-0954	1	Cap. Breather Tube - Begin Spec J
	110-0915	1	Engines with Stub Shaft (Includes Parts Marked *)	23	123-0073	1	Cap. Breather Tube - Spec D Through H
	110-0915	1	Engines with Clutch Drive (Includes Parts Marked *)	24	123-0293	1	Cap. Breather Tube - Spec A Through C
	110-1707	1	Engines with Gear Reduction (Includes Parts Marked Δ)	25	TUBE, BREATHER		
2	517-0048	1	Δ*Plug, Expansion - Camshaft Opening in Block - Engines Without Spark Advance		123-0129	1	Spec D Through H (1 x 4-11/16")
3	110-1283	1	Δ*Cover, Camshaft Opening in Block - Engines With Spark Advance		123-0521	1	Spec A Through C (1 x 5-11/16")
4	101-0367	2	Δ* Bearing, Camshaft (Precision)	26	123-0104	1	Valve, Breather - Spec A Through H
5	120-0386	1	Δ* Tube, Crankcase Oil	27	800-0012	2	Screw, Cap - Hex Head (1/4-20 x 2-1/4")
6	INSERT, EXHAUST VALVE SEAT			28	526-0063	2	Washer, Flat - Copper (17/64" ID x 7/16" OD x 1/32" Thk)
	110-0872	2	Δ* Standard	29	110-0666	2	Cover, Valve Compartment
	110-0872-02	2	.002" Oversize	30	110-0667	2	Gasket, Valve Compartment Cover
	110-0872-05	2	.005" Oversize	31	TAPPET, VALVE		
	110-0872-10	2	.010" Oversize		115-0006	4	Standard
	110-0872-25	2	.025" Oversize		115-0006-05	4	.005" Oversize
7	101-0115	1	Δ* Gasket Kit, Bearing Plate	32	110-0639	8	Lock, Valve Spring Retainer
8	PLATE, BEARING (EXCLUDES BEARING)			33	110-0893	2	Washer, Intake Valve Spring Retainer
	101-0316	1	*Engines with Stub Shaft Begin Spec F	34	110-0904	2	Rotocap, Exhaust Valve Spring Retainer
	101-0258	1	Engines with Stub Shaft Spec A Through E	35	110-0539	4	Spring, Valve
	101-0316	1	*Engines with Clutch Drive Begin Spec F	36	VALVE		
	101-0258	1	Engines with Clutch Drive Spec A Through E		110-0881	2	Intake
	101-0390	1	ΔEngines with Gear Reduction Begin Spec F		110-0880	2	Exhaust
	101-0232	1	Engines with Gear Reduction Spec A Through E	37	110-0892	2	Gasket, Cylinder Head
9	850-0045	5	Δ* Washer, Lock - Spring (5/16")	38	HEAD, CYLINDER		
10	800-0512	5	Δ* Screw, Cap - Hex Head (Special)		110-0890	1	Right Side (#2 Cylinder) - Key 1 and 2 (Low Compression)
11	BEARING, CRANKSHAFT - BEGIN SPEC F (Includes Thrust Washer)				110-0884	1	•Right Side (#2 Cylinder) - Key 3 and 4 (High Compression)
	101-0450	2	Δ Standard		110-0891	1	Left Side (#1 Cylinder) - Key 1 and 2 (Low Compression)
	101-0450-02	2	.002" Undersize		110-0883	1	•Left Side (#1 Cylinder) - Key 3 and 4 (High Compression)
	101-0450-10	2	.010" Undersize	39	526-0122	18	Washer, Flat (11/21" ID x 23/21" OD x 10 Ga.)
	101-0450-20	2	.020" Undersize	40	SCREW, HEX HEAD CAP (Hardened)		
	101-0450-30	2	.030" Undersize		110-0879	8	Special
12	104-0575	2	Δ* Washer, Crankshaft Bearing Thrust Begin Spec F		114-0022	10	Special
13	516-0072	4	Δ* Pin, Crankshaft Bearing Stop (2 only Spec A Through E)	41	509-0041	1	Seal, Oil (in Gasket Kit 168-0103) (Not used on Engines with 4 to 1 Reduction Gear Box)
14	516-0141	2	Δ* Pin, Gearcover Align	42	BEARING, CRANKSHAFT - SPEC A THROUGH E		
15	110-0902	4	Δ* Guide, Valve		101-0181	2	Standard
16	123-0953	1	Tube, Breather - Begin Spec J		101-0181-02	2	.002" Undersize
17	123-0958	2	Screen, Breather Tube - Begin Spec J		101-0181-10	2	.010" Undersize
18	509-0117	1	Seal, "O" Ring - Breather Tube Begin Spec J		101-0181-20	2	.020" Undersize
19	123-0951	1	Clamp, Breather Tube - Begin Spec J		101-0181-30	2	.030" Undersize
20	809-0035	1	Screw, Tapping - Pan Head (#8 x 3/4") Begin Spec J	43	110-0445	5	Nut, Hex (Bearing Plate Mounting - on Some Early Models) (Special)
21	123-0865	1	Baffle, Breather Tube - Begin Spec J	44	104-0776	1	Shim, Crankshaft Thrust Bearing
				45	520-0114	5	Stud, Rear Bearing Plate Mounting (On some early models)
				46	123-1600	1	Kit, Breather Icing (Optional)

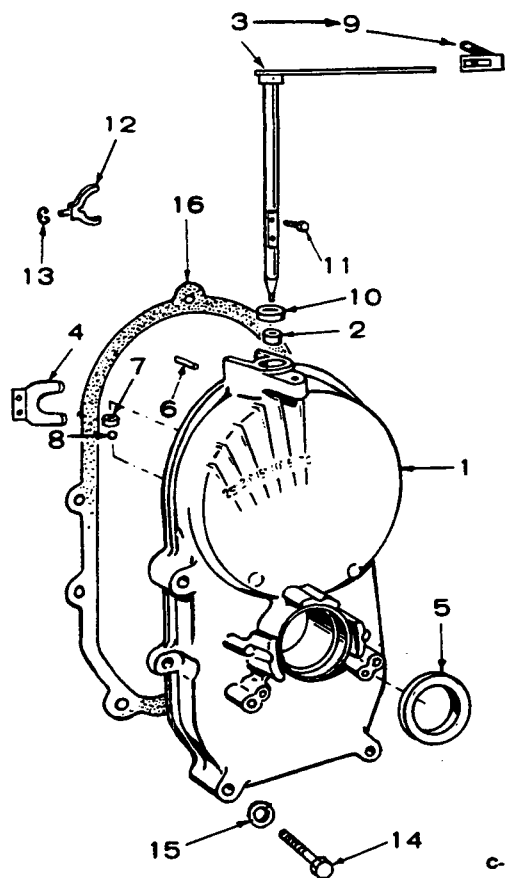
- * - Parts Included in 110-0915 Cylinder Block Assembly.
- Δ - Parts Included in 110-1707 Cylinder Block Assembly.
- - Hi Compression head can be identified by a 3/32" radius boss on the underside of head on corner nearest the spark plug hole.

CAMSHAFT



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	150-0078	1	Ring, Retaining	9	CAMSHAFT	1	Key 1 and 2 (Includes Center Pin)
2	150-1695	1	Kit, Governor Cup (Includes Hub and Cup)	105-0140		1	Key 3 and 4 - Begin Spec J (Includes Center Pin and Spark Advance Mechanism Pins) (3/16" Pins)
2A	150-1519	1	Hub, Governor Cup	105-0295		1	Key 3 and 4, Spec A Through H (Includes Center Pin and Spark Advance Mechanism Pins) (1/8" Pins)
2B	150-1520	1	Cup, Governor	105-0234		1	Pin, Camshaft Center
3	BALL, FLY - GOVERNOR						
	510-0015	10	Key 1 and 2				
	510-0015	5	Key 3 and 4				
4	150-1257	1	Spacer, Governor Flyball				
5	150-0077	1	Plate, Governor Flyball				
6	105-0332	1	Gear, Timing (Includes Spacer and Plate)				
7	105-0541	1	Washer, Thrust	10	150-0075	1	
8	515-0001	1	Key, Camshaft Gear Mounting				

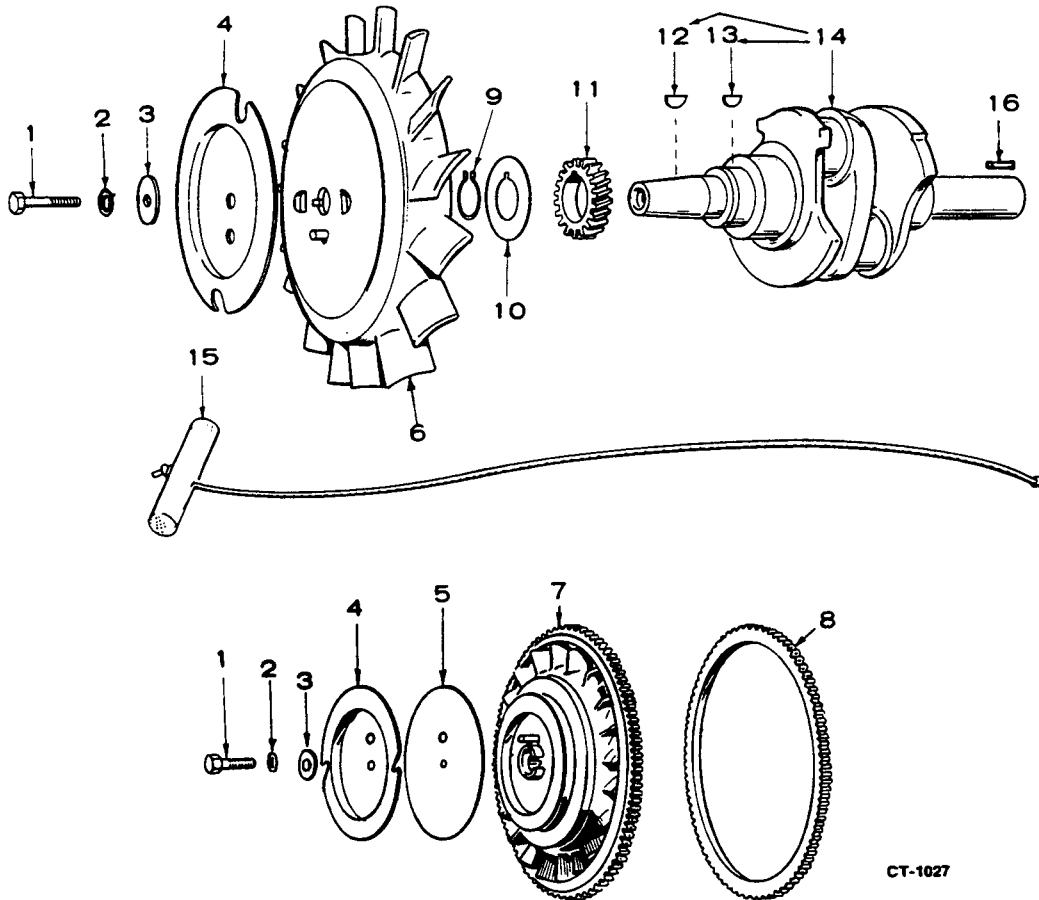
GEARCASE



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	GEARCASE ASSEMBLY		
	103-0667	1	Begin Spec J (Includes Parts Marked †)
	103-0648	1	Specs A through H (Includes Parts Marked *)
2	510-0013	1	† Bearing, Needle - Upper
3	SHAFT AND ARM ASSEMBLY, GOVERNOR		
	150-1542	1	† Begin Spec J
	150-0710	1	* Spec A through H
4	150-1187	1	† Yoke, Governor Shaft - Begin Spec J
5	509-0040	1	† Seal, Oil - Crankshaft
6	516-0130	1	† Pin, Cup Stop
7	BEARING NEEDLE - LOWER		
	510-0013	1	† Begin Spec J
	510-0008	1	* Spec A through H
8	510-0014	1	† Ball, Bearing
9	150-0678	1	† Clip, Sensitivity Adjustment
10	509-0008	1	† Seal, Oil
11	815-0046	2	† Screw, Machine - Pan Head (#8-32 x 3/8") - Begin Spec J
12	150-0620	1	* Yoke, Governor Shaft - Spec A through H
13	518-0129	1	* Ring, Governor Yoke Retaining - Spec A through H
14	SCREW, CAP - HEX HEAD		
	800-0032	4	5/16-18 x 1-3/4"
	800-0034	1	5/16-18 x 2-1/4"
15	850-0045	5	Washer, Lock - Spring (5/16")
16	103-0011	1	Gasket, Gearcase

† - Parts Included in 103-0667 Gearcase Assembly.
 * - Parts Included in 103-0648 Gearcase Assembly.

CRANKSHAFT AND FLYWHEEL

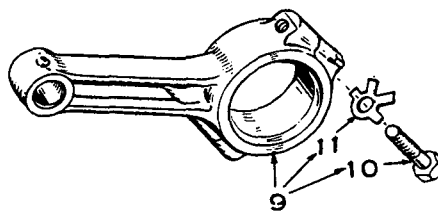
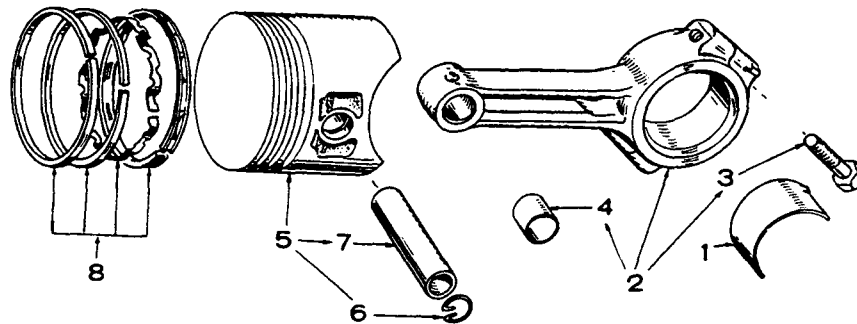


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REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	104-0170	1	Screw, Cap - Hex Head (Special)	8	134-0673	1	Gear, Ring - Flywheel - Key 2 and 4
2	850-0055	1	Washer, Lock - Spring (7/16")	9	518-0014	1	Ring, Retaining
3	WASHER, FLAT 526-0017	1	Key 1 and 3 (15/32" ID x 1-1/4" OD x 1/4" Thk)	10	104-0043	1	Washer, Gear Retaining
	526-0128	1	Key 2 and 4 (15/32" ID x 1-1/2" OD x 1/4" Thk)	11	104-0032	1	Gear, Timing
4	SHEAVE, ROPE 192-0308	1	Key 1 and 2, Begin Spec E	12	515-0227	1	Key, Flywheel Mounting
	160-0222	1	Key 1, Spec A through D	13	515-0001	1	Key, Timing Gear Mounting
	192-0308	1	Key 2, Spec A through D	14	CRANKSHAFT (Includes Keys)		Begin Spec J
	192-0308	1	Key 3 (Optional Key 4)				Engines with Stub Shaft
5	192-0296	1	Backplate, Rope Sheave - Key 2 and 4 - Spec A through H				Engines with Clutch Drive
6	FLYWHEEL						Engines with 4 to 1 Gear Reduction (Includes Pinion Gear, Thrust Washer and Key)
	160-0937	1	Key 1 Begin Spec G (Includes Magnets)		104-0905	1	Engines with 3:3 to 1 Gear Reduction
	160-0650	1	Spec E through F (Includes Magnets)				Spec G through H
	160-0202	1	Spec A through D (Includes Magnets)		104-1316	1	Engines with Stub Shaft
	160-1072	1	Key 3 †Begin Spec J (Includes Magnets)		104-1316	1	Engines with Clutch Drive
	160-0761	1	†Spec A through H (Includes Magnets)		104-1279	1	Engines with Clutch Drive
					104-1296	1	Engines with Gear Reduction
7	FLYWHEEL (Includes Gear)						Spec A through F
	134-2728	1	Keys 2 and 4 - Begin Spec J		104-1316	1	Engines with Stub Shaft
	134-0675	1	Key 2 - Spec A through H		104-1316	1	Engines with Clutch Drive
	134-1192	1	Key 4 - Specs A through H		104-1296	1	Engines with Gear Reduction
					104-1323	1	Taper Shaft (Welders Only)
				15	192-0083	1	Rope, Starting - Key 1 and 3
				16	515-0202	1	Key, Stub Shaft

† - NOTE: If screws protrude through Magnets use 526-0049 Brass Washer to Shim.

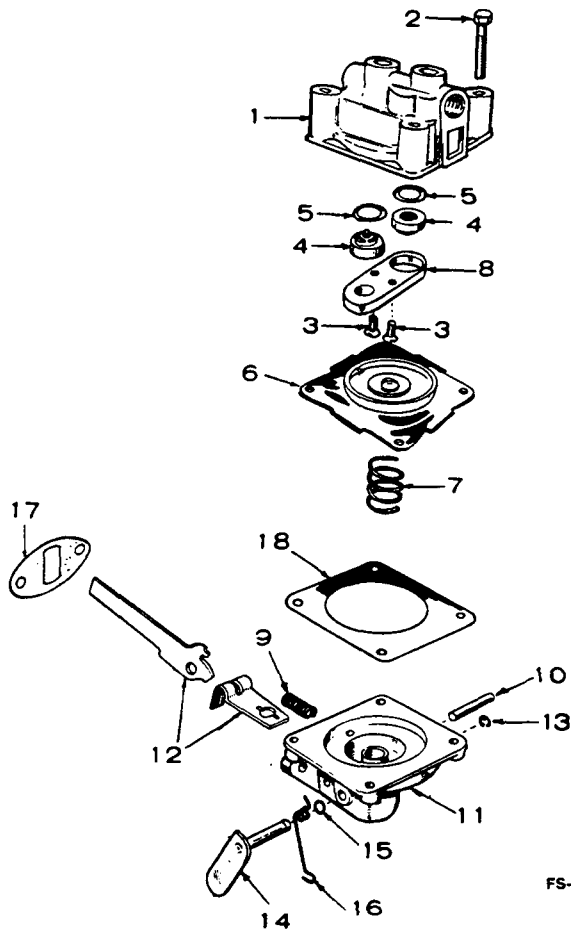
PISTON AND ROD



CT-1028

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	BEARING, CONNECTING ROD - BEGIN SPEC D (HALF)			8	RING SET, PISTON		
	114-0145	4	Standard		Key 1 and 2		
	114-0145-02	4	.002" Undersize		Standard		
	114-0145-10	4	.010" Undersize		113-0152-05	2	.005" Oversize
	114-0145-20	4	.020" Undersize		113-0152-10	2	.010" Oversize
	114-0145-30	4	.030" Undersize		113-0152-20	2	.020" Oversize
2	114-0203	2	Rod Assembly, Connecting (Includes Bushing and Place Bolts) - Begin Spec D		113-0152-30	2	.030" Oversize
					113-0152-40	2	.040" Oversize
3	805-0010	4	Bolt, Place (5/16-24 x 1-1/4") Begin Spec D		Key 3 and 4 (Chrome Plated Top Compression Ring)		
4	114-0036	2	Bushing, Connecting Rod - Begin Spec D		113-0153	2	Standard
5	PISTON AND PIN (Includes Retaining Rings)				113-0153-05	2	.005" Oversize
	112-0179	2	Standard		113-0153-10	2	.010" Oversize
	112-0179-05	2	.005" Oversize		113-0153-20	2	.020" Oversize
	112-0179-10	2	.010" Oversize		113-0153-30	2	.030" Oversize
	112-0179-20	2	.020" Oversize		113-0153-40	2	.040" Oversize
	112-0179-30	2	.030" Oversize	9	ROD, CONNECTING - SPEC A THROUGH C (Aluminum)		
	112-0179-40	2	.040" Oversize		114-0098	2	Standard
6	112-0003	4	Ring, Retaining		114-0098-10	2	.010" Undersize
7	112-0069	2	Pin, Piston		114-0098-20	2	.020" Undersize
					114-0098-30	2	.030" Undersize
				10	110-0284	4	Screw, Cap - Hex Head (Hardened) Spec A Through C
				11	114-0059	4	Washer, Lock Tab - Spec A Through C

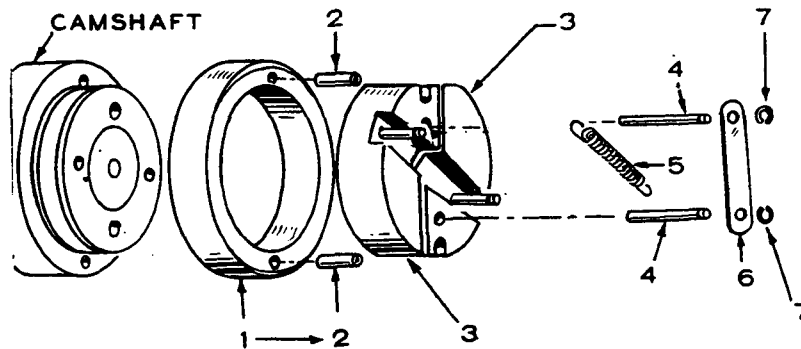
FUEL PUMP PARTS



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	149-0693	1	Pump, Fuel (Complete)
	149-0526	1	Kit, Repair (Includes Parts Marked *)
1		1	Body, Upper (Not Sold Separately)
2	815-0148	4	Screw, Cap - Slotted Hex Head (#8-32 x 7/8")
3	815-0147	2	Screw, Machine - Oval Head Phillips (#6-32 x 5/8")
4	149-0096	2	*Valve and Cage
5	149-0095	2	*Gasket, Valve
6	149-0582	1	*Diaphragm Assembly
7	149-0672	1	*Spring
8	149-0539	1	Retainer, Valve Cage
9	149-0675	1	*Spring
10	516-0113	1	Pin, Rocker Arm
11		1	Body, (Not Sold Separately)
12	149-0710	1	Link and Arm Set, Rocker
13	518-0129	1	Ring, Retainer - Primer Lever
14	149-0551	1	Lever, Primer
15	509-0065	2	Seal, "O" Ring
16	149-0404	1	Spring, Primer Lever
17	149-0003	1	*Gasket, Pump Mounting
18	149-0858	1	*Gasket, Diaphragm (Air Lock Prevention)

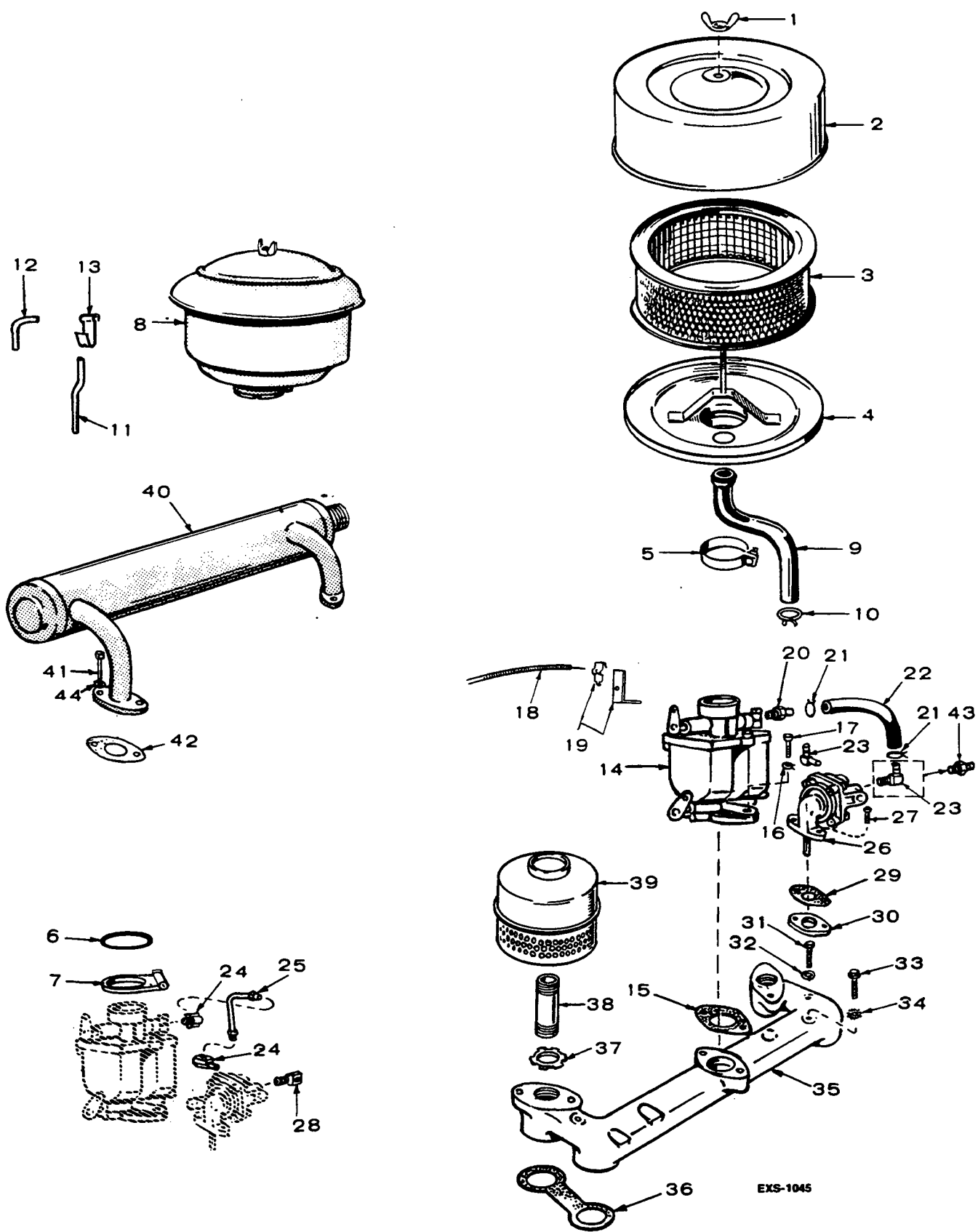
* - Parts Included in 149-0526 Repair Kit.

SPARK ADVANCE MECHANISM - KEYS 3 AND 4



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	160-0791	1	Cam	4	PIN GROOVE		
2	516-0144	4	Pin, Roll (7/16")	516-0172	2	.1935" Dia x 1/16" Lg.	- Begin Spec J
3	WEIGHT ASSEMBLY (INCLUDES PINS)			516-0146	2	1/8" Dia x 1-1/4" Lg.	- Specs A through H
	160-1049	2	Key 3, Begin Spec J (Magneto Ignition)	5	SPRING		
	160-0789	2	Key 3, Specs A through H (Magneto Ignition)	160-1051	1		Begin Spec J
	160-1198	2	Key 4, Begin Spec J (Battery Ignition)	160-0727	1		Specs A through H
	160-0790	2	Key 4, Specs A through H (Battery Ignition)	160-0726	1		Retainer, Specs A through H
				7	RING, RETAINING		
				518-0129	2		Begin Spec J
				518-0185	2		Specs A through H

EXHAUST AND FUEL SYSTEM

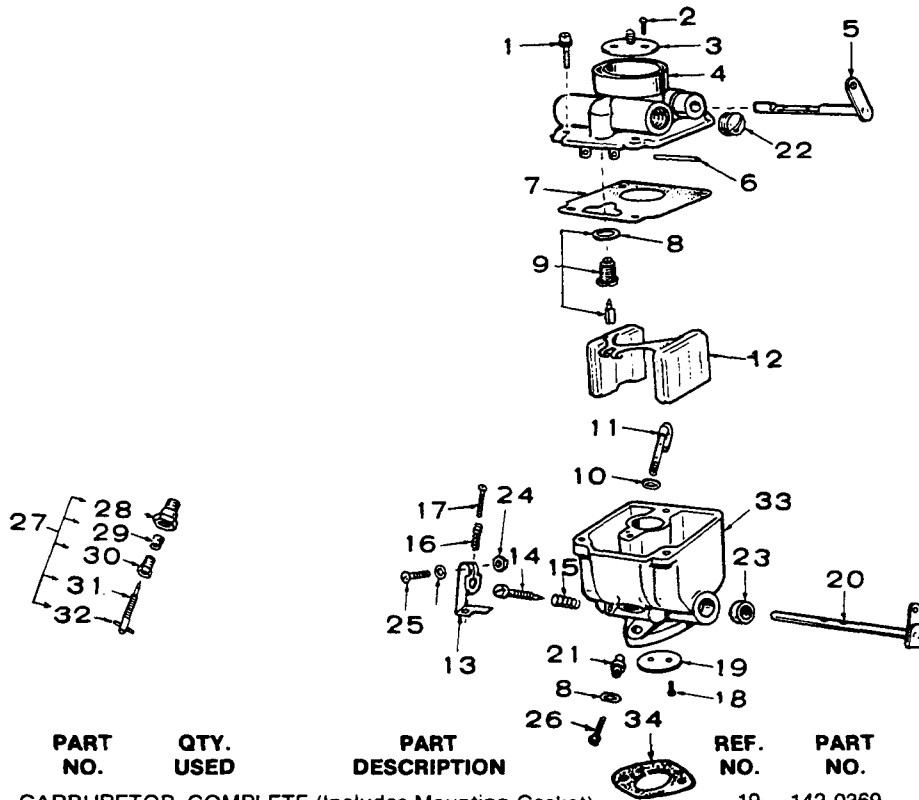


EXS-1045

EXHAUST AND FUEL SYSTEM

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	865-0020	1	Nut, Wing (1/4-20) - Begin Spec J	22	LINE, FUEL PUMP TO CARBURETOR - BEGIN SPEC J		
2	140-1295	1	Cover, Air Cleaner - Begin Spec J	503-0644	1	Key 1 and 3	
3	140-1216	1	Element, Air Cleaner (Paper) - Begin Spec J	503-0694	1	Key 2 and 4	
4	BASE, AIR CLEANER			23	ELBOW, BARBED - BEGIN SPEC J		
	140-1344	1	Begin Serial Number 0975977797 During Spec J	502-0313	1	Fuel Pump Outlet - Key 1 and 3	
	140-1356	1	Spec J through Serial Number 0975977796 During Spec J (Includes 503-0189 Clamp)	502-0313	1	Fuel Pump Inlet	
5	CLAMP, AIR CLEANER			24	502-0002	2	Elbow, Fuel Line to Carburetor and Fuel Pump - Specs A through H
	503-0398	1	Begin Serial Number 0975977797 During Spec J	25	149-0611	1	Line, Fuel - Specs A through H
	503-0019	1	Specs A through H	26	149-0693	1	Pump, Fuel (See Separate Group for Components)
6	509-0124	1	Seal, "O" Ring - Spec J through Serial Number 0975977796 During Spec J	27	806-0009	2	Screw, Cap - Counterbore Head Hardened (1/4-20 x 1-1/4")
7	140-1058	1	Clamp, Air Cleaner - Spec J through Serial Number 0975977796 During Spec J	28	502-0020	1	Elbow, Fuel Pump Inlet - Specs A through H
8	CLEANER, AIR (OIL BATH)			29	149-0003	2	Gasket, Fuel Pump
	140-0283	1	Specs D through H	30	149-0045	1	Spacer, Fuel Pump
	140-0494	1	Specs A through C	31	800-0054	2	Screw, Cap - Hex Head (3/8-16 x 2")
9	HOSE, BREATHER			32	850-0050	2	Washer, Lock - Spring (3/8")
	123-1264	1	Begin Serial Number 0975977797 During Spec J	33	SCREW, INTAKE - MANIFOLD		
	123-1263	1	Spec J through Serial Number 0975977796 During Spec J	821-0004	1	Hex Head Self Locking (#10-32 x 5/8") - Begin Spec J	
10	503-0769	1	Clamp, Hose - Begin Spec J	813-0098	1	Round Head Machine (#10-32 x 3/8") - Spec A through H	
11	140-0471	1	Tube, Breather Cap to Air Cleaner - Specs D through H	34	853-0008	1	Washer, Lock - ET (#10) - Specs A through H
12	123-0522	1	Tube, Breather Cap to Air Cleaner - Specs A through C	35	154-0356	1	Manifold, Intake
13	140-0459	1	Bracket, Breather Tube - Specs D through H	36	154-0013	2	Gasket, Intake Manifold
14	CARBURETOR, GASOLINE (See Separate Group for Components) (Includes Mounting Gasket)			37	331-0053	2	Nut, Locking (1") - Begin Spec J
	142-0426	1	Key 1 and 2 (Fixed Main Jet With 21/32" Venturi)	38	505-0331	2	Nipple, Pipe (1 x 4") Spec J
	142-0431	1	Key 3 and 4 (Fixed Main Jet With 3/4" Venturi)	39	155-0916	2	Muffler, Exhaust - Begin Spec J
15	141-0078	1	Gasket, Carburetor Mounting	40	MUFFLER, EXHAUST - SPECS A THROUGH H		
16	850-0040	2	Washer, Lock - Spring (1/4")	155-0480	1	Key 1 and 2	
17	800-0009	2	Screw, Cap - Hex Head (1/4-20 x 1-1/2")	155-0860	1	Key 3 and 4	
18	153-0097	1	Rod, Choke	41	800-0028	4	Screw, Cap - Hex Head (5/16-18 x 1") - Specs A through H
19	153-0263	1	Bracket and Clamp, Choke Rod (Includes 518-0176 Clip)	42	154-0360	2	Gasket, Muffler - Specs A through H
20	502-0395	1	Connector, Fuel Line to Carburetor - Begin Spec J	43	502-0395	1	Connector, Fuel Pump Outlet - Keys 2 and 4 - Begin Spec J
21	503-0301	2	Clamp, Fuel Line - Begin Spec J	140-1427	1	Kit, Conversion, Oil Bath to Dry Type Air Cleaner - Specs A through H	
				44	850-0045	4	Washer, Lock (5/16")

CARBURETOR PARTS

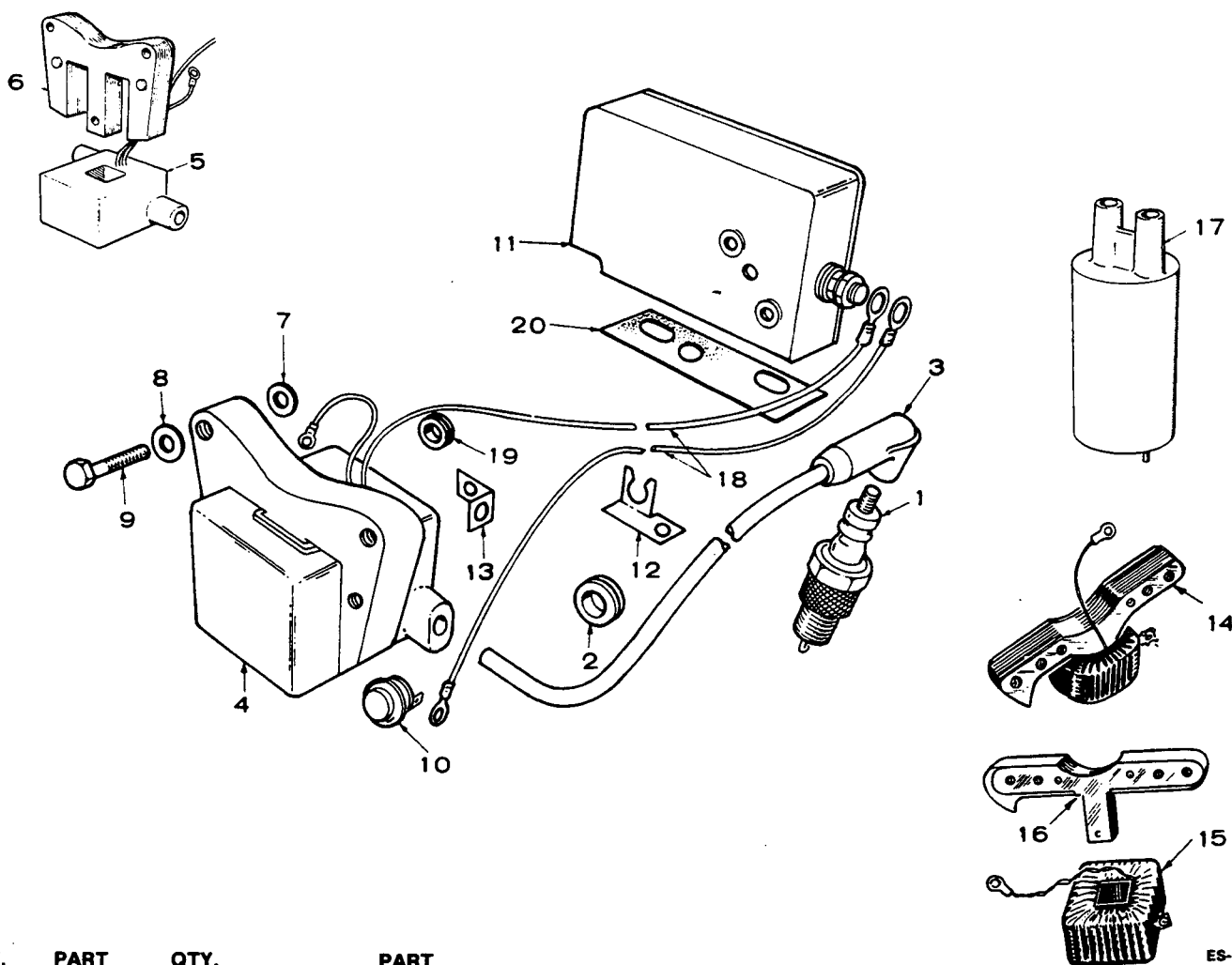


FS-1221

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	CARBURETOR, COMPLETE (Includes Mounting Gasket)			19	142-0369	1	Fly, Throttle
			Key 1 and 2	20	142-0368	1	†Shaft, Throttle
142-0426	1		Begin Spec G (Fixed Main Jet)	21	NUT AND JET NOZZLE		
142-0363	1		Specs A through F (Adjustable Main Jet) (For Replacement Order 142-0426)		142-0393	1	Key 1 and 2
					142-0370	1	†Begin Spec G
142-0431	1		Key 3 and 4 (Fixed Main Jet)		142-0474	1	Specs A through F
KIT, REPAIR (INCLUDES PARTS MARKED †)				22	505-0008	1	†Key 3 and 4
			Key 1 and 2	23	142-0343	2	†Bushing, Throttle Shaft
142-0428	1		Begin Spec G	24	870-0053	1	Nut, Hex (#10-32)
142-0371	1		Specs A through F	25	813-0103	1	Screw, Machine - Round Head (#10-32 x 3/4")
142-0475	1		Key 3 and 4	26	PLUG, NOZZLE		
142-0033	1		†Kit, Gasket (Includes Parts Marked *)		142-0015	1	Key 1 and 2 - Begin Spec G
1	SCREW, FILLISTER HEAD				142-0015	1	Key 3 and 4
	815-0103	1	Key 1 and 2 (#10-24 x 1/2")	27	142-0042	1	Needle Assembly, Key 1 and 2 - Specs A through F (Includes Parts Marked Δ)
	815-0109	2	Key 1 and 2 (#10-24 x 5/8")				
	815-0109	3	Key 3 and 4 (#10-24 x 5/8")	28	142-0046	1	ΔRetainer, Main Adjusting Needle - Key 1 and 2 - Specs A through F
2	815-0091	2	†Screw, Fillister Head with IT Washer (#4-40 x 3/16")	29	142-0206	1	Δ†Packing, Main Adjusting Needle - Key 1 and 2 - Specs A through F
3	142-0055	1	Fly, Choke	30	142-0045	1	ΔRetainer, Main Adjusting Needle Packing - Key 1 and 2 - Specs A through F
4	142-0205	1	Sleeve, Choke (Cover)	31	142-0041	1	Δ†Needle, Main Adjusting - Key 1 and 2 - Specs A through F
5	SHAFT, CHOKE			32	516-0027	1	ΔPin, Main Adjusting Needle - Key 1 and 2 - Specs A through F
	142-0217	1	Key 1 and 2	33		1	Body Assembly, Lower (Not Sold Separately)
	142-0420	1	Key 3 and 4	34	141-0078	1	*Gasket, Carburetor Mounting
6	142-0039	1	†Shaft, Float				
7	142-0606	1	*Gasket, Body				
8	GASKET						
	148-0017	1	*Float Valve Seat				
	148-0017	1	*Nozzle Plug - Begin Spec G				
9	142-0049	1	†Valve and Seat Assembly				
10	142-0032	1	*Gasket, Nozzle				
11	142-0285	1	Nozzle Assembly				
12	142-0361	1	Float and Lever Assembly				
13	145-0008	1	Lever, Idle Stop				
14	142-0040	1	†Needle, Idle Adjusting				
15	142-0282	1	Spring, Idle Needle				
16	142-0035	1	Spring, Throttle Stop				
17	812-0063	1	Screw, Machine - Round Head (#6-32 x 1/2")				
18	815-0072	2	†Screw, Oval - Head Machine (#4-40 x 1/4")				

† - Parts Included in Repair Kit. Parts With Δ symbol are included in 142-0371 Kit only.
 * - Parts Included in 142-0033 Gasket Kit.
 Δ - Parts Included in 142-0042 Needle Assembly.

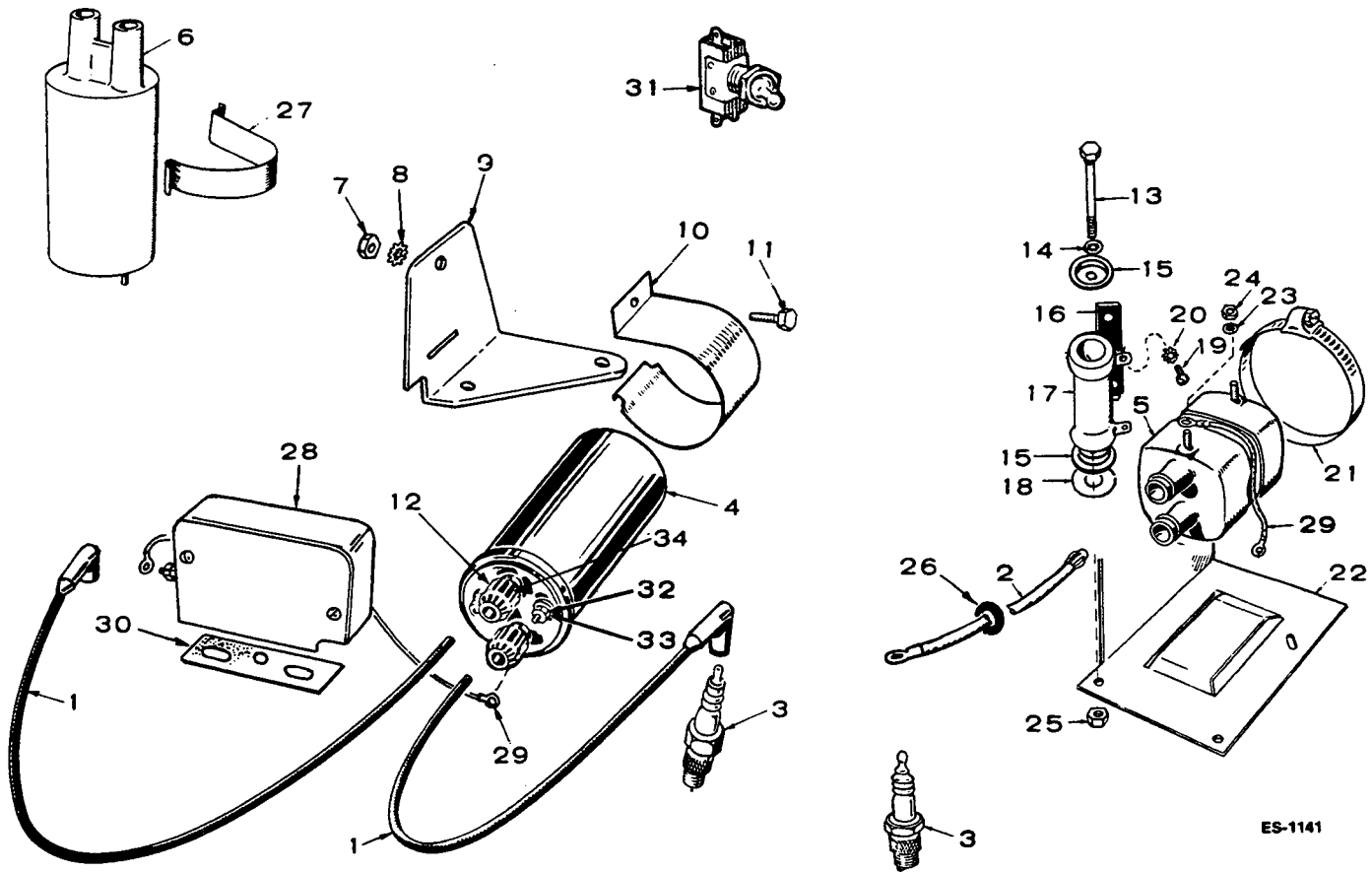
IGNITION SYSTEM (MAGNETO) - KEYS 1 AND 3



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	PLUG, SPARK						
	167-0241	2	Non-Resistor Type				
	167-0237	2	Resistor Type				
2	508-0095	2	Grommet, Spark Plug Cables - Begin Spec G	8	526-0184	2	Washer, Flat (17/64" ID x 5/8" OD x 10 Gauge Thk) - Begin Spec G
3	CABLE, SPARK PLUG			9	815-0259	2	Screw, Cap - Hex Head (1/4-20 x 1-1/4") - Begin Spec G
			Right Side				
			Begin Spec G (Rubber End Cap)				
	167-1593	1	Non-Resistor Type	10	313-0018	1	Switch, Stop
	167-1595	1	Resistor Type	11	160-0257	1	Box Assembly, Breaker (See Separate Group for Components)
	167-1308	1	Specs A through F (Eye Type End)	12	167-0188	4	Clip, Spark Plug Cable - Begin Spec G
			Left Side				
			Begin Spec G (Rubber End Cap)				
	167-1593	1	Non-Resistor Type	13	332-0273	1	Clip, Magneto Lead
	167-1595	1	Resistor Type	14	160-0722	1	Stator Assembly, Magneto - Specs A through F (Includes Coil and Pole Shoe)
	167-1309	1	Specs A through F (Eye Type End)	15	160-0282	1	Coil, Magneto Stator - Specs A through F
4	160-0752	1	Stator Assembly, Magneto - Begin Spec G (includes Coil and Pole Shoe)	16	160-0281	1	Pole Shoe, Magneto Stator - Specs A through F
5	160-0750	1	Coil, Magneto Stator - Begin Spec G	17	160-0792	1	Coil, Ignition - Specs A through F
6	160-0749	1	Pole Shoe, Magneto Stator - Begin Spec G	18	334-0028	1	Lead (4 foot piece of wire)
7	526-0015	2	Washer, Flat (9/32" ID x 9/16" OD x 1/16" Thk) - Begin Spec G	19	508-0002	1	Grommet, Magneto Lead
				20	160-0043	1	Gasket, Breaker Box Mounting

ES-1140

IGNITION SYSTEM (BATTERY) - KEYS 2 AND 4



ES-1141

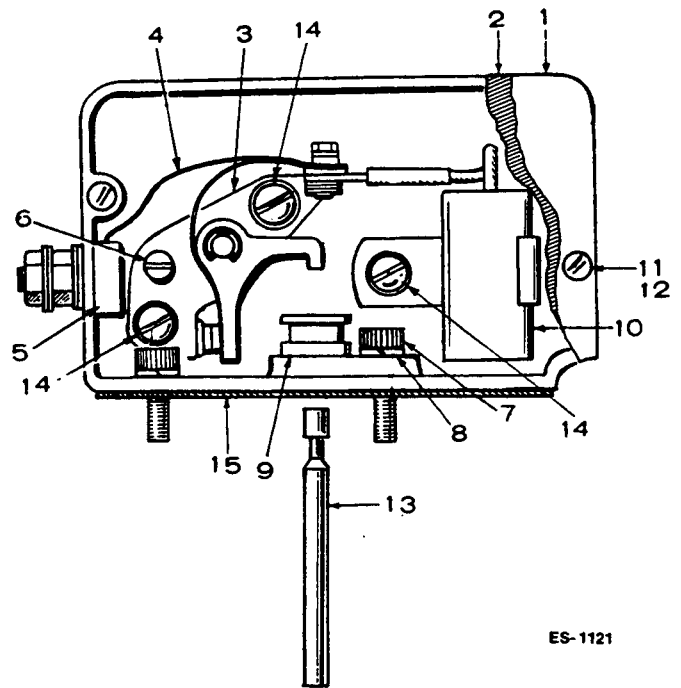
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	CABLE, SPARK PLUG (RUBBER END CAP) - BEGIN SPEC J			16	304-0610	1	Support, Resistor Terminal - Spec G
	167-1595	1	Right Side	17	RESISTOR		
	167-1596	1	Left Side		304-0060	1	12 Volt Engines, Spec A through G (1.72 Ohm - 25 Watt)
2	CABLE, SPARK PLUG (EYE TYPE END)				304-0397	1	6 Volt Engines, Spec G
			Right Side	18	526-0179	1	Washer, Flat (7/32" ID x 5/8" OD x 1/16" Thk) - Spec G
	167-1308	1	Specs C through G (8-1 1/4")	19	815-0201	2	Screw, Machine - Round Head W/ET (#8-32 x 3/8") - Specs A through G
	167-1097	1	Specs A and B (9")	20	853-0005	2	Washer, Lock - ET (#8) - Spec G
			Left Side	21	503-0514	1	Clamp, Coil - Spec G
	167-1072	1	Spec G (15-1 1/2")	22	166-0376	1	Bracket, Coil - Spec G
	167-1309	1	Specs A through F (23-1 1/2")	23	854-0010	2	Washer, Lock - IT (#10) - Spec G
3	PLUG, SPARK			24	870-0053	2	Nut, Hex (#10-32) - Spec G
	167-0241	2	Non-Resistor Type	25	870-0053	1	Nut, Hex (#10-32) - Spec G
	167-0237	2	Resistor Type	26	508-0005	2	Grommet, Spark Plug Cable - Specs A through F
4	166-0535	1	Coil, Ignition (12 Volt) - Begin Spec J (Includes Parts Marked +)	27	160-0488	1	Clamp, Coil - Specs A through F
5	166-0346	1	Coil, Ignition (6 Volt) - Spec G	28	160-0257	1	Box Assembly, Breaker (See Separate Group for Components)
6	160-0792	1	Coil, Ignition (6 Volt) - Specs A through F	29	166-0702	1	Lead (Kit) (Includes Parts Marked *)
7	862-0001	1	Nut, Hex (1/4-20) - Begin Spec J	30	160-0043	1	Gasket, Breaker Box Mounting
8	856-0006	1	Washer, Lock - EIT (1/4") - Begin Spec J	31	308-0002	1	Switch, Ignition - On-Off - Specs A through E
9	166-0590	1	Bracket, Coil Mounting - Begin Spec J	32	166-0554	2	+Nut, Hex (Special)
10	166-0588	1	Clamp, Coil - Begin Spec J	33	850-2005	2	+*Washer, Flat (Special)
11	800-0004	1	Screw, Cap - Hex Head (1/4-20 x 5/8") - Begin Spec J	34	166-0614	2	+Bushing, Rubber (Inside Cap #166-0604)
12	166-0604	2	+Nut, Coil - Begin Spec J				
13	813-0112	1	Screw, Machine - Round Head (#10-32 x 2-1/2") - Specs A through G				
14	854-0010	1	Washer, Lock - IT (#10) - Spec G				
15	304-0014	2	Washer, Resistor Centering - Specs A through G				

* - Parts Included in Replacement Kit 166-0702.

+ - Parts Included in 166-0535 Ignition Coil.

BREAKER BOX

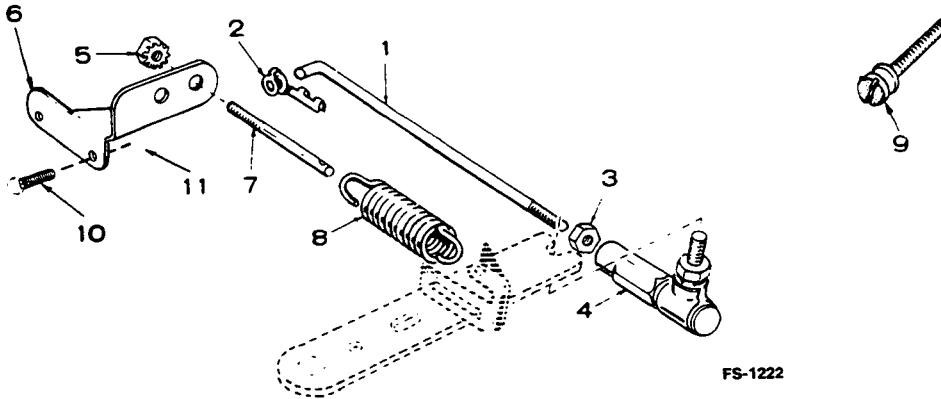
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	160-0257	1	Box Assembly, Breaker - Complete (Includes Parts Marked *)
1	160-0930	1	*Cover, Breaker Box
2	160-0150	1	*Gasket, Cover
3	160-0002	1	*Point Set
4	160-0428	1	*Strap, Point Set to Terminal
5	160-0349	1	*Terminal and Block Assembly
6	160-0075	1	*Cam Point Adjusting
7	802-0034	2	*Screw, Cap - Socket Head (1/4-20 x 3/4")
8	850-0040	2	*Washer, Lock - Spring (1/4")
9	160-0264	1	*Guide, Plunger
10	312-0069	1	*Condenser
11	850-0025	2	*Washer, Lock - Spring (#8)
12	812-0077	2	*Screw, Machine - Round Head (#8-32 x 3/8")
13	160-0265	1	*Plunger
14	518-0049	3	*Screw, Machine - Round Head W/ET Washer (#8-32 x 1/4")
15	160-0043 160-0836	1	Gasket, Breaker Box Mounting Ignition Tune-Up Kit (Includes Points and Condenser)



ES-1121

* - Parts Included in 160-0257 Breaker Box Assembly.

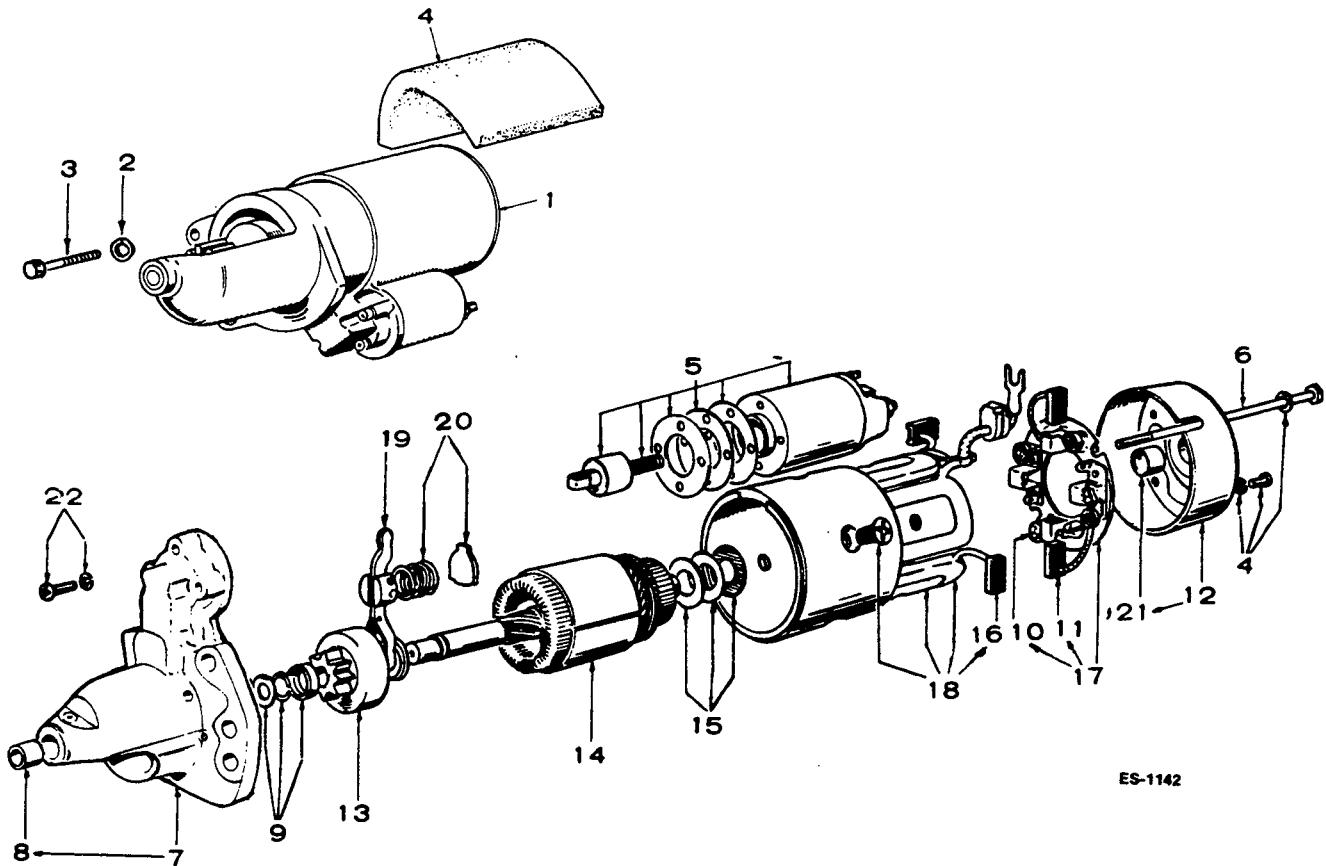
GOVERNOR



FS-1222

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	150-0629	1	Rod, Control - Governor
2	518-0006	1	Clip, Link End
3	870-0053	1	Nut, Hex (#10-32)
4	150-0639	1	Joint, Ball
5	870-0131	2	Nut, Hex With ET Washer (#10-32)
6	150-0040	1	Bracket, Governor Speed Adjusting Stud
7	150-0096	1	Stud, Governor Speed Adjusting
8	150-0098	1	Spring, Governor Speed
9	150-0136	1	Screw, Governor Sensitivity - Spec A through D
10	815-0419	2	Screw, Machine - Hex Head Slotted (#8-32 x 1-1/4")
11	870-0221	2	Nut, Hex With ET (#8-32)

STARTER - KEYS 2 AND 4 (BEGIN SPEC J)



ES-1142

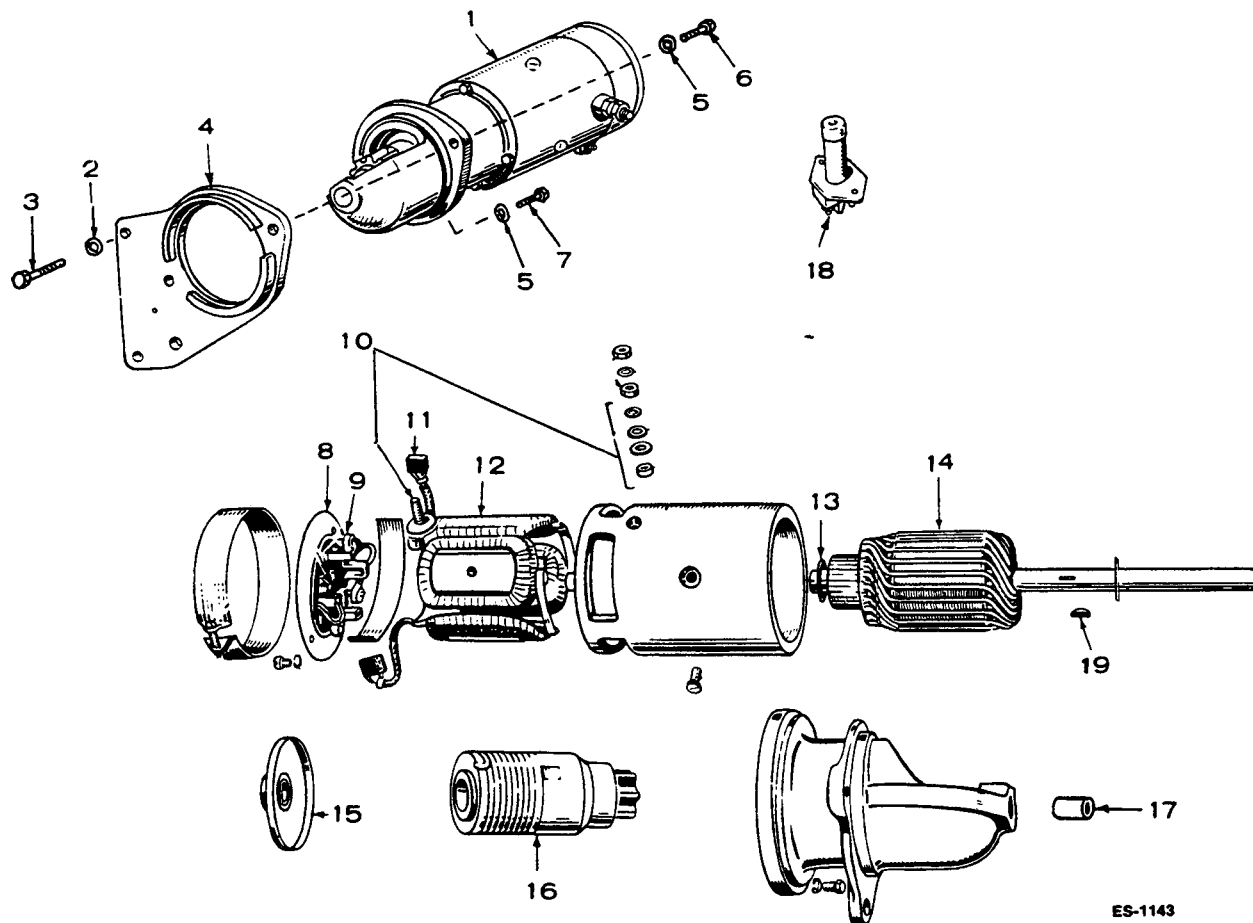
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-1052	1	Motor, Starter - 12 Volt Solenoid Shift (Includes Parts Marked *)
2	850-0050	2	Washer, Lock - Spring (3/8")
3	800-0050	2	Screw, Cap - Hex Head (3/8-16 x 1")
4	191-1076	1	Seal, Air
5	191-0987	1	*Switch Assembly
6	191-0988	2	*Bolt, Through
7	191-1086	1	*Bracket Assembly, Front (Includes Bearing)
8	191-0971	1	*Bearing, Front Bracket
9	191-0991	1	*Stopper Set, Pinion
10	191-1007	3	*Spring, Brush
11	191-1008	1	*Brush, Negative
12	191-1009	1	*Bracket Assembly, Rear (Includes Bearing)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
13	191-1087	1	*Clutch Assembly
14	191-1088	1	*Armature
15	191-0997	1	*Washer Set
16	191-1005	2	*Brush, Positive
17	191-1006	1	†*Holder Assembly, Brush (Includes Spring and Brush)
18	191-1089	1	*Yoke Assembly (Includes Frame, Pole Shoes, Field Coil and Positive Brushes)
19	191-0963	1	*Lever Assembly
20	191-0984	1	*Spring Set
21	191-1010	1	*Bearing, Rear Bracket Assembly
22	191-1011	1	*Screw Set

* - Parts Included in 191-1052 Starter Motor.

† - Early brush holder was equipped with two (2) negative brushes and four (4) brush springs. Completely interchangeable with current brush holder. When replacing negative brushes on early models only one (1) required, however two (2) may be used.

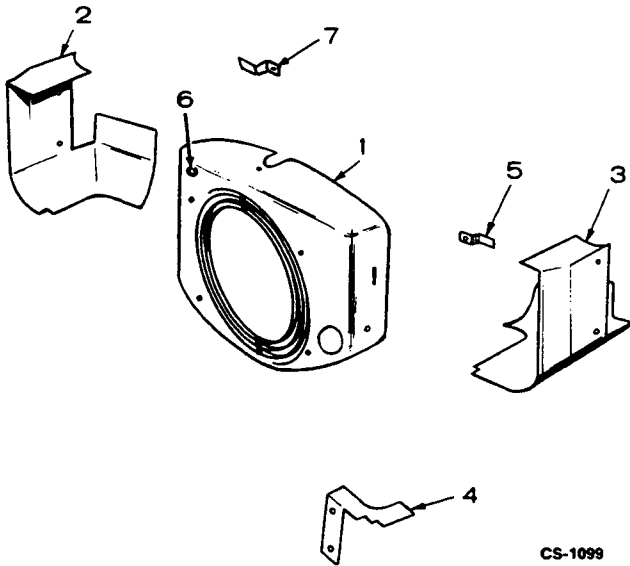
STARTER - KEYS 2 AND 4 (SPECS A THROUGH H)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	MOTOR, STARTER (12 VOLT) (INCLUDES PARTS MARKED *)			8	191-1018	1	*Head Assembly, Commutator End
	191-0511	1	Spec G and H	9	191-1020	1	*Spring, Brush (Set of 4)
	191-0150	1	Spec A Through F	10	191-1022	1	*Stud, Terminal (Package)
2	850-0050	3	Washer, Lock Spring (3/8")	11	191-0513	1	*Brush Set, Service
3	102-0455	3	Screw, Cap - Hex Head (3/8-16 x 1-1/4") (Special)	12	191-1017	1	*Coil Assembly, Package, Field
4	FLANGE, MOUNTING			13	191-1021	1	*Washer, Armature Thrust (Package)
	191-0508	1	Spec G and H	14	191-0517	1	*Armature
	191-0129	1	Spec A Through F	15	191-1019	1	*Bearing Assembly, Intermediate
	850-0050	2	Washer, Lock - Spring (3/8")	16	191-0271	1	*Drive Assembly
5	850-0050	1	Screw, Cap - Hex Head (3/8-16 x 1")	17	191-0735	1	*Bearing, Drive End
6	800-0050	1	Screw, Cap - Hex Head (3/8-16 x 7/8")	18	308-0028	1	Switch, Start - Spec A Through F
7	800-0049	1	Screw, Cap - Hex Head (3/8-16 x 7/8")	19	515-0094	1	*Key, Woodruff (#6)

* - Included in 191-0511 and 191-0150 Starter Motors.

AIR HOUSING



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	HOUSING, BLOWER		
	134-2830	1	Key 1 and 3 Begin Spec J
	134-1579	1	Specs G and H
	134-0569	1	Specs A through F
	134-2798	1	Key 2 and 4 Begin Spec J
	134-1574	1	Specs G and H
	134-0705	1	Specs A through F
	134-3907	1	Spec J - Sets with Pulse Pump
2	134-0589	1	Housing, Cylinder Air (Left)
3	HOUSING, CYLINDER AIR (Right)		
	134-2237	1	Sets with Spin-on Oil Filter
	134-0588	1	Key 1 and 3 Key 2 and 4
	134-2791	1	Begin Spec J
	134-0674	1	Specs A through H
4	134-0670	1	Baffle, Air - Key 2 and 4 - Specs A through H
5	134-0599	1	Clip, Cylinder Air Housing - Right Side - Specs A through H
6	508-0005	1	Grommet, Rubber - Use with Housing #134-3907 (7/16" ID x 3/4" OD)
7	134-2108	1	Clip, Cylinder Air Housing - Left Side - Specs A through H

SERVICE KITS AND MISCELLANEOUS

PART NO.	QTY. USED	PART DESCRIPTION
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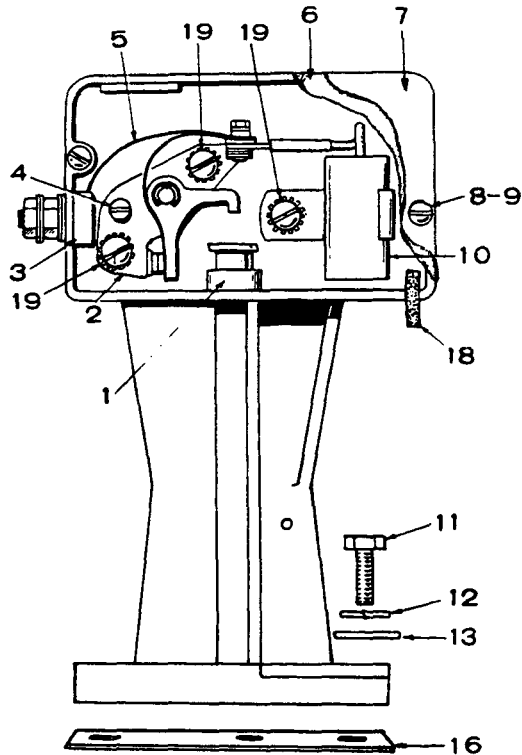
NOTE: For other kits, refer to the group for the part in question.

98-1100	1	Kit, Decal
168-0095	1	Kit, Gasket - Carbon Removal
168-0103	1	Kit, Gasket - Engine
PAINT, TOUCH-UP (Pressurized Can)		
525-0305	1	Non-Metallic Green (13 oz.)
525-0137	1	Metallic Green (13 oz.)
420-0169	1	Wrench, Carburetor Adjusting

OPTIONAL EQUIPMENT PARTS SECTION

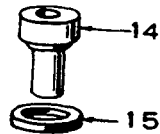
This section contains illustrated parts listing of factory installed options for these Industrial Engines. Options may not be applicable to all models; for field conversions additional parts are usually required. Some parts listed in the standard engine parts section for parts keys 3 and 4 are also applicable as optional parts for parts keys 1 and 2. Optional parts listed in this section are in addition or in place of those shown in the standard engine parts section.

OPTIONAL NUMBER 1 BREAKER BOX (HIGH PROFILE)

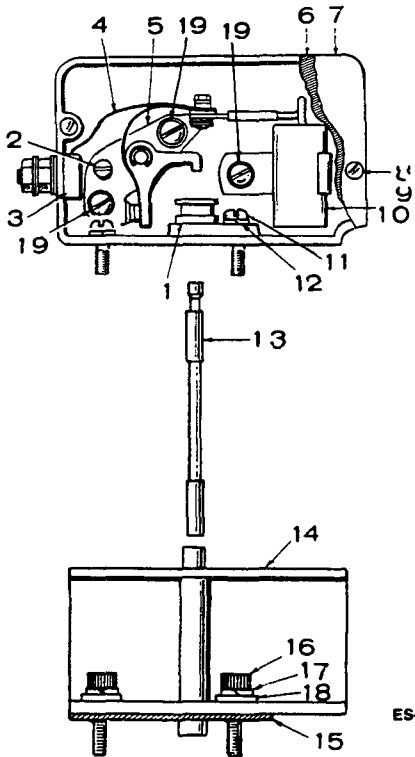


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	160-1135	1	Box Assembly. (Includes Parts Marked *)
1	160-0931	1	*Guide, Plunger
2	160-0002	1	*Point Set
3	160-0349	1	*Terminal and Block Assembly
4	160-0075	1	*Cam, Point Adjusting
5	160-0428	1	*Strap, Point Set to Terminal
6	160-0150	1	*Gasket, Cover
7	160-0930	1	*Cover, Breaker Box
8	850-0025	2	*Washer, Lock - Spring (#8)
9	812-0077	2	*Screw, Machine - Round Head (#8-32 x 3/8")
10	312-0069	1	*Condenser (.3 Mfd)
11	802-0035	2	*Screw, Socket Head (1/4-20 x 7/8")
12	850-0040	2	*Washer, Lock - Spring (1/4")
13	526-0214	2	*Washer, Flat (17/64" ID x 1/2" OD x 1/16" Thk)
14	BUSHING, GUIDE		
	160-1041	1	*Begin Spec J
	160-0929	1	Spec A through H
15	160-1040	1	*Gasket, Mounting - Begin Spec J
16	160-0043	1	Gasket, Spec A through H
17	160-0723	1	*Plunger, Breaker
18	160-0261	1	*Wick
19	815-0285	3	*Screw, Machine - Round Head W/ET Washer (#8-32 x 5/16")
	160-0836	1	Ignition Tune-Up Kit (Includes Points and Condenser)

* - Parts Included in 160-1135 Breaker Box Assembly.



OPTIONAL NUMBER 2 BREAKER BOX (1-3/4" SPACER)

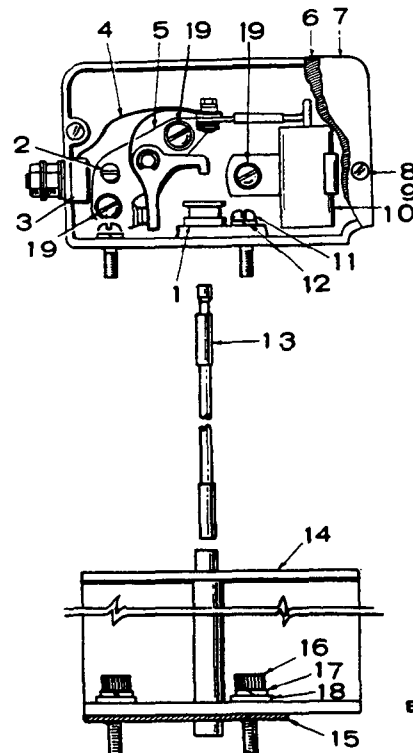


ES-1144

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	160-0258	1	Box and Spacer Assembly - Complete (For replacement order 160-1135 Breaker Box Assembly)
1	160-0267	1	Guide, Plunger
2	160-0075	1	Cam, Point Adjusting
3	160-0349	1	Terminal and Block Assembly
4	160-0428	1	Strap, Point Set to Terminal
5	160-0002	1	Point Set
6	160-0150	1	Gasket, Cover
7	160-0930	1	Cover
8	850-0025	2	Washer, Lock - Spring (#8)
9	812-0077	2	Screw, Machine - Round Head (#8-32 x 3/8")
10	312-0069	1	Condenser (.3 Mfd.)
11	813-0148	2	Screw, Machine - Round Head (1/4-28 x 1/2")
12	854-0014	2	Washer, Lock - IT (1/4")
13	160-0266	1	Plunger, Breaker Points
14	160-0246	1	Spacer, Breaker Box Mounting
15	160-0043	1	Gasket, Breaker Box and Spacer Mounting
16	802-0035	2	Screw, Cap - Socket Head (1/4-20 x 7/8")
17	850-0040	2	Washer, Lock - Spring (1/4")
18	526-0214	2	Washer, Flat (17/64" ID x 1/2" OD x 1/16" Thk)
19	518-0049	3	Screw, Machine - Round Head W/ET Washer (#8-32 x 1/4")
	160-0836	1	Ignition Tune-Up Kit (Includes Points and Condenser)

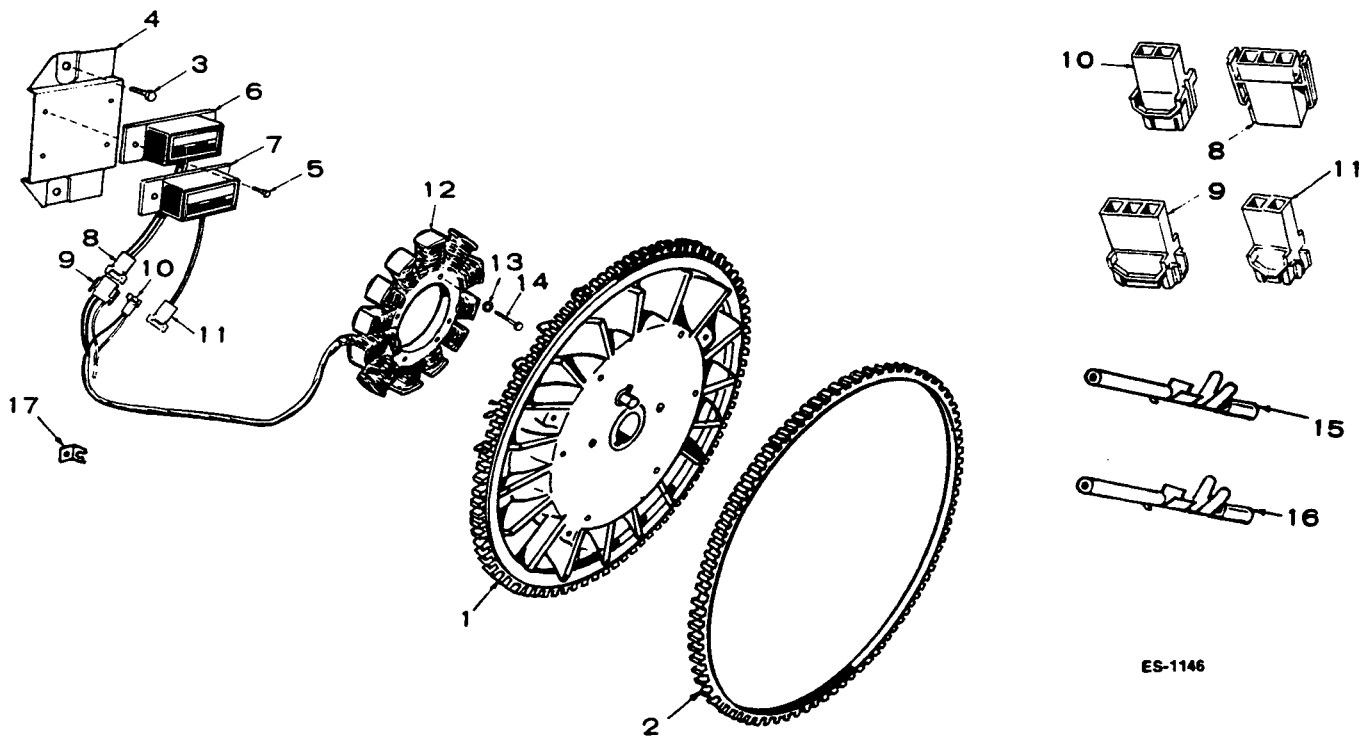
OPTIONAL NUMBER 3 BREAKER BOX (4" SPACER)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	160-0642	1	Box and Spacer Assembly - Complete (For replacement order 160-1135 Breaker Box Assembly)
1	160-0267	1	Guide, Plunger
2	160-0075	1	Cam, Point Adjusting
3	160-0349	1	Terminal and Block Assembly
4	160-0428	1	Strap, Point Set to Terminal
5	160-0002	1	Point Set
6	160-0150	1	Gasket, Cover
7	160-0930	1	Cover
8	850-0025	2	Washer, Lock - Spring (#8)
9	812-0077	2	Screw, Machine - Round Head (#8-32 x 3/8")
10	312-0069	1	Condenser (.3 Mfd.)
11	813-0148	2	Screw, Machine - Round Head (1/4-28 x 1/2")
12	854-0014	2	Washer, Lock - IT (1/4")
13	160-0723	1	Plunger, Breaker Points
14	160-0633	1	Spacer, Breaker Box Mounting
15	160-0043	1	Gasket, Breaker Box and Spacer Mounting
16	802-0035	2	Screw, Cap - Socket Head (1/4-20 x 7/8")
17	850-0040	2	Washer, Lock - Spring (1/4")
18	526-0214	2	Washer, Flat (17/64" ID x 1/2" OD x 1/16" Thk)
19	518-0049	3	Screw, Machine - Round Head W/ET Washer (#6-32 x 1/4")
	160-0836	1	Ignition Tune-Up Kit (Includes Points and Condenser)



ES-1145

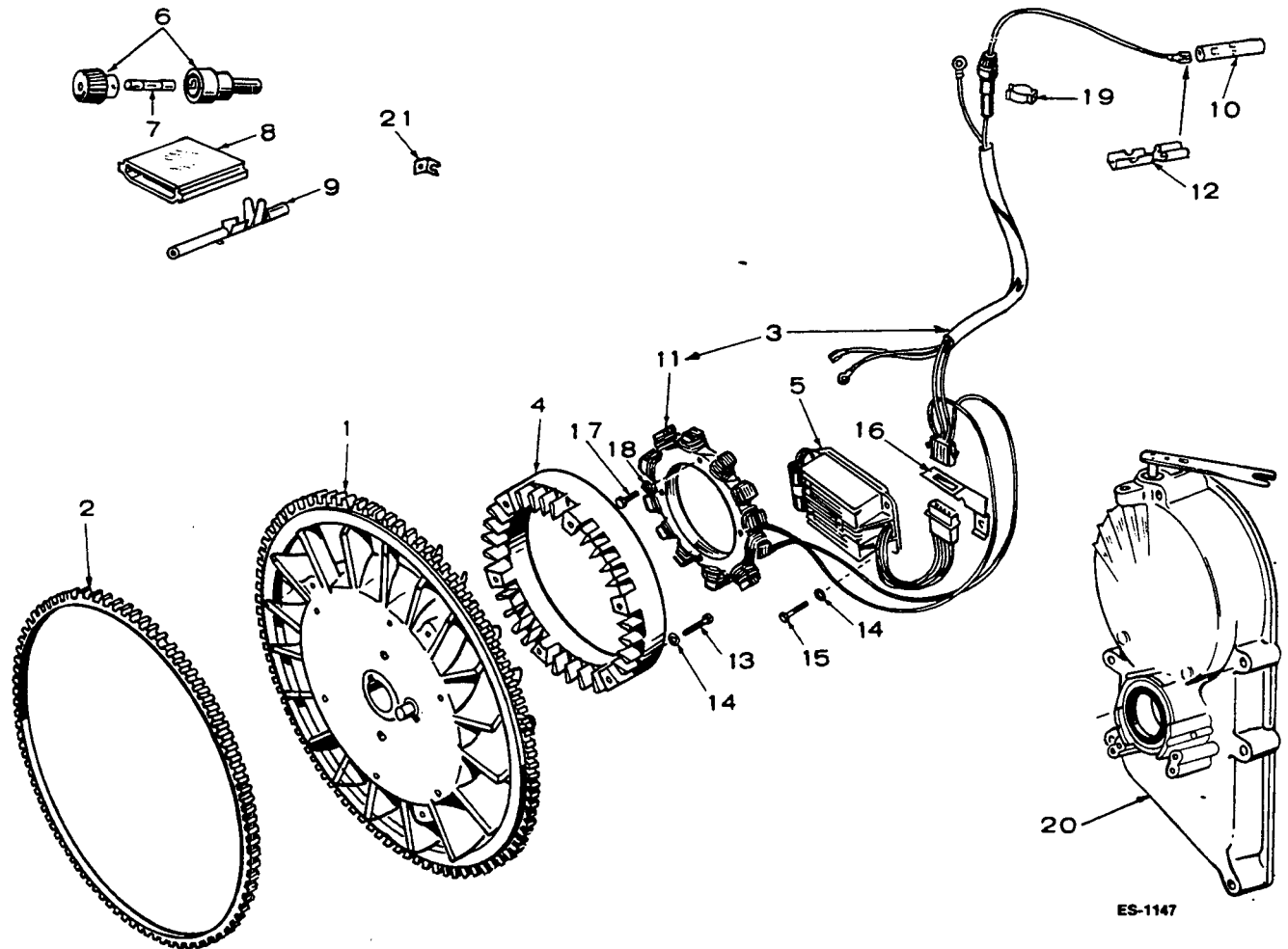
**OPTIONAL NUMBER 4
ALTERNATOR, FLYWHEEL - 20 AMPERE (SYNCRO) - KEYS 2 AND 4 -
BEGIN SPEC J**



ES-1146

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	134-2642	1	Flywheel (Includes Ring Gear)	11	323-0880	1	Plug, Connector (2 Female Contacts)
2	134-0673	1	Gear, Ring - Flywheel	12	191-0937	1	Stator, Alternator
3	821-0010	2	Screw, Cap - Hex Head Locking (1/4-20 x 1/2")	13	850-0030	3	Washer, Lock - Spring (#10)
4	191-1107	1	Bracket, Regulator and Rectifier Mounting	14	813-0108	3	Screw, Machine - Round Head Cross Recessed (#10-32 x 1-1/4")
5	815-0181	4	Screw, Cap - Hex Head W/ET Lockwasher (#10-32 x 5/16")	15	323-0488	5	Contact, Connecting - Female
6	191-0938	1	Rectifier, Current	16	323-0496	5	Contact, Connecting - Male
7	191-0939	1	Regulator, Voltage	17	167-0188	2	Clip, Stator Leads
8	323-0882	1	Plug, Connector (3 Female Contacts)				
9	323-0881	1	Cap, Connector (3 Male Contacts)				
10	323-0879	1	Cap, Connector (2 Male Contacts)				

OPTIONAL NUMBER 5 ALTERNATOR, FLYWHEEL (WICO) - KEYS 2 AND 4 (SPECS A THROUGH H)

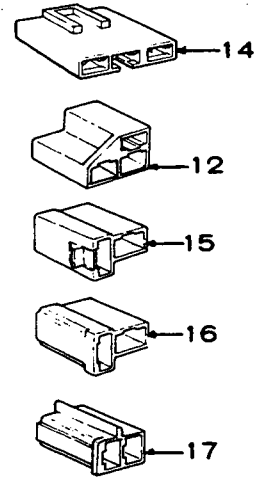
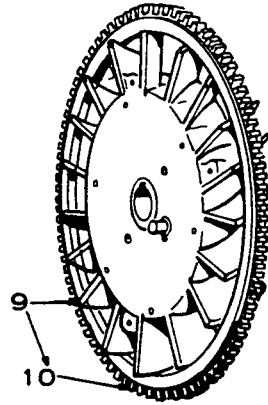
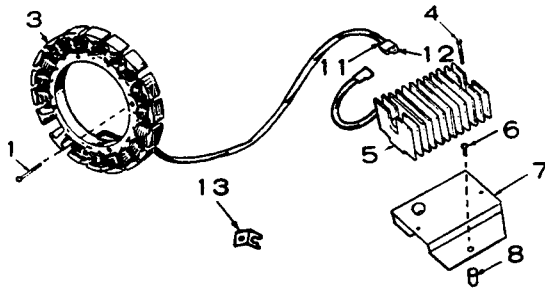


ES-1147

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	134-1895	1	Flywheel (Includes Ring Gear)	11	191-0724	1	*Stator Only
2	134-0673	1	Gear, Ring - Flywheel	12	332-0529	1	*Terminal, Faston - Male
3	191-0740	1	Stator Assembly - Includes Parts Marked *)	13	812-0156	6	Screw, Machine - Round Head (1/4-20 x 1-1/2")
4	191-0400	1	Rotor	14	850-0040	9	Washer, Lock - Spring (1/4")
5	305-0478	1	Regulator - Rectifier Assembly	15	800-0006	3	Screw, Cap - Hex Head (1/4-20 x 7/8")
6	321-0165	1	*Holder Assembly, Fuse	16	332-1358	1	Bracket, Connector Mounting
7	321-0162	1	*Fuse - 30 Amp.	17	813-0108	3	Screw, Machine - Round Head (#10-32 x 1/2")
8	323-0759	1	*Connector, Socket Housing	18	850-0030	3	Washer, Lock - Spring (#10)
9	323-0488	4	*Socket, Connector	19	321-0169	1	Clip, Fuse Holder
10	332-0556	1	*Connector, Faston	20	103-0332	1	Case Assembly, Gear - Drilled and Tapped for Stator (See standard gear case group for components)
				21	167-0188	1	Clip, Stator Leads

* - Parts Included in 191-0740 Stator Assembly.

**OPTIONAL NUMBER 6
ALTERNATOR, FLYWHEEL - 15 AMPERE (PHELON) - KEYS 2 AND 4 -
BEGIN SPEC J**



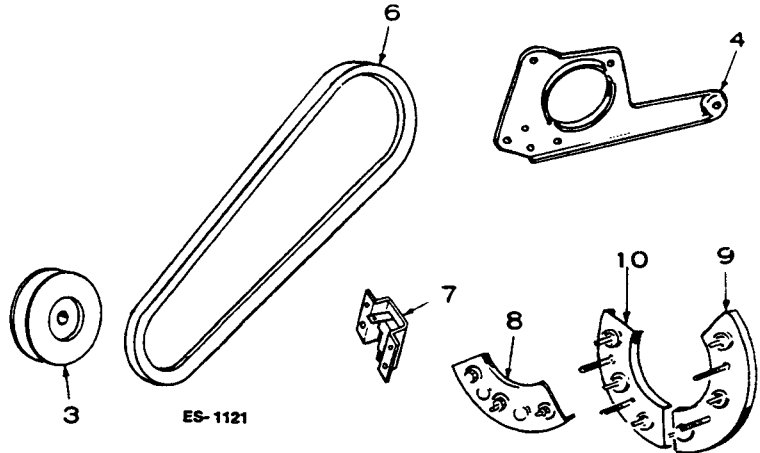
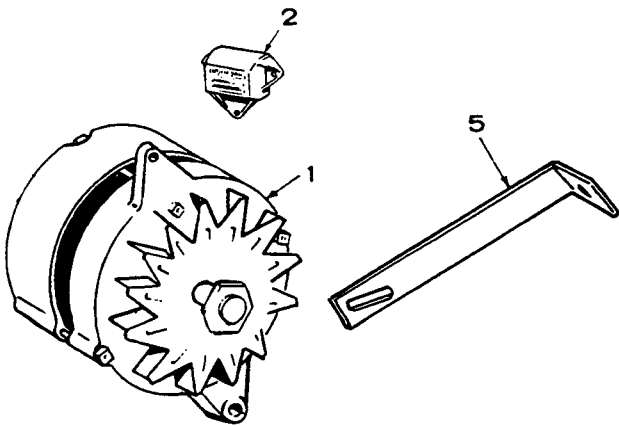
ES-1148

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	815-0593	3	Screw, Machine - Hex Head (#10-32 x 1-3/8")
3	191-1256	1	Stator Assembly, Alternator (Includes Parts Marked *)
	191-1254	1	*Stator, Alternator
4	821-0018	2	Screw, Cap - Hex Head - Self Locking (1/4-20 x 5/8")
5	191-0886	1	Regulator, Voltage
6	821-0012	2	Screw, Cap - Hex Head - Self Locking (1/4-20 x 1-1/8")
7	191-1107	1	Bracket, Regulator Mounting
8	134-2100	2	Spacer, Regulator Mounting
9	FLYWHEEL (Includes Ring Gear)		
	134-2621	1	Engines With Rope Sheave or Machined PTO
	134-3019	1	Engines Without Rope Sheave

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
10	134-0673	1	Gear, Ring - Flywheel
11	332-2073	3	*Terminal, Wire - Stator Leads
12	323-0853	1	*Body, Terminal Connector
13	167-0188	2	Clip, Stator Leads
14	323-1075	1	*Body, Terminal Connector - Optional
15	323-1085	1	*Body, Terminal Connector - Optional
16	323-0892	1	*Body, Terminal Connector - Optional
17	323-0890	1	*Body, Terminal Connector - Optional

* - Parts Included in 191-1256 Alternator Stator Assembly.

**OPTIONAL NUMBER 7
ALTERNATOR (AUTOMOTIVE TYPE - RIGHT SIDE MOUNTED)**



ES-1121

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-1232	1	*Alternator Assembly (Includes Parts Marked †) (35 Ampere, 12 Volt) Motorola #12N37-1
	191-1233	1	† Alternator, 35 Ampere
2	191-1243	1	† Regulator, Voltage
3	191-0623	1	† Pulley, Alternator
4	191-0575	1	Bracket, Alternator and Starter Mounting
5	191-0576	1	Bracket, Alternator Adjusting
6	511-0076	1	Belt, Drive
7	191-0659	1	Brush and Holder (Part of 191-1233 Alternator)

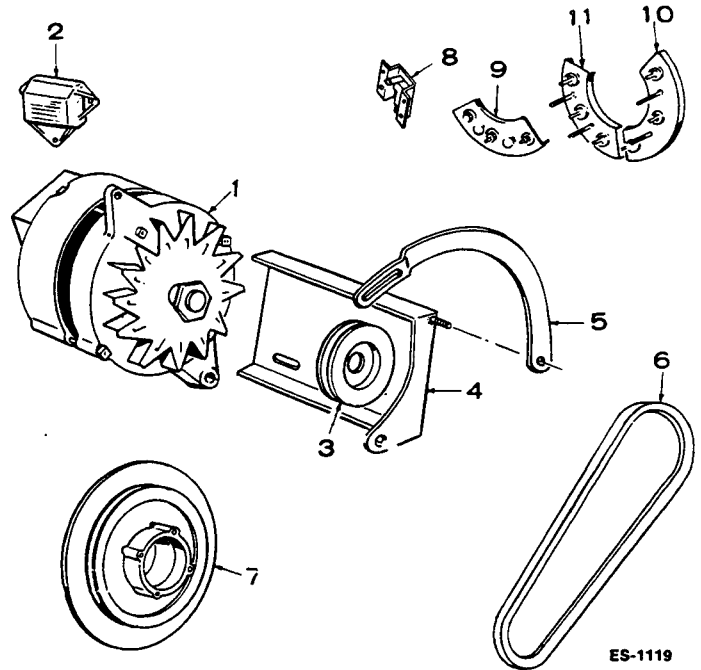
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
8	191-0671	1	Diode Assembly, Isolation (Part of 191-1233 Alternator)
9	191-0662	1	Diode Assembly, Rectifier - Negative (Part of 191-1233 Alternator)
10	191-0661	1	Diode Assembly, Rectifier - Positive (Part of 191-1233 Alternator)

* - For components not listed, check alternator nameplate and contact your nearest Motorola dealer.

† - Parts Included in 191-1232 Alternator Assembly.

OPTIONAL NUMBER 8 ALTERNATOR (AUTOMOTIVE TYPE - LEFT SIDE MOUNTED)

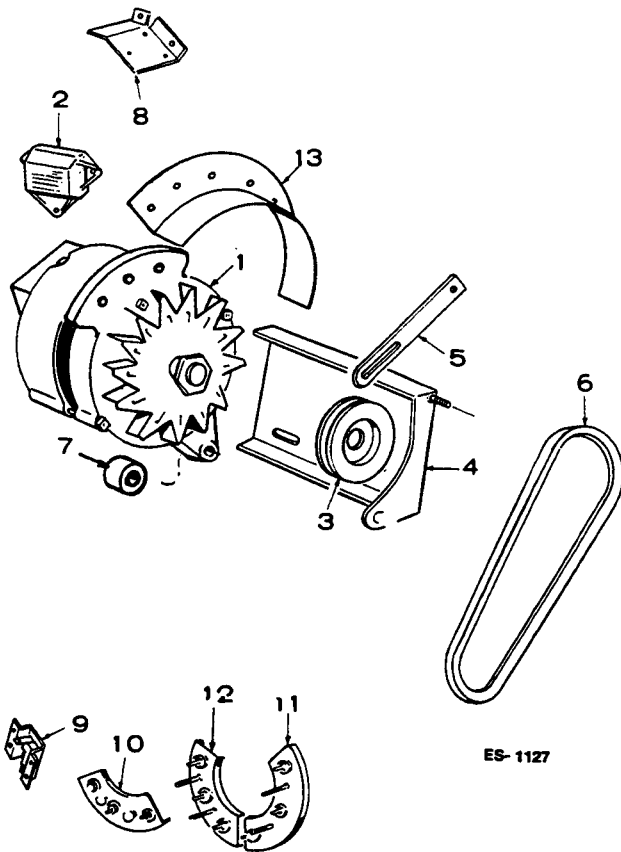
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-1232	1	*Alternator Assembly (35 Ampere, 12 Volt) Motorola #12N37-1 (Includes Parts Marked †)
	191-1233	1	†Alternator, 35 Ampere
2	191-1243	1	†*Regulator, Voltage
3	191-0623	1	†Pulley, Alternator
4	BRACKET, ALTERNATOR MOUNTING		
	191-0537	1	Pressure Cooled Engine
	191-0539	1	Vacu-Flo Cooled Engine
5	191-0535	1	Bracket, Alternator Adjusting
6	511-0051	1	Belt, Drive
7	191-0134	1	Pulley, Drive - Vacu-Flo Cooled Engine
8	191-0659	1	Brush and Holder Assembly (Part of 191-1233 Alternator)
9	191-0671	1	Diode Assembly, Isolation (Part of 191-1233 Alternator)
10	191-0662	1	Diode Assembly, Rectifier - Negative (Part of 191-1233 Alternator)
11	191-0661	1	Diode Assembly, Rectifier - Positive (Part of 191-1233 Alternator)



* - For components not listed, check alternator nameplate and contact your nearest Motorola dealer.

† - Parts Included in 191-1232 Alternator Assembly.

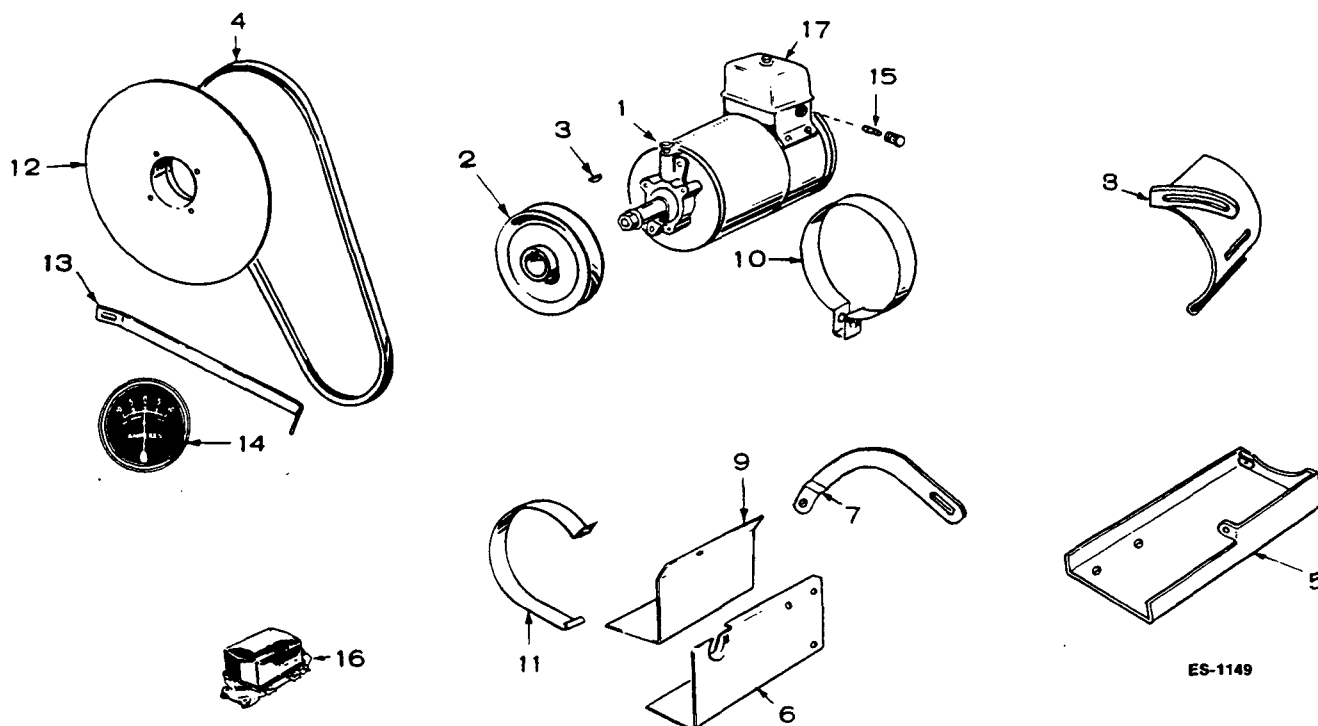
OPTIONAL NUMBER 9 ALTERNATOR (AUTOMOTIVE TYPE - TOP MOUNTED)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-0543	1	*Alternator (35 Ampere, 12 Volt) - Motorola #A12N-451
2	191-0642	1	*Regulator, Voltage
3	191-0623	1	Pulley, Alternator
4	191-0636	1	Bracket, Alternator Mounting
5	BRACKET, ALTERNATOR ADJUSTING		
	191-1168	1	Pressure Cooled Engines - Begin Serial Number 992673 During Spec J
	191-0637	1	Pressure Cooled Engines - Spec A through Serial Number 992673 During Spec J
	191-0637	1	Vacu-Flo Cooled Engines
6	BELT, DRIVE		
	511-0090	1	Pressure Cooled Engines - Begin Serial Number 992673 During Spec J
	511-0067	1	Pressure Cooled Engines - Spec A through Serial Number 992673 During Spec J
	511-0067	1	Vacu-Flo Cooled Engines
7	191-0640	1	Spacer, Alternator Bracket
8	191-0638	1	Bracket, Regulator Mounting
9	191-0659	1	Brush and Holder Assembly (Part of 191-0543 Alternator)
10	191-0663	1	Diode Assembly, Isolation (Part of 191-0543 Alternator)
11	191-0662	1	Diode Assembly, Rectifier - Negative (Part of 191-0543 Alternator)
12	191-0661	1	Diode Assembly, Rectifier - Positive (Part of 191-0543 Alternator)
13	191-0725	1	Guard, Belt

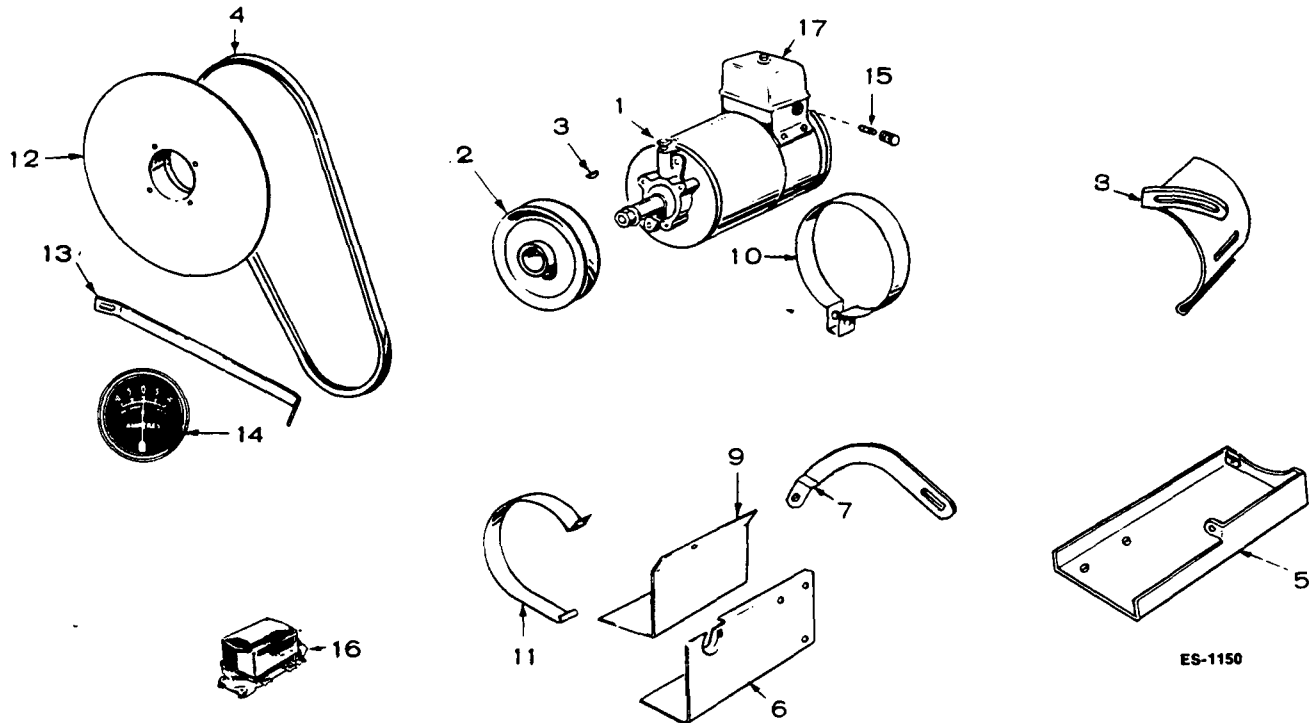
* - For Components not listed, check alternator nameplate and contact your nearest Motorola dealer.

OPTIONAL NUMBER 10 GENERATOR (AUTOMOTIVE TYPE - 6 VOLT)



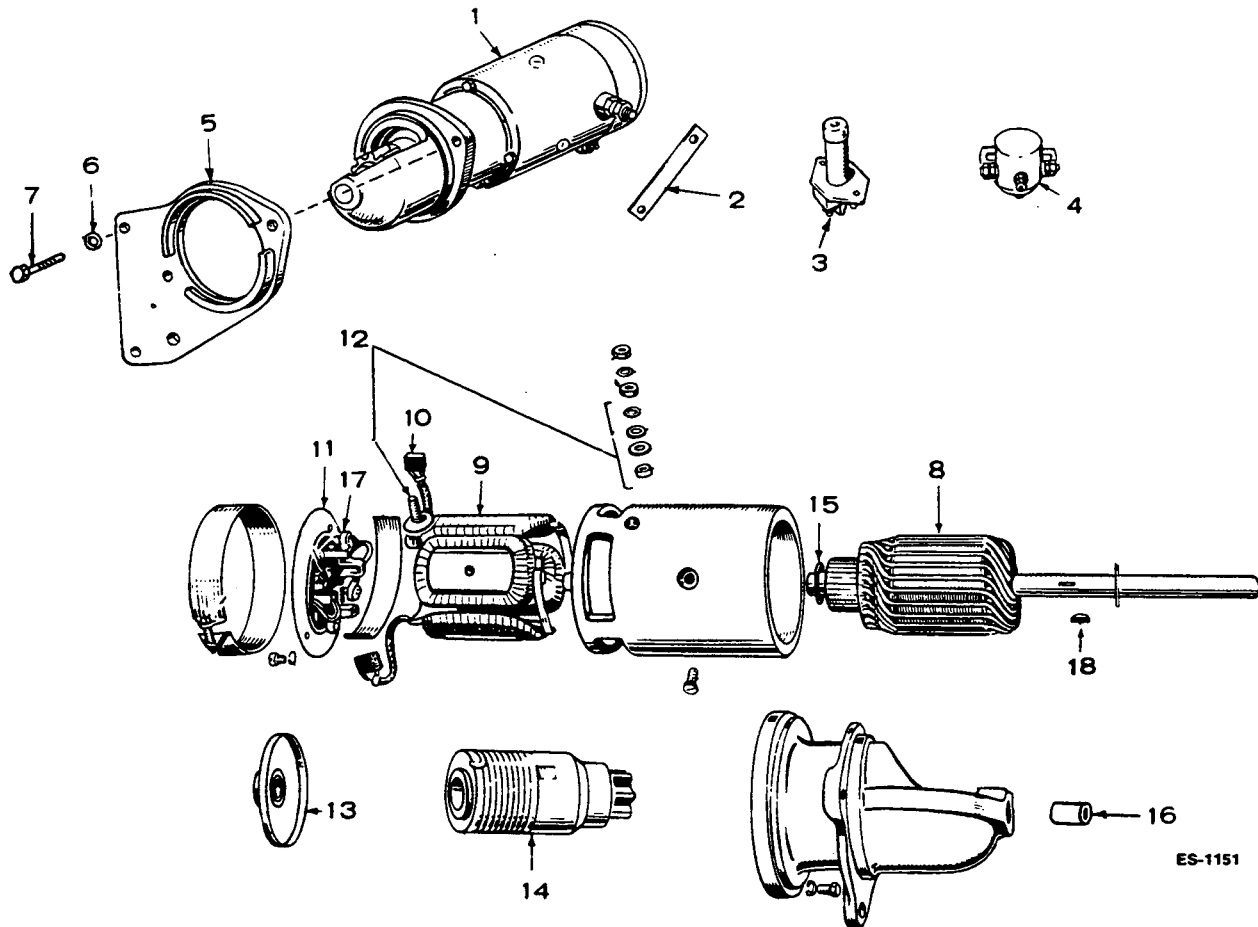
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	GENERATOR, 6 VOLT 191-0308	1	†Begin Spec F (Includes Pulley, Excludes Regulator) - Delco Remy # 1100055	10	191-0242	1	Band, Generator Mounting - Spec E
	191-0199	1	*Specs A through E (Includes Regulator, Excludes Pulley) - Prestolite # GAS-4175	11	191-0157	1	Band, Generator Mounting - Spec A through D
2	191-0162	1	Pulley, Generator - Specs A through E	12	191-0134	1	Pulley, Generator Drive - Vacu-Flo Cooled Engine
3	515-0105	1	Key, Pulley - Specs A through E	13	BRACE, GENERATOR MOUNTING BRACKET - VACU-FLO COOLED ENGINE		
4	511-0051	1	Belt, Drive	191-0305	1	Begin Spec F	
5	BRACKET, GENERATOR MOUNTING			191-0158	1	Specs A through D	
	191-0279	1	Pressure Cooled Engine	14	302-1361	1	Ammeter, Specs A through E (Includes Mounting Clamp)
	191-0304	1	Vacu-Flo Cooled Engine	15	321-0094	1	Fuse (5 Ampere) - Spec A through E
	191-0240	1	Pressure Cooled Engine	16	191-0309	1	†Regulator, Voltage - Begin Spec F
	191-0241	1	Vacu-Flo Cooled Engine	17	191-0382	1	*Regulator, Voltage - Specs A through E
6	BRACKET, GENERATOR MOUNTING - SPECS A THROUGH D						
	191-0155	1	Pressure Cooled Engine				† - For components check nameplate and contact your nearest Delco-Remy dealer.
	191-0172	1	Vacu-Flo Cooled Engine				* - For components check nameplate and contact your nearest Prestolite dealer.
7	191-0280	1	Bracket, Adjusting - Begin Spec F				
8	191-0239	1	Bracket, Adjusting - Spec E				
9	191-0156	1	Bracket, Adjusting - Specs A through D				

OPTIONAL NUMBER 11 GENERATOR (AUTOMOTIVE TYPE - 12 VOLT)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	GENERATOR, 12 VOLT 191-0813	1	†Begin Spec F (Excludes Pulley, Excludes Regulator)- Delco Remy #1100337	8	191-0239	1	Bracket, Adjusting - Spec E
	191-0159	1	*Specs A through E (Includes Regulator, Excludes Pulley) - Prestolite #GDY-4107	9	191-0156	1	Bracket, Adjusting - Specs A through D
2	PULLEY, GENERATOR 191-0229	1	Begin Spec F (No Longer Available, customer use off old Generator Assembly)	10	191-0242	1	Band, Generator Mounting - Spec E
	191-0164	1	Specs A through E	11	191-0157	1	Band, Generator Mounting - Spec A through D
3	515-0105	1	Key, Pulley - Specs A through E	12	191-0134	1	Pulley, Generator Drive - Vacu-Flo Cooled Engine
4	511-0051	1	Belt, Drive	13	BRACE, GENERATOR MOUNTING BRACKET - VACU-FLO COOLED ENGINE		
5	BRACKET, GENERATOR MOUNTING		Begin Spec F	191-0305	1	Begin Spec F	
	191-0279	1	Pressure Cooled Engine	191-0158	1	Specs A through D	
	191-0304	1	Vacu-Flo Cooled Engine	14	302-1360	1	Ammeter, Specs A through E (10 Ampere) - (Includes Mounting Clamp)
	191-0240	1	Pressure Cooled Engine	15	321-0094	1	Fuse (5 Ampere) - Spec A through E
	191-0241	1	Vacu-Flo Cooled Engine	16	191-0386	1	†Regulator, Voltage - Begin Spec F
6	BRACKET, GENERATOR MOUNTING - SPECS A THROUGH D †		† - For components check nameplate and contact your nearest Delco-Remy dealer.	17	191-0278	1	*Regulator, Voltage - Specs A through E
	191-0155	1	Pressure Cooled Engine				* - For components check nameplate and contact your nearest Prestolite dealer.
	191-0172	1	Vacu-Flo Cooled Engine				
7	191-0280	1	Bracket, Adjusting - Begin Spec F				

**OPTIONAL NUMBER 12
STARTER (GEAR ENGAGING - 6 VOLT) - KEYS 2 AND 4 -
SPECS A THROUGH H**

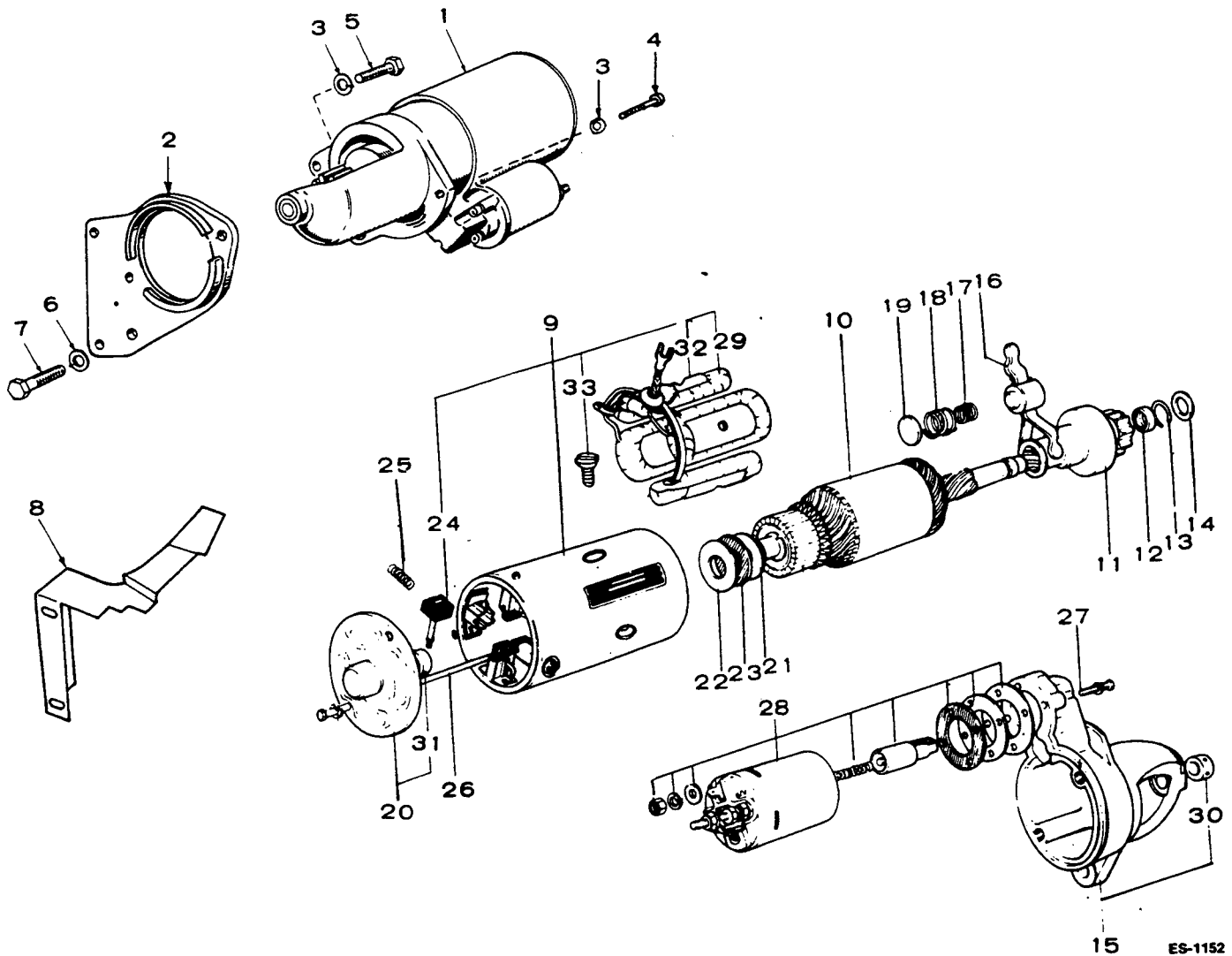


ES-1151

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	MOTOR, STARTER (INCLUDES PARTS MARKED *)			10	(P) 17-33	1	*Brush Set
	191-0526	1	Specs G and H	11	(P) 19-28	1	*Head Assembly, Commutator End
	191-0198	1	Spec A through F	12	191-1022	1	*Stud, Terminal (Package)
2	332-0570	1	Jumper, Starter Motor to Switch	13	191-1019	1	*Bearing Assembly, Intermediate
3	308-0028	1	Switch, Start	14	191-0271	1	*Drive Assembly
4	307-1046	1	Solenoid, Start	15	191-1021	1	*Washer, Armature Thrust (Package)
5	FLANGE, STARTER MOTOR MOUNTING			16	191-0735	1	*Bearing, Drive End
	191-0508	1	Specs G and H	17	191-1020	1	*Spring, Brush (Set of 4)
	191-0129	1	Specs A through F	18	515-0094	1	*Key, Woodruff (#6)
6	850-0050	3	Washer, Lock - Spring (3/8")				
7	102-0455	3	Screw, Cap - Hex Head (Special)				
8	(P) 16-47	1	*Armature				
9	(P) 20-42	1	*Coil Assembly, Field				

* - Included in 191-0526 and 191-0198 Starter Motors.
NOTE: Order Prestolite Parts (P) from your nearest Prestolite Dealer, giving part number, full description and Starter Motor number.

**OPTIONAL NUMBER 13
STARTER (SOLENOID SHIFT - 12 VOLT) - KEYS 2 AND 4 -
SPECS A THROUGH H**



15 ES-1152

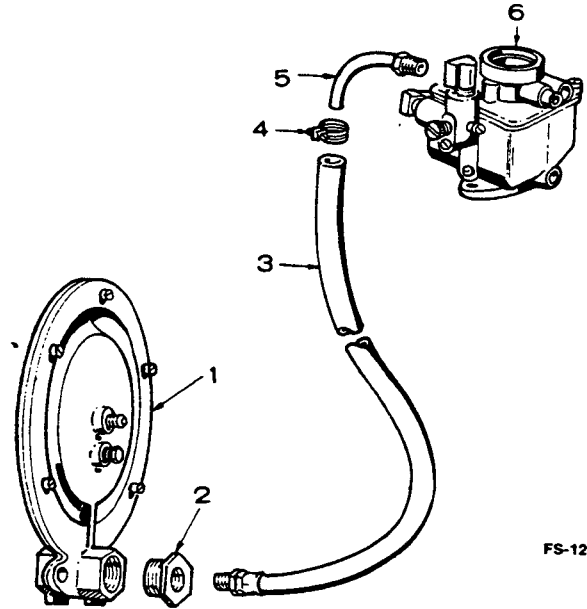
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-0790	1	Motor, Starter (Includes Parts Marked *)
2	191-0508	1	Flange, Starter Motor
3	850-0050	2	Washer, Lock - Spring (3/8")
4	800-0049	1	Screw, Cap - Hex Head (3/8-16 x 7/8")
5	800-0050	1	Screw, Cap - Hex Head (3/8-16 x 1")
6	850-0050	2	Washer, Lock - Spring (3/8")
7	102-0455	2	Screw, Cap - Hex Head (Special)
8	134-2131	1	Baffle, Air
9	191-0806	1	*Yoke Assembly (Frame) - Includes Parts Marked Δ
10	191-0743	1	*Armature
11	191-0744	1	*Clutch
12	191-0745	1	*Stop, Pinion
13	191-0746	1	*Ring
14	191-0806	1	*Washer, Plain

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
15	191-0808	1	£*Bracket Assembly, Front
16	191-0749	1	*Lever Assembly
17	191-0750	1	*Spring, Lever
18	191-0751	1	*Spring, Lever
19	191-0752	1	*Holder, Spring
20	191-0809	1	£*Bracket Assembly, Rear
21	191-0754	1	*Washer, Plain
22	191-0755	1	*Washer, Plain
23	191-0756	1	*Washer, Insulation
24	191-0757	4	Δ*Brush
25	191-0758	1	*Spring, Brush
26	191-0759	2	*Bolt, Through
27	191-0760	3	*Screw, Machine
28	191-0761	1	*Switch Assembly, Solenoid
29	191-0762	1	*ΔCoil Assembly, Field
30	191-0763	1	*Bearing, Front
31	191-0764	1	*Bearing, Rear
32	191-0765	4	*ΔPole Shoe
33	191-0766	4	*ΔScrew

* - Included in 191-0790 Starter Motor.
 Δ - Included in 191-0806 Yoke Assembly.
 £ - No Longer Available - Replace with 191-0790 Starter.

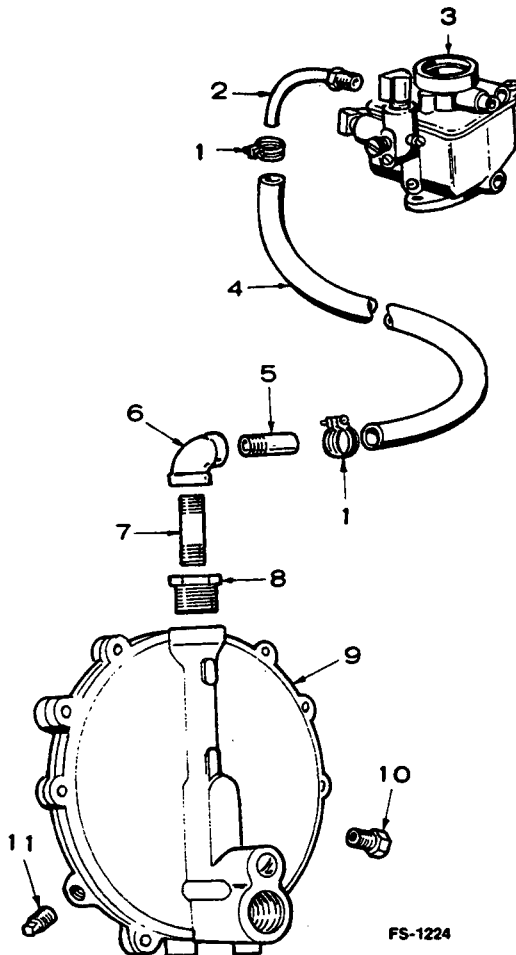
OPTIONAL NUMBER 14 FUEL SYSTEM (GAS-GASOLINE - ENSIGN REGULATOR)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	148-0428	1	Regulator, Gas Pressure
2	505-0021	1	Bushing, Regulator Outlet
3	501-0025	1	Line, Fuel - Regulator to Carburetor
4	503-0027	1	Clamp, Hose
5	148-0147	1	Pipe, Carburetor Inlet
6	CARBURETOR (Gas-Gasoline) (Includes Mounting Gasket See Separate Group For Components)		
	142-0367	1	Key 1 and 2
	142-0436	1	Key 3 and 4
	KIT, REPAIR - REGULATOR		
	148-0300	1	For Ensign Model F
	148-0522	1	For Ensign Model F1



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OPTIONAL NUMBER 15 FUEL SYSTEM (GAS-GASOLINE - GARRETSON REGULATOR)

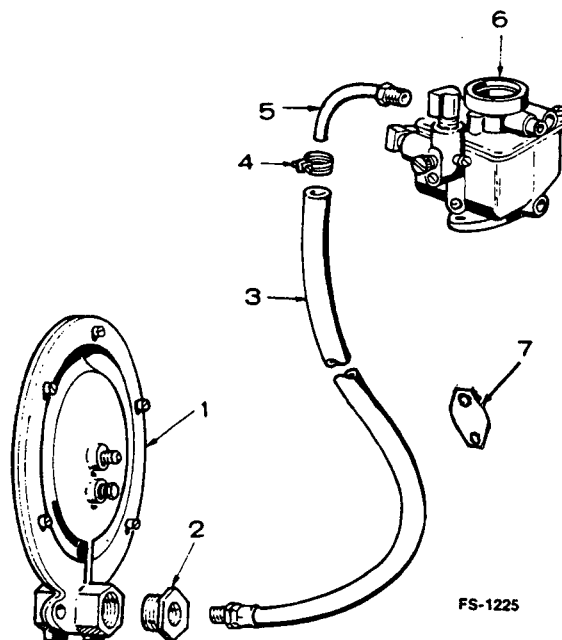


FS-1224

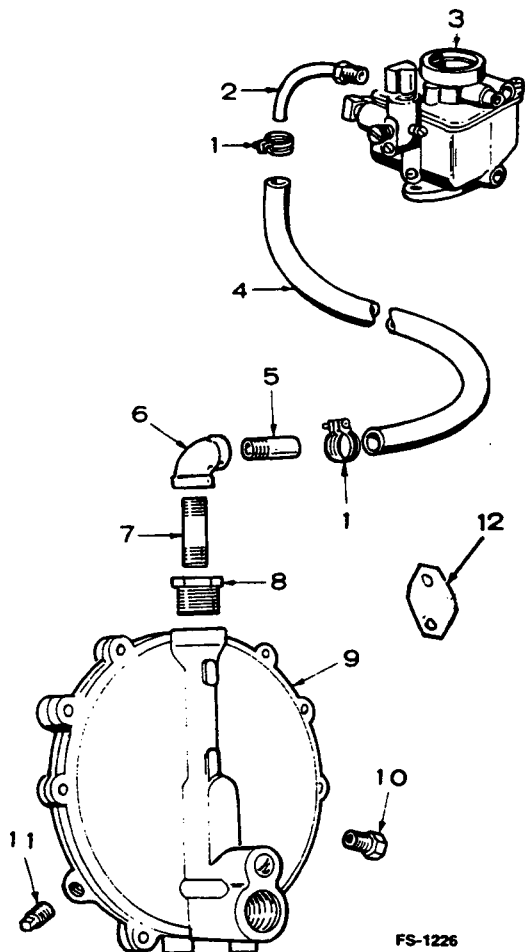
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	503-0032	2	Clamp, Hose
2	148-0147	1	Pipe, Fuel - Carburetor Inlet
3	CARBURETOR (GAS-GASOLINE) (Includes Mounting Gasket See Separate Group For Components)		
	142-0367	1	Key 1 and 2
	142-0436	1	Key 3 and 4
4	503-0315	1	Hose, Fuel (1/2" ID x 2 Ft)
5	505-0302	1	Nipple, Half
6	505-0038	1	Elbow, Pipe
7	505-0099	1	Nipple, Pipe
8	505-0017	1	Bushing, Regulator Outlet
9	148-0311	1	Regulator, Gas Pressure
10	148-0107	1	Vent, Regulator
11	505-0057	1	Plug, Regulator
	148-0390	1	Kit, Repair - Garretson Regulator

OPTIONAL NUMBER 16 FUEL SYSTEM (GAS - ENSIGN REGULATOR)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	148-0428	1	Regulator, Gas Pressure
2	505-0021	1	Bushing, Regulator Outlet
3	501-0025	1	Line, Fuel - Regulator to Carburetor
4	503-0027	1	Clamp, Hose
5	148-0147	1	Pipe, Carburetor Inlet
6	CARBURETOR (GAS ONLY) (Includes Mounting Gasket) (See Separate Group For Components)		
	142-0372	1	Keys 1 and 2
	142-0472	1	Keys 3 and 4
	KIT, REPAIR - REGULATOR		
	148-0300	1	For Ensign Model F
	148-0522	1	For Ensign Model F1
7	149-0136	1	Plate, Fuel Pump Hole Cover



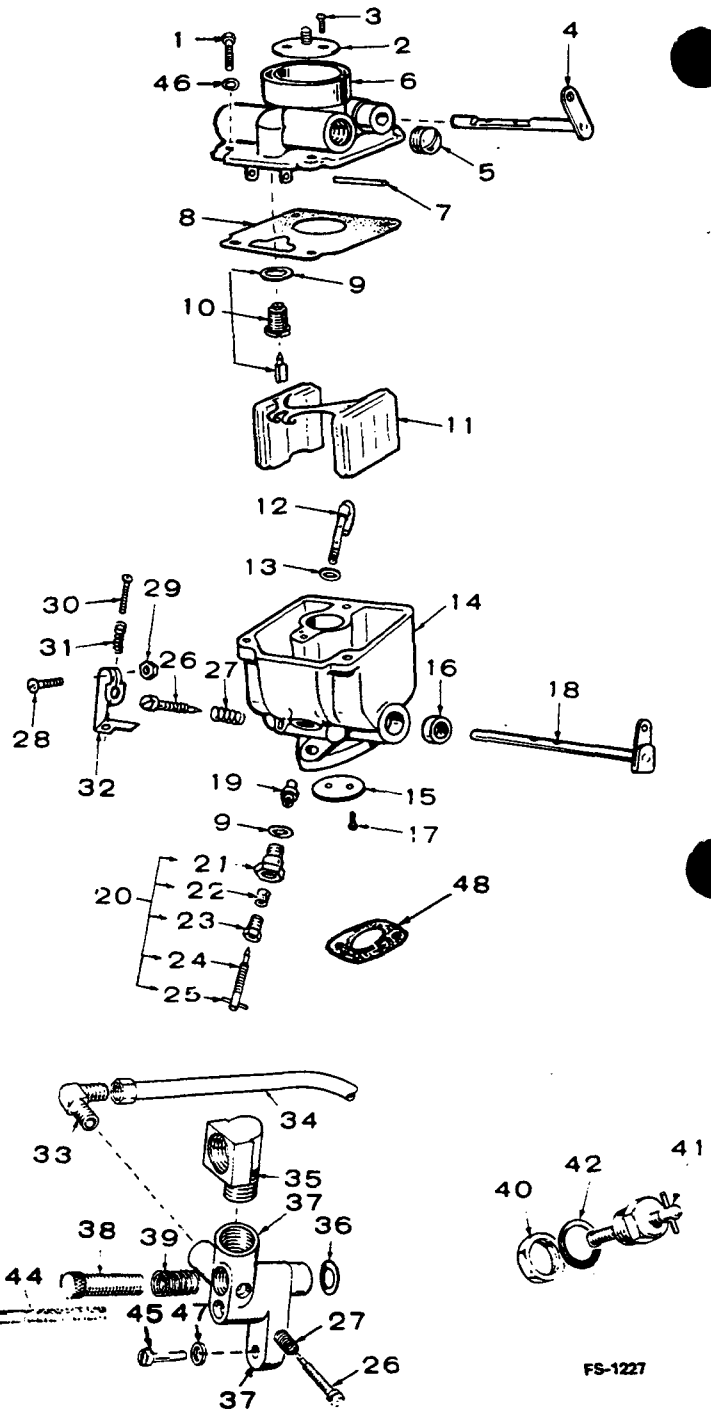
OPTIONAL NUMBER 17 FUEL SYSTEM (GAS - GARRETSON REGULATOR)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	503-0032	2	Clamp, Hose
2	148-0147	1	Pipe, Fuel - Carburetor Inlet
3	CARBURETOR (GAS ONLY) (Includes Mounting Gasket See Separate Group For Components)		
	142-0372	1	Keys 1 and 2
	142-0472	1	Keys 3 and 4
4	503-0315	1	Hose, Fuel (1/2" ID x 2 FT)
5	505-0302	1	Nipple, Half
6	505-0038	1	Elbow, Pipe
7	505-0099	1	Nipple, Pipe
8	505-0017	1	Bushing, Regulator Outlet
9	148-0311	1	Regulator, Gas Pressure
10	148-0107	1	Vent, Regulator
11	505-0057	1	Plug, Regulator
	148-0390	1	Kit, Repair - Garretson Regulator
12	149-0136	1	Plate, Fuel Pump Hole Cover

OPTIONAL NUMBER 18 CARBURETOR PARTS (GAS-GASOLINE)

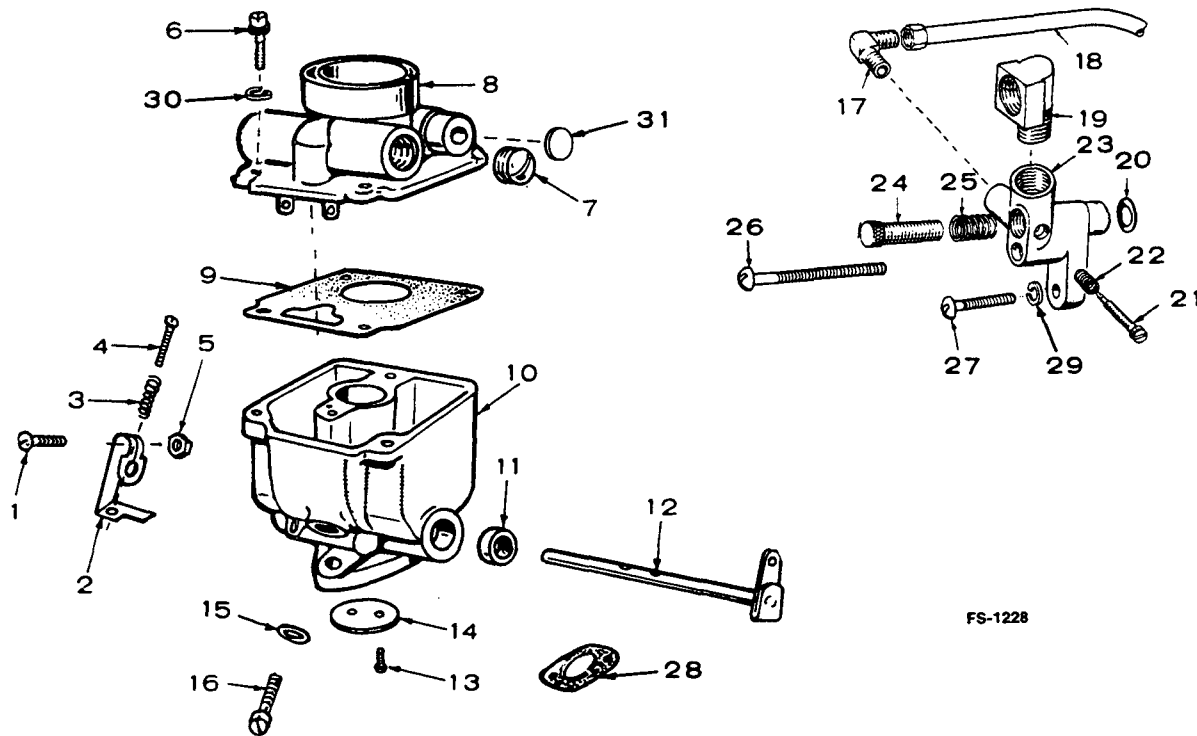
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	CARBURETOR, COMPLETE (Includes Mounting Gasket)		
	142-0367	1	Key 1 and 2
	142-0436	1	Key 3 and 4
	KIT, REPAIR		
	142-0371	1	Kit, Repair (Includes Parts Marked †)
	142-0033	1	†Kit, Gasket (Includes Parts Marked *)
1	SCREW, MACHINE - FILLISTER HEAD		
	815-0103	1	#10-24 x 1/2"
	815-0109	2	#10-24 x 5/8"
2	142-0055	1	Fly, Choke
3	815-0091	2	†Screw, Machine - Fillister Head (#4-40 x 3/16")
4	SHAFT ASSEMBLY, CHOKE		
	142-0217	1	Key 1 and 2
	142-0420	1	Key 3 and 4
5	505-0008	1	Plug, Pipe (1/8")
6	SLEEVE ASSEMBLY, CHOKE (Cover)		
	142-0205	1	Sleeve Assembly, Choke (Cover)
7	142-0039	1	†Shaft, Float
8	142-0031	1	*Gasket, Body to Sleeve
9	148-0017	2	*Gasket
10	142-0049	1	†Valve and Seat Assembly
11	142-0361	1	Float and Lever
12	142-0285	1	Nozzle
13	142-0032	1	*†Gasket, Nozzle
14		1	Body Assembly (Not Sold Separately)
15	142-0369	1	Fly, Throttle
16	142-0343	2	Bushing, Throttle Shaft
17	815-0072	2	Screw, Machine - Oval Head (#4-40 x 3/16")
18	142-0368	1	†Shaft, Throttle
19	NUT AND JET, NOZZLE		
	142-0370	1	†Nut and Jet, Nozzle
20	142-0042	1	Needle Assembly (Includes Parts Marked Δ)
21	142-0046	1	ΔRetainer, Main Adjusting Needle
22	142-0206	1	†ΔPacking, Main Adjusting Needle
23	142-0045	1	ΔRetainer, Main Adjusting Needle Packing
24	142-0041	1	†ΔNeedle, Main Adjusting
25	516-0027	1	ΔPin, Main Adjusting Needle
26	142-0040	2	†Needle, Idle Adjusting
27	142-0282	2	Spring, Idle Adjusting Needle
28	813-0103	1	Screw, Machine - Round Head (#10-32 x 3/4")
29	870-0053	1	Nut, Hex (#10-32)
30	812-0063	1	Screw, Machine - Round Head (#6-32 x 1/2")
31	142-0035	1	Spring, Throttle Stop Adjusting Screw
32	145-0008	1	Lever, Throttle Stop
33	502-0034	1	Elbow, Idle Line to Adapter
34	149-0030	1	Line, Idle
35	502-0074	1	Elbow, Adapter
36	509-0091	1	Gasket, Adapter Mounting
37	148-0126	1	Adapter, Gas
38	148-0131	1	Screw, Adapter Adjusting
39	148-0010	1	Spring, Adapter Adjusting Screw
40	148-0038	1	Nut, Hex - Float Lock (Used only on early models with metal float)
41	148-0135	1	Lock Assembly, Float (Used only on early models with metal float)
42	148-0017	1	*Gasket, Float Lock (Used only on early models with metal float)



43	142-0015	1	Plug, Body
44	812-0088	1	Screw, Round Head Machine (#8-32 x 1-3/4")
45	812-0125	1	Screw, Round Head Machine (#12-24 x 1/2")
46	850-0030	1	Washer, Lock - Spring (#10)
47	850-0038	1	Washer, Lock - Spring (1/4")
48	141-0078	1	*Gasket, Carburetor Mounting

† - Parts Included in 142-0371 Repair Kit.
 * - Parts Included in 142-0033 Gasket Kit.
 Δ - Parts Included in 142-0042 Needle Assembly.

OPTIONAL NUMBER 19 CARBURETOR PARTS (GAS)



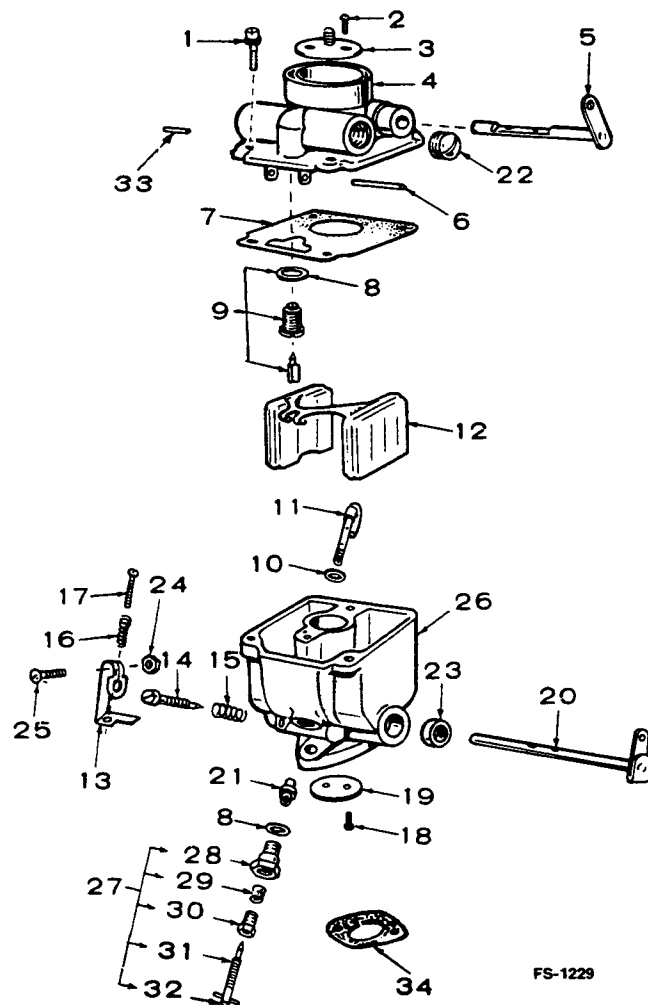
FS-1228

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	CARBURETOR, COMPLETE (Includes Mounting Gasket)						
	142-0372	1	Key 1 and 2	13	815-0072	2	Screw, Machine - Oval Head (#4-40 x 1/4")
	142-0472	1	Key 3 and 4	14	142-0369	1	Fly, Throttle
	142-0033	1	Kit, Gasket (Includes Parts Marked *)	15	148-0017	1	Gasket, Plug
1	813-0103	1	Screw, Machine - Round Head (#10-32 x 3/4")	16	142-0015	1	Plug, Body
2	145-0008	1	Lever, Idle Stop - Throttle	17	502-0034	1	Elbow, Idle Line to Adapter
3	142-0035	1	Spring, Throttle Stop Adjusting Screw	18	149-0030	1	Line, Idle
4	812-0063	1	Screw, Machine - Round Head (#6-32 x 1/2")	19	502-0074	1	Elbow, Adapter
5	870-0053	1	Nut, Hex (#10-32)	20	509-0091	1	Gasket, Adapter Mounting
6	SCREW, MACHINE - FILLISTER HEAD			21	142-0040	1	Needle, Idle Adjusting
	815-0103	1	#10-24 x 1/2"	22	142-0282	1	Spring, Idle Adjustng Needle
	815-0109	2	#10-24 x 5/8"	23	148-0126	1	Adapter, Carburetor
7	505-0008	1	Plug, Pipe (1/8")	24	148-0131	1	Screw, Adapter Adjusting
8	142-0205	1	Cover, Carburetor	25	148-0010	1	Spring, Adapter Adjusting Screw
9	142-0031	1	Gasket, Cover to Body	26	812-0088	1	Screw, Round Head Machine (#8-32 x 1-3/4")
10		1	Body, Carburetor (Not Sold Separately)	27	812-0125	1	Screw, Round Head Machine (#12-24 x 1/2")
11	142-0343	2	Bushing, Throttle Shaft	28	141-0078	1	Gasket, Carburetor Mounting
12	142-0368	1	Shaft Assembly, Throttle	29	850-0038	1	Washer, Lock - Spring (1/4")
				30	850-0030	1	Washer, Lock - Spring (#10)
				31	517-0010	2	Plug, Welsh - Brass (1/4")

* - Parts Included in 142-0033 Gasket Kit.

OPTIONAL NUMBER 20 CARBURETOR PARTS (GASOLINE WITH ADJUSTABLE MAIN JETS)

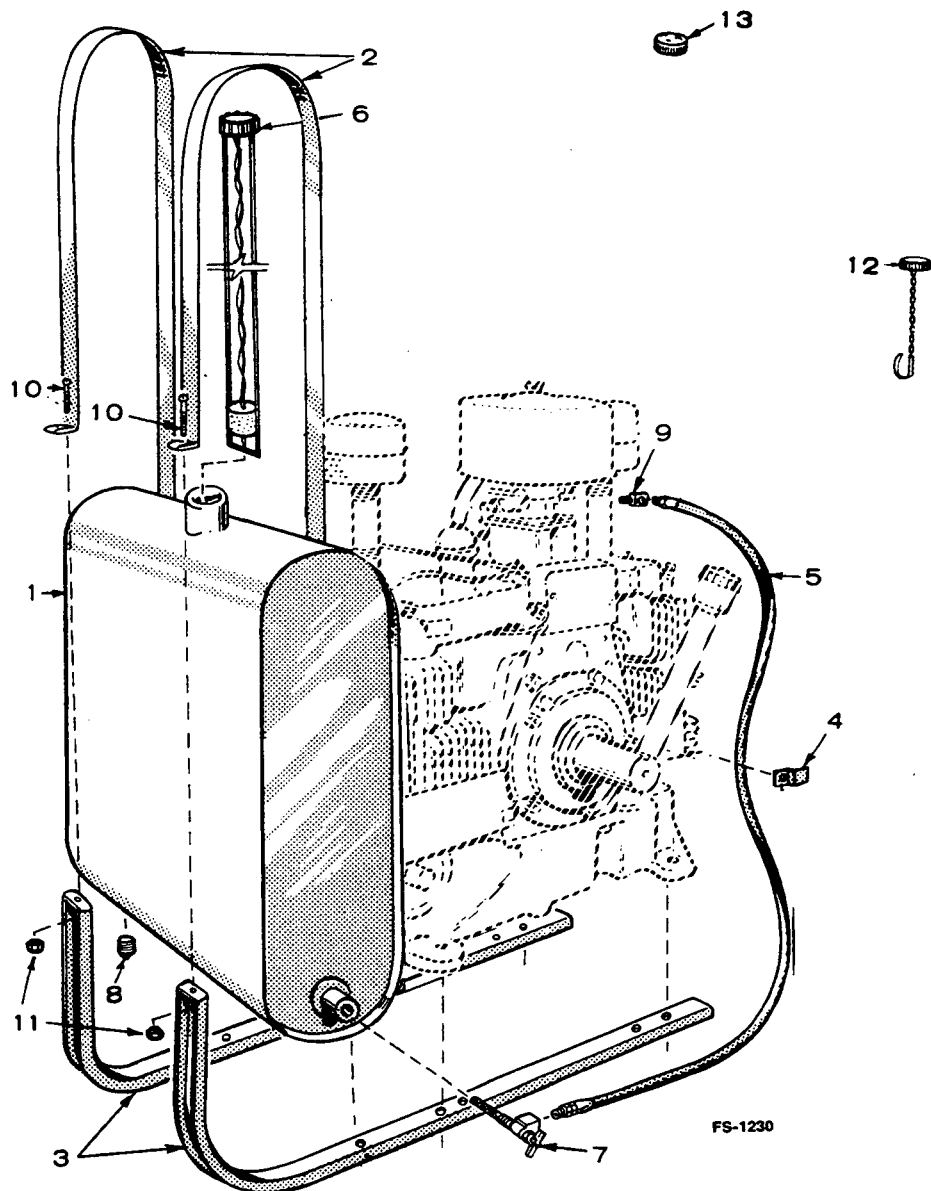
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	142-0416	1	Carburetor Complete (Includes Mounting Gasket - 3/4" Venturi)
	142-0371	1	Kit, Repair (Includes Parts Marked †)
	142-0033	1	†Kit, Gasket (Includes Parts Marked *)
1	SCREW, FILLISTER HEAD		
	815-0103	1	#10-24 x 1/2"
	815-0109	2	#10-24 x 5/8"
2	815-0091	2	†Screw, Fillister Head with IT Washer (#4-40 x 3/16")
3	142-0055	1	Fly, Choke
4	142-0205	1	Sleeve, Choke (Cover)
5	142-0420	1	Shaft, Choke
6	142-0039	1	†Shaft, Float
7	142-0031	1	*Gasket, Body
8	GASKET		
	148-0017	1	*Float Valve Seat
	148-0017	1	*Needle Assembly
9	142-0049	1	†Valve and Seat Assembly
10	142-0032	1	*Gasket, Nozzle
11	142-0285	1	Nozzle Assembly
12	142-0361	1	Float and Lever Assembly
13	145-0008	1	Lever, Idle Stop - Throttle
14	142-0040	1	†Needle, Idle Adjusting
15	142-0282	1	Spring, Idle Needle
16	142-0035	1	Spring, Throttle Stop
17	812-0063	1	†Screw, Machine - Round Head (#6-32 x 1/2")
18	815-0072	2	†Screw, Oval-Head Machine (#4-40 x 1/4")
19	142-0369	1	Fly, Throttle
20	142-0368	1	†Shaft, Throttle
21	142-0370	1	Nut and Jet, Nozzle
22	505-0008	1	Plug, Inlet
23	142-0343	2	Bushing, Throttle Shaft
24	870-0053	1	Nut, Hex (#10-32)
25	813-0103	1	Screw, Machine - Round Head (#10-32 x 3/4")
26		1	Body Assembly, Lower (Not Sold Separately)
27	142-0042	1	Needle Assembly (Includes Parts Marked Δ)
28	142-0046	1	ΔRetainer, Main Adjusting Needle
29	142-0206	1	Δ†Packing, Main Adjusting Needle
30	142-0045	1	ΔRetainer, Main Adjusting Needle Packing
31	142-0041	1	Δ†Needle, Main Adjusting
32	516-0027	1	ΔPin, Main Adjusting Needle
33	142-0227	1	Pin, Choke Stop
34	141-0078	1	*Gasket, Carburetor Mounting



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- † - Parts Included in Repair Kit. Parts with Δ symbol are included in 142-0371 kit only.
- * - Parts Included in 142-0033 Gasket Kit.
- Δ - Parts Included in 142-0042 Needle Assembly.

OPTIONAL NUMBER 21 FUEL TANK (SIDE MOUNTED)



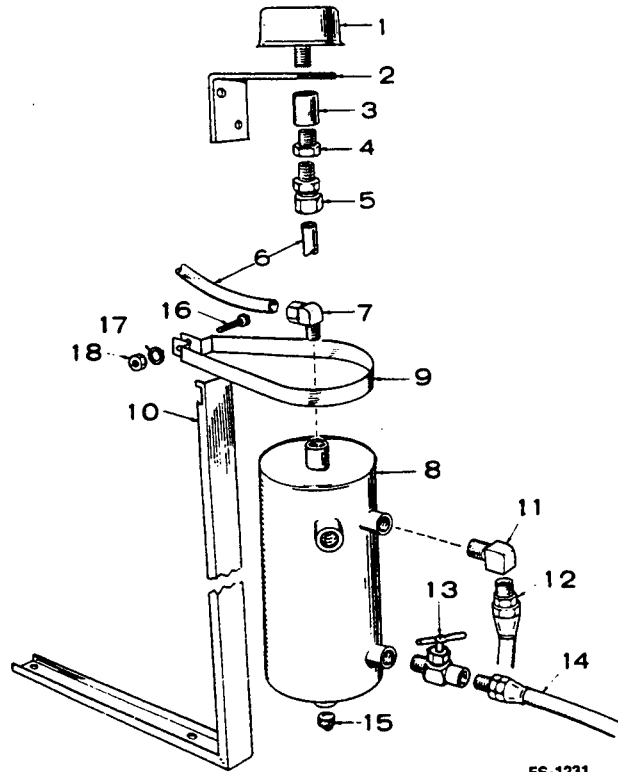
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	159-0984	1	Kit, Fuel Tank with Gauge (Includes Parts Marked *)	7	504-0013	1	†*Valve, Shut-off
	159-0597	1	Kit, Fuel Tank Without Gauge (Includes Parts Marked †)	8	505-0057	1	†*Plug, Tank Drain
1	159-0981	1	†*Tank, Fuel (Less Cap)	9	502-0020	1	†*Elbow, Carburetor Inlet
2	159-0596	2	†*Strap, Fuel Tank	10	813-0108	2	†*Screw, Machine - Round Head (#10-32 x 1-1/2")
3	159-0595	2	†*Bracket, Fuel Tank	11	870-0053	2	†*Nut, Hex (#10-32)
4	134-0599	1	†*Clip, Fuel Line	12	159-0020	1	†Cap, Fuel Tank (For 2-5/16" Filler Neck) - Late Models
5	501-0008	1	†*Line, Fuel	13	159-0007	1	Cap, Fuel Tank (For 1-3/4" Filler Neck) - Early Models
6	193-0207	1	*Cap and Gauge, Fuel Tank (For 2-5/16" Filler Neck) - Late Models				

† - Included in 159-0597 Fuel Tank Kit.

* - Included in 159-0984 Fuel Tank Kit.

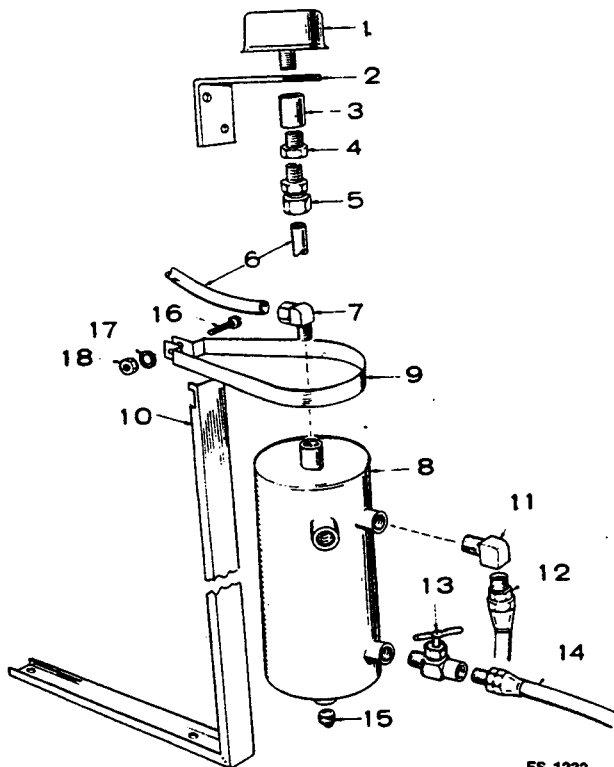
OPTIONAL NUMBER 22 RESERVOIR (DAY) TANK - ONE QUART

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	159-0591	1	Kit, Tank (Includes all parts in this group)
1	159-0041	1	Cap, Vent
2	415-0055	1	Bracket, Vent Cap
3	505-0028	1	Coupling, Pipe
4	505-0016	1	Bushing, Reducer (3/8 to 1/8")
5	502-0116	1	Connector, Compression
6	159-0345	1	Tubing, Copper (5/16 x 12")
7	502-0024	1	Elbow, Compression (90°)
8	159-0294	1	Tank, Reservoir
9	159-0556	1	Band, Reservoir Tank
10	159-0612	1	Bracket, Reservoir Tank Mounting
11	502-0020	1	Elbow, Street (90°)
12	501-0005	1	Line, Fuel - to Fuel Pump (18")
13	504-0086	1	Valve, Shut-off
14	501-0007	1	Line, Fuel - to Carburetor (24")
15	505-0057	1	Plug, Tank Drain
16	812-0156	1	Screw, Machine - Round Head (1/4-20 x 1-1/2")
17	850-0040	1	Washer, Lock - Spring (1/4")
18	861-0011	1	Nut, Square (1/4-20)



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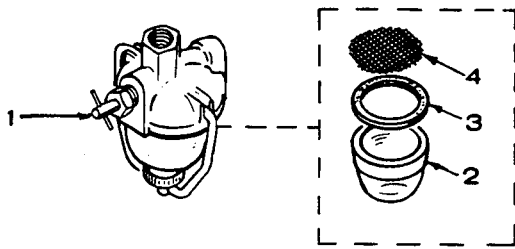
OPTIONAL NUMBER 23 RESERVOIR (DAY) TANK - TWO QUART



FS-1232

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	159-0942	1	Kit, Tank (Includes all parts in this group)
1	159-0041	1	Cap, Vent
2	415-0055	1	Bracket, Vent Cap
3	505-0028	1	Coupling, Pipe
4	505-0016	1	Bushing, Reducer (3/8 to 1/8")
5	502-0116	1	Connector, Compression
6	159-0345	1	Tubing, Copper (5/16 x 12")
7	502-0024	1	Elbow, Compression (90°)
8	159-0746	1	Tank, Reservoir
9	159-0936	1	Band, Reservoir Tank
10	159-0612	1	Bracket, Reservoir Tank Mounting
11	502-0020	1	Elbow, Street (90°)
12	501-0005	1	Line, Fuel - to Fuel Pump (18")
13	504-0086	1	Valve, Shut-off
14	501-0007	1	Line, Fuel - to Carburetor (24")
15	505-0057	1	Plug, Tank Drain
16	812-0156	1	Screw, Machine - Round Head (1/4-20 x 1-1/2")
17	850-0040	1	Washer, Lock - Spring (1/4")
18	861-0011	1	Nut, Square (1/4-20)

OPTIONAL NUMBER 24 FUEL FILTER



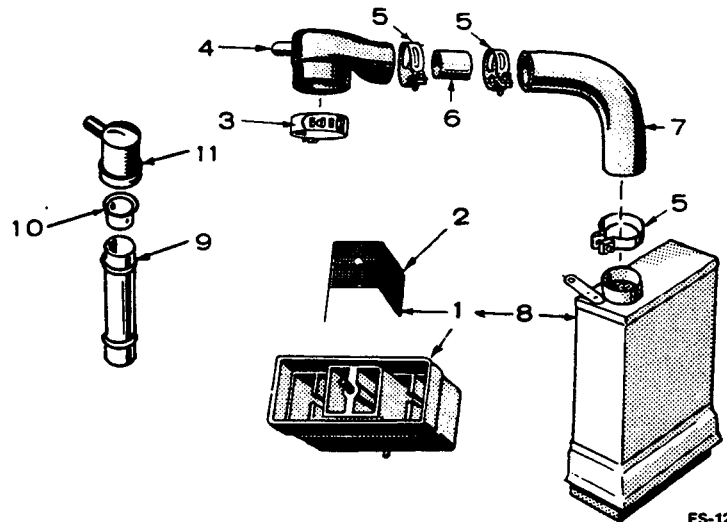
FS-1204

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	149-0079	1	Bowl Assembly, Sediment - Complete (Includes Parts Marked *)
2	149-0150	1	*Bowl Only
3	149-0149	1	*Gasket, Bowl Mounting
4	149-0202	1	*Screen

* - Parts Included in 149-0079 Sediment Bowl Assembly.

OPTIONAL NUMBER 25 RECTANGULAR AIR CLEANER AND BREATHER

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	140-0403	1	Kit, Cup and Screen (Part of 140-0399 Air Cleaner)
2	140-0068	1	Screen, Air Cleaner (Part of 140-0399 Air Cleaner)
3	503-0107	1	Clamp, Hose
4	145-0080	1	Inlet, Carburetor Air
5	503-0280	3	Clamp, Hose
6	140-0211	1	Sleeve, Air Cleaner Hose
7	503-0480	1	Hose, Air Inlet (3/4" ID x 8-1/4")
8	140-0399	1	Cleaner, Air
9	123-0129	1	Tube, Breather
10	123-0104	1	Valve, Breather
11	123-0293	1	Cap, Breather Tube

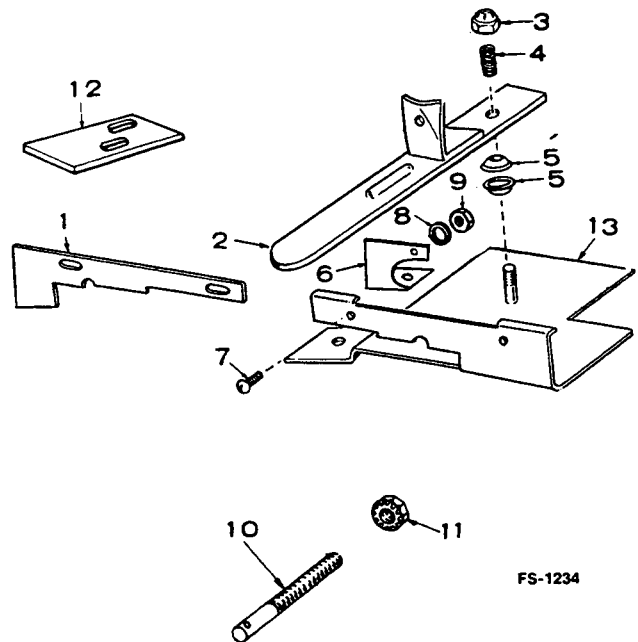


FS-1233

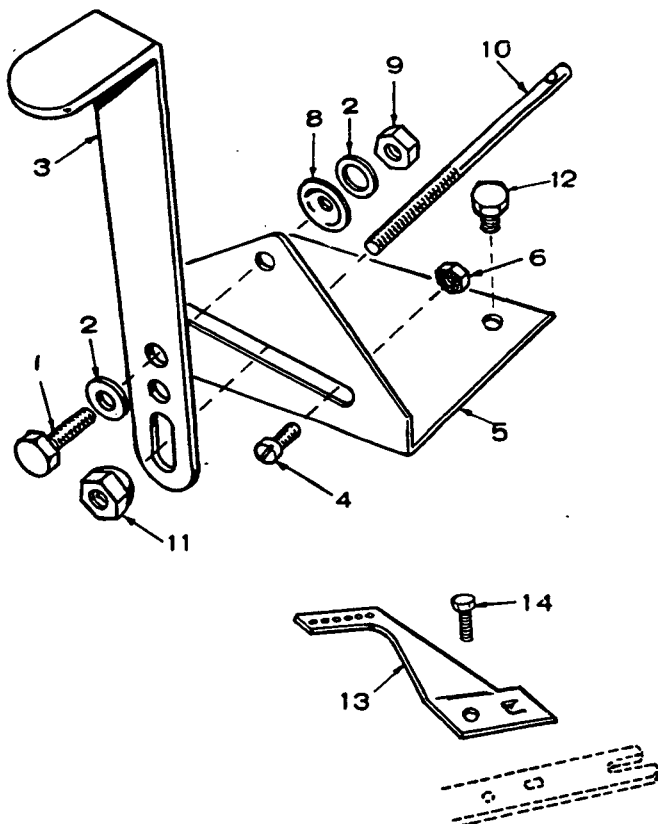
OPTIONAL NUMBER 26 GOVERNOR CONTROL - VARIABLE SPEED (152-0147)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	152-0147	1	Bracket and Control Arm Assembly Complete (Includes Parts Marked *)
1	152-0152	1	*Plate, Adjusting
2	152-0145	1	*Lever, Adjusting
3	870-0065	1	*Nut, Self Locking (1/4-20)
4	150-1012	1	*Spring, Throttle Lever
5	152-0041	2	*Washer, Tension
6	152-0153	1	*Stiffener, Control Bracket
7	812-0077	2	*Screw, Machine - Round Head (#8-32 x 3/8")
8	853-0005	2	*Washer, Lock - ET (#8)
9	860-0008	2	*Nut, Machine - Hex (#8-32)
10	150-1009	1	Stud, Speed Adjusting
11	870-0200	1	Nut, Machine - Hex With ET (#10-32)
12	152-0144	1	Adapter, Throttle Stop
13	152-0146	1	*Bracket, Mounting

* - Parts Included in 152-0147 Bracket and Control Assembly.



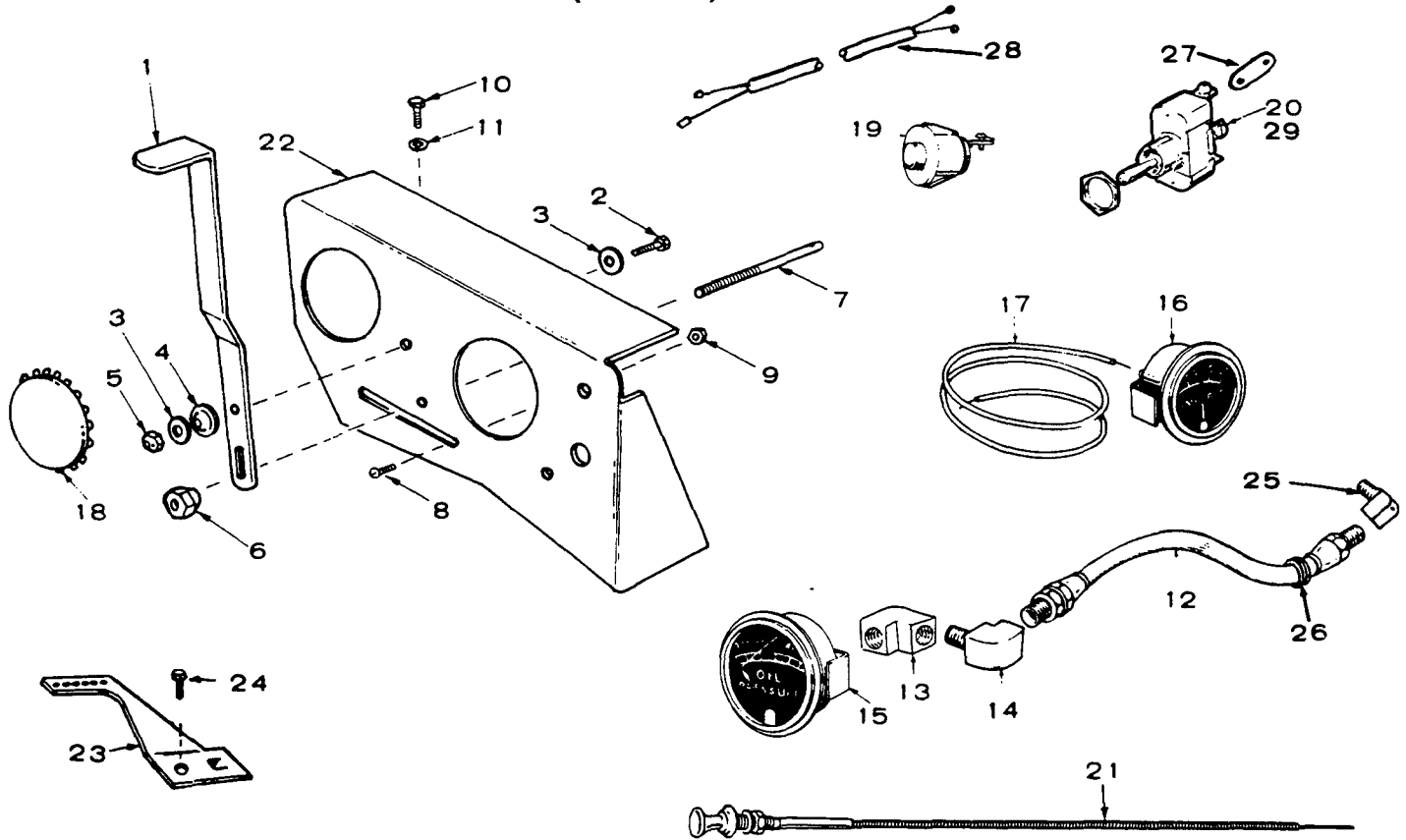
OPTIONAL NUMBER 27 GOVERNOR CONTROL - VARIABLE SPEED (152-0085)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	152-0085	1	Bracket and Control Arm Assembly Variable Speed - Complete (Includes Parts Marked *)
1	800-0005	1	*Screw, Cap - Hex Head (1/4-20 x 3/4")
2	526-0015	2	*Washer, Flat (9.32 ID x 9.16" OD x 1.16" Thk)
3	152-0083	1	*Lever, Control
4	815-0199	2	*Screw, Machine - Fillister Head (#10-32 x 5/16")
5	152-0086	1	*Bracket, Mounting
6	870-0131	2	*Nut, Hex with ET Lock Washer (#10-32)
8	152-0041	1	*Washer, Tension
9	870-0065	1	*Nut, Hex - Self Locking (1/4-20)
10	152-0090	1	Stud, Speed Adjusting
11	150-0621	1	Nut, Special - Speed Adjusting Stud
12	821-0008	2	Screw, Cap - Hex Head Locking (1/4-20 x 5/16")
13	150-1000	1	Extension, Governor Arm
14	815-0181	1	Screw, Cap - Hex Head with ET Lock Washer (#10-32 x 1/2")

* - Parts Included in 152-0085 Bracket and Control Arm Assembly.

OPTIONAL NUMBER 28 CONTROL (ENGINE) - KEYS 2 AND 4

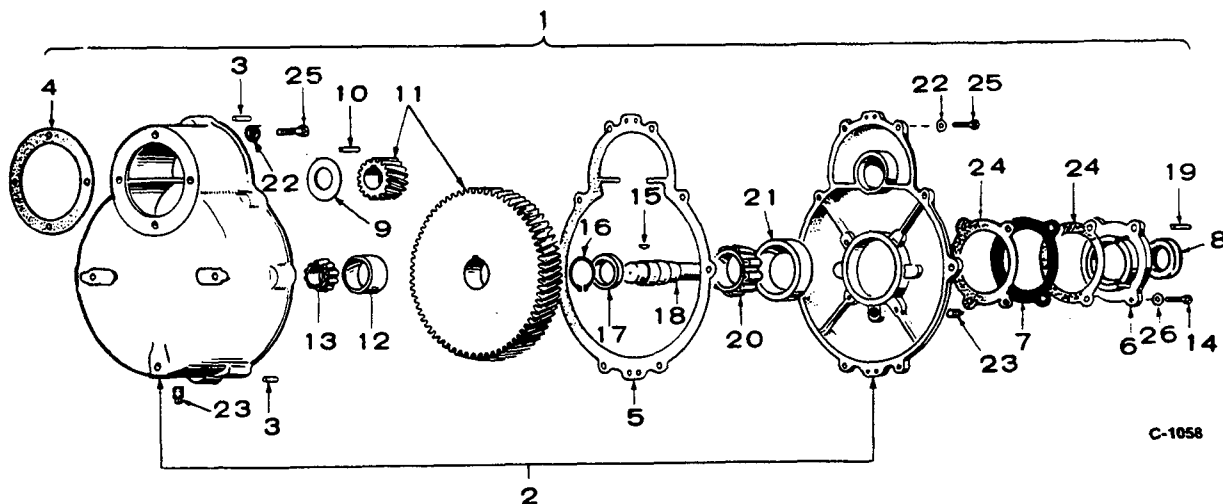


SC-1193

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
NOTE: These controls consist of various combinations and do not necessarily consist of all parts shown in this group.			
1	152-0164	1	Lever, Throttle Control
2	800-0005	1	Screw, Cap - Hex Head (1/4-20 x 3/4")
3	526-0015	2	Washer, Flat (9/32" ID x 9/16" OD x 1/16" Thk)
4	152-0041	1	Washer, Tension
5	870-0065	1	Nut, Hex Self Locking (1/4-20)
6	150-0621	1	Nut, Special - Speed Adjusting Stud
7	150-0147	1	Stud, Speed Adjusting
8	815-0199	2	Screw, Machine - Fillister Head (#10-32 x 5/16")
9	870-0131	2	Nut, Hex with ET Lock Washer (10-32)
10	800-0002	2	Screw, Cap - Hex Head (1/4-20 x 3/8")

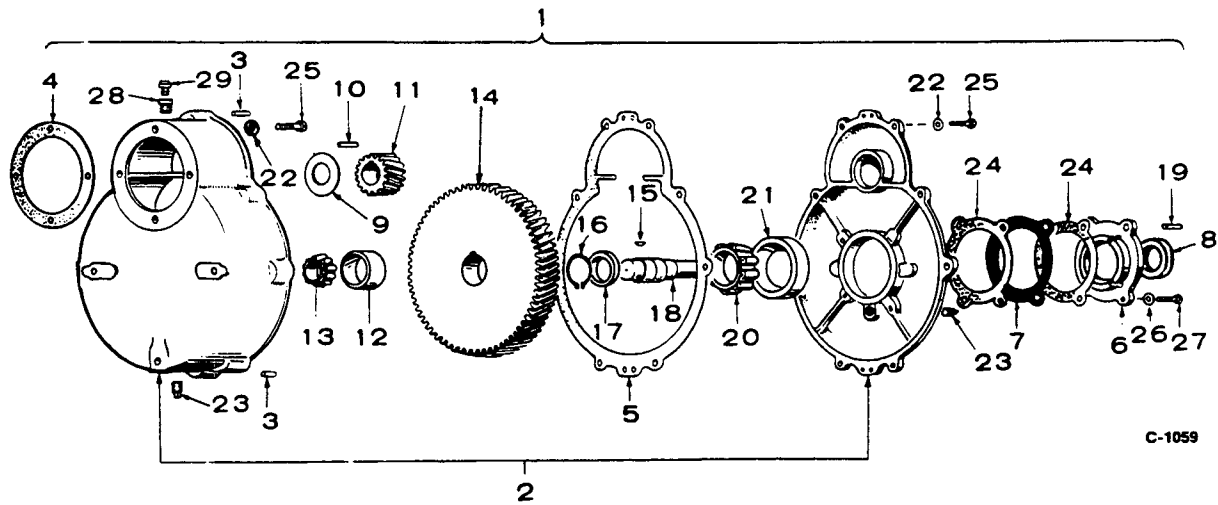
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
11	850-0040	2	Washer, Lock - Spring (1/4")
12	501-0203	1	Line, Oil
13	502-0055	1	Elbow, Pipe (90°)
14	502-0002	1	Elbow, Inverted Male (90°)
15	193-0005	1	Gauge, Oil Pressure
16	AMMETER (Select According to Scale) (Includes Mounting Clamp)		
	302-1361	1	Scale Reads 20-0-20
	302-1363	1	Scale Reads 45-0-45
17	334-0028	1	Lead (4 foot piece of wire)
18	517-0009	1	Plug, Dot Button
19	308-0029	1	Switch, Start
20	308-0232	1	Switch, Stop
21	153-0328	1	Cable, Choke
22	301-2780	1	Bracket, Engine Control
23	150-1000	1	Extension, Governor Arm
24	815-0181	1	Screw, Cap - Hex Head W/ET (#10-32 x 1/2")
25	502-0020	1	Elbow, Street - Oil Line to Cylinder Block
26	508-0084	1	Grommet, Oil Line
	332-0592	1	Jumper
28	338-0565	1	Harness, Start and Run
29	308-0140	1	Switch, Start-Run-Stop (Toggle)

OPTIONAL NUMBER 29 REDUCTION GEARBOX (3.3:1)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	REDUCTION GEAR ASSEMBLY			14	800-0007	4	Screw, Cap - Hex Head (1/4-20 x 1")
	190-0444	1	Mounted Left Side Horizontal	15	515-0159	1	Key, Driven Gear
	190-0440	1	Mounted Right Side Horizontal	16	518-0013	1	Ring, Retainer
2	190-0050	1	Housing - Includes Cover (Also Order 2 #516-0012 Pins)	17	190-0202	1	Spacer, Bearing
3	516-0012	2	Pin, Dowel	18	190-0192	1	Shaft, Take-Off
4	190-0020	1	Gasket, Housing to Engine	19	515-0103	1	Key, Take-Off Shaft
5	190-0021	1	Gasket, Cover to Housing	20	510-0023	1	Cone, Roller Bearing
6	190-0016	1	Plate, Bearing Retainer	21	510-0024	1	Cup, Roller Bearing
7	190-0115	1	Shim Set, End Play Adjustment	22	850-0045	12	Washer, Lock - Spring (5/16")
8	509-0016	1	Seal, Oil	23	505-0054	3	Plug, Pipe (1/4)
9	190-0195	1	Washer, Pinion Gear	24	190-0306	2	Gasket, Bearing Plate to Housing
10	515-0142	1	Key, Pinion Gear	25	800-0028	16	Screw, Cap - Hex Head (5/16-18 x 1")
11	190-0447	1	Gear, Set (Pinion and Driven)	26	526-0063	4	Washer, Flat - Copper (17/64" ID x 7/16" OD x 1/22" Thk)
12	510-0022	1	Cup, Roller Bearing				
13	510-0021	1	Cone, Roller Bearing				

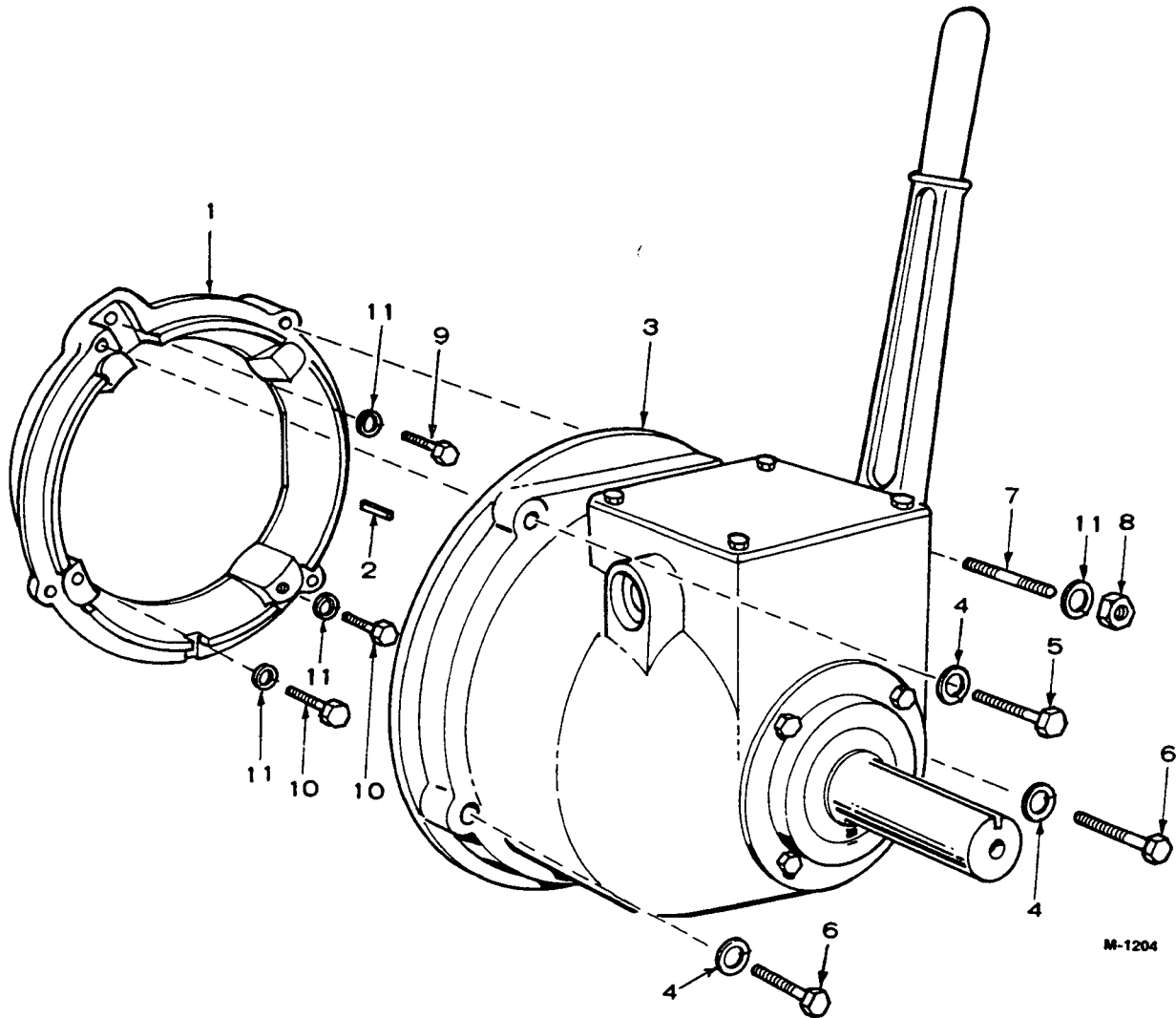
OPTIONAL NUMBER 30 REDUCTION GEARBOX (4:1)



C-1059

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	REDUCTION GEAR ASSEMBLY			16	518-0013	1	Ring, Retainer
	190-0193	1	Mounted Left Side Horizontal	17	190-0202	1	Spacer, Bearing
	190-0299	1	Mounted Right Side Horizontal	18	190-0192	1	Shaft, Take-Off
	190-0410	1	Mounted Vertical Down	19	515-0103	1	Key, Take-Off Shaft
2	190-0050	1	Housing - Includes Cover (Also Order 2 #516-0012 Pins)	20	510-0023	1	Cone, Roller Bearing
3	516-0012	2	Pin, Dowel	21	510-0024	1	Cup, Roller Bearing
4	190-0020	1	Gasket, Housing to Engine	22	850-0045	12	Washer, Lock - Spring (5/16")
5	190-0021	1	Gasket, Cover to Housing	23	PLUG, PIPE (1/4) 505-0054	3	Mounted Left Side and Mounted Right Side Gear Box
6	190-0016	1	Plate, Bearing Retainer		505-0054	2	Mounted Vertical Down Gear Box
7	190-0115	1	Shim Set, End Play Adjustment	24	190-0306	2	Gasket, Bearing Plate to Housing
8	509-0016	1	Seal, Oil	25	800-0028	16	Screw, Cap - Hex Head (5/16-18 x 1")
9	190-0195	1	Washer, Pinion Gear	26	526-0063	4	Washer, Flat - Copper (17/64" ID x 7/16" OD x 1/32" Thk)
10	515-0142	1	Key, Pinion Gear	27	800-0007	4	Screw, Cap - Hex Head (1/4-20 x 1")
11	190-0447	1	Gear, Pinion	28	505-0007	1	Bushing, Reducer - Mounted Vertical Down Gear Box
12	510-0022	1	Cup, Roller Bearing	29	518-0172	1	Vent, Mounted Vertical Down Gear Box
13	510-0021	1	Cone, Roller Bearing				
14	190-0190	1	Gear, Driven				
15	515-0159	1	Key, Driven Gear				

OPTIONAL NUMBER 31 CLUTCH

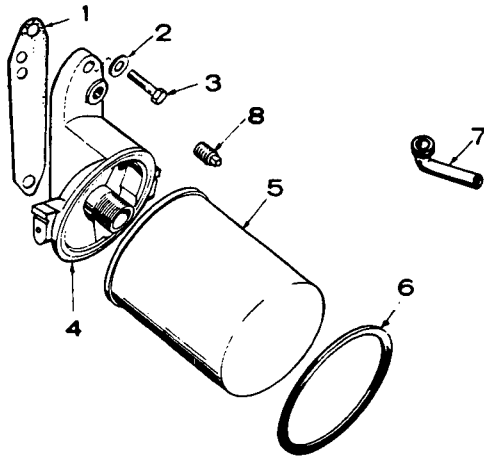


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	190-0178	1	Kit, Clutch - Complete
1	190-0171	1	Adapter, Clutch to Engine
2	515-0041	1	Key, Clutch
3	190-0174	1	*Clutch Assembly
4	850-0055	3	Washer, Lock - Spring (7/16")
5	800-0074	1	Screw, Cap - Hex Head (7/16-14 x 1-3/4")
6	800-0075	2	Screw, Cap - Hex Head (7/1-14 x 2")
7	520-0126	1	Stud (3/8 x 3-7/8")
8	104-0091	1	Nut, Hex (Special)
9	800-0053	1	Screw, Cap - Hex Head (3/8-16 x 1-3/4")
10	800-0054	2	Screw, Cap - Hex Head (3/8-16 x 2")
11	850-0050	4	Washer, Lock - Spring (3/8")

* - For components, check Clutch nameplate and contact your nearest Rockford dealer.

**OPTIONAL NUMBER 32
SPIN ON OIL FILTER - BEGIN SPEC G**

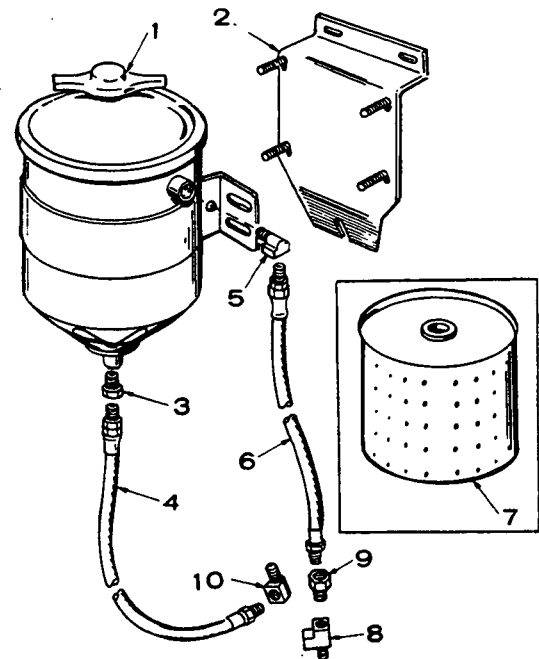
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	122-0321	1	Gasket, Filter Adapter
2	526-0065	2	Washer, Flat - Copper (21/64" ID x 9/16" OD x 1/16" Thk)
3	800-0028	2	Screw, Cap - Hex Head (5/16-18 x 1")
4	122-0320	1	Adapter, Filter
5	122-0445	1	Filter, Spin-On
6	122-0347	1	Seal, Air
7	122-0345	1	Tube, Oil Drain
8	505-0057	1	Plug, Adapter Outlet (1/8")



LS-1052

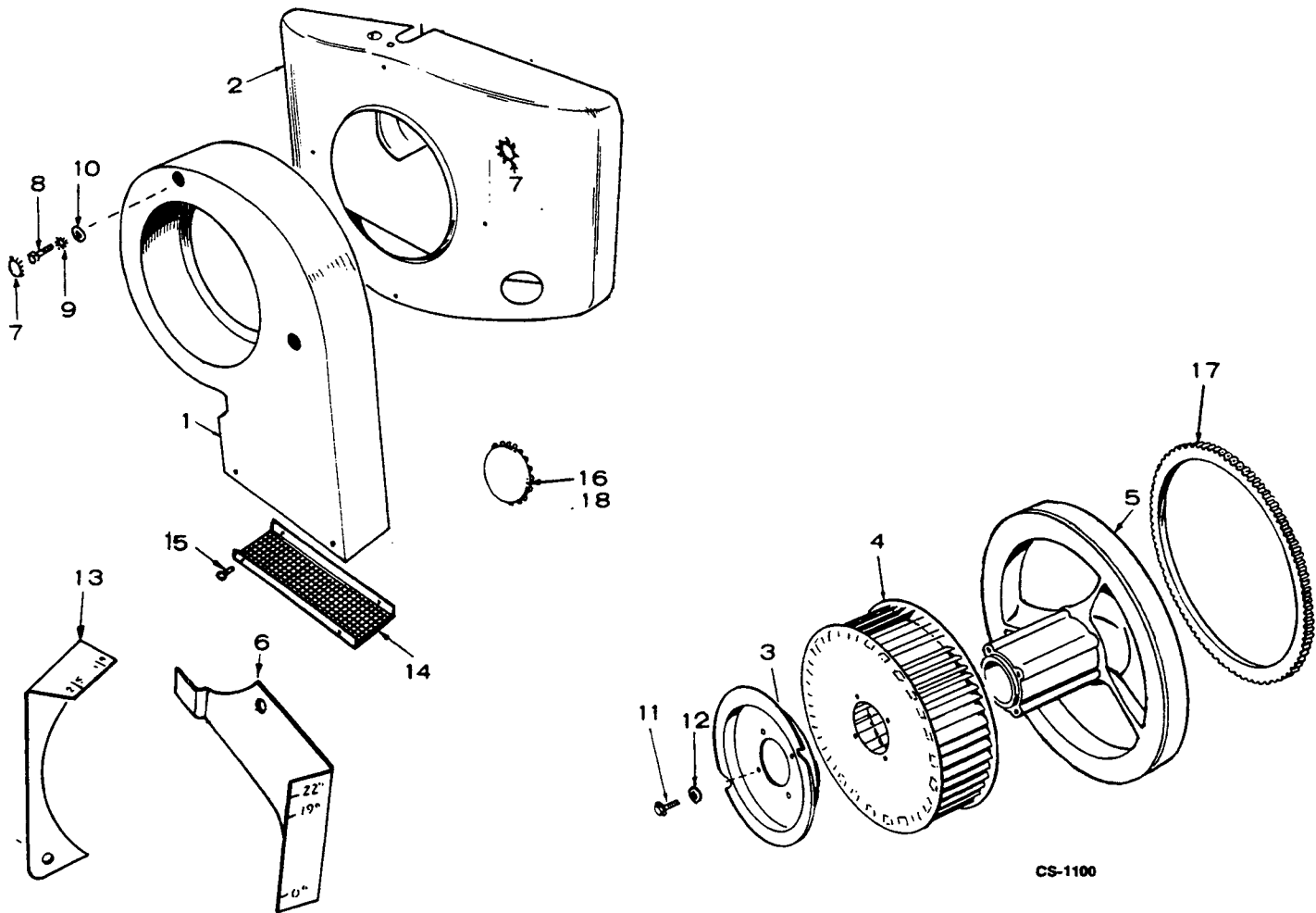
**OPTIONAL NUMBER 33
CARTRIDGE TYPE OIL FILTER**

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	122-0091	1	Filter, Oil (Includes Cartridge)
2	122-0088	1	Bracket, Filter Mounting
3	502-0003	1	Connector, Oil Filter Outlet
4	501-0005	1	Line, Oil Filter Return
5	502-0002	1	Elbow, Oil Filter Inlet
6	501-0008	1	Line, Oil Filter Inlet
7	122-0037	1	Cartridge, Oil Filter
8	502-0058	1	Tee, Oil Pressure Line
9	502-0003	1	Connector, Oil Pressure Line
10	502-0002	1	Elbow, Oil Return Line



LS-1053

**OPTIONAL NUMBER 34
AIR HOUSING - VACU FLO COOLING (AND FLYWHEEL)**

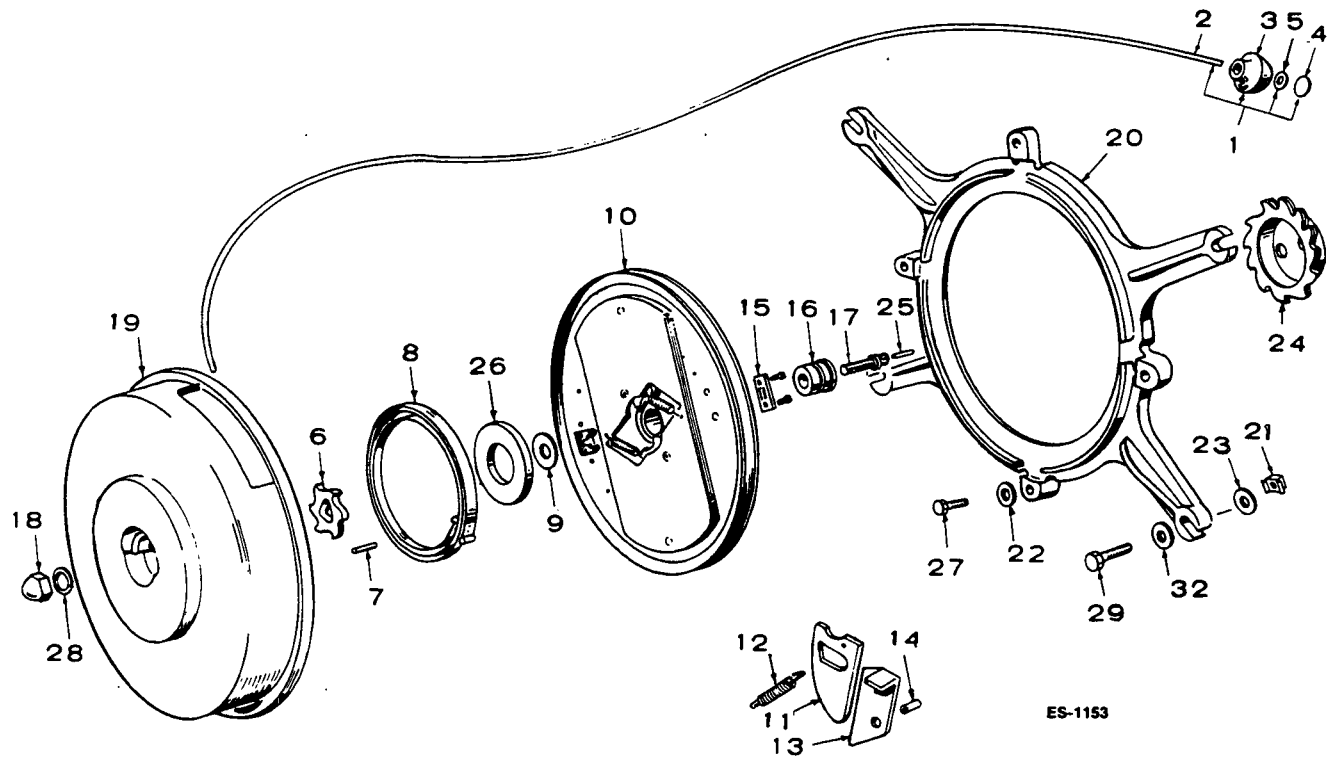


CS-1100

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	SCROLL, AIR DISCHARGE (Includes Guard) 134-3103	1	Mounted in 6 o'clock position
	134-3070	1	Mounted in 9 o'clock position
	134-3041	1	Mounted in 3 o'clock position or 12 o'clock position
2	HOUSING, BLOWER		Begin Spec J
	134-2795	1	Key 2
	134-2796	1	Key 4
	134-1576	1	Spec G and H
	134-1284	1	Spec A through F
3	192-0272	1	Sheave, Rope
4	WHEEL, BLOWER		
	134-0565	1	Spec A through G
	134-0753	1	Begin Spec J
5	FLYWHEEL (Includes Ring Gear)		
	104-0302	1	Key 2
	104-0491	1	Key 4
6	INDICATOR, IGNITION TIMING - BEGIN SPEC E		
	166-0519	1	Right Side
	166-0555	1	Left Side

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
7	517-0021	3	Plug, Dot Button (7/8")
8	800-0002	4	Screw, Cap - Hex Head (1/4-20 x 3/8")
9	853-0013	4	Washer, Lock - ET (1/4")
10	526-0015	4	Washer, Flat (9/32" ID x 9/16" OD x 1/16" Thk)
11	800-0010	4	Screw, Cap - Hex Head (1/4-20 x 1-3/4")
12	850-0040	4	Washer, Lock - Spring (1/4")
13	160-0500	1	Bracket, Timing - Key 2 and 4 Spec A through D
14	134-2956	1	Guard, Scroll Outlet
15	815-0421	4	Screw, Cap - Hex Head (#10-16 x 1/2")
16	517-0035	1	Plug, Dot Button (Timing Hole)
17	134-0673	1	Gear, Ring - Flywheel
18	517-0009	1	Plug, Dot Button - Spec G and H

**OPTIONAL NUMBER 35
REDI-PULL STARTER - KEYS 1 AND 3**



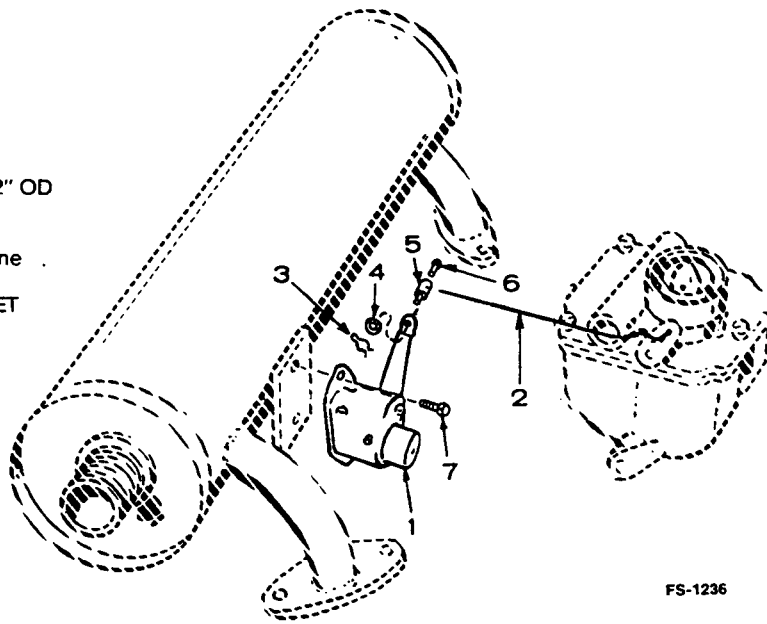
ES-1153

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	KIT, STARTER - COMPLETE						
	192-0325	1	Begin Spec E (Includes Parts Marked †)	21	870-0110	4	†ΔNut, Speed Grip (1/4-20)
	192-0215	1	Specs A through D (Includes Parts Marked Δ)	22	526-0180	4	†ΔWasher, Flat (17/64" ID x 7/8" OD x 1/8" Thk)
1	192-0045	1	†ΔRope and Grip Assembly (Includes Parts Marked □)	23	526-0130	4	†ΔWasher, Flat (17/64" ID x 1" OD x 1/16" Thk)
2	192-0043	1	†Δ□Rope	24	192-0309	1	†Wheel, Ratchet - Begin Spec E:
3	192-0044	1	†Δ□Grip	25	516-0132	1	†ΔPin, Spiral - Brass
4	517-0025	1	†Δ□Plug, Grip	26	526-0168	1	†ΔWasher, Flat (1-15/32" ID x 3" OD x .047" Thk)
5	526-0021	1	†Δ□Washer, Flat (17/64" ID x 3/4" OD x 1/16" Thk)	27	815-0137	4	†ΔScrew, Cap - Hex Head (1/4-20 x 1-1/4")
6	192-0153	1	†ΔWheel, Cog	28	850-0050	1	†ΔWasher, Lock - Spring (3/8")
7	516-0138	1	†ΔPin, Roll	29	800-0007	4	†ΔScrew, Cap - Hex Head (1/4-20 x 1-1/4")
8	192-0039	1	†ΔSpring, Recoil	31	815-0137	2	†ΔScrew, Cap - Hex Head (1/4-20 x 1-1/4")
9	526-0123	1	†ΔWasher, Thrust	32	526-0158	4	†ΔWasher, Flat (.261" ID x 1" OD x 1/8" Thk)
10	192-0180	1	†ΔSheave, Rope (Includes Parts Marked *)	33	526-0015	2	†ΔWasher, Flat (9/32" ID x 9/16" OD x 1/16" Thk)
11	192-0172	2	†Δ*Pawl	34	192-0170	1	ΔWheel, Ratchet - Specs A through D
12	192-0165	2	†Δ*Spring, Pawl	35	192-0218	2	ΔScrew, Cap - Hex Head - Specs A through D
13	192-0168	2	†Δ*Arm, Ratchet				
14	516-0110	4	†Δ*Pin, Roll (2) Pawl (2) Ratchet Arm				
15	192-0167	1	†Δ*Clamp, Rope				
16	192-0163	1	†ΔBearing, Sheave Hub				
17	192-0323	1	†ΔScrew, Cap - Socket Head (Special)				
18	862-0003	1	†ΔNut, Hex (3/8-16)				
19	192-0152	1	†ΔCover, Starter				
20	192-0186	1	†ΔRing, Mounting				

† - Parts Included in 192-0325 Starter Kit.
 Δ - Parts Included in 192-0215 Starter Kit.
 □ - Parts Included in 192-0045 Rope and Grip Assembly.
 * - Parts Included in 192-0180 Rope Sheave.

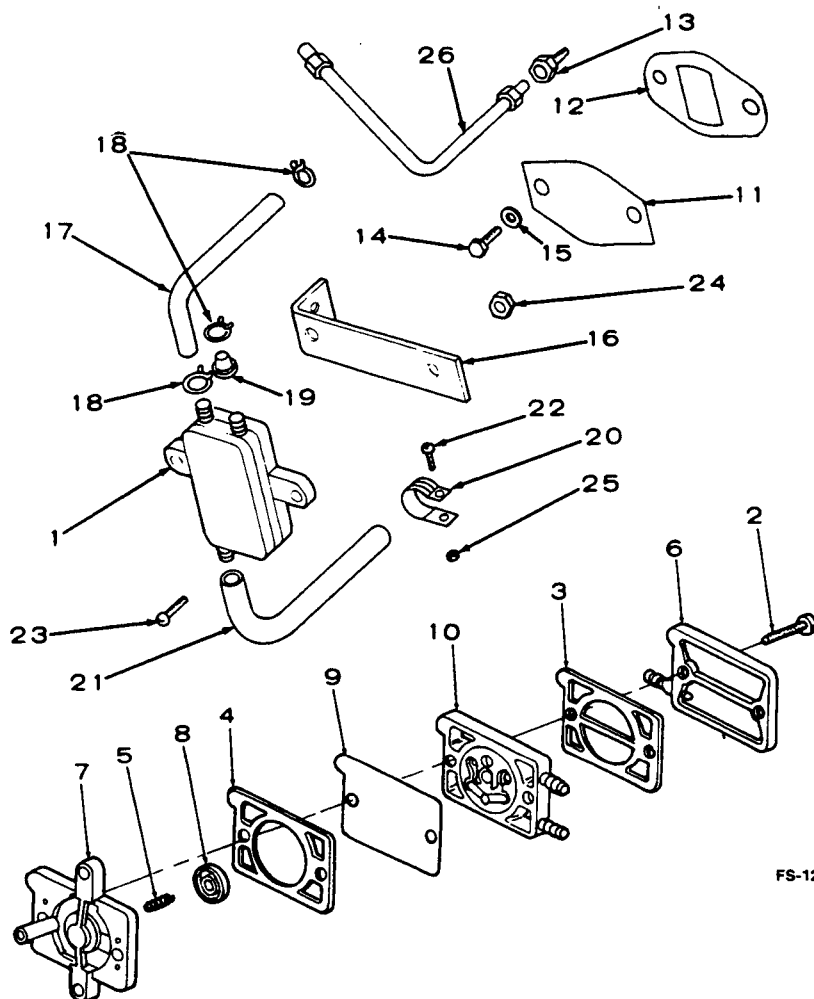
OPTIONAL NUMBER 36 CHOKE (SISSON)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	153-0223	1	Choke, Sisson
2	153-0361	1	Link, Choke to Carburetor
3	516-0059	1	Pin, Cotter
4	526-0006	1	Washer, Flat (15/64" ID x 1/2" OD x 3/64" Thk)
5	152-0155	1	Swivel, Choke to Linkage
6	815-0104	1	Screw, Fillister Head Machine (#8-32 x 5/16")
7	815-0315	2	Screw, Cap - Hex Head W/ET (1/4-20 x 1/2")



FS-1236

**OPTIONAL NUMBER 37
FUEL PUMP - VACUUM PULSE
KEY 4 - SPEC J**

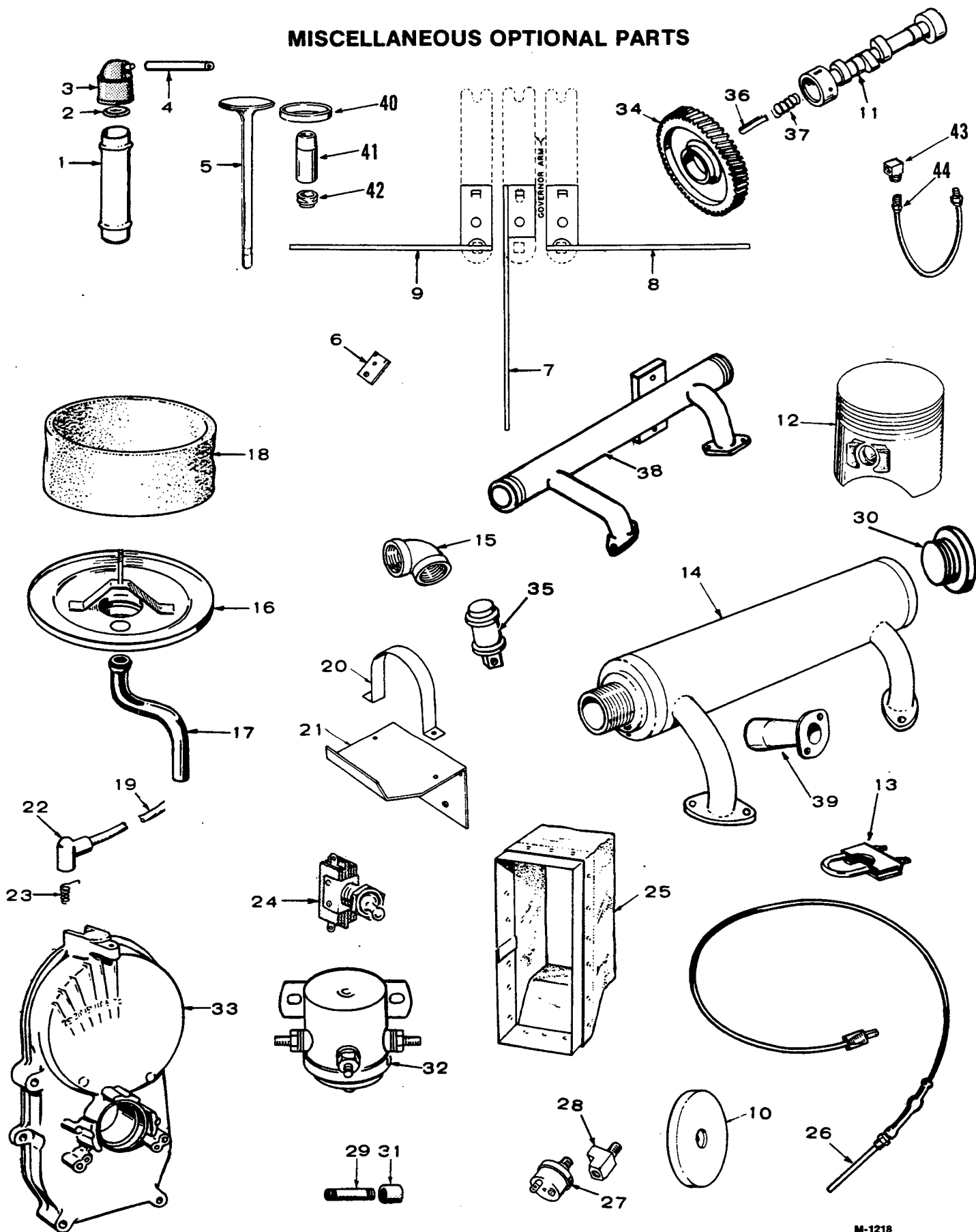


FS-1237

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	149-1982	1	Pump, Fuel - Vacuum, Pulse (Includes Parts Marked*)	15	526-0063	2	Washer (Copper) - Hole Cover Plate (17/64" ID x 7/16" OD x 1/32" Thk)
2	142-0540	2	*Screw - Pump Cover to Body	16	149-1329	1	Bracket, Mounting - Pulse Pump
3	149-1323	1	*Gasket - Cover to Valve Assembly	17	503-0573	1	Hose, Fuel - Upper (1/4" ID x 16")
4	142-0541	1	*Gasket - Pump Cover	18	503-0301	3	*Clamp, Hose (7/16")
5	142-0545	1	*Spring - Fuel Pump	19	149-1321	1	*Cap, Fuel Fitting
6	149-1983	1	*Cover, Pump (Includes Cap and Clamp)	20	332-0051	2	Clip, Wire (7/16")
7	149-1324	1	*Base, Pump	21	503-0385	1	Hose, Fuel - Lower (1/4" ID x 8")
8	142-0552	1	*Plate, Drive - Fuel Pump	22	812-0061	4	Screw, Round Head - Machine (#6-32 x 3/8")
9	142-0555	1	*Diaphragm - Fuel Pump	23	813-0102	2	Screw, Round Head - Machine (#10-32 x 5/8")
10	142-0537	1	*Valve Assembly, Reed - Fuel Pump (Includes Cap and Clamp)	24	870-0131	2	Nut, Hex (W/ET 10-32)
11	149-0136	1	Plate - Fuel Pump Hole Cover	25	870-0183	4	Nut, Hex (W/ET 6-32)
12	149-0003	2	Gasket, Fuel Pump Hole Cover	26	149-1330	1	Line, Pulse Pump
13	502-0018	1	Fitting - Pulse Pump				
14	800-0004	2	Screw, Cap - Hex Head - Fuel Pump Hole Cover (1/4-20 x 5/8")				

* - Parts Included in 149-1982 Fuel Pump.

MISCELLANEOUS OPTIONAL PARTS



M-1218

MISCELLANEOUS OPTIONAL PARTS

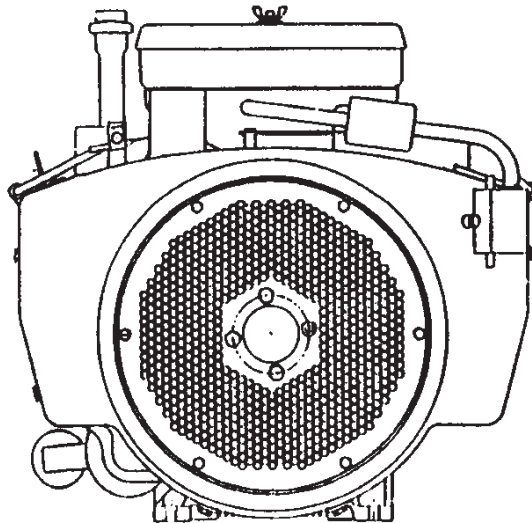
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	123-0810	1	Tube, Breather (1-9/16" Diameter x 4-7/8" Long) - Specs A through H				Left Side
2	123-0315	1	Valve, Breather (1-9/16" Diameter) - Specs A through H				23-1/2" Long - Rubber Covered Terminal - Spec A through F
3	123-0787	1	Cap, Breather Tube (1-9/16" Diameter) - Specs A through H				7-1/4" Long - Eye Type Terminal - Engine with Top Mounted Coil - Spec A through F
4	123-0853	1	Hose, Breather Cap Extension (Use with 1-9/16" Diameter Cap) - Specs A through H				7-1/2" Long - Rubber Covered Terminal - Engine with Top Mounted Coil - Spec A through F
5	110-1037	2	Valve, Intake - Chrome Cobalt				
6	150-0635	1	Arm, Extension - Governor Arm (Rear Pull)	20	160-0624	1	Clamp, Coil - Top Mounted - Specs A through F
7	150-0755	1	Arm, Extension - Governor Arm (Front Pull)	21	160-0625	1	Bracket, Coil - Top Mounted - Spec A through F
8	150-0752	1	Arm, Extension - Governor Arm (Right Side Pull)	22	166-0250	2	Cover, Spark Plug Terminal - Specs A through H
9	150-0790	1	Arm, Extension - Governor Arm (Left Side Pull)	23	166-0253	2	Spring, Contact - Spark Plug Cover - Specs A through H
10	134-2824	1	Guard, Flywheel Capscrew	24	308-0140	1	Switch, Ignition on-off - Begin Spec F
11	105-0238	1	Camshaft - Key 4 Without Spark Advance Mechanism	25	405-1059	1	Anti-Vibration Package - Vacu-Flo Cooled Engines
12	PISTON AND PIN ASSEMBLY (Piston Has Round Holes in Oil Ring Grooves and Top Groove is 9/32" from top of Piston)			26	102-0558	1	Heater Assembly, Oil Base
	112-0170	2	Standard Size	27	309-0237	1	Switch, Low Oil Pressure (Also A sending Unit)
	112-0170-05	2	.005" Oversize	28	502-0058	1	Tee, Low Oil Pressure Switch
	112-0170-10	2	.010" Oversize				
	112-0170-20	2	.020" Oversize	29	NIPPLE, OIL DRAIN		
	112-0170-30	2	.030" Oversize		505-0342	1	3/8 x 5-1/2" (Early Models)
	112-0170-40	2	.040" Oversize		505-0081	1	1/2 x 5-1/2" (Late Models)
13	155-1239	2	Clamp, Muffler (1-5/8") (Use With Ray Gun Muffler)	30	CAP, PIPE		
14	MUFFLER, EXHAUST				505-0618	1	Use With Muffler 155-1253 (1-1/2") - Spec J
			Right Side Outlet		505-0329	1	Use With Exhaust Manifold 154-1909 (1-1/4") - Spec J
	155-0510	1	3" Diameter x 15-7/8" Long				
	155-0859	1	3-1/2" Diameter x 16-1/2" Long	31	COUPLING, OIL DRAIN		
			Left Side Outlet		505-0028	1	3/8" (Early Models)
	155-0550	1	3" Diameter x 15-7/8" Long		505-0014	1	1/2" (Late Models)
	155-0859	1	3-1/2" Diameter x 16-1/2" Long	32	307-0367	1	Solenoid, Start (12 Volt)
	155-1660	2	3.24" Dia x 6.3" Long (Ray Gun)	33	103-0387	1	Gearcase (Includes Oil Seal) - Manual Speed Controlled Engines
	155-1698	2	Spark Arrestor (Ray Gun)	34	105-0030	1	Gear, Timing - Manual Speed Controlled Engines
	155-1253	1	3-1/2" Dia x 19-3/16" Long (Crossover Left and Right Outlet)		105-0150	1	Key 1 and 2
15	505-0041	1	Elbow, Pipe - Exhaust		105-0233	1	Key 3 and 4 (Includes Spark Advance Mechanism Pins)
16	140-1348	1	Base, Air Cleaner (Long Mounting Tube for Higher Elevation above Carburetor) - Begin Spec J	35	313-0018	1	Switch, Push Button (Stop)
17	123-1284	1	Hose, Breather (Use with Tall Air Cleaner Base) - Begin Spec J	36	105-0058	1	Plunger, Camshaft Thrust - Manual Speed Controlled Engines
18	140-1218	1	Wrapper - Air Cleaner Element (Polyurethane) - Begin Spec J	37	105-0059	1	Spring, Camshaft Plunger - Manual Speed Controlled Engines
19	CABLE, SPARK PLUG			38	154-1909	1	Manifold - Exhaust - Crossover Spec J
			Right Side	39	154-1757	2	Adapter Assembly, Manifold Use with 155-1660 Muffler And 155-1698 Spark Arrestor - Spec J
	167-1594	1	Kit - Non-Resistor Specs A through F	40	110-1000	2	Insert, Intake (Stellite)
	167-1330	1	17-1/2" Long - Eye Type Terminal - Engine with Top Mounted Coil - Spec A through F	41	110-1827	2	Guide, Intake Valve
				42	509-0090	2	Seal, Oil - Intake Valve (Includes Ret. Rings)
	167-1460	1	17-3/4" Long - Rubber Covered Terminal - Engine with Top Mounted Coil - Spec A through F	43	502-0020	1	Elbow, Street - Oil Line
				44	501-0005	1	Line, Oil

Onan

Engine

Parts Catalog

P216G	OL16	LX720
P218G	OL18	LX770
P220G	OL20	LX790



Printed in U.S.A.

965-0268B
10-98 (Spec A-H)
Replaces 4-98 (Spec A-H)

MODEL IDENTIFICATION

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.

For handy reference, insert your nameplate information in the spaces below.

MODEL AND SPEC NO.

SERIAL NO.

DIGITAL CONTROL SOFTWARE VERSION
AND DATE (IF APPLICABLE)

SAFETY PRECAUTIONS

The following symbols are used in Onan manuals to alert users to the potentially dangerous conditions relating to maintenance of equipment and replacement of parts. Please read and observe.



This symbol warns of immediate hazards which will result in severe personal injury or death.



This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.



This symbol refers to a hazard or unsafe practice which can result in severe personal injury or product or property damage.

PRODUCT SAFETY PRECAUTIONS



Service and repair of Onan equipment must be performed by trained, experienced personnel only. Improper service or repair may result in property damage, severe personal injury or death. Do not use this catalog as a guide to servicing your equipment. Read and follow the IMPORTANT SAFETY INSTRUCTIONS in the Service Manual appropriate for the equipment you are working on.



Contact with USED ENGINE OILS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking or changing engine oils take all necessary precautions not to ingest, breathe the fumes or contact the used oil.



Contact with ASBESTOS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When handling engine gaskets take all necessary precautions not to ingest, breathe or contact the dust from the gaskets! Use adequate ventilation and wear protective gloves, masks and clothing!



Contact with BENZINE and LEAD, found in gasoline, fuel additives and solvents has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking, draining or adding gasoline and fuel additives or using solvents take all necessary precautions not to ingest, breathe the fumes or contact the liquids. Use adequate ventilation and wear protective gloves, masks and protective clothing!

Introduction

This parts manual applies to the standard Performer horizontal engine as listed in the Engine Data Table. Parts are arranged in groups of related items and each illustrated part is identified by a reference number corresponding to the same reference number in the parts list. Parts illustrations are typical. Throughout this manual, left and right sides are determined by facing the oil cooler (front) end of the engine.

Using the MODEL and SPECIFICATION NUMBER from the nameplate, consult the SALES OPTION CODE TABLE in the back of the book to identify factory installed parts that are unique to your engine (Note: The diagonal line (/) in the model and specification number separates engine characteristics from the specification number/letter. The specification number denotes customer requested features. The specification letter advances [A to B, B to C, etc] with major manufacturing changes.)

Engine Data Table

MODEL	RATING
P216G-I/*	16 Horse Power
P218G-I/*	18 Horse Power
P220G-I/*	20Horse Power
OL16/*	16 Horse Power
OL18/*	18 Horse Power
OL20/*	20 Horse Power
LX720/*	16 Horse Power
LX770/*	18 Horse Power
LX790/*	20 Horse Power

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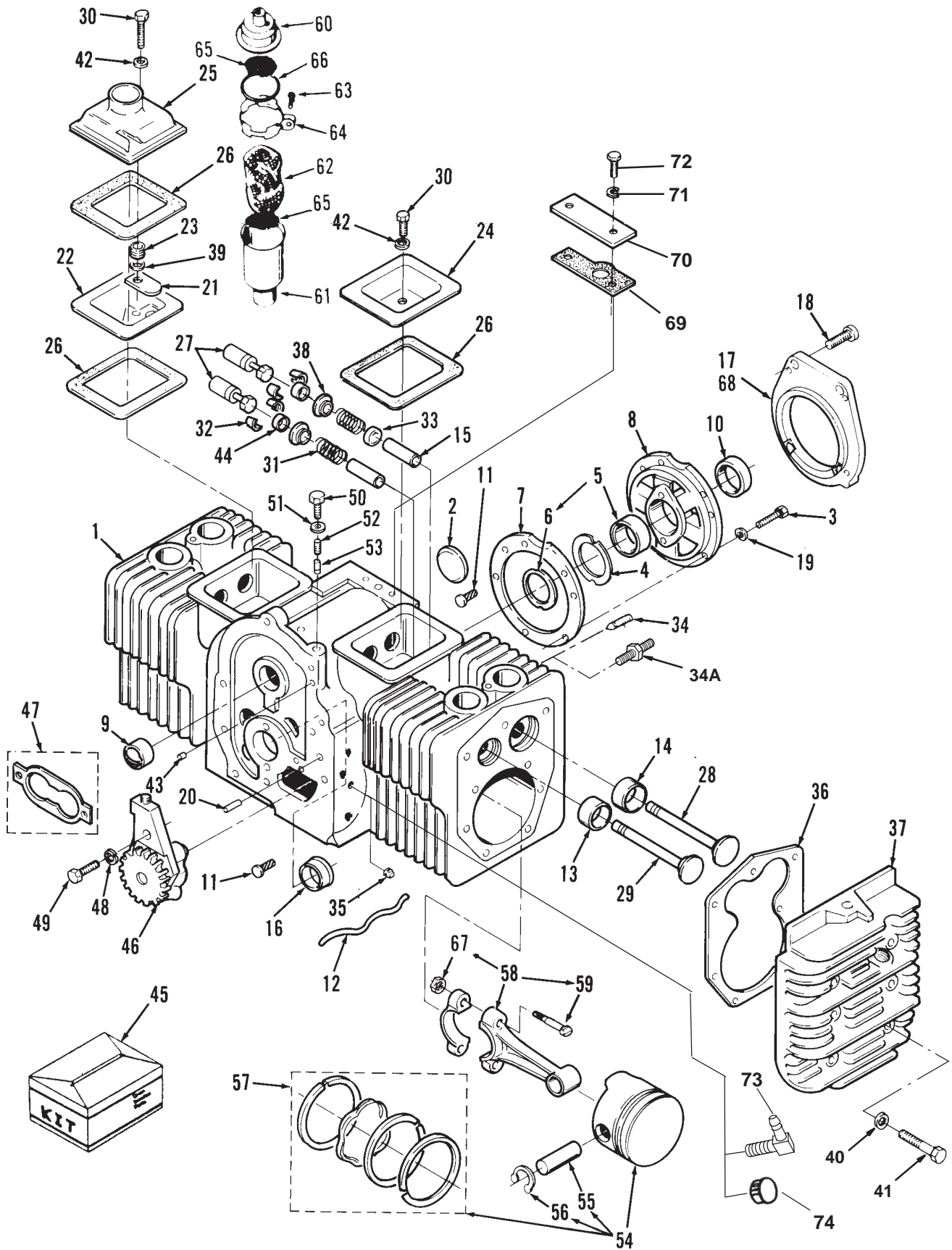
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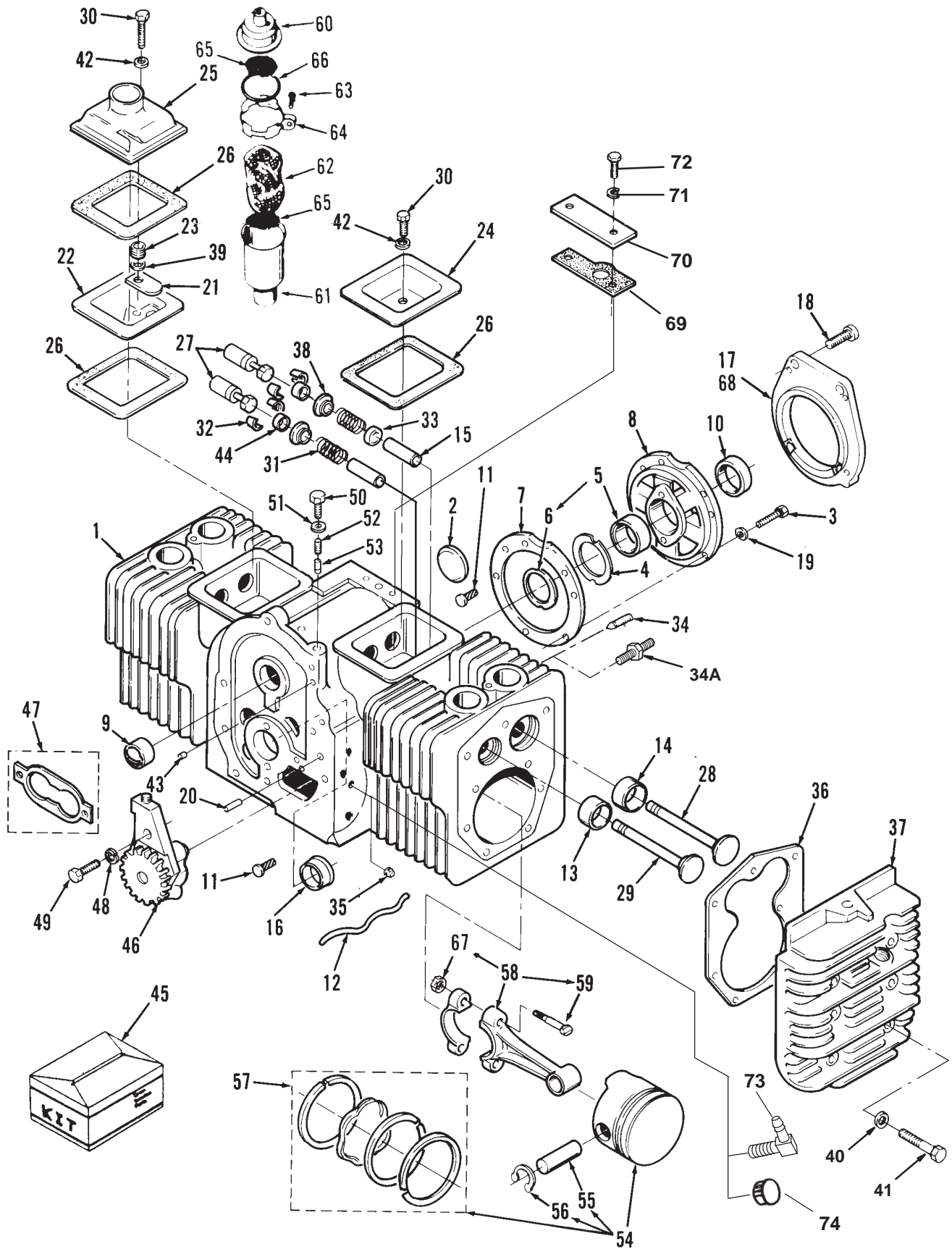
Cylinder Block



Cylinder Block

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1		1	Block, Cylinder (See Short Block Catalog #932-0109)	19	526-0402	5	Washer, Flat (.395 Screw)
2	517-0048-01	1	Plug, Camshaft Welch Opening (1-5/8")	20	516-0141	2	Pin, Gear Cover Alignment
3	800-0051	5	Screw, Hex Head Cap (3/8-16 x 1-1/4")	21	123-1175	1	Reed, Breather Valve Specs A, B
4			Shim, Crankshaft End Play (Use as Required)	22	123-1173	1	Baffle, Breather Valve Specs A, B
	104-0776	1	.005"	23	123-1174	1	Spring, Breather Valve Specs A, B
	104-0776-01	1	.003"	24	110-1879-01	1	Cover, RH Valve - Spec A,B
5			Bearing, Rear Crankshaft (Includes Thrust Washer)	25	110-3637-01	1	Cover, LH Valve - Begin Spec C - Zinc-Plated
	101-0804	1	Standard	26			Gasket, Valve Cover Spec A, B
	101-0804-02	1	.002" Undersize		110-3709	3	Begin Spec C
	101-0804-10	1	.010" Undersize	27	115-0006	4	Tappet, Standard Valve
	101-0804-20	1	.020" Undersize	28	110-3479	2	Valve, Intake
	101-0804-30	1	.030" Undersize	29	110-3480	2	Valve, Exhaust
6	104-0575	1	Washer, Thrust	30	800-0010	2	Screw, Hex Head Cap (1/4-20 x 1-3/4")
7	101-0809	1	Gasket, Bearing Plate				
8			Plate, Rear Bearing	31	110-3485	4	Spring, Valve
	101-0439-01	1	Cadmium Plated Code 11AH,11AV	32	110-3511	8	Lock, Valve Spring
			4 Boss - Code 11AK	33	509-0289	2	Seal, Intake Valve
	101-0551-01	1	SAE-A - Zinc Plated - Code 11AP	34	803-0071	2	Screw, Set Socket (3/8-16 x 5/8") (Use W/O Remote Oil Filter)
9	101-0405	2	Bearing, Camshaft	34A	520-0820	2	Stud, Mounting (3/8-16 x 1-11/16) (Use with Remote Oil Filter)
10	509-0041	1	Seal, Crankshaft Rear Oil				
11	516-0072	4	Pin, Bearing Stop Drive				
12	120-1320	1	Tube, Oil	35	505-0057	1	Plug, Pipe - Code 17CE
13			Insert, Exhaust Valve Seat	36	110-3181	2	Gasket, Cylinder Head
	110-1824	2	Standard	37			Head, Cylinder
	110-1824-02	2	.002" Oversize		110-3509	1	Right Side
	110-1824-05	2	.005" Oversize		110-3508	1	Left Side
	110-1824-10	2	.010" Oversize	38	110-3487	4	Washer, Valve Spring Retaining
	110-1824-25	2	.025" Oversize	39	526-0018	1	Washer, Flat (1/4" Screw)
14			Insert, Intake Valve Seat	40	526-0122	18	Washer, Flat (5/16" Screw)
	110-0197	2	Standard	41	800-0571	18	Screw, Hex Head Cap (Special) 2.0" Long
	110-0197-02	2	.002" Oversize				Washer, Copper Flat (1/4" Screw)
	110-0197-05	2	.005" Oversize	42	526-0063	2	Plug, Core Hole (Specs A, B)
	110-0197-10	2	.010" Oversize				Cap, Valve
	110-0197-25	2	.025" Oversize	43	517-0067	1	Kit, Gasket
15			Guide, Valve	44	110-3510	4	Engine, Complete
	110-3527	2	Exhaust	45			Valve Grind/Carbon Removal
	110-3526	2	Intake		168-0187	1	Pump, Oil (Components Not Sold Separately)
16			Bearing, Front Crankshaft (Flanged)		168-0189	1	Gasket Kit, Oil Pump
	101-0805	1	Standard	46	120-0491	1	Washer, Flat (M6)
	101-0805-02	1	.002" Undersize				Screw, Hex Head Cap (1/4-20x1")
	101-0805-10	1	.010" Undersize	47	120-0161	1	Screw, Hex Head Cap (3/8-24 x 7/8")
	101-0805-20	1	.020" Undersize	48	740-1004	2	Washer, Copper Flat (3/8" Screw)
	101-0805-30	1	.030" Undersize	49	800-0007	2	Spring, Bypass Valve
17	101-0761	1	Adapter, Bearing Plate Code 11BH	50	801-0049	1	Plunger, Bypass Valve
18			Screw	51	526-0066	1	
	815-0682	4	Socket Head (Special) Code 11BH				
	800-0515	5	Cap, Hex Head (Special) Code 11BF	52	120-0140	1	
	800-0515	4	Cap, Hex Head (Special) Code 11BE, 11AR	53	120-0398	1	

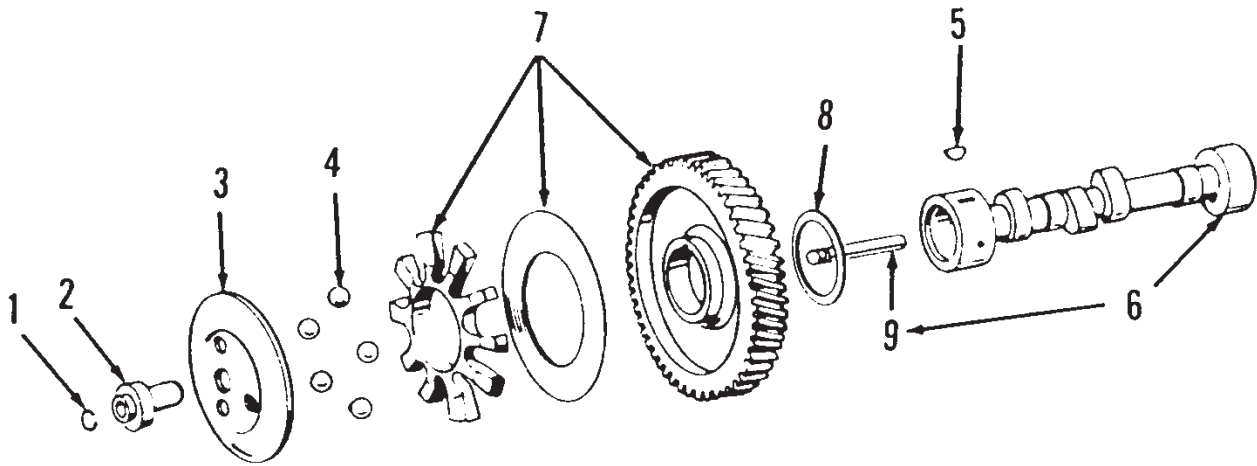
Cylinder Block



Cylinder Block

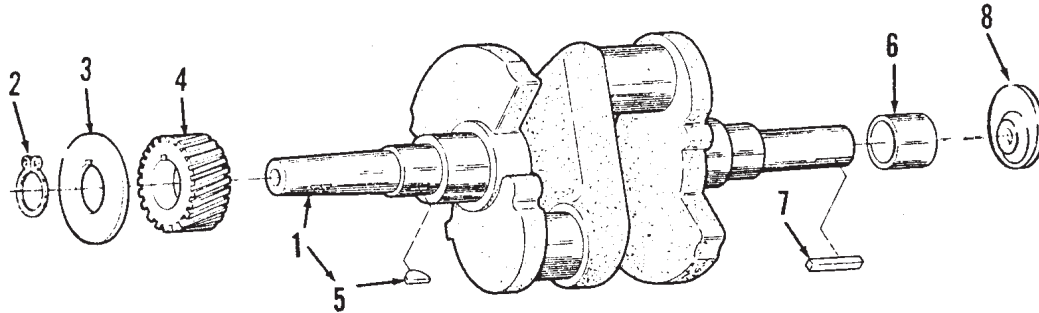
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
54			Piston (Includes Pin and Retaining Rings)	61	123-0952	1	Tube, Breather – Begin Spec C
	112-0264	2	Standard	62	123-1871	1	Baffle, Breather Tube (Begin Spec C)
	112-0264-05	2	.005" Oversize	63	809-0035	1	Screw, Round Head Tapping (#8 x 3/4") – Begin Spec C
	112-0264-01	2	.010" Oversize	64	123-0951	1	Clamp, Loop – Begin Spec C
	112-0264-02	2	.020" Oversize	65	123-0958	2	Screen, Breather Tube
	112-0264-03	2	.030" Oversize				Begin Spec C
55	112-0229	2	Pin, Piston	66	509-0117	1	Seal, Breather Cap O-Ring
56	518-0311	4	Ring, Retaining				Begin Spec C
57			Kit, Piston Ring	67			Nut
			Specs A-C		870-0302	4	Hex, Crown Lock
	113-0314	2	Standard		870-0533	4	Flange, Hex
	113-0314-05	2	.005" Oversize	68			Adapter, Hydraulic Pump
	113-0314-10	2	.010" Oversize		101-0766-01	1	Code 11BE
	113-0314-20	2	.020" Oversize		101-0766-02	1	Code 11BF
	113-0314-30	2	.030" Oversize		517-0120	1	Plug, Breather Hole – Begin Spec C (Not Shown) (Use W/O Fuel Pump)
			Begin Spec D	69	160-1368	1	Gasket, Plate
	113-0310	2	Standard	70	160-1345-01	1	Plate, Ignition Plunger Cover – Zinc Plated
	113-0310-05	2	.005" Oversize				Washer, Flat (M6)
	113-0310-01	2	.010" Oversize				Screw, Cap Hex Head (1/4-20 x 5/8")
	113-0310-02	2	.020" Oversize	71	740-1004	2	Elbow
	113-0310-03	2	.030" Oversize	72	800-0004	2	Plug, Breather Hole
58			Rod, Connecting (Includes Bolt and Nut)				
			P216	73	502-1252	1	
	114-0394	2	Standard	74	517-0120	1	
	114-0394-10	2	.010" Undersize				
	114-0394-20	2	.020" Undersize				
	114-0394-30	2	.030" Undersize				
			P218, P220				
	114-0397	2	Standard				
	114-0397-10	2	.010" Undersize				
	114-0397-20	2	.020" Undersize				
	114-0397-30	2	.030" Undersize				
59	114-0392	4	Bolt, Connecting Rod (Special)				
60	123-0954	1	Cap and Valve, Breather				
			Begin Spec C				

Camshaft



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-0078	1	Ring, Retaining	6			Camshaft (Includes Center Pin)
2	150-1519	1	Hub, Governor Cup	105-0637	1		P216, P218 P220
3	150-1520	1	Cup, Governor	105-0639	1		All Specs Except 11212
4			Ball, Governor	105-0718	1		Spec 11212 Only
	510-0015	5	Codes 13BG, 13BM, 13BN, 13BP, 13BR, 13BS, 13BT, 13BV, 13BW 13CB, 13CE, 13CM, 13CR, 13DB	7	105-0700	1	Gear, Camshaft (Includes Gear, Spacer and Plate)
	510-0015	10	Code 13CH (Use with 13CF)	8	105-0541	1	Washer, Special Thrust
5	515-0001	1	Key, Camshaft Gear Woodruff	9	150-0075	1	Pin, Center

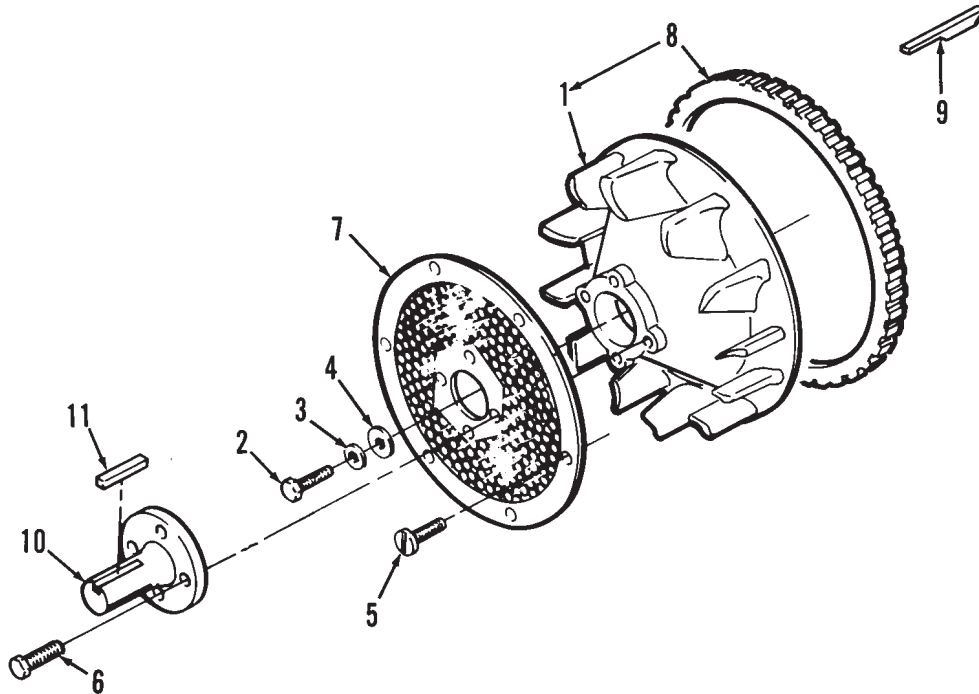
Crankshaft



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Crankshaft P216	2	518-0014	1	Ring, Retaining
	104-1887	1 *	Code 45BB	3	104-0043	1	Washer, Gear Retaining Special
	104-1332	1 *	Code 45BC	4	104-0032	1	Gear, Crankshaft
	104-1699	1 *	Code 45BD,45BE,45BW	5	515-0001	1	Key, Crankshaft Gear
	104-1331	1 *	Code 45BF	6	190-0267	1	Sleeve, Bearing – Code 45BP
	104-1621	1	Code 45BG	7		1	Key
	104-1535	1	Code 45BH		515-0198	1	Square (3/8 x 3/8 x 2-1/2") Code 45BW
	104-1333	1 *	Code 45BS		515-0103	1	Woodruff (1/4 x 1/4 x 2") Code 45BC, 45BS, 45BT
	104-0901	1	Code 45BT		515-0230	1	Square, Code 45BD, 45BW (3/8 x 3/8 x 2")
	104-0900	1	Code 45BU		515-0263	1	Kit, Key – Code 45BC, 45BF, 45BH, 45BP, 45BS, 45BT, 45BZ, 45CA, 45CE
	104-1432	1 *	Code 45BZ		515-0146	1	Woodruff, #18 (1/4 x 1-1/8") Code 45BP
	104-1330	1 *	Code 45CA		515-0301	1	Code 45CE
			P218, P220	8	104-1712	1	Weight, Balance – Code 45BL
	104-1351	1 *	Code 45BB				
	104-1443	1 *	Code 45BC				
	104-1700	1 *	Code 45BD,45BE				
	104-1348	1 *	Code 45BF				
	104-1693	1	Code 45BG				
	104-1502	1 *	Code 45BH				
	104-1735	1	Code 45BJ				
	104-1352	1 *	Code 45BP				
	104-1349	1 *	Code 45BS				
	104-1364	1 *	Code 45BT				
	104-1167	1	Code 45BU				
	104-1575	1	Code 45BY				
	104-1354	1 *	Code 45CA				
	104-0983-01	1	Code 45CC				
	104-1768	1 *	Code 45CE				
	104-1787	1	Code 45EA				
	104-1871	1	Code 45ED				
	104-1873	1	Code 45EE				
	104-1939	1	Code 45EH				

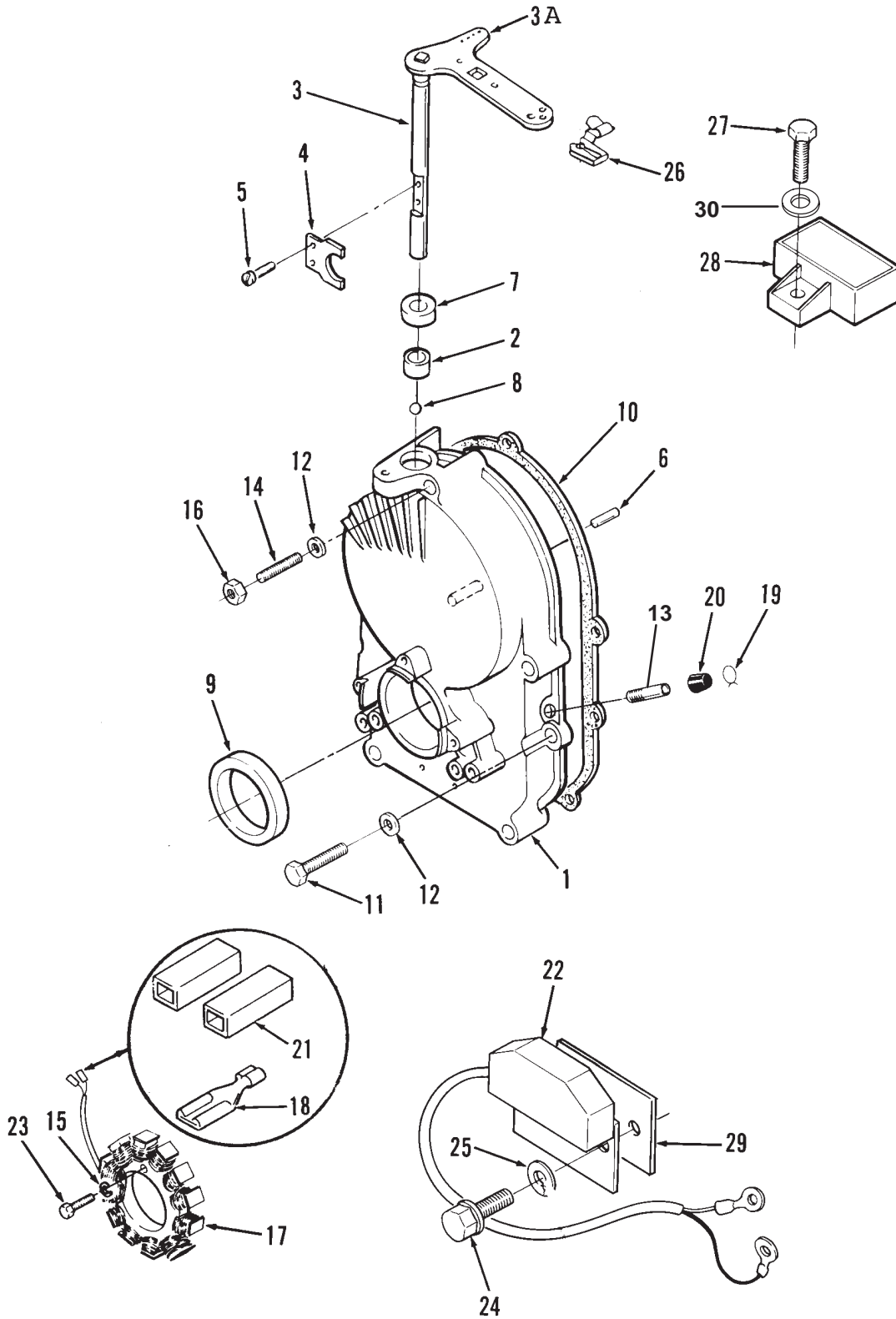
* Includes Keys.

Blower Wheel With Screen



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Flywheel (Includes Ring Gear)	6	800-0030	4	Screw, Hex Head Cap (5/16-18 x 1.25") - OEM Supplied On Code 23EL
	134-4633	1	Code 31AZ, 31BC, 23DJ, 23DC, 23EF, 31BD	7	134-4553-50	1	Screen, Air Inlet Code 31AZ, 23DC, 23EF - Painted
	134-4705	1	Code 23DD	8	104-0779	1	Gear, Ring
2	104-0170	1	Screw, Hex Head Cap (Special)	9	515-0284	1	Key, Flywheel
3	526-0356	1	Washer, Flat (7/16" Screw)	10	190-0687	1	Shaft, PTO - 1" Diameter
4	526-0017	1	Washer, Flat (7/16" Screw)	11	515-0007	1	Key, Machine (1/4 x 2")
5	815-0687	6	Screw, Flange Lock Head (#10-24 x 3/8")				

Gearcase, Ignition Control, Alternator and Regulator

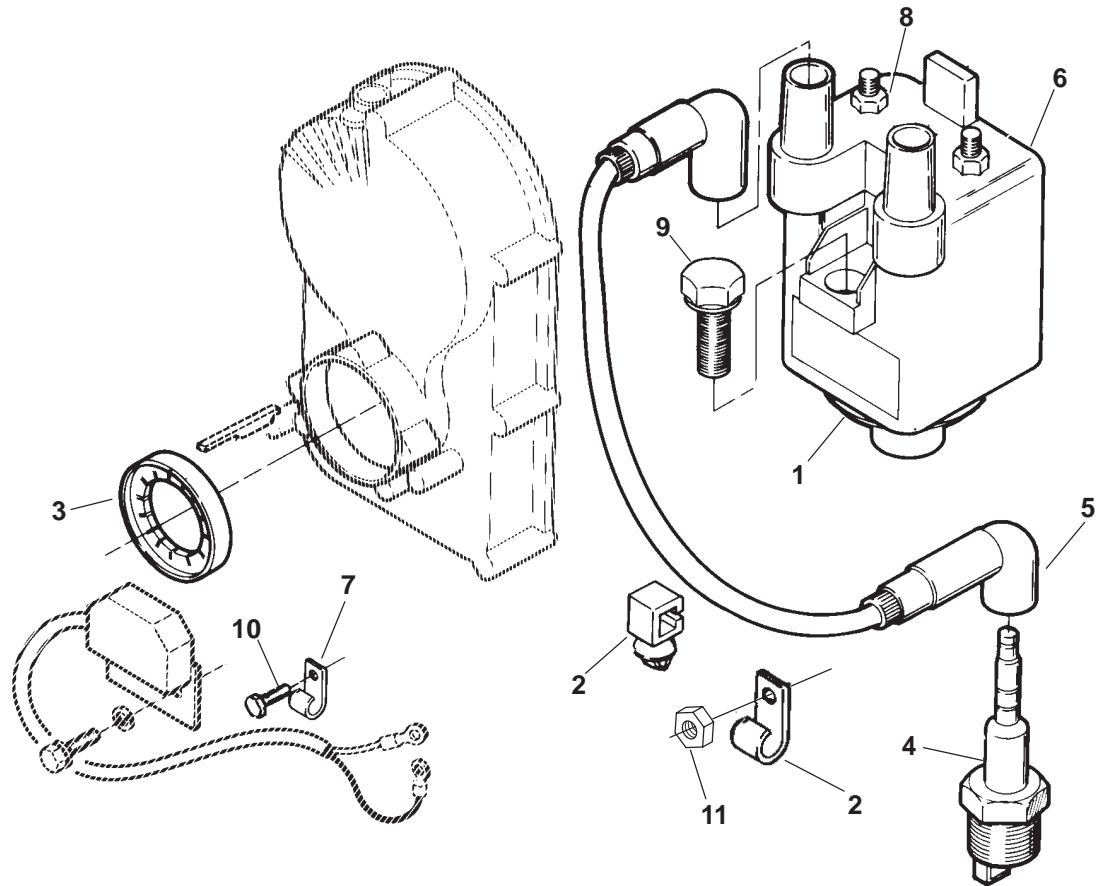


Gearcase, Ignition Control, Alternator and Regulator

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Gearcase (Kit) (Includes Parts Marked*)	18	332-2423	3	Terminal, Stator Leads Code 31AZ,47AW – Use Qty. 2
	103-0791	1	W/Sleeve Bearing	19	503-0301	1	*Clamp, Vacuum Port Cap
	103-0799	1	W/Needle Bearing	20	149-1321	1	*Cap, Vacuum Port – Spec A,B
2	510-0105	1	*Bearing, Governor Shaft	21	191-2104	2	Body, Terminal Connector Kit (Includes Terminals) Code 31AZ
3			*Shaft and Arm, Governor Case Hardened				Control, Ignition
	150-1470-01	1					12 Volt
	150-1422	1	Code 31AZ, 31BD Begin Spec C	22			24 Volt – Code 31BD
3A	150-1007	1	Arm, Governor Spec A,B		166-0785	1	
4	150-1187	1	*Yoke, Governor Shaft		166-0800	1	
5	815-0046	2	*Screw, Pan Head Machine (8-32 x 3/8")	23	815-0172	3	Screw, Hex Head Machine Self-Lock (#10-32 x 1") Code 31AZ,31BC
6	516-0130	1	*Pin, Governor Cup Dowel Stop	24	815-0340	2	Screw, Hex Washer Head (10-32 x 3/8")
7	509-0008	1	*Seal, Governor Shaft Oil	25	854-0010	2	Washer, IT Lock (#10)
8	510-0014	1	*Ball, Governor Bearing Shaft	26	518-0637	1	Clip, Control Retaining Rod To Governor Shaft
9	509-0040	1	*Seal, Crankshaft Oil	27	821-0015	1	Screw, Lock Head (1/4-20 x 1/2")
10	103-0810	1	Gasket, Gearcase Mounting				Regulator, Voltage
11	114-0022	4	Screw, Hex Head Cap (5/16-18 x 1-3/4")	28			35 Ampere – Code 31BC
12	526-0065	5	Washer, Copper Flat (5/16" Screw)		191-1847	1	20 Ampere – Code 23DK, 31AZ, 23EH
13	149-1299	1	*Tube, Vacuum Port (1.5" Long)	29	166-0786	1	Insulator, Module Ignition
14	520-0933	1	Stud, Gear Cover	30	853-0013	1	Washer, ET Lock
15	850-0030	3	Washer, Lock (#10) – Code 31AZ				
16	862-0015	1	Nut, Hex (5/16-18)				
17			Stator (Includes Terminals)				
	191-1276	1	Code 31BC (35A)				
	191-1456	1	Code 31AZ (20A)				

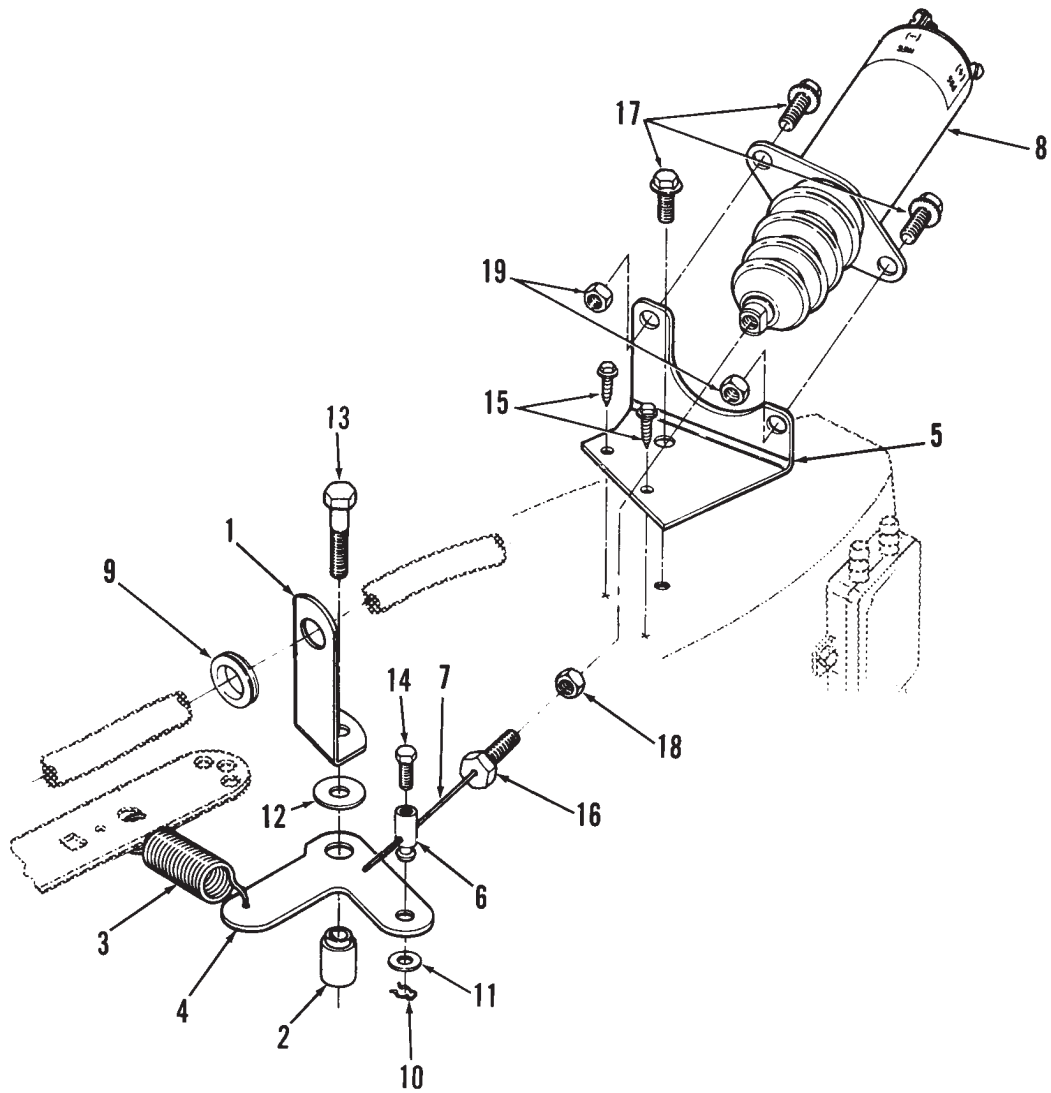
* – Parts Included in Gearcase.

Electronic Ignition



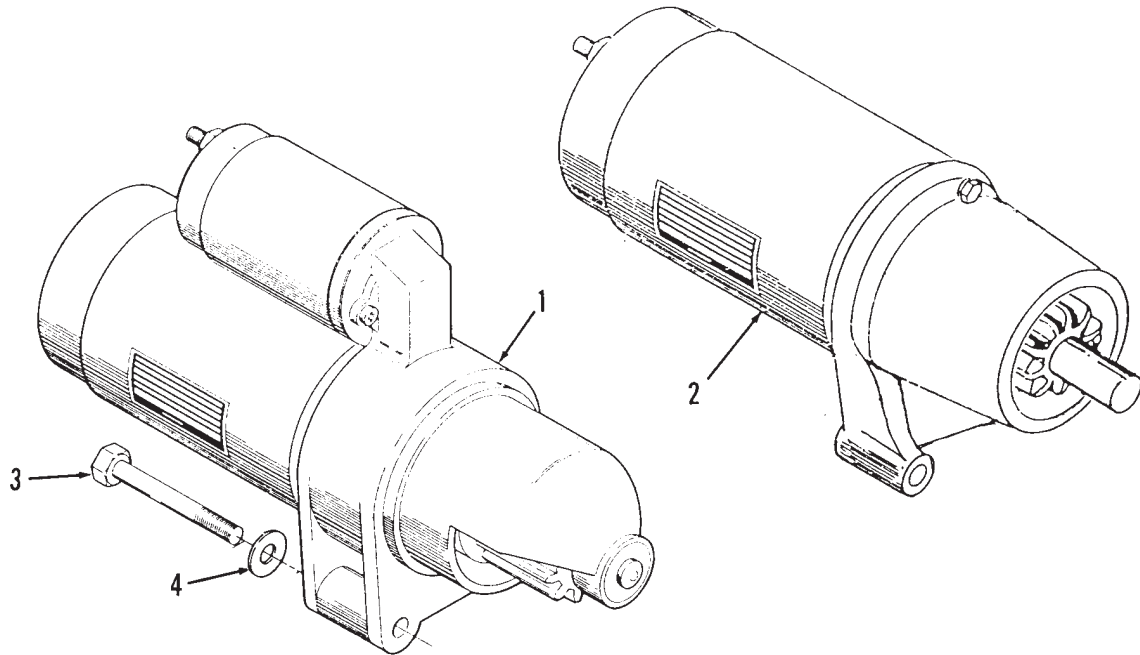
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Coil, Battery Ignition (Includes Nuts)	6	166-0770	1	Nut, Hex Flange (M4 Positive Terminal)
	166-0761	1	Spec A-G	7	518-0515	2	Clip, Wire
	166-0820	1	Begin Spec H	8	166-0771	1	Nut, Hex Flange (M5 Negative Terminal)
2			Clip, Wire (Attach To Spark Plug Wire)	9	815-0650	2	Screw, Hex Washer Head (1/4-20 x 1")
	332-2904	1	Square	10	114-0022	2	Screw, Hex Head Cap (5/16-18 x 1-3/4")
	332-2650	1	Loop	11	870-0212	1	Nut, Self Lock
3	166-0767	1	Rotor, Ignition				
4	167-0272	2	Plug, Spark				
5			Cable, Spark Plug				
	167-1615-01	1	9" Long				
	167-1615-04	1	18.5" Long				

Two Speed Governor



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	149-2366	1	Bracket, Fuel Line	13	114-0023	1	Screw, Hex Head Cap (Special)
2	150-1727	1	Bushing, Governor Control	14	800-4072	1	Screw, Hex Head Machine (M4)
3	150-1740	1	Spring, Governor	15	815-0439	2	Screw, Hex Washer Head Cap (#8-15 x 1/2")
4	150-2498	1	Bracket, Governor	16	815-0800	1	Screw, Hex Head - Grade 5 (1/4-28 x 1")
5	150-2499	1	Bracket, Solenoid Mounting	17	821-0010	3	Screw, Lock Head (1/4-20 x 1/2")
6	153-0632	1	Swivel, Choke Lever	18	115-0025	1	Nut, Hex (1/4-28)
7	153-0678	1	Cable (Includes Bolt)	19	870-0212	2	Nut, Lock (1/4-20)
8	307-2758	1	Solenoid, 2 Speed Governor				
9	508-0021	1	Grommet, Rubber				
10	516-0059	1	Pin, Cotter				
11	526-0006	1	Washer, Flat (#12 Screw)				
12	526-0021	1	Washer, Flat (1/4" Screw)				

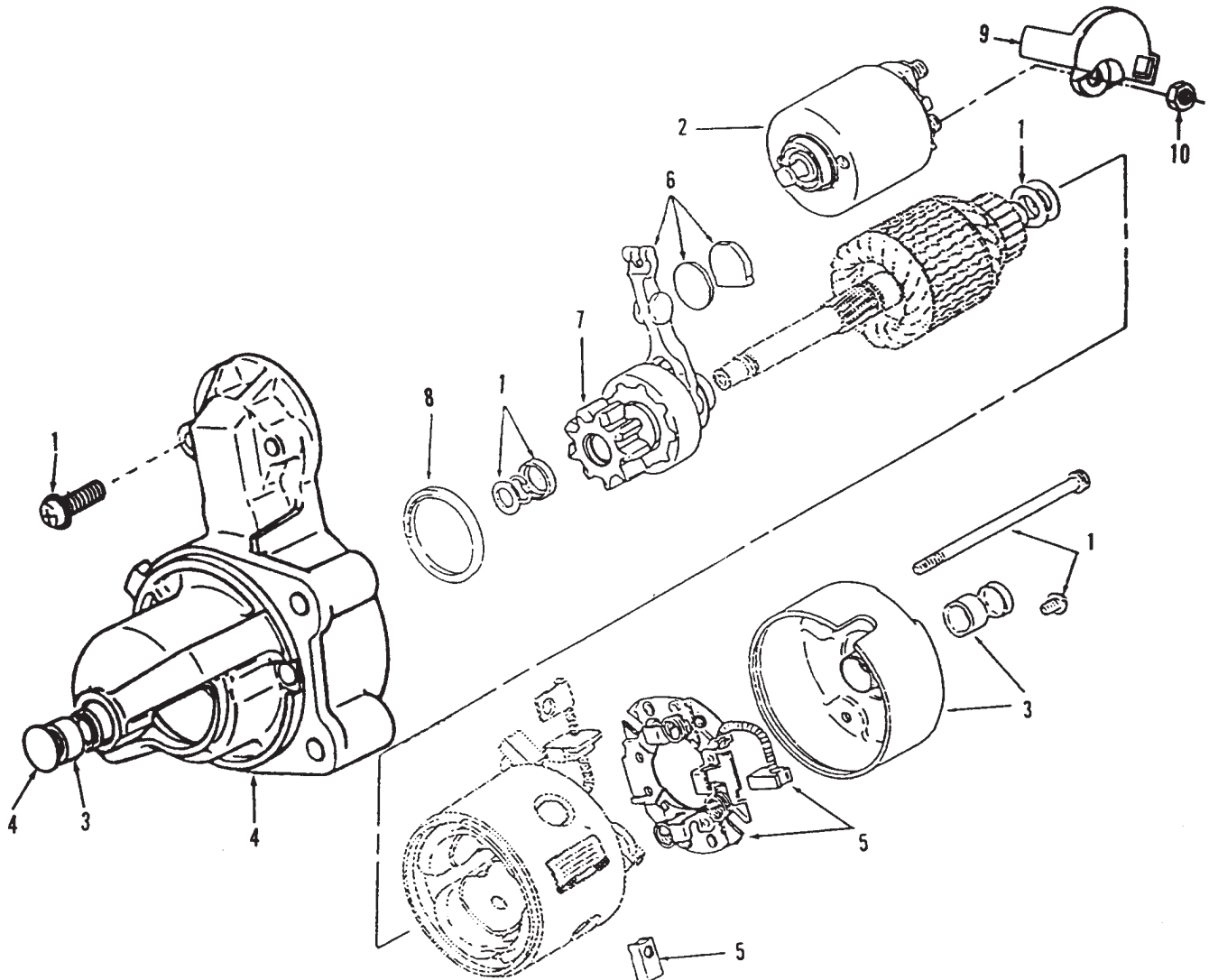
Starter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Starter, Solenoid Shift (See Separate Page for Components)	3	800-0595	2	Screw, Cap Hex Head (5/16-18 x 3-1/2")
	191-1949-04	1	Code 33AT, 33BF	4	526-0122	2	Washer, Flat (5/16" Screw) Inside Mounting Bolt
	191-1949-05	1	Code 33AS, 33BA				
	191-1949-07	1	Code 33AW				
2	191-1828	1	Starter, Inertia (Bendix) Type (See Separate Page For Components) - Code 33AV				

NOTE: Onan Part Number Stamped on the Starter Nameplate for Identification.

Starter Components (191-1949-05 & 191-1949-07)

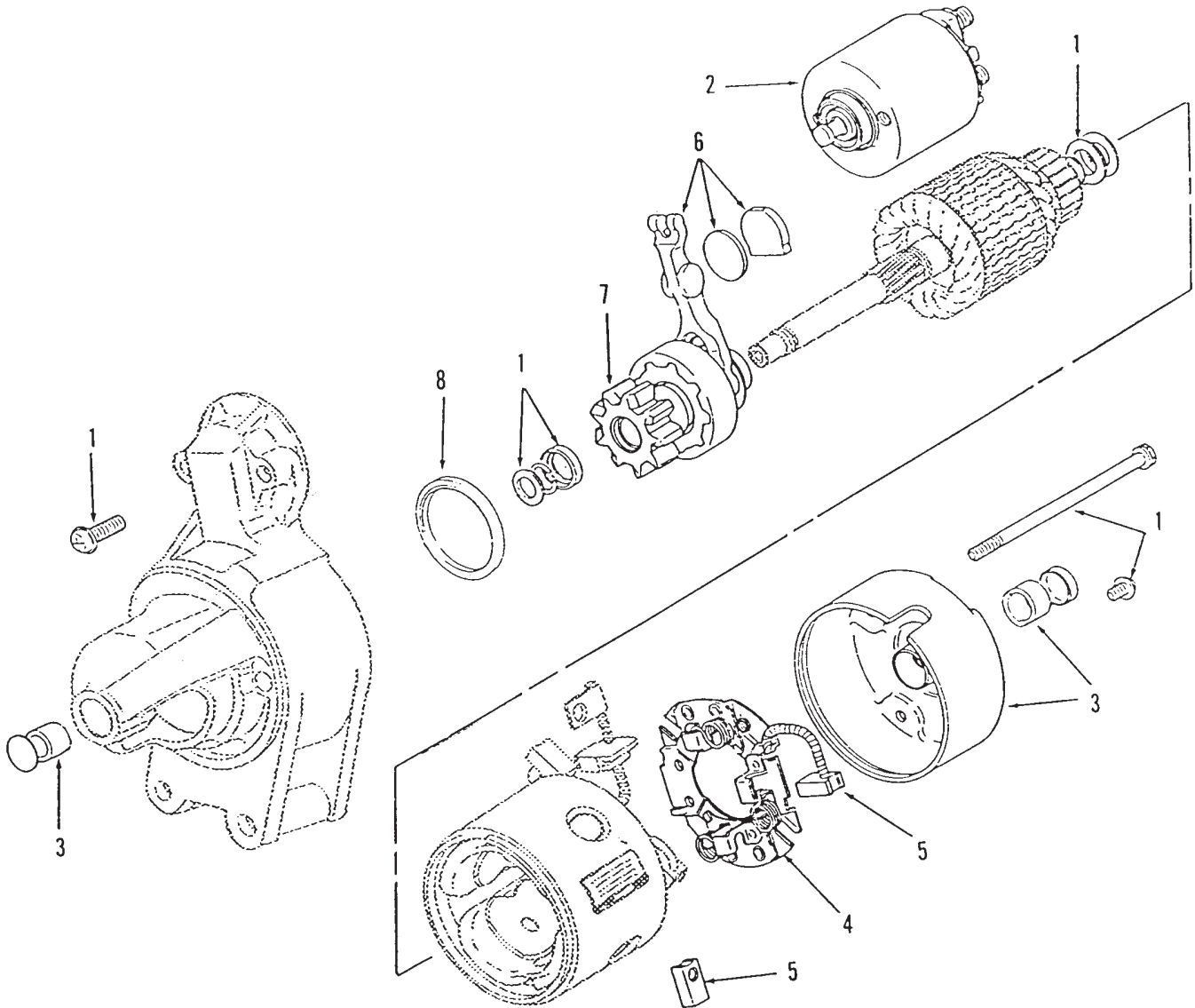


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1954	1	Kit, Starter Hardware (Includes (2) Solenoid Mtg Screws, 2 Thru Bolts, Armature Shims, Pinion Stop Collar, Retaining Ring and Solenoid Terminal Nuts)	6	191-1766	1	Kit, Starter Shift Lever (Includes Lever, Wear Plate, Rubber Plug and Grease)
2	191-1956	1	Kit, Starter Solenoid (Includes Solenoid and Spring Plunger)	7	191-1953	1	Kit, Starter Clutch (Includes Pinion Gear and Clutch Assembly)
3	191-1931	1	Kit, Starter Bushing (Includes Rear Cap with Bushing and Front Bushing)	8	191-1955	1	Kit, Dust Seal (Includes ID, OD Pinion Seals)
4			Kit, Mounting Bracket (Includes Front Bracket, Front Bushing, Dust Seal, Thrust Washer, Cap Plug and OD Pinion Seal)	9	191-1947	1	Cap, Starter Solenoid
	191-1950	1	Code 33AT, 33AW, 33BF	10	750-1006	1	Nut, Metric Hex (M8)
	191-1952	1	Code 33AS, 33BA				
5	191-1951	1	Kit, Starter Brush (Includes (2) Negative and (2) Positive Brushes and Brush Holder)				

NOTE: Phantom Items Not For Sale, For Replacement Order Complete Starter.

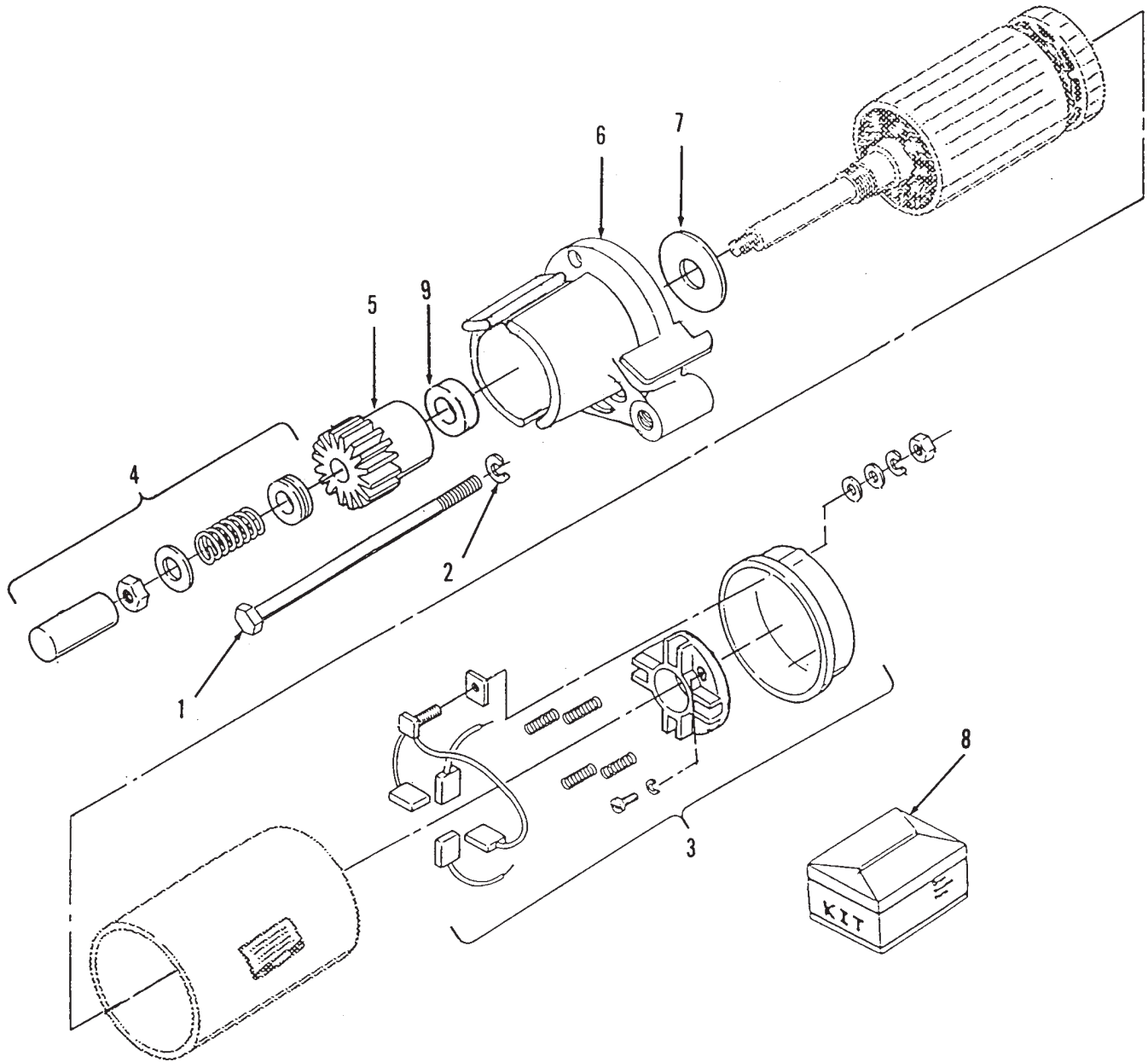
NOTE: Onan Part Number Stamped on the Starter Nameplate for Identification.

Starter Components (191-1808-04 & 191-1808-05)



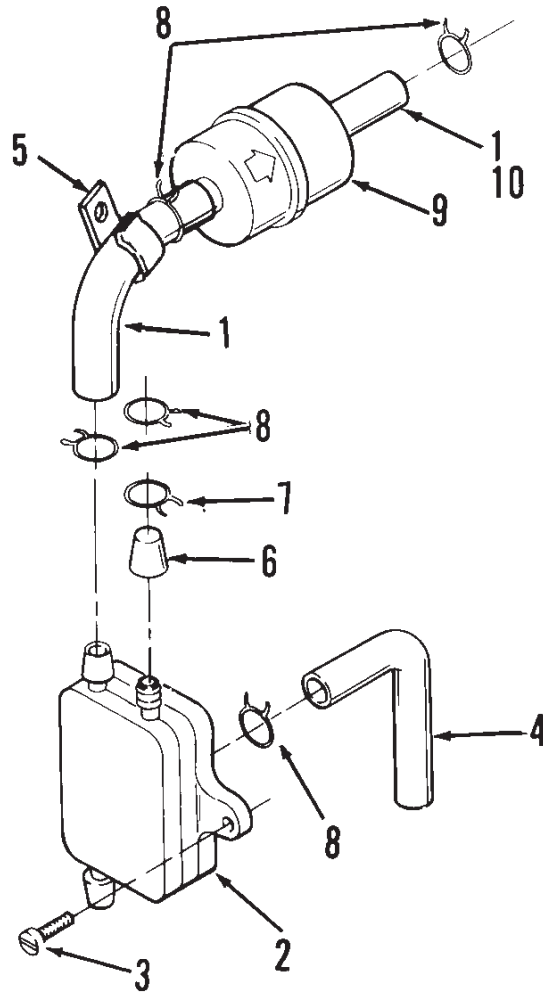
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1954	1	Kit, Starter Hardware (Includes (2) Solenoid Mtg Screws, 2 Thru Bolts, Armature Shims, Pinion Collar and Retaining Ring)	6	191-1766	1	Kit, Starter Shift Lever (Includes Lever, Wear Plate and Rubber Plug)
2	191-1956	1	Kit, Starter Solenoid (Includes Solenoid and Spring Plunger)	7	191-1953	1	Clutch Assembly, Starter (Includes Pinion Gear)
3	191-1931	1	Kit, Starter Bushing (Includes Rear Cap with Bushing and Front Bushing)	8	191-1955	1	Seal, Dust
4	191-1764	1	Holder, Brush (Includes Negative Brush)	NOTE: Phantom Items Not For Sale, For Replacement Order Complete Starter. NOTE: Onan Part Number Stamped on the Starter Nameplate for Identification.			
5	191-1763	1	Kit, Starter Brush (Includes (2) Negative and (1) Positive Brushes)				

Starter Components (191-1828)



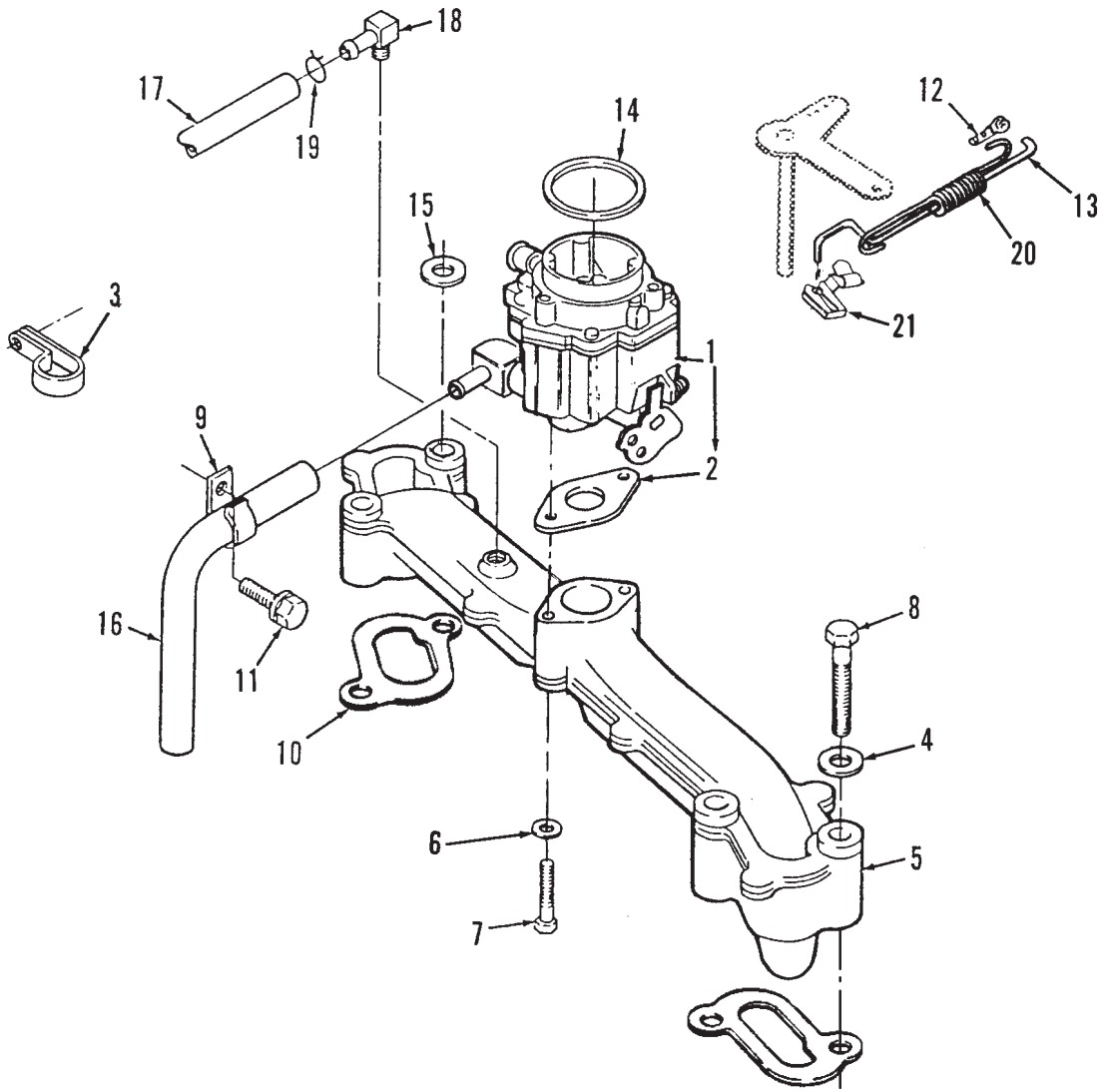
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1048	2	Bolt, Hex Head	7	191-1038	1	Washer, Thrust
2	870-0438	2	Retainer, Bolt	8	191-1841	1	Kit, Repair (Includes Brush with Stud, Springs and Brushes)
3	191-1532	1	Cap Assy, End (Includes Cap, Brushholder, Springs, Brushes, Terminal Hardware)	9	191-1534	1	Seal, Dust
4	191-1359	1	Cover Assy (Includes Dust Cover, Spring, Spacer, Nut and Washer)	NOTE: Phantom Items Not For Sale, For Replacement Order Complete Starter. NOTE: Onan Part Number Stamped on the Starter Nameplate for Identification.			
5	191-1156	1	Gear, Drive				
6	191-1671	1	Plate, Front End Cap				

Fuel Pump and Filter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0707	1	Hose (Cut to Length) 12", 9.5"	6	149-1321	1	Cap, Fuel Fitting Code 13BJ, 13CG, 15AZ, 15BL
	503-1016	1	8" (Code 13DA Only)				
2			Pump, Fuel Code 15AZ, 15BA, 15BL, 15BR	517-0165	1	Code 15CM	
	149-1982	1	Top or Bottom Inlet, Top Outlet	7	503-0301	1	Clamp, Hose – Code 15AZ, 15BL, 13BJ
	149-2187-02	1	Top Inlet, Top Outlet Code 15CY	8			Clamp, Hose (1/2") With Fuel Filter
	149-2501-00	1	Top Inlet, Bottom Outlet		503-0731	6	Without Fuel Filter
	149-2501-01	1	Bottom Inlet, Bottom Outlet	9	503-0731	4	Filter, Fuel
3	815-0555	2	Screw, Pan Head Tapping (10-24 x 5/8") Code 15AZ, 15BA, 15BL, 15BM		149-2206-01	1	Code 15BZ
					149-2206-01	1	Code 15BA, 15BL, 15BB, 15BZ, 15CM
4			Line, Pulse	10			Hose, Fuel
	503-0707	1	Cut to 7" Long (Code 13CD, 13CG, 15AZ, 15BA 15BL, 15BM)		503-1199	1	21" (Code 13BJ)
					503-0707	1	5-1/2" (Code 13DA, 15CM)
	503-1865-01	1	10-1/4" (Code 15CY)	11	503-1593	1	Hose, Fuel (Out)
5	518-0515	1	Clip, Wire – Code 15BZ, 15AZ, 15BL, 13CD, 13BJ	12	149-1308	3	Spring, Hose
				13	149-2500	1	Bracket, Mounting

Fuel System Gasoline

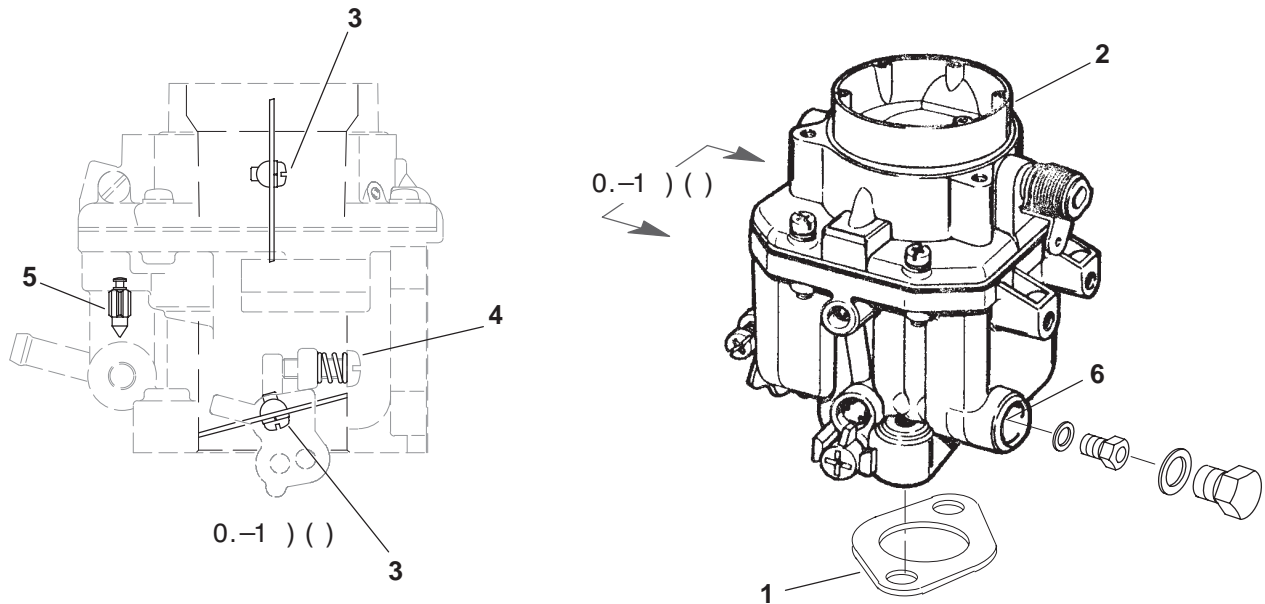


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Fuel System Gasoline

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Kit, Carburetor (Includes Mounting Gaskets) (See Separate Page for Components) P216, P218 Spec A-F	9	518-0515	1	Clip, Fuel Line Wire
	146-0495	1	All Specs Except 11140 (Also Includes Elbow and O-Ring)	10	154-2495	2	Gasket, Manifold To Block
	146-0506	1	Spec 11140 Only (Does Not Include Gaskets)	11	815-0474	1	Screw, Hex Washer Head (1/4-14 x 1/2")
	146-0659	1	Begin Spec G P220 Spec A-F	12	518-0004	1	Clip, Retaining - Control Rod To Carburetor (Use only with Old Governor Rod)
	146-0496	1	All Specs Except 11212 (Also Includes Elbow and O-Ring)	13			Rod, Governor Control Zinc Plated - P216, P220 P218
	146-0613	1	Spec 11212 Only Begin Spec G	150-2460	1		
	146-0660	1	All Specs Except 11212	150-2364	1		
	146-0661	1	Spec 11212 Only	150-2593-02	1		P218 - Code 15CL/P216 - Code 15BD, 19BC
2	154-0733	1	Gasket, Carburetor	14	509-0145	1	O-Ring
3	332-1554	1	Clamp, Insulated (Fits 1/2" Diameter Tube) - Code 23DZ	15	526-0113	1	Washer, Flat (5/16" Screw)
4	740-1006	4	Washer, Flat (M8) - Code 15BD, 15CB, 15CL	16			Hose, Fuel 17" Long - Code 15AZ, 15BR, 15BD 30" Long - Code 15BL, 19AS 15" Long - Code 15BD, 15CL
5			Kit, Intake Manifold (Includes Carburetor Mounting Screws and Washers)	503-1548	1		
	541-0428	1	W/O Tapped Hole	503-1577	1		
	541-0429	1	W/Tapped Hole	503-1443	1		
6	526-0122	2	Washer, Flat (5/16")	503-1443	1		
7			Screw, Hex Head Cap (5/16-18 x 1-3/4")	17			Hose, Breather Code 19AU, 19BA - Specs A, B, C
	114-0022	2	(5/16-18 x 1-3/4")	503-1574	1		
	800-0193	2	(5/16-18 x 1-7/8") Floodlighter P218 - Spec C	503-1606-01	1		Code 19AS, 19AU, 19AW, 19BA - Begin Spec C - 3.25" Long
8	800-0033	4	Screw, Hex Head Cap (5/16-18 x 2")	18			Fitting, Barbed Code 19AU, 19BA Code 19BC
				19			Clamp, Hose 1/2" Diameter - Code 19BA, 15CL, 15AZ .44" Diameter - Code 19AS, 19AW, 19AU, 19BA - Begin Spec C
				20	150-2550	1	Spring, Governor Rod
				21			Clip, Rod End Old New
				518-0406	1		
				518-0637	1		

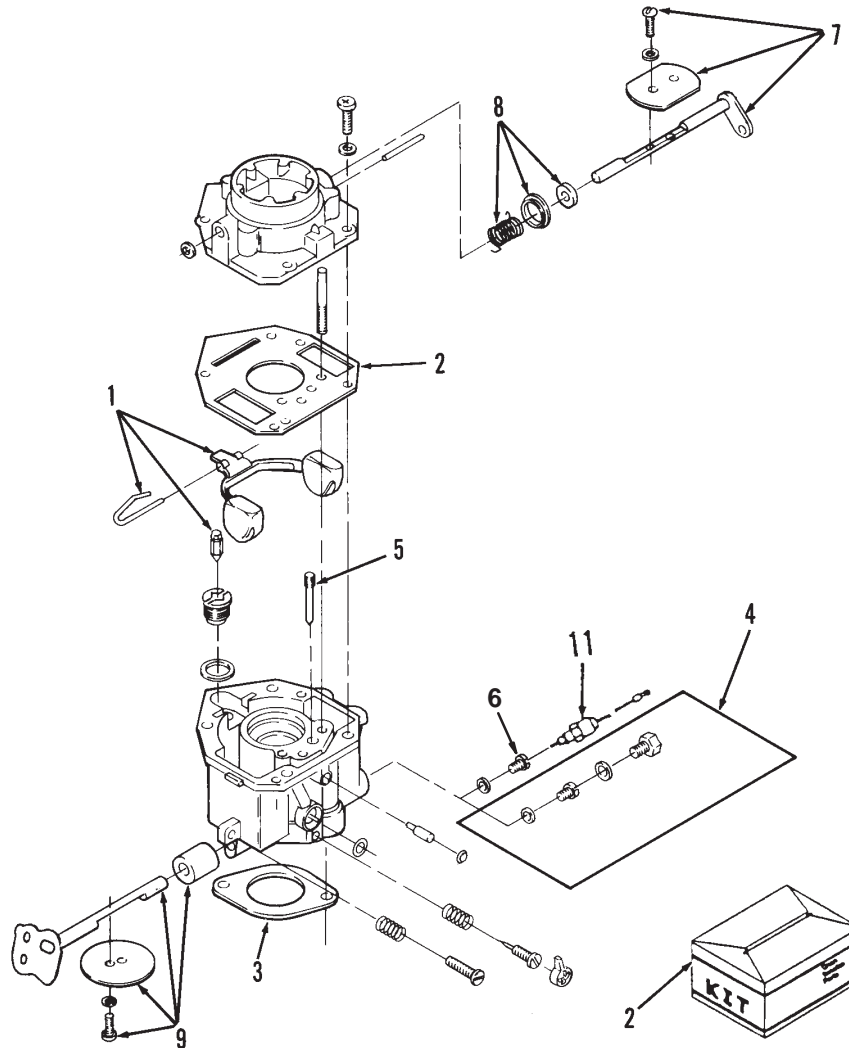
Carburetor Components Gasoline



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Kit, Carburetor (Includes Mounting Gasket and Carburetor)	146-0502		1	Kit, Solenoid Valve Repair (Includes Main Plug Gasket and Solenoid Valve Assy)
	146-0659	1	P216, P218	146-0657		1	Kit, Carburetor Repair (Includes Mounting Gasket, Air Horn Gasket and Set Screws [M4 x 16mm], Float Valve, Float Pin, Float Assy, Main Plug Gasket and O'Ring)
	146-0660	1	P220	146-0658		1	Kit, Carburetor Repair (Includes Carburetor Mounting Gasket, Diaphragm Stopper Screw, O'Ring, Stop Ring, Accelerator Pump Valve and Diaphragm Assy, Accelerator Diaphragm Spring, Check Valve Assy, Check Valve Spring and Cover Set Screws)
1	154-0733	1	Gasket, Carburetor Mounting				
2			Carburetor (Includes Parts Marked *)				
	146-0697	1	P216, P218				
	146-0698	1	P220				
3	146-0338	4	*Screw, Valve Set				
4	146-0331	1	*Spring, Adjustment Screw				
5	146-0423	1	*Valve, Float				
6			*Jet, Main Fuel (Altitude)				
	146-0652	1	P216, P218				
	146-0694	1	P220				
	146-0650	1	Package, Carburetor Repair (Includes Air Horn Gasket and Set Screws [M4 x 16mm], Float Valve, Float Pin, Float Assy, Main Plug Gasket and O'Ring)				
	146-0649	1	Package, Accelerator Pump Repair (Includes Diaphragm Stopper Screw, O'Ring, Stop Ring, Accelerator Pump Valve Accelerator Diaphragm Spring and Diaphragm Assy, Check Valve Assy, Check Valve Spring, Cover Set Screw)				

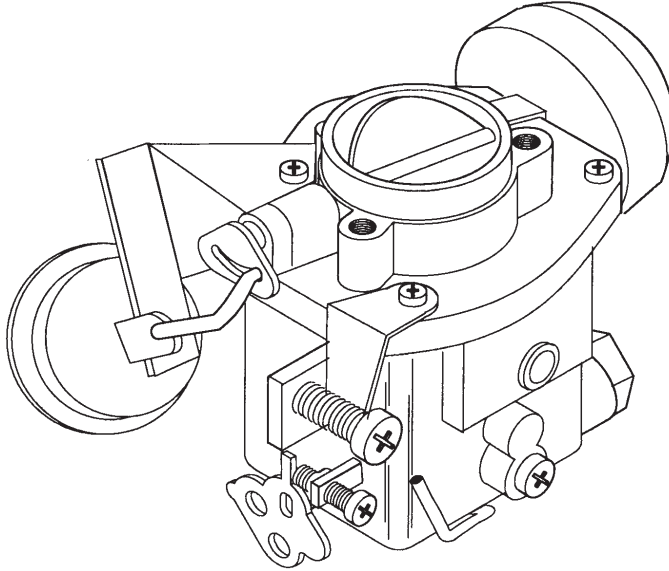
* – Parts Included in Carburetor.

Carburetor Components Gasoline (Spec A-F)



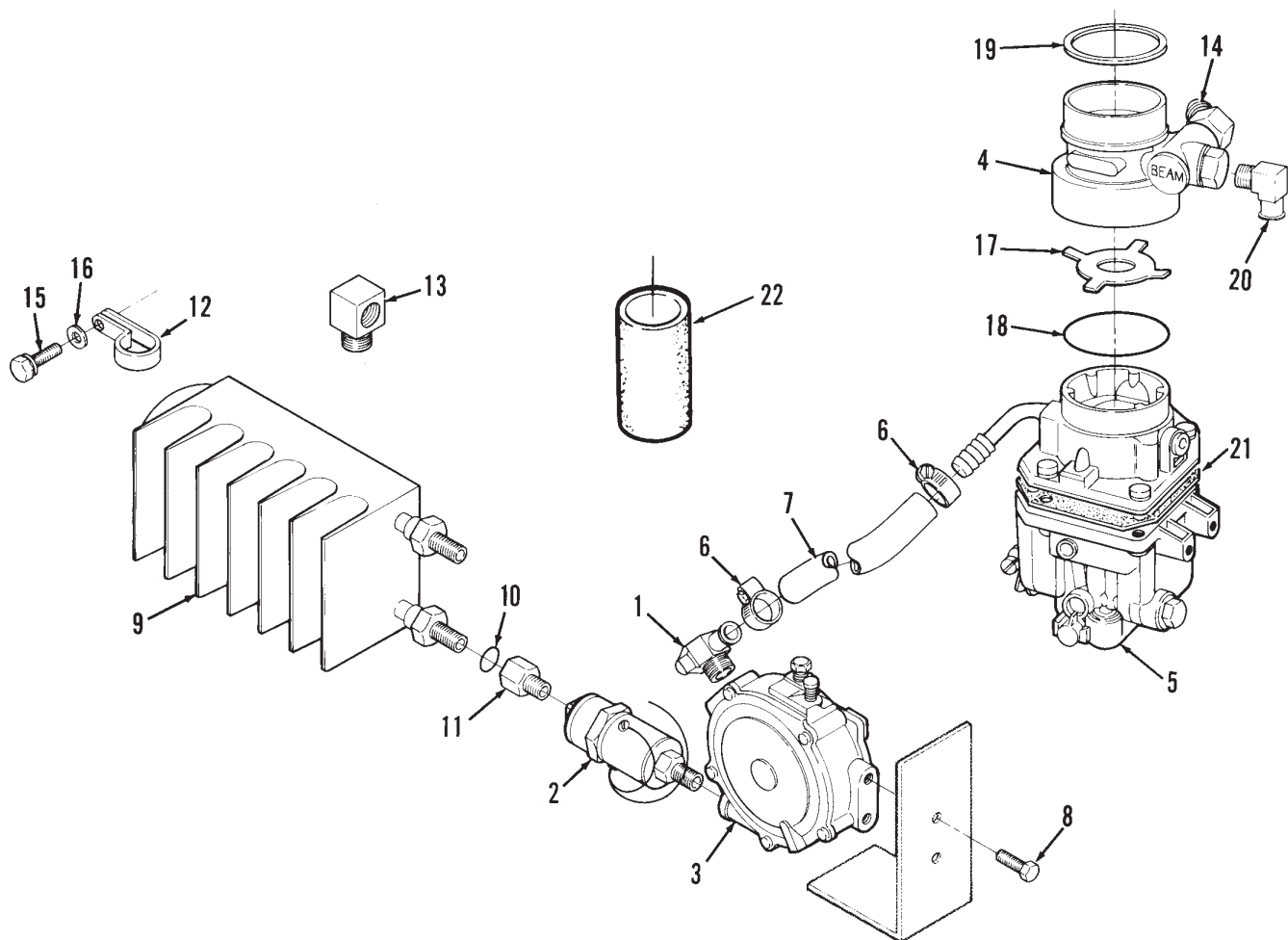
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Carburetor, Complete (Includes Mounting Gasket)	5			Jet, Idle
	146-0495	1	P216, P218	146-0425	1		P216, P218
	146-0496	1	All Specs Except 11212	146-0420	1		P220
	146-0613	1	Spec 11212	6			Jet, Power
1	146-0437	1	Kit, Float (Includes Float, Pin and Valve)	146-0396	1		P216, P218
2	146-0500	1	Kit, Repair (Includes Screw and Plug Package, Gasket Package, Float Valve, Idle Adjust Needle and Spring, Mounting Gaskets, Idle Limit Cap)	146-0391	1		P220
3	154-0733	2	Gasket, Carburetor	7	146-0433	1	Kit, Choke Shaft (Includes Choke Valve, Valve Set Screw and Air Filter)
4			Jet, Fixed Power – Optional (High Altitude Application)	8			Kit, Choke Lever (Includes Choke Lever Ring, Choke Spring and Choke Collar)
	146-0458	1	P216, P218	146-0434	1		P216, P218
	146-0347	1	P220	146-0435	1		P220
				9	146-0503	1	Kit, Throttle Shaft (Includes Valve Set Screw, Air Filter and Throttle Valve)
				11	146-0502	1	Solenoid, Fuel Cut-off Code 15CJ

**Carburetor Components
Gasoline
Auto Choke**



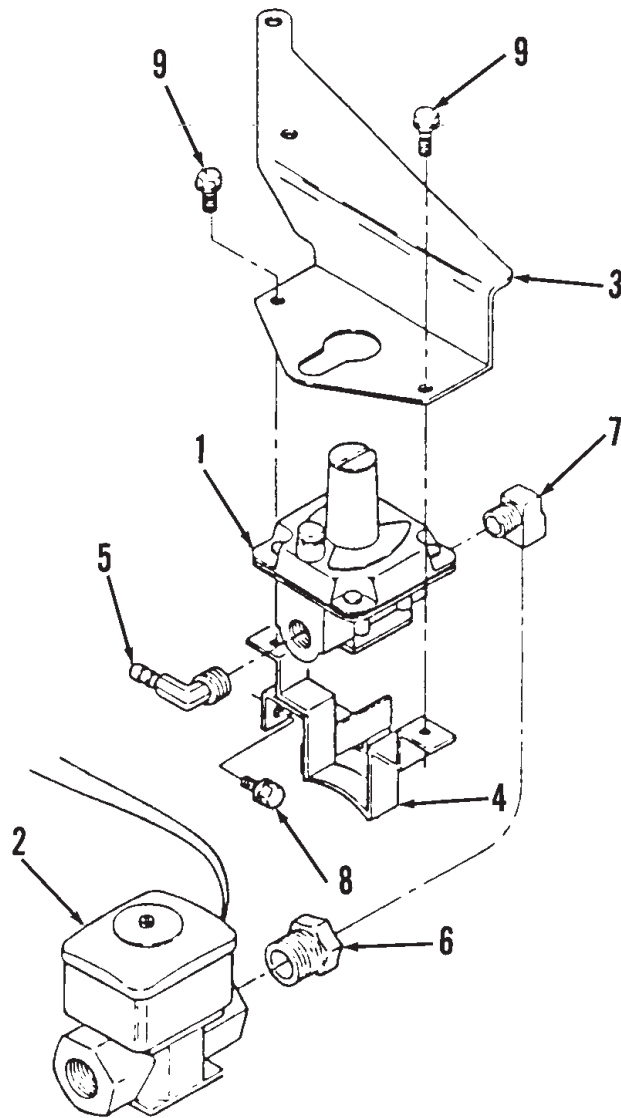
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	146-0506	1	Carburetor, Complete	8	146-0437	1	Kit, Float (Includes Float, Valve and Pin)
1	146-0425	1	Jet, Idle	7	146-0503	1	Kit, Throttle Shaft (Includes Valve Set Screw, Throttle Shaft, Air Filter and Throttle Valve)
2	146-0343	1	Jet, Power				
3	146-0441	1	Cap, Idle Limiter	9	146-0499	1	Kit, Gasket (Includes Air Horn, Gasket, Power Plug Gasket (2) and O-Ring)
4	146-0341	1	Spring, Power Needle				
5	146-0342	1	Needle, Complete Power				
6	146-0498	1	Kit, Screw and Plug (Includes Screws, Gaskets, Plugs and Idle Adjust Spring)				

Fuel System LP Gas



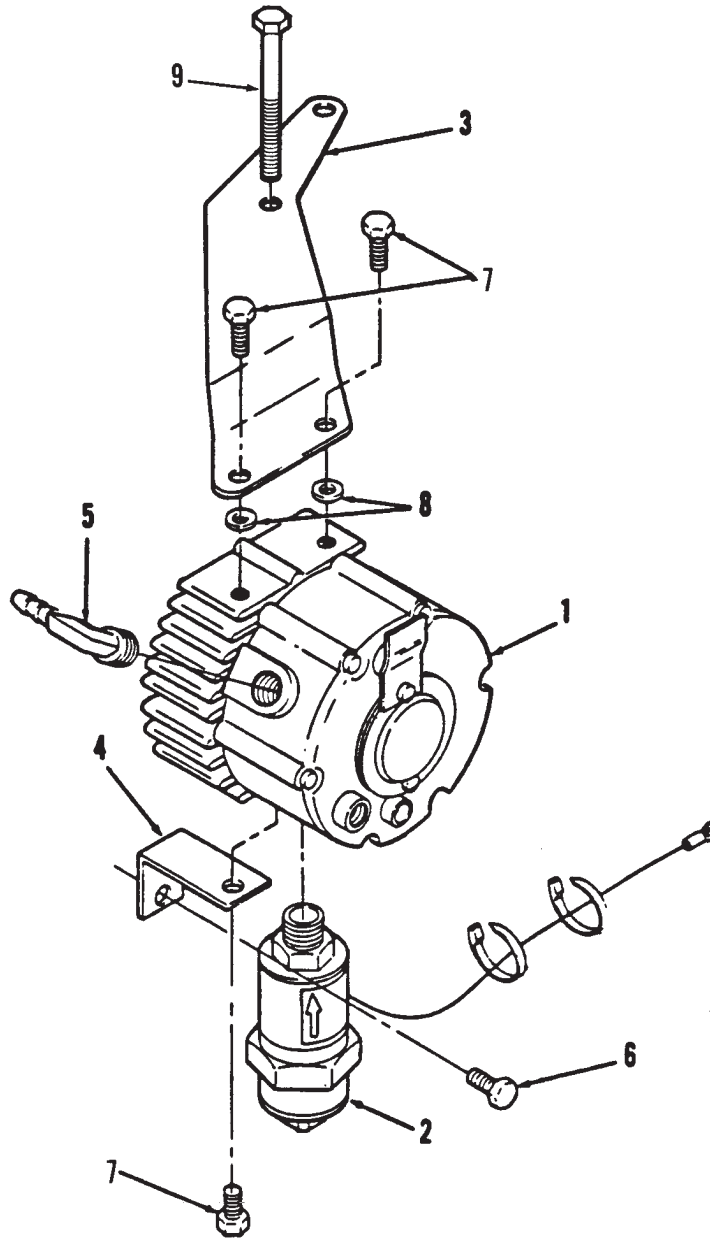
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	148-0907	1	Elbow, 90° Main Jet	9	148-0914	1	Vaporizer, LP Gas
2	307-2754	1	Valve, Fuel Shut-Off	10	509-0035	2	O-Ring (1/2" ID)
3			Regulator, LP Gas	11	502-0126	2	Connector, Inverted Male
	148-0909	1	Spec A-F	12	332-1554	1	Clamp, Insulated (Fits 1/2" Diameter Tube)
	148-1025	1	Begin Spec G				
4			Adapter, LP Gas	13	502-0054	1	Elbow, 90°
	148-0918-01	1	LP Only	14	502-0575	1	Elbow, 45° - Dual Fuel Adapter
	148-0908-01	1	Dual Fuel Carburetor	15	800-0011	2	Screw, Hex Washer Head (1/4-20 x 2")
5			Carburetor, LP Gas (Includes Gasket)	16	526-0018	2	Washer, Flat (1/4" Screw)
	146-0495	1	Spec A-F	17	148-0911	1	Deflector, Carburetor
			Begin Spec G	18	509-0145	1	O-Ring (2" ID)
	146-0678	1	P216, P218	19	140-2279	1	Gasket, Air Cleaner - Dual Fuel
	146-0679	1	P220				
6	503-0183	2	Clamp, Hose (7/8" Diameter)	20	502-0237	1	Elbow, Hose (Male) 90° Dual Fuel
7	503-1048	1	Hose, Fuel				
8	821-0009	2	Screw, Hex Washer Head Self-Locking (1/4-20 x 3/8")	21	146-0520	1	Gasket, Air Horn
				22	503-1882-02	1	Tube, Air Intake

Natural Gas Regulator



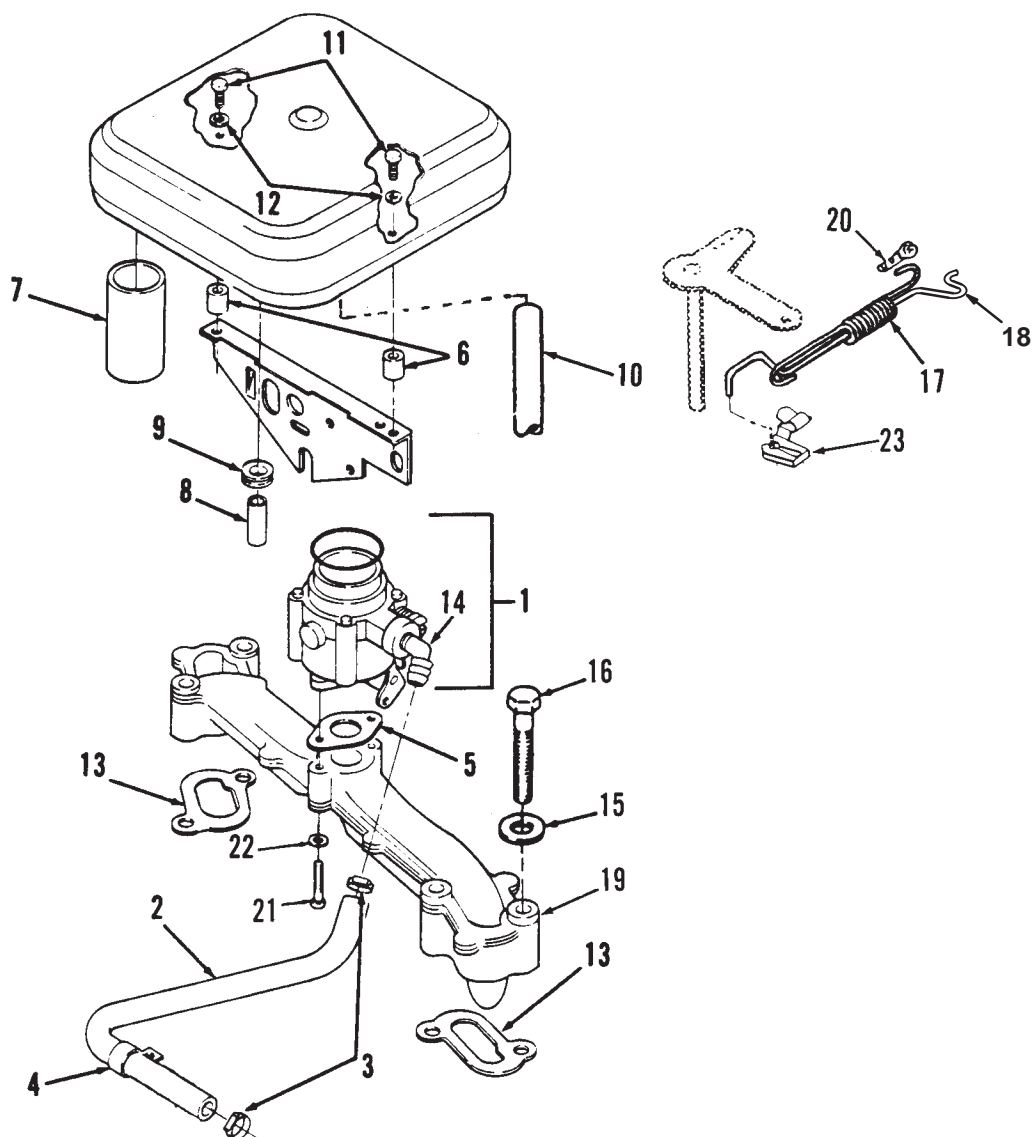
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	148-0977	1	Regulator, Natural Gas Spec A-F	6	502-0029-08	1	Bushing, Reducer (3/4 x 1/2")
	148-1026	1	Begin Spec G	7	502-0133	1	Elbow, 90° Street (1/2" NPT)
2	307-0312	1	Valve, Magnetic	8	815-0293	1	Screw, Hex Washer Head (1/4-20 x 3/4")
3	148-0971	1	Bracket, Regulator Mounting	9	821-0010	2	Screw, Hex Washer Head (1/4-20 x 1/2")
4	148-0972	1	Strap, Regulator Mounting				
5	502-1145	1	Elbow, 90° Brass				

LP Converter Kit



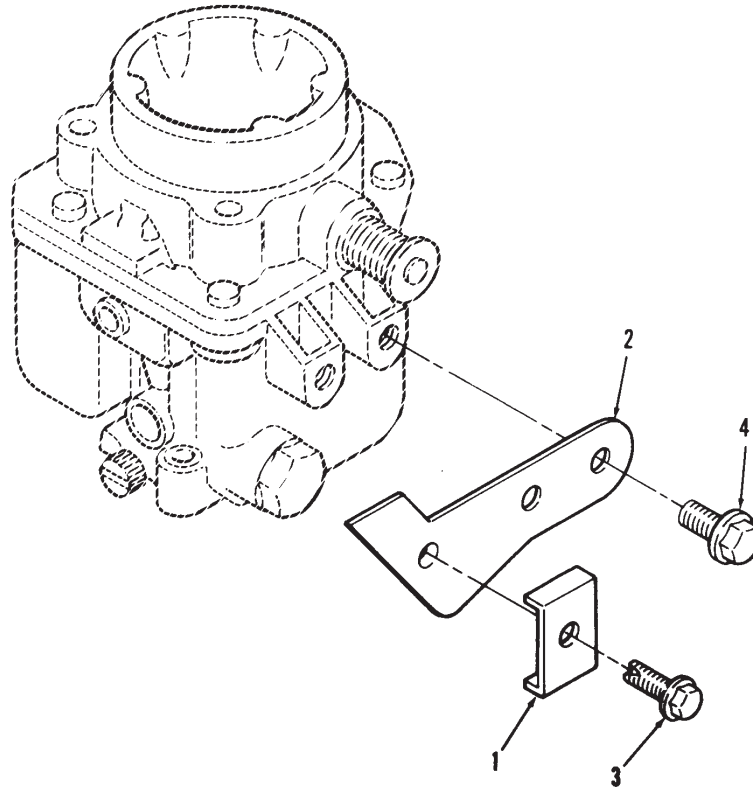
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	148-0941	1	Regulator	6	815-0293	1	Screw, Hex Washer Head Thread Forming (1/4-20 x .75)
2	307-2754	1	Valve, Shut Off	7	821-0018	3	Screw, Hex Head Cap (1/4-20 x .625)
3	148-0937-02	1	R.H. Mount	8	526-0018	2	Washer, Flat (1/4" Screw)
	148-0942	1	L.H. Mount	9	800-0034	2	Screw, Hex Head Cap (5/16-18 x 2-1/4")
4	148-0938-02	1	R.H. Mount				
	148-0943	1	L.H. Mount				
5	502-1145	1	Elbow, 90° Brass (1/2" NPT - 3/8 Barb)				

LP Carburetor Kit



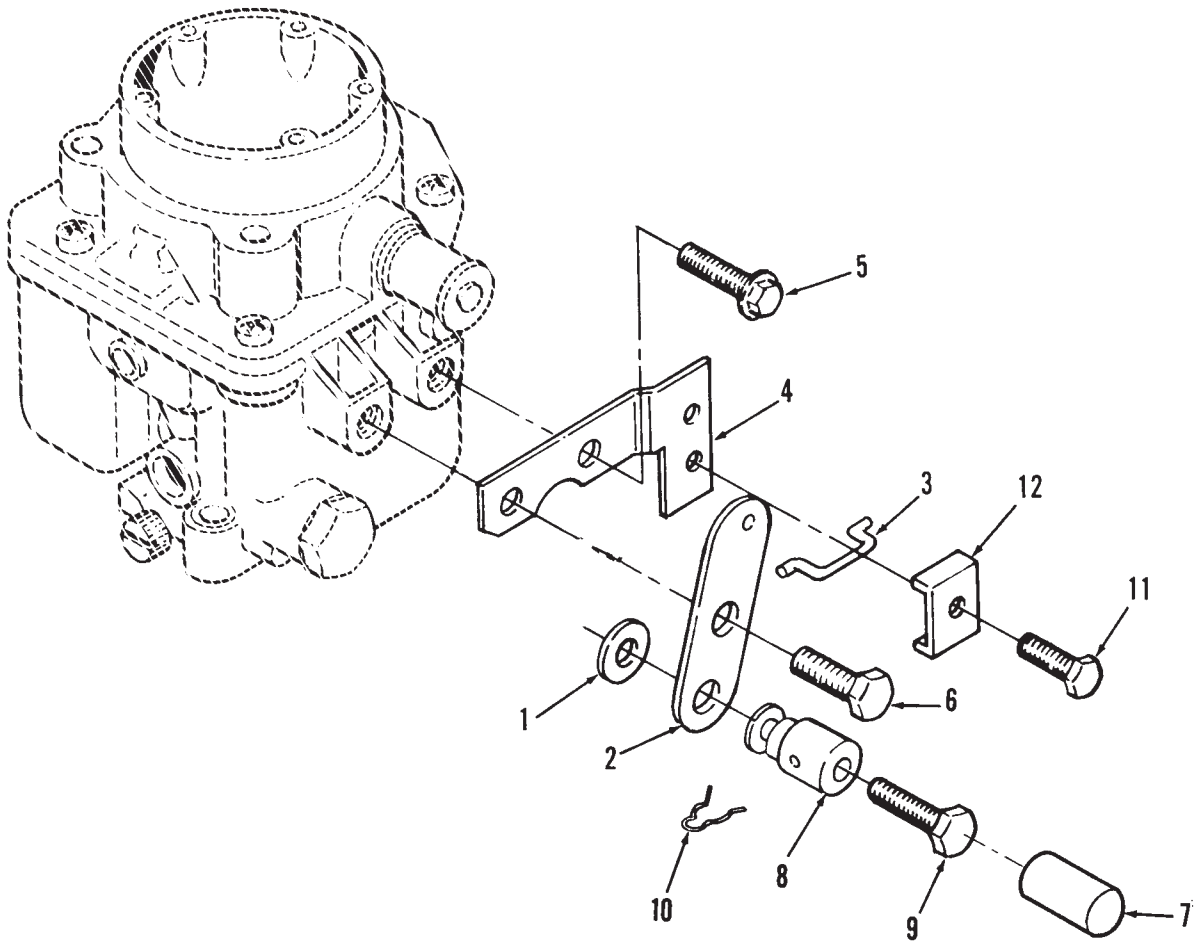
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	146-0562	1	Carburetor, LP Spec A-F Begin Spec G	12	526-0018	2	Washer, Flat (1/4" Screw)
	146-0678	1	P216	13	154-2495	2	Gasket, Intake Manifold
	146-0679	1	P218/220	14	502-1146	1	Elbow, 45° Brass
2	503-1798	1	Hose (3/8" I.D x 18" Long)	15	740-1006	4	Washer, Flat (M8)
3	503-1133	2	Clamp, Hose	16	800-0033	4	Screw, Hex Head Cap (5/16-18 x 2")
4	332-1356	1	Clamp, Loop	17	150-2550	1	Spring, Governor Rod
5	141-0281	1	Gasket, Carburetor	18	150-2593-02	1	Rod, Governor Control
6	140-2722-01	2	Spacer, Air Cleaner	19	541-0428	1	Manifold, Intake
7	503-1882-02	1	Hose Air Inlet	20	518-0004	1	Clip, Control Rod Retaining to Carburetor
8	123-1484-01	1	Tube, Copper Breather	21	800-0193	2	Screw, Hex Head Cap (5/16-18 x 1-7/8")
9	508-0021	1	Grommet, Rubber	22	526-0397	2	Washer, Flat (.34" Screw)
10	503-1606-02	1	Hose, Breather (3.75" Lg) - Begin Spec C	23			Clip, Rod End
11	821-0013	2	Screw, Hex Head Cap (1/4-20 x 1)	518-0406	1	Old	
				518-0637	1	New	

Choke Control (Rear Pull)



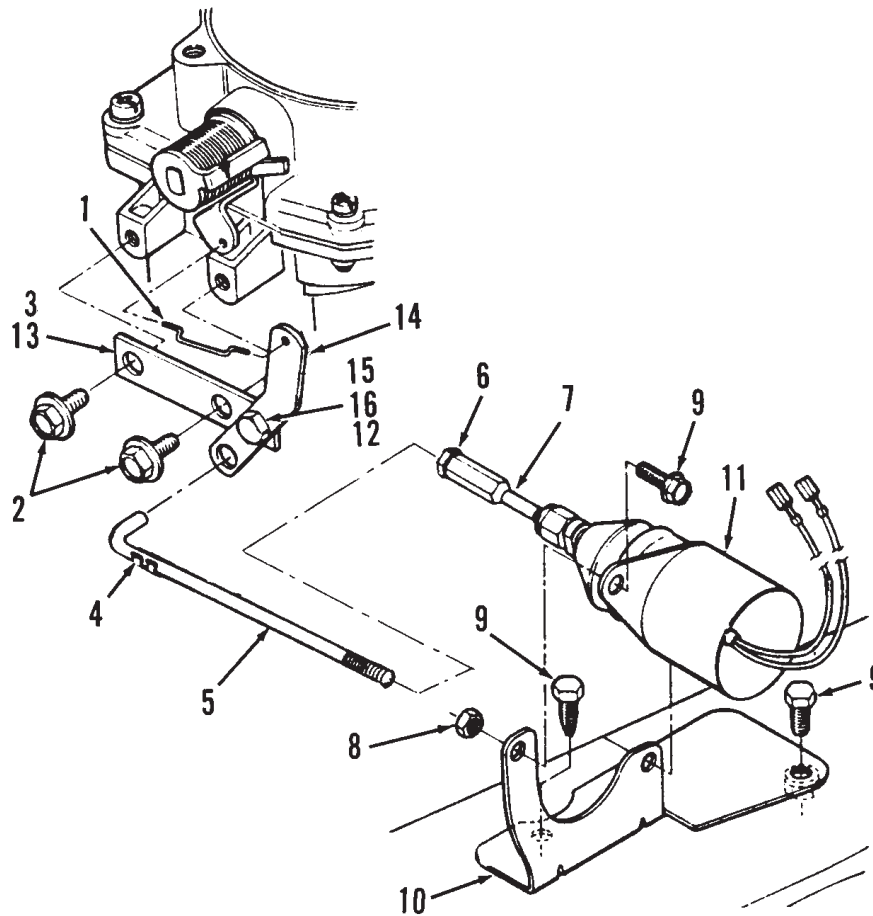
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	153-0514	1	Clip, Choke Cable	4	821-0004	2	Screw, Hex Washer Head Cap (10-32 x 5/16")
2	153-0686-02	1	Bracket, Choke Cable				
3	815-0359	1	Screw, Tapping Slotted Hex Washer Head (#10-32 x 7/8")				

Choke Control (Front Pull)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	526-0140	1	Washer, Flat (#10 Screw)	8	152-0155	1	Swivel, Choke Lever
2	153-0523	1	Lever, Choke	9	815-0693	1	Screw, Hex Head Machine (#8-32 x .375")
3	153-0500	1	Link, Choke	10	516-0059	1	Pin, Cotter
4	153-0524	1	Bracket, Choke Cable	11	815-0359	1	Screw, Tapping Slotted Hex Washer Head (#10-32 x 1/4")
5	821-0004	1	Screw, Hex Washer Cap Head (#10-32 x 1/4")	12	153-0514	1	Clip, Choke Cable
6	815-0820	1	Screw, Shoulder (#10-32 x .38")				
7	517-0177	1	Plug, Cap				

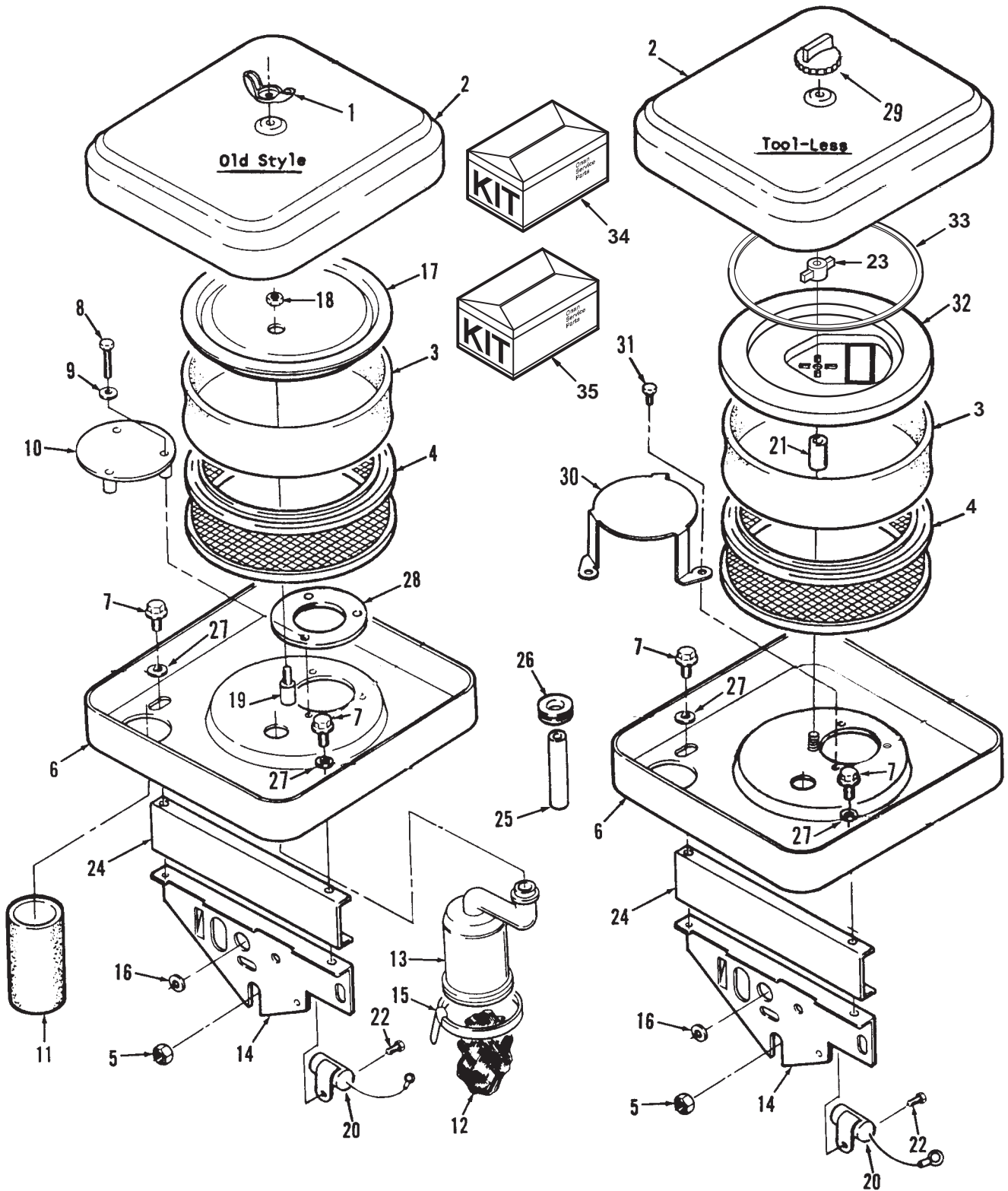
Remote Choke Spec D



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	153-0500	1	Link, Choke	11	307-2750	1	Solenoid, 12 Volt
2	821-0004	2	Screw, Lk H (10-32 x 3/8)	12	821-0010	2	Screw, Lock Head Flange (1/4-20 x 1/2")
3	153-0642	1	Bracket Assy, Choke (Includes Parts Marked *)	13	150-2480	1	*Bracket, Choke
4	518-0006	1	Clip, Lock	14	150-2531	1	*Lever, Choke
5	150-2478	1	Rod, Choke	15	815-0820	1	*Screw, Pan Head Shoulder (10-32)
6	870-0053	1	Nut, Hex Mach (10-32)	16	870-0298	1	*Nut, Lock (10-32)
7	150-2481	1	Swivel, Link	17	526-0008	1	*Washer, Flat (#10 Screw)
8	870-0212	2	Nut, Self Lk (1/4-20)				
9	815-0290	4	Screw, Hex Washer Head Thread Form (1/4-20 x 5/8)				
10	307-2751	1	Bracket, Solenoid				

* - Parts Included in Choke Bracket Assy.

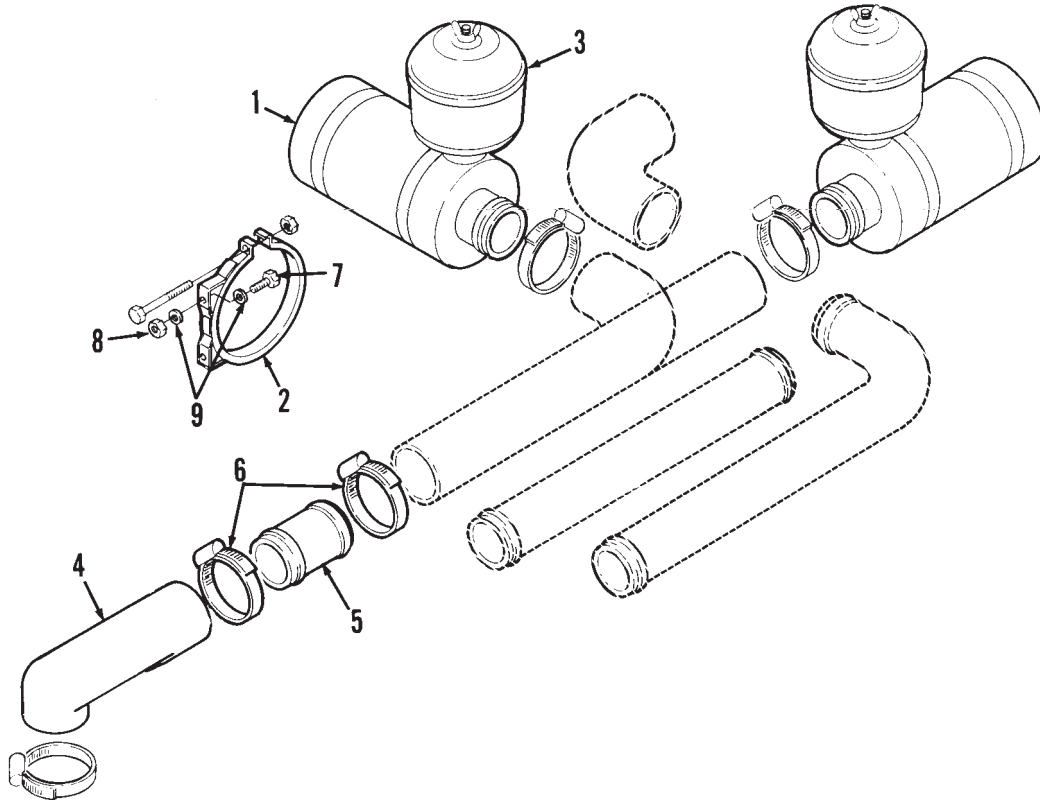
Air Cleaner



Air Cleaner

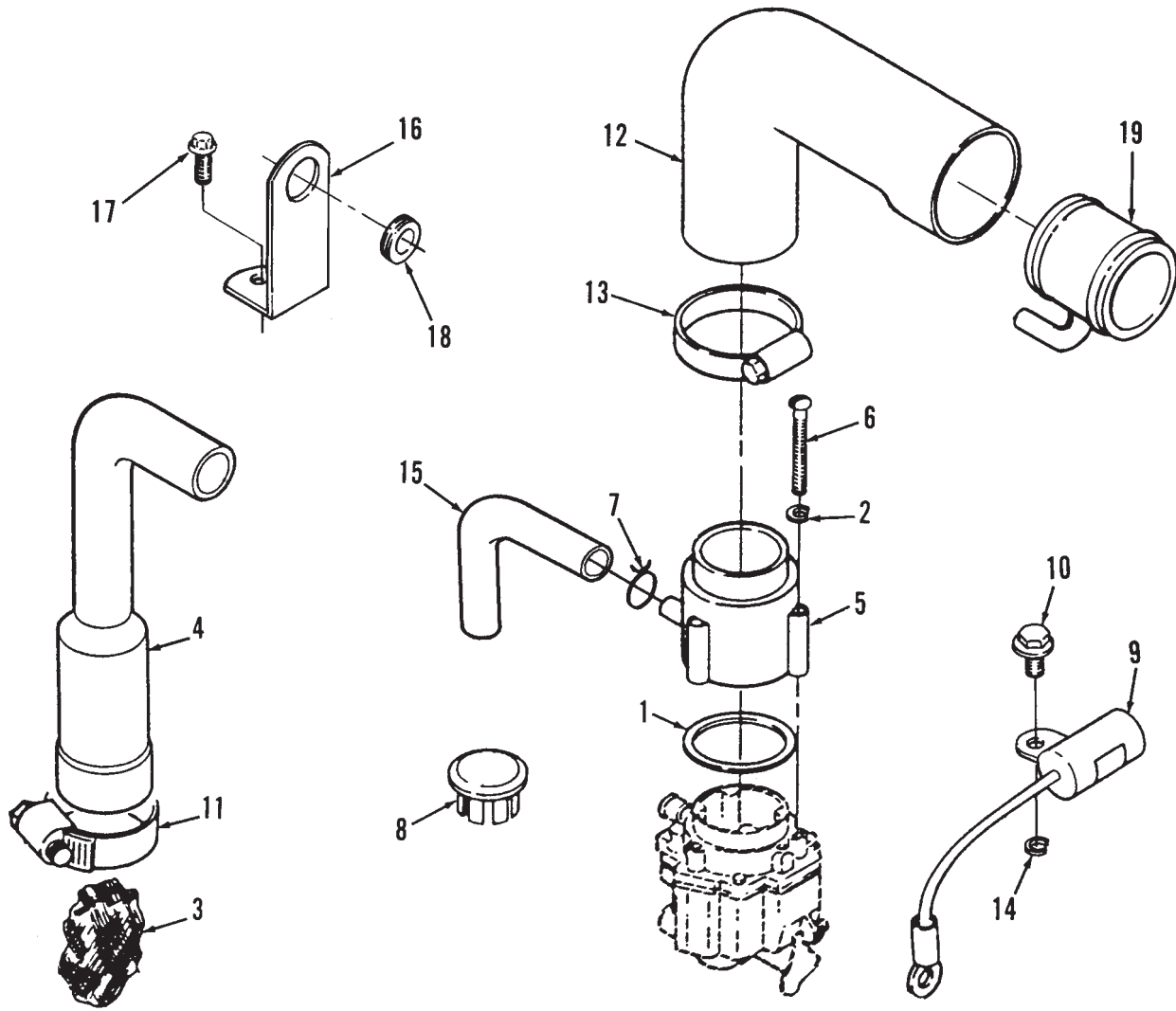
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	865-0020	1	Nut, Wing (1/4-20)	13	123-1429	1	Tube, Crankcase Breather – Specs A, B
2			Cover, Air Cleaner	14	140-2017-50	1	Support, Air Cleaner – Painted
	140-2005-50	1	Painted – Code 19AS, 19AW, 19BA (Standard Capacity)	15	503-1752	1	Clamp, Breather Tube – Spec A and B
	140-2005-02	1	Chromed – Code 19BB	16	508-0001	1	Grommet, Rubber (1/2" Hole)
	140-1913-50	1	Painted – Code 19AU (Hi Capacity)	17	541-0459	1	Cover, Element
3			Wrapper, Air Cleaner Element	18	870-0365	1	Nut, Hex (1/4-20)
	140-1496-01	1	Standard Svc and XSL Code 19AS, 19BA	19	301-0458	1	Spacer, Air Cleaner Stud
	140-1912-01	1	High Capacity – Code 19AU	20	312-0256	1	Capacitor (Placed Horizontal)
4			Element, Air Cleaner	21			Spacer, Air Cleaner Stud
	140-2628-01	1	Standard Capacity – Code 19AS, 19BA		140-2536-01	1	1" Long – Standard
	140-2628-02	1	High Capacity – Code 19AU		140-2536-02	1	2-3/4" Long – High Capacity
5	870-0399	1	Nut, Hex Washer Head Flanged (5/16-18)	22	815-0178	1	Screw, Hex Washer Head Thread Form (10-32 x 5/8")
6			Housing, Air Cleaner	23	140-2786	1	Spacer, Nylon
	140-2493-53	1	Code 19AS, 19BA – Begin Spec C – Use with Standard Filter	24	140-2202-02	1	Spacer, LP Gas – Painted (Early Systems)
	140-2493-51	1	Code 19AS – Spec A, B – Use with Standard Filter	25	123-1484-01	1	Tube, Breather (Copper) LP Gas
	140-2539-53	1	Code 19AU – Begin Spec C – Use with High Capacity Filter	26	508-0021	1	Grommet, Rubber (1/2" ID) LP Gas
	140-2539-51	1	Code 19AU – Spec A, B – Use with High Capacity Filter	27	526-0018	2	Washer, Flat (1/4" Screw) LP Gas
7			Screw	28	140-2278	1	Plate, Support – Dual Fuel Units
	815-0261	2	Hex Washer Head Tapping (1/4-20 x 1/2") Gasoline		140-2204	1	Gasket, Hose Fitting – Code 19BA – Not Shown
	800-0011	2	Hex Head Cap (1/4-20 x 2") LP		870-0346	1	Nut, 6 Point Self-Lock (1/4-28) Code 19BA – Not Shown
8			Screw, Hex Head Machine Gasoline Fuel (#10-32 x 1-1/2")	29	140-2761	1	Knob (1/4-20)
	815-0470	2	LP Gas – Dual Fuel Units (#10-32 x 2-1/4")	30	145-0614	1	Plate, Air Deflector, High Capacity (Spec A-F) Code 19AU
	815-0516	3	Washer, Flat (#10 Screw)	31	815-0463	3	Screw, Hex Washer Slotted Head (#10-32 x 3/8")
9	526-0234	3	Plate, Air Deflector – Gasoline	32	140-2942	1	Cover, Element
10	145-0521	1	Tube, Air Intake	33	140-2789	1	Gasket, Air Cleaner
11			4.12" Long	34			Kit, Air Cleaner
	140-2025-01	1	5.12" Long		541-0457-01	1	Standard Capacity High Capacity
	503-1882-03	1	3.5" Long		541-0458-01	1	Spec A, B
	503-1882-01	1	Filter, Breather Tube – Specs A and B		541-0458-02	1	Begin Spec D
12	123-1871	1		35	541-0459	1	Kit, Air Cleaner (Inner Cover)

Remote Air Cleaner



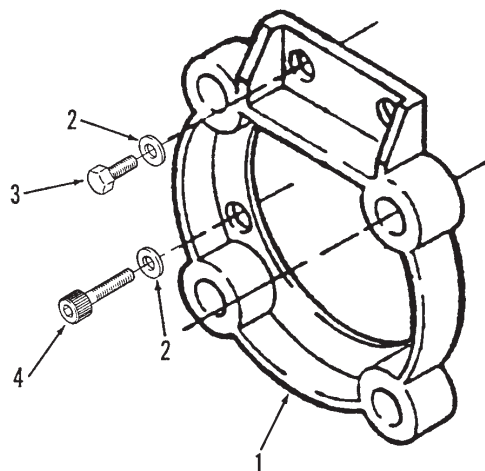
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	140-0721	1	Cleaner, Air (Includes Element #140-0765)	5	140-2173	1	Tube, Air Induction (Steel)
2	140-0722	2	Band, Air Cleaner	6	503-1141	4	Clamp, Hose (2-3/8" Dia.)
3	140-0723	1	Pre-Cleaner, Air (Plastic)	7	800-0004	4	Screw, Hex Head Cap (1/4-20 x 5/8")
4	140-1428	1	Elbow, Air Inlet	8	870-0065	4	Nut, Self-Lock (1/4-20)
				9	526-0018	8	Washer, Flat (1/4" Screw)

Remote Air Cleaner Adapter



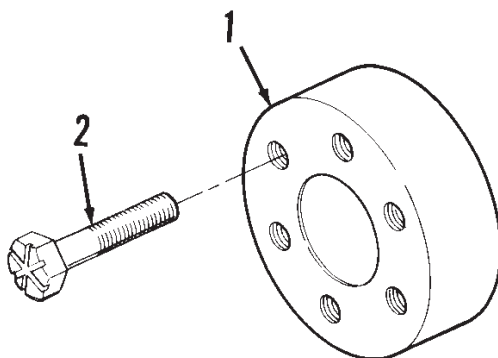
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	509-0145	1	Seal, O-Ring	11	503-0398	1	Clamp, Breather Tube (1-5/8" Diameter)
2	850-0030	3	Washer, Spring Lock (#10)	12	140-1428	1	Elbow, Air Inlet
3	123-1871	1	Filter, Breather Tube - Spec A,B	13	503-1142	3	Clamp, Hose 1.81-2.75" - P220 - Code 19CK
4	123-1539	1	Tube, Crankcase Breather Spec A,B		503-1141	1	1.56 - 2.5" - Code 19AV
5	140-1714	1	Adapter, Carburetor Air Intake	14	853-0013	1	Washer, ET Lock (1/4")
6	813-0106	3	Screw, Round Head Machine (#10-32 x 1-1/8")	15	503-1396	1	Hose, Breather
7			Clamp, Hose (11/16" Dia.)	16	149-2242	1	Bracket, Fuel Line - P218, P220 - Begin Spec C
	503-0769	1	Spec A,B	17	815-0261	1	Screw, Hex Washer Head (1/4-20 x 1/2")
	503-0769	2	Begin Spec C	18	508-0021	1	Grommet, Rubber - P218, P220 - Begin Spec C
8			Plug, Dot Button - Blower Housing Air Hole	19	140-2668-01	1	Tube, Air Induction - P220 - Code 19C
	517-0252	1	Unplated				
	517-0174	1	Tapered				
9	312-0256	1	Capacitor				
10	815-0389	1	Screw, Hex Washer Head (1/4-20 x 3/8")				

Clutch Adapter



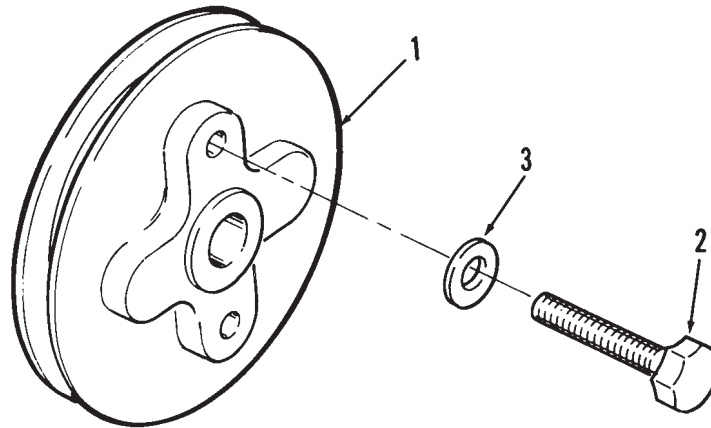
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	190-0597	1	Adapter, Electric Clutch	4	802-0073	2	Screw, Socket Head (3/8-16 x 1-1/4")
2	526-0245	4	Washer, Flat (3/8" Screw)				
3	800-0051	2	Screw, Hex Head Cap (3/8-16 x 1-1/4")				

Drive Plate Hub



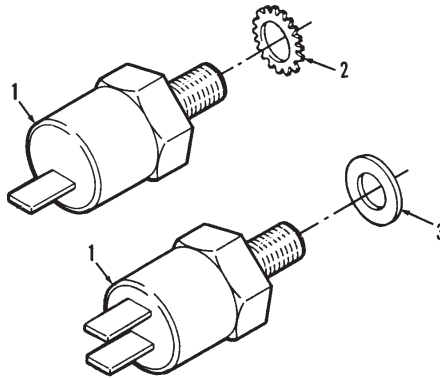
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	104-1674	1	Hub, Drive Plate
2	805-0019	6	Bolt, Place - Grade 8 (3/8-16 x 1-7/16")

Pulley (Single Groove)



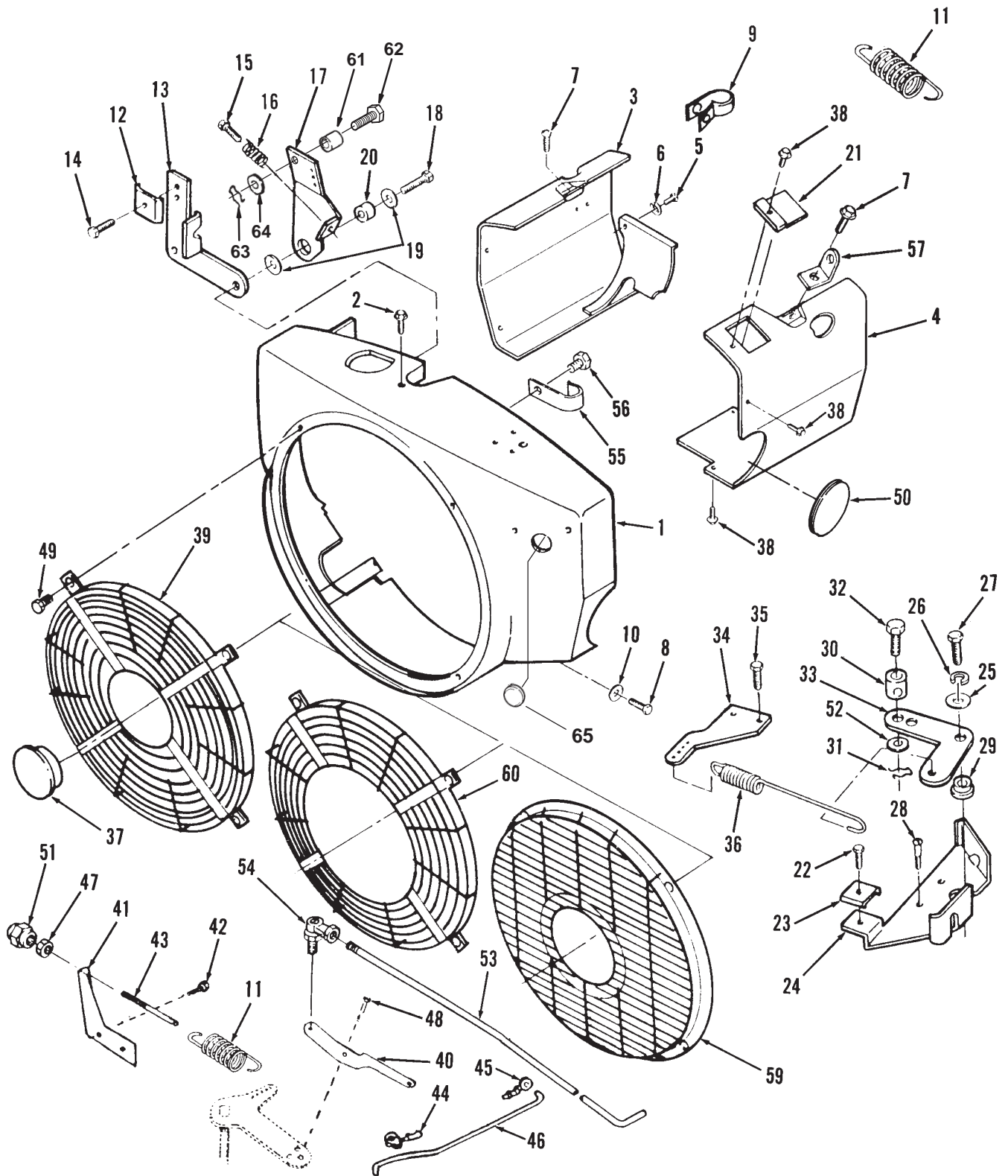
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1210	1	Pulley, Alternator Drive
2	114-0022	4	Screw, Hex Head Ca-p (5/16-18 x 1-3/4")
3	740-1006	4	Washer, Flat (M8)

High Temperature Switch Cut-Off



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	309-0559	1	Switch, High Temperature	3	526-0021	1	Washer, Flat - 2 Terminal Switch (1/4" Screw)
	309-0592	1	1 Terminal				
		1	2 Terminal				
2	853-0013	1	Washer, ET Lock (1/4")				

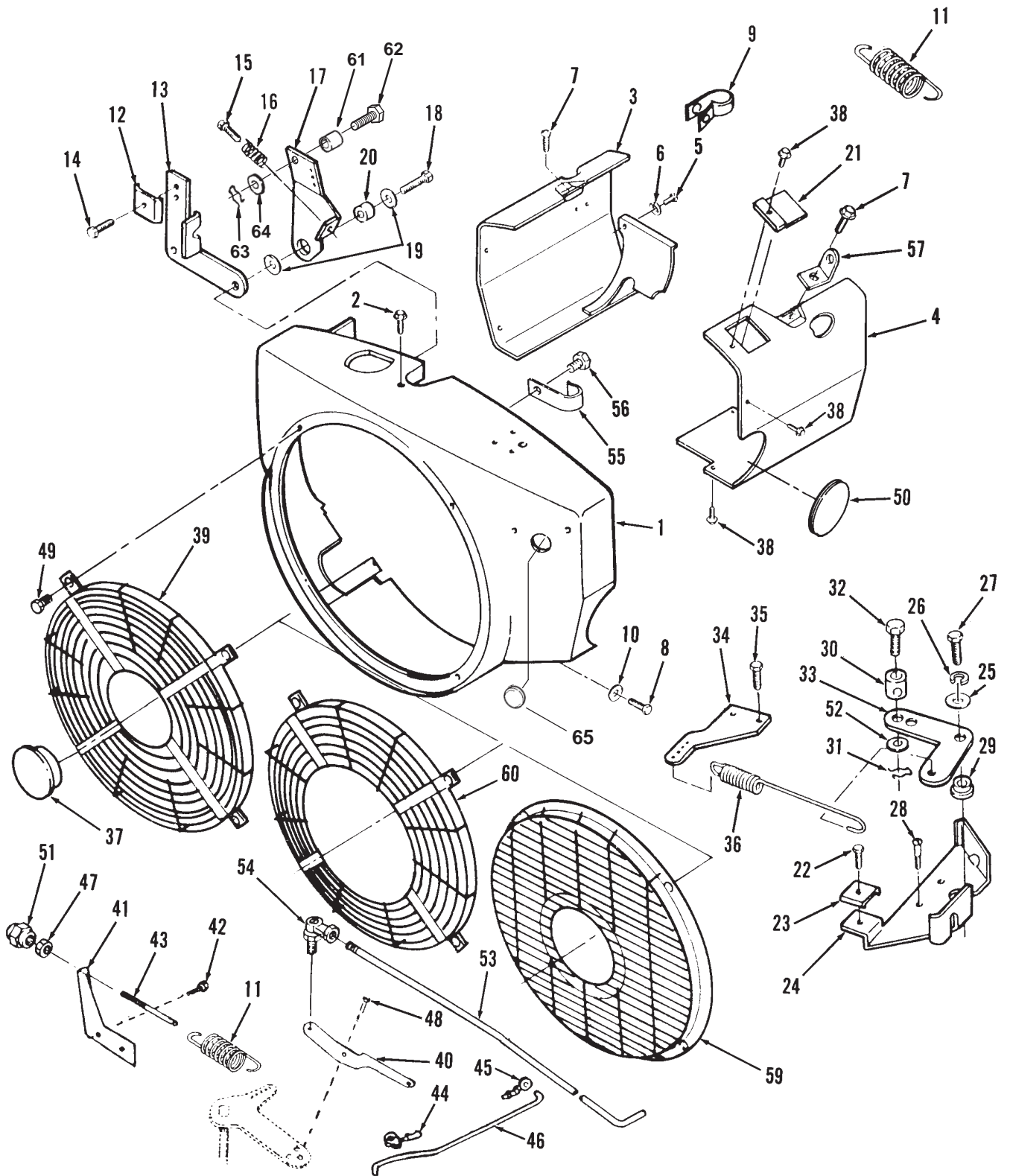
Blower Housing and Governor



Blower Housing and Governor

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	134-5179-02	1	Housing, Blower Standard – Used on all Models Except ones with the Following Codes:	13	150-2345-02	1	Bracket, Cable Code 13BJ, 13CK
	134-5184-02	1	Code 13CK (Spec 10608)	14	150-1725-01	1	Begin Spec D – Code 13BJ
	134-5185-02	1	Code 17DA (W/Oil Cooler)	14	815-0359	1	Screw, Hex Head Tapping (#10-32 x 1/2") – Code 13BJ
	134-4902-02	1	Code 17BC (Spec 10876, Floodlighter)(This Part To Be Used With the Following Not Illustrated Parts)	15	815-0510	1	Screw, Hex Head Tapping (#6-32 x 5/8") – Code 13BJ, 13CK
	134-4907-02	1	Tray, Housing	16	150-1398	1	Spring, Idle Setting –Code 13BJ, 13CK
	134-4908-02	1	Housing, Transition (RH)	17			Arm Assy, Governor Control (Includes Spring and Screws) Code 13BJ (Without Swivel)
	134-4909-02	1	Housing, Transition (LH)		150-2360	1	Spec A-C
	134-4906-02	1	Backplate		150-1761	1	Spec D
2	815-0261	2	Screw, Hex Washer Tapping Head (1/4-20 x 7/16")		150-2360	1	Code 13CK (Without Swivel)
3	134-4615-50	1	Housing, LH Cylinder Air Code 31AZ, 31BD, 31BC – Painted		150-2584	1	Code 13DA (With Swivel and Pin)
	134-4610-50	1	Code 23DK – With 31AZ – With Weld Nuts – Painted		150-1761-01	1	Code 13DD
	134-4885-02	1	Floodlighter – Code 13CG	18	821-0010	2	Screw (1/4-20 x 1/2") Lock Head
	134-4956-50	1	Code 23EF – P218 – Painted		815-0436	2	Hex Washer Head
4	134-4798-50	1	Housing, RH Cylinder Air Code 23DK – With 31AZ – With Weld Nuts – Painted	19	526-0021	2	Washer, Flat (1/4" Screw) Code 13BJ, 13CD, 13CG
	134-4352	1	Floodlighter – Code 13CG	20	150-1269	1	Bushing, Control Arm –Code 13BJ, 13CK
	134-4824	1	Code 23DC	21	134-3626-50	1	Cover, Voltage Regulator Painted – Code 31BD, 23EF
	134-4796-50	1	Code 31AZ, 31BC, 31BD – Painted	22	815-0391	1	Screw, Hex Head Tapping (#10-32 x 1/2")
	134-4957-50	1	Code 23EF – P218 – Painted	23	153-0514	1	Clamp, Throttle Cable
5	815-0290	2	Screw, Hex Washer Tapping Head (1/4-20 x 5/8")	24			Bracket, Governor Control Mounting – Zinc Plated All Specs Except 11215
6	526-0021	2	Washer, Flat (1/4" Screw)		150-1726-01	1	Spec 11215 Only
7	821-0016	2	Screw, Hex Washer Cap Head (5/16-18 x 3/4")	25	740-1004	1	Washer, Flat (M6)
8	815-0290	4	Screw, Hex Washer Tapping Head (1/4-20 x 5/8")	26	850-0040	1	Washer, Spring Lock (1/4")
	815-0337	4	(1/4-20 x 3/4") Units With 3 Quart Oil Base – Code 17CM	27	800-0007	1	Screw, Hex Head Cap (1/4-20 x 1")
9	332-2319	1	Clamp, Alternator Wire Leads (5/16" Diameter)	28	815-0439	3	Screw, Hex Washer Head Tapping (8-15 x 1/2")
10	526-0018	4	Washer, Flat (1/4" Screw)	29	150-1727	1	Bushing, Governor Control
11	150-1214	1	Spring, Governor 5 Ball – Code 13BJ, 13CK – Code 13CG, 13BF (Use with Code 13CB)	30	152-0155	1	Swivel, Throttle Lever
	150-1740	1	10 Ball – Code 13CH – P218	31	516-0059	1	Pin, Cotter
	150-2550	1	5 Ball – Code 13CG (Use with 13CC)	32	815-0693	1	Screw, Hex Head Machine Link, Governor Control
12	153-0514	1	Clamp, Cable – Code 13BJ, 13CK	33			All Specs Except 11215 Spec 11215 Only
				34	150-1366	1	Adapter, Governor Arm (Zinc Plated)
					150-2571	1	Screw, Hex Head Tapping W/ET (#10-32 x 1/2")
				35	150-1754-01	1	Spring, Governor – Code 13BK, 39AG
				36	815-0555	2	
					150-1755	1	

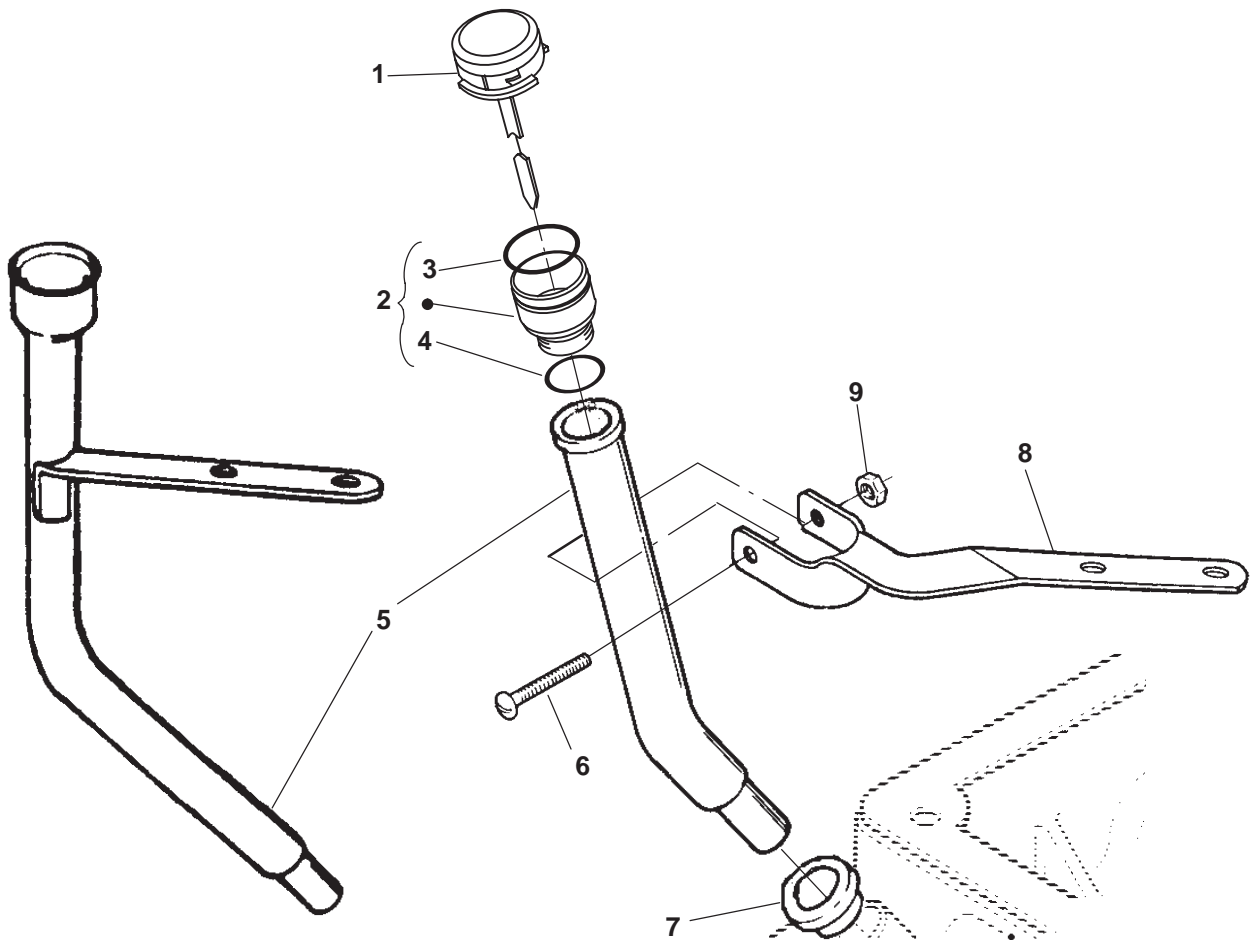
Blower Housing and Governor



Blower Housing and Governor

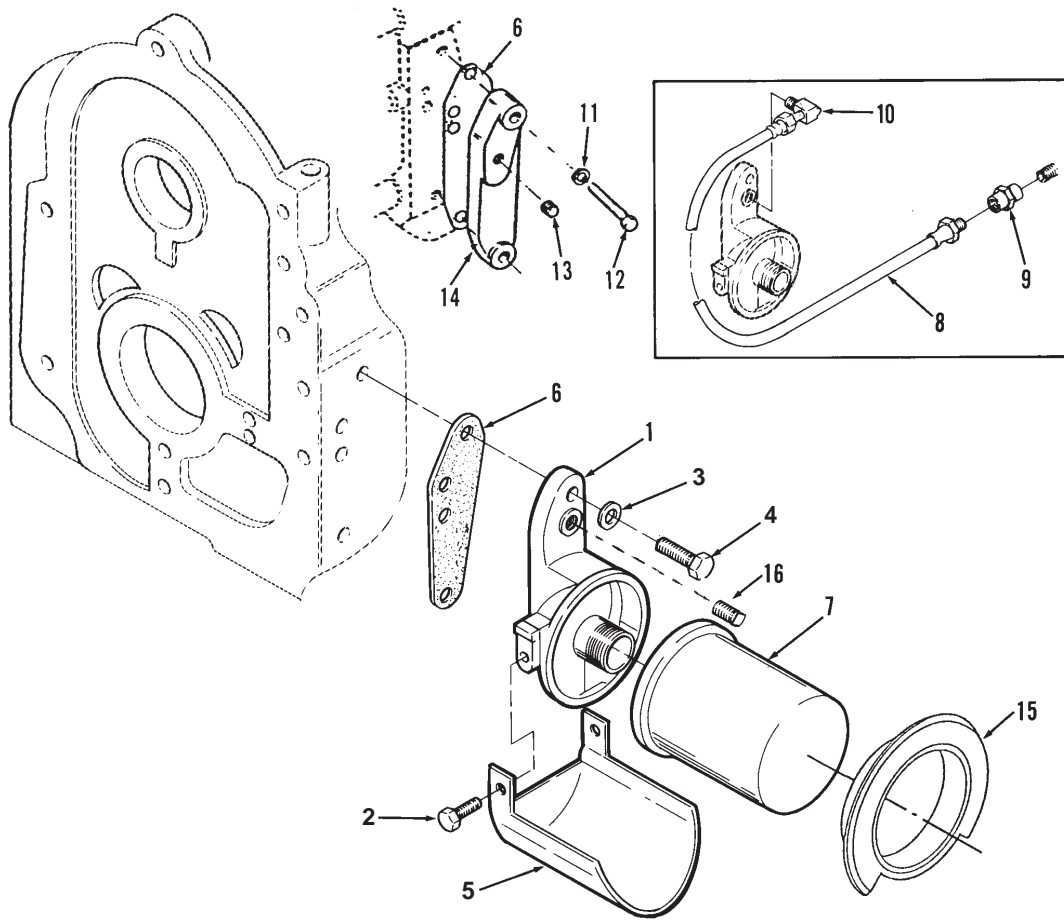
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
37			Plug, Black Nylon	49			Screw
	517-0261	1	Code 23DE – 2" Dia.		815-0575	4	Hex Washer Head (1/4-20 x 3/8")
	517-0136	1	Code 13BJ,15BB,23DH – (59/64" Dia.)		815-0721	4	Pan Head Taptite (Special) Code 23DN,13BJ,13CG, 13DA
	99-2393	1	Logo, Nameplate – Code 23DN (2.475" Dia.)				
	99-2389	1	Logo, Nameplate (Wheelhorse) Supplied by Onan	50	508-0273	1	Grommet, Air Seal – Code 17CE
38	821-0008	4	Screw, Hex Washer Head Cap (1/4-20 x 5/16")	51	150-0621	1	Nut, Acorn Governor Code 23DE, 23DC, 13CG
39	134-4560-50	1	Guard, Stationary – Painted (See Illustration) Code 23DE	52	526-0006	1	Washer, Flat (#12 Screw) Code 13BK, 13DA
40			Lever, Governor – Code 13CC	53	150-0629	1	Rod, Governor – Code 13CH
	150-2427-02	1	Zinc Plated	54	150-0639	1	Joint, Ball – Code 13CH
	150-2408-02	1	Spec B – P216, P220	55	518-0515	1	Clip, Wire – Code 13BJ, 13BK, 13CD, 13CG, 13DA
	150-2388	1	Spec C – P218	56	815-0474	1	Screw, Hex Washer Head (1/4-14 x 1/2") Code 13BJ, 13BK, 13CD, 13CG, 13DA
	150-2524-02	1	Zinc Plated – Code 13CY Begin Spec H Code 13CC	57	403-4202-02	2	Bracket Lifting
	150-2688-02	1	Miller	59			Guard, Stationary (See Illustration)
	150-2695-02	1	Lincoln, Hobart		134-4689	1	No Center Hole – Code 13BJ, 13CE, 23DE, 23DH, 23DN, 23ED, 23EJ, 23EK
	150-2524-02	1	Code 13CY		134-4689-02	1	Center Hole Dia. 3.88" Code 23DH, 23DN, 23ED, 13DA
41	150-2264	1	Bracket, Governor Adjust – Code 13CG,13BJ, 13BF	60	134-4556-01	1	Guard, Stationary (See Illustration) – Code 23DH
42	821-0010	2	Screw, Lock Head (1/4-20 x 1/2") Code 13CG, 13BJ	61	153-0632	1	Swivel, Choke Lever
43	150-0694	1	Stud, Adjusting – Code 13CG	62	800-4072	1	Screw, (Special)
44	518-0637	1	Clip, Rod End – Code 13CG	63	516-0059	1	Pin, Cotter
45	518-0004	1	Clip, Retaining – Control Rod Code 13CG, 13CH	64	526-0006	1	Washer, Flat
46	150-2460	1	Rod, Control – Code 13CG – Zinc Plated	65	517-0136	1	Plug
47	870-0131	1	Nut, Governor Adjusting Hex (W/ET 10-32) – Code 13CG				
48			Screw, Thread Cutting – Hex Head W/ET				
	815-0194	2	10-32 x 3/8"				
	815-0181	2	10-32 x 1/2"				

Oil Fill Tube and Bracket



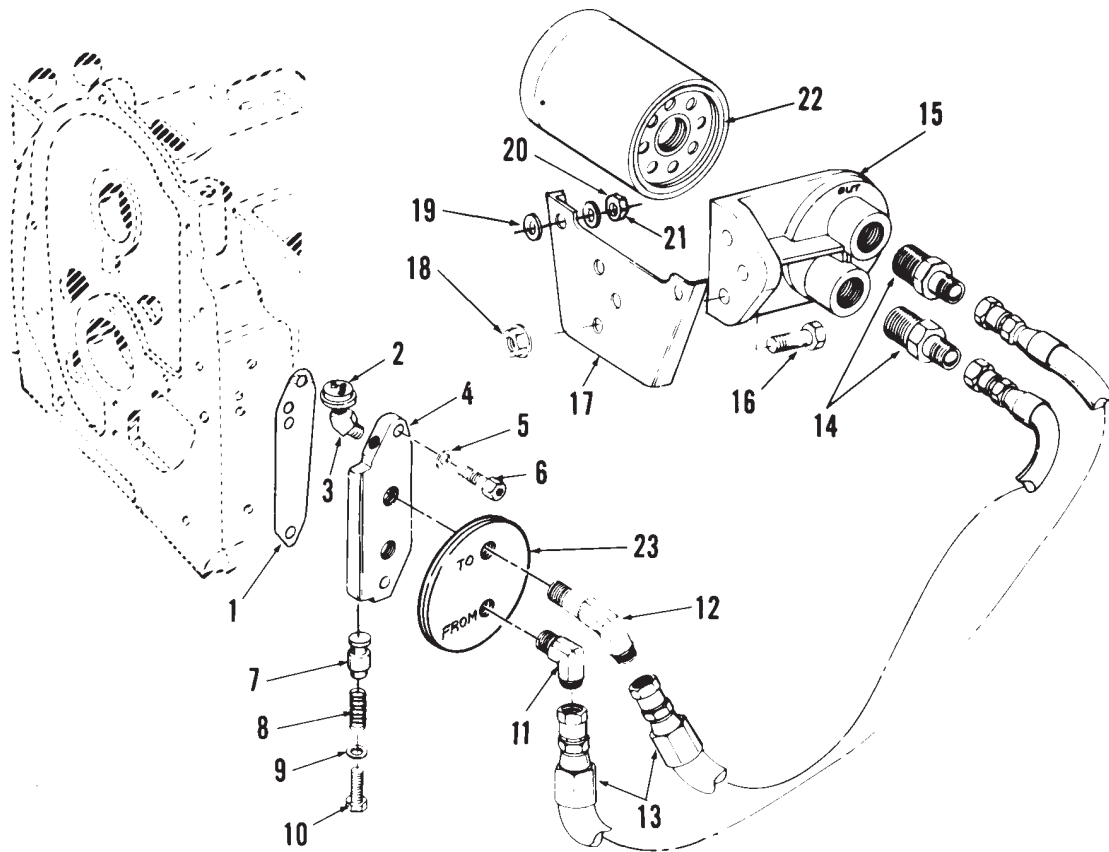
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	123-1961	1	Cap and Indicator, Twist-On Code 17BC Code 17BY	2	123-2105	1	Adapter Assy, Oil Tube (Includes O'Ring and Seal)
	123-1851-01	1	Use with Code 17CM or 17DU	3	509-0304	1	O'Ring
	123-1637-01	1	Use with Code 17BW, 17CG or 17DK (Screw-In Cap is 123-1637-00)	4	509-0142	1	Seal
	123-1880-01	1	Code 17BZ Use with Code 17DA Use with Code 17CG	5			Tube, Oil Fill With Welded Bracket Code 17CF
	123-1630-01	1	13.07" Indicator		123-1896-02	1	W/Straight Bracket
	123-1402-01	1	13.68" Indicator		123-1896-04	1	W/" Shaped Bracket
	123-1849-01	1	Use with Code 17CM		123-2117-02	1	W/" Shaped Bracket W/O Welded Bracket
	123-1402-01	1	Use with Code 17BW		123-1685-50	1	Code 17BY
			Code 17CF Use with Code 17DT		123-1718-50	1	Code 17BZ, 17CH
	123-1754-01	1	17.57" Indicator		123-1729-50	1	Code 17CF
	123-2119-01	1	16.90" Indicator	6			Screw
	123-1754-01	1	Use with Code 17BW, 17CG or 17DK		815-0576	1	Pan Head (#10 x 1-1/4")
	123-1850-01	1	Use with Code 17CM or 17DH		815-0760	1	Self-Tapping - Use with Extended Tubes
	123-1860-01	1	Use with Code 17DA	7	509-0269	1	Seal, Oil Fill Tube
	123-1630-01	1	Code 17CH	8			Bracket, Fill Tube
	123-2119-01	1	Code 17EA		123-1865-51	1	Codes 17BZ, 17CH
					123-1863-51	1	Code 17BY
				9	870-0410	1	Nut, Speed (Type U)

Oil Filter



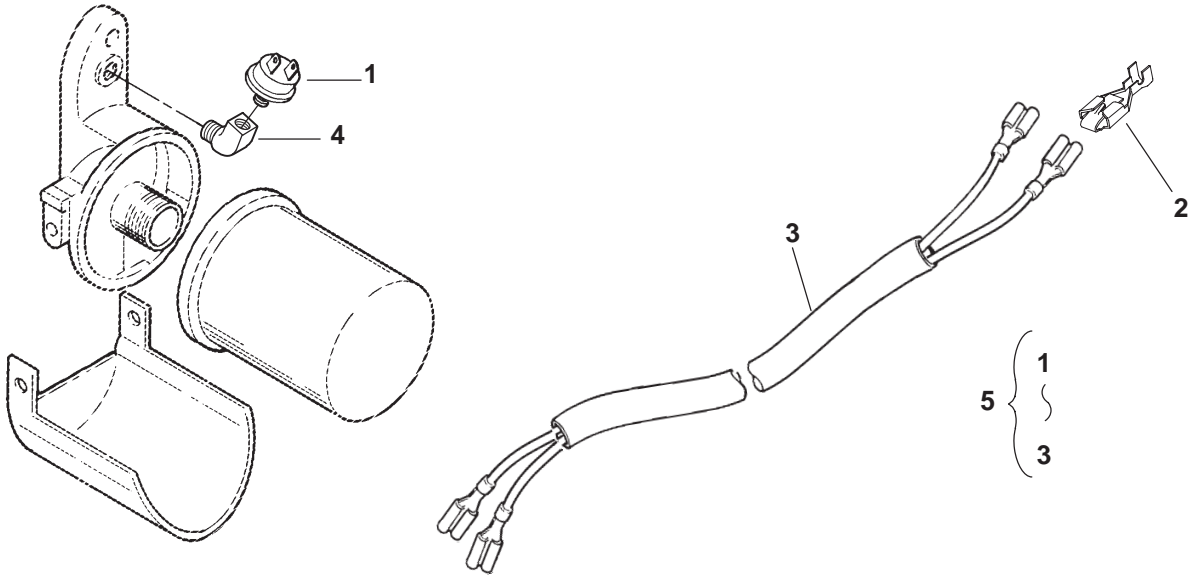
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	122-0814	1	Adapter, Oil Filter (Includes Screws)	8	501-0008	1	Line, Flex Oil
2	815-0194	2	Screw, Hex Head ET Cap (#10-32 x 3/8")	9	502-0017	1	Connector
3	526-0065	2	Washer, Copper Flat (5/16" Screw)	10	502-0020	1	Elbow, Street 90°
4	800-0028	2	Screw, Hex Head Cap (5/16-18 x 1")	11	526-0065	2	Washer, Copper Flat (5/16" Screw)
5	122-0360-50	1	Drain, Oil Filter (Painted)	12	800-0028-01	2	Screw, Hex Head Cap (5/16-18 x 1")
6	122-0771	1	Gasket, Oil Filter Adapter	13	505-0057	1	Plug, Countersunk (1/8")
7	122-0645	1	Filter, Oil	14	122-0438	1	Cover, Oil Filter Pad Code 11AZ,17CE
	122-0800	1	Without Hex Nut - Code 17CD,17DF (4-3/16" Long)	15	122-0502	1	Gasket, Oil Filter (Code 17CD,17CV,17DF,17DG)
	122-0469	1	With Hex Nut - Code 17CV (4.64" Long)	16	505-1426	1	Plug, Countersunk (1/8")
	122-0406	1	With Hex Nut - Code 17DG (3.8" Long)				

Remote Oil Filter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	122-0771	1	Gasket, Oil Filter Adapter	14	502-0804	2	Connector, Male – Code 17CJ
2	309-0641-18	1	Switch, LOPKO	15	122-0476	1	Base, Remote Oil Filter Code 17CJ
	309-0546	1	2 Terminal, Normally Open Code 17CK,35AV	16	800-0027	3	Screw, Hex Head Cap (5/16-18 x 7/8")
		1	1 Terminal, Normally Closed Code 17AS,17CJ,35AU	17	122-0559	1	Bracket, Remote Oil Filter Code 17CJ
3	502-0053	1	Elbow, Street	18	870-0257	3	Nut, Self-Lock (5/16-18")
	505-0049	1	45° – Code 17AS, 17CJ	19	526-0030	2	Washer, Flat (3/8" Screw)
	122-0369	1	90° – Code 17CK	20	526-0174	2	Washer, Flat (13/32" ID x 25/32" OD x .1345 Thk)
4	122-0369	1	Adapter, Oil Filter	21	862-0003	2	Nut, Hex (5/16-18")
5	526-0065	2	Washer, Copper Flat (5/16" Screw)	22	122-0469	1	Filter, Oil – Code 17CJ
6	802-0056	2	Screw, Socket Head Cap (5/16-18 x 1-1/4")	23		1	Grommet, Air Seal
7	120-0398	1	Plunger, Bypass		508-0249	1	W/Oil Line Holes
8	120-0140	1	Spring, Bypass Valve		508-0273	1	W/O Oil Line Holes
9	526-0066	1	Washer, Flat (3/8" Screw)		505-0057	1	Plug, Square Head – Units Without Lopko Switch (Not Shown)
10	801-0047	1	Screw, Hex Head Cap (3/8-24" x 5/8")				
11	502-0805	1	Elbow, Male (From Filter) 90°				
12	502-0806	1	Elbow, Male (To Filter) 90°				
13			Hose, Oil				
	501-0498	2	Specs A, B – Code 17CJ				
	501-0440	2	Begin Spec C – Code 17CJ				

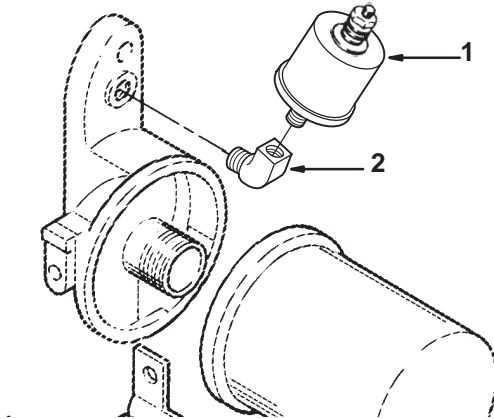
Low Oil Pressure Cut-Off Switch



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Switch, LOPKO Spec A-D	309-0646-01		1	Code 35AH, 1 Terminal – Normally Open 2.06" Long
	309-0546	1	Code 35AU, 1 Terminal – Normally Closed – 2.01" Long	309-0646-04		1	Code 35BV, 3 Terminal – One Terminal Normally Open, One Terminal Normally Closed with External Common Ground
	309-0641-18	1	Code 35AV, 2 Terminal – Normally Open – 1.87" Long	309-0661		1	Code 35DL
	309-0558	1	Code 35BW, 2 Terminal – One Terminal – Normally Open, One Terminal – Normally Closed and Internally Grounded – 2" Long	2	332-2301	2	+*Tab, Faston
	309-0641-17	1	Code 35AH, 1 Terminal – Normally Open 2.06" Long	3	338-2211	1	Harness, LOPKO Spec A-D
	309-0583	1	Code 35BV, 3 Terminal – One Terminal Normally Open, One Terminal Normally Closed with External Common Ground	3	338-3183	1	+* Begin Spec E
	309-0615	1	Begin Spec E Code 35AU, 1 Terminal – Normally Closed – 2.01" Long	4	502-0053	1	Elbow, 45° Street (Spec A-D) Code 17DF, 35AV, 35BW, 35AH, 35BV
	309-0646-02	1	Code 35AV, 2 Terminal – Normally Open – 1.87" Long	5	541-0235	1	Kit, LOPKO 1 Terminal LOPKO (Includes Parts Marked *) 2 Terminal LOPKO
	309-0646-03	1	Code 35BW, 2 Terminal – One Terminal – Normally Open, One Terminal – Normally Closed and Internally Grounded – 2" Long		541-0319	1	1 Open, 1 Closed (Includes Parts Marked +)
					541-0236	1	Both Open (Includes Parts Marked •)

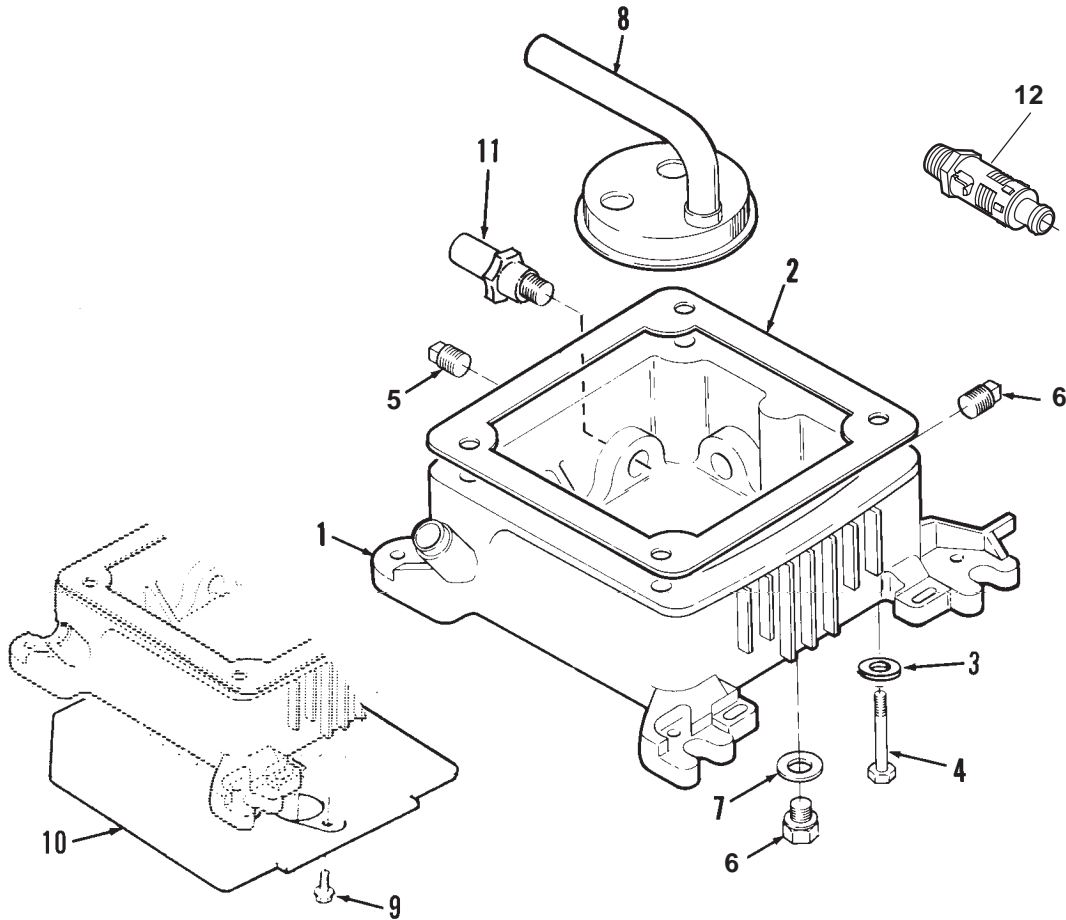
- * – Parts Included in 1 Terminal LOPKO Kit.
- + – Parts Included in 2 Terminal (1 Open, 1 Closed) LOPKO Kit.
- – Parts Included in 2 Terminal (Both Open) LOPKO Kit.

Oil Pressure Sender



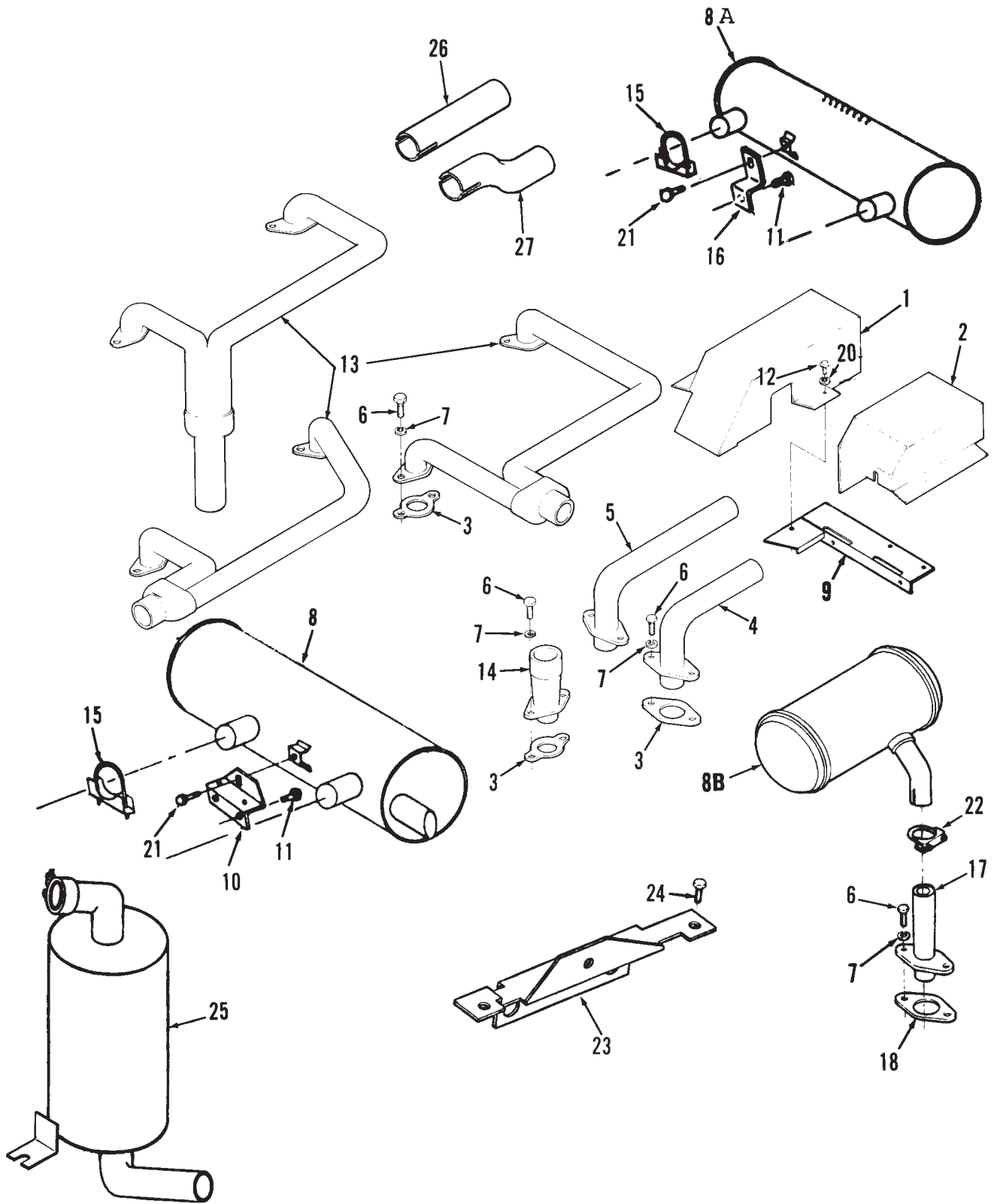
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Sender, Oil Pressure Gauge (40 P.S.I.)
	193-0389	1	Spec A-D
	309-0646-01	1	Begin Spec E
2	502-0053	1	Elbow, 45° Street

Oil Base



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Base, Oil (Includes All Plugs and Plug Gasket)	6	102-0938	1	Plug, Hex Head (Special) Code 17CM, 17DA, 17DE, 17DM
	102-1325	1	1.75 Quart – Code 17BW, 17CG, 17DE, 17DK, 17DM, 17DT	7	102-0743	1	Gasket, Hex Head Plug – Code 17CM, 17DA, 17DE, 17DM
	102-1338	1	2.5 Quart – Multi Drain Code 17CM, 17DH, 17DL, 17DU	8			Cup, Oil Pump Intake
	102-1286	1	4 Quart – Code 17BC	120-0713	1		Code 17BW, 17CG, 17DE, 17DK
	102-1384	1	3 Quart – Code 17DA	120-1215	1		Code 17CM, 17DH, 17DL
2	102-1387	1	Gasket, Oil Base	120-1230	1		Code 17DA
3	526-0251	4	Washer, Flat (3/8" Screw)	123-1616	1		Code 17BC
4			Screw, Hex Head Cap	9	815-0340	2	Screw, Hex Washer Head (10-32 x 3/8") – Code 23DV
	800-0061	4	(3/8-16 x 3-3/4") Code 17BW, 17CG, 17DE, 17DK	10	134-3864-50	1	Baffle, Oil Base Code 23DV
	800-0200-01	4	(3/8-16 x 5-3/4") Code 17CM, 17DH, 17DL	11	309-0625	1	Switch, Oil Temperature – Open 345° – Code 17DE, 17DM
	800-0302	4	(3/8-16 x 5-1/2") Code 17DA	12	504-0186	1	Valve, Shutoff
	800-0058	4	(3/8-16 x 3") Code 17BC				
5			Plug, Square Head (3/8")				
	505-0110	2	Code 17BW, 17CG, 17CM, 17DA				
	505-0110	1	Code 17DE, 17DH, 17DM				
	505-1475	1	Code 17DK, 17DL				

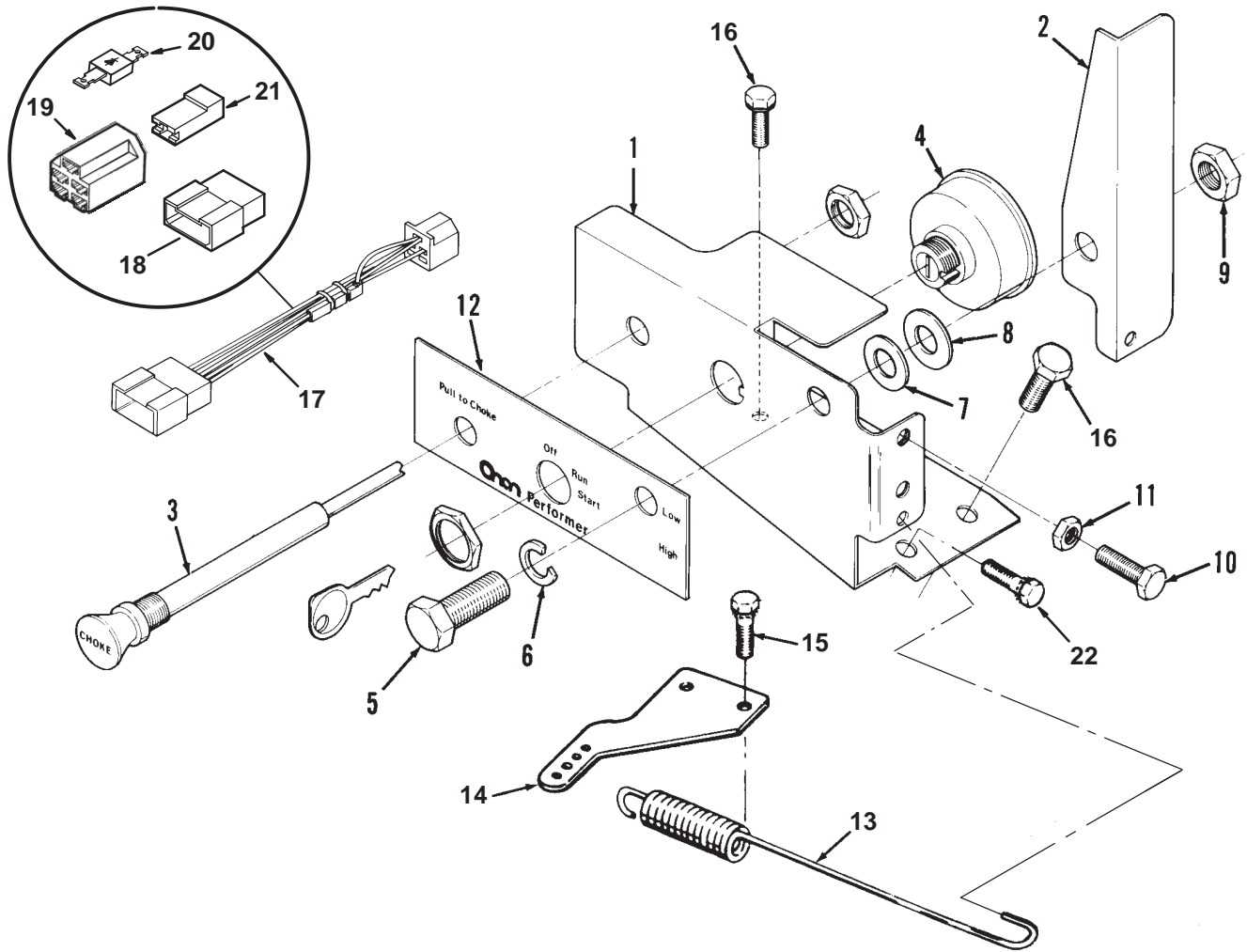
Exhaust System



Exhaust System

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	134-4254-50	1	Cover, LH Exhaust Tube Code 21AW, 21BE, 21BH, 21BJ, 21BM – Painted	11	821-0029	2	Screw, Lock Head (3/8 x 3/4") Code 21BF – Use with Muffler – 155-2320
	134-3891-50	1	Code 21CE, 21BB – Painted		821-0029	1	Use with Muffler #155-2255, 155-2321
	134-4672-50	1	Code 21BF – Painted				
2	134-4655-50	1	Cover, RH Exhaust Tube Painted – Code 21BB, 21BE, 21BF, 21BH, 21BM, 21BW, 21CE	12	821-0009	2	Screw, Hex Washer Self-Lock Head (1/4-20 x 3/8") – Code 21BB, 21BE, 21BM, 21BH
3	154-2746	2	Gasket, Exhaust	13	154-2178-50	1	Manifold, Exhaust Rear Right Down
4	154-2343-50	1	Adapter, RH Exhaust 1-1/4" OD Outlet – Painted Code 21AW, 21BE, 21BJ, 21BM		154-2243-50	1	Rear Outlet
	154-2128-50	1	1-1/4" OD Outlet – Painted Code 21BB, 21BD, 21CE		154-2613-50	1	Right Outlet
	154-2709	1	1.405" OD Outlet Code 21BF		541-0377	1	Crossover – Code 21BG, 21BH, 21CA
5	154-2344-50	1	Adapter, LH Exhaust 1-1/4" OD Outlet – Painted Code 21AW, 21BE, 21BJ, 21BM	14	154-1958-50	2	Adapter, Exhaust (Flange Type) – Code 21AG (1.28" OD Tapers to 1.13"OD, 4-1/2" Long)
	154-2129-50	1	1-1/4" OD Outlet – Painted Code 21BB, 21BD, 21CE	15	155-1257	2	Clamp, Muffler – (1-3/8" Dia)
	154-2710	1	1.405" OD Outlet Code 21BF	16	155-2302-01	1	Support, Muffler – Use with Muffler 155-2255, 155-2321
6	800-0026	4	Screw, Cap Hex Head (5/16-18 x 3/4")	17	154-2713-50	2	Adapter, Exhaust Manifold – Painted – (1.12" OD, 4-1/4" Long) Code 21AG, 21BZ
7	850-0045	4	Washer Lock 5/16" – Code 21BJ, 21BK, 21BW	18	154-2746	2	Gasket, Exhaust Manifold
	740-1006	4	Flat (M8) – All Others	19	800-0512	4	Screw, Hex Head Cap (5/16-18 x 1")
8	155-2320	1	Muffler, Exhaust – 16.55" Long	20	850-0045	2	Washer, Lock – Code 21BH (3/8")
8A			Muffler, Exhaust – 2 Inlets Mounts Horizontal	21	821-0014	1	Screw, Lock Head (5/16-18 x 1/2")
	155-2255	1	Rear, Center Exhaust – 15" Long	22	155-1256	2	Clamp, Muffler (1-1/8")
	541-0379	1	End, Discharge Tube – (Kit) 16" Long – P216, P220	23	155-2264-50	1	Bracket, Muffler Support – Code 21BF – Painted
8B	155-2300	2	Muffler (Use in Pairs) – Use With Adapter 154-2713	24	821-0008	2	Screw, Lock Head (1/4-20 x 5/16") Code 21BF
9			Support, Exhaust Cover Code 21BB – Painted	25	155-2521	1	Muffler, Exhaust – Single Inlet – Mounts Vertically
	134-4983-50	1	Code 21BH, 21BE – Painted	26	154-2840	1	Tube, Exhaust – Straight Use with Muffler Kit 541-0379
	134-4445-50	1	Code 21BF, 21BM – Use with Muffler 155-2320 – Painted	27	154-2841	1	Tube, Exhaust – Offset – Use with Muffler Kit 541-0379
10	155-2329-50	1	Bracket, Muffler Support – Code 21BF, 21BM – Use with Muffler 155-2320 – Painted				

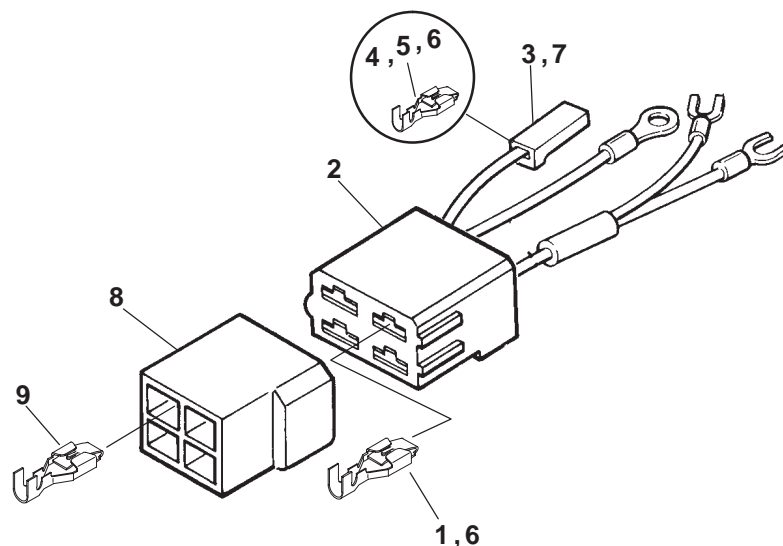
Control Panel



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	301-9964-51	1	Panel, Control	15	815-0194	3	Screw, ET Hex Head Thread Cutting (10-32 x 3/8")
2	150-2184	1	Lever, Control	16	821-0009	2	Screw, Hex Washer Head Self-Lock (1/4-20 x 3/8")
3	153-0606	1	Choke, Manual	17	338-3689	1	Harness, Control With LOPKO (Includes Parts Marked *)
4	308-0385	1	Switch, Ignition (Includes Keys)	338-3690	1	Without LOPKO (Includes Tab Housing Connector and 5 Pin Connector Body)	
5	800-0050	1	Screw, Hex Head Cap (3/8-16 x 1")	18	323-0916	1	*Connector, Tab Housing
6	851-0029	1	Washer, Lock (3/8")	19	323-0987	1	*Body, Connector (5 Pin)
7	526-0029	1	Washer, Flat (3/8" Screw)	20	357-0030	1	*Rectifier, Silicon
8	508-0284	1	Washer, Nylon Flat (3/8" Screw)	21	323-1216	1	*Body, Connector (Single Pin)
9	870-0297	1	Nut, Lock (3/8-16)	22	815-0378	1	Screw, Hex Washer Head (#14 x 1/2")
10	815-0650	2	Screw, Hex Washer Head (1/4-20 x 1")				
11	862-0001	2	Nut, Hex (1/4-20)				
12	98-5735	1	Decal, Control Panel				
13	150-1755	1	Spring, Governor Return				
14	150-1754-01	1	Adapter, Governor Arm Zinc Plated				

* - Parts Included in Control Harness.

Engine Harness (Code 35BB, 35BD, 35BH, 35CG)



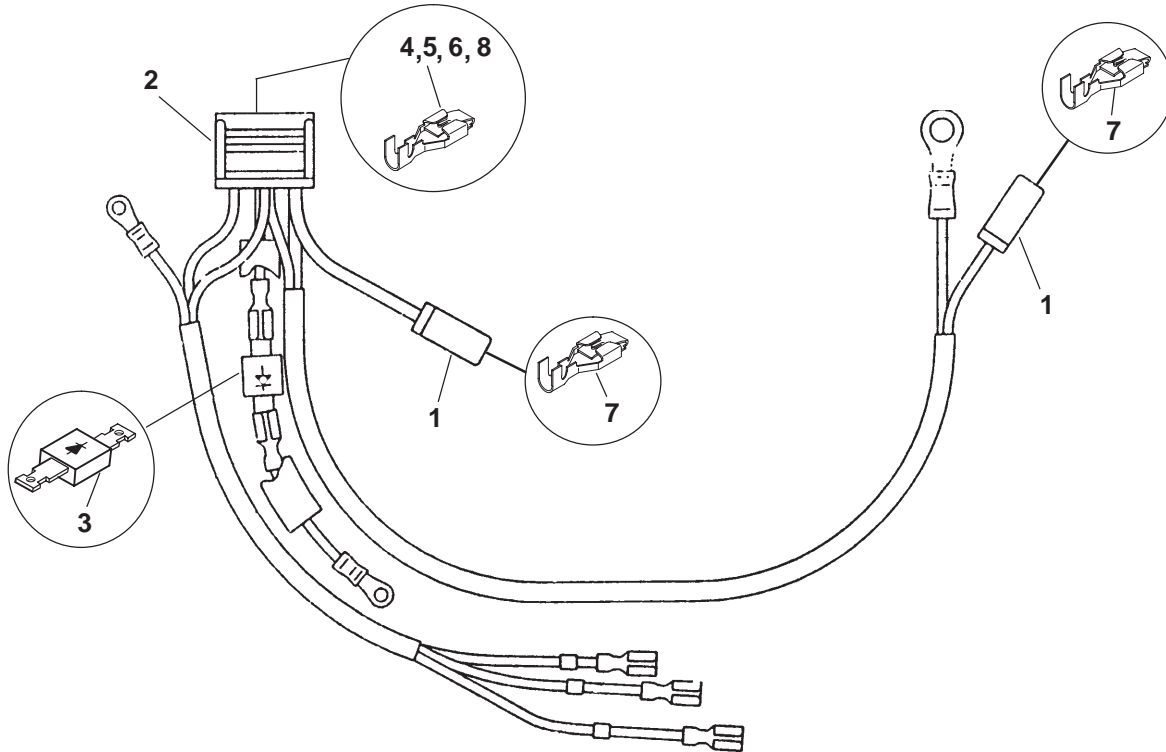
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Harness, Engine	1	332-2890	4	•+Terminal, Tab
338-2390		1	W/O LOPKO (2 Wire, 4 Pin) (Code 35BB, 35CG) (Includes Parts Marked *)	2	323-1381	1	*•+Housing, 4-Way Receptacle
			With LOPKO (4 Wire, 4 Pin) Spec A-D	3	323-1216	1	•+Housing, Receptacle
			Code 35BD	4	332-2870-02	1	+Terminal, Receptacle (.25)
			14-15" LOPKO Leads (Includes Parts Marked *)	5	332-2870-01	3	•Terminal, Receptacle (.25)
			24-25" LOPKO Leads (Includes Parts Marked +)	6	332-2715	AR	*Terminal, Receptacle (Qty 2,4,5)
338-2075		1	Code 35BB, 35BH (Includes Parts Marked *)	7	332-0819	1	*Housing, Receptacle
			Begin Spec E	8	323-1382	1	Housing, 4-Way Tab
			Code 35BD	9			Terminal, Tab
			15-16" LOPKO Leads (Includes Parts Marked *)		332-2301	4	20A Charging System
338-2162		1	5" VR Lead		332-1503	1	35A Charging System
338-2075		1	14" VR Lead				
			25-26" LOPKO Leads				
338-3179		1	11" VR Lead (Includes Parts Marked +)				
338-3358		1	22" VR Lead (Includes Parts Marked •)				
338-3181		1	Code 35BB, 35BH (Includes Parts Marked *)				
338-3357		1					
338-3179		1					

* - Parts Included in Harness 338-2390, 338-2075, 338-3179, 338-3358.

+ - Parts Included in Harness 338-2162, 338-3181.

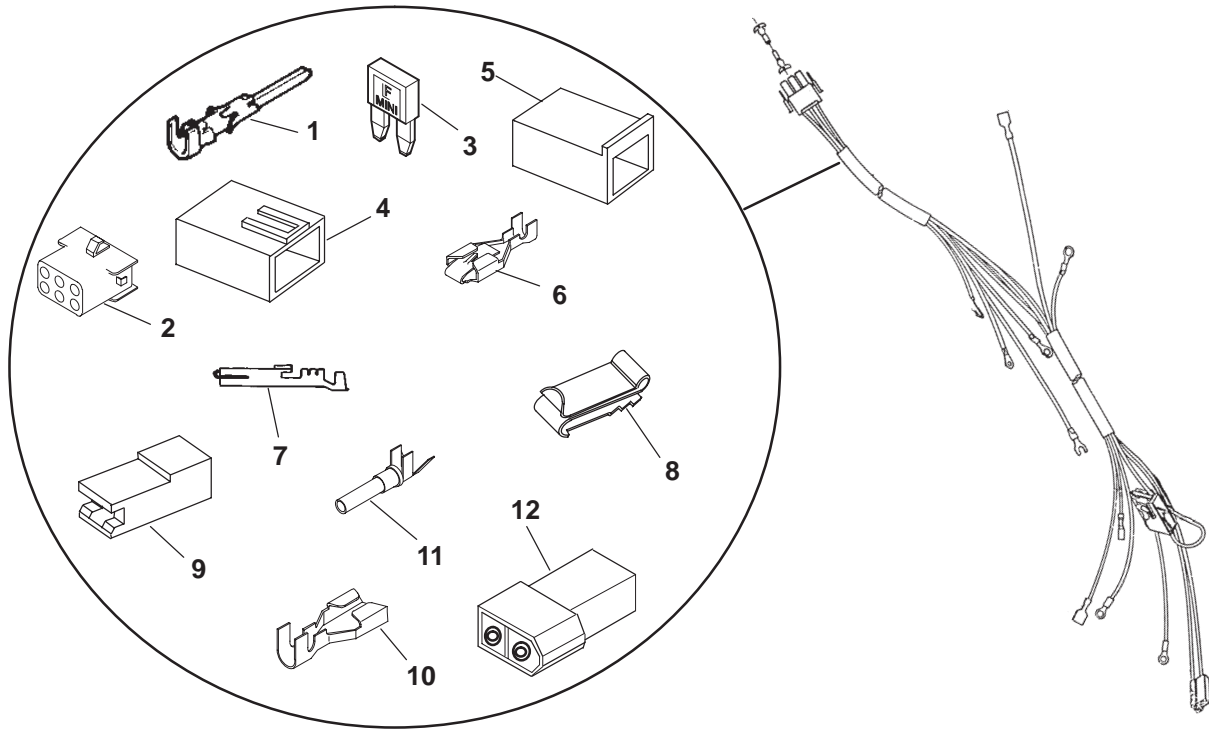
• - Parts Included in Harness 338-3357.

Engine Harness (Code 35BC, 35BZ, 35CC, 35CH, 35CJ, 35DB)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Harness, Engine	1	332-0819	2	+*Housing, Receptacle
			With LOPKO	2			Housing, 6-Way Receptacle
			Spec A-D (Code 35BC, 35BZ)		323-1386	1	+• Code 35CC
					323-0987	1	* Code 35BC, 35BZ
338-2104-02		1	W/O Rectifier (Includes Parts Marked +)	3	357-0030	1	*•Rectifier, Silicon
338-2805		1	W/Rectifier (Includes Parts Marked *)	4	332-2073	1	*Receptacle, Lock
			Begin Spec E	5	332-3165	1	*Receptacle, Lock
338-3178-02		1	Code 35BC, 35BZ, 35CH (W/O Rectifier) (Includes Parts Marked +)	6	332-3143	1	*Receptacle, Lock
338-3186		1	Code 35BC, 35BZ, 35DB (W/Rectifier) (Includes Parts Marked *)	7	332-2715	2	+*Terminal, Receptacle
			Without LOPKO	8	332-2890	5	+•Terminal, Receptacle
			Spec A-D				
338-2104-01		1	Code 35BL, 35CH, 35CJ (Includes Parts Marked +)				* - Parts Included in Harnesses 338-2805, 338-3186.
338-2804-01		1	Code 35CC (Includes Parts Marked •)				• - Parts Included in Harnesses 338-2804-01, 338-3185-01.
			Begin Spec E				+ - Parts Included in Harnesses 338-2104-01, 338-2104-02, 338-3178-01, 338-3178-02.
338-3178-01			Code 35BC, 35BZ, 35CH, 35CJ (Includes Parts Marked +)				
338-3185-01		1	Code 35CC (Includes Parts Marked •)				

Engine Harness (Code 35BE)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
		1	Harness, Engine	1	323-1200	*6	#•+ Socket, Contact
			Spec A-D	2	323-1317	1	#•+ Plug, Connector (6 PI)
338-2216		1	W/30A Blade Fuse (Includes Parts Marked +)	3	321-0291	1	+ Fuse, 30A Blade
338-2843		1	W/O Fuse (Includes Parts Marked #)	4	323-1424	1	+ Cap, Connector
			Spec E-G	5	332-0819	1	+ Housing, Receptacle Terminal
338-3192		1	W/30A Blade Fuse (Includes Parts Marked +)	6	332-2715	1	+ Terminal, Receptacle
338-3193		1	W/O Regulator Lead (Includes Parts Marked #)	7	332-2922	2	+ Terminal, Receptacle
338-3194		1	W/Oil Temp Switch Lead (Includes Parts Marked #)	8	332-2923	1	+ Clip, Connector
338-3325		1	W/Ground Lead (Includes Parts Marked •)	9	323-1216	*2	#• Housing, Receptacle
			Begin Spec H	10	332-2870-01	*4	#• Terminal, Receptacle (.25)
338-3551		1	W/30A Blade Fuse (Includes Parts Marked +)	11	323-1679	2	• Socket, Contact
338-3552		1	W/O Fuse (Includes Parts Marked #)	12	323-1697	1	• Plug (2 Cir)

* - Use As Needed.

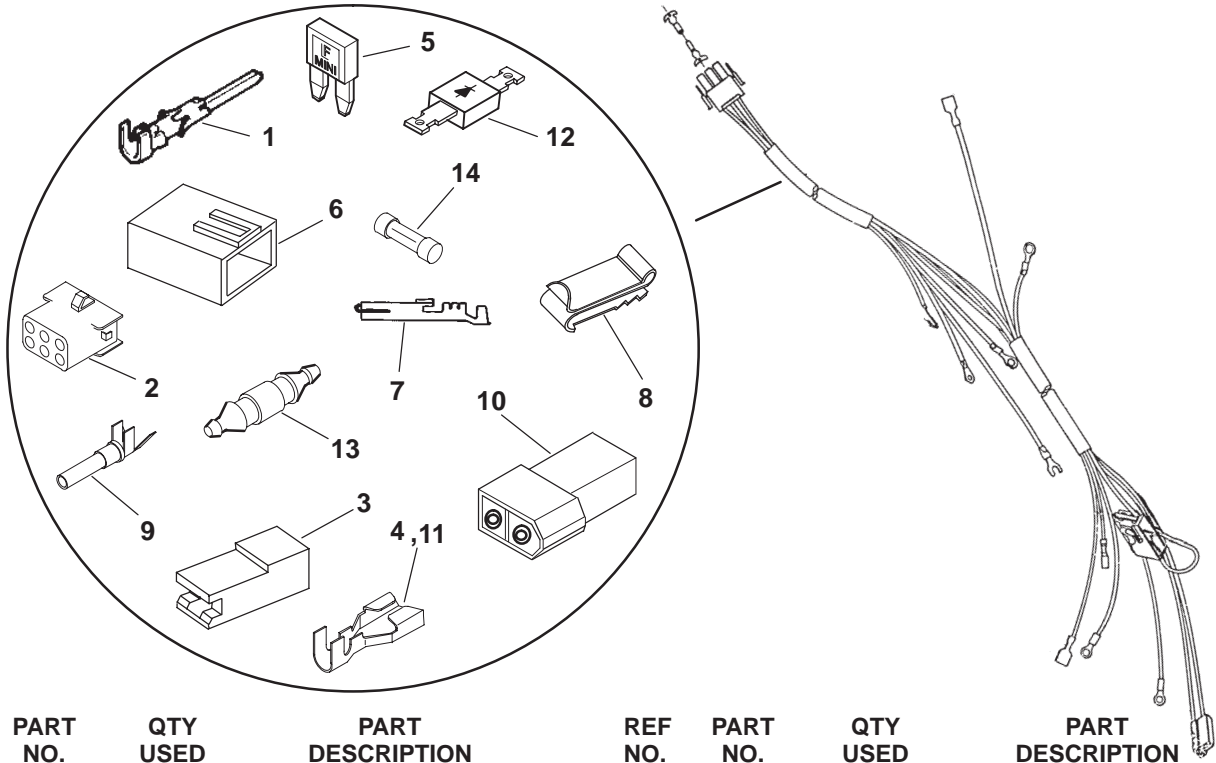
+ - Parts Included in Harness 338-2216 and 338-3192.

- Parts Included in Harness 338-2843, 338-3193, 338-3194 and 338-3552.

• - Parts Included in Harness 338-3325.

♦ - Parts Included in Harness 338-3551.

Engine Harness (Code 35CL,35CV 35DD, 35DE, 35DJ)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Harness, Engine	1	323-1200	*6	#Socket, Contact
			Spec A-D	2	323-1317	1	#Plug, Connector (6 PI)
338-3086		1	Code 35CV (Includes Parts Marked # and +)	3	323-1216	*2	#Housing, Receptacle
338-2844		1	Code 35CL (Includes Parts Marked #)	4	332-2870-01	*4	#Terminal, Receptacle (.25)
			Spec E-G	5	321-0291	1	~Fuse, 30A Blade
338-3195		1	Code 35CV 13" Starter B+ Lead (Includes Parts Marked # and +)	6	323-1424	1	~Cap, Connector
338-3325		1	15" Starter B+ Lead (Includes Parts Marked # and +)	7	332-2922	2	~Terminal, Receptacle
338-3421		1	Code 35DE (Includes Parts Marked # and •)	8	332-2923	1	~Clip, Connector
338-3505		1	Code 35DJ (Includes Parts Marked # and ~)	9	323-1679	2	◇~•+Socket, Contact
338-3420		1	Code 35DD (Includes Parts Marked # and J)	10	323-1697	1	◇~•+Plug (2 Cir)
			Begin Spec H	11	332-2870-02	2	◇J~•Terminal, Receptacle (.25)
338-3556		1	Code 35DD W/O Grd Wire (Includes Parts Marked # and J)	12	357-0030	1	◇J~•Rectifier, Silicon
338-3642		1	W/Grd Wire (Includes Parts Marked # and J)	13	321-0362	1	◇Holder, Fuse
338-3589		1	Code 35DJ W/30A Blade Fuse (Includes Parts Marked # and ~)	14	321-0364	1	◇Fuse, 30A Cartridge
338-3653		1	W/30A Cartridge Fuse (Includes Parts Marked # and ◇)				
338-3653		1	Code 35DE (Includes Parts Marked # and ◇)				

* - Use As Needed.

+ - Parts Included in Harness 338-3086, 338-3195 and 338-3325.

- Parts Included in All Harness Listed on This Page.

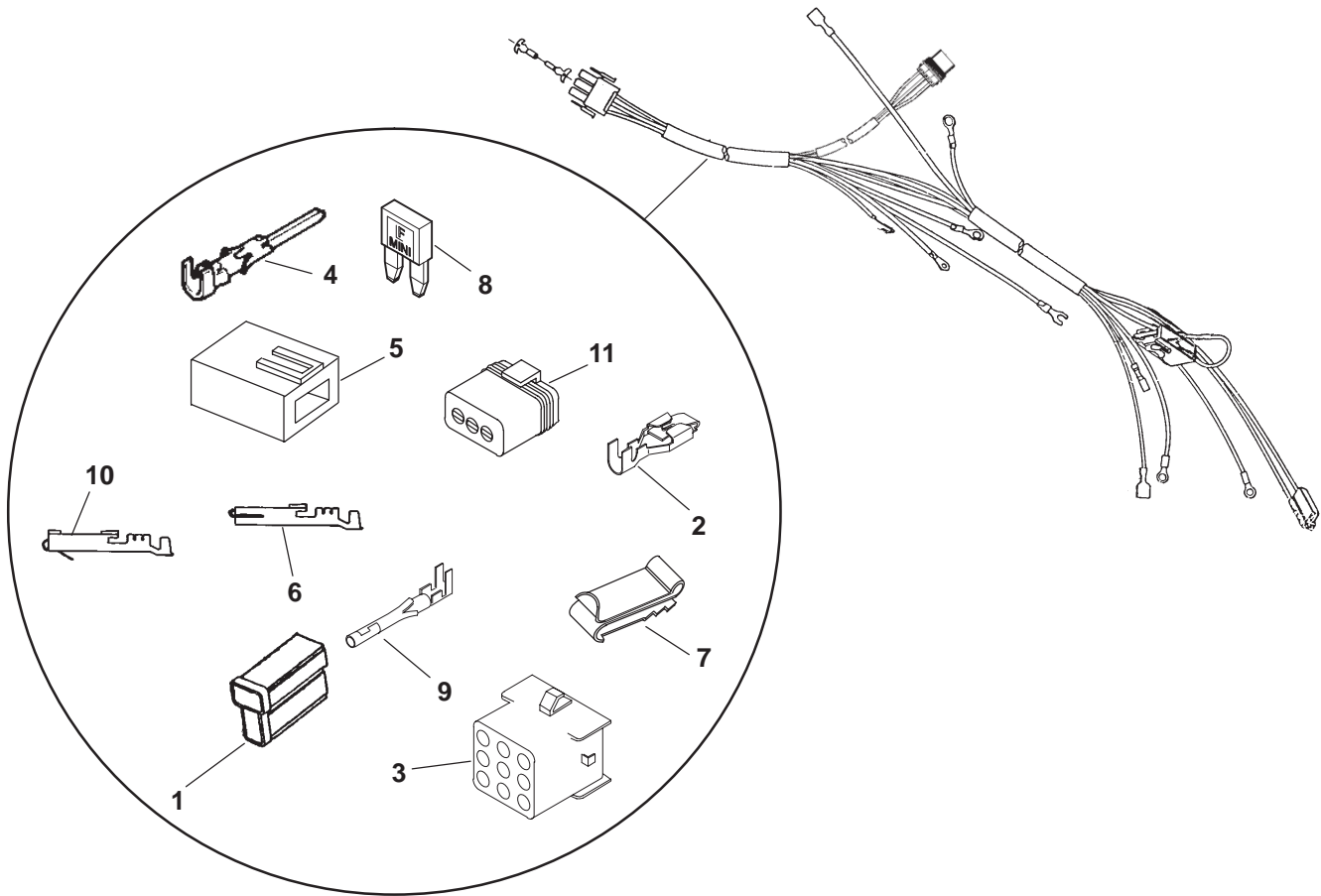
• - Parts Included in Harness 338-3421.

~ - Parts Included in Harness 338-3505 and 338-3589.

J - Parts Included in Harness 338-3420, 338-3556 and 338-3642

◇ - Parts Included in Harness 338-3653.

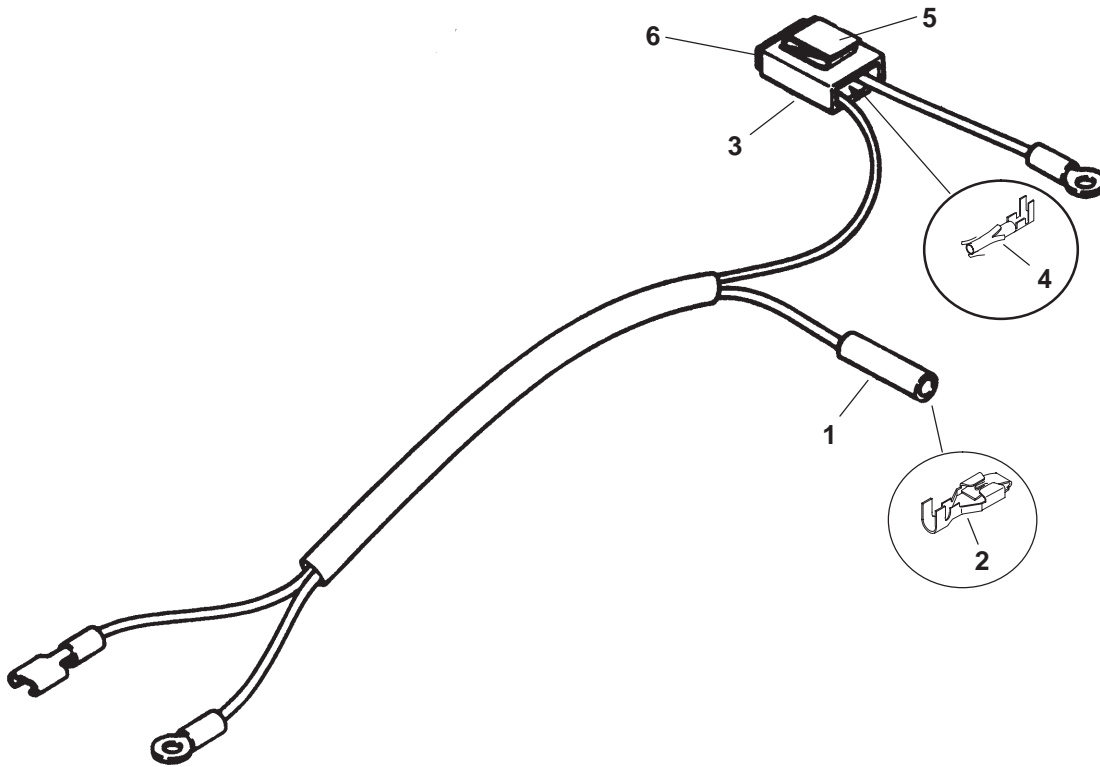
Engine Harness (Code 35BK)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Harness, Engine	5	323-1424	1	*Cap, Connector
	338-2175	1	Spec B (Includes Parts Marked *)	6	332-2922	2	*Terminal, Receptacle
	338-2504	1	Spec C, D (Includes Parts Marked +)	7	332-2923	1	*Clip, Connector
	338-3191		Spec E-G (Includes Parts Marked +)	8	321-0291	1	*Fuse, 30 Ampere
	338-3631		Begin Spec H (Includes Parts Marked •)	9	323-1199	9	Pin, Contact
1	323-1085	1	+*Connector, Male	10	332-3096-01	3	•Socket, Terminal
2	332-2073	1	+*Terminal, Lock - Receptacle	11	323-1774	1	•Connector, Sealed
3	323-1291	1	+*Cap, Connector				
4	323-1200	9	+*Socket, Contact				

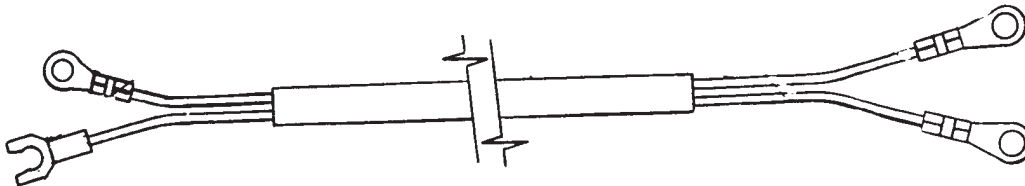
* - Parts Included in Spec B Harness.
+ - Parts Included in Spec C-G Harnesses.
• - Parts Included in Spec H Harness.

Engine Harness (Code 35BJ)



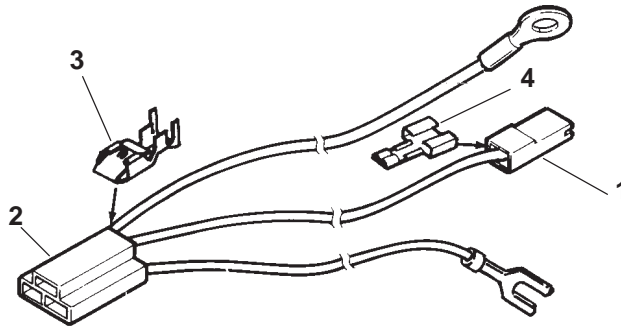
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	338-2259	1	Harness, Engine	4	332-2922	2	Terminal, Receptacle
1	323-1296	1	Connector, Male	5	332-2923	1	Clip, Connector
2	332-2073	1	Terminal, Receptacle Lock	6	321-0291	1	Fuse, 30A
3	323-1424	1	Cap, Connector				

Engine Harness (Code 35AZ)



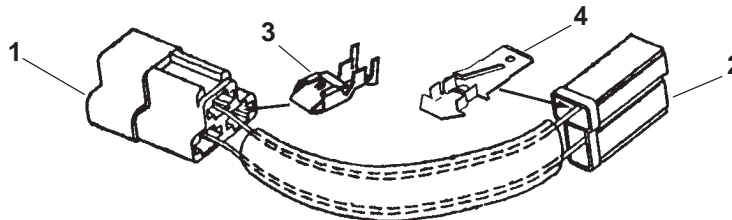
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	338-2516	1	Harness, Engine

Interface Harness (Code 35AW)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	338-2638	1	Harness, Interface (3 Pin) Spec A-D (Includes Connectors)	1	323-1216	1	Connector, Body
	338-3180	1	Begin Spec E (Includes Connectors and Terminals)	2	323-1254	1	Connector, Body
				3	332-2073	3	Terminal, Lock Receptacle
				4	332-2423	1	Terminal, Receptacle

Interface Harness (Code 47AW)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	338-2174	1	Harness, Wiring	3	332-2073	2	Terminal, Lock Receptacle
1	323-1417	1	Body, Connector	4	332-2238	2	Terminal, Tab
2	323-0892	1	Body, Connector				

Labels, Paint, Thread Sealant and Gasket Kits

98-6802-01	3	Label, Performer – P216 (Red and White)	110-3709	3	+Gasket, Valve Box
		Label, Model Ident	110-3181	2	+Gasket, Cylinder Head
98-6802-01	2	P216	154-2746	2	+Gasket, Exhaust Manifold
98-6802-02	2	P218	154-2495	2	+Gasket, Intake Manifold
98-6802-03	2	P218	509-0289	2	+Seal, Valve Stem
98-6664	1	Label, Air Cleaner – Maintenance	168-0187	1	Kit, Gasket – Complete Engine (Includes Parts Marked #)
		Label, Periodic – Maintenance	101-0809	1	#Gasket, Rear Bearing Plate
98-5969-01	1	Standard Oil Base – No Oil Filter	102-0743	1	#Gasket, Oil Drain
		Standard Oil Base – With Oil Filter	103-0810	1	#Gasket, Gearcase
98-5969-02	1	Standard Oil Base – With Oil Filter	110-3709	3	#Gasket, Valve Box
98-5969-03	1	High Capacity Oil Base – With Oil Filter	110-3181	2	#Gasket, Cylinder Head
98-5969-04	1	Extra High Capacity Oil Base with Oil Filter	120-0161	1	#Gasket Kit, Oil Pump
518-0452	1	Sealant, Thread (50cc Bottle)	122-0771	1	#Gasket, Oil Filter Adapter
518-0347	1	Loctite, Bottle (250cc)	154-0733	1	#Gasket, Adapter to Carburetor
525-0305	1	Paint, Enamel Touch-Up Green (Non-Metallic) 13 Ounce Pressurized Can	154-2495	2	#Gasket, Intake Manifold
525-0454	1	Paint, Enamel Touch-Up Greige – 13 Ounce Pressurized Can	154-2746	2	#Gasket, Exhaust Manifold
525-0394	1	Paint, Enamel – Touch-Up – Flat Black – 16 Ounce Pressurized Can	160-1368	1	#Gasket, Breaker Box
525-0614	1	Paint, Enamel – Forest Green 3 oz. Pressurized Can	509-0008	1	#Seal, Oil (Governor Shaft)
168-0189	1	Kit, Gasket – Carbon Removal (Includes Parts Marked +)	509-0040	1	#Seal, Oil (Gearcase)
			509-0041	1	#Seal, Oil (Bearing Plate)
			509-0142	1	#O-Ring (Oil Fill Cap)
			509-0145	1	#O-Ring (Air Cleaner to Carburetor)
			509-0289	2	#Seal, Valve Stem
			102-1387	1	#Gasket, Oil Base
			509-0269	1	#Seal, Fill Tube

+ – Parts Included in Carbon Removal Gasket Kit.

– Parts Included in Complete Engine Gasket Kit.

Sales Option Code Table

<u>SPEC NO.</u>	<u>10461</u>	<u>10462</u>	<u>10463</u>	<u>10464</u>	<u>10478</u>	<u>10482</u>	<u>10488</u>	<u>10498</u>	<u>10501</u>	<u>10502</u>	<u>10509</u>	<u>10518</u>	<u>10528</u>
	11AH	11AH	11AH	11AH	11AH	11AH	11AK	11AH	11AH	11AP	11AH	11AH	11AH
	11AV	11AV	11AV	13BG	11AV	11AV	11AV	11AV	11AV	11BK	11AU	11BG	11AU
	13BG	11BJ	13BG	13BJ	11BH	11BG	13BJ	13BK	13BK	13CB	13BN	13CB	13BJ
	13BN	13BG	13BJ	13BY	13CB	11BK	13BP	13BM	13BN	15BD	13CG	13CC	13BM
	13BJ	13BJ	13BY	15BA	13CC	13BN	13BZ	13BY	13BW	15BK	15BD	13CG	13BV
	13BV	13BY	15BA	15BD	13CG	13BY	15BD	15BD	15BD	15BL	15BK	15BD	15BB
	15AZ	15BA	15BD	15BK	15AZ	13CD	15BK	15BJ	15BJ	17BW	15BL	15BK	15BD
	15BD	15BD	15BK	17BW	15BD	15AZ	15BL	15BL	15BL	17BZ	17BW	15BL	15BK
	15BK	15BK	17BY	17BY	15BK	15BD	17BY	17BW	17BZ	17CD	17BZ	17BW	17BW
	15BL	17BW	17CG	17CE	15BR	15BJ	17CD	17BY	17CD	19AS	17CD	17BZ	17BY
	17BW	17BY	17CJ	19AS	17BW	17CD	17CG	17CD	17CG	23DC	19AS	17CE	17CE
	17BY	17CD	19AU	21AW	17BY	17CG	19AV	19AU	19AS	31AY	23DC	19AW	19AW
	17CD	19AS	21AW	23DC	17CD	17CH	21AW	23DC	21AZ	31AZ	31AY	23DC	23DC
	19AS	21AW	23DC	23EL	19AS	19AV	23DC	23DH	23DC	33AT	31BC	23DE	31AY
	21AW	23DC	23DJ	31AY	23DC	23DC	31AY	23DJ	31AY	35AH	33AT	31AY	31BD
	23DC	23DJ	31AY	31AZ	23DE	31AY	31AZ	31AY	31AZ	45BS	45BB	31AZ	33AT
	23DK	31AY	31AZ	33AS	31AY	31BD	33AT	31AZ	33AT	47AK	47AG	33AT	45BB
	23DV	31AZ	33AT	35AU	31AZ	33AT	35AU	33AT	45BH			35AV	47AB
	31AY	33AS	35AU	35AW	33AT	45BP	35BB	35AU	47AG			35BC	
	31AZ	35AU	35AW	45BD	35AV	45BW	45BB	35BB				45BH	
	33AT	35AW	45BD	47AG	35BD	47AG	47AR	45BU				47AG	
	35AU	45BD	47AL	47AL	45BG		47BA	47AG					
	35AW	47AL	47AR		45BV		47BB						
	45BB	47AR			47AB								
	47AG												

<u>SPEC NO.</u>	<u>10530</u>	<u>10531</u>	<u>10538</u>	<u>10539</u>	<u>10540</u>	<u>10541</u>	<u>10543</u>	<u>10550</u>	<u>10551</u>	<u>10552</u>	<u>10556</u>	<u>10557</u>	<u>10558</u>
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	11AV	11AV	11AW	11AW	11AW	11AW	11AW	11AV	11AV	11BE	11AV	11AV	11AV
	11BG	11BG	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	11AV	11BG	11PP	13CB
	13BJ	13BJ	13BV	13BV	13BV	13BV	13BN	13BM	13BN	13BJ	11PP	13CF	13CC
	13BN	13BN	13CR	13CR	13CR	13CR	13BZ	13BY	13BV	13BN	13CB	13CG	13CG
	13BV	13BV	15BD	15BD	15BD	15BD	15BD	15BA	15BD	13BV	13CC	13CH	15BD
	13CC	15BD	15BJ	15BJ	15BJ	15BJ	15BJ	15BD	15BK	15BD	13CG	15AZ	15BK
	13CG	15BK	15BL	15BL	15BL	15BL	15BL	15BJ	15BL	15BK	15AZ	15BD	15BL
	15BD	15BL	17BW	17BW	17BW	17BW	17BW	17BY	17BZ	15BL	15BD	15BK	17BW
	15BK	17BZ	17BY	17BY	17BY	17BY	17BY	17CG	17CD	17BZ	15BK	15BL	17CD
	15BL	17CD	17CE	17CD	17CD	17CD	17CD	17CK	17CG	17CD	17BW	17BW	17CF
	17BZ	17CG	19AS	19BA	17CN	19AU	19AU	19AV	19AS	17CG	17CD	17CD	19AS
	17CD	19AS	23DC	23DC	19BA	19BC	23DC	21AW	23DC	19AS	17CF	17CF	19BB
	17CG	23DC	23DN	23DN	19BB	23DC	31AY	23DC	31AY	23DC	19AS	19AS	23DC
	19AS	31AY	31AY	31AY	19BC	23DN	31AZ	23DH	31AZ	31AY	19BB	19BB	23DN
	23DC	31AZ	31AZ	31AZ	23DC	31AY	33AT	23DJ	33AT	31AZ	23DC	23DC	31AY
	31AY	33AT	33AT	33AT	23DN	31AZ	35BJ	23ED	35BC	33AT	23DJ	23DE	31AZ
	31AZ	35BC	35AU	35AU	31AY	33AT	45BB	31AY	45BT	35BC	23DN	31AY	33AT
	33AT	35CH	35BK	35BK	31AZ	35AU	47AR	31AZ	47AA	35CH	31AY	31AZ	35AV
	35BC	45BE	45BB	45BB	33AT	35BK		33AT	47AG	45BS	31AZ	33AT	35BE
	45BB	45BW	47AR	47AR	35AU	45BB		35AU			33A5	35AV	45BH
	45BW				35BK	47AR		35BH			35AV	35BE	47AG
	47AA				35BL			45BH			33AT	45BH	
	47AG				45BB			47AL			35AV		
					47AR			47AR			35BE		
								47BA			45BH		

Sales Option Code Table

<u>SPEC NO.</u>	<u>10559</u>	<u>10560</u>	<u>10561</u>	<u>10562</u>	<u>10563</u>	<u>10590</u>	<u>10596</u>	<u>10601</u>	<u>10605</u>	<u>10606</u>	<u>10608</u>	<u>10626</u>	<u>10630</u>
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	11AV	11AV	11AV	11AV	11AV	11AU	11AV	11AV	11AV	11AV	11AV	11AV	11AV
	13BJ	13BM	13BK	13BJ	11BG	13BM	13BJ	13BR	13BJ	13BK	11BJ	11BG	11BG
	13BN	13CG	13BP	13BM	13BN	13BV	13BN	13BV	13BN	13BM	13BG	13BJ	11PP
	13BZ	15BD	13BV	13BV	13BV	13CG	13BV	13CD	13BV	13BY	13BY	13BN	13CB
	15BD	15BK	15AZ	15BB	13CD	15BC	15BD	15BD	15BD	15BD	13CK	13BV	13CC
	15BK	15BL	15BD	15BD	15BD	15BD	15BJ	15BK	15BK	15BJ	15BD	15BD	13CG
	15BM	17BW	15BJ	15BK	15BK	15BK	15BL	15BL	15BL	15BL	15BK	15BK	15AZ
SALES OPTION CODE NUMBERS	17BW	17BZ	15BK	17BW	15BL	17BW	17BZ	17BZ	17BZ	17CD	15BL	15BL	15BD
	17BY	17CD	15BL	17BY	17BZ	17BY	17CD	17CD	17CD	17CF	17BY	17BZ	15BK
	17CD	19AS	17BW	17CD	17CD	17CE	17CG	17CG	17CG	17CM	17CD	17CD	15BR
	19AS	23DC	17BY	19AS	17CG	19AW	19AV	19AS	19AS	19AS	17CG	17CG	17BW
	23DC	23DE	17CD	23DC	19AS	23DC	23DC	23DC	23DC	23DC	19AS	19AS	17BY
	31AY	31AY	19AS	31AY	23DC	31AY	31AY	31AY	23DE	23DH	21BF	23DC	17CD
	31AZ	31AZ	21AW	31BD	31AY	31AZ	31AZ	31AZ	31AY	23DJ	23DC	31AY	19AS
	33AT	33AT	23DC	33AT	31AZ	33AT	33AT	33AT	31AZ	31AY	23DJ	31AZ	23DC
	35AU	35AU	31AY	45BB	33AT	45BB	35AU	35BC	33AT	31AZ	31AY	33AT	23DE
	35BB	35BB	31AZ	47AB	35BC	47AB	35BB	35CK	35CH	33AS	31AZ	35AU	31AY
	45BB	45BF	33AT		35CK		45BB	45BB	45BE	35AU	33AV	35BC	31AZ
		47AG	35AU		45BB		45BW	45BW	45BW	35BH	35AU	45BE	33AT
			35BB		45BW		47AB			45BU	35AW	45BW	35AV
			35BH		47AA					47AG	45BD	47AA	35BD
			45BB										45BG

<u>SPEC NO.</u>	<u>10632</u>	<u>10640</u>	<u>10641</u>	<u>10642</u>	<u>10643</u>	<u>10645</u>	<u>10646</u>	<u>10648</u>	<u>10649</u>	<u>10662</u>	<u>10666</u>	<u>10667</u>	<u>10670</u>
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	11AV	11AV	11AV	11AV	11AV	11AU	11AV	11AV	11AV	11AV	11AV	11AV	11AV
	13BJ	13BN	13BK	13BG	13BJ	13BS	13BM	11BF	13BJ	13BM	13BJ	11BG	11BE
	13BN	13BV	13BN	13BJ	13BY	13CG	13CC	13BR	13BP	13CC	13BN	13BJ	13BJ
	13BV	13CD	13BW	13BY	13CL	15BA	13CG	13BY	13BW	13CG	13BV	13BN	13BN
	15BB	15BB	15BD	15BA	15BD	15BD	15BD	13CD	15BD	15BD	15BD	13BV	13BV
	15BD	15BD	15BJ	15BD	15BJ	15BK	15BK	15BD	15BK	15BK	15BK	15BD	15BD
	15BK	15BK	15BL	15BK	15BM	17BW	15BL	15BK	15BL	15BL	15BL	15BK	15BK
SALES OPTION CODE NUMBERS	17BZ	17BW	17BZ	17CF	17CD	17BZ	17BW	15BL	17BW	17BY	17CD	15BL	15BL
	17CD	17BY	17CD	17CJ	17CF	17CD	17BY	17BZ	17BZ	17CD	17CF	17BZ	17BZ
	17CG	17CD	17CG	17CM	19AV	19AS	17CD	17CD	17CD	17CM	17CG	17CD	17CD
	19AS	19AV	19AS	19AU	23DC	19AW	19AS	17CG	19AV	19AS	19AS	17CM	17CG
	23DC	23DC	21BB	21AZ	23EL	21AZ	23DC	19AS	21AG	23DC	23DC	19AS	19AS
	31AY	23DE	23DC	23DC	31AY	23DC	23DE	23DC	23DC	23DE	31AY	23DC	23DC
	31AZ	31AY	23DK	23EL	31AZ	23DE	31AY	23DE	23DK	31AY	31BC	31AY	31AY
	33AT	31BC	31AY	31AY	33AT	23DN	31AZ	31AY	31AY	31AZ	33AT	31AZ	31AZ
	45BB	33AT	31AZ	31AZ	35AU	31AY	33AT	31AZ	31AZ	33AT	45BB	33AT	33AT
	45BW	35BC	33AT	33AT	35BB	31BC	35AV	33AT	33AT	35AV	45BW	35AV	35BC
	47AB	39AG	35AU	35AU	45BF	33AT	35BB	35BC	35AU	35BH	47AA	35BC	35CH
		47BS	35BH	35AW	47AL	35AU	45BF	35CK	35BB	45BF		45BE	45BT
		47AA	45BH	45BD	47AP	35BB	47AG	45BT	45BB	47AG		45BW	
		47AR	47AG	47AG		45BB		47AB	45BW			47AA	
				47AL									

Sales Option Code Table

<u>SPEC NO.</u>	<u>10671</u>	<u>10674</u>	<u>10675</u>	<u>10676</u>	<u>10677</u>	<u>10678</u>	<u>10680</u>	<u>10685</u>	<u>10691</u>	<u>10692</u>	<u>10698</u>	<u>10701</u>	<u>10706</u>
11AH	11AP	11AH	11AH	11AH	11AH	11AH	11AR	11AH	11AH	11AH	11AP	11AH	11AH
11AV	11AV	11AV	11AY	11AV	11AV	11AV	11AV	11AV	11AW	11AW	11AV	11AV	11AV
13BJ	13BM	13BJ	13BJ	13BJ	11BF	13BM	13BT	13BJ	13BJ	13BJ	13BS	13BJ	11PP
13BN	13BV	13BM	13BW	13BJ	13BV	13BV	13BM	13BS	13BS	13BS	13BV	13BR	13CF
13BV	13CD	13BN	13CM	13BP	13CD	13CD	13BV	13BZ	13BZ	13CG	13BV	13CG	
15BB	15BA	13BV	15AZ	13BV	15BD	15BD	15BD	15BD	15BD	15BA	15BD	13CH	
15BD	15BD	15BD	15BD	15AZ	15BK	15BK	15BK	15BJ	15BJ	15BD	15BK	15BD	
15BK	15BK	15BK	15BJ	15BD	15BL	15BL	15BL	15BL	15BL	15BK	15BL	15BK	
17BZ	17BW	15BL	15BZ	15BK	17BZ	17BZ	17BW	17BW	17BW	17BW	17BZ	15BL	
17CD	17BY	17BW	17BW	17BZ	17CD	17CD	17BY	17BY	17BY	17BZ	17CD	17CD	
17CG	17CD	17BY	17BY	17CG	17CM	17CG	17CD	17CE	17CD	17CD	17CM	17CF	
19AS	19AS	17BZ	17CD	17CV	19AU	19AS	19AS	19AS	19BA	19AS	19AS	17CM	
23DC	21BM	17CD	19AS	19AV	23DC	23DC	21BE	23DC	23DC	23DC	23DC	19AS	
31AY	23DC	19AS	21BG	21AW	31AY	23DE	23DC	23DN	23DN	23DE	31AY	23DC	
31AZ	31AY	23DC	21BH	23DC	31AZ	31AY	31AY	31AY	31AY	31AY	31AZ	23DE	
33AT	31AZ	23DN	23DC	31AY	33AT	31AZ	31AZ	31AZ	31AZ	31BC	33AT	31AY	
35AV	33AT	31AY	31AY	31AZ	35BC	33AT	33AT	33AT	33AT	33AT	35AV	31AZ	
35BB	35AV	31AZ	31AZ	33AT	39AG	35BC	35AV	35AU	35AU	35AV	35BB	33AT	
45BB	35BC	33AT	33AV	35AU	45BE	39AG	35BC	35BK	35BK	35BB	45BB	35BB	
45BW	39AG	35AU	35AU	35BC	45BW	45BT	39AG	45BB	45BB	45BS	45BW	45BH	
47AB	45BS	35BH	35BH	45BT	47AB	47AA	45BB	47AG	47AG	47AA		47AG	
	47AB	45BB	45AZ	45EC			45BW	47AR	47AR				
		45BW	45BB	47AL			47AB						
			45BL	47AR									
			47AL	47BA									
			47AS										

<u>SPEC NO.</u>	<u>10709</u>	<u>10712</u>	<u>10714</u>	<u>10720</u>	<u>10721</u>	<u>10722</u>	<u>10725</u>	<u>10729</u>	<u>10731</u>	<u>10734</u>	<u>10735</u>	<u>10736</u>	<u>10740</u>
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AR	11AH	11AH	11AH	11AH	11AH	11AH
11AV	11AU	11AV	11AW	11AW	11AW	11AW	11AV	11AV	11AV	11AV	11AV	11AV	11AV
13BJ	13BJ	13BK	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	13CB	11PP	13CB	13BM
13BN	13BS	13BM	13BM	13BN	13BN	13BN	13BR	13BM	13CC	13CF	13CC	13CC	13BU
13BV	13BV	13BV	13BV	13BV	13BV	13BV	13BV	13BV	13CG	13CG	13CG	13CG	13CD
15BD	15BB	15BD	15BB	15BD	15BD	15BD	15BD	15BD	15BD	13CH	15BD	15BD	
15BJ	15BD	15BJ	15BD	15BK	15BK	15BK	15BK	15BK	15BK	15AZ	15BK	15BK	
15BL	15BK	15BL	15BK	15BL	15BL	15BL	15BL	15BL	15BL	15BD	15BL	15BL	
17CD	17BW	17CD	17BW	17BZ	17BZ	17CD	17BZ	17CD	17BZ	17BW	15BK	17BW	17BW
17CF	17CE	17CF	17BY	17CD	17CD	17CD	17CD	17CM	17CD	17CD	17BW	17CD	17BY
17CG	17CF	17CG	17CD	17CG	17CG	17CG	17CR	17CG	17CF	17CD	17CF	17CD	17CD
19AV	19AW	19AS	19AS	19AS	19AS	19AS	19AS	19AS	19AS	17CF	19AS	19AU	
23DC	23DC	21BM	23DC	23DC	23DC	23DC	23DC	23DC	23DC	19BB	19AS	19BB	21BJ
31AY	31AY	23DC	31AY	31AY	31AY	31AY	31AY	31AY	31AY	23DC	19BB	23DC	23DC
31AZ	31BD	31AY	31BD	31AZ	31AZ	31AZ	31AZ	31AZ	31BD	23DN	23DC	23DN	23DE
33AT	33AT	31AZ	33AT	33AT	33AT	33AT	33AT	33AT	33AT	31AY	23DJ	31AY	31AY
35AU	45BB	33AT	45BB	35BC	35BC	35BC	35AV	35AV	31AZ	23DN	31AZ	31AZ	
35BB	47AB	35AU	47AB	35CH	35CH	35CH	35BB	35BB	33AT	31AY	33AT	33AT	
45CC		35BB		45BE	45BB	45BT	45BB	45BB	35AV	31AZ	35AV	35BC	
		35BB		45BW	45BW	45EC	45BW	45BW	35BE	33AT	35BE	39AG	
		45BB					47AB	47AB	45BH	35AV	45BH	45BB	
									45BM	35BE	47AG	45BW	
									47AG	45BH			
										47AG			

Sales Option Code Table

SPEC NO.	10741	10742	10744	10748	10753	10754	10756	10759	10760	10765	10769	10775	10776
	11AP	11AH	11AH	11AH	11AR	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
	11AV	11AV	11AV	11AV	11AU	11AW	11AV	11AV	11AV	11AW	11AW	11AW	11AW
	13BJ	13BG	13BJ	13BJ	13BJ	13CB	13BR	13CB	13BJ	11PP	13BJ	11PP	11PP
	13BM	13BJ	13BN	13BM	13BT	13CC	13BV	13CD	13BR	13CB	13BN	13BJ	13BJ
	13BV	13BV	13BV	13BV	13BV	13CG	13CG	15BD	13BU	13CC	13BW	13BN	13BN
	15BD	15AZ	15BB	15BB	15BD	15AZ	15BK	15BK	15BD	13CG	15BD	13BY	13BY
	15BK	15BD	15BD	15BD	15BK	15BD	15BL	15BL	15BJ	15AZ	15BK	15BA	15BA
	15BL	15BK	15BK	15BK	15BL	15BK	15BU	17BW	15BL	15BD	15BL	15BD	15BD
	17BW	17BY	17BZ	17BZ	17BW	15BR	17BZ	17CD	17BW	15BK	17BZ	15BK	15BK
	17BZ	17CD	17CD	17CG	17BY	17BW	17CD	17CF	17BY	15BR	17CD	17BY	17BY
	17CD	17CG	17CG	17CK	17CE	17BY	17CM	19AS	17CD	17BW	17CG	17CD	17CD
	19AV	19AS	19AS	19AS	19AW	17CD	19AS	23DC	19AS	17BY	19AS	17CG	17CG
	23DC	23DC	23DC	21BE	23DC	19AS	21BK	23DJ	21AG	17CD	23DC	19AS	19AS
	31AY	23DE	23DE	23DC	31AY	23DC	23DC	23DN	23DC	19AS	23DK	23DC	23DC
	31AZ	23DV	31AY	31AY	31AZ	23DN	31AY	31AY	31AY	23DC	31AY	23DJ	23DJ
	33AT	31AY	31AZ	31BD	33AT	31AY	31AZ	31AZ	31BC	23DJ	31AZ	31AY	31AY
	35BC	31AZ	33AT	33AT	35BC	31AZ	33AT	33AT	33AT	23DN	33AT	31AZ	31AZ
	45BT	33AT	35AV	35AU	45BT	33AT	35AV	35AV	35AV	31AY	35AU	33AT	33AS
	47AG	45BC	35BB	35BB	47AB	35AV	35BB	35BC	35BC	31BD	35BB	35AU	35AU
		47AG	45BB	45BB		35BD	45BB	39AG	45BB	33AV	45BB	35AU	35AU
			45BW	45BW		45BG	45BW	45BF	47AB	35AV	45BM	45BE	45BE
			47AB			47AR		45BM		35BD	47AG	45BM	45BM
								47AB		45BG		47AG	
										45BM			
										47AR			

SPEC NO.	10777	10779	10780	10782	10783	10784	10788	10790	10791	10796	10797	10808	10815
	11AH	11AH	11AH	11AH	11AH	11AP	11AH	11AH	11AH	11AH	11AP	11AH	11AH
	11AZ	11AW	11AW	11AW	11AV	11BE	11AW	11AV	11AW	11AW	11BE	11AV	11AW
	13BN	13BJ	13BJ	11PP	13BK	11AV	13BM	11AW	13BJ	13BJ	11AW	13BJ	13BJ
	13BV	13BV	13BS	13BN	13BM	13BJ	13BV	11PP	13BN	13BM	13BJ	13BP	13BN
	15BD	13CR	13BZ	13BW	13BY	13BT	13CD	13CB	13BU	13BV	13BM	13BZ	13BY
	15BK	15BD	15BD	13CD	15BD	13BV	15BD	13CD	15BD	15BD	13BV	15BA	15BA
	15BL	15BJ	15BJ	15BD	15BJ	15BD	15BK	15BD	15BK	15BK	15BD	15BD	15BD
	17CD	15BL	15BL	15BJ	15BL	15BK	15BL	15BK	15BL	15BL	15BK	15BJ	15BK
	19AS	17BW	17BW	15BL	17CD	15BL	17BW	15BL	17BW	17BW	15BL	17CF	17BY
	23DZ	17BY	17BY	17CG	17CF	17BZ	17BY	17BW	17CD	17BY	17BW	17CG	17CD
	31AY	17CD	17CD	17CH	17CM	17CG	17CD	17CD	17CF	17CD	17BY	17CJ	17CG
	31AZ	19AS	19AS	17CV	19AU	19AU	19AS	17CF	19AV	19AS	17CD	19AV	19AS
	45BC	23DC	23DC	19AV	23DC	21BE	23DC	19AS	23DC	21BE	19AU	21BB	23DC
	47AG	23DN	23DN	23DC	23DH	23DC	31AY	23DC	31AY	23DC	21BE	23DC	23DJ
	47AL	31AY	31AY	31AY	23DJ	31AY	31AZ	23DJ	31AZ	31AY	23DC	23DK	31AY
	47AU	31AZ	31AZ	31BD	31AY	31BC	33AT	23DN	33AT	31AZ	23DE	31AY	31AZ
		33AT	33AT	33AT	31AZ	33AT	35BC	31AY	35AU	33AT	31AY	31AZ	33AV
		35AU	35AU	35BA	33AS	35BC	39AG	31AZ	35BB	35AU	31AZ	33AT	35AU
		35BK	35BK	45BM	35AU	35CH	45BB	33AT	45BE	35BB	33AT	35AV	35AW
		45BB	45BB	45BN	35BH	45BS	47AB	35AV		45BB	35BB	35BH	45BE
		47AR	47AG	45BP	45BU			35BC		45BW	35CG	35BL	45BM
			47AR		47AG			39AG			45BT	45AZ	
								45BF				45BJ	
								45BM				47AR	
												47BA	
												47BB	

Sales Option Code Table

<u>SPEC NO.</u>	<u>10816</u>	<u>10821</u>	<u>10830</u>	<u>10832</u>	<u>10844</u>	<u>10845</u>	<u>10857</u>	<u>10862</u>	<u>10866</u>	<u>10867</u>	<u>10868</u>	<u>10874</u>	<u>10876</u>
	11AH	11AH	11AP	11AH	11BE	11AH	11AH	11AH	11AH	11AH	11AH	11AP	11AH
	11AV	11AP	11BE	11AV	11AW	11AW	11AV	11AW	11AW	11AW	11AW	11BE	11AV
	13BJ	11AW	11AW	11AW	13CB	13BR	11PP	13BJ	11PP	11BG	11PP	11AW	13CF
	13BM	11BE	13BJ	11PP	13CG	13CD	13CB	13BM	13CB	11PP	13CF	13BS	13CG
	13BV	13BJ	13BN	13CB	15BD	13CE	13CC	13BV	13CC	13CB	13CG	13CG	13CH
	15BB	13BN	13BV	13CC	15BK	15BD	13CG	15BD	13CG	13CC	13CH	15BD	15BC
	15BD	13BV	15BD	13CG	15BL	15BK	15AZ	15BJ	15AZ	13CG	15AZ	15BK	15BD
	15BK	13CD	15BK	15AZ	17CD	15BL	15BD	15BL	15BD	15AZ	15BD	15BL	15BJ
SALES OPTION CODE NUMBERS	17BW	15BD	15BL	15BD	17CF	17BW	15BK	17BW	15BK	15BD	15BK	17BW	17BC
	17BY	15BK	17BZ	15BK	17CG	17BY	17BY	17BY	17BW	15BK	17BW	17BY	17CD
	17CD	15BL	17CD	17BW	19AS	17CD	17CD	17CD	17CD	15BR	17CD	17CD	19AS
	19AS	17BZ	17CG	17CD	21BM	19AS	17CM	19AS	17CF	17BW	17CF	19AS	23DD
	23DC	17CD	19AS	17CF	23DC	21BE	17DL	21BE	19AS	17BY	17DK	21BE	31AY
	31AY	17CG	23DC	19AS	23DJ	23DC	19AS	23DC	23DC	17CD	19AS	23DC	31BD
	31BC	19AS	31AY	19BB	23DN	23DE	19BB	23DH	23DJ	19AS	19BB	23DE	35AU
	33AT	23DC	31AZ	23DC	31AY	31AY	23DC	31AY	23DN	23DC	23DC	23DN	35AZ
	45BB	23DE	33AT	23DJ	31AZ	31AZ	23DJ	31AZ	23DV	23DJ	23DJ	31AY	45CE
	47AB	31AY	35BC	23DN	33AT	33AT	23DN	33AT	31AY	23DN	23DN	31AZ	47AE
		31AZ	35CH	23DV	35AV	35AV	31AY	35AU	31AZ	31AY	23DV	33AT	47AV
		33AT	45BT	31AY	35BC	35BC	31AZ	35BB	33AV	31AZ	23EH	35AV	47AZ
		35AV		31AZ	45BS	35CK	33AT	45BC	35AV	33AT	23EK	35BB	
		35BC		33AT	47AR	45BB	35AV	45BW	35BF	35AV	31AY	45BU	
		35CK		35AV	47BA	45BW	35BD	47AR	34BH	35BD	31AZ		
		45BS		35BE	47BB		35BH		47AR	45BG	33AT		
				45BH			45BF			47AR	35AV		
										47AZ	35BE		
										47BB	45BH		
											47AR		
											47AZ		
											47BB		

<u>SPEC NO.</u>	<u>10877</u>	<u>10882</u>	<u>10888</u>	<u>10889</u>	<u>10896</u>	<u>10897</u>	<u>10898</u>	<u>10904</u>	<u>10905</u>	<u>10906</u>	<u>10907</u>	<u>10911</u>	<u>10920</u>
	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
	11AV	11AV	11AU	11AW	11AU	11AW	11AW	11AV	11AV	11AW	11AV	11AU	11AV
	13BK	13CB	13BJ	13BJ	13BJ	13BR	11BE	11AW	11AW	13BK	11BG	13BM	13BS
	13BN	13CC	13BM	13BM	13BW	13CD	13CB	13BJ	13BG	13BM	13CF	13CG	13CG
	13BW	13CG	13BV	13BV	13CM	13CE	13CG	13BN	13BJ	13BV	13CG	15BD	15BC
	15BD	15AZ	15BB	15BB	15AZ	15BD	15BD	13BV	13BV	15BD	13CH	15BK	15BD
	15BJ	15BD	15BD	15BD	15BD	15BK	15BK	15AZ	15AZ	15BJ	15AZ	15BL	15BK
	15BL	15BK	15BK	15BK	15BJ	15BL	15BL	15BD	15BD	15BL	15BD	17BW	17CF
SALES OPTION CODE NUMBERS	17BZ	17BW	17BY	17BY	15BZ	17BW	17BZ	15BK	15BK	17BW	15BK	17BY	17CK
	17CD	17CD	17CE	17CD	17BW	17BY	17CD	17BW	17BY	17BZ	17BW	17CE	17DA
	17CG	17CF	17CG	17CG	17BY	17CD	17CG	17BY	17CD	17CD	17CD	19AW	19AV
	19AS	19AS	19AW	19AS	17CD	19AU	19AS	17CD	17CG	19AS	17CF	21AG	23DC
	21BB	23DC	23DC	23DC	19AS	21BM	21BM	19AS	19AS	23DC	19AS	23DC	23DE
	23DC	23DJ	31AY	31AY	21BH	23DC	23DC	21AW	23DC	31AY	23DC	23DN	23DJ
	23DJ	23DN	31BD	31BD	23DC	23DE	23DJ	23DC	23DE	31BC	23DJ	31AT	23DN
	23DK	31AY	33AT	33AT	23EL	31AY	23DN	23DK	23DJ	33AT	23DN	31AY	31AY
	31AY	31AZ	45BB	45BB	31AY	31AZ	31AY	23DV	23DV	35AU	31AY	31AZ	31AZ
	31AZ	33AT	47AR	47AR	31AZ	33AT	31AZ	31AY	31AY	35BB	31AZ	33AT	33AT
	33AT	35AV	47AZ	47AZ	33AV	35AV	33AT	31AZ	31AZ	45BB	33AT	35AV	45BD
	45BH	35BB	47BB	47BB	35AU	35BC	35AV	33AT	33AT	47AR	45BF	35BB	47AR
	47AR	45BF	47BD	47BF	35BH	35CK	35BC	45BB	45BC		47AR	45BB	47BA
		47AR	47BF	47BD	45BB	45BB	45BS				47BA	47AR	47BB
		47BA			45BL	45BW	47AR				47BB	47BA	
		47BB			47AL	47AR	47BA					47BB	
					47AR	47AY	47BB						
					47BA								

Sales Option Code Table

<u>SPEC NO.</u>	<u>10923</u>	<u>10924</u>	<u>10926</u>	<u>10927</u>	<u>10930</u>	<u>10931</u>	<u>10932</u>	<u>10933</u>	<u>10934</u>	<u>10935</u>	<u>10936</u>	<u>10937</u>	<u>10938</u>
11AH	11AH	11AH	11AH	11AH	11AH	11AK	11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
13CF	11BG	11BG	11BG	11BG	11BG	11BG	13BJ	11BG	13BG	13BG	13BG	13CF	11BG
13CG	13CF	13BJ	13BJ	13BJ	13BJ	13BG	13BP	13BG	13BJ	13BJ	13BJ	13CG	13CB
13CH	13CG	13BM	13BM	13BN	13BJ	13BW	13BJ	13BW	13BW	13BW	13BW	13CH	13CC
15BD	13CH	13BV	13BV	13BW	13BW	15AZ	13BW	15AZ	15AZ	15AZ	15AZ	15AZ	13CG
15BK	15AZ	15BD	15BD	15AZ	15AZ	15BD	15AZ	15BD	15BD	15BD	15BD	15BD	15AZ
15BL	15BD	15BK	15BK	15BD	15BD	15BD	15BJ	15BD	15BK	15BK	15BK	15BK	15BD
17CD	15BK	15BL	15BL	15BK	15BK	15BK	15BZ	15BK	15BZ	15BZ	15BZ	15BZ	15BK
17CF	15BL	17BZ	17BZ	15BZ	15BZ	17CF	15BZ	17BY	17BY	17BY	17BY	17CD	15BZ
17CM	15BZ	17CD	17CD	17BZ	17BZ	17CG	17BZ	17CD	17CD	17CD	17CD	17CF	17BY
19AS	17CD	17CG	17CG	17CD	17CD	17CD	17CJ	17CD	17CG	17CG	17CG	17CM	17CD
23DC	17CF	19AS	19AS	17CG	17CG	19AV	17CG	19AS	19AS	19AS	19AS	19AS	17CG
23DE	17CG	23DC	23DC	19AS	19AS	23DC	19AS	23DC	23DC	23EF	23DC	19AS	17CG
31AY	19AS	31AY	31AY	23DC	23DC	23DK	23DC	23DJ	23DJ	31AY	23DJ	23DC	23DC
31AZ	19BC	31AZ	31BC	31AY	23DK	31AY	31AY	23ED	23ED	31AZ	23DN	23DJ	23DJ
33AT	23DC	33AT	33AT	31AZ	31AY	31AZ	31AZ	31AY	31AY	33AV	31AY	23DN	23DN
35AV	23FE	35AU	35AU	33AT	31AZ	33AT	33AT	31AZ	31AZ	45BC	31AZ	31AY	31AY
35BC	23DJ	35BB	35BB	35AU	33AT	35AV	35AU	33AS	33AV	47AR	33AV	31AZ	31AZ
45CE	23DN	45BB	45BB	35BB	35AU	35BB	35BC	35AU	35AU	47AW	35AV	33AT	33AT
47AR	31AY	45BW	45BW	45CA	35BB	35BL	45BE	35AW	35AW	47AY	35BD	35AV	35AV
	31AZ	47AR	47AR	47AR	45BB	45BJ	45BW	45BD	45BD	47AZ	45BH	35BC	35BC
	33AT				47AR	47AR	47AR	47AR	47AR	47AR	47BB	47AR	45BG
	35AV				47AZ	47AZ	47AZ	47AZ	47AZ	47AZ	47BF	47AZ	47AR
	35BC				47BB	47BB	47BB	47BB	47BB	47BB		47BB	47AY
	45CE				47BF	47BF	47BF	47BF	47BF			47BF	47AZ
	47AR												47BF
	47AZ												
	47BB												
	47BF												

<u>SPEC NO.</u>	<u>10939</u>	<u>10940</u>	<u>10941</u>	<u>10942</u>	<u>10943</u>	<u>10944</u>	<u>10945</u>	<u>10952</u>	<u>10955</u>	<u>10956</u>	<u>10957</u>	<u>10958</u>	<u>10975</u>
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AR	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AV	11AV	11AW	11AW	11AW	11AW	11AW
11BG	11BG	11BG	11BG	11BG	11BG	11BG	11BF	13BJ	13BJ	13BJ	13BJ	13BJ	13BK
13CB	13BG	13BG	13BG	13BG	13BG	13BN	13BR	13BP	13BY	13BY	13BS	13BS	13BM
13CC	13BJ	13BJ	13BJ	13BJ	13BJ	13BW	13BY	13BV	13CR	13CR	13BY	13BY	13BY
13CG	13BW	13BW	13BW	13BW	13BW	13CD	13CD	15BD	15BD	15BD	15BD	15BD	15BD
15AZ	15AZ	15AZ	15AZ	15AZ	15AZ	15AZ	15BB	15BJ	15BJ	15BJ	15BJ	15BJ	15BJ
15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BL	15BL	15BL	15BL	15BL	15BL
15BK	15BK	15BK	15BK	15BK	15BK	15BJ	15BK	17BY	17BW	17BW	17BW	17BW	17CD
15BZ	15BZ	15BZ	15BZ	15BZ	15BZ	15BZ	15BL	17CD	17BY	17BY	17BY	17BY	17CF
17BY	17BZ	17BZ	17BZ	17BZ	17BZ	17BZ	17BZ	17CM	17CD	17CD	17CE	17CD	17CM
17CD	17CD	17CD	17CD	17CD	17CD	17CD	17CD	19AU	17CN	19BA	19AS	17DF	19AU
17CG	17CG	17CG	17CG	17CG	17CG	17CG	17CG	21AW	17DF	23DC	23DC	19BA	23DC
19AS	19AS	19AS	19AS	19AS	19AS	19AS	19AS	23DC	19BA	23EJ	23EJ	23DC	23DJ
23DC	23DC	23DC	23DC	23DC	23DC	23DC	21BJ	31AY	19BB	31AY	31AY	23DN	23DN
23DJ	31AY	31AY	31AY	31AY	31AY	31AY	23DC	31AZ	19BC	31AZ	31AZ	23EJ	31AY
23DN	31AZ	31AZ	31AZ	31AZ	31AZ	31AZ	23DJ	33AT	23DC	33AT	33AT	31AY	31AZ
31AY	33AT	33AT	33AT	33AT	33AT	33AT	23DN	35AU	23DN	35BK	35BK	31AZ	33AS
31AZ	35AU	35AU	35AU	35AU	35AU	45BP	31AY	35BH	23EJ	35BL	35BW	33AT	35AU
33AT	35BC	35BC	35BC	35BC	35BC	47AR	31AZ	45BB	31AY	35BW	45BB	35BK	35BH
35AV	45BB	45BT	45BU	45BS	47AZ	33AT			31AZ	45BB	47AR	35BW	45BU
35BC	47AR	47AR	47AR	47AR	47BB	35AV			33AT	47AR		45BB	47AR
45BG	47AZ	47AZ	47AZ	47AZ	47BF	35BC						47AR	47BA
47AR	47BB	47BB	47BB	47BB	47BB								47BB
47AY	47BF	47BF	47BF	47BF	47BF								
47AZ													
47BF													

Sales Option Code Table

<u>SPEC NO.</u>	<u>10976</u>	<u>10982</u>	<u>10994</u>	<u>11000</u>	<u>11003</u>	<u>11004</u>	<u>11006</u>	<u>11007</u>	<u>11016</u>	<u>11017</u>	<u>11031</u>	<u>11040</u>	<u>11051</u>
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AP	11AH	11AH	11AR	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AU	11AW	11AV	11AV	11AW	11AW	11AV	11AW	11AV	11AW
13BJ	13BJ	13BR	11PP	13BJ	11BE	13BN	11BG	13BJ	13BR	13BJ	11BF	13BN	13BN
13BP	13BM	13CD	13CB	13BN	13BM	13BV	13BJ	13BM	13BY	13BN	13BR	13BV	13BV
13BY	13BV	13CE	13CC	13BV	13BV	13CD	13BM	13BV	13CD	13BV	13BY	13CD	13CD
13CR	15BB	15BD	13CG	15BD	13CD	15BD	13BV	15BD	15BD	15BD	13CD	15BD	15BD
15BD	15BD	15BK	15AZ	15BJ	15BD	15BK	15BD	15BK	15BK	15BK	15BD	15BK	15BK
15BJ	15BK	15BL	15BD	15BL	15BK	15BL	15BL	15BK	15BL	15BL	15BK	15BK	15BL
15BL	17BW	17BW	15BK	17CF	15BL	17CD	15BL	17BY	17BZ	17BZ	15BL	17BZ	17BZ
17BW	17BY	17BY	17BY	17CV	17BY	17CF	17BZ	17CD	17CD	17CD	17BZ	17CD	17CD
17BY	17CD	17CD	17CD	17DA	17CD	17CG	17CD	17CG	17CG	17CG	17CD	17CG	17CG
17CD	19AS	19AU	17CF	19AU	17CG	19AV	17CG	19AS	19AS	19AS	17CG	19AS	19AS
17DF	23DC	21BE	17DH	21BB	19AS	21BB	19AS	21BE	21BJ	23DC	19AS	23DC	23DC
19AS	31AY	23DC	19AS	23DC	21BZ	23DC	21BH	23DC	23DC	31AY	21BZ	23DN	23DN
23DC	31BD	23DE	19BB	31AY	23DC	23DN	23DC	31AY	23DJ	31AZ	23DC	31AY	31AY
23DN	33AT	31AY	23DC	31AZ	31AY	31AY	31AY	31AZ	23DN	33AT	23DJ	31AZ	31AZ
23EJ	35AV	31AZ	23DJ	33AT	31AZ	31AZ	31BC	33AT	31AY	35AU	23DN	33AT	33AT
31AY	35BB	33AT	23DN	35AU	33AT	33AT	33AT	35AU	31AZ	35BC	31AY	35AV	35AV
31AZ	45BB	35AV	31AY	35BC	35AV	35BC	35AU	35BC	33AT	45BB	31AZ	35BC	35BC
33AT	47AR	35BC	31AZ	45BD	35BC	35CK	35BD	45BD	35AV	45BW	33AT	35CK	35CK
35BK	47BA	35CK	33AT	47AR	35CK	45BS	35BH	45BW	35BC	47AR	35AV	45BB	45BB
35BW	47BB	45BB	35AV	47BA	45BS		45BC	47AR	35CK	47BA	35BC	47AR	47AR
45BB		45BW	35BD	47BB	47AR			47AY	45BT	47BB	35CK	47BA	47BA
47AR		47AR	45BF		47AZ			47BB	47AR		45BT	47BB	47BB
		47AY	47AR		47BA			47BD	47BA		47AR		47AR
		47AZ	47AZ		47BB				47BD		47BA		47BA
		47BA	47BB								47BB		47BB

<u>SPEC NO.</u>	<u>11054</u>	<u>11056</u>	<u>11065</u>	<u>11069</u>	<u>11072</u>	<u>11075</u>	<u>11076</u>	<u>11077</u>	<u>11081</u>	<u>11082</u>	<u>11083</u>	<u>11088</u>	<u>11089</u>
11AH	11AW	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AV	11BF	11AW	11AW	11AW	11AW	11AV	11AV	11AV	11AV	11AV	11AW	11AW	11AW
13BJ	13BJ	13BN	13BS	13BJ	13BJ	13BK	11PP	11BJ	13BG	11BG	13BK	11BG	11BG
13BW	13BM	13BV	13CG	13BN	13BN	13BN	13CB	13BG	13BJ	11PP	13BM	13BJ	13BJ
13CM	13BV	13CD	15BC	13BV	13BV	13BW	13CC	13BJ	13BY	13CG	13BV	13BM	13BM
15AZ	15BD	15BD	15BD	15BD	15BD	15AZ	13CG	13BY	15BA	13CC	15BD	13BV	13BV
15BD	15BJ	15BK	15BK	15BJ	15BJ	15BD	15AZ	15BA	15BD	13CG	15BJ	15BD	15BD
15BJ	15BL	15BL	15CJ	15BL	15BL	15BJ	15BD	15BD	15BK	15AZ	15BL	15BK	15BK
15BZ	17BZ	17BZ	17CF	17BZ	17BY	17CF	15BK	15BK	17BY	15BD	17BY	15BL	15BL
17BW	17CD	17CD	17CK	17CD	17CD	17CG	17BW	17BW	17CG	15BK	17CD	17BZ	17BZ
17BY	17CG	17CG	17DA	17CG	17CG	17CV	17CD	17BY	17CJ	15BR	17CG	17CD	17CD
17CD	19AV	19AS	19AV	19AS	19AS	19AS	17CF	17CD	19AU	17BW	19AS	17CG	17CG
19AS	23DC	21BW	19CJ	21AW	23DC	21BB	17DK	19AS	21AW	17BY	21BE	19AS	19AS
21BH	31AY	23DC	23DC	23DC	23DN	23DC	19AS	21AW	23DC	17CD	23DC	21BE	21BE
23DC	31AZ	23DN	23DE	31AY	31AY	23DJ	23DC	23DC	23DJ	19AS	31AY	23DC	23DC
23EL	33AT	31AY	23DJ	31AZ	31AZ	23DK	23DJ	23DJ	31AY	23DC	31AZ	23DJ	23DJ
31AY	35BC	31AZ	23DN	33AT	33AT	31AY	23DN	31AY	31AZ	23DJ	33AT	23DN	23DN
31AZ	45BT	33AT	31AY	35BC	35CH	31AZ	23DV	31AZ	33AW	23DN	35AV	31AY	31AY
33AT	47AR	35AV	31AZ	45BB	45EA	33AT	23EH	33BA	33BB	31AY	35BB	31BC	31BC
35AU		35BC	33AT	47AR	47AR	45BH	23EK	33BB	35AU	31AZ	45CC	33AT	33AT
35BZ		35CK	45BD	47BA	47AR	47AR	31AY	35AU	35AW	33AT	47AR	35BC	35BC
45BB		45BB	45BW	47BB	47BA	47BA	31AZ	35AW	45BD	35AV		35CK	35CK
45BL		45BW	47AR	47BC	47BB	33AT	45BD	47AL	35BC			45BE	45BE
47AL		47AR	47BA			35AV	47AL	47AR	45BG			45BW	45BW
47AR		47BA	47BB			35BE	47AR	47BA	47AR			47AR	47AR
47BA		47BB				45BH	47BA		47AZ			47BB	47BB
47BF						47AR			47BB			47BA	47BA
						47AZ						47BC	47BC
						47BB							

Sales Option Code Table

<u>SPEC NO.</u>	<u>11090</u>	<u>11091</u>	<u>11093</u>	<u>11100</u>	<u>11105</u>	<u>11106</u>	<u>11108</u>	<u>11110</u>	<u>11112</u>	<u>11113</u>	<u>11120</u>	<u>11121</u>	<u>11122</u>
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AV	11AH	11AH	11AH
11AV	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11BE	11AW	11AW	11AW
11BG	13BJ	13BJ	11BG	11BG	13BG	13BJ	11BF	11BF	11BG	13BN	13BK	13BM	13BN
13CB	13BN	13BP	11PP	13BJ	13BP	13BJ	13BK	13BN	13BV	13BM	13BV	13BV	13BV
13CC	13BV	13BV	13CB	13BV	13BV	13BM	13BM	13BW	13CD	13BV	13CD	13CD	13CD
13CG	15BD	15BD	13CC	15BD	15AZ	13BV	13BY	13CD	15BD	15BD	15BD	15BD	15BD
15AZ	15BK	15BJ	13CG	15BK	15BD	15BD	15BD	15AZ	15BK	15BJ	15BK	15BK	15BK
15BD	15BL	15BL	15AZ	15BL	15BJ	15BJ	15BJ	15BD	15BL	15BL	15BL	15BL	15BL
15BK	17BZ	17BY	15BD	17BZ	17BY	15BL	15BL	15BJ	17CD	17BY	17CD	17BZ	17BZ
15BZ	17CD	17CD	15BK	17CD	17CD	17BZ	17CD	15BZ	17CF	17CD	17CF	17CD	17CD
17BW	17DA	17CM	15BZ	17CG	17CM	17CD	17CF	17BZ	17CG	17CG	17DA	17CG	17CG
17CD	19AS	19AU	17BW	19AS	19AU	17CG	17CM	17CD	19AV	19AS	19AS	19AS	19AS
17CF	23DC	21BK	17CD	21BE	23DC	19AV	17DH	17CG	21BE	21BE	21AG	21CA	21CA
19AS	31AY	23DC	17CF	23DC	31AY	21BW	19AS	19AS	23DC	23DC	23DC	23DC	23DC
23DC	31AZ	31AY	19AS	31AY	31AZ	23DC	23DC	23DC	23DN	31AY	23DN	23DJ	23DJ
23DJ	33AT	31AZ	23DC	31AZ	33AT	31AY	23DJ	31AY	31AY	31AZ	31AY	23DN	23DN
23DN	35AV	33AT	23DJ	33AT	35AU	31AZ	23DN	31BD	31AZ	33AT	31AZ	31AY	31AY
23DV	35BC	35AU	23DN	35CH	35BH	33AT	23ED	33AT3	33AT	35AV	33AT	31AZ	31AZ
23EK	45BE	35BH	31AY	45BS	45BB	35CH	31AY	5BC3	35BC	35BC	35AV	33AT	33AT
31AY	45BW	45BB	31AZ	47AR	47AR	45BT	31AZ	5CK	35CK	45CC	35CH	35AV	35AV
31AZ	47AR	47AR	33AT			47BA	47AR	33BA	45BP	45BS	47AR	35CK	35BC
33AT	47BA	47BA	35AV			47BB	47BA	35AU	47AR	47AR	47BA	45BB	35CK
35AV	47BB	47BB	35BB				47BB	35BH	47AZ	47BA	47BB	45BW	45BB
35BE			45BG					45BU	47BB	47BB		47AR	45BW
45BH			47AR					47AR	47BF			47BA	47AR
47AR			47AZ					47AZ				47BB	47AZ
47AZ			47BB					47BB					
47BB													
47BF													

<u>SPEC NO.</u>	<u>11124</u>	<u>11126</u>	<u>11127</u>	<u>11128</u>	<u>11132</u>	<u>11134</u>	<u>11135</u>	<u>11137</u>	<u>11140</u>	<u>11145</u>	<u>11147</u>	<u>11149</u>	<u>11153</u>
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AV	11AV	11AV	11AV	11AW	11AW	11AW
13BJ	11BG	11BG	13BG	11PP	13BN	11PP	13BK	11PP	13BJ	13BK	13BJ	13BN	13BN
13BN	13BJ	11PP	13BJ	13CB	13CG	13CB	13BS	13CG	13BN	13BM	13BM	13BM	13BV
13BV	13BM	13BJ	13BW	13CC	15BB	13CC	13BV	13CL	13BV	13BU	13BY	13CD	13CD
15BD	13BV	13BN	15AZ	13CG	15BD	13CG	15BD	15ZA	15BD	15BD	15BA	15BD	15BD
15BJ	15BD	13BY	15BD	13CY	15BK	15AZ	15BJ	15CL	15BK	15BJ	15BB	15BK	15BK
15BL	15BK	15BA	15BK	15AZ	17BZ	15BD	15BL	17CD	15BL	15BL	15BD	15BD	15BL
17BZ	15BL	15BD	15BZ	15BD	17CD	15BK	17BZ	17CF	17BZ	17BZ	15BJ	17BZ	17BZ
17CG	17BZ	15BK	17BY	15BK	17DA	17BW	17CD	17DE	17CD	17CD	15BK	17CD	17CD
17CV	17CD	17BY	17CD	15BR	19AS	17CD	17CG	17DM	17CG	17CG	17BY	17DA	17DA
19AS	17CG	17CD	17CG	17BW	23DC	17CF	19CK	19AS	19AS	19AS	17CG	19AS	19AS
21AW	19AS	17CG	19AS	17CF	31AY	17DK	21BE	19BB	23DC	21BH	17CK	21BW	21BW
23DC	21BE	19AS	23DC	17CD	31AZ	19AS	23DC	23DC	23DJ	23DC	19AV	23DC	23DC
31AY	23DC	23DC	23DJ	19AS	33AT	19BB	23DH	23DJ	23DN	23DJ	21AW	23DN	23DN
31AZ	23DJ	23DJ	23ED	23DC	35AV	23DC	31AY	23DN	31AY	23DN	23DC	31AY	31AY
33AT	23DN	31AY	31AY	23DJ	35BC	23DJ	31BC	23DV	31AZ	31AY	23DH	31AZ	31AZ
35CH	31AY	31AZ	31AZ	23DN	45BE	23DN	33AT	23EH	33AT	31AZ	23DJ	33AT	33AT
45BB	31BC	33BA	33BA	31AY	45BW	23DV	35AU	23EJ	35CH	33AW	23DN	35AV	35AV
45BL	33AT	35AU	33BB	31AZ	47AR	23EH	35BC	31AY	45BE	35AV	31AY	35BC	35BC
47AR	35AV	35AW	35AU	33AT	47BA	23EK	45BD	31AZ	45BW	35BC	31AZ	35CK	35CK
47BA	35BC	45BE	35AW	35AV	47BB	31AY	47AR	33AT	47AR	45BB	33AT	45BB	45BB
47BB	35CK	47AR	45BD	35BD	47BF	31AZ	47BA	35AV	47BA	47AR	35AU	45BW	45BW
	45BE	47BA	47AR	45BF		33AT	47BB	35BE	47BB	47AZ	35BH	47AR	47AR
	45BW	47BB	47AZ	47AR		35AV		35CM		47BB	45BB	47AZ	47AZ
	47AR		47BB	47AZ		45BH		45BH			47AL	47BB	47BB
			47BF	47BB		45BH		47AR			47AR		
						47AR		47AL			47BA		
						47AZ		47AZ					
						47BB							

Sales Option Code Table

<u>SPEC NO.</u>	<u>11154</u>	<u>11156</u>	<u>11159</u>	<u>11160</u>	<u>11161</u>	<u>11162</u>	<u>11163</u>	<u>11169</u>	<u>11174</u>	<u>11178</u>	<u>11180</u>	<u>11182</u>	<u>11186</u>
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AV	11AV	11AW	11AW	11AW	11AW	11AV	11AV	11AW
13BK	13BP	13BN	11BG	11BE	13BK	11BF	11BF	13BJ	13BN	11PP	13BM	13BJ	
13BP	13BV	13BV	11BK	13BN	13BP	13BJ	13BR	13BN	13BV	13CG	13BU	13BP	
13BV	13CD	13CD	11PP	13BV	13BV	13BM	13BY	13BV	13CD	13CL	13CD	13BV	
15BD	15BD	15BD	13BJ	13CD	15AZ	13BV	13CD	15AZ	15BD	15BC	15BD	15BD	
15BJ	15BK	15BK	13BN	15BD	15BD	15BD	15BC	15BD	15BK	15BF	15BK	15BK	
15BL	15BL	15BL	13BW	15BK	15BJ	15BK	15BF	15BK	15BL	17CD	15BL	15BL	
17BY	17BZ	17BZ	15BD	15BL	17BW	15BL	17BZ	15BZ	17BZ	17CF	17BW	17BZ	
17CD	17CD	17CD	15BJ	17CD	17BY	17BZ	17CD	17BZ	17CD	17DM	17BY	17CD	
17CG	17CG	17CG	15BL	17CF	17CD	17CD	17CG	17DA	17DA	19AS	17CD	17DA	
19AV	19AS	19AS	17CG	17CG	19AU	17CG	19AS	17DG	19AS	19BB	19AU	19AS	
21BE	21BJ	21BZ	17CH	19AV	21AW	19AS	21BZ	19AS	21CA	23DC	21BJ	23DC	
23DC	23DC	23DC	17CV	21BE	23DC	23DC	23DC	23DC	23DC	23DJ	23DC	23DN	
31AY	23DJ	31AY	19CJ	23DC	31AY	31AY	23DJ	23DN	23DN	23DV	23DN	31AY	
31AZ	23DN	31AZ	23DC	23DN	31AZ	31BD	23DN	31AY	31AY	23EH	31AY	31BC	
33AT	31AY	33AT	31AY	31AY	33AT	33AT	31AY	31AZ	31AZ	23EJ	31AZ	33BA	
35AU	31AZ	35AU	31BD	31AZ	35AU	35AU	31AZ	33AW	33AT	31AY	33AT	35BW	
35BB	33AT	35CK	33AT	33AT	35BH	35BB	33AT	35AV	35AV	31AZ	35AV	45BB	
45CC	35CH	45BB	35BA	35AV	45BB	45BU	35AV	35BC	35BC	33AT	35BC	47AR	
47AR	35CK	45BW	45BP	35BC	47AR	47AR	35BC	35CK	35CK	35AV	35CK	47AZ	
47BA	45BB	47AR	47AR	35CK	47AZ	47AZ	35CK	45BB	45BB	35BE	45BB	47BB	
47BB	47AR	47BA	47AZ	45BS	47BB	47BB	45BT	45BW	45BW	35CM	45BW	47BF	
47BF	47AZ	47BB	47BB	47AR	47BF	47BF	47AR	47AR	47AR	45BH	47AR		
	47BB			47AZ			47AZ	47BF	47AZ	47AL	47AZ		
				47BB			47BB		47BB	47AR	47BB		
				47BF						47AZ			

<u>SPEC NO.</u>	<u>11190</u>	<u>11191</u>	<u>11192</u>	<u>11193</u>	<u>11198</u>	<u>11199</u>	<u>11201</u>	<u>11203</u>	<u>11204</u>	<u>11206</u>	<u>11208</u>	<u>11211</u>	<u>11212</u>
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
11BF	13BJ	13CB	13CF	11BG	11PP	13BJ	13BS	13BK	13BJ	13BJ	13BK	11BG	
13BF	13BN	13CC	13CG	11PP	13CB	13BN	13CG	13BN	13BN	13BN	13BM	11BK	
13BN	13BV	13CG	13CH	13CB	13CC	13BV	15BC	13BV	13BV	13BV	13BU	11PP	
13CE	15AZ	15BC	15BC	13CG	13CG	15BD	15BD	15AZ	15BD	15AZ	15BD	13BJ	
15AZ	15BD	15BF	15BF	13CY	15AZ	15BK	15BK	15BD	15BJ	15BD	15BJ	13BN	
15BZ	15BK	17CD	17CD	15BD	15BD	15BL	15CJ	15BK	15BL	15BK	15BL	13BW	
15CK	15BZ	17CF	15CF	15BK	15BK	17BZ	17CF	17BY	17BZ	15BZ	17BZ	15BJ	
15CR	17BZ	17DK	17DK	15BR	17BY	17CD	17CK	17CD	17CD	17BZ	17CG	15BL	
17CF	17CD	19AS	19AS	17CD	17CD	17CG	17DA	17CG	17CG	17CD	17DG	15CT	
17DA	17CG	23DC	19BB	17CF	17DL	19AS	19AV	19AS	19AS	17CG	19AS	17CG	
17DF	19AS	23DJ	23DC	17DK	19AS	23DC	23DC	21BH	23DC	19AS	21BE	17CH	
19AS	23DC	23DV	23DJ	19AS	19BB	23DN	23DJ	23DC	23DJ	23DC	23DC	17CV	
23DC	31AY	23EH	23DV	23DJ	23DC	31AY	23DN	31AY	23DN	31AY	23DJ	19CJ	
23DJ	31AZ	23EK	23EH	23DN	23DJ	31AZ	31AY	31AZ	31AY	31AZ	23DN	23DC	
23DN	33AT	31AY	23DK	31AY	23DN	33AT	31AZ	33AT	31AZ	33AT	31AY	31AY	
31AY	35AV	31AZ	31AY	31AZ	31AY	35AV	33AT	35AU	33AT	33CH	31AZ	31BD	
31BC	35BC	33AT	31AZ	33AT	31AZ	35BB	45BD	35BH	35CH	45BF	33AW	33AT	
33AT	45BB	33BB	33AT	35AV	33AT	45BB	45BW	45BB	45BE	45BW	35AV	35BA	
35BF	45BW	35AV	33BB	35BD	35AV	45BW	47AR	47AR	45BW	47AR	35BC	45BP	
35CC	47AR	35BE	35AV	45BF	35BD	47AR	47BA	47BA	47AR	47AZ	45BB	47AR	
45BT	47AZ	45BH	35B3	47AR	45BF	47BA	47BB	47BB	47BA	47BB	47AR	47AZ	
47AR	47BB	47AR	45BH	47AZ	47AR	47BB		47BF	47BB	47BF	47AZ	47BB	
47AZ	47BF	47AZ	47AR	47BB	47AZ								
47BB		47BB	47AZ		47BB								
47BF			47BB										

Sales Option Code Table

<u>SPEC NO.</u>	<u>11213</u>	<u>11215</u>	<u>11216</u>	<u>11218</u>	<u>11220</u>	<u>11224</u>	<u>11227</u>	<u>11249</u>	<u>11251</u>	<u>11252</u>	<u>11253</u>	<u>11254</u>	<u>11255</u>
	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AK	11AH	11AH	11AH	11AH	11AH
	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
	11BG	13BK	13BF	13BR	11PP	13BJ	13BM	13BG	13BJ	13BJ	13BJ	13BJ	13BJ
	13BR	13BR	13BN	13BV	13CB	13BN	13BY	13BJ	13BN	13BN	13BN	13BN	13BN
	13BV	13BV	13CE	13CD	13CG	13BV	13DA	13BW	13BV	13BV	13BV	13BV	13BV
	13CD	15BD	15AZ	15BD	13CY	15AZ	15BA	15AZ	15AZ	15AZ	15AZ	15AZ	15AZ
	15BD	15BJ	15BZ	15BK	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD
	15BK	15BM	15CK	15BL	15BK	15BJ	15BJ	15BK	15BK	15BK	15BK	15BK	15BK
SALES OPTION CODE NUMBERS	15BL	15CM	15CR	17BZ	15BR	17BY	17BY	15BZ	15BZ	15BZ	15BZ	15BZ	15BZ
	17CD	17BY	17CF	17CD	17CD	17CD	17CG	17BZ	17BZ	17BZ	17BZ	17BZ	17BZ
	17CF	17CG	17DA	17CG	17CF	17CG	17CK	17CD	17CD	17CD	17CD	17CD	17CD
	17CG	17DF	17DF	19AS	17DK	19AS	19AV	17CG	17CG	17CG	17CG	17CG	17CG
	19AS	19AS	19AS	23DC	19AS	21BK	21AW	19AS	19AS	19AS	19AS	19AS	19AS
	23DC	23DC	23DC	31AY	23DC	23DC	23DC	23DC	23DC	23DC	23DC	23DC	23DC
	23DN	23DJ	23DJ	31AZ	23DJ	31AY	23DJ	23DK	31AY	31AY	31AY	31AY	31AY
	31AY	23DN	23DN	33AT	23DN	31AZ	23ED	31AY	31AZ	31AZ	31AZ	31AZ	31AZ
	31AZ	31AY	31AY	35BC	31AY	33AT	31AY	31AZ	33AT	33AT	33AT	33AT	33AT
	33AT	31AZ	31BC	35CK	31AZ	35AU	31AZ	33AV	35CH	35CH	35CH	35CH	35CH
	35AV	33AW	33AT	45BB	33AT	35BH	33AT	35AU	45BB	45BE	45BS	45BU	45BT
	35BZ	35CJ	35BV	47BW	35AV	45BB	35AU	35BB	45BW	45BW	47AR	47AR	47AR
	35CK	45BB	35CC	47AL	35BD	47AR	35BH	45BB	47AR	47AR	47AZ	47AZ	47AZ
	45BF	47AR	45BB	47AR	45ED	47BA	45BH	47AR	47AZ	47AZ	47BB	47BB	47BB
	47AR	47AZ	47AR	47AZ	47AR	47BB	47AL	47AZ	47BB	47BB	47BF	47BF	47BF
	47BA	47BB	47AZ		47AZ	47BF	47AR	47BB	47BF	47BF			
	47BB	47BF	47BB		47BB		47BA	47BF					
	47BF		47BF										

<u>SPEC NO.</u>	<u>11273</u>	<u>11274</u>	<u>11277</u>	<u>11280</u>	<u>11281</u>	<u>11291</u>	<u>11293</u>	<u>11300</u>	<u>11302</u>	<u>11305</u>	<u>11313</u>	<u>11337</u>	<u>11354</u>
	11AH	11AH	11AH	11AH	11AH	11AH	11AW	11AH	11AH	11AH	11AH	11AH	11AH
	11AW	11AW	11AW	11AW	11AW	11AW	11BE	11AV	11AW	11AW	11AW	11AW	11AW
	11PP	13BF	13CC	13CC	13CC	13BN	13BJ	13CF	13BJ	13BN	13BJ	13BJ	13BF
	13CB	13BN	13CG	13CG	13CG	13BV	13BN	13CG	13BN	13BV	13BM	13BN	13BM
	13CG	13CG	13DB	13DB	13DB	13CD	13BV	13CH	13BV	13CD	13BV	13BV	13BY
	13CY	15BB	15BC	15AZ	15BC	15AZ	15BD	15BC	15AZ	15AZ	15BB	15AZ	13CG
	15BC	15BD	15BF	15BD	15BF	15BD	15BK	15BD	15BD	15BD	15BD	15BD	15AZ
	15BF	15BK	17CD	15BK	17CD	15BK	15BL	15BJ	15BK	15BK	15BK	15BK	15BD
SALES OPTION CODE NUMBERS	17CD	17BZ	17CF	17CD	17CF	15BZ	17BZ	17BC	15BZ	15BZ	17BZ	15BZ	17BY
	17CF	17DA	17DK	17CF	17DT	17BZ	17CD	17CD	17BZ	17BZ	17CD	17BZ	17CD
	17DK	17DG	19AS	17DT	19AS	17CD	17CG	19AS	17CD	17CD	17DA	17CD	17CG
	19AS	19AS	19BB	19AS	23DC	17CG	19AS	23DD	17CG	17CG	19AS	17DA	19AS
	23DC	23DC	23DC	23DC	23DJ	19AS	23DC	31AY	19AS	19AS	23DC	19AS	21BJ
	23DJ	31AY	23DJ	23DJ	23EH	21BJ	31AY	31BD	23DC	23DC	31AY	21BJ	23DC
	23DN	31AZ	23EH	23EH	23EK	23DC	31BC	35AU	31AY	23DN	31AZ	23DC	23DN
	31AY	33AT	23EK	23EK	31AY	23DN	33AT	35AZ	31BC	31AY	33AT	23DJ	31AY
	31AZ	35AV	31AY	31AY	31AZ	31AY	35AV	45CE	33AT	31AZ	35AU	23DN	31AZ
	33AT	35CC	31AZ	31AZ	33AT	31AZ	35BC	47AE	35CH	33AT	35BC	31AY	33AT
	35AV	45BE	33AT	33AT	33BB	33AT	45BT	47AZ	45BS	35CJ	45BB	31AZ	35AV
	35BD	45BW	33BB	33BB	35AV	35AV	47AR		47AR	35CK	47BW	33AT	35BC
	45BF	47AR	35AV	35AV	35CV	35BC	47BA		47AZ	45BB	47AR	35AV	45BB
	47AR	47AZ	35BE	35CV	45EE	35CK	47BB		47BB	45BW	47AZ	35BC	47AR
	47AZ	47BB	45BH	45EE	47AR	45BB	47BF		47BF	47AR	47BB	35CK	47AZ
	47BB	47BF	47AR	47AR	47AZ	45BW				47AZ	47BF	45BB	47BB
			47AZ	47AZ	47BB	47AR				47BB		45BW	47BF
			47BB	47BB	47AZ	47AZ				47BF		47AR	
						47BB						47AZ	
						47BF						47BB	
												47BF	

Sales Option Code Table

SPEC NO.	11359	11383	11394	11395	11397	11401	11406	11407	11408	11409	11410	11411	11413
11AH	AA1H	11AH	11AH	11AH	11AH	11AW	11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11BE	11AW	11AW	11AW	11AW	11AW	11AW	11AW
13CC	13BN	13CG	13CB	13CB	13BN	13BF	11PP	11PP	13CC	13CC	13CF	13CC	11PP
13CG	13BV	13CG	13CC	13BV	13BN	13CB	13CB	13CG	13CG	13CG	13CG	13CG	13CB
13DB	13CD	13CH	13CG	13CD	13BV	13CG	13CG	13DB	13DB	13CH	13DB	13CC	
15BD	15AZ	15BD	15BD	15AZ	13CG	13CY	13CY	15AZ	15BC	15BC	15BC	15BC	13CG
15BK	15BD	15BK	15BK	15BD	15BC	15BD	15BD	15BD	15BD	15BF	15BF	15BF	15AZ
15CY	15BK	15CY	15CY	15BK	15BF	15BK	15BK	15BK	17CD	17CD	17CD	17CD	15BD
17CD	15BZ	17CD	17CD	15BZ	17BZ	17CD	17CD	17CD	17DF	17DF	17CF	17CF	15BK
17CF	17BZ	17CF	17CF	17BZ	17CD	17CF	17CF	17CF	17DT	17DT	17DT	17DT	17BY
17DT	17CD	17DT	17DT	17CD	17CG	17DK	17DK	17DT	19AS	19AS	19AS	19AS	17CD
19AS	17DA	19AS	19AS	17CG	19AZ	19AS	19AS	19AS	23DC	19BB	19BB	19BB	17DU
23DC	19AS	19BB	19BB	19AS	23DC	23DC	23DC	23DC	23DJ	23DC	23DC	23DC	19AS
23DJ	21BJ	23DC	23DC	21BZ	31AY	23DJ	23DJ	23DJ	23DJ	23EH	23DJ	23DJ	23EC
23EH	23DC	23DJ	23DJ	23DC	31AZ	23DN	23DN	23EH	23EK	23EH	23EH	23EH	23DJ
23EK	23DJ	23DV	23DV	23DN	33AT	23EH	23EH	23EK	31AY	23EK	23EK	23EK	23EN
31AY	23DN	23EH	23EH	31AY	ETCH	31AY	31AY	31AY	31AZ	31AY	31AY	31AY	23EH
31AZ	31AY	23EK	23EK	31AZ	45BS	31AZ	31AZ	31AZ	33AT	31AZ	31AZ	31AZ	31AY
33BF	31AZ	31AY	31AY	33AT	47AR	33AT	33AT	33AT	33BB	33AT	33AT	33AT	31AZ
35AV	33AT	31AZ	31AZ	35AV	47BA	35AV	35AV	35AV	35AV	33BB	33BB	33BB	33AT
35DE	35AV	33BF	33BF	35DB	47BB	35BD	35BD	35AV	35DC	35AV	35DC	35AV	35AV
35DF	35BC	35AV	35AV	45BB	47BF	45BF	45ED	35DC	45EE	35BE	45BH	35BD	
45EE	35CK	35DD	35DE	45BW		47AR	47AR	45EE	47AR	47GH	47AR	45BF	
47AR	45BB	35DH	35DH	47AR		47AZ	47AZ	47AR	47AZ	47AR	47AZ	47AR	
47AZ	45BW	45BH	45BH	47AZ		47BB	47BB	47AZ	47BB	47AZ	47BB	47AZ	
47BB	47AR	47AR	47AR	47BB				47BB		47BB		47BB	
	47AZ	47AZ	47AZ	47BF									
	47BB	47BB	47BB										
	47BF												

SPEC NO.	11416	11417	11418	11421	11422	11423	11432	11457	11458	11459	11460	11485	11486
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
13CC	13CF	13CB	11PP	11PP	11PP	13BP	13BJ	13CC	13CF	13CC	13CC	13CC	13CC
13CG	13CG	13CC	13CB	13CB	13CB	13BZ	13BN	13CG	13CG	13CG	13CG	13CG	13CG
13DB	13CH	13CG	13CG	13CG	13CG	13DD	13BV	13DB	13CH	13DB	13DB	13DB	13DB
15AZ	15AZ	15AZ	13CY	13CY	13CY	15AZ	15AZ	15BC	15BC	15BC	15BD	15BC	15BC
15BD	15BD	15BD	15BD	15BC	15BD	15BD	15BD	15BF	15BF	15BF	15BK	15BF	15BF
15BK	15BK	15BK	15BK	15BF	15BK	15BJ	15BJ	17CD	17CD	17CD	15CY	17CD	17CD
17CD	17CD	17CD	15CY	17CD	15CY	15BZ	17BY	17CF	17CF	17CF	17CD	17CF	17CF
17CF	17CF	17CF	17CD	17CF	17CD	17CD	17CD	17DT	17DT	17DT	17CF	17DT	17DT
17DT	17DT	17DT	17CF	17DK	17CF	17CF	17DK	19AS	19AS	19AS	17DT	19AS	19AS
19AS	19AS	19AS	17DK	19AS	19DK	17CG	19AS	23DC	19BB	19BB	19AS	23DC	23DC
23DC	19BB	19BB	19AS	23DC	19AS	19AS	21AW	23DJ	23DC	23DC	23DC	23DC	23DJ
23DJ	23DC	23DC	23DC	23DJ	23DC	21BJ	23DC	23EH	23D	23DJ	23DJ	23EH	23EH
23EH	23DJ	23DJ	23DJ	23DN	23DJ	23DC	23DK	23EK	23EH	23EH	23EH	23EK	23EK
23EK	23DV	23DV	23DN	23EH	23DN	23DN	23DV	31AY	23EK	23EK	23EK	31AY	31AY
31AY	23EH	23EH	23EH	31AY	23EH	31AY	31AY	31AZ	31AY	31AY	31AY	31AY	31AZ
31AZ	23EK	23EK	31AY	31AZ	31AY	31AZ	31AZ	33BF	31AZ	31AZ	31AZ	33BF	33BF
33AT	31AY	31AY	31AZ	33AT	31AZ	33AT	33AT	35AV	33BF	33BF	33BF	35AV	35AV
33BB	31AZ	31AZ	33AT	35AV	33AT	45BW	45BB	35DC	35AV	35AV	35AV	35DF	35DF
35AV	33AT	33AT	35AV	35BD	35AV	45EA	47AR	35DF	35DD	35DE	35DF	35DJ	35DJ
35CF	33BB	33BB	35BD	45BF	35BD	47AR	47BA	45EE	35DH	35DH	35FJ	45EE	45EE
45EE	35AV	35AV	45BF	47AR	45ED	47BA	47BB	47AR	45BH	45BH	45EE	47AR	47AR
47AR	35BE	35BE	47AR	47AZ	47AR	47BB		47AZ	47AR	47AR	47AR	47AZ	47AZ
47AZ	45BH	45BH	47AZ	47BB	47AZ	47BF		47BB	47AZ	47AZ	47AZ	47AZ	47BB
47BB	47AR	47AR	47BB	47BB	47BB				47BB	47BB	47BB	47BB	47BB
	47AZ	47AZ											
	47BB	47BB											

Sales Option Code Table

<u>SPEC NO.</u>	<u>11496</u>	<u>11499</u>	<u>11501</u>	<u>11510</u>	<u>11519</u>	<u>11520</u>	<u>11546</u>	<u>11551</u>	<u>11552</u>	<u>11561</u>	<u>11568</u>	<u>11569</u>	<u>11573</u>
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
13BN	13CB	13CC	11PP	13CC	13CC	13CC	13CF	13CB	13CC	13CF	13BN	13BN	11BE
13BV	13CC	13CG	13CB	13CG	13CG	13CG	13CC	13CG	13CG	13CG	13BV	13BV	13BF
13CD	13CG	13DB	13CC	13DB	13DB	13CH	13CG	13DB	13CH	13CD	13CD	13BN	
17AZ	15BD	15BC	13CG	15BD	15BC	15BD	15BD	15BC	15BC	15AZ	15AZ	13BV	
15BD	15BK	15BF	15AZ	15BK	15BF	15BK	15BK	15BF	15BF	15BD	15BD	13CG	
15BK	15CY	17CD	15BD	15CY	17CD	15CY	15CY	17CD	17CD	17CD	15BK	15BK	15AZ
15BZ	17CD	17CF	15BK	17CD	17DT	17CD	17CD	17CF	17CF	15BZ	15BZ	15BD	
17BZ	17CF	17DT	17BY	17DT	17EA	17DT	17CF	17DT	17DT	17BZ	17BZ	15BZ	
17CD	17DT	19AS	17CD	17EA	19AS	17EA	17DT	19AS	19AS	17CD	17CD	15CK	
17CG	19AS	23DC	17DU	19AS	21CR	19AS	19AS	23DC	21CR	17CG	17CG	17BZ	
19AS	23DC	23DJ	19AS	21CT	23DC	21CR	21CR	23DJ	23DC	19AS	19AS	17CD	
23DC	23DJ	23EH	23DC	23DC	23DJ	23DC	23DC	23EH	23DJ	21BZ	21BZ	17CG	
23DN	23DV	23EK	23DJ	23DJ	23DN	23DJ	23DJ	23EK	23DN	23DC	23DC	19AS	
31AY	23EH	31AY	23DN	23EH	23EH	23EH	23DV	31AY	23EH	23DN	23DN	21BJ	
31AZ	23EK	31AZ	23EH	23EK	31AY	23EK	23EH	31AZ	31AY	31AY	31AY	23DC	
33AT	31AY	33BF	31AY	31AY	31AZ	31AY	23EK	33BF	31AZ	31AY	31AZ	31AY	
35CJ	31AZ	35AV	31AZ	31AZ	33BF	31AZ	31AY	35AV	33BF	33AT	33AT	31AZ	
35CK	33BF	35D3	33AT	33BF	35AV	33BF	31AZ	35DF	35AV	35CJ	35CJ	33AT	
45BW	35AV	35DF	35AV	35AV	35DF	35AV	33BF	35DJ	35DD	35CK	35CK	35AV	
45EA	35DE	45BH	35BD	35DF	35DJ	35DD	35AV	45BH	35DH	45BB	45BW	35CH	
47AR	35DF	47AR	45EE	35DJ	45EE	35DF	35DF	47AR	45BH	45BW	45EA	45BT	
47AZ	45BH	47AZ	47AR	45EE	47AR	45BH	35DJ	47AZ	47AR	47AR	47AR	47AR	
47BB	47AR	47BB	47AZ	47AR	47AZ	47AR	45BH	47BB	47AZ	47AZ	47AZ	47AZ	
47BF	47AZ		47BB	47AZ	47BB	47AZ	47AR		47BB	47BB	47BB	47BB	
	47BB			47BB		47BB	47AZ	47BB		47BF	47BF	47BF	

<u>SPEC NO.</u>	<u>11592</u>	<u>11593</u>	<u>11602</u>	<u>11603</u>	<u>11606</u>	<u>11609</u>
11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11AW
13CB	13CC	11BF	11BH	11BE	13BK	
13CC	13CG	13BF	11PP	13BJ	13BM	
13CG	13DB	13BN	13CB	13BN	13BY	
15BD	15BC	13BZ	13CG	13BV	15BD	
15BK	15BF	13CG	13CY	15AZ	15BJ	
15CY	17CD	15AZ	15BD	15BD	15BL	
17CD	17DT	15BD	15BK	15BK	17BZ	
17DT	17EA	15BJ	15CY	15BZ	17CG	
17EA	19AS	15BZ	17CD	17BZ	17CV	
19AS	21CR	17BZ	17CF	17CD	19AS	
21CR	23DC	17CD	17DK	17CG	21BZ	
23DC	23DJ	17CG	19AS	19AS	23DC	
23DJ	23DN	19AS	23DC	23DC	23DN	
23DN	23EH	21BM	23DJ	31AY	31AY	
23DV	31AY	23DC	23DN	31BC	31AZ	
23EH	31AZ	23DN	23EH	33AT	33AT	
31AY	33BF	31AY	31AY	35CH	35AV	
31AZ	35AV	31AZ	31AZ	45BS	35BB	
33BF	35DF	33AT	33AT	47AR	45BB	
35AV	35DJ	35AV	35AV	47AZ	47AR	
35DF	45EH	35CH	35BD	47BB	47BA	
35DJ	47AR	45BT	45ED	47BF	47BB	
45EH	47AZ	47AR	47AR			
47AR	47BB	47BA	47AZ			
47AZ		47BB	47BB			
47BB		47BF				

**SALES CODES LISTED BELOW ARE SALES OPTION CODE NUMBERS THESE
CODES ARE USED ON P216, P218, P220**

11AH Standard Bearing Plate	15CB Down Carb–Manual Choke (Deere)
11AK 4 Boss 5.7 BC Bearing Plate	15CJ Fuel–Cutoff–Solenoid
11AP SAE–A Bearing Plate	15CK Remote Choke (Solenoid)
11AR SAE–B Bearing Plate	15CL Carb–Manifold–Auto Choke
11AU Standard Block	15CM Fuel Line 5” – Filter (SUC Side Top)
11AV Premium Block – Plastic Thrust Washer	15CY Pmp, Fuel–N/Filter–Carb Mounted
11AW Premium Block with Standard Thrust Washer	17AS Oil Filter–Remote
11AY Standard Block (Premium Head)	17BC Oil Base – 4 Quart
11AZ Hydraulic Lifters	17BW Oil Base–Standard Capacity with Side Drain Only
11BB Premium Block (Deere) Standard Bearing Plate	17BY Oil Fill Tube & Indicator – Inner
11BE Adapter, Hydraulic Pump (SAE A)	17BZ Oil Fill Tube & Indicator – Outer
11BF Adapter, Hydraulic Pump (SAE B)	17CD Oil Filter (3.4” Long)
11BG 6 Holes Rear of Block	17CE No Oil Filter
11BH Adapter, Bearing Plate (7” Pilot)	17CF Oil Fill Tube & Indicator – Outer Extension
11BJ Electric Clutch Adapter	17CG Oil Base–Standard Capacity (Optional Drains)
11BK Single Groove Pulley	17CH Oil Fill Tube & Indicator
11PP Plastic Plugs (Inserted in Block)	17CJ Remote Oil Filter With Lines
13BF Governor, 2 Speed Solenoid	17CK Remote Oil Filter Adapter Plate
13BG Governor–3450 High Idle	17CM Oil Base 2.5 Quart (Die Cast)
13BJ Side Pull Governor	17CN Chrome Oil Fill Tube & Indicator – Inner
13BK Front Pull Governor	17CR Oil Fill Tube & Indicator (Outer)
13BM 3850 High Idle	17CV Oil Filter–Hex Nut (4.6” Long)
13BN 3600 High Idle	17DA Oil Base–3 Quart (Sandcast)
13BP 3300 High Idle	17DE Oil Base – Standard Capacity with Temperature Switch
13BR 3200 High Idle	17DF Oil Filter (4.2” Long)
13BS 2800 High Idle	17DG Oil Filter with Hex Nut (3.8” Long)
13BT 2600 High Idle	17DH Oil Base – 2.5 Quart – Single Drain
13BU 1100 Low Idle	17DK Oil Base – Standard Capacity
13BV 1200 Low Idle	17DL Oil Base – 2.5 Quart – Single Drain
13BW 1300 Low Idle	17DM Oil Base – Standard Capacity – Temperature Switch
13BY 1400 Low Idle	17DT Base, Standard Oil–Side Drain–W/Valve
13BZ 1500 Low Idle	17DU Base, 2.5 Qt Oil–W/Valve
13CB 3780 High Idle	17EA Oil Fill & Indicator–Miller
13CC Governor Arm Extension–Diameter .141 (Customer Interface)	19AS Air Cleaner – Standard Capacity
13CD No Governor Linkage	19AU Air Cleaner – High Capacity
13CE 1800 Low Idle	19AV Remote Air Cleaner Adapter
13CF 1850 High Idle	19BA Air Cleaner–XSL with Reset Switch
13CG Fixed Speed Governor	19BB Air Cleaner Cover – Chrome
13CH 10 Ball Governor	19BC Intake Manifold with Vacuum Top
13CK Side Pull Governor with Blower Housing Cutout	19CJ Remote Air Cleaner Adapter with Elbow
13CL 3000 RPM High Idle	19CK Elbow, Remote Air Cleaner–HAKO Only
13CM 3400 RPM High Idle	19AS Air Cleaner, Standard Capacity
13CR 3550 RPM High Idle	19AW Air Intake Sys–Standard Capacity
13CY Governor Arm Extension (Customer Interface)	21AG Flanged, Exhaust Adapter 1.28 OD
13DA Governor, Side Pull–w/Swivel	21AW Exhaust Tube (7.5” Centers) with Covers
13DB 3730 RPM High Idle	21AZ Exhaust Tubes (14” Centers) with Covers
13DD Governor, Side Pull, .190 Hole	21BB Exhaust Tubes (11.8” Centers) with Cover/Brackets
15AZ Fuel Pump–No Filter (Dual Inlet)	21BD Exhaust Tubes (11.8” Centers)
15BA Fuel Pump–Filter (Top Inlet)	21BE Exhaust Tubes (7.5” Centers)
15BB No Pump–Filter	21BF Exhaust System with Covers and Brackets
15BC No Pump–No Filter	21BG Adapter, Exhaust (1.5” OD)
15BD Downdraft Carb–Manual Choke	21BH Exhaust Manifold – Left Rear Outlet with Covers
15BF Carburetor, LP–Downdraft	21BJ Exhaust Tubes (7.5” Centers)
15BJ Front Pull Choke	21BK Exhaust Manifold – Right Rear – Outlet
15BK Rear Pull Choke	21BM Exhaust Tubes with Covers and Support Brackets (7.5” Centers)
15BL Fuel Pump with Filter (Dual Inlet)	21BW Exhaust Manifold–Right Rear–Down
15BM Fuel Pump – No Filter (Top Inlet)	21BZ Exhaust Adapter 1.125” OD
15BR Fuel Pump – No Filter (Dual Inlet) 17” Line	21CA Exhaust Manifold – Left Rear Outlet
15BU Downdraft Carb–Dual Fuel (Left)	21CC Exhaust Tubes with Covers and Support Brackets (14” Centers)
15BZ 5” Fuel Line with Filter (Suck Side – Bottom)	

**SALES CODES LISTED BELOW ARE SALES OPTION CODE NUMBERS THESE
CODES ARE USED ON P216, P218, P220**

21CD Exhaust Tubes (14" Centers)	35BZ 6 Pin Harness
21CE Exhaust Tube with Covers (11.8" Centers)	35CC 6 Pin W/Diode & Mating Connector
21CR Exhaust Studs	35CG 4 Pin/2 Wire with Mating Connector
23DC Press Cooled Housing and Wheel	35CH 6 Pin/4 Wire with Mating Connector
23DD Blower Wheel (Vacuflow)	35CJ 6 Pin/4 Wire Harness
23DE Stationary Guard – No PTO (Steel)	35CK Control Panel
23DH Stationary Guard with PTO (Steel)	35CL 6 Pin Harness W/Lt Rear Interface
23DJ No Rotating Screen	35CV 6 Pin Harness W/Lt Rear Intfl
23DK Cylinder Air Housings with Weld Nuts	35CM Oil Temperature Switch (1 Terminal–Normally Closed)
23DN Stationary Guard (No PTO–Plastic) – Onan Logo	35DB Control Panel W/Harness
23DV Baffle, Oil Base Cooling	35DD Harness, 6 Pin Lt Rr Interface W/Diode
23DZ M Engine Components	35DE Harness, 6 Pin Lt Rr Interface W/Diode
23ED Stationary Guard with PTO (Plastic)	35DF Cable, Battery Pos. W/Slv
23EF Housing and Wheel Ingersoll (B)	35DJ Harness, 6 Pin Lt Rr Interface W/Diode & Fuse
23EH Inverted Volt Reg (Cyl Air Housing–Restricted)	35DL Switch, Low Pressure–Sealed Connector
23EJ Stationary Guard without P.T.O. – No Logo	39AG Control Panel
23EK Stationary Guard – No P.T.O. (Miller)	45BB 1.12 Diameter St Shaft 3.95 to RFB
23EL Screen – No Center Bolts	45BC 1.12 Diameter St Shaft 2.25 to RFB
31AY Electronic Ignition	45BD 1.44 Diameter St Shaft 3.77 to RFB
31AZ Alternator – 12V/20A	45BE 1.44 Diameter St Shaft 3.99 to RFB
31BC Alternator – 12V/35A	45BF 1.12 Diameter TP Shaft 3.11 to RFB
31BD No Alternator	45BG 1.12 Diameter TP Shaft 4.96 to RFB
31BJ Alternator 12V (Deere) – 20 Ampere	45BH 1.12 Diameter TP Shaft 2.18 to RFB
33AS Starter Solenoid Shift (Down)	45BJ 1.12 Diameter TP Shaft 2.55 to RFB
33AT Starter Solenoid Shift (Side) Standard	45BL Crankshaft–Balance Weight
33AV Starter–Bendix	45BP 1.50 Diameter St Shaft 2.74 to RFB
33AW Starter–Solenoid Shift (Side) Premium	45BS Internal Splined 9 Tooth Crank
33BA Solenoid Shift (Down) Premium	45BT Internal Splined 13 Tooth Crank
33BB No Starter Cap Kit	45BU Internal Splined 11 Tooth Crank
33BF Starter, Solenoid Shift–Side W/Cap	45BW Add Crankshaft Key
35AH Low Oil Pressure Switch (1 Terminal/Normally Open)	45BY 1.12 Diameter St Shaft 5.00 to RFB
35AU Low Oil Pressure Switch (1 Terminal/Normally Closed)	45BZ 1.04 Diameter TP Shaft 3.63 to RFB
35AU Low Oil Pressure Switch (1 Terminal/Normally Open)	45CA 1.12 Diameter St Shaft 4.71 to RFB
35AV Low Oil Pressure Switch (2 Terminal/Normally Open)	45CC Crankshaft–No PTO (Stub)
35AW 3 Pin Harness	45CE Crankshaft 1.63" TP Shaft x 2.24" RFB
35AZ Wiring Harness	45EA 1.12 Diameter St Shaft–4.71 to RFB
35BA Oil Pressure Sender (40 PSI)	45ED 1.12 Dia Top Shaft 3.72 RFB
35BB 4 Pin Harness with Mating Connector	45EE CS–ST Shaft 1–14 UNS–2A SPL
35BC 6 Pin Harness with Mating Connector	45EH 1.12 Dia Top Shaft 2.68 to RFB
35BD 4 Pin Harness – Ext 10"	47AE Paint and Primer
35BE 6 Pin Harness with LT Rear Interface	47AL No Labels
35BH 4 Pin Harness	47AR Finishing List
35BJ 2 Wire Harness w/Inline Fuse	47AV Modification Kit
35BK 9 Pin Harness	47AW Ingersoll B – Installation and Connection
35BL High Metal Temperature Switch (1 Terminal – Normally Open)	47AY Loose Labels
35BV Low Oil Pressure Switch (3 Terminal – Normally Open/ Normally Closed Common Ground)	47AZ Nameplate – Alternate Location
35BW Low Oil Pressure Switch (2 Terminal – Normally Open/ Normally Closed – Int. Ground)	47BB Labels – P218, P220
	47BF Maintenance Labels

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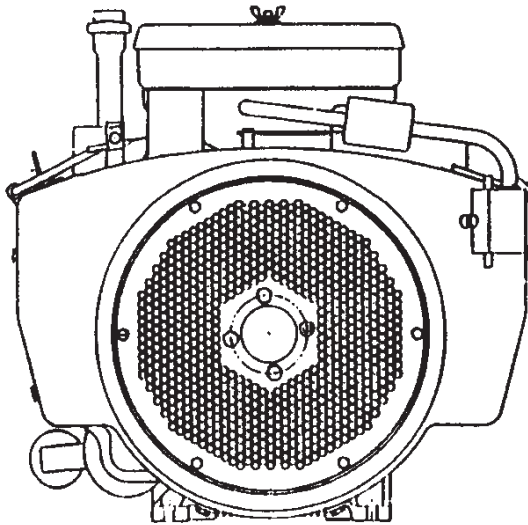
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Engine *Parts Catalog*

**P224G
OL24
LX990**



Printed in U.S.A.

965-0266C
2-99 (Spec B-H)
Replaces 10-98 (Spec B-H)

MODEL IDENTIFICATION

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.

For handy reference, insert your nameplate information in the spaces below.

MODEL AND SPEC NO.

SERIAL NO.

DIGITAL CONTROL SOFTWARE VERSION
AND DATE (IF APPLICABLE)

SAFETY PRECAUTIONS

The following symbols are used in Onan manuals to alert users to the potentially dangerous conditions relating to maintenance of equipment and replacement of parts. Please read and observe.



This symbol warns of immediate hazards which will result in severe personal injury or death.



This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.



This symbol refers to a hazard or unsafe practice which can result in severe personal injury or product or property damage.

PRODUCT SAFETY PRECAUTIONS



Service and repair of Onan equipment must be performed by trained, experienced personnel only. Improper service or repair may result in property damage, severe personal injury or death. Do not use this catalog as a guide to servicing your equipment. Read and follow the IMPORTANT SAFETY INSTRUCTIONS in the Service Manual appropriate for the equipment you are working on.



Contact with USED ENGINE OILS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking or changing engine oils take all necessary precautions not to ingest, breathe the fumes or contact the used oil.



Contact with ASBESTOS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When handling engine gaskets take all necessary precautions not to ingest, breathe or contact the dust from the gaskets! Use adequate ventilation and wear protective gloves, masks and clothing!



Contact with BENZINE and LEAD, found in gasoline, fuel additives and solvents has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking, draining or adding gasoline and fuel additives or using solvents take all necessary precautions not to ingest, breathe the fumes or contact the liquids. Use adequate ventilation and wear protective gloves, masks and protective clothing!

Introduction

This parts manual applies to the Performer engine as listed in the Engine Data Table. Parts are arranged in groups of related items and each illustrated part is identified by a reference number corresponding to the same reference number in the parts list. Parts illustrations are typical. Throughout this manual, right and left sides are determined by facing the flywheel end (FRONT) of the Engine.

Using the MODEL and SPECIFICATION NUMBER from the nameplate, consult the SALES OPTION CODE TABLE in the back of the book to identify factory installed parts that are unique to your engine. (Note: The diagonal line (/) in the model and specification number separates engine characteristics from the specification number and letter. The specification number denotes customer requested features. The specification letter advances (A to B, B to C, etc.) with major manufacturing changes.)

Engine Data Table

<u>Model</u>	<u>Rating</u>
P224G-I/*	24 Horsepower
OL24/*	24 Horsepower
LX990/*	24 Horsepower

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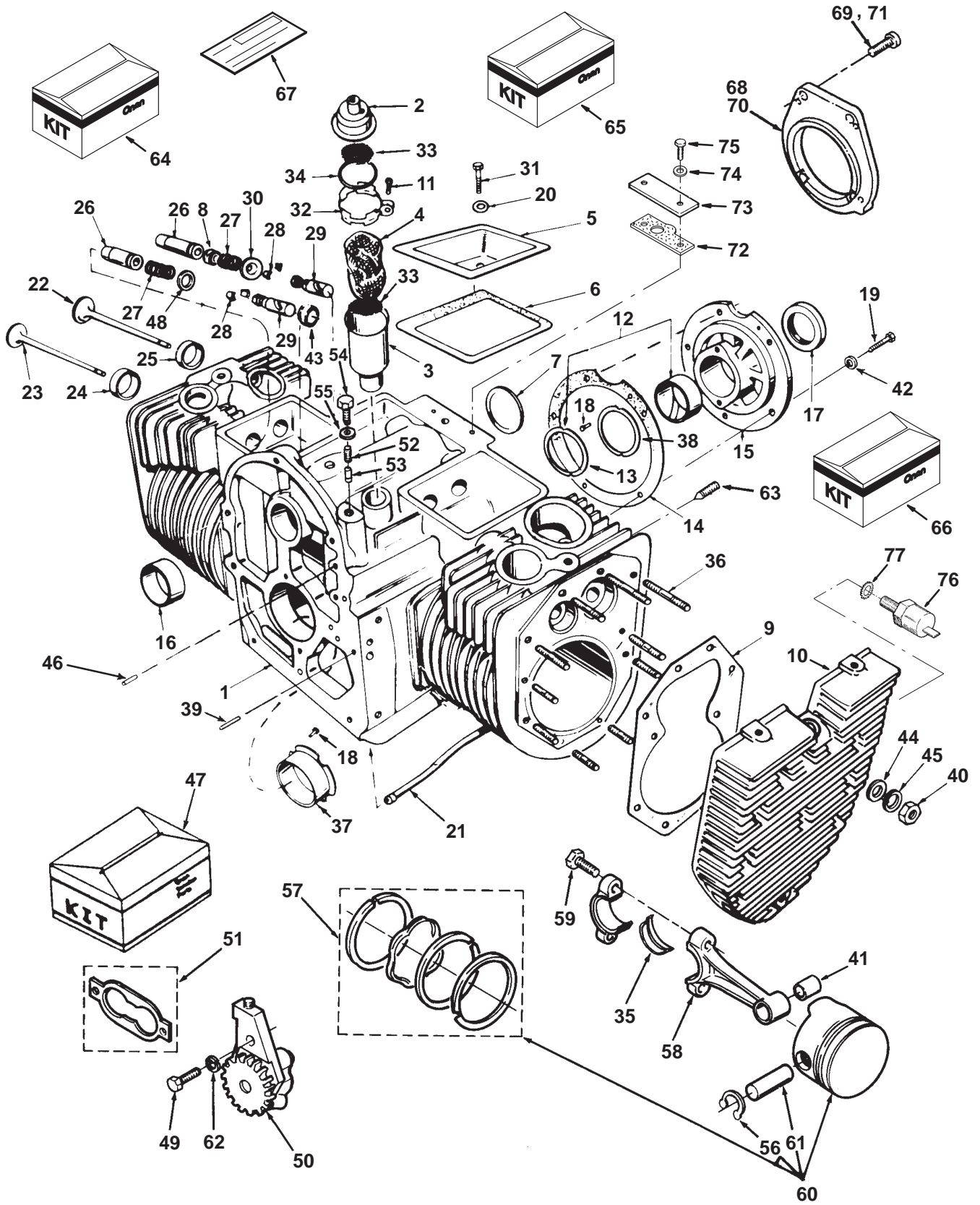
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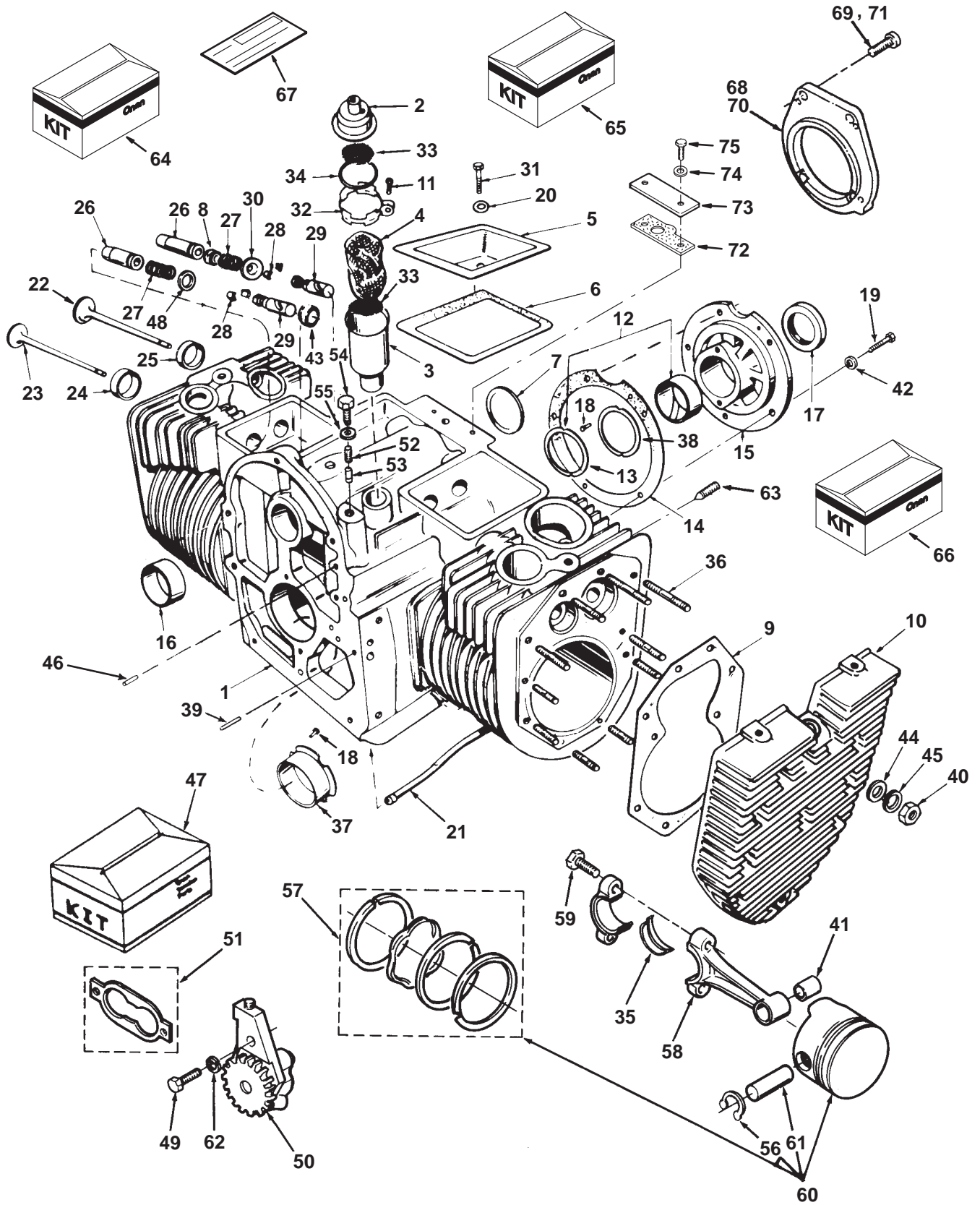
Cylinder Block



Cylinder Block

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1		1	Block, Cylinder (See Short Block Catalog #932-0109) (Includes Parts Marked *)	26			*Guide, Valve
2	123-0954	1	Cap and Valve, Breather		110-3167	2	Exhaust
3	123-0952	1	*Tube, Breather	27	110-3168	2	Intake
4	123-1417	1	Filter, Breather Tube	28	110-0539	4	Spring, Valve
5			Cover, Valve Compartment				Lock, Valve Spring
	110-1624-01	2	Spec B,E		110-3572	8	Spec B,C
	110-3616-02	1	Spec C,D		110-0639	8	Spec E
	110-1624-01	1	Spec C,D	29	115-0006	4	Tappet, Valve
6	110-3575	2	Gasket, Valve Cover	30			Rotator, Valve
7	517-0048-01	1	*Plug, Expansion (Plated)		110-0904	2	Spec B,C (Intake)
8	110-3604	2	Seal, Intake Valve		110-0904	4	Begin Spec E
9	110-2987	2	Gasket, Cylinder Head	31	800-0011	2	Screw, Cap – Hex Head (1/4–20 x 2")
10	110-3549	2	Head, Cylinder	32	123-0951	1	Clamp, Loop – Breather Tube
11	809-0035	1	Screw, Breather Clamp (#8 x 3/4")				Cap
12			Bearing, Rear Crankshaft	33	123-0958	2	Screen, Breather Tube
	101-0804	1	* Standard	34	509-0117	1	Seal, O–Ring – Breather Cap
	101-0804-02		1.002" Undersize	35			Bearing, Half – Connecting Rod
	101-0804-10		1.010" Undersize		114-0188	4	Standard
	101-0804-20		1.020" Undersize		114-0188-02	4	.002" Undersize
	101-0804-30		1.030" Undersize		114-0188-10	4	.010" Undersize
13	104-0575	2	*Washer, Crankshaft Bearing Thrust		114-0188-20	4	.020" Undersize
14	101-0809	1	*Gasket, Bearing Plate		114-0188-30	4	.030" Undersize
15			Plate, Rear Bearing	36			*Stud, Cylinder Head Mounting
	101-0439-01	1	* Code 11AH,11AW		520-0919	8	3/8 x 2–19/32" (Install 4 Bottom Holes – RH, LH Heads)
	101-0430-01	1	SAE–B – Code 11AR				3/8 x 2–3/4" (Install 2 Top Holes – RH, LH Heads)
	101-0437-01	1	SAE–A – Code 11AP		520-0876	4	3/8 x 3" (Install 4 Middle Holes – RH, LH Heads)
	101-0793-02	1	Begin Spec E		520-0918	8	Bearing, Sleeve – Flanged
16	101-0405	2	*Bearing, Camshaft	37			* Standard
17	509-0041	1	Seal, Crankshaft Oil (Rear)		101-0805	1	.002" Undersize
18	516-0072	4	*Pin, Bearing Stop		101-0805-02	1	.010" Undersize
19	800-0051-01	5	Screw, Cap – Hex Head (3/8–16 x 1–1/4")		101-0805-10	1	.020" Undersize
			Loctite Patch		101-0805-20	1	.030" Undersize
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22			Valve, Intake	40	104-0091	20	Nut, Hex (Special)
	110-3569	2	Spec B,C	41	114-0036	2	Bushing, Piston Pin
	110-1718	2	Begin Spec E	42	526-0402	5	Washer, Flat (3/8")
23			Valve, Exhaust	43	110-3571	2	Cap, Valve – Exhaust (Spec B and C only)
	110-3570	2	Spec B,C	44	526-0250	20	Washer, Flat – Heat Treated (3/8" Screw)
	110-1719	2	Begin Spec E				Washer, Compression (Special)
24			Insert, Valve Seat – Exhaust	45	851-0029	24	Plug, Core Hole
	110-1716	2	* Standard	46	517-0067	1	Kit, Gasket
	110-1716-02	2	.002" Oversize	47			Cylinder Head Removal
	110-1716-05	2	.005" Oversize		168-0190	1	Complete Engine
	110-1716-10	2	.010" Oversize		168-0191	1	Washer, Exhaust Valve Spring Retainer (Spec B and C only)
	110-1716-25	2	.025" Oversize	48	110-0893	2	Screw, Cap – Hex Head (1/4–20 x 1")
	110-3655-25	2	.025" Oversize				
25			Insert, Valve Seat – Intake (Zinc Plated)	49	800-0007	2	
	110-3655	2	* Standard				
	110-3655-02	2	.002" Oversize				
	110-3655-05	2	.005" Oversize				
	110-3655-10	2	.010" Oversize				

Cylinder Block



Cylinder Block

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
50			Pump, Oil (Components Not Sold Separately)	64	541-0239	1	Kit, PTO – 7" Pilot Adapter Code 11BH (Includes Parts Marked ~)
	120-0491	1	Spec B-D				
	120-1275-02	1	Begin Spec E	65	541-0344	1	Kit, PTO Bearing Plate Adapter – SAE A – Code 11BE (Includes Parts Marked #)
51	120-0161	1	Gasket Kit, Oil Pump				
52	120-0140	1	Spring, Bypass Valve				
53	120-0398	1	Plunger, Bypass Valve	66	541-0374	1	Kit, PTO Bearing Plate Adapter – SAE B – Code 11BG (Includes Parts Marked ^)
54	801-0050	1	Screw, Cap – Hex Head (3/8-24 x 1")				
55	526-0066	1	Washer, Flat – Copper (3/8" Screw)	67	98-4240	1	~^#Label, Blank Kit Number
56			Ring, Retaining	68			Adapter, Hydraulic Pump
	518-0294	4	Spec B-D		101-0766-01	1	# Code 11BE
	112-0267	4	Begin Spec E		101-0766-02	1	^ Code 11BF, 11BG
57			Kit, Ring – Piston	69			Screw, Cap – Hex Head (3/8-16 x 1-3/4")
			Spec B-D		800-0515	4	# Code 11BE – SAE A
	113-0296		Standard		800-0515	5	^ Code 11BF, 11BG – SAE B
	113-0296-05	2	.005" Oversize	70	101-0761	1	~Adapter, Bearing Plate
	113-0296-10	2	.010" Oversize	71	815-0682	4	~Screw, Hex Recessed (3/8-16 x 1-1/4")
	113-0296-20	2	.020" Oversize				
	113-0296-30	2	.030" Oversize	72	160-1368	1	Gasket, Plate
			Begin Spec E	73	160-1345-01	1	Plate, Ignition Plunger Cover
	113-0311	2	Standard	74	740-1004	2	Washer, Flat (M6)
	113-0311-05	2	.005" Oversize	75	800-0004	2	Screw, Hex Head Cap (1/4-20 x 5/8")
	113-0311-01	2	.010" Oversize				
	113-0311-02	2	.020" Oversize	76	309-0559	1	Switch, Cut-Off – High Temperature
	113-0311-03	2	.030" Oversize				
58	114-0203	2	Rod, Connecting (Includes Bolt and Bushing)	77	853-0013	1	Washer, Lock – Ext. Tooth (1/4")
59	805-0010	4	Bolt, Connecting Rod				
60			Piston & Ring Set (Includes Pin and Retaining Rings)				
	112-0265	2	Standard				
	112-0265-05	2	.005" Oversize				
	112-0265-01	2	.010" Oversize				
	112-0265-02	2	.020" Oversize				
	112-0265-03	2	.030" Oversize				
61			Pin, Piston				
	112-0069	2	Spec B-D				
	112-0268	2	Begin Spec E				
62	740-1004	2	Washer, Flat (1/4")				
63	803-0071	4	Screw, Socket – Set (3/8-16 x 5/8")				

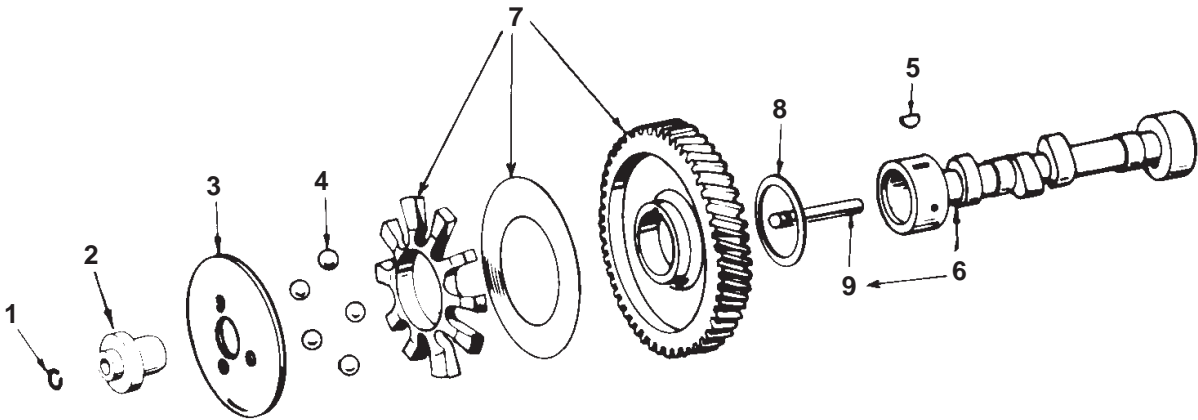
* – Parts Included in the Cylinder Block.

– Parts included in PTO Bearing Plate Adapter Kit SAE A.

^ – Parts included in PTO Bearing Plate Adapter Kit SAE B.

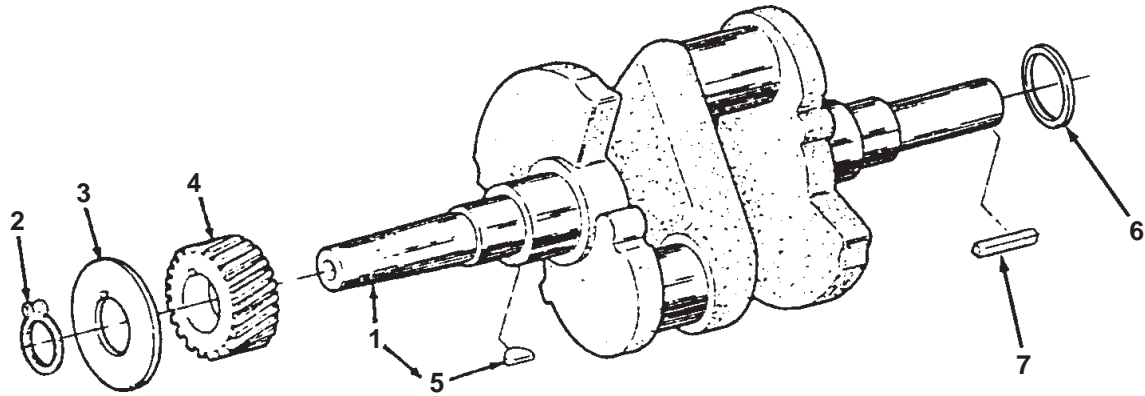
~ – Parts included in PTO – 7" Pilot Adapter Kit.

Camshaft



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-0078	1	Ring, Retaining	6			Camshaft
2	150-1519	1	Hub, Governor Cup	105-0594		1	Specs B-G (Includes Center Pin)
3	150-1520	1	Cup, Governor	105-0676		1	Spec 11583H Only
4			Ball, Governor	7	105-0700	1	Gear, Camshaft (Includes Gear, Spacer and Plate)
	510-0015	5	5 Ball Governor (Hi-Speed)	8	105-0541	1	Washer, Thrust - Special
	510-0015	10	10 Ball Governor - Code 13CH (Lo-Speed)	9	150-0075	1	Pin, Center
5	515-0001	1	Key, Woodruff - Camshaft Gear				

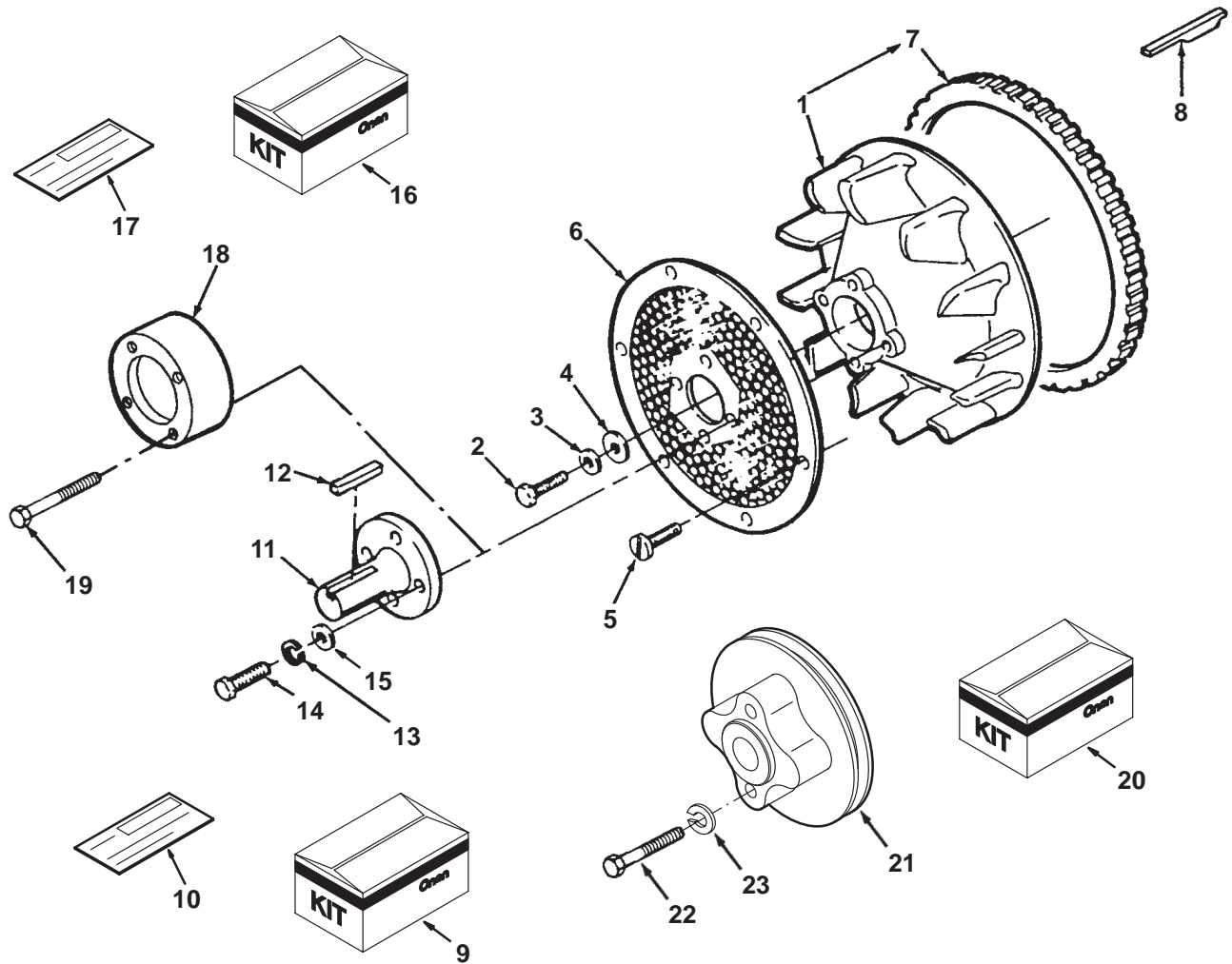
Crankshaft



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Crankshaft (Includes Keys)	5	515-0001	1	Key, Crankshaft Gear
	104-1340	1	Code 45BB	6	104-1694	1	Spacer – Code 45BE
	104-1698	1	Code 45BE	7			Key, Woodruff – Crankshaft Stub
	104-1314	1	Code 45BF		515-0263	1	Kit, Flywheel Key
	104-1311	1	Code 45BS		515-0103	1	(1/4 x 1/4 x 2") Code 45BB, 45BW
	104-1310	1	Code 45BT		515-0146	1	(#18 x 1/4 x 1-1/8")
	104-1500	1	Code 45BU		515-0198	1	(3/8 x 3/8 x 2-1/2") Code 45BW, 45BE
	104-1786	1	Code 45BY		515-0230	1	(3/8 x 3/8 x 2") Code 45BD
	104-0864-01	1	+ Code 45CC				
	104-1698	1	Code 45BD				
	104-1831	1	+ Code 45EA				
2	518-0014	1	Ring, Retaining				
3	104-0043	1	Washer, Gear Retaining – Special				
4	104-1808	1	Gear, Crankshaft				

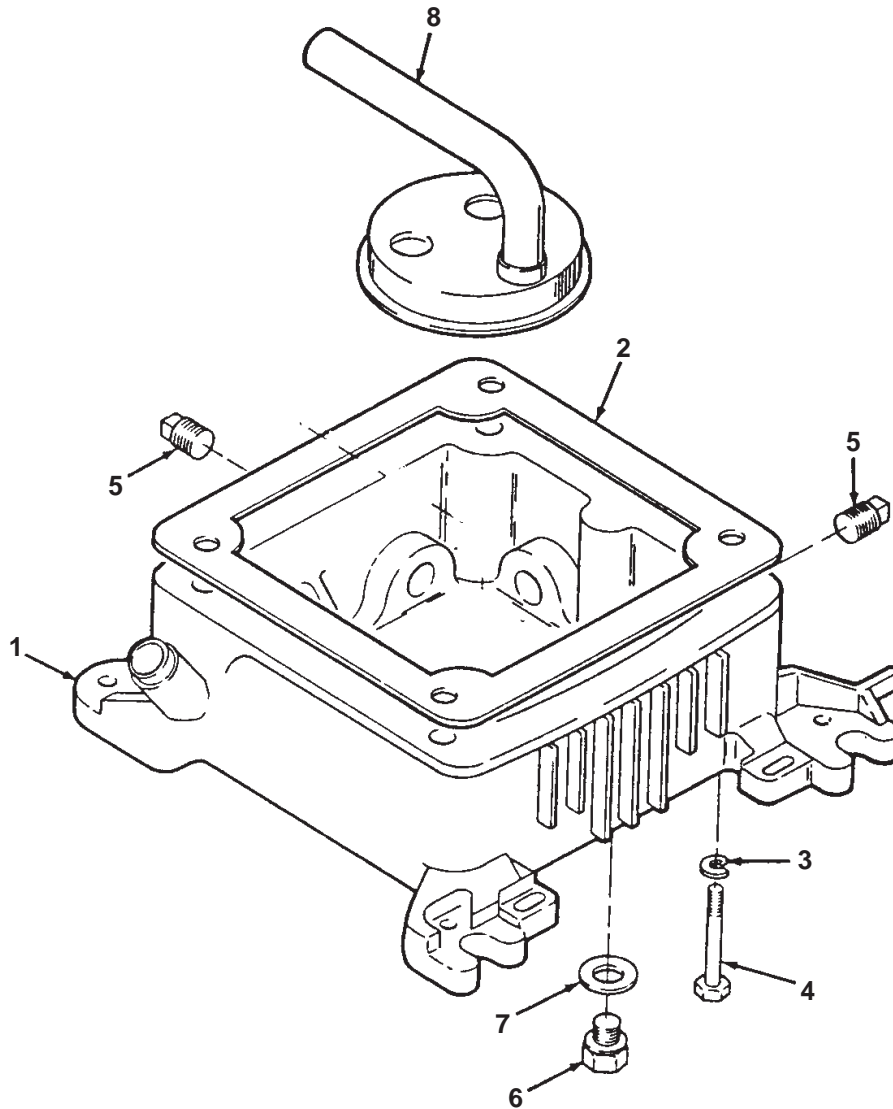
+ – Does Not Include Keys.

Blower Wheel With Screen



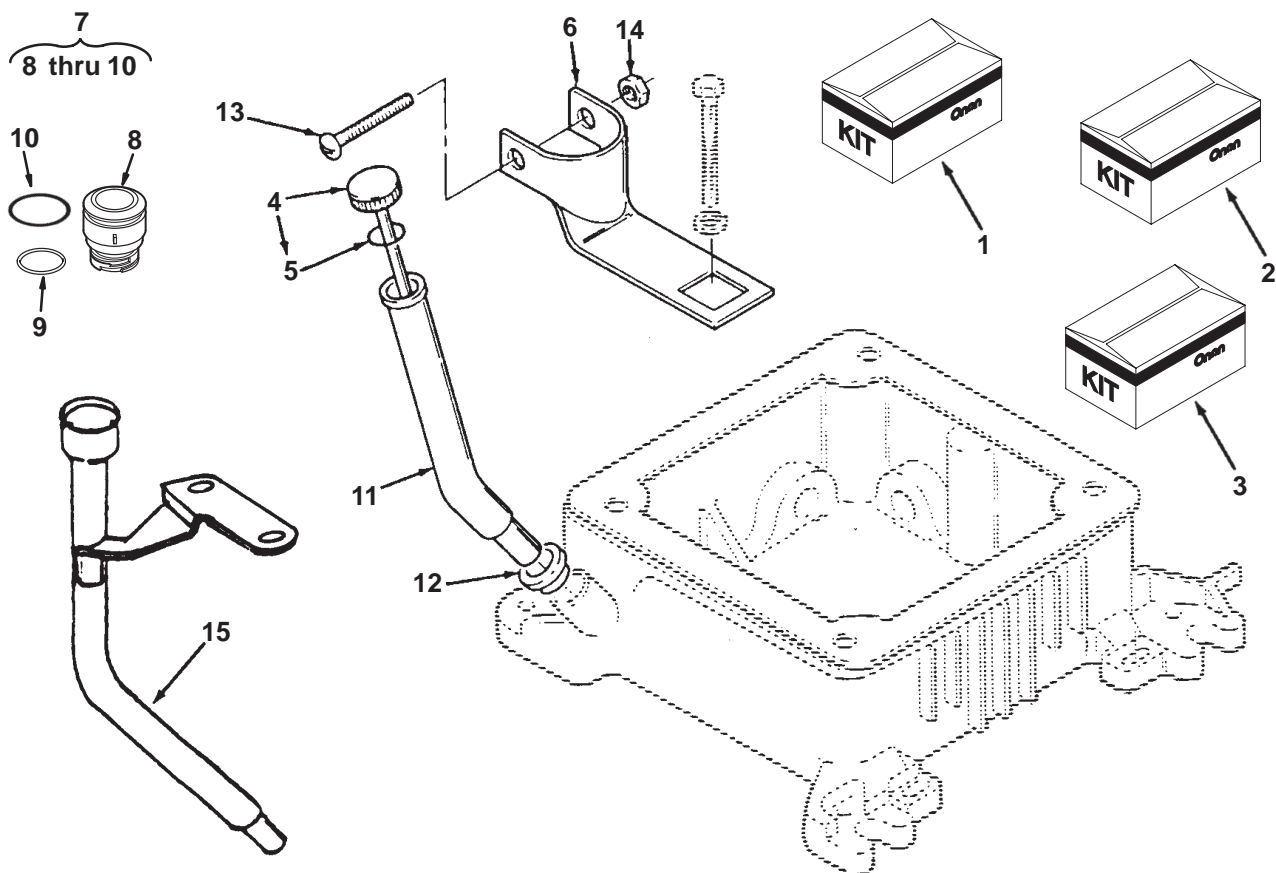
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	134-4680	1	Flywheel (Includes Ring Gear)	17	98-4240	1	#Label, Blank Kit Number
2	104-0170	1	Screw, Cap – Hex Head	18	190-0683	1	#Spacer, PTO
3	526-0356	1	Washer, Flat (7/16" Screw)	19	114-0022	2	Screw, Cap – Hex Head (5/16-18 x 1-3/4")
4	526-0017	1	Washer, Flat (7/16" Screw)	20	190-0576	1	Kit, PTO Front Pulley (Code 45BN) (Includes Parts Marked ^)
5	815-0687	6	Screw, Lock Head – Flange	21	191-1210	1	^Pulley, Drive (5-3/4" OD)
6	134-4553-50	1	Screen, Air Inlet – Painted	22	800-0548	2	^Screw, Hex Head Cap (5/16-18 x 1-1/2")
7	104-0779	1	Gear, Ring	23	850-0045	2	^Washer, Lock (5/16)
8	515-0284	1	Key, Flywheel (Special)	24	E-256	1	^Sheet, Instruction (Not Shown)
9	541-0222	1	Kit, PTO – 1" Shaft (Includes Parts Marked *)				
10	98-4240	1	*Label, Blank Kit Number				* – Parts included in PTO – 1" Shaft Kit.
11	190-0687	1	*Shaft, PTO – 1" Diameter				# – Parts included in PTO Spacer Kit.
12	515-0007	1	*Key, Machine (1/4 x 2")				^ – Parts included in PTO Front Pulley Kit.
13	850-0045	4	*Washer, Lock (5/16")				
14			Screw, Lock Head – Code 23DC (5/16-18 x 1.25")				
	800-0030-01	4	* (5/16-18 x 1.25")				
	821-0014	4	(5/16-18 x 1/2") Begin Spec E				
15	850-0045	4	*Washer, Flat (5/16")				
16	541-0307	1	Kit, PTO Spacer (Includes Parts Marked #)				

Oil Base



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Base, Oil (Includes All Plugs and Plug Gasket)	6			Plug, Hex Head – Special
	102-1338	1	Spec B (Multidrain)	505-1462	1		Metric (M22) Code 17DN
	102-1384-02	1	Begin Spec C	102-0938	1		Special (Code 17DA)
2	102-1387	1	Gasket, Oil Base	7	102-0743	1	Gasket, Hex Head Plug
3	526-0251	4	Washer, Flat (3/8" Screw)	8			Cup, Intake – Oil Pump
4			Screw, Cap – Hex Head	120-1215	1		Spec B
	800-0200-01	4	(3/8-16 x 5-3/4") Spec B	120-1230	1		Spec C
	800-0302-01	4	(3/8-16 x 5-1/2") Begin Spec C	120-1272	1		Begin Spec E
5			Plug				
	505-0110	2	3/8 Pipe				
	505-0266	1	Pipe, Square – Countersunk				

Oil Fill Tube



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	541-0433	1	Kit, Inner Oil Fill Tube Code 17BY (Includes Parts Marked #)	8	123-2091	1	@ Adapter, Oilcap
2	541-0434	1	Kit, Outer Oil Fill Tube Code 17BZ (Includes Parts Marked ^)	9	509-0142	1	@ Seal
3	541-0435	1	Kit, Outer Tall Oil Fill Tube Code 17CF (Includes Parts Marked *)	10	509-0304	1	@ O-Ring
4			Cap and Indicator, Oil Fill (Includes O'Ring) Code 17CF	11			Tube, Oil Fill
	123-1843	1	Spec B		123-1718-50	1	^ Outer, Short – Painted – Code 17BZ
	123-1860	1	* Begin Spec C		123-1729-50	1	Outer, Tall – Painted – Code 17CF
	123-1860-01	1	Begin Spec H		123-1685-50	1	# Inner, Tall – Painted – Code 17BY – Begin Spec E
	123-1880	1	^ Code 17BZ		123-1869-51	1	Begin Spec H (Code 17BY)
	123-1878	1	# Code 17BY Begin Spec E	12	509-0269	1	*^# Seal, Oil Fill Tube
	123-1880-01	1	Spec 11583H (Code 17BZ)	13			Screw
5	509-0142	1	O'Ring, Oil Fill Cap		815-0576	1	Pan Head (1-1/4" Long) Code 17CF
6			Bracket, Fill Tube		815-0760	1	Hex Washer Head – Thread Cutting – Code 17BZ,17BY
	123-1897-51	1	Plated – Code 17CF	14	870-0410	1	Nut, Speed (Type U) – Code 17CF
	123-1867-51	1	^ Painted – Code 17BZ	15	123-1969-51	1	*Tube, Oil Fill – Painted (Includes Bracket) Code 17CF
	123-1869-51	1	# Painted – Code 17BY – Begin Spec E				
7	123-2105	1	Adapter Assembly, Oil Fill (Begin Spec H) (Includes Parts Marked @)				

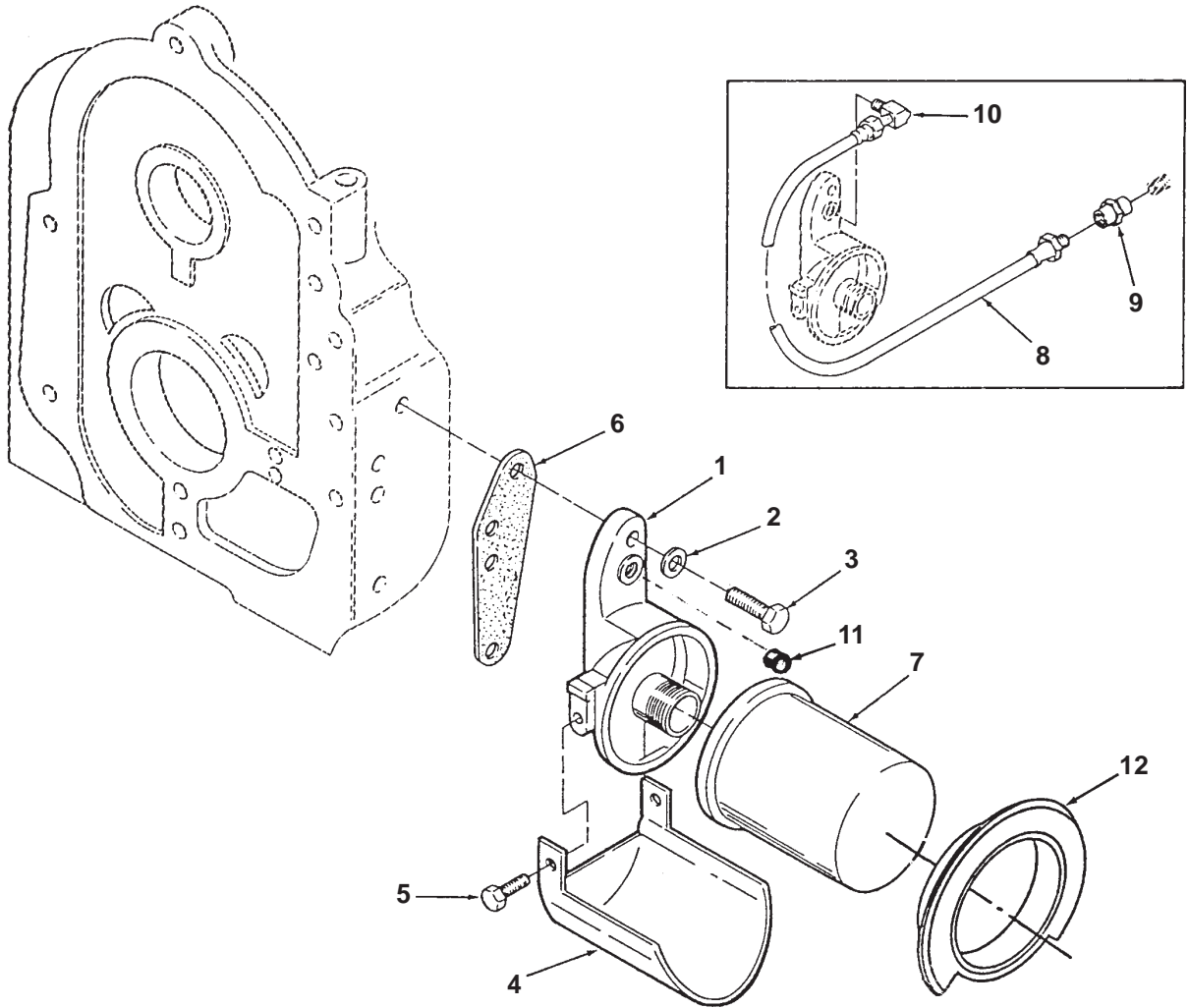
– Parts included in Inner Oil Fill Tube Kit.

^ – Parts included in Outer Oil Fill Tube Kit.

* – Parts included in Outer Tall Oil Fill Tube Kit.

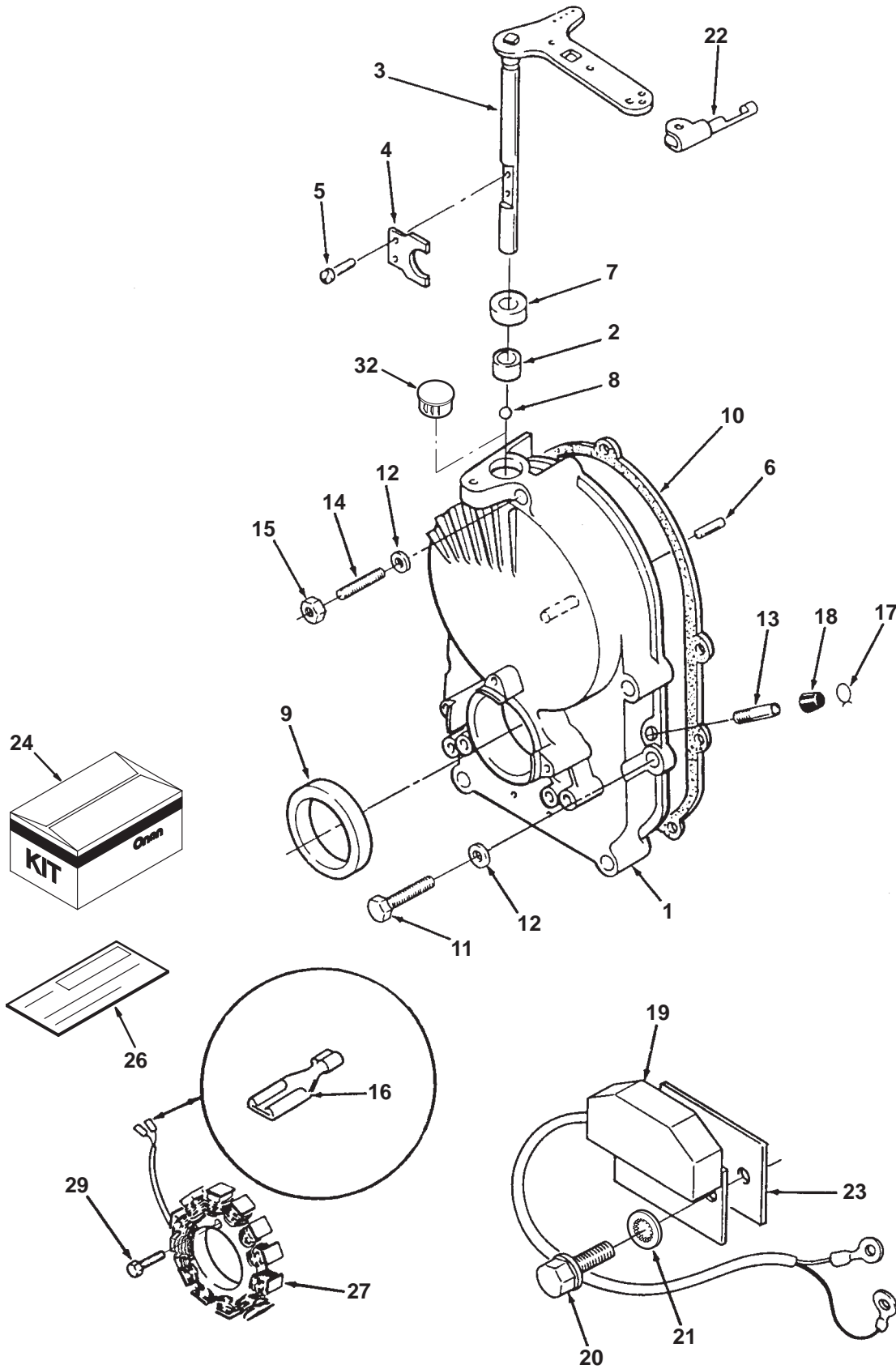
@ – Parts included in Oil Fill Adapter Assembly.

Oil Filter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	122-0814	1	Adapter, Oil Filter	7		1	Filter, Oil
2	526-0065	2	Washer, Flat - Copper (5/16" Screw)	122-0469		1	With Hex Nut - Code 17CV
3	800-0028-01	2	Screw, Cap - Hex Head (5/16-18 x 1") Shakeproof (Code 17DF)	122-0800		1	Without Hex Nut - Code 17CD 4.2" Long - Begin Spec C Code 17DF
4	122-0352-50	1	Drain, Oil Filter - Painted	8	501-0008	1	Line, Flex
5	815-0194	2	Screw, Cap - Hex Head W/ET (#10-32 x 3/8")	9	502-0017	1	Connector
6	122-0771	1	Gasket, Oil Filter Adapter	10	502-0020	1	Elbow, Street
				11	505-1426	1	Plug, Countersunk (1/8")
				12	122-0502	1	Gasket, Oil Filter - Code 17CV

Gearcase



Gearcase

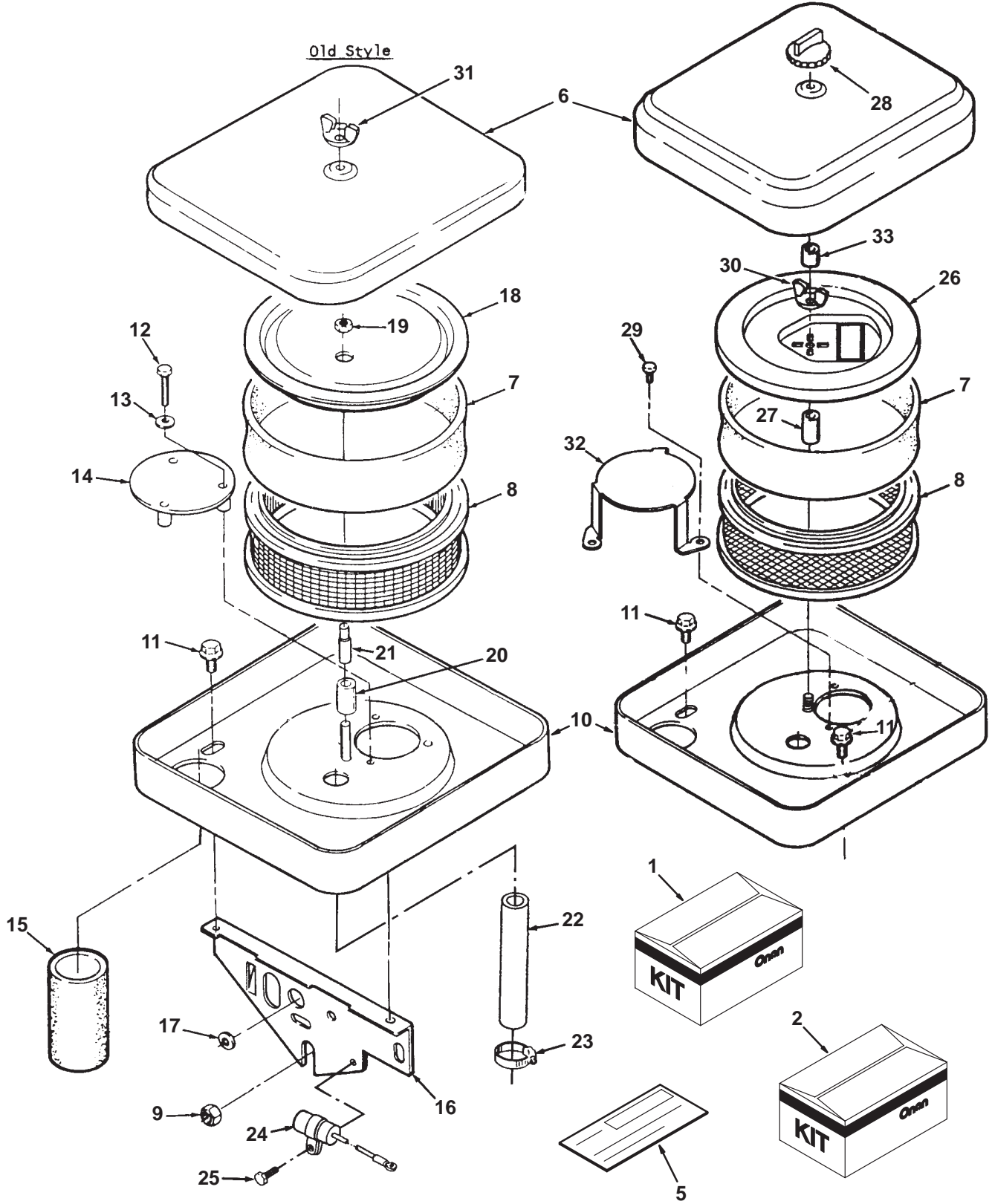
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Gearcase Kit (Includes Parts Marked *)	16	191-2104	1	Terminal Kit, Alternator (3 Leads)
	103-0791	1	All Specs Except 10913	17	503-0301	1	Clamp, Vacuum Port Cap (Spec B only)
	103-0799	1	Spec 10913 only	18	149-1321	1	Cap, Vacuum Port (Spec B only)
2			*Bearing, Governor Shaft	19	166-0785	1	Control, Ignition
	510-0105	1	All Specs Except 10913 and 11583H	20	815-0340	2	Screw, Hex Washer Head (10-32x3/8")
	510-0013	1	Spec 10913 only	21	854-0010	2	Washer, Lock - IT (#10)
3			Shaft And Arm, Governor	22	518-0406	1	Clip, Retaining - Control Rod To Governor Shaft
	150-1470-01	1	All Specs Except 10913 and 11583H	23	166-0786	1	Insulator, Ignition Module
	150-1422-01	1	Spec 10913 only	24	541-0259	1	Kit, 35 Amp Alternator (Includes Parts Marked +) Code 31BC
4	150-1187	1	*Yoke, Governor Shaft (All Specs Except 11583H)	25	E-0327	1	+Sheet, Instruction (Not Shown)
5	815-0046	2	*Screw, Machine - Pan Head (8-32x3/8") (All Specs Except 11583H)	26	98-4240	1	+Label, Blank Kit Number
				27	191-1276	1	+Stator, Alternator
6	516-0130	1	*Pin, Dowel - Governor Cup Stop (All Specs Except 11583H)		191-1276	1	35 Ampere (Code 31BC)
					191-1456	1	20 Ampere (Code 31AZ)
7	509-0008	1	*Seal, Oil - Governor Shaft (All Specs Except 11583H)	28	191-1847	1	+Regulator, 35 Amp Voltage (Shown on Blower Housing Page)
8	510-0014	1	*Ball, Bearing - Governor Shaft (All Specs Except 11583H)	29	815-0659	3	+Screw, Machine - Hex Head Self-Lock (#10-32x1")
9	509-0040	1	*Seal, Oil - Crankshaft, Front	30	821-0010	1	+Screw, Lock Head (1/4-20 x1/2") (Not Shown)
10	103-0810	1	Gasket, Gearcase Mounting	31	853-0013	1	+Washer, ET Lock (Not Shown)
11	800-0032-01	4	Screw, Cap - Hex Head (5/16-18x1-3/4")	32	517-0293	1	Plug, Expansion (Spec 11583H Only)
12	526-0065	5	Washer, Flat - Copper (5/16" Screw)				
13	149-1299	1	*Tube, Vacuum Port (1.5" Long) (Spec B only)				
14	520-0933	1	Stud, Gear Cover				
15	862-0015	1	Nut, Hex (5/16-18) Stator (Includes Terminals)				

* - Parts included in Gearcase.

+ - Parts included in 35 Amp Alternator Kit.

Air Cleaner

Tool-Less

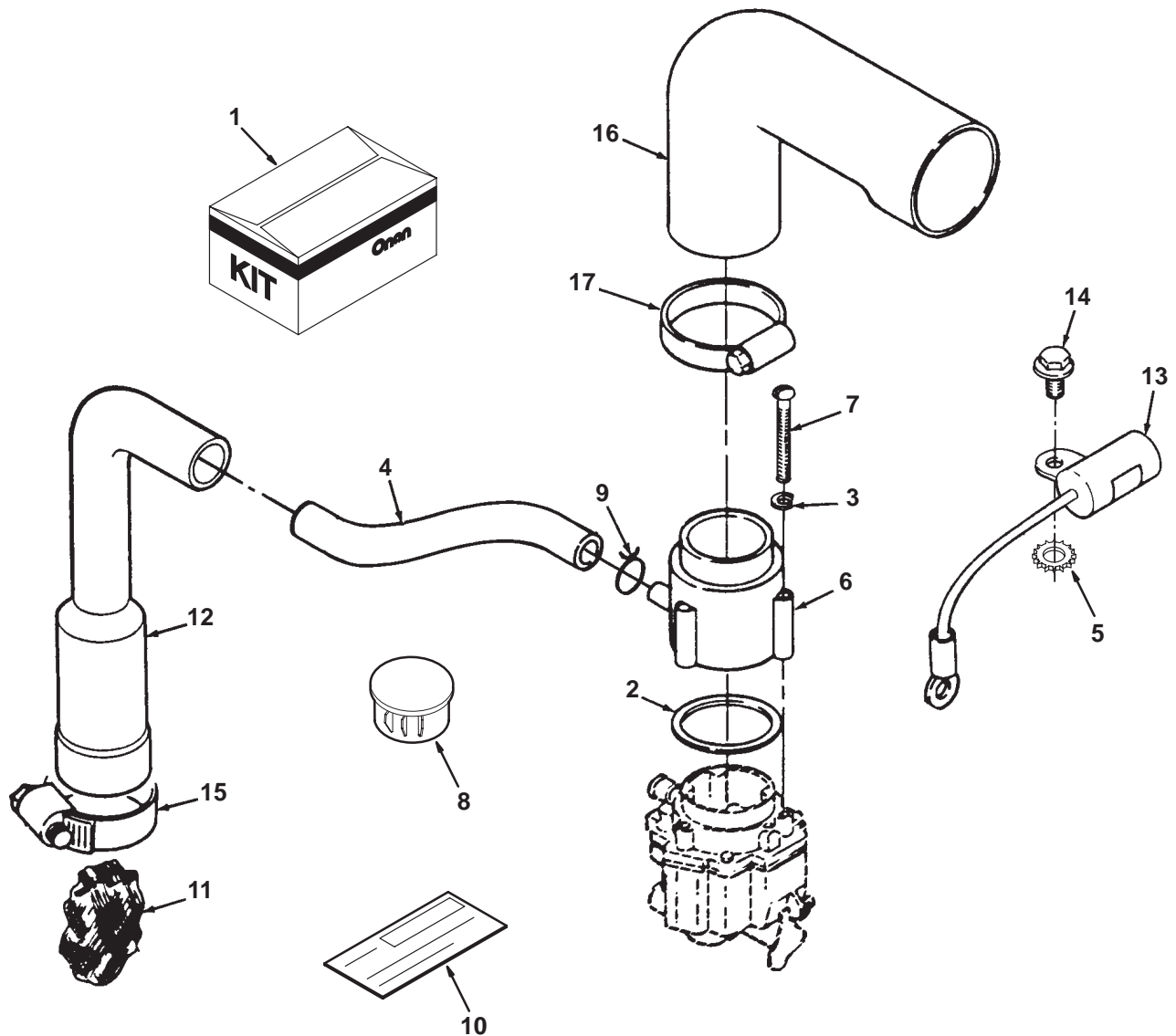


Air Cleaner

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Kit, Air Cleaner – Code 19AS (Standard Capacity)	13	526-0234	3	Washer, Flat (#10 Screw)
	541-0457-01	1	Begin Spec B (Includes Parts Marked *)	14	145-0522	1	Plate, Air Deflector
	541-0457-02	1	Begin Spec C (Includes Parts Marked #)	15			Tube, Air Intake
2			Kit, Air Cleaner – Code 19AU (High Capacity)		503-1882-01	1	3.5" Long
	541-0458-01	1	Begin Spec B (Includes Parts Marked ~)		503-1882-02	1	4.12" Long
	541-0458-02	1	Begin Spec C (Includes Parts Marked ^)		503-1882-03	1	5.12" Long
				16	140-2191-50	1	Support, Air Cleaner
				17	508-0021	1	Grommet, Rubber (3/4" Hole)
				18	541-0459	1	Cover, Element
				19	870-0365	1	Nut, Hex (1/4-20)
				20	301-0458	1	Spacer, Air Cleaner Stud
				21	520-0948	1	Stud – Code 19AU
3	E-347a	1	~* Sheet, Instruction (Not Shown)	22			Hose, Breather
4	E-348b	1	^# Sheet, Instruction (Not Shown)		503-1606-01	1	Old Style
5	98-4240	1	~^*# Label, Blank Kit Number		503-1606-02	1	^# Tool-Less
6			Cover, Air Cleaner	23	503-1133	1	^# Clamp, Hose
	140-2005-50	1	*# Code 19AS (Standard)	24	312-0256	1	Capacitor (Placed Horizontal)
	140-1913-50	1	~^ Code 19AU, 19CL (XSL)	25	815-0389	1	Screw, Hex Head (1/4-20 x 3/8")
	140-2005-02	1	Code 19BB – Begin Spec C (Chrome)	26			Cover, Inner – Tool-Less
					140-2794	1	Spec A-F
7			Wrapper, Air Cleaner Element		140-2942	1	~^*# Begin Spec G
	140-1496-01	1	*# Code 19AS	27			Spacer, Air Cleaner Stud
	140-1912-01	1	Code 19AU, 19CL		140-2536-01	1	*# Extended Service Life & Standard Capacity 1" Long
8			Element, Air Cleaner		140-2536-02	1	~^ High Capacity – 2.75" Long
	140-2628-01	1	*# Code 19AS – Standard Capacity – Extended Service	28	140-2761	1	~^*# Knob, Tool-Less
	140-2628-02	1	~^ Code 19AU, 19CL – High Capacity	29	815-0463	3	~^*# Screw, Slotted – Hex Washer Head (10-32 x 3/8")
9	870-0399	1	Nut, Hex Washer Head Flanged (5/16-18) Code 19AV	30	865-0029	1	Nut, Wing
10			Housing, Air Cleaner	31	865-0020	1	Nut, Wing (1/4-20)
	140-2493-51	1	* Code 19AS – Painted	32	145-0614	1	~^ Plate, Air Deflector – High Capacity
	140-2539-51	1	~ Code 19AU – Painted	33	140-2786	1	~^*# Spacer, 1/2" LG – Standard and High Capacity
	140-2493-53	1	# Begin Spec C – Use with Standard Filter				
	140-2539-53	1	^ Begin Spec C – Use with High Capacity Filter				
11	815-0575	2	Screw, Tapping – Hex Washer Head (1/4-20 x 3/8")				
12	815-0470	3	Screw, Hex Head – Machine (#10-32 x 1-1/2")				

* – Parts included in 541-0457-01 Air Cleaner Kit.
 # – Parts included in 541-0457-02 Air Cleaner Kit.
 ~ – Parts included in 541-0458-01 Air Cleaner Kit.
 ^ – Parts included in 541-0458-02 Air Cleaner Kit.

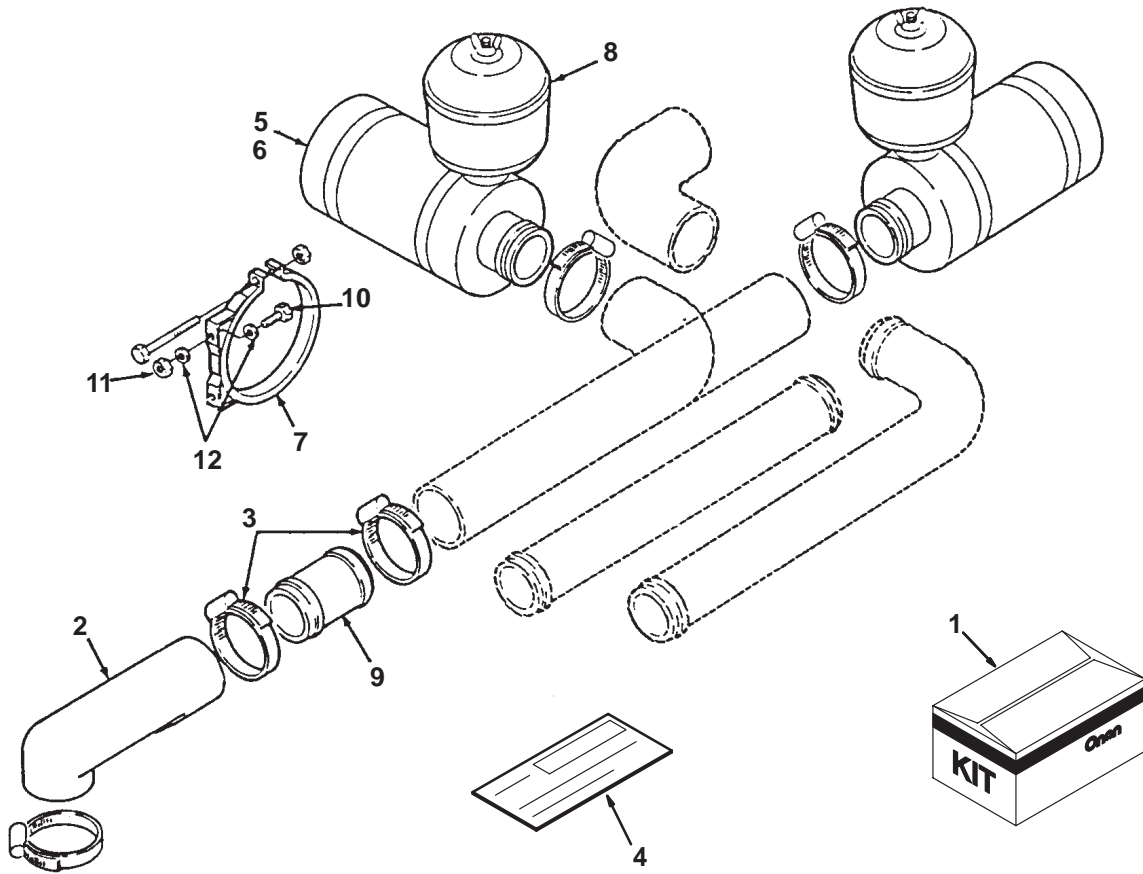
Remote Air Cleaner Adapter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	541-0320	1	Kit, Remote Adapter Air Cleaner (Includes Parts Marked *)	10	98-4240	1	*Label, Blank Kit Number
			Code 19AV	11	123-1871	1	Filter, Breather Tube
2	509-0145	1	*Seal, O-Ring	12	123-1539	1	Tube, Breather – Crankcase
3	850-0030	3	*Washer, Lock – Spring (#10)	13	312-0256	1	Capacitor
4	503-1396	1	*Hose, Breather	14	815-0178	1	Screw, Hex Washer Head Thread Form (10-32 x 5/8")
5	853-0013	1	*Washer, Lock – External Tooth (1/4")	15	503-0398	1	Clamp, Breather Tube (1-5/8" Diameter)
6	140-1714	1	*Adapter, Air Intake	16	140-1428	1	Elbow, Air Inlet
7	813-0106	3	*Screw, Machine – Round Head (#10-32 x 1-1/8")	17	503-1141	1	Clamp, Hose (2-3/8" Diameter)
8	517-0252-01	1	*Plug, Hole				
9	503-0171	2	*Clamp, Hose (11/16" Dia.)				

*- Parts included in Air Cleaner Kit.

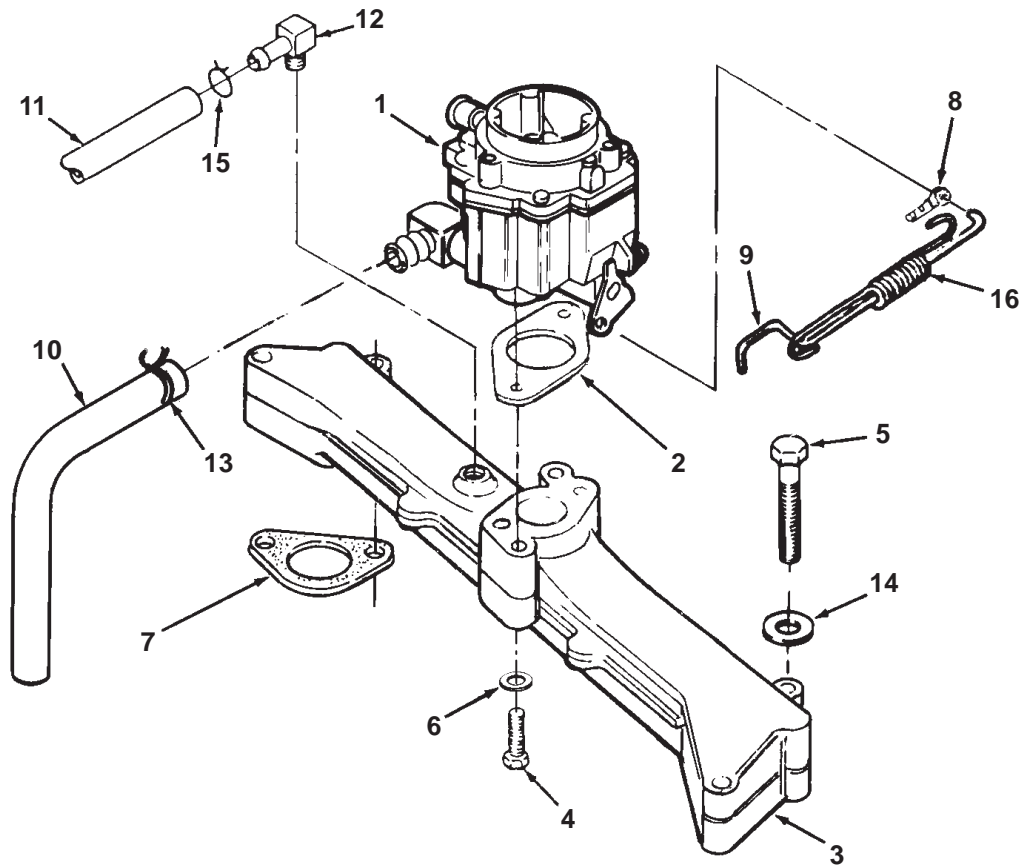
Remote Air Cleaner



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	541-0147	1	Kit, Air Cleaner Remote Elbow (Include Parts Marked *)	8	140-0723	1	Precleaner, Air Cleaner (Plastic)
2	140-1428	1	*Elbow, Air Inlet	9	140-2173	1	Tube, Air Induction (Steel)
3	503-1141	4	*Clamp, Hose (2-3/8 x 1/2" Band)	10	800-0004	4	Screw, Hex Head Cap (1/4-20 x 5/8")
4	98-4240	1	*Label, Blank Kit Number	11	870-0065	4	Nut, Self-Lock (1/4-20)
5	140-0721	1	Cleaner, Air (Includes Element)	12	526-0018	8	Washer, Flat (1/4" Screw)
6	140-2860	1	Element, Air Cleaner				
7	140-0722	2	Band, Air Cleaner				

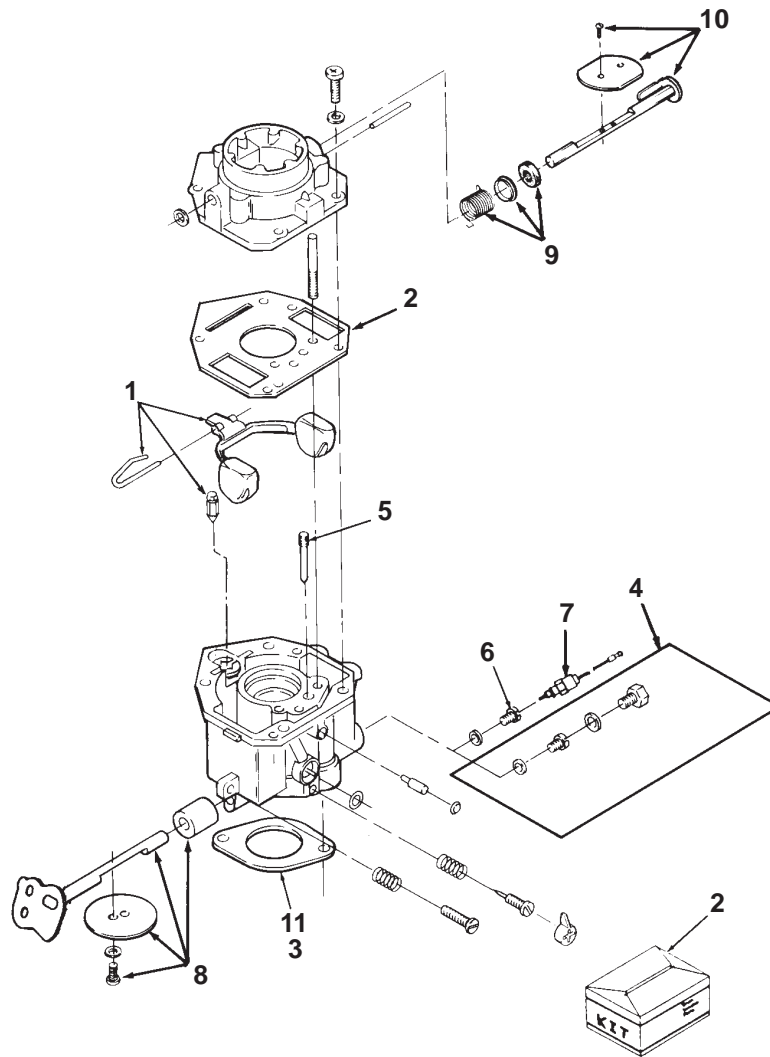
*- Parts included in Remote Elbow Kit.

Fuel System Gasoline



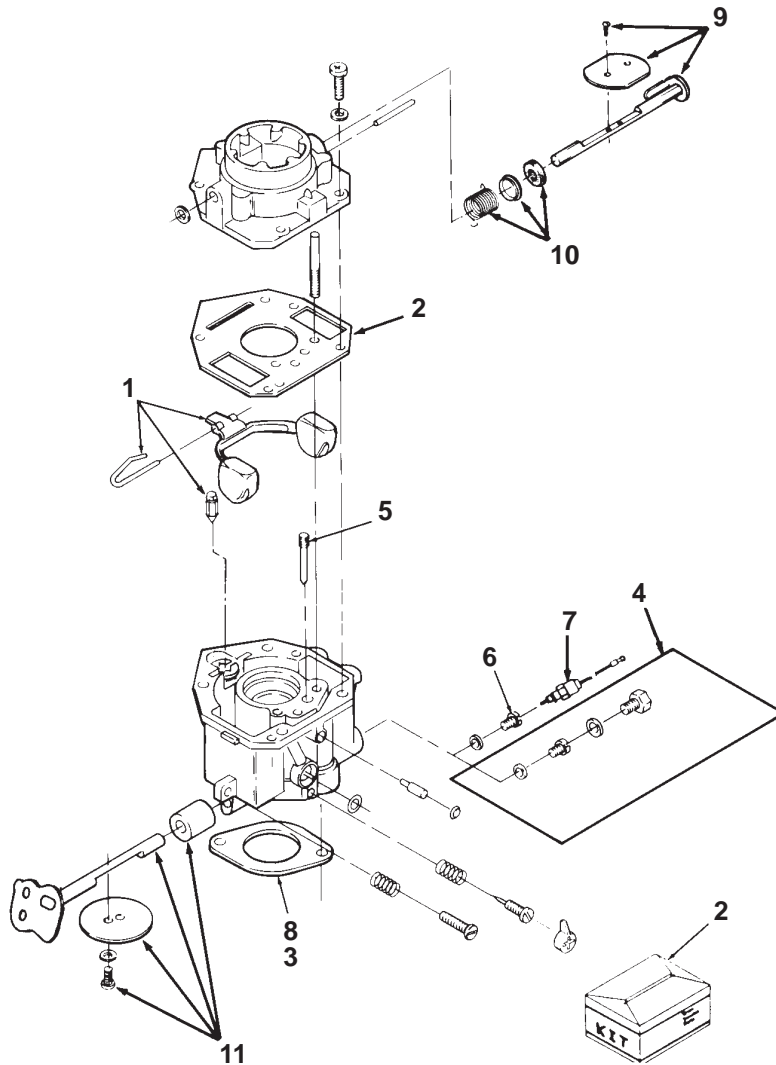
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Carburetor, Complete (Includes Mounting Gasket, Elbow and O-Ring) (See Separate Page for Components)	6	740-1006	2	Washer, Flat (M8)
	146-0497	1	Spec B-F	7	154-2219	2	Gasket, Intake Manifold
	146-0662	1	Begin Spec G (Emissions Carburetor) (Includes Gasket Only)	8	518-0004	1	Clip, Retaining - Control Rod To Carburetor
2	154-0733	1	Gasket, Carburetor Mounting	9	150-2553	1	Rod, Governor Control
3			Manifold, Intake	10			Hose, Fuel
	154-2873	1	Code 15BD		503-1199	1	24" Long
	154-2749	1	Code 15CU		503-1418	1	15" Long
4	800-0035	2	Screw, Cap - Hex Head (5/16-18 x 2-1/2")	11	503-1606-01	1	Hose, Rubber Breather (3.25" Long)
5			Screw, Cap - Hex Head (3/8-16 x 3")	12	502-1038	1	Fitting, Barbed - Code 19AU
	800-0058	4	Spec B (3/8-16 x 3")	13	503-0731	2	Clamp, Hose - (1/2" Diameter)
	800-0058	2	Begin Spec C (3/8-16 x 3")	14			Washer, Flat
	800-0036	2	Begin Spec C (5/16-18 x 2-3/4")		526-0251	4	Spec B (3/8" Screw)
					526-0251	2	Begin Spec C (3/8" Screw)
					526-0122	2	Begin Spec C (5/16" Screw)
				15	503-1133	1	Clamp, Hose - Breather
				16	150-2409	1	Spring, Rod - Governor

Carburetor Components Nikki Spec B



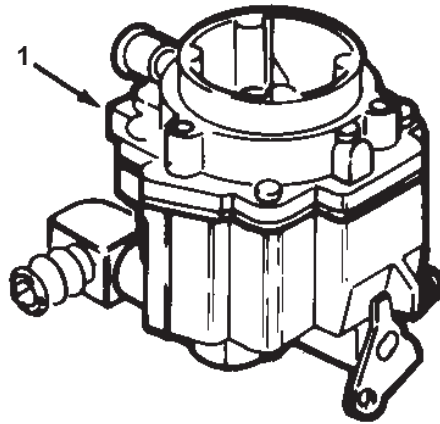
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	146-0431	1	Carburetor, Complete (Includes Mounting Gasket)	5	146-0426	1	Jet, Idle
1	146-0437	1	Kit, Float (Includes Float, Pin and Valve)	6	146-0501	1	Jet, Power – Fixed – Standard
2	146-0500	1	Kit, Repair (Includes Screw And Plug Package, Gasket Package, Float Valve, Idle Adjust Needle and Spring, Mounting Gaskets, Idle Limit Cap)	7	146-0467	1	Solenoid, Fuel Cut-Off (Includes Gasket)
3	154-0733	1	Gasket, Carburetor Mounting	8	146-0505	1	Kit, Throttle Shaft
4	146-0424	1	Jet, Power – Fixed – Optional (High Altitude Application) (Package) (Includes Float Valve, Idle Jet, Power Jet, Idle Needle-Adjust, and Power Jet Gasket)	9	146-0435	1	Kit, Choke Lever
				10	146-0433	1	Kit, Choke Shaft
				11	145-0438	1	Gasket, Carburetor Mounting

Carburetor Components Nikki Spec C



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Carburetor, Complete (Includes Mounting Gasket)	5	146-0426	1	Jet, Idle
	146-0497	1	Begin Spec C	6	146-0501	1	Jet, Power – Fixed – Standard
1	146-0437	1	Kit, Float (Includes Float, Pin and Valve)	7	146-0502	1	Kit, Fuel Cut-Off Solenoid (Includes Cut-Off Solenoid, Crimp Terminal, and Gasket)
2	146-0500	1	Kit, Repair (Includes Screw And Plug Package, Gasket Package, Float Valve, Idle Adjust Needle and Spring, Mounting Gaskets, Idle Limit Cap)	8	146-0499	1	Gasket, Mounting
3	154-0733	1	Gasket, Carburetor Mounting	9	146-0433	1	Kit, Choke Shaft
4	146-0424	1	Jet, Power – Fixed – Optional (High Altitude Application) (Package) (Includes Float Valve, Idle Jet, Power Jet, Idle Needle-Adjust, and Power Jet Gasket)	10	146-0435	1	Kit, Choke Lever
				11	146-0505	1	Kit, Throttle Shaft

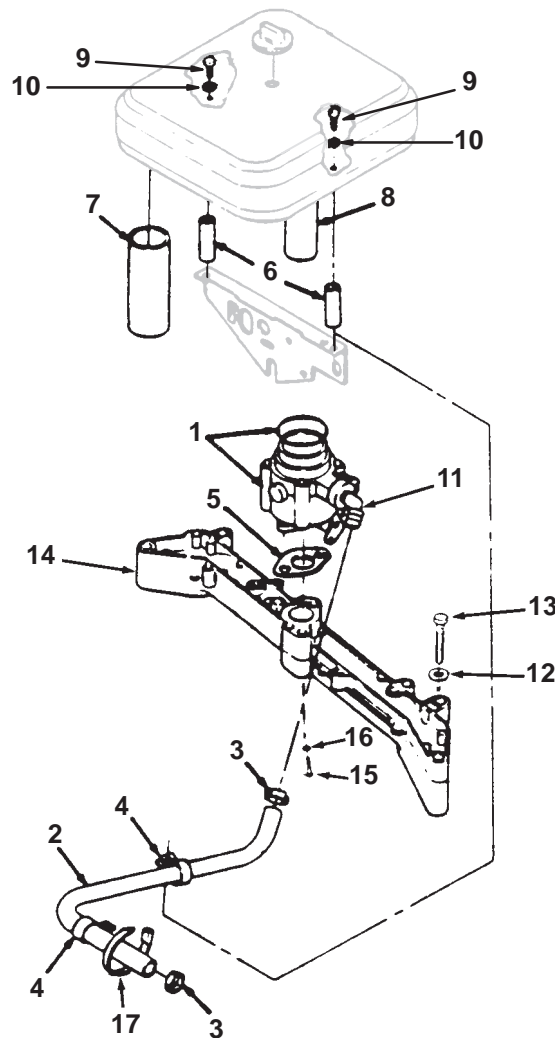
Carburetor Components Begin Spec G



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	146-0662	1	Carburetor, Emissions (Includes Parts Marked *)	7	146-0649	1	*Repair Package, Accelerator Pump
2	146-0338	4	*Screw, Valve Set	8	146-0502	1	Repair Kit, Solenoid Valve
3	146-0423	1	*Valve, Float	9	146-0657	1	*Repair Kit, Float and Gasket
4	146-0331	1	*Spring, Adjustment Screw	10	146-0658	1	*Repair Kit, Accelerator Pump
5	146-0339	1	*Plug, Expansion	11	146-0695	1	*Jet, Main Fuel High Altitude
6	146-0650	1	*Repair Package, Float and Gasket				

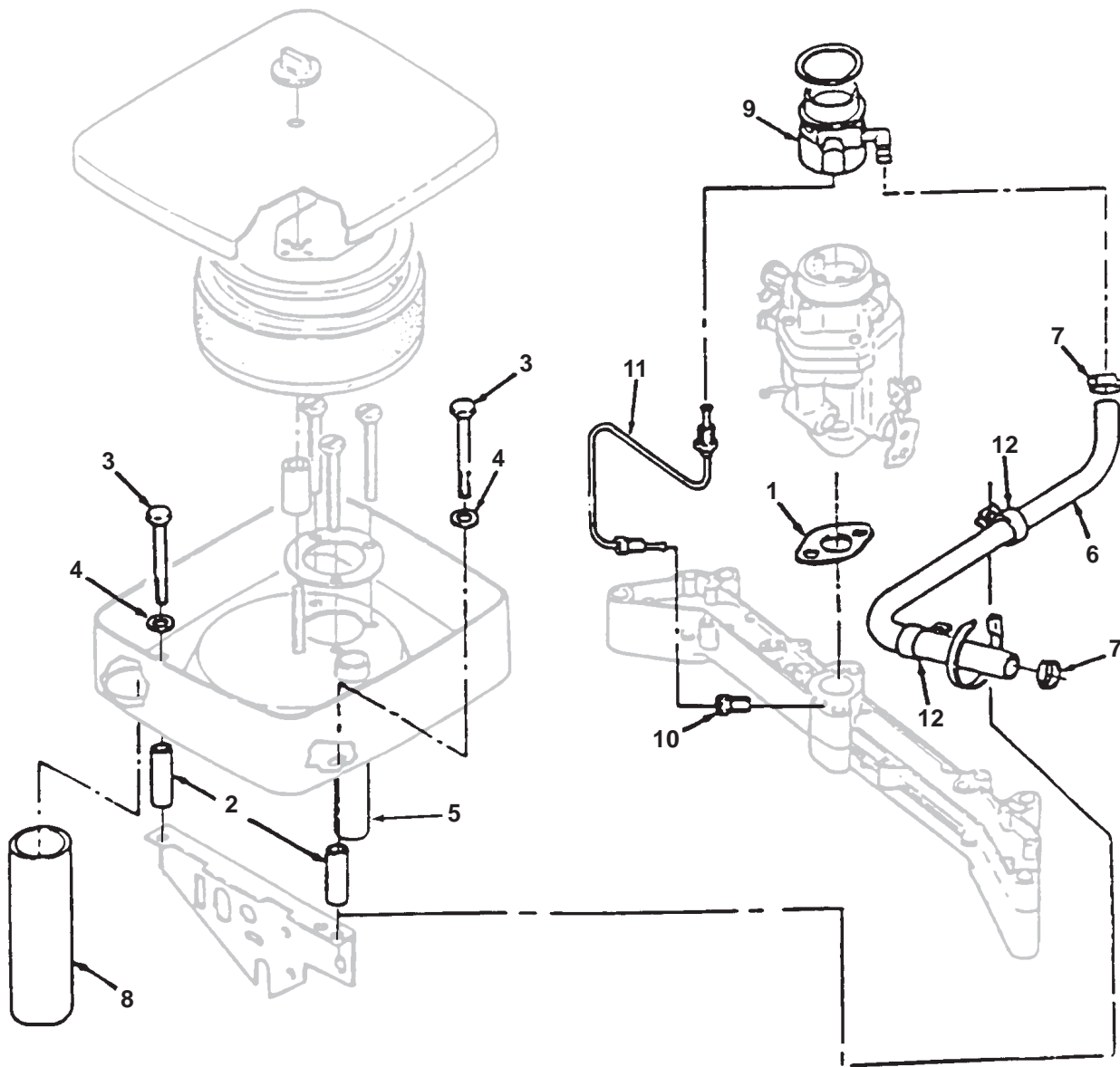
*- Parts included in Emissions Carburetor.

Fuel System LP Carburetor



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	146-0562	1	Carburetor, LP	13			Screw, Cap – Hex Head
2	503-1798-01	1	Hose, Fuel (3/8" ID x 27" Long)	800-0058		4	Spec B (3/8-16 x 3")
3	503-1133	2	Clamp, Hose	800-0058		2	Begin Spec C (3/8-16 x 3")
4	332-1356	1	Clamp, Loop	800-0036		2	Begin Spec C
5	141-0281	1	Gasket, Carburetor Mounting				(5/16-18 x 2-3/4")
6	140-2722-01	2	Spacer, Air Cleaner	14	154-2873	1	Manifold, Intake
7	503-1882-03	1	Hose, Air Inlet	15	800-0035	2	Screw, Cap – Hex Head
8	503-1606-03	1	Hose, Breather				(5/16-18 x 2-1/2")
9	821-0013	2	Screw, Cap – Hex head	16	740-1006	2	Washer, Flat
			(1/4-20 x 1)	17	332-1794	1	Tie, Cable (Self-Locking)
10	526-0018	2	Washer, Flat (1/4" Screw)				
11	502-1146	1	Elbow, Brass – 45° (Included with Carburetor)				
12			Washer, Flat (M8)				
	526-0251	4	Spec B (3/8" Screw)				
	526-0251	2	Begin Spec C (3/8" Screw)				
	526-0122	2	Begin Spec C (5/16" Screw)				

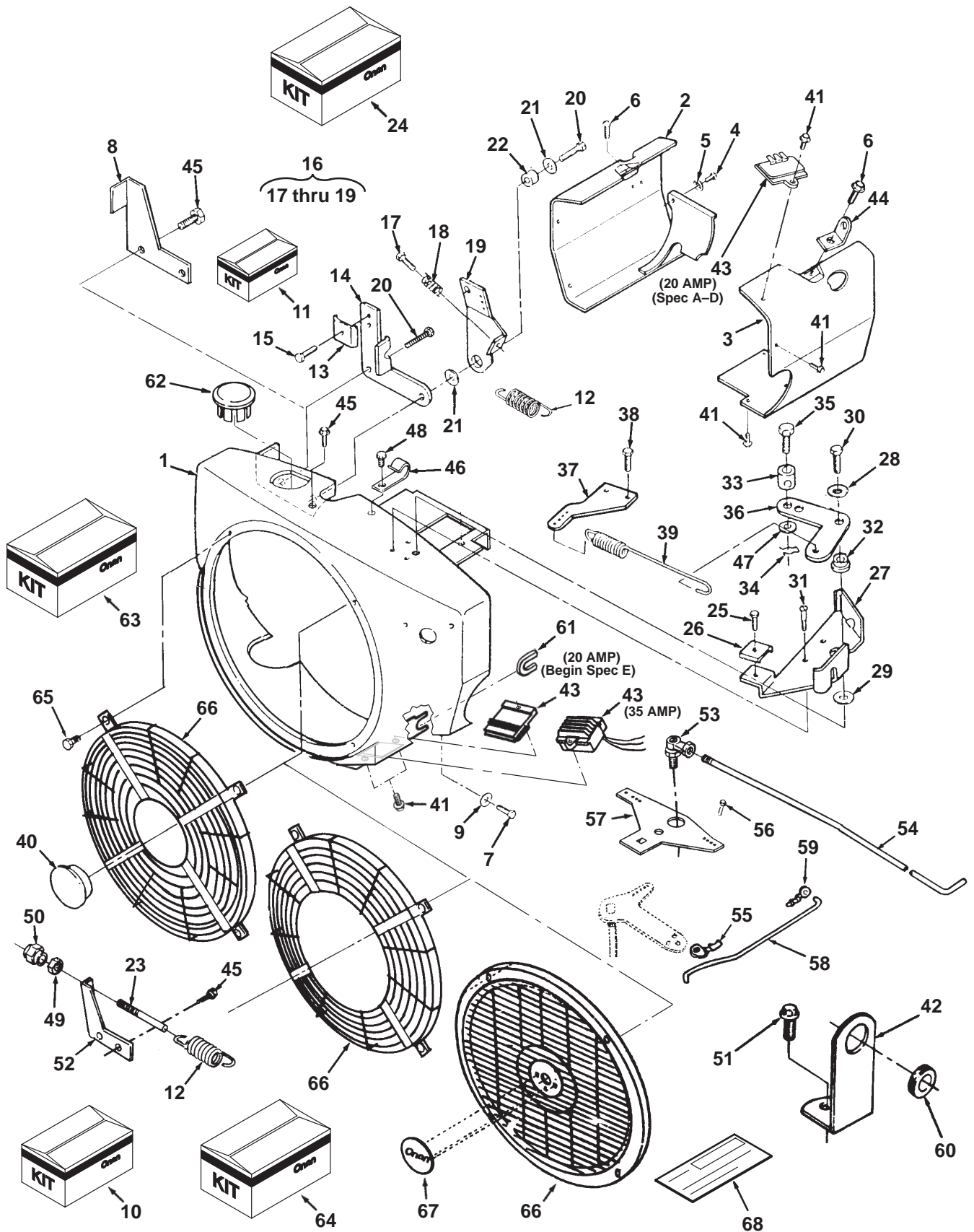
Fuel System Dual Fuel



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	154-0733	1	Gasket, Carburetor Mounting
2	140-2722-02	2	Spacer, Air Cleaner
3	800-0011	2	Screw, Hex Washer Head (1/4-20 x 2")
4	526-0018	2	Washer, Flat (1/4" Screw)
5	503-1606-05	1	Tube, Breather
6	503-1798-01	1	Hose, Fuel - 27" Long

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
7	503-1133	2	Clamp, Hose
8	503-1882-04	1	Hose, Air Inlet
9	148-0981-02	1	Mixer, LPG
10	148-0984-02	1	Jet, Idle
11	149-2385	1	Tube, Idle Feed
12	332-1356	2	Clamp, Loop

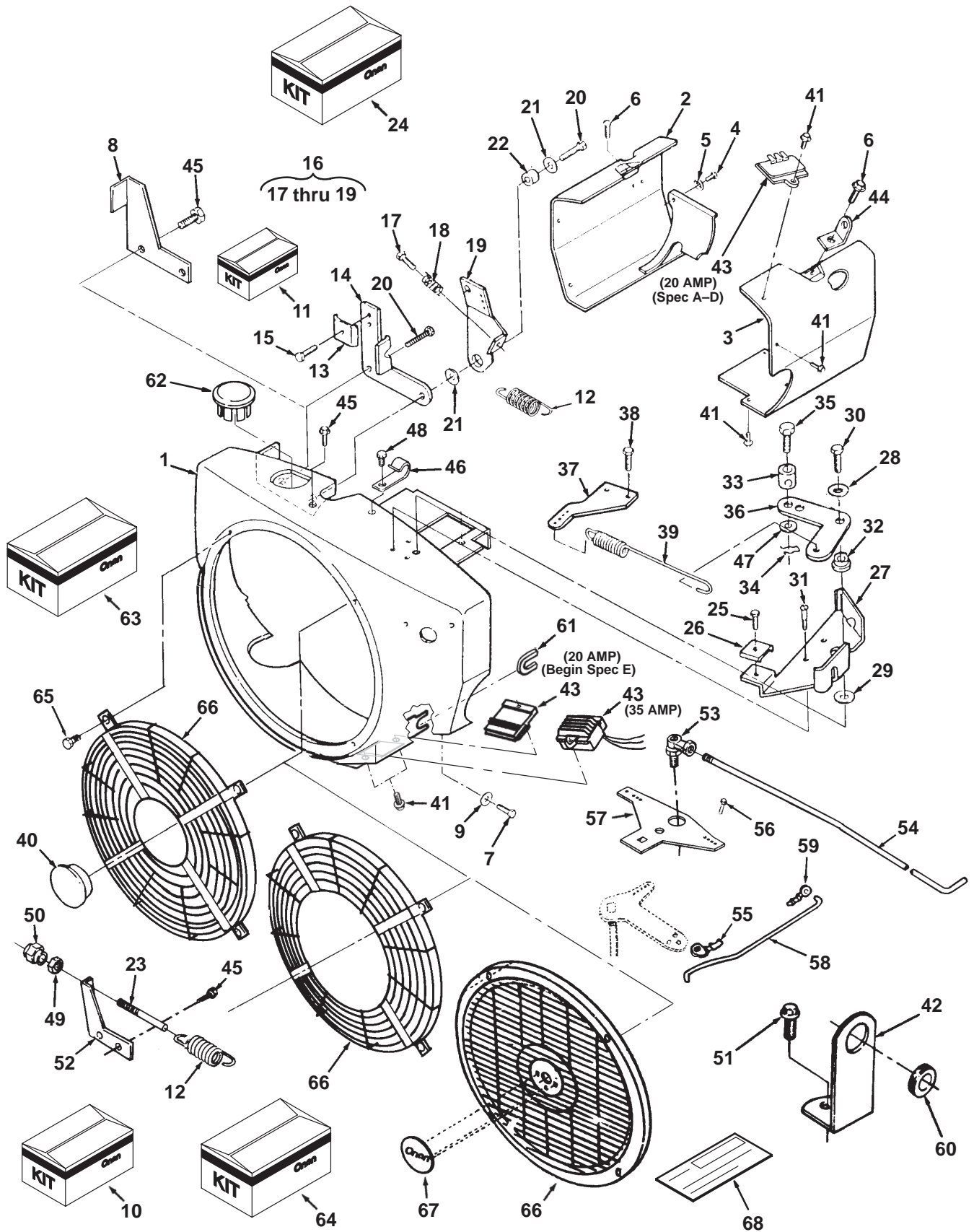
Blower Housing



Blower Housing

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	134-4850	1	Housing, Blower Without Oil Cooler (Spec B)	20	815-0436	2	^Screw, Cap – Hex Washer Head (1/4–20 x 1/2”) – Code 13BJ
	134-5001-50	1	Spec B-D	21			Washer, Flat (1/4” Screw)
	134-4986-02	1	Spec E-G (Painted) Spec H		526-0021	2	^ 3/4” OD – Code 13BJ
	134-4986-02	1	With Control Panel Code 39AG, 35CK, and 35DB (With Harness)		526-0018	2	5/8” OD – Code 13CD,13BJ
	134-5127-02	1	Without Control Panel	22	150-1269	1	^Bushing, Governor Control Arm
2			Housing, Cylinder Air – LH	23	150-0694	1	~Stud, Adjusting – Code 13CG
	134-4668-50	1	Without Weld Nuts	24	541-0191	1	Kit, Front Pull Governor (Code 13BK) (Includes Parts Marked #)
	134-4668-51	1	With Weld Nuts	25	815-0391	1	#Screw, Tapping – Hex Head (#10–32 x 1/2”)
3			Housing, Cylinder Air – RH	26	153-0514	1	#Clamp, Throttle Cable
	134-4846-50	1	Without Weld Nuts	27	150-1726-01	1	#Bracket, Governor Control Mounting – Zinc Plated
	134-4846-51	1	With Weld Nuts	28	526-0021	1	Washer, Flat (1/4” Screw)
4	815-0290	2	Screw, Tapping – Hex Washer Head (1/4–20 x 5/8”)	29	850-0040	1	Washer, Lock – Spring (1/4”)
5	526-0021	2	Washer, Flat (1/4” Screw)	30	800-0007	1	#Screw, Cap – Hex Head (1/4–20 x 1”)
6	821-0016	2	Screw, Cap – Hex Washer Head (5/16–18 x 3/4”)	31	815-0439	3	#Screw, Hex Washer Head Tapping (8–15 x 1/2”)
7	815-0337	3	Screw, Tapping – Hex Washer Head (1/4–20 x 3/4”)	32	150-1727	1	#Bushing, Governor Control
8	150-2264	1	Bracket, Governor Adjust (Plated) Code 13CG	33	152-0155	1	#Swivel, Throttle Lever
9	526-0018	4	Washer, Flat (1/4” Screw)	34	516-0059	1	#Pin, Cotter
10	541-0424	1	Kit, Fix Speed Governor (Code 13CG) (Includes Parts Marked ~)	35	815-0693	1	#Screw, Machine – Hex Head (#8–32 x .318”)
11	541-0213	1	Kit, Side Pull Governor (Code 13BJ) (Includes Parts Marked ^)	36	150-1366	1	#Link, Governor Control
12			Spring, Governor	37	150-1754-01	1	#Adapter, Governor Arm
	150-1214	1	~^ 5 Ball Governor	38	815-0194	2	#Screw, Hex Head W/ET (#10–32 x 1/2”)
	150-1740	1	10 Ball Governor–Code 13CH	39	150-1755	1	#Spring, Governor
13	153-0514	1	^Clamp, Cable – Code 13BJ	40			Plug, Black Nylon
14	150-1725-01	1	^Bracket, Governor Mounting Code 13BJ		517-0261	1	Code 23DE (57mm)
15	815-0359	1	^Screw, Tapping – Hex Head (#10–32 x 1/2”) – Code 13BJ		517-0136	1	Code 13BJ,13CD,15BB (23.4mm)
16			Arm Assy, Governor Control	41	821-0008	4	Screw, Cap – Hex Washer Head (1/4–20 x 5/16”)
	150-1761	1	^ Includes Parts Marked @ (Code 13CB)	42	149-2242	1	Bracket, Fuel Line – Begin Spec C
	150-2504-01	1	Includes Parts Marked < (Code 13BN)	43			Regulator, Voltage Spec A-D
17			Screw, Hex Head		191-2106	1	20 Ampere – Code 31AZ Begin Spec E
	815-0510	1	@ Tapping (#6–32 x 5/8”) Code 13BJ		191-2227	1	20 Ampere – Code 31AZ
	815-0563	1	< Thread Form (#6–32 x 1–3/8”) Side Pull Governor – Variable Speed		191-1847	1	35 Ampere – Code 31BC
18	150-1398	1	<@ Spring, Idle Setting – Code 13BJ	44	403-4202-02	2	Bracket, Lifting (Plated)
19			Arm, Governor Control (With- out Swivel)	45	821-0010	5	~Screw, Lock Head (1/4–20 x 1/2”)
	150-1576	1	@ Code 13BJ	46	518-0515	1	Clip, Wire – Code 13BJ,13BK 13CD (Spec B thru G only)
	150-1576-02	1	< Code 13DD	47	526-0006	1	#Washer, Flat (#12 Screw) Code 13BK
				48	815-0474	1	Screw, Hex Washer Head (1/4–14 x 1/2”) – Code 13BJ 13BK,13CD – Code 13CG (Spec B thru G only)

Blower Housing

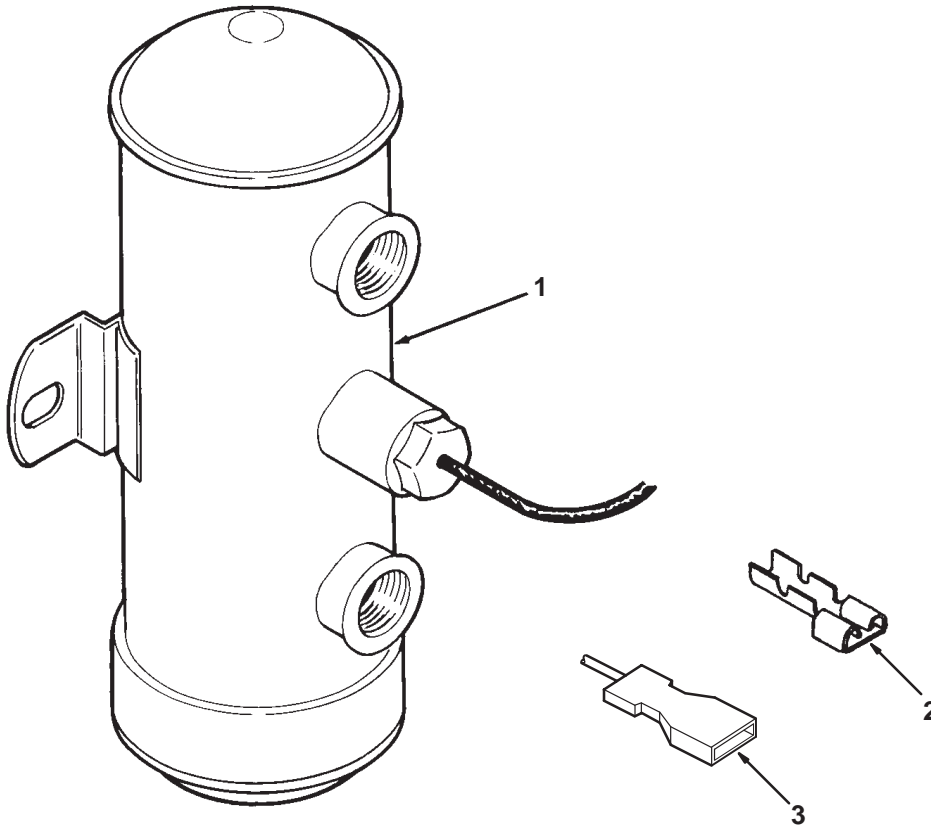


Blower Housing

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
49	870-0131	1	~Nut, Hex – Governor Adjusting (W/ET 10-32) – Code 13CG	64	541-0369	1	Kit, Stationary Grill with PTO Access (Code 23ED) (Includes Parts Marked +)
50	150-0621	1	~Nut, Governor – Acorn,				
51	815-0261	1	Screw, Hex Washer Head (1/4-20 x 1/2")	65			Screw
52	150-2264	1	~Bracket, Governor Adjust – Zinc Plated – Code 13CG		815-0575	4	Hex Washer Head (1/4-20 x 3/8")
53	150-0639	1	Joint, Ball – Code 13CG		815-0721	4	+*Pan Head – Taptite (Special) (10-32 x 1) Code 23DN, 13CD
54	150-2364	1	Rod, Governor – Code 13CG				
55	518-0406	1	Clip, Retaining – Control Rod Code 13CG	66			Guard, Stationary
56	815-0181	1	Screw, Thread Cutting – Hex Head W/ET (#10-32 x 1/2")		134-4689	1	No Center Hole
57	150-2388	2	Lever, Governor – Code 31AZ Begin Spec C		134-4689-01	1	*Center Hole – 1" Dia.
58	150-2553	1	Rod, Governor Control (Zinc Plated)		134-4689-02	1	+Center Hole – 3.88" Dia.
59	518-0004	1	Clip, Retaining – Control Rod to Carburetor	67	99-2393	1	*Nameplate, Logo
60	508-0021	1	Grommet, Rubber – Code 13BJ	68	98-4240	1	*+##^Label, Blank Kit Number
61	508-0331	1	Grommet, Rubber – 20, 35 Amp Voltage Regulator Harness – Begin Spec E				
62			Plug, Hole – Code 19AV				
	517-0252	1	Plated				
	517-0174	1	Tapered				
63	541-0296	1	Kit, Stationary Grill Without PTO Access (Code 23DN) (Includes Parts Marked *)				

– Parts included in Front Pull Governor Kit.
 * – Parts included in Stationary Grill Kit without PTO Access.
 + – Parts included in Stationary Grill Kit with PTO Access.
 ^ – Parts included in Side Pull Governor Kit.
 @ – Parts included in 150-1761 Governor Control Arm Assy.
 < – Parts included in 150-2504-01 Gov. Control Arm Assy.
 ~ – Parts included in Fixed Speed Governor Kit.

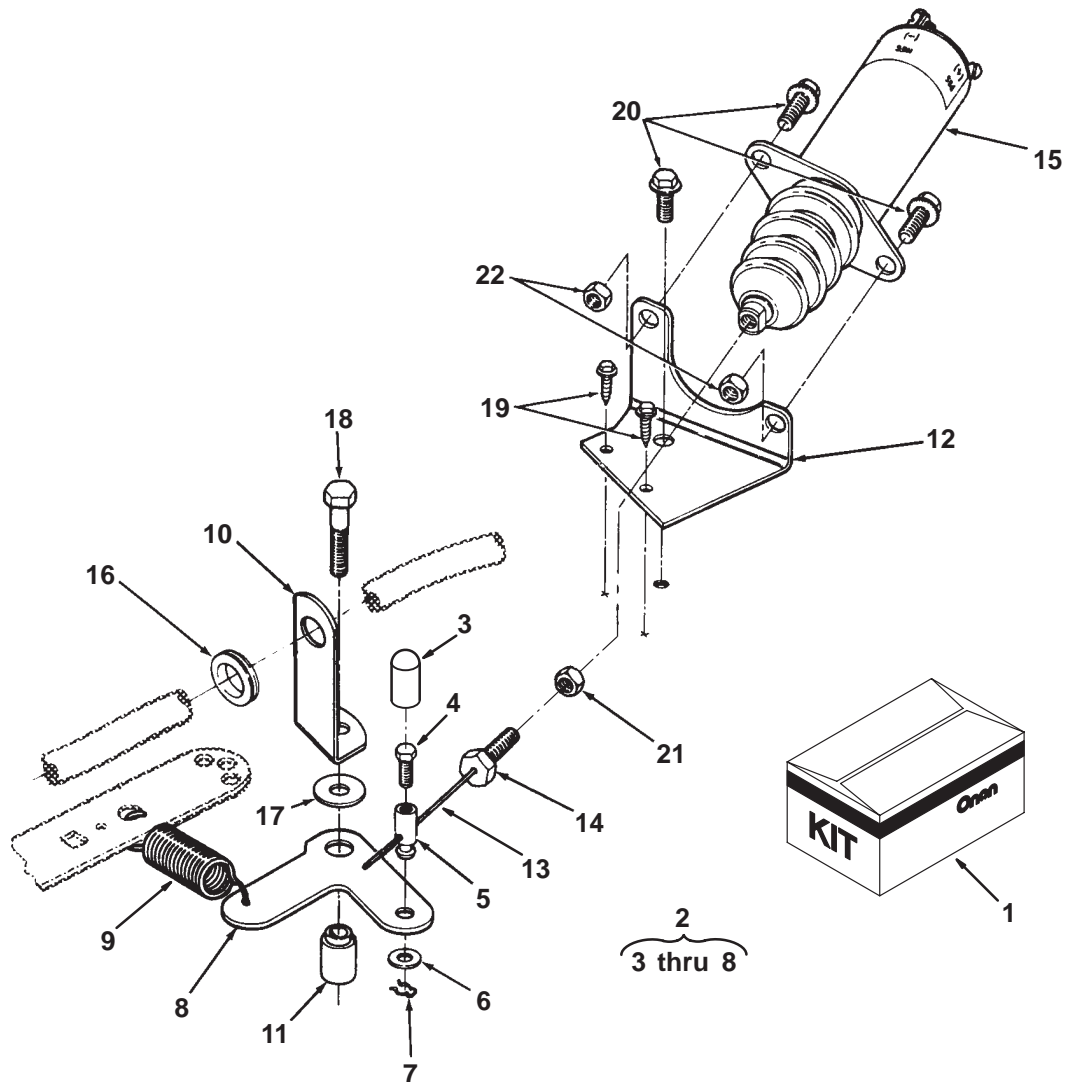
Remote Fuel Pump (Electric)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	149-1828	1	Kit, 12 Volt Electric Fuel Pump (Includes Parts Marked *)
2	332-0529	1	*Terminal, Crimp
3	332-1993	1	*Terminal

*- Parts included in 12 Volt Electric Fuel Pump Kit.

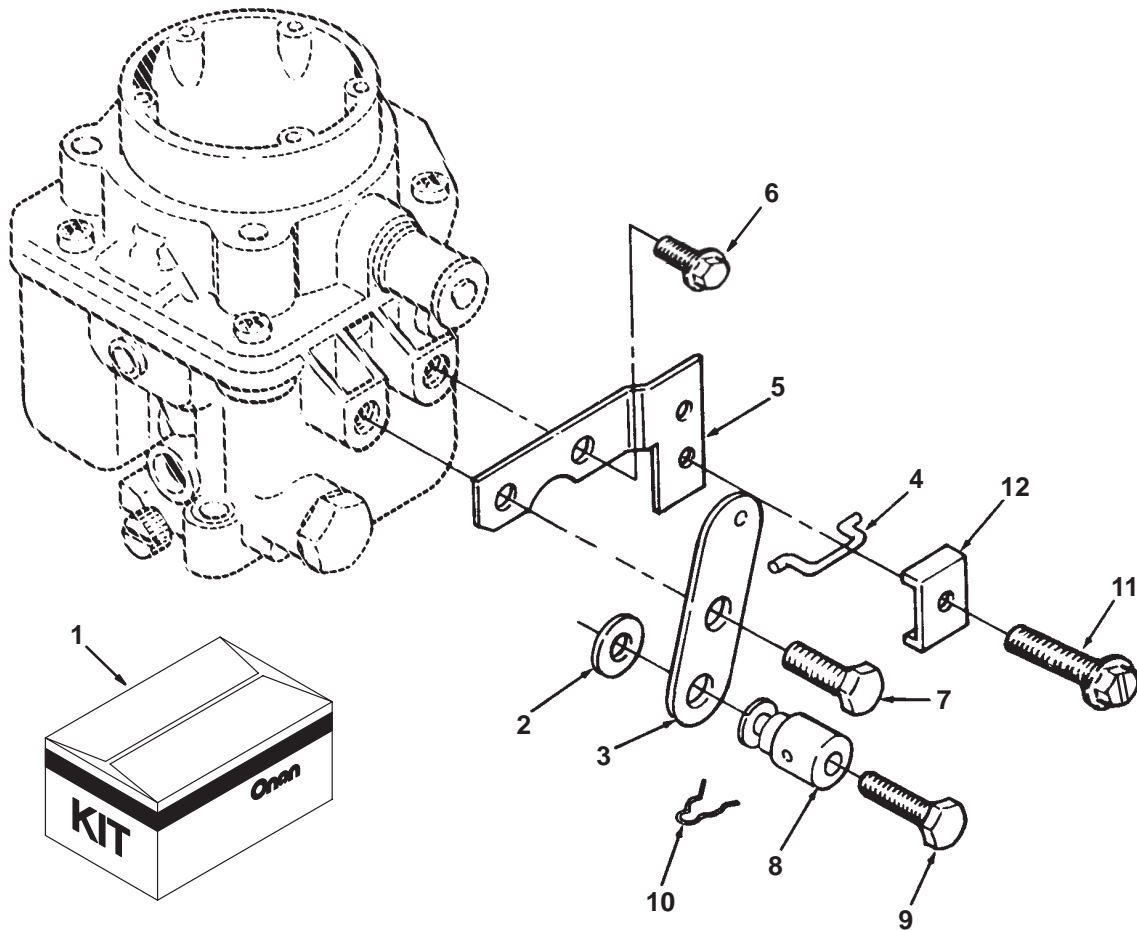
Two Speed Governor (Code 13BF)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	541-0418	1	Kit, 2 Speed, 12 Volt Solenoid Governor (Code 13BF) (Includes Parts Marked *)	15	307-2758	1	* Solenoid, Governor
2	150-2545	1	Bracket Assembly, Governor (Includes Parts Marked #)	16	508-0021	1	* Grommet, Fuel Line Bracket
3	517-0177	1	# Plug, Cap	17	526-0021	1	* Washer, Flat (1/4" Screw)
4	800-4072	1	** Screw, Machine – Hex Head (M4)	18	800-0007	1	* Screw, Cap – Hex Head (Special)
5	153-0632	1	** Swivel, Choke Lever	19	815-0439	2	* Screw, Cap – Hex Washer Head (#8-15 x 1/2")
6	526-0006	1	** Washer, Flat (#12 Screw)	20	821-0010	3	* Screw, Lock Head (1/4-20 x 1/2")
7	516-0059	1	** Pin, Cotter	21	115-0025	1	* Nut, Hex (1/4-28)
8	150-2498	1	** Bracket, Governor	22	870-0212	2	* Nut, Lock (1/4-20)
9	150-1740	1	* Spring, Governor (Low Speed)	23	E-350	1	* Sheet, Instruction (Not Shown)
10	149-2242	1	* Bracket, Fuel Line				
11	150-1727	1	* Bushing, Governor Control				
12	150-2499	1	* Bracket, Solenoid Mounting				
13	153-0678	1	* Cable Assy (Includes Screw)				
14	815-0800	1	* Screw, Hex Head – Grade 5 (1/4-28 x 1") (Included in Cable Assy)				

* – Parts included in 2 Speed, 12 Volt Solenoid Governor Kit.
– Parts included in Governor Bracket Assembly.

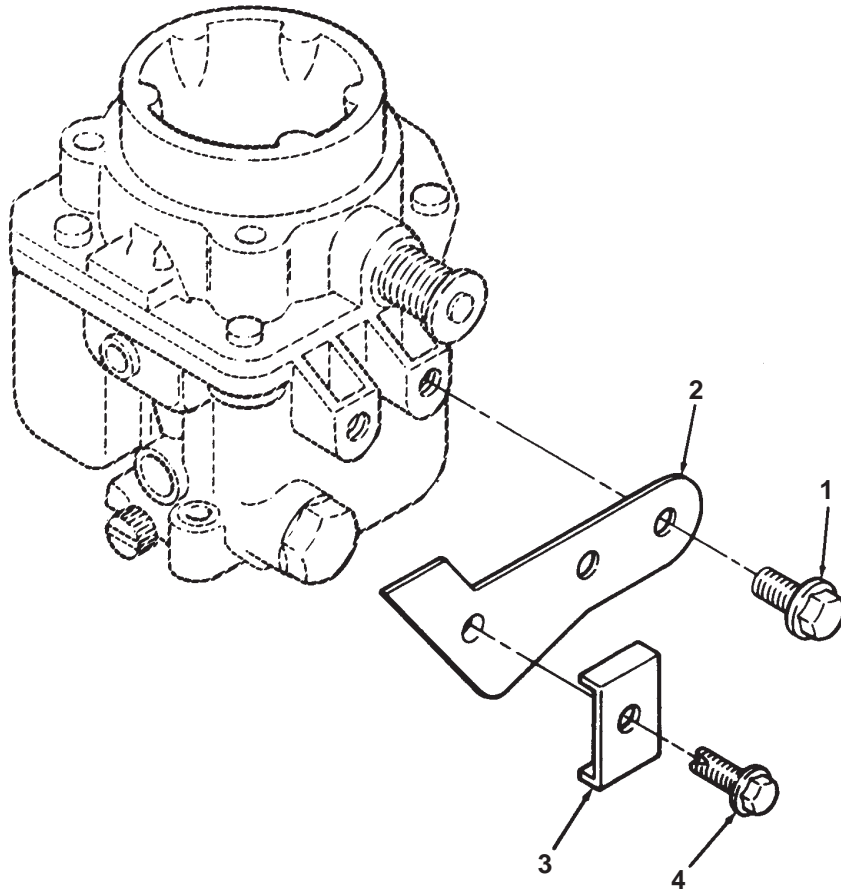
Choke Control (Front Pull)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	541-0190	1	Kit, Front Pull Choke (Includes Parts Marked *) Code 15BJ	9	815-0693	1	*Screw, Machine – Hex Head (#8-32 x.3/8")
2	526-0140	2	*Washer, Flat (#10 Screw)	10	516-0059	1	*Pin, Cotter
3	153-0523	1	*Lever, Choke	11	815-0359	1	*Screw, Tapping – Slotted Hex Washer Head (#10-32 x 7/8")
4	153-0500	1	*Link, Choke	12	153-0514	1	*Clip, Choke Cable
5	153-0524	1	*Bracket, Choke Cable				
6	821-0004	1	*Screw, Cap – Hex Washer Head (#10-32 x 5/16")				
7	815-0820	1	*Screw, Shoulder (#10-32 x 3/8")				
8	152-0155	1	*Swivel, Choke Lever				

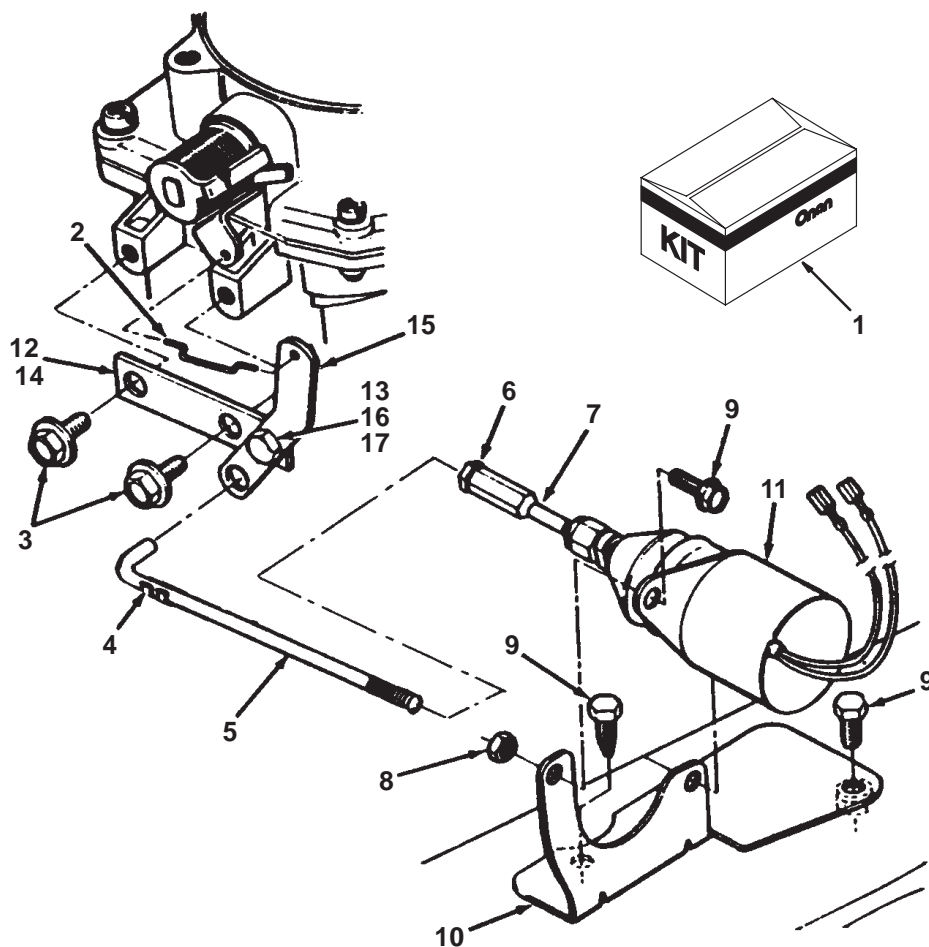
*– Parts included in Front Pull Choke Kit

Choke Control (Rear Pull)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0004	2	Screw, Cap – Hex Washer Head (10-32x5/16")	3	153-0514	1	Clip, Choke Cable
2	153-0686-02	1	Bracket, Choke Cable	4	815-0359	1	Screw, Tapping – Slotted Hex Washer Head (#10-32 x 7/8")

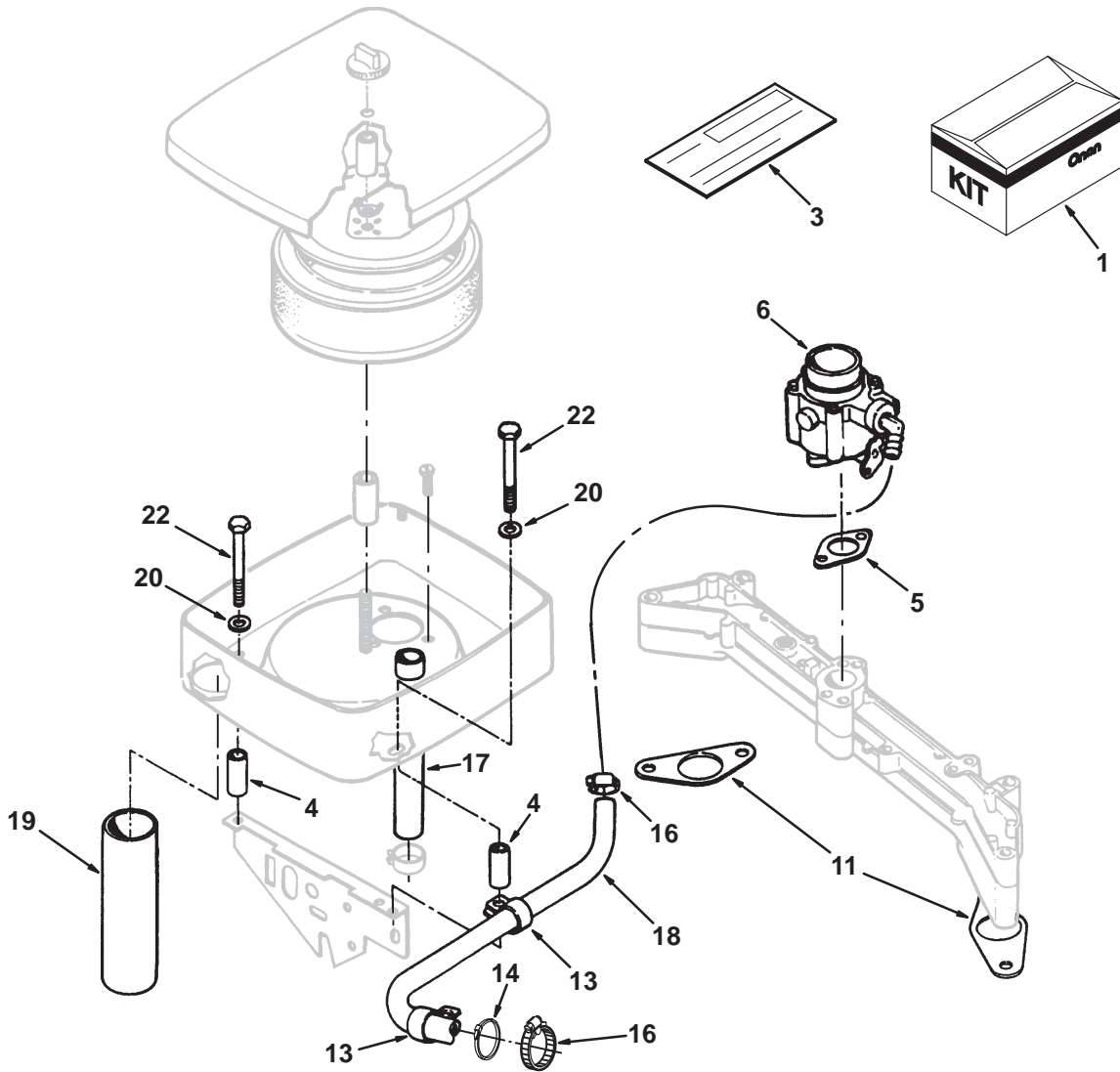
Remote Choke Spec C



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	541-0412	1	Kit, Remote Choke (Includes Parts Marked +) Code 15CK	12	153-0642	1	+Bracket Assy, Choke (Includes Parts Marked *)
2	153-0500	1	+Link, Choke	13	526-0008	2	*Washer, Flat (#10 Screw)
3	821-0004	2	+Screw, Lk H (#10-32 x 3/8")	14	150-2480	1	*Bracket, Choke
4	518-0006	1	+Clip, Lock	15	150-2531	1	*Lever, Choke
5	150-2478	1	+Rod, Choke	16	815-0480	1	*Screw, Pan Head Shoulder (#10-32)
6	870-0053	1	+Nut, Hex Mach (10-32)	17	870-0298	1	*Nut, Lock (#10-32)
7	150-2481	1	+Joint, Ball				
8	870-0212	2	+Nut, Self Lk (1/4-20)				
9	815-0290	4	+Screw, HWH THD Form (1/4-20 x 5/8)				
10	307-2751	1	+Bracket, Solenoid				
11	307-2750	1	+Solenoid, 12 Volt				

+ - Parts included in Remote Choke Kit.
* - Parts Included in Choke Bracket Assy.

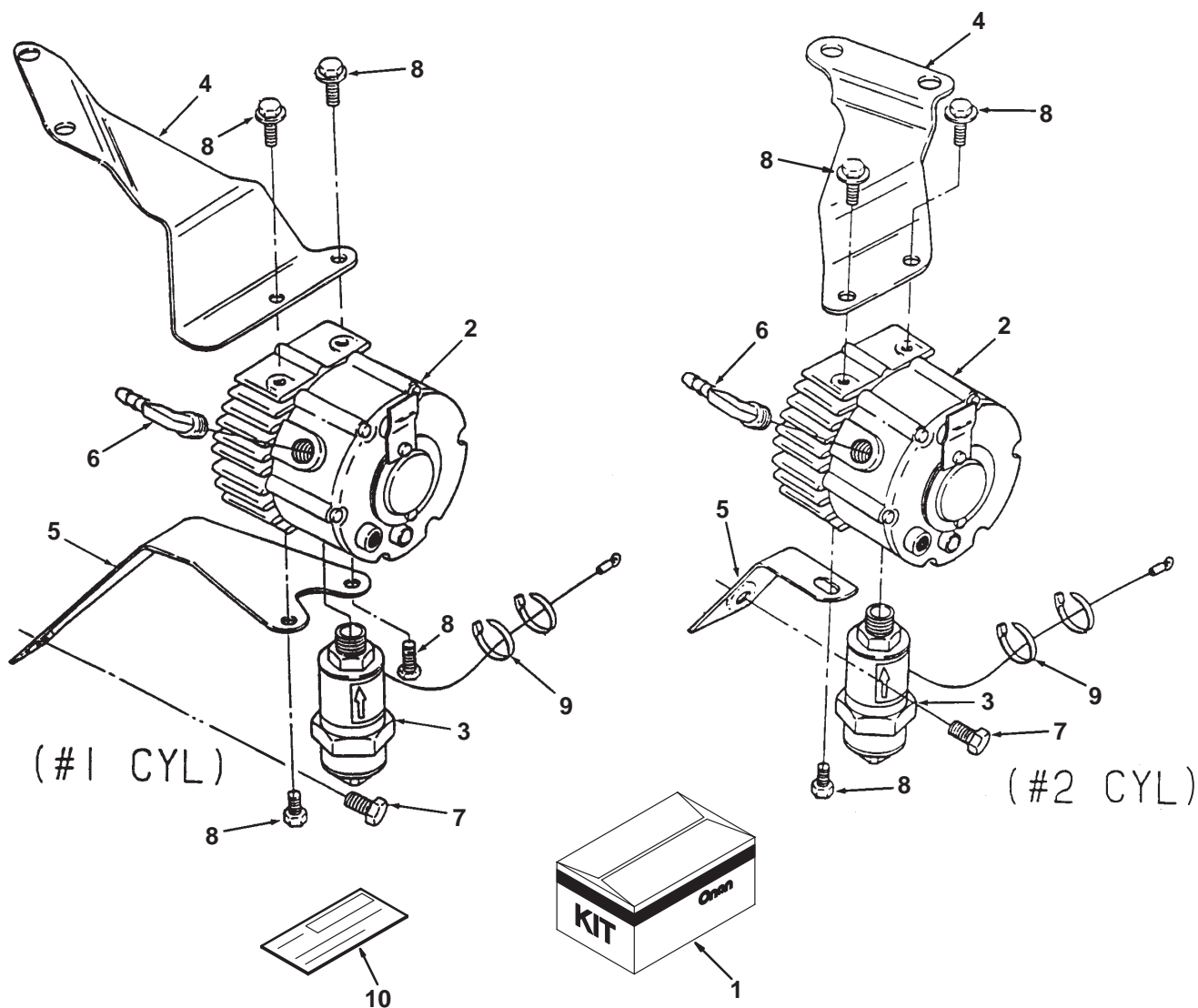
LPG Conversion Kit



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	541-0512	1	Kit, LPG Conversion (Includes (Parts Marked *))	15	502-1145	1	*Elbow, 90 Degree (1/2 NPT x 3/8" Hose) (See LPG Converter Kit page)
2	E-355	1	*Sheet, Instruction (Not Shown)	16	503-1133	2	*Clamp, Hose
3	98-7315-07	1	*Label, Kit Number (Emission)	17	503-1606-03	1	*Hose, Breather
4	140-2722-01	2	*Spacer, Air Intake	18	503-1798-01	1	*Hose, LPG
5	141-0281	1	*Gasket, Carburetor	19	503-1882-03	1	*Tube, Air Intake
6	146-0681	1	*Carburetor, LPG Emissions	20	526-0018	4	*Washer, Flat
7	148-0975	1	*Bracket, Upper (See LPG Converter Kit page)	21	815-0293	1	*Screw, Hex Washer Head Thread Forming (1/4-20 x 3/4") (See LPG Converter Kit page)
8	148-0976	1	*Bracket, Lower (See LPG Converter Kit page)	22	821-0013	2	*Screw, Hex Head Cap (1/4-20 x 1")
9	148-1025	1	*Converter, LPG (See LPG Converter Kit page)	23	821-0018	3	*Screw, Hex Head Cap (1/4-20 x 5/8") (See LPG Converter Kit page)
10	149-1321	3	*Cap, Fuel Fitting (Not Shown)				
11	154-2219	2	*Gasket, Intake Manifold				
12	307-2754	1	*Shutoff, Fuel Solenoid (See LPG Converter Kit page)				
13	332-1356	2	*Clamp, Hose Mount				
14	332-1794	3	*Tie, Cable (Self-Locking)				

* - Parts included in LPG Conversion Kit.

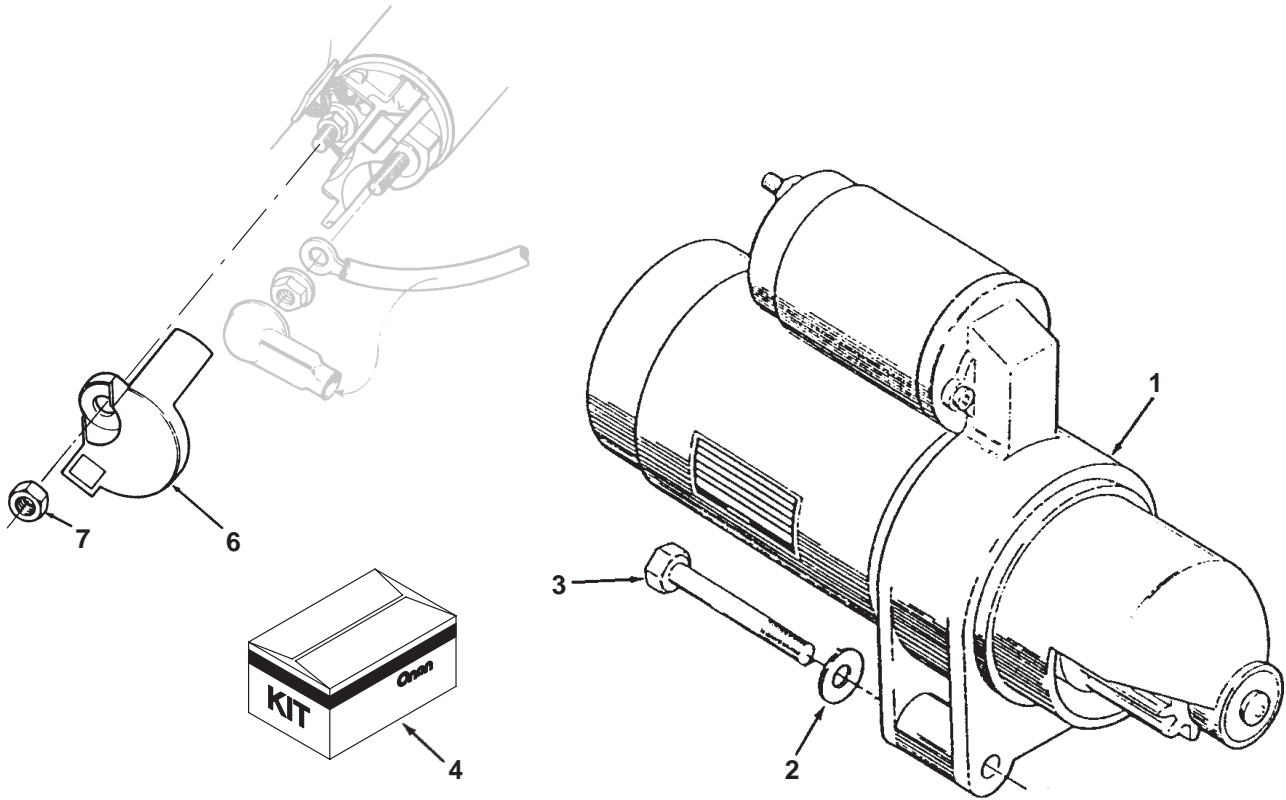
LPG Converter Kit



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	541-0442	1	Kit, LPG Converter #1 Cylinder Mounting (Includes Parts Marked *)	7	815-0293	1	*@ Screw, Hex Washer Head Thread Forming (1/4-20 x 3/4")
	541-0443	1	#2 Cylinder Mounting (Includes Parts Marked @)	8			Screw, Hex Head Cap (1/4-20 x 5/8")
2	148-1025	1	*@ Converter, LPG		821-0018	4	* #1 L.H. - Cylinder
3	307-2754	1	*@ Shut Off, Fuel Solenoid		821-0018	3	@ #2 R.H. - Cylinder
4			Bracket, Upper	9	332-1794	2	*@ Tie, Cable
	148-0973	1	* L.H. Mount (#1 Cyl)	10	98-4240	1	*@ Label, Blank Kit Number
	148-0975	1	@ R.H. Mount (#2 Cyl)	11	E-356	1	*@ Sheet, Instruction (Not Shown)
5			Bracket, Lower				
	148-0974	1	* L.H. Mount (#1 Cyl)				
	148-0976	1	@ R.H. Mount (#2 Cyl)				
6	502-1145	1	*@ Elbow, 90° Brass (1/2"NPT - 3/8 Barb)				

* - Parts included in #1 Cylinder Mounting Kit.
 @ - Parts included in #2 Cylinder Mounting Kit.

Starter

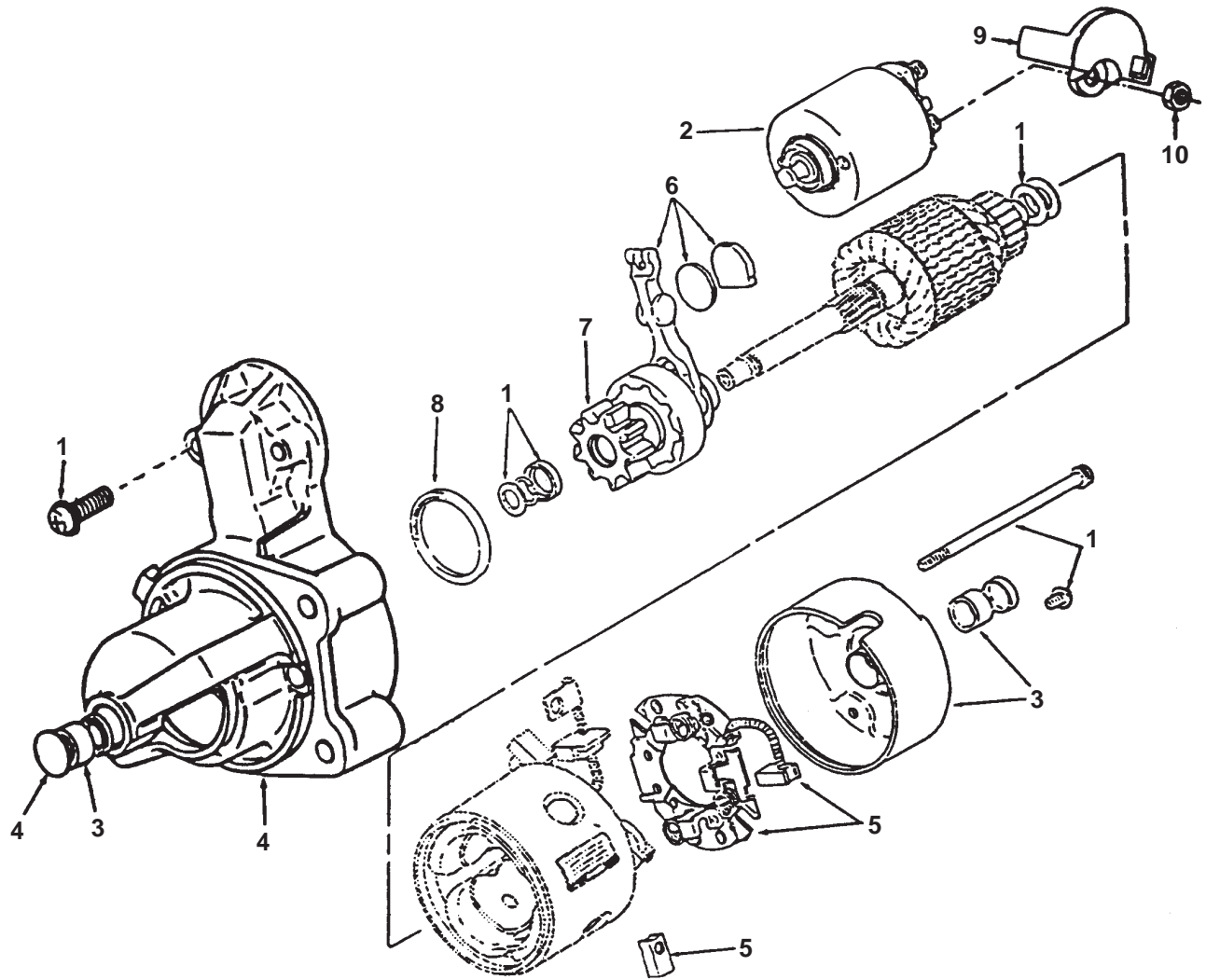


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Starter – Solenoid Shift (See Separate Page for Components)
	191-1949-04	1	Code 33AT
	191-1949-07	1	Code 33AW
2	526-0122	2	Washer, Flat (5/16" Screw)
3	800-0595	2	Screw, Cap Hex Head (5/16"-18 x 3-1/2")

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
4	541-0411	1	Kit, Starter Cap (Includes Parts Marked *)
5	E-0342	1	*Sheet, Instruction (Not Shown)
6	191-1947	1	*Cap, Starter Solenoid
7	750-1006	1	*Nut, Hex

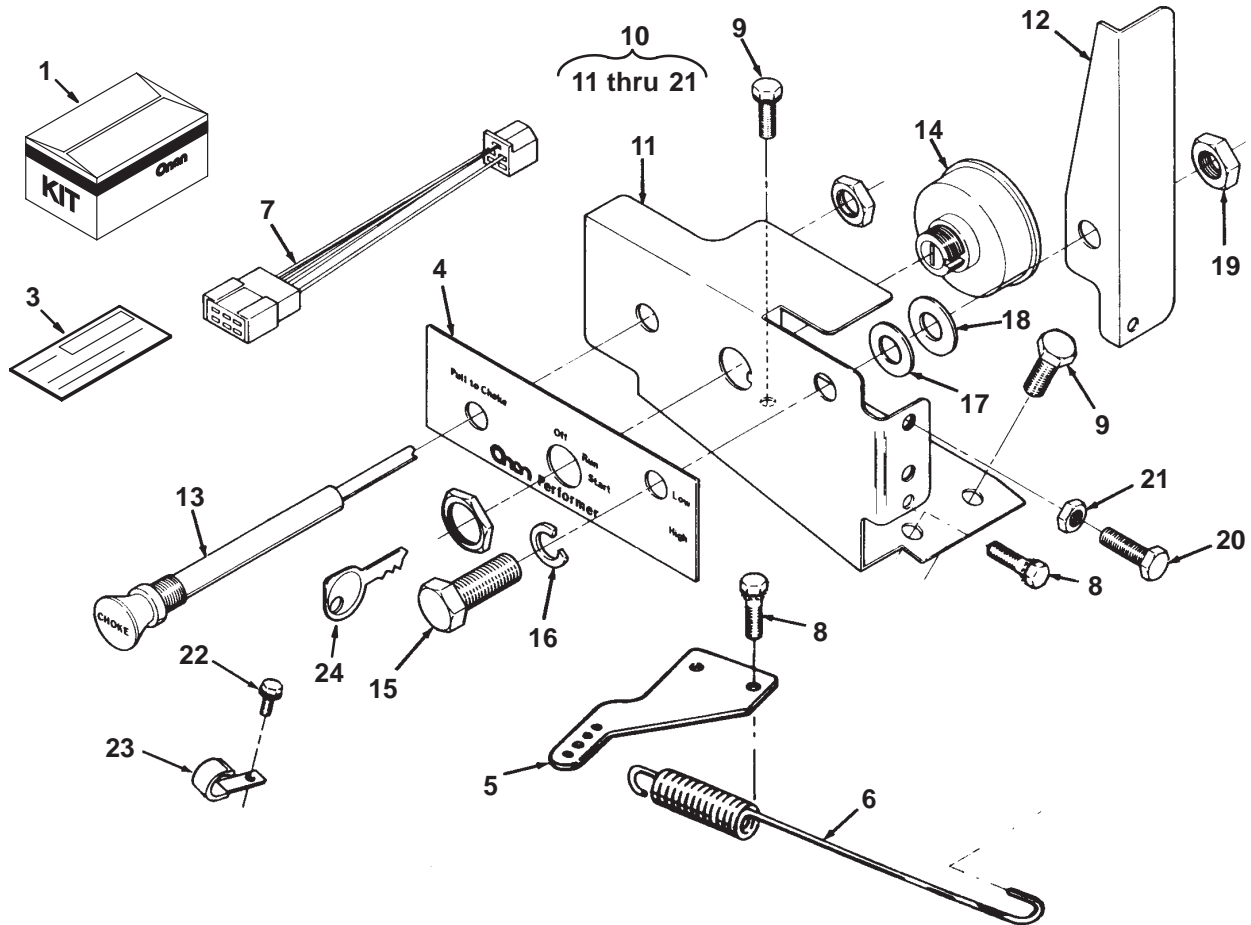
* – Parts included in Starter Cap Kit.

Starter Components



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1954	1	Kit, Hardware – Starter (Includes (2) Solenoid Mtg Screws, 2 Thru Bolts, Armature Shims, Pinion Stop Collar, Retaining Ring and Solenoid Terminal Nuts)	5	191-1951	1	Kit, Brush – Starter (Includes (2) Negative and (2) Positive Brushes and Brush Holder)
2	191-1956	1	Kit, Solenoid – Starter (Includes Solenoid and Spring Plunger)	6	191-1766	1	Kit, Shift Lever – Starter (Includes Lever, Wear Plate, Rubber Plug and Grease)
3	191-1931	1	Kit, Bushing – Starter (Includes Rear Cap with Bushing and Front Bushing)	7	191-1953	1	Kit, Clutch – Starter (Includes Pinion Gear, Clutch Assy & #8)
4	191-1950	1	Kit, Mounting Bracket (Includes Front Bracket, Front Bushing, Dust Seal, Thrust Washer, Cap Plug and OD Pinion Seal)	8	191-1955	1	Kit, Dust Seal (Includes ID, OD Pinion Seals)
				9	191-1947	1	Cap, Starter Solenoid
				10	750-1006	1	Nut, Hex – Metric (M8)

Control Panel

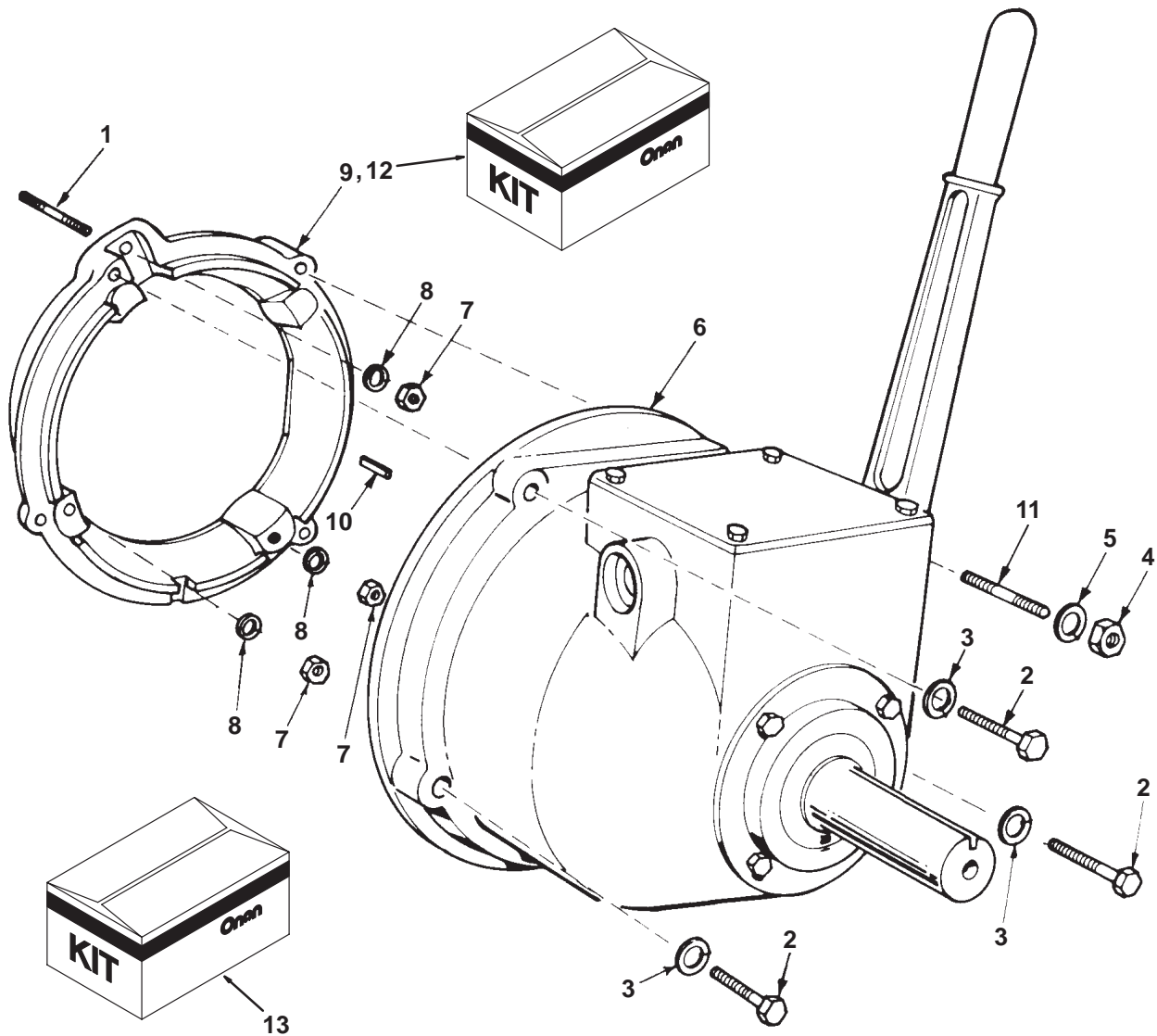


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Kit, Control Panel (Includes Parts Marked #) Code 35 DB	10	301-9965	1	#Panel Assy, Control (Includes Parts Marked *)
	541-0240	1	Control Panel Kit With Oil Pressure Switch	11	301-9964-51	1	*Panel, Control
	541-0194	1	Control Panel Kit Without Oil Pressure Switch	12	150-2184	1	*Lever, Control
2	E-0320	1	#Sheet, Instruction (Not Shown)	13	153-0606	1	*Choke, Manual
3	98-4240	1	#Label, Blank Kit Number	14	308-0385	1	*Switch, Ignition (Includes Keys)
4	98-5735	1	#Decal, Control Panel	15	800-0050	1	*Switch, Cap - Hex Head (3/8-16 x 1")
5			#Bracket, Governor	16	851-0029	1	*Washer, Lock (3/8")
	150-1754	1	Non-Plated	17	526-0029	1	*Washer, Flat (3/8" Screw)
	150-1754-01	1	Zinc Plated	18	508-0284	1	*Washer, Flat - Nylon (3/8" Screw)
6	150-1755	1	#Spring, Governor	19	870-0297	1	*Nut, Lock (3/8-16)
7			#Harness, Control Panel Wiring (See Separate Page for Components)	20	815-0650	2	*Screw, Hex Washer Head (1/4-20 x 1")
	338-2108	1	Units With Oil Pressure Switch (4 Leads)	21	862-0001	2	*Nut, Hex (1/4-20)
	338-2109	1	Units With/Out Oil Pressure Switch (2 Leads)	22	815-0474	1	Screw, Hex Washer Head (1/4-14 x 1/2") (Spec B thru G only)
8	815-0194	2	#Screw, Hex Head - Thread Cutting W/ET - Panel Mounting (#10-32 x 1/2")	23	518-0515	1	Clamp, Cable (Spec B thru G only)
9	821-0009	2	#Screw, Hex Washer Head Self-Lock (1/4-20 x 3/8")	24	308-0386	1	Key

- Parts included in Control Panel Kit.

* - Parts included in Control Panel Assembly.

Clutch

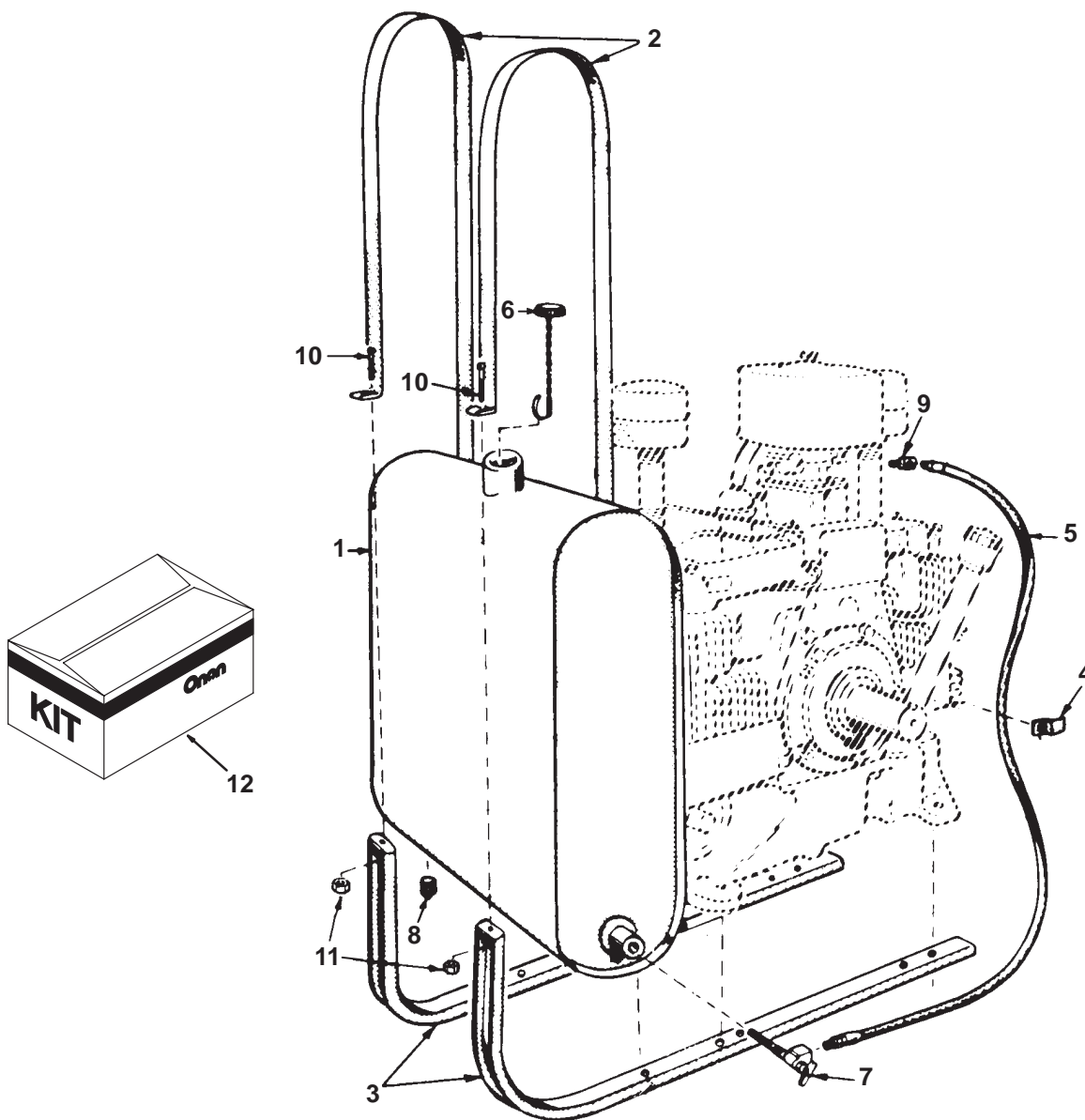


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	520-0739	3	#Stud (3/8-24 x 3/8-16 x 3")
2	800-0075	3	#Screw, Cap - Hex Head (7/16-14 x 2")
3	850-0055	3	#Washer, Lock - Spring (7/16")
4	104-0091	1	#Nut, Hex - Hardened
5	850-0050	1	#Washer, Lock - Spring (3/8")
6	190-0288	1	#*Clutch
7	104-0091	4	#Nut, Hex - Hardened
8	850-0050	3	#Washer, Lock - Spring (3/8")
9	190-0171	1	#Adapter, Clutch

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
10	515-0041	1	#Key, Drive - Special
11	520-0738	1	#Stud (3/8-24 x 3/8-16 x 4")
12	190-0597	1	Kit, PTO Electric Clutch Adapter Code 45BA
13	190-0289	1	Kit, Clutch (Includes Parts Marked #)

* - For Components, check nameplate and contact nearest Rockford Clutch Dealer.
 #- Parts Included in Clutch Kit.

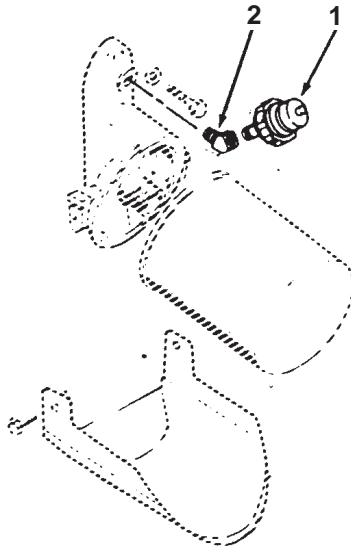
Fuel Tank (Side Mounted)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	159-0981	1	*Tank, Fuel (Less Cap) * (3.75 Gallon)	9	505-0041	1	*Elbow, 90° – Carburetor Inlet
2	159-0596	2	*Strap, Fuel Tank	10	813-0108	2	*Screw, Machine – Round Head (#10-32 x 1-1/2")
3	159-0595	2	*Bracket, Fuel Tank	11	870-0053	2	*Nut, Hex (#10-32)
4	134-0599	1	*Clip, Line – Fuel	12	159-0597	1	Kit, Fuel Tank (Side Mounting) (Includes Parts Marked *)
5	501-0008	1	*Line, Fuel				
6	159-0020	1	*Cap, Fuel Tank				
7	504-0013	1	*Valve, Shut-off				
8	505-0057	1	*Plug, Drain – Tank				

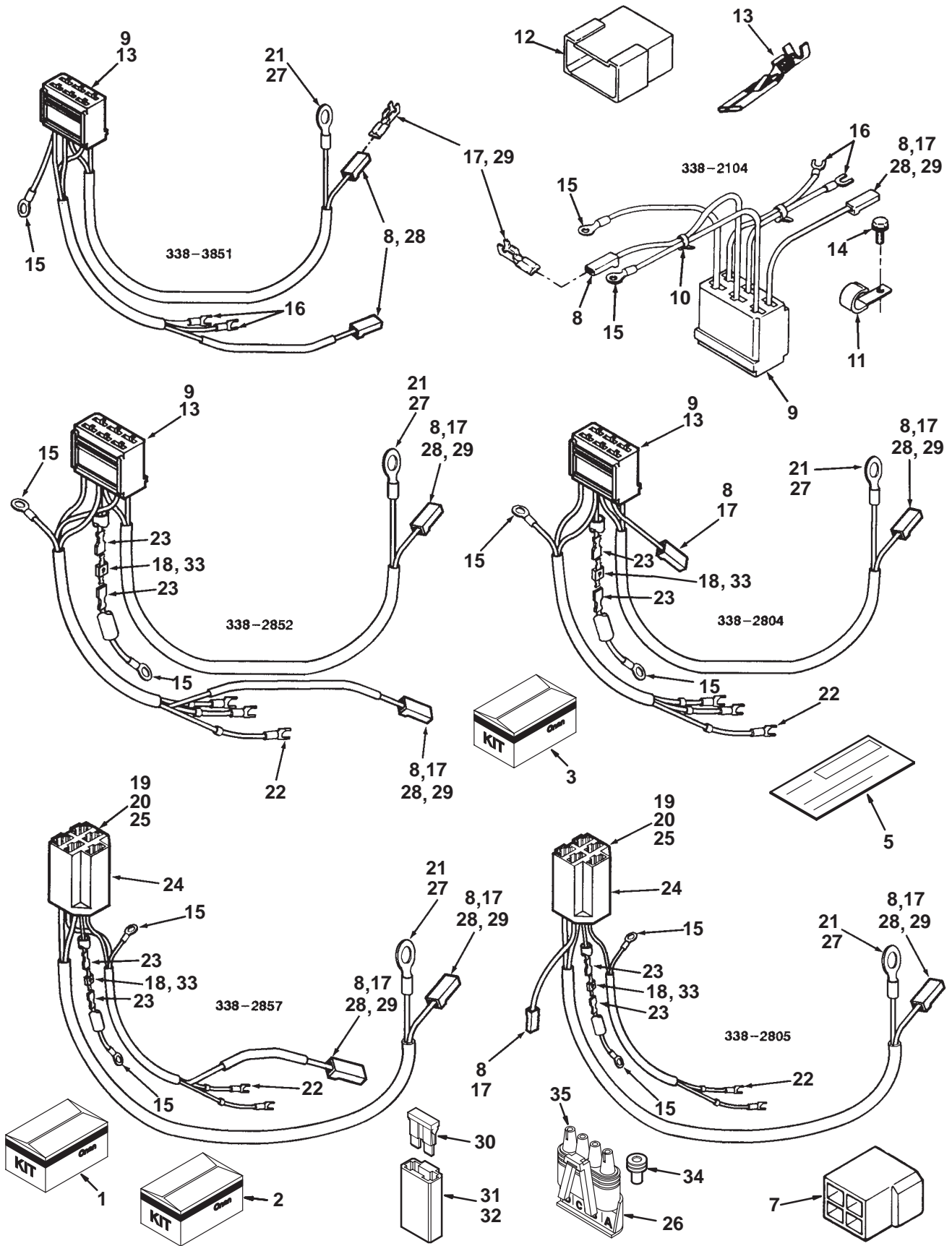
*– Parts included in Side Mounting Fuel Tank Kit.

Low Oil Pressure Cut-Off Switch



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	541-0235	1	Switch, Low Oil Pressure Kit, 1 Terminal Code 35AU Normally Closed 2.01" Long	541-0436-02			Kit, 3 Terminal – Code 35BV – Dual Circuit to Open/Close at 5 PSI
	309-0546	1	Screw On Connector	309-0583	1		Screw On Connector
	309-0615	1	Slip On Connector Code 35AH Normally Open – 2.06" Long	309-0646-04	1		Slip On Connector 3 Terminal – Code 35BV – Dual Circuit to Open/Close at 10 PSI
	309-0641-17	1	Screw On Connector	309-0609	1		Screw On Connector
	309-0646-01	1	Slip On Connector	309-0646-05	1		Slip On Connector
	541-0236	1	Kit, 2 Terminal Code 35AV Normally Open – 1.87" Long	2	502-0053	1	Elbow, 45° Street – Spec A-D Code 35AH, 35AV
	309-0641-18	1	Screw On Connector				
	309-0646-02	1	Slip On Connector				
	541-0319		Kit, 2 Terminal Code 35BW One Terminal Normally Open One Terminal Normally Closed				

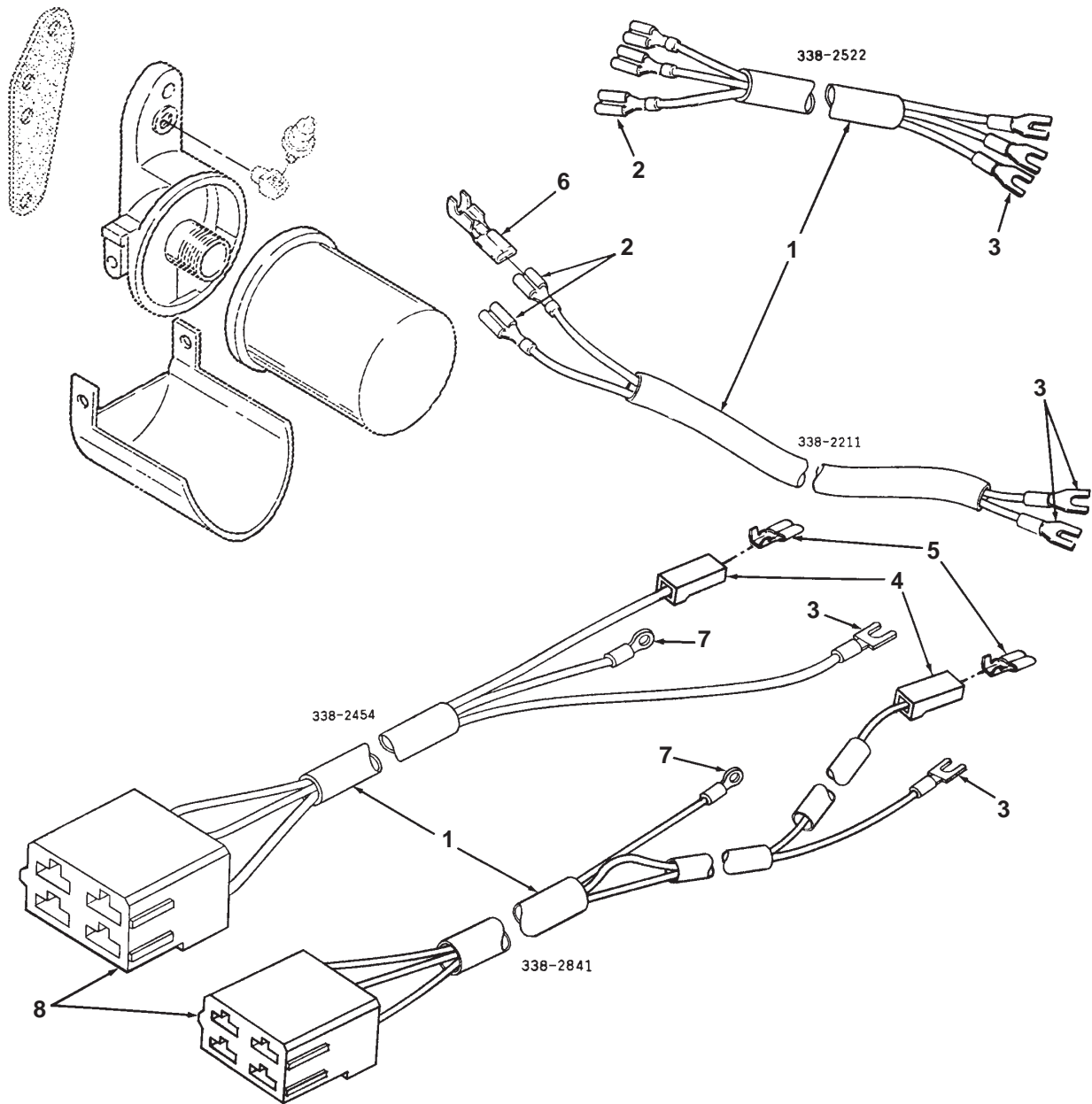
Wiring Harness



Wiring Harness

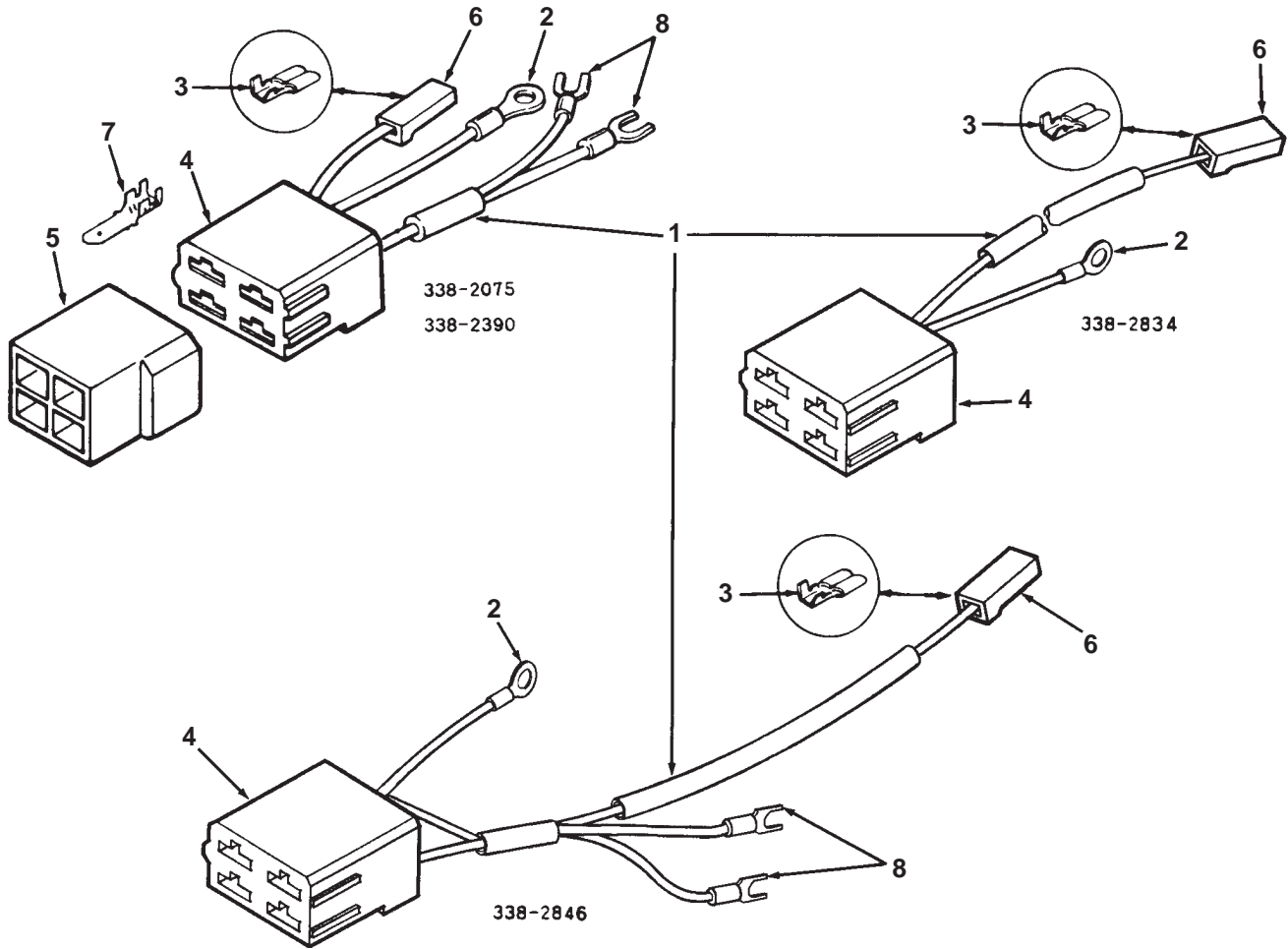
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Harness, Wiring – Engine		338-3616	1	Unit With Push On Terminals To The LOP Switch (Includes Parts Marked ^)
			Units Without Pressure Switch (4 Leads) Code 35CH,35CJ, 35CK (Prior to Spec E)	1	541-0175	1	Kit, 4 Pin Harness Connector Code 35BB (Includes Parts Marked *)
338-2104-01		1	Screw On Connector				
338-3178-01		1	Slip On Connector	2	541-0195	1	Kit, 6 Pin Harness Connector Code 35BC (Includes Parts Marked +)
			Units With Pressure Switch (6 Leads) Code 35BC,35BZ (Prior to Spec E)	3	541-0437-02	1	Kit, 4 Wire, 6 Pin Wiring Harness (Begin Spec E) (Includes Parts Marked #)
338-2104-02		1	Screw On Connector				
338-3178-02		1	Slip On Connector				
			6 Pin Connector – 3 Terminal	4	E-364	1	#Sheet, Instruction (Not Shown)
			LOP Switch – Code 35CC (Prior to Spec E)	5	98-4240	1	#Label, Blank Kit Number
				6	E-0313	1	+*Sheet, Instruction (Not Shown)
338-2804-02		1	Screw On Connector	7	323-1382	1	*Housing, Tab (4-Way)
338-3185-02		1	Slip On Connector	8	332-0819	2	Housing, Connector – Push On
			6 Pin Connector – 2 Terminal	9	323-1386	1	Housing, Receptacle – 6 Way
			LOP Switch – Normally Open Code 35CC (Prior to Spec E)	10	332-1567	2	#+*Tie, Cable
				11	518-0515	1	#Clamp, Cable (1/2" Dia.) (Spec B thru G only)
338-2804-01		1	Screw On Connector	12	323-0916	1	#+Housing, Connector – Tab 6 Pin Terminal
338-3185-01		1	Slip On Connector	13			
			6 Pin/6 Wire Code 35BC, 35BZ– to Relocate Voltage Regulator Begin Spec E		332-2301	6	#+* Used with 20 Amp Charging System – 18 to 14 Gauge Wire
338-2851-02		1	Screw On Connector		332-1503	2	#+* Used with 35 Amp Charging System
338-3187-02		1	Slip On Connector				
			5 Pin Connector – 2 Terminal		332-2890	5	Code 35CC
			LOP Switch (Normally Open) Code 35CK (Prior to Spec E)	14	815-0474	1	Screw, Hex Washer Head (1/4-14 x 1/2") (Spec B thru G only)
338-2805		1	Screw On Connector	15	332-0806	2	^Terminal, Ring (#8)
338-3186		1	Slip On Connector	16	332-1303	5	Terminal, Spade (#10)
			6 Pin Connector – 2 Terminal	17	332-2715	2	Terminal, Receptacle
			LOP Switch Normally Open Begin Spec E – Code 35CC	18	357-0030	1	Rectifier, Silicon – Code 35CC
				19	332-3165	1	Receptacle, Lock
338-2852-01		1	Screw On Connector	20	332-3143	1	Receptacle, Lock
338-3188-01		1	Slip On Connector	21	332-1048	1	Terminal, Ring (.38)
			Pin Connector – 3 Terminal	22	332-2973	3	Terminal, Spade (#8)
			LOP Switch – Begin Spec E	23	332-1993	2	Terminal, Receptacle
			Code 35CC	24	323-0987	1	Body, Connector – Code 35CK
338-2852-02		1	Screw On Connector	25	332-2073	2	Terminal
338-3188-02		1	Slip On Connector	26	323-1451	1	^Housing, Receptacle (4 RCPT)
			6 Pin Connector – 4 Wire to Relocate Voltage Regulator Begin Spec E – Code 35CH, 35CJ, 35CK	27	332-2944	1	^Terminal, Ring (.312) Insulation
				28	323-1216	2	^Body, Connector
				29	332-2870-01	6	^Terminal, Receptacle (#.250)
				30	321-0291	1	^Fuse, 30 AMP
338-2851-01		1	Screw On Connector	31	323-1424	1	^Cap, Connector
338-3187-01		1	Slip On Connector	32	332-2922	2	^Terminal
338-3187-02		1	Use On Spec 11583H and Spec 11590H	33	357-0030	1	^Rectifier, Silicon
				34	323-1576	4	^Seal, Cable (Gray)
			5 Pin Connector – 2 Terminal	35	323-1607	4	^Contact, Socket
			Begin Spec E				
			With LOPKO Code 35CK				* – Parts included in 4 Pin Harness Connector Kit.
338-2857		1	Screw On Connector				+ – Parts included in 6 Pin Harness Connector Kit.
338-3189		1	Slip On Connector				# – Parts Included in 4 Wire, 6 Pin Wiring Harness Kit.
338-3376		1	Without LOPKO Code 35DB				^ – Parts included in 338-3616 Engine Wiring Harness.

Wiring Harness Lopko



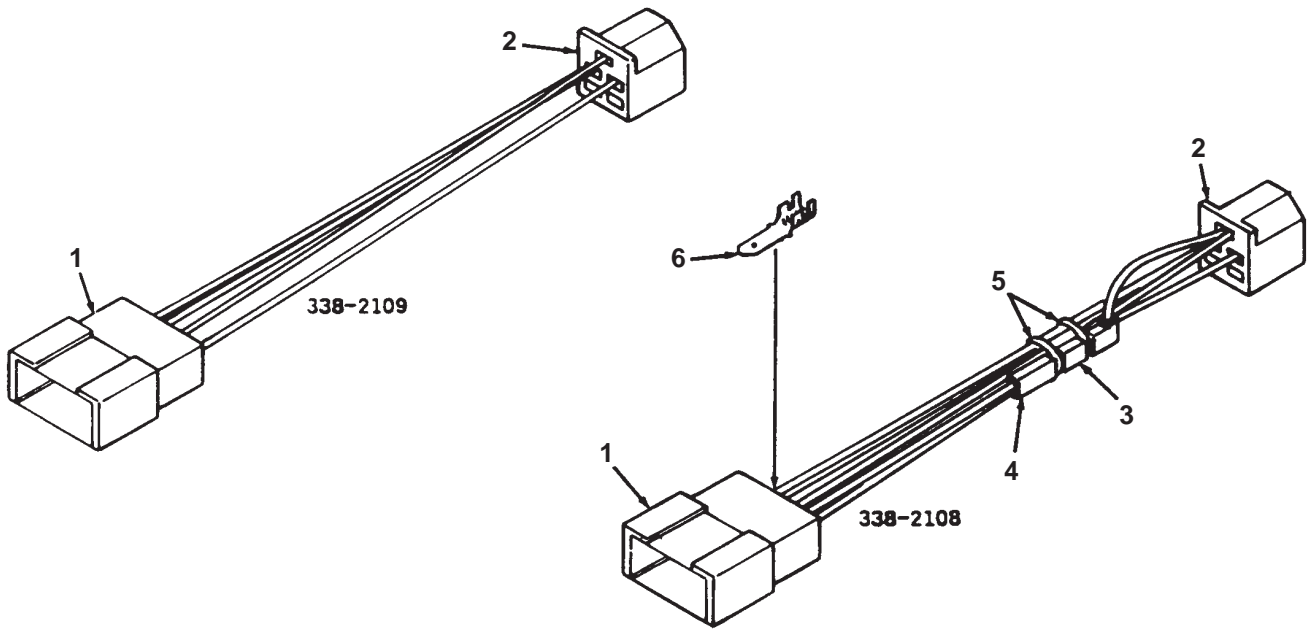
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Harness, Wiring – Lopko Code 35BY – 4 Pin, 3 Wire – Ext. – Spec C	2	332-2890	3	Terminal, Receptacle
	338-2454	1	Screw On Connector	3	332-2973	1	Terminal, Spade (#10) Code 35BY
	338-3226-01	1	Slip On Connector Code 35BG,35BV		332-1303	3	Code 35BV
	338-2522	1	Screw On Connector	4	332-0819	1	Housing, Connector – Push On Code 35BY
	338-3332	1	Slip On Connector Code 35BY – 4 Pin, 3 Wire – Begin Spec E	5	332-2715	1	Terminal, Receptacle – Code 35BY
	338-2841	1	Screw On Connector	6	332-2301	2	Tab, Faston
	338-3182		Slip On Connector	7	332-0806	1	Terminal, Ring (#8) Code 35BY
				8	323-1381	1	Housing, Receptacle – 4 Way Code 35BY

Wiring Harness



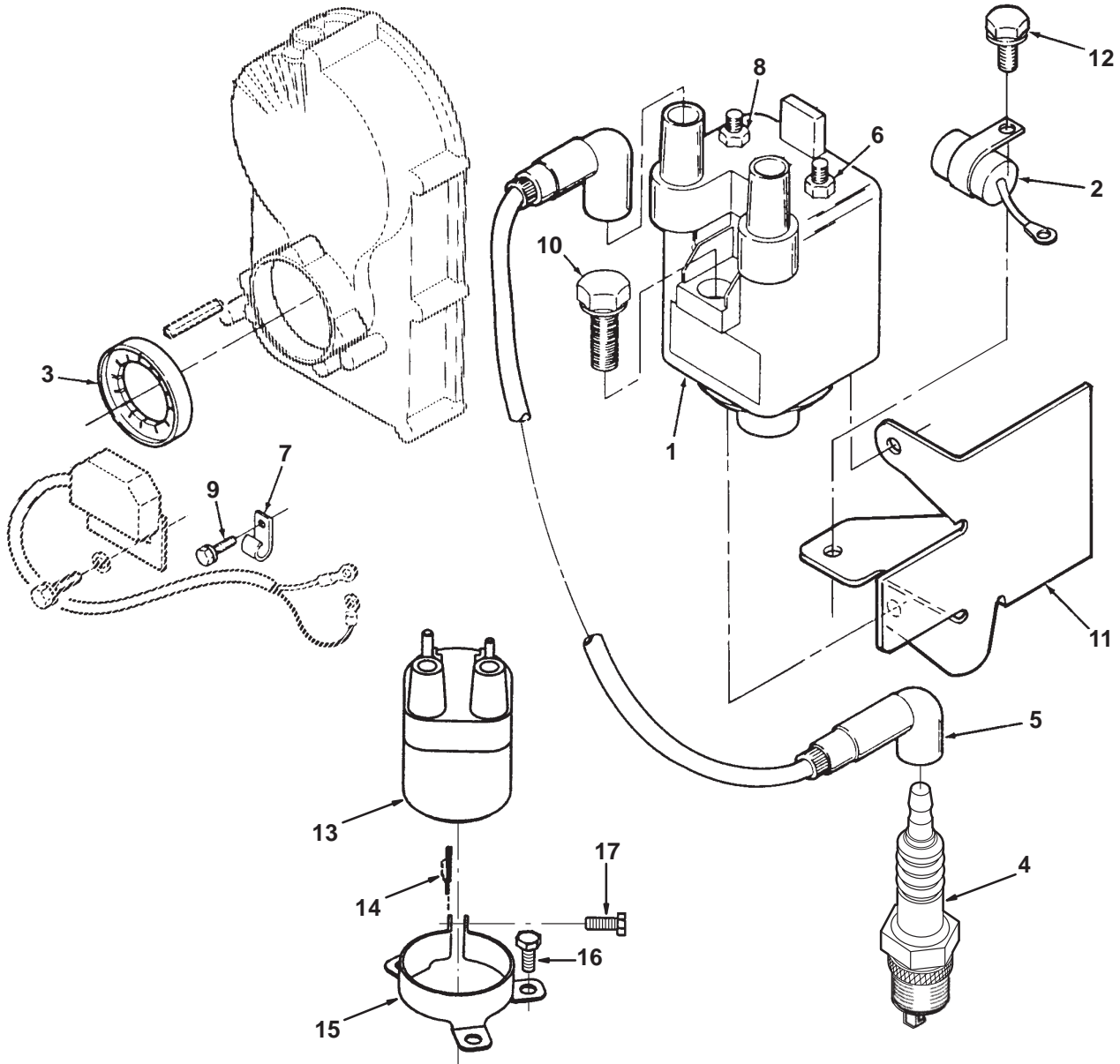
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Harness, Wiring – Engine 4 Wire, 4 Pin Connector – Code 35BB,35BH	2	332-0806	1	Terminal, Ring(#8)
	338-2075	1	Screw On Connector	3	332-2715	5	Terminal, Receptacle (.250) Code 35BB, 35BH
	338-3179	1	Slip On Connector		332-2715	3	Code 35CG
	338-2390	1	2 Wire, 4 Pin Connector – Code 35CG	4	323-1381	1	Housing, Receptacle – 4 Way
			Relocate Voltage Regulator Begin Spec E – Code 35BB,35BH	5	323-1382	1	Housing, Tab – 4 Way
				6	332-0819	1	Housing, Receptacle
				7	332-2301	4	Terminal, Tab 20 Ampere Charging System
	338-2846	1	Screw On Connector		332-1503	1	35 Ampere Charging System
	338-3184	1	Slip On Connector	8	332-2973	2	Terminal, Spade (#8) Code 35BB,35BH
	338-2834	1	Relocate Voltage Regulator Begin Spec E – Code 35CG				

Wiring Harness Control Panel



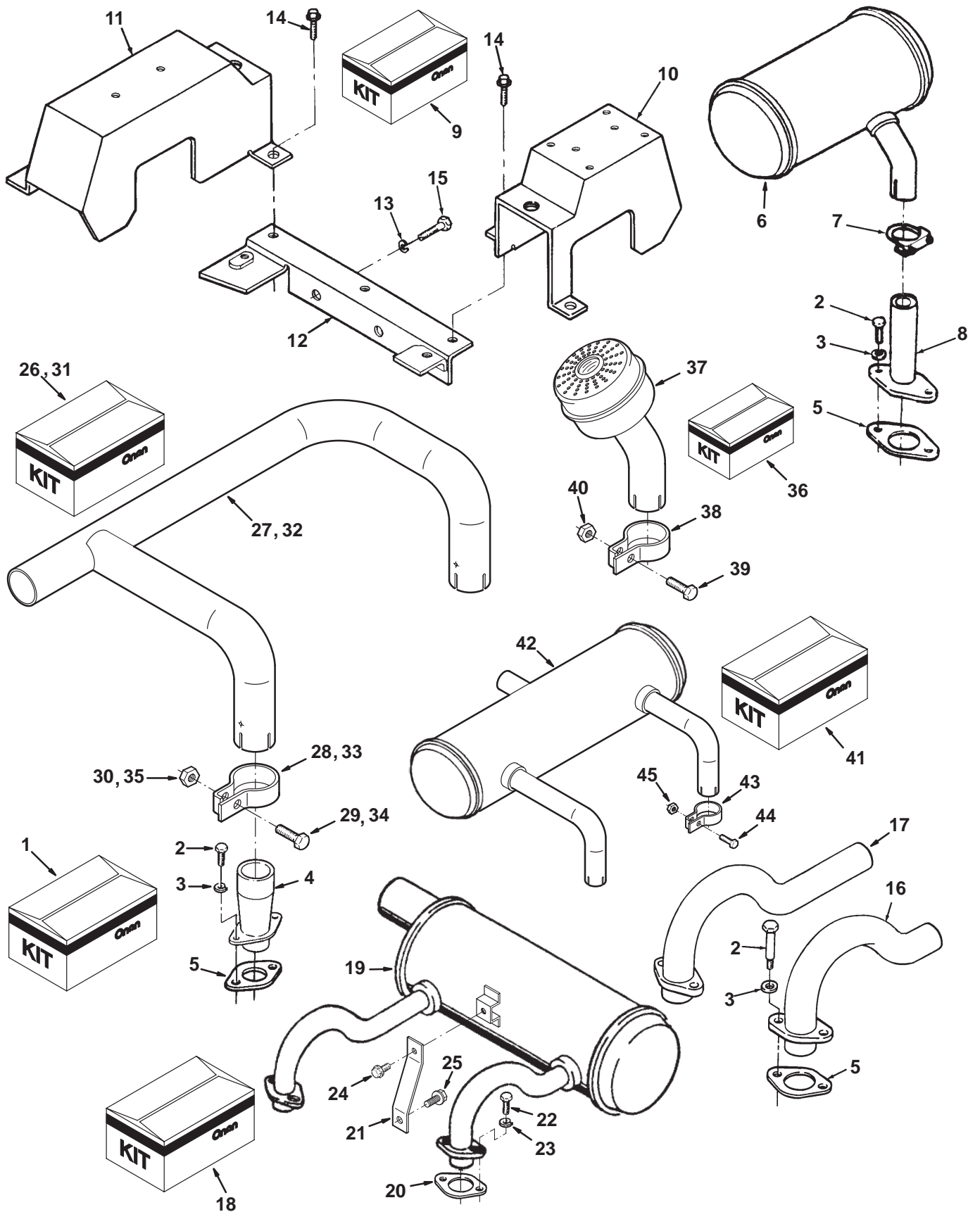
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Harness, Wiring – Control Panel	3	357-0030	1	Rectifier, LOPKO
	338-2109	1	Without LOPKO	4	323-1216	1	Body, Connector – LOPKO
	338-2108	1	Lopko	5	332-0942	2	Tie, Cable – LOPKO
1	323-0916	1	Connector	6			Terminal, Tab
2	323-0987	1	Body, Connector		332-2301	4	20 Ampere Charging System
					332-1503	2	35 Ampere Charging System

Ignition – Electronic



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	166-0761	1	Coil, Battery Ignition (Includes Nuts) (Spec B Thru G)	11	166-0787-01	1	Bracket, Coil Mounting (Spec B Thru G)
2	312-0256	1	Capacitor	12	815-0261	1	Screw, Hex Washer Head (1/4-20 x 1/2")
3	166-0767	1	Rotor, Ignition	13	166-0820	1	Coil, Battery Ignition (Begin Spec H)
4	167-0272	2	Plug, Spark	14	518-0574	1	Clip (Begin Spec H)
5	167-1602	1	Cable, Spark Plug	15	134-5130-02	1	Clamp, Coil Mounting (Begin Spec H)
6	166-0770	1	Nut, Hex Flange (M4 Positive Terminal)	16	815-0261	3	Screw, Hex Washer Head Thread Forming (1/4-20 x 1/2")
7	518-0515	1	Clip, Wire (Spec B thru G only)	17	821-0018	1	Screw, Hex Lock (1/4-20 x 5/8")
8	166-0771	1	Nut, Hex Flange (M5 Negative Terminal)				
9	114-0022	1	Screw, Cap – Hex Head (5/16-18 x 1-3/4")				
10	815-0650	2	Screw, Hex Washer Head (1/4-20 x 1")				

Exhaust System



Exhaust System

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	542-7129	1	Kit, Exhaust Adapter (Includes Parts Marked ~) Code 21BG	24	821-0014	1	#Screw, Lock Head Flange (5/16-18 x 1/2")
2			Screw	25	821-0029	1	#Screw, Lock Head Flange (3/8 x 3/4")
	800-0512	4	~ Cap, Hex Head (Special)	26	542-7119	1	Kit, Right Front Side or Left Rear Side Manifold (Includes Parts Marked *)
	800-0512-01	4	Cap, Hex Head (Spec 11583H)	27	154-1610-50	1	*Manifold, LH Exhaust (Shown)
	802-0055	4	Socket Head (5/16-18 x 1") Code 21CB	28	155-1219	2	*Clamp, Muffler
3			Washer	29	805-0019	2	*Screw, Hex Head Cap (3/8-16 x 1 7/16")
	850-0045	4	~Lock (5/16") Code 21AG,21BG	30	862-0003	2	*Nut, Hex (3/8-16)
	740-1006	4	Flat (M8) Code 21AZ,21CC	31	542-7120	1	Kit, Left Front Side or Right Rear Side Manifold (Includes Parts Marked +)
	526-0022	4	Flat (5/16" Screw) Code 21CB	32	154-1609-50	1	+Manifold, RH Exhaust (Not Shown)
4	154-1484-50	2	~Adapter, Exhaust (Flange Type) Code 21AG,21BG	33	155-1219	2	+Clamp, Muffler
5	154-2747	2	~Gasket, Exhaust Manifold	34	805-0019	2	+Screw, Hex Head Cap (3/8-16 x 1 7/16")
6	155-2534	2	Muffler (Use in Pairs) - Use With Adapter 154-1484-50	35	862-0003	2	+Nut, Hex (3/8-16)
7	155-1239	2	Clamp, Muffler (1-1/8" Dia.)	36	542-7101	1	Kit, Pepper Pot Muffler (Includes Parts Marked @)
8	154-1484-50	2	Adapter, Exhaust Manifold 4-1/4" Long	37	155-1216	2	@Muffler (Use With Exhaust Adapter 1545-1484-50- (Code 21BG)
9	541-0419	1	Kit, Exhaust Cover & Support (Includes Parts Marked ^) Code 21CC	38	155-1219	2	@ Clamp, Muffler
10	134-4656-50	1	^Cover, Exhaust Tube - RH Code 21AZ,21BB - Painted	39	805-0019	2	@ Screw, Hex Head Cap (3/8-16 x 1 7/16")
11	134-4678-50	1	^Cover, Exhaust Tube - LH Code 21AZ,21CC - Painted	40	862-0003	2	@ Nut, Hex (3/8-16)
12	134-4981-50	1	^Support, Exhaust Cover	41	542-7122	1	Kit, Front or Rear Outlet Muffler (Includes Parts Marked <)
13	850-0050	2	^Washer, Lock (3/8")	42	155-1686	1	<Muffler, Exhaust (Use With Exhaust Adapter 154-1484-50 (Code 21BG)
14	821-0008	2	^Screw, Lock Head - Flange (1/4-20 x 5/16")	43	155-1219	2	<Clamp, Muffler
15	800-0048	2	^Screw, Cap - Hex Head (3/8-16 x 3/4")	44	805-0019	2	<Screw, Hex Head Cap (3/8-16 x 17/16)
16			Tube, Exhaust - RH - Painted	45	862-0003	2	<Nut, Hex (3/8-16)
	154-2263-50	1	Code 21AZ,21CC,21BD				
	154-2112-50	1	Code 21CB				
17			Tube, Exhaust - LH - Painted				
	154-2265-50	1	Code 21AZ,21CC,21BD				
	154-2113-50	1	Code 21CB				
18			Kit, Muffler (Includes Parts Marked #)				
	541-0315	1	Outlet, RH				
	514-0316	1	Outlet, LH)				
19			#Muffler, Exhaust				
	155-2245-01	1	RH - Outlet (Not Shown)				
	155-2245-02	1	LH - Outlet (Shown)				
20	154-2747	2	#Gasket, Exhaust Manifold				
21	155-2419-02	1	#Bracket, Muffler				
22	800-0512	4	#Screw, Hex Head Cap (Special)				
23	850-0045	4	#Washer, Lock (5/16) Code 21AG,21BG				

-- Parts included in Exhaust Adapter Kit.

^ - Parts included in Exhaust Cover & Support Kit.

- Parts included in RH and LH Outlet Muffler Kits.

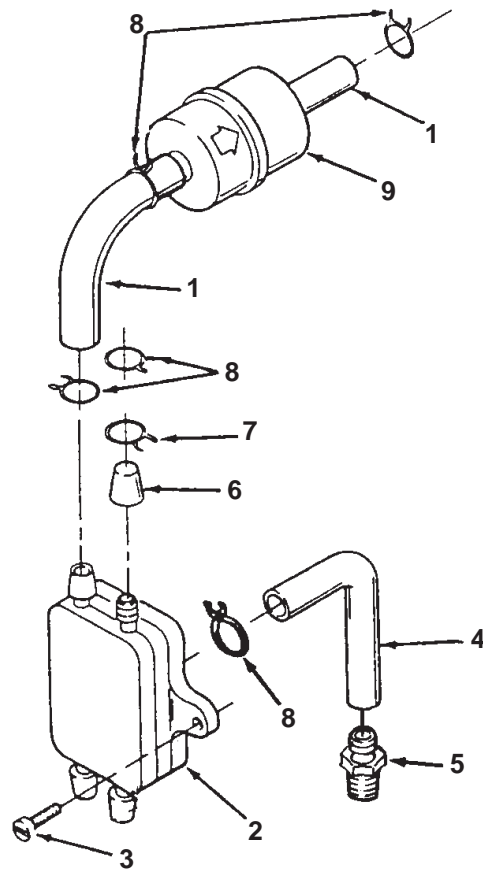
* - Parts included in Left Rear Crossover Manifold Kit.

+ - Parts included in Right Rear Crossover Manifold Kit.

@ - Parts included in Pepper Pot Muffler Kit.

< - Parts included in Front or Rear Outlet Muffler Kit.

Fuel Pump



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0707	1	Hose	4	503-0707	1	Line, Pulse (Cut To 7" Long)
2			Pump, Fuel – Vacuum 2 Open Ports	5	502-0395	1	Connector, Hose – Fuel Pump Vacuum
	149-2187-02	1	All Codes Except 23DN	6	149-1321	1	Cap, Fuel Fitting
	149-2187-01	1	Code 23DN	7	503-0301	1	Clamp, Hose
3	815-0555	2	Screw, Tapping – Pan Head (10-24 x 5/8")	8	503-0731	6	Clamp, Hose (1/2")
				9	149-2206-01	1	Filter, Fuel

Labels, Paint, Thread Sealant and Gasket Kits

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
518-0452		1	Sealant, Thread (50cc Bottle)	168-0191		1	Kit, Gasket – Engine Complete (Includes Parts Marked +)
518-0347		1	Loctite, Bottle (250cc)				
			Label, Performer 24 XSL Red, White	101-0782		1	+Gasket, Bearing Plate – 1/64"
			Code 19AS	102-1387		1	+Gasket, Oil Base
98-6802-04		3	Code 19AS	103-0810		1	+Gasket, Gear Cover
98-6802-04		2	Code 19AV	110-3575		3	+Gasket, Valve Box Cover
98-6664		1	Label, Air Cleaner Maintenance	110-2987		2	+Gasket, Cylinder Head
525-0394		1	Paint, Enamel (Touch-Up) – Flat Black, Pressurized Can (16 oz.)	120-0161		1	+Gasket Kit, Oil Pump
			Label, Periodic Maintenance Standard Capacity Oil Base	122-0771		1	+Gasket, Oil Filter Adapter to Block
98-5969-02		1	High Capacity Oil Base	110-3604		2	+Seal, Intake Valve
98-5969-04		1	Decal, Control Panel	509-0142		1	+Seal, Oil Fill Cap O-Ring
98-5735		1	Label, Head Bolt Torque – Begin Spec C	102-0743		1	+Gasket, Oil Drain
98-4024		2	Label, Maintenance (Oil Check)	509-0145		1	+Seal, Air Cleaner O-Ring
98-6266		1	Tag, 3 Year Warranty	154-0733		1	+Gasket, Carburetor Flange
98-7193		1	Label, Barcode	154-2219		2	+Gasket, Intake Manifold
98-7295		4	Cap, Plug	154-2747		2	+Gasket, Exhaust Adapter
517-0165		1	Kit, Gasket – Carbon Removal (Includes Parts Marked *)	160-1368		1	+Gasket, Breaker Box
168-0190		1	*Gasket, Valve Compartment Cover	509-0008		1	+Seal, Governor Shaft
110-3575		3	*Gasket, Cylinder	509-0040		1	+Seal, Oil – Gear Cover
110-2987		2	*Gasket, Intake Manifold	509-0041		1	+Seal, Oil – Bearing Plate
154-2219		2	*Gasket, Exhaust Adapter	509-0117		1	+Seal, Breather Cap O-Ring
154-2747		2	*Gasket, Exhaust Adapter	145-0438		1	+Gasket, Carburetor
154-2746		2	*Gasket, Exhaust Manifold	154-2746		2	+Gasket, Exhaust Adapter
154-2747		2	*Seal, Oil – Valve	110-3604		2	+Seal, Oil – Valve
110-3604		2		509-0269		1	+Seal, Fill Tube

* _ Parts Included in 168-0190 Gasket Kit.

+ - Parts Included in 168-0191 Gasket Kit

Sales Option Code Table

SPEC NO.	10684	10704	10705	10707	10708	10710	10711	10713	10726	10727	10792	10803
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AW	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	13BJ	11AW	11AW
13BJ	13BJ	13BG	13BJ	11BE	13BJ	13BJ	13BJ	13BJ	13BJ	13BN	13BV	13BJ
13BN	13BP	13BK	13BN	13BS	13BN	13BM	13BN	13BN	13BN	13BV	13CB	13BP
13BV	13BW	13CE	13BV	13BY	13BV	13BV	13BV	13BV	13BV	15BD	13CD	13BV
15BD	15BD	15BD	15BD	13CD	15BD	15BA	15BB	15BD	15BK	15BD	15BD	15BD
15BK	15BK	15BK	15BK	15BD	15BK	15BD	15BD	15BD	15BK	15BL	15BK	15BK
15BL	15BL	15BL	15BL	15BK	15BL	15BK	15BK	15BL	17CD	15BL	15BL	15BL
17CD	17CD	17CD	17CD	15BL	17CD	17CD	17CD	17CD	17CD	17CF	17CD	17CD
17CF	17CF	17CF	17CF	17CD	17CF	17CF	17CF	17CF	17CF	17DA	17CF	17CF
17DA	17DA	17DA	17DA	17CF	17DA	17DA	17DA	17DA	17DA	19AS	17DA	17DA
19AS	19AS	19AS	19AS	17DA	19AS	19AS	19AS	19AS	19AS	23DC	19AS	19AS
23DC	23DC	21BG	23DC	19AS	23DC	23DC	23DC	23DC	23DC	31AY	23DC	23DC
31AY	31AY	23DC	31AY	21BG	31AY	31AY	31AY	31AY	31AY	31AZ	23DN	31AY
31AZ	31AZ	31AY	31AZ	23DC	31AZ	31AZ	31AZ	31AZ	31AZ	33AT	31AY	31AZ
33AT	33AT	31AZ	33AT	23DN	33AT	33AT	33AT	33AT	33AT	35CH	31AZ	33AT
35AU	35AU	33AT	35BC	31AY	35CH	35AU	35AV	35CH	45BT	33AT	35CG	
35BB	35BB	35AV	45BB	31AZ	45BB	35BC	35BB	45BE	45EC	35AV	45BB	
45BB	45BB	35BB	45BW	33AT	45BW	45BB	45BB	45BW	47AR	35BC	47AR	
45BW	45BW	45BB	47AR	35BC	47AR	45BW	45BW	47AR	47AZ	39AG	47BA	
47AL	47AR	47AR		39AG	47BA	47AR	47AR	47AZ	47BB	45BF	47BB	
47AR	47AY	47BA		45BS	47BB	47BA	47BA	47BB	47BF	45BM		
47BA	47BA	47BB		47AR		47BB	47BB	47BF		47AR		
47BB				47AZ						47AZ		
				47BB						47BB		

SPEC NO.	10813	10814	10825	10828	10829	10833	10834	10835	10836	10837	10838	10839	10841
11AH	11AH	11AH	11AH	11AW	11AH	11AH	11AR	11AW	11AH	11AW	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11BE	11AW	11AW	11AW	11BE	11AW	11BE	11AW	11AW	11AW
11BG	13BK	13BJ	13BM	13BR	13BJ	13BJ	13BJ	13BJ	13BM	13BM	13BJ	13BJ	13BJ
13BJ	13BP	13BN	13BV	13CG	13BN	13BM	13BN	13BM	13BV	13BV	13BN	13BM	13BM
13BN	15BD	13BV	13CD	15BD	13BU	13BV	13BV	13BV	13CD	13CD	13BV	13BU	13BU
13BW	15BJ	15BD	15BD	15BK	15BD	15BD	15BD	15BD	15BD	15BB	15BD	15BD	15BD
15BD	15BL	15BK	15BK	15BL	15BJ	15BK	15BK	15BK	15BK	15BD	15BJ	15BK	15BK
15BK	15BV	15BL	15BL	17CD	15BL	15BL	15BL	15BL	15BL	15BK	15BL	15BL	15BL
15BL	17CD	17CD	17CD	17CF	17CF	17CD	17CD	17CD	17CD	17CD	17CD	17CD	17CD
17CF	17CF	17CF	17CF	17DA	17DA	17CF	17CF	17CF	17CF	17CF	17CF	17CF	17CF
17DA	17DA	17DA	17DA	19AS	17DF	17DA	17DA	17DA	17DA	17DA	17DA	17DA	17DA
17DF	19AU	19AS	19AV	23DC	19AV	19AV	19AS	19AV	19AU	19AS	19AU	19AU	19AU
19AS	21BR	23DC	23DC	31AY	23DC	23DC	23DC	23DC	23DC	23DC	23DC	23DC	23DC
23DC	23DC	31AY	31AY	31AZ	31AY	31AY	31AY	31AY	31AY	23DE	23DE	31AY	31AY
31AY	31AY	31BC	31AZ	33AT	31AZ	31AZ	31AZ	31AZ	31AZ	31AY	31AY	31AZ	31AZ
31AZ	31AZ	33AT	33AT	35AV	33AT	33AT	33AT	33AT	33AT	31AZ	31AZ	33AT	33AT
33AT	33AT	35AV	35BC	35BB	35AU	35AU	35BC	35CH	33AT	33AT	35AH	35AV	35AV
35AU	35AU	35BC	39AG	45BT	35BC	35BB	45BT	45BT	35BC	35BC	35BY	35BC	35BC
35BH	35BB	45BB	45BB	47AR	45BD	45BB	47AR		47AR	39AG	39AG	45BB	45BD
35BL	45BB	45BW	47AR	47BA	47AR	47AR		47BA	45BB	45BT	47AR	47AR	47AR
45BY	47AR	47AR		47BB	47BA	47BA		47BB	47AR	47AR	47BA	47BA	47BA
47AR	47AZ	47BA			47BB	47BB			47AZ	47AZ	47BB	47BB	47BB
47BA	47BB	47BB							47BB	47BB			
47BB	47BF												

Sales Option Code Table

<u>SPEC NO.</u>	<u>10842</u>	<u>10843</u>	<u>10847</u>	<u>10875</u>	<u>10890</u>	<u>10909</u>	<u>10912</u>	<u>10913</u>	<u>10922</u>	<u>10925</u>	<u>10966</u>	<u>10967</u>	<u>10983</u>
	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
	13BJ	13BJ	13BM	13BG	13BJ	13BJ	13BJ	11BG	13BJ	13BM	13BJ	13BR	13BJ
	13BZ	13BM	13BV	13BJ	13BM	13BN	13BM	13CG	13BW	13BV	13BY	13CD	13BM
	13CB	13BV	13CD	13BZ	13BV	13BV	13BV	13CH	13CM	13CD	13CR	13CE	13BZ
	15BD	15BD	15BD	15BD	15BB	15BD	15BD	13CS	15AZ	15BD	15BD	15BD	15BB
	15BK	15BJ	15BK	15BJ	15BD	15BK	15BK	15AZ	15BD	15BK	15BJ	15BK	15BD
SALES OPTION CODE NUMBERS	15BL	15BL	15BL	15BM	15BK	15BL	15BL	15BD	15BK	15BL	15BL	15BL	15BK
	17BZ	17CD	17CD	15CM	17CF	17CF	17CD	15BK	17BZ	17CD	17CF	17CD	17CD
	17DA	17CF	17CF	17CF	17DA	17DA	17DA	17CF	17DA	17CF	17DF	17CF	17CF
	17DF	17DA	17DA	17CV	17DF	17DF	17DA	17DA	17DF	17DA	17DN	17DA	17DA
	19AS	19AU	19AS	17DA	19AS	19AV	19AU	17DF	19AS	19AU	19AU	19AU	19AS
	21CB	23DC	23DC	19CJ	23DC	23DC	23DC	19AS	21BG	23DC	23DC	21AZ	23DC
	23DC	31AY	31AY	21CC	31AY	31AY	23DN	23DC	23DC	23DJ	31AY	23DC	31AY
	31AY	31AZ	31AZ	23DC	31BD	31AZ	31AY	23DN	31AY	23DN	31AZ	23DN	31AZ
	31BD	33AT	33AT	23DJ	33AT	33AT	31AZ	31AY	31AZ	31AY	33AT	31AY	33AT
	33AT	35AV	35BC	23DK	45BB	35AU	33AT	31AZ	33AT	31AZ	35AH	31AZ	35AV
	45BB	35BC	39AG	31AY	47AR	35BB	35AV	33AT	35CH	33AT	35BL	33AT	35BB
	45BW	45BT	45BB	31AZ	47AZ	45BE	35BC	35AV	45BB	35BC	35BY	35AV	45BB
	47AR	47AR	47AR	33AT	47BB	47AR	39AG	35BH	45BW	39AG	45BB	35BC	47AR
	47BA	47BA	47BA	35AU	47BF	47BA	45BE	45BF	47AR	45BB	47AR	39AG	47BA
	47BB	47BB	47BB	35BC		47BB	47AR	47AR	47BA	47AR	47BA	45BB	47BB
				35BL			47AZ	47AZ	47BB	47BA		45BW	
				45BE			47BB	47BB		47BE		47AR	
				47AR								47AZ	
				47BA								47BB	
				47BB									

<u>SPEC NO.</u>	<u>10987</u>	<u>10999</u>	<u>11014</u>	<u>11015</u>	<u>11021</u>	<u>11022</u>	<u>11025</u>	<u>11029</u>	<u>11041</u>	<u>11043</u>	<u>11050</u>	<u>11057</u>	<u>11066</u>
	11AH	11AH	11AW	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AW	11AH	11AH
	11AW	11AW	11BE	11AW	11AW	11AW	11AW	11AW	11AW	11AW	13BJ	11AW	11AW
	11BE	13BG	13BG	13BJ	13BM	13BK	13BJ	13BJ	13BJ	13BM	13BM	11BE	13BJ
	13BP	13BJ	13BJ	13BS	13BV	13BN	13BM	13BN	13BM	13BV	13BV	13BM	13BN
	13CG	13BZ	13BV	13BY	13CD	13BV	13BV	13BV	13BV	13CD	15BB	13BV	13BV
	15BD	15AZ	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	13CD	15BD
	15BK	15BD	15BK	15BJ	15BK	15BK	15BK	15BJ	15BK	15BK	15BK	15BD	15BK
	15BL	15BJ	15BL	15BL	15BL	15BL	15BL	15BL	15BL	15BL	17CD	15BK	15BL
SALES OPTION CODE NUMBERS	17CF	15BZ	17CF	17CD	17CF	17CF	17CD	17CD	17CD	17CF	17CF	15BL	17CD
	17DA	17CF	17CV	17CF	17DA	17DA	17CF	17CF	17CF	17DA	17DA	17CD	17CF
	17DF	17CV	17DA	17DA	17DF	17DF	17DA	17DA	17DA	17DF	19AS	17CF	17DA
	19AS	17DN	19AS	19AU	19AU	19AS	19AS	19AS	19AS	19AV	23DC	17DA	19AS
	23DC	19AU	21BG	23DC	23DC	23DC	23DC	23DC	23DC	23DC	23ED	19AS	23DC
	23DN	23DC	23DC	31AY	31AY	31AY	31AY	23DJ	31AY	23DJ	31AY	23DC	23DJ
	31AY	23DJ	31AY	31AZ	31AZ	31AZ	31AZ	23DN	31BD	23DN	31AZ	23DN	23DN
	31AZ	23EJ	31AZ	33AT	33AT	33AT	33AT	31AY	33AT	31AY	33AT	31AY	31AY
	33AT	31AY	33AT	35AH	35BC	45BE	35AV	31BC	45BB	31AZ	35AV	31AZ	31AZ
	35AV	31AZ	35AU	35BL	35BV	47AR	35BC	33AT	47AR	33AT	35BC	33AT	33AT
	35BB	33AT	35BC	35BY	35CK	47BA	45BE	35AV	47BA	35BC	45BT	35BC	35BG
	45BU	35AV	45BT	45BB	45BB	47BB	45BW	35BC	47BB	35CK	45EC	39AG	35BV
	47AR	35BZ	47AR	47AR	47AR		47AR	45BB		45BB	47AR	45BS	35CH
	47BA	45BD	47BA		47AZ		47BA	45BW		47AR	47BA	47AR	45BB
	47BB	47AL	47BB		47BB		47BB	47AR		47AZ	47BB	47AZ	45BW
		47AR						47BA		47BB		47BB	47AR
		47BA						47BB					47BA
													47BB

Sales Option Code Table

<u>SPEC NO.</u>	<u>11070</u>	<u>11071</u>	<u>11087</u>	<u>11092</u>	<u>11109</u>	<u>11111</u>	<u>11115</u>	<u>11116</u>	<u>11117</u>	<u>11119</u>	<u>11125</u>	<u>11133</u>	<u>11138</u>
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
13BJ	11BE	13BJ	13BJ	13BN	13BN	11BE	13BN	13BJ	13BM	11PP	13BJ	13BN	13BJ
13BM	13BJ	13BN	13BN	13BN	13CG	13BS	13BV	13BN	13BV	13CB	13BN	13BV	13BM
13BV	13BM	13BV	13BV	15BB	13CG	13CD	13BV	13CD	13CG	13BV	13CD	13BV	
15BD	13BV	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15AZ	15BD	15BD	15BD
15BK	15BD	15BK	15BK	15BK	15BK	15BK	15BK	15BK	15BK	15BD	15BK	15BK	15BK
15BL	15BK	15BL	15BL	17CF	15BL	15BL	15BL	15BL	15BL	15BK	15BL	15BL	15BL
17CD	15BL	17CD	17CD	17DA	17CF	17CF	17CF	17CF	17CF	17CF	17CF	17CF	17CF
17CF	17CD	17CF	17CF	17CF	17DF	17DA	17DA	17DA	17DA	17DF	17DA	17DA	17DA
17DA	17CF	17DA	17DA	19AS	17DF	17DF	17DF	17DF	17DF	17DN	17DF	17DF	17DF
19AS	17DA	19AS	19AS	23DC	19AS	19AU	19AS	19AS	19AS	19AS	19AS	19AS	19AS
23DC	19AS	23DC	23DC	31AY	21BG	23DC	23DC	21BG	19BB	21BG	21BG	23DC	
31AY	23DC	31AY	23DN	31AZ	23DC	31AY	23DJ	23DC	23DC	23DC	23DC	31AY	
31AZ	31AY	31AZ	31AY	33AT	31AY	31AZ	23DN	31AY	23DJ	31AY	23DJ	31BC	
33AT	31AZ	33AT	31AZ	35AV	31BC	33AT	31AY	31AZ	23ED	31AZ	23DN	33AT	
35AV	33AT	35AV	33AT	35BC	33AT	35AV	31AZ	33AT	31AY	33AT	31AY	35AV	
35BC	35AV	35BC	35AV	45BE	35BV	35BZ	33AT	35AV	31AZ	35CH	31AZ	35BC	
45BB	35BC	45BB	35BC	45BW	35CC	35CK	35BV	35BC	33AT	45BE	33AT	45BE	
47AR	45BS	45BW	45BE	47AR	45BS	45BB	35CC	35CK	35AV	45BW	35AV	45BW	
47BA	47AR	47AR	45BW	47BA	47AR	47AR	45BB	45BE	35BH	47AR	35BC	47AR	
47BB	47BA	47BA	47AR	47BB	47BA	47AZ	45BW	45BW	45BF	47BA	35CK	47BA	
	47BB	47BB	47BA		47BB	47BB	47AR	47AR	47AR	47BE	45BB	47BB	
			47BE				47BA	47AZ	47AZ	47BF	45BW	47AR	
							47BB	47BB	47BE		47AR	47AZ	
											47BB	47BB	

<u>SPEC NO.</u>	<u>11146</u>	<u>11150</u>	<u>11151</u>	<u>11155</u>	<u>11157</u>	<u>11158</u>	<u>11166</u>	<u>11167</u>	<u>11168</u>	<u>11175</u>	<u>11181</u>	<u>11183</u>	<u>11184</u>
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
13BK	13BJ	13BN	11BE	13BP	11BF	13BP	11BG	13BJ	11BF	13BM	13BJ	13BJ	
13BM	13BN	13CG	13BG	13CG	13BJ	13CG	13BM	13BN	13BN	13BV	13BZ	13BN	
13BU	13BV	15BD	13BJ	15BD	13BM	15BD	13BV	13BV	13BV	13CD	13CB	13BV	
15BD	15BB	15BJ	13BV	15BK	13BV	15BK	13CD	15BD	13CD	15BD	15BD	15BB	
15BJ	15BD	15BL	15BD	15BL	15BB	15BL	15BD	15BK	15AZ	15BK	15BJ	15BD	
15BL	15BK	17CF	15BK	17BZ	15BD	17BZ	15BK	15BL	15BD	15BL	15BM	15BK	
17BZ	17CF	17DA	15BL	17DA	15BK	17DA	15BL	17BZ	15BK	17CF	15CM	17CF	
17DA	17DA	17DF	17CF	17DF	17CF	17DF	17CF	17CD	15BZ	17DA	17CF	17DA	
17DF	17DF	19AS	17CV	19AS	17DA	19AS	17DA	17DA	17CF	17DF	17CV	17DF	
19AS	19AS	23DC	17DA	21BG	17DF	21BG	17DF	19AV	17DA	19AV	17DA	19AS	
23DC	23DC	23DJ	19AV	23DC	19AS	23DC	19AU	23DC	17DF	23DC	19CJ	23DC	
23DJ	23DJ	23ED	21BG	23DJ	23DC	23DJ	23DC	31AY	19AS	23DJ	21CC	23DJ	
23DN	23DN	31AY	23DC	23DN	23ED	23DN	31AY	31AZ	21BG	23DN	23DC	23DN	
31AY	31AY	31AZ	31AY	31AY	31AY	31AY	31AZ	33AT	23DC	31AY	23DJ	31AY	
31AZ	31AZ	33AT	31AZ	31AZ	31AZ	31AZ	33AT	35AU	23DN	31AZ	23DK	31AZ	
33AW	33AT	35AV	33AT	33AT	33AT	33AT	35BC	35BH	31AY	33AW	31AY	33AT	
35AV	35BV	35BC	35AU	35CH	35CH	35CH	35BV	45BB	31AZ	35AV	31AZ	35AV	
35BC	35CC	45CC	35BC	45BB	45BT	45BE	35CK	45BW	33AT	35BC	33AT	35BC	
45BB	45BB	47AR	45BT	47AR	47AR	47AR	45BB	47AR	35AV	35CK	35AU	45BB	
47AR	45BW	47AZ	47AR	47BA	47BA	47BA	47AR	47BA	35BC	45BB	35BC	45BW	
47AZ	47AR	47BB	47BA	47BB	47BB	47BB	47BB	47BB	35CK	47AR	35BL	47AR	
47BB	47AY	47BF	47BB				47BH	47BF	45BT	47AZ	45BE	47AY	
	47BA								47AR	47BB	47AR	47BA	
	47BG								47AZ		47BA	47BG	
									47BB		47BB		
									47BF				

Sales Option Code Table

SPEC NO.	11185	11189	11190	11194	11196	11200	11202	11205	11210	11214	11216	11219	11222
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
13BJ	11BF	11BF	13BN	13BK	13BJ	13BJ	13BJ	13BK	11BG	13BF	11BG	13BJ	13BJ
13BN	13BN	13BF	13BV	13BM	13BN	13BP	13BN	13BM	13CB	13BN	13BM	13BN	13BN
13BV	13CG	13BN	13CD	13BV	13BV	13BV	13BV	13BU	13CG	13CE	13BV	13BV	13BV
15BD	15AZ	13CE	15BD	15BD	15BD	15BA	15BC	15BD	15AZ	15AZ	13CD	15AZ	15AZ
15BK	15BD	15AZ	15BK	15BJ	15BK	15BD	15BF	15BJ	15BD	15BZ	15BD	15BD	15BD
15BL	15BK	15BZ	15BL	15BL	15BL	15BK	17CF	15BL	15BK	15CK	15BK	15BK	15BK
17CF	15BZ	15CK	17BY	17CF	17CF	17BY	17DA	17BZ	17CF	15CR	15BL	15BZ	15BZ
17DA	17CF	15CR	17DA	17DA	17DA	17DA	17CK	17DF	17CV	17DA	17CF	17CF	17CF
17DF	17DA	17CF	17DF	17DF	17DF	17DA	19AS	17DA	17DF	17DA	17DA	17DA	17DA
19CL	17DF	17DA	19AS	19AS	19AS	19AS	23DC	19AS	19AS	17DF	17DF	17DF	17DF
21BG	19AS	17DF	21BG	23DC	23DC	23DC	23DJ	23DC	23DC	19AS	19AU	19AS	19AS
23DC	23DC	19AS	23DC	31AY	23DJ	23DJ	23DN	23DJ	23DJ	23DC	23DC	23DC	23DC
23DN	23DJ	23DC	23DN	31BC	23DN	23DN	31AY	23DN	23DN	23DJ	31AY	31AY	31AY
31AY	23DN	23DJ	31AY	33AT	31AY	31AY	31AZ	31AY	31AY	23DN	31AZ	31AZ	31AZ
31BC	31AY	23DN	31AZ	35AU	31AZ	31AZ	33AT	31AZ	31AZ	31AY	33AT	33AT	33AT
33AW	31BC	31AY	33AT	35BB	33AT	33AT	35BV	33AW	33AT	31BC	35BC	35AV	35AV
35AU	33AT	31BC	35CJ	45BB	35AV	33BB	35CC	35AV	35AV	33AT	35BV	35BC	35BC
35BZ	35BV	33AT	35CK	45BW	35BC	35AU	45BB	35BC	35BH	35BV	35CK	45BB	45BB
45BB	35CC	35BV	45EA	47AR	45BB	35BC	45BW	45BB	45BF	35CC	45BB	45BW	45BW
45BW	45BT	35CC	47AR	47BA	45BW	45BE	47AR	47AR	47AR	45BB	47AL	47AR	47AR
47AR	47AR	45BT	47AZ	47BB	47AR	47AR	47BA	47AZ	47AZ	47AR	47AR	47AZ	47AZ
47BA	47AZ	47AR	47BB	47BF	47AY	47BA	47BB	47BB	47BB	47AZ	47BH	47BB	47BB
47BB	47BB	47AZ	47BF		47BA	47BB				47BB		47BB	47BB
47BF	47BF	47BB	47BF		47BG	47BF				47BF			
		47BF											

SPEC NO.	11223	11225	11228	11229	11256	11257	11258	11259	11260	11275	11278	11289	11292
11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
11BK	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	13BJ	13BF	13BJ	13BG	13BN
13BG	13BM	13BN	13BZ	13BN	13BN	13BN	13BN	13BN	13BN	13BN	13BZ	13BJ	13BV
13BJ	13BV	13BV	13CB	13BV	13BV	13BV	13BV	13BV	13BV	13CG	13CB	13BZ	13CD
13BV	15BD	15BK	15AZ	15AZ	15AZ	15AZ	15AZ	15AZ	15AZ	15BB	15AZ	15AZ	15AZ
15BD	15BK	15BL	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BD
15BL	15BL	15CU	15BK	15BK	15BK	15BK	15BK	15BK	15BK	15BK	15BK	15BJ	15BK
15CK	17CF	17CF	15BZ	15BZ	15BZ	15BZ	15BZ	15BZ	15BZ	17CF	15BZ	15BZ	15BZ
17BZ	17DA	17DA	17BZ	17CF	17CF	17CF	17CF	17CF	17CF	17CV	17CF	17CF	17CF
17CV	17DF	17DF	17DA	17DA	17DA	17DA	17DA	17DA	17DA	17DA	17DA	17CV	17DA
17DA	19AS	19AS	17DF	17DF	17DF	17DF	17DF	17DF	17DF	19AS	17DF	17DN	17DF
19AS	23DC	23DC	19AS	19AS	19AS	19AS	19AS	19AS	19AS	23DC	19AS	19AU	19AS
23DC	23DJ	23DJ	21CB	23DC	23DC	23DC	23DC	23DC	23DC	31AY	23DC	23DC	23DC
31AY	23DN	23DN	23DC	31AY	31AY	31AY	31AY	31AY	31AY	31AZ	31AY	23DJ	23DN
31BC	31AY	31AY	31AY	31AZ	31AZ	31AZ	31AZ	31AZ	31AZ	33AT	31BD	23EJ	31AY
33AW	31BC	31AZ	31BD	33AT	33AT	33AT	33AT	33AT	33AT	35AV	33AT	31AY	31AZ
35AU	33AT	33AT	33AT	35CH	35CH	35CH	35CH	35CH	35CH	35CC	45BB	31AZ	33AT
35BC	35AV	35BV	45BB	45BB	45BE	45BS	45BU	45BT	45BE	45BW	33AT	35AV	35AV
45BB	35BC	35CC	45BW	45BW	45BW	47AR	47AR	47AR	45BW	47AR	35AV	35BC	35BC
47AR	35CK	45BB	47AR	47AR	47AR	47AZ	47AZ	47AZ	47AR	47BA	35CT	35CK	35CK
47BA	45BE	45BW	47BA	47AZ	47AZ	47BB	47BB	47BB	47BA	47BB	45BD	45BB	45BB
47BB	45BW	47AR	47BB	47BB	47BB	47BF	47BF	47BF	47BB		45AL	45BW	45BW
47BF	47AR	47BA	47BF	47BF	47BF						47AR	47AR	47AR
	47AZ	47BB									47BA	47AZ	47AZ
	47BB											47BB	47BB
													47BF

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	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
	13BZ	13BN	11BH	11BE	13BJ	13BJ	13BN	13BN	13BN	13BN	13BJ	13BP	13BK
	13CB	13BV	13BF	13BG	13BN	13BN	13BV	13BV	13BV	13BV	13BN	13BZ	13BM
	13DD	13CD	13BV	13BJ	13DG	13BV	13CD	13CG	13CD	13CD	13BV	13DD	13BU
	15AZ	15AZ	13CB	13BV	15BB	15AZ	15AZ	15BC	15AZ	15AZ	15BB	15AZ	15BD
	15BD	15BD	13CG	15BD	15BD	15BD	15BD	15BD	15BD	15BD	15BK	15BD	15BJ
	15BK	15BK	15AZ	15BK	15BK	15BK	15BK	15BK	15BK	15BK	15BU	15BJ	15BL
	15BZ	15BZ	15BD	15BL	17CF	15BZ	15BZ	15BZ	15BZ	15BZ	17BZ	15BZ	17BZ
	17CF	17CF	15BK	17CF	17CV	17CF	17CF	17CF	17CF	17CF	17DA	17CF	17CV
	17DA	17DA	17CF	17CV	17DA	17DA	17DA	17CK	17DA	17DA	17DF	17DA	17DA
	17DF	17DF	17DA	17DA	19AS	17DF	17DF	17DA	17DF	17DF	19AS	17DF	19AS
	19AS	19AS	17DF	19AV	23DC	19AS	19AV	19AU	19AS	19AS	21BG	19AS	23DC
	23DC	23DC	19AS	21BG	31AY	23DC	23DC	23DC	23DC	21BG	23DC	23DC	23DJ
	23DN	23DN	23DC	31AZ	23DJ	23DJ	23DJ	31AY	23DJ	23DC	23DJ	23DN	23DN
	31AY	31AY	23DJ	31AY	33AT	23DN	23DN	31AZ	23DN	23DN	23DN	31AY	31AY
	31BD	31AZ	23DN	31BC	35AV	31AY	31AY	33AT	31AY	31AY	31AY	31BD	31BC
	33AT	33AT	31AY	33AT	35CC	31AZ	31AZ	35BC	31AZ	31AZ	31AZ	33AT	33AW
	45BB	35CJ	31AZ	35AV	45BE	33AT	33AT	45BE	33AT	33AT	33AT	45BB	35AV
	45BW	35CK	33AT	35BC	45BW	35AV	35AV	45BW	35AV	35AV	35AV	45BW	35BC
	47AR	45BE	35BV	45BT	47AR	35BC	35BZ	47AR	35BC	35DB	35BC	47AR	45BB
	47BA	45BW	35CC	47AR	47BA	35CK	35CK	47AZ	35CK	45BB	45BE	47BA	47AR
	47BB	47AR	45BF	47BA	47BB	45BB	45BE	47BB	45BB	45BW	45BW	47BB	47AZ
		47AZ	47AR	47BB		45BW	45BW		45BW	47AR	47AR		47BB
		47BB	47AZ			47AR	47AR		47AR	47AZ	47BA		
		47BF	47BB			47AZ	47AZ		47AZ	47BB	47BB		
			47BF			47BB	47BB		47BB	47BF	47BF		
						47BF	47BF		47BF				

SPEC NO.	<u>11468</u>	<u>11469</u>	<u>11471</u>	<u>11480</u>	<u>11481</u>	<u>11487</u>	<u>11490</u>	<u>11493</u>	<u>11495</u>	<u>11570</u>	<u>11582</u>	<u>11583</u>	<u>11590</u>
	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH	11AH
	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW	11AW
	13BF	13BN	11BF	13BM	13BM	11BG	11BE	13BN	13BJ	13BN	13BJ	13CD	13BF
	13BZ	13BV	13BM	13CG	13BV	13CB	13BG	13BV	13BW	13BV	13BN	13CE	13BN
	13CG	13CD	13BV	15BC	13CD	13CG	13BJ	13CD	13CM	13CD	13BV	13GJ	13CG
	15AZ	15BA	13CD	15BD	15AZ	15BF	13BV	15AZ	15AZ	15AZ	15AZ	15BF	15AZ
	15BD	15BD	15BD	15BK	15BD	17CF	15BD	15BD	15BD	15BD	15BD	17BZ	15BD
	15BZ	15BK	15BK	17BZ	15BK	17DA	15BK	15BK	15BK	15BK	15BK	17DA	15BZ
	15CK	15BZ	15BL	17CV	15BZ	17DF	15BL	15BZ	15BZ	15BZ	15BZ	17DF	15CK
	17CV	17CF	17CF	17DA	17CF	19AS	17CF	17CF	17BZ	17CF	17CF	19AU	17BZ
	17DZ	17DA	17DA	19AV	17CV	23DC	17CV	17DA	17DF	17DA	17DA	21BG	17CV
	19AU	17DF	17DF	23DC	17DA	23DJ	17DA	17DF	17DZ	17DF	17DF	23DC	17DA
	23DC	19AS	19AS	23DJ	21BG	23DN	19AV	19AS	19AS	19AS	19AS	23DN	19AS
	23DJ	23DC	23DC	23ED	19AS	31AY	21BG	23DC	23DC	21BG	23DC	31AY	23DC
	23EJ	31AY	31AY	31AY	23DC	31AZ	23DC	23DN	31AY	23DC	31AY	31BC	23DJ
	31AY	31AZ	31AZ	31AZ	23DN	33AT	31AY	31AY	31AZ	23DN	31AZ	33AW	23DN
	31AZ	33AT	33AW	33AT	31AY	35AV	31BC	31AZ	33AT	31AY	33AT	35AV	31AY
	33AT	35DB	33AV	35AV	31AZ	35BH	33AT	33AT	35CH	31AZ	35CH	35BC	31BD
	35AV	45BE	35DB	35BB	33AT	45BF	35BV	35DJ	45BB	33AT	45BW	45BE	33AT
	35CT	45BW	45BT	45BF	35AV	47AR	35CC	35CK	45BW	35CJ	45EA	47AR	35AV
	45BD	47AR	47AR	47AR	35DB	47AZ	45BT	45BW	47AR	35CK	47AR	47AZ	35CH
	47AL	47AZ	47AZ	47AZ	45BB	47BB	47AR	45EA	47BA	45BW	47AZ	47BB	45BE
	47AR	47BB	47BB	47BB	45BW		47BA	47AR	47BB	45EA	47BB		47AR
	47AZ	47BF	47BF	47BF	47AR		47BB	47AZ		47AR	47BF		47AZ
					47AZ			47BB		47AZ			47BB
					47BB			47BF		47BB			47BF
					47BF					47BF			

Sales Option Code Table

<u>SPEC NO.</u>	<u>11607</u>	<u>11613</u>
	11AH	11AH
	11AW	11AW
	13BM	13BM
	13BV	13BV
	13CD	13CD
	15BD	15BD
	15BK	15BK
	15BL	15BL
	17BY	17BY
	17DA	17DA
	17DF	17DF
	19AS	19AU
	23DC	23DC
	23DJ	23DN
	23DN	31AY
	31AY	31AZ
	31AZ	33AT
	33AT	35AV
	35AV	35DB
	35DB	45BE
	45BD	47AR
	45BW	47AZ
	47AR	47BB
	47AZ	47BF
	47BB	
	47BF	

**SALES
OPTION
CODE
NUMBERS**

SALES OPTION CODE DEFINITIONS

LISTED BELOW ARE SALES OPTION CODE NUMBERS USED ON P224G

11AH	Standard Bearing Plate	17DZ	Base, Oil – 3 Quart – Side Drain – Steel Plug
11AW	Premium Block with Standard Thrust Washer	19AS	Air Cleaner – Standard Capacity
11BE	Adapter, Hydraulic Pump (SAE A)	19AU	Air Cleaner – High Capacity
11BF	Adapter, Hydraulic Pump (SAE B)	19AV	Remote Air Cleaner Adapter
11BG	6 Holes Rear of Block	19BB	Air Cleaner Cover – Chrome
11BH	Adapter, Bearing Plate (7" Pilot)	19CJ	Remote Air Cleaner Adapter with Elbow
11BK	Pulley, Single Groove	19CL	Air Cleaner – High Capacity
13BF	Governor, 2-Speed Solenoid	21AZ	Exhaust Tubes (14" Centers) with Covers
13BG	Governor–3450 High Idle	21BG	Exhaust Adapter (1.5" OD)
13BJ	Side Pull Governor	21BR	Exhaust System (Steiner)
13BK	Front Pull Governor	21CB	Exhaust Tubes (13.24" Centers)
13BM	3850 High Idle	21CC	Exhaust Tubes with Covers and Support Brackets (14" Centers)
13BN	3600 High Idle	23DC	Blower Wheel
13BP	3300 High Idle	23DE	Stationary Guard – No PTO (Steel)
13BR	3200 High Idle	23DJ	No Rotating Screen
13BS	2800 High Idle	23DK	Cylinder Air Housings with Weld Nuts
13BU	1100 Low Idle	23DN	Stationary Guard (No PTO–Plastic) – Onan Logo
13BV	1200 Low Idle	23ED	Stationary Guard with PTO (Plastic)
13BW	1300 Low Idle	23EJ	Stationary Guard without P.T.O. – No Logo
13BY	1400 Low Idle	31AY	Electronic Ignition
13BZ	1500 Low Idle	31AZ	Alternator – 12V/20A
13CB	3780 High Idle	31BC	Alternator – 12V/35A
13CD	No Governor Linkage	31BD	No Alternator
13CE	1800 Low Idle	33AT	Starter Solenoid Shift (Side) Standard
13CG	Fixed Speed Governor	33AW	Starter–Solenoid Shift (Side) Premium
13CH	10 Ball Governor	33BB	No Starter Cap Kit
13CM	3400 RPM High Idle	35AH	Low Oil Pressure Switch (1 Terminal/Normally Open)
13CR	3550 RPM High Idle	35AU	Low Oil Pressure Switch (1 Terminal/Normally Closed)
13CS	1850 High Idle	35AV	Low Oil Pressure Switch (2 Terminal/Normally Open)
13DD	Governor, Side Pull, .190 Hole	35BB	4 Pin Harness with Mating Connector
13DG	1950 Low Idle	35BC	6 Pin Harness with Mating Connector
13GJ	Delete Governor	35BG	Harness, 3 Wire – Leads
15AZ	Fuel Pump–No Filter (Dual Inlet)	35BH	4 Pin Harness
15BA	Fuel Pump–Filter (Top Inlet)	35BL	High Metal Temperature Switch (1 Terminal – Normally Open)
15BB	No Pump–Filter	35BV	Low Oil Pressure Switch (3 Terminal – Normally Open/Normally Closed Common Ground)
15BC	No Pump, No Filter	35BY	Harness, 4 Pin – 3 Wire
15BD	Downdraft Carb–Manual Choke	35BZ	6 Pin Harness
15BF	Carb–LPG Downdraft	35CC	6 Pin with Diode and Mating Connector
15BJ	Front Pull Choke	35CG	4 Pin/2 Wire with Mating Connector
15BK	Rear Pull Choke	35CH	6 Pin/4 Wire with Mating Connector
15BL	Fuel Pump with Filter (Dual Inlet)	35CJ	6 Pin/4 Wire Harness
15BM	Fuel Pump – No Filter (Top Inlet)	35CK	Control Panel
15BV	Fuel Line (Hard) Assy	35CT	4 Pin Harness–w/Metri–Pack
15BZ	5" Fuel Line with Filter (Suck Side – Bottom)	35DB	Control Panel
15CK	Choke, Remote (Solenoid)	39AG	Control Panel
15CM	Fuel Line 5" – Filter (SUC Side Top)	45AL	Generator Adapter–YK
15CR	Carb–Downdraft Dual Fuel	45BB	1.12 Diameter Straight Shaft 3.95 to RFB
15CU	Carb–Downdraft–Manual Choke Intake Manf w/Plug–Special	45BD	1.44 Diameter Straight Shaft 3.77 to RFB
17BY	Oil Fill & Indicator – Inner	45BE	1.44 Diameter Straight Shaft 3.99 to RFB
17BZ	Oil Fill Tube & Indicator – Outer	45BF	1.12 Diameter Tapered Shaft 3.11 to RFB
17CD	Oil Filter (3.4" Long)	45BM	6 Holes–Rear of Block
17CF	Oil Fill Tube & Indicator – Outer Extension	45BS	Internal Splined 9 Tooth Crank
17CG	Base, Oil–Std Cap (Opt Drains)	45BT	Internal Splined 13 Tooth Crank
17CK	Plate, Oil–Remote Filter Adapter	45BU	Internal Splined 11 Tooth Crank
17CV	Oil Filter–Hex Nut (4.6" Long)	45BW	Crankshaft Key
17DA	Oil Base–3 Quart (Sandcast)		
17DF	Oil Filter (4.2" Long)		
17DN	Oil Base, Single Drain – 3 Quart		

SALES OPTION CODE DEFINITIONS (cont'd)

LISTED BELOW ARE SALES OPTION CODE NUMBERS USED ON P224G

45BY	1.12 Diameter Straight Shaft 5.00 to RFB	47AZ	Nameplate – Alternate Location
45CC	Crankshaft–No PTO (Stub)	47BA	Nameplate – Standard Location
45EA	1.12 Diameter Straight Shaft 4.71 to RFB	47BB	Labels – P224
45EC	Adapter, Pump (SAE–B)	47BE	Labels – P224
47AL	No Labels	47BF	Maintenance Labels
47AR	Finishing List	47BG	Maintenance Labels
47AY	Loose Labels	47BH	Nameplate Location

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