

Obsolete

Onan

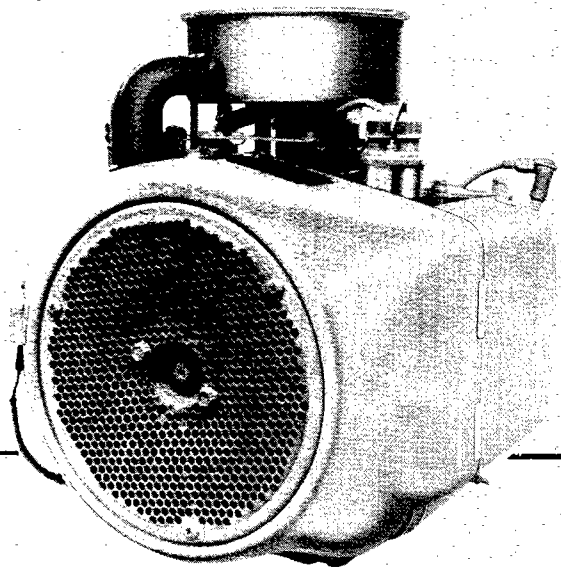
Parts Manual

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, the word "Onan" is printed in a large, bold, stylized font. Underneath the logo is a wide, empty rectangular box. Below this box, the text "MODEL AND SPEC NO." is printed in a bold, sans-serif font. Below that is another empty rectangular box. To the left of this second box, the text "SERIAL NO." is printed in a bold, sans-serif font. The bottom right corner of the nameplate is cut off at an angle. In the bottom right corner of the entire page, the text "M-1149" is printed.

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

Index

- Adapter, Clutch 46
Adapter, Exhaust (Flange Type) 49
Adapter, Governor Arm 26,34
Adapter, Oil Filter 36,41
Air Cleaner-Remote 45
Ammeter 34,35
Arm, Governor Control 25
Armature, Starter 21,37,38
- Baffle, Breather Valve 4
Ball, Governor 11
Base, Oil 8
Base, Remote Oil Filter 36
Bearing, Camshaft 4
Bearing, Crankshaft 4
Block, Cylinder 4
Block, Terminal (4 Place) 43
Box, Breaker 19,20,42
Bracket, Governor Control 12,26
Bracket, Lifting 48
Brush, Ground-Starter 21,37,38
- Cable, Choke 34,35
Cable, Spark Plug 19,44
Camshaft 11
Cap, Fuel Tank 33
Carburetor Components (Gasoline) 16,28,31,32
Carburetor, Gasoline 14,27
Clamp, Muffler 49
Coil, Ignition 19,44
Condenser, Ignition 20,42
Cover, Air-Cleaner 14,48
Cover, Breaker Box 20,42
Cover, Dust-Starter 21,38
Cover, Valve 4
Crankshaft 10
- Drain, Oil Filter 41
- Element, Air Cleaner 14
Extension, Governor Arm 35
- Filter, Breather Tube 14,45
Filter, Oil 41,48
Flywheel 10
- Gasket, Breaker Box 19,20,42
Gasket, Cylinder Head 4
Gasket, Exhaust Adapter 49
Gasket, Oil Base 8
Gasket, Valve Cover 4
Gauge, Oil Pressure 34,35
Gear, Camshaft 11
Gear, Crankshaft 10
Gear, Ring 10
Gearcase 7
Governor 12,25,26
Guard, Flywheel 10,48
- Harness, Wiring 35
Head, Cylinder 4
Holder, Brush 21,38
Hose, Fuel 27
Hose, Vacuum 14,27
Housing, Air 18
Housing, Air Cleaner 14
Housing, Blower 18
Housing, Cylinder 18
Housing, Starter 21,38
- Kit, Adapter - Remote Air Cleaner 45
Kit, Alternator Connector 23,24
Kit, Clutch 46
Kit, Fuel Tank 33
Kit, Gasket - Engine 4
Kit, Repair - Carburetor 16,28,31,32
Kit, Repair - Starter 21,38
Kit, Tuneup - Ignition 20,42
- Lever, Choke 47
Lever, Throttle Control 34,35
Line, Fuel - Gasoline 33
Line, Oil - Flexible 34,35
- Manifold, Exhaust 49
Manifold, Intake 14
Muffler, Exhaust 49
- Numerical Index 50,51,52,53
- Panel, Control 34,35
Pipe, Exhaust 49
Piston 6
Plate, Bearing - Rear 4
Plug, Spark 19,44
Pump, Fuel-Electric (Gasoline) 40
Pump, Fuel-Vacuum (Gasoline) 27,30
Pump, Oil 8
- Regulator, Voltage 23,24
Relay, Start Solenoid 21,37,38
Ring, Piston 6
Rod, Connecting 6
Rod, Control-Governor 12,25
- Seal, Oil 4,7
Seat, Valve 4
Sender, Oil Pressure (Electric) 48
Spring, Governor 12,25,26,34,35
Starter 21,38
Starter Components 21,37,38
Starter, Recoil 39
Stator 23,24,44
Strap, Fuel Tank 33
Switch, Ignition 34,35
Switch, Pressure-Oil 48
- Tank, Fuel 33,48
Tappet, Valve 4
Tube, Air Intake 14,48
Tube, Breather 14,45
Tube, Oil 4
Tube, Vacuum Port 7,27
- Valve, Exhaust 4
Valve, Intake 4
Valve, Shut-Off 33
- Wrapper, Filter Element 48

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.

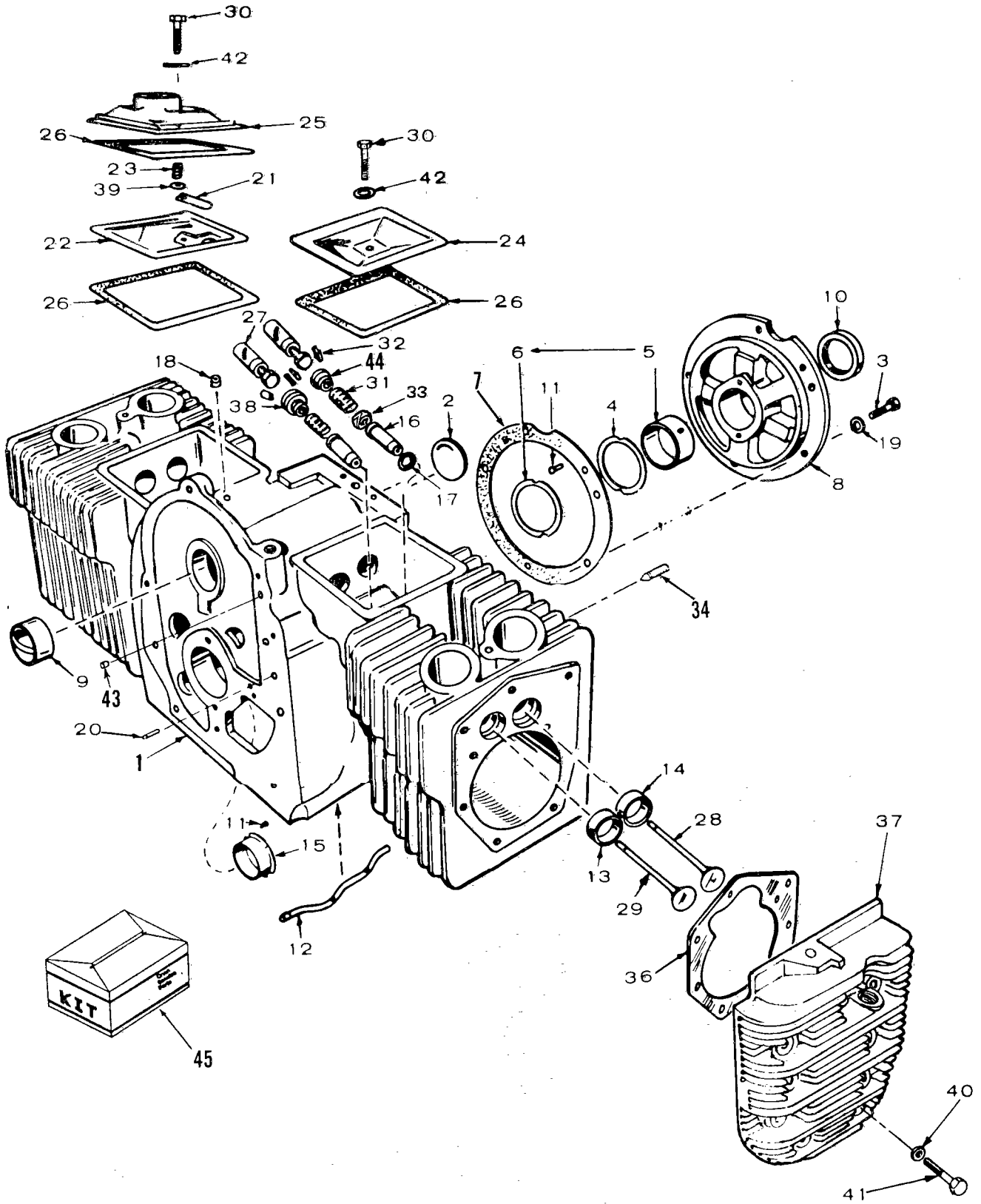
WARNING

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



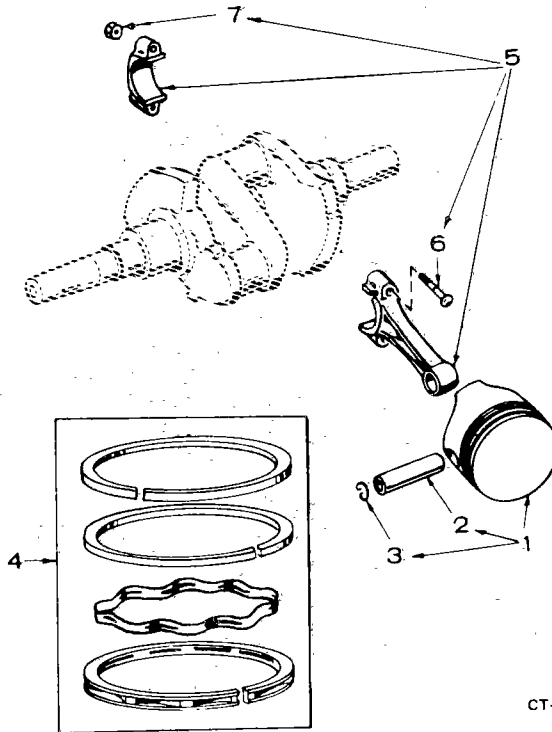
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Cylinder Block

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				
	110-1807	2	Engines w/o Intake Valve Seals Exhaust				
	110-1807	2	Engines with Intake Valve Seals *Exhaust				
	110-3161	2	Engines with Intake Valve Seals *Intake				

* - Parts Included in the Cylinder Block Assembly.

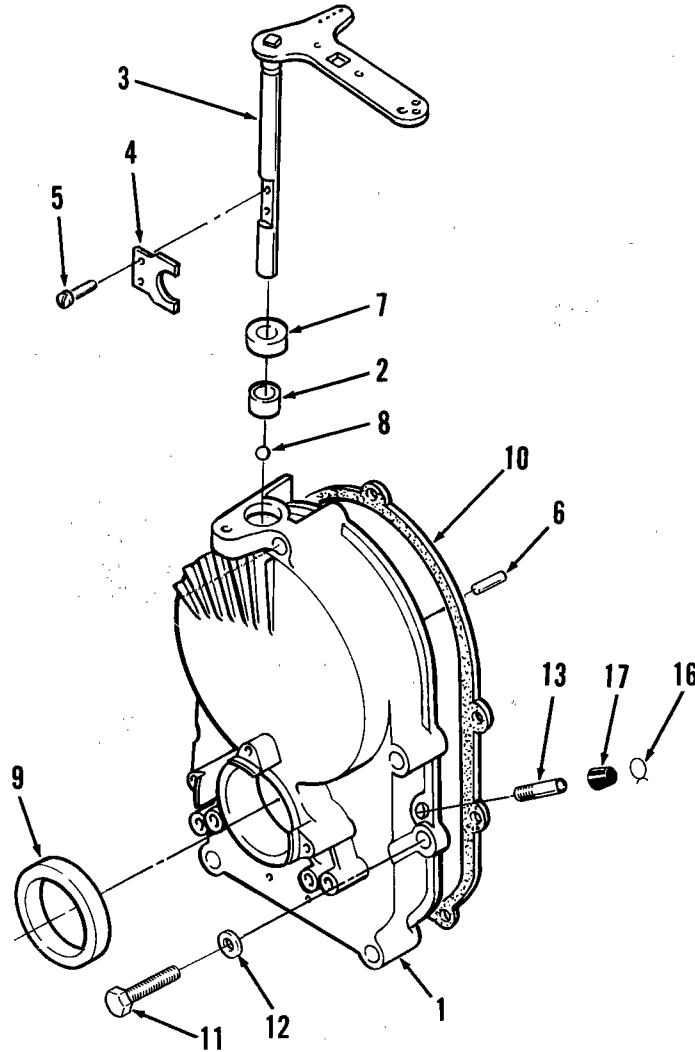
Piston and Rod



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				

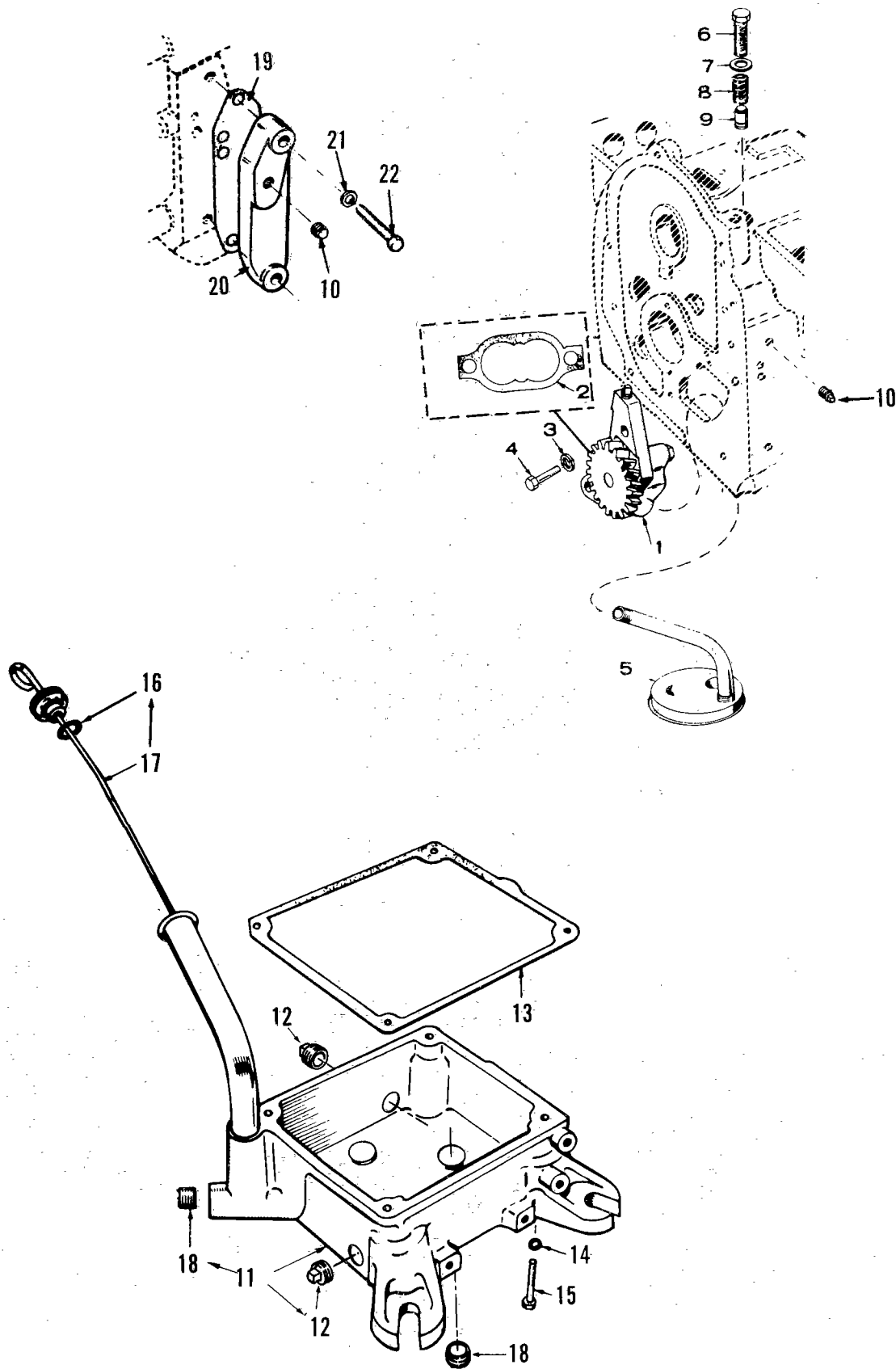
Gearcase



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	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	16	503-0301	1	*Clamp, Vacuum Port Cap
8	510-0014	1	*Ball, Bearing - Governor Shaft	17	149-1321	1	*Cap, Vacuum Port

* - Parts Included in 103-0738 Gearcase Assembly.

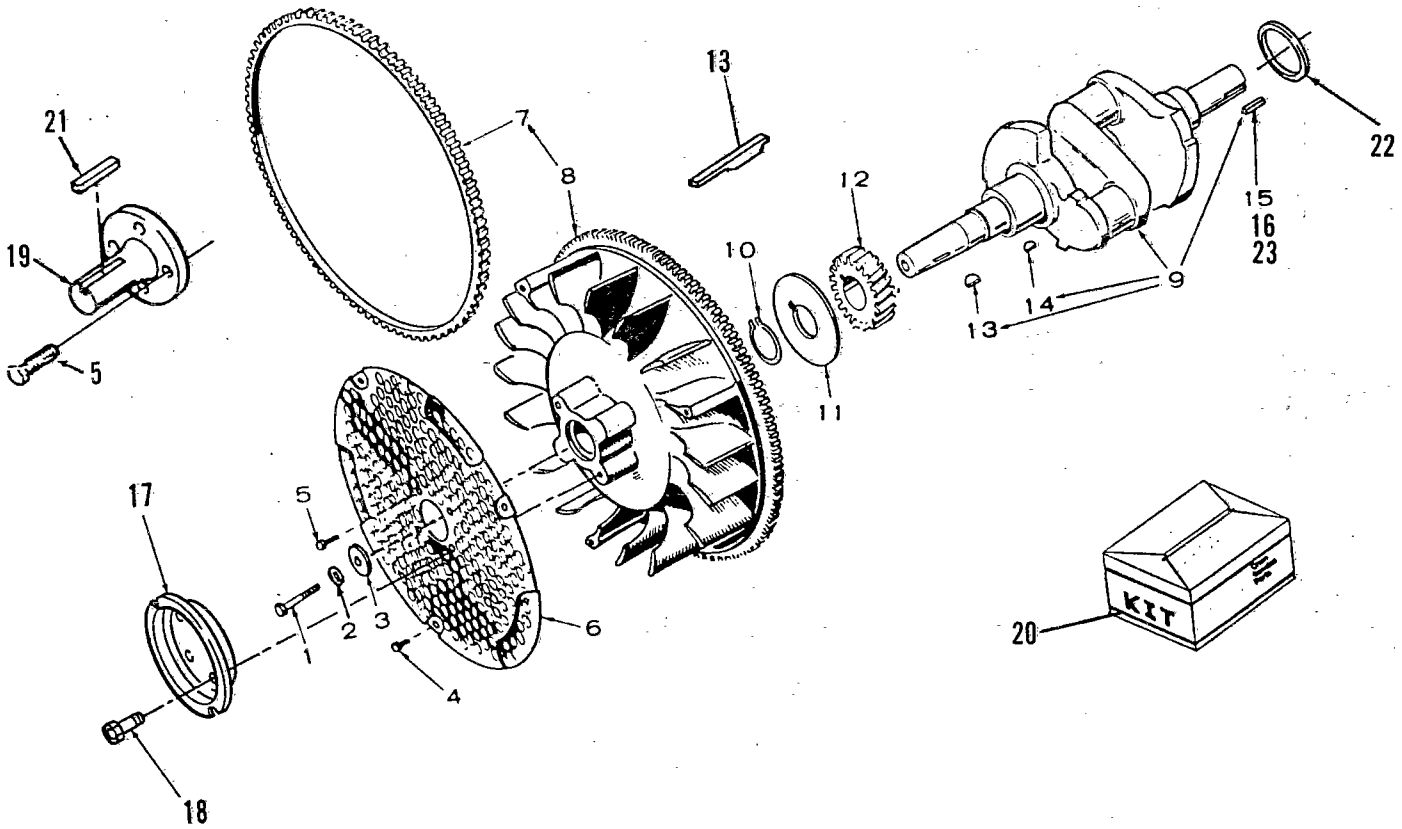
Oil System



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")				

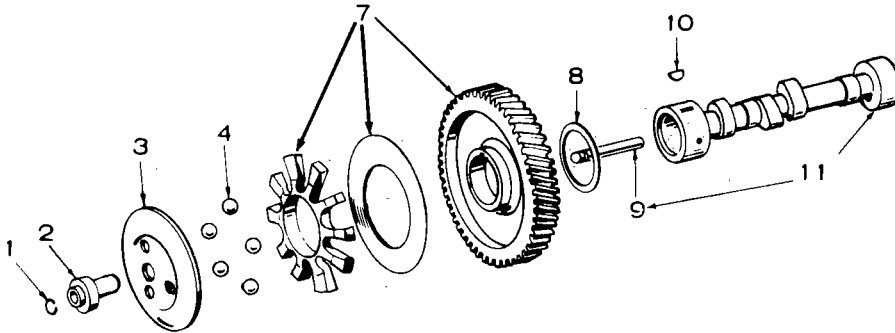
Crankshaft and Flywheel



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.

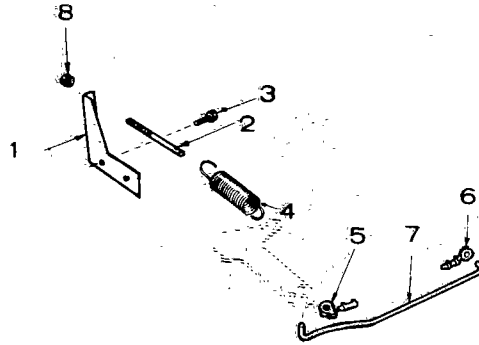
Camshaft



C-1084

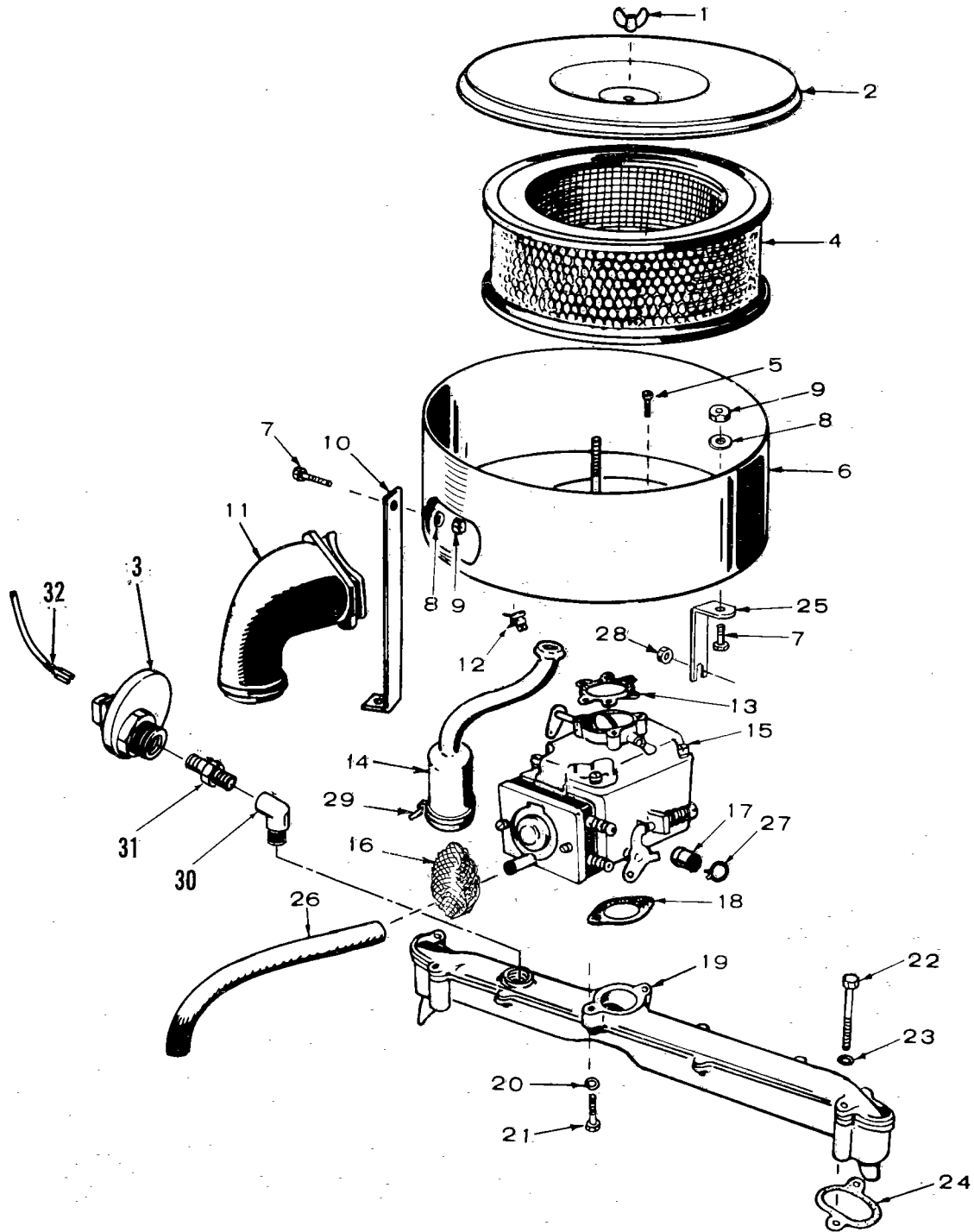
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-0078	1	Ring, Retaining	7	105-0332	1	Gear Assembly, Camshaft (Includes Plate and Spacer)
2	150-1519	1	Hub, Governor Cup	8	105-0541	1	Washer, Thrust (Special)
3	150-1520	1	Cup, Governor	9	150-0075	1	Pin, Center
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

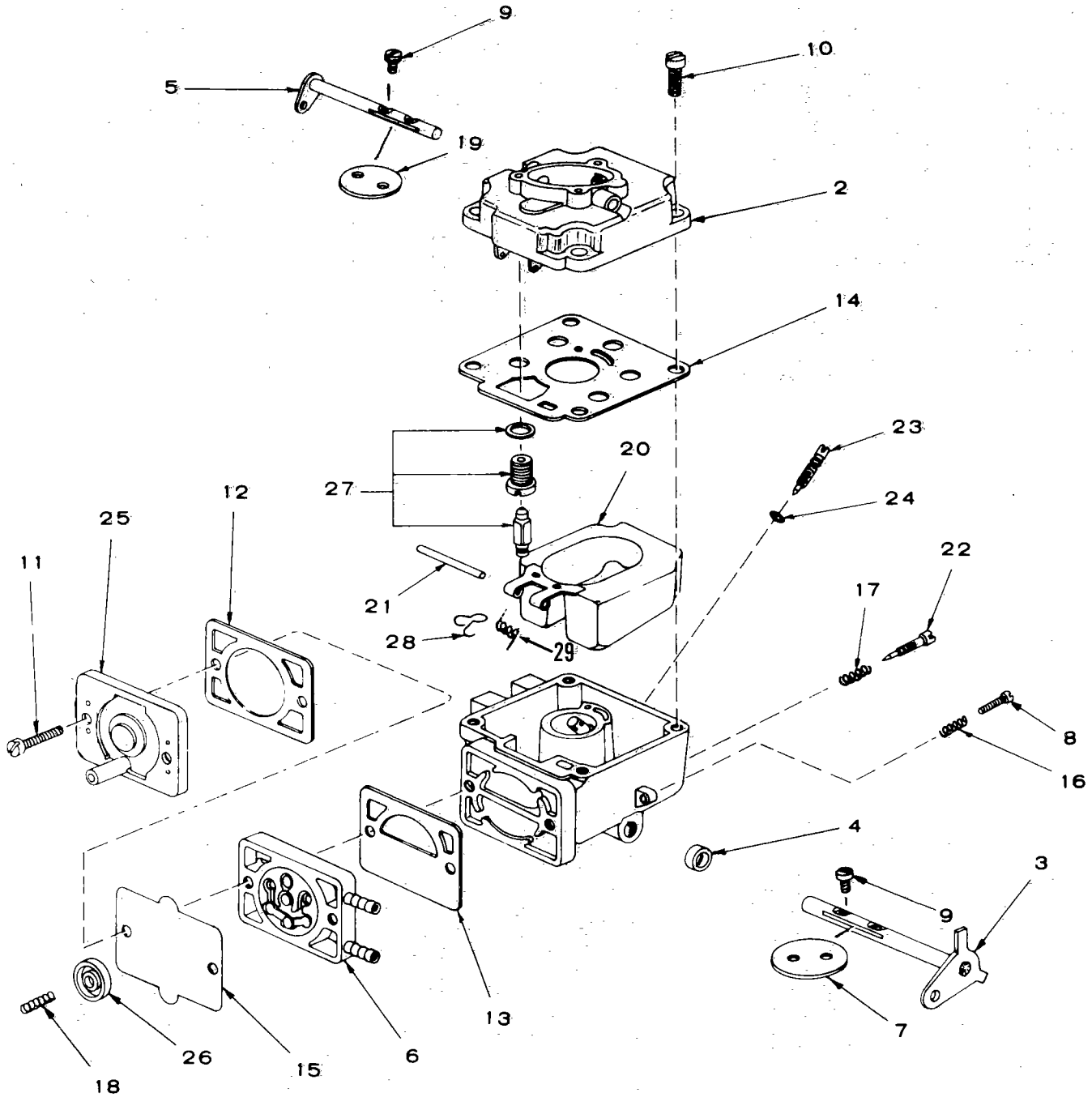


Fuel System

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
				32	336-8464	1	Lead, Vacuum Switch to Oil Pressure Switch (18")
16	123-1417	1	Filter, Breather Tube				
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)

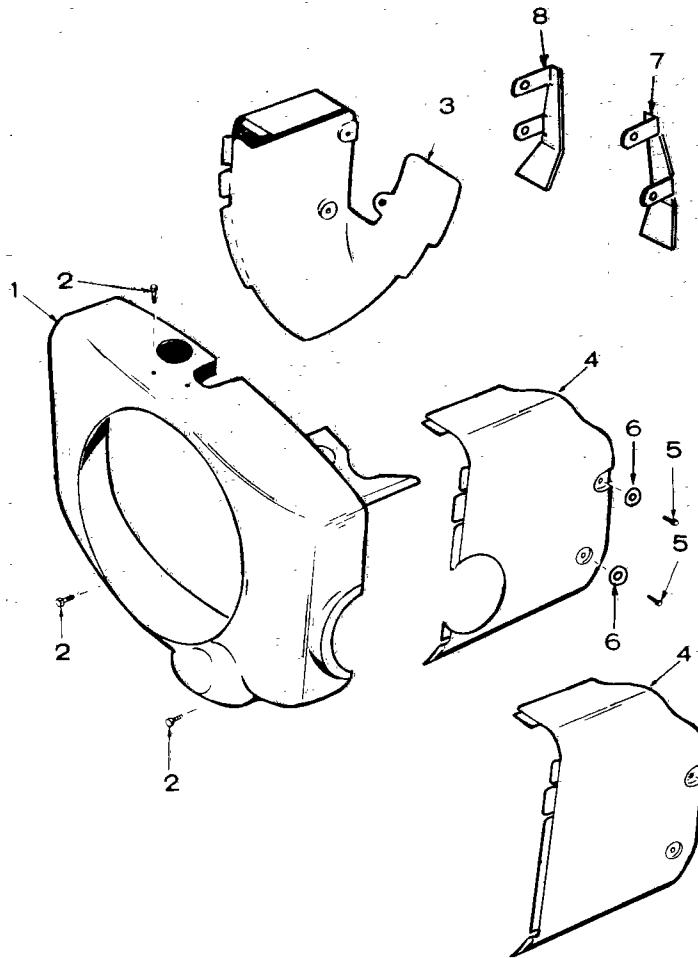


**Carburetor (With Integral Fuel Pump) Components
(142-0660)**

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	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
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
				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

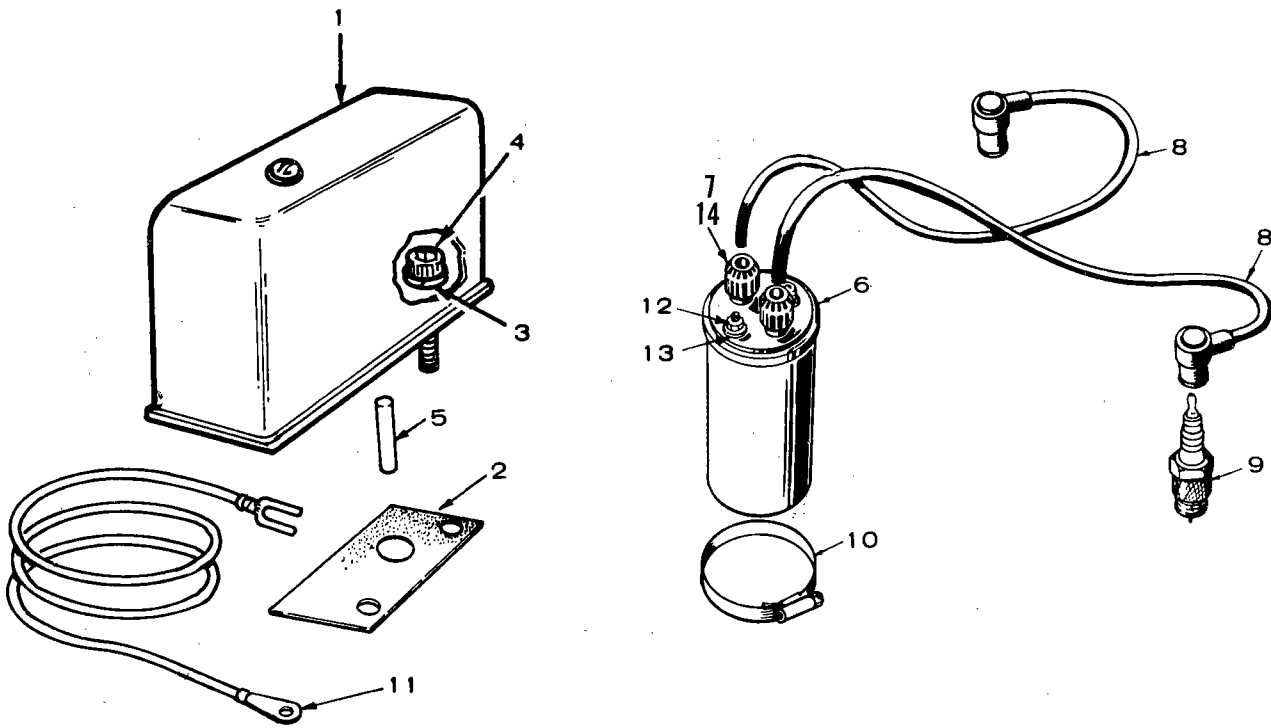
† - Parts Included in 142-0571 Gasket Set.
* - Parts Included in 142-0570 Repair Kit.

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				

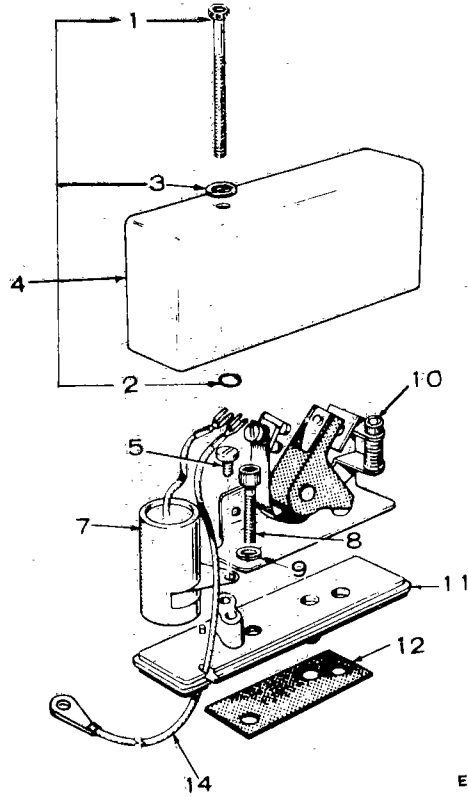
Ignition



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
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)

Breaker Box

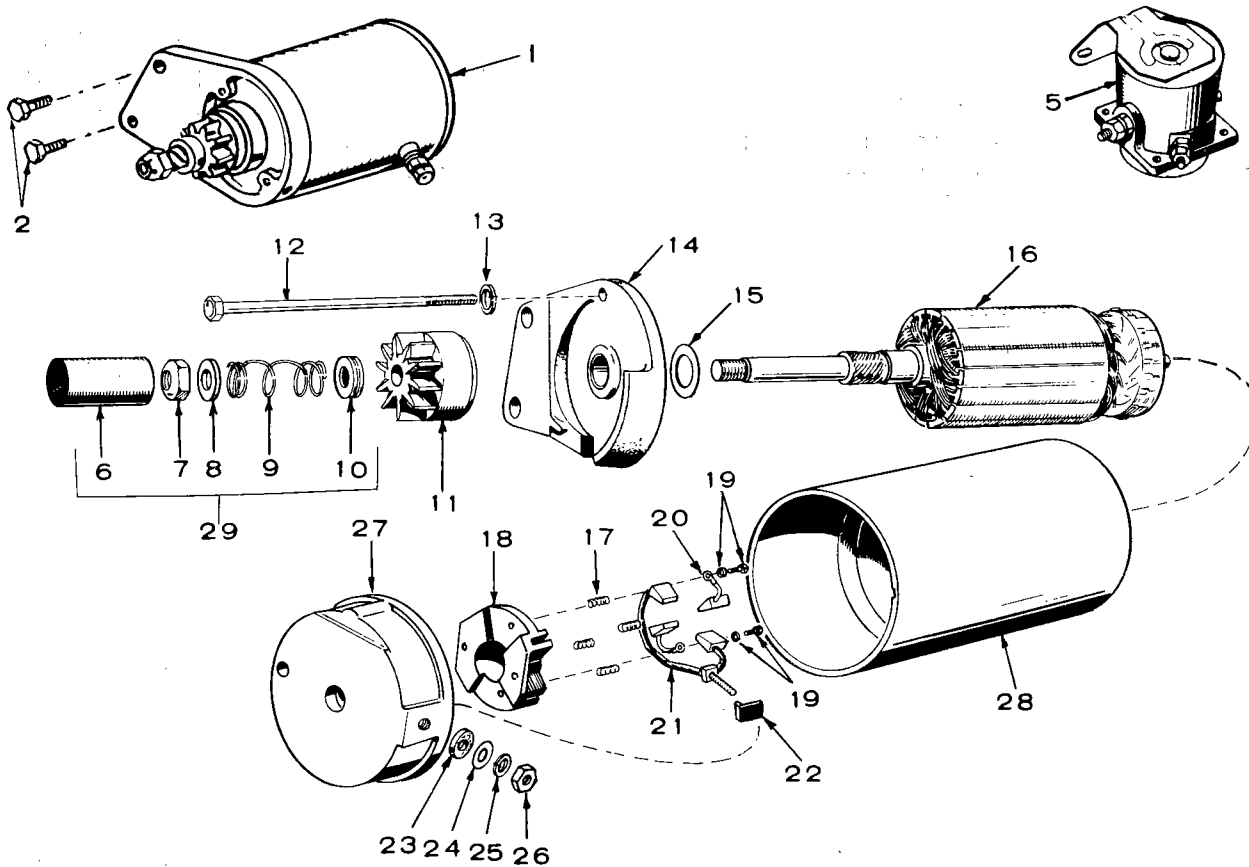


ES-1217

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



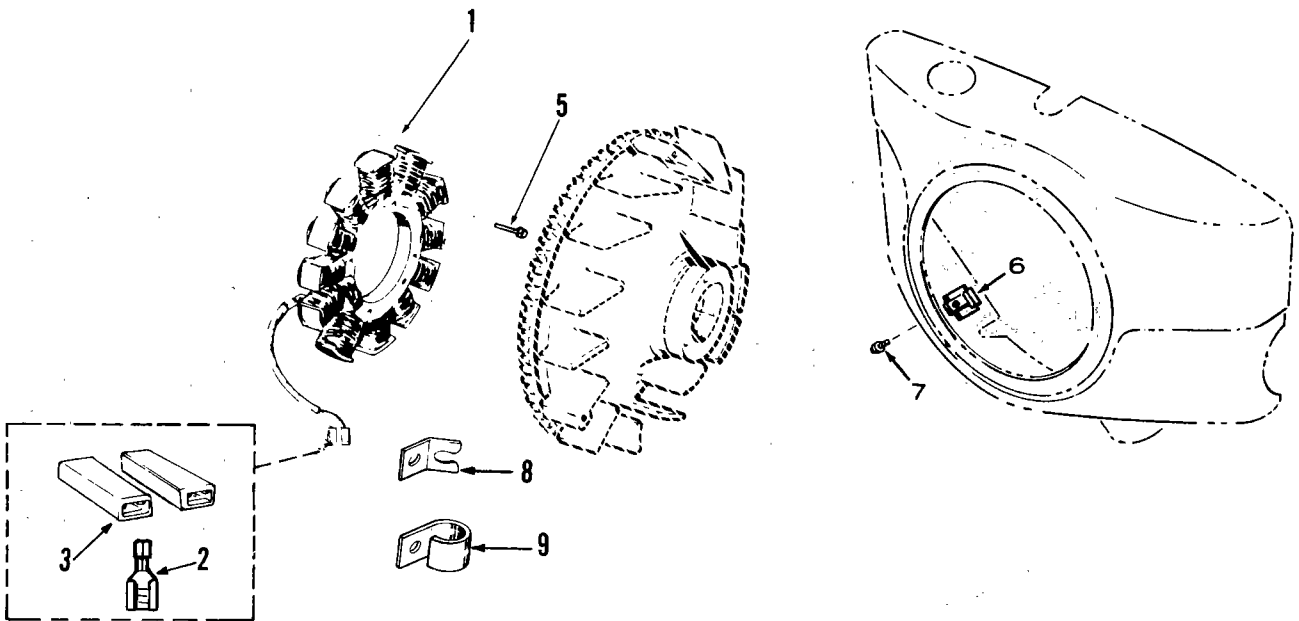
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1171	1	Starting Motor, Complete	18	#	1	+Brush Holder
2	815-0570	2	Screw, Cap - Hex Washer Head (5/16-18 x 1")	19	#	1	+Screw and Lock Washer
5	307-1031	1	Solenoid, Start - Relay	20	#	2	*+Brush, Ground
6	#	1	xCover, 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	29	191-1359	1	Dust Cover Assembly (Includes Parts Marked x)
16	191-1221	1	Armature				
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

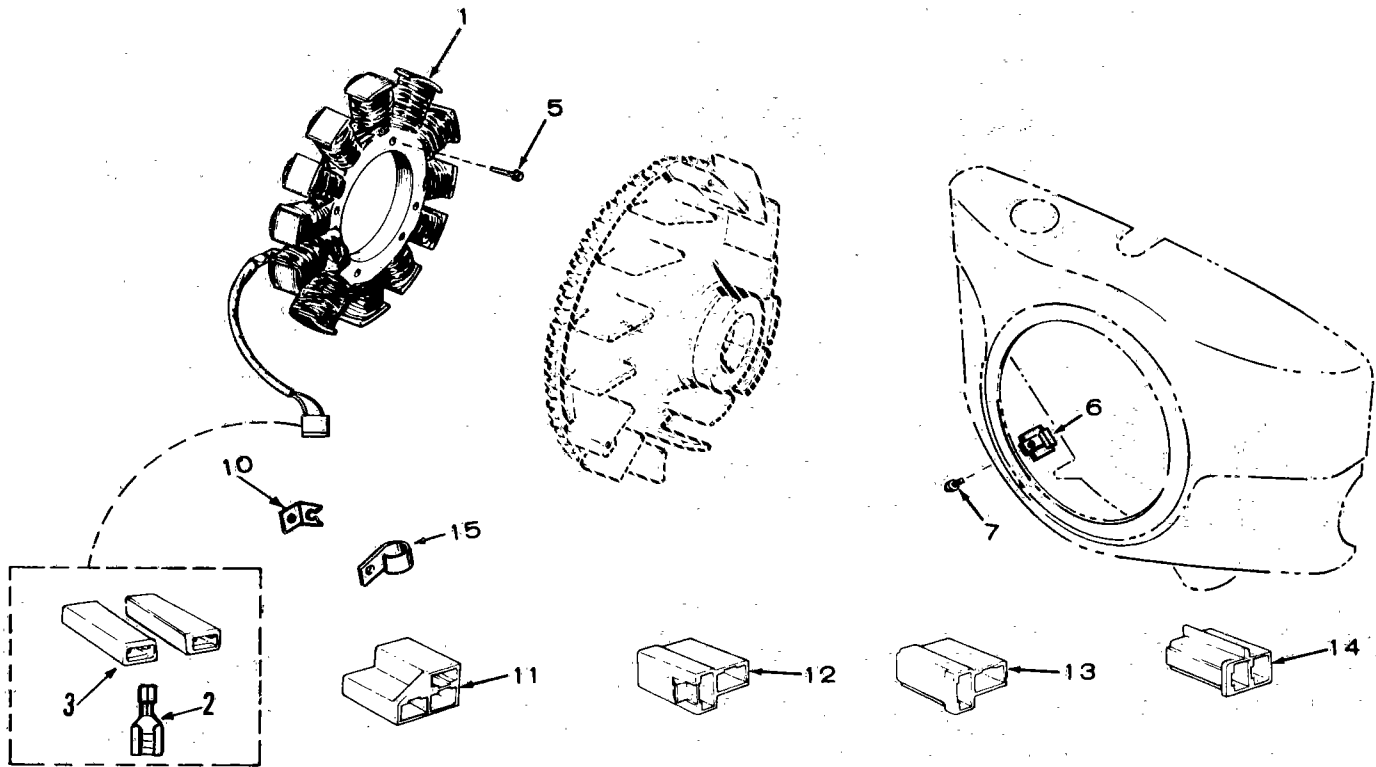
This section contains illustrated parts listing of factory installed options for these industrial engines. Options may not be applicable to all models; for field conversions additional parts are usually required. Optional parts listed in this section are in addition or in place of those shown in the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

Option 1
Flywheel Alternator - 20 Ampere (Phelon)



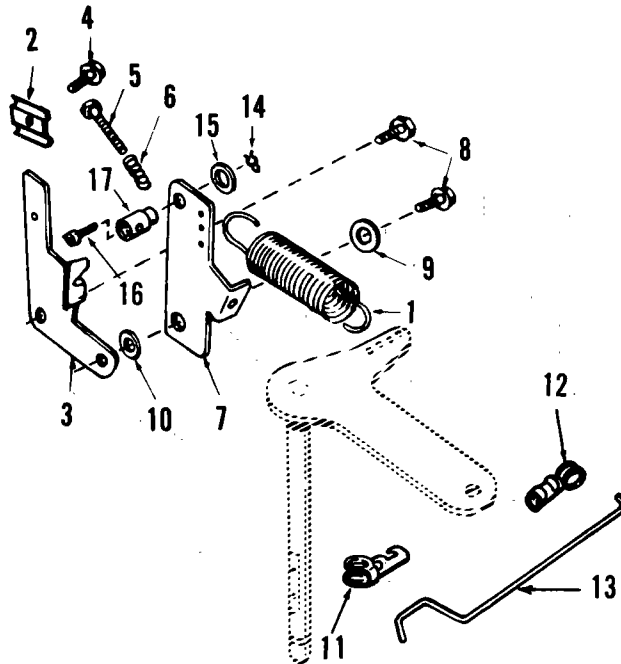
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	191-1276	1	Stator (Includes Terminals and Connector Bodies)	6	191-1748	1	Regulator, Voltage
2	332-2423	2	Terminal, Stator Leads	7	821-0007	1	Screw, Cap - Hex Washer Head (1/4-20 x 1/4")
3	323-1257	2	Kit, Body Terminal 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

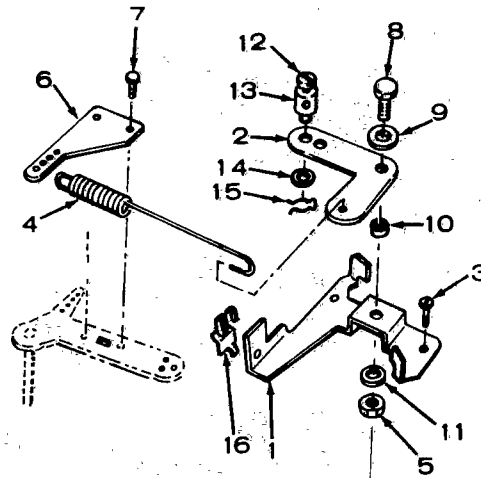
Option 3
Governor Control - Variable Speed
(Side Pull)



FS-1274

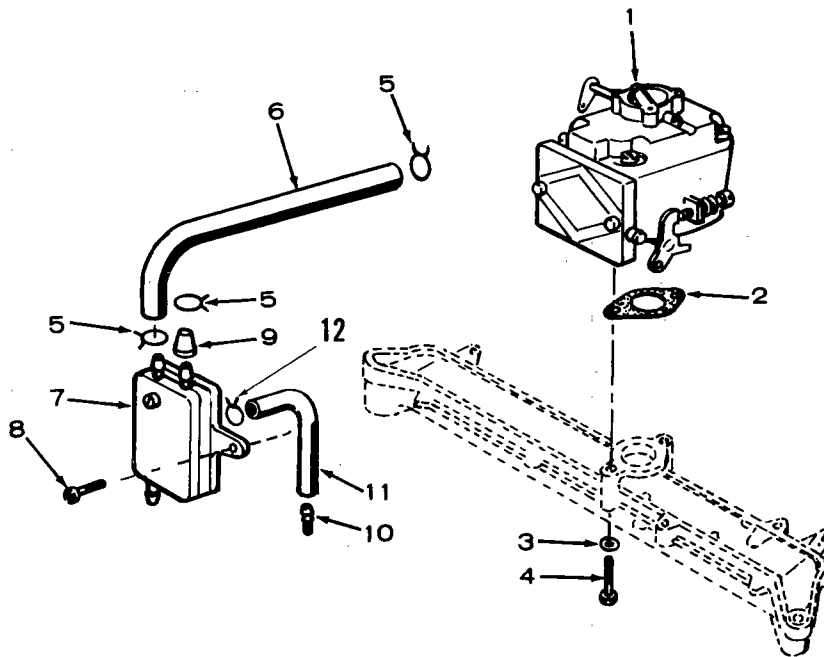
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-1214	1	Spring, Governor	9	526-0021	2	Washer, Flat (17/64" ID x 3/4" OD x 1/16")
2	153-0514	1	Clamp, Cable	10	150-1269	1	Bushing, Control Arm
3	150-1725	1	Bracket, Cable	11	518-0406	1	Clip, Retaining - Control 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

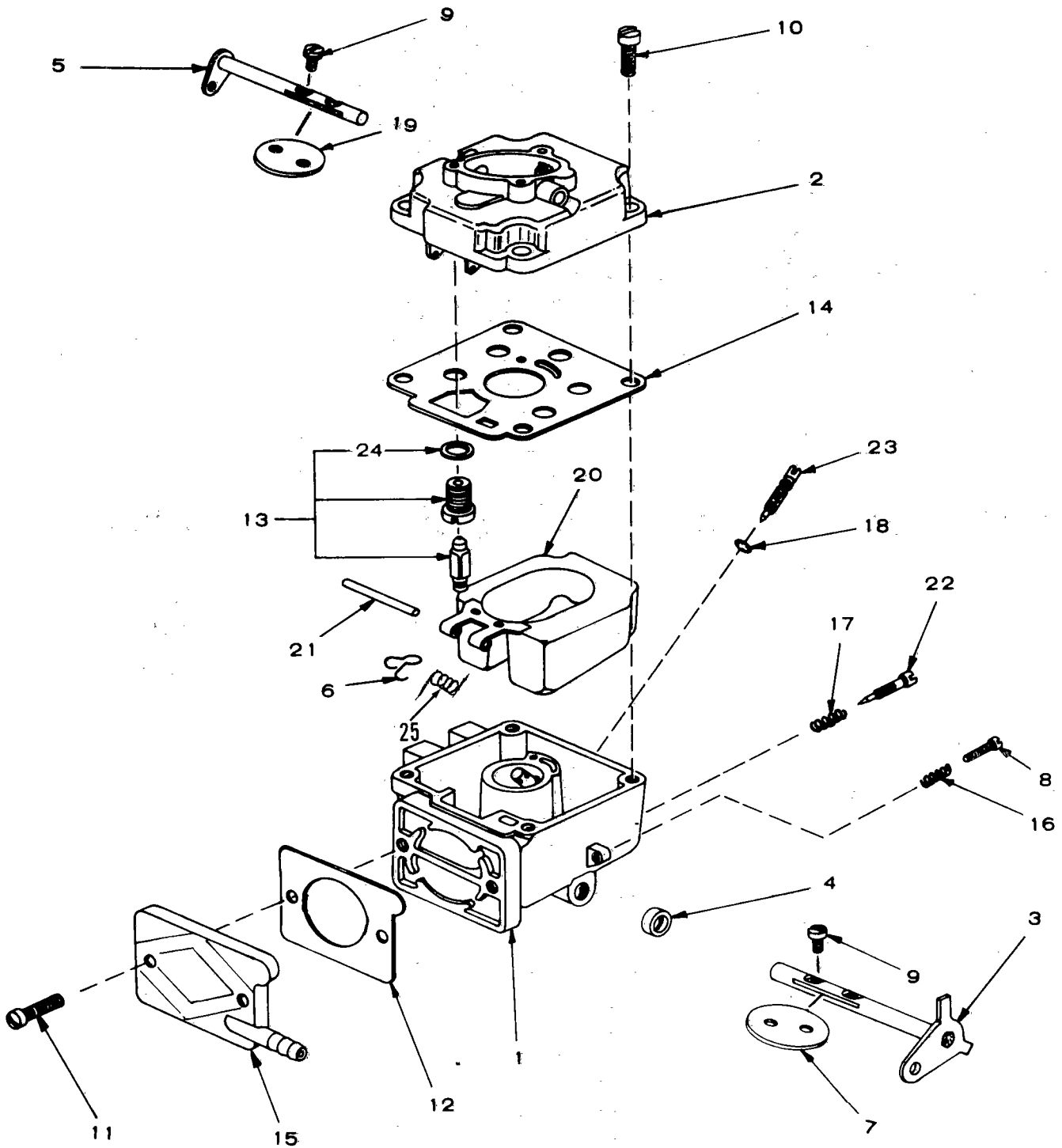
Option 5 Fuel System



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)

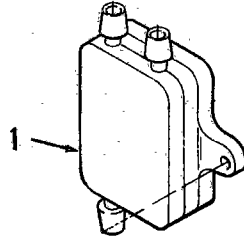


**Option 6
Carburetor Components
(Without Integral Fuel Pump)**

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

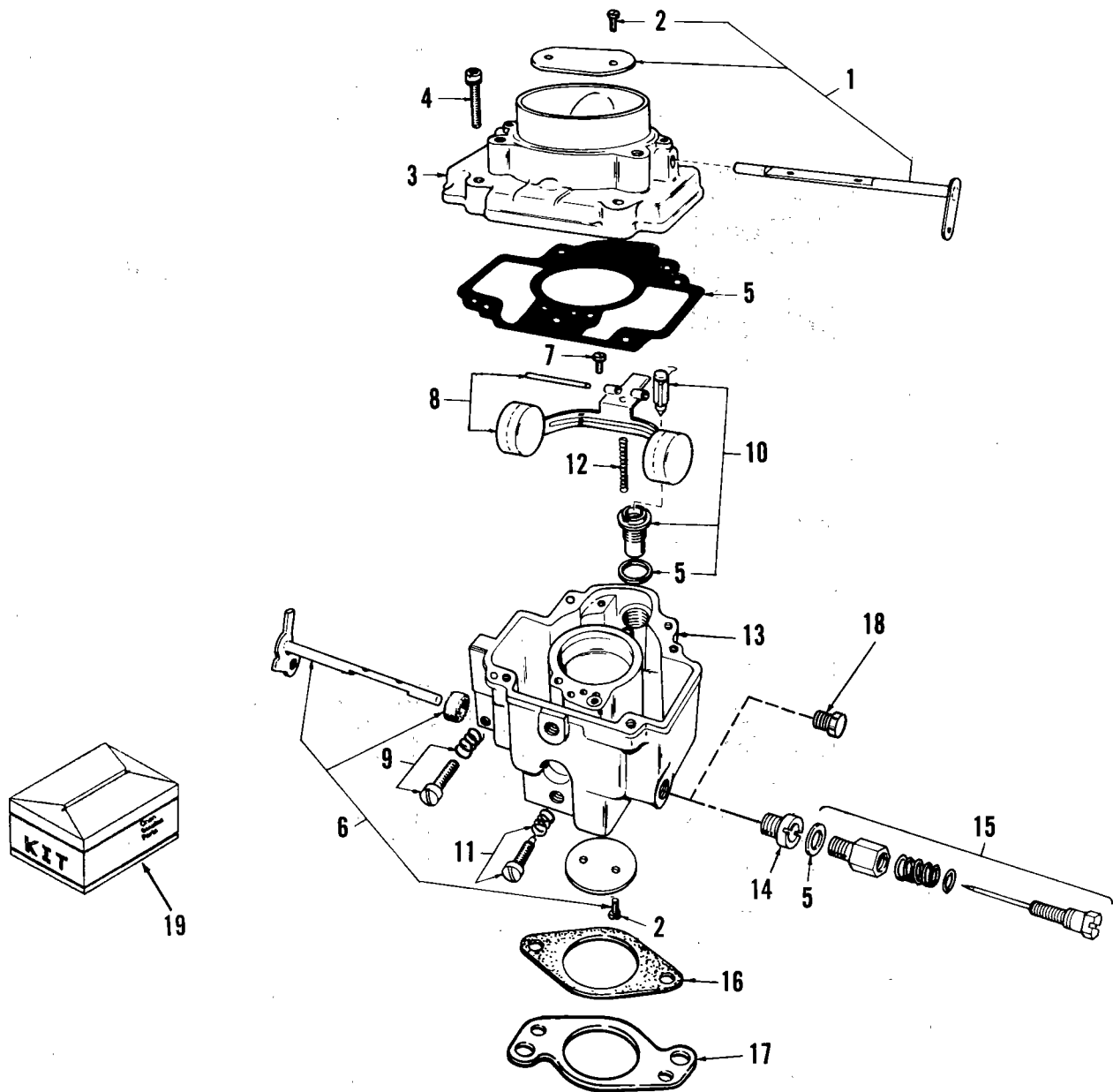
† - Parts Included in 142-0592 Repair Kit.
* - Parts Included in 142-0591 Gasket Kit.

Option 7
Fuel Pump



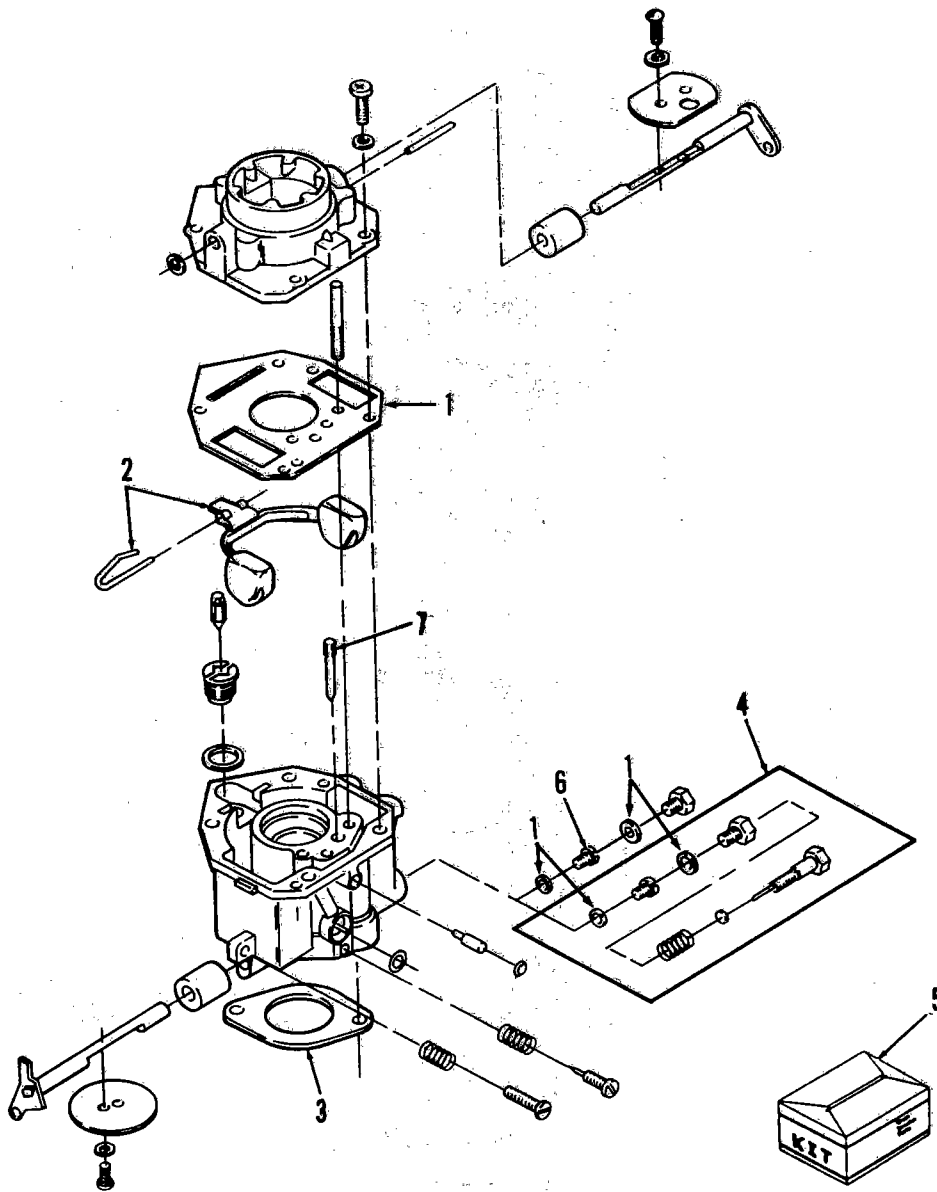
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	149-2187-01	1	Pump, Fuel - Vacuum, Pulse				

**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				

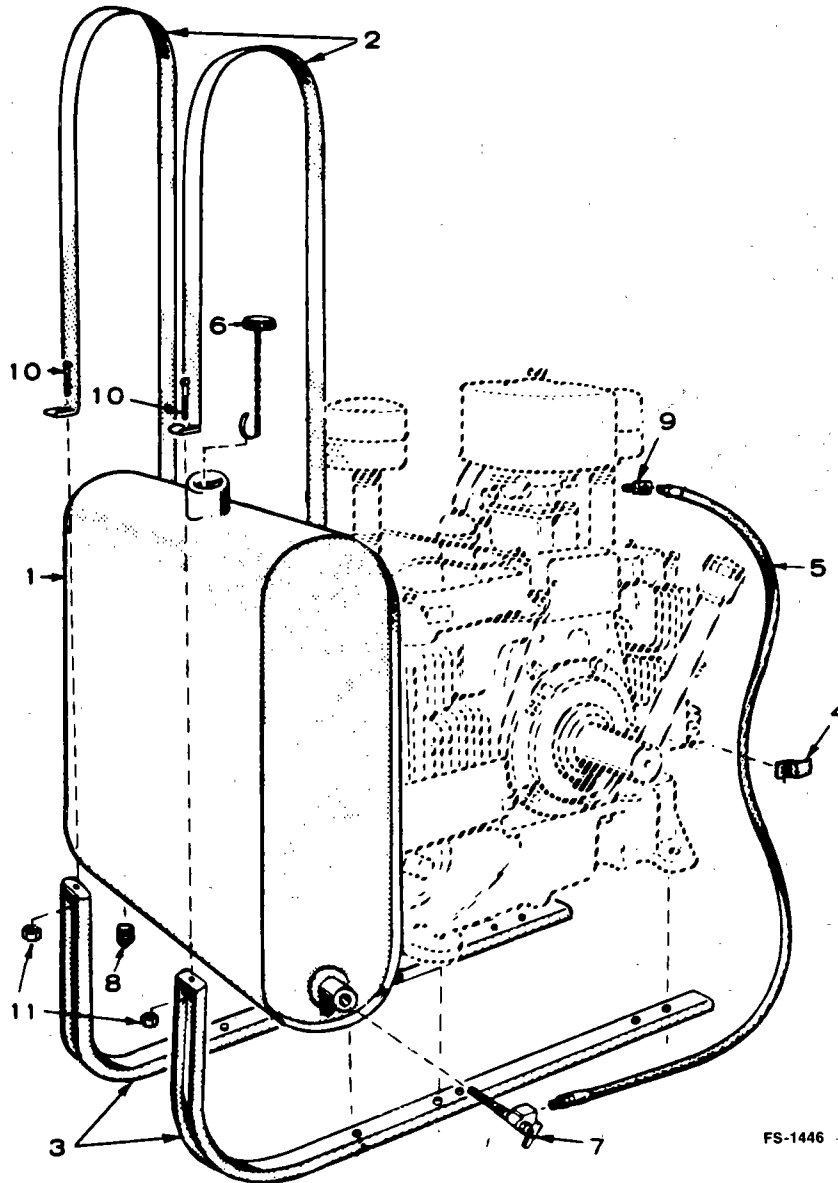
**Option 8A
Carburetor Components (Nikki)
Fixed Main Jet**



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.

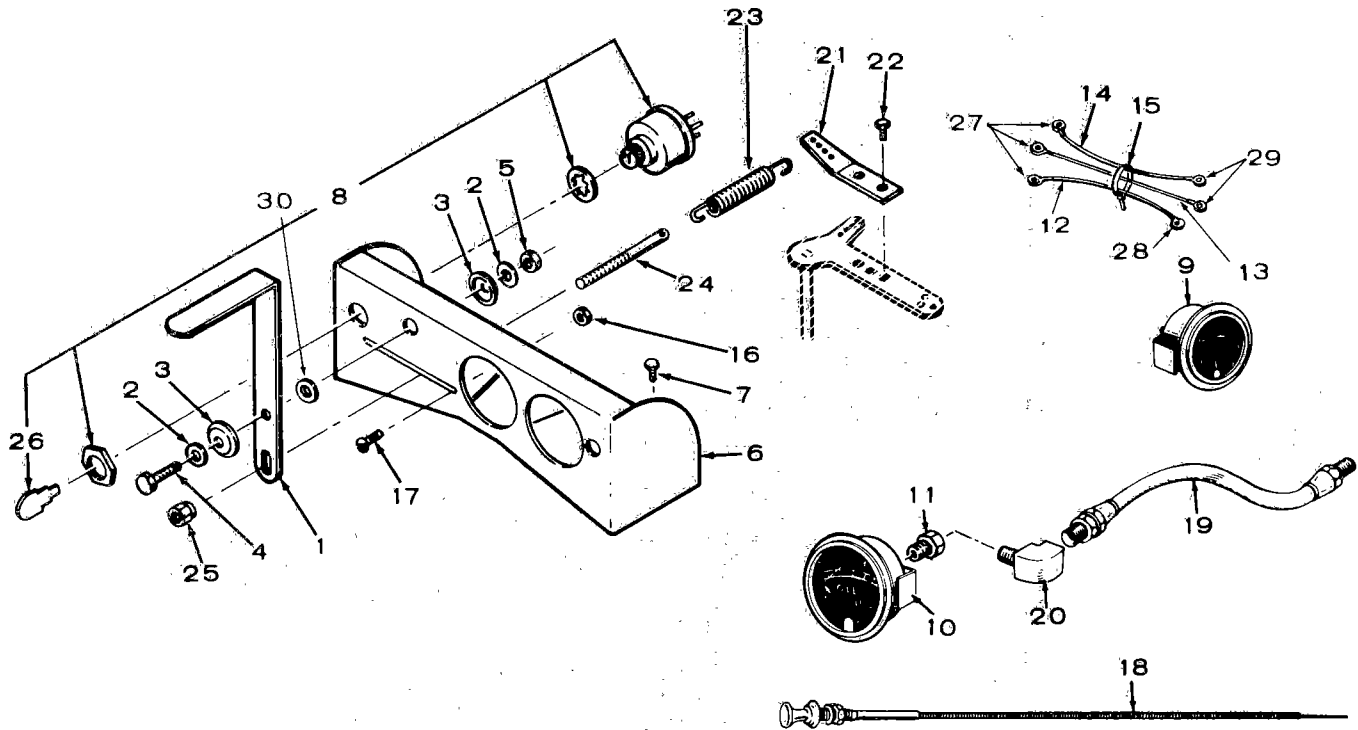
Option 9
Fuel Tank (Side Mounted)



FS-1446

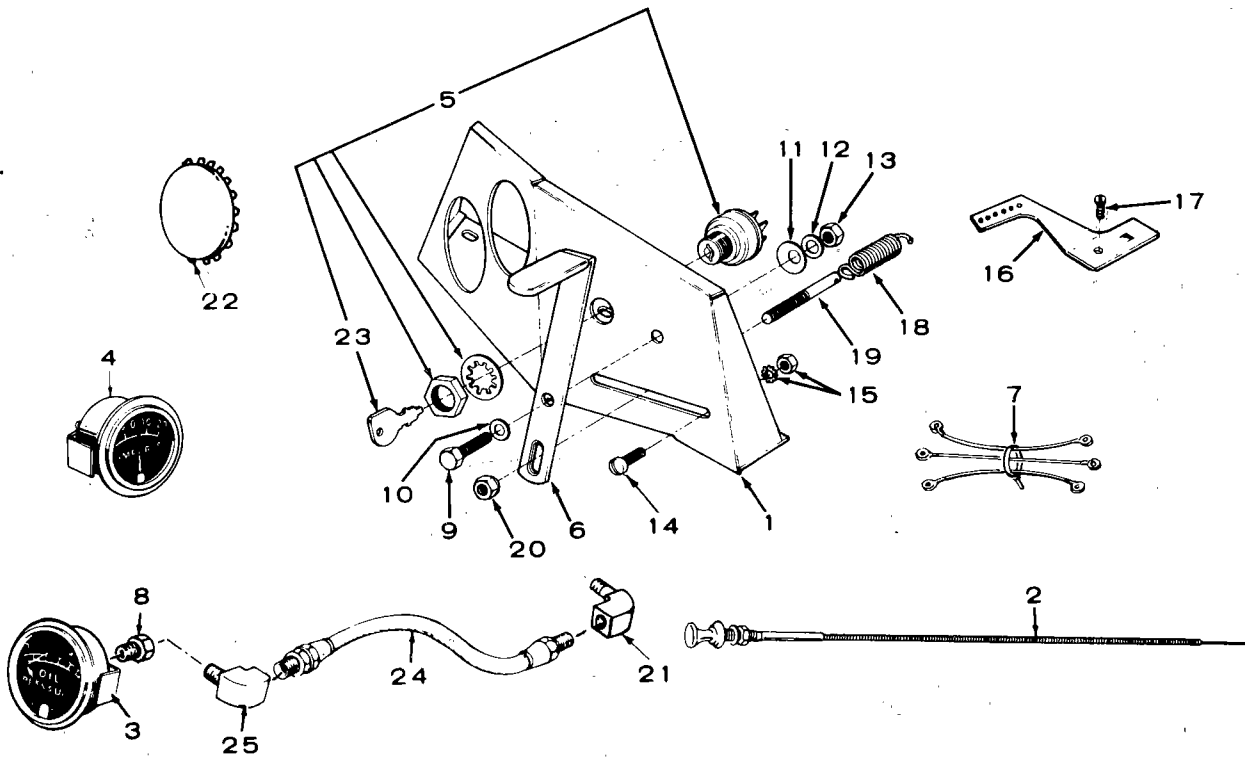
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	159-0597	1	Kit, Fuel Tank - Complete	7	504-0013	1	Valve, Shut-off
1	159-0981	1	Tank, Fuel (Less Cap)	8	505-0057	1	Plug, Tank Drain
2	159-0596	2	Strap, Fuel Tank	9	502-0020	1	Elbow, Carburetor Inlet
3	159-0595	2	Bracket, 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)



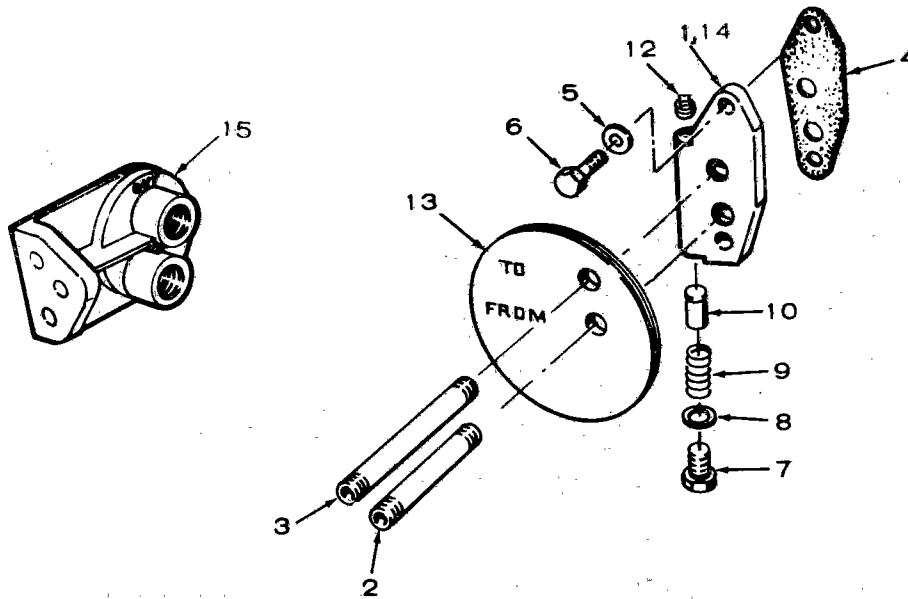
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	152-0198	1	Lever, Throttle Control	15	332-0942	1	Tie, Cable
2	526-0015	2	Washer, Flat (1/4" Screw)	16	870-0131	2	Nut, Hex (10-32)
3	152-0041	2	Washer, Tension - Cup	17	815-0199	2	Screw, Machine - Fillister Head (10-32 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)

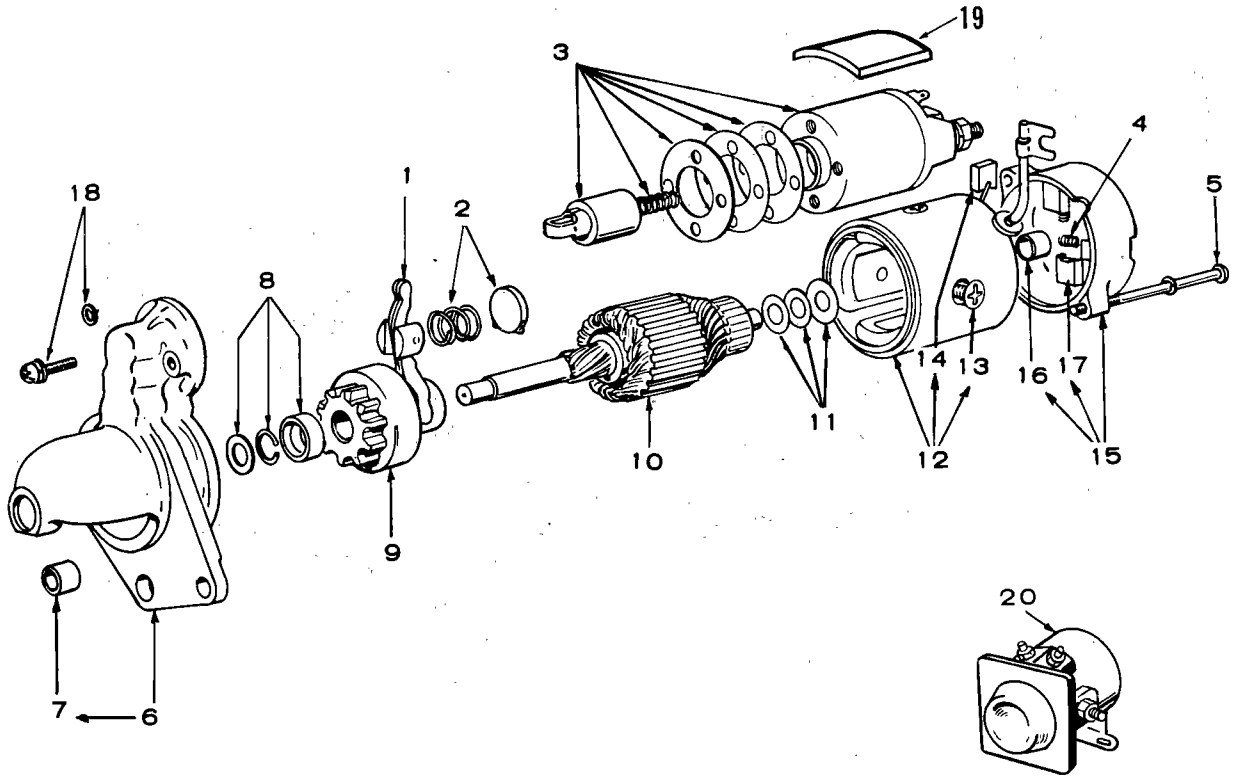


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	122-0369	1	+Adapter, Remote Oil Filter	8	526-0066	1	+Washer, Flat - Copper (3/8" Screw)
2	505-0791	1	Nipple, Pipe (1/4 x 7")	9	120-0140	1	+Spring, By-Pass Valve
3	505-0776	1	Nipple, Pipe (1/4 x 6")	10	120-0398	1	+Valve, 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.

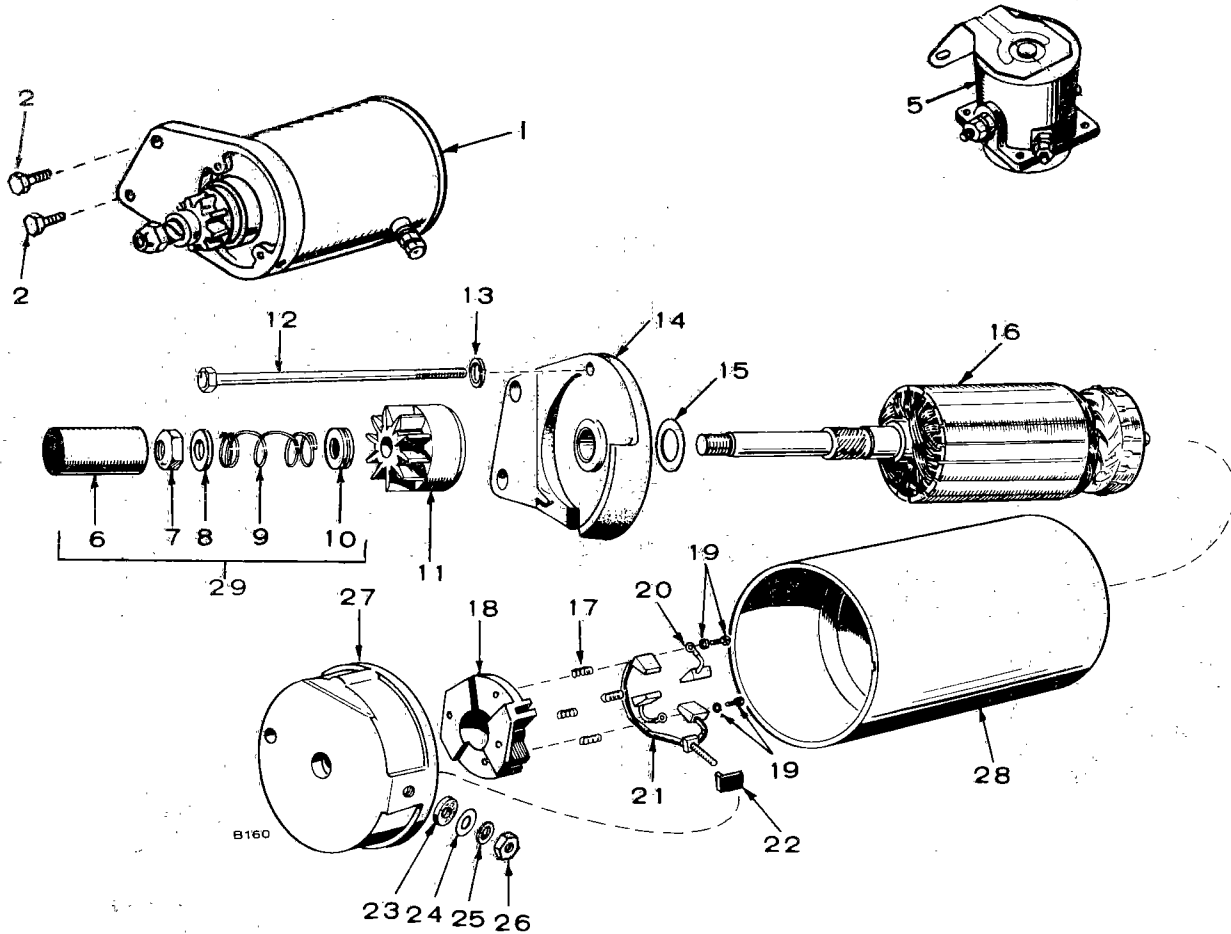
NOTE: Hoses vary with each installation. Purchase locally, hoses with a minimum pressure rating of 150 PSI (1035 kPa).

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				

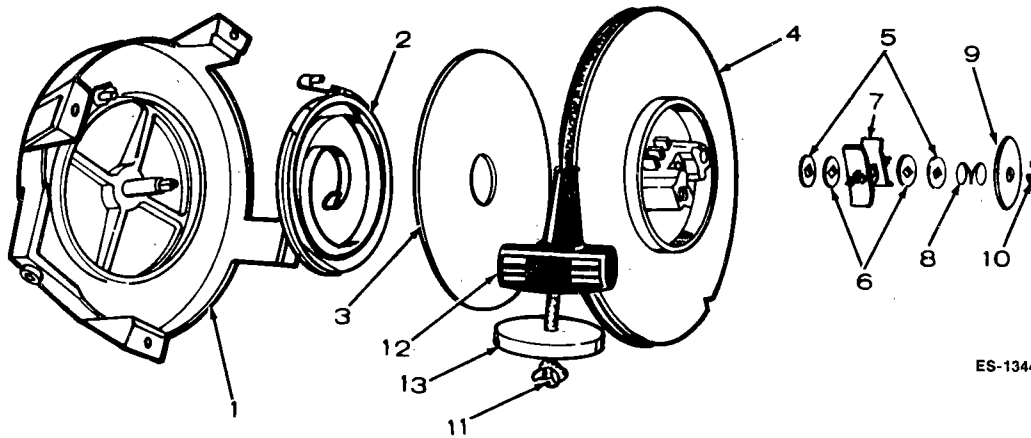
† - Included in the 191-1040 Cap Assembly.

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

§ - Not Sold Separately.

x - Included in 191-1359 Dust Cover Assembly.

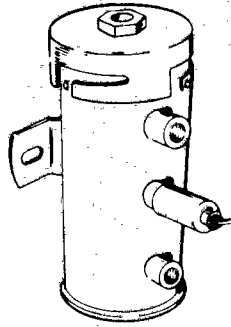
Option 13
Recoil Starter Components



ES-1344

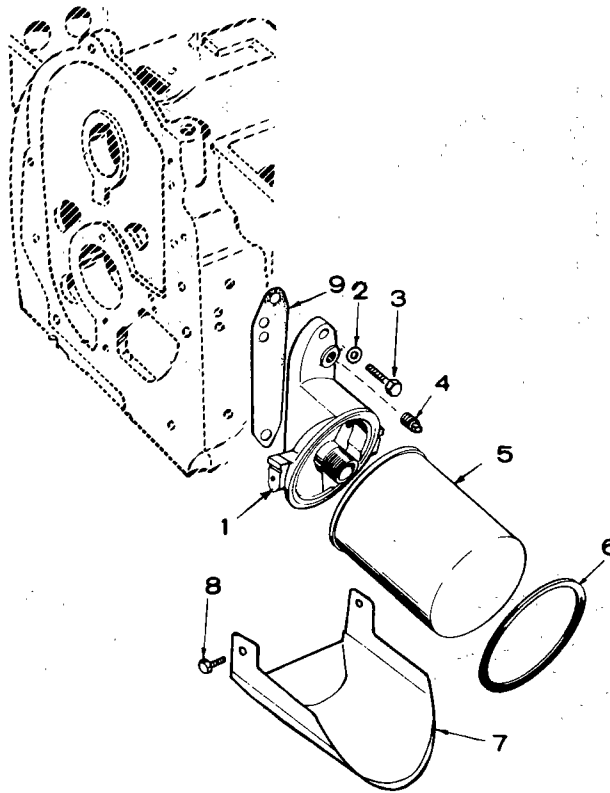
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	192-0392	1	Starter, Recoil - Complete	7	192-0416	1	Shoe Assembly, Friction
1	192-0422	1	Cover, Starter	8	192-0415	1	Spring, Brake
2	192-0421	1	Spring, Rewind	9	526-0142	1	Washer, Flat
3	192-0420	1	Shield Spring	10	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)



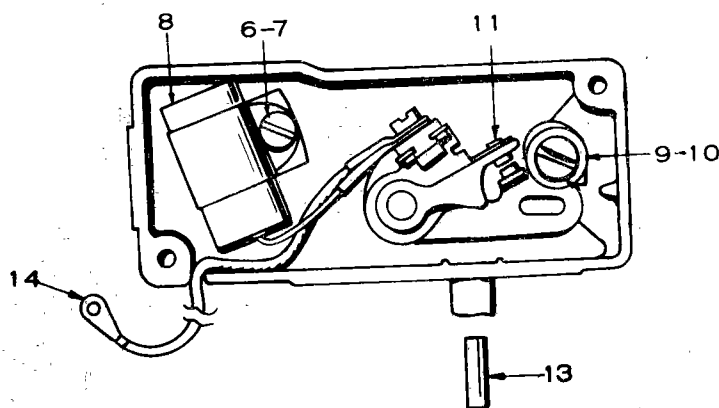
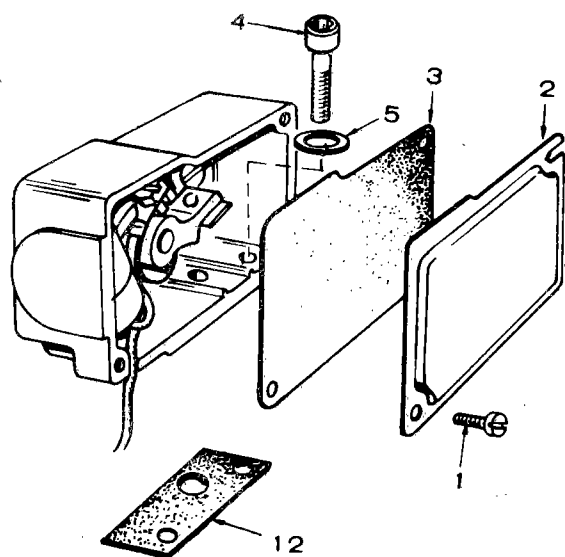
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	149-1828	1	Pump, Fuel

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)

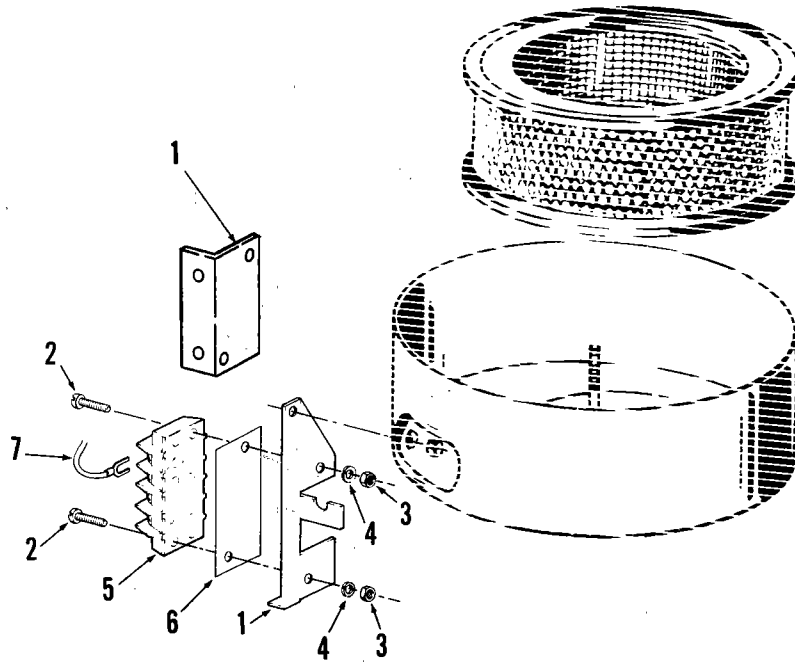


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	160-1158	1	Box Assembly, Breaker (Includes Parts Marked *)
1	815-0358	2	*Screw, Tapping - Hex Head, Slotted (#8-32 x 5/16")
2	160-1149	1	*Cover, Breaker Box
3	160-1148	1	*Gasket, Cover
4	802-0034	2	*Screw, Cap - Socket Head (1/4-20 x 3/4")
5	850-0038	2	*Washer,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

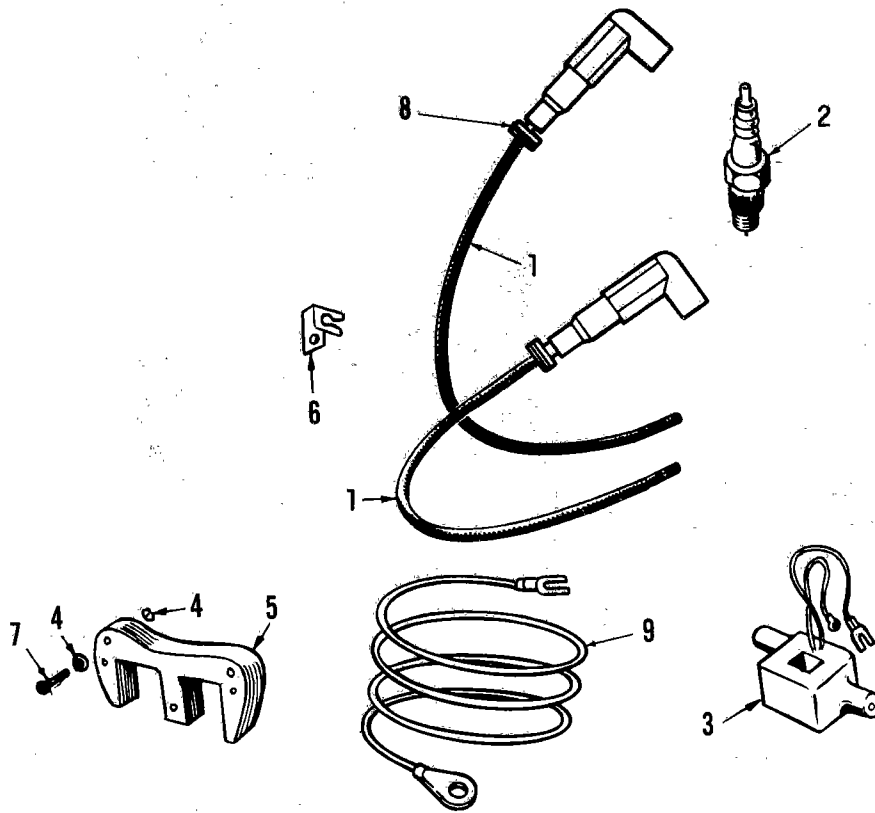
Option 17
Support and Terminal Block Assembly



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

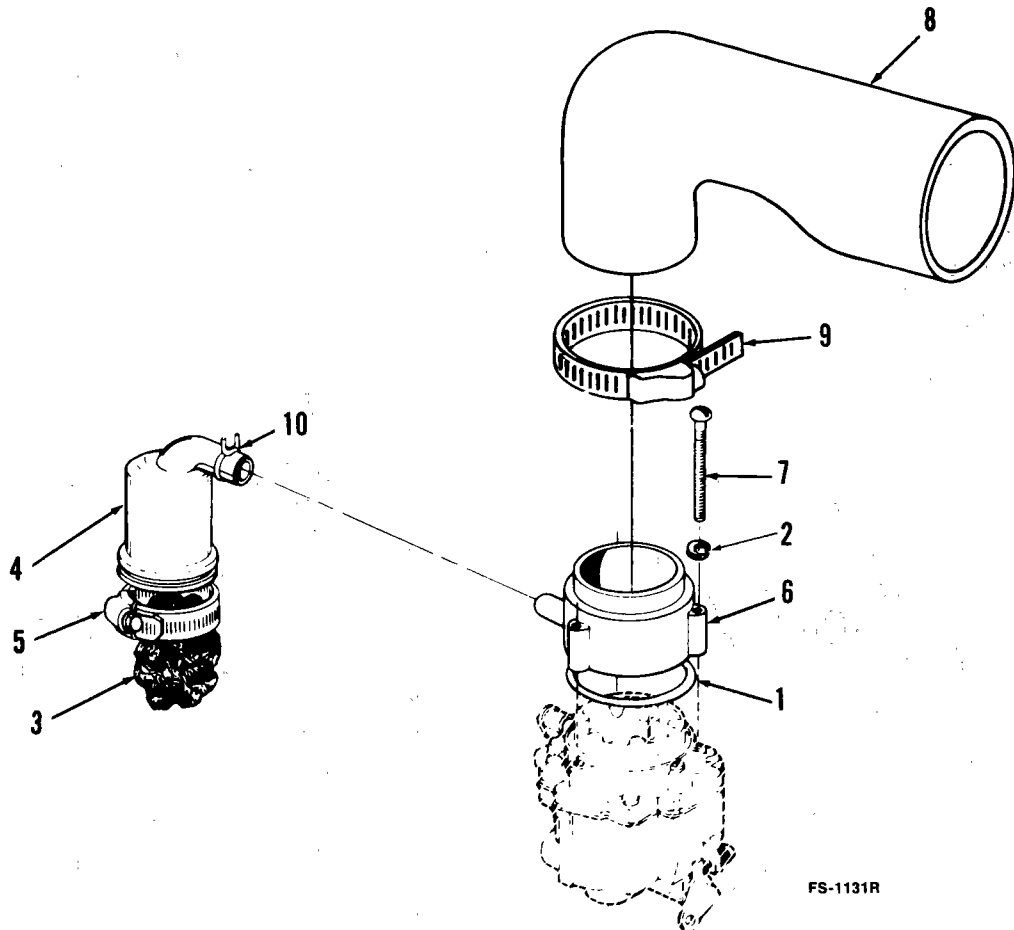
Option 18
Ignition (Magneto)



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**

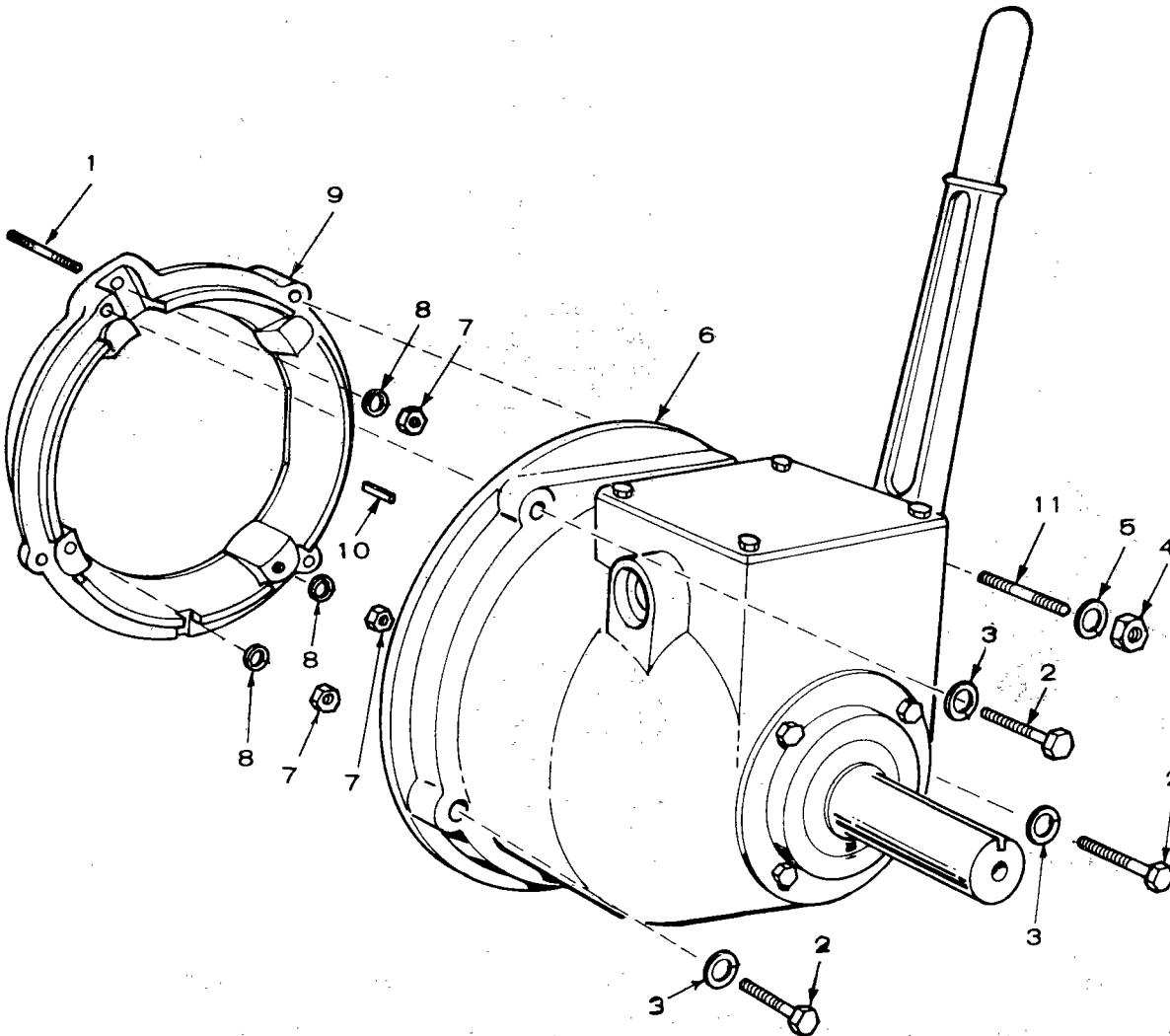


FS-1131R

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.

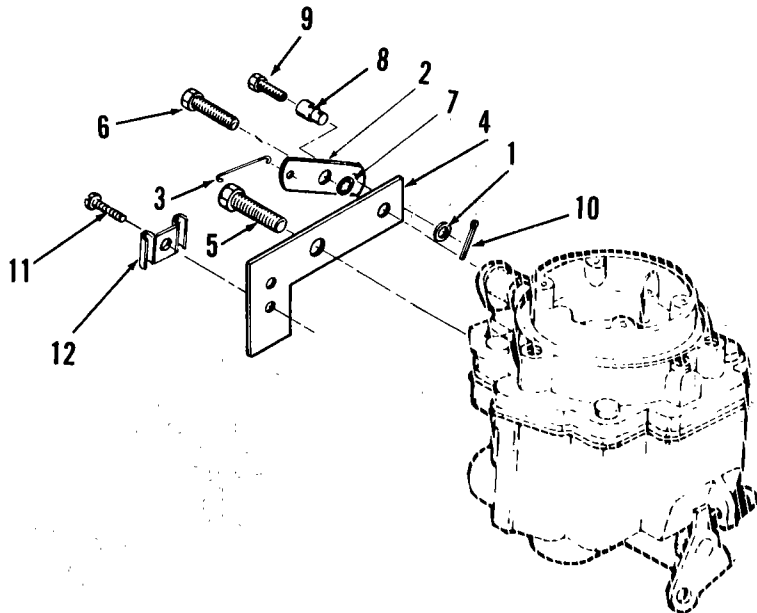
Option 20 Clutch



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.

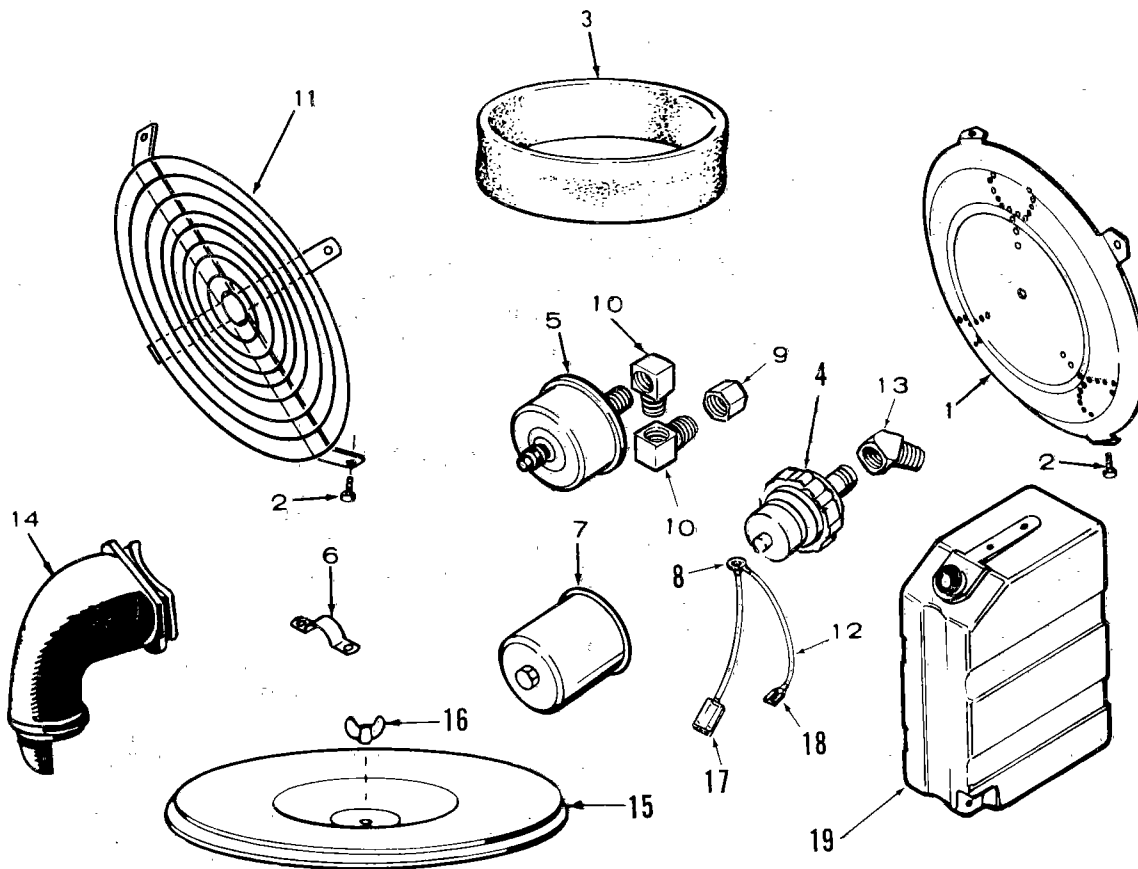
Option 21
Choke Control (Front Pull)



FS-1131R

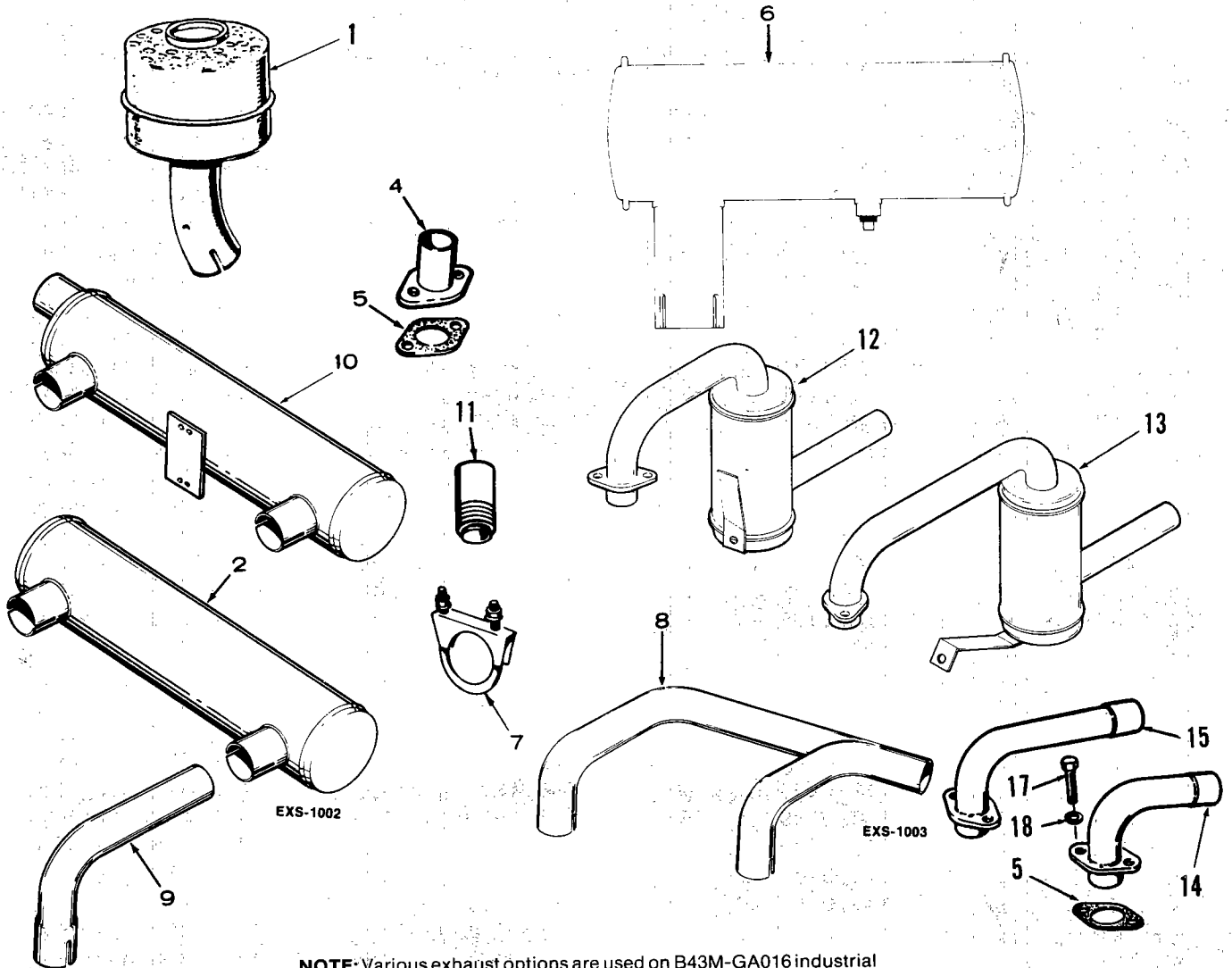
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	526-0140	1	Washer, Flat (#10 Screw)	8	152-0155	1	Swivel, Choke Lever
2	153-0523	1	Lever, Choke	9	815-0693	1	Screw, Machine - Hex Head (#8-32 x .31")
3	153-0500	1	Link, Choke	10	516-0059	1	Pin, Cotter
4	153-0524	1	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°				

Miscellaneous Exhaust Options



NOTE: Various exhaust options are used on B43M-GA016 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
	155-1693	2	Muffler, Exhaust - Raygun Without Spark Arrestor		505-0755	2	1" x 1-13/16"
7			Clamp, Muffler	12	155-1722	1	1" x 3"
	155-1256	2	1-1/4"	13	155-1723	1	Muffler - RH
	155-1257	2	1-3/8"	14	154-2128	1	Muffler - LH
8			Manifold, Exhaust - Crossover	15	154-2129	1	Adapter, Exhaust - Right (1-1/4" OD Outlet)
	154-1986	1	Left Rear Outlet				Adapter, Exhaust - Left (1-1/4" OD Outlet)
	154-1669	1	Left Front Outlet	17	800-0026	4	Screw, Cap - Hex Head (5/16-18" x 3/4")
	154-1986	1	Right Front Outlet	18	850-0045	4	Washer, Lock - Spring (5/16")
	154-1669	1	Right Rear Outlet				

Numerical Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
332-2748	24	503-1133	17	526-0017	9	802-1038	39
336-2378	22	503-1190	17	526-0018	5	803-0071	5
336-2378	23	503-1252	15	526-0018	15	812-0061	27
336-9679	17	503-1336	15	526-0018	17	812-0061	41
337-2229	28	503-1337	15	526-0018	28	812-0062	41
337-2311	11	503-1345	15	526-0018	33	815-0046	13
337-2311	31	503-1351	15	526-0018	39	815-0176	17
338-1080	42	503-1365	17	526-0030	36	815-0181	39
338-1081	42	504-0150	11	526-0063	7	815-0194	12
338-1082	42	505-0110	11	526-0065	12	815-0194	28
338-1931	41	505-0266	11	526-0065	13	815-0194	39
338-1932	41	505-0274	17	526-0066	5	815-0194	41
338-2031	41	508-0008	36	526-0066	7	815-0235	28
357-0030	41	508-0071	36	526-0122	5	815-0261	15
359-0034	42	508-0251	41	526-0130	35	815-0261	17
370-4027	33	508-0253	39	526-0240	11	815-0261	22
402-0549	11	508-0253	41	526-0324	11	815-0261	27
402-0597	11	509-0008	13	526-0325	11	815-0261	31
403-1523	5	509-0040	13	526-1518	36	815-0261	33
403-1523	31	509-0041	5	800-0002	36	815-0261	41
403-2218	11	509-0096	11	800-0004	35	815-0290	28
403-2280	11	509-0168	5	800-0005	33	815-0337	28
403-2280	36	509-0196	28	800-0007	7	815-0337	39
405-3332	36	509-0210	5	800-0007	33	815-0340	27
405-3333	36	510-0013	13	800-0010	5	815-0358	23
405-3334	36	510-0014	13	800-0017	15	815-0359	39
405-3335	36	510-0015	8	800-0017	17	815-0359	41
405-3405	36	510-0099	39	800-0026	33	815-0370	17
405-3453	36	515-0001	8	800-0026	35	815-0370	22
405-3611	36	515-0001	9	800-0028	12	815-0370	27
405-3612	36	515-0227	9	800-0030	33	815-0385	42
406-0566	36	516-0072	5	800-0033	15	815-0387	41
406-0567	36	516-0130	13	800-0033	17	815-0388	41
406-0568	36	516-0141	5	800-0036	33	815-0436	39
501-0497	17	517-0048	5	800-0046	5	815-0499	33
502-0002	15	517-0067	7	800-0048	31	815-0531	17
502-0054	17	517-0129	31	800-0051	39	815-0550	41
502-0313	15	517-0223	15	800-0052	24	815-0570	25
502-0871	15	518-0006	21	800-0052	39	815-0583	27
502-0923	17	518-0014	9	800-0058	11	815-0584	39
502-0927-01	17	518-0311	7	800-0540	5	815-0587	15
502-0928-01	17	518-0387	15	800-0545	13	815-0587	17
502-0929-01	17	518-0450	15	800-0571	5	815-0590	15
502-0932-01	17	518-0452	43	800-0572	5	815-0590	17
502-0933-01	17	518-0459	15	800-0730	33	815-0591	15
502-0935	17	518-0466	15	800-0730	35	815-0591	17
502-0965-01	17	525-0305	43	801-0049	7	815-0592	15
503-0183	15	526-0002	15	801-0050	7	815-0610	15
503-0183	17	526-0003	17	802-0034	22	815-0610	28
503-1133	15	526-0008	17	802-0034	23	815-0647	17

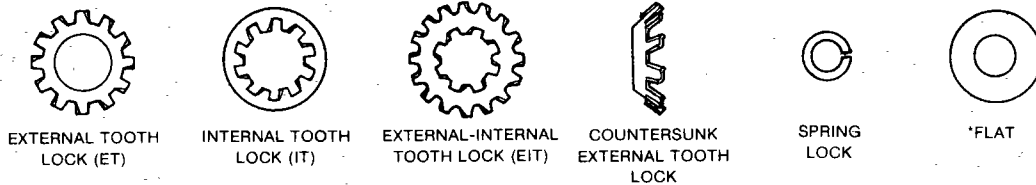
Numerical Index

Part No.	Page	Part No.	Page	Part No.	Page	Part No.	Page
815-0657	11	862-0015	17				
820-1077	13	870-0131	21				
821-0005	17	870-0196	27				
821-0009	15	870-0221	17				
821-0009	31	870-0257	36				
821-0010	11	870-0302	7				
821-0010	31	870-0328	13				
821-0010	36	870-0421	15				
821-0014	11	870-0433-03	28				
821-0014	31	870-0437	36				
821-0014	36	870-1183	27				
821-0016	5	898-1193-03	28				
821-0016	11						
821-0016	31						
821-0029	11						
821-0029	33						
821-0029	35						
821-0031	11						
821-0031	36						
821-0033	36						
850-0020	41						
850-0038	22						
850-0038	23						
850-0040	7						
850-0040	17						
850-0040	24						
850-0040	25						
850-0040	33						
850-0040	35						
850-0040	36						
850-0045	15						
850-0045	17						
850-0045	33						
850-0045	35						
850-0050	5						
850-0050	11						
850-0050	24						
850-0050	39						
850-0055	9						
850-2005	22						
856-0006	15						
856-0008	11						
856-0008	28						
856-0010	31						
860-0005	42						
862-0001	24						
862-0001	33						
862-0003	24						
862-0003	39						
862-0015	15						

HARDWARE IDENTIFICATION

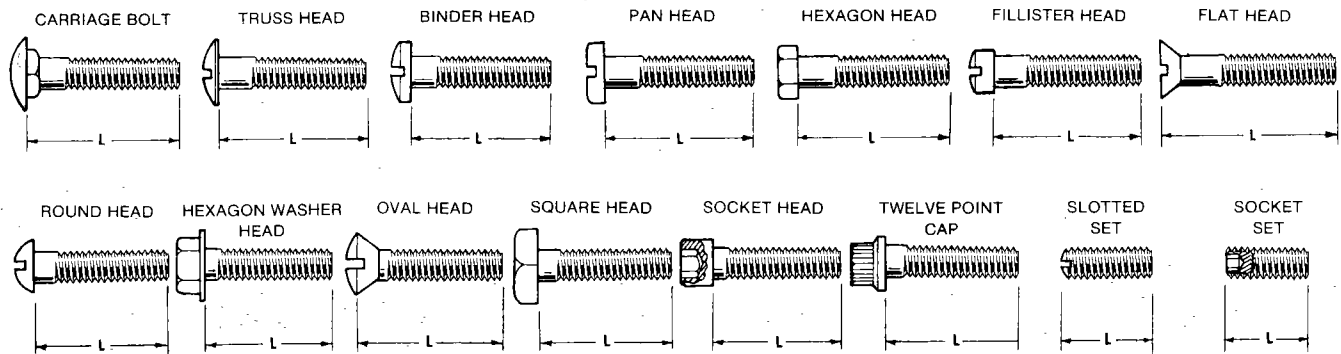
Illustrated hardware items are only for identification purposes. All hardware items listed throughout this parts catalog are steel SAE grade five (5) or lower (zinc plated with clear chromate dip) unless parts description indicates differently. All dimensions are in inches.

WASHER TYPES



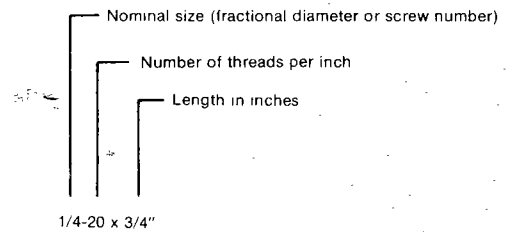
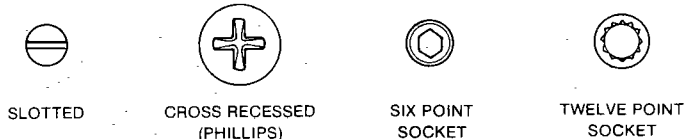
* - Flat washer dimensions given are: Inside Diameter (ID), Outside Diameter (OD) and Thickness (Thk).

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

Telephone: (612) 574-5000
Telex: 275477
Cable ONAN