

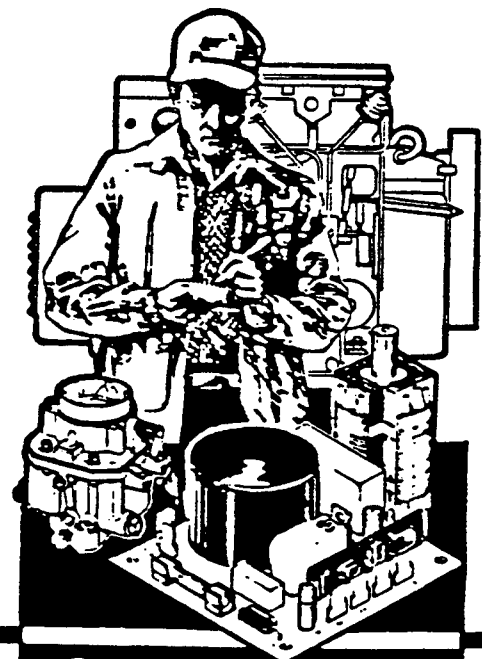
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Onan

**Parts
Manual**

M C C K

Marine GenSet



Onan Service Parts

927-0224
5-88 (Spec H-J)
Replaces
8-81 (Spec H)
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. Below the logo is a large rectangular box labeled "MODEL AND SPEC NO.". Below that is a smaller rectangular box labeled "SERIAL NO.". The bottom right corner of the nameplate is shown peeling away, revealing a second identical nameplate underneath. The identifier "M-1149" is printed at the bottom right of the top nameplate.

Onan

MODEL AND SPEC NO.

SERIAL NO.

M-1149

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

Important Safety Precautions

Read and observe these safety precautions when using or working on electric generators, engines and related equipment. Also read and follow the literature provided with the equipment.

Proper operation and maintenance are critical to performance and safety. Electricity, fuel, exhaust, moving parts and batteries present hazards that can cause severe personal injury or death.

FUEL, ENGINE OIL, AND FUMES ARE FLAMMABLE AND TOXIC

Fire, explosion, and personal injury can result from improper practices.

- Used engine oil, and benzene and lead, found in some gasoline, have been identified by government agencies as causing cancer or reproductive toxicity. When checking, draining or adding fuel or oil, do not ingest, breathe the fumes, or contact gasoline or used oil.
- Do not fill tanks with engine running. Do not smoke around the area. Wipe up oil or fuel spills. Do not leave rags in engine compartment or on equipment. Keep this and surrounding area clean.
- Inspect fuel system before each operation and periodically while running.
- Equip fuel supply with a positive fuel shutoff.
- Do not store or transport equipment with fuel in tank.
- Keep an ABC-rated fire extinguisher available near equipment and adjacent areas for use on all types of fires except alcohol.
- Unless provided with equipment or noted otherwise in installation manual, fuel lines must be copper or steel, secured, free of leaks and separated or shielded from electrical wiring.
- Use approved, non-conductive flexible fuel hose for fuel connections. Do not use copper tubing as a flexible connection. It will work-harden and break.

EXHAUST GAS IS DEADLY

- Engine exhaust contains carbon monoxide (CO), an odorless, invisible, poisonous gas. Learn the symptoms of CO poisoning.
- Never sleep in a vessel, vehicle, or room with a genset or engine running unless the area is equipped with an operating CO detector with an audible alarm.
- Each time the engine or genset is started, or at least every day, thoroughly inspect the exhaust system. Shut down the unit and repair leaks immediately.

- Warning: Engine exhaust is known to the State of California to cause cancer, birth defects and other reproductive harm.

Make sure exhaust is properly ventilated.

- Vessel bilge must have an operating power exhaust.
- Vehicle exhaust system must extend beyond vehicle perimeter and not near windows, doors or vents.
- Do not use engine or genset cooling air to heat an area.
- Do not operate engine/genset in enclosed area without ample fresh air ventilation.
- Expel exhaust away from enclosed, sheltered, or occupied areas.
- Make sure exhaust system components are securely fastened and not warped.

MOVING PARTS CAN CAUSE SEVERE PERSONAL INJURY OR DEATH

- Do not remove any guards or covers with the equipment running.
- Keep hands, clothing, hair, and jewelry away from moving parts.
- Before performing any maintenance, disconnect battery (negative [-] cable first) to prevent accidental starting.
- Make sure fasteners and joints are secure. Tighten supports and clamps, keep guards in position over fans, drive belts, etc.
- If adjustments must be made while equipment is running, use extreme caution around hot manifolds and moving parts, etc. Wear safety glasses and protective clothing.

BATTERY GAS IS EXPLOSIVE

- Wear safety glasses and do not smoke while servicing batteries.
- Always disconnect battery negative (-) lead first and reconnect it last. Make sure you connect battery correctly. A direct short across battery terminals can cause an explosion. Do not smoke while servicing batteries. Hydrogen gas given off during charging is explosive.
- Do not disconnect or connect battery cables if fuel vapors are present. Ventilate the area thoroughly.

DO NOT OPERATE IN FLAMMABLE AND EXPLOSIVE ENVIRONMENTS

Flammable vapor can be ignited by equipment operation or cause a diesel engine to overspeed and become difficult to stop, resulting in possible fire, explosion, severe personal injury and death. **Do not operate diesel equipment where a flammable vapor environment can be created by fuel spill, leak, etc., unless equipped with an automatic safety device to block the air intake and stop the engine.**

HOT COOLANT CAN CAUSE SEVERE PERSONAL INJURY

- Hot coolant is under pressure. Do not loosen the coolant pressure cap while the engine is hot. Let the engine cool before opening the pressure cap.

ELECTRICAL SHOCK CAN CAUSE SEVERE PERSONAL INJURY OR DEATH

- Do not service control panel or engine with unit running. High voltages are present. Work that must be done while unit is running should be done only by qualified service personnel.
- Do not connect the generator set to the public utility or to any other electrical power system. Electrocutation can occur at a remote site where line or equipment repairs are being made. An approved transfer switch must be used if more than one power source is connected.
- Disconnect starting battery (negative [-] cable first) before removing protective shields or touching electrical equipment. Use insulative mats placed on dry wood platforms. Do not wear jewelry, damp clothing or allow skin surface to be damp when handling electrical equipment.
- Use insulated tools. Do not tamper with interlocks.
- Follow all applicable state and local electrical codes. Have all electrical installations performed by a qualified licensed electrician. Tag open switches to avoid accidental closure.
- With transfer switches, keep cabinet closed and locked. Only authorized personnel should have cabinet or operational keys. Due to serious shock hazard from high voltages within cabinet, all service and adjustments must be performed by an electrician or authorized service representative.

If the cabinet must be opened for any reason:

1. Move genset operation switch or Stop/Auto/Handcrank switch (whichever applies) to Stop.
2. Disconnect genset batteries (negative [-] lead first).
3. Remove AC power to automatic transfer switch. If instructions require otherwise, use extreme caution due to shock hazard.

MEDIUM VOLTAGE GENERATOR SETS (601V TO 15kV)

- Medium voltage acts differently than low voltage. Special equipment and training are required to work on or around medium voltage equipment. Operation and maintenance must be done only by persons trained and qualified to work on such devices. Improper use or procedures will result in severe personal injury or death.
- Do not work on energized equipment. Unauthorized personnel must not be permitted near energized equipment. Induced voltage remains even after equipment is disconnected from the power source. Plan maintenance with authorized personnel so equipment can be de-energized and safely grounded.

GENERAL SAFETY PRECAUTIONS

- Do not work on equipment when mentally or physically fatigued or after consuming alcohol or drugs.
- Carefully follow all applicable local, state and federal codes.
- Never step on equipment (as when entering or leaving the engine compartment). It can stress and break unit components, possibly resulting in dangerous operating conditions from leaking fuel, leaking exhaust fumes, etc.
- Keep equipment and area clean. Oil, grease, dirt, or stowed gear can cause fire or damage equipment by restricting airflow.
- Equipment owners and operators are solely responsible for operating equipment safely. Contact your authorized Onan/Cummins dealer or distributor for more information.

KEEP THIS DOCUMENT NEAR EQUIPMENT FOR EASY REFERENCE.

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Introduction

This Parts Manual applies to the Standard Gen Sets Listed below. The illustrations are arranged in groups of related items, and each part or assembly is identified by a Reference Number. All parts illustrated are typical, and unless otherwise mentioned in the description column the parts are interchangeable between models.

These typical illustrations are subject to change and reflect only the latest replacement parts arrangement. The Right and Left sides of the Set are determined by FACING the FRONT (Engine end) of the Set.

Set Data Table

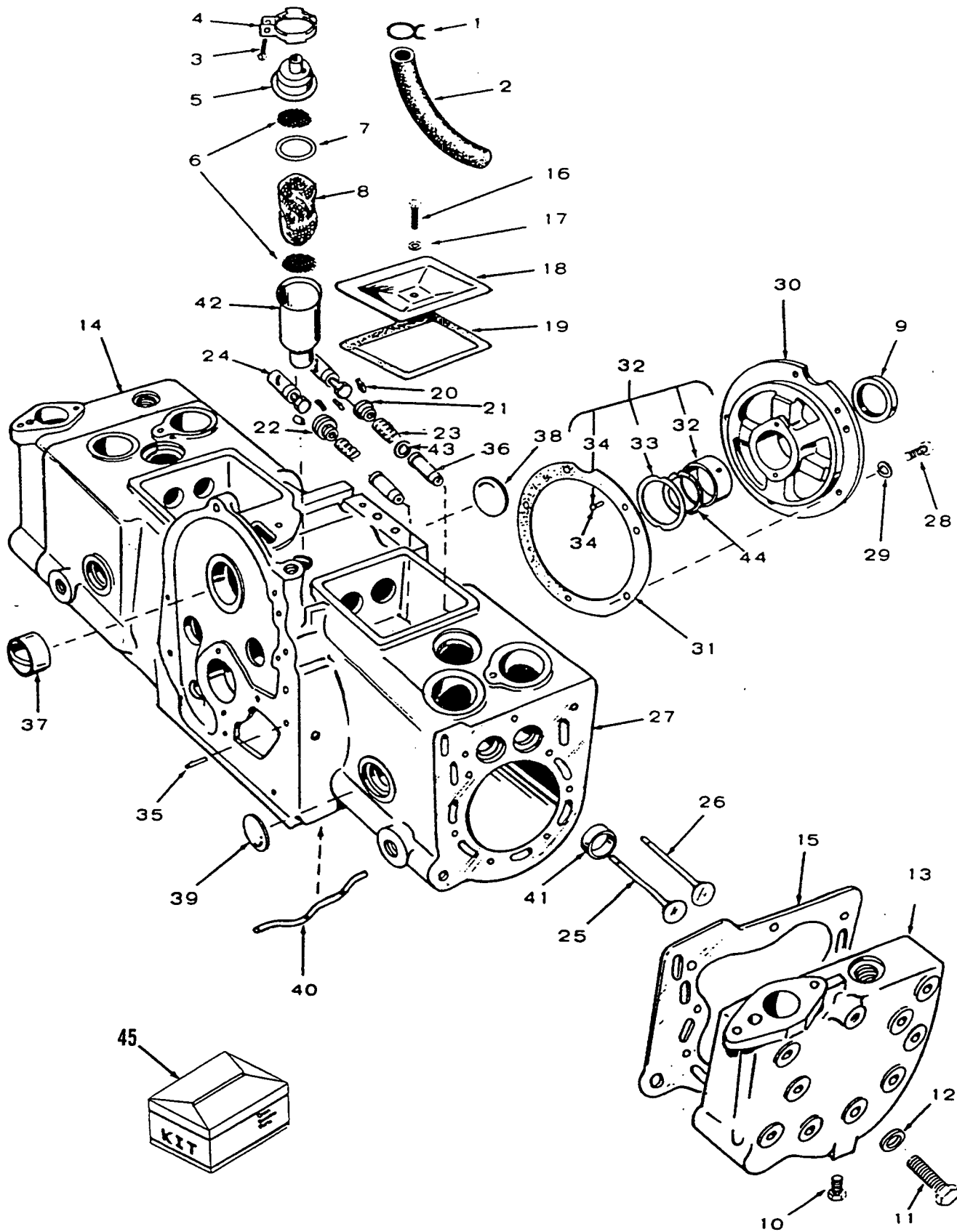
MODEL AND SPECIFICATION	ELECTRICAL DATA					PARTS KEY NO.
	WATTS	VOLTS	HERTZ	WIRE	PHASE	
3.5MCCK-53CR/*	3500	120/240	50	4	1	1
4.0MCCK-3CR/*	4000	120/240	60	4	1	
5.5MCCK-53CR/*	5500	120/240	50	4	1	2
6.5MCCK-3CR/*	6500	120/240	60	4	1	

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

Standard Parts Section

This section contains the illustrated parts listing for the standard generator sets listed in the Data Table.

Cylinder Block



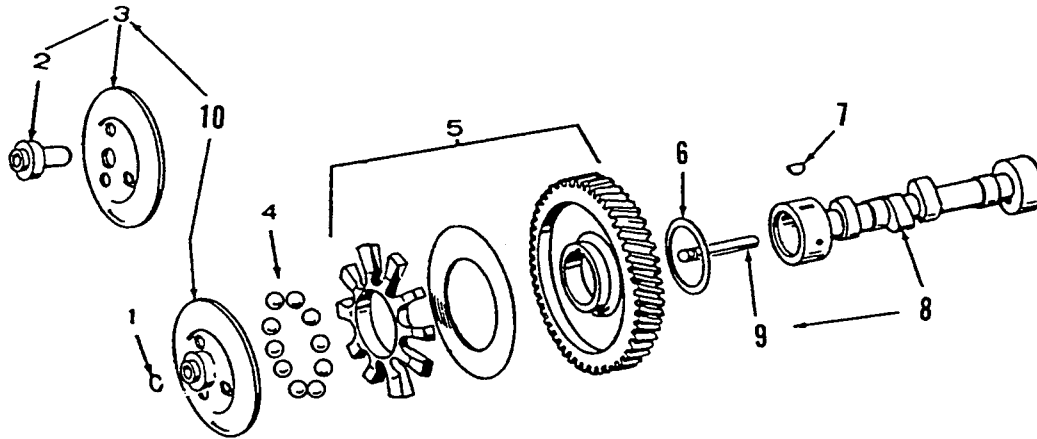
Cylinder Block

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0170	2	Clamp, Hose	27	110-2553	1	Block Assembly, Cylinder (Includes Parts Marked *)
2	503-0761	1	Hose, Rubber - Preformed	28	800-0512	5	*Screw, Cap - Hex Head (Special)
3	809-0035	1	Screw, Tapping - Round Head, Slotted (#8 x 3/4")	29	850-0045	5	*Washer, Lock - Spring (5/16")
4	123-0951	1	Clamp, Loop - Metal	30	101-0316	1	*Plate, Bearing - Rear (Less Bearing)
5	123-0955	1	Cap, Tube - Breather	31	101-0115	1	*Gasket Kit, Plate - Bearing (Includes Shims)
6	123-0958	2	Screen, Tube - Breather	32			Bearing Kit, Crankshaft (Includes Thrust Washer)
7	509-0117	1	Gasket, Tube - Breather		101-0450	2	* Standard
8	123-1417	1	Filter, Tube - Breather		101-0450-02	2	.002" Undersize
9	509-0041	1	Seal, Oil (In Gasket Kit 168-0149)		101-0450-10	2	.010" Undersize
10	502-0153	2	Plug, Pipe - Hex Head (Brass)		101-0450-20	2	.020" Undersize
11	800-0509	18	Screw, Cap - Hex Head (Special)		101-0450-30	2	.030" Undersize
12	526-0122	18	Washer, Flat (5/16)	33	104-0575	2	*Washer, Thrust
13			Head, Cylinder - Right Side	34	516-0072	2	*Pin, Drive - Headed (.190" Dia. x 11/32")
	110-1479	1	Sets Without Heat Exchanger	35	516-0141	2	*Pin, Dowel (5/16" Dia. x 7/8")
	110-1506	1	Sets With Heat Exchanger	36	110-0902	4	*Guide, Valve
14			Head, Cylinder - Left Side	37	101-0367	2	**Bearing, Sleeve - Camshaft
	110-1478	1	Sets Without Heat Exchanger	38	517-0048	1	*Plug, Expansion (1-5/8" Dia.)
	110-1505	1	Sets With Heat Exchanger	39	517-0011	8	*Plug, Expansion (1-1/4" Dia.)
15	110-3535	2	Gasket, Head	40	120-0386	1	*Tube, Oil
16	800-0012	2	Screw, Cap - Hex Head (1/4-20 x 2-1/4")	41			Seat, Valve - Exhaust
17	526-0063	4	Washer, Flat - Copper (1/4)		110-0872	2	* Standard
18	110-0666	2	Cover, Valve		110-0872-02	2	.002" Oversize
19	110-0667	2	Gasket, Cover - Valve		110-0872-05	2	.005" Oversize
20	110-0639	8	Lock, Stem - Valve		110-0872-10	2	.010" Oversize
21	110-0893	2	Washer, Retainer - Intake Valve Spring		110-0872-25	2	.025" Oversize
22	110-0904	2	Rotocap, Spring - Exhaust Valve	42	123-0953	1	*Tube, Breather
23	110-0539	4	Spring, Valve	43	110-3136	2	*Gasket, Guide - Intake Valve
24			Tappet, Valve	44	104-0776	1	Shim, Bearing - Thrust
	115-0006	4	Standard	45	168-0149	1	Gasket Kit, Engine
	115-0006-02	4	.002" Oversize				
	115-0006-05	4	.005" Oversize				
25	110-0880	2	Valve, Exhaust (Chrome Cobalt Alloy)				
26	110-0881	2	Valve, Intake (Steel)				

* - Parts Included in 110-2553 Cylinder Block Assembly

** - Units with Hi-Lift Cam, Use 101-0405 Bearing(1)

Camshaft

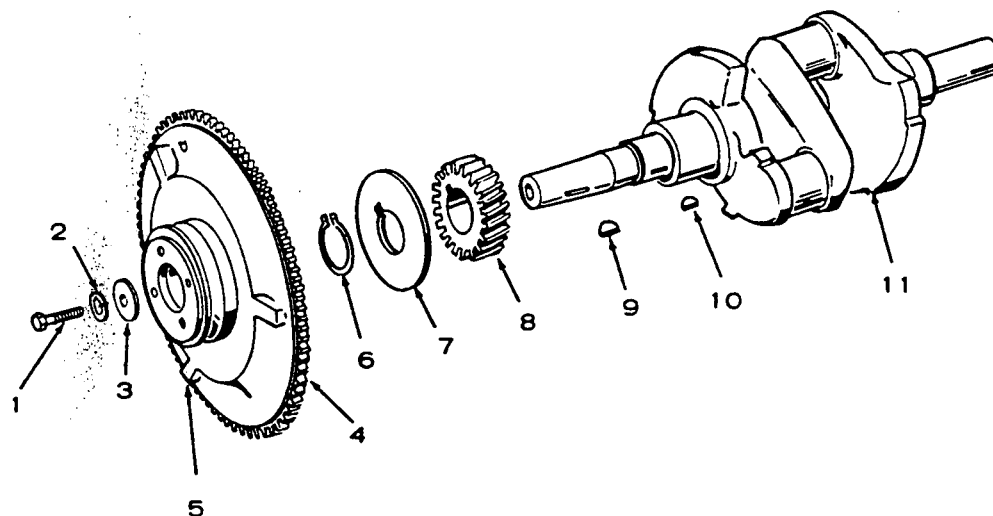


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-0078	1	Ring, Retaining
2	150-1519	1	*Hub, Governor
3	150-1520	1	*Cup, Governor
4	510-0015	10	Ball, Fly
5	105-0332	1	Gear Assembly, Camshaft (Includes Spacer and Plate)
6	105-0541	1	Washer, Thrust

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
7	515-0001	1	Key, Woodruff (1/2" Dia. x 1/8" Thk)
8	105-0140	1	Camshaft Assembly (Includes Center Pin)
9	150-0075	1	Pin, Center - Camshaft
10	150-1695	1	Cup Kit, Governor (Includes Parts Marked *)

* - Parts Included in 150-1695 Governor Cup Kit

Crankshaft and Flywheel

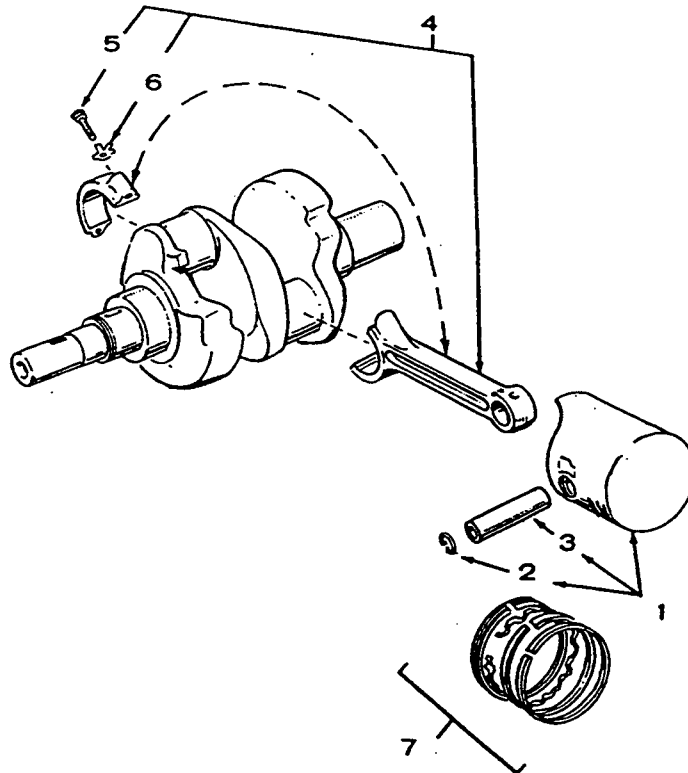


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	104-0170	1	Screw, Cap - Hex Head (Special)
2	850-0055	1	Washer, Lock - Spring (7/16")
3	526-0017	1	Washer, Flat (7/16)
4	104-1069	1	Flywheel (Includes Ring Gear)
5	134-0673	1	Gear, Ring
6	518-0014	1	Ring, Retaining

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
7	104-0043	1	Washer, Retaining - Gear
8	104-0032	1	Gear, Crankshaft
9	515-0098	1	*Key, Woodruff (5/8" Dia. x 3/16" Thk)
10	515-0001	1	*Key, Woodruff (1/2" Dia. x 1/8" Thk)
11	104-1346	1	Crankshaft Kit (Includes Parts Marked *)

* - Parts Included in Crankshaft Kit

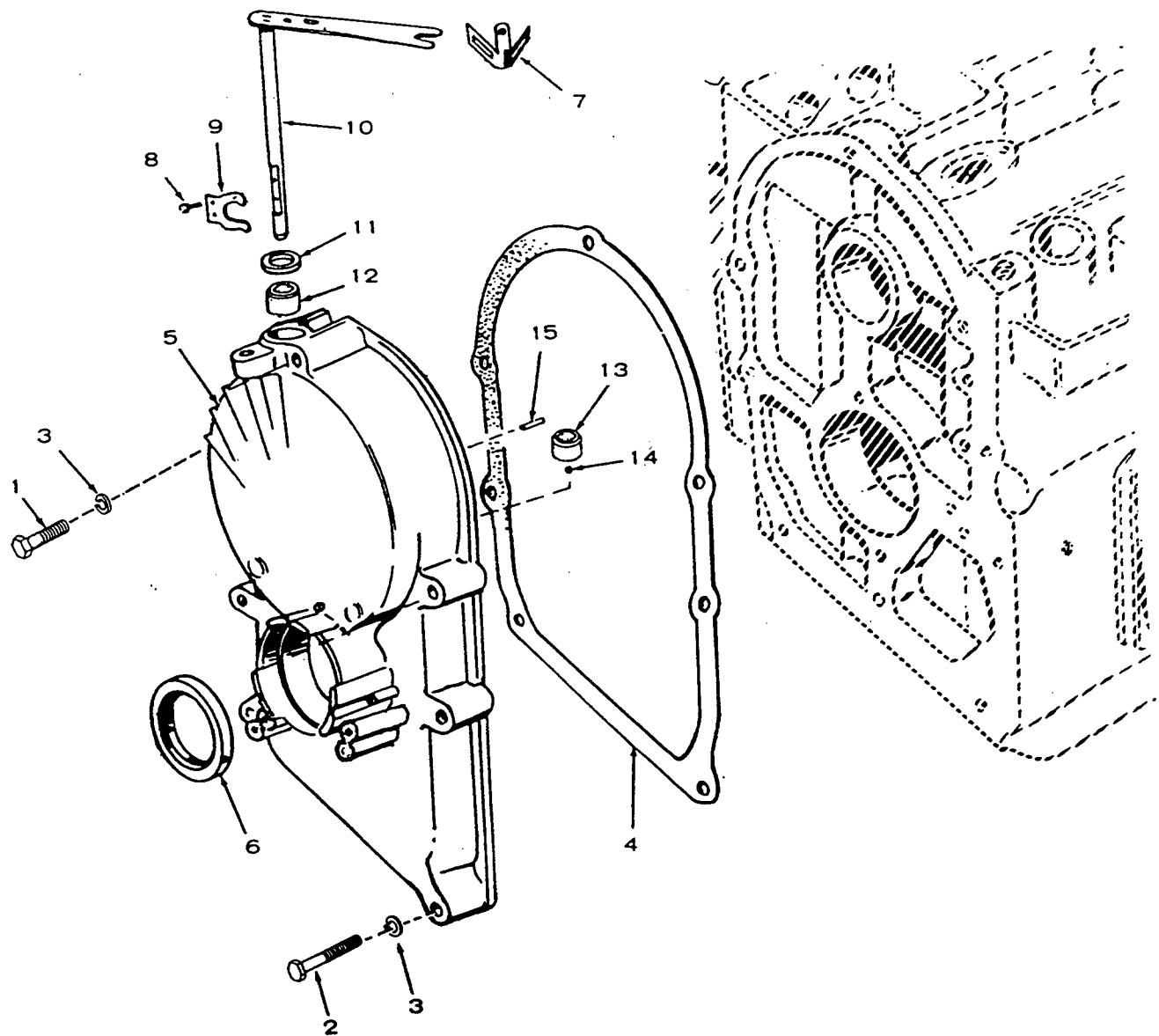
Piston and Rod



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Piston and Pin (Includes Retaining Rings and Wrist Pins)
	112-0179	2	Standard
	112-0179-05	2	.005" Oversize
	112-0179-10	2	.010" Oversize
	112-0179-20	2	.020" Oversize
	112-0179-30	2	.030" Oversize
	112-0179-40	2	.040" Oversize
2	112-0003	4	Ring, Retaining
3	112-0069	2	Pin, Wrist - Piston
4			Rod, Connecting (Includes Screw and Lock)
	114-0098	2	Standard
	114-0098-10	2	.010" Undersize
	114-0098-20	2	.020" Undersize
	114-0098-30	2	.030" Undersize

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
5	800-0548	4	Screw, Cap - Hex Head (Special)
6	114-0059	4	Washer, Lock - Connecting Rod
7			Ring Set, Piston
	113-0152	2	Standard
	113-0152-05	2	.005" Oversize
	113-0152-10	2	.010" Oversize
	113-0152-20	2	.020" Oversize
	113-0152-30	2	.030" Oversize
	113-0152-40	2	.040" Oversize

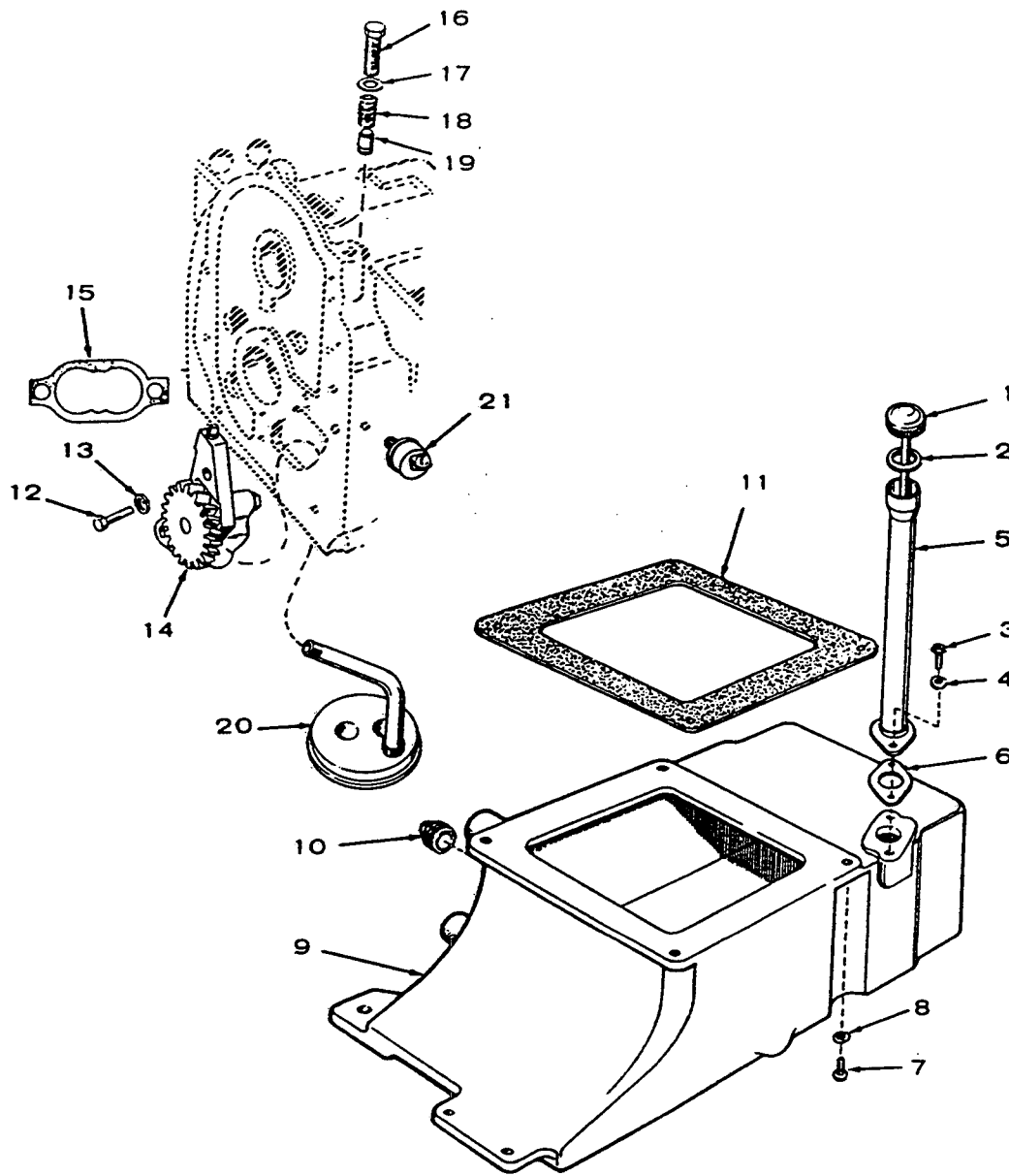
Gearcase



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0034	1	Screw, Cap - Hex Head (5/16-18 x 2-1/4")
2	114-0022	4	Screw, Cap - Hex Head (5/16-18 x 1-3/4")
3	850-0045	5	Washer, Lock - Spring (5/16")
4	103-0011	1	Gasket, Gearcase
5	103-0667	1	Gearcase Assembly (Includes Parts Marked *)
6	509-0040	1	*Seal, Oil - Crankshaft
7	150-0678	1	*Clip, Adjustment - Sensitivity
8	815-0046	2	Screw, Machine - Pan Head, Cross-Recessed (#8-32 x 3/8")
9	150-1187	1	*Yoke, Governor

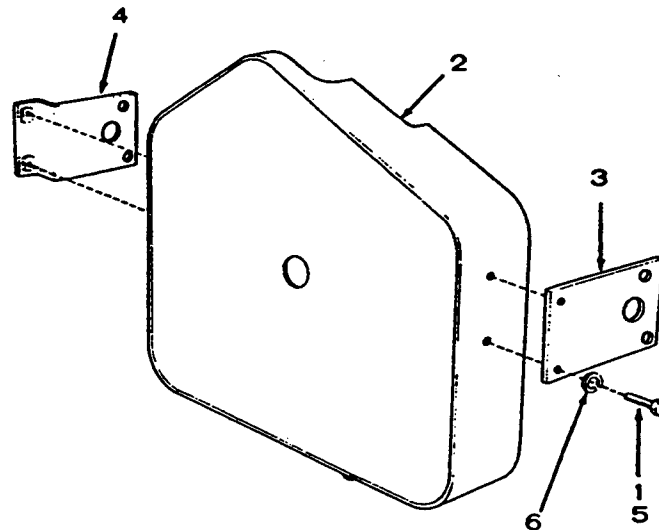
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
10	150-1564	1	*Arm and Shaft, Governor (Includes Clip)
11	509-0008	1	*Seal, Oil - Governor Shaft
12	510-0013	1	*Bearing, Needle - Upper
13	510-0013	1	*Bearing, Needle - Lower
14	510-0014	1	*Ball, Bearing
15	516-0130	1	*Pin, Roll - Yoke Stop
	815-0193	2	*Screw, Hex Head - Thread Cutting (1/4-20 x 3/8") (Not Shown)
	815-0261	1	*Screw, Hex Head - Thread Cutting (1/4-20 x 1/2") (Not Shown)

Oil System



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	123-1160	1	Indicator, Fill - Oil (Includes Gasket Cap)	11	102-0158	1	Gasket, Base - Oil
2	123-0191	1	Gasket, Cap - Oil Fill	12	800-0007	2	Screw, Cap - Hex Head (1/4-20 x 1")
3	800-0004	2	Screw, Cap - Hex Head (1/4-20 x 5/8")	13	850-0040	2	Washer, Lock - Spring (1/4")
4	850-0040	2	Washer, Lock - Spring (1/4")	14	120-0491	1	Pump, Oil
5	123-0508	1	Tube, Fill - Oil	15	120-0161	1	Gasket Kit, Pump - Oil
6	141-0078	1	Gasket, Tube - Oil Fill	16	801-0048	1	Screw, Cap - Hex Head (3/8-24 x 3/4")
7	102-0455	4	Screw, Cap - Hex Head (Special)	17	526-0066	1	Washer, Flat - Copper (3/8)
8	850-0050	4	Washer, Lock - Spring (3/8")	18	120-0140	1	Spring, Valve - Bypass
9	102-0517	1	Base, Oil	19	120-0398	1	Plunger, Valve - Bypass
10	505-0056	2	Plug, Pipe - Square Head	20	120-0400	1	Cup, Intake - Oil Pump
				21	309-0113	1	Switch, Pressure - Low Oil

Belt Guard

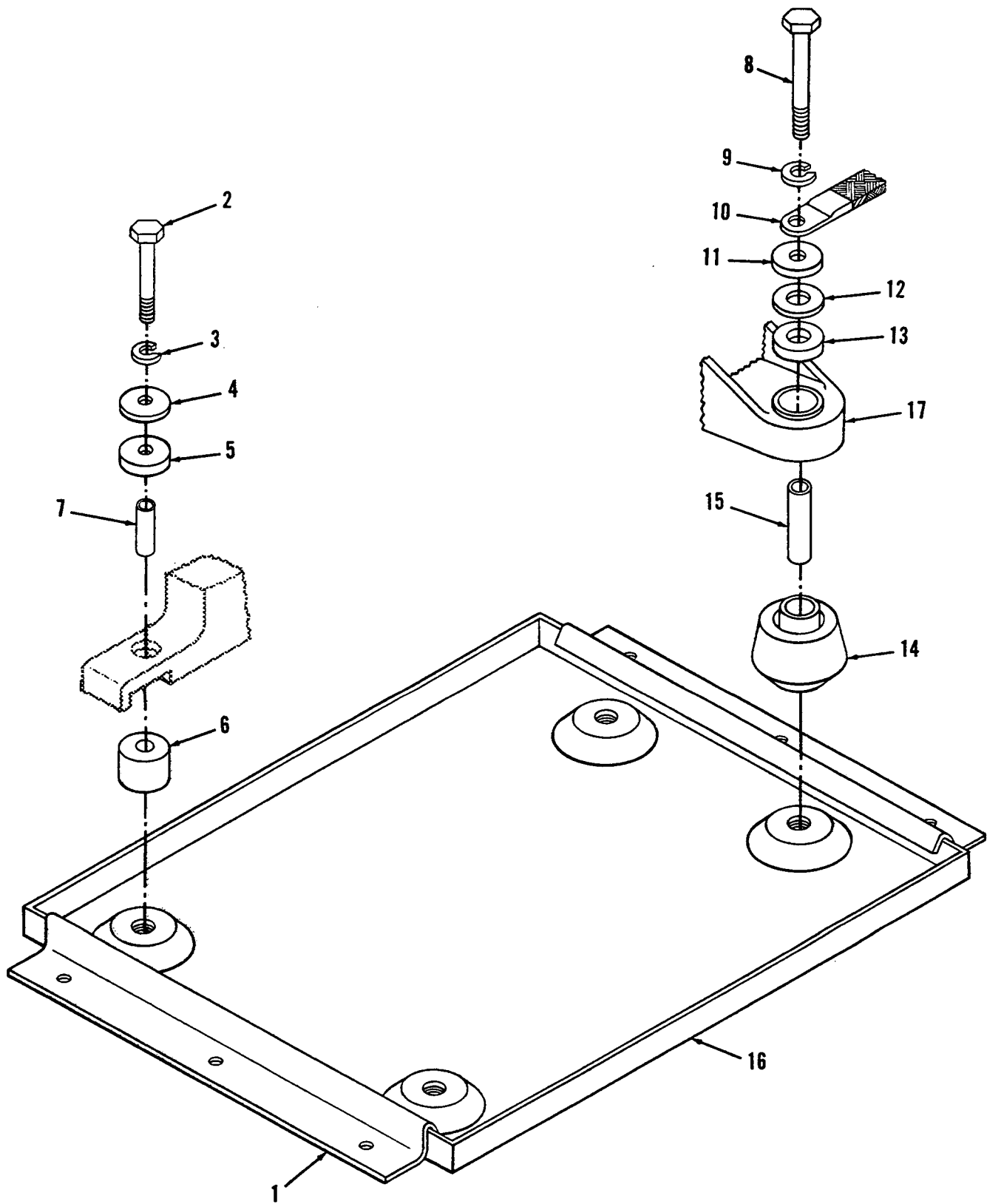


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0010	4	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2") Key 1
2	131-0277	1	Guard, Belt
3	131-0281	1	*Bracket, Guard - Belt (Right Hand)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
4	131-0282	1	*Bracket, Guard - Belt (Left Hand)
5	800-0708	4	Screw, Cap - Hex Head (1/4-20 x 1/2") - Key 2
6	850-0160	4	Washer, Lock (1/4") - Key 2

* - Brackets Attached to Engine via Cylinder Head Cap Screws.

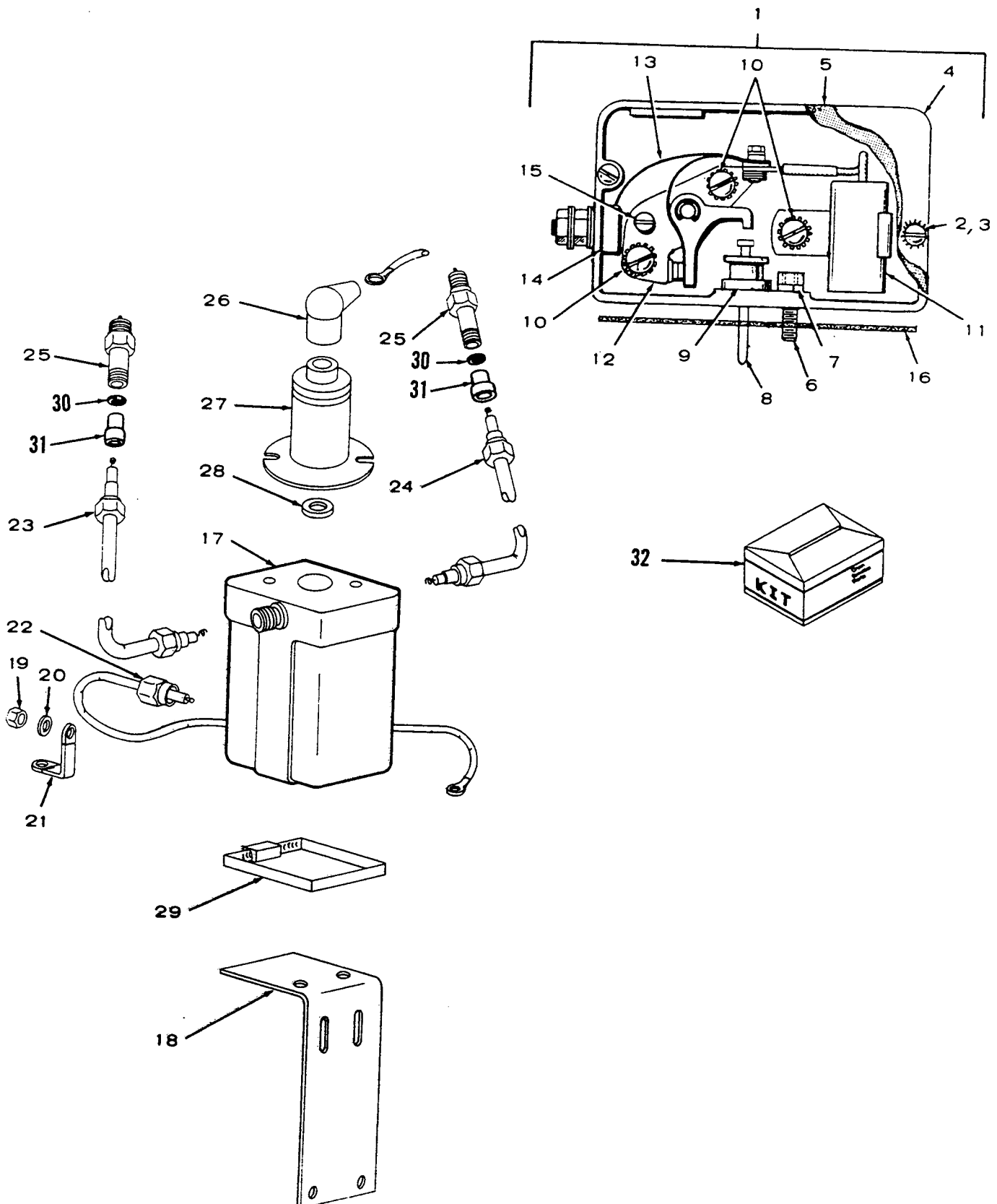
Vibration Mounts



Vibration Mounts

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	405-1265	2	Clamp, Holddown	10	337-0091	1	Strap, Ground
2	800-0055	2	Screw, Cap - Hex Head (3/8-16 x 2-1/4")	11	526-0128	2	Washer, Flat (15/32")
3	850-0050	2	Washer, Lock - Spring (3/8")	12	526-0198	4	Washer, Flat (5/8")
4	526-0124	4	Washer, Flat (3/8")	13	402-0282	2	Snubber, Rubber
5	402-0131	2	Snubber, Rubber	14	402-0284	2	Cushion, Rubber
6	402-0036	2	Cushion, Rubber	15	402-0290	2	Bushing, Sleeve
7	402-0176	2	Bushing, Sleeve	16	403-1505	1	Pan, Drip
8	800-0081	2	Screw, Cap - Hex Head (7/16-14 x 3-1/2")	17	232-2321	1	Support, Generator
9			Washer, Lock				
	850-0055	1	Spring (7/16")				
	856-0012	1	External/Internal Tooth (7/16")				

Ignition System



Ignition System

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	160-1277	1	Box Assembly, Breaker (Includes Parts Marked *)	22	336-4674	1	Lead, Electrical - Shielded (Box to Coil)
2	812-0077	2	*Screw, Machine - Round Head Slotted (#8-32 x 3/8")	23	167-1631	1	Lead, Electrical - Shielded, Spark Plug (25") (Includes Parts Marked †)
3	856-0002	2	Washer, Lock - External Internal Tooth (#8)	24	167-1632	1	Lead, Electrical - Shielded, Spark Plug (10") (Includes Parts Marked †)
4	160-0930	1	*Cover, Box - Breaker	25	167-0199	2	Plug, Spark - Shielded
5	160-0440	1	*Gasket, Box - Breaker	26	167-0300	1	Nipple, Rubber - Coil Terminal
6	802-0034	2	*Screw, Cap - Socket Head (1/4-20 x 3/4")	27	312-0083	1	Condenser, Ignition - Shielded
7	850-0040	2	*Washer, Lock - Spring (1/4")	28	509-0102	1	Seal, "O" Ring
8	160-0265	1	*Plunger	29	503-1142	1	Clamp, Loop - Coil Mounting
9	160-0264	1	*Guide, Plunger	30	167-0077	2	†Spring and Washer Assembly (Includes Parts Marked ††)
10	518-0049	3	*Screw, Machine - Round Head with External Tooth Lockwasher (#8-32 x 1/4")		167-0302	2	††Spring, Steel Wire
11	312-0069	1	*Condenser, Ignition		167-0301	2	††Eyelet, Spring
12	160-0002	1	*Point Set, Breaker		526-0320	2	††Washer, Flat (.133 I.D. x .281 O.D. x .025" Thk)
13	160-0428	1	*Lead, Flat - Point Set to Terminal	31	167-0208	2	†Grommet, Rubber
14	160-0349	1	*Terminal Assembly, Box - Breaker	32	160-0836	1	Tune Up Kit, Ignition (Includes Parts Marked *)
15	160-0075	1	*Pivot, Adjusting - Point Set				
16	160-0043	1	*Gasket, Mounting - Breaker Box				
17	166-0382	1	Coil, Ignition - Shielded				
18	166-0704	1	Bracket, Mounting - Coil				
19	870-0053	2	Nut, Hex (#10-32)				
20	854-0010	1	Washer, Lock - Internal Tooth (#10)				
21	337-0419	1	Strap, Ground				

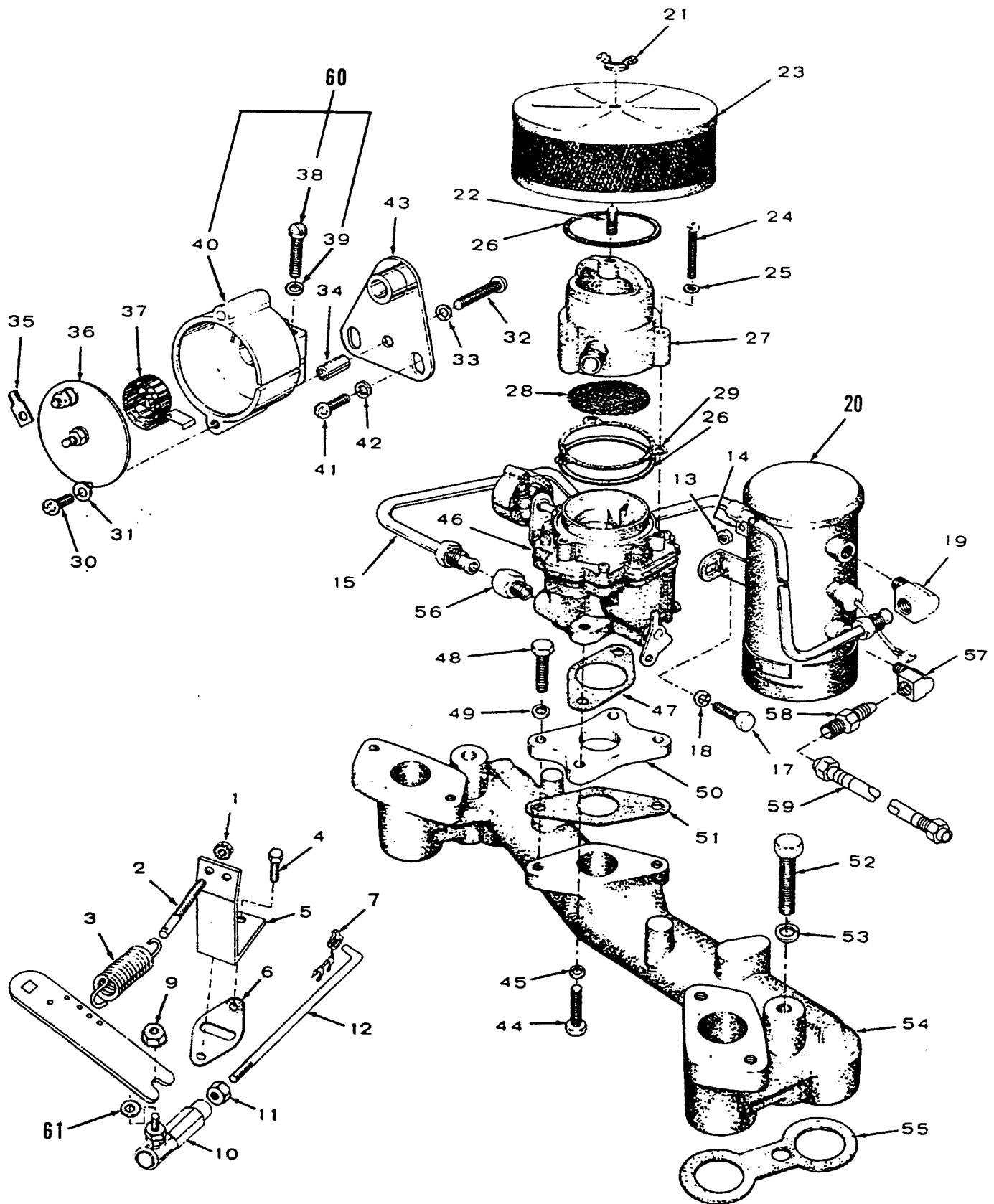
* - Parts Included in 160-1277 Breaker Box Assembly

† - Parts Included in 167-1631, 167-1632 Shielded
Spark Plug Lead

* - Parts Included in 160-0836 Ignition Tune Up Kit

†† - Parts Included in 167-0077 Spring and Washer
Assembly

Fuel System

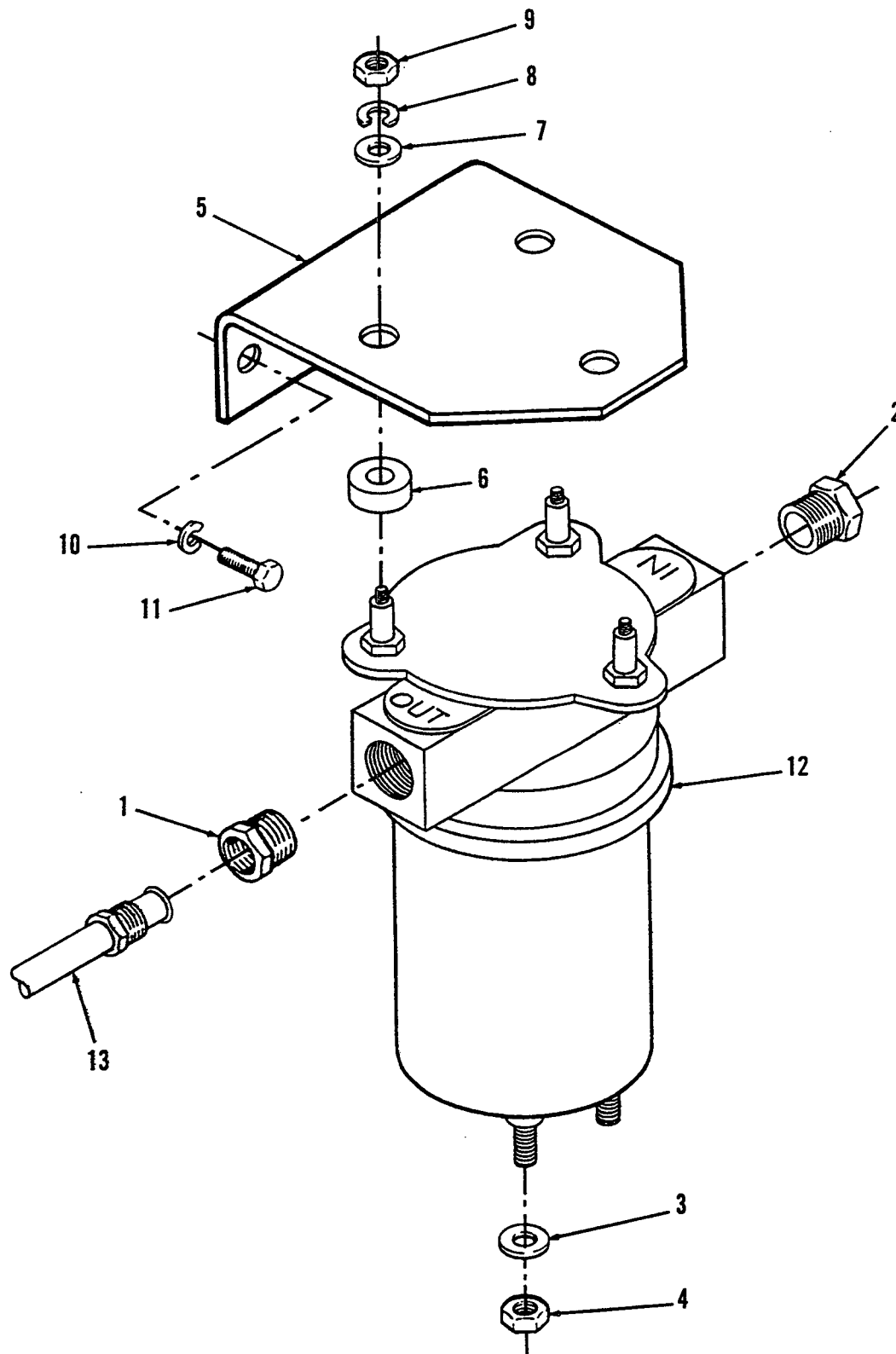


Fuel System

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	150-0621	1	Nut, Acorn	32	812-0084	1	Screw, Machine - Round Head (#8-32 x 1")
2	150-0096	1	Stud, Adjusting - Governor	33	850-0025	1	Washer, Lock - Spring (#8)
3	150-1612	1	Spring, Governor	34	153-0516	1	Spacer, Sleeve
4	800-0004	2	Screw, Cap - Hex Head (1/4-20 x 5/8")	35	332-0527	1	Terminal, Tab
5	150-1577	1	Bracket, Governor	36	153-0116	1	Cover, Choke
6	149-0003	1	Gasket	37	153-0017	1	Element, Choke
7	518-0004	1	Clip, Rod - End	38	815-0110	1	†Screw, Machine - Fillister Head (#10-32 x 7/8")
9	870-0131	1	*Nut, Self-locking Hex (#10-32)	39	850-0030	1	†Washer, Lock - Spring (#10)
10	150-0639	1	*Ball, Joint	40	153-0058	1	†Housing, Choke
11	870-0053	2	*Nut, Hex (#10-32)	41	813-0098	2	Screw, Machine - Round Head (#10-32 x 3/8")
12	150-1732	1	*Rod, Control	42	850-0030	2	Washer, Lock - Spring (#10)
13	862-0015	1	Nut, Hex (5/16-18)	43	153-0481	1	Adapter, Choke
14	518-0350	1	Clamp, Loop - Insulated	44	800-0028	2	Screw, Cap - Hex Head (5/16-18 x 1")
15			Line, Fuel	45	850-0045	2	Washer, Lock - Spring (5/16")
	149-1624	1	Spec A-H	46	146-0439	1	Carburetor, Gasoline (See Separate Illustration for Parts)
	149-2154	1	Spec J	47	141-0858	1	Gasket, Mounting - Carburetor
17	800-0544	2	Screw, Cap - Hex Head (Special)	48	800-0007	2	Screw, Cap - Hex Head (1/4-20 x 1")
18	850-0160	2	Washer, Lock - Spring (1/4")	49	850-0040	2	Washer, Lock - Spring (1/4")
19	502-0002	1	Elbow, Inverted Male - Brass (1/4 Pipe, 1/8 NPT)	50	154-2077	1	Adapter, Mounting - Carburetor
20			Pump, Fuel	51	141-0859	1	Gasket, Mounting - Carburetor
	NFS	1	Spec A-H (Must convert to Spec J. Use Kit 149-2186) (See Next Page for Breakdown)	52	800-0059	2	Screw, Cap - Hex Head (3/8-16 x 3-1/4")
	149-2159		Spec J	53	850-0050	2	Washer, Lock - Spring (3/8")
21	865-0020	1	Nut, Wing - Self-locking (1/4-20)	54	154-2078	1	Manifold, Intake
22	520-0093	1	Stud (1/4-20 x 7/8")	55	154-0013	2	Gasket, Manifold - Intake
23	145-0516	1	Arrester, Spark	56	502-0003	1	Adapter, Pipe to Tube
24	813-0106	3	Screw, Machine - Round Head (#10-32 x 1-1/8")	57	502-0020	1	Elbow, Inverted Male
25	850-0030	3	Washer, Lock - Spring (#10)	58	502-0577	1	Connector, Male
26	509-0145	2	Seal, "O" Ring	59	501-0242	1	Line, Fuel (3/8" ID x 24")
27	140-1473	1	Adapter, Cleaner - Air	60	153-0440	1	Housing, Choke (Includes Parts Marked †)
28	120-0848	2	Screen, Adapter - Carburetor	61	526-0196	1	*Washer, Flat (#10)
29	140-1684	1	Gasket, Adapter to Carburetor				
30	815-0285	2	Screw, Machine - Round Head with External Tooth Lockwasher (#8-32 x 5/16")				
31	526-0062	2	Washer, Flat (#8)				

* - Parts Included in 150-1718 Linkage Assembly
† - Parts Included in 153-0440 Choke Housing

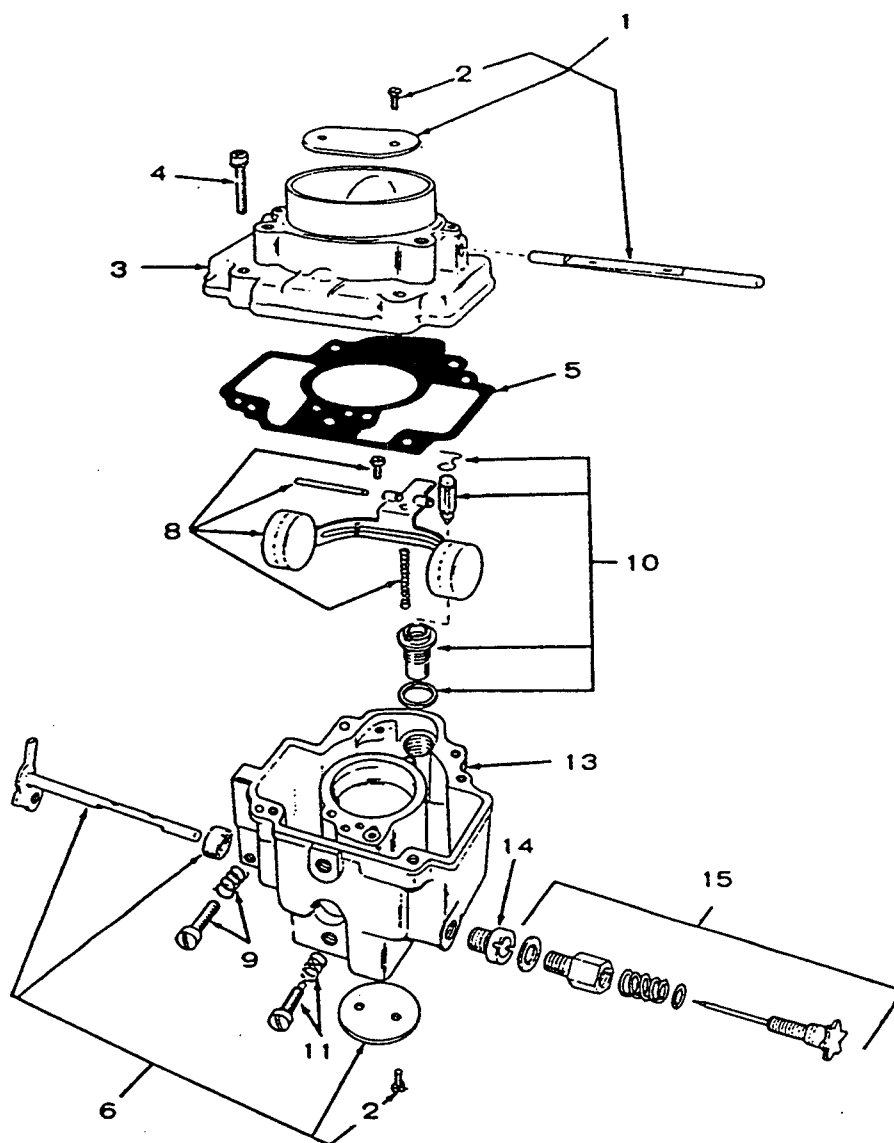
Fuel Pump
(Begin Spec J)



**Fuel Pump
(Begin Spec J)**

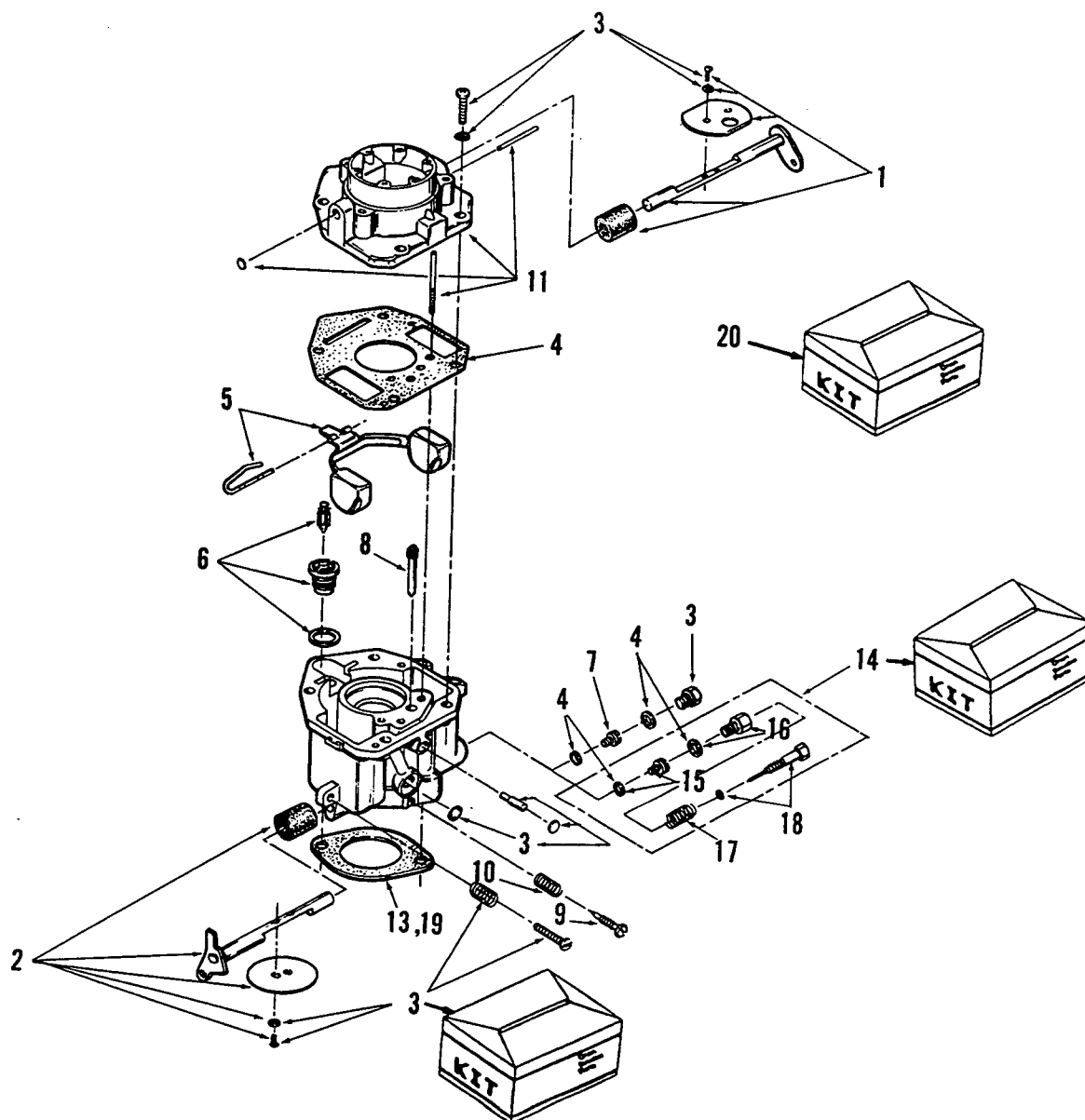
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	502-0033	1	Connector, Male - Inverted	8	850-0030	3	Washer, Lock (#10)
2	502-0029	1	Bushing, Pipe	9	870-1053	3	Nut, Hex (#10-32)
3	526-0008	2	Washer, Flat (#10)	10	850-0160	2	Washer, Lock - Spring (1/4)
4	870-0131	2	Nut, Hex - Ext Tooth (#10-32)	11	800-0708	2	Screw, Cap - Hex Head (1/4-20 x 1/2)
5	149-2153	1	Bracket, Pump - Fuel	12	149-2159	1	Pump, Fuel
6	370-4052	3	Spacer, Mounting - Fuel Pump	13	149-2154	1	Line, Fuel
7	526-0008	3	Washer, Flat (#10)				

Carburetor Parts (Walbro)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	146-0313	1	Carburetor (Includes Mounting Gasket)	6	146-0267	1	Shaft Package, Throttle
1	146-0264	1	Shaft Package, Choke	8	146-0262	1	Float Package
2	146-0142	4	Screw, Mounting - Valve (Special)	9	146-0261	1	Throttle Package
3	NFS	1	Intake, Air	10	146-0227	1	Valve and Seat Package
4	146-0247	4	Screw, Body to Intake (Special)	11	146-0209	1	Needle Package, Idle
5	146-0220	1	Gasket Kit, Carburetor	13	NFS	1	Body
				14	146-0243	1	Jet, Power
				15	146-0248	1	Needle Package, Power
					146-0258	1	Repair Kit, Carburetor

Carburetor Parts (Nikki)

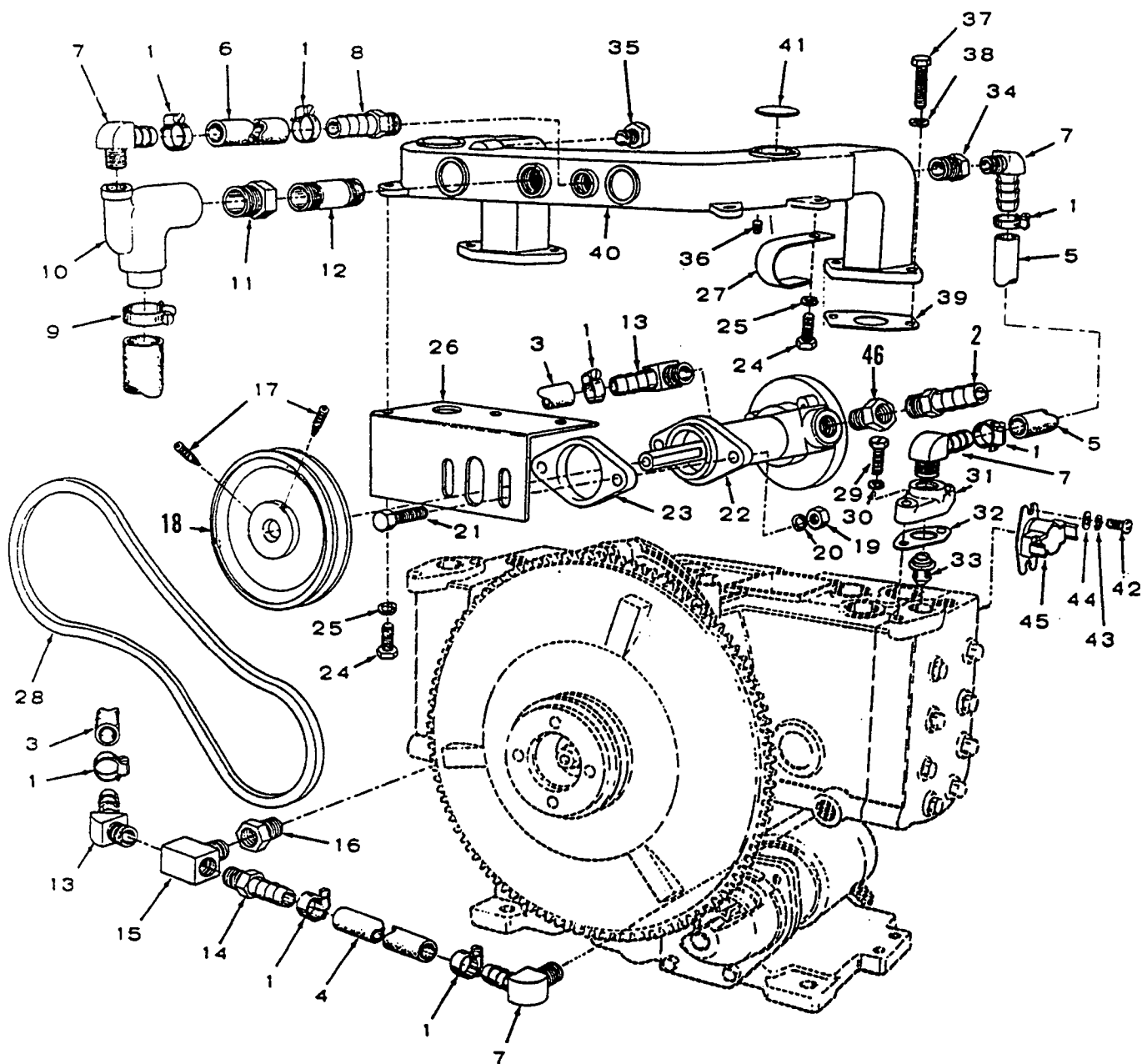


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	146-0439	1	Carburetor, Complete (Includes Mounting Gasket)
1	146-0417	1	Choke, Shaft Kit
2	146-0418	1	Shaft, Throttle (Kit)
3	146-0322	1	*Screw and Plug Kit (Includes Parts Marked *)
4	146-0326	1	*Gasket Kit
5	146-0325	1	Float Kit
6	146-0329	1	*Valve and Seat Kit
7	146-0343	1	Jet, Power (Includes Gasket)
8	146-0420	1	Jet, Idle
9	146-0335	1	*Needle, Adjusting - Idle
10	146-0331	1	*Spring, Needle - Idle Adjusting
11	NFS	1	Intake, Air
12	NFS	1	Body
13	141-0858	2	Gasket, Mounting - Carburetor

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
14	146-0327	1	Jet Kit, Variable - Optional (High Altitude Application) (Includes Parts Marked +)
15	146-0343	1	+Jet, Power - Variable (Includes Gasket)
16	146-0340	1	+Retainer, Needle - Power (Includes Gasket)
17	146-0341	1	+Spring, Needle - Power
18	146-0342	1	+Needle, Power - Complete
19	141-0859	1	Gasket, Mounting - Carburetor
20	146-0356	1	Repair Kit (Includes Parts Marked *)

* - Parts Included in 146-0356 Repair Kit.
+ - Parts Included in 146-0327 Variable Jet Kit.
* - Part Included in 146-0322 Screw and Plug Kit.

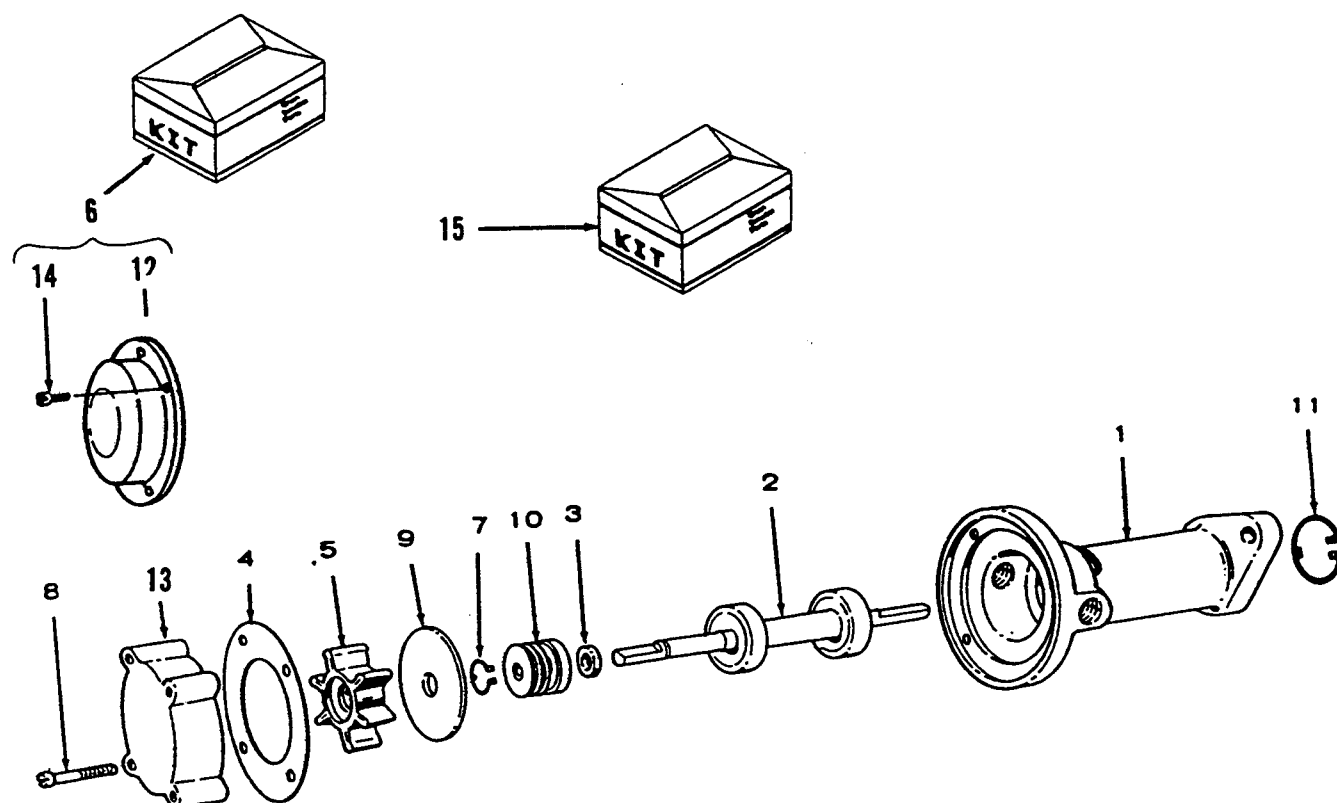
Cooling - Exhaust System



Cooling - Exhaust System

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0976	12	Clamp, Hose	25	850-0040	4	Washer, Lock - Spring (1/4")
2	503-0827	1	Connector, Hose	26	131-0270	1	Bracket, Mounting - Water Pump
3	503-0696	1	Hose, Rubber (1/2" ID x 7")	27	148-0274	1	Bracket, Support - Hose
4	503-0468	1	Hose, Rubber (1/2" ID x 13-1/2")	28	511-0073	1	Belt, Drive
5	503-0975	2	Hose, Rubber (1/2" ID x 6")	29	800-0007	4	Screw, Cap - Hex Head (1/4-20 x 1")
6	503-0434	1	Hose, Rubber (1/2" ID x 8")	30	850-0040	4	Washer, Lock - Spring (1/4")
7	502-0237	6	Elbow, Hose - 90°	31	309-0185	2	Housing, Thermostat
8	502-0238	1	Connector, Hose	32	309-0186	2	Gasket
9	503-1141	2	Clamp, Hose	33	309-0130	2	Thermostat
10	155-1058	1	Elbow, Exhaust with Injector Port	34	502-0029-05	2	Reducer, Bushing
11	505-0023	1	Bushing, Reducer	35	502-0153	1	Plug, Pipe - Hex Head, Brass
12	505-1344	1	Nipple, Pipe (Special)	36	502-0080	1	Plug, Pipe - Square Head, Brass
13	502-0575	2	Elbow, Hose - 45°	37	800-0029	4	Screw, Cap - Hex Head (5/16-18 x 1-1/8")
14	502-0238	1	Connector, Hose	38	850-0045	4	Washer, Lock - Spring (5/16")
15	502-0446	1	Tee, Pipe	39	154-0973	2	Gasket, Manifold - Exhaust
16	502-0426	1	Bushing	40	154-2092	1	Manifold, Exhaust (Includes Expansion Plugs)
17	803-0062	2	Screw, Set - Socket (5/16-18 x 5/16")	41	517-0041	4	Plug, Expansion - Brass (1-1/4" Dia.)
18	512-0166	1	Pulley, Groove (Includes Set Screw)	42	812-0145	2	Screw, Machine - Round Head (1/4-20 x 5/16")
19	870-0154	2	Nut, Hex (1/4-20)	43	854-0014	2	Washer, Lock - Internal Tooth (1/4)
20	850-0160	2	Washer, Lock - Spring (1/4")	44	526-0016	2	Washer, Flat (1/4)
21	816-0090	2	Bolt, Carriage - Zinc Plate, Grade 5 (1/4-20 x 1-1/4")	45	309-0257	1	Switch, High Temperature
22	131-0257	1	Pump, Water - Complete (See Separate Illustration for Component Parts)	46	502-0976	1	Adapter
23	131-0173	1	Adapter, Pump				
24	800-0005	4	Screw, Cap - Hex Head (1/4-20 x 3/4")				

Water Pump Parts (131-0257)

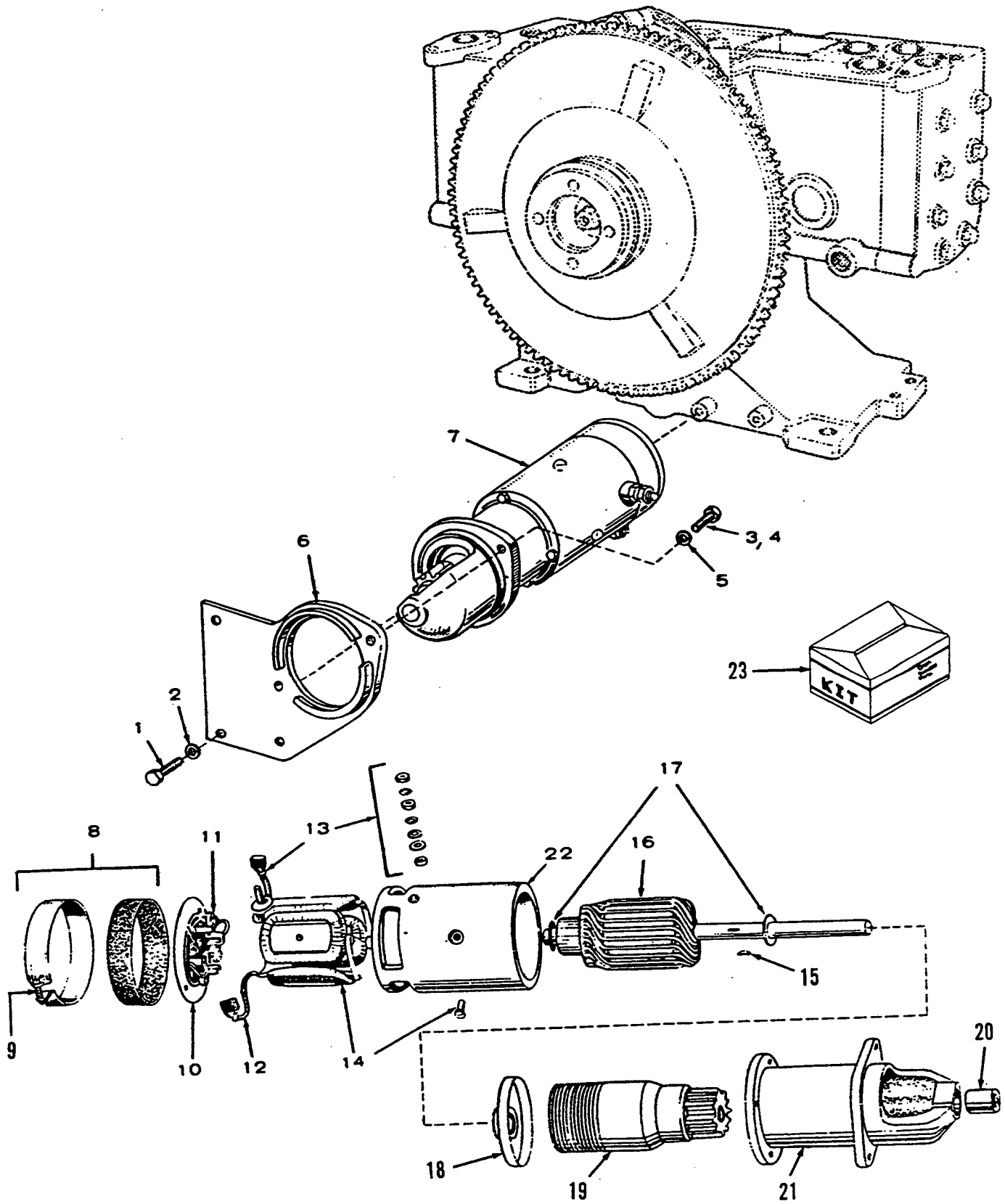


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	131-0257	1	Pump, Water (Complete)
1	131-0212	1	Body, Pump - Water
2	131-0222	1	*Shaft Assembly, Pump - Water
3	131-0219	1	*Slinger, Shaft - Water Pump
4	131-0210	1	*Gasket, Housing - Impeller
5	131-0386	1	*Impeller, Pump - Water
6	132-0229	1	Housing Kit, Impeller (Includes Parts Marked #)
7	518-0392	1	*Ring, Retaining - External
8	815-0477	4	Screw, Machine - Fillister Head (#10-32 x 1-1/8")

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
9	131-0217	1	*Plate, Wear - Water Pump
10	131-0220	1	*Seal Assembly, Rotary
11	518-0373	1	*Ring, Retaining - Internal
12	NFS	1	#Housing (1/8" Mounting Flange
13	NFS	1	Housing (1" Mounting Flange for Replacement Order Kit 132-0229)
14	815-0465	4	#Screw, Machine - Fillister Head (#10-32 x 3/8")
15	131-0258	1	Repair Kit, Pump - Water (Includes Parts Marked *)

* - Parts Included in 131-0258 Repair Kit

Starter



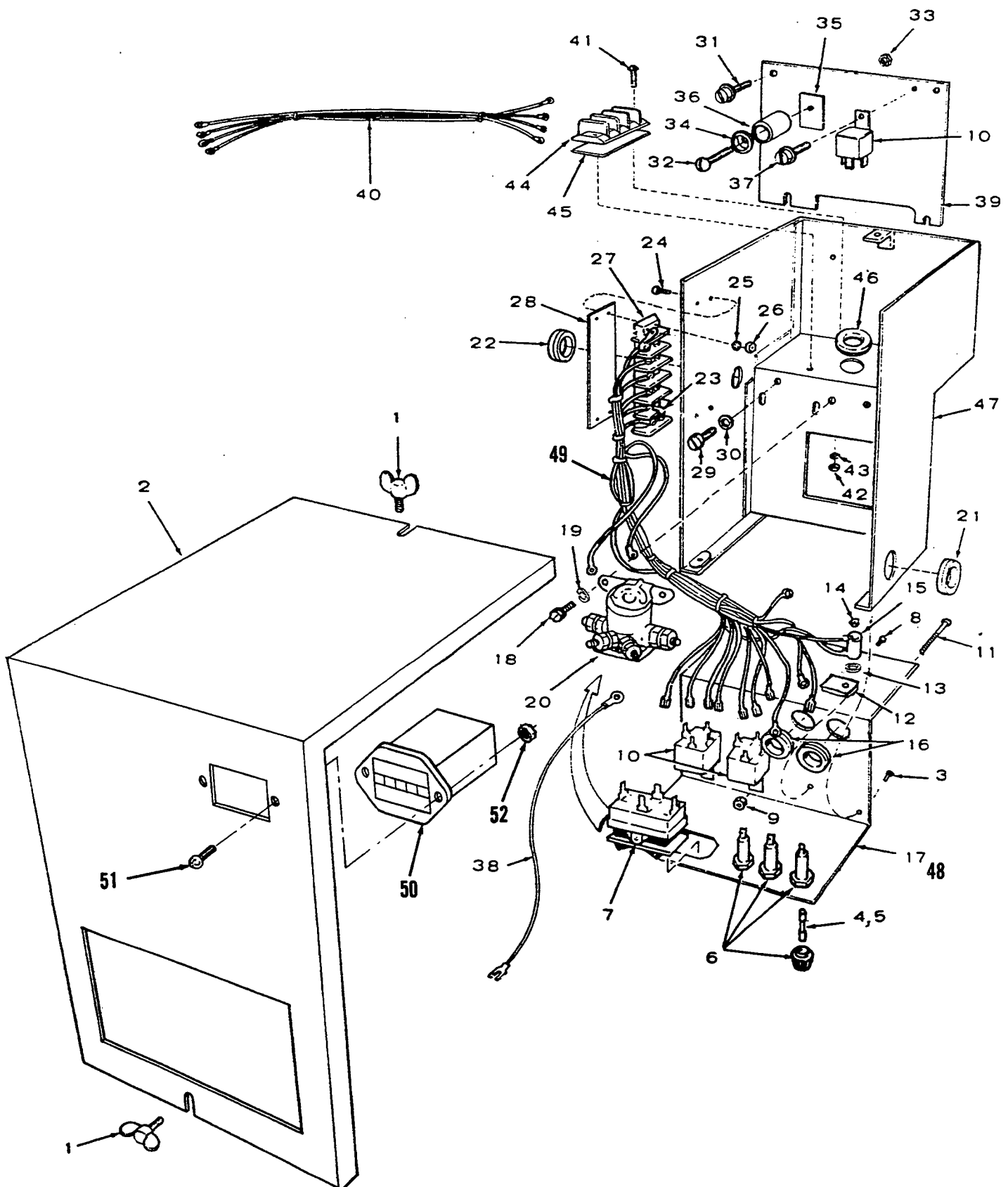
Starter

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0051	3	Screw, Cap - Hex Head (3/8-16 x 1-1/4")	11	191-1020	1	*Spring Set, Brush
2	850-0050	3	Washer, Lock - Spring (3/8")	12	191-0513	1	*Brush Set
3	800-0049	1	Screw, Cap - Hex Head (3/8-16 x 7/8")	13	191-1022	1	*Terminal Package
4	800-0050	1	Screw, Cap - Hex Head (3/8-16 x 1")	14	191-1017	1	*Coil Assembly, Field
5	850-0050	2	Washer, Lock - Spring (3/8")	15	515-0094	1	Key, Woodruff (#6)
6	191-0508	1	Flange, Mounting - Starter	16	191-0517	1	*Armature
7	191-1246	1	Starter, Sealed (Includes Parts Marked *)	17	191-1021	1	*Washer Package, Thrust
8	191-1267	1	†*Band, Cover (Includes Gasket and Hardware)	18	191-1019	1	*Bearing Assembly, Intermediate
9	813-0110	1	†Screw, Round Head - Machine (#10-32 x 2")	19	191-0271	1	*Drive Assembly, Plated
10	191-1018	1	*Head Assembly, Commutator	20	191-0735	1	*Bearing, Sleeve - Bronze
				21	NFS	1	*Pinion, Housing - (With Drain Hole)
				22	NFS	1	*Frame, Starter - Sealed Type
				23	191-1524	1	Band Kit - Starter (Includes Parts Marked †)

* - Parts Included in 191-1246 Starter Assembly

† - Parts Included in 191-1524 Starter Band Kit

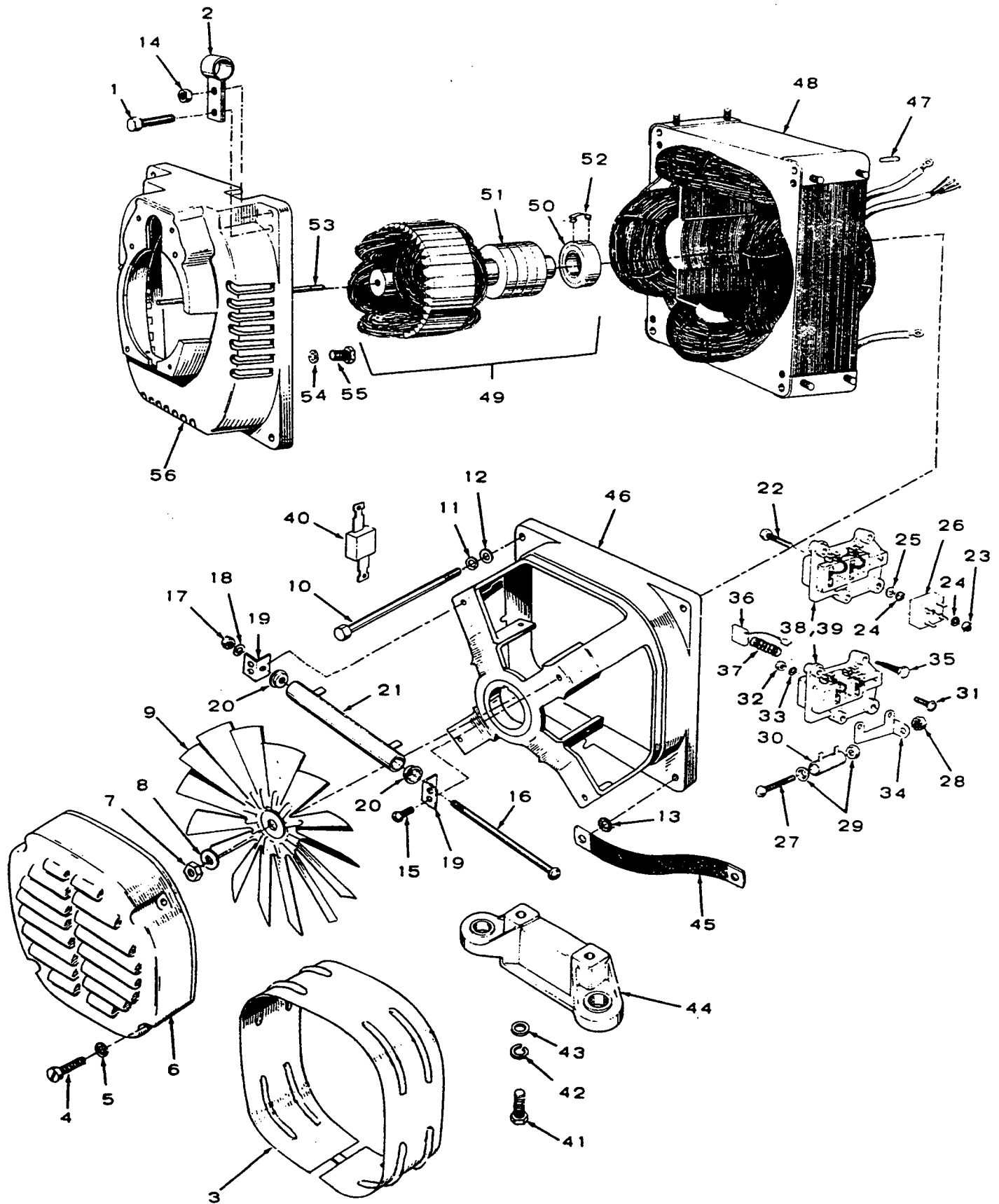
Control



Control

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	518-0056	2	Screw, Wing (#10-32 x 1/2")	28	332-2103	1	Strip, Marker
2	301-9199	1	Cover, Box - Control (Includes Decal)	29	800-0708	2	Screw, Cap - Hex Head (Special)
	98-3733	1	Decal, Diagram - Wiring	30	850-0160	2	Washer, Lock - Spring (1/4")
3	821-0004	2	Screw, Self-locking - Hex Washer Head (#10-32 x 5/16")	31	821-0004	2	Screw, Self-locking - Hex Washer Head (#10-32 x 5/16")
4	321-0174	2	Fuse, Cartridge - 5 Ampere (F1, F2)	32	813-0112	1	Screw, Machine - Round Head (#10-32 x 2-1/2")
5	321-0153	1	Fuse, Cartridge - 5 Ampere (F3)	33	870-0131	1	Nut, Hex - With External Tooth Lockwasher (#10-32)
6	321-0175	3	Holder, Fuse	34	304-0014	1	Washer, Shoulder - Resistor Centering
7	308-0383	1	Switch, Toggle - Start/Stop (S1)	35	304-0292	1	Insulator, Mounting - Resistor
8	821-0004	2	Screw, Self-locking - Hex Washer Head (#10-32 x 5/16")	36	304-0060	1	Resistor, Fixed - 1.72-Ohm, 25 Watt (R3)
9	870-0131	2	Nut, Hex - With External Tooth Lockwasher (#10-32)	37	815-0350	1	Screw, Tapping - Hex Washer Head (#10 x 3/8")
10	307-1575	3	Relay, Crank/Run/Stop - K2,3,4	38	336-4678	1	Lead, Electrical (Solenoid to Starter)
11	812-0087	1	Screw, Machine - Round Head (#8-32 x 1-1/2")	39	301-4887	1	Plate, Mounting - Relay
12	304-0580	1	Insulator, Mounting - Resistor	40	338-1099	1	Harness, Wiring - Generator to Control
13	508-0015	1	Insulator, Washer	41	812-0066	2	Screw, Machine - Round Head (#6-32 x 3/4")
14	870-0221	1	Nut, Hex - With External Tooth Lockwasher (#8-32)	42	860-0005	2	Nut, Hex (#6-32)
15	352-0161	1	Resistor, Fixed - 100-Ohm, 5 Watt (R1)	43	853-0003	2	Washer, Lock - External Tooth (#6)
16	331-0088	2	Insulator, Bushing	44	332-0236	1	Block - Terminal - TB2
17	301-4879	1	Panel, Control	45	332-2117	1	Strip, Marker
18	800-0708	2	Screw, Cap - Hex Head (Special)	46	508-0191	1	Insulator, Bushing
19	850-0160	2	Washer, Lock - Spring (1/4")	47	301-4634	1	Box, Control
20	307-1617	1	Solenoid (K1)	48	98-5966	1	Decal, Panel - Control
21	508-0021	1	Grommet, Rubber	49	338-1264	1	Harness, Wiring - Control (Includes Relays, Resistor and Terminal Block)
22	508-0208	1	Insulator, Bushing	50	302-0885	1	Meter, Time - Running
23	332-1043	2	Jumper, Terminal	51	815-0385	2	Screw, Machine - Round Head (#6-32 x 1/2")
24	812-0065	2	Screw, Machine - Round Head (#6-32 x 5/8")	52	870-1183	2	Nut, Hex - W/ET (#6-32)
25	854-0006	2	Washer, Lock - Internal Tooth (#6)	53	525-0216	1	Paint, Touch-Up - White Enamel (16 oz. Spray Can)
26	860-0005	2	Nut, Hex (#6-32)				
27	332-0699	1	Block, Terminal - TB1				

Generator



Generator

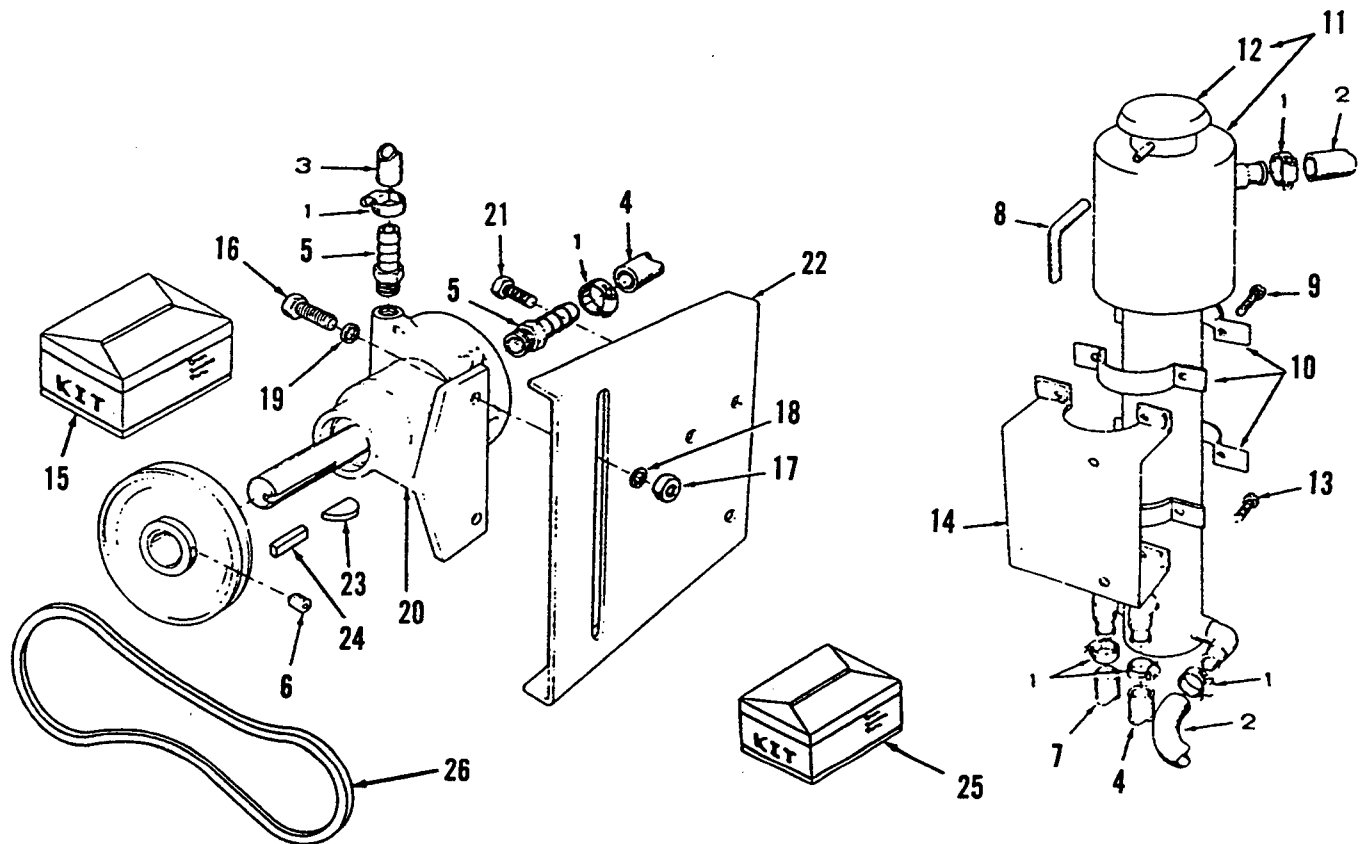
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	815-0454	4	Screw, Tapping - Hex Head (5/16-18 x 1-1/4")	31	812-0066	2	*Screw, Machine - Round Head With External Tooth
2	403-1500	2	Bracket, Lifting				Lockwasher (#6-32 x 3/4")
3	234-0362	1	Wrapper, Bell - End	32	860-0005	2	*Nut, Hex (#6-32)
4	812-0156	2	Screw, Machine - Round Head (1/4-20 x 1-1/4")	33	853-0003	2	*Washer, Lock - External Tooth (#6)
5	850-0040	2	Washer, Lock - Spring (1/4")	34	304-0304	2	*Bracket, Mounting - Resistor
6	232-2107	1	Cover, Fan - Generator	35	815-0359	15	Screw, Tapping - Hex Washer Head (#10-32 x 7/8")
7	870-0203	1	Nut, Hex - Hardened (7/16-20)	36	214-0096	8	Brush, Ring - Collector
8	850-0055	1	Washer, Lock - Spring (7/16")	37	212-1232	8	Spring, Brush
9	205-0090	1	Fan, Generator	38	212-0359	2	Block, Brush - Generator (Bottom and Right Side Position)
10			Screw, Cap - Hex Head (Through Generator)				Block, Brush - Generator (Top and Left Side Position)
	800-0043	4	3.5MCCK; 4.0MCCK (5/16-18 x 5")	39	212-0360	2	Rectifier, Diode - CR2
	800-0044	4	5.5MCCK; 6.5MCCK (5/16-18 x 7-1/2")	40	357-0030	1	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
11	850-0045	3	Washer, Lock - Spring (5/16")	41	800-0051	2	Washer, Lock - Spring (3/8")
12	526-0115	4	Washer, Flat (5/16)	42	850-0050	2	Washer, Flat (3/8)
13	856-0008	1	Washer, Lock - External Tooth (5/16")	43	526-0030	2	Support, Generator
14	862-0015	4	Nut, Hex (5/16-18)	44	232-2321	1	Strap, Bond
15	815-0333	2	Screw, Tapping - Round Head (#10-32 x 1/2")	45	337-0091	1	Bell, End - Generator
16	812-0118	1	Screw, Machine - Round Head (#10-24 x 5")	46	211-0364	1	Pin, Dowel (1/4" OD x 3/4")
17	860-0011	1	Nut, Hex (#10-24)	47	516-0182	8	Stator, Generator
18	850-0030	1	Washer, Lock - Spring (#10)		220-3050	1	3.5MCCK; 4.0MCCK - Key 1
19	304-0706	2	Bracket, Mounting - Resistor		220-3049	1	5.5MCCK; 6.5MCCK - Key 2
20	304-0015	2	Washer, Centering - Resistor	49			Rotor, Generator (Includes Bearing and Collector Rings)
21	353-0092	1	Resistor, Fixed		201-2704	1	6.5MCCK - Key 2
22	815-0341	1	Screw, Machine - Round Head (#10-32 x 1")		201-2705	1	5.5MCCK - Key 2
23	871-0010	1	Nut, Hex (#10-32)		201-2706	1	4.0MCCK - Key 1
24	853-0008	2	Washer, Lock - External Tooth (#10)		201-2707	1	3.5MCCK - Key 1
25	526-0049	2	Washer, Flat (#10)	50	510-0047	1	Bearing, Ball
26	305-0653	1	Rectifier, Bridge - CR1	51	204-0110	1	Ring, Collector
27	813-0112	2	*Screw, Machine - Round Head (#10-32 x 2-1/2")	52	232-0596	1	Clip, Retaining - Bearing Stud, Through - Rotor
28	870-0131	2	*Nut, Hex with External Tooth		520-0732	1	3.5MCCK; 4.0MCCK - Key 1
29	304-0014	4	†Washer, Shouldered - Resistor Centering		520-0733	1	5.5MCCK; 6.5MCCK - Key 2
30	353-0091	2	*Resistor, Fixed	54	850-0050	4	Washer, Lock - Spring (3/8")
				55	800-0050	4	Screw, Cap - Hex Head (3/8-16 x 1")
				56	231-0164	1	Adapter, Generator to Engine

* - Prior to Serial #399168 During Spec H Quantity-(1)
† - Prior to Serial #399168 During Spec H Quantity-(2)

OPTIONAL PARTS SECTION

This section contains illustrated parts listing of factory installed options for the generator sets. 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 parts section.

Heat Exchanger Cooling System

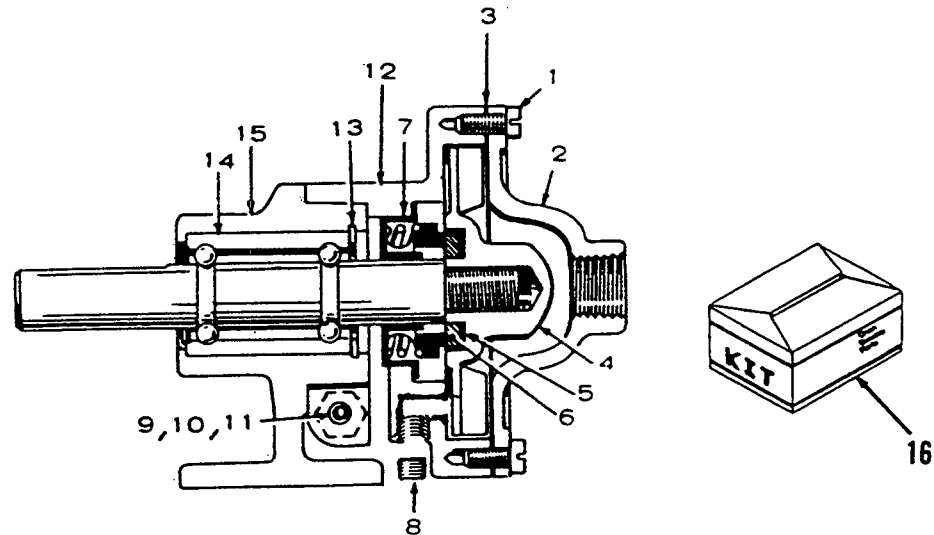


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0976	6	+Clamp, Hose
2	503-0978	2	+Hose, Rubber (1/2" ID x 36")
3	503-1448	1	+Hose, Rubber (1/2" ID x 11-1/2")
4	503-0434	2	+Hose, Rubber (1/2" ID x 8")
5	502-0238	2	+Connector, Hose
6	803-0062	3	+Screw, Set - Socket (5/16-18 x 5/16")
7	503-0713	1	+Hose, Rubber (1/2" ID x 25-1/2")
8	503-0492	1	+Hose, Rubber (5/16" ID x 26")
9	821-0013	4	+Screw, Self-locking - Hex Head (1/4-20 x 1")
10	130-0632	4	+Strap, Retaining - Heat Exchanger
11	130-1394	1	+Exchanger, Heat (Includes Cap
12	130-0824	1	+Cap, Pressure (14 lb)
13	821-0010	2	+Screw, Self-locking - Hex Head (1/4-20 x 1/2")
14	130-1393	1	+Plate, Mounting - Heat Exchanger
15			Pulley Kit, Pump - Water (Includes Set Screw)
	512-0134	1	+Sets with Flat Area on Water Pump Shaft (Includes 1 Set Screw)
	132-0252	1	+Sets with Keyed Area on Water Pump Shaft (Includes 2 Set Screws)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
16	800-0703	2	+Screw, Cap - Hex Head (Special) (1/4-20 x 1")
17	870-0154	2	+Nut, Hex (1/4-20)
18	850-0160	2	+Washer, Lock - Spring (1/4")
19	526-0015	2	+Washer, Flat (1/4")
20	132-0110	1	+Pump, Water (See Separate Illustration for Parts)
21	821-0016	3	+Screw, Self-locking - Hex Head (5/16-18 x 3/4")
22	130-1397	1	+Bracket, Mounting - Water Pump
23	515-0227	1	Key Kit, Woodruff (Kit) (Use on 132-0110 Water Pumps with Key Way on Shaft)
24	515-0249	1	+Key, Machine (Use on 132-0179 Water Pump Assembly)
25	130-1429	1	Conversion Kit, Exchanger - Heat
26	511-0039	1	+Belt, Drive

+ - Parts Included in 130-1429 Heat Exchanger Kit

Water Pump Parts (132-0110)

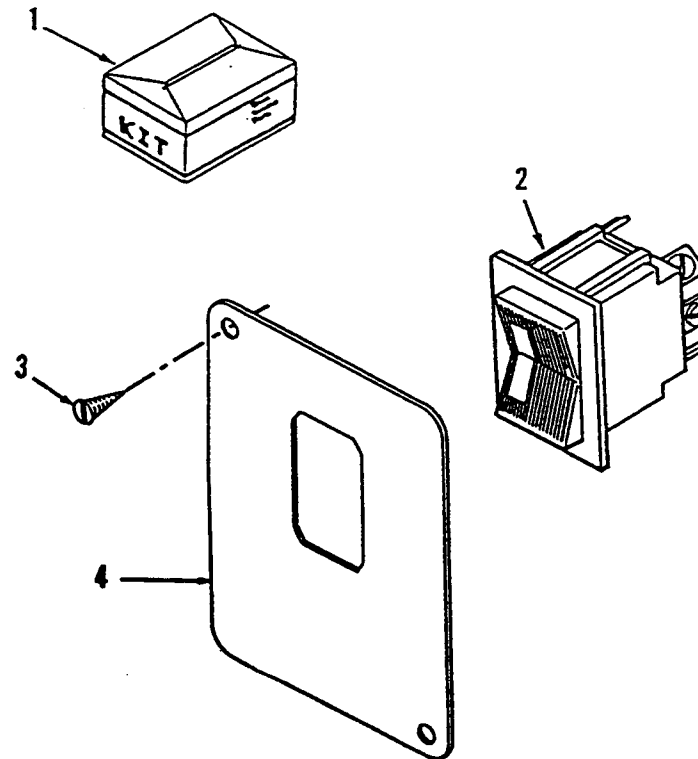


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	132-0110	1	Pump, Water
1	132-0113	6	*Screw, Cap - Hex Head Slotted (Special)
2	132-0137	1	Cover, Pump - Water
3	132-0112	1	*Gasket
4	132-0114	1	*Impeller
5	132-0092	1	*Seat
6	132-0091	1	*Ring, Wear
7	132-0101	1	*Seal Assembly
8	132-0141	1	Plug, Pipe - Socket Drive
9	132-0138	1	Screw, Cap - Hex Head (Special)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
10	132-0139	1	Washer, Lock - Spring (Special)
11	132-0140	1	Nut, Hex (Special)
12	NFS	1	Body, Pump
13	132-0132	1	Ring, Retaining
14	132-0225	1	*Bearing & Shaft Assembly
15	132-0142	1	Pedestal, Pump
16	132-0111	1	Repair Kit (Includes Parts Marked *)

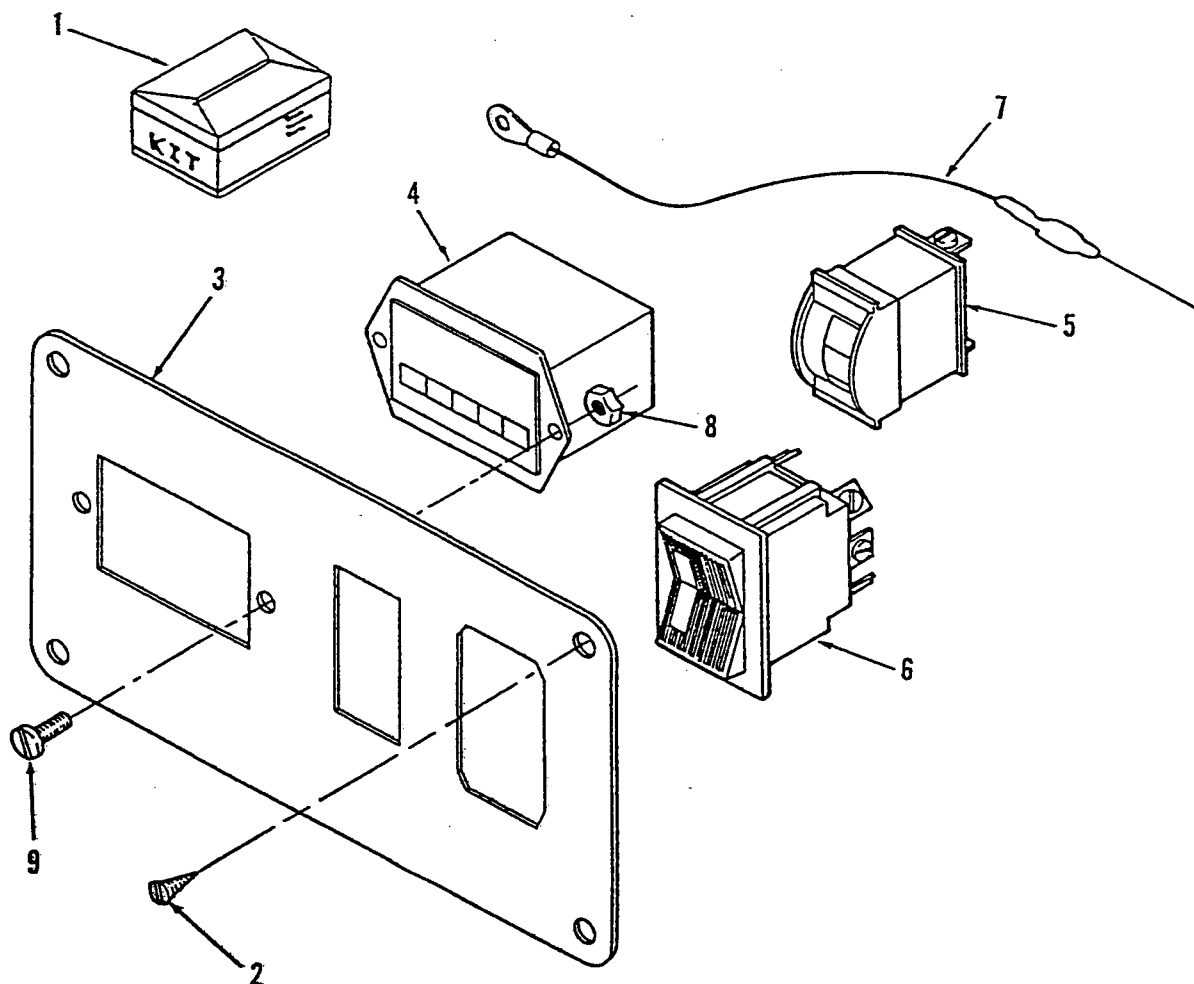
* - Parts Included in 132-0111 Repair Kit

Remote Control Panel (Basic)



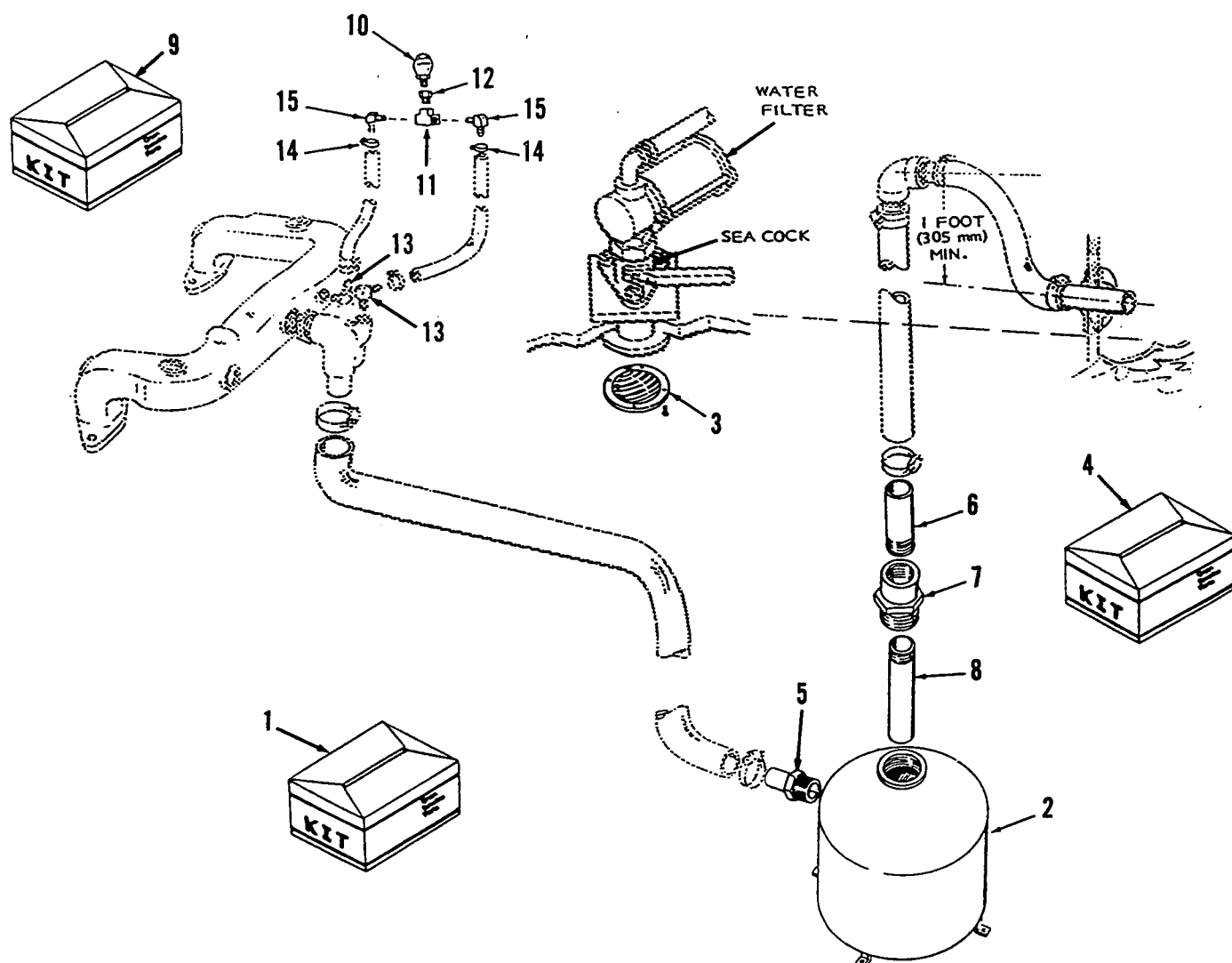
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	300-3468	1	Panel Kit, Control - Remote (Includes Parts Marked *)	4	319-0491	1	*Panel, Control (Does Not Include Front & Back Decals)
2	308-0827	1	*Switch, Rocker		98-5946	1	Decal, Panel - Rear
3	815-0380	2	*Screw, Wood - Oval Head Cross Recessed (#5 x 1/2")		98-5949	1	Decal, Panel - Front

Remote Control Panel (Deluxe)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	300-3467	1	Panel Kit, Control - Remote (Includes Parts Marked *)	4	302-0885	1	*Meter, Totalizing - Time
2	815-0380	4	*Screw, Wood - Oval Head, Cross Recessed (#5 x 1/2")	5	302-0888	1	*Meter, Condition - Battery
3	319-0492	1	*Panel, Control (Does Not Include Front & Back Decals)	6	308-0827	1	*Switch, Rocker
	98-5944	1	Decal, Panel - Rear	7	359-0034	1	*Diode and Lead Assembly
	98-5946	1	Decal, Panel - Front	8	870-0183	2	*Nut, Hex (#6-32)
				9	815-0385	2	*Screw, Machine - Round Head (6-32 x 1/2")

Aqualift Exhaust System

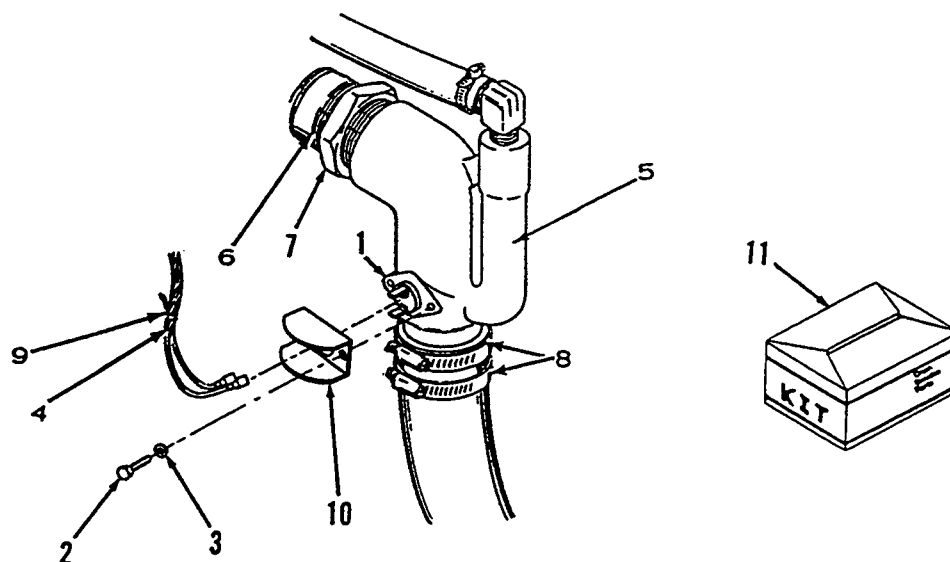


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	155-1004	1	Muffler Kit, Aqualift (Includes Parts Marked *)
2	NFS	1	*Muffler, Aqualift (For Replacement, Order Kit 155-1004)
3	155-1002	1	*Strainer, Water - Thru Hull
4	155-0955	1	Mounting Kit, Muffler (Includes Parts Marked *)
5	155-1121	1	*Inlet Assembly, Epoxy Coated
6	505-0721	1	*Nipple, Pipe - Half
7	505-0635	1	*Bushing, Double Tapped

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8	505-0632	1	*Nipple, Pipe - Half, PVC
9	155-0950	1	Relief Kit, Break - Siphon
10	504-0062	1	+Valve, Relief - Vacuum
11	502-0090	1	+Tee, Pipe - Brass
12	502-0270	1	+Adapter, Pipe
13	502-0237	2	+Elbow, Pipe to Hose
14	503-0446	2	Clamp, Hose (1/2")
15	505-1346	2	+Elbow, Hose - 90°

* - Parts Included in Kit #155-1004
 * - Parts Included in Package #155-0955
 + - Parts Included in Kit #155-0950

High Exhaust Temperature Cut-Off Switch

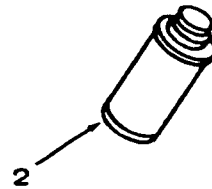
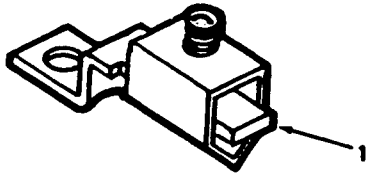


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	309-0420	1	*Switch, Cut-Off - High Exhaust Temperature
2	815-0569	2	*Screw, Crescent (6-32 x 5/16")
3	854-0008	2	*Washer, Lock (IT #6)
4	338-1413	1	*Harness, Wiring
5	155-1058	1	*Elbow, Exhaust
6	505-1344	1	*Nipple, Pipe
7	505-0023	1	*Reducer, Bushing

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8	503-1141	2	*Clamp, Hose
9	332-1794	1	*Tie, Wire
10	309-0501	1	*Shield, Switch - Temperature
11	309-0421	1	Switch Kit, Cut-Off (Includes Parts Marked *)

* - Parts Included in 309-0421 High Exhaust Temperature Cut-Off Switch

Miscellaneous Optional Parts



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	332-0142	1	Terminal, Solderless
2	110-1827	4	Guide, Valve (To Stop Oil Seepage)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
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