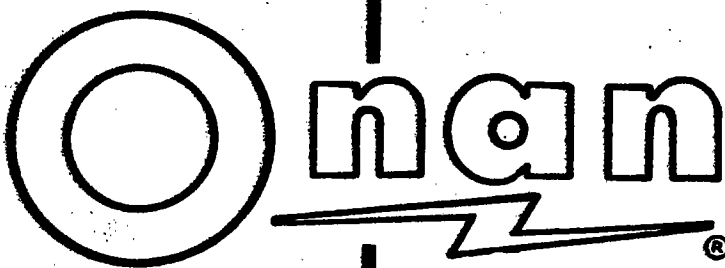


The following catalog has gaps in its page numbers, or doesn't have any numbers. We have chosen to leave the page numbering in the order that Acrobat assigns it.



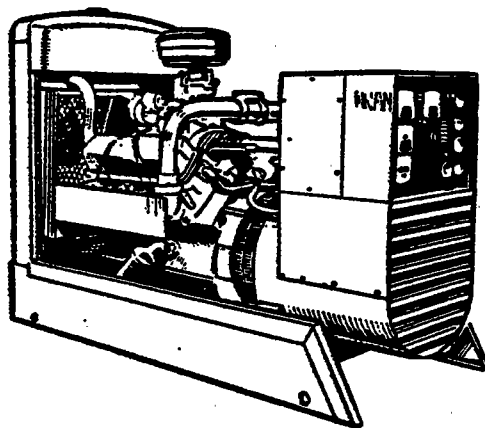
**OPERATOR'S MANUAL
AND
PARTS CATALOG**

FOR

KB-KR

SERIES

ELECTRIC GENERATING SETS



**PARTS AVAILABILITY
> LONGER GUARANTEED**

Part Number

957-0302

Printed in U.S.A.

Issue Date


**1NS, NS76
(Replaces 8NS, NS74)**

PARTS CATALOG

INSTRUCTIONS FOR ORDERING REPAIR PARTS

ONAN PARTS


All parts in this list are Onan parts. For parts or service, contact the dealer from whom you purchased this equipment or your nearest authorized service station. To avoid errors or delay in filling your order, please refer to the Onan nameplate and give the complete MODEL, SPECIFICATION and SERIAL number.

Onan ELECTRIC GEN SET	
MODEL	<input type="text"/>
SERIAL NO.	<input type="text"/>
IMPORTANT - ALWAYS GIVE ABOVE NOS. WHEN ORDERING PARTS	
CONTINUOUS	RATING
HERTZ-60 RPM - 1800	
3 PHASE 1 PHASE	
KW <input type="text"/>	KVA <input type="text"/>
KW <input type="text"/>	KVA <input type="text"/>
VOLTS 120/208 127/220 139/240 120/240/416	
AMPS <input type="text"/>	
VOLTS 254/440 277/400 347/600 120/240	
AMPS <input type="text"/>	
BAT. <input type="text"/> VOLTS	
MANUFACTURED BY ONAN DIV. OF ONAN CORPORATION MINNEAPOLIS, MINN. 55432, U.S.A. FOR ELECT. EQUIPMENT ONLY 	

INTERNATIONAL HARVESTER PARTS

All International Harvester parts must be ordered from the International Harvester Company, Chicago, Illinois or the nearest International Harvester Construction Equipment distributor or dealer.

Refer to the International Harvester nameplate. When ordering parts or requesting service information supply all information stated on engine nameplate and engine serial number which is stamped on front of cylinder head.

MADE IN UNITED STATES OF AMERICA BY INTERNATIONAL  HARVESTER CO. CHICAGO, ILLINOIS	
MODEL <input type="text"/>	
SERIAL NO. <input type="text"/>	
MAX. IDLE SPEED <input type="text"/>	FULL LOAD SPEED <input type="text"/>
DO NOT OVERLOAD	

This catalog applies to the standard Onan KB and KR Series units as listed below. Powered by an International Harvester engine (see International Harvester's Manual). Engine parts modified or added by Onan will be in this list and have Onan part numbers. These supersede similar parts listed in the International Harvester manual.

Onan parts are arranged in groups of related items and are identified by a reference. All parts illustrations are typical. Using the Model and Spec No. from the Onan nameplate, select Parts Key No. (1, 2, etc., in the last column) that applies to your set MODEL and SPEC NO. This PARTS KEY NO. represents parts that differ between models. Unless otherwise mentioned, parts are interchangeable. Right and left sides are determined by facing the front end of the engine.

GENERATING SET DATA TABLE

MODEL & SPEC NO.*	ELECTRICAL DATA				PARTS KEY	
	WATTS	HERTZ	PHASE	WIRE		
45.0KB-515R/ 55.0KB-515R/	45,000 55,000	50 50	** **	12 12	1	
55.0KB-15R/ 55.0KB-9XR/	55,000 55,000	60 60	** 3	12 4		
65.0KB)15R/ 65.0KB-9XR/	65,000 65,000	60 60	** 3	12 4		
70.0KR-515R/ 70.0KR-15R/	70,000 70,000	50 60	** **	12 12		2
85.0KR-15R/ 85.0KR-9XR/	85,000 85,000	60 60	** 3	12 4		
Pennsylvania Approved Models		See Special Parts List Following the Standard Parts List.				

- * - The Specification Letter advances (A to B, B to C, etc.) with manufacturing changes.
- ** - These sets are reconnectable; refer to Table 2 Voltage Connections.

REPLACEMENT ENGINE

- 100-0854 1 ★Engine. Replacement - KB - International Harvester Company Model UV-401
- 100-0855 1 ★Engine. Replacement - KR - International Harvester Company Model UV-549.

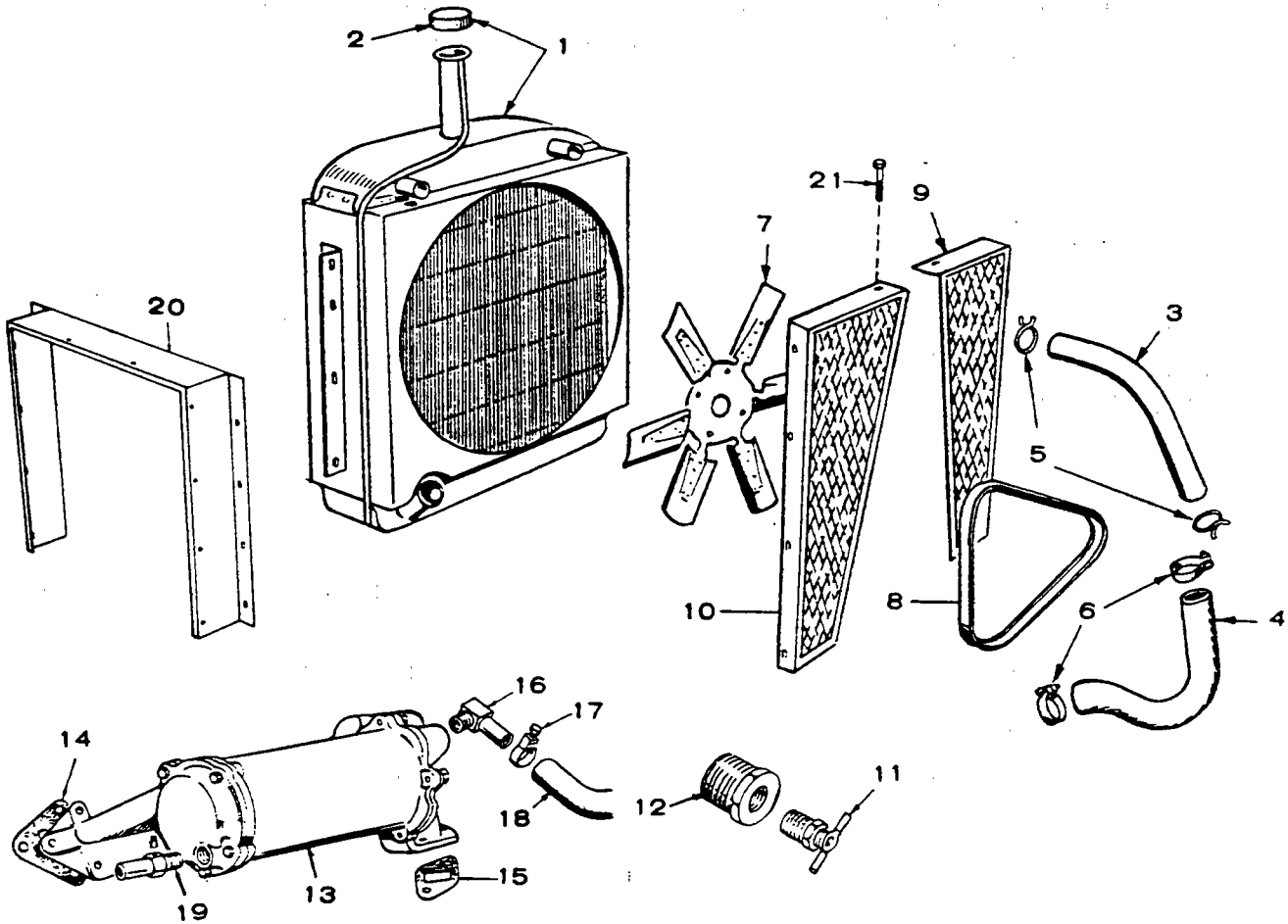
General Description:

Includes - Complete Cylinder Block, Oil Pan, Water Pump, Oil Filter, Governor, Exhaust Manifolds, and Engine Mounts.

Excludes - Carburetor, Fuel Pump, Air Cleaner, Fuel Filter, Starter & Solenoid, Charge Generator, Regulator & Wire Harness, Ignition Coil, Distributor, Spark Plug Leads, Oil Pressure & Water Temperature Gauge Senders, Oil Pressure Switch, High Water Temperature Cut Off Switch, Anti-Dieseling Control, Radiator, Fan Blades & Belt, Exhaust Header, Muffler and Exhaust Tube.

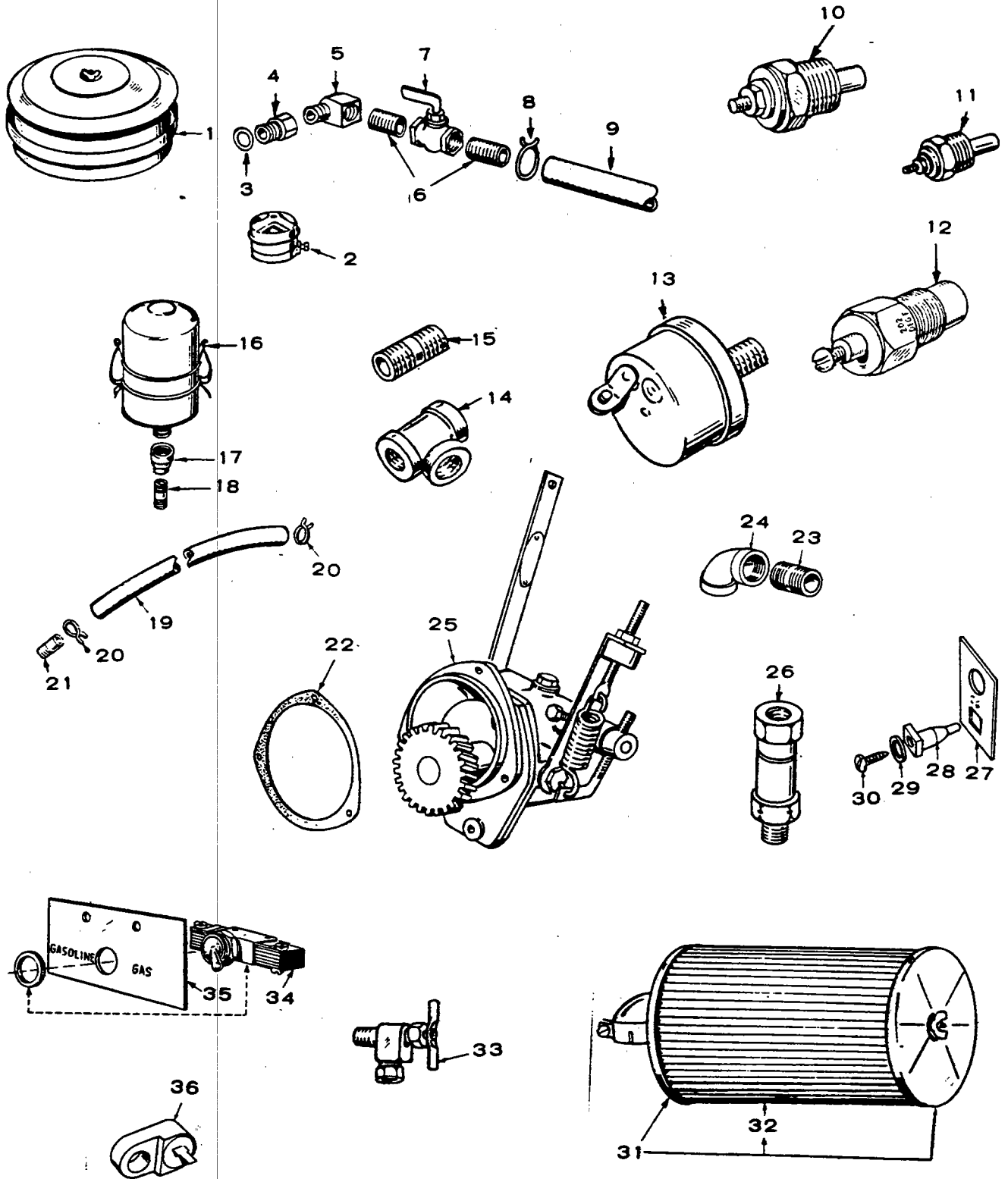
- ★ - Standard generator set, for all other models refer to factory.

COOLING SYSTEM GROUP



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	RADIATOR - INCLUDES CAP 130-0430	1	Key 1 (55.0KB)	12	505-0019	1	Bushing, Drain Valve (1/2 x 3/8")
	130-0429	1	Key 1 (65.0KB) and Key 2	13	102-0431	1	Cooler, Oil - Key 1 (65.0KB Only)
2	130-0449	1	Cap, Radiator - 7 lbs. Pressure	14	102-0434	1	Gasket, Rear - Oil Cooler - Key 1 (65.0KB Only)
3	603-0332	2	Hose, Radiator - Upper	15	102-0435	1	Gasket, Front - Oil Cooler - Key 1 (65.0KB Only)
4	503-0333	1	Hose, Radiator - Lower	16	503-0399	1	Elbow, Water By-Pass - Oil Cooler - Key 1 (65.0KB Only)
5	503-0311	4	Clamp, Upper Hose	17	503-0398	2	Clamp, Hose - Oil Cooler - Key 1 (65.0KB Only)
6	503-0354	2	Clamp, Lower Hose	18	502-0250	1	Elbow, Hose - Oil Cooler - Key 1 (65.0KB Only)
7	130-0428	1	Fan Only, Cooling	19	102-0494	1	Nipple, Oil Cooler - Key 1 (65.0KB Only)
8	511-0059	2	Belt, Fan Drive	20	130-0798	1	Adapter, Fan Guard - City Water Cooled without water cooled manifold
9	130-0434	1	Guard, Fan (LH) - Also used on City Water Cooled Sets without water cooled manifold	21	821-0010	As Req.	Screw (1/4-20 x 1/2"). Lock
10	130-0433	1	Guard, Fan (RH) - Also used on City Water Cooled Sets without water cooled manifold				
11	504-0028	1	Valve, Drain				

OIL DRAIN, BREATHER, AIR CLEANER, SENDERS, GOVERNOR, AND OPTIONAL RESERVOIR (DAY) TANK GROUP



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	140-0524	1	Cleaner, Air - Gasoline Fueled Models
2	140-0525	1	Adapter, Air Cleaner
3	102-0034	1	Gasket, Oil Drain Adapter
4	102-0033	1	Adapter, Oil Drain
5	502-0133	1	Elbow, Oil Drain (90°)
6	505-0100	2	Nipple, Oil Drain (1/2")
7	504-0011	1	Valve, Shut-Off - Oil Drain
8	503-0197	1	Clamp, Oil Drain Hose
9	503-0098	1	Hose, Oil Drain
10	193-0108	1	Sender, Oil Pressure Gauge
11	193-0104	1	Sender, Water Temperature Gauge
12	309-0178	1	* Switch, Water Temperature (High) <i>Pre-Adapter (S7)</i>
13	309-0169	1	Switch, Oil Pressure
14	509-0059	1	Tee, Pipe (1/8") Oil Pressure Switch and Oil Gauge Sender Mounting
15	505-0104	1	Nipple, Close (1/8 x 1-1/2") - Oil Pressure Tee to Block
16	140-0518	1	Cleaner, Crankcase Breather
17	505-0369	1	Coupling, Reducer (1/2 x 1/4") - Breather Cleaner to Mounting Nipple
18	505-0099	1	Nipple, Close (1/4 x 7/8") - Breather Cleaner to Cylinder Head Cover Mounting
19	503-0445	1	Hose, Breather
20	503-0131	2	Clamp, Breather Hose
21	505-0010	1	Nipple, Half (1/4 x 1") Breather Hose Adapter

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
22	151-0387	1	Gasket, Governor Flange
23	505-0099	1	Nipple, Close, Breather Hose Adapter
24	505-0038	1	Elbow, Breather Hose Adapter
25	151-0371	1	*Governor Assembly (International Harvester Co. #678045C91)
26	123-0960	1	Vent, Crankcase
27	332-1281	1	Bracket, Terminal Mounting
28	870-0196	1	Nut, Insulator
29	508-0015	1	Washer, Insulator
30	809-0035	1	Screw, Sheet Metal
31	140-0851	1	Cleaner, Air - Gaseous Fueled Models
32	140-0871	1	Element, Air Cleaner - Gaseous Fueled Models - Optional
33	504-0085	1	Valve, Fuel Shut-Off - Optional
34	308-0005	1	Switch, Gas-Gasoline - Optional
35	308-0150	1	Bracket, Switch Mounting - Optional
36	309-0269	1	Switch, Low Engine Temperature
	141-0640	1	Repair Kit, Carburetor
	141-0641	1	Gasket Kit, Carburetor

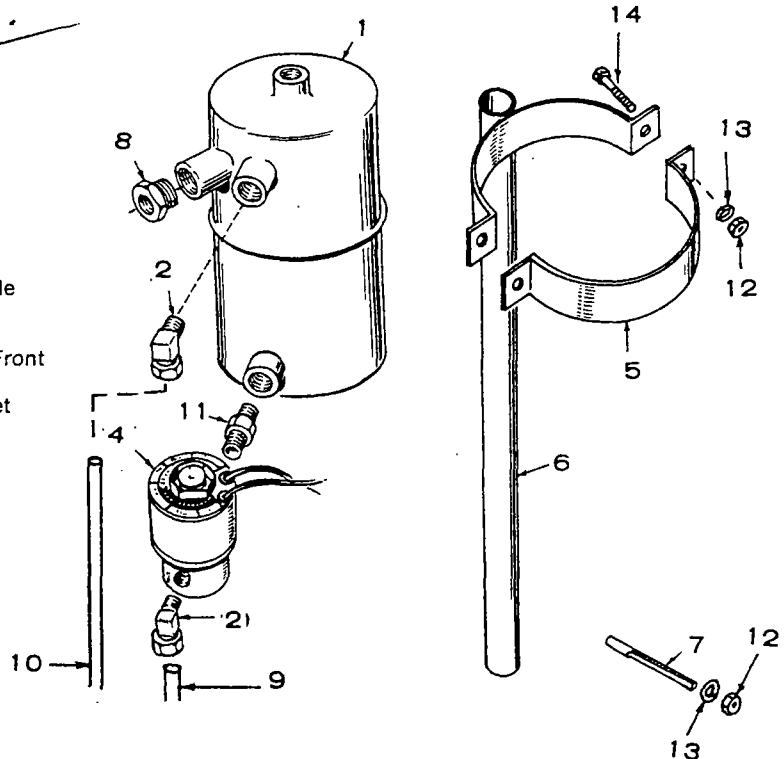
* - Order parts or components for this governor (International #678045C91) from the International Harvester Company, 401 North Michigan Avenue, Chicago, Illinois 60611.

12 309-0178
 1 * Switch Temp (S1) Shut down

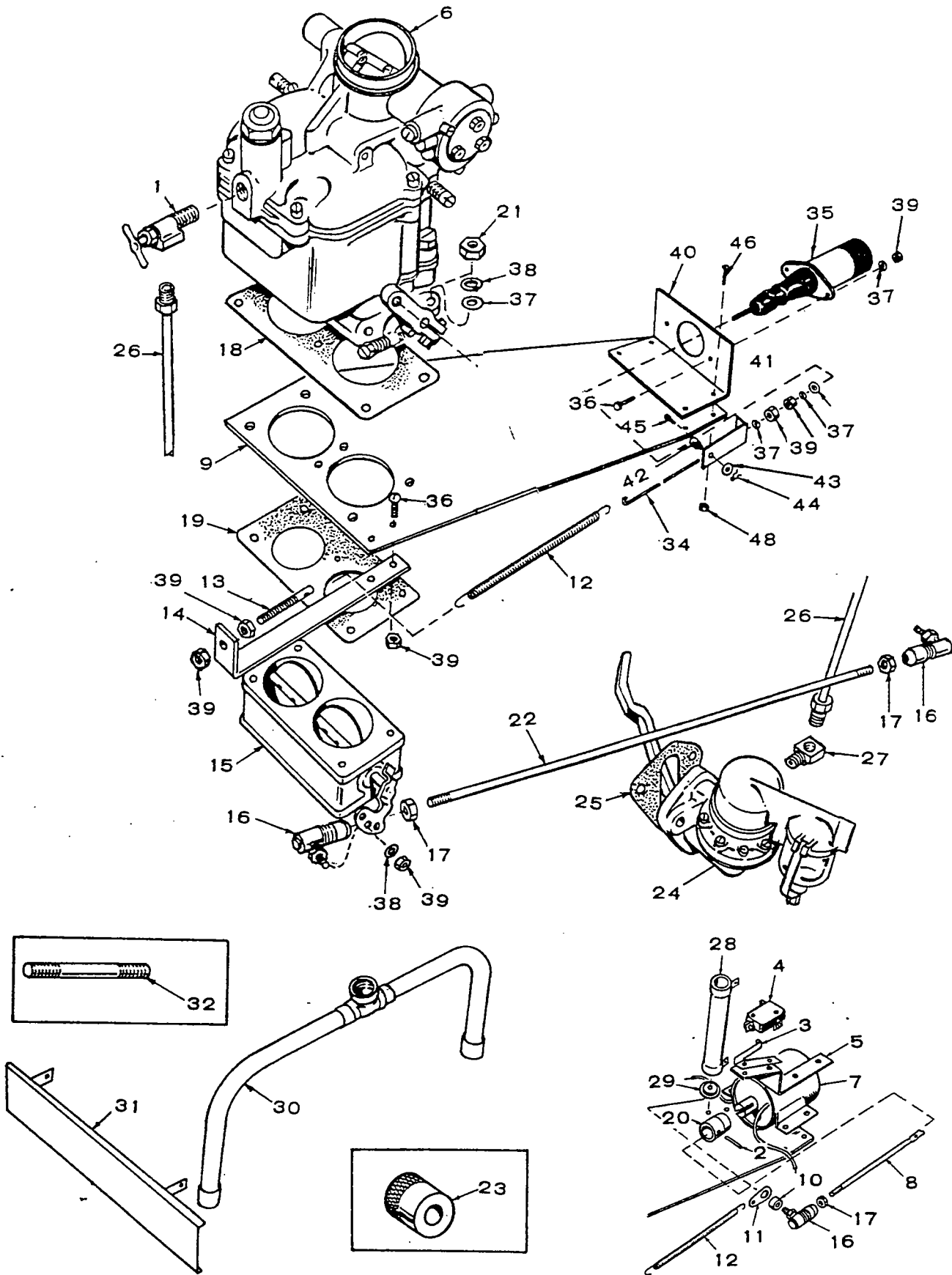
RESERVOIR (DAY) TANK GROUP

* Note: 309-0178 used as shutdown when no S7 used.

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	159-0294	1	Tank, Day
2	502-0024	3	Elbow, Compression - Male
3	505-0057	2	Plug, Square Head
4	307-0565	1	Valve, Solenoid
5	159-0253	1	Clamp, Tank Mounting - Front
6	159-0678	1	Bracket, Tank Mounting
7	159-0681	1	Bolt Wedge - Tank Bracket Mounting
8	159-0705	1	Reducer, Restricted
9	159-0667	1	Line, Fuel - Tank to Carburetor
10	159-0686	1	Line, Fuel - Tank to Pump
11	502-0082	1	Nipple, Hex
12	NUT, HEX		
	860-0015	1	Tank Bracket Mounting
	860-0013	2	Tank Clamp
13	WASHER, LOCK		
	850-0045	1	Tank Bracket Mounting
	850-0040	2	Tank Clamp
14	800-0007	2	Screw, Hex Head Cap - Tank Clamp



GASOLINE FUEL SYSTEM, EXHAUST, AND ANTI DIESELING GROUP



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	504-0095	1	Valve, Shut-Off - Carburetor Inlet - Key 1 - Spec N Only
1	502-0004	1	Elbow, Male - Carburetor Inlet - Key 1 - Begin Spec P
1	502-0004	1	Elbow, Male - Carburetor Inlet - Key 2
2	516-0086	1	†Pin, Roll (1/8 x 3/4") - Spec N Only
3	309-0133	1	Actuator, Micro Switch - Spec N Only
4	309-0155	1	Switch, Micro - Spec N Only
5	309-0131	1	Bracket, Micro Switch Mounting - Spec N Only
6	*CARBURETOR ASSEMBLY		
	141-0636	1	Key 1 (Zenith #28ADA10C)
	141-0635	1	Key 2 (Zenith #12411A)
7	307-0259	1	Solenoid & Lead Assembly, Anti-Dieseling - Spec N Only
8	145-0124	1	Link, Solenoid - Spec N Only
9	145-0186	1	Bracket, Solenoid Mounting
10	150-0302	1	Bushing, Throttle Spring Link to Ball Joint
11	145-0118	1	Link, Throttle Spring - Spec N Only
12	145-0158	1	Spring, Throttle
13	150-0096	1	Stud, Throttle Spring Adjusting
14	145-0187	1	Bracket, Throttle Spring
15	145-0410	1	Body Assembly, Throttle (Includes Parts Marked †)
16	150-0638	2	†Joint, Ball (3 Used Spec N Only)
17	115-0025	4	†Nut, Hex (1/4-28) - (2) Governor Control Stud, (2) Ball Joint, (5 Used Spec N Only)
18	145-0189	1	Gasket, Carburetor to Solenoid Mounting Bracket
19	145-0185	1	Gasket, Throttle Body
20	309-0132	1	Cam, Micro Switch - Spec N Only
21	110-0445	4	Nut, Hex (5/16-24) - Carburetor Retaining
22	520-0517	1	†Stud, Governor Control
23	141-0372	1	Knob, Choke - Carburetor
24	149-0730	1	Pump Assembly, Fuel
25	149-0736	1	Gasket, Fuel Pump Mounting
26	159-0685	1	Line, Fuel Pump to Carburetor
27	502-0004	1	Elbow, Inverted Male - Fuel Pump Outlet
28	304-0045	1	Resistor, Anti-Dieseling (Fixed) - Spec N Only

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
29	304-0015	2	Washer, Resistor Centering - Spec N Only
30	155-0612	1	Header Assembly, Exhaust
31	133-0157	2	Shield, Exhaust Manifold Heat
32	520-0599	2	Stud, Exhaust Elbow
33	145-0414	1	Link, Throttle Spring - Begin Spec P
34	145-0436	1	Link, Solenoid - Begin Spec P
35	SOLENOID, ANTI-DIESELING		
	307-1093	1	Spec P to Serial #1173734206 During Spec R)
	307-1356	1	Begin Serial #1173734206 During Spec R)
36	SCREW, ROUND HEAD		
	812-0079	4	Solenoid Mounting
	813-0100	2	Throttle Spring Bracket Mounting
	813-0148	1	Link Mounting - Begin Spec P
37	WASHER, FLAT		
	526-0115	4	Carburetor Mounting
	526-0018	2	Link Mounting - Begin Spec P
38	WASHER, LOCK		
	850-0045	4	Carburetor Mounting
	850-0025	4	Solenoid Mounting
	850-0040	2	†Ball Joint Mounting - Begin Spec P
39	NUT, HEX		
	860-0008	4	Solenoid Mounting
	870-0131	2	Throttle Spring Bracket Mounting
	870-0053	2	Throttle Adjusting Stud
40	307-1323	1	Bracket, Solenoid Mounting - Begin Serial #1173734201 During Spec R
41	307-1330	1	Bracket, Solenoid - Begin Serial #1173734206 During Spec R
42	152-0155	1	Swivel, Solenoid - Begin Serial #1173734206 During Spec R
43	526-0006	2	Washer, Flat
44	516-0059	1	Pin, Cotter
45	815-0104	1	Screw, Fillister Head (8-32 x 5/16" long)
46	800-0003	2	Screw, Hex Head (1/4-20 x 1/2" long)
47	850-0040	4	Washer, Lock (1/4)
48	862-0001	2	Nut, Hex (1/4-20)

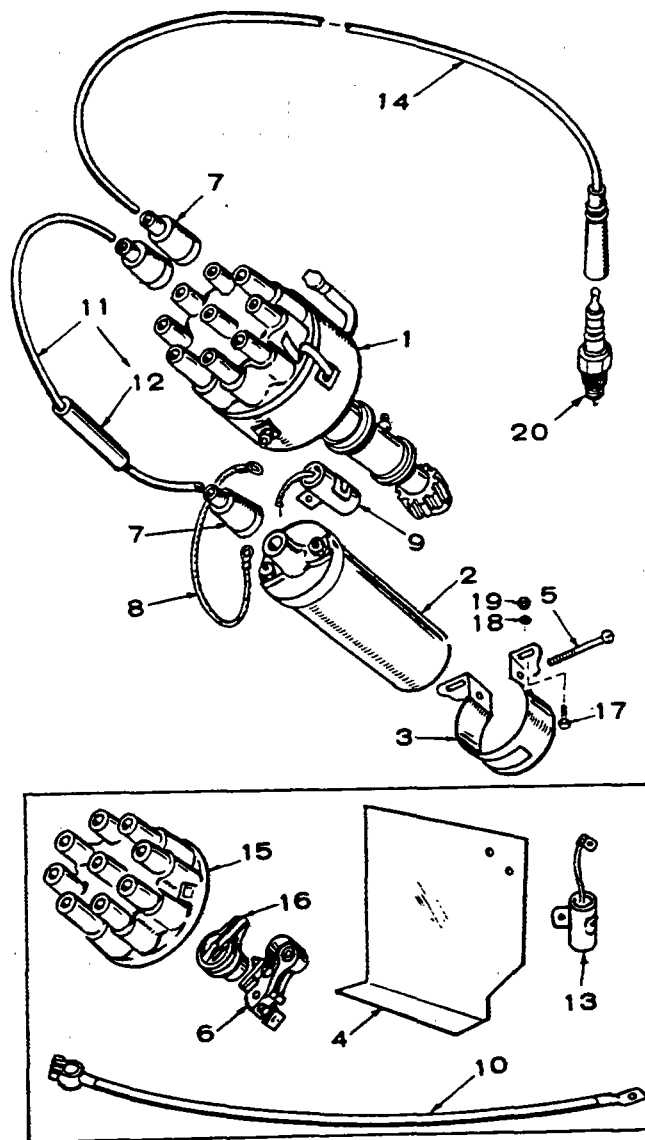
* - For components contact your nearest Zenith Carburetor dealer or Zenith Carburetor Division, The Bendix Corp., 696 Hart Avenue, Detroit, Michigan.

† - Included in 145-0410 Throttle Body Assembly.

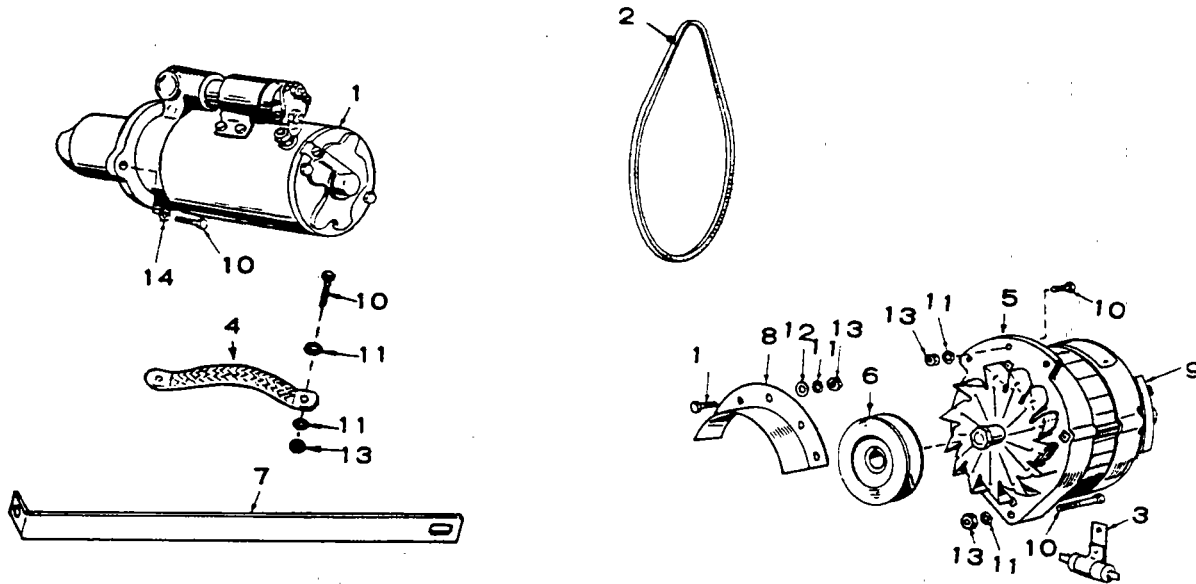
IGNITION GROUP

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	166-0282	1	*Distributor Assembly (Delco Remy #1110625)
2	166-0278	1	Coil, Ignition (12 Volt)
3	166-0279	1	Bracket, Coil Mounting
4	133-0158	1	Shield, Ignition Coil Heat
5	166-0286	1	Screw, Oil Bracket
6	166-0321	1	Point Set, Breaker
7	160-0558	10	Nipple, Rubber (9) Distributor, (1) Ignition Coil
8	336-0332	1	Lead, Ignition Coil
9	312-0058	1	Condenser, Ignition Coil (0.1 Mfd.)
10	CABLE, BATTERY		
	416-0643	1	28-1/4" Long
	416-0021	1	20-1/2" Long
11	167-1528	1	Cable, Distributor (Includes Suppressor)
12	314-0006	1	Suppressor, Distributor
13	166-0320	1	Condenser, Distributor
14	CABLE, SPARK PLUG		
	167-1332	1	Cylinder No. 1
	167-1333	1	Cylinder No. 2
	167-1334	1	Cylinder No. 3
	167-1337	1	Cylinder No. 4
	167-1335	1	Cylinder No. 5
	167-1336	1	Cylinder No. 6
	167-1338	1	Cylinder No. 7
	167-1339	1	Cylinder No. 8
15	166-0318	1	Cap, Distributor
16	166-0319	1	Rotor, Distributor
17	800-0026	2	Screw, Hex Cap - Coil Clamp Mounting
18	850-0045	2	Washer, Lock - Coil Clamp Mounting
19	862-0015	2	Nut, Hex - Coil Clamp Mounting
20	167-0127	8	Plug, Spark

* - For components not listed, contact your nearest Delco Remy dealer or Delco Remy Division of General Motors Corp., Anderson, Indiana 46011.



STARTING MOTOR AND BATTERY CHARGE GENERATOR GROUP



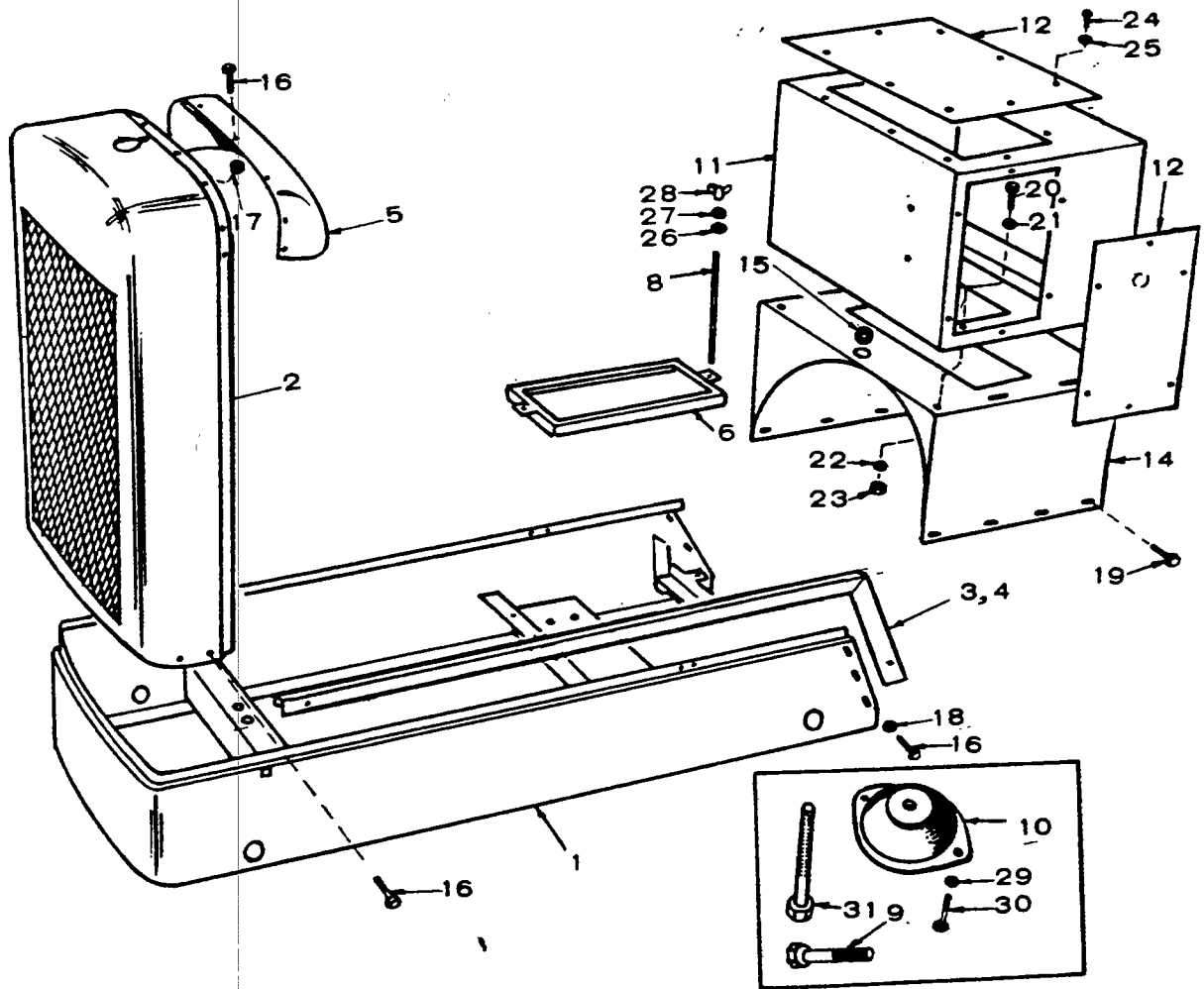
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-0486	1	*Motor, Starting (12 Volt) (Delco Remy #1113167-H)
2	511-0025	1	Belt, Alternator Drive
3	312-0058	1	Condenser (0.1 Mfd.) - Charge Alternator
4	337-0090	2	Strap, Ground (8-7/16")
5	191-0665	1	**Alternator, Charge (Includes Regulator) - Motorola #70D44039B
6	191-0649	1	Pulley, Alternator
7	191-0678	1	Brace, Alternator Mounting
8	191-0725	1	Guard, Alternator Belt
9	191-0732	1	Regulator, Alternator (Part of Alternator)
10	SCREW, HEX CAP		
	800-0051	2	Starter Motor Mounting
	800-0051	3	Alternator Mounting (3/8-16 x 1-1/4")
	800-0095	1	Alternator Mounting (1/2-13 x 2-1/4")
	800-0025	6	Alternator Guard Mounting
	800-0091	1	Ground Strap Mounting (1/2-13 x 1-1/4")

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
11	WASHER, LOCK		
	850-0050	3	Alternator Mounting (3/8")
	850-0060	1	Alternator Mounting (1/2")
	850-0045	6	Alternator Guard Mounting
	856-0013	1	Ground Strap Mounting (1/2") EIT
	850-0060	1	Ground Strap Mounting (1/2")
12	526-0115	6	Washer, Flat - Alternator Guard Mounting
13	NUT, HEX		
	862-0015	6	Alternator Guard Mounting
	862-0005	1	Alternator Mounting (1/2-13")
	862-0003	3	Alternator Mounting (3/8-16")
	862-0016	1	Ground Strap Mounting (1/2-13")
14	856-0010	2	Washer, Shakeproof - Starter Motor Mounting

* - For components contact your nearest Delco Remy dealer or Delco Remy Div. of General Motors Corp., Anderson, Indiana 46011.

** - For components contact your nearest Motorola dealer or Motorola Automotive Products Inc., 9401 W. Grand Avenue, Franklin Park, Illinois 60131.

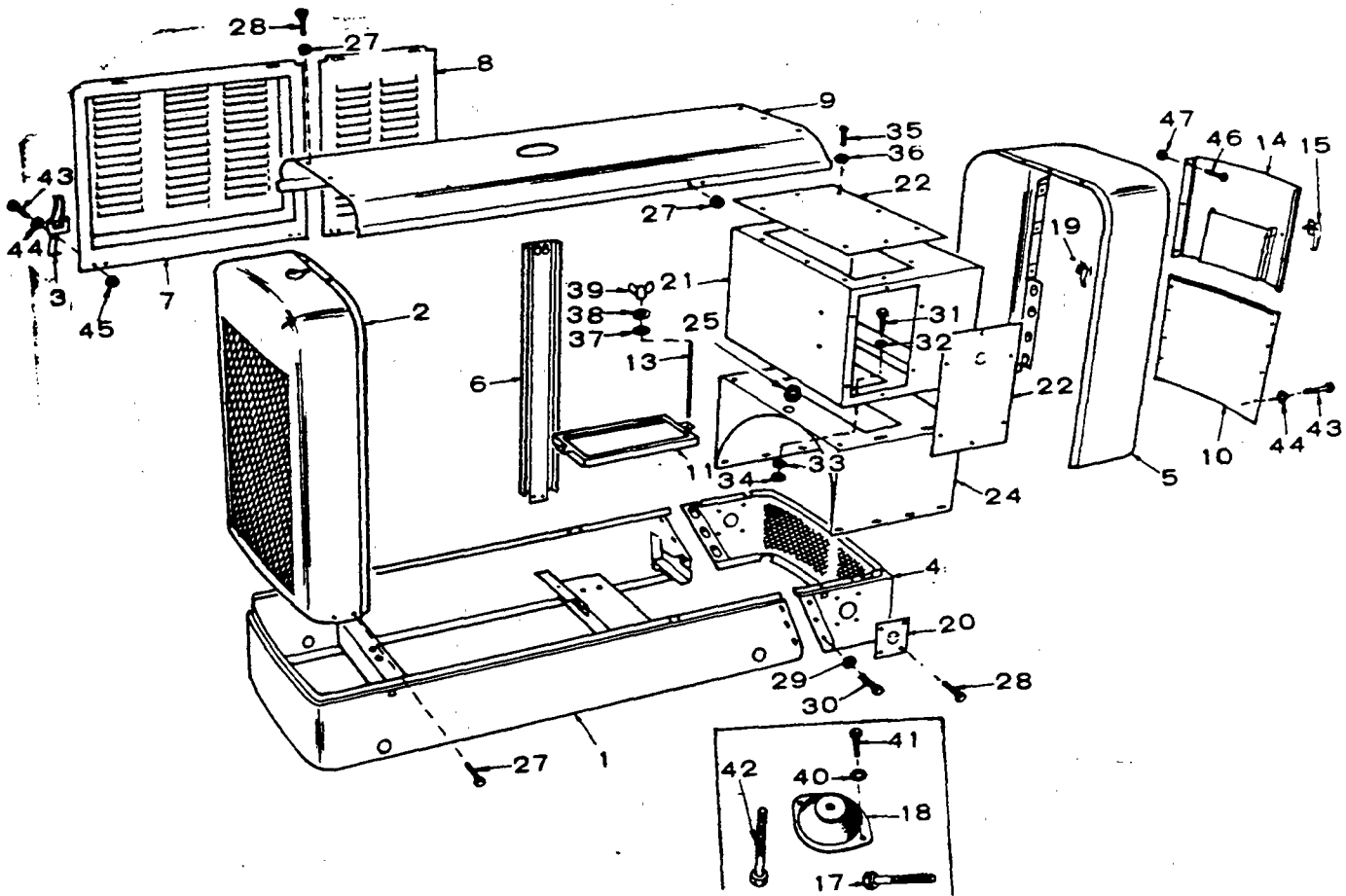
MOUNTING GROUP (UNHOUSED MODELS ONLY)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	403-0893	1	Chassis, Mounting
2	405-1153	1	Panel, Front End (Radiator Cooled Models)
3	403-0896	1	Trim, Chassis - Right Hand Side
4	403-0897	1	Trim, Chassis - Left Hand Side
5	405-1165	1	Hood, Radiator Extension
6	416-0338	1	Frame, Battery Hold-down
8	520-0231	2	Stud, Battery Hold-down
9	800-0520	2	Bolt, Generator End Mounting (3/4-10 x 1")
10	402-0371	2	Rubber, Generator End Mounting
11	301-3155	1	Housing, Control Box
12	301-3156	3	Panel, Control Box Housing
14	301-3154	1	Saddle, Control Box Housing
15	508-0001	1	Grommet, Control Box Saddle

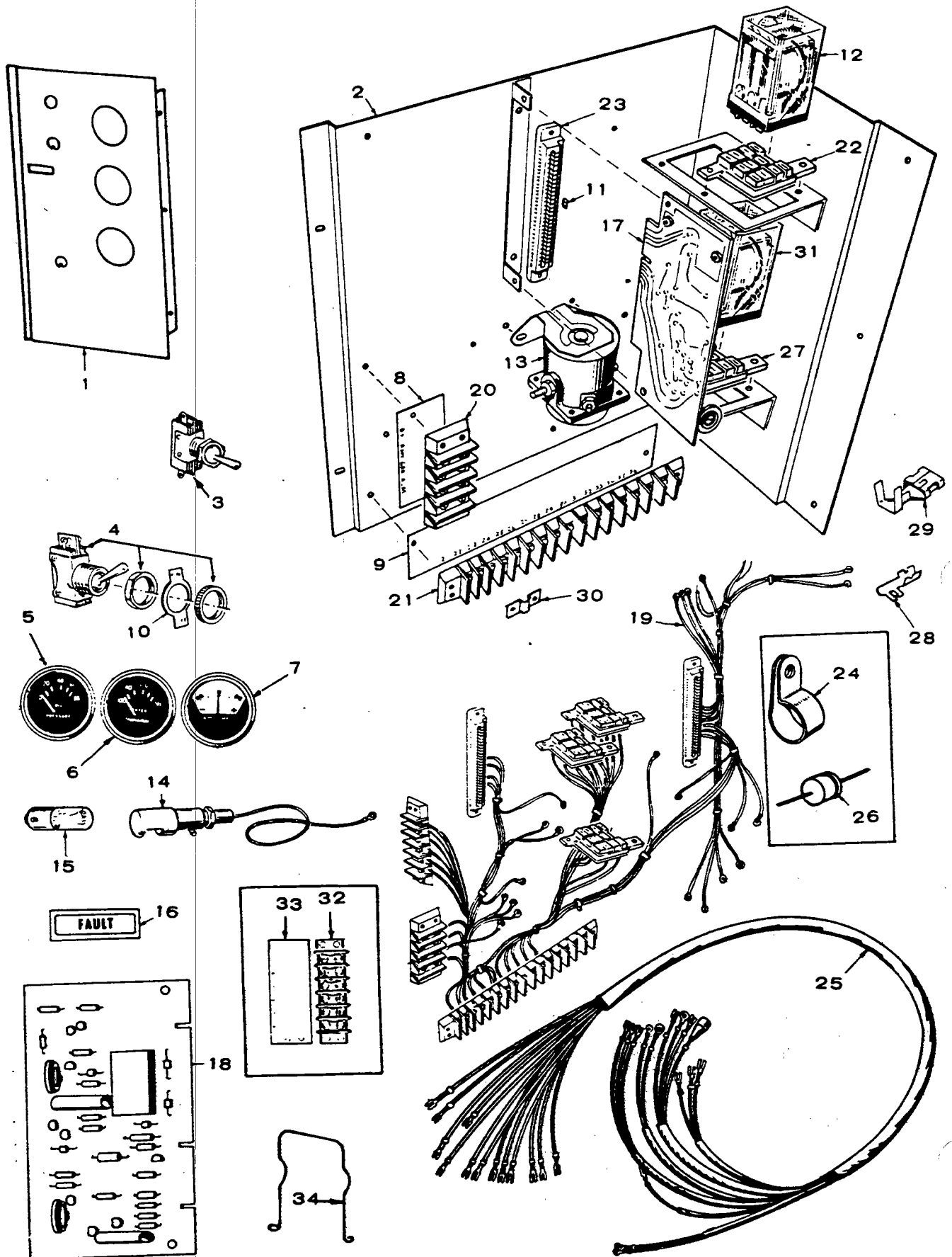
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
16	821-0014	As Req.	Screw (5/16-18 x 1/2), Lock
17	870-0113	As Req.	Nut (5/16-18), Retainer
18	870-0020	6	Nut (5/16-18), Sq. Weld.
19	821-0010	As Req.	Screw (1/4-20 x 1/2), Lock
20	800-0003	4	Screw (1/4-20 x 1/2), Control Box to Saddle
21	526-0018	8	Washer (1/4")
22	850-0040	4	Washer (1/4"), Lock
23	862-0001	4	Nut (1/4-20)
24	815-0026	18	Screw (10-32 x 3/8)
25	853-0008	18	Washer, ET Lock (#10)
26	526-0015	2	Washer (5/16")
27	850-0045	2	Washer (5/16"), Lock
28	865-0007	2	Nut, Wing (5/16-18)
29	850-0055	4	Washer (7/16"), Lock
30	800-0071	4	Screw (7/16-14 x 1)
31	402-0214	2	Bolt, Front Engine Mounting

HOUSING GROUP (HOUSED MODELS ONLY)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	403-0893	1	Chassis, Mounting	21	301-3155	1	Housing, Control Box
2	405-1153	1	Panel, Front End	22	301-3156	3	Panel, Control Box Housing
3	406-0105	8	Clamp, Hold-down - Side Panels	24	301-3154	1	Saddle, Control Box Housing
4	403-0894	1	Chassis, Mounting - Rear Section	25	508-0001	1	Grommet, Control Box Saddle
5	405-1775	1	Panel, Rear End - Excludes Door	26	821-0014	As Req.	Screw (5/16-18 x 1/2), Lock
6	405-1776	2	Support, Top Panel	27	870-0113	As Req.	Nut (5/16-18), Retainer
7	405-1774	2	Panel, Door - Housing Side - Includes Handles	28	821-0010	As Req.	Screw (1/4-20 x 1/2"), Lock
8	405-1778	2	Panel, Side	29	850-0050	6	Washer (3/8"), Lock
9	PANEL, TOP 405-1779	1	Models Without Water Cooled Manifolds	30	800-0048	6	Screw (3/8-16 x 3/4")
	405-1813	1	Models With Water Cooled Manifolds	31	800-0003	4	Screw (1/4-20 x 1/2), Control Box to Saddle
10	405-1780	1	Panel, Chassis	32	526-0018	8	Washer (1/4")
11	416-0338	1	Frame, Battery Hold-down	33	850-0040	4	Washer (1/4"), Lock
13	520-0231	2	Stud, Battery Hold-down	34	862-0001	4	Nut (1/4-20)
14	405-1777	1	Door, Rear Panel Control	35	815-0026	18	Screw (10-32 x 3/8)
15	406-0157	1	Handle, Panel Door (Includes Keys)	36	853-0008	18	Washer, ET Lock (#10)
17	800-0520	2	Bolt, Generator End Mounting (3/4-10 x 1")	37	526-0015	2	Washer (5/16")
18	402-0371	2	Rubber, Generator End Mounting	38	850-0045	2	Washer (5/16"), Lock
19	406-0089	1	Catch, Panel Door	39	865-0007	2	Nut, Wing (5/16-18)
20	403-0895	2	Cover, Conduit Opening	40	850-0055	4	Washer (7/16"), Lock
				41	800-0071	4	Screw (7/16-14 x 1)
				42	402-0214	2	Bolt, Front Engine Mounting
				43	813-0098	22	Screw (10-32 x 3/8)
				44	850-0030	22	Washer (#10), Lock
				45	870-0053	16	Nut (10-32)
				46	821-0006	3	Screw (#14 x 1/2), Pan Head Sheet Metal
				47	870-0106	3	Nut, Speed

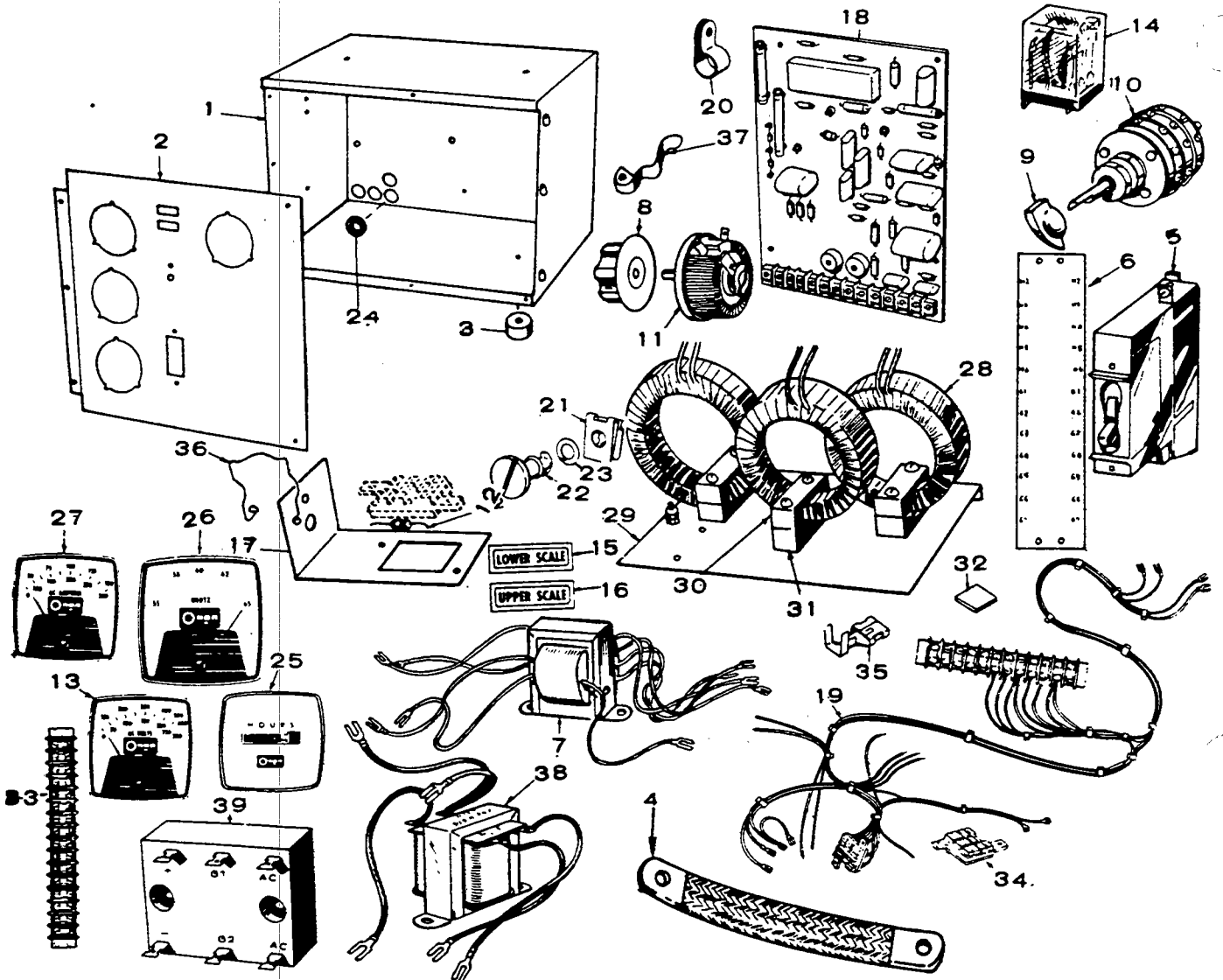
CONTROL GROUP (ENGINE INSTRUMENT PORTION)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	PANEL ONLY, ENGINE CONTROL		
	301-3165	1	Models With One Fault Light
	301-3267	1	Models With Five Fault Lights - Optional
2	301-3253	1	Bracket, Engine Control
3	308-0138	1	Switch, Selector
4	308-0002	1	Switch, Panel Light
5	193-0107	1	Gauge, Oil Pressure
6	193-0106	1	Gauge, Water Temperature
7	302-0061	1	Ammeter, Charge (30-0-30)
8	332-1239	1	Strip, Marker (B+, Remote, Ground, Alarm)
9	332-1241	1	Strip, Marker (21 through 36)
10	308-0003	1	Plate, Switch (on-off)
11	332-1276	2	Plug, Keying
12	307-1058	2	Relay (1) Start Disconnect, (1) Ignition
13	307-1031	1	Relay, Start Solenoid
14	322-0073	1	Holder, Lamp
15	322-0074	1	Lamp, Panel
16	LAMP, FAULT		
	322-0128	1	Standard Sets
	322-0107	1	Overcrank (Optional)
	322-0111	1	Overspeed (Optional)
	322-0108	1	Low Oil Pressure (Optional)
	322-0109	1	High Engine Temperature (Optional)
	322-0110	1	Low Engine Temperature (Optional)
17	CONTROL, CRANKER		
	300-0733	1	Standard Cranker
	300-0714	1	Cycle Cranker (Optional) - See Separate Group for Components

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
18	MONITOR, ENGINE CONTROL (See Separate Group for Components)		
	300-0679	1	Models With One Fault Light - Standard
	300-0681	1	Models With Five Fault Lights - Optional
19	HARNESSEASSEMBLY, WIRING-CONTROL (Includes Parts Marked *)		
	338-0528	1	Models With One Fault Light - Standard
	338-0534	1	Models With Five Fault Lights - Optional
20	332-0537	1	*Block, Terminal - 4 Place
21	332-0795	1	*Block, Terminal - 16 Place
22	323-0765	2	Socket, Relay - 11 Place
23	332-1271	2	*Housing, Printed Circuit Board Terminal
24	332-0051	1	Clip, Tinnerman
25	338-0505	1	Harness Assembly, Wiring - Engine to Control
26	357-0004	1	Rectifier, Diode (Part of Standard Cranker Control)
27	323-0764	1	*Socket, Relay - 8 Place
28	332-1269	As Req.	*Terminal, Printed Circuit Board
29	332-1280	As Req.	*Terminal, Crimp
30	332-1043	1	*Jumper, Terminal Model With One Fault Light
31	307-1061	1	Relay, Starter Protection - Begin Spec P
32	332-0699	1	*Block, Terminal (6 Place) - Models With Five Fault Lights
33	332-1240	1	*Strip, Marker (53 thru 58) - Models With Five Fault Lights
34	307-1157	3	Spring, Relay Hold-down

* - Included in Wiring Harness Assembly.

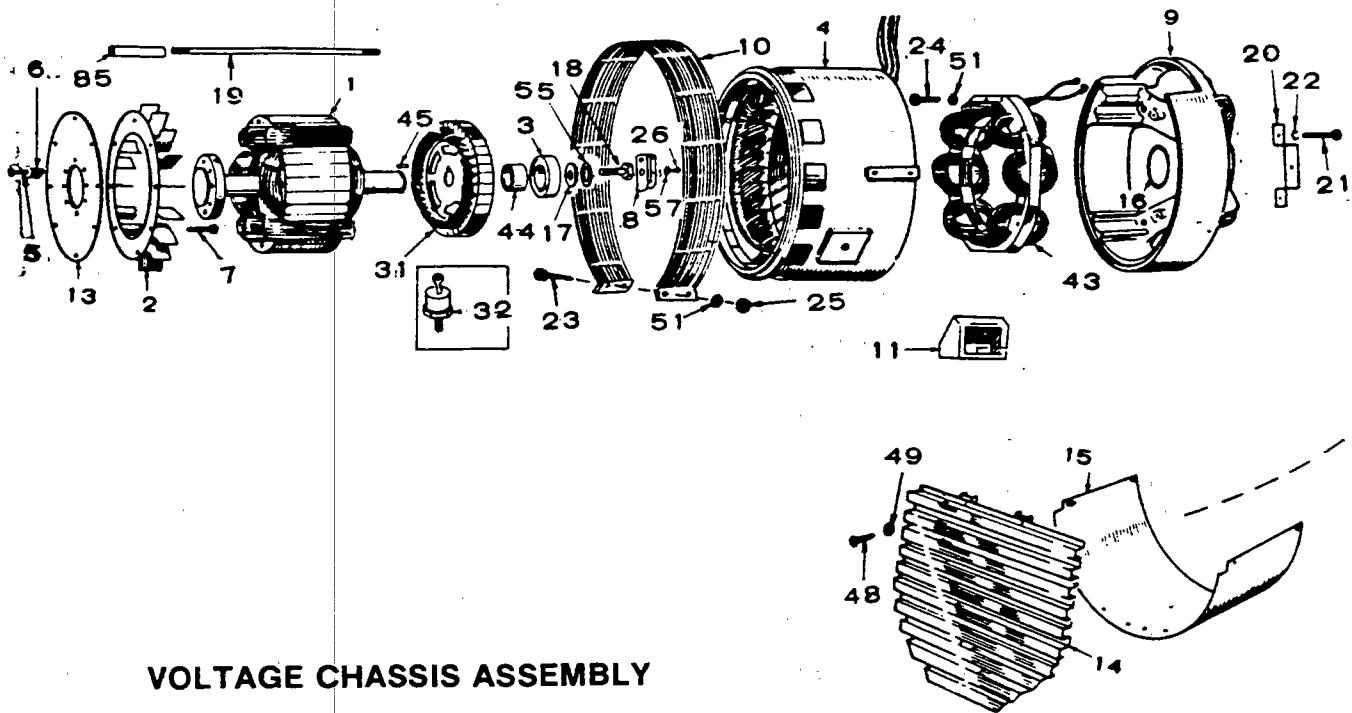


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	301-3158	1	Box Only, Control	6	STRIP, MARKER		
2	PANEL ONLY, CONTROL			332-1248		1	Models Without Meter Panel
			Models Without Meter Panel	332-1242		1	Models With Meter Panel
	301-3168	1	45.0KB-515R, 55.0KB-515R, 55.0KB-15R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R and 85.0KR-15R	7	315-0342	1	Transformer, Voltage
				8	303-0032	1	Knob, Rheostat
				9	303-0076	1	Knob, Selector Switch
	301-3341	1	55.0KB-9XR, 65.0KB-9XR and 85.0KR-9XR	10	SWITCH, SELECTOR		
			Models With Meter Panel	308-0012		1	Models Without Meter Panel
	301-3170	1	45.0KB-515R, 55.0KB-515R, 55.0KB-15R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R and 85.0KR-15R	308-0284		1	Models With Meter Panel
				11	303-0170	1	Rheostat
				12	350-0556	1	*Resistor (47,000-Ohm, 1/2 Watt)
	301-3342	1	55.0KB-9XR, 65.0KB-9XR and 85.0KR-9XR				45.0KB-515R, 55.0KB-515R, 55.0KB-15R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R and 85.0KR-15R
3	402-0078	4	Rubber, Mounting - Control Box	13	VOLTMETER		
4	337-0049	1	Strap, Ground	302-0718		1	45.0KB-515R, 55.0KB-515R, 55.0KB-15R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R and 85.0KR-15R
5	BREAKER, CIRCUIT						
	320-0018	1	Spec N Only	302-0779		1	55.0KB-9XR, 65.0KB-9XR and 85.0KR-9XR
	320-0431	1	Begin Spec P (Also used on Spec N optional brushless generator sets)				

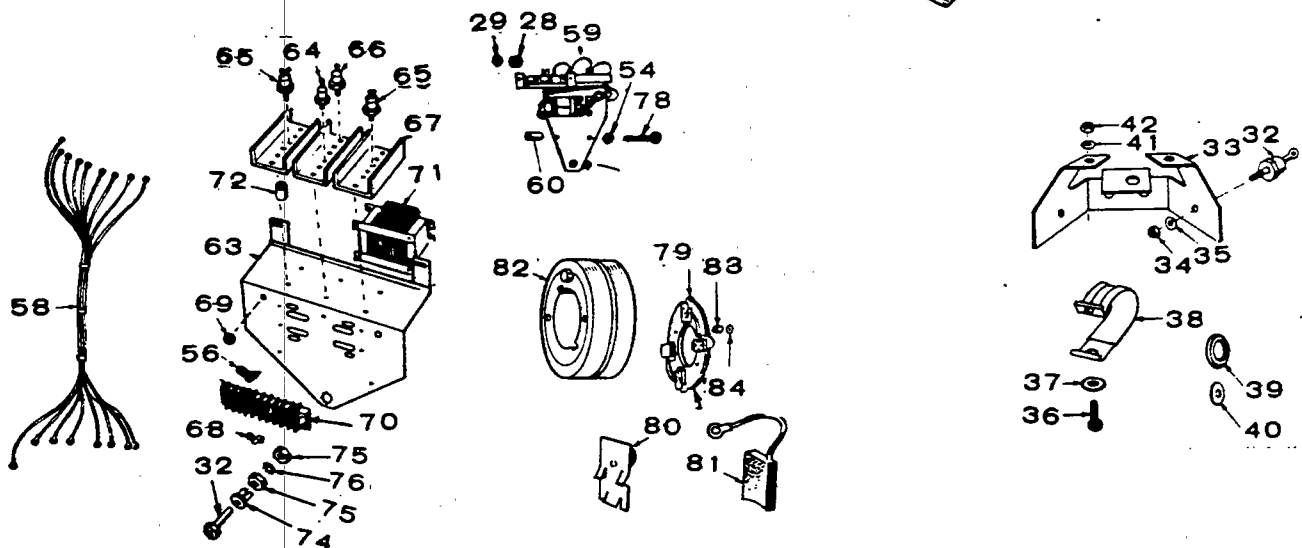
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
14	307-1061	1	Relay, Voltage Selector - 45.0KB-515R, 55.0KB-515R, 55.0KB-15R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R and 85.0KR-15R	29	302-0729	1	Bracket, Transformer Mounting
15	322-0130	1	Light, Lower Scale - 45.0KB-515R, 55.0KB-515R, 55.0KB-15R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R and 85.0KR-15R	30	302-0235	3	Clamp, Transformer Mounting - Upper - Models With Meter Panel
16	322-0131	1	Light, Upper Scale - 45.0KB-515R, 55.0KB-515R, 55.0KB-15R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R and 85.0KR-15R	31	302-0236	3	Clamp, Transformer Mounting - Lower - Models With Meter Panel
17	301-3244	1	Bracket, Relay Mounting - 45.0KB-515R, 55.0KB-515R, 55.0KB-15R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R and 85.0KR-15R	32	302-0253	As Req.	Shim, Transformer Mounting
18	BOARD ASSEMBLY, PRINTED CIRCUIT (See Separate Group For Components)			33	*BLOCK, TERMINAL 332-0607	1	Models Without Meter Panel - 12 Place
	332-1264	1	Spec N Only		332-0795	1	Models With Meter Panel - 16 Place
	332-1268	1	Begin Spec P (Also used on Spec N optional brushless generator sets)	34	323-0764	1	*Socket, Relay - 45.0KB-515R, 55.0KB-515R, 55.0KB-15R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R and 85.0KR-15R
19	HARNES, WIRING - AC CONTROL (Includes Parts Marked *)			35	332-1280	As Req.	*Terminal, Crimp - 45.0KB-515R, 55.0KB-515R, 55.0KB-15R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R and 85.0KR-15R
	338-0524	1	Models Without Meter Panel 45.0KB-515R, 55.0KB-515R, 55.0KB-15R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R and 85.0KR-15R	36	307-1157	1	Spring, Relay Hold-down
	338-0570	1	55.0KB-9XR, 65.0KB-9XR and 85.0KR-9XR	37	302-0307	1	Lock, Circuit Breaker Handle - Penn State Models (Optional)
	338-0525	1	Models With Meter Panel 45.0KB-515R, 55.0KB-515R, 55.0KB-15R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R and 85.0KR-9XR	38	315-0384	1	Reactor Assembly, Commutator Begin Spec S
	338-0571	1	55.0KB-9XR, 65.0KB-9XR and 85.0KR-9XR	39	305-0524	1	Bridge, Rectifier - Begin Spec S
20	332-0050	2	Clip, Tinnerman	40	813-0110	6	Screws, Round Head Machine (10-32 x 2" long)
21	406-0332	2	Fastener	41	854-0010	8	Washer, Internal Lock (#10)
22	406-0333	2	Stud, Fastener	42	815-0203	1	Screw, Round Head (BM) (10-32 x 7/8" long)
23	406-0334	2	Washer, Stud Fastener	43	871-0010	3	Nut, Hex (BMS) - (10-32)
24	508-0001	4	Grommet	44	526-0049	2	Washer, Flat
25	METER, RUNNING TIME (Models With Meter Panel)			45	856-0003	1	Washer, External/Internal - Lock
	302-0469	1	50 Hertz	46	HARNES, WIRING - AC CONTROL (Models Without Meter Panel) - BEGIN SPECS		
	302-0466	1	60 Hertz		338-0764	1	45.0KB-515R, 50.0KB-15R (Penn State) - 55.0KB-15R, 55.0KB-515R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R, 75.0KR-15R (Penn State), 85.0KR-15R
26	METER, FREQUENCY (Models With Meter Panel)				338-0766	1	55.0KB-9XR, 65.0KB-9XR, 70.0KR-9XR, 85.0KR-9XR
	302-0256	1	50 Hertz		338-0730	1	Models With Meter Panel 45.0KB-515R, 50.0KB-15R (Penn State), 55.0KB-15R, 55.0KB-515R, 65.0KB-15R, 70.0KR-515R, 70.0KR-15R, 75.0KR-15R (Penn State), 85.0KR-15R
	302-0221	1	60 Hertz		338-0759	1	55.0KB-9XR, 65.0KB-9XR, 70.0KR-9XR, 85.0KR-9XR
27	AMMETER - AC (Models With Meter Panel)						
	302-0720	1	Key 1 - 45.0KB (0-100/0-200 Amps)				
	302-0721	1	Key 1 - 55.0KB (0-150/0-300 Amps)				
	302-0722	1	Key 1 - 65.0KB - AND Key 2 (0-200/0-400 Amps)				
28	TRANSFORMER, CURRENT						
	302-0106	3	Key 1 (45.0KB) - 200/5				
	302-0107	3	Key 1 (55.0KB) - 300/5				
	302-0608	3	Key 1 (65.0KB) AND Key 2 - 400/5				

* - Included in Wiring Harness Assembly.

GENERATOR GROUP



VOLTAGE CHASSIS ASSEMBLY



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1		1	Rotor Assembly, Wound (Includes Parts Marked †)	15	234-0361	1	Wrapper, Generator End Bell - Unhoused Sets
2	205-0089	1	†Blower	16	509-0125	1	Seal, "O" Ring - Bearing
3	510-0101	1	†Bearing	17	526-0238	1	†Washer, Bearing Retainer
4		1	Stator Assembly, Wound	18	800-0513	1	†Screw, Bearing Retainer
5	805-0033	8	†Bolt, Place - Drive Disc to Hub	19	STUD, GENERATOR THROUGH		
6	526-0259	8	*Washer (5/8")		520-0722	4	45.0KB - 55.0KB
7	805-0032	8	Bolt, Place - Drive Disc to Engine		520-0723	4	65.0KB
8	150-0717	1	Switch Assembly, Overspeed		520-0724	4	70.0KR
9	211-0185	1	Bell, End		520-0726	4	85.0KR
10	234-0368	1	Screen, Generator	20	150-1456	1	Bracket and Point Assembly, Overspeed Switch - Begin Spec S
11	232-2106	2	Bracket, Generator Mounting	21	800-0003	2	Screw (1/4-20 x 1-1/4") - Bracket Mounting
12	850-0079	1	†Washer (3/4"), Lock				
13	232-2078	1	†Disc, Generator Drive		850-0040	8	Washer (1/4"), Lock
14	234-0370	1	Grille, Generator Air Inlet - Unhoused Sets	23	800-0008	2	Screw (1/4-20 x 1-1/4") - Screen Mounting

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
24	800-0009	4	Screw (1/4-20 x 1-1/2") - Stator Mounting
25	862-0001	2	Nut (1/4-20) - Generator Screen
26	812-0189	1	Screw (3/8-16 x 3/4"), Round Head - Overspeed Switch Mounting
27	856-0010	1	Washer (3/8"), Shakeproof EIT
28	862-0011	4	Nut (3/8-16) - Generator Through Stud
29	850-0050	4	Washer (3/8")
31	201-1739	1	†‡Rotor Assembly, Wound - Exciter (Includes Diodes)
32	†RECTIFIER, DIODE (Part of Exciter Rotor)		
	358-0015	3	£Negative
	358-0016	3	£Positive
33	HEAT SINK - DIODE (Part of Exciter Rotor)		
	363-0055	1	For Negative Diodes
	363-0054	1	For Positive Diodes
34	870-0053	6	Nut (10-32) - Diode Mounting
35	850-0030	6	Washer (#10) - Diode Mounting
36	813-0110	4	Screw (10-32 x 2"), Round Head - Heat Sink Mounting
37	526-0009	4	Washer (#10)
38	332-0050	2	Clip, Wire
39	508-0124	4	Bushing, Insulating
40	508-0156	4	Washer, Insulating
41	850-0030	4	Washer (#10)
42	870-0053	4	Nut (10-32) - Heat Sink Mounting
43	STATOR ASSEMBLY, WOUND - EXCITER		
	220-1528	1	Spec P through R
	220-2353	1	Spec S
44	232-2102	1	£†Spacer, Bearing
45	515-0145	1	£†Key, Exciter Rotor
46	800-0073	12	Screw (7/16-14 x 1-1/2") - Stator Assembly to Generator Adapter
47	850-0055	12	Washer (7/16"), Lock
48	812-0146	4	Screw (1/4-20 x 3/8"), Round Head - Air Inlet Grille Mounting
49	850-0040	4	Washer (1/4"), Lock
50	800-0132	4	Screw (5/8-11 x 1-1/2") - Generator Support to Chassis
51	850-0070	4	Washer (5/8"), Lock
52	402-0384	2	Mount, Vibration
53	800-0163	2	Screw (3/4-10 x 4") - Vibration Mount to Stator Assembly
54	800-0090	4	Screw (1/2-13 x 1") - Generator Support to Vibration Mount
55	850-0060	4	Washer (1/2"), Lock
56	850-0079	2	Washer (3/4"), Lock
57	526-0238	2	Washer (3/4"); Flat
58	338-0521	1	Harness Assembly, Voltage Regulator - Spec F through H

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
59	CHASSIS ASSEMBLY - INCLUDES PARTS MARKED ‡		
	305-0489	1	55.0KB - Spec N Only
	305-0483	1	65.0KB, 70.0KR and 85.0KR - Spec N Only
	305-0491	1	£Spec P through R
60	305-0481	2	Spacer, Voltage Regulator Chassis Mounting - Spec P through R
61	853-0013	4	Washer (1/4"), Shakeproof ET
62	800-0009	2	Screw (1/4-20 x 1-1/2") - Chassis Assembly Mounting
63	305-0482	1	‡Chassis, Voltage Regulator
64	358-0029	1	£‡Rectifier, Silicon (Avalanche) - Negative
65	‡RECTIFIER, SILICON GATE CONTROL - NEGATIVE		
	364-0012	2	Spec N Only
	364-0014	2	£Spec P through R
66	£RECTIFIER, SILICON (Avalanche) - NEGATIVE		
	358-0031	2	Spec N Only
	358-0035	2	£Spec P through R
67	363-0048	3	‡Heat Sink, Rectifier
68	332-1043	2	‡Jumper, Terminal Board
69	508-0002	2	‡Grommet, Reactor Leads
70	332-1266	1	‡Block, Terminal
71	‡REACTOR ASSEMBLY		
	315-0341	1	55.0KB - Spec N Only
	315-0339	1	65.0KB, 70.0KR and 85.0KR - Spec N Only
	315-0343	1	£Spec P through R
72	332-1265	6	‡Insulator, Heat Sink Mounting
73	150-0723	1	‡Contact, Overspeed Switch
74	870-0250	1	‡Nut, Insulator - Overspeed Switch
75	862-0001	2	‡Nut (1/4-20), Hex - Overspeed Switch
76	853-0013	1	‡Washer (1/4"), Lock - Overspeed Switch
77	332-1415	1	‡Clamp, Cable
78	800-0003	2	Screw (1/4-20 x 1/2") - Chassis Assembly Mounting
79	212-0342	1	Rig Assembly, Brush - Includes Brushes & Springs - Spec N Only
80	212-1105	4	Spring, Brush - Spec N Only
81	214-0046	4	Brush - Spec N Only
82	204-0083	1	Ring, Collector - Spec N Only
83	212-1225	4	Spacer, Brush Rig Mounting - Spec N Only
84	526-0018	4	Washer, Brush Rig Mounting - Spec N Only
85	503-0611	4	Hose, Insulator

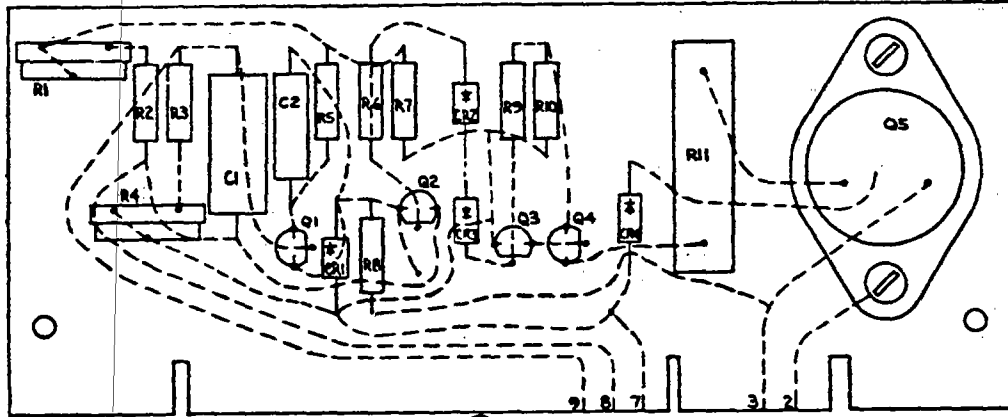
* - Refer to factory giving complete Model, Spec and Serial Number from the Onan Nameplate.

† - Included in Wound Rotor Assembly.

‡ - Included in the Voltage Regulator Chassis Assembly (Spec P through R).

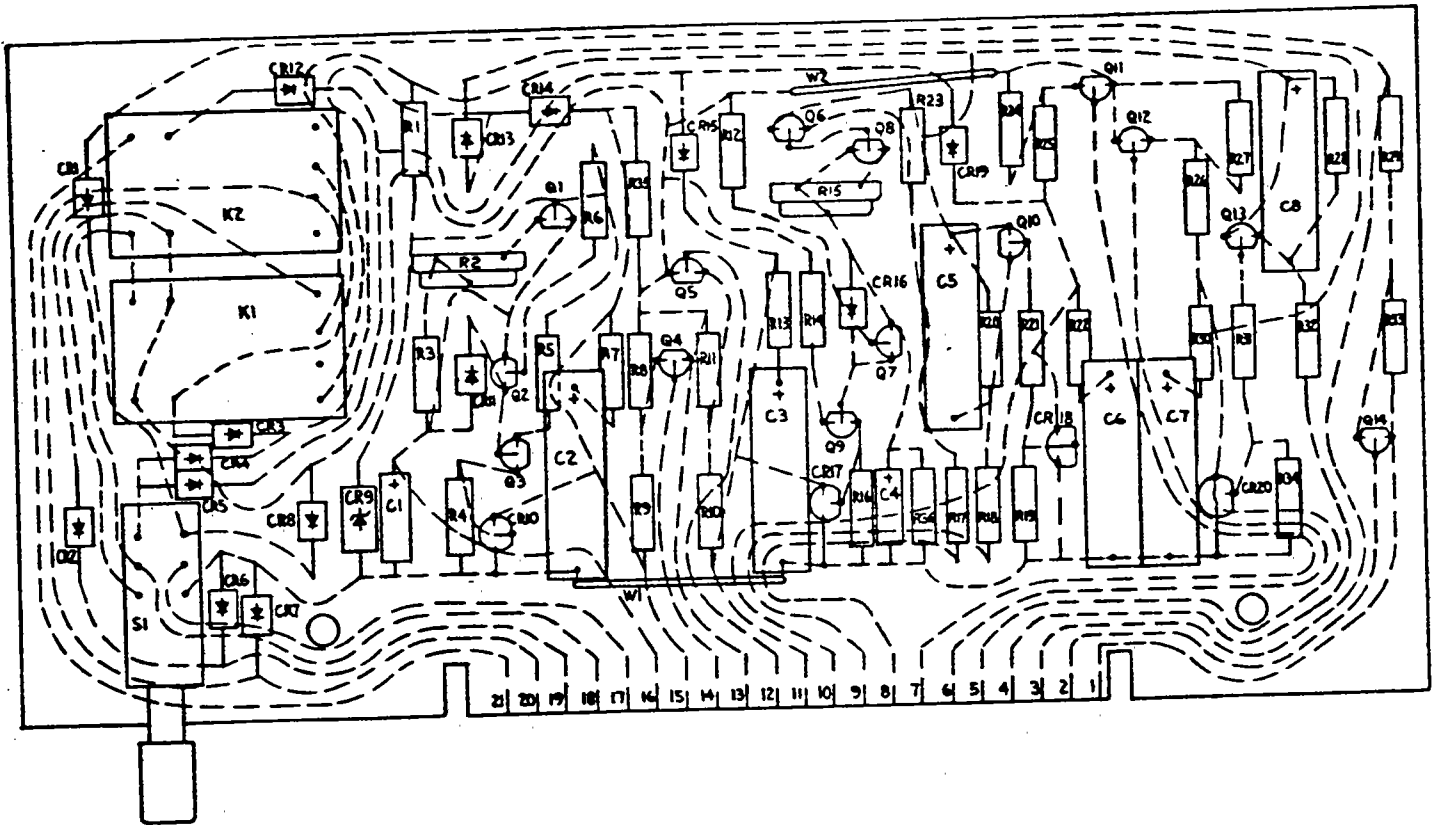
£ - These parts were also used on Spec N Optional Brushless Generators.

CONTROL, CYCLE CRANKER GROUP (OPTIONAL EQUIPMENT)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-0714	1	Control, Cycle Cranker - Complete
C1	356-0039	1	Capacitor, Electrolytic (100 Mfd.)
CR1	359-0027	1	Diode, Zener (7.5 Volts)
CR2,3,4	357-0004	3	Rectifier, Diode
Q1,2	362-0008	2	Transistor, Signal
Q3	362-0017	1	Transistor
Q4	362-0026	1	Transistor, Signal
Q5	362-0019	1	Transistor, Power
R1, R4	303-0171	2	Potentiometer (5,000-Ohm)
R2	350-0560	1	Resistor, Fixed (1 Megohm)
R3, R9	350-0548	2	Resistor, Fixed (10,000-Ohm)
R5	350-0558	1	Resistor, Fixed (68,000-Ohm)
R6	350-0420	1	Resistor, Fixed (24,000-Ohm)
R7	350-0546	1	Resistor, Fixed (6,800-Ohm)
R8	350-0526	1	Resistor, Fixed (150-Ohm)
R10	350-0500	1	Resistor, Fixed (1.0-Ohm)
R11	352-0152	1	Resistor, Fixed (5 Watt, 2.5-Ohm)
C2	355-0010	1	Capacitor, Dielectric (.0022 Mfd., 100 Volt)

ENGINE CONTROL MONITOR GROUP (SETS WITH FIVE FAULT LIGHTS) OPTIONAL

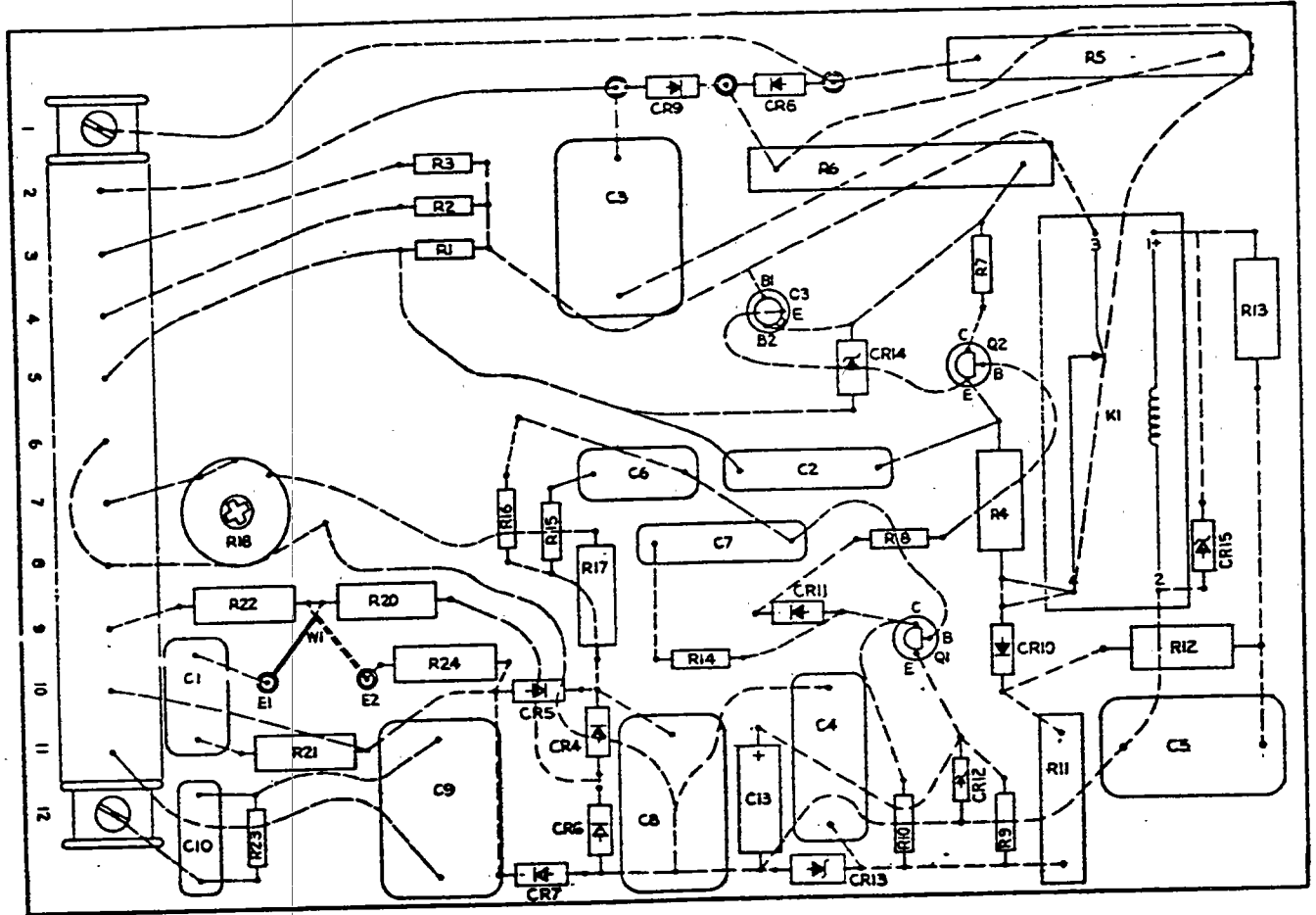


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-0681	1	Monitor Assembly, Complete - Engine Control
K1, K2	307-1039	2	Relay
R6	350-0548	1	Resistor (10,000-Ohm)
C2,3,5,6,7,8	355-0005	6	Capacitor (22 Mfd.)
C1	356-0040	1	Capacitor (10 Mfd.)
C4	356-0030	1	Capacitor (1 Mfd.)
CR9	359-0027	1	Diode, Zener
CR1 thru 8, 11 thru 16,19 CR10,17,18, 20	357-0004	15	Rectifier, Diode
Q3,9	362-0003	2	Transistor
Q1,2,7,8 Q4,5,6, 11 thru 14	362-0008	8	Transistor, Silicon
R5,14	350-0536	2	Resistor (1000-Ohm)
R1	350-0526	1	Resistor (150-Ohm)
R12	350-0552	1	Resistor (22,000-Ohm)
R2,15	303-0169	2	Potentiometer
R3	350-0572	1	Resistor (1-Megohm)
R7,13,22,30	350-0505	4	Resistor (2.7-Ohm)
R4,16,19,34	350-0517	4	Resistor (27-Ohm)
R36	350-0584	1	Resistor (10 Megohm)
R8,11,20,21, 23,24,27,28, 31,33	350-0529	10	Resistor (270-Ohm)
R9,10,17,18, 25,26,29,32	350-0540	8	Resistor (2,200-Ohm)
R35	350-1128	1	Resistor (220-Ohm)
S1	308-0280	1	Switch, Push Button

PRINTED CIRCUIT BOARD ASSEMBLY GROUP (AC)

332-1264 - Printed Circuit Board, Complete

BRUSH TYPE GENERATOR

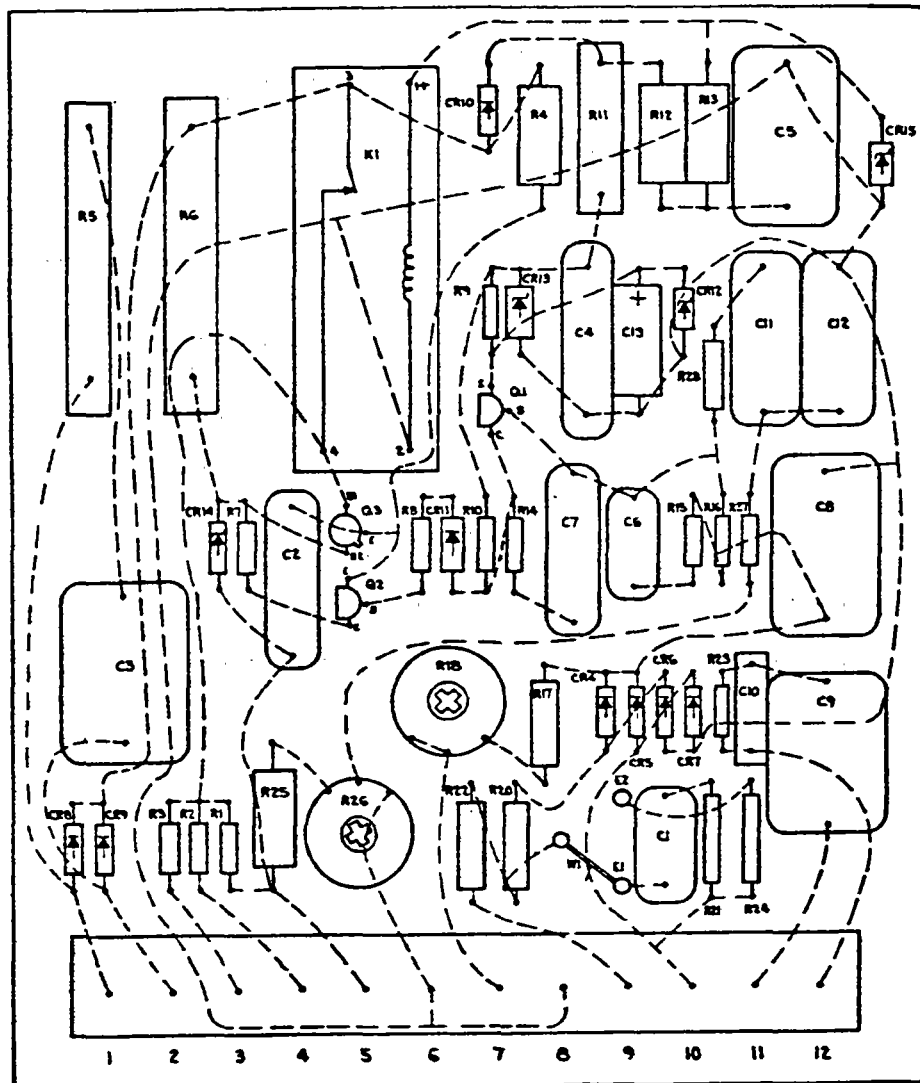


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
TB1	332-1252	1	Terminal Block	R6	353-0039	1	Resistor, Fixed (5,000-Ohm, 15 Watt)
C1	355-0018	1	Capacitor (.47 Mfd., 100 Volt)	R7	350-0398	1	Resistor (3,000-Ohm, 1/2 Watt)
C2, C7	355-0005	2	Capacitor (.22 Mfd., 200 Volt)	R8, R16	350-0447	2	Resistor (330,000-Ohm, 1/2 Watt)
C3, C9	355-0017	2	Capacitor (.47 Mfd., 400 Volt)	R9, R10	350-0423	2	Resistor (33,000-Ohm, 1/2 Watt)
C4	355-0006	1	Capacitor (.47 Mfd., 200 Volt)	R11	352-0151	1	Resistor, Fixed (15,000-Ohm, 5 Watt)
C5, C8	355-0016	2	Capacitor (1 Mfd., 100 Volt)	R12	350-1014	1	Resistor (13,000-Ohm, 2 Watt)
C6	355-0015	1	Capacitor (.1 Mfd., 200 Volt)	R13	350-1007	1	Resistor (6,800-Ohm, 2 Watt)
C10	355-0014	1	Capacitor (.047 Mfd., 200 Volt)	R14	350-0443	1	Resistor (220,000-Ohm, 2 Watt)
C13	356-0039	1	Capacitor (100 Mfd., 10 Volt)	R15	350-0435	1	Resistor (100,000-Ohm, 1/2 Watt)
CR4 thru 11	357-0014	8	Rectifier, Silicon	R17	351-0524	1	Resistor, Metal Film (13,000-Ohm, 1/4 Watt)
CR12	359-0035	1	Diode, Zener (6.8 Volt)	R18	303-0168	1	Potentiometer
CR13	359-0025	1	Diode, Zener (20 Volt)	R20, R22	351-0520	2	Resistor, Metal Film (28,000-Ohm, 1/4 Watt)
CR14	359-0026	1	Diode, Zener (18 Volt)	R21	351-0522	1	Resistor, Metal Film (5,110-Ohm, 1/4 Watt)
CR15	359-0015	1	Diode, Zener (24 Volt)	R24	351-0523	1	Resistor, Metal Film (8,870-Ohm, 1/4 Watt)
K1	307-1063	1	Relay, Magnetic Reed				
Q1, Q2	362-0017	2	Transistor, Silicon (NPN)				
Q3	361-0004	1	Transistor, Unijunction				
R1, R23	350-0355	2	Resistor (47-Ohm, 1/2 Watt)				
R2, R3	350-0351	2	Resistor (33-Ohm, 1/2 Watt)				
R4	350-1075	1	Resistor (4.7-Megohm, 2 Watt)				
R5	353-0040	1	Resistor, Fixed (270-Ohm, 10 Watt)				

PRINTED CIRCUIT BOARD ASSEMBLY GROUP (AC,

332-1268 - Printed Circuit Board, Complete

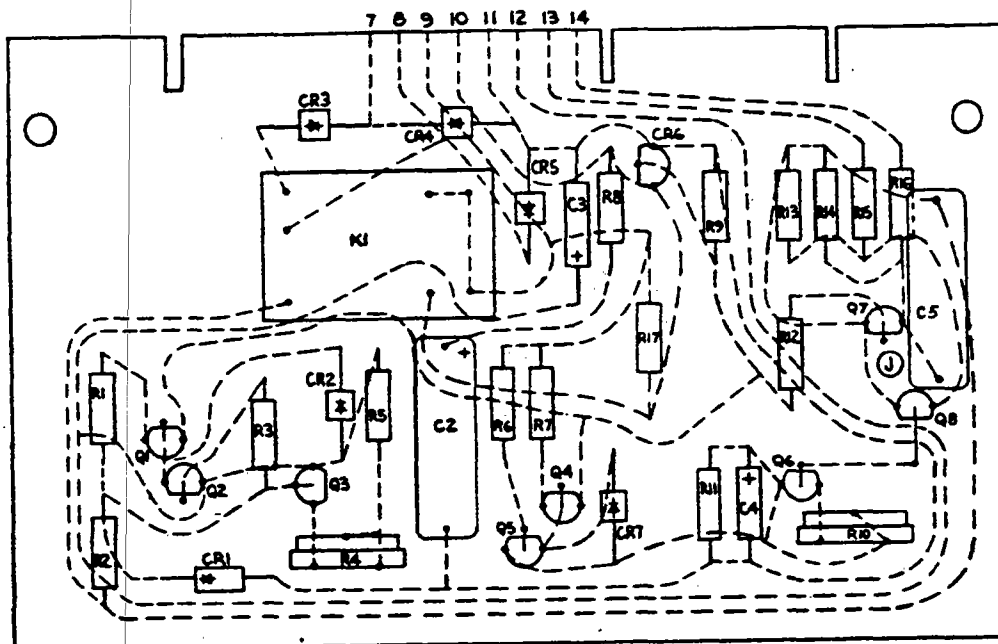
BRUSHLESS TYPE GENERATOR



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
TB1	332-1252	1	Terminal Block	R6	353-0039	1	Resistor, Fixed (5,000-Ohm, 15 Watt)
C1	355-0018	1	Capacitor (.47 Mfd., 100 Volt)	R7	350-0398	1	Resistor (3,000-Ohm, 1/2 Watt)
C2, C7	355-0005	2	Capacitor (.22 Mfd., 200 Volt)	R8, R16	350-0447	2	Resistor (330,000-Ohm, 1/2 Watt)
C3, C9	355-0017	2	Capacitor (.47 Mfd., 400 Volt)	R9, R10	350-0423	2	Resistor (33,000-Ohm, 1/2 Watt)
C4, C12	355-0006	2	Capacitor (.47 Mfd., 200 Volt)	R11	352-0151	1	Resistor, Fixed (15,000-Ohm, 5 Watt)
C5, C8	355-0016	2	Capacitor (1 Mfd., 100 Volt)	R12	350-1014	1	Resistor (13,000-Ohm, 2 Watt)
C6	355-0015	1	Capacitor (.1 Mfd., 200 Volt)	R13	350-1007	1	Resistor (6,800-Ohm, 2 Watt)
C10	355-0014	1	Capacitor (.047 Mfd., 200 Volt)	R14	350-0443	1	Resistor (220,000-Ohm, 2 Watt)
C11	355-0020	1	Capacitor (.1 Mfd., 400 Volt)	R15, R27	350-0435	2	Resistor (100,000-Ohm, 1/2 Watt)
C13	356-0039	1	Capacitor (100 Mfd., 10 Volt)	R17	351-0524	1	Resistor, Metal Film (13,000-Ohm, 1/4 Watt)
CR4 thru 11	357-0014	8	Rectifier, Silicon	R18	303-0168	1	Potentiometer
CR12	359-0035	1	Diode, Zener (6.8 Volt)	R20, R22	351-0520	2	Resistor, Metal Film (28,000-Ohm, 1/4 Watt)
CR13	359-0025	1	Diode, Zener (20 Volt)	R21	351-0522	1	Resistor, Metal Film (5,110-Ohm, 1/4 Watt)
CR14	359-0026	1	Diode, Zener (18 Volt)	R24	351-0523	1	Resistor, Metal Film (8,870-Ohm, 1/4 Watt)
CR15	359-0015	1	Diode, Zener (24 Volt)	R25	350-1011	1	Resistor (10,000-Ohm, 2 Watt)
K1	307-1063	1	Relay, Magnetic Reed	R26	303-0164	1	Potentiometer
Q1, Q2	362-0017	2	Transistor, Silicon (NPN)	R28	350-0459	1	Resistor (1.0 Megohm, 1 Watt)
Q3	361-0004	1	Transistor, Unijunction				
R1, R23	350-0355	2	Resistor (47-Ohm, 1/2 Watt)				
R2, R3	350-0351	2	Resistor (33-Ohm, 1/2 Watt)				
R4	350-1075	1	Resistor (4.7 Megohm, 2 Watt)				
R5	353-0040	1	Resistor, Fixed (270-Ohm, 10 Watt)				

ENGINE CONTROL MONITOR GROUP (STANDARD SETS WITH ONE FAULT LIGHT)

12 VOLT

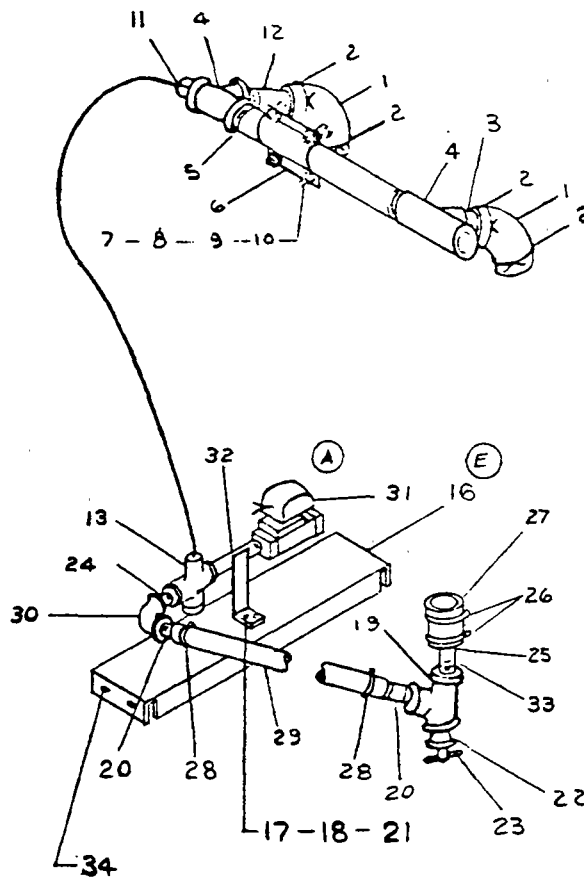


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-0679	1	Monitor Assembly, Complete - Engine Control
K1	307-1039	1	Relay
R3	350-0548	1	Capacitor (10,000-Ohm)
C2,5	355-0005	2	Capacitor (22 Mfd.)
C3	356-0040	1	Capacitor (10 Mfd.)
C4	356-0030	1	Capacitor (1 Mfd.)
CR1	359-0027	1	Diode, Zener
CR2,3,4,5,7	357-0004	5	Rectifier, Diode
CR6	364-0017	1	Rectifier, Gate Control
Q1, Q4	361-0003	2	Transistor
Q2,3,5,6	362-0025	4	Transistor, Field Effect
Q7, Q8	362-0008	2	Transistor, Silicon
R1, R7	350-0536	2	Resistor (1000-Ohm)
R2	350-0526	1	Resistor (150-Ohm)
R6	350-0552	1	Resistor (22,000-Ohm)
R4, R10	303-0169	2	Potentiometer
R5	350-0572	1	Resistor (1 Megohm)
R8	350-0505	1	Resistor (2.7-Ohm)
R9	350-0517	1	Resistor (27-Ohm)
R11	350-0584	1	Resistor (10 Megohm)
R12,13,14	350-0529	3	Resistor (270-Ohm)
R15, R16	350-0540	2	Resistor (2.2-Ohm)
R17	350-1128	1	Resistor (220-Ohm)

CITY WATER COOLED WITH MARSH REGULATOR (UNHOUSED MODELS) INSTALLATION

179-0331

NOTE: REMOVE THERMOSTATS FROM ENGINE



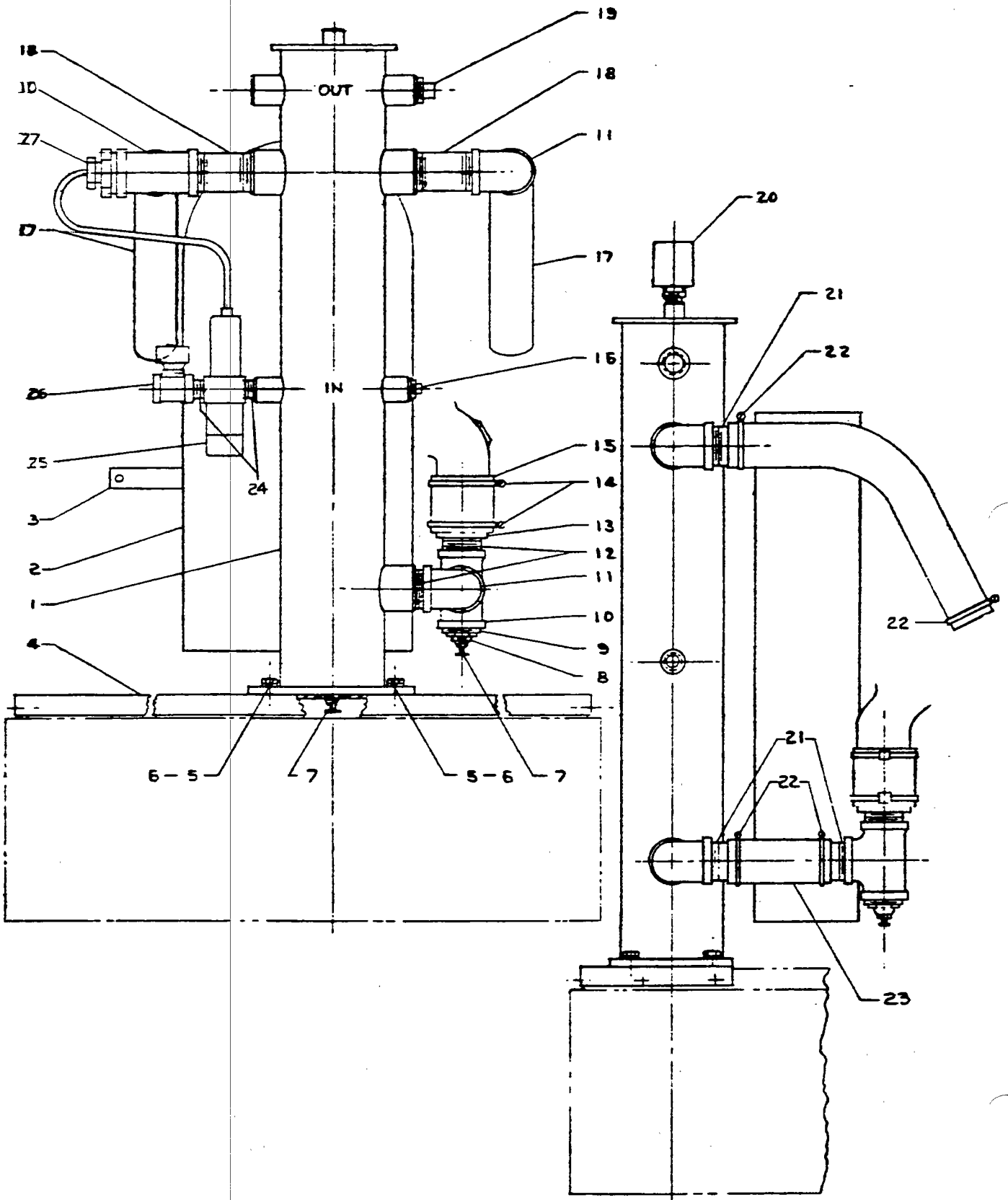
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	503-0364	2	Hose, Radiator	22	505-0131	1	Bushing, Reducer (3/4 x 3/8")
2	503-0365	4	Clamps, Hose	23	504-0028	1	Cock, Drain
3	505-0272	1	Nipple, Half (1-1/2 x 4")	24	505-0102	1	Nipple, Close (3/4 x 1-3/8")
4	505-0317	2	Tee (1-1/2")	25	130-0452	1	Fitting, Water Inlet
5	505-0424	1	Nipple (1-1/2 x 16-1/2")	26	503-0354	2	Clamps, Hose
6	130-0488	1	Support, Pipe	27		1	Hose, Order 3" of Bulk Hose #503-0357
7	800-0028	4	Screw, Hex Head Cap (5/16-18 x 1")	28	503-0189	2	Clamps, Hose
8	862-0002	4	Nut, Hex (5/16-18")	29		1	Hose, Order 9-1/2" of Bulk Hose #503-0249
9	850-0045	4	Lockwasher (5/16")	30	505-0132	1	Elbow (3/4" x 90°)
10	526-0115	4	Flat Washer (5/16")	31	307-0835	1	Valve, Solenoid
11	505-0289	1	Bushing, Reducer (1-1/2 x 3/4")	32	110-0810	1	Nipple & Bracket Assembly
12	505-0474	1	Nipple, Half (1-1/2 x 5")	33	505-0085	1	Nipple (3/4 x 2")
13	309-0241	1	Valve, Temperature Control	34	821-0014	6	Screw, Lock Head (5/16-18 x 1/2")
16	130-0499	1	Bracket, Support	35	130-0454	1	*Guard, Belt
17	850-0040	2	Washer, Lock (1/4")	36	130-0455	1	*Bracket, Guard Mounting
18	862-0001	2	Nut, Hex (1/4-20")				
19	505-0166	1	Tee (3/4")				
20	505-0324	2	Nipple, Half (3/4 x 2")				
21	800-0023	2	Screw, Hex Head Cap (1/4-20 x 1-3/8")				

* - Not shown in Illustration.

STANDPIPE WITH MARSH REGULATOR INSTALLATION

179-0302

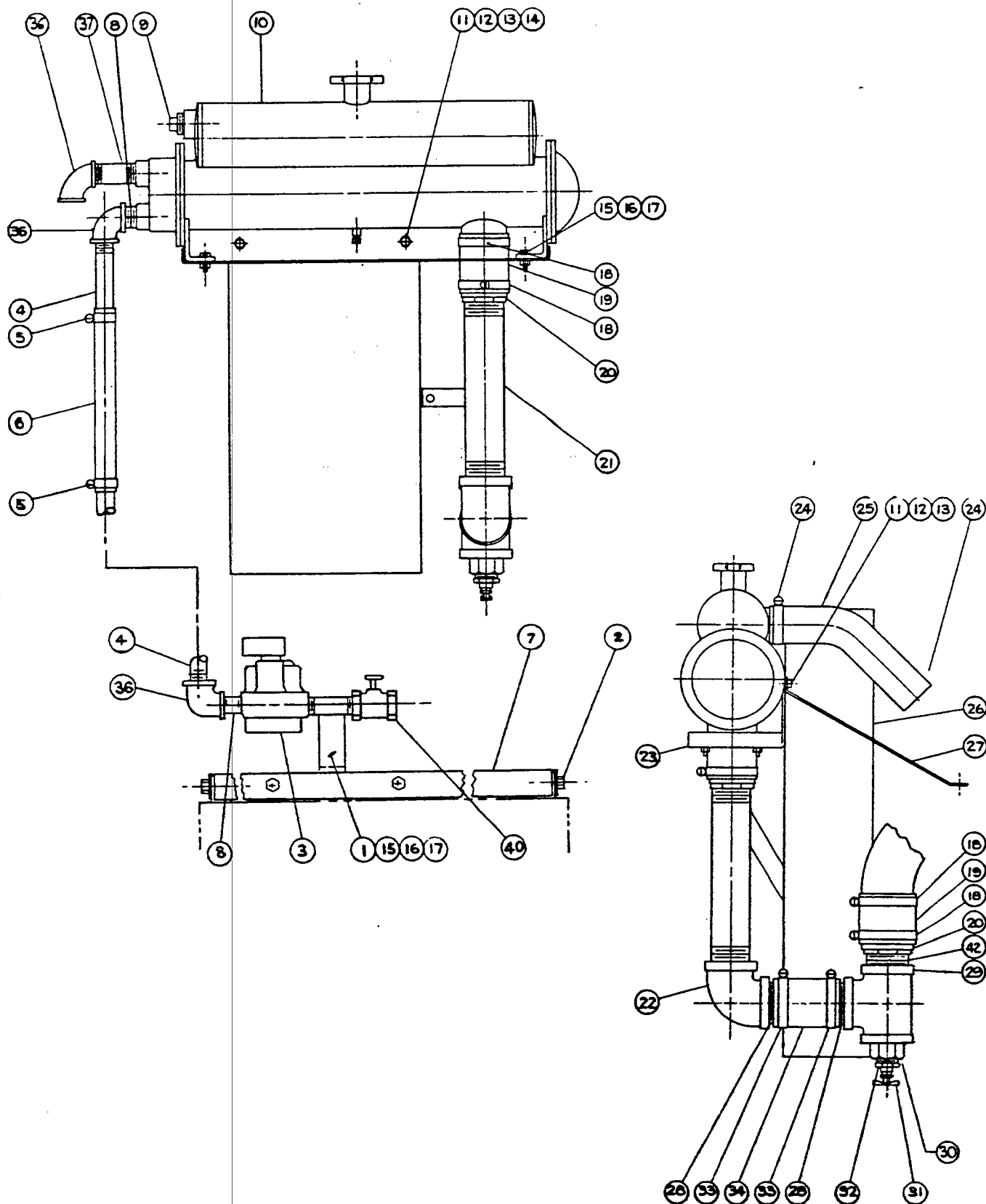
NOTE: REMOVE THERMOSTATS



<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
1	130-0635	1	Standpipe
2	130-0454	1	Guard, Belt
3	130-0455	1	Bracket, Belt Guard
4	130-0636	1	Bracket, Standpipe Mounting
5	850-0050	4	Lockwasher (3/8")
6	800-0050	4	Screw, Hex Head Cap (3/8-16 x 1")
7	504-0028	2	Cock, Drain
8	505-0019	1	Bushing, Reducer (1/2 x 3/8")
9	505-0399	1	Bushing, Reducer (1-1/2 x 1/2")
10	505-0317	2	Tee (1-1/2")
11	505-0043	2	Elbow (1-1/2" x 90°)
12	505-0220	2	Nipple, Close (1-1/2 x 1-3/4")
13	130-0478	1	Fitting, Water Inlet
14	503-0354	2	Clamp, Hose
15		1	Hose - Order 3" of Bulk Hose #503-0357
16	505-0130	1	Plug, Square Head (3/4")
17	503-0332	2	Hose, Radiator - Upper
18	505-0261	2	Nipple (1-1/2 x 4-1/2")
19	505-0140	1	Plug, Square Head (1")
20	504-0062	1	Valve, Vacuum Relief
21	505-0444	4	Nipple, Half (1-1/2 x 2-1/4")
22	503-0365	6	Clamp, Hose
23		1	Hose - Order 7" of Bulk Hose #503-0411
24	505-0102	2	Nipple, Close (3/4")
25	309-0241	1	Valve, Temperature Control, Water
26	307-0835	1	Valve
27	505-0289	1	Bushing, Reducer (1-1/2 x 3/4")

HEAT EXCHANGER INSTALLATION

179-0254

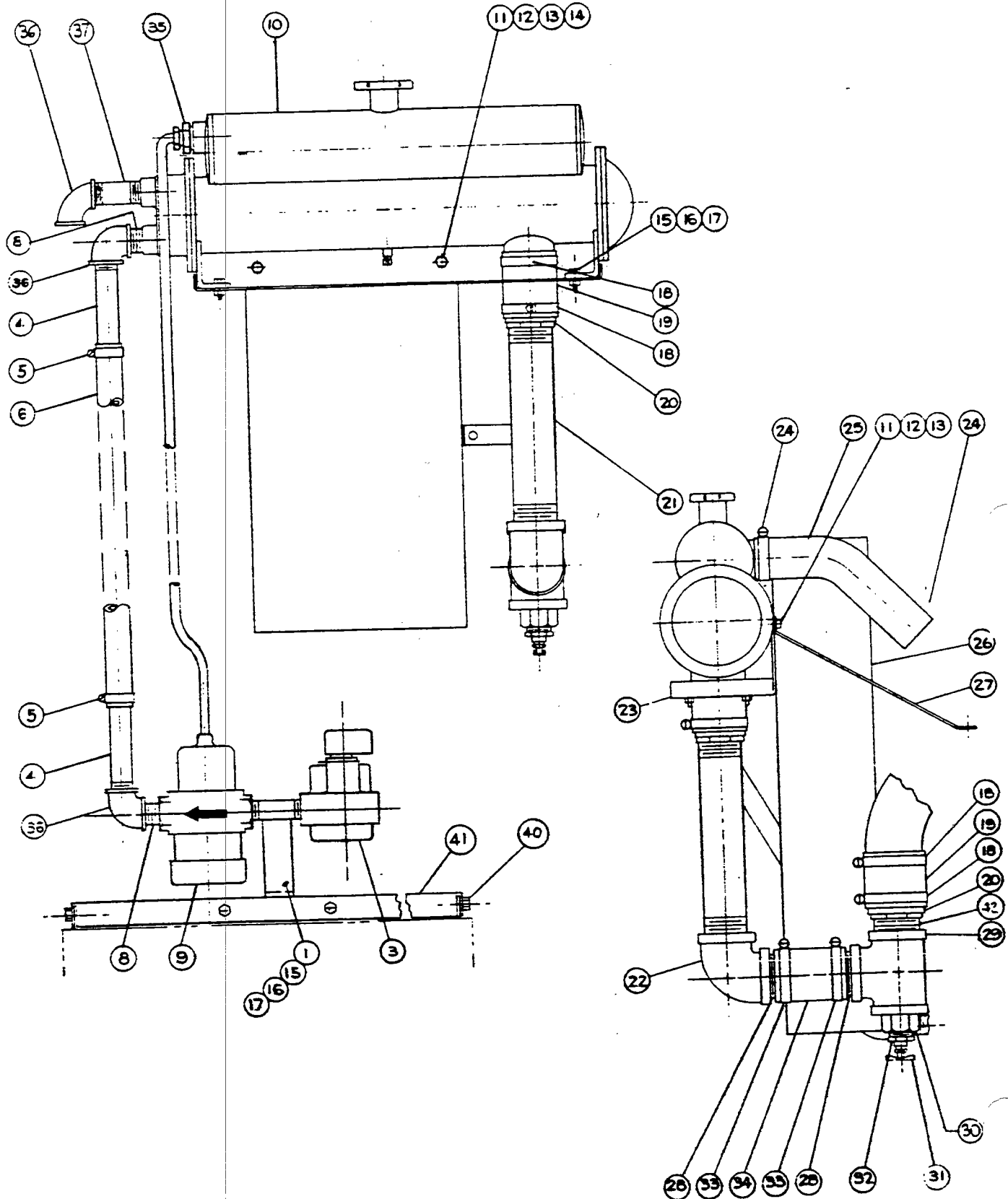


<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
1	130-0797	1	Bracket & Nipple Assembly
2	821-0014	6	Screw, Lock Head (5/16-18 x 1/2")
3	307-1139	1	Valve, Solenoid
4	505-0089	2	Nipple, Half (1 x 5")
5	503-0004	2	Clamp, Hose
6		1	Hose - Order 12" of Bulk Hose #503-0361
7	130-0499	1	Bracket, Heat Exchanger
8	505-0004	2	Nipple, Close (1 x 1-1/2")
9	505-0140	1	Plug, Pipe (1")
10	130-0753	1	Exchanger, Heat
11	800-0050	5	Screw, Hex Head Cap (3/8-16 x 1")
12	850-0050	5	Lockwasher (3/8")
13	862-0003	5	Nut, Hex (3/8-16")
14	526-0029	4	Flatwasher (3/8")
15	800-0007	6	Screw, Hex Head Cap (1/4-20 x 1")
16	850-0004	6	Lockwasher (1/4")
17	862-0001	6	Nut, Hex (1/4-20")
18	503-0354	4	Clamp, Hose
19		2	Hose - Order 4" of Bulk Hose #503-0357
20	130-0478	2	Fitting, Water Inlet
21	505-0095	1	Nipple (1-1/2 x 12")
22	505-0043	1	Elbow (1-1/2")
23	130-0752	1	Bracket, Heat Exchanger
24	503-0311	2	Clamp, Hose
25	503-0332	2	Hose, Radiator
26	130-0454	1	Guard, Belt
27	130-0751	1	Brace
28	505-0385	2	Nipple Half (1-1/2 x 2")
29	505-0317	1	Tee (1-1/2")
30	505-0399	1	Bushing, Reducer (1-1/2 x 1/2")
31	504-0028	1	Drain Cock
32	505-0019	1	Bushing, Reducer (1/2 x 3/8")
33	503-0365	2	Clamp, Hose
34		1	Hose - Order 4" of Bulk Hose #503-0411
36	505-0041	3	Elbow
37	505-0086	1	Nipple (1 x 2-1/2")
40	504-0090	1	Valve, Globe
42	505-0220	1	Nipple (1-1/2"), Close

HEAT EXCHANGER WITH MARSH REGULATOR INSTALLATION

NOTE: REMOVE THERMOSTATS FROM ENGINE

179-0296

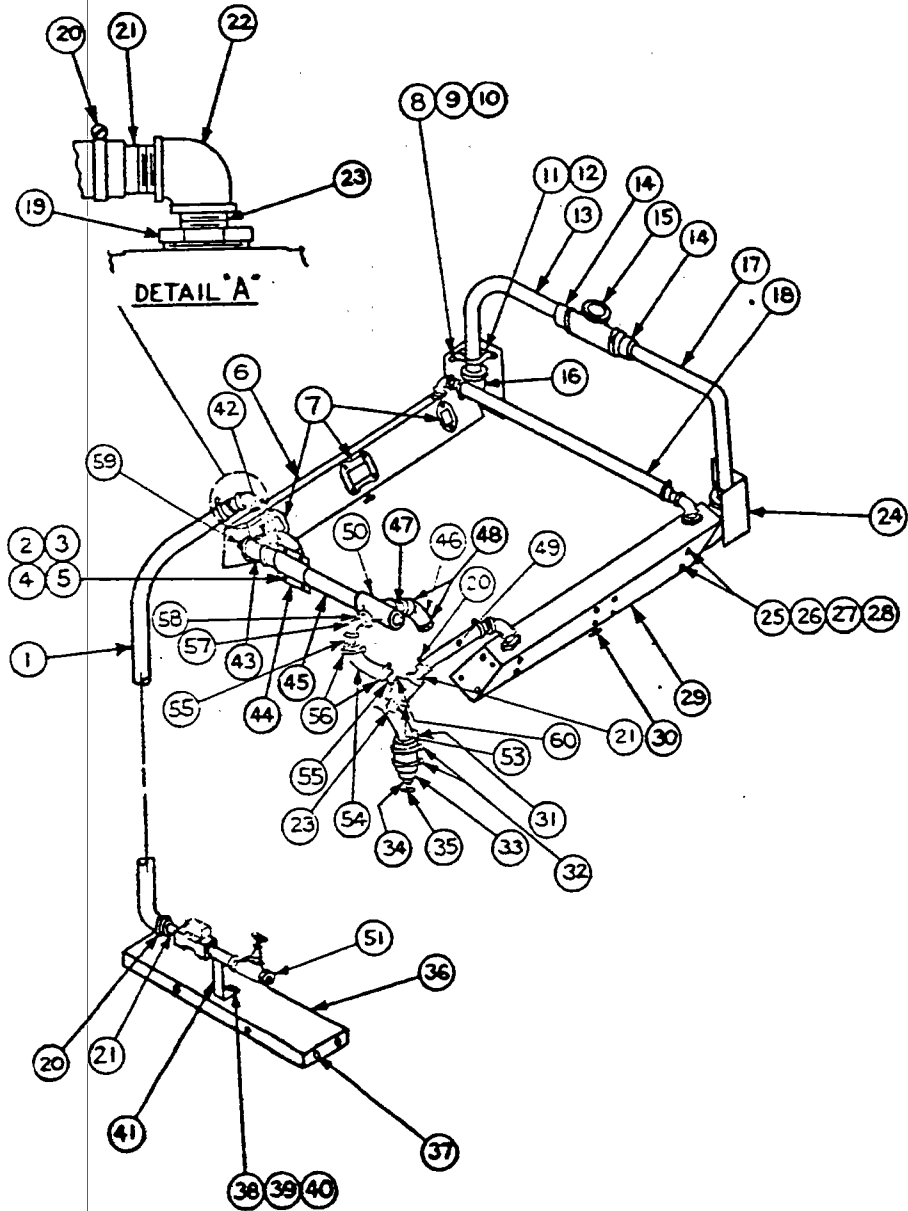


<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
1	130-0797	1	Bracket & Nipple Assembly
3	307-1139	1	Valve, Solenoid
4	505-0089	2	Nipple, Half (1" x 5")
5	503-0004	2	Clamp, Hose
6	503-0361	1	Hose
8	505-0004	2	Nipple, Close (1 x 1-1/2")
9	309-0242	1	Valve, Temperature Control - Water
10	130-0753	1	Heat Exchanger
11	800-0050	5	Hex Head Capscrew (3/8-16 x 1")
12	850-0050	5	Lockwasher (3/8")
13	862-0003	5	Nut, Hex (3/8-16")
14	526-0029	4	Flatwasher (3/8")
15	800-0007	6	Screw, Hex Head Cap (1/4-20 x 1")
16	850-0004	6	Lockwasher (1/4")
17	862-0001	6	Nut, Hex (1/4-20")
18	503-0354	4	Clamp, Hose
19		2	Hose, Order 4" of Bulk Hose #503-0357
20	130-0478	2	Fitting, Water Inlet
21	505-0095	1	Nipple (1-1/2 x 12")
22	505-0043	1	Elbow (1-1/2")
23	130-0752	1	Bracket, Heat Exchanger
24	503-0311	2	Clamp, Hose
25	503-0332	2	Hose, Radiator (Cut to Size)
26	130-0454	1	Guard, Belt
27	130-0751	1	Brace
28	505-0385	2	Nipple, Half (1-1/2 x 2")
29	505-0317	1	Tee (1-1/2")
30	505-0399	1	Bushing, Reducer (1-1/2 x 1/2")
31	504-0028	1	Drain Cock
32	505-0019	1	Bushing, Reducer (1/2 x 3/8")
33	503-0365	2	Clamp, Hose
34		1	Hose, Order 4" of Bulk Hose #503-0411
35	505-0129	1	Bushing, Reducer (1 x 3/4")
36	505-0041	3	Elbow
37	505-0086	1	Nipple (1 x 2-1/2")
39	505-0219	1	Nipple (1-1/4 x 4-1/2")
40	821-0014	6	Screw, Lock Head (5/16-18 x 1/2")
41	130-0499	1	Bracket, Heat Exchanger
42	505-0220	1	Nipple, Close (1-1/2")

179-1008

CITY WATER COOLED WITH WATER COOLED EXHAUST MANIFOLD (HOUSED AND UNHOUSED MODELS) INSTALLATION - LATE MODELS

NOTE: See separate groups for early models. Can be identified by exhaust manifolds. This installation has ONAN cast into the manifold.

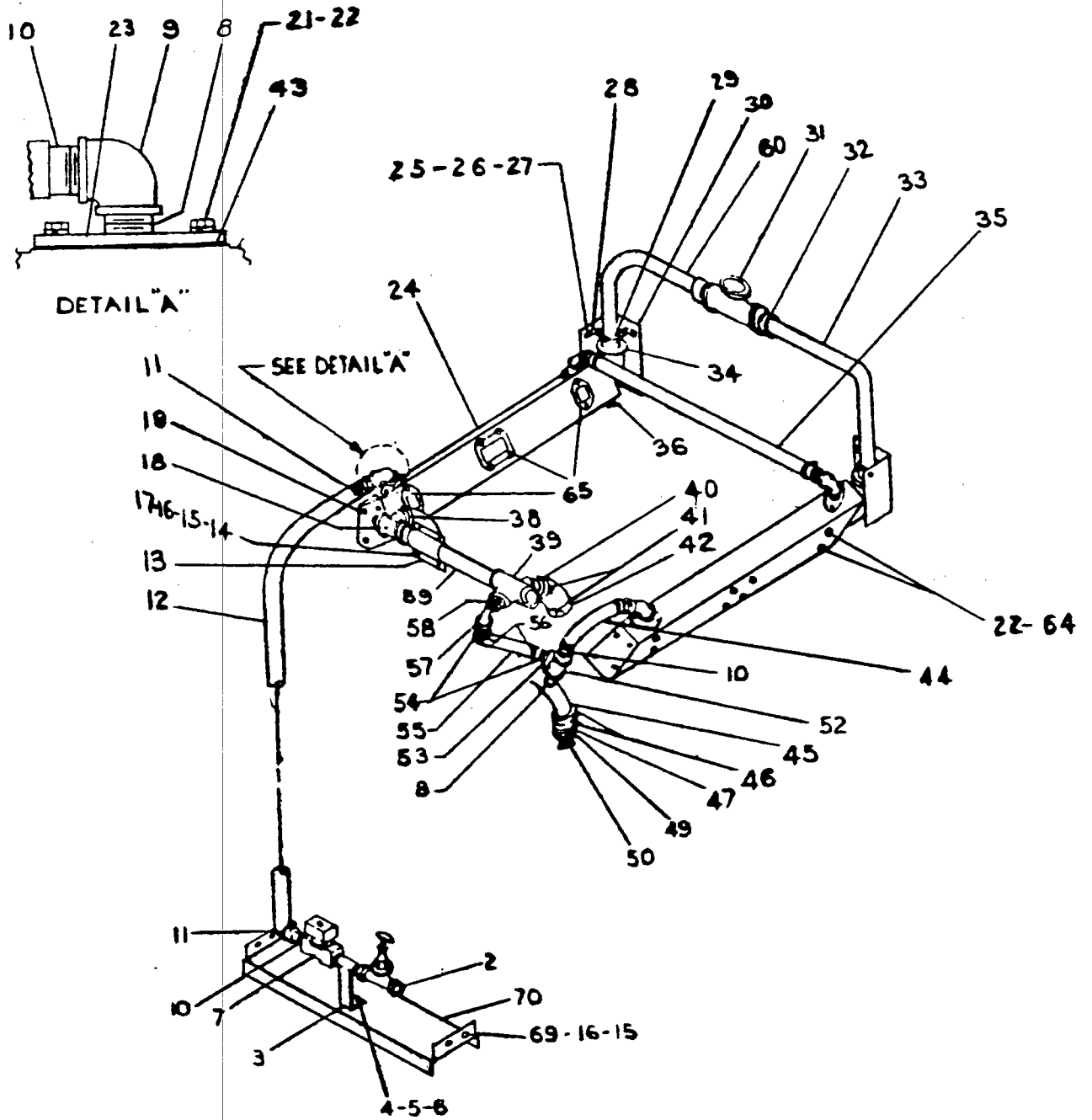


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1		1	Hose, Order 23" of Bulk Hose #503-0386	33	130-0452	1	Fitting, Water Inlet
2	800-0028	4	Screw, Hex Head Cap (5/16-18 x 1")	34	505-0131	1	Bushing, Reducer (3/8 x 3/4")
3	526-0115	4	Washer, Flat (5/16")	35	504-0028	1	Cock, Drain
4	850-0045	4	Washer, Lock (5/16")	36	130-0499	1	Bracket, Heat Exchanger
5	862-0002	4	Nut, Hex (5/16-18")	37	821-0014	6	Screw, Lock Head (5/16-18 x 1/2")
6	154-1453	1	Manifold, Assembly (LH)	38	800-0007	2	Screw, Hex Head Cap (1/4-20 x 1")
7	154-0592	2	Gasket Set, Manifold	39	850-0040	2	Washer, Lock (1/4")
8	813-0102	10	Screw, Hex Head Cap (#10-32 x 5/8")	40	862-0001	2	Nut, Hex (1/4-20")
9	850-0030	10	Washer, Lock (#10)	41	110-0526	1	Nipple & Bracket Assembly
10	870-0053	8	Nut, Hex (#10-32)	42	505-0474	1	Nipple, Half (1-1/2 x 5")
11	155-0660	2	Bracket, Exhaust Shield Mounting	43	505-0317	1	Tee (1-1/2")
12	155-0661	2	Band, Shield Mounting	44	130-0488	1	Support, Pipe
13	155-1048	1	Tube Assembly, Exhaust	45	505-0424	1	Nipple (1-1/2 x 16-1/2")
14	155-0615	1	Nipple, Half	46	503-0364	2	Hose
15	505-0373	1	Tee, Reducer (2-1/2 x 2-1/2 x 3")	47	505-0272	1	Nipple, Half (1-1/2 x 4")
16	505-0216	2	Elbow, Street (2-1/2")	48	503-0365	4	Clamp, Hose
17	155-1047	1	Tube Assembly, Exhaust	49		1	Hose, Order 11" of Bulk Hose #503-0386
18		1	Hose, Order 38" of Bulk Hose #503-0386	50	505-0398	1	Tee, Side Outlet (1-1/2")
19	505-0399	4	Bushing, Reducer (1-1/2 x 1/2")	51	504-0019	1	Valve, Lockshield
20	503-0189	6	Clamp, Hose	53	505-0108	1	Tee (1/2")
21	505-0185	6	Nipple, Half (1/2 x 1-1/2")	54		1	Hose, Order 9" of Bulk Hose #503-0110
22	505-0040	4	Elbow (1/2" x 90°)	55	505-0010	2	Nipple, Half (1/4")
23	505-0100	5	Nipple, Close (1/2")	56	503-0032	2	Clamp, Hose
24	155-0659	2	Shield, Exhaust Header	57	505-0011	1	Elbow, Street (1/4")
25	520-0755	8	Stud (5-3/4 x 3/8-24")	58	505-0426	1	Bushing, Reducer (1-1/2 x 1/4")
26	520-0110	8	Stud (4-1/2 x 3/8-24")	59	505-0402	1	Plug (1-1/2")
27	850-0050	16	Washer, Lock (3/8")	60	505-0018	1	Bushing, Reducer (1/2 x 1/4")
28	104-0091	16	Nut, Hex (3/8-24")	61	130-0454	1	*Guard, Belt
29	154-1452	1	Manifold Assembly (RH)	62	130-0455	1	*Bracket, Guard Mounting
30	504-0005	2	Cock, Drain	63	800-0026	2	*Screw, Hex Head Cap (5/16-18 x 3/4") - Coil Mounting
31		1	Hose, Order 3" of Bulk Hose #503-0357				
32	503-0354	2	Clamp, Hose				

* - Items not shown on Illustration.

179-0337

CITY WATER COOLED WITH WATER COOLED EXHAUST MANIFOLD (HOUSED MODELS) INSTALLATION - EARLY MODELS



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
2	504-0019	1	Valve, Lockshield
3	110-0526	1	Nipple & Bracket Assembly
4	800-0007	2	Screw (1/4-20 x 1")
5	862-0001	2	Nut (1/4-20")
6	850-0040	2	Lockwasher (1/4")
7	307-0833	1	Valve, Solenoid
8	505-0100	5	Nipple, Close (1/2")
9	505-0040	4	Elbow (1/2" x 90°)
10	505-0185	6	Nipple, Half (1/2 x 1-1/2")
11	503-0189	6	Clamp, Hose
12		1	Hose, Order 23" of Bulk Hose #503-0386
13	130-0488	1	Support, Pipe
14	800-0028	4	Screw (5/16-18 x 1")
15	862-0002	8	Nut (5/16-18")
16	850-0045	10	Lockwasher (5/16")
17	526-0115	4	Flatwasher (5/16")
18	505-0317	1	Tee (1-1/2")
19	505-0402	1	Plug (1-1/2")
21	800-0050	8	Screw (3/8-16 x 1")
22	850-0050	24	Lockwasher (3/8")
23	154-0611	4	Flange, Water Inlet
24	154-1245	2	Manifold, Water Cooled
25	870-0053	8	Nut (#10-32)
26	813-0102	10	Screw (#10-32 x 5/8")
27	850-0030	10	Lockwasher (#10-32)
28	155-0660	2	Bracket, Exhaust Shield Mounting
29	155-0661	2	Band, Shield Mounting
30	155-0659	2	Shield - Exhaust Header
31	505-0373	1	Tee, Reducer (2-1/2 x 2-1/2 x 3")
32	155-0615	1	Nipple, Half
33	155-1047	1	Tube Assembly, Exhaust
34	505-0216	2	Elbow, Street (2-1/2")
35		1	Hose, Order 38" of Bulk Hose #503-0386
36	504-0005	2	Cock, Drain

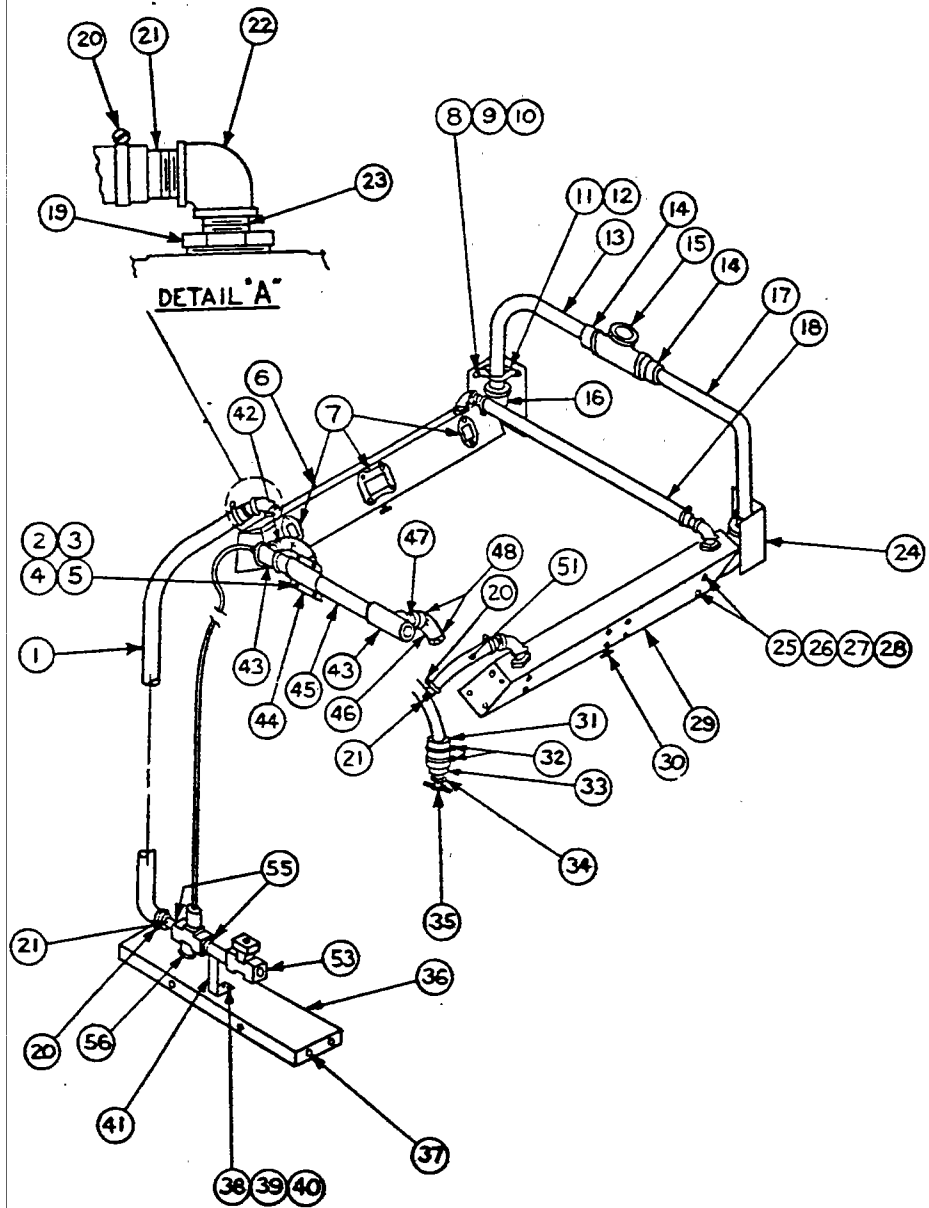
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
38	505-0474	1	Nipple, Half (1-1/2 x 5")
39	505-0398	1	Tee, Side Outlet (1-1/2")
40	505-0272	1	Nipple, Half (1-1/2 x 4")
41	503-0365	4	Clamp, Hose
42	503-0364	2	Hose
43	145-0178	4	Gasket, Flange
44		1	Hose, Order 11" of Bulk Hose #503-0386
45		1	Hose, Order 3" of Bulk Hose #503-0357
46	503-0354	2	Clamp, Hose
47	130-0452	1	Fitting, Water Inlet
49	505-0131	1	Bushing (3/4 x 3/8")
50	504-0028	1	Cock, Drain
52	505-0108	1	Tee (1/2")
53	505-0018	1	Bushing (1/2 x 1/4")
54	505-0010	2	Nipple, Half (1/4")
55		1	Hose, Order 8" of Bulk Hose #503-0110
56	503-0032	2	Clamp, Hose
57	505-0011	1	Elbow, Street (1/4")
58	505-0426	1	Bushing (1-1/2 x 1/4")
59	505-0424	1	Nipple (1-1/2 x 16-1/2")
60	155-1048	1	Tube Assembly, Exhaust
61	505-0057	2	Plug (1/8")
62	130-0454	1	Guard, Belt
63	130-0455	1	Bracket, Guard Mounting
64	104-0091	16	Nut (3/8-24")
65	154-0592	2	Gasket Sets, Manifold
66	800-0026	2	Screw, Coil Mounting (5/16-18 x 3/4")
69	800-0026	4	Screw, Hex Head Cap (5/16-18 x 3/4")
70	130-0828	1	Bracket, Support

NOTE: See separate group for late models. Can be identified by exhaust manifolds. This installation does not have ONAN cast into the manifolds.

CITY WATER COOLED WITH WATER COOLED EXHAUST AND MARSH REGULATOR (HOUSED AND UNHOUSED MODELS) INSTALLATION - LATE MODELS

179-1007

NOTE: See separate groups for early models. Can be identified by exhaust manifolds. This installation has ONAN cast on the manifolds.



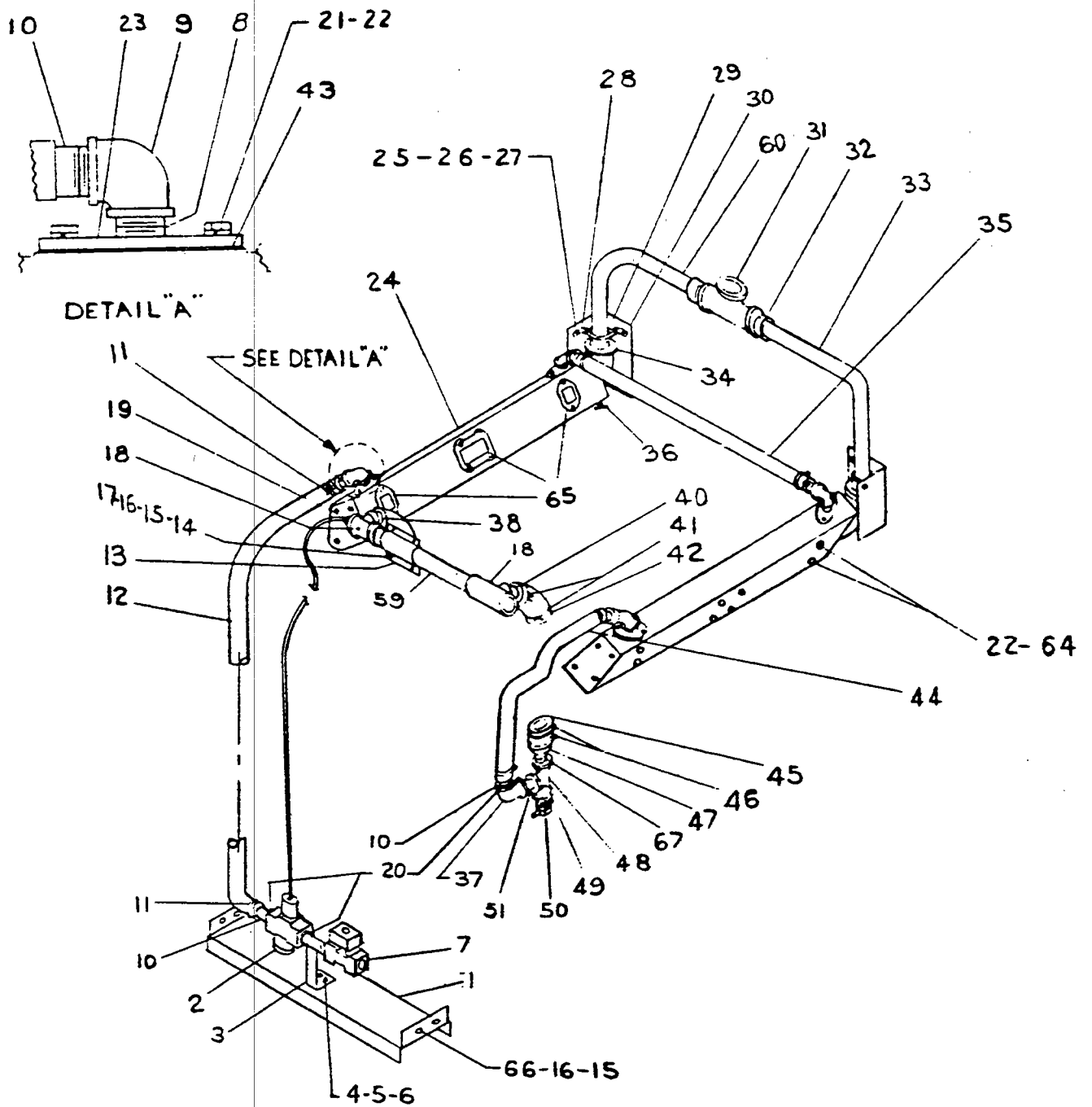
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1		1	Hose, Order 23" of Bulk Hose #503-0386
2	800-0028	4	Screw, Hex Head Cap (5/16-18 x 1")
3	526-0115	4	Washer, Flat (5/16")
4	850-0045	4	Washer, Lock (5/16")
5	862-0002	4	Nut, Hex (5/16-18")
6	154-1453	1	Manifold Assembly (LH)
7	154-0592	2	Gasket Set, Manifold
8	813-0102	10	Screw, Hex Head Cap
9	850-0030	10	Washer, Lock (#10)
10	870-0053	8	Nut, Hex (#10-32)
11	155-0660	2	Bracket, Exhaust Shield Mounting
12	155-0661	2	Band, Shield Mounting
13	155-1048	1	Tube Assembly, Exhaust
14	155-0615	2	Nipple, Half
15	505-0373	1	Tee, Reducer (2-1/2 x 2-1/2 x 3")
16	505-0216	2	Elbow, Street (2-1/2")
17	155-1047	1	Tube Assembly, Exhaust
18		1	Hose, Order 38" of Bulk Hose #503-0386
19	505-0399	4	Bushing, Reducer (1-1/2 x 1/2")
20	503-0189	6	Clamp, Hose
21	505-0185	6	Nipple, Half (1/2 x 1-1/2")
22	505-0040	4	Elbow (1/2" x 90°)
23	505-0100	5	Nipple, Close (1/2")
24	155-0659	2	Shield, Exhaust Header
25	520-0755	8	Stud (5-3/4 x 3/8-24")
26	520-0110	8	Stud (4-1/2 x 3/8-24")
27	850-0050	16	Washer, Lock (3/8")
28	104-0091	16	Nut, Hex (3/8-24")

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
29	154-1452	1	Manifold Assembly (RH)
30	504-0005	2	Cock, Drain
31		1	Hose, Order 3" of Bulk Hose #503-0357
32	503-0354	2	Clamp, Hose
33	130-0452	1	Fitting, Water Inlet
34	505-0131	1	Bushing, Reducer (3/8 x 3/4")
35	504-0028	1	Cock, Drain
36	130-0499	1	Bracket, Heat Exchanger
37	821-0014	6	Screw, Lock Head (5/16-18 x 1/2")
38	800-0007	2	Screw, Hex Head Cap (1/4-20 x 1")
39	850-0040	2	Washer, Lock (1/4")
40	862-0001	2	Nut, Hex (1/4-20")
41	110-0526	1	Nipple & Bracket Assembly
42	505-0474	1	Nipple Half (1-1/2 x 5")
43	505-0317	2	Tee (1-1/2")
44	130-0488	1	Support, Pipe
45	505-0424	1	Nipple (1-1/2 x 16-1/2")
46	503-0364	2	Hose
47	505-0272	1	Nipple, Half (1-1/2 x 4")
48	503-0365	4	Clamp, Hose
51		1	Hose, Order 11" of Bulk Hose #503-0386
53	307-0833	1	Valve, Solenoid
55	505-0021	2	Bushing, Reducer (3/4 x 1/2")
56	309-0241	1	Valve, Water Temperature Control
57	800-0026	2	*Screw, Hex Head Cap (5/16-18 x 3/4") Coil Mounting

* - Item not shown on Illustration.

CITY WATER COOLED WITH WATER COOLED EXHAUST MANIFOLD AND MARSH REGULATOR (HOUSED MODELS) INSTALLATION

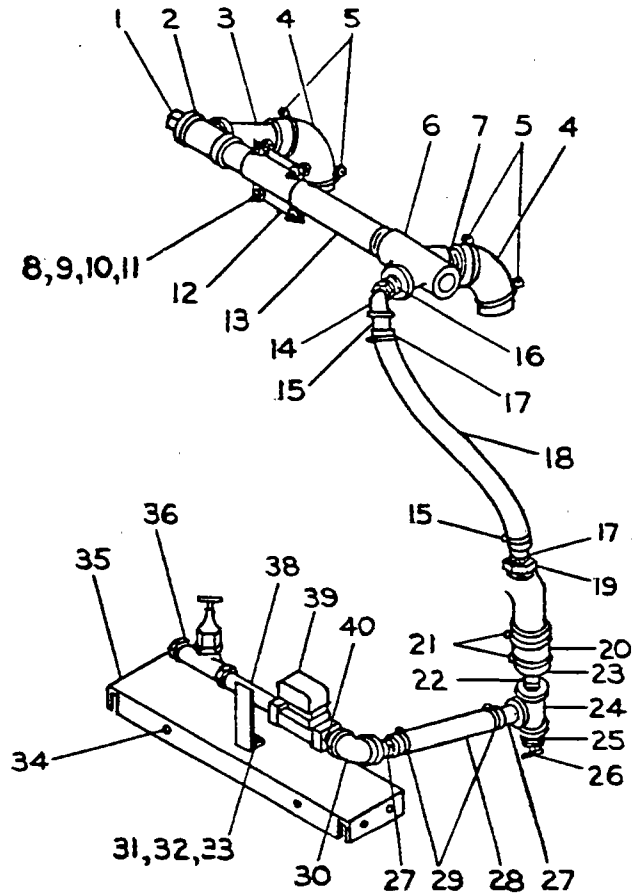
179-0402



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	130-0828	1	Bracket, Support	32	155-0615	1	Nipple, Half
2	309-0241	1	Valve, Water Temperature Control	33	155-1047	1	Tube Assembly, Exhaust
3	110-0526	1	Nipple & Bracket Assembly	34	505-0216	2	Elbow, Street (2-1/2")
4	800-0007	2	Screw (1/4-20 x 1")	35		1	Hose, Order 38" of Bulk Hose #503-0386
5	862-0001	2	Nut (1/4-20")	36	504-0005	2	Cock, Drain
6	850-0040	2	Lockwasher (1/4")	37	505-0132	1	Elbow (3/4" x 90°)
7	307-0833	1	Valve, Solenoid	38	505-0474	1	Nipple, Half (1-1/2 x 5")
8	505-0100	5	Nipple, Close (1/2")	40	505-0272	1	Nipple, Half (1-1/2 x 4")
9	505-0040	4	Elbow (1/2" x 90°)	41	503-0365	4	Clamp, Hose
10	505-0185	6	Nipple, Half (1/2 x 1-1/2")	42	503-0364	2	Hose
11	503-0189	6	Clamp, Hose	43	145-0178	4	Gasket, Flange
12		1	Hose, Order 23" of Bulk Hose #503-0386	44		1	Hose, Order 20" of Bulk Hose #503-0386
13	130-0488	1	Support, Pipe	45		1	Hose, Order 3" of Bulk Hose #503-0357
14	800-0028	4	Screw (5/16-18 x 1")	46	503-0354	2	Clamp, Hose
15	862-0002	8	Nut (5/16-18")	47	130-0452	1	Fitting, Water Inlet
16	850-0045	10	Lockwasher (5/16")	48	505-0166	1	Tee (3/4")
17	526-0115	4	Flatwasher (5/16")	49	505-0131	1	Bushing (3/4 x 3/8")
18	505-0317	2	Tee (1-1/2")	50	504-0028	1	Cock, Drain
19	505-0289	1	Bushing, Reducer (1-1/2 x 3/4")	51	505-0084	1	Nipple (3/4 x 2-1/2")
20	505-0021	2	Bushing (3/4 x 1/2")	59	505-0424	1	Nipple (1-1/2 x 16-1/2")
21	800-0050	8	Screw (3/8-16 x 1")	60	155-1048	1	Tube Assembly, Exhaust
22	850-0050	24	Lockwasher (3/8")	61	505-0057	2	Plug (1/8")
23	154-0611	4	Flange, Water Inlet	62	130-0454	1	Guard, Belt
24	154-1245	2	Manifold, Water Cooled	63	130-0455	1	Bracket, Guard Mounting
25	870-0053	8	Nut (#10-32)	64	104-0091	16	Nut (3/8-24")
26	813-0102	10	Screw (#10-32 x 5/8")	65	154-0592	2	Gasket Set, Manifold
27	850-0030	10	Lockwasher (#10)	66	800-0026	6	Screw, Coil Mounting (5/16-18 x 3/4")
28	155-0660	2	Bracket, Exhaust Shield Mounting	67	505-0102	1	Nipple, Close (3/4")
29	155-0661	2	Band, Shield Mounting				
30	155-0659	2	Shield, Exhaust Header				
31	505-0373	1	Tee, Reducer (2-1/2 x 2-1/2 x 3")				

CITY WATER COOLED (UNHOUSED MODELS) INSTALLATION

179-0091

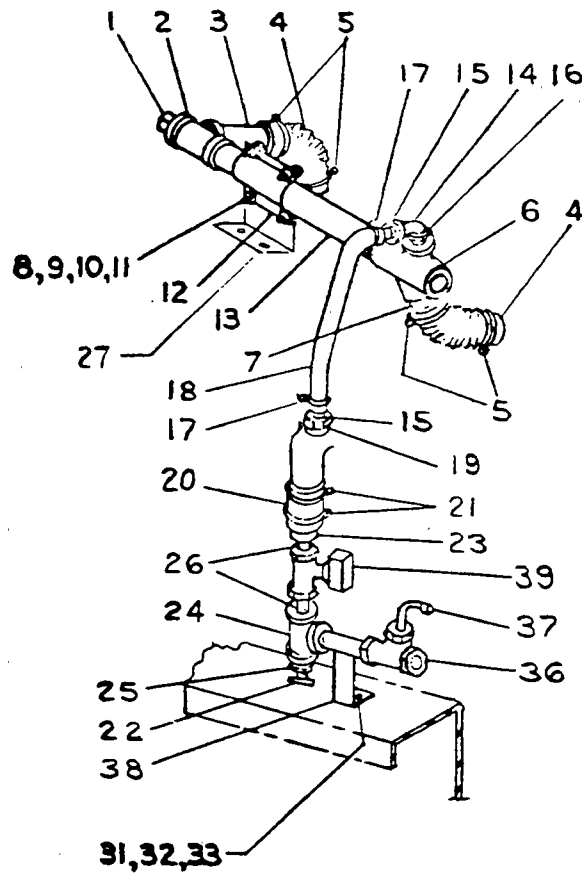


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	505-0402	1	Plug, Square Head	22	505-0085	1	Nipple, Pipe (3/4 x 2")
2	505-0317	1	Tee, Pipe (1-1/2")	23	130-0452	1	Fitting, Water Inlet
3	505-0474	1	Nipple, Half (1-1/2 x 5")	24	505-0166	1	Tee, Pipe (3/4")
4	503-0364	2	Hose, Radiator	25	505-0131	1	Bushing, Reducer (3/4 x 3/8")
5	503-0365	4	Clamp, Hose	26	504-0028	1	Cock, Drain
6	505-0398	1	Tee, Side Outlet (1-1/2")	27	505-0324	2	Nipple, Half (3/4 x 2")
7	505-0272	1	Nipple, Half (1-1/2 x 4")	28		1	Hose - Order 8" of Bulk Hose #503-0249
8	800-0028	4	Screw, Hex Head Cap (5/16-18 x 1")	29	503-0189	2	Clamp, Hose
9	862-0002	4	Nut, Hex (5/16-18")	30	505-0132	1	Elbow, Pipe (3/4 x 90°)
10	850-0045	4	Washer, Lock (5/16")	31	800-0023	2	Screw, Hex Head Cap (1/4-20 x 1-3/8")
11	526-0115	4	Washer, Flat (5/16")	32	862-0001	2	Nut, Hex (1/4-20")
12	130-0488	1	Clamp, Pipe	33	850-0040	2	Washer, Lock (1/4")
13	505-0424	1	Nipple, Pipe (1-1/2 x 16-1/2")	34	821-0014	8	Screw, Lock Head (5/16 x 2")
14	505-0011	1	Elbow, Street (1/4")	35	130-0499	1	Bracket, Heat Exchanger
15	505-0010	2	Nipple, Half (1/4 x 1")	36	504-0046	1	Valve, Globe
16	505-0426	1	Bushing, Reducer (1-1/2 x 1/4")	38	110-0810	1	Bracket & Nipple
17	503-0032	2	Clamp, Hose	39	307-0835	1	Valve, Solenoid
18	503-0032	1	Hose - Order 16-1/4" of Bulk Hose #503-0110	40	505-0102	1	Nipple, Close (3/4")
19	505-0018	1	Bushing, Reducer (1/2 x 1/4")	41	130-0454	1	*Guard, Belt
20		1	Hose - Order 3" of Bulk Hose #503-0357	42	130-0455	1	*Bracket, Belt Guard
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
21	503-0354	2	Clamp, Hose				

* - Not shown in Illustration.

CITY WATER COOLED (HOUSED MODELS) INSTALLATION

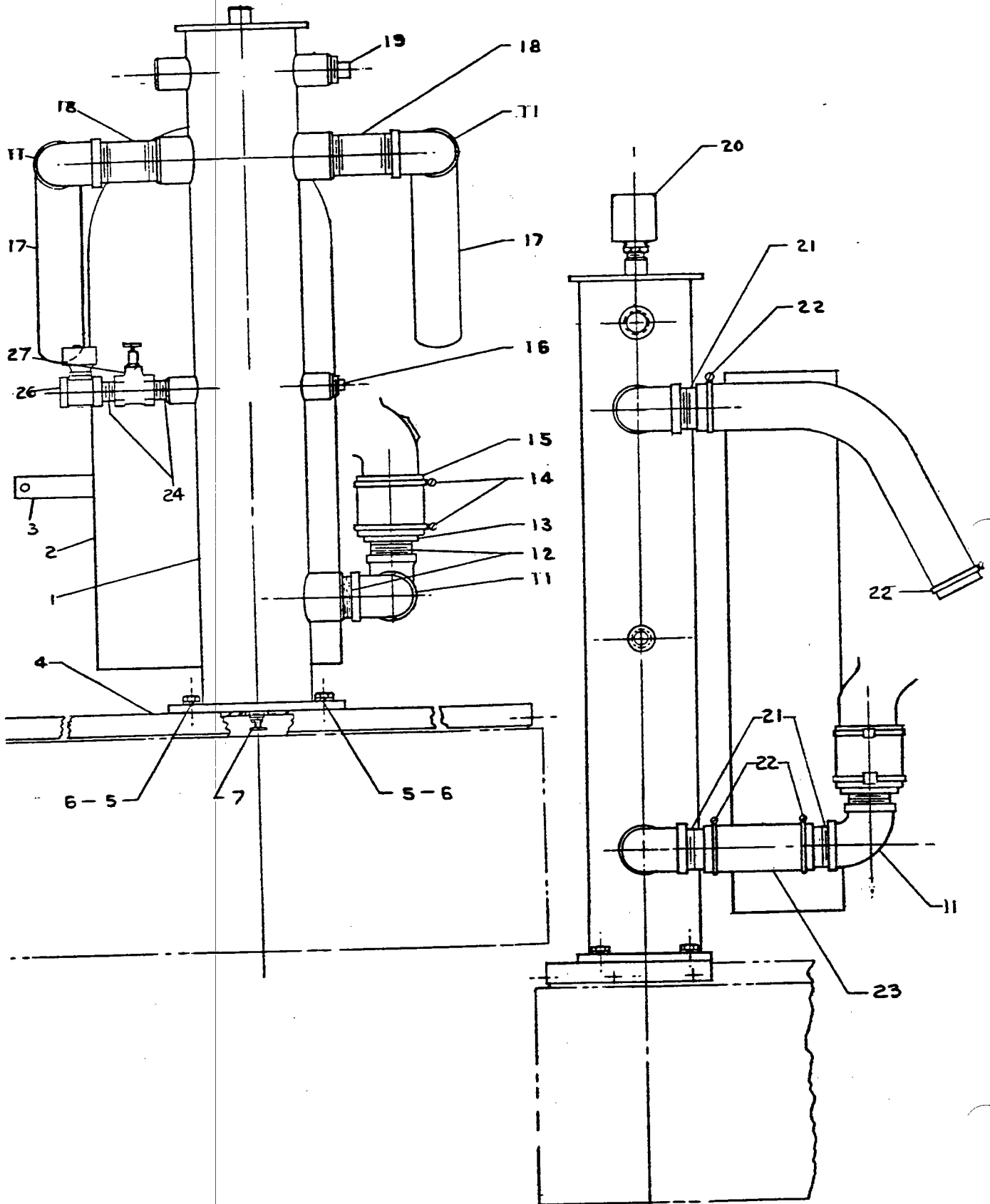
179-1005



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	505-0402	1	Plug, Square Head	19	505-0018	1	Bushing, Reducer (1/2 x 1/4")
2	505-0317	1	Tee, Pipe (1-1/2")	20		1	Hose, Order 3" of Bulk Hose #503-0357
3	505-0474	1	Nipple, Half (1-1/2 x 5")	21	503-0354	2	Clamp, Hose
4	503-0364	2	Hose, Radiator	22	504-0028	1	Cock, Drain
5	503-0365	4	Clamp, Hose	23	130-0452	1	Fitting, Water Inlet
6	505-0398	1	Tee, Side Outlet (1-1/2")	24	505-0166	1	Tee, Pipe (3/4")
7	505-0385	1	Nipple, Half (1-1/2 x 2")	25	505-0131	1	Bushing, Reducer (3/4 x 3/8")
8	800-0028	4	Screw, Hex Head Cap (5/16-18 x 1")	26	505-0102	2	Nipple, Close (3/4")
9	862-0002	4	Nut, Hex (5/16-18")	27	130-0528	1	Support, Pipe
10	850-0045	4	Washer, Lock (5/16")	28	130-0828	1	Bracket, Support
11	526-0115	4	Washer, Flat (5/16")	29	505-0084	2	Nipple (3/4 x 2-1/2")
12	130-0488	1	Clamp, Pipe	30	505-0132	1	Elbow, 90° (3/4")
13	505-0424	1	Nipple, Pipe (1-1/2 x 16-1/2")	31	800-0023	2	Screw, Hex Head Cap (1/4-20 x 1-3/8")
14	505-0011	1	Elbow, Street (1/4")	32	862-0001	2	Nut, Hex (1/4-20")
15	505-0010	2	Nipple, Half (1/4 x 1")	33	850-0040	2	Washer, Lock (1/4")
16	505-0426	1	Bushing, Reducer (1-1/2 x 1/4")	36	504-0046	1	Valve, Globe
17	503-0032	2	Clamp, Hose	38	110-0810	1	Bracket & Nipple
18		1	Hose, Order 16-1/4" of Bulk Hose #503-0110	39	307-0835	1	Valve, Solenoid

179-0197

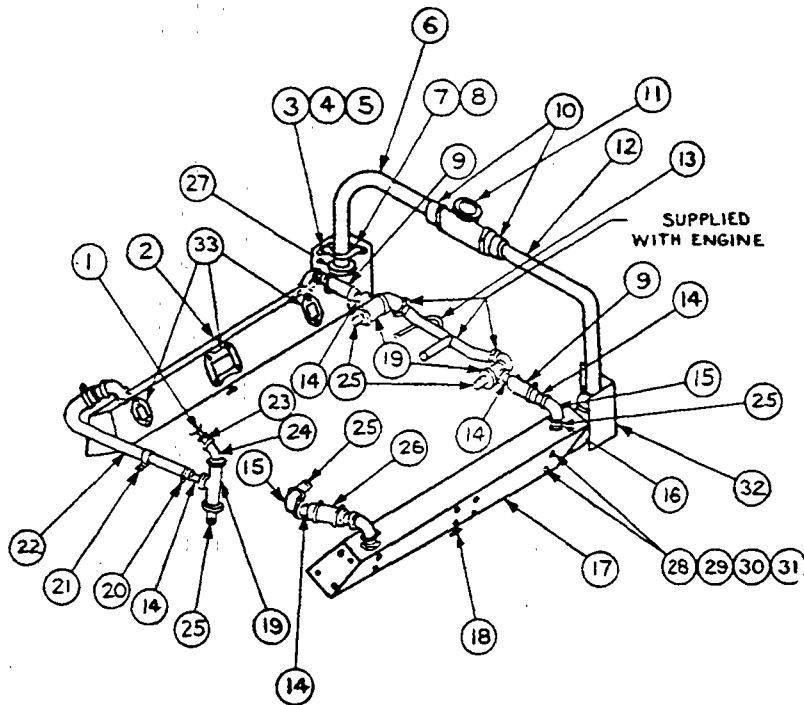
STANDPIPE INSTALLATION



WATER COOLED EXHAUST MANIFOLD (RADIATOR COOLED) INSTALLATION - LATE MODELS

179-1006

NOTE: See separate group for early models. Can be identified by exhaust manifolds. This installation has ONAN cast into the manifolds.



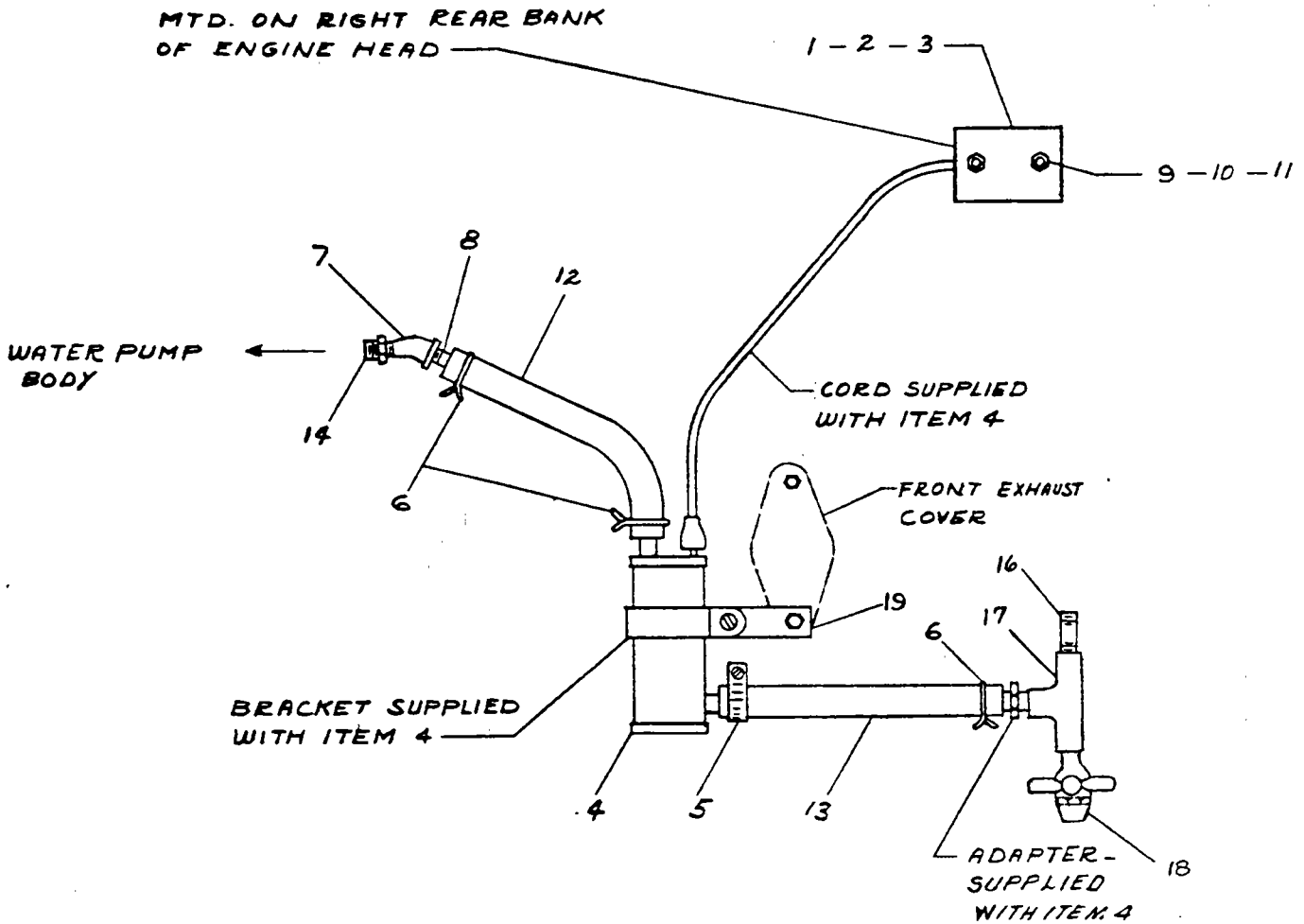
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	504-0028	1	Cock, Drain	20	503-0189	8	Clamp, Hose
2	154-1453	1	Manifold Assembly (LH)	21	148-0274	1	Clamp, Hose
3	870-0053	8	Nut, Hex (#10-32)	22		1	Hose, Order 30" of Bulk Hose #503-0191
4	813-0102	8	Screw, Round Head Mounting (#10-32 x 5/8")	23	505-0019	1	Bushing, Reducer (1/2 x 3/8")
5	850-0030	8	Washer, Lock (#10)	24	505-0248	1	Elbow, Street (45° x 1/2")
6	155-1048	1	Tube, Exhaust Assembly	25	505-0100	8	Nipple, Close (1/2")
7	155-0661	2	Band, Shield Mounting	26	503-0191	1	Hose (13-1/2")
8	155-0660	2	Bracket, Exhaust Shield Mounting	27	505-0216	2	Elbow, Street (2-1/2")
9		2	Hose, Order 8" of Bulk Hose #503-0191	28	520-0110	8	Stud (3/8-24 x 4-1/2")
10	155-0615	1	Nipple, Exhaust Tube	29	520-0755	8	Stud (3/8-24 x 5-1/2")
11	505-0373	1	Tee, Reducing (2-1/2 x 2-1/2 x 3")	30	850-0050	16	Washer, Lock (3/8")
12	155-1047	1	Tube, Exhaust Assembly	31	104-0091	16	Nut, Hex (3/8-24")
13	130-0745	1	Water Line, Manifold Drain	32	155-0659	2	Shield, Exhaust Header
14	505-0185	8	Nipple, Half (1/2")	33	154-0592	2	Gasket Set, Manifold
15	505-0040	5	Elbow (1/2" x 90°)	34	800-0026	2	*Screw, Hex Head Cap (5/16-18 x 3/4") Coil Mounting
16	505-0399	4	Bushing, Reducer (1-1/2 x 1/2")	35	850-0045	2	*Washer, Lock (5/16") Coil Mounting
17	154-1452	1	Manifold Assembly (RH)	36	505-0185	1	Nipple, Half (1/2" x 1-1/2")
18	504-0005	2	Cock, Drain	37	503-0191	6	Hose, Rubber (3/4 x 1-1/8")
19	505-0108	3	Tee (1/2")				

* - Not shown in Illustration.

<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
1	130-0635	1	Standpipe
2	130-0454	1	Guard, Belt
3	130-0455	1	Bracket, Belt Guard
4	130-0636	1	Bracket, Standpipe Mounting
5	850-0050	4	Lockwasher (3/8")
6	800-0050	4	Screw, Hex Head Cap (3/8-16 x 1")
7	504-0028	1	Cock, Drain
11	505-0043	4	Elbow (1-1/2" x 90°)
12	505-0220	2	Nipple, Close (1-1/2 x 1-3/4")
13	130-0478	1	Fitting, Water Inlet
14	503-0354	2	Clamp, Hose
15		1	Hose - Order 3" of Bulk Hose #503-0357
16	505-0130	1	Plug, Square Head (3/4")
17	503-0332	2	Hose, Radiator Upper
18	505-0261	2	Nipple (1-1/2 x 4-1/2")
19	505-0140	1	Plug, Square Head (1")
20	504-0062	1	Valve, Vacuum Relief
21	505-0444	4	Nipple, Half (1-1/2 x 2-1/4")
22	503-0365	6	Clamp, Hose
23		1	Hose - Order 7" of Bulk Hose #503-0411
24	505-0102	2	Nipple, Close (3/4")
26	307-0835	1	Valve
27	504-0046	1	Valve, Lockshield

WATER JACKET HEATER (120 VOLTS) INSTALLATION

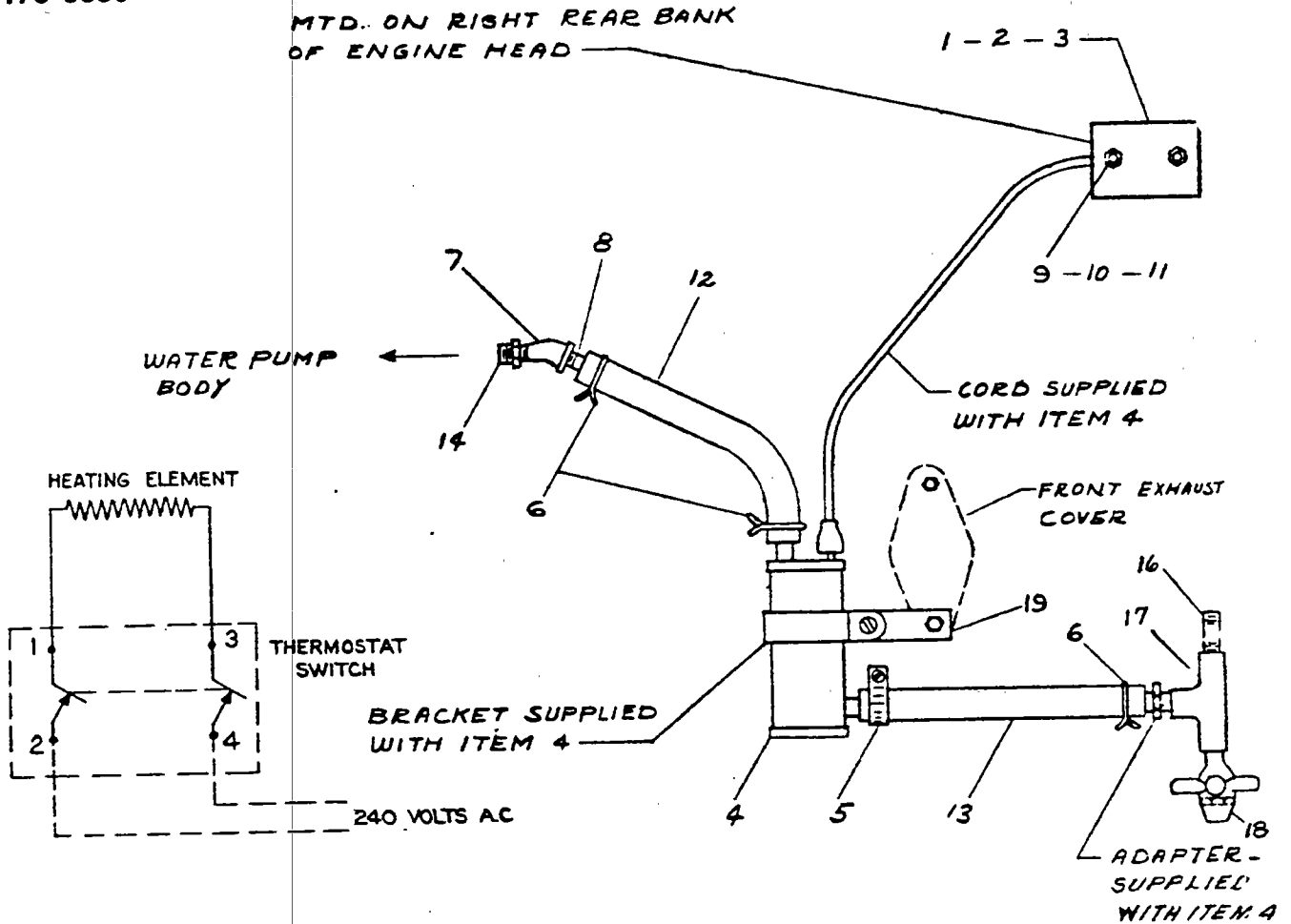
179-0086



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	309-0106	1	Thermostat
2	333-0012	1	Box, Thermostat
3	333-0013	1	Cover, Thermostat Box
4	333-0052	1	Heater
5	503-0183	1	Clamp, Hose
6	503-0131	3	Clamp, Hose
8	505-0135	1	Nipple, Half (3/8 x 1-1/2")
9	520-0446	2	Stud
10	870-0053	2	Nut, Hex (#10-32)
11	850-0030	2	Lockwasher (#10)
12		1	Hose - Order 12" of Bulk Hose #503-0386
13		1	Hose - Order 11" of Bulk Hose #503-0386
14	505-0019	1	Bushing, Reducer (1/2 x 3/8")
16	505-0101	1	Nipple, Close (1/4")
17	505-0184	1	Tee (1/4")
18	504-0003	1	Valve, Drain
19	130-0755	1	Bracket

WATER JACKET HEATER (240 VOLTS) INSTALLATION

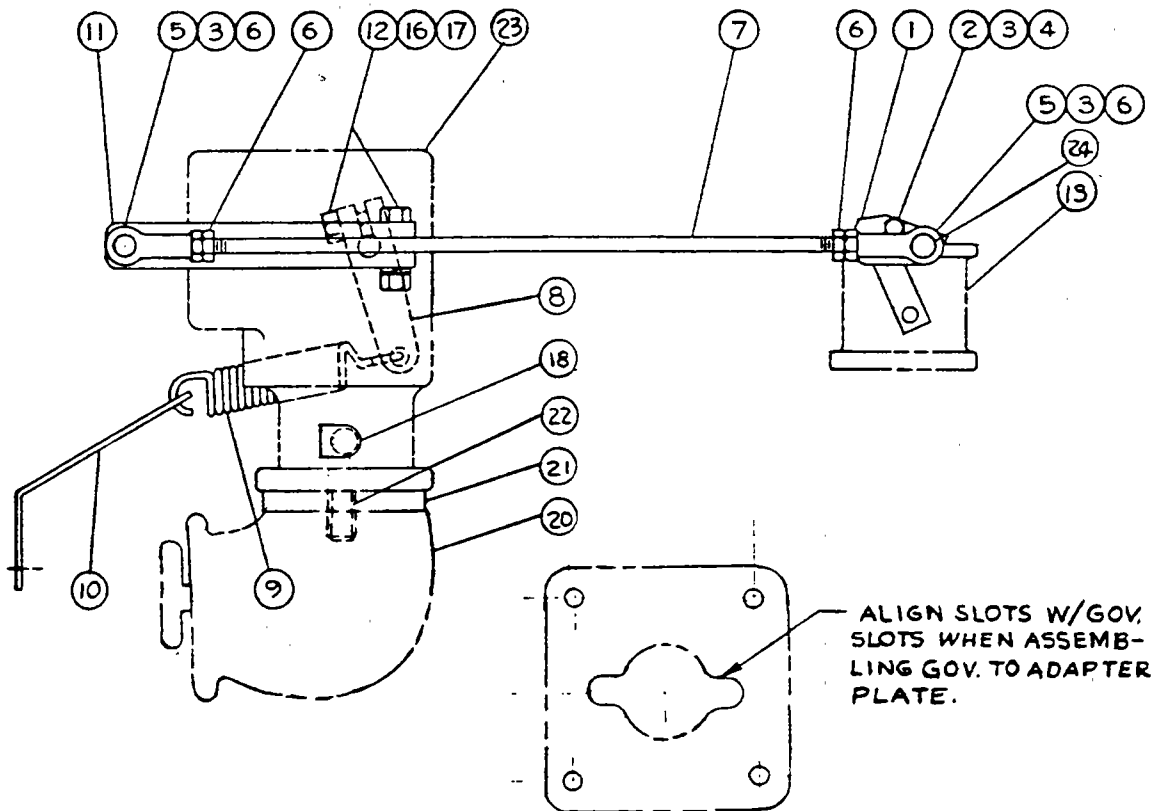
179-0358



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	309-0256	1	Thermostat
2	333-0057	1	Box, Thermostat
3	333-0056	1	Cover, Thermostat Box
4	333-0073	1	Heater
5	503-0183	1	Clamp, Hose
6	503-0131	3	Clamp, Hose
7	505-0119	1	Elbow, Stud (3/8" x 45°)
8	505-0135	1	Nipple, Half (3/8 x 1-1/2")
9	332-0672	2	Stud
10	870-0053	2	Hex Nut (#10-32)
11	850-0030	2	Lockwasher (#10)
12		1	Hose, Order 8" of Bulk Hose #503-0386
13		1	Hose, Order 11" of Bulk Hose #503-0386
14	505-0019	1	Bushing, Reducer (1/2 x 3/8")
16	505-0101	1	Nipple, Close (1/4")
17	505-0184	1	Tee (1/4")
18	504-0003	1	Valve, Drain
19	130-0755	1	Bracket

OPTIONAL HYDRAULIC GOVERNOR INSTALLATION

179-0223

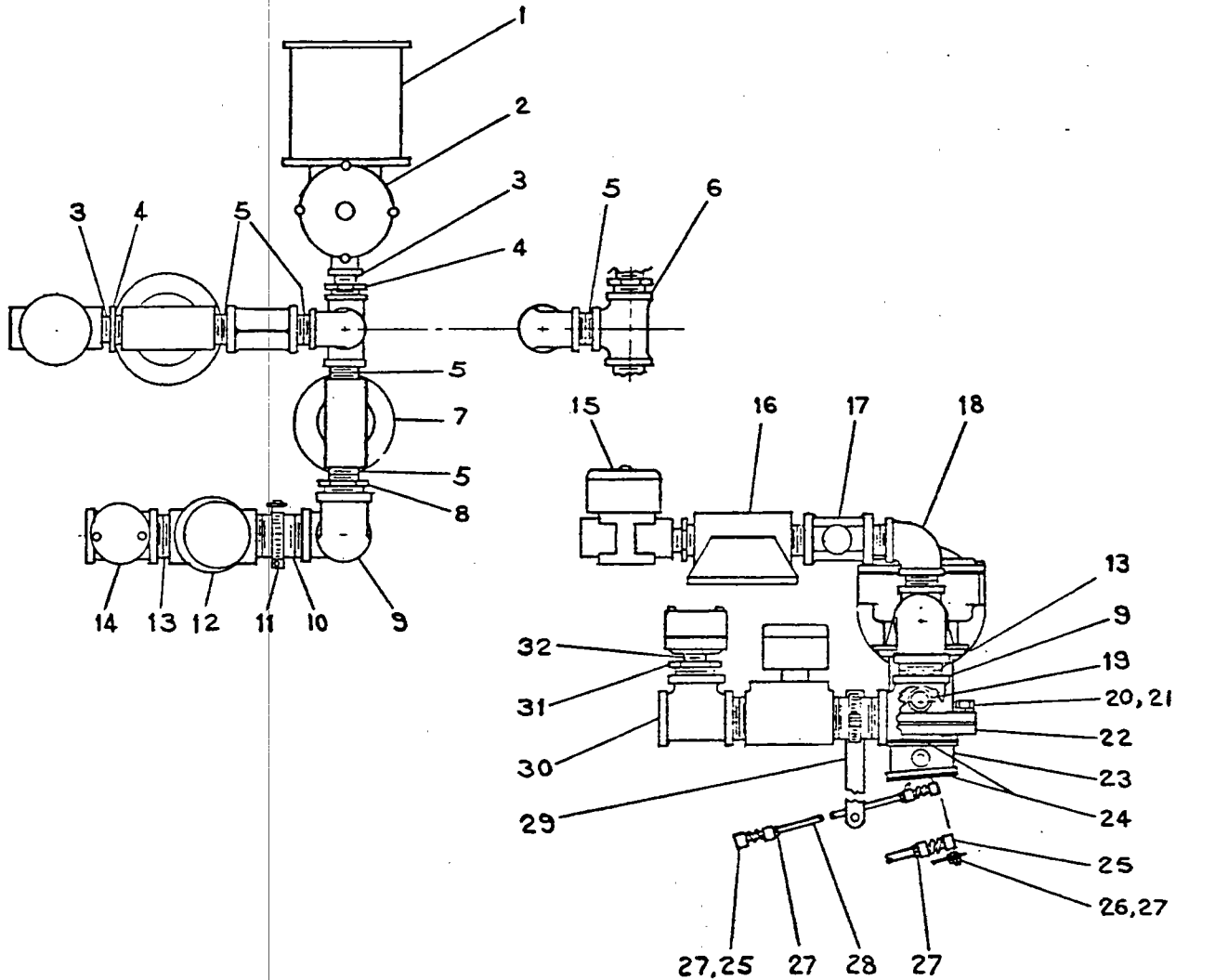


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	145-0375	1	Link, Throttle Lever Extension
2	800-0003	2	Screw, Hex Head Cap (1/4-20 x 1/2")
3	850-0040	4	Lockwasher (1/4")
4	862-0001	2	Nut, Hex (1/4-20")
5	150-1036	2	Joint, Governor Ball
6	115-0025	4	Nut, Hex (1/4-28")
7	520-0515	1	Stud, Governor Control
8	151-0332	1	Arm, Governor Spring Mounting
9	150-0698	1	Spring, Governor
10	151-0325	1	Bracket, Governor Spring Mounting
11	151-0331	1	Arm, Governor
12	800-0031	2	Screw, Hex Head Cap (5/16-18 x 1-1/2")
13	145-0441	1	Body, Throttle
16	850-0045	2	Lockwasher (5/16")
17	862-0015	2	Nut, Hex (5/16-18")
18	502-0246	1	Elbow, 3/8" Inverted 1/8" Pipe
20	151-0296	1	Drive Kit, Governor
21	151-0299	1	Spacer, Drive
22	151-0300	1	Coupling, Drive
23	151-0319	1	Governor, Hydraulic
24	812-0155	1	Screw, Round Head Machine (1/4-20 x 1-1/4")
25	502-0106	1	*Connector, 3/8" Inverted 1/8" Pipe
26	504-0077	1	*Valve, Check
27	120-0654	1	*Line, Oil

* - Not shown in Illustration.

179-0253

OPTIONAL NATURAL GAS AND LPG VAPOR (AUTOMATIC CHANGEOVER) INSTALLATION

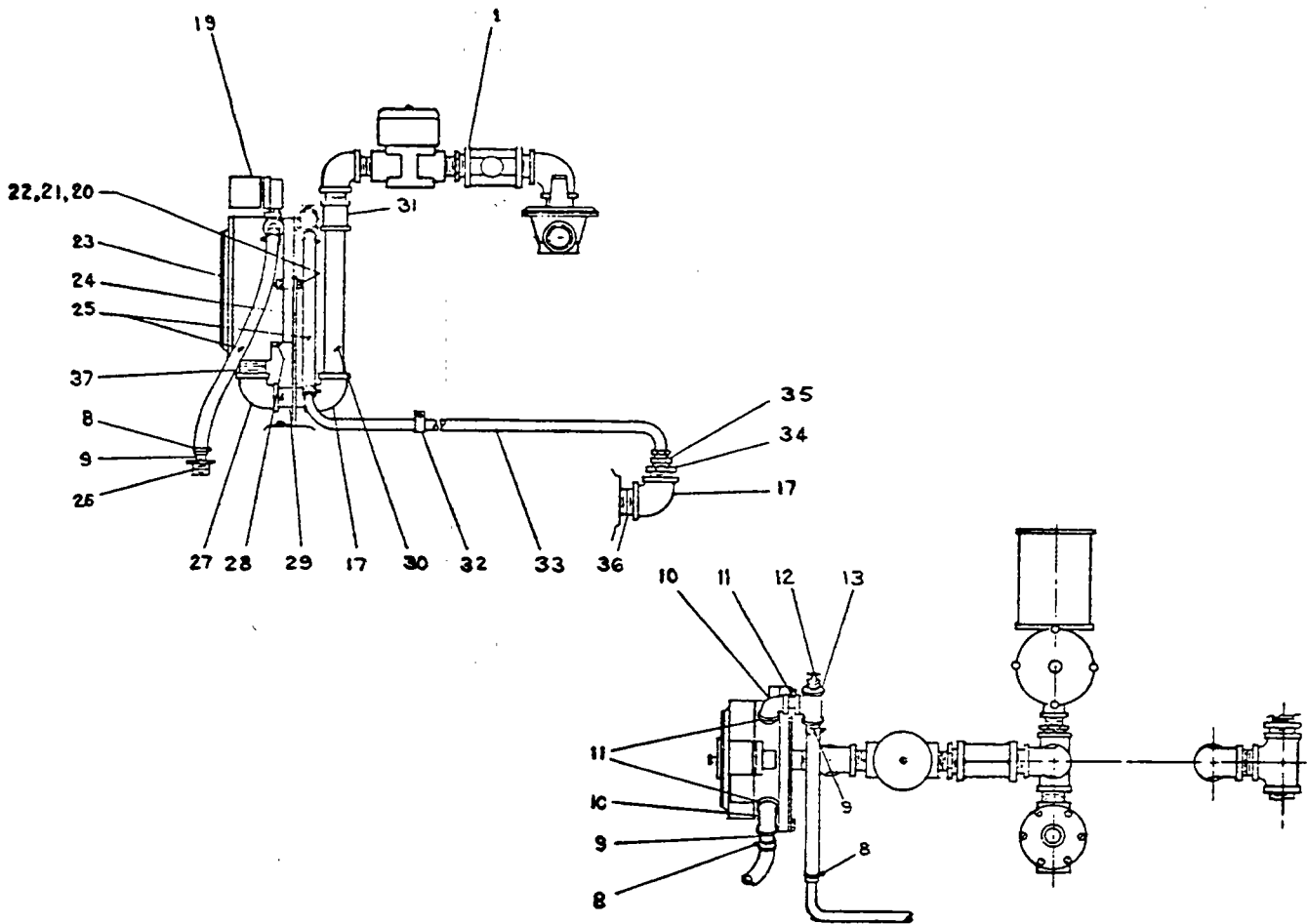


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	140-0851	1	Air Cleaner	17	148-0626	1	*Valve, Adjustment (Impco #AB1-32 - 1")
2	148-0592	1	*Carburetor (Impco #200 with 1-3/4" Flange & 3-1/16" Air Hose)	18	505-0041	1	Elbow (1 x 90°), Pipe
3	505-0102	2	Nipple, Close (3/4")	19	148-0620	1	Collar, Shaft
4	505-0129	2	Bushing, Reducer (1 x 3/4")	20	850-0055	2	Washer (7/16), Lock
5	505-0004	5	Nipple, Close (1")	21	800-0071	2	Screw (7/16-14 x 1"), Hex Head Cap
6	505-0304	1	Tee (1"), Pipe	22	145-0358	1	Adapter, Carburetor
7	148-0601	1	*Valve, Pressure Reduction (Impco #T-30)	23	145-0410	1	Body Assembly, Throttle
8	505-0023	1	Bushing, Reducer (1-1/4 x 1")	24	145-0185	2	Gasket
9	505-0042	2	Elbow (1-1/4 x 90°), Pipe	25	150-0638	2	Joint, Ball
10	505-0258	1	Nipple (1-1/4 x 3"), Pipe	26	850-0040	1	Washer (1/4"), Lock
11	331-0101	1	Hanger (1-1/4")	27	115-0625	4	Nut (1/4-28), Hex
12	307-0837	1	Valve, Solenoid	28	520-0517	1	Stud
13	505-0177	2	Nipple, Close (1-1/4")	29	191-0101	1	Strap, Generator Adjusting
14	148-0627	1	*Switch, Pressure (Impco #AP-153-R33)	30	505-0249	1	Tee (1-1/4")
15	307-0312	1	Valve, Magnetic	31	505-0766	1	Bushing, Reducer (1-1/4 x 1")
16	148-0636	1	*Valve, Pressure Reduction (Impco #T-30 Less Pressure Spring)	32	505-0099	1	Nipple, Close (1/4")

* - For components contact your nearest Impco dealer or Impco Division, 16916 Gridley Place, Cerritos, California 90701

179-0259

OPTIONAL NATURAL GAS AND LPG LIQUID (MANUAL CHANGEOVER) INSTALLATION

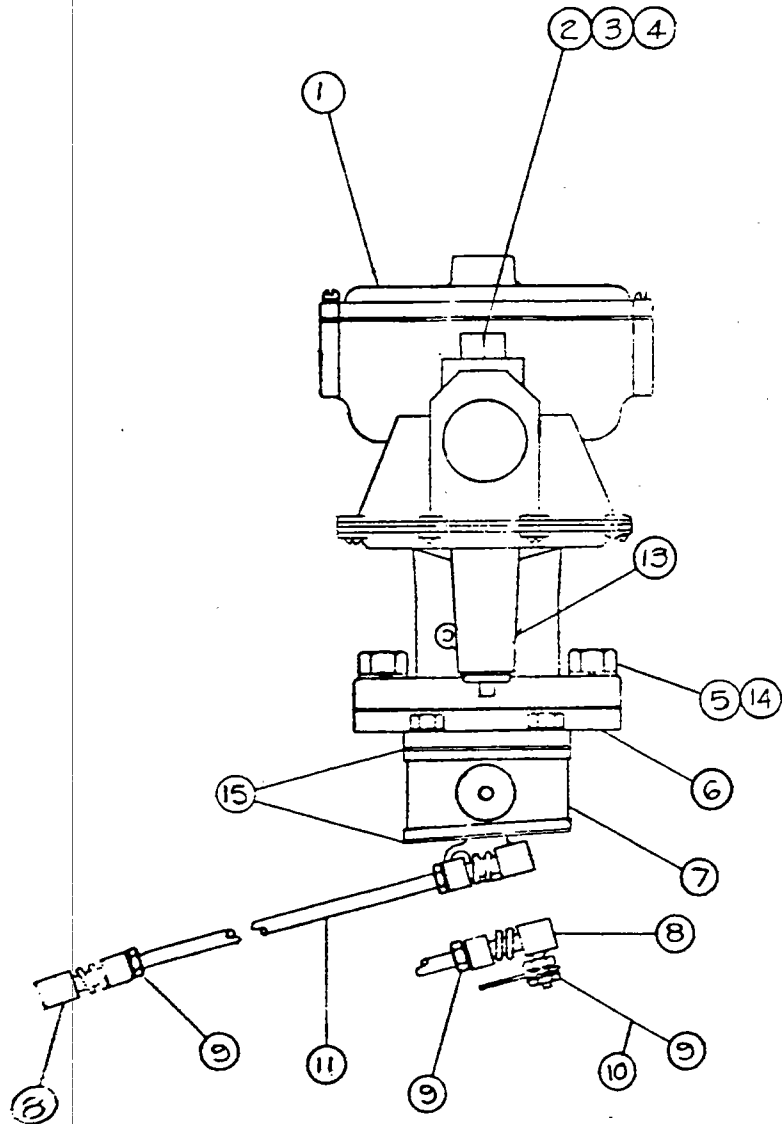


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	148-0728	1	Carburetor and Valve Assembly	25		1	Hose, Order 42" of Bulk Hose #503-0386
2	503-0324	2	Nipple, Half (3/4" x 2")	26	505-0019	1	Bushing, Reducer (1/2 x 3/8")
3	505-0102	1	Nipple, Close (3/4")	27	505-0356	1	Elbow, Reducer (1 x 3/4")
8	503-0189	4	Clamp, Hose	28	504-0005	1	Cock, Drain (1/8")
9	505-0135	3	Nipple (3/8 x 1/2"), Half	29	505-0084	1	Nipple (3/4 x 2-1/2"), Pipe
10	505-0039	2	Elbow (3/8"), Pipe	30	503-0249	1	Hose (3/4" x 8-3/4")
11	505-0101	3	Nipple, Close (3/8")	32	148-0274	1	Bracket, Hose
12	504-0028	1	Cock, Drain (3/8")	33	131-0192	1	Line, Water
13	505-0060	1	Tee, Pipe (3/8")	34	505-0021	1	Bushing, Reducer (3/4 x 1/2")
17	505-0132	2	Elbow (3/4"), Pipe	35	502-0227	1	Connector, Inverted Male
19	307-0268	1	Valve, Solenoid	36	505-0071	1	Nipple (3/4 x 2"), Pipe
20	800-0009	2	Screw, Hex Head Cap (1/4-20 x 1-1/2")	37	505-0107	1	Nipple, Short (1 x 2")
21	850-0040	2	Washer (1/4"), Lock				
22	862-0001	2	Nut (1/4-20), Hex				
23	148-0625	1	*Converter Assembly, Gas (Impco Model EB)				
24	148-0631	1	Bracket, Vaporizer				

* - For components contact your nearest Impco dealer or Impco Division, 16916 Gridley Place, Cerritos, California 90701.

**OPTIONAL CARBURETOR AND REGULATOR ASSEMBLY
(NATURAL GAS AND LPG — MANUAL CHANGEOVER)**

148-0619

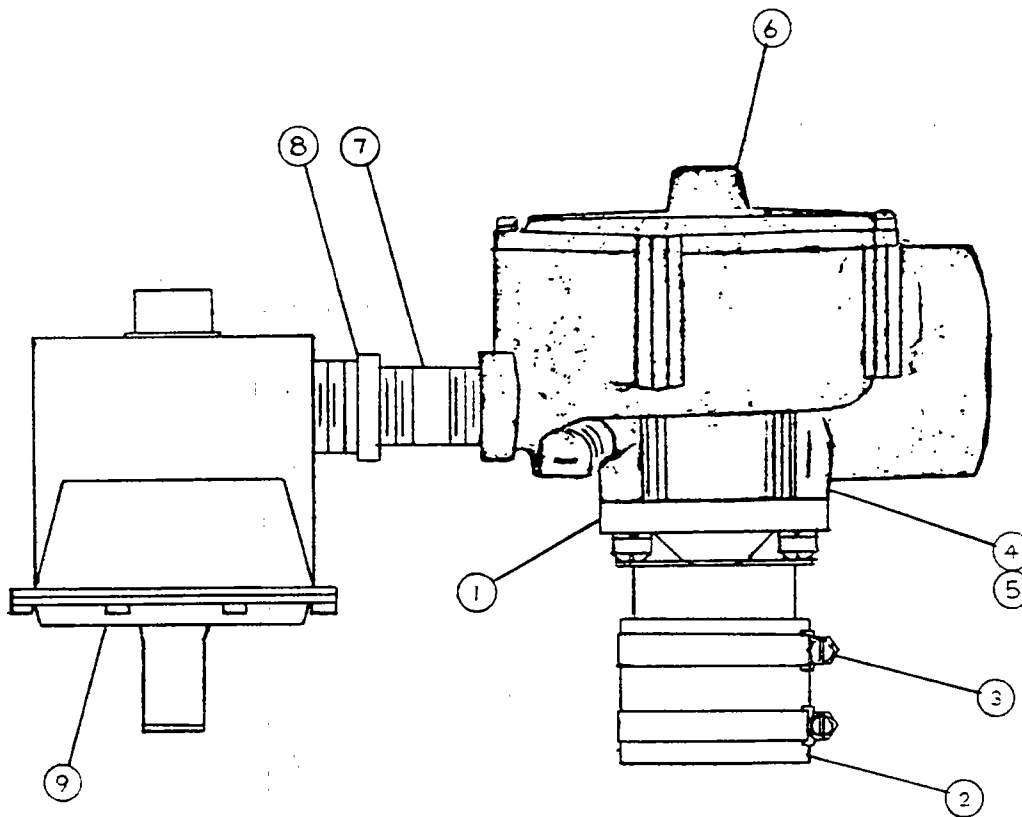


<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
1	148-0592	1	*Carburetor (Impco #200 with 1-3/4" Flange and 3/16" Air Horn)
2	148-0601	1	*Valve, Thermal (Impco #T-30)
3	505-0102	1	Nipple, Close (3/4 x 1-3/8")
4	505-0129	1	Bushing, Reducer (1 x 3/4")
5	800-0071	2	Screw, Hex Head (7/16-14 x 1")
6	145-0358	1	Adapter, Carburetor
7	145-0328	1	Body Assembly, Throttle
8	150-0638	2	Joint, Ball
9	115-0025	4	Nut, Hex (1/4-28")
10	850-0040	1	Washer, Lock (1/4")
11	520-0629	1	Stud
13	148-0620	1	Collar, Shaft
14	850-0055	2	Washer, Lock (7/16")
15	145-0185	2	Gasket

* - For components contact your nearest Impco dealer or Impco Division, 16916 Gridley Place, Cerritos, California 90701.

OPTIONAL CARBURETOR AND REGULATOR ASSEMBLY GROUP (NATURAL GAS — GASOLINE)

148-0632

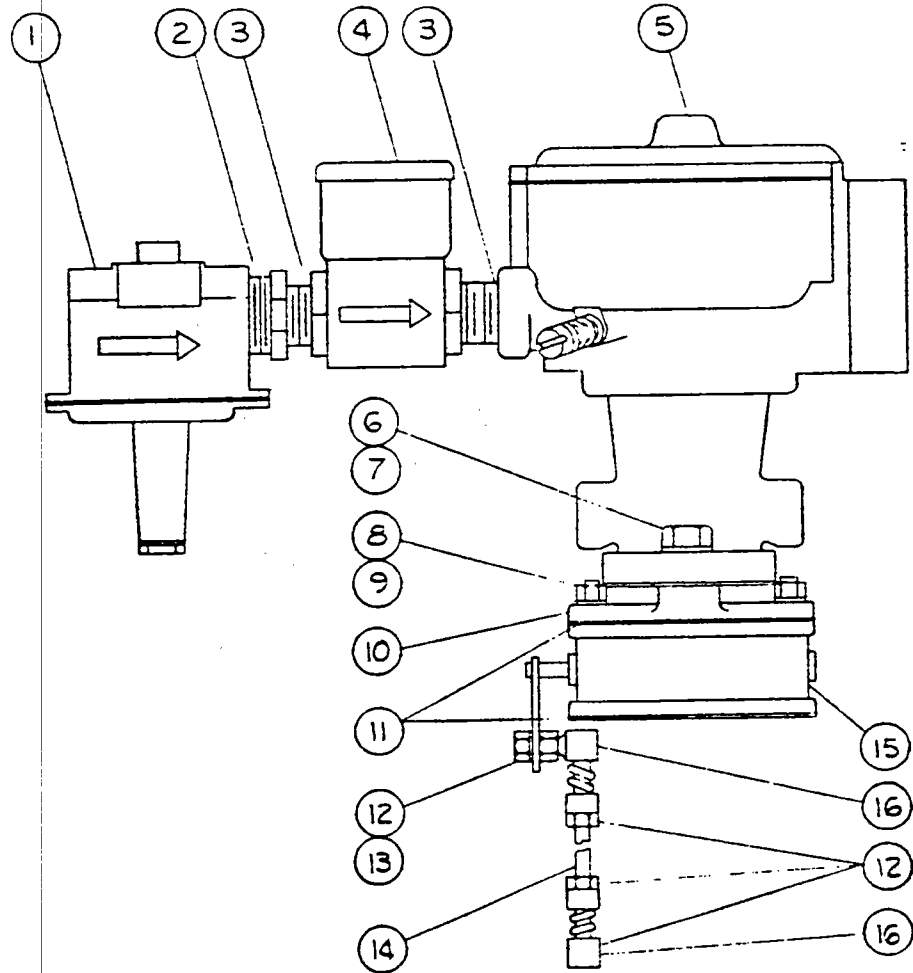


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	145-0396	1	Adapter, Carburetor
2	503-0550	1	Adapter, Hose
3	503-0354	2	Clamp
4		1	Gasket (Supplied with Mixer) - Impco #G7-21
5		4	Screw (Supplied with Mixer) - Impco #51-19
6	148-0598	1	*Carburetor Mixer - (Impco #200 with 3-1/16" Air Horn)
7	505-0102	1	Nipple (3/4 x 1-3/8")
8	505-0129	1	Bushing, Reducer (1 x 3/4")
9	148-0601	1	*Regulator - Natural Gas (Impco #T-30)

* - For components contact your nearest Impco dealer or Impco Division, 16916 Gridley Place, Cerritos, California 90701.

OPTIONAL CARBURETOR AND REGULATOR ASSEMBLY (LPG VAPOR)

148-0682

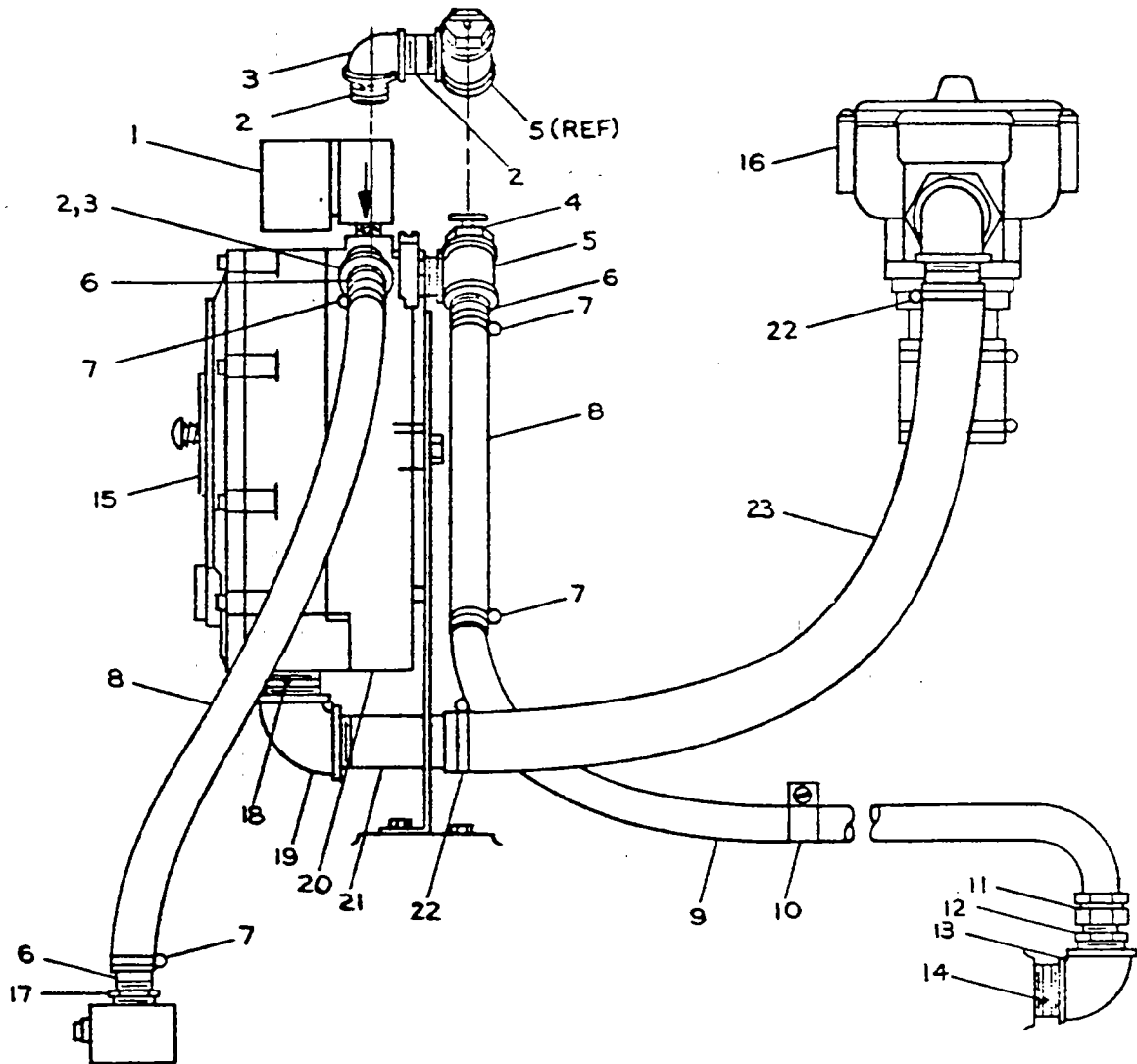


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	148-0636	1	*Regulator, Natural Gas (Impco #T-30 Less Pressure Spring)
2	505-0129	1	Bushing, Reducing (3/4 x 1")
3	505-0102	2	Nipple, Close (3/4 x 1-3/8")
4	307-0312	1	Valve, Magnetic (3/4")
5	148-0592	1	*Carburetor - Natural Gas (Impco #200 with 1-3/4" Flange & 3-1/16" Air Horn)
6	800-0071	2	Screw, Hex Head Cap (7/16-14")
7	850-0055	2	Washer, Lock (7/16")
8	110-0445	4	Nut, Hex Head Cap (5/16-24")
9	850-0045	4	Washer, Lock (5/16")
10	145-0358	1	Adapter, Carburetor
11	145-0185	2	Gasket, Carburetor Flange
12	115-0025	4	Nut, Hex Head Cap (1/4-28")
13	850-0040	1	Washer, Lock (1/4")
14	520-0517	1	Stud (1/4-28 x 7")
15	145-0410	1	Body Assembly, Throttle
16	150-0638	2	Joint, Ball (1/4-28")

* - For components contact your nearest Impco dealer or Impco Division, 16916 Gridley Place, Cerritos, California 90701.

OPTIONAL CARBURETOR AND CONVERTER ASSEMBLY (GASOLINE - LPG LIQUID)

148-0634

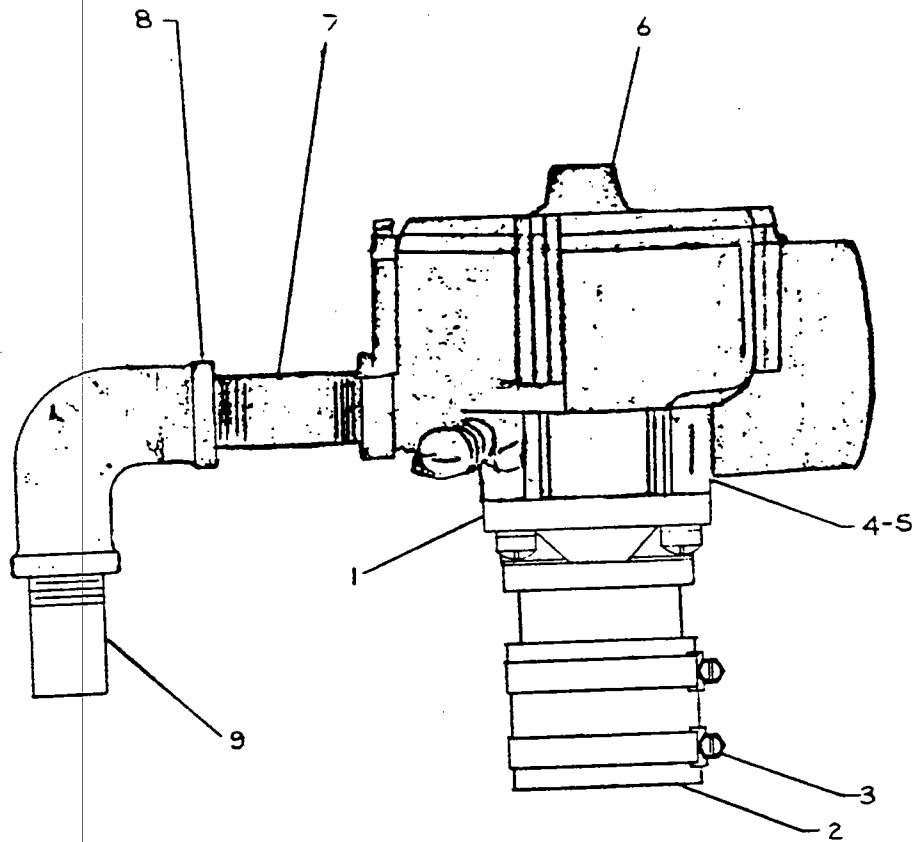


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	307-0268	1	Valve, Solenoid	16		1	Carburetor Regulator Assembly - LPG - See Optional Carburetor Assembly (Gasoline-LPG Liquid)
2	505-0101	3	Nipple, Pipe (3/8 x 1")	17	505-0019	1	Bushing, Reducer (1/2 x 3/8")
3	505-0039	2	Elbow, Pipe (3/8")	18	505-0107	1	Nipple, Short (1 x 2")
4	504-0028	1	Cock, Drain (3/8")	19	505-0356	1	Elbow, Reducer (1 x 3/4")
5	505-0060	1	Tee, Pipe (3/8")	20	504-0005	1	Cock, Drain
6	505-0135	3	Nipple, Half (3/8")	21	505-0324	1	Nipple, Half (3/4 x 2")
7	503-0189	4	Clamp, Hose	22	503-0382	2	Clamp, Hose
8		1	Hose, Order 42" of Bulk Hose #503-0386	23		1	Hose, Order 12" of Bulk Hose #503-0249
9	131-0192	1	Line, Water	24	148-0631	1	Bracket, Vaporizer
10	148-0274	1	Clamp, Loop Type				
11	502-0227	1	Connector, Inverted Male				
12	505-0021	1	Bushing, Reducer (3/4 x 1/2")				
13	505-0132	1	Elbow, Pipe (3/4")				
14	505-0071	1	Nipple, Pipe (3/4 x 1-1/4")				
15	148-0625	1	Converter Assembly, Gas (Impco Model EB)				

* - For components contact your nearest Impco dealer or Impco Division, 16916 Gridley Place, Cerritos, California 90701.

OPTIONAL CARBURETOR ASSEMBLY (GASOLINE - LPG LIQUID)

148-0668

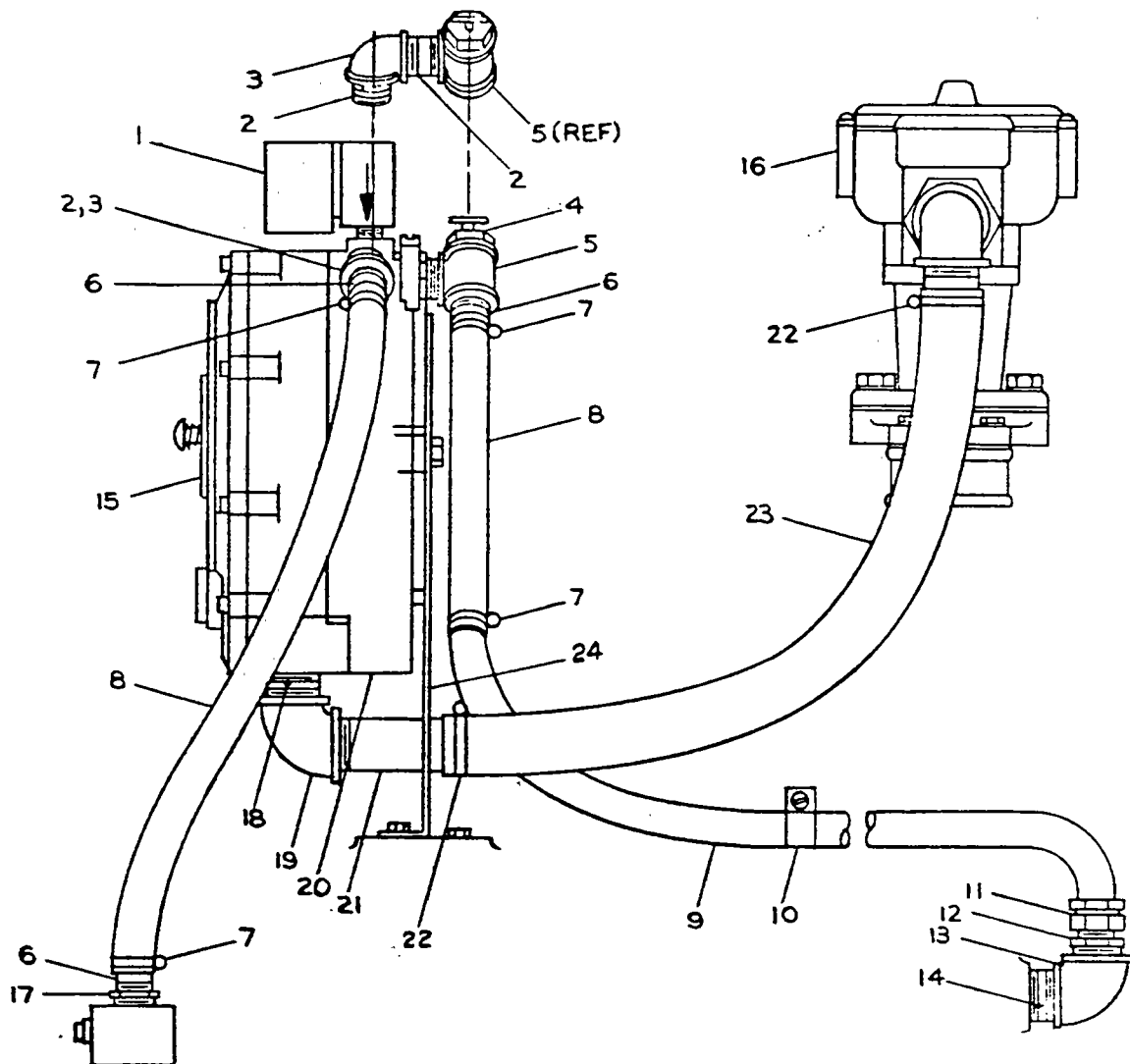


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	145-0396	1	Adapter, Carburetor
2	503-0550	1	Adapter, Hose
3	503-0354	2	Clamp
4		1	Gasket (Supplied with Mixer - Impco #G1-21)
5		4	Screw (Supplied with Mixer - Impco #51-14)
6	148-0598	1	*Carburetor Mixer (Impco #200 with 3-1/16" Air Horn)
7	505-0102	1	Nipple (3/4 x 1-3/8")
8	505-0132	1	Elbow (3/4" x 90°)
9	505-0324	1	Nipple, Half (3/4 x 2")

* - For components contact your nearest Impco dealer or Impco Division, 16916 Gridley Place, Cerritos, California 90701.

OPTIONAL CARBURETOR AND CONVERTER ASSEMBLY (LPG LIQUID)

148-0694



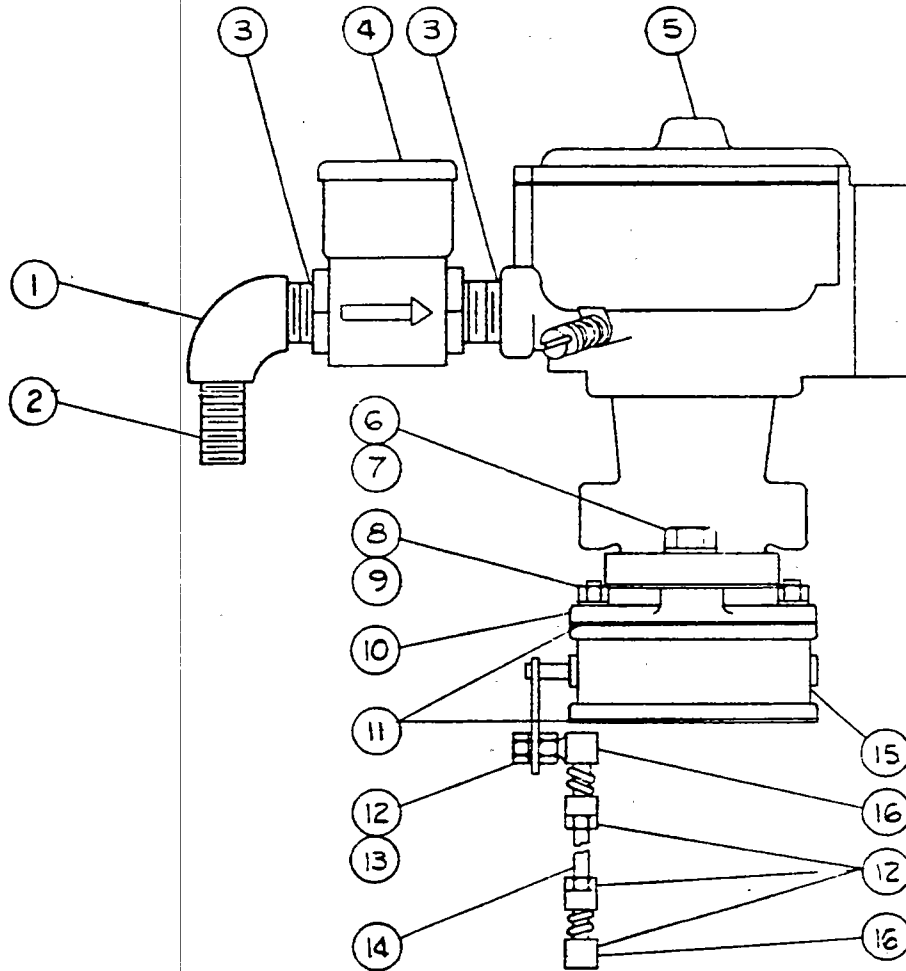
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	307-0268	1	Valve, Solenoid
2	505-0101	3	Nipple, Pipe (3/8 x 1")
3	505-0039	2	Elbow, Pipe (3/8")
4	504-0028	1	Cock, Drain (3/8")
5	505-0060	1	Tee, Pipe (3/8")
6	505-0135	3	Nipple, Half (3/8")
7	503-0189	4	Clamp, Hose
8		1	Hose, Order 42" of Bulk Hose #503-0386
9	131-0192	1	Line, Water
10	148-0274	1	Clamp, Loop Type
11	502-0227	1	Connector, Inverted Male
12	505-0021	1	Bushing, Reducer (3/4 x 1/2")
13	505-0040	1	Elbow, Pipe (1/2")
14	505-0106	1	Nipple, Pipe (1/2 x 1-1/2")
15	148-0625	1	Converter Assembly, Gas (Impco Model EB)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
16		1	Carburetor and Regulator Solenoid Assembly, LPG (See Optional Carburetor Assembly - LPG Liquid)
17	505-0019	1	Bushing, Reducer (1/2 x 3/8")
18	505-0107	1	Nipple, Short (1 x 2")
19	505-0356	1	Elbow, Reducer (1 x 3/4")
20	504-0005	1	Cock, Drain
21	505-0324	1	Nipple, Half (3/4 x 2")
22	503-0382	2	Clamp, Hose
23		1	Hose, Order 12" of Bulk Hose #503-0249
24	148-0631	1	Bracket, Vaporizer

* For components contact your nearest Impco dealer or Impco Division, 16916 Gridley Place, Cerritos, California 90701.

OPTIONAL CARBURETOR AND REGULATOR ASSEMBLY (LPG LIQUID)

148-0693

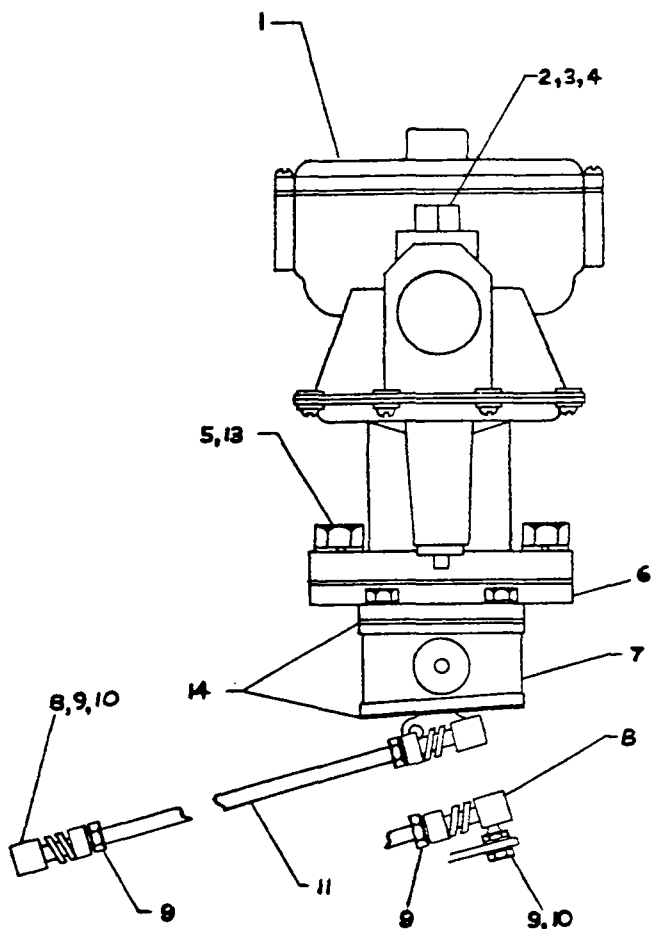


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	505-0132	1	Elbow (3/4")
2	505-0324	1	Nipple, Half (3/4 x 2")
3	505-0102	2	Nipple, Close (3/4 x 1-3/8")
4	307-0312	1	Valve, Magnetic (3/4")
5	148-0592	1	*Carburetor, Natural Gas (Impco #200)
6	800-0071	2	Screw, Hex Head Cap (7/16-14")
7	850-0055	2	Washer, Lock (7/16")
8	110-0445	4	Nut, Hex Head Cap (5/16-24")
9	850-0045	4	Washer, Lock (5/16")
10	145-0358	1	Adapter, Carburetor
11	145-0185	2	Gasket, Carburetor Flange
12	115-0025	4	Nut, Hex Head Cap (1/4-28")
13	850-0040	1	Washer, Lock (1/4")
14	520-0517	1	Stud (1/4-28 x 9-7/8")
15	145-0410	1	Body Assembly, Throttle
16	150-0638	2	Joint, Ball (1/4-28")

* - For components contact your nearest Impco dealer or Impco Division, 16916 Gridley Place, Cerritos, California 90701.

OPTIONAL CARBURETOR ASSEMBLY (NATURAL GAS)

148-0678

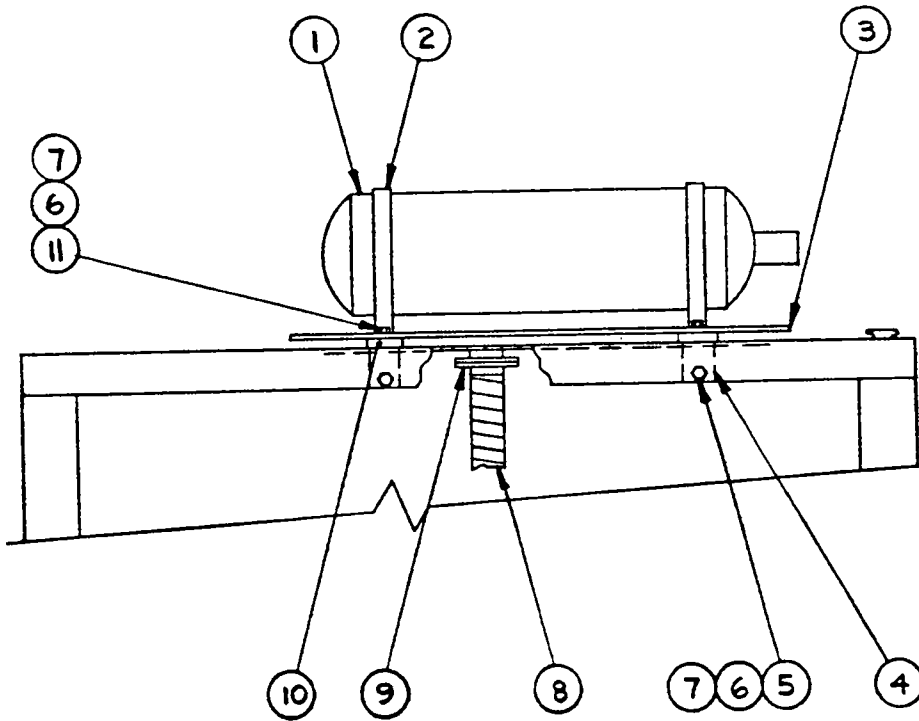


REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	148-0592	1	*Carburetor (Impco #200)
2	148-0601	1	*Valve, Thermal (Impco #T-30)
3	505-0102	1	Nipple, Close (3/4 x 1-3/8")
4	505-0129	1	Bushing, Reducer
5	800-0071	2	Screw, Hex Head Cap (7/16-14 x 1")
6	145-0358	1	Adapter, Carburetor
7	145-0410	1	Body Assembly, Throttle
8	150-0638	2	Joint, Ball
9	115-0025	4	Nut, Hex (1/4-28")
10	850-0040	2	Washer, Lock (1/4")
11	520-0517	1	Stud
13	850-0055	2	Washer, Lock (7/16")
14	145-0185	2	Gasket

* - For components contact your nearest Impco dealer or Impco Division, 16916 Gridley Place, Cerritos, California 90701.

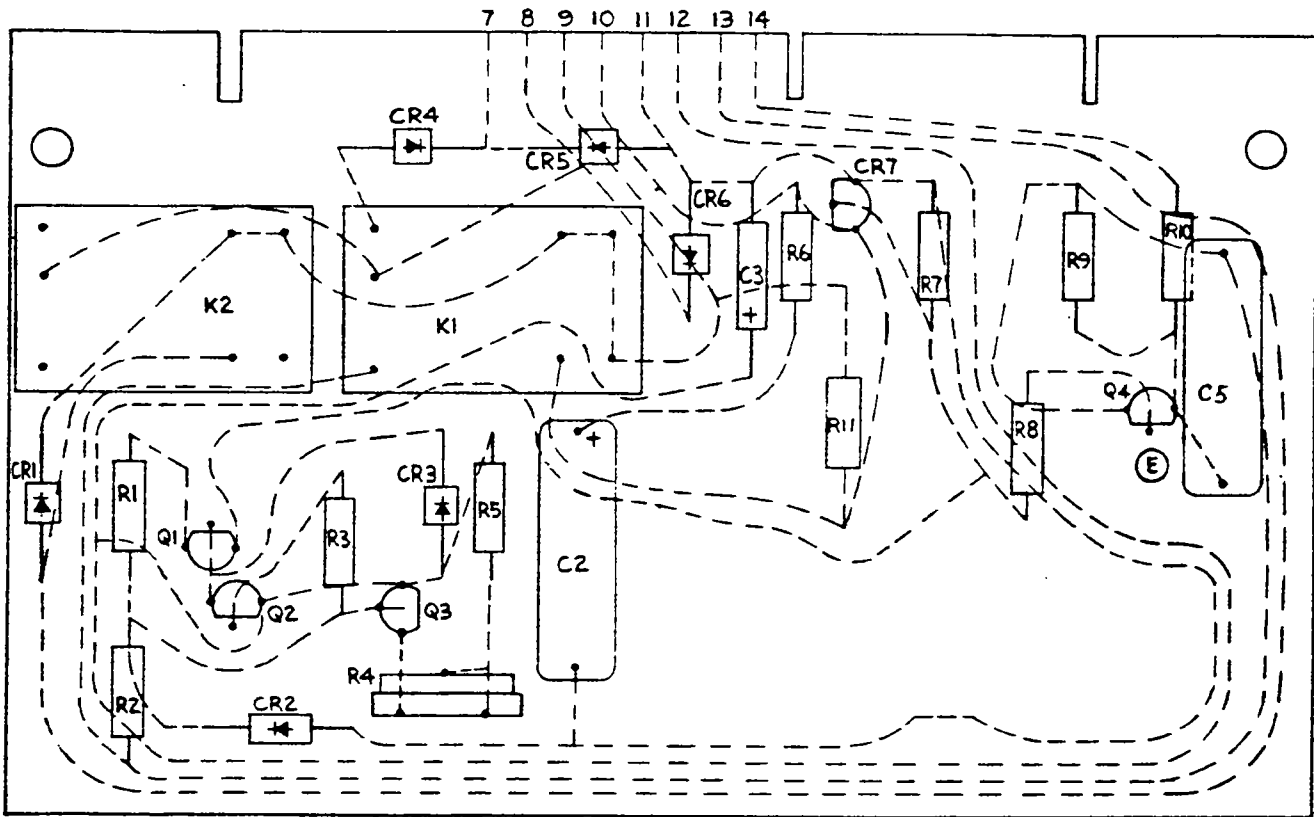
MUFFLER INSTALLATION

179-0260



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	155-0989	1	Muffler
2	140-0757	2	Clamp
3	155-0997	1	Shield, Muffler Heat
4	155-0789	2	Support, Muffler
5	800-0026	6	Screw, Hex Head Cap (5/16-18 x 3/4")
6	850-0045	10	Washer, Lock (5/16")
7	862-0002	10	Nut, Hex (5/16-18 x 3/4")
8	155-1003	1	Tube Assembly, Exhaust
9	154-0570	1	Flange, Union - Manifold
10	526-0172	4	Washer, Flat
11	800-0028	4	Screw, Hex Head Cap (5/16-18 x 1")

ENGINE CONTROL MONITOR (12 VOLT PENN STATE) SETS WITH ONE FAULT LIGHT



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	300-0730	1	Monitor, Engine Control - Complete
K1, K2	307-1039	2	Relay
C2,5	355-0005	2	Capacitor (.22 Mfd.)
C3	356-0040	1	Capacitor (10 Mfd.)
CR1,3,4,5,6	357-0004	5	Rectifier - Diode
CR2	359-0027	1	Diode - Zener (7.5 Volt)
CR7	364-0017	1	Rectifier - Gate Control
Q1	361-0003	1	Transistor 2N4871
Q2, Q3	362-0025	2	Transistor - Field Effect 2N5457
Q4	362-0008	1	Transistor - Silicon (PNP) 2N3702
R1	350-0536	1	Resistor (1000-Ohm)
R2	350-0526	1	Resistor (150-Ohm)
R3	350-0552	1	Resistor (22,000-Ohm)
R4	303-0169	1	Potentiometer (3.5 Megohm)
R5	350-0572	1	Resistor (1.0 Megohm)
R6	350-0505	1	Resistor (2.7-Ohm)
R7	350-0517	1	Resistor (27-Ohm)
R8, R9	350-0529	2	Resistor (270-Ohm)
R10	350-0540	1	Resistor (2,200-Ohm)
R11	350-0971	1	Resistor (220-Ohm)

**SPECIAL PARTS LIST
FOR KB AND KR SERIES PENNSYLVANIA APPROVED
GENERATING MODELS**

Refer first to this list for Pennsylvania Approved Models. Parts not in this list refer to the main parts list (Key 1 for KB and Key 2 for KR). When referring to the main parts list, reference to Spec letter or voltage also applies to these models.

These models are recognized by the numbers 30 (Gasoline Fuel), 31 (Gaseous Fuel), or 131 (Liquid Petroleum Fuel) appearing in the model. These numbers may appear just before or after the diagonal line (/). The number appearing after the diagonal line signifies a standard Pennsylvania Approved model. (Example: 65.0KB-15R/131Q)

REPLACEMENT ENGINE

<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
	100-0869	1	Key 1, International Harvester Co. Model UV-401
	100-0870	1	Key 2, International Harvester Co. Model UV-549
	100-0854	1	Key 1, International Harvester Co. Model UV-401-LPG Fuel Only
	100-0855	1	Key 2, International Harvester Co. Model UV-549-LPG Fuel Only

NOTE: See Standard parts list for general description.

CONTROL GROUP (ENGINE INSTRUMENTS PORTION)

<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
3	SWITCH, SELECTOR		
	308-0138	1	Spec N through P
	308-0327	1	Begin Spec Q
18	300-0730	1	Monitor, Engine Control (See Separate Group for Components)

CONTROL GROUP (AC OUTPUT PORTION)

<u>REF. NO.</u>	<u>PART NO.</u>	<u>QTY. USED</u>	<u>PART DESCRIPTION</u>
	320-0307	1	Lock, Circuit Breaker Handle