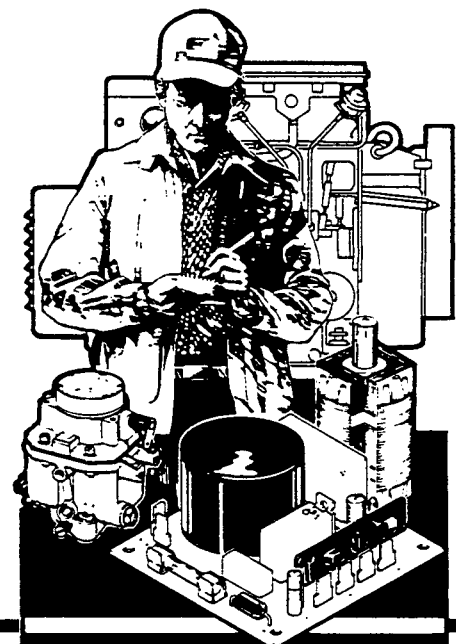


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Onan

Parts Manual

D V E
GenSet



Onan Service Parts

982-0225
9-86 (Spec A - B)
Replaces 12-84 (Spec A)
Printed in U.S.A.

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Introduction

This Parts Manual applies to the Standard 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 IDENTIFICATION	RATING	RPM RATING	BATTERY VOLTAGE
120.0 DVE - */ # @	120,000 WATTS	1500 RPM	24 VDC
150.0 DVE - */ # @	150,000 WATTS	1800 RPM	24 VDC

Electrical Data Table

*VOLTAGE CODE	VOLTS	HERTZ	WIRE	PHASE	NOTES
6D	240/480	60	4	3	
9X	347/600	60	4	3	
15	120/240	60	12	1	+
15	120/208	60	12	3	+
	120/240				
	127/220				
	139/240				
	240/416				
	254/440				
	227/480				
32R	110/190	60	12	3	+
	115/200				
	120/208				
	127/220				
	220/380				
	230/400				
	240/416				
	254/440				
515	110/220	50	12	1	+
	115/230				
515	110/190	50	12	3	+
	110/220				
	115/200				
	115/230				
	120/208				
	127/220				
	220/380				
	230/400				
	240/416				
	254/480				

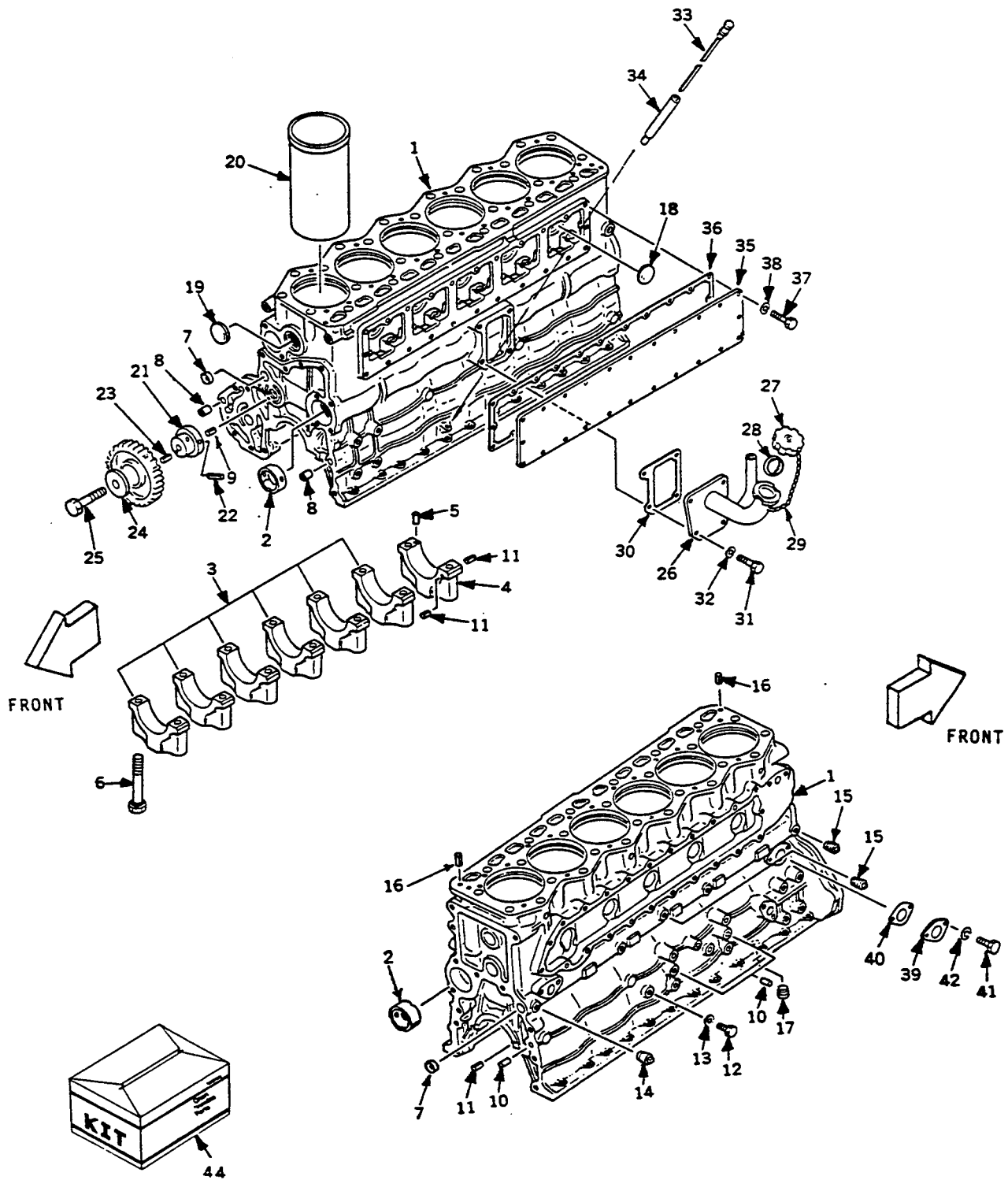
* - Voltage Codes follow Model Letter designations.

- Specification Number: Number 1 is Standard, all others indicate variations.

@ - Specification Letter: Letter advances (A to B, B to C, etc) with major manufacturing changes.

+ - These Generators are Reconnectible, Refer To Operator's Manual for wiring data.

Cylinder Block

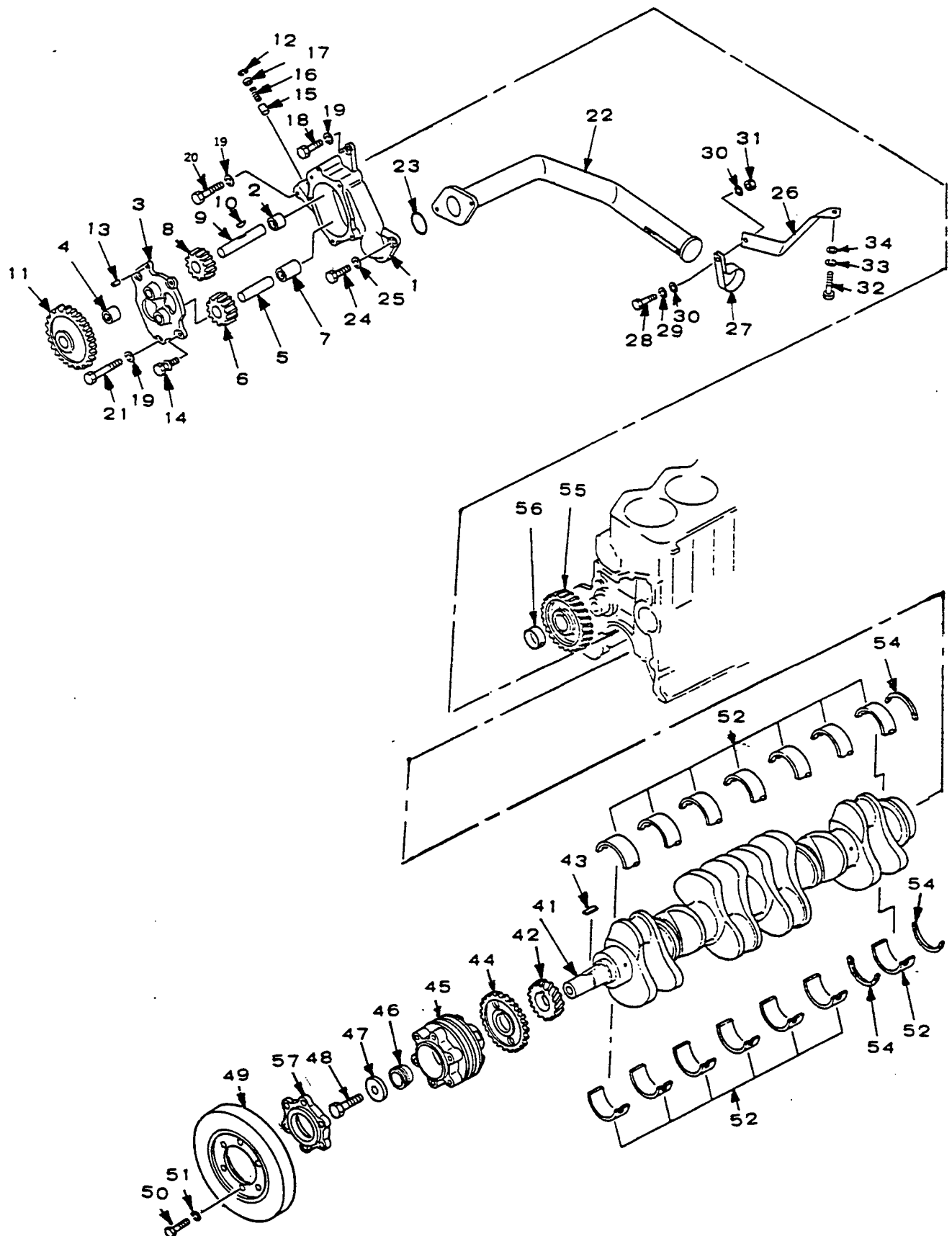


Cylinder Block

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0558	1	Block, Cylinder (Includes Parts Marked *)	23	186-0126	1	Pin, Roll
2	186-0237	4	*Bearing, Sleeve - Camshaft	24	186-0243	1	Plate, Thrust
3	186-0559	6	*Cap, Bearing - Main	25	720-1083	1	Bolt, Hex Head (M12 x 1.75 x 75mm)
4	186-0560	1	*Cap, Bearing - Main (Rear)	26	186-0384	1	Housing, Fill - Oil (Includes Cap, Gasket, and Chain)
5	186-0122	1	*Pin, Dowel	27	186-0259	1	Cap, Fill - Oil (Includes Gasket)
6	186-0266	14	*Bolt, Special - Bearing Cap	28	186-0260	1	Gasket
7	186-0190	2	*Plug, Expansion	29	186-0261	1	Chain
8	186-0238	2	*Pin, Dowel	30	186-0263	1	Gasket
9	186-0126	1	*Pin, Roll	31	186-0501	4	Bolt, Hex Head
10	186-0123	4	*Pin, Dowel	32	186-0096	4	Washer, Lock - Spring
11	186-0125	6	*Pin, Roll	33	186-0252	1	Indicator, level - Oil
12	186-0150	1	*Plug, Threaded	34	186-0253	1	Guide, Indicator - Oil
13	186-0146	1	*Gasket	35	186-0556	1	Cover
14	186-0152	2	*Plug, Pipe	36	186-0557	1	Gasket
15	186-0151	3	*Plug, Pipe	37	186-0499	24	Bolt, Hex Head
16	186-0127	2	*Pin, Roll	38	186-0095	24	Washer, Lock - Spring
17	186-0515	1	*Plug, Pipe	39	186-0580	1	Plate
18	186-0158	7	*Plug, Expansion	40	186-0467	1	Gasket
19	186-0516	1	*Plug, Expansion	41	186-0499	2	Bolt, Hex Head
20			*Liner, Cylinder	42	186-0095	2	Washer, Lock - Spring
	186-0455	6	+ Marked "A" On Lower Edge	44	186-0446	1	Gasket Kit, Block - Cylinder
	186-0456	6	+ Marked "B" On Lower Edge				
21	186-0242	1	Shaft				
22	186-0124	1	Pin, Roll				

* Parts included in 186-0558 Cylinder Block Assembly
+ Order the cylinder liner according to the identification mark on the cylinder block. Block marked "A" use liner marked "A", etc.

Crankshaft, And Oil Pump

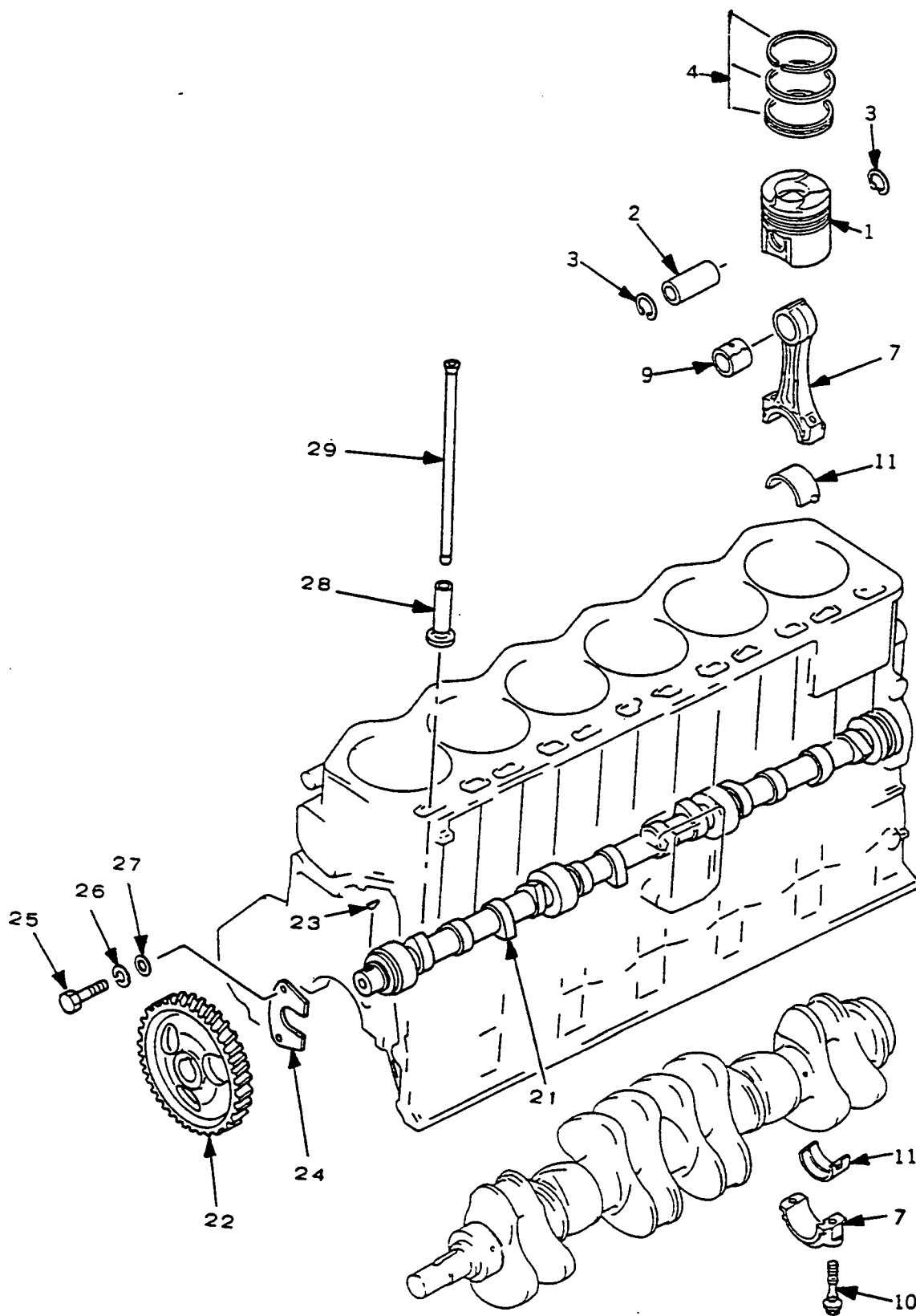


Crankshaft, And Oil Pump

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0321	1	Pump, Oil (Includes Parts Marked *)	30	186-0102	2	Washer, Flat
2	186-0322	1	*Bushing, Sleeve	31	186-0089	1	Nut, Hex
3	186-0532	1	*Cover (Includes Bushing And Shaft)	32	720-1054	1	Bolt, Hex Head (M10 x 1.5 x 25mm)
4	186-0323	1	*Bushing, Sleeve	33	186-0096	1	Washer, Lock - Spring
5	186-0533	1	*Shaft	34	186-0103	1	Washer, Flat
6	186-0324	1	*Gear (Includes Bushing)	41	186-0457	1	Crankshaft (Includes Gear And Key)
7	186-0444	1	*Bushing, Sleeve	42	186-0279	1	Gear
8	186-0325	1	*Gear	43	186-0281	1	Key
9	186-0326	1	*Shaft	44	186-0280	1	Gear
10	186-0121	1	*Key	45	186-0530	1	Pulley
11	186-0327	1	*Gear	46	186-0283	1	Collar, Tapered
12	186-0130	1	*Ring, Snap	47	186-0284	1	Plate
13	186-0328	1	*Pin	48	186-0182	1	Bolt, Hex Head - Self-Locking
14	186-0329	3	*Bolt, Shoulder	49	186-0461	1	Damper, Vibration
15	186-0330	1	*Valve	50	186-0503	6	Bolt, Hex Head (M12 x 1.75 x 25mm)
16	186-0331	1	*Spring	51	186-0097	6	Washer, Lock - Spring
17	186-0332	1	*Retainer	52			Bearing Set, Main (Includes Upper and Lower Half Brgs)
18	720-1038	1	Bolt, Hex Head (M8 x 1.25 x 30mm)		186-0267	7	Standard
19	186-0095	3	Washer, Lock - Spring		186-0276	7	0.25mm Undersize
20	720-1041	1	Bolt, Hex Head (M8 x 1.25 x 45mm)		186-0272	7	0.50mm Undersize
21	720-0143	1	Bolt, Hex Head (M8 x 1.25 x 55mm)		186-0270	7	0.75mm Undersize
22	186-0316	1	Pipe, Pickup - Oil		186-0268	7	1.00mm Undersize
23	186-0143	1	Seal, O-Ring	54			Washer Set, Thrust (Includes Three Half Washers)
24	720-1037	2	Bolt, Hex Head (M8 x 1.25 x 25mm)		186-0264	1	Standard
25	186-0095	2	Washer, Lock - Spring		186-0277	1	0.25mm Oversize
26	186-0317	1	Bracket		186-0273	1	0.50mm Oversize
27	186-0318	1	Clamp		186-0271	1	0.75mm Oversize
28	720-1037	1	Bolt, Hex Head (M8 x 1.25 x 25mm)		186-0269	1	1.00mm Oversize
29	186-0095	1	Washer, Lock - Spring	55	186-0286	1	Gear
				56	186-0285	1	Bushing, Sleeve
				57	186-0561	1	Spacer

* Parts included in 186-0321 Cylinder Block Assembly.

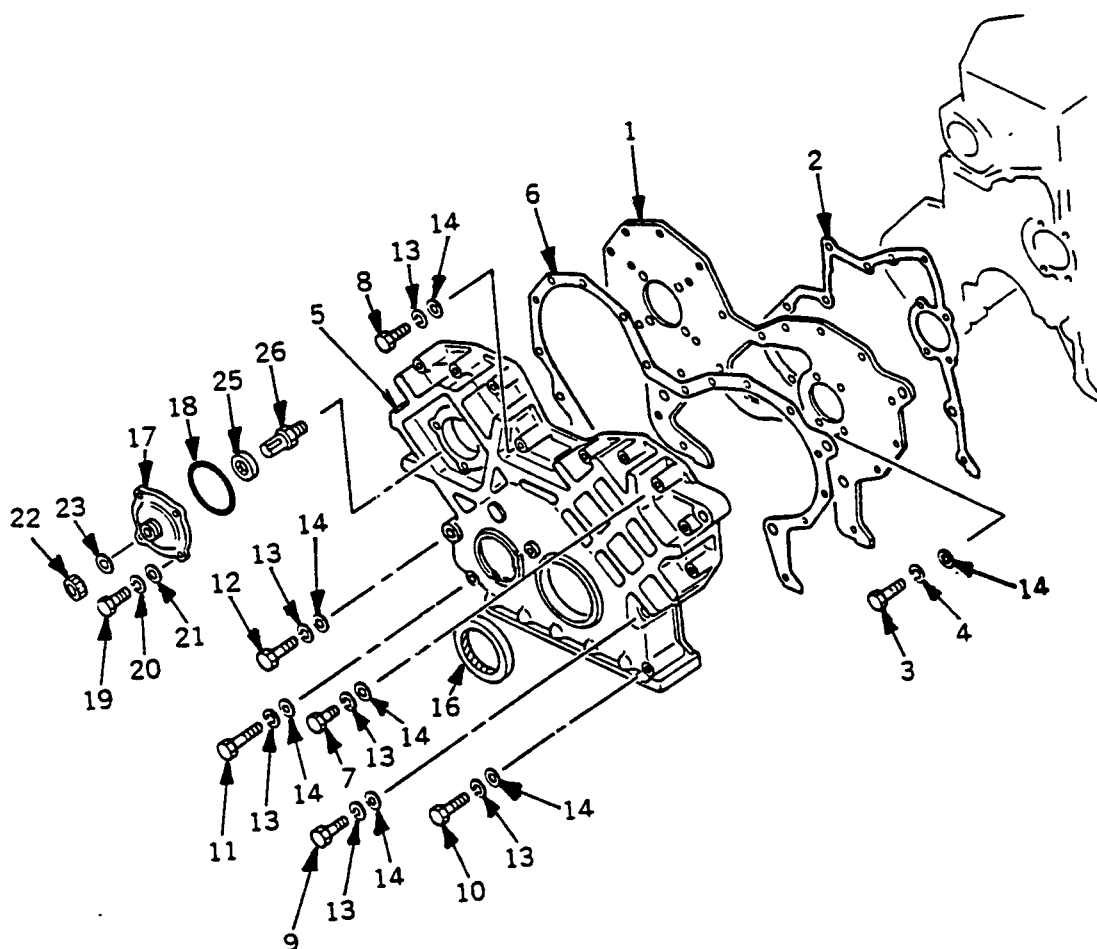
Camshaft, Piston, And Connecting Rod



Camshaft, Piston, And Connecting Rod

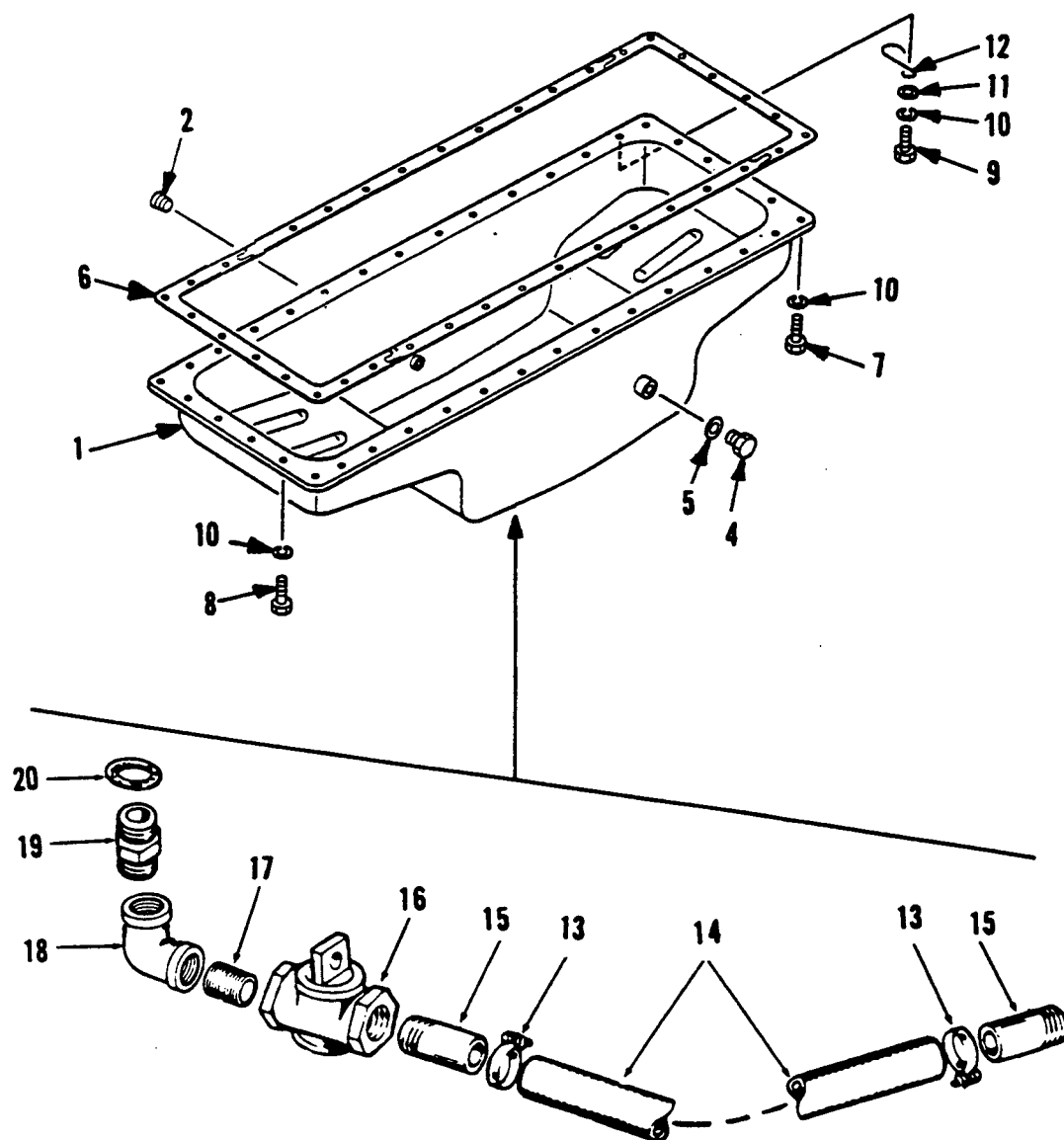
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0463	6	Piston (Includes Pin and Snap Rings)		186-0390	1	Used on Engine Serial Nos. Beginning with 51262
2	186-0564	1	Pin	22	186-0295	1	Gear
3	186-0131	2	Ring, Snap	23	186-0120	1	Key
4	186-0563	6	Ring Set, Piston	24	186-0296	1	Plate, Thrust
7	186-0468	6	Rod, Connecting (Includes Cap)	25	720-1037	2	Bolt, Hex Head (M8 x 1.25 x 25mm)
9	186-0565	1	Bushing, Sleeve	26	186-0095	2	Washer, Lock - Spring
10	186-0290	2	Bolt, Special - Connecting Rod	27	186-0101	2	Washer, Flat
11			Bearing Set, Rod - Connecting	28			Tappet
	186-0459	6	Standard		186-0685	12	Used on Engine Serial Nos. 50020 thru 51092
	186-0464	6	0.25mm Undersize				
	186-0568	6	0.50mm Undersize		186-0302	12	Used on Engine Serial Nos. Beginning with 51262
	186-0567	6	0.75mm Undersize				
	186-0566	6	1.00mm Undersize				
21			Camshaft (Includes Gear And Key)	29	186-0303	12	Rod, Push
	186-0684	1	Used on Engine Serial Nos. 50020 thru 51092				

Gear Cover



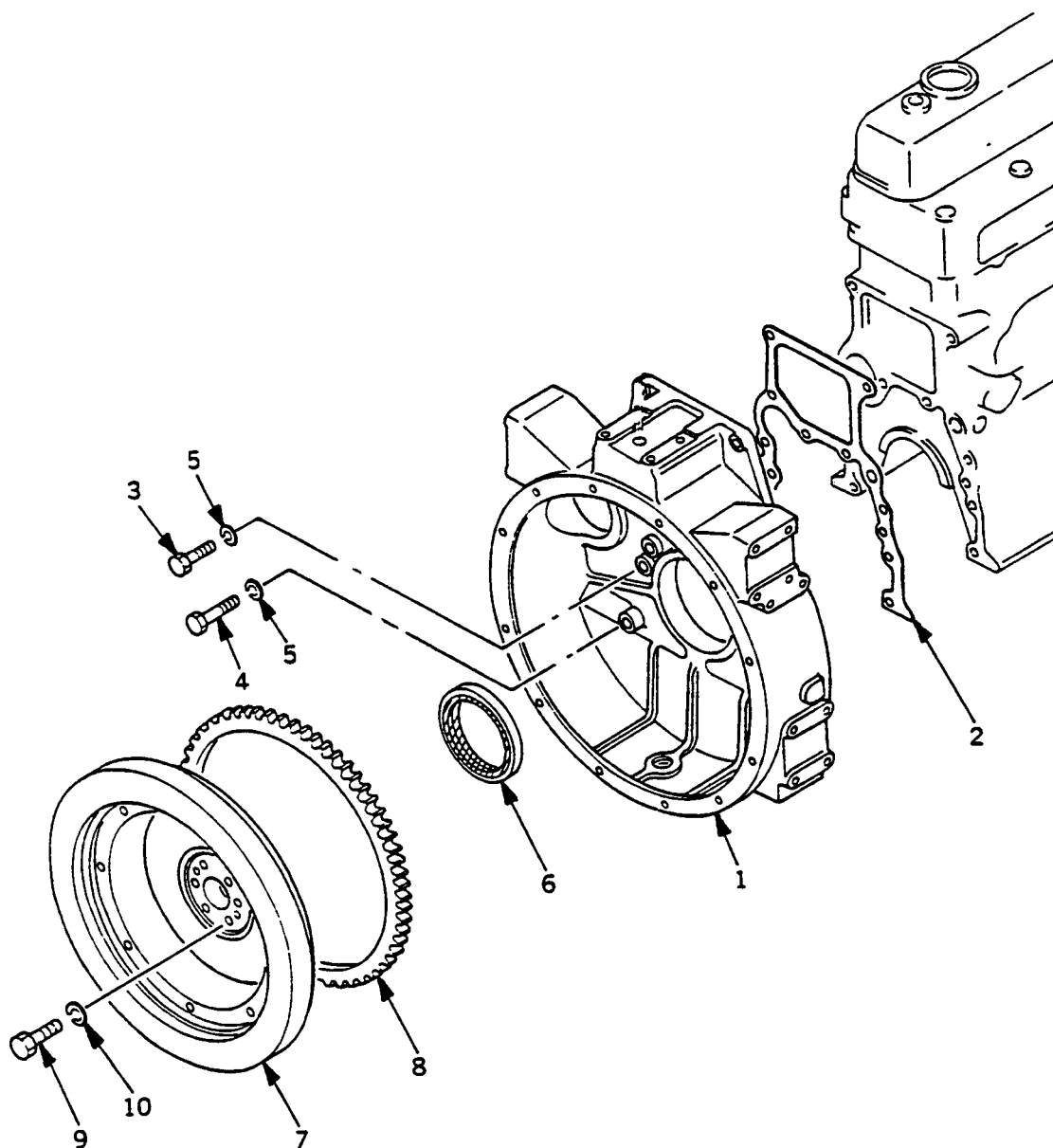
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0245	1	Plate, Front	12	186-0081	1	Bolt, Hex Head
2	186-0249	1	Gasket	13	186-0095	18	Washer, Lock - Spring
3	186-0079	4	Bolt, Hex Head	14	186-0101	22	Washer, Flat
4	186-0095	4	Washer, Lock - Spring	16	186-0246	1	Seal, Oil - Front
5	186-0244	1	Gearcase	17	186-0247	1	Cover, Bearing
6	186-0248	1	Gasket, Gearcase	18	186-0136	1	Seal, O-Ring
7	720-1044	10	Bolt, Hex Head (M8 x 1.25 x 60mm)	19	720-1037	4	Bolt, Hex Head (M8 x 1.25 x 25mm)
8	720-1046	4	Bolt, Hex Head (M8 x 1.25 x 70mm)	20	186-0095	4	Washer, Lock - Spring
9	720-1048	1	Bolt, Hex Head (M8 x 1.25 x 80mm)	21	186-0101	4	Washer, Flat
10	720-1062	1	Bolt, Hex Head (M10 x 1.5 x 65mm)	22	186-0375	1	Cap, Drive - Tachometer
11	720-1062	1	Bolt, Hex Head (M10 x 1.5 x 65mm)	23	186-0199	1	Gasket
				25	186-0405	1	Seal, Oil
				26	186-0374	1	Shaft

Oil Pan



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0398	1	Pan, Oil	11	186-0102	2	Washer, Flat
2	186-0117	1	Plug	12	186-0192	1	Clip
4	186-0407	1	Plug	13	503-0197	2	Clamp, Hose
5	186-0148	1	Gasket	14	503-1195	1	Hose, Rubber
6	186-0254	1	Gasket, Pan - Oil	15	505-0185	2	Nipple, Pipe - Half
7	186-0079	27	Bolt, Hex Head	16	504-0011	1	Valve, Cock - Brass
8	720-1037	8	Bolt, Hex Head (M8 x 1.25 x 25mm)	17	505-0100	1	Nipple, Pipe - Close
9	720-1038	3	Bolt, Hex Head (M8 x 1.25 x 30mm)	18	505-0040	1	Elbow, Pipe - 90°
10	186-0095	38	Washer, Lock - Spring	19	502-0936	1	Adapter, Pipe - Hex
				20	186-0140	1	Gasket, O-Ring

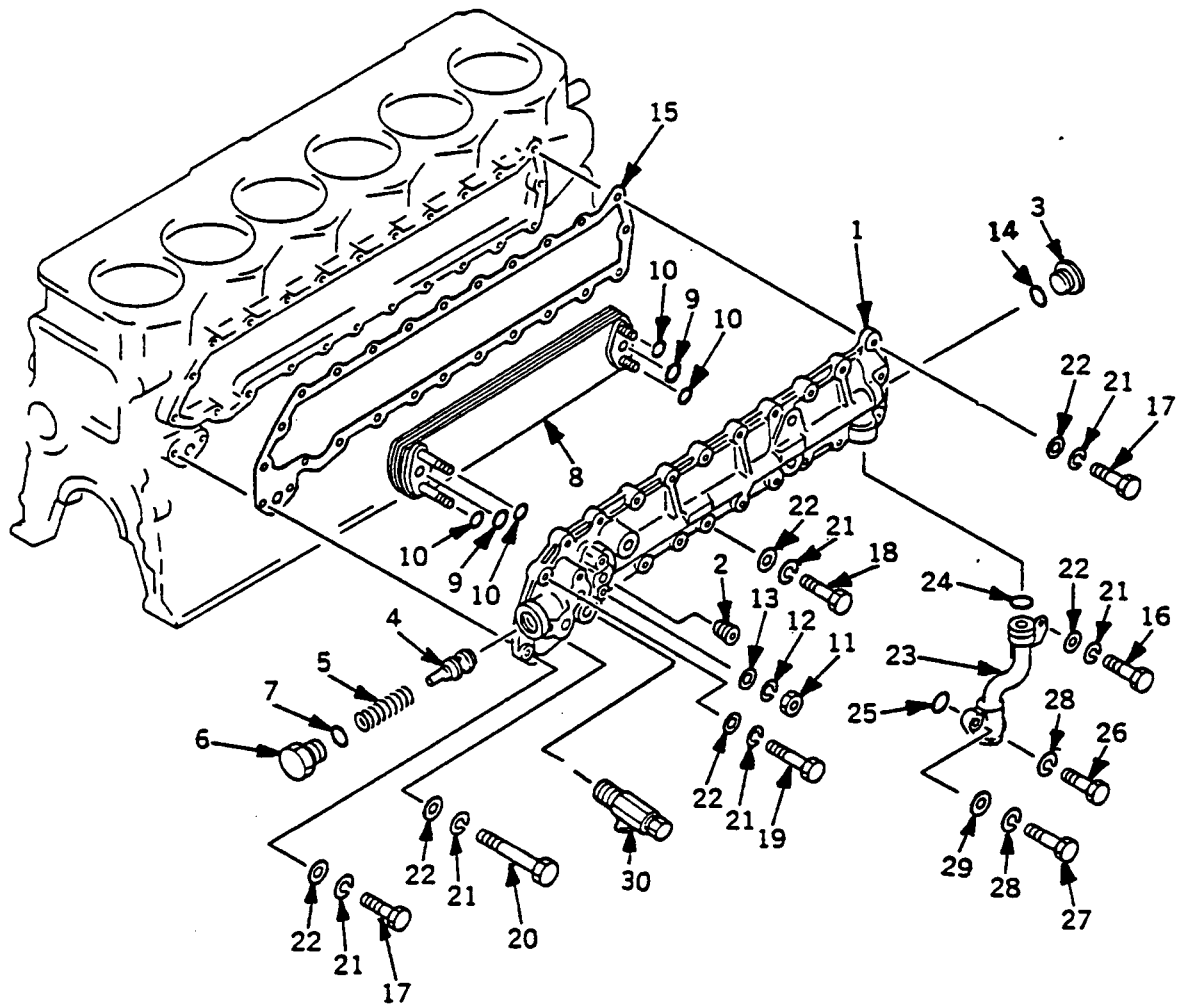
Flywheel, And Flywheel Housing



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0555	1	Housing, Flywheel
2	186-0251	1	Gasket
3	720-1076	9	Bolt, Hex Head (M12 x 1.25 x 35mm)
4	720-1080	2	Bolt, Hex Head (M12 x 1.75 x 60mm)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
5	186-0097	11	Washer, Lock - Spring
6	186-0440	1	Seal, Oil - Rear
7	186-0562	1	Flywheel (Includes Ring Gear)
8	186-0193	1	Gear, Ring
9	186-0086	6	Bolt, Hex Head
10	186-0181	6	Washer, Lock - Spring

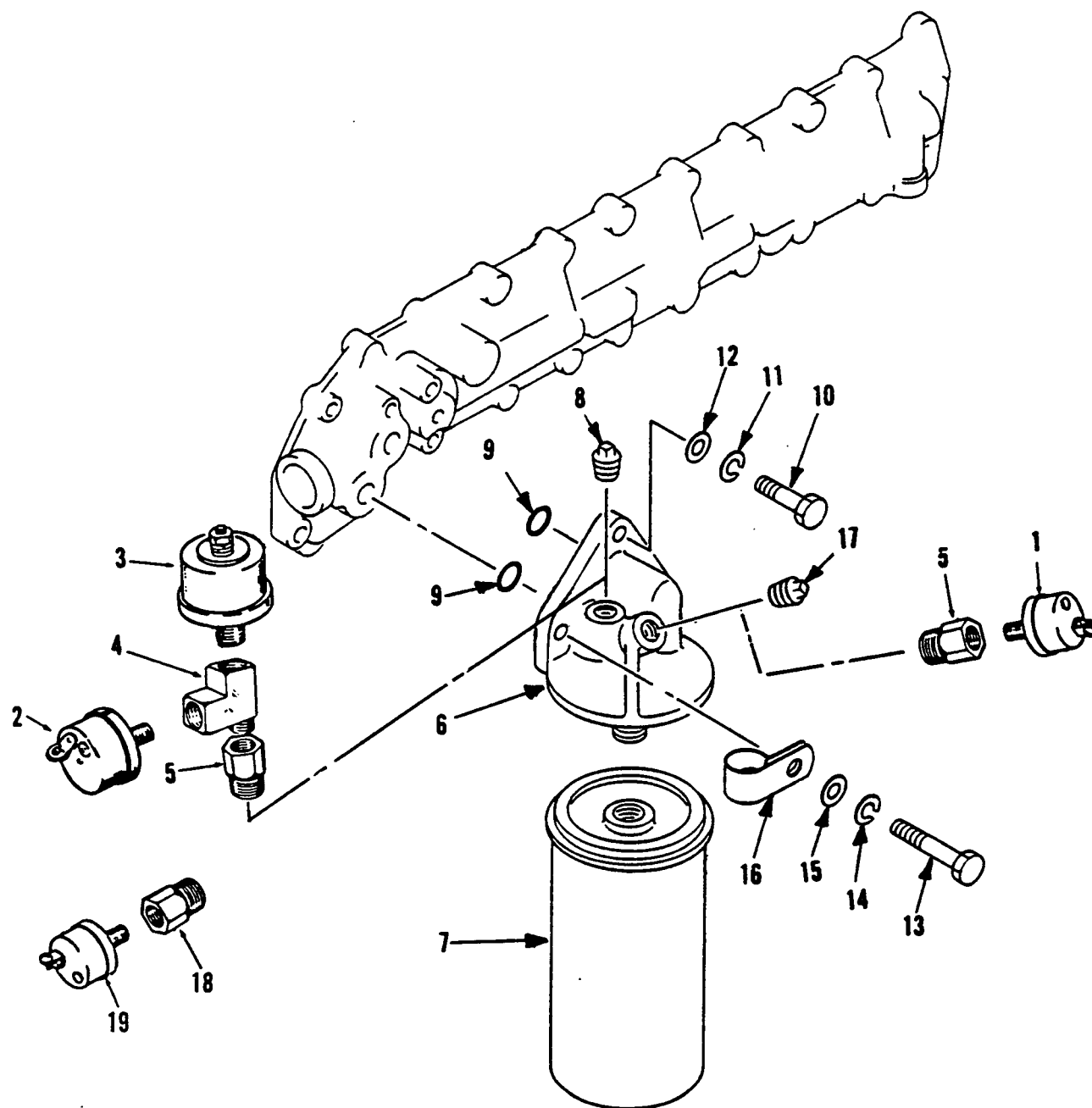
Oil Cooler



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0351	1	Cover
2	186-0117	2	Plug
3	186-0399	1	Plug
4	186-0354	1	Valve, Thermo
5	186-0353	1	Spring
6	186-0352	1	Plug
7	186-0342	1	Seal, O-Ring
8	186-0177	1	Element
9	186-0343	2	Seal, O-Ring
10	186-0189	4	Seal, O-Ring
11	186-0092	4	Nut, Hex
12	186-0099	4	Washer, Lock - Spring
13	186-0106	4	Washer, Flat
14	186-0343	1	Seal, O-Ring
15	186-0345	1	Gasket
16	720-1037	5	Bolt, Hex Head (M8 x 1.25 x 25mm)
17	720-1038	2	Bolt, Hex Head (M8 x 1.25 x 30mm)

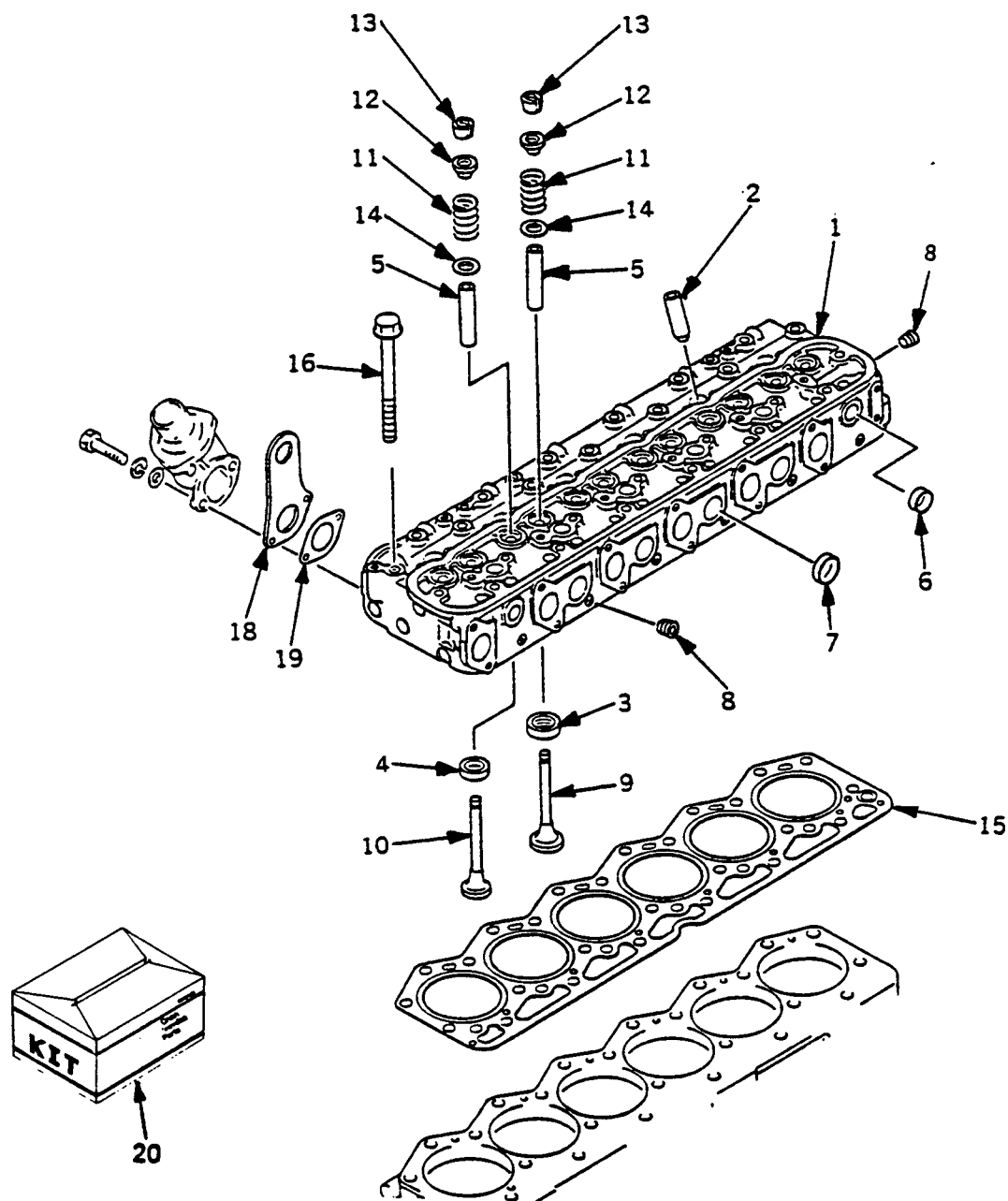
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
18	720-1039	16	Bolt, Hex Head (M8 x 1.25 x 35mm)
19	720-1045	1	Bolt, Hex Head (M8 x 1.25 x 65mm)
20	720-1043	1	Bolt, Hex Head (M8 x 1.25 x 55mm)
21	186-0095	25	Washer, Lock - Spring
22	186-0102	25	Washer, Flat
23	186-0349	1	Pipe, Oil
24	186-0429	1	Seal, O-Ring
25	186-0142	1	Seal, O-Ring
26	720-1038	1	Bolt, Hex Head (M8 x 1.25 x 30mm)
27	720-1043	1	Bolt, Hex Head (M8 x 1.25 x 55mm)
28	186-0095	2	Washer, Lock - Spring
29	186-0102	1	Washer, Flat
30	186-0401	1	Valve, Drain

Oil Filter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	309-0272	1	Switch, Pressure - Lo Oil (S5)	11	186-0096	2	Washer, Lock - Spring
2	309-0169	1	Switch, Pressure - Lo Oil (S1)	12	186-0103	2	Washer, Flat
3	193-0244	1	Sender, Pressure - Oil (E1)	13	186-0080	1	Bolt, Hex Head
4	502-0058	1	Tee, Pipe - Brass	14	186-0095	1	Washer, Lock - Spring
5	502-0917	2	Adapter, Pipe - Hex	15	186-0102	1	Washer, Flat
6	186-0314	1	Adapter, Filter	16	186-0403	1	Clamp, Loop
7	186-0315	1	Filter, Oil	17	186-0151	1	Plug, Pipe
8	186-0154	2	Plug, Pipe	18	505-0395	1	Bushing, Reducer
9	186-0142	2	Seal, O-Ring	19	193-0353	1	Sender, Temperature - Oil
10	720-1056	2	Bolt, Hex Head (M10 x 1.5 x 35mm)				

Cylinder Head

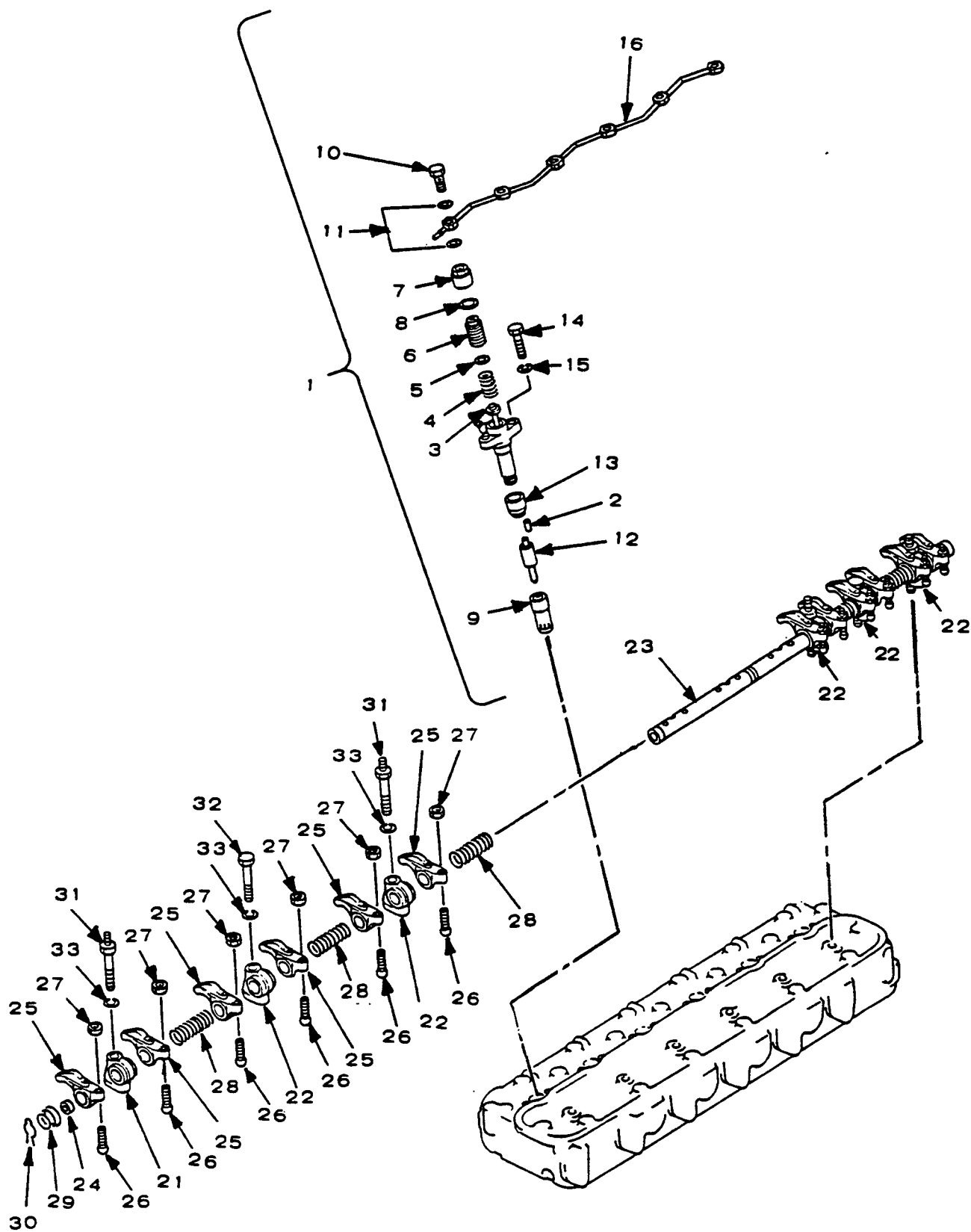


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0552	1	Head, Cylinder With Valves (Includes Parts Marked *)
	186-0553	1	Less Valves (Includes Parts Marked +)
2	186-0204	6	++Sleeve
3	186-0484	6	++Seat, Valve - Intake (Std)
4	186-0554	6	++Seat, Valve - Exhaust (Std)
5	186-0442	12	++Guide, Valve
6	186-0157	13	++Plug, Expansion
7	186-0158	4	++Plug, Expansion
8	186-0156	7	++Plug, Expansion

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
9	186-0304	6	*Valve, Poppet - Intake
10	186-0305	6	*Valve, Poppet - Exhaust
11	186-0306	12	*Spring, Valve
12	186-0307	12	*Guide, Valve
13	186-0308	24	*Collet, Lock - Valve
14	186-0297	12	*Seat, Spring - Valve
15	186-0447	1	Gasket, Head - Cylinder
16	186-0226	26	Bolt, Hex Head
18	186-0207	1	Hanger, Front
19	186-0206	1	Gasket
20	186-0445	1	Gasket Kit, Head - Cylinder

* Parts included in 186-0381 Cylinder Head Assembly.
+ Parts included in 186-0382 Cylinder Head Assembly.

Rocker Arm, And Nozzle Holder

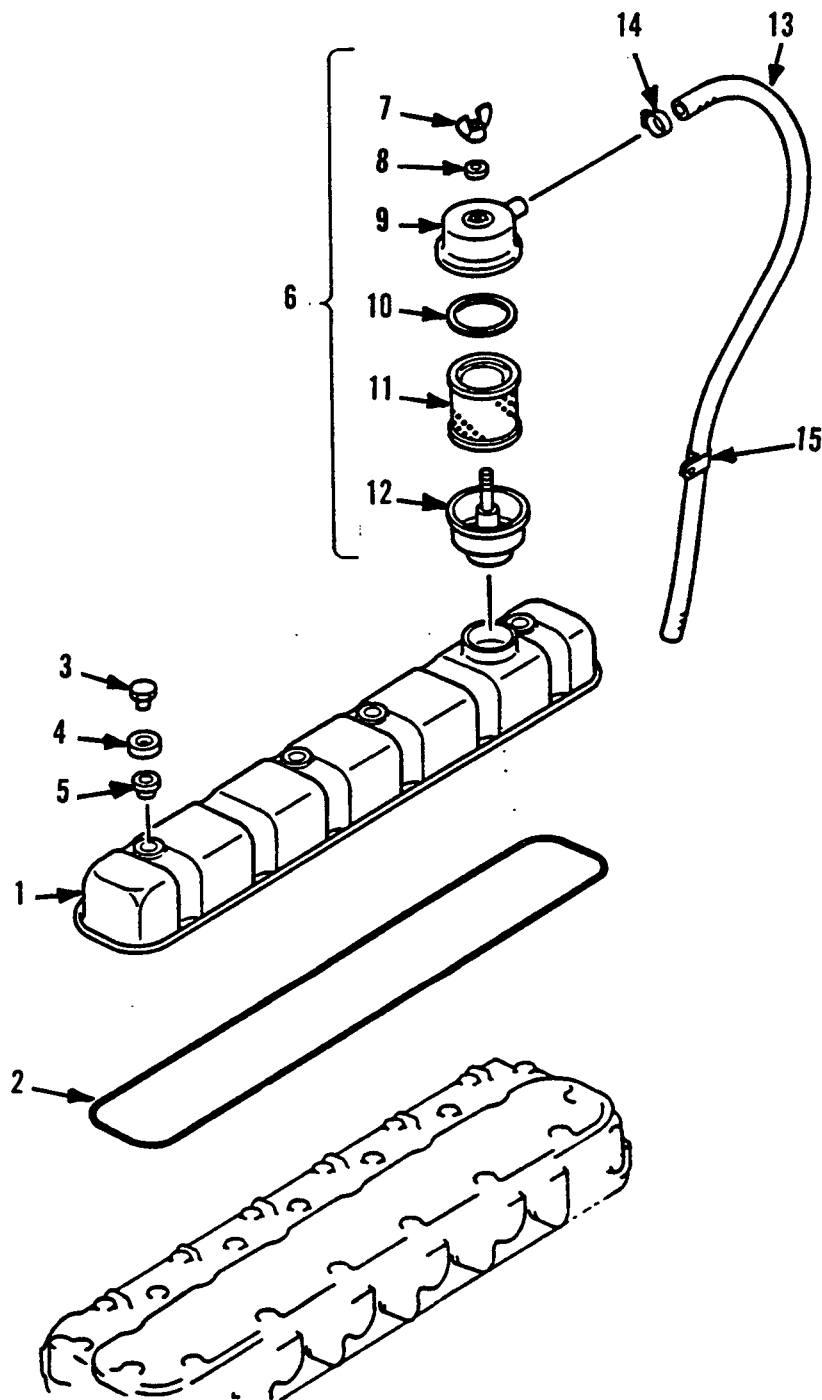


Rocker Arm, And Nozzle Holder

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0453	6	Holder, Nozzle (Includes Parts Marked *)	16	186-0366	1	Line, Fuel - Return
2	186-0003	2	*Pin	21	186-0310	1	Bracket, Arm - Rocker
3	186-0005	1	*Rod, Push	22	186-0311	5	Bracket, Arm - Rocker
4	186-0004	1	*Spring	23	186-0569	1	Shaft, Arm - Rocker (Includes Plug)
5	186-0001	1	*Washer	24	186-0596	1	Plug
6	186-0006	1	*Screw, Adjusting	25	186-0312	12	Arm, Rocker
7	186-0007	1	*Nut, Lock	26	186-0313	12	Screw, Adjusting
8	186-0002	1	*Gasket	27	186-0089	12	Nut, Hex - Self-Locking
9	186-0008	1	*Retainer, Nozzle	28	186-0299	5	Spring
10	186-0187	1	*Bolt, Hex Head	29	186-0300	2	Spring
11	186-0144	2	*Gasket	30	186-0301	2	Clip
12	186-0454	1	*Nozzle	31	186-0298	4	Stud
13	186-0208	1	Packing	32	720-1084	2	Bolt, Hex Head (M12 x 1.75 x 80mm)
14	720-1043	12	Bolt, Hex Head (M8 x 1.25 x 55mm)	33	186-0097	6	Washer, Lock - Spring
15	186-0095	12	Washer, Lock - Spring				

* Parts included in 186-0227 Nozzle Holder Assembly.

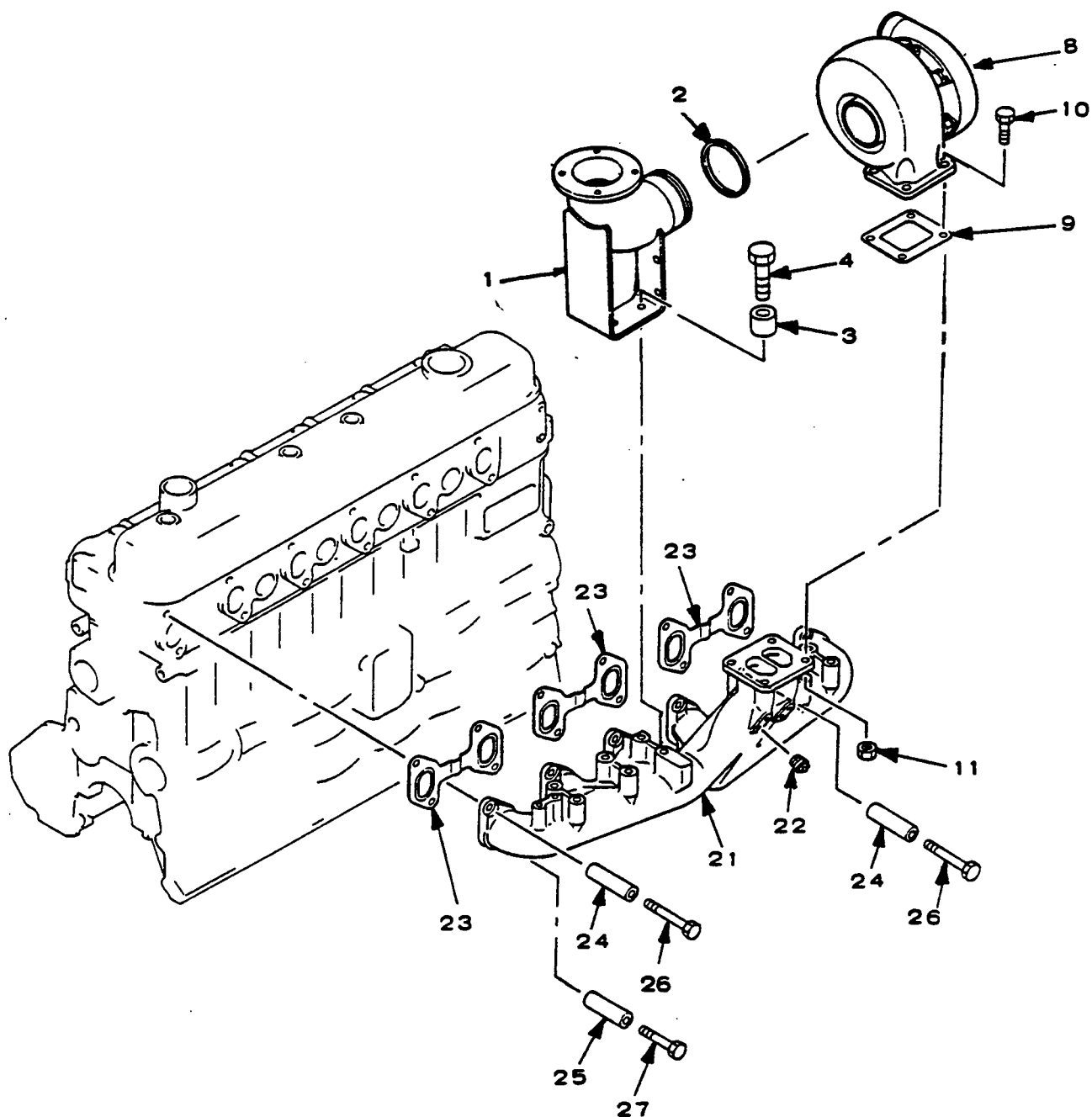
Cylinder Head Cover



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0221	1	Cover, Head - Cylinder	8	186-0519	1	*Washer, Flat
2	186-0222	1	Seal, O-Ring - Cylinder Cover	9	186-0549	1	*Cover, Breather
3	186-0218	4	Nut, Hex - Crown	10	186-0597	1	*Gasket
4	186-0219	4	Washer, Flat	11	186-0550	1	*Element, Breather
5	186-0220	4	Seal	12	186-0548	1	*Body, Breather
6	186-0547	1	Breather Assembly (Includes Parts Marked *)	13	186-0223	1	Hose, Rubber
7	186-0551	1	*Nut, Wing	14	186-0167	1	Clamp, Hose
				15	186-0403	1	Clip

* Parts included in 186-0547 Breather Assembly.

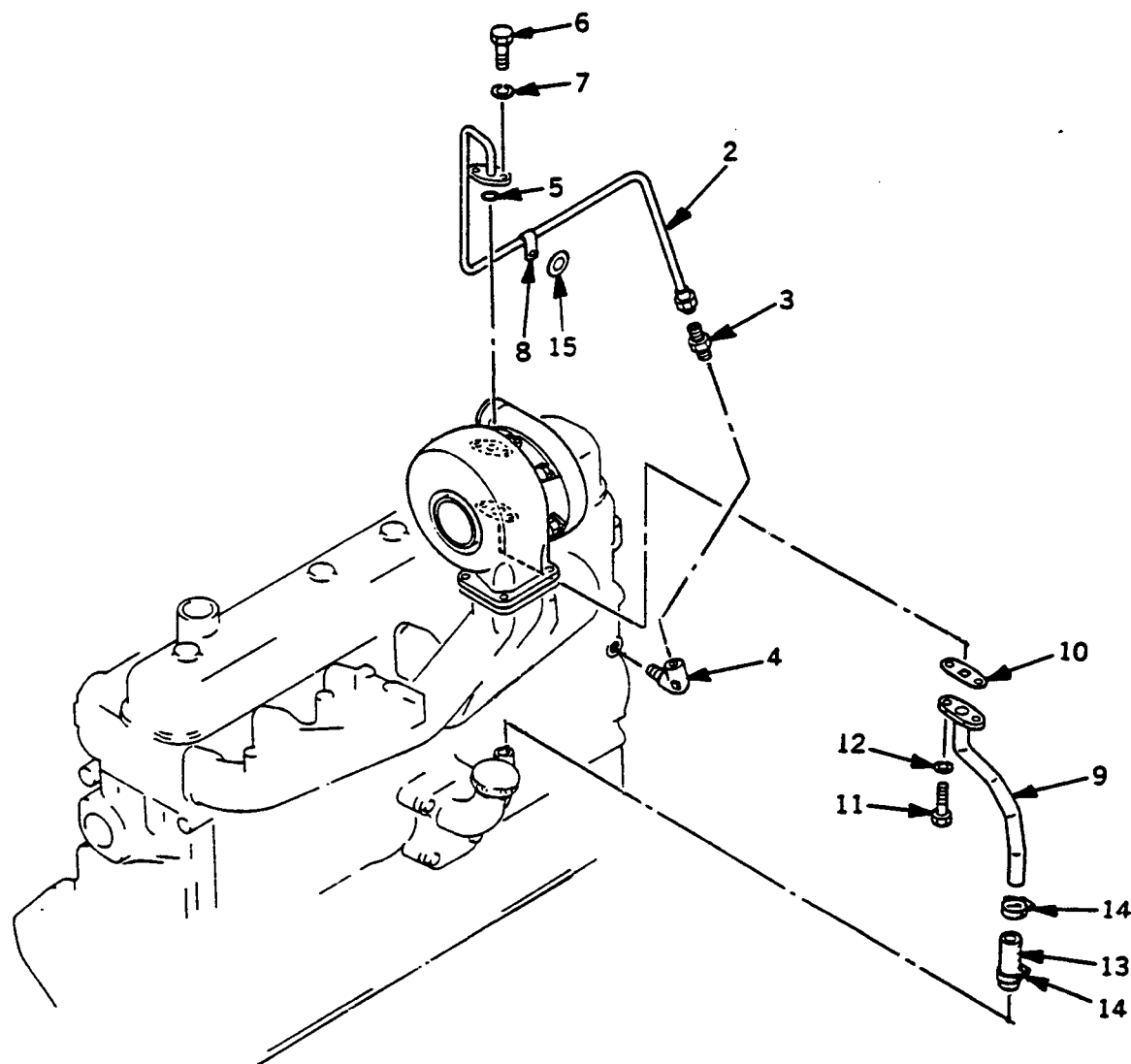
Exhaust Manifold, And Turbocharger



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0380	1	Elbow, Exhaust
2	186-0186	1	Ring, Seal
3	186-0406	4	Spacer
4	720-1057	4	Bolt, Hex Head (M10 x 1.5 x 40mm)
8	186-0471	1	Turbocharger
9	186-0201	1	Gasket
10	186-0114	4	Bolt, Hex Head
11	186-0200	4	Nut, Hex

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
21	186-0379	1	Manifold, Exhaust
22	186-0153	2	Plug
23	186-0213	3	Gasket
24	186-0212	11	Spacer
25	186-0185	1	Spacer
26	186-0082	11	Bolt, Hex Head
27	720-1061	1	Bolt, Hex Head (M10 x 1.5 x 60mm)

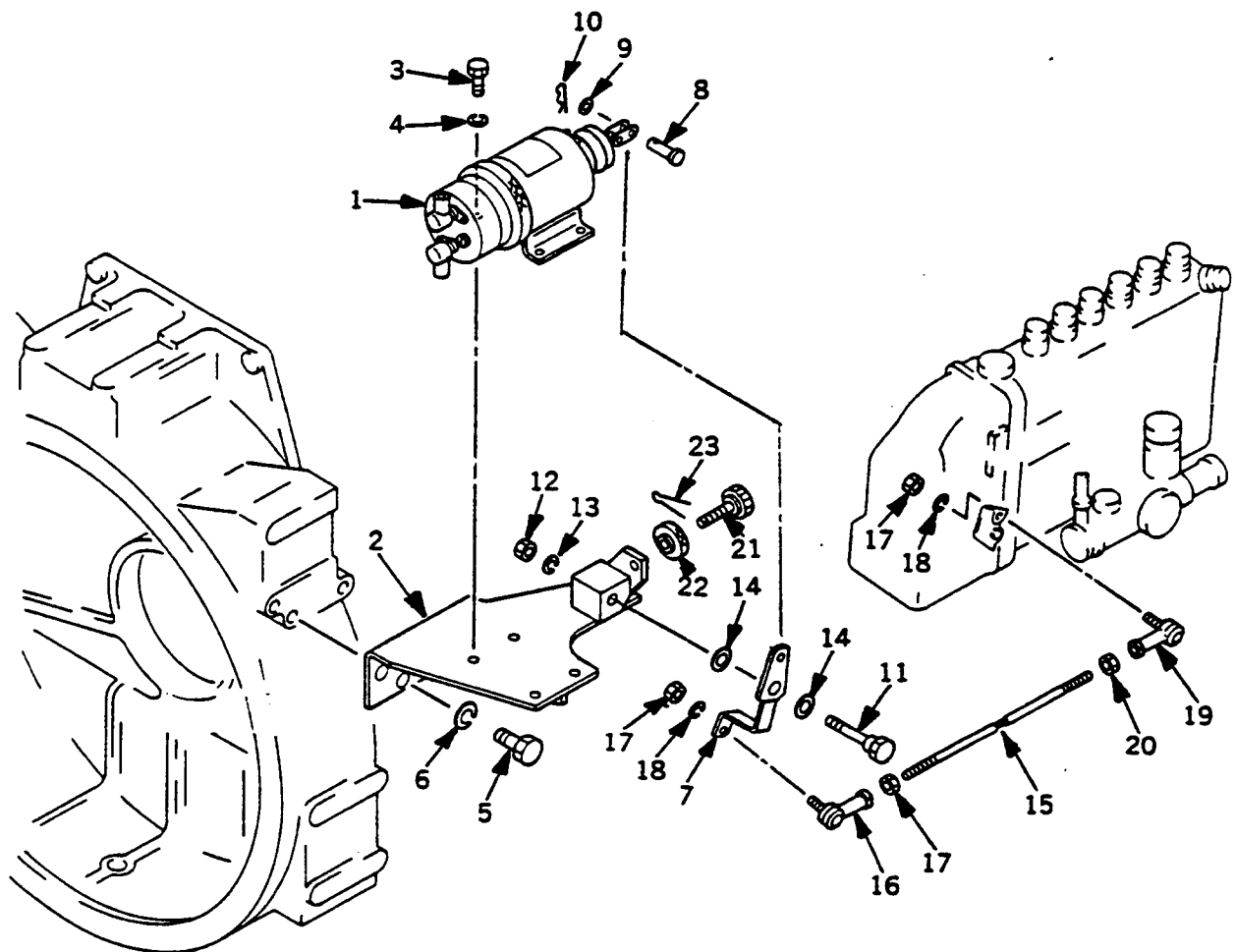
Turbocharger Lubricating System



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
2	186-0392	1	Pipe, Inlet
3	186-0162	1	Nipple, Pipe - Hex
4	186-0393	1	Elbow, Pipe
5	186-0141	1	Seal, O-Ring
6	186-0079	2	Bolt, Hex Head
7	186-0095	2	Washer, Lock - Spring
8	186-0188	1	Clip
9	186-0391	1	Pipe, Outlet

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
10	186-0202	1	Gasket
11	720-1056	2	Bolt, Hex Head (M10 x 1.5 x 25mm)
12	186-0486	2	Spacer
13	186-0165	1	Hose, Rubber
14	186-0168	2	Clamp, Hose
15	186-0487	1	Washer, Flat

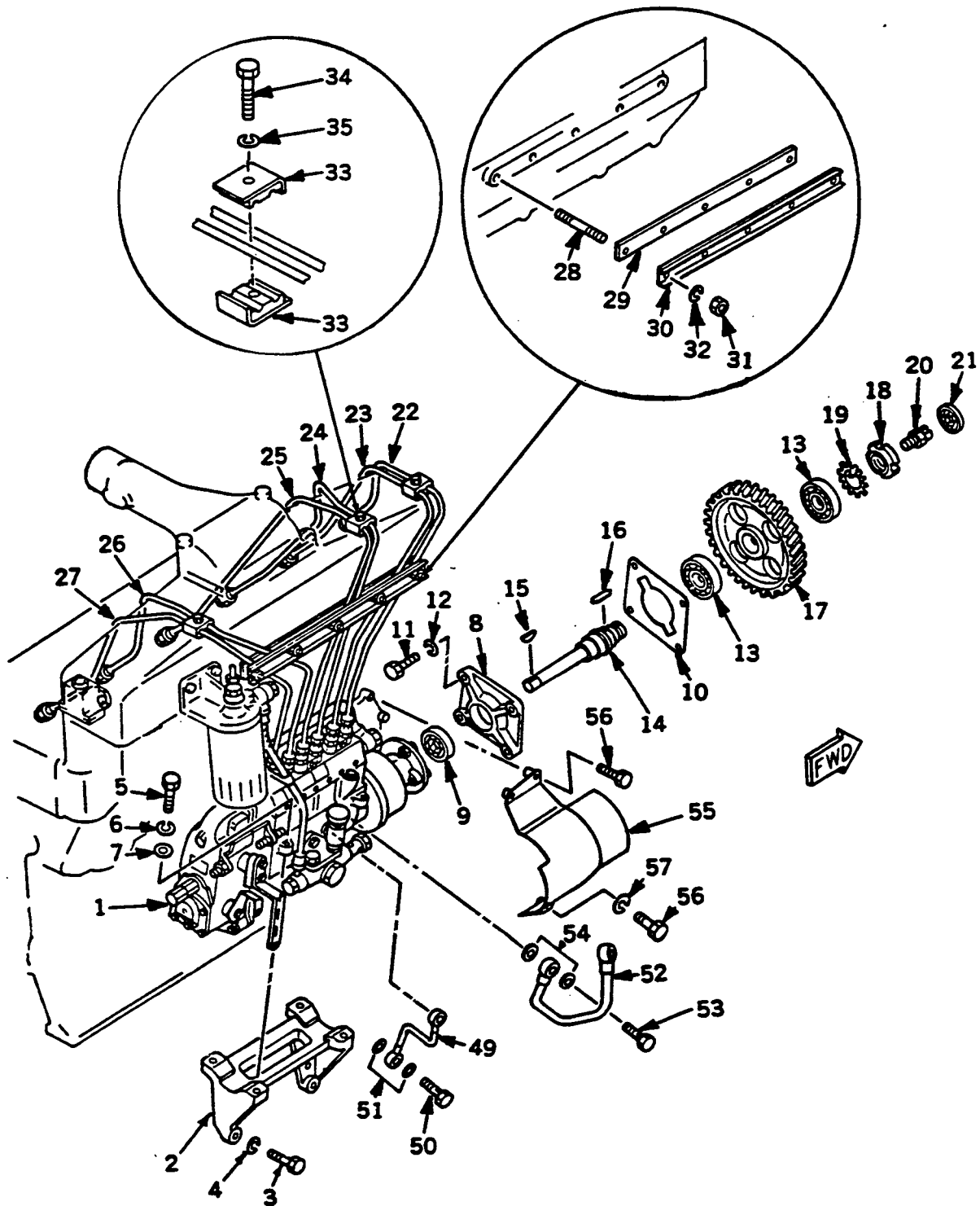
Fuel Control Solenoid



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0179	1	Solenoid, Electric
2	186-0423	1	Bracket
3	186-0489	4	Bolt, Hex Head
4	186-0094	4	Washer, Lock - Spring
5	720-1073	2	Bolt, Hex Head (M12 x 1.75 x 25mm)
6	186-0097	2	Washer, Lock - Spring
7	186-0418	1	Lever
8	186-0133	1	Pin
9	186-0105	1	Washer, Flat
10	186-0129	1	Pin, Snap
11	186-0419	1	Bolt, Shoulder - Hex Head

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
12	186-0089	1	Nut, Self-Locking - Hex
13	186-0095	1	Washer, Lock - Spring
14	186-0104	2	Washer, Flat
15	186-0422	1	Rod
16	186-0416	1	Joint, Ball
17	186-0088	3	Nut, Hex
18	186-0094	2	Washer, Lock - Spring
19	186-0417	1	Joint, Ball (LH Threads)
20	186-0087	1	Nut, Hex (LH Threads)
21	186-0420	1	Knob (Thumbscrew)
22	186-0421	1	Nut, Knurled
23	186-0510	1	Pin, Cotter

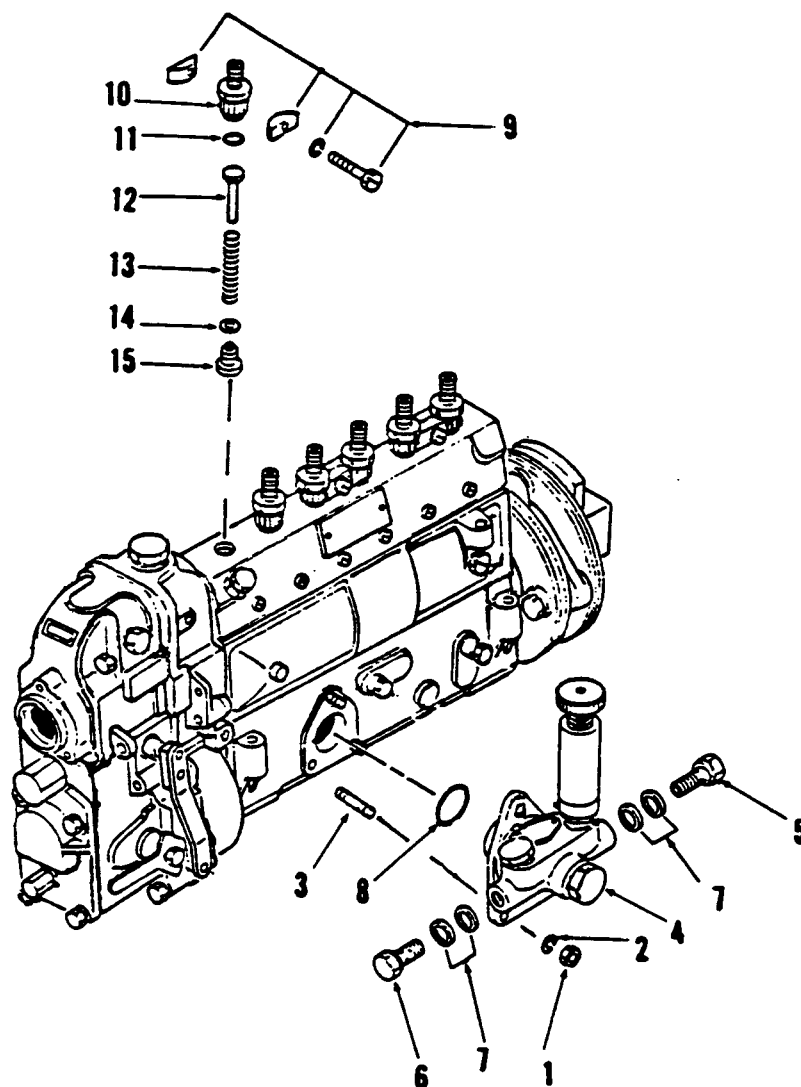
Fuel Injection Pump



Fuel Injection Pump

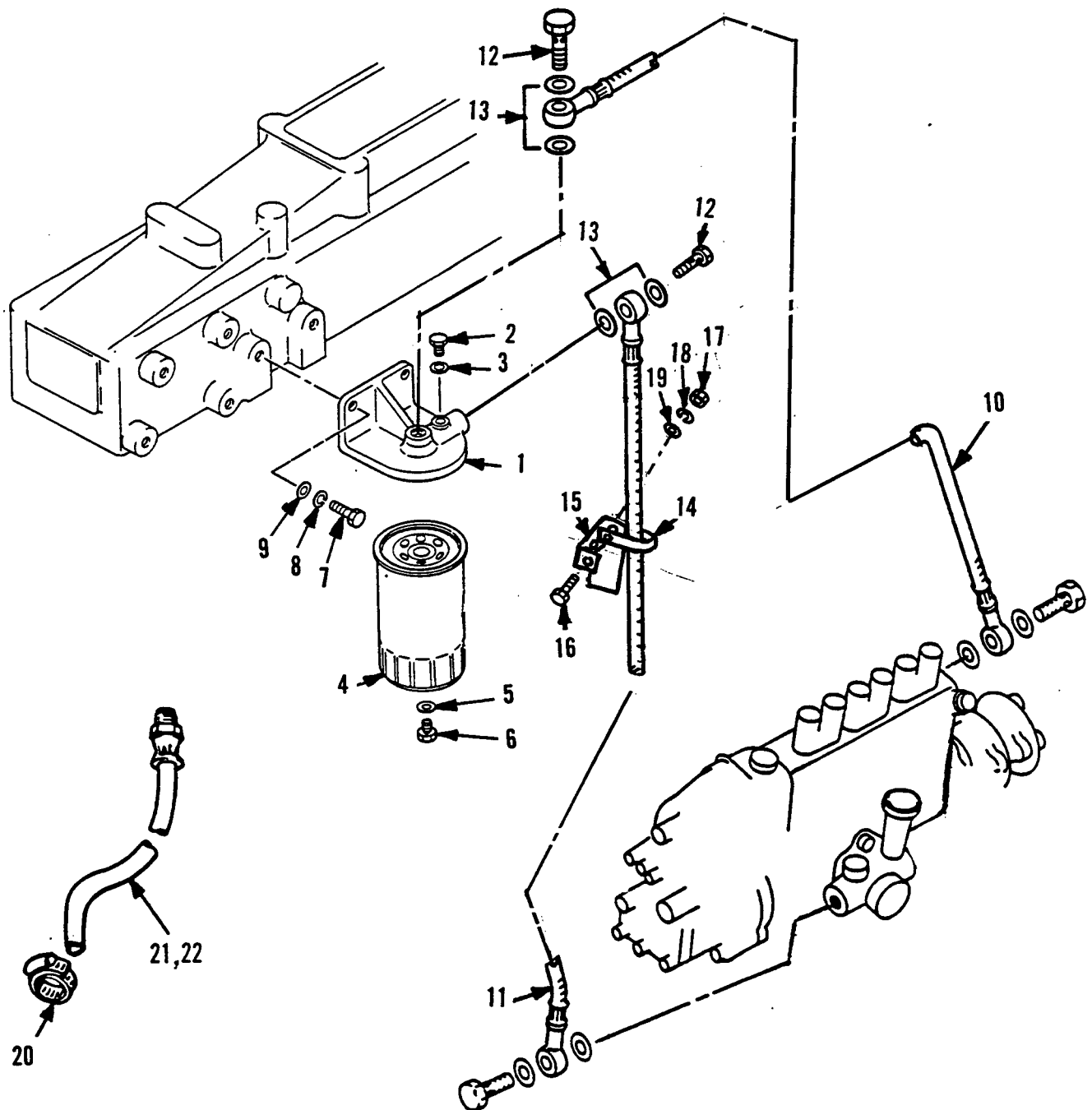
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0470	1	Pump, Injection - Fuel (See Separate Page For Components)	22	186-0583	1	Line, Fuel - Injection (NO 1)
2	186-0255	1	Bracket	23	186-0584	1	Line, Fuel - Injection (NO 2)
3	720-1056	4	Bolt, Hex Head (M10 x 1.5 x 35mm)	24	186-0585	1	Line, Fuel - Injection (NO 3)
4	186-0096	4	Washer, Lock - Spring	25	186-0586	1	Line, Fuel - Injection (NO 4)
5	720-1046	4	Bolt, Hex Head (M8 x 1.25 x 70mm)	26	186-0587	1	Line, Fuel - Injection (NO 5)
6	186-0095	4	Washer, Lock - Spring	27	186-0588	1	Line, Fuel - Injection (NO 6)
7	186-0183	4	Washer, Flat	28	186-0504	5	Stud
8	186-0359	1	Cover	29	186-0592	1	Band
9	186-0512	1	Seal, Oil	30	186-0591	1	Clamp
10	186-0203	1	Gasket	31	186-0089	5	Nut, Hex
11	186-0084	4	Bolt, Hex Head	32	186-0095	5	Washer, Lock - Spring
12	186-0096	4	Washer, Lock - Spring	33	186-0590	6	Holder
13	186-0134	2	Bearing, Ball	34	186-0498	3	Bolt, Hex Head
14	186-0582	1	Shaft	35	186-0094	3	Washer, Lock - Spring
15	186-0120	1	Key	49	186-0319	1	Line
16	186-0118	1	Key	50	186-0160	1	Bolt, Hollow - Hex
17	186-0355	1	Gear	51	186-0146	2	Gasket
18	186-0356	1	Lock	52	186-0320	1	Line
19	186-0357	1	Washer, Lock - Spring	53	186-0159	1	Bolt, Hollow - Hex
20	186-0374	1	Shaft	54	186-0145	2	Gasket
21	186-0405	1	Seal, Oil	55	186-0400	1	Cover
				56	720-1042	3	Bolt, Hex Head (M8 x 1.25 x 50mm)
				57	186-0095	1	Washer, Lock - Spring

Fuel Injection Pump Components



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-1018	3	Nut, Hex	8	186-1019	1	Seal, O-Ring
2	186-1017	3	Washer, Lock - Spring	9	186-1011	3	Clamp Assembly
3	186-1016	3	Stud	10	186-1120	6	Holder
4	186-1128	1	Pump, Fuel - Feed (Includes Joint Bolts And Gaskets)	11	186-1122	6	Seal, O-Ring
5	186-1023	1	Bolt, Hollow - Hex	12	186-1114	6	Plunger
6	186-1021	1	Bolt, Hollow - Hex	13	186-1014	6	Spring
7	186-1022	4	Gasket	14	186-1124	6	Gasket
				15	186-1126	6	Valve, Delivery

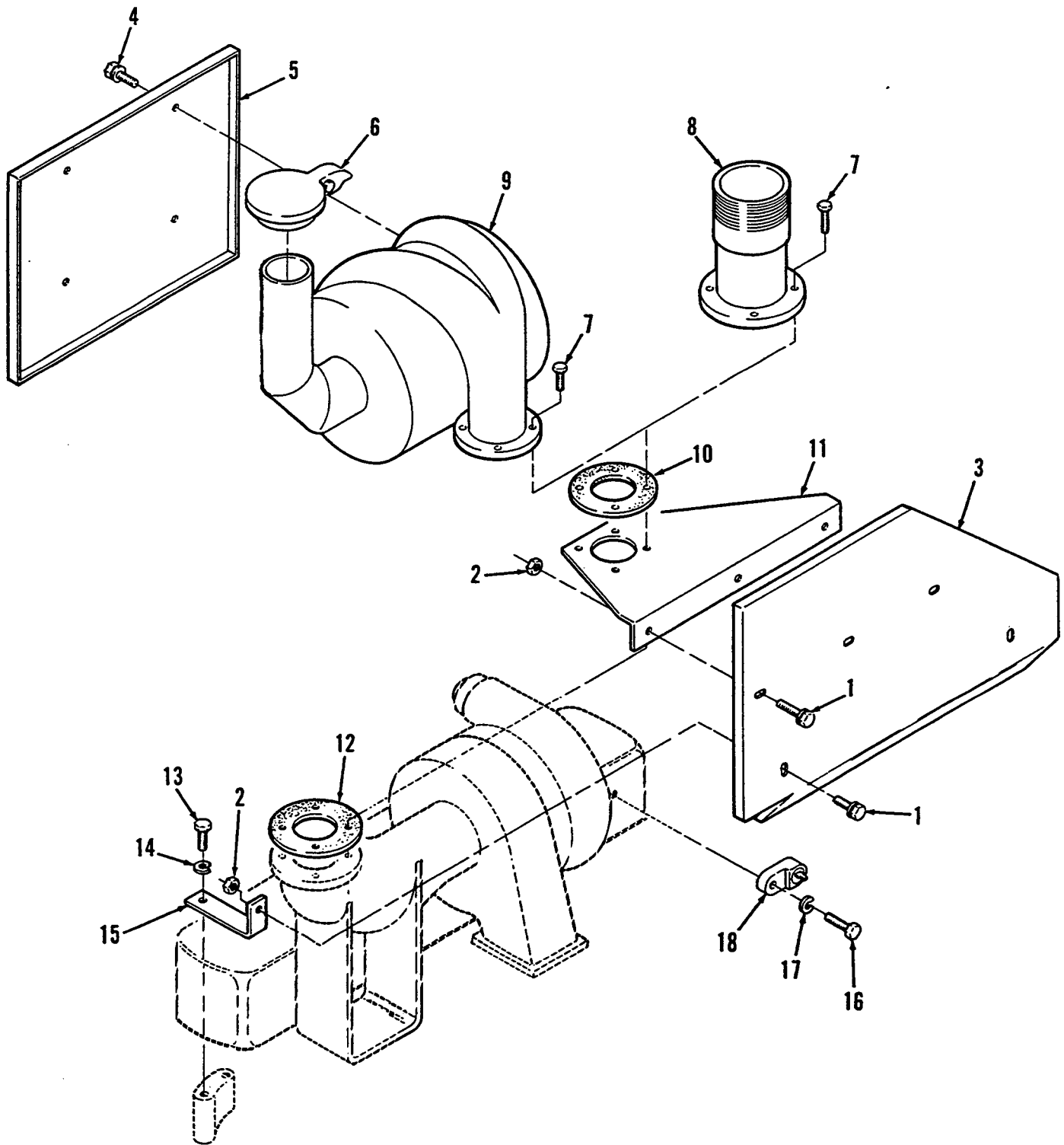
Fuel Filter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0593	1	Adapter, Filter - Fuel
2	186-0522	1	Plug
3	186-0144	1	Gasket
4	186-0435	1	Filter, Fuel (Includes Plug And Gasket)
5	186-0522	1	Plug
6	186-0144	1	Gasket
7	720-1056	2	Bolt, Hex Head (M10 x 1.5 x 35mm)
8	186-0096	2	Washer, Lock - Spring
9	186-0505	2	Washer, Flat
10	186-0432	1	Hose, Fuel

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
11	186-0589	1	Hose, Fuel
12	186-0161	2	Bolt, Hollow
13	186-0147	4	Gasket
14	186-0523	1	Clip
15	186-0521	1	Bracket
16	186-0499	1	Bolt, Hex Head
17	186-0089	1	Nut, Hex
18	186-0095	1	Washer, Lock - Spring
19	186-0102	1	Washer, Flat
20	503-0685	2	Clamp, Hose
21	501-0501	1	Line, Fuel - Flexible
22	501-0502	1	Line, Fuel - Flexible

Exhaust System .

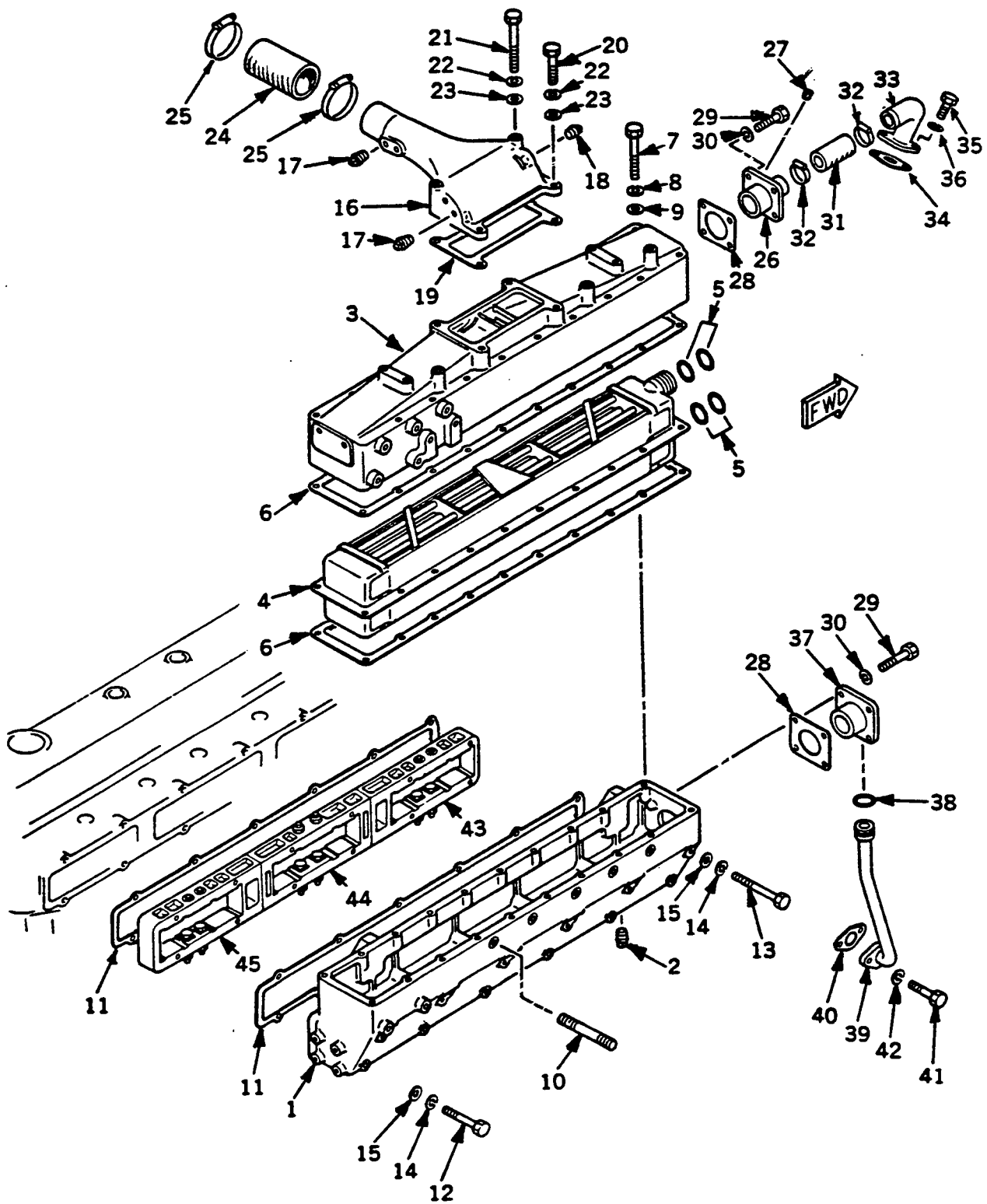


Exhaust System

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0029	5	Screw, Self-Lock - Hex Washer Head (3/8 - 16 x 3/4")	10	155-2165	1	Gasket
2	870-0281	5	Nut, Self-Locking - Hex Washer Head (3/8 - 16)	11	155-2072	1	*Plate, Mounting - Head Shield
3	155-2069	1	*Shield, Heat	12	155-1886	1	*Gasket
4	821-0016	4	Screw, Self-Lock - Hex Washer Head (5/16 - 18 x 3/4")	13	800-2085	2	Screw, Cap - Hex Head (M10 x 1.5 x 20mm)
5	155-2070	1	*Shield, Heat	14	850-2010	2	Washer, Lock - Spring (M10)
6	155-2062-02	1	Cap, Rain	15	155-2071	2	*Bracket, Mtg - Heat Shield
7	720-1055	4	Screw, Cap - Hex Head (M10 x 1.5 x 30mm)	16	800-2087	1	Screw, Cap - Hex Head (M10 x 1.5 x 30mm)
8	154-2570	1	Adapter, Exhaust	17	850-2010	1	Washer, Lock - Spring (M10)
9	155-2060	1	Muffler, Exhaust	18	309-0269	1	Switch, Thermostatic - Lo Engine Temperature (S4)

* Parts used on Housed Generator Sets.

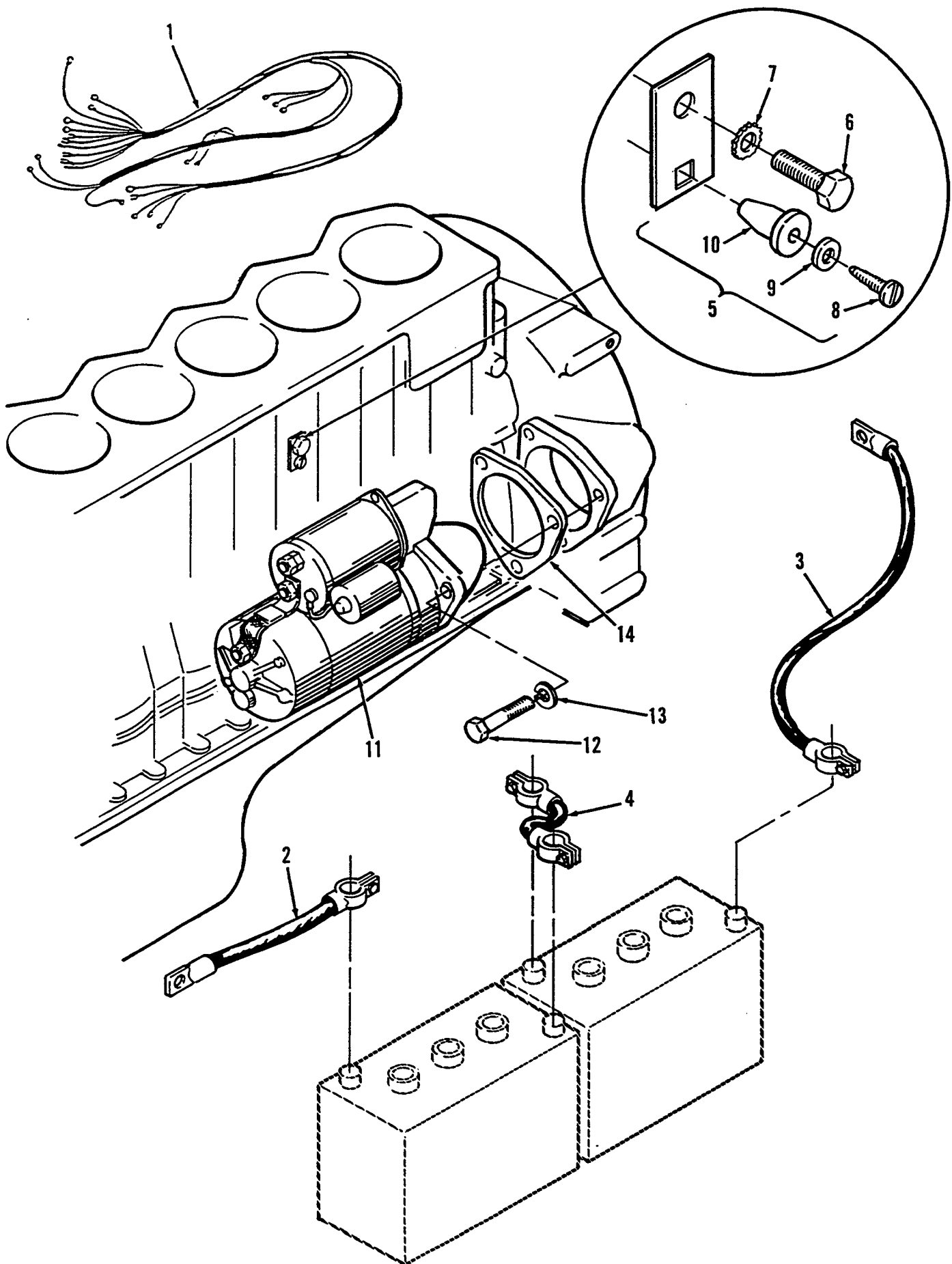
Intake Manifold



Intake Manifold

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0536	1	Manifold, Intake	24	186-0378	1	Hose, Rubber
2	186-0151	4	Plug	25	186-0170	2	Clamp, Hose
3	186-0538	1	Cover, Cooler	26	186-0579	1	Adapter, Cooler
4	186-0539	1	Core, Cooler	27	186-0509	1	Plug
5	186-0472	4	Seal, O-Ring	28	186-0439	2	Gasket
6	186-0448	2	Gasket	29	720-1037	8	Bolt, Hex Head (M8 x 1.25 x 25mm)
7	186-0595	20	Bolt, Hex Head	30	186-0095	8	Washer, Lock - Spring
8	186-0095	20	Washer, Lock - Spring	31	186-0473	1	Hose, Rubber
9	186-0101	20	Washer, Flat	32	186-0434	2	Clamp, Hose
10	186-0504	5	Stud	33	186-0578	1	Pipe
11	186-0449	2	Gasket	34	186-0468	1	Gasket
12	186-0540	6	Bolt, Hex Head	35	720-1037	2	Bolt, Hex Head (M8 x 1.25 x 25mm)
13	186-0541	6	Bolt, Hex Head	36	186-0095	2	Washer, Lock - Spring
14	186-0095	12	Washer, Lock - Spring	37	186-0577	1	Adapter, Cooler
15	186-0102	11	Washer, Flat	38	186-0427	1	Seal, O-Ring
16	186-0537	1	Duct, Air	39	186-0576	1	Pipe
17	186-0151	4	Plug	40	186-0467	1	Gasket
18	186-0514	1	Plug	41	720-1037	2	Bolt, Hex Head (M8 x 1.25 x 25mm)
19	186-0450	1	Gasket	42	186-0095	2	Washer, Lock - Spring
20	720-1039	2	Bolt, Hex Head (M8 x 1.25 x 35mm)	43	186-0542	1	Spacer, Manifold
21	720-1047	2	Bolt, Hex Head (M8 x 1.25 x 75mm)	44	186-0543	1	Spacer, Manifold
22	186-0095	4	Washer, Lock - Spring	45	186-0544	1	Spacer, Manifold
23	186-0102	4	Washer, Flat				

Starter

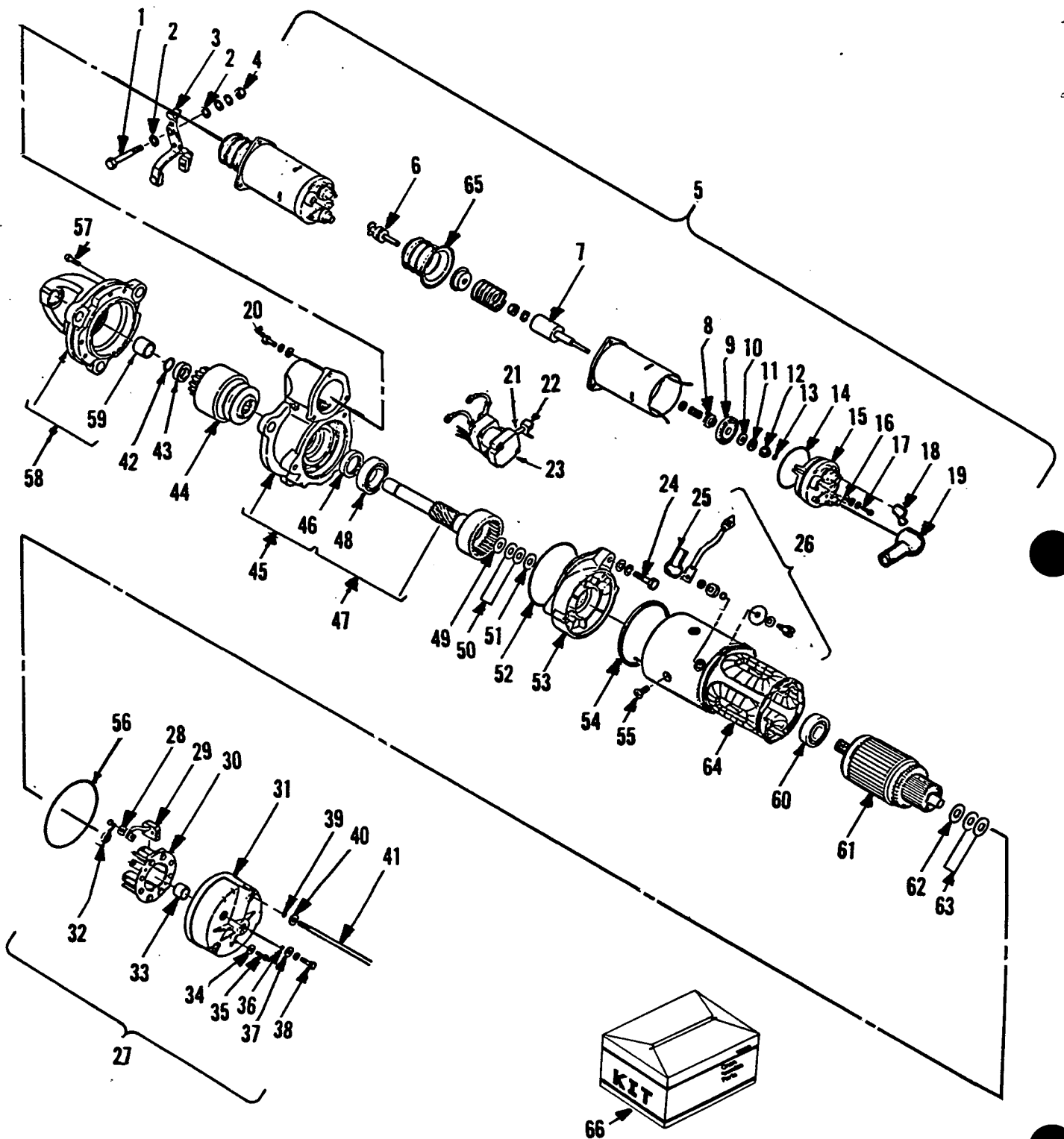


Starter

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	338-1823	1	Harness, Wiring - Control To Engine	8	809-0035	1	*Screw, Thread Cutting - Round Head (#8 x 3/4")
2	416-0619	1	Cable, Battery (18")	9	508-0015	1	*Washer, Insulating (#8)
3	416-0531	1	Cable, Battery (24")	10	870-0196	1	*Nut, Insulating (#8)
4	416-0473	1	Cable, Battery (Jumper)	11	186-0437	1	Starter (See Separate Page For Components)
5	332-2739	1	Terminal Assembly (Includes Parts Marked *)	12	186-0491	3	Screw, Cap - Hex Head
6	800-2112	1	Screw, Cap - Hex Head (M12 x 1.75 x 30mm)	13	186-0492	3	Washer, Lock - Spring
7	856-2012	1	Washer, Lock - EIT (M12)	14	186-2094	1	Shim

* Parts included in 332-2739 Terminal Assembly.

Starter Components

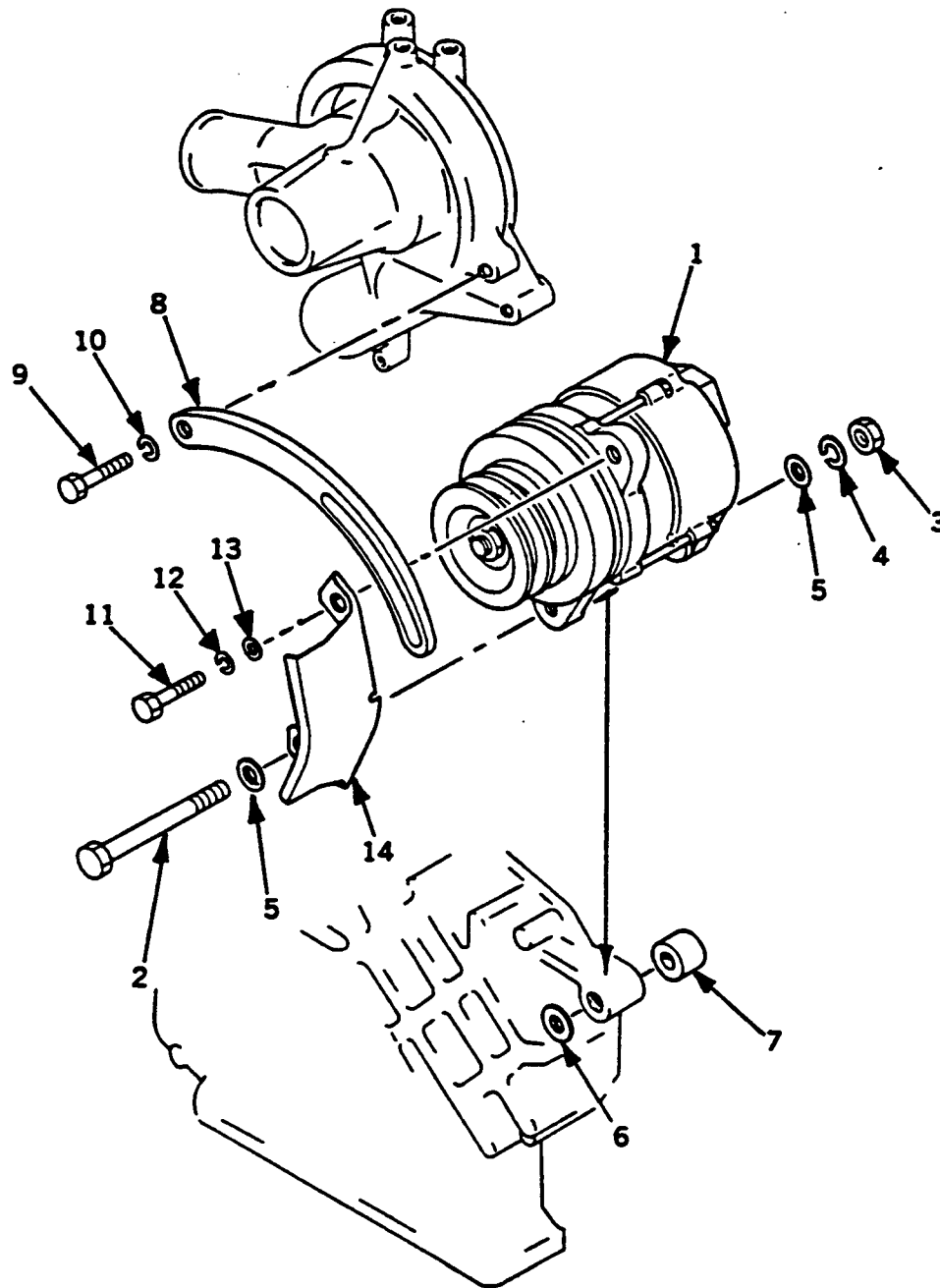


Starter Components

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0047	1	Pin, Lever - Threaded	35	186-0623	1	Bolt, Hex Head
2	186-0030	2	Seal	36	186-0624	2	*Seal, O-Ring
3	186-0598	1	Lever, Shift	37	186-0625	2	Washer, Flat
4	186-0599	1	Nut, Hex	38	186-0626	2	Bolt, Hex Head
5	186-0476	1	Solenoid	39	186-0627	2	*Seal, O-Ring
6	186-0600	1	Screw, Plunger	40	186-0628	2	Washer, Flat
7	186-0601	1	Plunger	41	186-0629	2	Bolt, Hex Head
8	186-0602	1	Bushing	42	186-0630	1	Ring, Retaining
9	186-0603	1	Contact	43	186-0631	1	Stop, Pinion
10	186-0604	1	Washer, Insulator	44	186-0479	1	Clutch
11	186-0605	2	Washer, Flat	45	186-0632	1	Bracket, Center
12	186-0606	1	Holder	46	186-0633	1	Seal, Oil
13	186-0607	2	Ring, Retaining	47	186-0634	1	Shaft
14	186-0608	1	*Seal, O-Ring	48	186-0477	1	Bearing, Ball
15	186-0609	1	Terminal	49	186-0635	1	Washer, Thrust
16	186-0610	2	Seal	50	186-0636	2	Washer, Thrust
17	186-0611	2	Bolt, Hex Head	51	186-0637	1	Washer, Insulator
18	186-0042	1	*Cap, Rubber (Terminal Cover)	52	186-0638	1	*Seal, O-Ring
19	186-0612	1	*Cap, Rubber (Terminal Cover)	53	186-0639	1	Bracket, Center
20	186-0613	3	Bolt, Hex Head	54	186-0640	1	*Seal
21	186-0018	1	Bolt, Hex Head	55	186-0641	4	Screw, Flat Head - Cross Recessed
22	186-0614	1	Holder, Switch	56	186-0642	1	*Seal, O-Ring
23	186-0475	1	Switch	57	186-0029	6	Bolt, Hex Head
24	186-0615	3	Bolt, Hex Head	58	186-0643	1	Housing, Front
25	186-0041	1	*Cap, Rubber (Terminal Cover)	59	186-0483	1	Bushing, Sleeve
26	186-0616	1	Terminal	60	186-0478	1	Bearing, Ball
27	186-0617	1	Housing, Rear	61	186-0644	1	Armature
28	186-0618	4	Plate	62	186-0645	1	Washer, Flat
29	186-0480	4	Brush	63	186-0646	2	Washer, Thrust
30	186-0619	4	Holder, Brush	64	186-0647	1	Coil, Field
31	186-0620	1	Housing	65	186-0648	1	Boot, Rubber
32	186-0621	4	Spring, Brush	66	186-0481	1	Package, Seal (Includes Parts Marked *)
33	186-0482	1	Bushing, Sleeve				
34	186-0622	1	Seal				

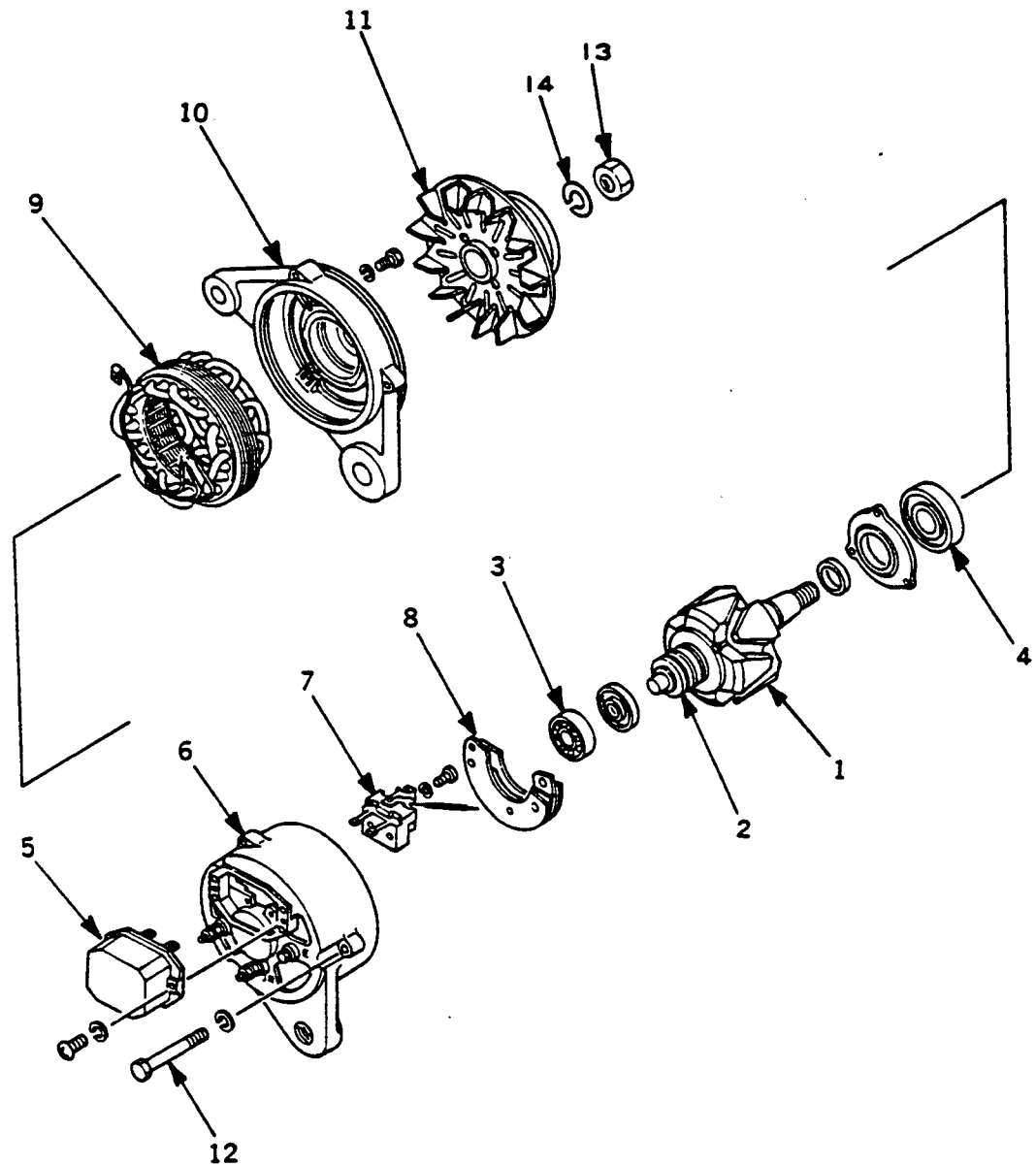
* Parts included in 186-0481 Seal Package Assembly.

Alternator



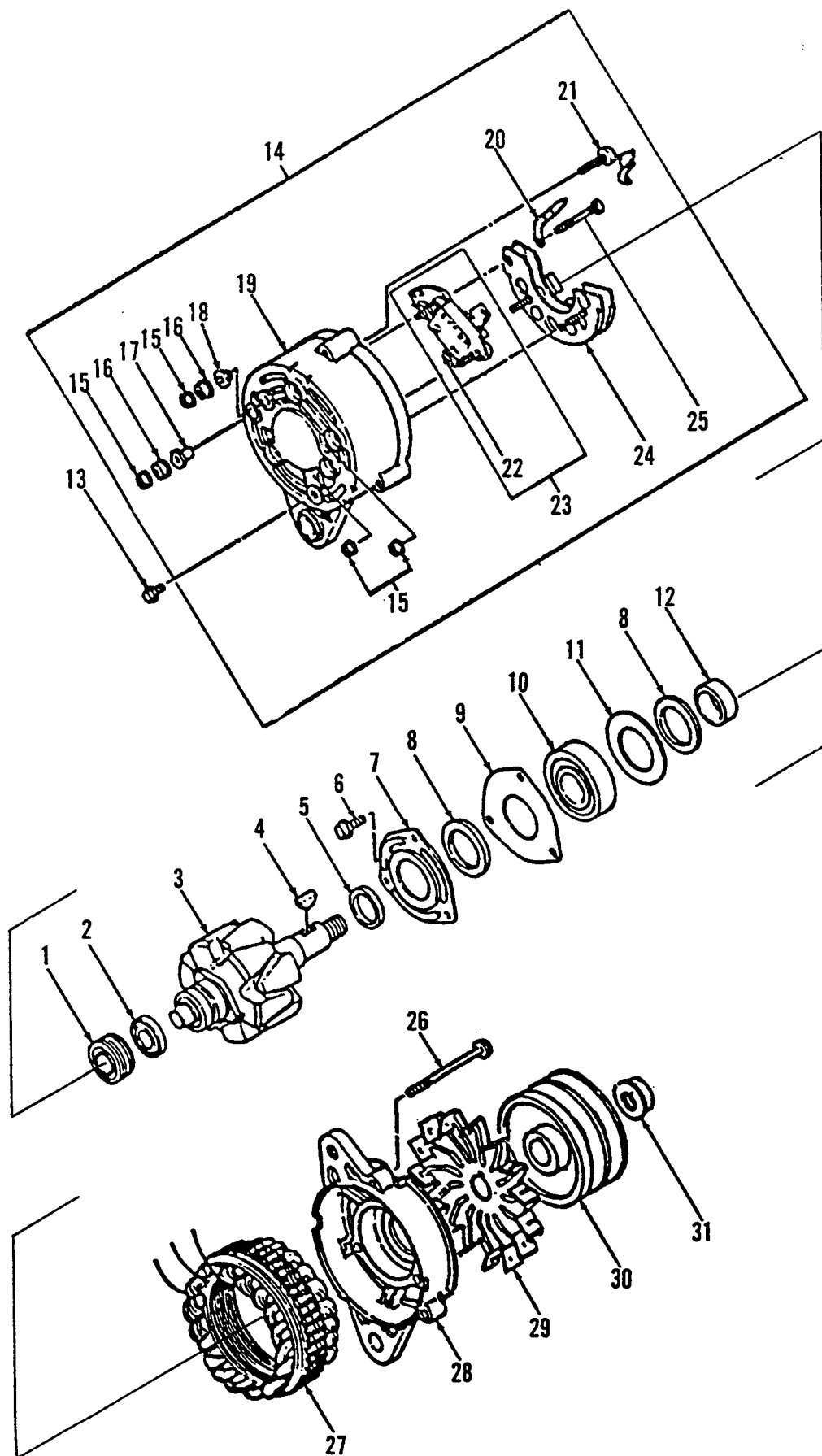
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-2092	1	Alternator (See Separate Page For Components)	8	186-0258	1	Arm, Adjusting
2	186-0184	1	Bolt, Hex Head	9	720-1054	1	Bolt, Hex Head (M10 x 1.5 x 25mm)
3	186-0094	1	Nut, Hex	10	186-0096	1	Washer, Lock - Spring
4	186-0098	1	Washer, Lock - Spring	11	186-0085	1	Bolt, Hex Head
5	186-0506	1	Washer, Flat	12	186-0097	1	Washer, Lock - Spring
6	186-0256	1	Spacer	13	186-0109	1	Washer, Flat
7	186-0257	1	Spacer, Sleeve	14	186-0594	1	Guard, Belt

Alternator Components (8-Pole)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0078	1	Rotor (Includes Slip Ring)	7	186-0070	1	Holder, Brush
2	186-0067	1	Ring, Slip	8	186-0025	1	Diode
3	186-0032	1	Bearing, Ball	9	186-0068	1	Stator
4	186-0033	1	Bearing, Ball	10	186-0069	1	Bracket, Mounting - Front
5	186-0071	1	Regulator, Voltage	11	186-0023	1	Pulley
6	186-0024	1	Bracket, Mounting - Rear (Includes Brush Holder And Diode)	12	186-0019	3	Bolt, Hex Head
				13	186-0493	1	Nut, Hex
				14	186-0494	1	Washer, Lock - Spring

Alternator Components (12-Pole)

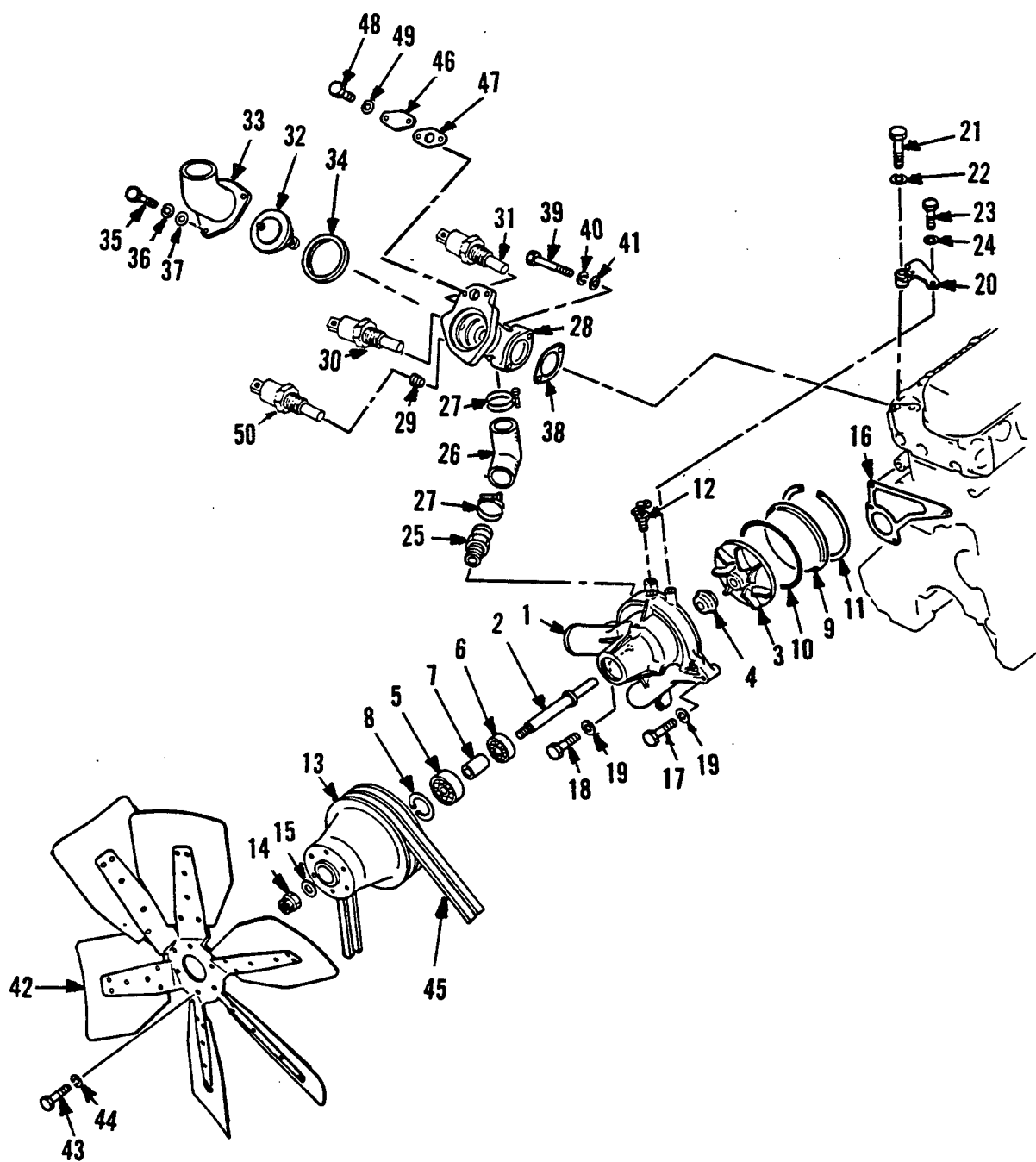


Alternator Components (12-Pole)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-2097	1	Bearing, Ball	17	186-2110	1	*Bushing, Insulating
2	186-2098	1	Retainer	18	186-2111	1	*Bushing, Insulating
3	186-2099	1	Rotor	19	186-2112	1	*Bracket, Rear
4	186-1645	1	Key, Woodruff	20	186-2113	1	*Bar, Connect
5	186-2100	1	Collar	21	186-2114	1	*Terminal
6	186-2101	3	Bolt	22	186-2115	2	*Holder, Brush
7	186-2102	1	Retainer	23	186-2116	1	*Regulator Assembly (Includes Brush Holder)
8	186-1655	2	Packing	24	186-2117	1	*Rectifier Assembly
9	186-1653	1	Retainer	25	186-2118	1	*Bolt
10	186-2103	1	Bearing, Ball	26	186-2119	3	Bolt
11	186-2104	1	Retainer	27	186-2120	1	Stator Assembly
12	186-2105	1	Collar	28	186-2121	1	Bracket, Front
13	186-2106	1	Bolt	29	186-2122	1	Fan
14	186-2107	1	Bracket Assembly, Rear (Includes Parts Marked *)	30	186-2123	1	Pulley
15	186-2108	6	*Nut	31	186-2124	1	Nut
16	186-2109	2	*Nut				

* Parts included in 186-2107 Rear Bracket Assembly.

Cooling Fan, And Water Pump

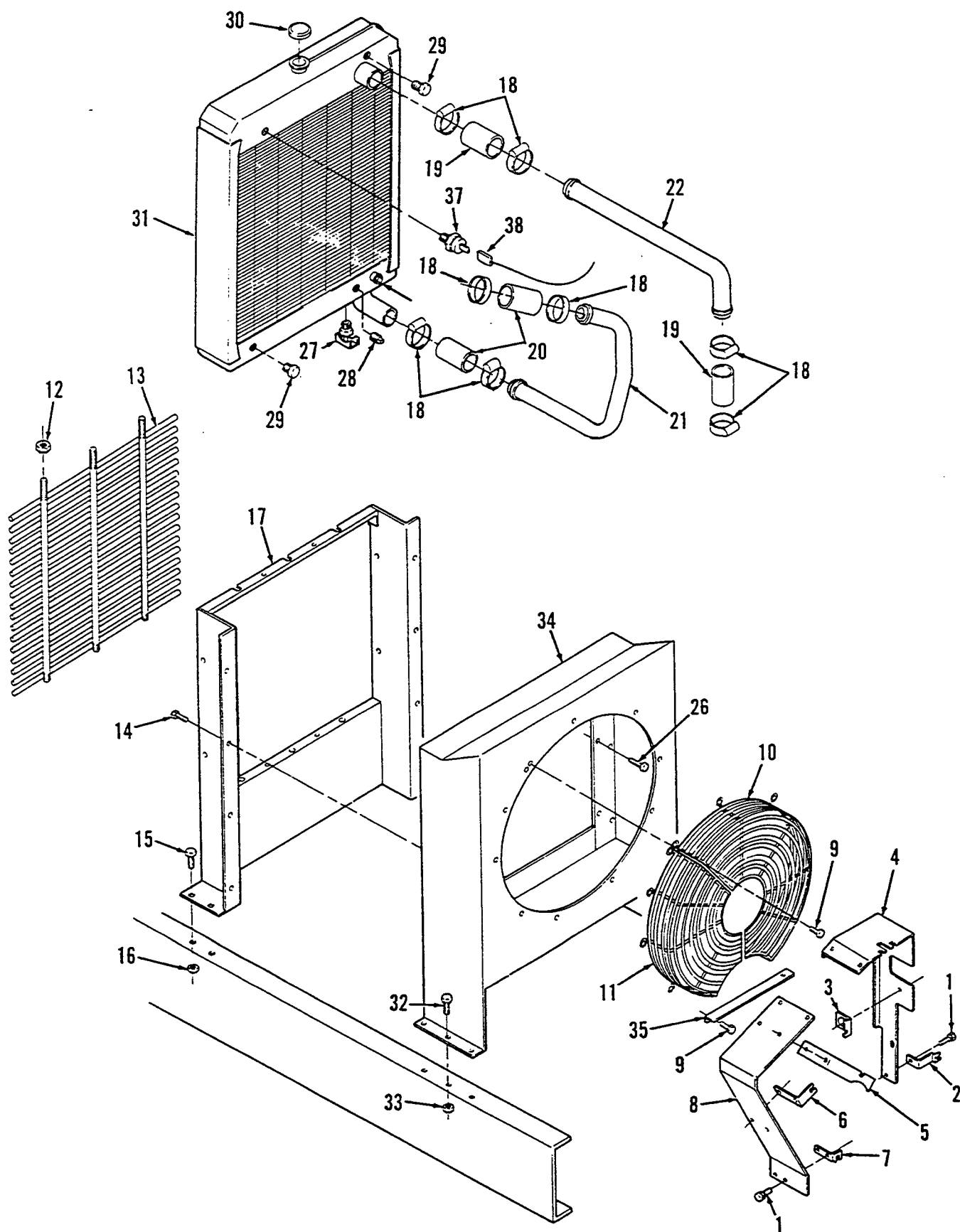


Cooling Fan, And Water Pump

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	186-0465	1	Pump, Water (Includes Parts Marked *)	28	186-0545	1	Housing, Thermostat
2	186-0527	1	*Shaft	29	186-0490	1	Plug, Pipe
3	186-0574	1	*Impeller	30	193-0375	1	Sender, Temperature - Engine Coolant (E2)
4	186-0404	1	*Seal	31	309-0522	1	Switch, Thermostatic - Hi Engine Coolant Temp (S2)
5	186-0441	2	*Bearing, Ball	32	186-0436	1	Thermostat
6	186-0511	1	*Bearing, Ball	33	186-0546	1	Connector, Outlet - Water
7	186-0526	1	*Spacer	34	186-0451	1	Gasket
8	186-0528	1	*Ring, Snap	35	720-1038	3	Bolt, Hex Head (M8 x 1.25 x 30mm)
9	186-0571	1	*Cover	36	186-0095	3	Washer, Lock - Spring
10	186-0428	1	*Seal, O-Ring	37	186-0102	3	Washer, Flat
11	186-0572	1	*Ring, Snap	38	186-0206	1	Gasket
12	186-0517	1	*Cock, Drain	39	720-1061	2	Bolt, Hex Head (M10 x 1.5 x 60mm)
13	186-0575	1	*Pulley	40	186-0096	2	Washer, Lock - Spring
14	186-0508	1	*Nut, Hex - Self-Locking	41	186-0505	2	Washer, Flat
15	186-0507	4	*Washer, Flat	42	186-0176	1	Fan
16	186-0341	1	Gasket	43	720-1056	6	Bolt, Hex Head (M10 x 1.5 x 35mm)
17	720-1061	3	Bolt, Hex Head (M10 x 1.5 x 60mm)	44	186-0096	6	Washer, Lock - Spring
18	186-0502	1	Bolt, Hex Head	45	186-0425	1	Belt Set, V
19	186-0096	4	Washer, Lock - Spring	46	130-2801	1	Plate
20	186-0530	1	Bracket	47	130-2800	2	Gasket
21	720-1057	1	Bolt, Hex Head (M10 x 1.5 x 40mm)	48	720-1037	2	Bolt, Hex Head (M8 x 1.25 x 25mm)
22	186-0096	1	Washer, Lock - Spring	49	186-0095	2	Washer, Lock - Spring
23	720-1035	2	Bolt, Hex Head (M8 x 1.25 x 16mm)	50	309-0521	1	Switch, Thermostatic - Hi Engine Coolant Temp (S6)
24	186-0096	2	Washer, Lock - Spring				
25	186-0347	1	Adapter, Pipe				
26	186-0466	1	Hose, Rubber				
27	186-0169	2	Clamp, Hose				

* Parts included in 186-0465 Water Pump.

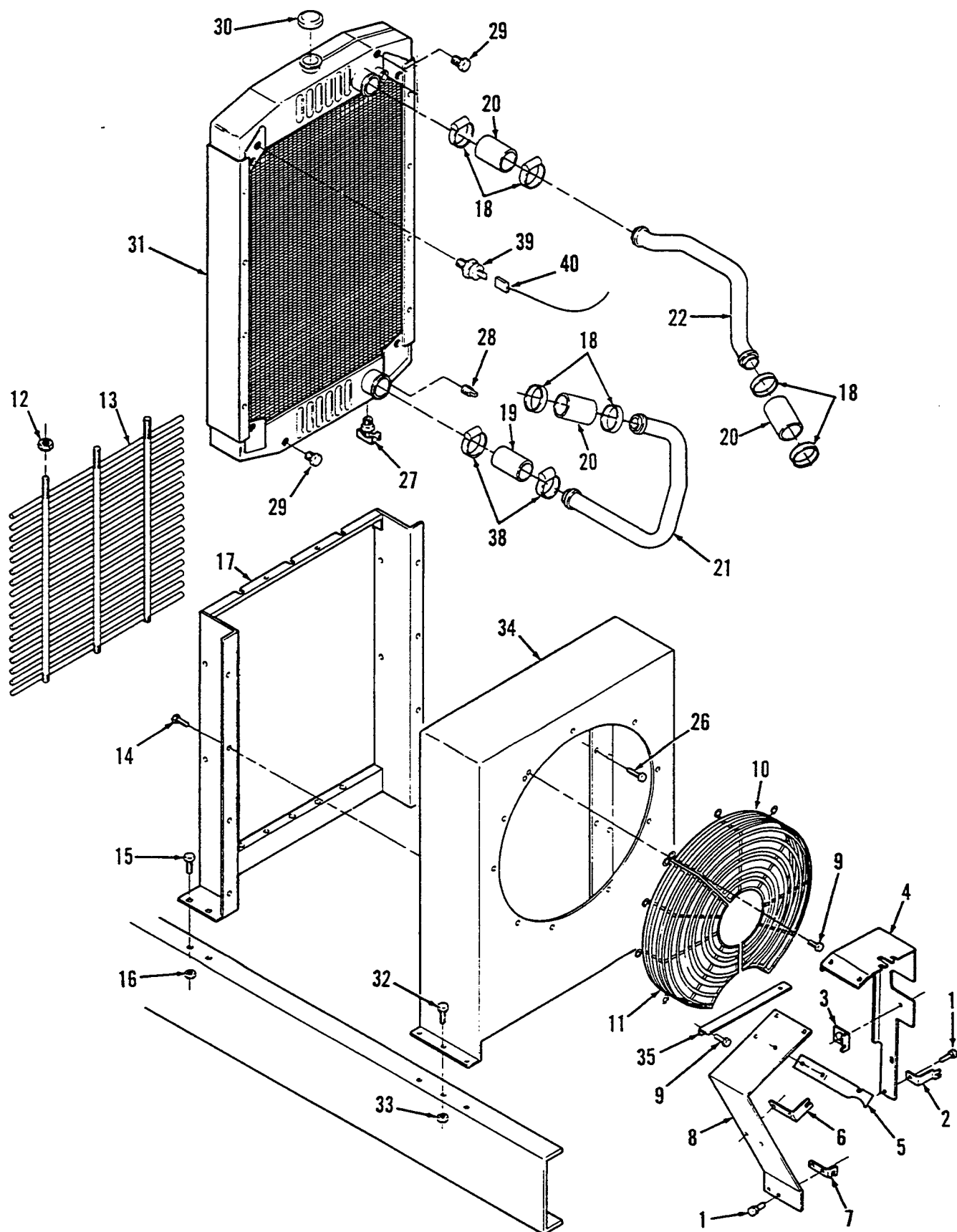
Cooling System (Standard)



Cooling System (Standard)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0010	9	Screw, Self-Locking - Hex Washer Head (1/4 - 20 x 1/2")	18	503-0354	8	Clamp, Hose
2	130-2605	1	Bracket, Support - Belt Guard	19	503-1380-01	2	Hose, Rubber
3	130-2604	1	Bracket, Support - Belt Guard	20	503-1380-01	2	Hose, Rubber
4	130-2647	1	Guard, Belt (Less Brackets)	21	130-2642-02	1	Tube, Outlet - Coolant
5	130-2603	1	Bracket, Support - Belt Guard	22	130-2641-02	1	Tube, Inlet - Coolant
6	130-2643	1	Bracket, Support - Belt Guard	26	821-0029	8	Screw, Self-Locking - Hex Washer Head (3/8 - 16 x 3/4")
7	130-2606	1	Bracket, Support - Belt Guard	27	504-0003	1	Cock, Drain
8	130-2646	1	Guard, Belt (Less Brackets)	28	502-0155	1	Plug, Pipe - Square Head
9	821-0018	11	Screw, Self-Locking - Hex Washer Head (1/4 - 20 x 5/8")	29	502-0153	3	Plug, Pipe - Hex Head
10	130-2615-02	1	Guard, Fan	30	130-0523	1	Cap, Radiator Large Neck
11	130-2615-01	1	Guard, Fan		130-2344	1	Small Neck
12	870-0281	6	Nut, Self-Locking - Hex Washer Head (3/8 - 16)	31	130-2519	1	Radiator (Includes Cap)
13	130-2625	1	Grille	32	821-0030	6	Screw, Self-Locking - Hex Washer Head (3/8 - 16 x 1")
14	821-0018	8	Screw, Self-Locking - Hex Washer Head (1/4 - 20 x 5/8")	33	870-0281	6	Nut, Self-Locking - Hex Washer Head (3/8 - 16)
15	821-0030	4	Screw, Self-Locking - Hex Washer Head (3/8 - 16 x 1")	34	130-2587-02	1	Shroud, Fan
16	870-0281	4	Nut, Self-Locking - Hex Washer Head (3/8 - 16)	35	130-2683	1	Bracket, Guard - Fan
17	130-2627	1	Guard, Radiator (Less Grille)	37	193-0322	1	Switch, Level - Coolant
				38	338-1919	1	Harness, Wiring

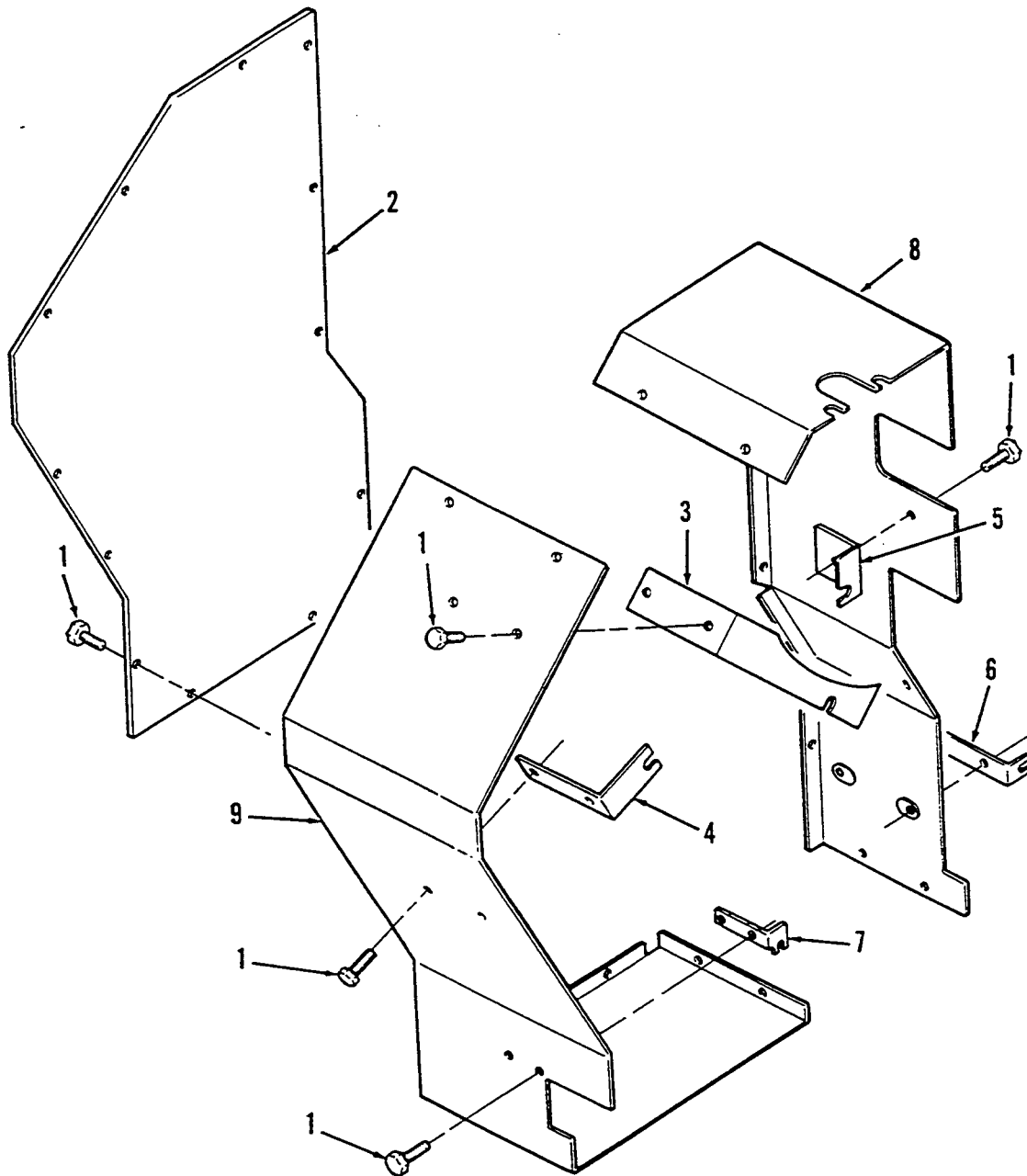
Cooling System (Hi Temperature)



Cooling System (Hi Temperature)

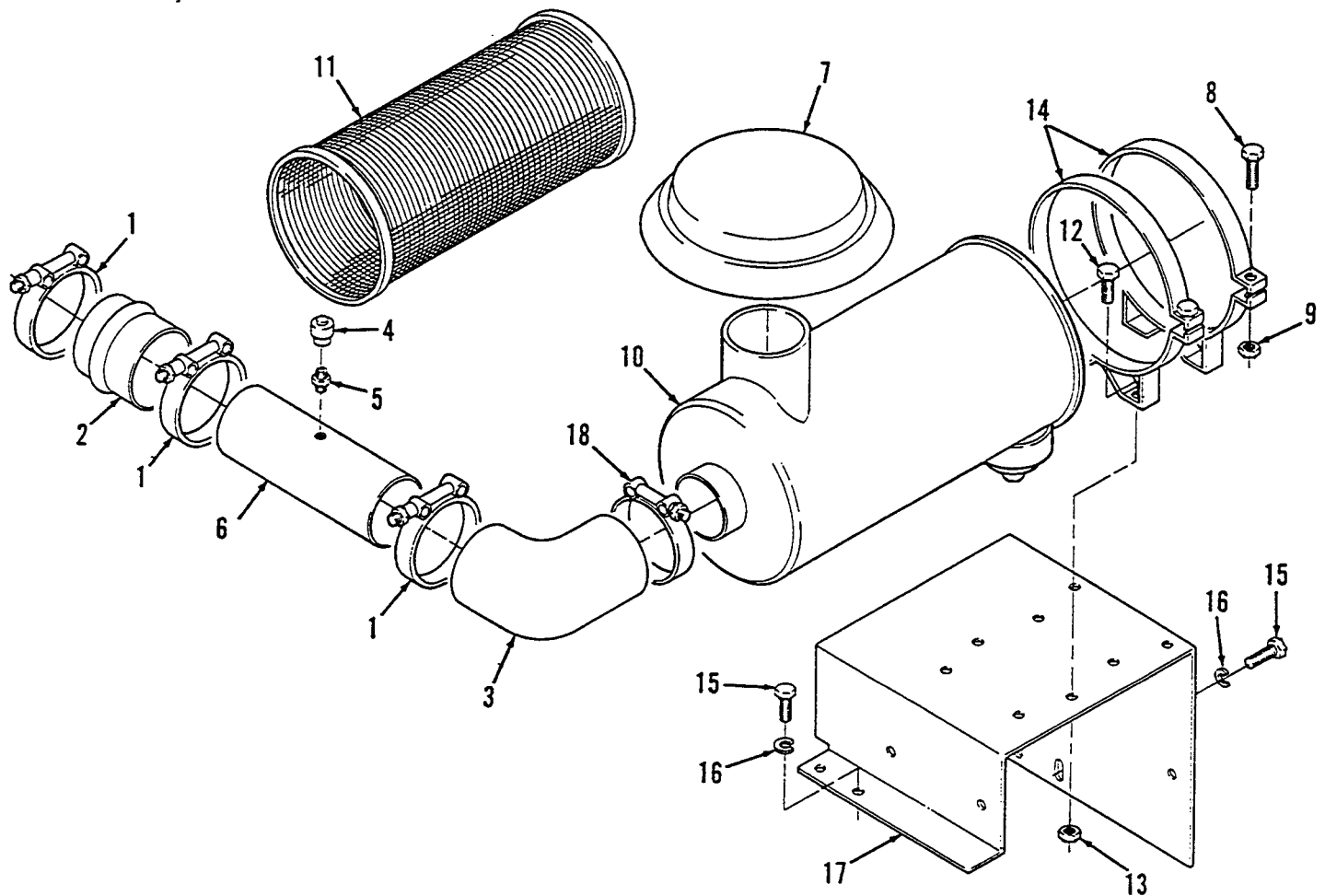
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0010	9	Screw, Self-Locking - Hex Washer Head (1/4 - 20 x 1/2")	18	503-0354	6	Clamp, Hose
2	130-2605	1	Bracket, Support - Belt Guard	19	503-1414-01	1	Hose, Rubber
3	130-2604	1	Bracket, Support - Belt Guard	20	503-1380-01	2	Hose, Rubber
4	130-2647	1	Guard, Belt (Less Brackets)	21	130-2879	1	Tube, Outlet - Coolant
5	130-2603	1	Bracket, Support - Belt Guard	22	130-2880	1	Tube, Inlet - Coolant
6	130-2643	1	Bracket, Support - Belt Guard	26	821-0029	8	Screw, Self-Locking - Hex Washer Head (3/8 - 16 x 3/4")
7	130-2606	1	Bracket, Support - Belt Guard	27	504-0003	1	Cock, Drain
8	130-2646	1	Guard, Belt (Less Brackets)	28	502-0155	1	Plug, Pipe - Square Head
9	821-0018	11	Screw, Self-Locking - Hex Washer Head (1/4 - 20 x 5/8")	29	502-0153	3	Plug, Pipe - Hex Head
10	130-2615-02	1	Guard, Fan	30	130-0523	1	Cap, Radiator Large Neck
11	130-2615-01	1	Guard, Fan		130-2344	1	Small Neck
12	870-0281	6	Nut, Self-Locking - Hex Washer Head (3/8 - 16)	31	130-2521	1	Radiator (Includes Cap)
13	130-2626	1	Grille	32	821-0030	6	Screw, Self-Locking - Hex Washer Head (3/8 - 16 x 1")
14	821-0018	8	Screw, Self-Locking - Hex Washer Head (1/4 - 20 x 5/8")	33	870-0281	6	Nut, Self-Locking - Hex Washer Head (3/8 - 16)
15	821-0030	4	Screw, Self-Locking - Hex Washer Head (3/8 - 16 x 1")	34	130-2883	1	Shroud, Fan
16	870-0281	4	Nut, Self-Locking - Hex Washer Head (3/8 - 16)	35	130-2683	1	Bracket, Guard - Fan
17	130-2885	1	Guard, Radiator (Less Grille)	38	503-0648	2	Clamp, Hose
				39	193-0322	1	Switch, Level - Coolant
				40	338-1919	1	Harness, Wiring

Remote Radiator



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0010	26	Screw, Self-Locking - Hex Washer Head (1/4 - 20 x 1/2")	6	130-2806	1	Bracket, Guard - Belt
2	130-2833	1	Cover, Guard - Belt	7	130-2606	1	Bracket, Guard - Belt
3	130-2603	1	Bracket, Guard - Belt	8	130-2830	1	Wrapper, Guard - Belt (Left Hand)
4	130-2643	1	Bracket, Guard - Belt	9	130-2643	1	Wrapper, Guard - Belt (Right Hand)
5	130-2604	1	Bracket, Guard - Belt				

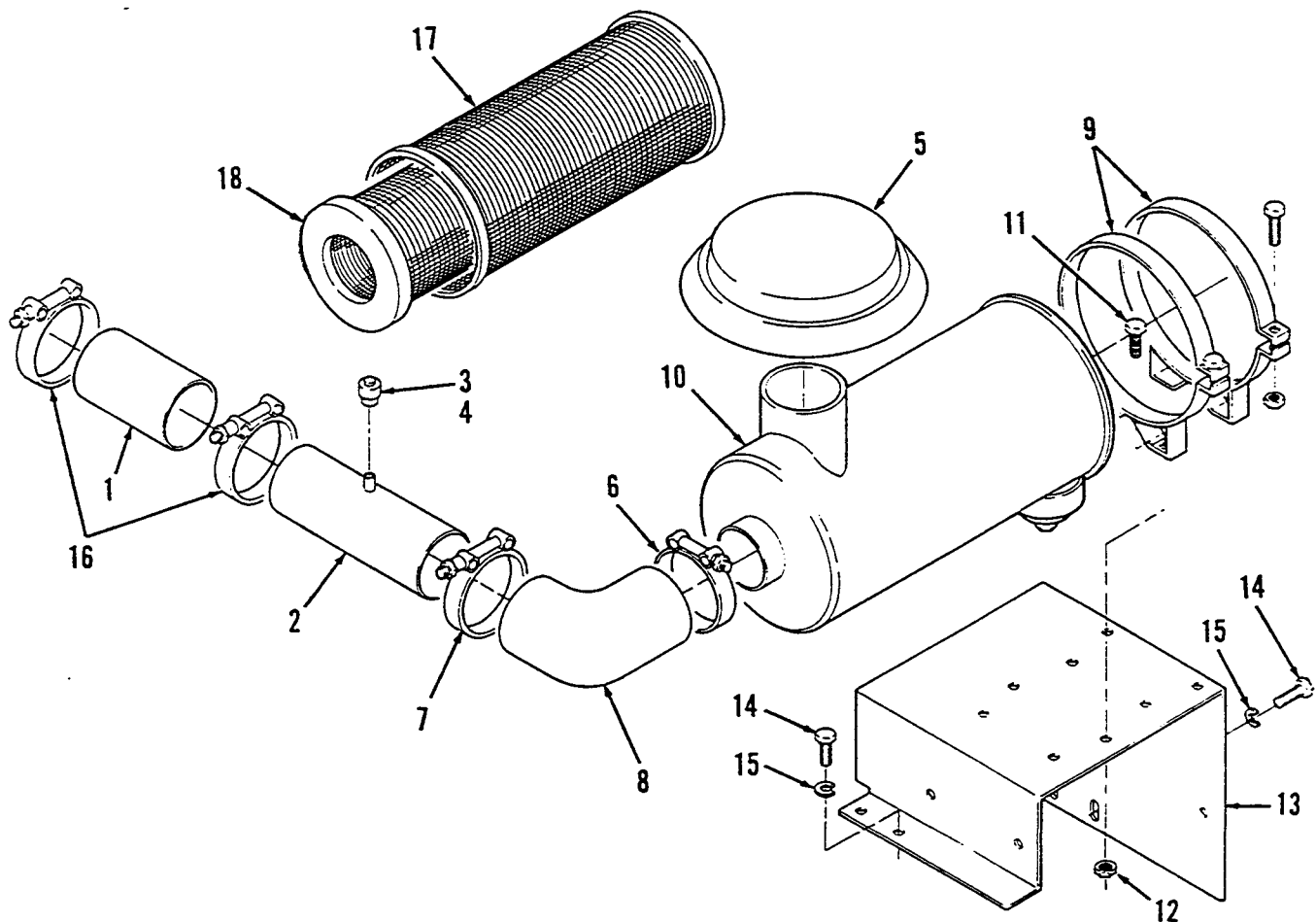
Air Cleaner (Standard)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0885	4	Clamp, Hose
2	503-1371	1	Hose, Air
3	140-1970	1	Elbow, Rubber - 90°
4	140-1548	1	Indicator, Service - Air
5	140-1260	1	Adapter, Hex - Air Service Indicator
6	140-1958	1	Tube, Air
7	140-1601	1	Hood, Cleaner - Air
8	815-0115	2	Screw, Machine - Fillister Head (1/4 - 20 x 1")
9	863-0002	2	Nut, Square (1/4 - 20)
10	140-1971	1	Cleaner Assembly, Air (Includes Element)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
11	140-1969	1	Element, Cleaner - Air
12	821-0025	4	Screw, Self-Locking - Hex Head (3/8 - 16 x 3/4")
13	870-0281	4	Nut, Self-Locking - Hex Washer Head (3/8 - 16)
14	140-1973	2	Band, Mounting
15	800-2110	4	Screw, Cap - Hex Head (M12 x 1.75 x 20mm)
16	850-2012	4	Washer, Lock - Spring (M12)
17	140-1959	1	Bracket, Mounting - Air Cleaner
18	503-0900	1	Clamp, Hose

Heavy Duty Air Cleaner (Dual Air Filter)



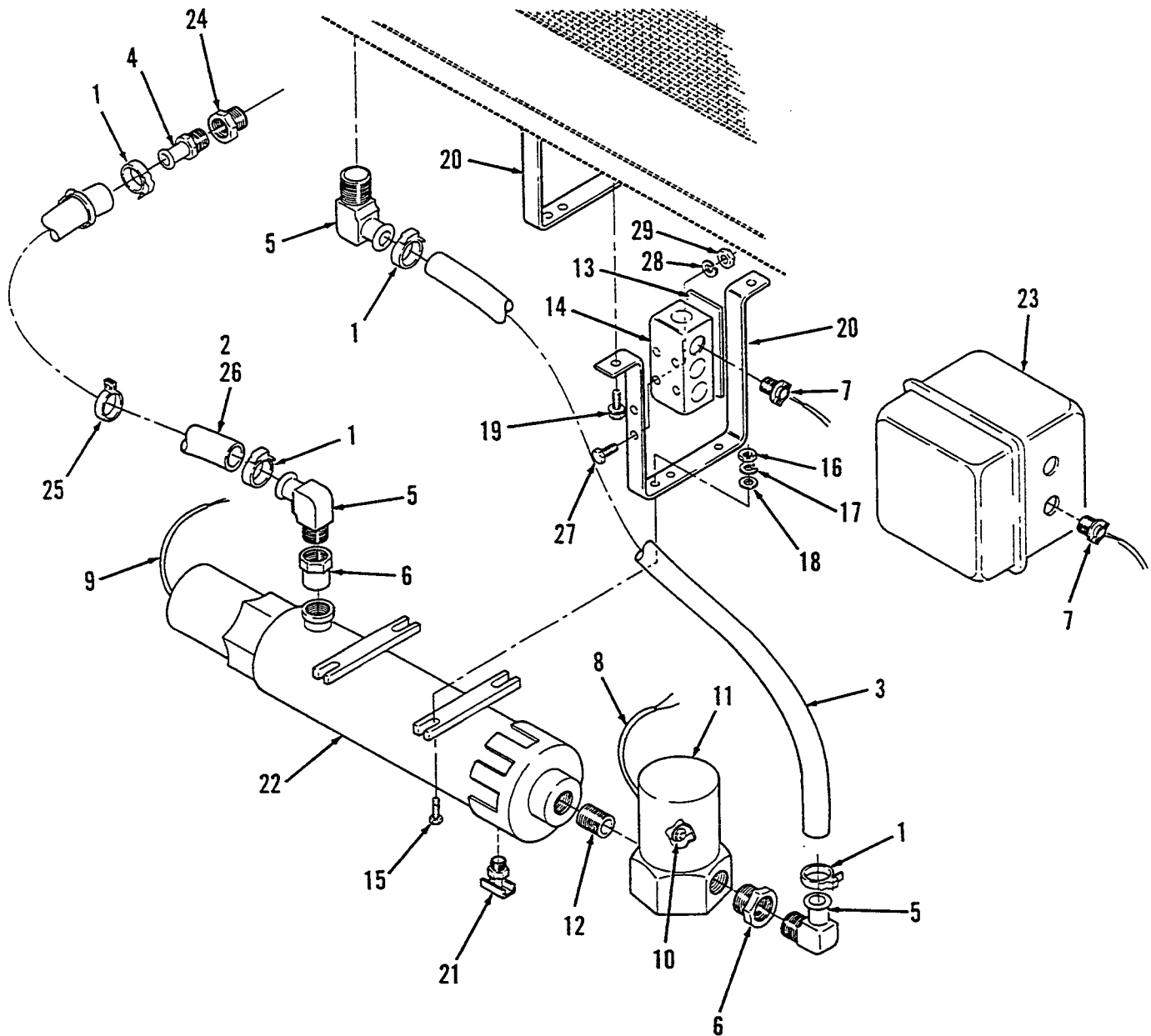
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0788	1	Hose
2	140-1958	1	Tube, Inlet - Air
3	140-1260	1	Fitting, Filter - Safety
4	140-1548	1	Indicator, Service
5	140-1601	1	Hood, Inlet - Air
6	503-0900	1	Clamp, Hose - T-Bolt
7	503-0885	1	Clamp, Hose - T-Bolt
8	140-1970	1	Elbow, Reducing - 90°
9	140-1973	2	Band, Mounting
10	140-2079	1	Cleaner, Air (Includes Elements)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
11	821-0029	4	Screw, Lock (3/8 - 16 x 3/4")
12	870-0281	4	Nut, Lock (3/8 x 16)
13	140-1959	1	Bracket, Mounting - Air Cleaner
14	800-2110	2	Screw, Cap - Hex Head (M12 x 1.75 x 20mm)
15	850-2012	2	Washer, Lock (M12)
16	503-0868	2	Clamp, Hose - T-Bolt
17	140-1969	1	Element, Air Cleaner - Primary
18	140-2080	1	Element, Air Cleaner - Safety

This diagram illustrates the assembly of a mechanical device, likely a pump or actuator, with various components labeled 1 through 18. The main body (3) is a rectangular block with a central vertical passage. A piston or plunger (8) is shown in the upper part of this passage, secured by a pin (4). A cable (9) is connected to the side of the main body. A separate component (11) with a multi-pin connector is shown on the left, connected to the main body. A long arm (14) is attached to the top of the main body, featuring a roller (16) and a pin (15). A spring (1) is shown at the bottom, connected to a bracket (2) and a pin (5). Other components include a nut (6), a washer (18), and a screw (17).

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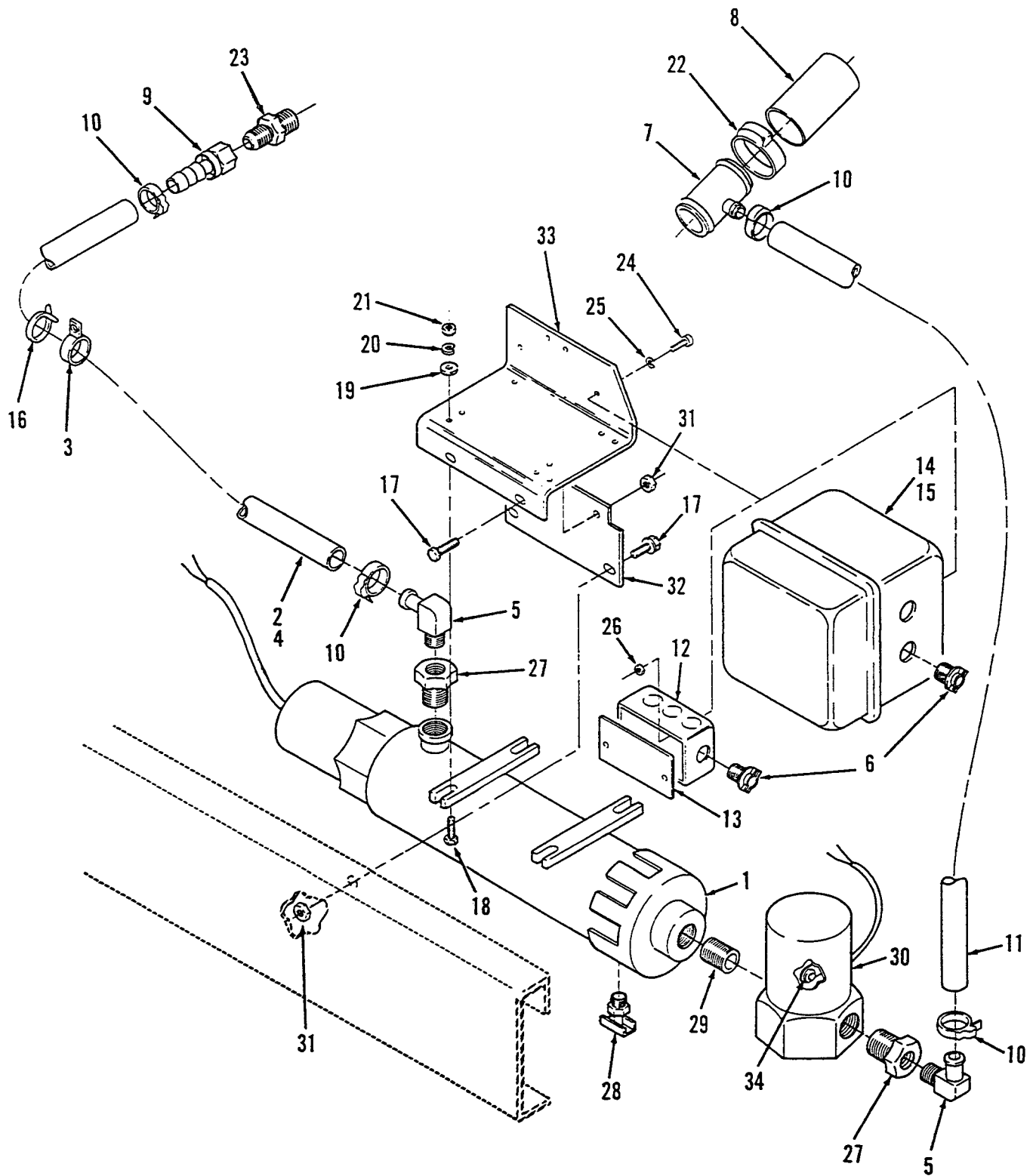
Engine Coolant Heater



Engine Coolant Heater

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	503-0183	4	Clamp, Hose	19	821-0029	4	Screw, Self-Locking - Hex Washer Head (3/8 - 16 x 3/4"
2	503-1170	1	Hose, Rubber	20	130-2618	2	Bracket, Mounting
3	503-1012	1	Hose, Rubber	21	504-0003	1	Cock, Drain
4	502-0943	1	Adapter, Hose	22			Heater, Electrical - 2000 Watt
5	502-0942	3	Elbow, Hose - 90°		333-0158	1	120 VAC, 1 Phase
6	505-0455	2	Bushing, Reducer - Hex		333-0167	1	208 VAC, 1 Phase
7	331-0027	4	Clamp, Cable		333-0141	1	240 VAC, 1 Phase
10			Terminal		333-0147	1	480 VAC, 1 Phase
	332-0014	2	#10 (Used On White Leads)	23	307-1164	1	Contactor, Electric - 480 VAC
	332-0149	5	#8 (Used On White Leads)		812-0100	2	Screw, Machine - Round Head (#10 - 24 x 1/2")
	323-0957	4	Nut, Wire (Used On Black Leads)		850-0030	2	Washer, Lock - Spring (#10)
11	309-0304	1	Switch, Thermostatic		860-0011	2	Nut, Hex (#10 - 24)
12	505-0004	1	Nipple, Pipe - Close	24	502-0948	1	Adapter, Pipe
13	330-0016	1	Cover, Box - Outlet	25	148-0274	1	Clip, J
14	330-0005	1	Box, Outlet - Electrical	26	128-0108	1	Insulation, Hose
15	800-0006	4	Screw, Cap - Hex Head (1/4 - 20 x 7/8")	27	812-0100	2	Screw, Machine - Round Head (#10 - 24 x 1/2")
16	862-0001	4	Nut, Hex (1/4 - 20)	28	850-0030	2	Washer, Lock (#10)
17	850-0040	4	Washer, Lock - Spring (1/4)	29	860-0011	2	Nut, Hex (#10 - 24)
18	526-0018	4	Washer, Flat (1/4)				

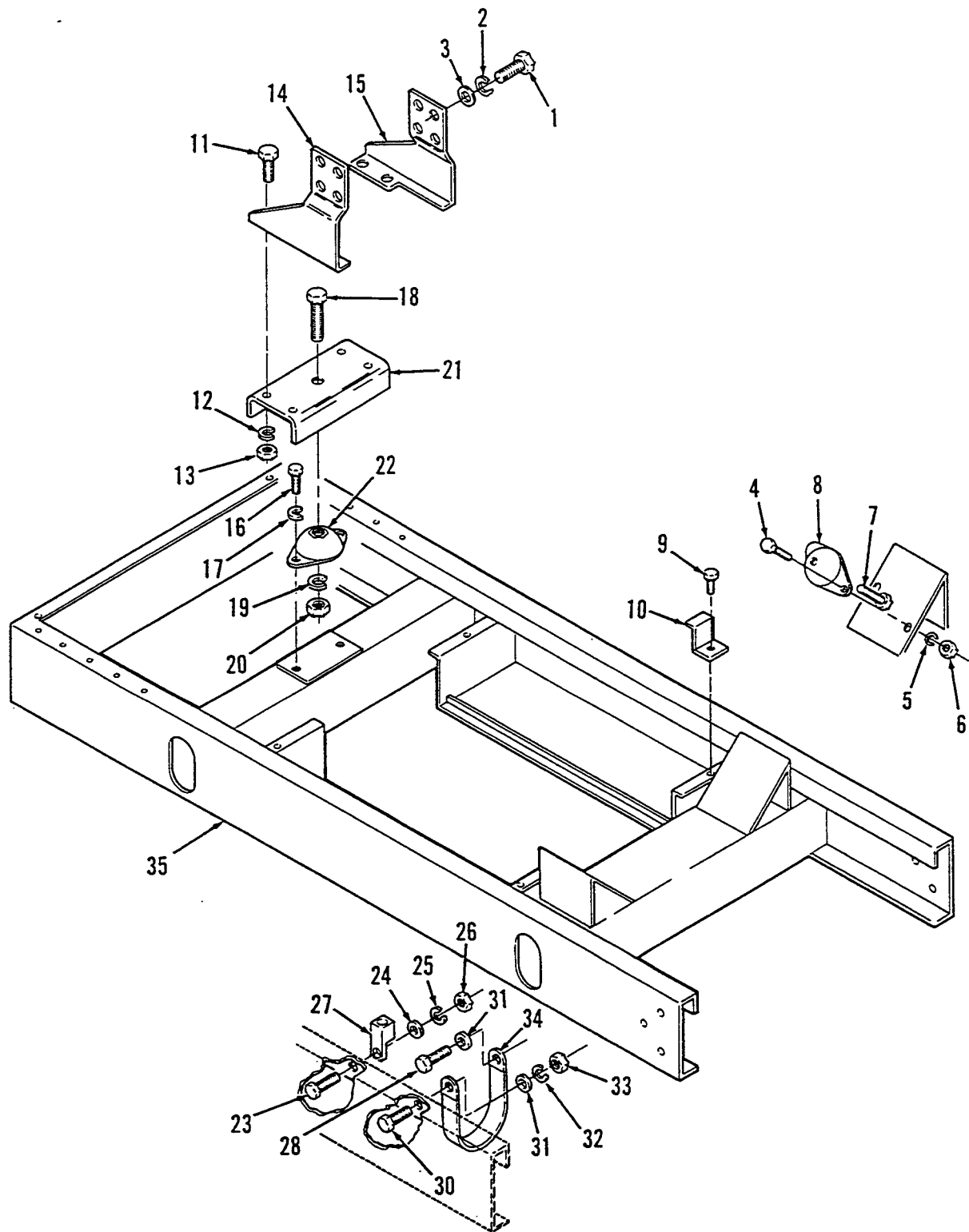
Engine Coolant Heater (Remote Radiator Set)



Engine Coolant Heater (Remote Radiator Set)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Heater, Electrical - 2000 Watt	17	821-0029	4	Screw, Lock (3/8 - 16 x 3/4")
	333-0158	1	120 VAC, 1 Phase	18	800-0006	4	Screw, Cap - Hex Head (1/4 - 20 x 8 3/4")
	333-0167	1	208 VAC, 1 Phase				
	333-0141	1	240 VAC, 1 Phase	19	526-0018	4	Washer, Flat (1/4)
	333-0147	1	480 VAC, 1 Phase	20	850-0040	4	Washer, Lock (1/4)
2	128-0108	1	Insulation, Hose (3/4 x 54")	21	862-0001	4	Nut, Hex (1/4 - 20)
3	148-0274	1	Clip, J	22	503-0354	2	Clamp, Hose
4	503-1169	1	Hose, Rubber (5/8 x 39")	23	502-0948	1	Adapter, Pipe
5	502-0942	2	Elbow, Hose - 90°	24	812-0100	2	Screw, Machine - Round Head (#10 - 24 x 1/2")
6	331-0027	2	Clamp, Cable				
7	130-2906	1	Tube, Heater - Water	25	850-0030	2	Washer, Lock (#10)
8	503-1380-01	1	Hose, Radiator (2 3/8 x 4")	26	860-0011	2	Nut, Hex (#10 - 24)
9	502-0943	1	Connector, Hose (Beaded)	27	505-0455	2	Bushing, Reducer
10	503-0183	4	Clamp, Hose	28	504-0003	1	Valve, Drain
11	503-1168	1	Hose, Rubber (5/8 x 25")	29	505-0004	1	Nipple, Close
12	330-0005	1	Box, Outlet - Electrical	30	309-0304	1	Switch, Thermostatic
13	330-0004	1	Cover, Box - Outlet	31	870-0281	2	Nut, Lock (3/8 - 16)
14	307-1164	1	Contactor, Electric - 480 VAC	32	130-2850	1	Bracket, Mounting - Heater
15	332-0149	1	Terminal (#8) (Used on White Leads)	33	130-2851	1	Bracket, Mounting - Heater
				34	323-0957	1	Nut, Wire (Used on Black Leads)
16	332-0941	10	Tie, Cable				

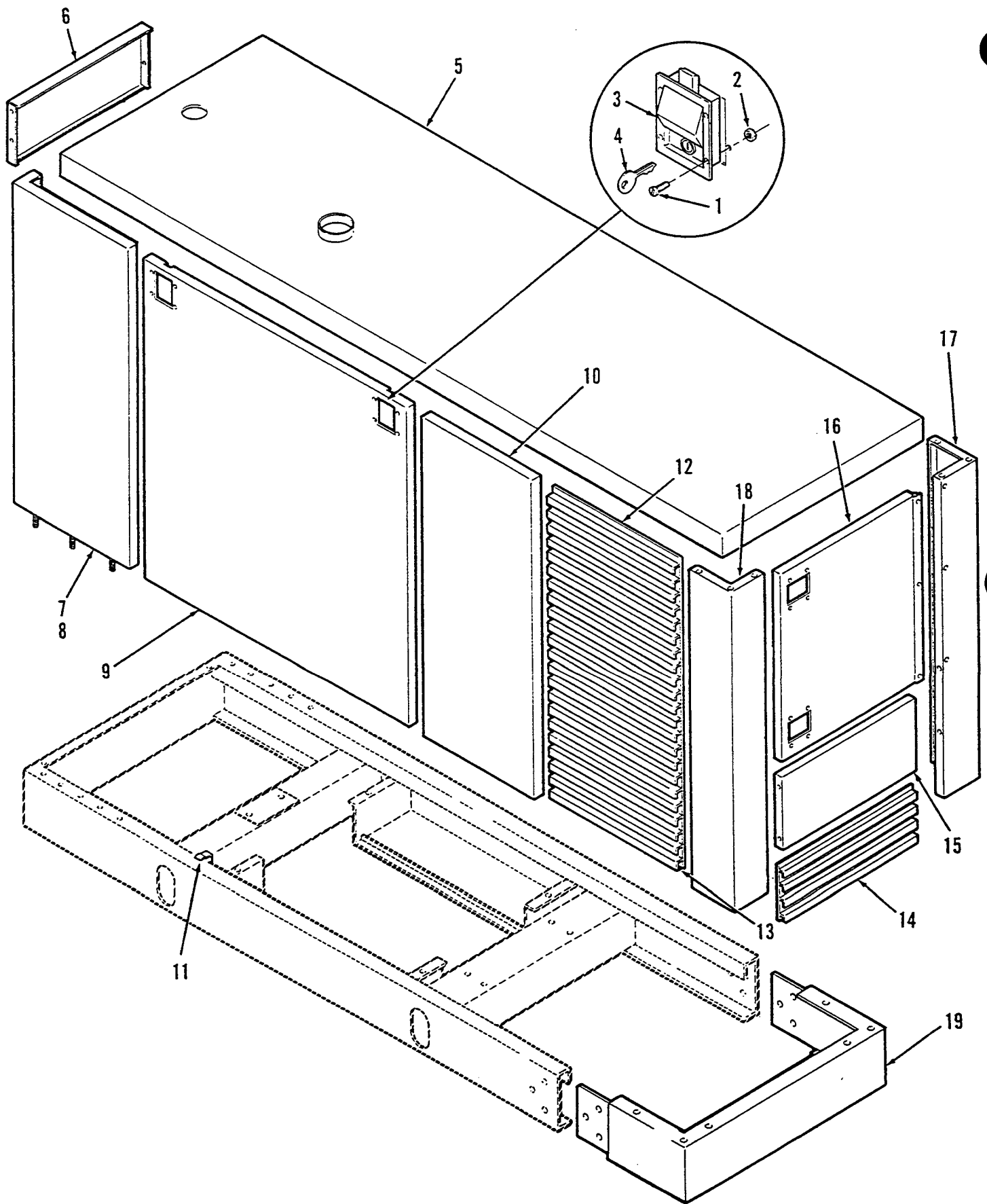
Chassis



Chassis

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-2112	8	Screw, Cap - Hex Head (M12 x 1.75 x 30mm)	17	850-0060	2	Washer, Lock - Spring (1/2)
2	850-2012	8	Washer, Lock - Spring (M12)	18	800-0153	1	Screw, Cap - Hex Head (3/4 - 10 x 1-1/2")
3	856-0013	2	Washer, Lock - EIT (1/2)	19	850-0079	1	Washer, Lock - Spring (3/4)
4	800-0091	4	Screw, Cap - Hex Head (1/2 - 13 x 1-1/4")	20	862-0008	1	Nut, Hex (3/4 - 10)
5	850-0060	4	Washer, Lock - Spring (1/2)	21	403-2323	1	Brace, Mounting - Engine
6	862-0016	4	Nut, Hex (1/2 - 13)	22	402-0030	1	Mount, Vibration
7	800-0520	2	Screw, Cap - Hex Head (3/4 - 10 x 1")	23	800-0028	1	Screw, Cap - Hex Head (5/16 - 18 x 1")
8	402-0568	2	Mount, Vibration	24	856-0008	1	Washer, Lock - EIT (5/16)
9	800-0048	4	Screw, Cap - Hex Head (3/8 - 16 x 3/4")	25	850-0045	1	Washer, Lock - Spring (5/16)
10	416-0850	4	Bracket, Holddown - Battery	26	862-0015	1	Nut, Hex (5/16 - 18)
11	800-0091	4	Screw, Cap - Hex Head (1/2 - 13 x 1-1/4")	27	332-1473	1	Terminal, Lug
12	850-0060	4	Washer, Lock - Spring (1/2)	28	800-2111	1	Screw, Cap - Hex Head (M12 x 1.75 x 25mm)
13	862-0010	4	Nut, Hex (1/2 - 13)	30	800-0090	1	Screw, Cap - Hex Head (1/2 - 13 x 1")
14	403-2301	1	Bracket, Mounting - Engine	31	856-0013	2	Washer, Lock - EIT (1/2)
15	403-2302	1	Bracket, Mounting - Engine	32	850-0060	1	Washer, Lock - Spring (1/2)
16	800-0090	2	Screw, Cap - Hex Head (1/2 - 13 x 1")	33	862-0016	1	Nut, Hex (1/2 - 13)
				34	337-0090	1	Strap, Electrical - Ground
				35	403-2293	1	Chassis

Set Housing

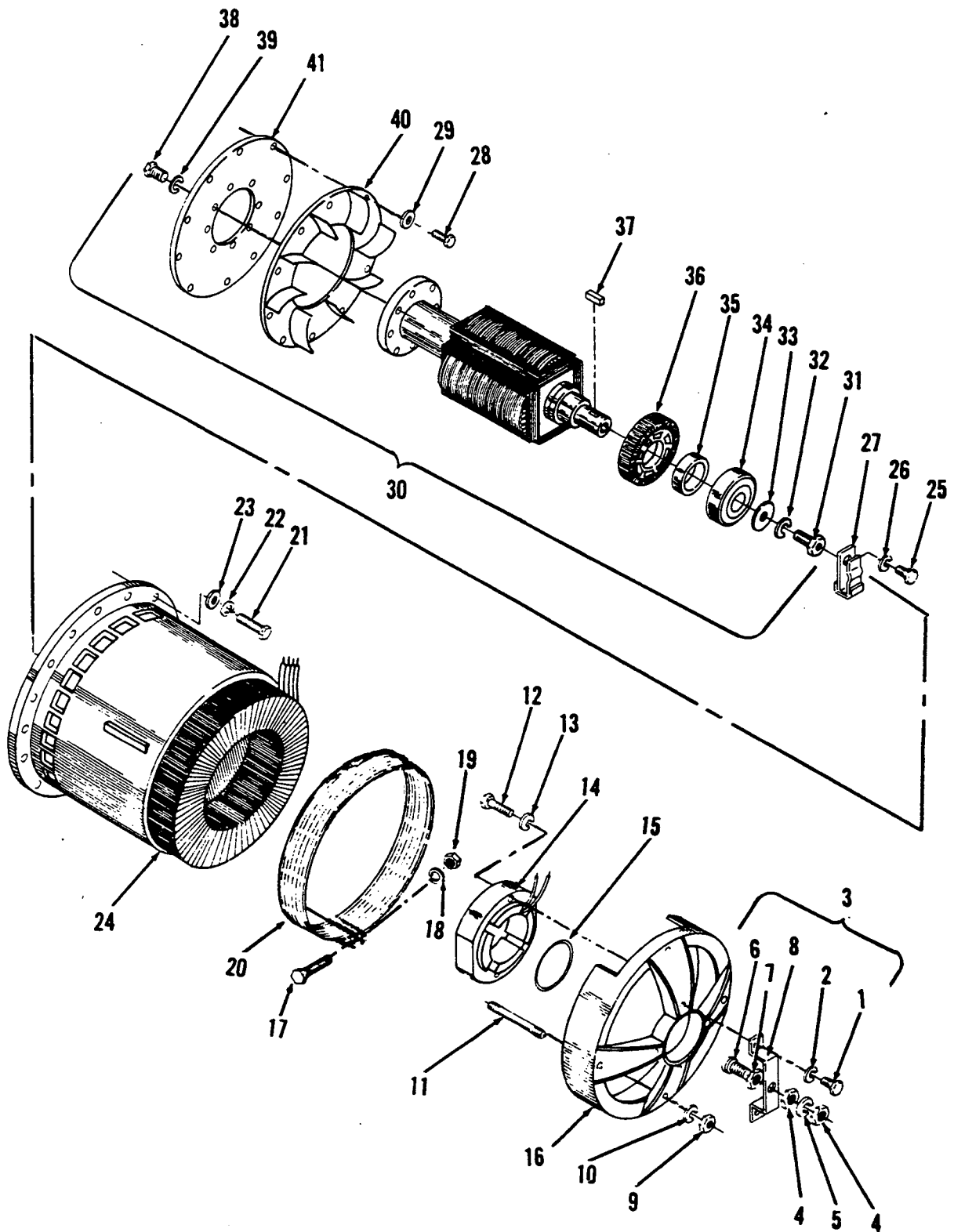


Set Housing

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	815-0607	24	Screw, Machine - Oval Head (#8 - 32 x 3/8")	13	405-3368	2	Bracket, Support - Grille
2	870-0235	24	Nut, Lock - Hex (#8 - 32)		821-0014	4	Screw, Self-Lock - Hex Wash Head (5/16 - 18 x 1/2")
3	406-0576	4	Latch, Door (Includes Key)		870-0257	4	Nut, Lock - Hex (5/16 - 18)
4	406-0577	1	Key, Latch	14	405-3357	1	Grille, Housing - Rear
5	405-3367	1	Panel, Top		821-0014	4	Screw, Self-Lock - Hex Wash Head (5/16 - 18 x 1/2")
	821-0029	14	Screw, Self-Locking - Hex Wash Head (3/8 - 16 x 3/4")		870-0257	4	Nut, Lock - Hex (5/16 - 18)
	870-0281	14	Nut, Lock - Hex (3/8 - 16)	15	405-3353	1	Panel, Housing - Rear
6			Panel, Housing - Front		821-0014	4	Screw, Self-Lock - Hex Wash Head (5/16 - 18 x 1/2")
	405-3377-03	1	Standard Cooling System		870-0257	4	Nut, Lock - Hex (5/16 - 18)
	821-0010	4	Screw, Lock - Hex Washer Head (1/4 - 20 x 1/2")	16	405-3361	1	Door, Access - Control
	870-0212	4	Nut, Lock - Hex (1/4 - 20)		819-1083	3	Screw, Mach - Pan Head, (1/4 - 20 x 7/16")
7	405-3349	1	Panel, Housing - Side/Front	17	405-3347	1	Panel, Housing - Rear Post
	870-0281	4	Nut, Lock - Hex (3/8 - 16)		821-0029	3	Screw, Self-Lock - Hex Wash Head (3/8 - 16 x 3/4")
8	405-3350	1	Panel, Housing - Side/Front (Not Illustrated)		870-0281	3	Nut, Lock - Hex (3/8 - 16)
	870-0281	4	Nut, Lock - Hex (3/8 - 16)	18	405-3375	1	Panel, Housing - Rear Post
9	405-3352	2	Door, Access - Engine (Does NOT Include Latches)		821-0029	3	Screw, Self-Lock - Hex Wash Head (3/8 - 16 x 3/4")
10	405-3373	2	Panel, Housing - Side		870-0281	3	Nut, Lock - Hex (3/8 - 16)
11	406-0574	8	Pivot, Hinge - Door/Panel	19	403-2313-02	1	Base, Skid - Rear
	821-0010	8	Screw, Self-Locking - Hex Wash Head (1/4 - 20 x 1/2")		800-0090	6	Screw, Cap - Hex Head (1/2 - 13 x 1")
	870-0212	8	Nut, Lock - Hex (1/4 - 20)		850-0060	6	Washer, Lock - Spring (1/2)
12	405-3358	2	Grille, Housing - Side		862-0016	6	Nut, Hex (1/2 - 13)
	821-0014	4	Screw, Self-Lock - Hex Wash Head (5/16 - 18 x 1/2")				

Note: Heat Shields used with Housing are illustrated in the Exhaust System.

Generator

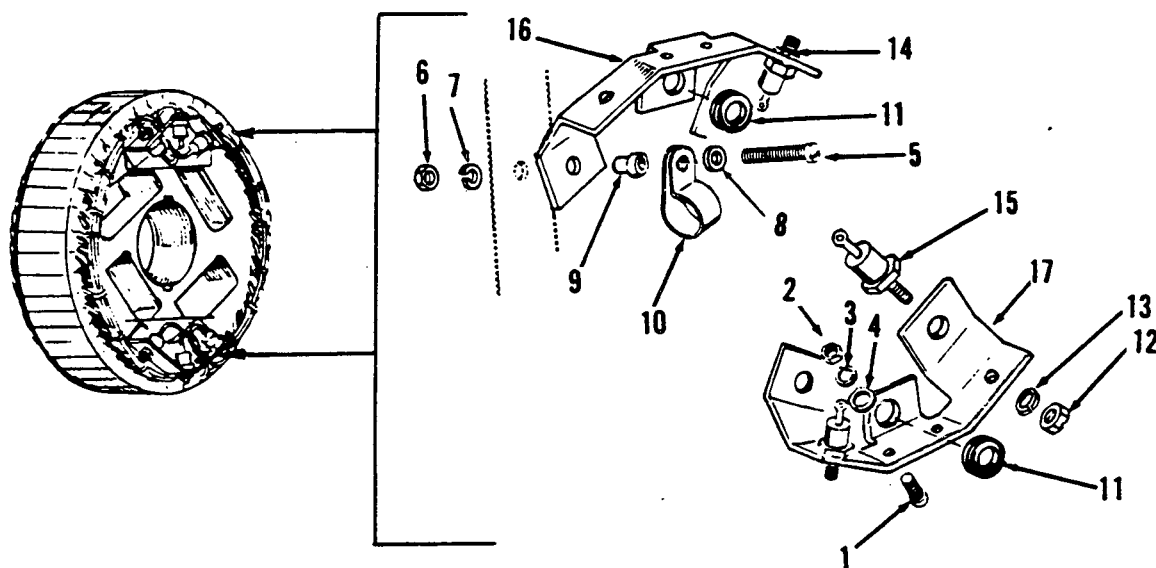


Generator

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4 - 20 x 1/2")		220-1778	1	Code 15 (Environmental Protected)
2	850-0040	2	Washer, Lock - Spring (1/4)		220-3226	1	Code 32R
3	150-1456	1	Contact Assembly, Overspeed (Includes Parts Marked *)		220-1990	1	Code 515
4	862-0001	2	*Nut, Hex (1/4 - 20)		220-2260	1	Code 515 (Environmental Protected)
5	853-0013	1	*Washer, Lock - ET (1/4)	25	800-0048	1	Screw, Cap - Hex Head (3/8 - 16 x 3/4")
6	150-0723	1	*Contact, Electrical	26	856-0010	1	Washer, Lock - Spring (3/8)
7	870-0250	1	*Nut, Insulator	27	150-0717	1	Switch, Overspeed
8	150-1356	1	*Bracket, Mounting - Contact	28	720-1075	8	Screw, Cap - Hex Head (M12 x 1.75 x 35mm)
9	862-0011	4	Nut, Hex (3/8 - 16)	29	740-1010	8	Washer, Flat (M12)
10	850-0050	4	Washer, Lock - Spring (3/8)	30			Rotor Assembly, Generator (Includes Parts Marked +)
11	520-0735	4	Stud		201-3271	1	Codes 6D, 9X, 32R, 15, 515
12	800-0009	4	Screw, Cap - Hex Head (1/4 - 20 x 1-1/2)		201-3368	1	Codes 15, 515 (Environmental Protected)
13	850-0040	4	Washer, Lock - Spring (1/4)	31	800-0513	1	+Screw, Cap - Hex Head (3/4 - 10 x 1-1/2")
14	220-2353	1	Standard	32	850-0079	1	+Washer, Lock - Spring (3/4)
	220-1774	1	Environmental Protected	33	526-0238	1	+Washer, Flat (3/4)
15	509-0125	1	Seal, O-Ring - Oil	34	510-0101	1	+Bearing, Ball
16	211-0185	1	Bell, End - Generator	35	232-2102	1	+Spacer, Sleeve
17	800-0008	2	Screw, Cap - Hex Head (1/4 - 20 x 1-1/4")	36			+Rotor Assembly, Exciter (See Separate Page For Components)
18	850-0040	2	Washer, Lock - Spring (1/4)		201-1739	1	Standard
19	862-0001	2	Nut, Hex (1/4 - 20)		201-1845	1	Environmental Protected
20	234-0368	1	Screen, Air - Generator	37	515-0145	1	+Key, Machine
21	800-2088	12	Screw, Cap - Hex Head (M10 x 1.5 x 35mm)	38	805-0033	8	+Bolt, Hex Head (5/8 - 11 x 1")
22	850-2010	12	Washer, Lock - Spring (M10)	39	526-0259	8	+Washer, Flat (11/16" ID x 1-3/8" OD x 7/64" THK)
23	740-1008	12	Washer, Flat (M10)	40	205-0095	1	+Fan, Generator
24			Stator, Generator	41	232-2037	1	+Disc, Drive - Generator
	220-2640	1	Code 6D				
	220-1613	1	Code 9X				
	220-1518	1	Code 15				

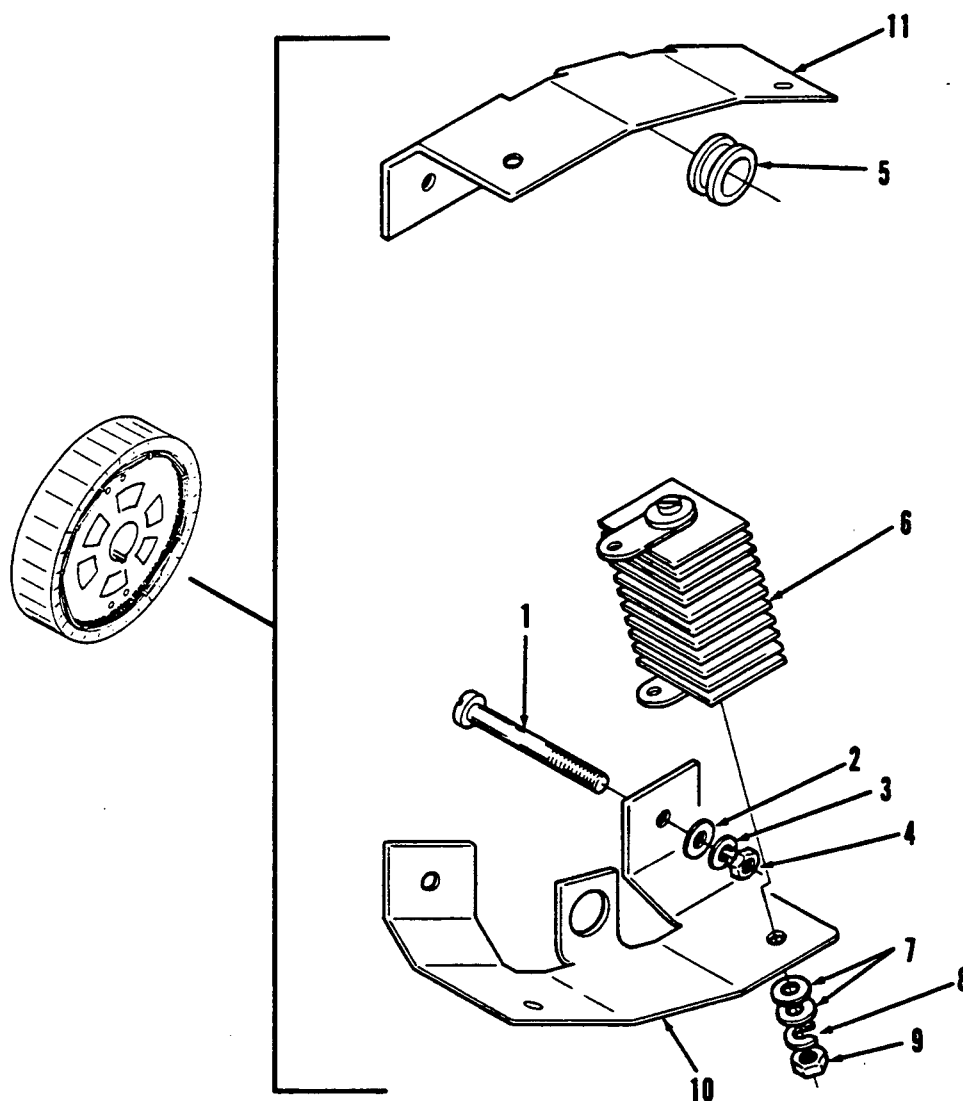
* Parts included in 150-1456 Overspeed Contact Assy.
+ Parts included in Generator Rotor Assembly.

Exciter Rotor



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	201-1739	1	Rotor Assembly - Exciter Standard	9	508-0187	4	Spacer, Stepped
	201-1845	1	Environmental Protected	10	332-0050	2	Clamp, Loop
1	813-0100	2	Screw, Machine - Round Head (#10 - 32 x 1/2")	11	508-0093	2	Grommet, Rubber
2	870-0053	2	Nut, Hex (#10 - 32)	12	870-0053	6	Nut, Hex (#10 - 32)
3	850-0030	2	Washer, Lock - Spring (#10)	13	850-0030	6	Washer, Lock - Spring (#10)
4	526-0008	2	Washer, Flat (13/64" ID x 7/16" OD x 1/32" THK)	14			Diode, Rectifier - Positive (CR1, CR2, CR3)
5	813-0110	4	Screw, Machine - Round Head (#10 - 32 x 2")		358-0097	3	Standard
6	870-0053	4	Nut, Hex (#10 - 32)		358-0044	3	Environmental Protected
7	850-0030	4	Washer, Lock - Spring (#10)	15			Diode, Rectifier - Negative (CR4, CR5, CR6)
8	526-0009	4	Washer, Flat (7/32" ID x 1/2" OD x 1/16" THK)		358-0096	3	Standard
					358-0043	3	Environmental Protected
				16	363-0054	1	Sink, Heat - Positive Diodes
				17	363-0055	1	Sink, Heat - Negative Diodes

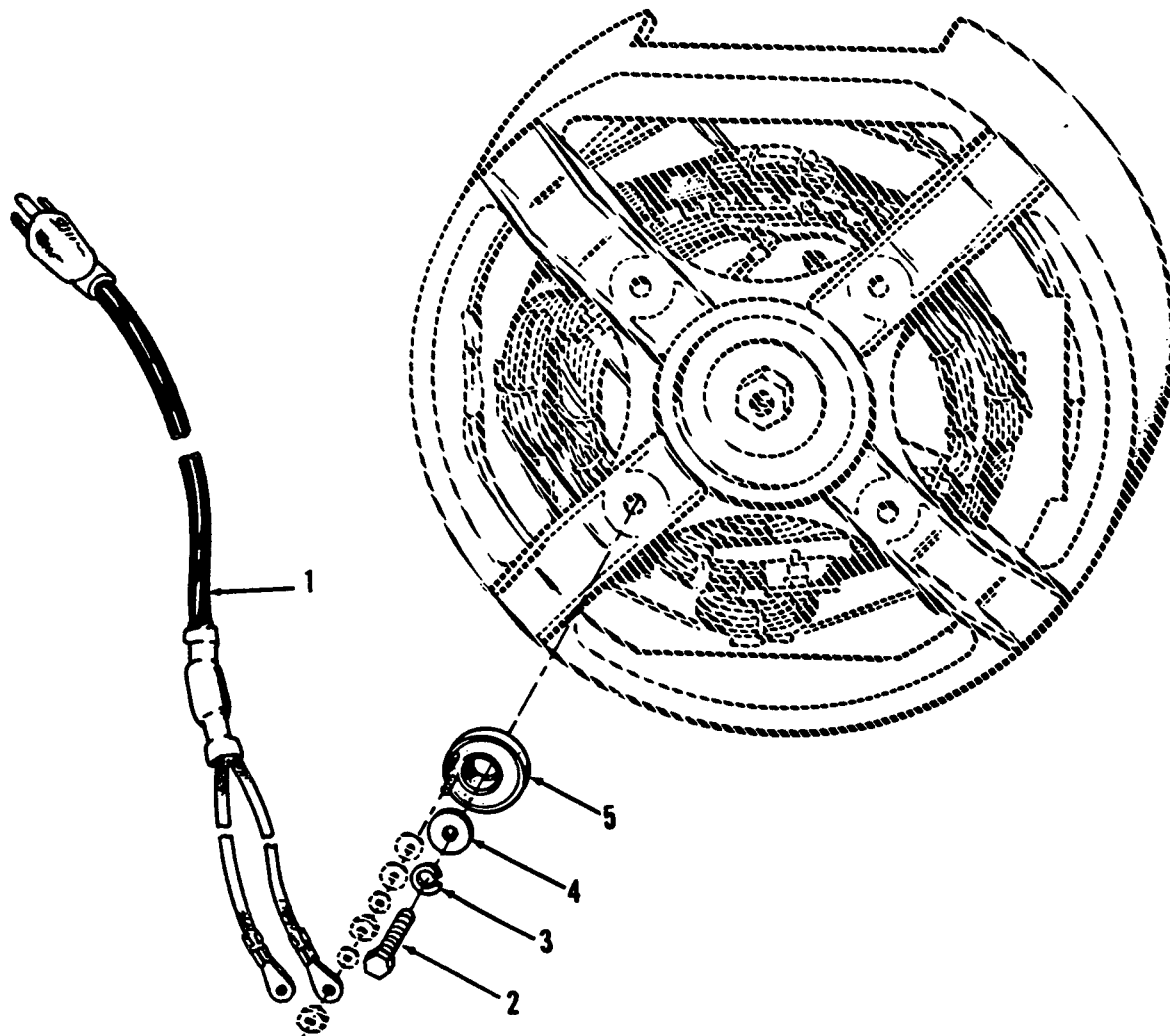
Voltage Suppressor



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	813-0112	4	Screw, Machine - Round Head (#10 - 32 x 2-1/2")
2	526-0140	4	Washer, Flat (7/32" ID x 3/8" OD x 3/64" THK)
3	850-0030	4	Washer, Lock - Spring (#10)
4	870-0053	4	Nut, Hex (#10 - 32)
5	508-0093	2	Grommet, Rubber
6	305-0526	1	Suppressor Set, Voltage (Matched Pair)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
7	526-0140	4	Washer, Flat (7/32" ID x 3/8" OD x 3/64" THK)
8	850-0030	4	Washer, Lock - Spring (#10)
9	870-0053	4	Nut, Hex (#10 - 32)
10	363-0054	1	Sink, Heat - Positive
11	363-0055	1	Sink, Heat - Negative

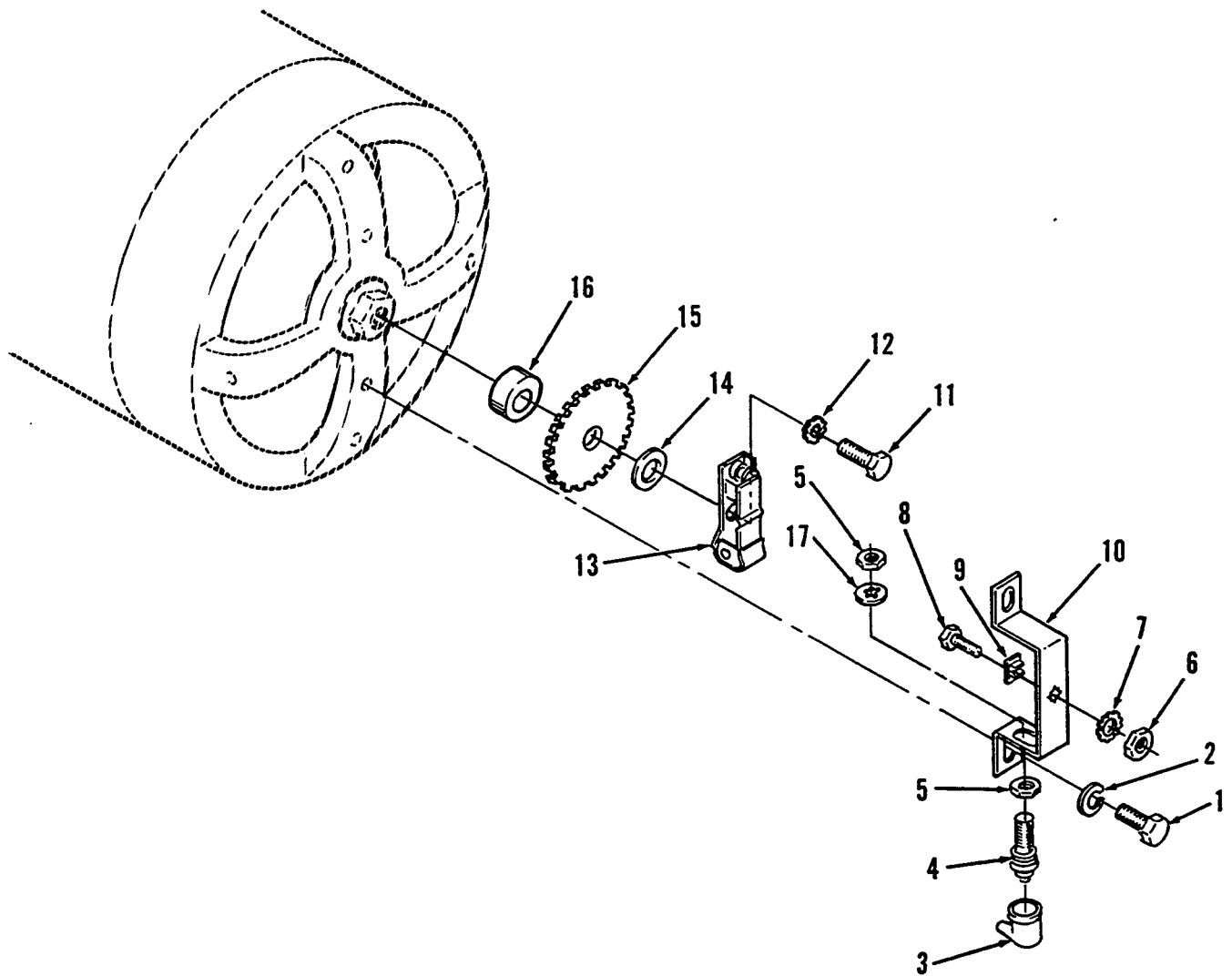
Generator Heater



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Cable Assembly, Electric (Includes Thermostat)
	335-0146	1	120 VAC
	335-0147	1	240 VAC
2	800-0004	1	Screw, Cap - Hex Head (1/4 - 20 x 5/8")

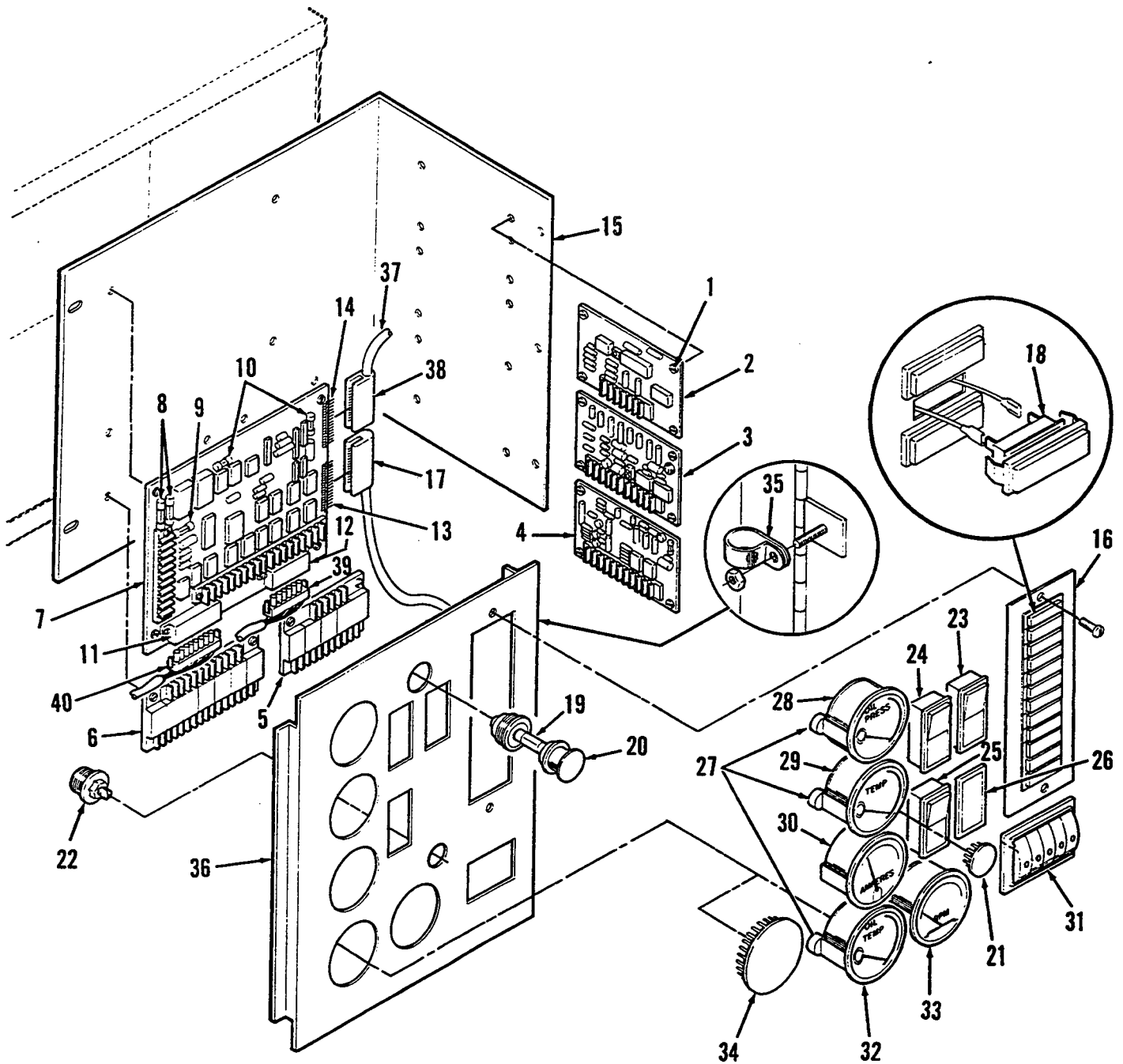
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
3	850-0038	1	Washer, Lock - Spring (1/4)
4	526-0158	1	Washer, Flat (17/64" ID x 1" OD x 1/8" THK)
5			Heater, Electrical
	333-0059	1	120 VAC, 125 Watt
	333-0192	1	240 VAC, 200 Watt

Magnetic Pickup



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4 - 20 x 1/3")	10	301-9402	1	Bracket, Mounting
2	850-0040	2	Washer, Lock - Spring (1/4")	11	800-0053	1	Screw, Cap - Hex Head (3/8 - 16 x 1-3/4")
3	150-1410	1	Cap, Insulator	12	856-0010	1	Washer, Lock - EIT (3/8)
4	150-1406	1	Sensor, Speed - Magnetic	13	150-0717	1	Switch, Overspeed
5	868-0011	2	Nut, Hex - Jam (3/4 - 16)	14	526-0077	1	Washer, Flat (13/32" ID x 1-1/4" OD x 1/4" THK)
6	862-0001	2	Nut, Hex (1/4 - 20)	15	150-1557	1	Wheel, Sensor - Speed
7	853-0013	1	Washer, Lock - ET (1/4)	16	370-4011	1	Spacer, Sleeve
8	150-0723	1	Contact, Electrical	17	854-0031	1	Washer, Lock - IT (3/4)
9	870-0250	1	Nut, Insulator				

Engine Control

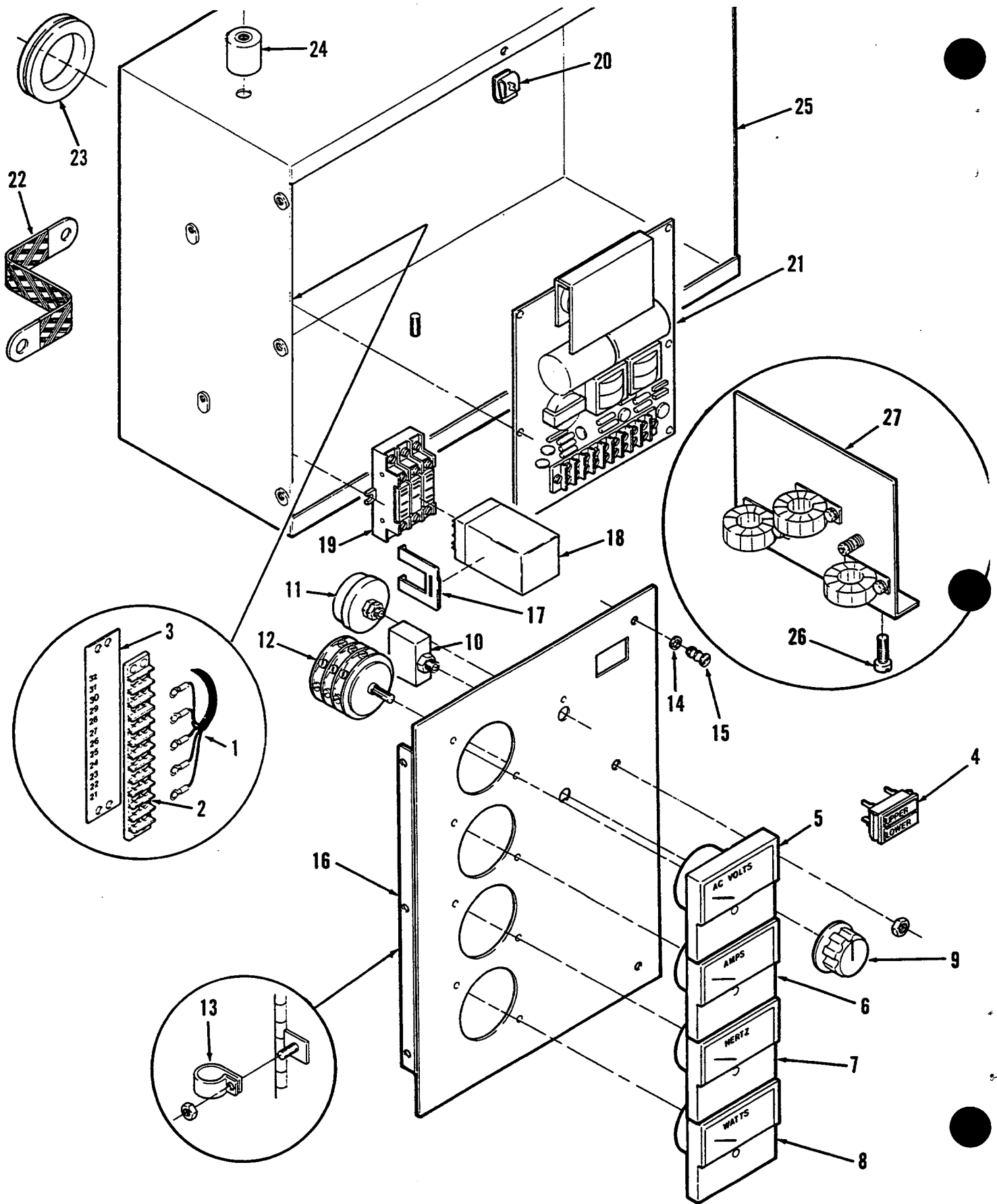


Engine Control

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	815-0544	24	Screw, Machine - Round Head IT Washer (#6 - 32 x 1/2")		815-0385	2	Screw, Machine - Round Head (#6 - 32 x 1/2")
2	300-2899	1	Board Assy, Printed Circuit - Time Delay, Start/Stop (A15)		870-0183	2	Nut, Self-Locking - ET Hex Washer Head (#6 - 32)
3			Board Assy, Printed Circuit - Magnetic Pickup (A16)	17	323-1310	1	Housing, Conn - 13 pin (J3)
	300-2903	1	Standard (Fixed Sensitivity)		323-1302	13	Contact, Pin
	300-2904	1	Precision (Adj Sensitivity)	18	322-0369-02	1	Lamp, Incandescent - 1/3 Watt 28 Volts DC
4	300-2906	1	Board Assy, Printed Circuit - Over/Under Volt Sensor (A17)	19	322-0017	1	Lamp, Incandescent - 28 Volts DC (DS11)
5	300-2856	1	Board Assy, Printed Circuit - Relay Assembly - (A13)	20	322-0361	1	Holder, Lamp
6	300-2863	1	Board Assy, Printed Circuit - Relay Assembly - (A14)	21	517-0131	1	Plug, Button
7			Board Assy, Printed Circuit - Engine Monitor - (A11)	22	151-0402	1	Potentiometer - Speed Control (R11)
			(Includes Fuses & Connectors)	23	308-0785	1	Switch, Push - Reset/Panel Lamp (S11)
	300-2808	1	2 Light Control	24	308-0784	1	Switch, Push - Run/Stop/Remote (S12)
	300-2810	1	7 Light Control	26	301-6257	1	Cover, Hole - Switch
	300-2812	1	12 Light Control	27	193-0250	3	Resistor, Gauge (R12)
8	321-0270	2	Fuse, Cartridge - 20 Amp (F1, F2)	28	193-0352	1	Gauge, Pressure - Oil (M11)
9	321-0231	1	Fuse, Cartridge - 15 Amp (F3)	29	193-0351	1	Gauge, Temp - Water (M12)
10	321-0094	2	Fuse, Cartridge - 5 Amp (F4, F5)	30	302-1790	1	Meter, Ampere - DC (M13)
11	323-1305	1	Connector - 8 Pin (P1)	31	302-0885	1	Meter, Running Time (M14)
12	323-1303	1	Connector - 6 Pin (P2)	32	193-0330	1	Gauge, Temp - Oil (M15)
13	323-1309	1	Connector - 13 Pin (P3)	33	302-1715	1	Meter, Tach (M16)
14	323-1307	1	Connector - 12 Pin (P4)	34	517-0221	1	Plug, Button
15	301-8851	1	Bracket, Mounting - Printed Circuit Board Assembly	35	322-0052	1	Clamp, Loop
	821-0004	4	Screw, Self-Locking - Hex Washer Head (#10 - 32 x 5/16")		870-0131	1	Nut, Self-Locking - ET Hex Washer Head (#10 - 32)
16			Module, Indicator - Fault (A12) (Includes Connector Housing)	36			Door, Control
	322-0358-02	1	2 Light Control		301-9055-01	1	5 Gauge Holes
	322-0359-02	1	7 Light Control		301-9055-02	1	3 Gauge Holes
	322-0360-02	1	12 Light Control	37	338-1817	1	Harness, Wiring - DC (Includes Connector Housing)
				38	323-1308	1	Housing, Conn - 12 Pin (J4)
					323-1302	12	Contact, Pin
				39	323-1304	1	*Housing, Conn - 6 Pin (J2)
					323-1200	6	* Contact, Pin
				40	323-1306	1	*Housing, Conn - 8 Pin (J1)
					323-1200	8	* Contact, Pin

* Parts included in Control To Engine Wiring Harness.

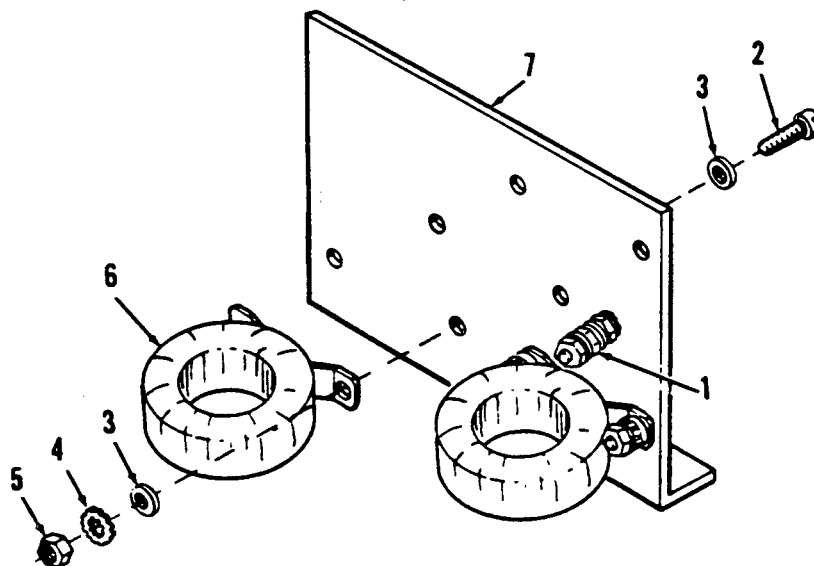
Generator Control



Generator Control

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Harness, Wiring - AC (Includes Terminal Block)	15	406-0333	2	Stud, Fastener - Turnbutton Door, Control
	338-1818	1	Controls With Meters	16			4 Meter Holes
	338-1853	1	Controls Without Meters		301-9054-01	1	3 Meter Holes
	812-0065	2	Screw, Machine - Round Head (#6 - 32 x 5/8")		301-9054-02	1	No Meter Holes
					301-9054-03	1	Screw, Self-Locking - Hex Washer Hd (#10 - 32 x 5/16")
2	332-0607	1	Block, Terminal (TB1)		821-0004	3	
3	332-2723	1	Strip, Marker	17	307-1987	2	Clip, Retaining - Relay
4	322-0363	1	Light, Indicator - Dual (DS21, DS22)	18	307-1056	1	Relay, 24 VDC
5	302-1148	1	Meter, Volt - AC (M21)	19	323-0804	1	Socket, Relay
6			Meter, Ampere - M22		815-0544	2	Screw, Machine - IT Round Washer Hd (#6 - 32 x 1/2")
			Single Scale	20	406-0332	2	Receptacle, Turnbutton Fastener
	302-1176	1	0-200 (Voltage Code 9X)				Regulator, Voltage (VR21)
			Dual Scale	21	300-2880	1	Screw, Machine - IT Round Washer Hd (#6 - 32 x 1/2")
	302-1724	1	0-250/500 Amp (Voltage Code 515)		815-0544	6	
	302-1725	1	0-375/550 Amp (Voltage Code 15)	22	337-0049	1	Strap, Electrical (Ground)
7	302-1720	1	Meter, Frequency (M23)		800-0024	1	Screw, Cap - Hex Head (5/16 - 18 x 1/2")
8		1	Meter, Watt (M24) (See Separate Page For Components)		856-0008	1	Washer, Lock - EIT (5/16)
9	303-0032	1	Knob	23	508-0051	1	Grommet
10		1	Breaker, Circuit (CB21)	24	402-0527	4	Mount, Vibration
	320-1121	1	Without Auxiliary Contacts		800-0045	4	Screw, Cap - Hex Head (5/16 - 18 x 3/8")
	320-1438	1	With Auxiliary Contacts				Washer, Lock - Spring (5/16)
11	303-0261	1	Rheostat (R21)		850-0045	4	
12	308-0284	1	Switch, Rotary (S21)	25	301-8065	1	Box, Control
13	332-0052	1	Clamp, Loop	26	821-0010	2	Screw, Self-Locking - Hex Washer Hd (1/4 - 20 x 1/2")
	870-0131	1	Nut, Self-Locking - ET Hex Washer Head (#10 - 32)	27		1	Transformer Assembly - Current (See Separate Page For Components)
14	406-0334	2	Clip, Retaining - Turnbutton Fastener				

Current Transformer

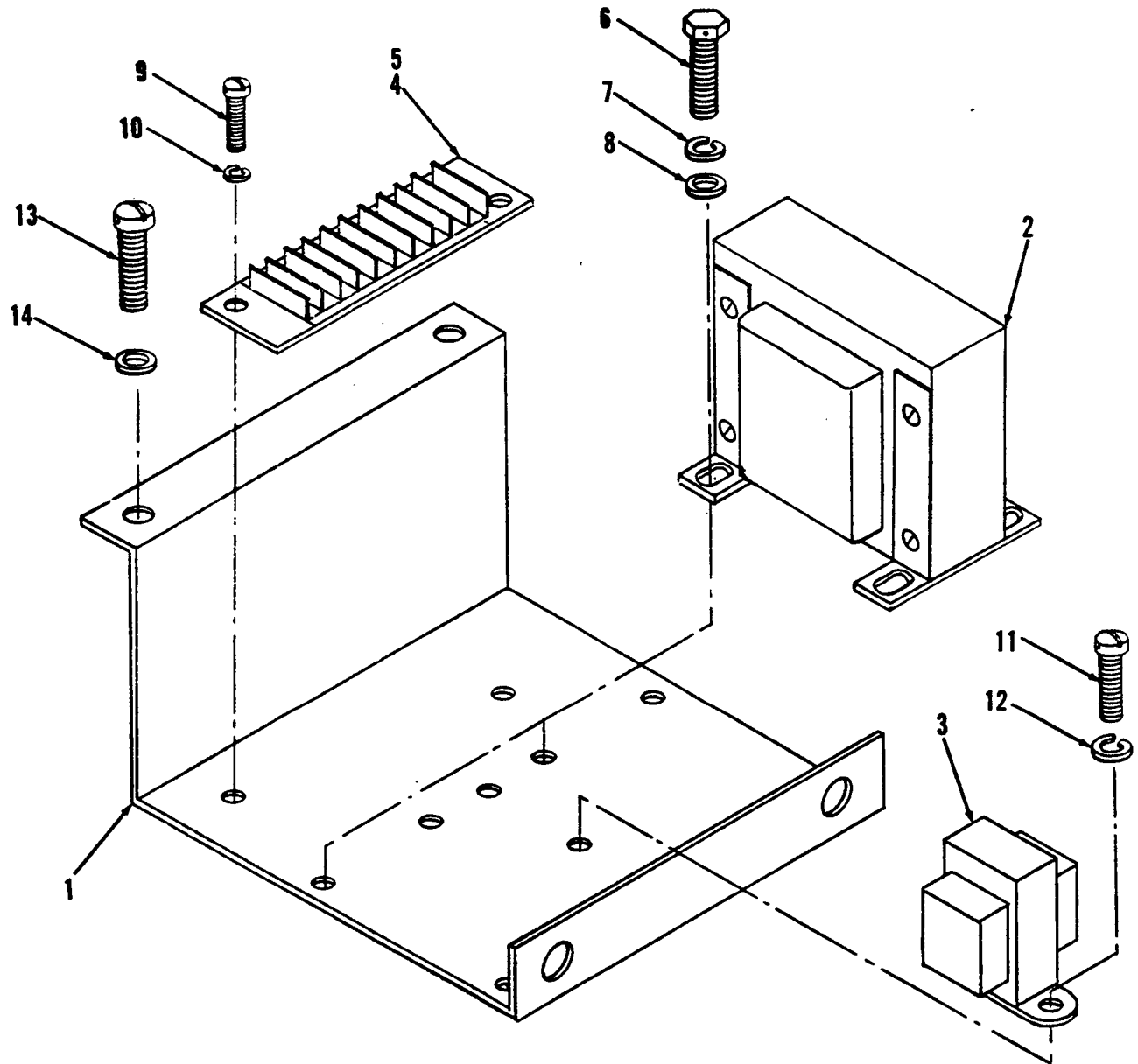


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Terminal Assembly, Ground (Includes Parts Marked *)
	815-0203	1	* Screw, Machine - Round Head * Brass (#10 - 32 x 7/8")
	871-0010	3	* Nut, Hex - Brass (#10 - 32)
	856-0003	1	* Washer, Lock - EIT (#10)
	854-0010	2	* Washer, Lock - IT (#10)
	526-0049	2	* Washer, Flat - Brass (13/64" ID x 7/32" OD x 1/32" THK)
2	813-0100	6	Screw, Machine - Round Head (#10 - 32 x 1/2")

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
3	526-0008	6	Washer, Flat (13/64" ID x 7/16" OD x 1/32" THK)
4	856-0003	6	Washer, Lock - EIT (#10)
5	870-0053	6	Nut, Hex (#10 - 32)
6	302-0764	1	Bracket, Mounting - Transformer
7			Transformer, Current
	302-0865	3	Code 9X - Ratio 200/5
	302-0547	3	Code 515 - Ratio 500/5
	302-0471	3	Codes 6D, 15, 32R - Ratio 750/5

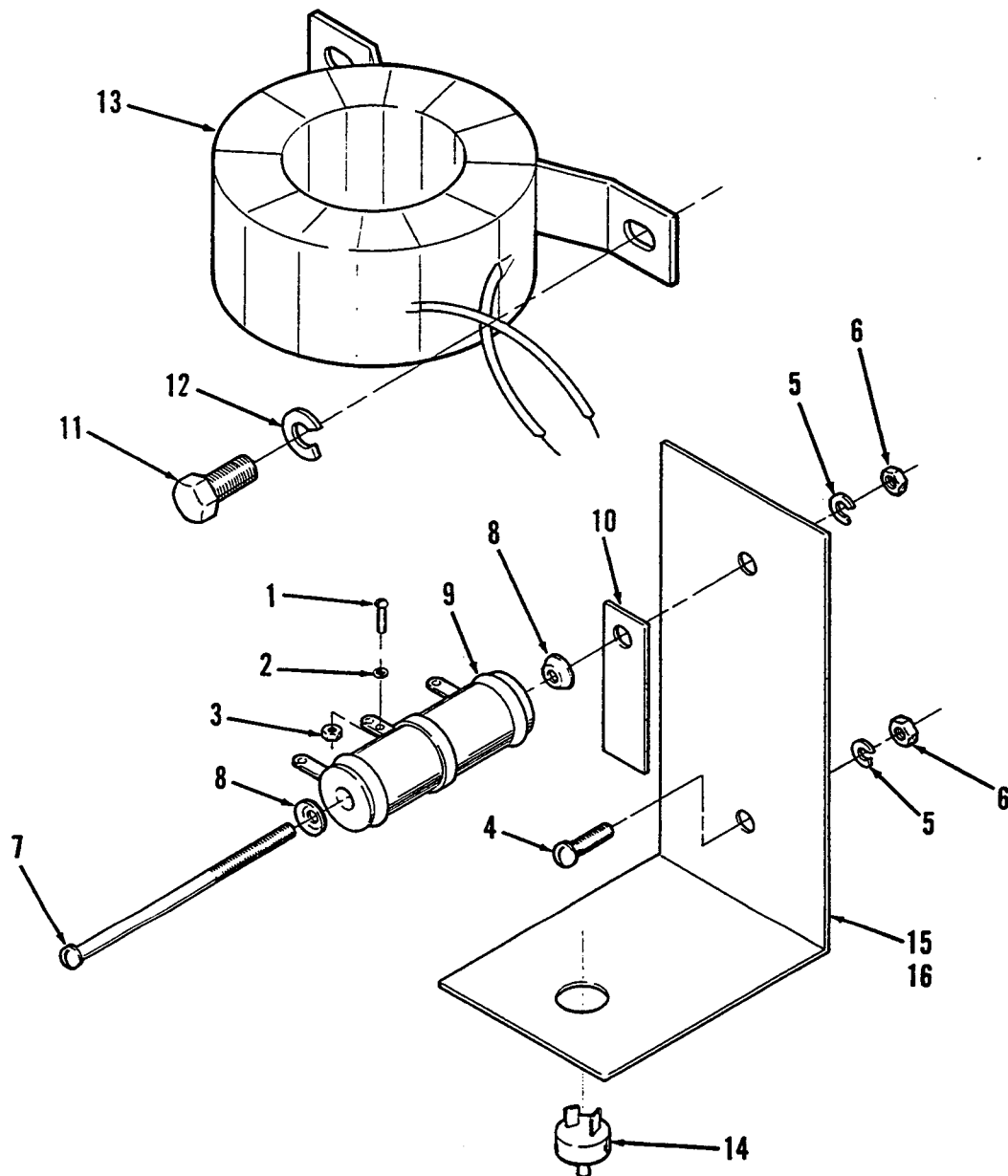
* Parts included in Ground Terminal Assembly.

**Current Transformer
(Voltage Code 6D)**



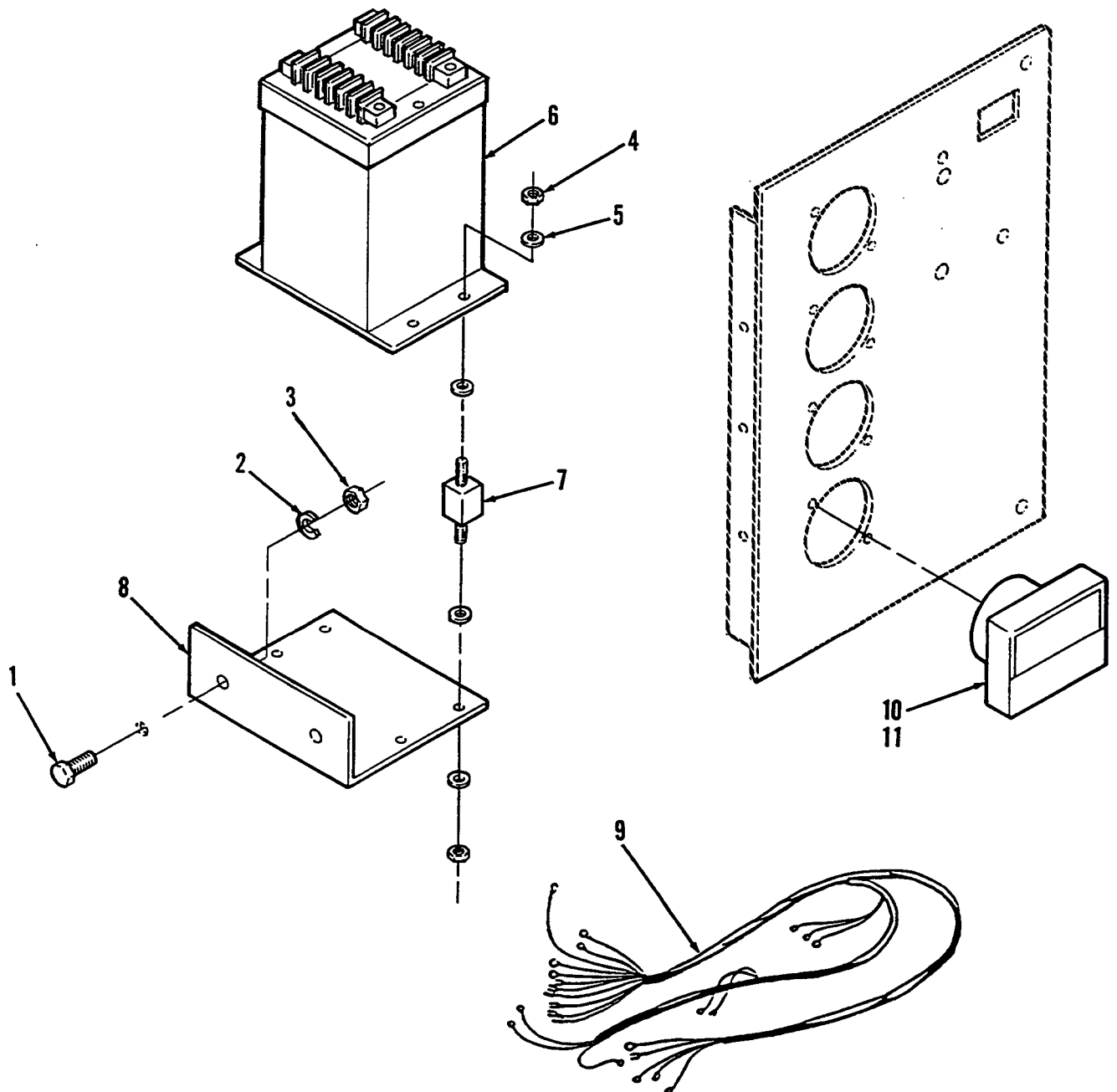
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	301-9540	1	Bracket, Mounting - Transformer	9	812-0077	2	Screw, Machine - Round Head (#8 - 32 x 3/8")
2	315-0636	2	Transformer, Current	10	850-0025	2	Washer, Lock (#8)
3	315-0635	1	Transformer, Current	11	812-0079	2	Screw, Machine - Round Head (#8 - 32 x 1/2")
4	332-2562	1	Block, Terminal	12	850-0025	2	Washer, Lock (#8)
5	332-2563	1	Strip, Marker	13	812-0156	4	Screw, Machine - Round Head (1/4 - 20 x 1-1/2")
6	800-0007	8	Screw, Cap - Hex Head (1/4 - 20 x 1")	14	850-0040	4	Washer, Lock (1/4)
7	850-0040	8	Washer, Lock (1/4)				
8	526-0018	8	Washer, Flat/(1/4)				

Cross Current Transformer



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	812-0061	3	Screw, Machine - Round Head (#6 - 32 x 3/8")	8	304-0014	2	Washer, Centering (7/32)
2	853-0003	6	Washer, Lock - ET (#6)	9	304-0282	1	Resistor, Current - Cross
3	860-0006	6	Nut, Machine - Hex (#6 - 32)	10	304-0292	1	Insulator, Resistor
4	813-0100	1	Screw, Machine - Round Head (#10 - 32 x 1/2")	11	800-0003	2	Screw, Cap - Hex Head (1/4 - 20 x 1/2)
5	850-0030	2	Washer, Lock (#10)	12	850-0040	2	Washer, Lock (1/4)
6	870-0053	2	Nut, Hex (#10 - 32)	13	302-0826	1	Transformer, Current - Cross
7	813-0113	1	Screw, Machine - Round Head (#10 - 32 x 2-3/4")	14	308-0069	1	Switch, Toggle
				15	301-9657	1	Bracket, Current - Cross
				16	98-2313	1	Decal

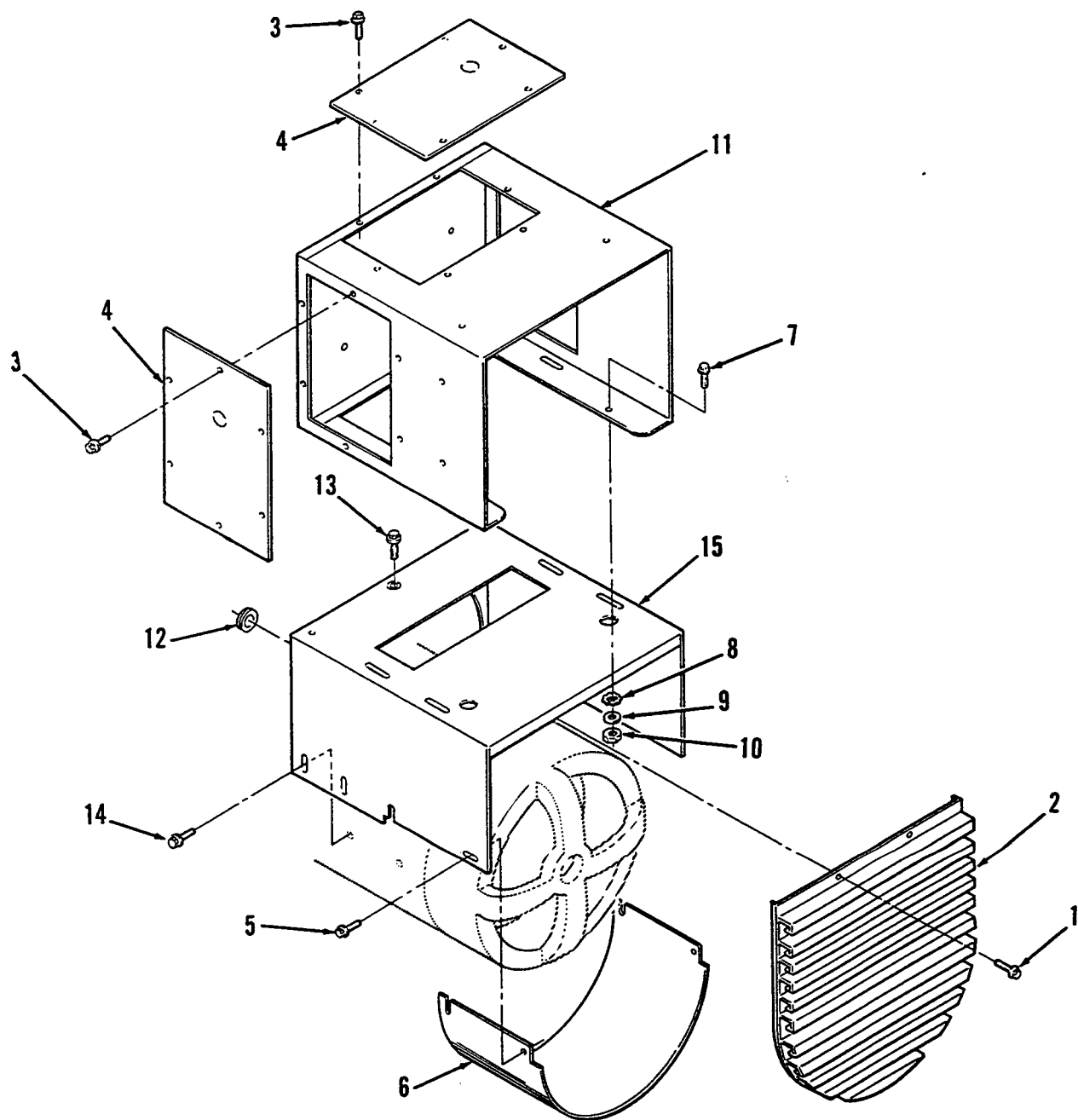
Wattmeter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0017	2	Screw, Lock (5/16 - 18 x 1/2")
2	850-0045	2	Washer, Lock (5/16)
3	862-0014	2	Nut, Hex (5/16 - 18)
4	860-0008	8	Nut, Hex (#8 - 32)
5	856-0002	16	Washer, Lock - EIT (#8)
6			Transducer, Watts
	302-1082	1	3 Phase, 60 Hertz
	302-1083	1	3 Phase, 50 Hertz

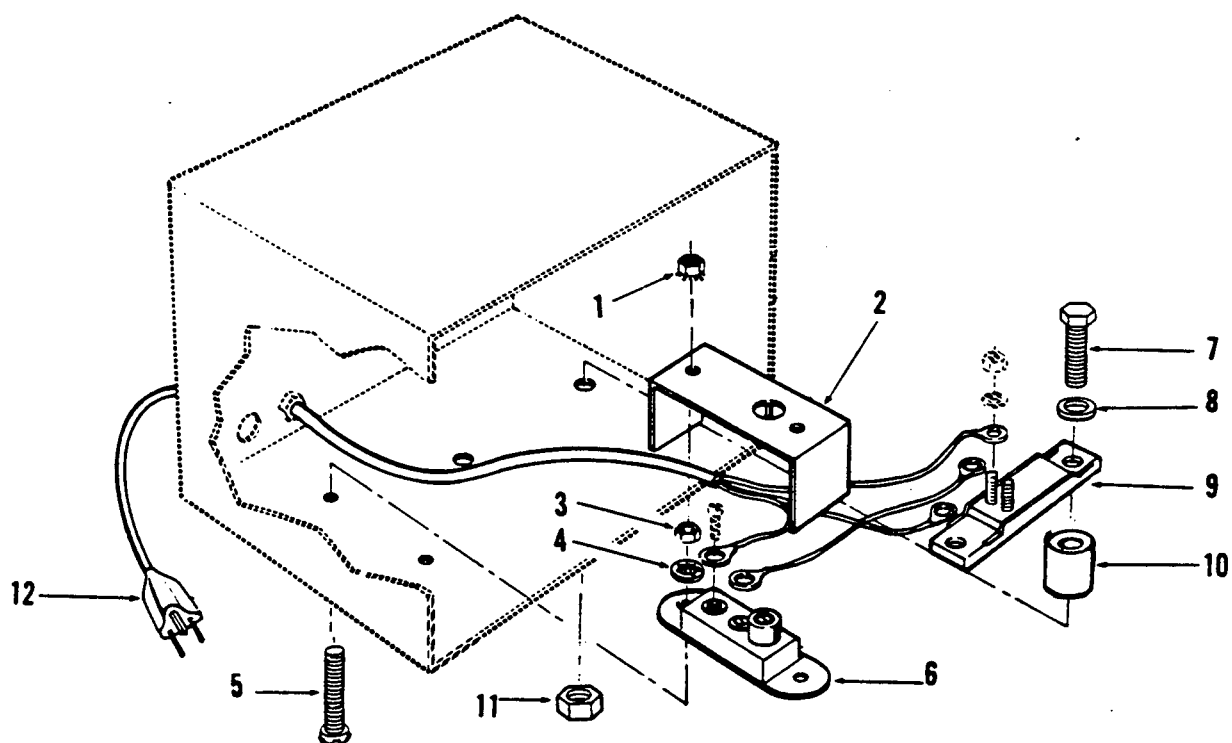
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
7	402-0354	4	Mount, Shock
8	301-6987	1	Bracket, Mounting - Watts Transducer
9	338-1936	1	Harness, Wiring - Watts Transducer
10	302-1722	1	Meter, Watt - DC
11	302-1721-06	1	Dial, Wattmeter

Control Housing



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0010	8	Screw, Self-Locking - Hex Washer Hd (1/4 - 20 x 1/2")	9	526-0018	5	Washer, Flat (17/64" ID x 5/8" OD x 1/16" THK)
2	234-0370	1	Grille, Air - Generator Inlet	10	870-0212	6	Nut, Hex (1/4 - 20)
3	815-0350	18	Screw, Tap - Hex Washer Head (#10 - 32 x 3/8")	11	301-3155	1	Housing, Box - Control Grommet
4	301-3156	3	Panel, Access	12	508-0203	1	Used Thru October 1984
5	821-0010	4	Screw, Self-Locking - Hex Washer Hd (1/4 - 20 x 1/2")		508-0051	1	Used Beginning November 1984
6	234-0361	1	Wrapper, Bell - End	13	821-0010	1	Screw, Self-Locking - Hex Washer Hd (1/4 - 20 x 1/2")
7	821-0018	6	Screw, Self-Locking - Hex Washer Hd (1/4 - 20 x 5/8")	14	821-0014	8	Screw, Self-Locking - Hex Washer Hd (5/16 - 18 x 1/2")
8	856-0006	1	Washer, Lock - EIT (1/4)	15	301-3154	1	Saddle, Box - Control

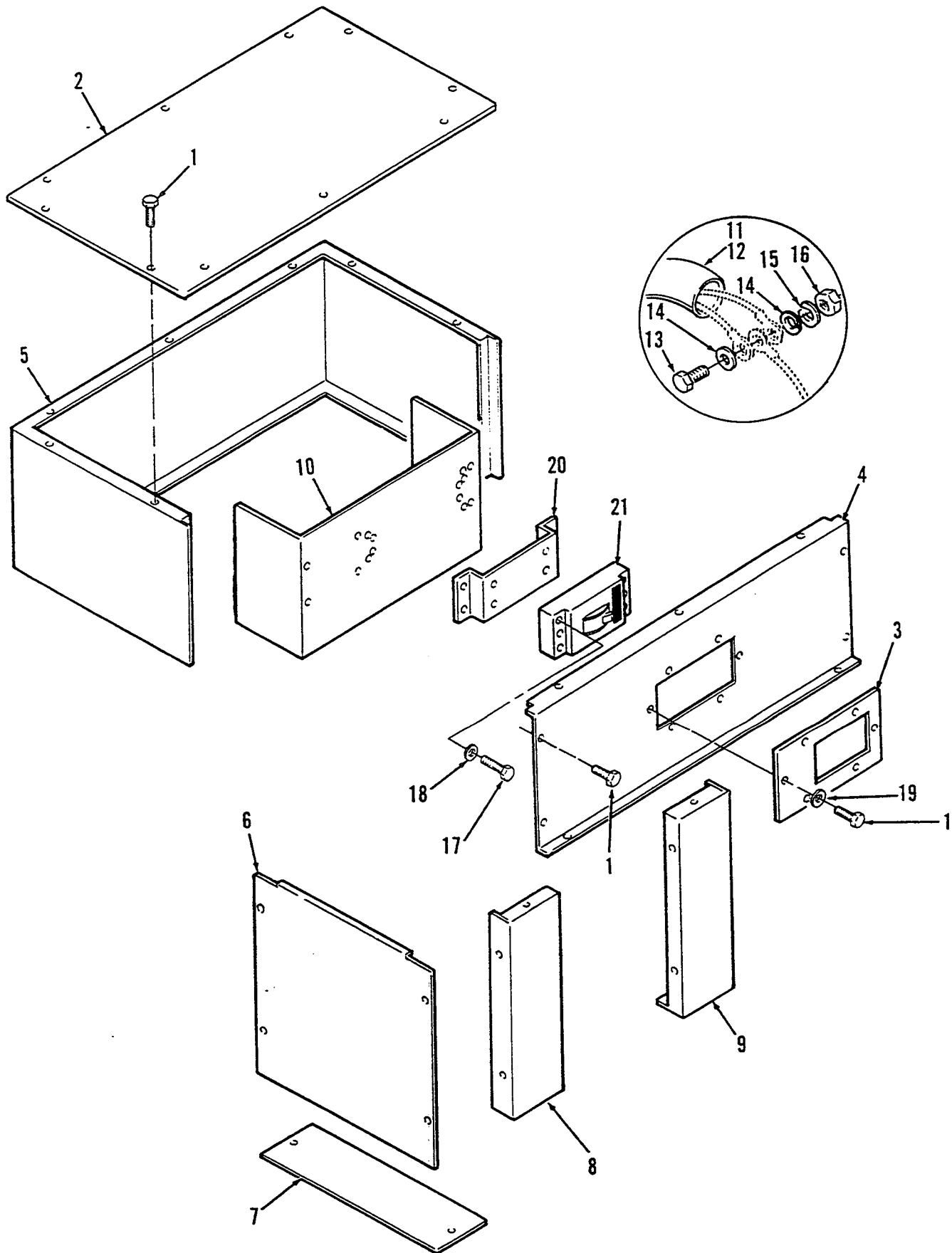
Control Heater



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	870-0183	2	Nut, Self-Locking - Hex ET (#6 - 32)
2	301-1886	1	Cover, Thermostat
3	860-0006	2	Nut, Hex (#6 - 32)
4	854-0006	2	Washer, Lock - IT (#6)
5	812-0070	2	Screw, Machine - Round Head (#6 - 32 x 1-1/4)
6	309-0128	1	Thermostat, Adjustable

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
7	800-0034	2	Screw, Cap - Hex Head (5/16 - 18 x 2-1/4")
8	526-0113	2	Washer, Flat (11/32" ID x 1" OD x 3/32" THK)
9	333-0151	1	Heater, Electrical
10	130-1107	2	Spacer, Sleeve
11	870-0257	2	Nut, Self-Locking (5/16 - 18)
12	335-0161	1	Cable, Electrical

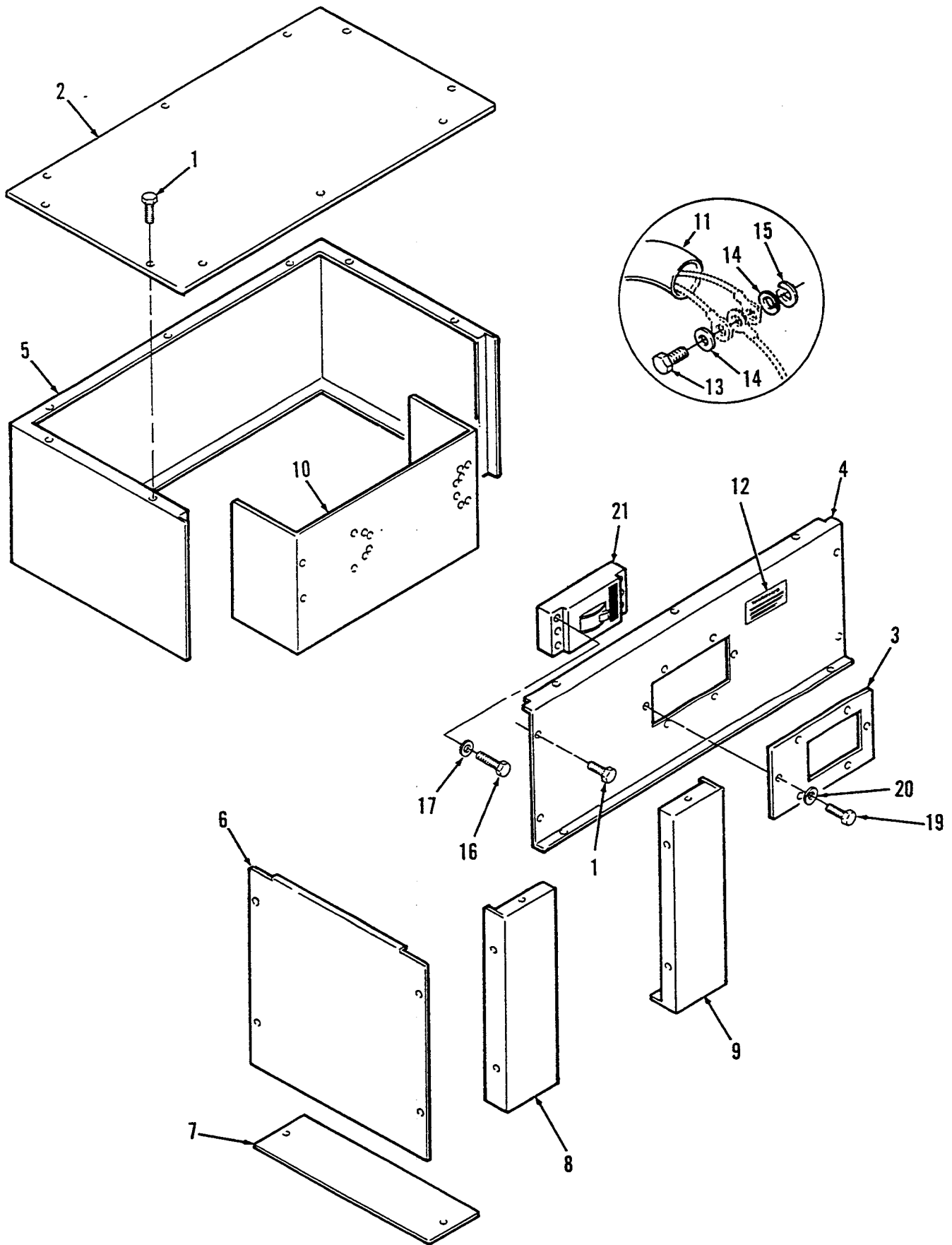
Circuit Breaker (Spec A)



Circuit Breaker (Spec A)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	813-0096	48	Screw, Machine - Round Head (#10 - 32 x 1/4")	320-0625	1	450 Amp, 240 VAC	
2	301-9257	1	Cover, Top	320-0598	1	500 Amp, 240 VAC	
3			Cover, Breaker - Circuit	320-0599	1	600 Amp, 240 VAC	
	301-9259	1	5" x 3-1/4" Breaker Hole	320-0988	1	Three Pole with Aux Contact	
	301-9458	1	3-1/4" x 1-1/2" Breaker Hole	320-1222	1	200 Amp, 480/600 VAC	
4	301-9251	1	Panel, Front	320-0975	1	225 Amp, 240 VAC	
5	301-9258	1	Wrapper, Enclosure	320-0620	1	250 Amp, 480/600 VAC	
6	301-9255	2	Cover, Access - Side	320-0300	1	300 Amp, 240 VAC	
7	301-9254	2	Panel, Access - Bottom	320-1425	1	300 Amp, 480/600 VAC	
8	301-9253	2	Panel, End	320-1220	1	350 Amp, 240 VAC	
9	301-9252	2	Panel, End	320-1217	1	400 Amp, 240 VAC	
10	301-9256	1	Bracket, Mounting - Circuit Breaker	320-1218	1	500 Amp, 240 VAC	
11			Sleeving, Shrinkable			600 Amp, 240 VAC	
	898-0863	1	0.75" ID	320-0392	1	Three Pole with 12 Volt Shunt Trip	
	898-0865	1	1.00" ID	320-0370	1	200 Amp, 600 VAC	
	898-0875	1	1.50" ID	320-0245	1	200 Amp, 600 VAC	
	898-0869	1	2.00" ID	320-0267	1	300 Amp, 600 VAC	
	898-1112	1	3.00" ID			500 Amp, 600 VAC	
12			Sleeving, Fiberglass			600 Amp, 600 VAC	
	898-0974	1	0.75" ID	320-0529	1	Three Pole with 24 Volt Shunt Trip	
	898-0976	1	1.00" ID	320-1433	1	200 Amp, 600 VAC	
13	800-0028	5	Screw, Cap - Hex Head (5/16 - 18 x 1")	320-0438	1	225 Amp, 600 VAC	
14	526-0022	10	Washer, Flat (21/64" ID x 9/16" OD x 1/16" THK)	320-0627	1	300 Amp, 600 VAC	
15	850-0045	5	Washer, Lock - Spring (5/16)	320-0524	1	350 Amp, 240 VAC	
16	862-0015	5	Nut, Hex (5/16 - 18)	320-1379	1	350 Amp, 600 VAC	
17	812-0156	4	Screw, Machine - Round Head (1/4 - 20 x 1-1/2")	320-0403	1	400 Amp, 600 VAC	
18	850-0040	4	Washer, Lock - Spring (1/4)	320-0432	1	500 Amp, 600 VAC	
19	850-0030	6	Washer, Lock (#10)			600 Amp, 600 VAC	
20			Bracket, Mounting - Circuit Breaker	320-0573	1	Three Pole with 120 Volt Shunt Trip	
	301-9459	1	Used on Circuit Breakers 480 Volts and Up	320-0285	1	200 Amp, 600 VAC	
	301-9460	1	Used on Circuit Breakers 240 Volts and Below	320-0708	1	225 Amp, 600 VAC	
21			Breaker, Circuit	320-0268	1	250 Amp, 600 VAC	
			Two Pole	320-0275	1	300 Amp, 600 VAC	
	320-1409	1	200 Amp, 240 VAC	320-0236	1	350 Amp, 600 VAC	
	320-0359	1	225 Amp, 240 VAC	320-0386	1	500 Amp, 600 VAC	
	320-1411	1	250 Amp, 240 VAC			600 Amp, 600 VAC	
	320-0420	1	300 Amp, 240 VAC	320-0405	1	Three Pole with 240 Volt Shunt Trip	
	320-0421	1	350 Amp, 240 VAC	320-0372	1	400 Amp, 600 VAC	
	320-0705	1	400 Amp, 240 VAC			600 Amp, 600 VAC	
	320-1410	1	500 Amp, 240 VAC	320-0331	1	Three Pole with 480 Volt Shunt Trip	
	320-1366	1	600 Amp, 240 VAC	320-0279	1	300 Amp, 600 VAC	
			Three Pole	320-0398	1	350 Amp, 600 VAC	
	320-0348	1	200 Amp, 240 VAC	320-0338	1	500 Amp, 600 VAC	
	320-0447	1	200 Amp, 480/600 VAC			600 Amp, 600 VAC	
	320-0349	1	225 Amp, 240 VAC	320-1144	1	Two Pole with 12 or 24 Volt Shunt Trip and Aux Contact	
	320-0269	1	225 Amp, 480/600 VAC	320-1424	1	200 Amp, 240 VAC (24 V)	
	320-0422	1	250 Amp, 240 VAC			300 Amp, 240 VAC (24 V)	
	320-0445	1	250 Amp, 480/600 VAC	320-1145	1	Three Pole with 12 or 24 Volt Shunt Trip and Aux Contacts	
	320-0423	1	300 Amp, 240 VAC	320-1035	1	200 Amp, 240 VAC (24 V)	
	320-0401	1	300 Amp, 480/600	320-1429	1	225 Amp, 240 VAC (12 V)	
	320-0448	1	350 Amp, 240 VAC	320-1419	1	250 Amp, 600 VAC (24 V)	
	320-0449	1	400 Amp, 240 VAC			600 Amp, 600 VAC (24 V)	

Circuit Breaker (Spec B)



Circuit Breaker (Spec B)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	815-0350	52	Screw, Self-Locking - Hex	320-1513-12	1	600 Amp, 600 VAC	
			Washer Hd (#10 - 32 x 3/8")	320-1459-09	1	200 Amp, 600 VAC	
2	301-9257	1	Cover, Top	320-1459-10	1	225 Amp, 600 VAC	
3			Cover, Breaker - Circuit	320-1460-06	1	250 Amp, 600 VAC	
	301-9720	1	For use with 225 Amp Circuit	320-1460-07	1	300 Amp, 600 VAC	
			Breakers and below	320-1460-08	1	350 Amp, 600 VAC	
	301-9721	1	For use with 250 Amp Circuit	320-1460-09	1	400 Amp, 600 VAC	
			Breakers and above	320-1460-10	1	450 Amp, 600 VAC	
4	301-9251	1	Panel, Front	320-1460-11	1	500 Amp, 600 VAC	
5	301-9258	1	Wrapper, Enclosure	320-1460-12	1	600 Amp, 600 VAC	
6	301-9255	2	Cover, Access - Side				Two Pole with Aux Contacts
7	301-9254	2	Panel, Access - Bottom	320-1515-09	1	200 Amp, 600 VAC	
8	301-9253	2	Panel, End	320-1515-10	1	225 Amp, 600 VAC	
9	301-9252	2	Panel, End	320-1516-06	1	250 Amp, 600 VAC	
10			Bracket, Mounting - Circuit	320-1516-07	1	300 Amp, 600 VAC	
			Breaker	320-1516-08	1	350 Amp, 600 VAC	
	301-9716	1	Used on Circuit Breakers	320-1516-09	1	400 Amp, 600 VAC	
			600 Amps and below	320-1516-11	1	500 Amp, 600 VAC	
	301-9722	1	Used on Circuit Breakers	320-1516-12	1	600 Amp, 600 VAC	
			700 Amps and above				Three Pole with Aux Contact
11			Sleeving, Shrinkable	320-1463-09	1	200 Amp, 600 VAC	
	898-0863	1	0.75" ID	320-1463-10	1	225 Amp, 600 VAC	
	898-0865	1	1.00" ID	320-1464-06	1	250 Amp, 600 VAC	
	898-0867	1	1.50" ID	320-1464-07	1	300 Amp, 600 VAC	
	898-0869	1	2.00" ID	320-1464-08	1	350 Amp, 600 VAC	
12	98-2304	1	Silkscreen, Breaker - Circuit	320-1464-09	1	400 Amp, 600 VAC	
			(Warning)	320-1464-10	1	450 Amp, 600 VAC	
13	800-0028	5	Screw, Cap - Hex Head (5/16 -	320-1464-11	1	500 Amp, 600 VAC	
			18 x 1")	320-1464-12	1	600 Amp, 600 VAC	
14	526-0022	10	Washer, Flat (21/64" ID x				Two Pole with 24 Volt
			9/16" OD x 1/16" THK)				Shunt Trip
15	850-0045	5	Washer, Lock - Spring (5/16)	320-1522-07	1	300 Amp, 600 VAC	
16	812-0156	4	Screw, Machine - Round Head				Three Pole with 12 Volt
			(1/4 - 20 x 1-1/2")				Shunt Trip
17	850-0040	4	Washer, Lock - Spring (1/4)	320-1467-09	1	200 Amp, 600 VAC	
18	332-1445	3	Tie, Cable (Not Shown)	320-1468-07	1	300 Amp, 600 VAC	
19	813-0096	6	Screw, Machine - Round Head	320-1468-11	1	500 Amp, 600 VAC	
			(#10 - 32 x 1/4")	320-1468-12	1	600 Amp, 600 VAC	
20	850-0030	6	Washer, Lock (#10)				Three Pole with 24 Volt
21			Breaker, Circuit				Shunt Trip
			Two Pole	320-1471-09	1	200 Amp, 600 VAC	
	320-1512-09	1	200 Amp, 600 VAC	320-1471-10	1	225 Amp, 600 VAC	
	320-1512-10	1	225 Amp, 600 VAC	320-1472-06	1	250 Amp, 600 VAC	
	320-1513-06	1	250 Amp, 600 VAC	320-1472-07	1	300 Amp, 600 VAC	
	320-1513-07	1	300 Amp, 600 VAC	320-1472-08	1	350 Amp, 600 VAC	
	320-1513-08	1	350 Amp, 600 VAC	320-1472-09	1	400 Amp, 600 VAC	
	320-1513-09	1	400 Amp, 600 VAC	320-1472-11	1	500 Amp, 600 VAC	
	320-1513-11	1	500 Amp, 600 VAC	320-1472-12	1	600 Amp, 600 VAC	

Circuit Breaker (Spec B)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Three Pole with 120 Volt Shunt Trip				Two Pole with 24 Volt Shunt Trip & Auxiliary Contacts
	320-1475-09	1	200 Amp, 600 VAC		320-1536-09	1	200 Amp, 600 VAC
	320-1475-10	1	225 Amp, 600 VAC				Three Pole with 12 Volt Shunt Trip & Auxiliary Contacts
	320-1476-06	1	250 Amp, 600 VAC				225 Amp, 600 VAC
	320-1476-07	1	300 Amp, 600 VAC		320-1487-10	1	Three Pole with 24 Volt Shunt Trip & Auxiliary Contacts
	320-1476-08	1	350 Amp, 600 VAC				225 Amp, 600 VAC
	320-1476-11	1	500 Amp, 600 VAC				Three Pole with 24 Volt Shunt Trip & Auxiliary Contacts
	320-1476-12	1	600 Amp, 600 VAC				200 Amp, 600 VAC
			Three Pole with 240 Volt Shunt Trip		320-1491-09	1	225 Amp, 600 VAC
	320-1481-06	1	600 Amp, 600 VAC		320-1491-10	1	250 Amp, 600 VAC
			Three Pole with 480 Volt Shunt Trip		320-1492-06	1	300 Amp, 600 VAC
			300 Amp, 600 VAC		320-1492-07	1	600 Amp, 600 VAC
	320-1484-07	1	350 Amp, 600 VAC		320-1492-12	1	
	320-1484-08	1	500 Amp, 600 VAC				
	320-1484-11	1	600 Amp, 600 VAC				
	320-1484-12	1					