



Electronic Service Manuals

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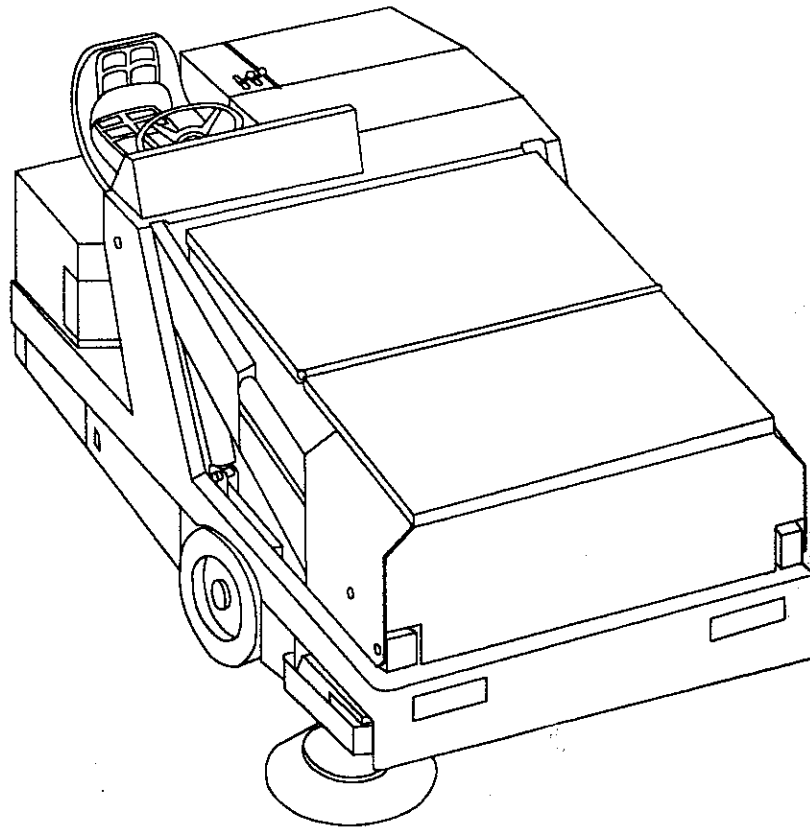
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Clarke American-Lincoln®



Beginning with
Serial No. 460001

READ THIS BOOK

This book has important information for the use and safe operation of this machine. Read and understand this book before starting the machine. Keep this book and tell all operators to read this book. If you do not follow the instructions, you can cause personal injury and/or damage equipment, furniture, or buildings.

All directions given in this book are as seen from the operator's position in the operator's seat.

For new books, write to:

Clarke/American-Lincoln
1100 Haskins Road
Bowling Green, Ohio 43402

Operator's Manual

**Instruction Book
and Parts List
Model 2260 / 2260XP
Power Sweeper**

**CALIFORNIA
PROPOSITION 65 WARNING**
Engine exhaust from this product
contains chemicals known to the State
of California to cause cancer, birth
defects, or other reproductive harm.

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MACHINE SPECIFICATIONS

DIMENSIONS

Length	-	97.0 inches	246.4 cm.
Width	-	54.0 inches	132.2 cm.
Wheel Base	-	42.3 inches	107.4 cm.
Height	-	57.8 inches	146.7 cm.
Height with Guard	-	82.0 inches	208.3 cm.

DRIVES

Propelling	-	Variable Displacement Pump
	-	Hydraulic Drive Motor
Sweeping	-	(2) Hydraulic Motors
Vacuum	-	(1) Hydraulic Motor
Multi Level Dump	-	(4) Hydraulic Cylinders

HYDRAULIC CONTROLS

Single foot pedal controls forward, neutral, reverse and dynamic braking. switch controlled broom and vacuum fan on/off.

MECHANICAL SYSTEMS

Steering	-	Standard automotive type cam and lever with 15" steering wheel.
Brakes	-	Foot operated with hand operated locked disk brakes
Brooms	-	Main - Lift and height adjustment
	-	Side - Lift

SWEEPING SYSTEM

Type	-	Direct throw.
Hopper	-	23 cubic feet - 1000 lbs. 454 Kg.
Filter Area	-	120 square feet - 11.2 sq. meters
Main Broom	-	Length - 42 inches 106.7 cm.
	-	Diameter - 14 inches 35.6 cm.
	-	Bristle length - 3.25 inches 3.3 cm.

Features broom lift and adjustable broom height for wear compensation, standard proex and wire broom and quick change system.

Side Broom	-	Diameter - 24 inches 61.0 cm.
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Features side broom lift, polypropylene fiber broom.

Dust Control System	-	Single quick change treated pleated paper type panel air filters (120 square feet or 11.1 sq. meters) with a 9 inch or 22.9 cm. hydraulically driven vacuum impeller.
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SYSTEM FLUID CAPACITIES

Engine Cooling System	-	
Radiator and Hoses	-	4.0 quarts or 3.8 l. approximate
Gas/LP system total	-	8.0 quarts 7.6 l.
Diesel system total	-	8.0 quarts 7.6 l.

Fuel Tank			
Gas, Diesel Fuel	-	9.2 gallons	34.8 l.
LPG	-	33.0 lbs.	15 Kg.
Hydraulic System			
Total System	-	7 gallons	26.5 l.

GENERAL MACHINE PERFORMANCE

Sweeping Width	-	60 inches or 137.2 cm. main and side brooms	
Speed			
Maximum Travel	-	7.5 MPH	12.1 Km./Hr.
Recommended Sweeping			
Speed	-	3.0 MPH	4.8 Km./Hr.
Turning Radius			
Left	-	67 inches	170.2 cm.
Right	-	95 inches	241.3 cm.
Minimum aisle			
width for 180° turn	-	144 inches	365.8 cm.

WEIGHT

2260 Gas Variable Dump	-	Net 3300 lbs.	1,497 Kg.
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ENGINE DATA

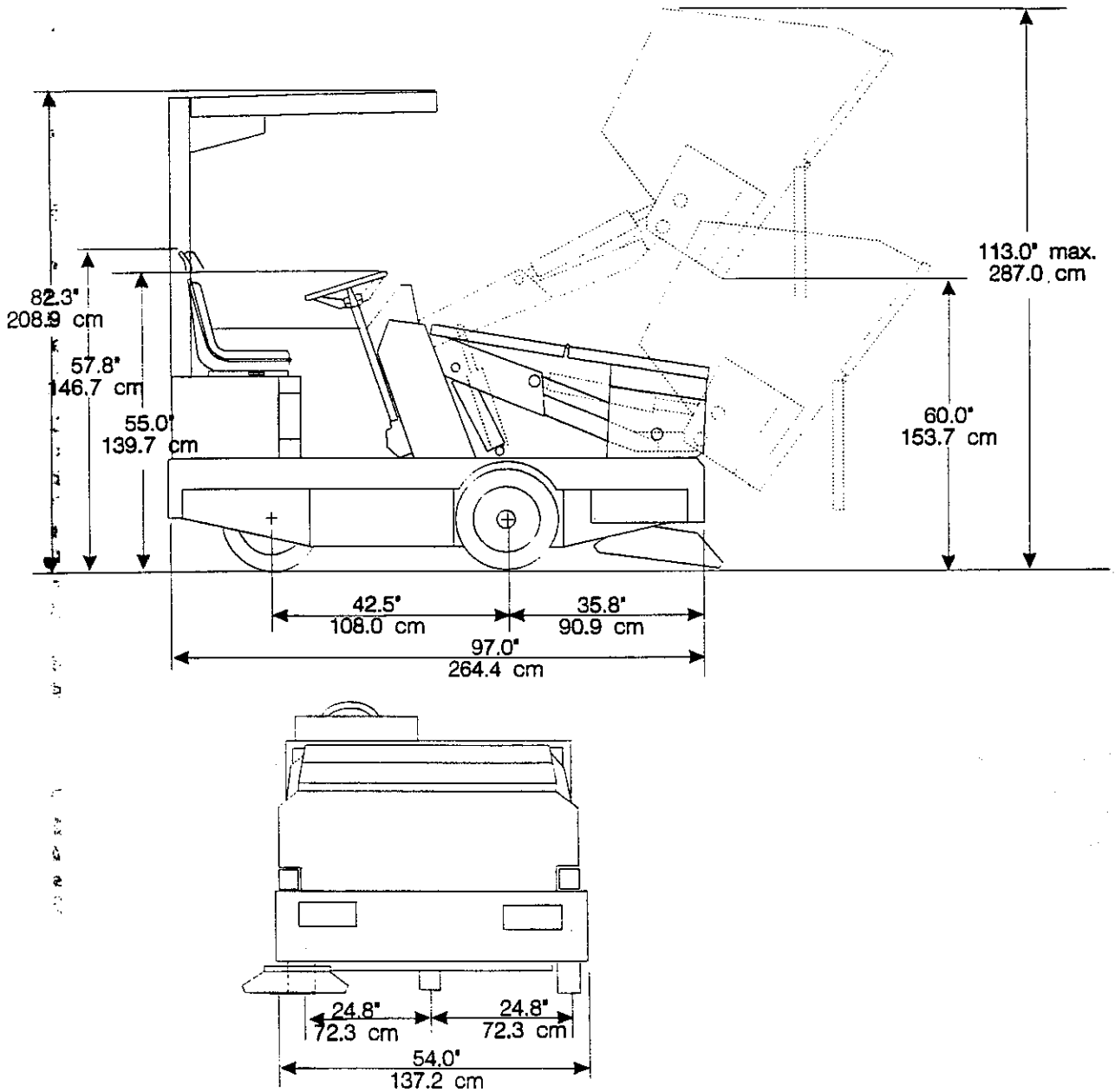
FORD VSG - 411			
Bore and Stroke	-	2.678" x 2.943"	7.40 cm. x 6.50 cm.
Oil Capacity	-	3.5 qts.	3.3 l.
Displacement	-	4 Cylinders	1.1 Liters (67 CID)
Fuel	-	"Regular" Unleaded Gasoline	

FORD VSG - 413			
Bore and Stroke	-	2.91" x 2.97"	7.40 cm. x 7.55 cm.
Oil Capacity	-	3.5 qts.	3.3 l.
Displacement	-	4 Cylinders	1.3 Liters (79 CID)
Fuel	-	"Regular" Unleaded Gasoline	

PERKINS 104.19			
Bore and stroke	-	8.307" x 3.543	8.4 cm x 9.0 cm
Oil Capacity	-	6.5 qts.	6.2 Liters
Displacement	-	4 Cylinders	2 Liters (122 CID)
Fuel Oil	-	Minimum cetane number 40	

MACHINE DIMENSIONS

MODEL 2260 and 2260XP SWEEPER

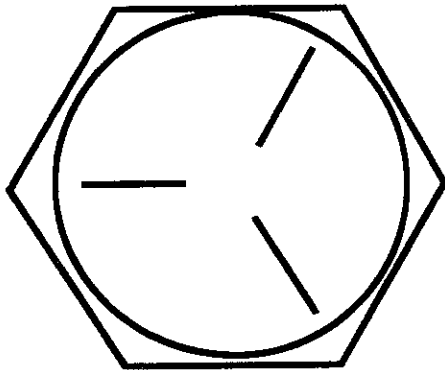


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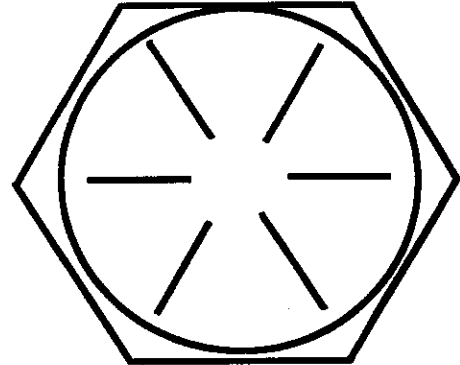
STANDARD HARDWARE & TORQUE VALUES

BOLT IDENTIFICATION

SAE - Grade 5



SAE - Grade 8



Screw Size	Grade 5 Plated		Grade 8 Plated		410H Stainless		Brass	Type F & T & BT		Type B, AB
	C	F	C	F	C	F		C	F	
* 6	14	15	-	-	18	20	5	20	23	21
* 8	27	28	-	-	33	35	9	37	41	34
*10	39	43	-	-	47	54	13	49	64	49
*1/4	86	108	130	151	114	132	32	120	156	120
5/16	15	17	22	24	19	22	6	-	-	-
3/8	28	31	40	44	34	39	10	-	-	-
7/16	44	49	63	70	55	62	16	-	-	-
1/2	68	76	95	108	84	95	-	-	-	-
9/16	98	110	138	155	-	-	-	-	-	-
5/8	135	153	191	216	-	-	-	-	-	-
3/4	239	267	338	378	-	-	-	-	-	-
7/8	387	-	545	-	-	-	-	-	-	-
1	579	-	818	-	-	-	-	-	-	-

C = Coarse thread

F = Fine thread

* = Torque values for #6 through 1/4 are lb/in. All others are lb/ft.

NOTE

Decrease the torque by 20% when using thread lubricant.
The torque tolerance is + 10% torque values.

HYDRAULIC TORQUE REQUIREMENTS

Nominal SAE Dash Size	O-Ring Face Seal End		SAE O-Ring Boss End	
	Thread Size Inch	Swivel Nut Torque	Thread Size Inch	Str. Fitting or Locknut Torque
		LB-FT		LB-FT
-3	*	*	3/8-24	8-10
-4	9/16-18	10-12	7/16-20	14-16
-5	*	*	1/2-20	18-20
-6	11/16-16	18-20	9/16-18	24-25
-8	13/16-16	32-35	3/4-16	50-60
-10	1-14	46-50	7/8-14	72-80
-12	1 3/16-12	65-70	1 1/16-12	125-135
-14	1 3/16-12	65-70	1 3/16-12	160-180
-16	1 7/16-12	92-100	1 5/16-12	200-220
-20	1 11/16-12	125-140	1 5/8-12	210-280
-24	2-12	150-165	1 7/8-12	270-360
* O-ring face seal type end not defined for this tube size.				
NOTE Parts must be lightly oiled with hydraulic fluid.				

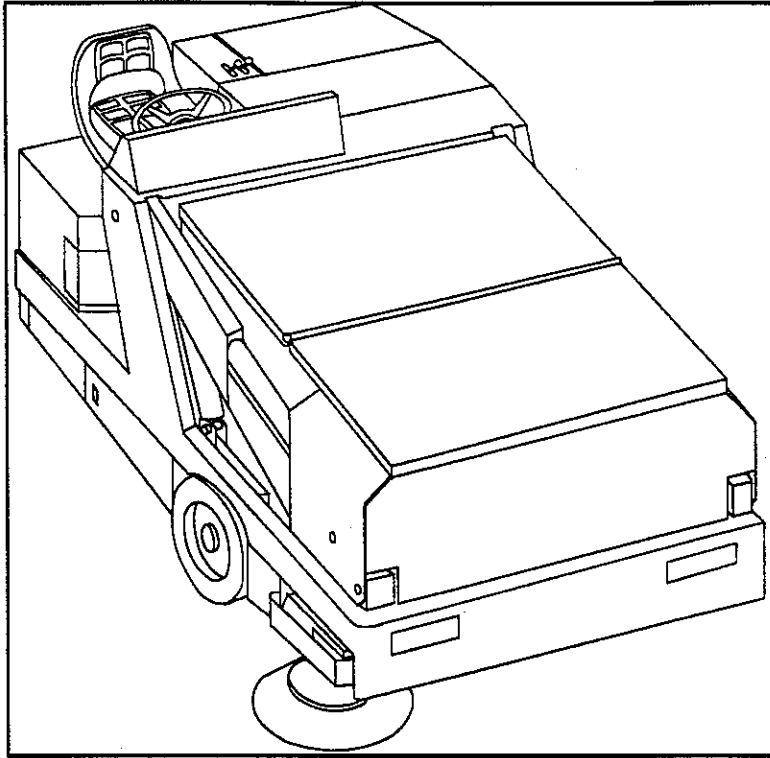
O - RING SIZE CHART

Part Number	OD	ID	Width	Description
2-00-04962	.441	.301 +.005	.07	O-Ring Seal Tube Size 4
2-00-04963	.629	.489 +.005	.07	O-Ring Seal Tube Size 8
2-00-04964	.879	.739 +.005	.07	O-Ring Seal Tube Size 12

DECIMAL - METRIC CONVERSION TABLE

Fraction	Decimal	Millimeter	Fraction	Decimal	Millimeter
1 64	.015625	.3969	33 64	.515625	13.0969
1 32	.03125	.7938	7 32	.53125	13.4938
3 64	.046875	1.1906	35 64	.546875	13.8906
1 16	.0625	1.5875	9 16	.5625	14.2875
5 64	.078125	1.9844	37 64	.578125	14.6844
3 32	.09375	2.3813	19 32	.59375	15.0813
7 64	.109375	2.7781	39 64	.609375	15.4781
1 8	.125	3.1750	5 8	.625	15.8750
9 64	.140625	3.5719	41 64	.640625	16.2719
5 32	.15625	3.9688	21 32	.65625	16.6688
11 64	.171875	4.3656	43 64	.671875	17.0656
3 16	.1875	4.7625	11 16	.6875	17.4625
13 64	.203125	5.1594	45 64	.703125	17.8594
7 32	.21875	5.5563	23 32	.71875	18.2563
15 64	.234375	5.9531	47 64	.734375	18.6531
1 4	.25	6.3500	3 4	.75	19.0500
17 64	.265625	6.7469	49 64	.765625	19.4469
9 32	.28125	7.1438	25 32	.78125	19.8438
19 64	.296875	7.5406	51 64	.796875	20.2406
5 16	.3125	7.9375	13 16	.8125	20.6375
21 64	.328125	8.3344	53 64	.828125	21.0344
11 32	.34375	8.7313	27 32	.84375	21.4313
23 64	.359375	9.1281	55 64	.859375	21.8281
3 8	.375	9.5250	7 8	.875	22.2250
25 64	.390625	9.921	57 64	.890625	22.6219
13 32	.40625	10.3188	29 32	.90625	23.0188
27 64	.421875	10.7156	59 64	.921875	23.4156
7 16	.4375	11.1125	15 16	.9375	23.8125
29 64	.453125	11.5094	61 64	.953125	24.2094
15 32	.46875	11.9063	31 32	.96875	24.6063
31 64	.484375	12.3031	63 64	.984375	25.0031
1 2	.50	12.7000	1	1.0	25.4001

MACHINE OPERATION



P-4579

Figure 1

Unpacking and Preparing the Machine for Operation

YOUR MODEL 2260 POWER SWEEPER HAS BEEN SHIPPED COMPLETE, BUT DO NOT ATTEMPT TO OPERATE WITHOUT READING THE FOLLOWING INSTRUCTIONS.

1. Uncrate the machine and carefully remove from skid to prevent damage.
2. Connect and tighten battery cables.
3. Fill tank with UNLEADED gasoline. (Diesel fuel, if equipped with diesel engine).



WARNING

Never fill fuel tank while the engine is running. Always be sure gasoline container and sweeper are electrically connected before pouring gas. This can be easily done by providing an insulated wire (permanently attached to the container) with battery clip on the other end.

4. Check engine crankcase oil level. Although properly lubricated at factory, check before starting engine. No special break-in oil is used and recommended number of operating hours before the initial oil change is the same as normal. See Maintenance.
5. Check radiator coolant level. Permanent type antifreeze is added at the factory to provide protection to approximately -35°F (-37°C). To retain this protection level, always add 1/2 part water to 1/2 part antifreeze.
6. Check oil level in the hydraulic reservoir located at center of machine beside the engine. The hydraulic reservoir is full, if oil can be seen in the sight glass with the hopper in the "DOWN" position. If oil is required, add HYDRAULIC FLUID ONLY, automatic transmission fluid FORD type "F" ATF.

NOTE

After the first 50 operating hours, service must be performed on your engine to insure future high performance and trouble free operation. See Maintenance.

SAFETY INSTRUCTIONS



WARNING

FOR SAFETY, OBSERVE THE FOLLOWING WARNINGS. FAILURE TO COMPLY MAY CREATE A SERIOUS RISK OF INJURY TO YOURSELF AND OTHERS. THIS MACHINE SHOULD NOT BE USED IN HAZARDOUS LOCATIONS INCLUDING AREAS OF VOLATILE DUST OR VAPOR CONCENTRATIONS.

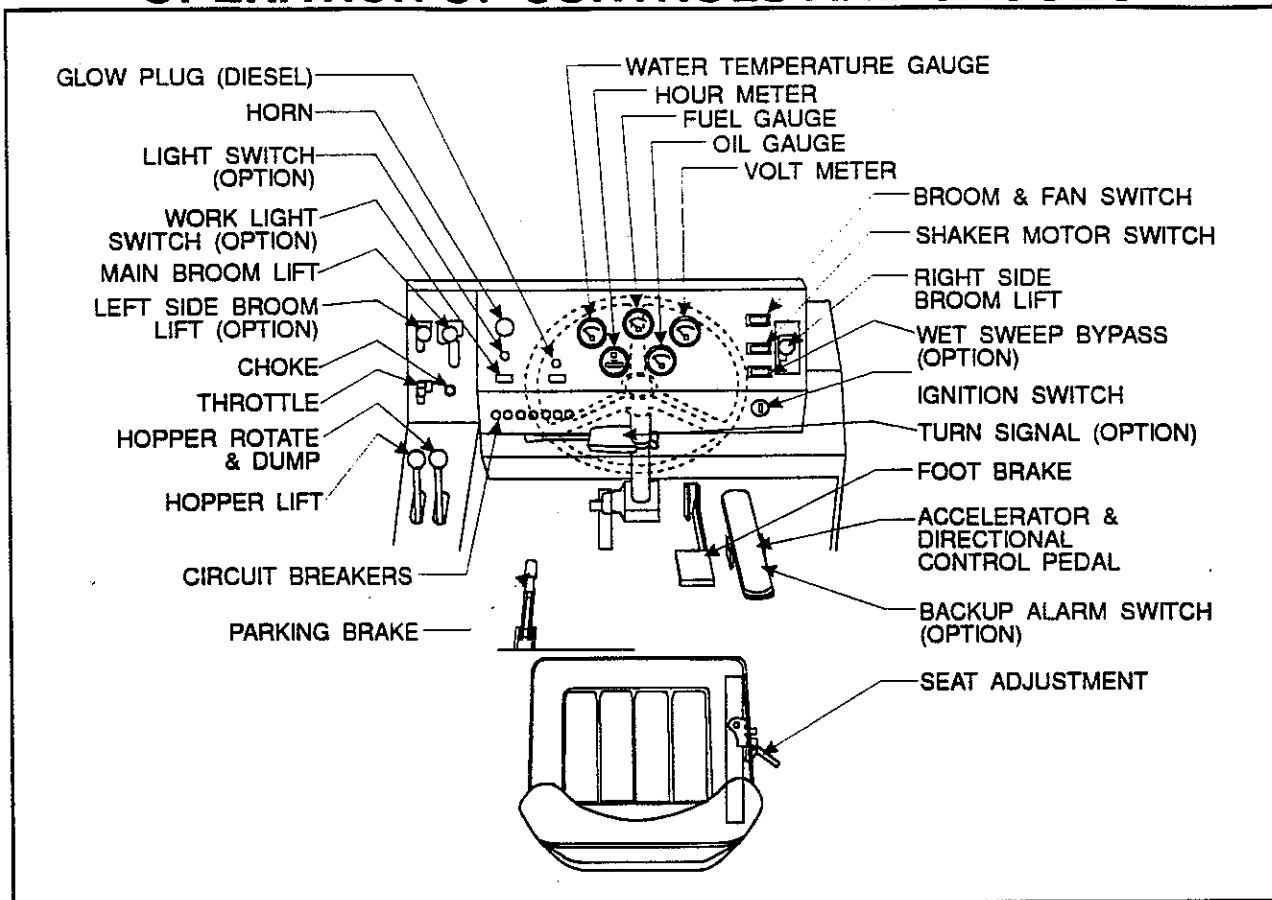
1. To avoid possible injury or property damage, read the operator's manual before using the machine.
2. Fire hazard. Fine dust, fuels solvents and thinners can explode and cause severe burns.
3. Do not use with/ or near flammable materials or vapors. Use only with good ventilation.
4. Heavy machinery, improper use can cause personal injury.
5. Operate only from the designated operators position. Keep inside the body of the machine. Keep hands and feet on the designated controls. Always operate in well lighted areas.
6. Do not leave the machine on a ramp or dock. After stopping the machine, turn all the switches off.
7. Do not dump the hopper over an open pit or dock. Do not dump the hopper when positioned on a grade (ramp). The machine must be level (horizontal).
8. Operate only when lids, doors, and access panels are securely closed.
9. Never travel with the hopper in the raised position.
10. The operator must exhibit extreme caution when negotiating, turning and traveling across grades or ramps.
11. Start, stop, change direction, travel and brake smoothly. Slow down when turning. Avoid uneven surfaces and loose materials.
12. Watch out for obstructions, especially overhead.
13. Carry no passengers on the machine.
14. Set parking brake when leaving the machine. Chock (block) the wheels if the machine is to be parked on a grade (ramp), or is to be worked on.
15. Never leave the operator's seat with the engine running.
16. Report damage or faulty operation immediately. Do not operate the machine until repairs have been completed.
17. Maintenance and repairs must be done by authorized personnel only.
18. Never manually depress the electrical switch on the left lift arm when the hopper is raised.



WARNING

TO MAINTAIN THE STABILITY OF THIS SWEEPER IN NORMAL OPERATION, THE COUNTERWEIGHTS, OVER-HEAD GUARD, REAR BUMPER GUARD, OR ANY SIMILAR EQUIPMENT, INSTALLED BY THE MANUFACTURER AS ORIGINAL EQUIPMENT, SHOULD NEVER BE REMOVED. IF IT BECOMES NECESSARY TO REMOVE SUCH EQUIPMENT FOR REPAIR OR MAINTENANCE. THIS EQUIPMENT MUST BE REINSTALLED BEFORE THE SWEEPER IS PLACED BACK IN OPERATION.

OPERATION OF CONTROLS AND GAUGES



P-4586

Figure 2

WATER TEMPERATURE GAUGE See Figure 2

The water temperature gauge is located on the instrument panel to the left of the fuel gauge. The gauge is activated by a sender in the engine. It displays the engine water temperature in °F.

HOUR METER See Figure 2

This meter is located to the left of the oil pressure gauge on the instrument console. This meter is activated when the key switch is in the "IGN/ON" position. The meter indicates actual "run" time of the machine. The meter can be used to indicate when maintenance should be done to the machine.

FUEL GAUGE (Not on LP machines) See Figure 2

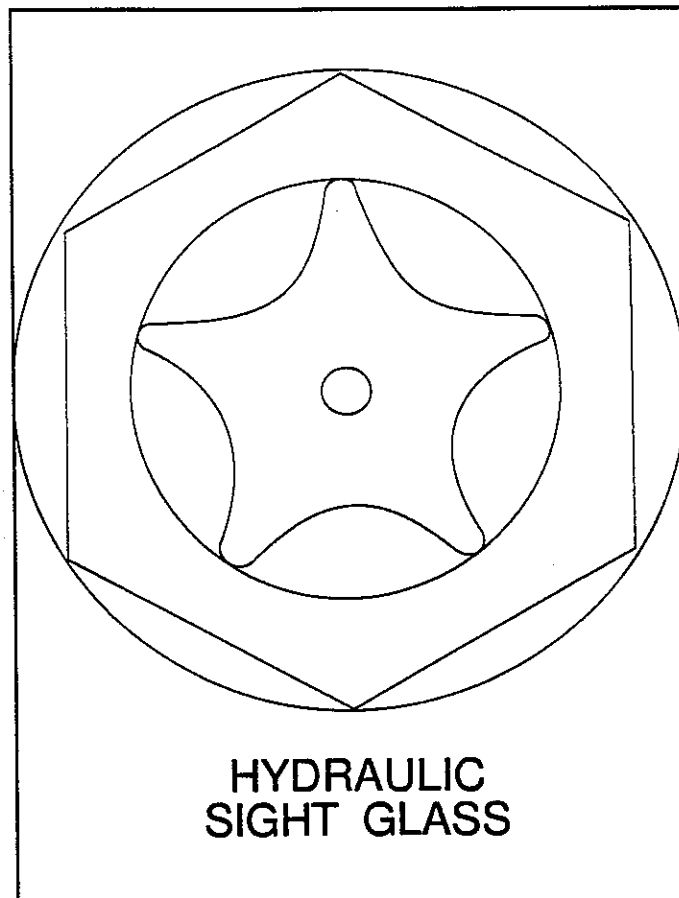
The fuel gauge is located between the water temperature gauge and the volt meter on the instrument panel, and indicates the level of fuel contained in the fuel tank.

OIL PRESSURE GAUGE See Figure 2

The oil pressure gauge is located on the instrument panel to the right of the hour meter. The gauge is mechanical and activated by a sender in the engine. It displays the engine oil pressure in PSI.

VOLT METER See Figure 2

The volt meter is located on the control panel to the left of the fuel gauge. The meter indicates the charging or discharging of the battery. When the key is in the accessory position the gauge will register approx. 12 volts. The meter will indicate approx. 13 to 14.5 volts when the engine is running. This indicates that the alternator is working correctly.



P-4696-1

Figure 3

HYDRAULIC FLUID SIGHT GLASS See Figure 3

This sight glass is located on the side of the hydraulic oil reservoir. The sight glass indicates the level of the hydraulic oil in the reservoir. Fluid level must be visible in the sight glass when the hopper is in the down position. If the sight glass is completely full, then there is too much fluid in the reservoir.

BROOM & FAN SWITCH See Figure 2

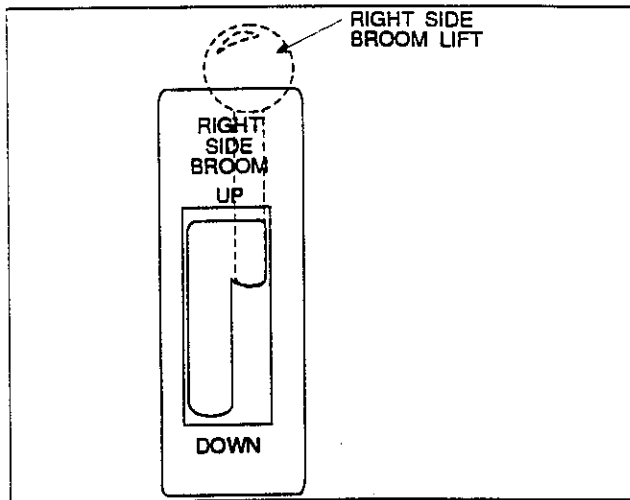
The broom and fan switch is located to the left of the right side broom lever. This switch "powers" the main broom and the vacuum fan system. It has on-off positioning.

SHAKER MOTOR SWITCH See Figure 2

The shaker motor switch is located below the broom and fan switch. This is a momentary switch that will activate the filter shaker motor. Hold the switch for 20 to 30 seconds to activate the shaker motors. When the shaker motor has been activated, the main broom and impeller fan will stop. The shaker motor will only operate with the hopper in the "SWEEP" position. This switch is not on the control panel, if the machine is equipped with the CDC Dust Control Filter Option.

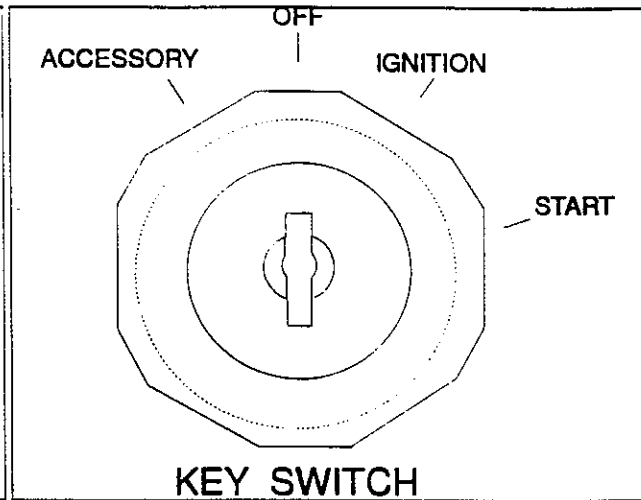
TIMED SHAKER MOTOR SWITCH (OPTION) See Figure 2

The shaker motor switch is located below the broom and fan switch. This is a momentary switch that will activate the filter shaker motor for 20 to 30 seconds after it has been pushed. When the shaker motor has been activated, the main broom and impeller fan will stop. The shaker motor will only operate with the hopper in the "SWEEP" position. This switch is not on the control panel, if the machine is equipped with the CDC Dust Control Filter Option.



P-4687

Figure 4



P-4385

Figure 5

RIGHT SIDE BROOM LIFT AND POWER CONTROL See Figure 4

The right side broom lift and power control is located on the right side of the instrument panel. To raise the side broom, grasp the lever and push the lever to the locking notch, marked "UP". To lower the side broom, grasp the lever, push it up and to the left, away from the locking notch. Let the lever lower until it rests by the "DOWN" mark.

To turn ON the side brooms Move the Hopper Lift/Side Broom Lever forward to the ON position.(See Fig.9)

IGNITION SWITCH See Figure 5

The keyed ignition switch is located to the right of the steering column on the instrument panel. It has four positions.

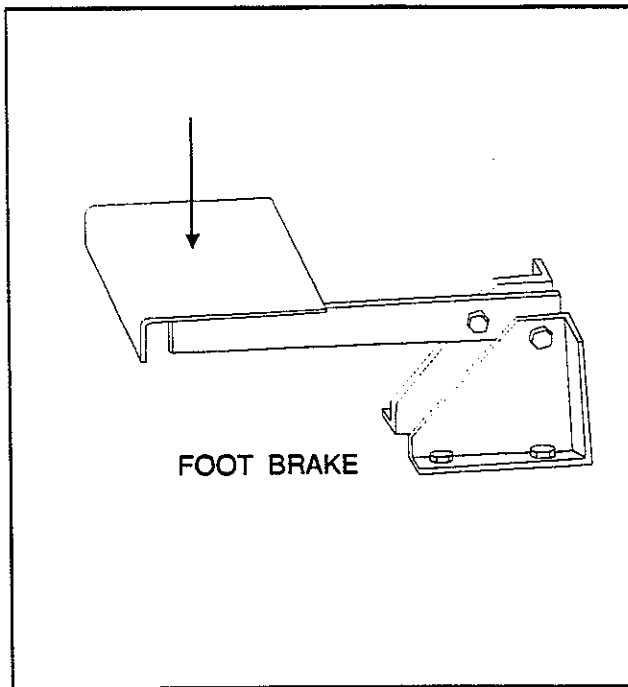
1. The key turned to the center "OFF" position will shut off the engine. The following items can be activated in the "OFF" position.
 - a Horn
 - b Filter Shaker Motors
 - c Light Options
2. The key turned to the left "ACCESSORY" position will allow the following additional items to be activated:
 - a Turn Signals
 - b Instrument Gauges
3. The key turned to the right "IGN/ON" position will allow all the items listed above to be activated. This position will not start the engine.
4. The key turned to the far right "START" position will start the engine. This position is a momentary position. The key will revert to the "IGN/ON" position when it is released.

WET-SWEEP BYPASS SWITCH - (OPTIONS) See Figure 2

The wet-sweep bypass switch is located to the right of the steering wheel under the shaker motor switch. The switch activated will shut off the vacuum motor. This will keep the dust filters from being ruined by the water pickup from sweeping water.

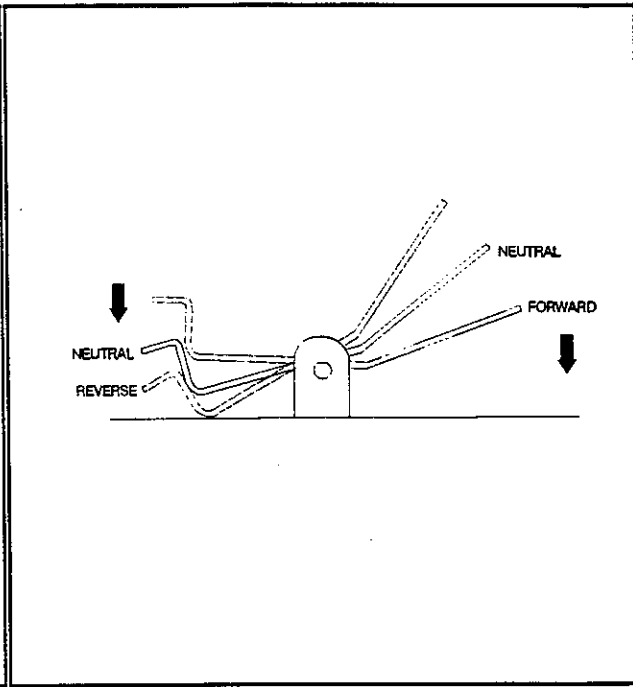
TURN SIGNALS - 4 WAY (OPTIONS) See Figure 2

The turn signal option is located on the steering column and works as automotive turn signals work, forward on the lever for right and back on the lever for left. The 4 way flasher will activate when the turn signal lever is pulled out.



P-4689

Figure 6



P-4066-1

Figure 7

FOOT BRAKE See Figure 6

The foot brake pedal is located to the right of the steering column on the floor of the driver compartment. The foot brake on front wheels is a mechanical system actuated by the brake pedal.

ACCELERATOR and DIRECTIONAL CONTROL PEDAL See Figure 7

The accelerator and directional control pedal is located on the floor of the operator's area, to the right of the brake pedal. The accelerator and directional control pedal controls the machine direction and travel speed.

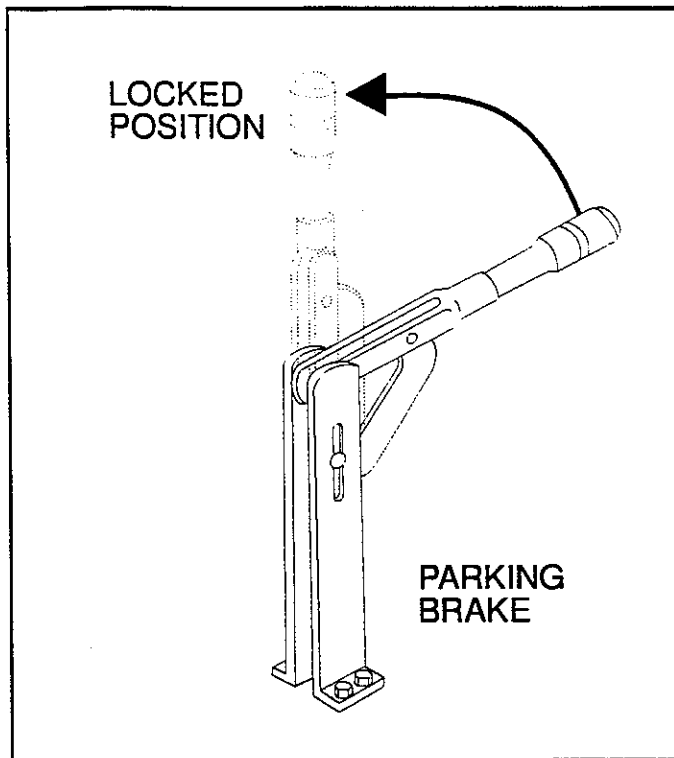
1. Put foot pressure on the upper portion of the pedal. The machine will move forward.
2. Increase the foot pressure on the upper portion of the pedal to increase the forward speed.
3. Put foot pressure on the lower portion of the pedal. The machine will move in reverse.
4. Increase the foot pressure on the lower portion of the pedal to increase the reverse speed.
5. To stop the machine, put light foot pressure on the opposite end of the accelerator and directional control pedal. If the machine is moving forward, put light foot pressure on the lower portion of the pedal. If the machine is moving in reverse, put light foot pressure on the upper portion of the pedal.

BACKUP ALARM (OPTION) See Figure 2

The back up alarm is operated by a switch that is located under the lower section of the Accelerator and directional control pedal. The alarm makes a loud audible noise when the machine is being driven in reverse.

SEAT CONTROL See Figure 2

This lever is located on the right of the seat. This lever allows the seat to be adjusted forward or back when the lever is moved.



P-4691

Figure 8

PARKING BRAKE See Figure 8

The parking brake lever is located in the left side of the driver compartment floor. This lever when raised to the upright position will "lock" the foot brake pedal in the down position.

CIRCUIT BREAKERS See Figure 2

The circuit breakers are located to the left of the steering wheel. When a circuit breaker "pops" out, this is an indication of an electrical problem that must be corrected before the breaker can be reset.

There can be up to seven circuit breakers in the row. They control the following circuits, beginning with number 1 on the left:

- CB-1 = Filter shaker motors
- CB-2 = Horn
- CB-3 = Starter relay
- CB-4 = Ignition
- CB-5 = Accessory
- CB-6 = Options
- CB-7 = Cab Options



P-4686

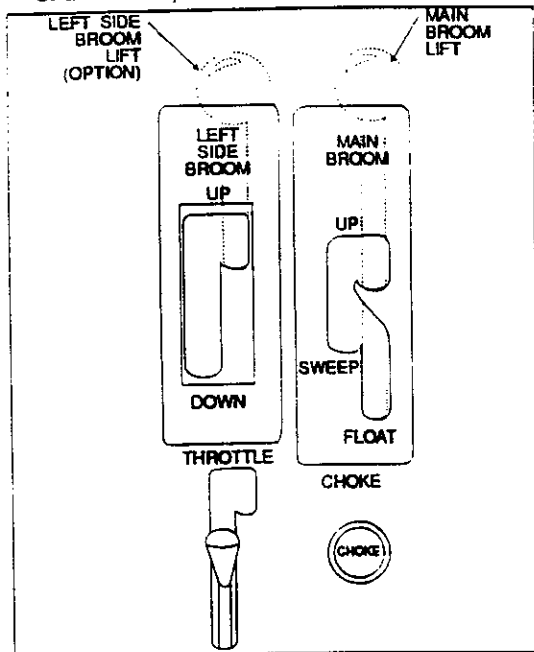
Figure 9

HOPPER DUMP/RETURN CONTROL LEVER See Figure 9

The Hopper Dump/Return lever is located to the left of the driver compartment. The lever is a two position control that operates the the hopper dump system. The lever is spring loaded to the center position which "STOPS" rotation of the hopper.

To rotate the hopper move the lever forward to the dump position and hold, release lever when the hopper reaches the desired position.

To return the hopper after dumping, move the lever back to the RETURN position, the hopper will rotate back and the hopper will lower to the seated position. Release the lever once the hopper has seated in the body of the sweeper



P-4688

Figure 10

HOPPER LIFT / SIDE BROOM LEVER See Figure 9
The Hopper Lift/Side Broom lever is located to the left of the driver compartment. The lever is a three position control that operates the the hopper lift, side broom and optional left side broom.

NOTE

The Hopper Lift lever will not function until the hopper has been rotated to clear the body of the sweeper.

The lever is spring centered from the rear position. The center position turns OFF the side broom (or brooms) and is the HOLD position when dumping the hopper.

The lever is detented in the forward position. Move the Lever Forward to turn ON the side broom when sweeping or to LOWER the hopper when dumping the hopper.

Move the lever back to RAISE the hopper when dumping. Release the lever when the hopper has reached the desired height, the lever will return to the center HOLD position.

WARNING

Never turn off the engine with the hopper in the lifted position.

THROTTLE CONTROL See Figure 10

The throttle control is located to the left of the choke on the console. To raise the throttle to full throttle, grasp the lever and push the lever to the locking notch. To lower the throttle to idle, grasp the lever, push it up and to the left, away from the locking notch. Let the lever lower until it rests at the bottom of the slot. The engine must be operating at full governed speed of 2600 "no load" RPM (broom control off and machine sitting still), to maintain optimum machine travel speed, hopper loading and dust control. Before turning off the key and stopping the engine return the lever to the idle position.

CHOKE CONTROL See Figure 2

LP and Diesel powered engines do not have a choke. The choke is located to the left of the steering column and the right of the throttle on the machine console. The choke governs the mixture of air and fuel during the combustion cycle of the engine operation. The choke should be pulled out during the start of the engine and then gradually pushed back in after engine warm up.

MAIN BROOM LIFT See Figure 10

The main broom lift control is located to the left of the drivers seat. To lower the main broom, grasp the lever and push up and to the left to clear the locking notch. Move the lever down to the first or second notch in the elongated slot. The first notch, "SWEEP", is for normal sweeping (2 to 3 inch or 5 to 8 cm. broom pattern). The second notch, "FLOAT", is for heavy sweeping (4 to 5 inch or 10 to 13 cm. broom pattern). To raise the main broom, push the lever up and slide into the locking notch in the "UP" position. You may operate the main broom in either the "SWEEP" or "FLOAT" position. However, the "SWEEP" position should be used for normal sweeping and will result in increased broom life. The "FLOAT" position should be used only when sweeping extremely uneven areas.

WORK LIGHT SWITCH - (OPTIONS)

The work light switch is located under the light switch to the left side of the steering wheel. It allows the operator to work the rear work light option, when the headlights are on.

LIGHT SWITCH - (OPTIONS)

The light switch is located under the horn to the left side of the steering wheel. It will work various light options that are available for this machine, such as:

- * HEAD LIGHTS
- * TAIL LIGHTS
- * SIDE BROOM LIGHTS
- * INSTRUMENT LIGHTS

All gauges, with the exception of the hour meter can have an optional internal instrument light.

HORN BUTTON

The horn button is located to the left of the steering column. The horn button is always active. Push the horn button to sound the horn.

GLOW PLUG (DIESEL)

It should be noted that in no circumstances should either or any other unauthorized starting aids be used at the same time as Glow Plugs.

1. To operate the following procedure should be adopted.
2. Before operating the starter motor, press the "GLOW PLUG" button for 20 to 30 seconds.
3. With the "GLOW PLUG" button still depressed, engage the starter motor until the engine starts.
4. Continue to press the "GLOW PLUG" button for a few seconds after the engine has started until even running has been obtained.
5. If the engine does not start, disengage the starter motor, but keep the "GLOW PLUG" button depressed for a further 10 to 15 seconds, when a further attempt should be made to start the engine, keeping the Glow Plugs energized while starting and for a few seconds after the engine has fired until it is running smoothly.

CAB - (OPTIONS) - NOT SHOWN

The all weather cab is available for this machine, along with several "cab only" options:

- * HEATER
- * WINDSHIELD WIPER
- * DEFROSTER
- * INTERIOR LIGHT

These options have their controls located on the cab.

LOW OIL SHUT DOWN

This engine is equipped with a low oil pressure shutdown. If the engine oil pressure drops too low, the engine will shut down. Add engine oil until the oil is brought up to the correct level.

OPERATING INSTRUCTIONS

NOTE

Before starting the engine, perform these pre-start checks.

PRE-START CHECK LIST

1. Check engine air filter element indicator.
2. Check engine oil level.
3. Check radiator coolant level.
4. Check hydraulic fluid level.
5. Check fuel level.
6. Check all systems for leaks.
7. Check brakes and controls for proper operation.
8. Check broom patterns

BEFORE STARTING ENGINE

1. Set Parking Brake.
2. Make sure all controls are in the "Off" position.

TO START ENGINE

1. Be sure accelerator and directional control pedal is in neutral.
2. Pull choke if engine is cold (Gas Engines Only.) If machine is stored in extremely cold temperatures, (under 32° F. or 0° C.), pull choke and; hold throttle open approximately halfway when starting engine.
3. Turn key to "On" position & release. Push choke in when engine starts.
4. If engine fails to start after following the above procedures, refer to Engine Manual Section.

NOTE

When machine has been stored in below freezing temperatures, run engine at not over 1/2 throttle with machine standing still for 5 to 10 minutes to warm engine and hydraulic oil.

TO OPERATE SWEEPER

1. Make sure parking brake is released.
2. Lower the side and main broom to the floor. (The main broom control may be placed in either the "FLOAT" or "SWEEP" position (See Figure 10).
3. Turn Broom Fan Switch on.
4. Pull engine throttle to "UP" position. (Engine must always be operated at full governed speed while sweeping to obtain recommended brush speed and dust control).
5. Push forward on directional control pedal to place machine in motion.
6. Vary your foot pressure on the directional control pedal to obtain desired travel speed.

TO STOP SWEEPER

1. Allow directional control pedal to return to neutral (centered) position. (Pedal will automatically return to neutral when foot pressure is released.) FOR NORMAL OPERATION, DEPRESS DIRECTIONAL CONTROL PEDAL WITH HEEL INTO NEUTRAL.
2. Depress the foot brake.
3. Turn Broom Fan Switch off.
4. Put the broom controls (Side and Main) in the "UP" position.
5. Push engine throttle down. Turn key to "OFF."
6. Set parking brake.

NOTE

After stopping the engine, perform these post operation checks.

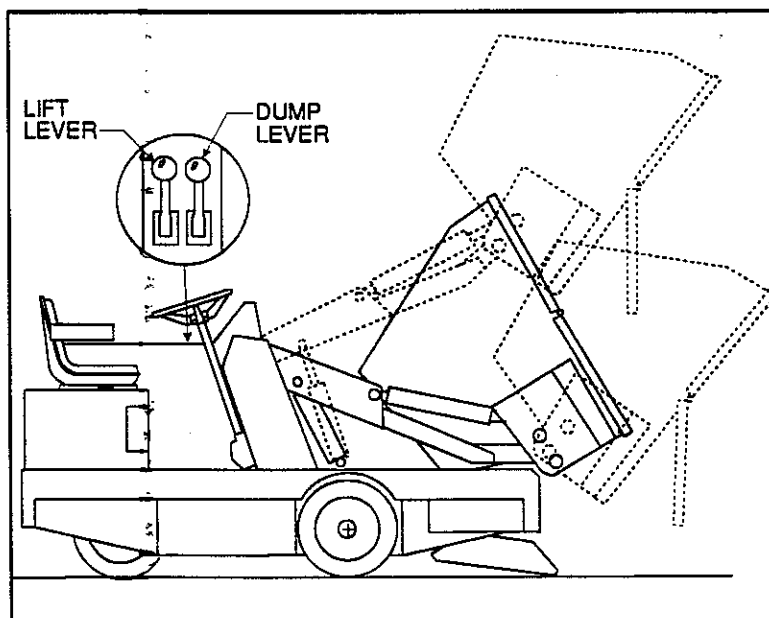
POST OPERATION CHECK LIST

1. Clean debris hopper.
2. Check sweeping brooms for wear or damage.
3. Check all flaps for wear, damage and adjustment.
4. Fill the fuel tank.

WARNING

The gasoline tank access is located behind the drivers seat, do not mistake the hydraulic reservoir for the gasoline tank.

5. Check all systems for leaks.



P-4585

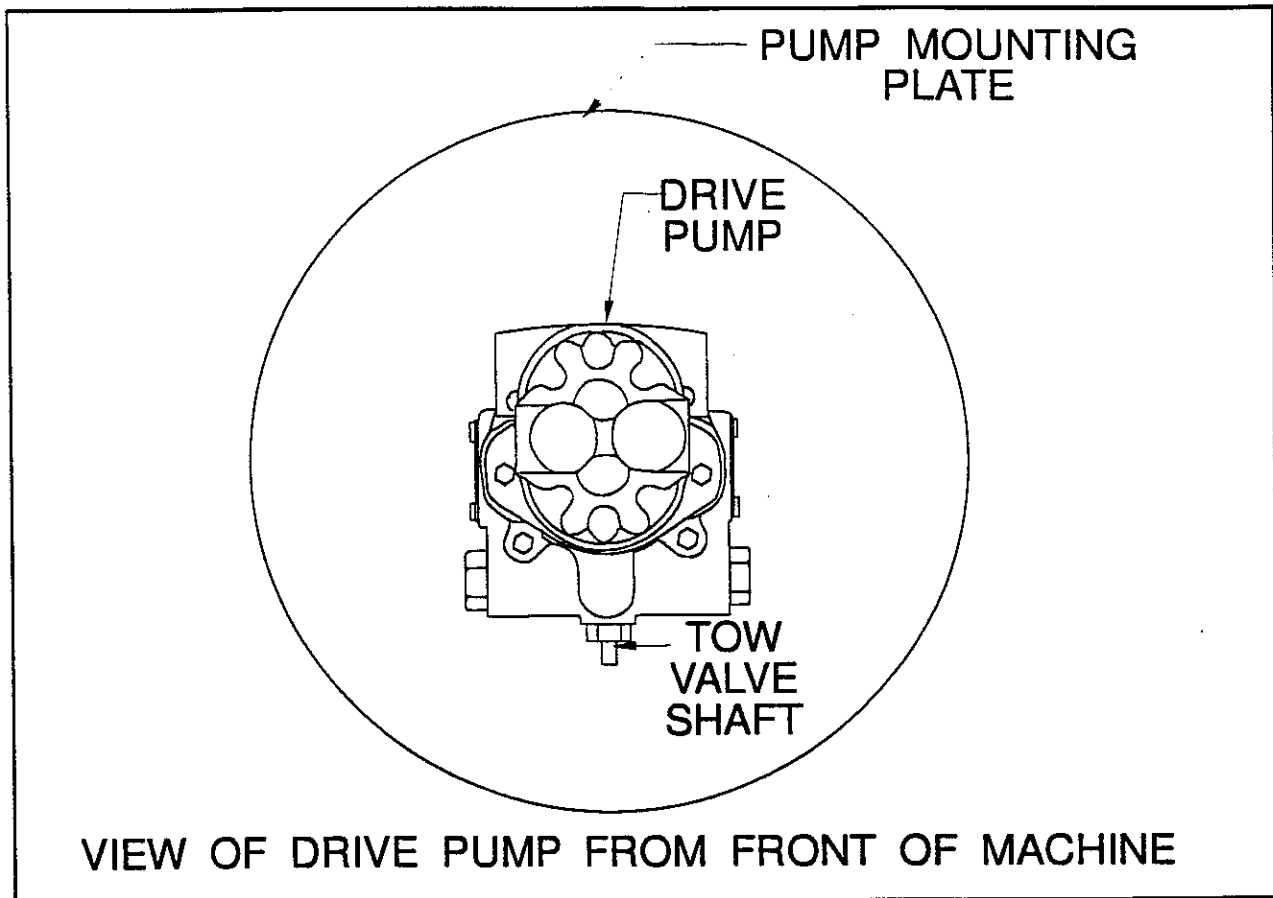
Figure 11

TO EMPTY DEBRIS HOPPER

1. Set engine throttle to full throttle position.
2. Push the hopper rotate and dump lever to the "DUMP" position. The hopper will begin to rotate.
3. Once the hopper rotation speed doubles, the hopper lift lever will work. Raise the hopper to the desired level (MINIMUM OF 8" or 20 cm. OF LIFT REQUIRED) by pulling back the hopper lift lever to the "RAISE" position.
4. Drive forward 12 to 18 inches slowly with the hopper up before completing the dump cycle.
5. Push the hopper rotation and dump lever to the "DUMP" position to complete dump cycle.
6. Drive in reverse 12 to 18 inches or 30 to 46 cm. slowly with the hopper up to clear the dumpster before lowering the hopper.
7. Pull the hopper rotation and dump lever to the "RETURN" position and the hopper will automatically rotate and lower to its proper position.

WARNING

Never turn off the engine with the hopper in the lifted position.



C-0192

Figure 12

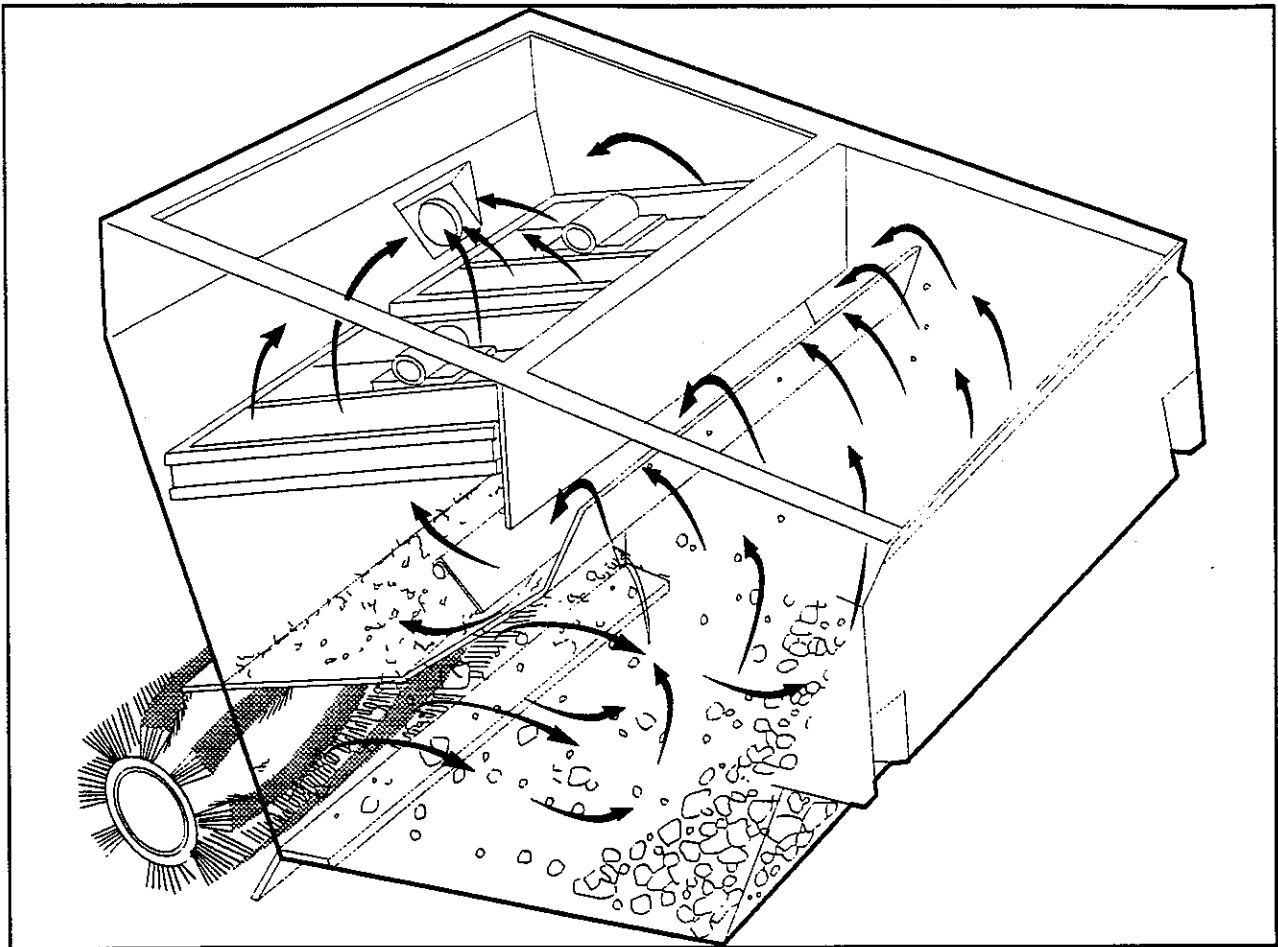
TOWING INSTRUCTIONS

1. Locate tow control shaft extension as shown in Figure 12. The tow control shaft is located underneath the pump.
2. To open hydraulic circuit to wheel drive motor turn shaft 90°.
3. After towing, turn shaft 90° to its original position.

DUST FILTERS

The Filter Panel can be periodically removed from the hopper and blown off with compressed air (not to exceed 100 P.S.I.) or cleaned with soap and water. (Do not attempt to use Filter Panels that have not dried completely.)

DUST FILTER AND Baffle SYSTEM



P-4695

Figure 13

THE DUST CONTROL SYSTEM

The baffle system that is built into the debris hopper is designed minimize dust in the air while the machine is sweeping.

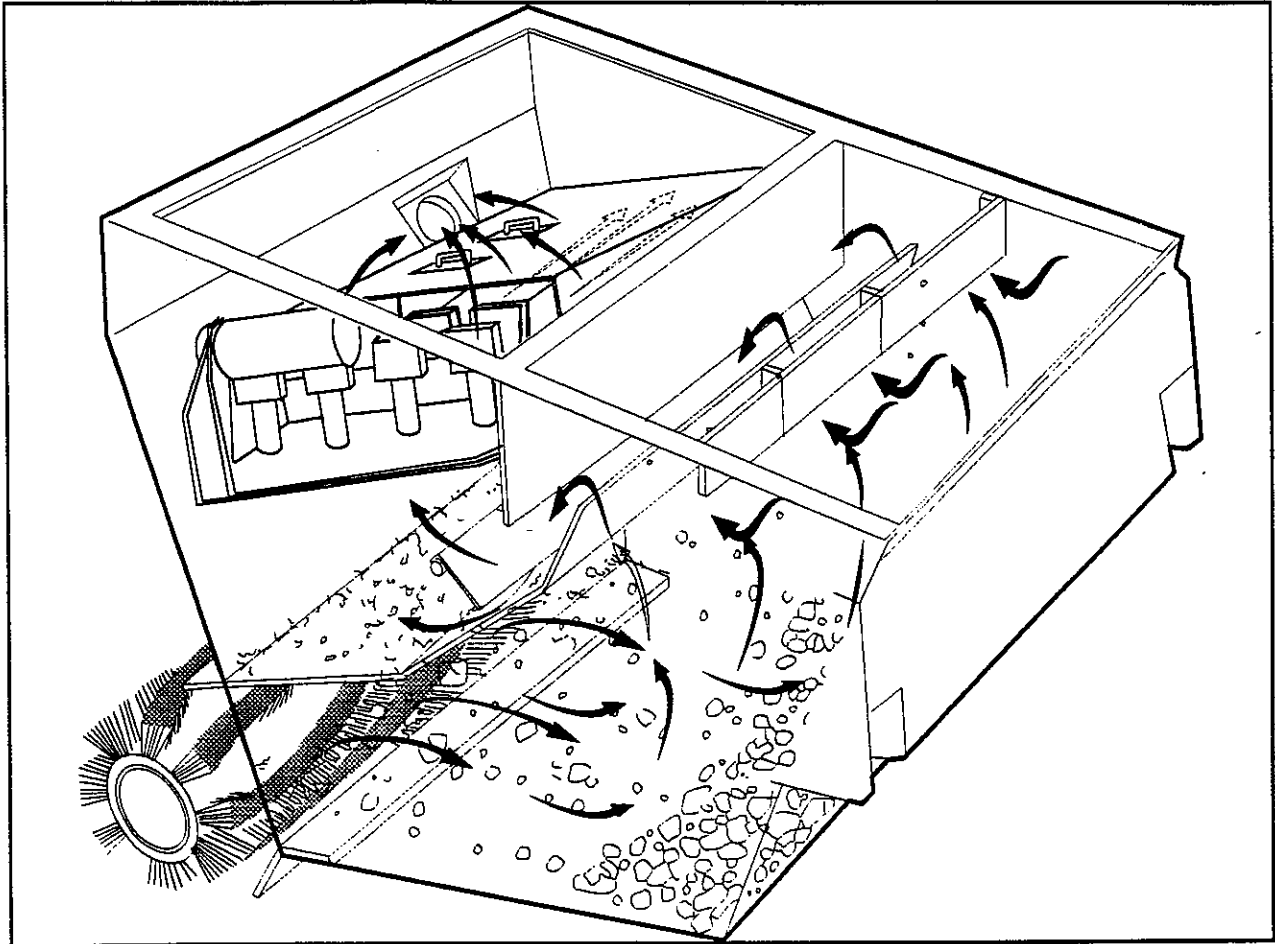
The debris from sweeping is thrown into the hopper. The impeller vacuum fan pulls the lighter dust up and through a baffle system. The Pre-Clean Flap separates the heavier dust particles to an area below the filter. The lighter dust particles are captured by the dust filter. This allows the dust filter to remain cleaner and need less shaking to remove dust. When the dust filter becomes clogged the filter shaker switch should be pushed to start the dust shaker cycle. This will extend the life of the filter.

NOTE

The main broom and impeller fan will shut off automatically when the shaker motor is cycling.

THE CONTINUOUS DUST CONTROL (CDC) OPTION

The CDC Hopper Self-Cleaning Air Filter System Option, sets the standard for constant dust control at the sweeping broom. Less operator attention is required for all sweeping conditions.



P-4695-1

Figure 14



To prevent possible injury from the compressed air blast emitted from the multi-jet filter cleaning heads, stop engine before opening the hopper filter chamber.

The air cleaning system removes dust from the vacuum fan induced air stream flowing through the sweeper hopper. The system provides prior to the fan two solids gas-separators that remove debris and dust scavenged from around the main broom.

The initial separator utilizes impaction and inertia to remove debris from the flow stream. The self-cleaning panel filter provides final high-level air cleaning before the vacuum fan interception.

Overlapping, multiple high energy gas jets automatically reverse and flush clean the filter to maintain a relatively constant hopper air flow. Energy for the filter cleaning gas multi-jets is from an engine driven compressor. Compressed air at 35/40 PSIG provides filter cleaning sequence and cleaning time lapse.

The compressor supplies air to a manifold for storage. Manifold compressed air energizes a stepper (linear motor) at 10/15 second intervals to operate one of four manifold exhaust valves. Compressed air flows from the valve into a multi-jet head for discharge through the overlapping gas jets. The multi-jet orifice geometric arrangement compliments the flow in the filter clean air shroud. The jet arrangement provides sealing contact

of the high energy gas jet to the flow tube bore walls. This results in inducted high air flow for cleaning the filter.

Proper filter cleaning is critical. Reduced cleaning energy will increase the hopper air stream, the flow drag across the filter, and increase the dusting around the main broom.

Release of filter cleaning air through the multi-jet heads into the filter clean air shroud flow tubes is from the cyclic opening of four exhaust valves. Valve opening is sequential and from the pilot valve stepper. The stepper is energized by the manifold compressed air supplied through a pressure piloted stepper operator valve.

Following the discharge of the filter cleaning compressed air from the manifold, the stepper operator valve resets. This permits the compressed air to vent from the pilot valve stepper to the atmosphere.

The stepper is reset for the next flushing cycle by gas permanently accumulated in the rod end of the stepper piston barrel. The gas accumulator charges each time the stepper cycles.

LP POWERED MACHINE

SAFETY REQUIREMENTS

Keep cigarettes, sparks, and open flame away when working on LP equipment, when inspecting for gas leaks or when LP tanks are present.

Check all components for proper operation. Replace LP components when needed. Never by-pass defective safety components.

Check routing of all LP hoses. Keep them away from sharp edges, exhaust manifolds, or other hot surfaces. Check for signs of abrasion or deterioration.

Check for gas odor before and during starting operations. If gas odor is noticed, stop and check for leaks or component malfunction.

Make sure LP tank is free of dents or gouges.

Make sure service coupling is clean and free of damage. Make sure service coupling of tank matches machine service coupling.

Keep the engine properly tuned.

Make sure the LP tank matches the fuel system.

Make sure LP tank is securely mounted on the machine with the retainer bracket clamping the tank, and with the locating pin in position.

Park the machine in a shaded, cool area when not in use.

Keep the LP tank service valve closed when the tank is not in use.

Never overfill LP tank. Fill the LP tank to the recommended weight stamped on the tank.

Use care in handling LP tanks. Never drop or drag them.

Always store and transport LP fuel tanks with the safety relief valve in the "UP" position.

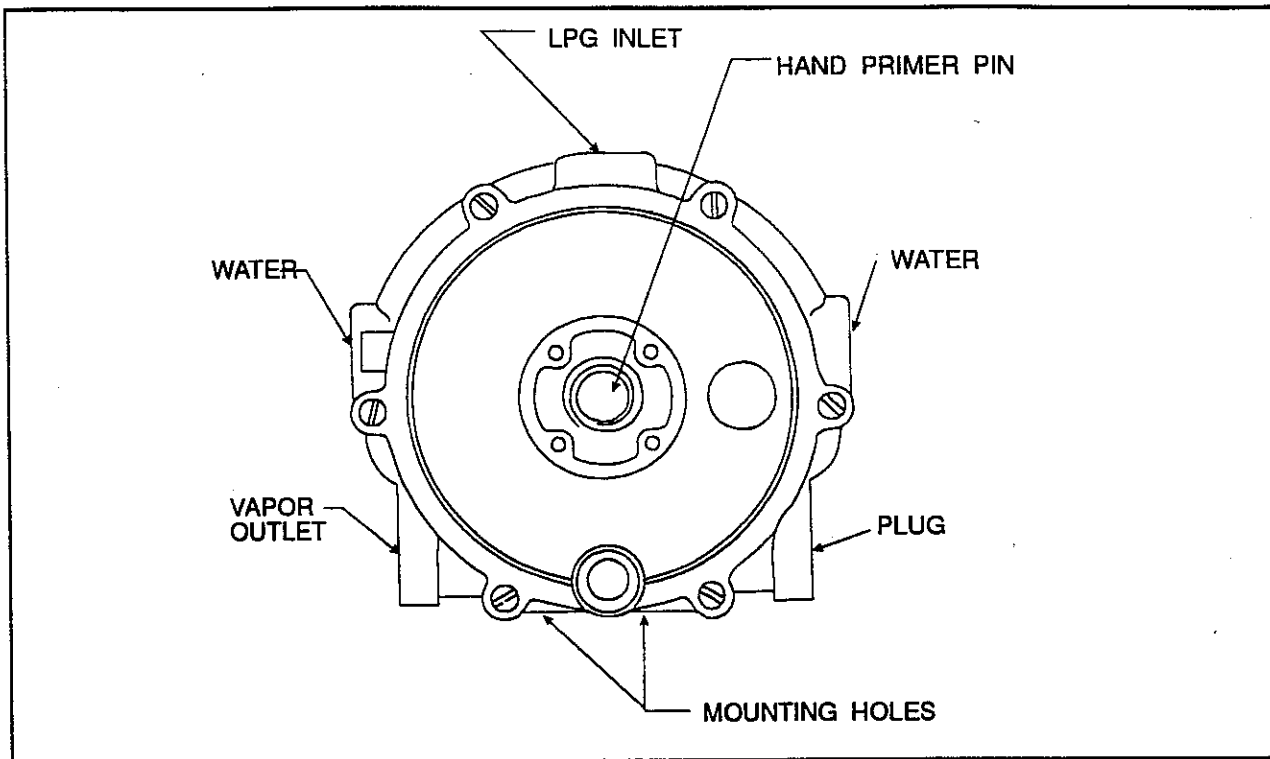
Avoid contact with the LP fuel to avoid frostbite.

When the machine is to stand unused for a period of time, overnight for example, park the machine in a designated area, shut off the service valve at the tank and operate the engine until the remaining fuel is consumed. Then, turn off the ignition switch.

LP CHECK LIST

This checklist can be made quickly. Be sure to make all of the checks listed on the maintenance chart.

1. Check connections for leaks.
2. Open the LP storage tank valve.
3. Check the regulator. Momentarily press fuel primer on the regulator cover to bleed air out of the system. See Figure 15.
4. Start the engine.



P-4563-1

Figure 15

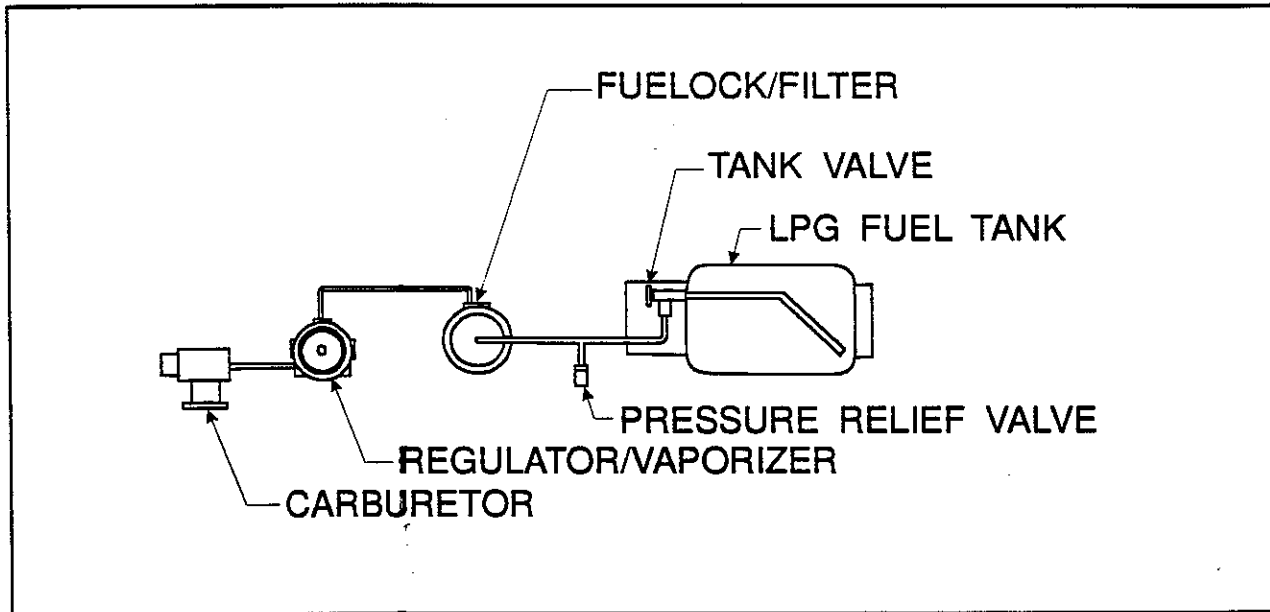
LP FUEL TANKS

Standard D.O.T. LP fuel tank sizes have 14, 20, 33.5, and 43.5 lb. capacities. The liquid volume permitted in these containers is less than the total volume of the cylinder, to provide for expansion of the LP fuel should the temperature increase a normal amount. Excessive heat may cause the fuel to expand too much, causing the safety relief valve to vent some LP fuel, relieving internal tank pressure.

Each tank is marked showing the type of construction (liquid or vapor), the manufacturer, the date of manufacture, the capacity, the weight, and the date of requalification. D.O.T. LP fuel tanks must be requalified (checked) periodically. This requalification must be recorded and maintained for the life of the container. LP fuel tanks are equipped with the following approved valves and fittings.

1. Safety Relief Valve - This is a spring-loaded valve that relieves excessive pressures which might develop in the tank due to unusual conditions.
2. Liquid Service Valve - Liquid is withdrawn from the tank through this valve. The LP tank may be filled through this valve if the tank is not equipped with a filler valve.
 - A. Excess Flow Valve - This valve is part of the liquid service valve. It is mounted inside the tank and prevents LP fuel from leaving the LP tank in the event of accidental breakage of external fittings or hoses. It permits flow in either direction, but stops outward flow if that flow becomes excessive.
3. Filler Valve - This valve is optional. If this valve is not present, the tank is filled through the service valve.
4. Liquid Level Gauge - This gauge is optional.

LP LIQUID WITHDRAWAL SYSTEM



P-4502-2

Figure 16

The liquid withdrawal LP fuel systems are made up of six components. Those components are: the LP tank, pressure relief valve, fuel filter lock, vaporizer-regulator and the carburetor. See figure 16.

The liquid LP fuel flows from the LP tank, under its own pressure, to the pressure relief valve. This valve is normally closed, preventing LP fuel from escaping into the atmosphere. This LP gas is then piped to the LP fuel filter lock. The fuel filter lock removes unwanted tank scale and deposits from the LP gas. The vaporizer converts the liquid LP fuel into a gaseous LP fuel. The gaseous LP fuel is sent to the primary regulator. The primary regulator reduces the pressure of the LP fuel and makes the flow more constant. The secondary regulator reduces LP gas pressure to the level required by the carburetor. From the secondary regulator, it is piped to the carburetor where the LP fuel is finally metered into the air flow which is sent to the combustion chamber.

USE & CARE OF LP TANKS

If an LP tank is damaged

or leaking, it should be removed to a designated safe area and the proper personnel should be notified. Do not attempt to make repairs to the cylinder, regardless of conditions. Repairs must be made by qualified personnel.

The care an LP tank receives has a direct bearing on how long that tank can be used safely. LP tanks must not be dropped, dragged, or slid across any surface. To move LP tanks, use a hand truck, or roll the LP tank on its foot ring while it is being held in a position slightly off the vertical.

CHANGING MACHINE LP TANKS

Refueling machines with LP tanks is an important function. Refueling is accomplished by replacing the empty LP tank with a full one.

The tank changing operation presents an opportunity for the machine operator to observe, carefully, the tank, tank fittings, and the fuel lines and the fittings for his own satisfaction. If abnormal wear is detected, the operator should report his findings to his supervisor for appropriate action.

To begin the tank changing operation, park the machine in a designated safe area and stop the machine. Next, close the tank valve, then remove the quick-disconnect coupling from the tank valve. Observe the machine fuel lines and the quick-disconnect for damage or abnormal wear.

Remove the empty tank from the holding device and observe the tank and tank fittings for damage or abnormal wear. Handle the tank carefully; it must not be dropped or mishandled.

Store the LP tank in a designated safe area. Select a filled LP tank and observe it for damage or leaks. Carefully install the filled tank in the machine so that the tank centering pin enters the aligning hole in the tank collar. This assures that the tank is positioned properly, so that the safety relief valve, liquid level gauge, and service valves will operate properly. Fasten the tank retaining bracket so that the tank is locked into position. Reconnect the fuel line to the tank servicing coupling. Open the service valve slowly and check for leaks. If a leak is found, close the valve immediately and notify the appropriate personnel. If no leaks are found, the engine is ready to start. Do not start the engine unless the operator is in the operator's position, with the directional control pedal in the neutral position.

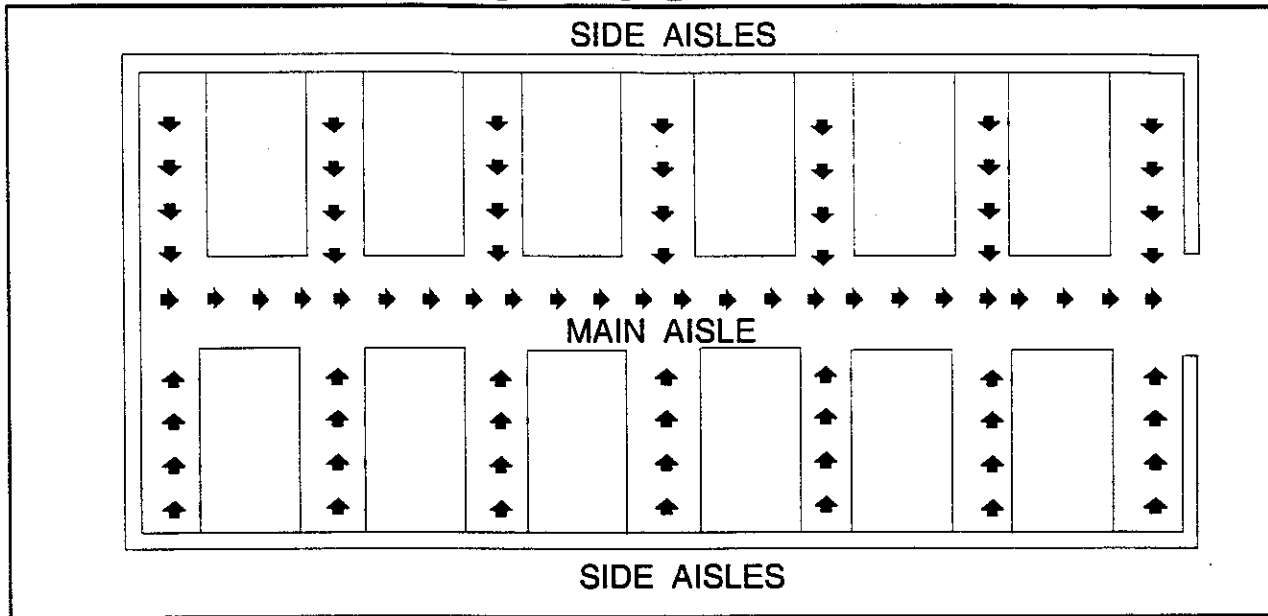
STORAGE OF LP FUEL TANK

Whether the storage is inside or outside, it should not be in the vicinity of combustible materials or high temperature sources such as ovens or furnaces, since the heat may raise the pressure of the fuel to a point where the safety relief valves would function. Care should be taken to insure that the cylinders are stored in such a manner that if the safety relief valves do function, they will relieve vapor, rather than liquid.

Valves on empty tanks must be closed during storage and transportation.

Similar precautions should be taken in storing machines fitted with LP fuel tanks. They may be stored or serviced inside buildings, provided there are no leaks in the fuel system, and the tanks are not overfilled. While machines are being repaired inside a building, the shut-off valve on the tanks must be closed, except when the engine must be operated.

HOW TO SWEEP



P-4134

Figure 17



WARNING

Do not turn the steering wheel sharply when the machine is in motion. The sweeper is very responsive to movement of the steering wheel. Do not make sudden turns.



WARNING

Sweep in straight paths. Do not bump posts. Do not scrape the sides of the machine.



WARNING

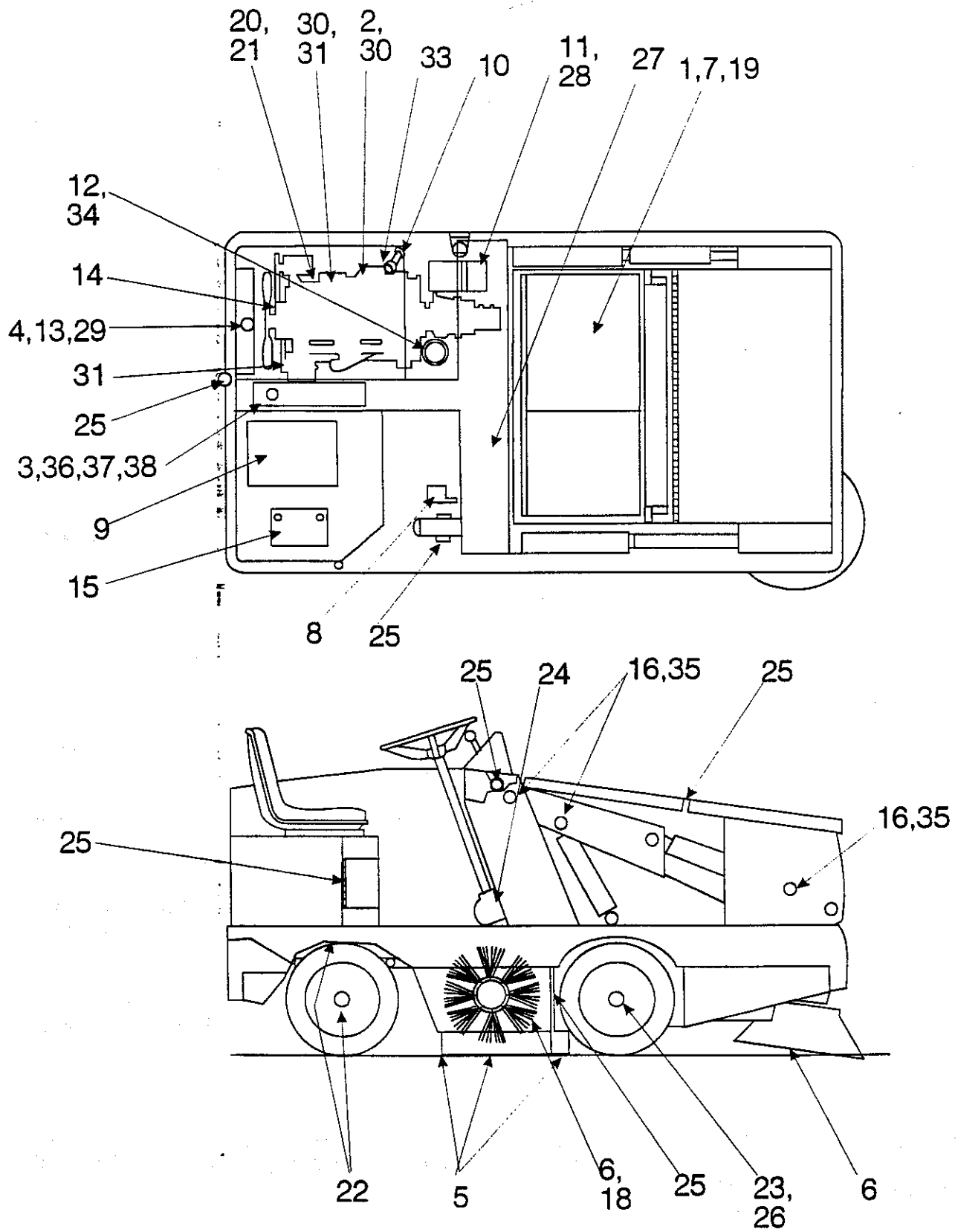
When the machine is in motion, do not push the directional / speed control pedal all the way forward. This is the same as starting in "High" and will put a strain on the motor and drive system.

1. Pick up large debris before sweeping with machine. Flatten and remove bulky cartons from aisle before sweeping large debris.
2. Use the machine to sweep debris from narrow aisles into main aisle. See Figure 17.
3. After the machine has made a sweeping run.
4. Push and hold the filter shaker control button for 20 to 30 seconds, the filter shakers will shake to unload accumulated dust. The main broom and fan will turn off automatically. The filter shakers only work when the hopper is in the sweep position.
5. Sweep debris from main aisle. See Figure 17.
6. Overlap of broom paths when sweeping. This will eliminate leaving dirty patches.
7. The machine will leave debris, while sweeping, when the hopper is full. Follow the hopper unloading cycle outlined on page 22.

NOTE

Replace main broom when bristles are reduced to 2 inch length. To order replacement brooms, see MAIN BROOM. Replace side broom when bristles are reduced to 3 inch length. To order replacement brooms see SIDE BROOM.

MAINTENANCE



C-0260

For service assistance, consult the yellow pages under power sweepers and scrubbers. For best performance, replace worn parts with genuine Clarke / American - Lincoln parts.

SERVICE CHART FOR 2260

SUBJECT

EVERY 8 HOURS or **DAILY** operation check and clean/adjust if necessary:

1. Inspect panel filter for damage and clean.
2. Check engine oil level
3. Check hydraulic fluid level
4. Check radiator core for blockage
5. Check all flaps for wear or damage
6. Check brooms for wear or damage, adjust as required
7. Check panel filter (clean side) for leakage
8. Check brake pedal and parking brake
9. Check for LPG odor at connections
10. Check water separator
11. Clean engine air filter dust cap and check filter
12. Check hydraulic return filter
13. Check coolant level

LP

D

EVERY 50 HOURS

14. Check tension on all belts
15. Check battery electrolyte level (If battery is not maintenance free)
16. Lubricate dump system
17. Check all hydraulic hoses for wear or cuts
18. Rotate main brush (end for end)
19. Clean or replace panel filter

Perform recommended engine maintenance (See engine manual)

EVERY 100 HOURS

20. Change crankcase oil
21. Change engine oil filter
22. Lubricate drive wheel swivel bearing
23. Lubricate front wheel bearings
24. Lubricate steering gear box
25. Lubricate all moving joints
26. Check brake pads for wear and adjust accordingly
27. Lubricate the clamp ends of the throttle cable with NAPA #765-1363 or equivalent anti-seize lubricant.

Perform recommended engine maintenance (See engine manual)

EVERY 250 HOURS

28. Replace engine air filter element
29. Flush radiator coolant system
30. Remove spark plugs - clean or replace
31. Check distributor & points - service or replace
32. Clean and lubricate governor & choke linkage
33. Replace fuel filter
34. Replace hydraulic return filter element
35. Check brass bushings & pins on hopper & lift arms

Perform recommended engine maintenance (See engine manual)

EVERY 500 HOURS

36. Clean hydraulic reservoir
37. Clean hydraulic intake strainer
38. Change hydraulic fluid

Perform recommended engine maintenance (See engine manual)

LP = LP Gas G = Gas D = Diesel

For service assistance, consult the yellow pages under power sweepers and scrubbers. For best performance, replace worn parts with genuine Clarke / American - Lincoln parts.

SERVICE CHART FOR CDC FILTER OPTION

SUBJECT

EVERY 50 HOURS

1. Check the Pilot Valve Stepper for 10/15 second cycle
2. Check and clean or change engine air filter, if plugged
3. Coat the inside of the stepper with a spray of liquid silicon lubricant

EVERY 500 HOURS

4. Check hose tubing and connectors for leaks and kinks
5. Tighten the compressor belt, if loose
6. Check for dust leakage in clean air plenum
7. Check the vacuum fan impeller

EVERY 1000 HOURS

8. Check manifold pressure for 35/40 PSIG
9. Check and clean multi-jet heads for caked dust in ports

EVERY 2000 HOURS

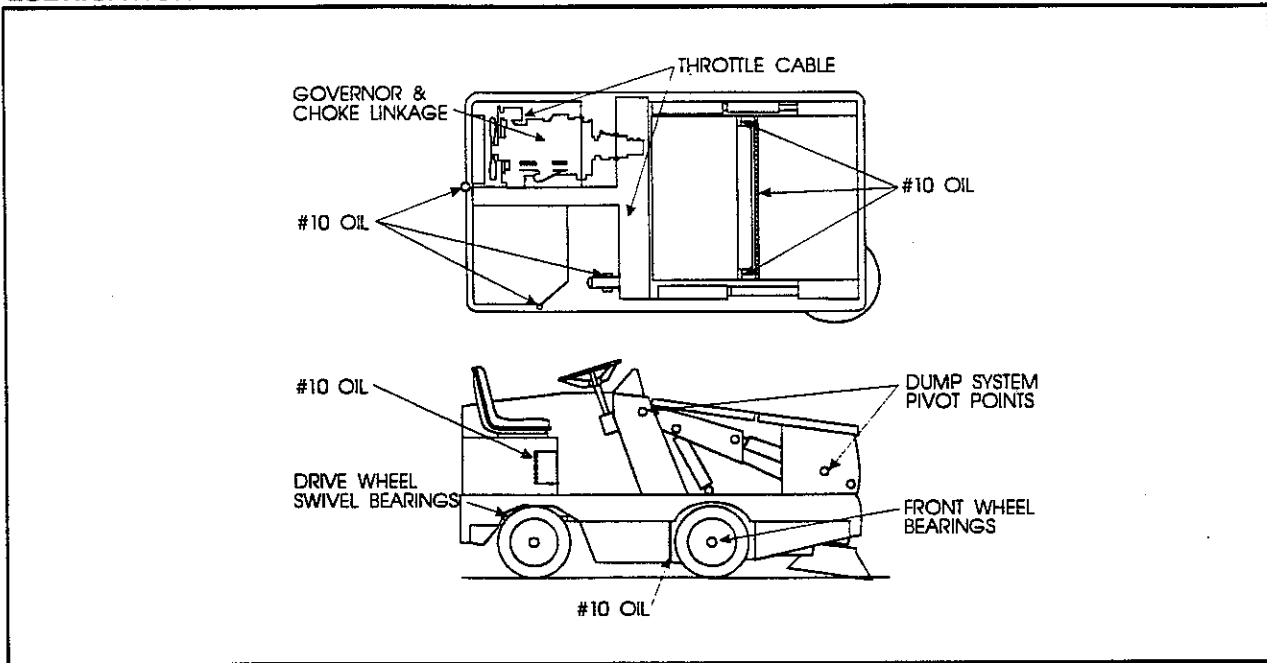
10. Check hopper filter for dust leakage

EVERY 5000 HOURS

11. Check exhaust valve seals for rupture and replace if needed
12. Check stepper seals for wear and replace if needed

GENERAL MACHINE MAINTENANCE

LUBRICATION



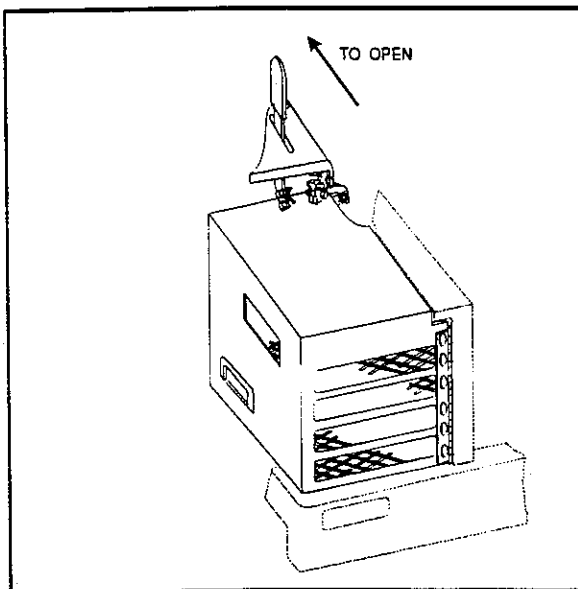
C-0135

Figure 18

Do the following lubrication procedures after every 50 hours of machine use.

1. Lubricate dump system pivot points, with a good grade multipurpose grease. Do the following lubrication procedures after every 100 hours of machine use.
2. Lubricate drive wheel swivel bearing, and the front wheel bearings with a good multipurpose grease.
3. The steering gear assembly has a grease fitting, located on the front section of the steering gear housing. Use E.P. Lithium grease to lubricate the steering gear through the grease fitting.
4. Lubricate all other moving joints of the machine with #10 oil.
5. Lubricate the clamp ends of the throttle cable with NAPA #765-1363 or equivalent anti-seize lubricant.

HOW TO OPEN THE ENGINE COVER



C-0188

Figure 19

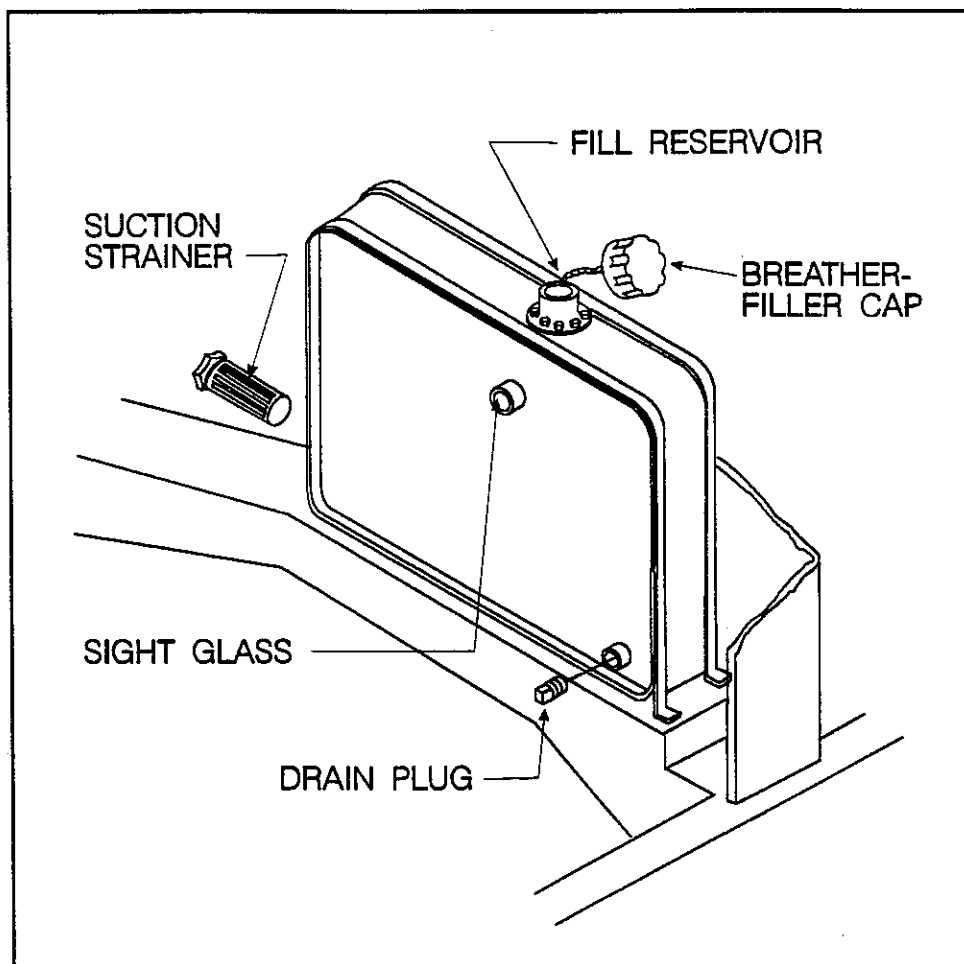
The engine cover encloses the entire engine, radiator and hydraulic reservoir assembly. The cover can be swung open to completely clear the assembly and allow easy access to the engine.

1. To open the cover, push the engine cover latch lever toward the front of the machine.
2. Swing the cover over.

HYDRAULICS

The Hydraulics system controls the brooms, hopper lift and rotation, the machine drive motor and vacuum fan.

HOW TO FILL THE HYDRAULIC RESERVOIR



P-4705-2

Figure 20

1. Open the engine cover.
2. Open the hydraulic reservoir breather filler cap.
3. Remove any debris that is in the breather filler cap screen.
4. Fill the reservoir until fluid is visible in the sight glass that is located on the side of the reservoir. Do not overfill.
5. Close the hydraulic reservoir breather filler cap.
6. Close the engine cover.

THE HYDRAULIC OIL COOLER

The hydraulic oil cooler is located next to the radiator. The cooler can be accessed by opening the engine cover. The oil cooler core must be kept clear of debris and dust.

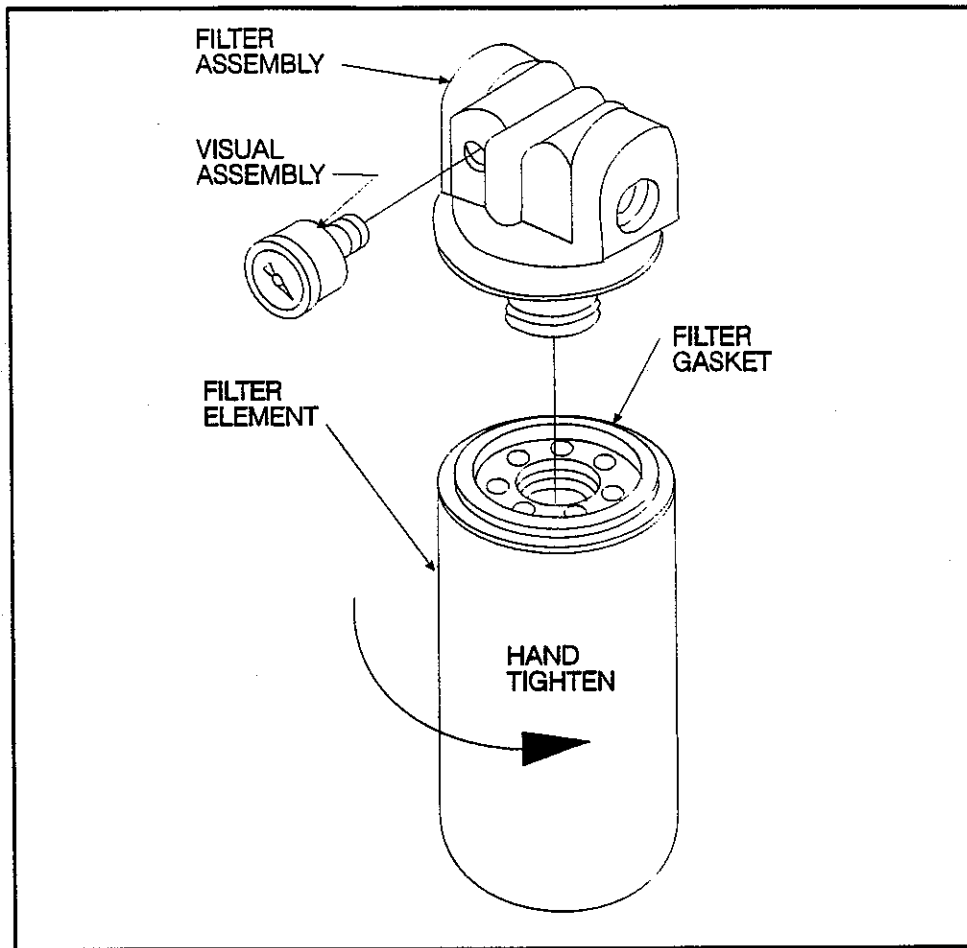
HOW TO CLEAN THE HYDRAULIC SYSTEM

1. Put a drop cloth on the floor.
2. Drive the machine on to the drop cloth.
3. Set the parking brake.
4. Open the engine cover.
5. Put a container under the reservoir drain to catch the reservoir fluid.
6. Remove the drain plug. The reservoir fluid will drain. Do not use the drained reservoir fluid to refill the hydraulic reservoir. Dispose of the used fluid.

HOW TO CLEAN THE HYDRAULIC SUCTION STRAINER

7. The suction strainer is the filter assembly located in the bottom of the hydraulic reservoir and can be removed from the outside of the reservoir. Turn the suction strainer counterclockwise by hand.
8. Remove the suction strainer from the reservoir.
9. Use a compressed air line on the inside of the strainer to blow impurities out of the filter media. If a compressed air line is unavailable, use new FORD type "F" Automotive Transmission Fluid to flush the impurities out of the filter media.
10. Flush the interior of the hydraulic reservoir with clean fluid.
11. Put the cleaned strainer in the hydraulic reservoir.
12. Rotate the strainer clockwise into the bottom of the hydraulic reservoir. Stop rotating the strainer when it is hand tight.
13. Put the reservoir plug, removed in step six, back in the hydraulic tank drain and tighten.
14. Open the breather filler cap.
15. Fill the reservoir with new FORD type "F" automotive transmission fluid. The capacity of the tank is 6 gallons or 22.8 liters.
16. Close the breather filler cap.
17. Close the engine cover.

HOW TO REPLACE THE RETURN FILTER ELEMENT

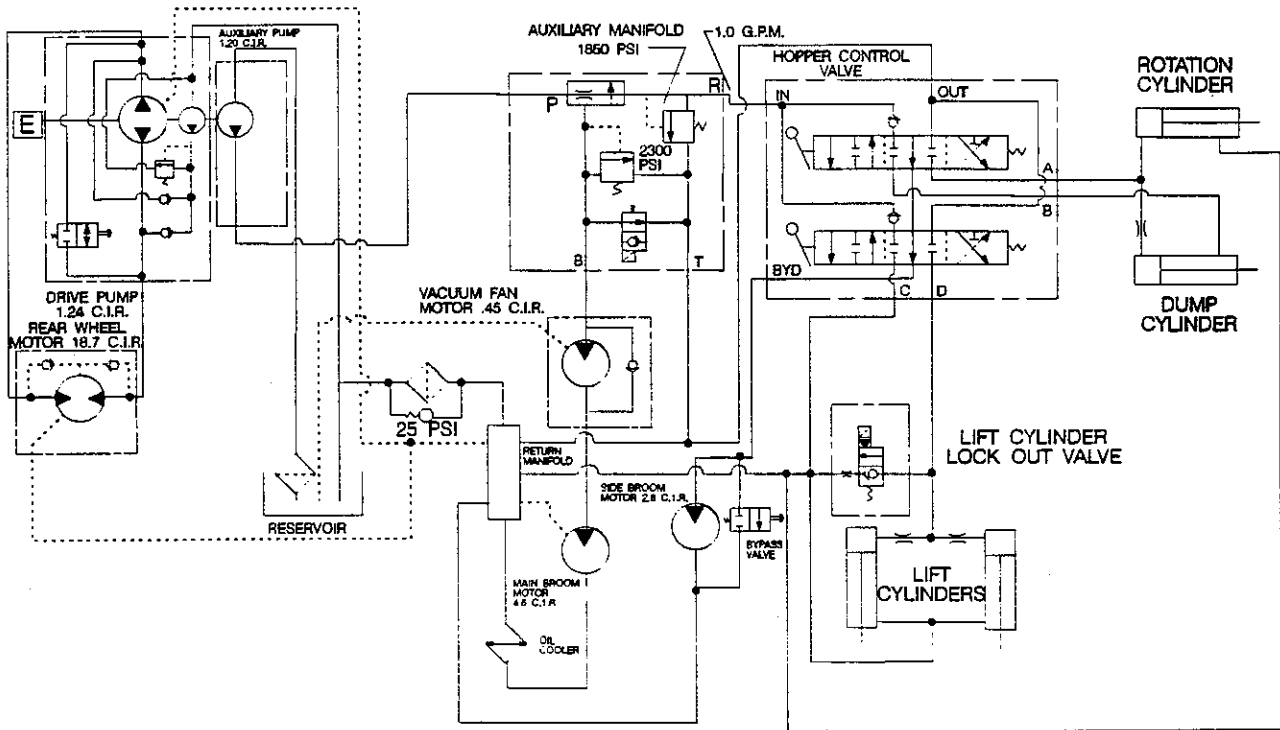


P-4506-2

Figure 21

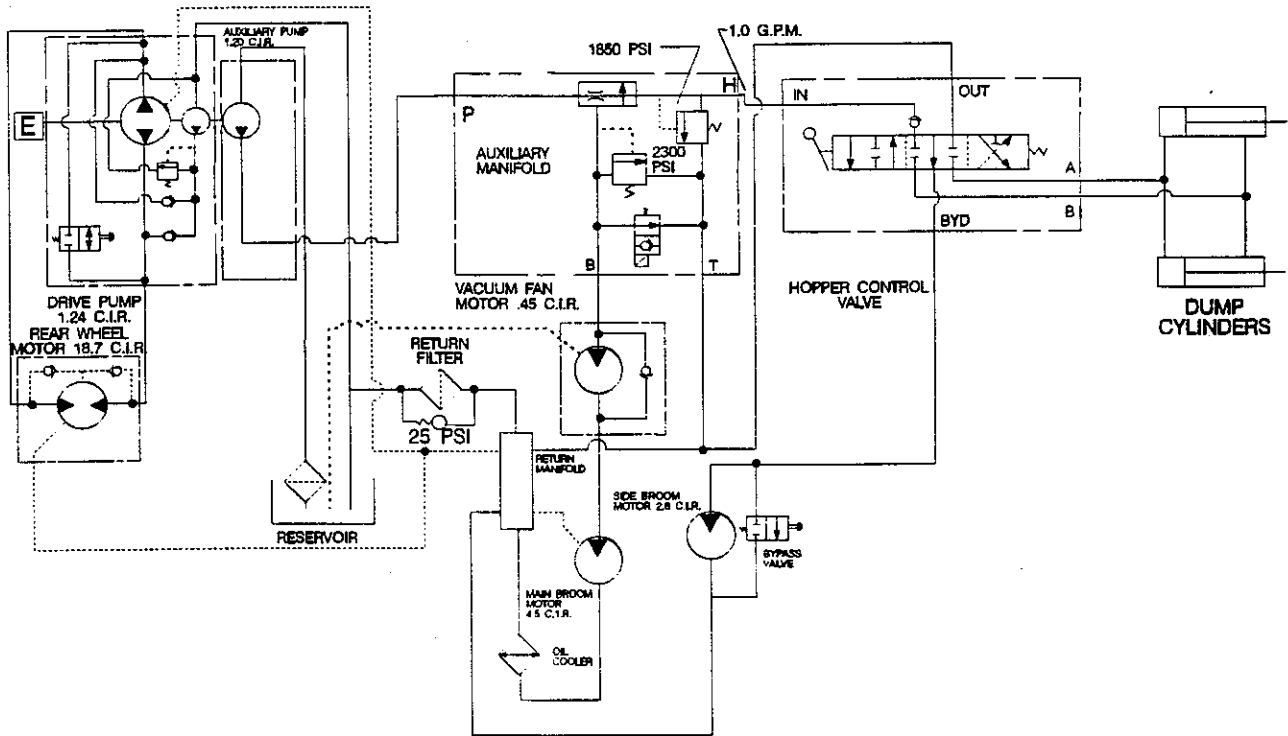
1. Check the visual indicator on the top of the filter assembly daily. When the indicator reads 40 PSI replace the return filter element immediately. This should be after 250 hours of machine run time.
2. Unscrew the filter element from the filter assembly and discard.
3. Moisten the filter gasket of a new filter element (Service Part Number 8-24-04018) with hydraulic fluid.
4. Put the filter element on threaded nipple of the filter assembly. Turn the filter clockwise, until it is hand tight.
5. Wipe clean any hydraulic reservoir fluid spills.

HYDRAULIC SCHEMATIC - VARIABLE DUMP



C-0261

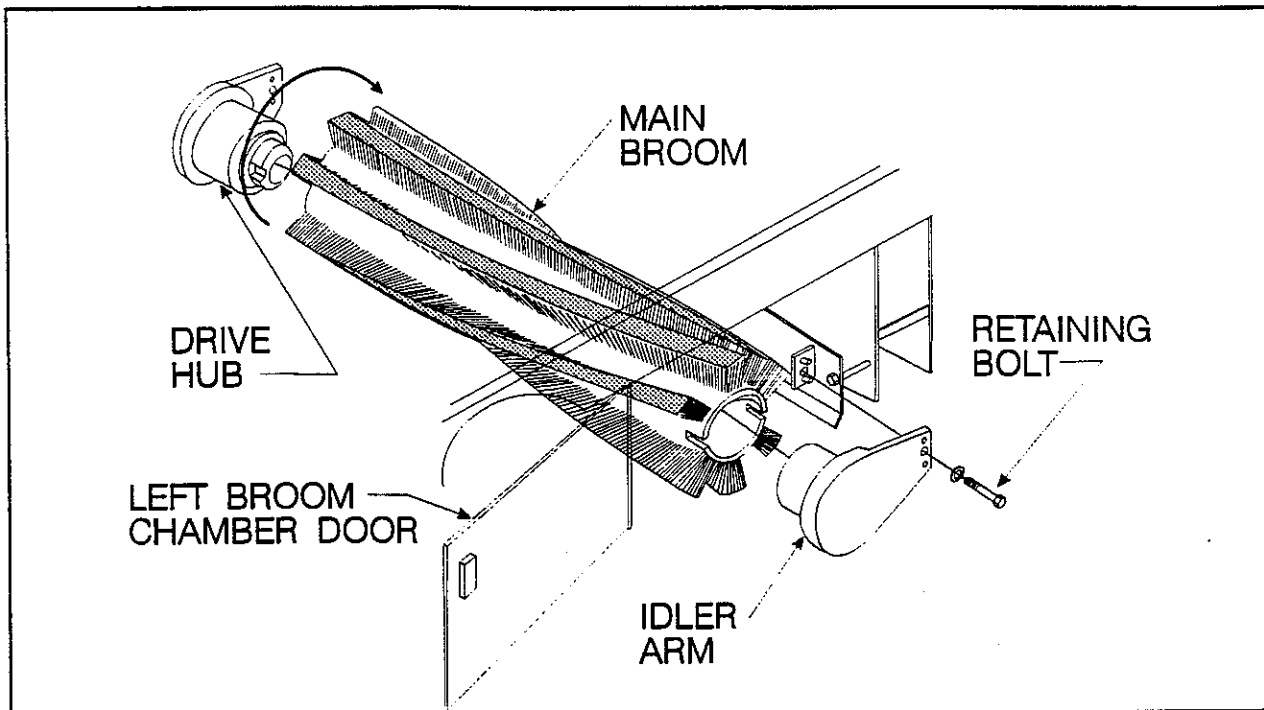
HYDRAULIC SCHEMATIC - LOW DUMP



C-0262

HOW TO REPLACE THE MAIN BROOM

Replace the main broom when the bristles are worn to 2 inches in length.



P-4388-1

Figure 22

1. Open the left broom chamber door.
2. Put the main broom control in the "SWEEP" position.
3. Remove the retaining bolt (See Figure 22).
4. Remove the idler arm assembly.
5. Remove the main broom and discard.
6. Put a new main broom in the broom chamber.
7. Rotate the new broom to the right on the drive hub until it engages the drive hub broom tabs.
8. Put the idler arm assembly in place.
9. Put the retaining bolt in place and tighten.
10. Close the broom chamber door.
11. Start the engine.
12. Put the broom lever in the "SWEEP" position.
13. Let the broom sweep in place for 30 seconds.
14. Put the broom lever in the "UP" position.
15. Back the machine off the test spot.
16. Inspect the polished area where the broom swept, for broom bristle contact with the floor. The area of broom bristle contact with the floor should be 2 to 3 inches or 5 to 8 cm. wide.

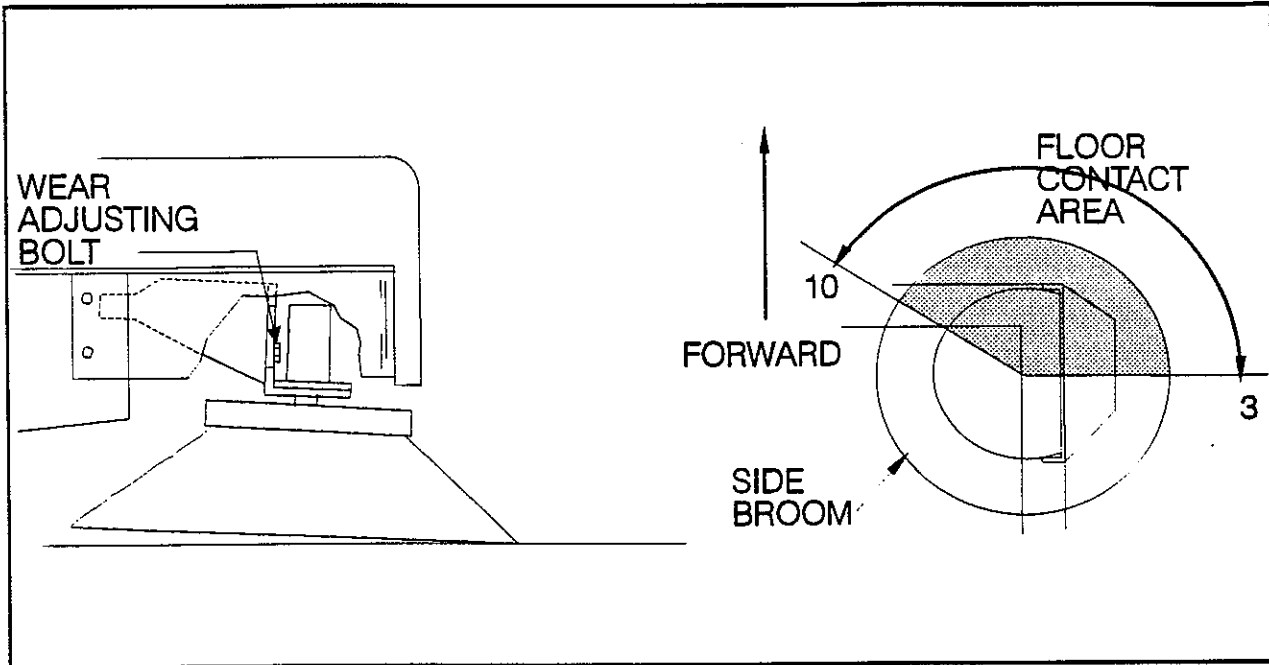
MAIN BROOM LEVEL ADJUSTMENT

The main broom level is factory set and should not need adjustment, if the level gets out of adjustment and the broom bristle contact pattern is not an even 2" to 3" wide, the broom arm lift frame (page 96, part number 27) will have to be adjusted. The frame is supported by two flange bearings (part number 22). These bearings are located inside the broom doors. The carriage bolts (part number 23) on the two end flanges will have to be loosened. The frame can then be leveled and the bolts tightened.

HOW TO ADJUST MAIN BROOM WEAR PATTERN

When the bristles of the broom begin to wear out the following adjustments may be made to keep a 2 inch (5 cm.) broom pattern.

1. Loosen the wing nut located in the engine compartment (See page 94, part number 22).
2. Set the broom lever to the "Sweep" position and adjust the torque knob (part number 23) to obtain a 2 inch (5 cm.) broom pattern. The torque knob will move the linkage rod (part number 3) that adjusts the sweeping pattern of the broom for wear.
3. Tighten the wing nut against the torque knob.



C-0263

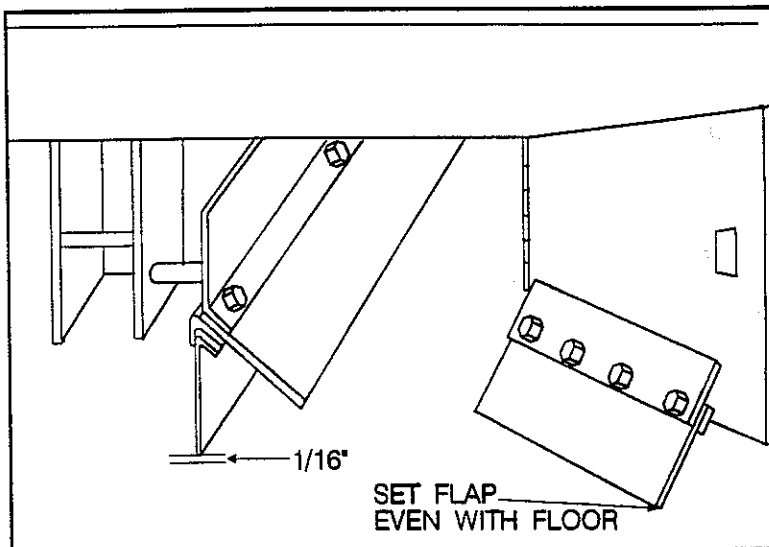
Figure 23

SIDE BROOM LEVEL ADJUSTMENT

As the side broom wears, simply loosen the two wear adjusting bolts and slide the broom-motor assembly into a position so that the broom contacts the floor at a 3 degree angle when lowered as shown in Figure 23.

SIDE BROOM REPLACEMENT

Put the side broom lift control in the "UP" position. Remove the retaining screw in the bottom middle of the side broom (Key # 19 on page 98). Remove the side broom. Transfer the side broom flange spacer and screws to the replacement side broom (Keys # 5, 6, 21, 22 and 39). Put the replacement side broom on the shaft. Put the retaining screw (Key # 19) in position and tighten.



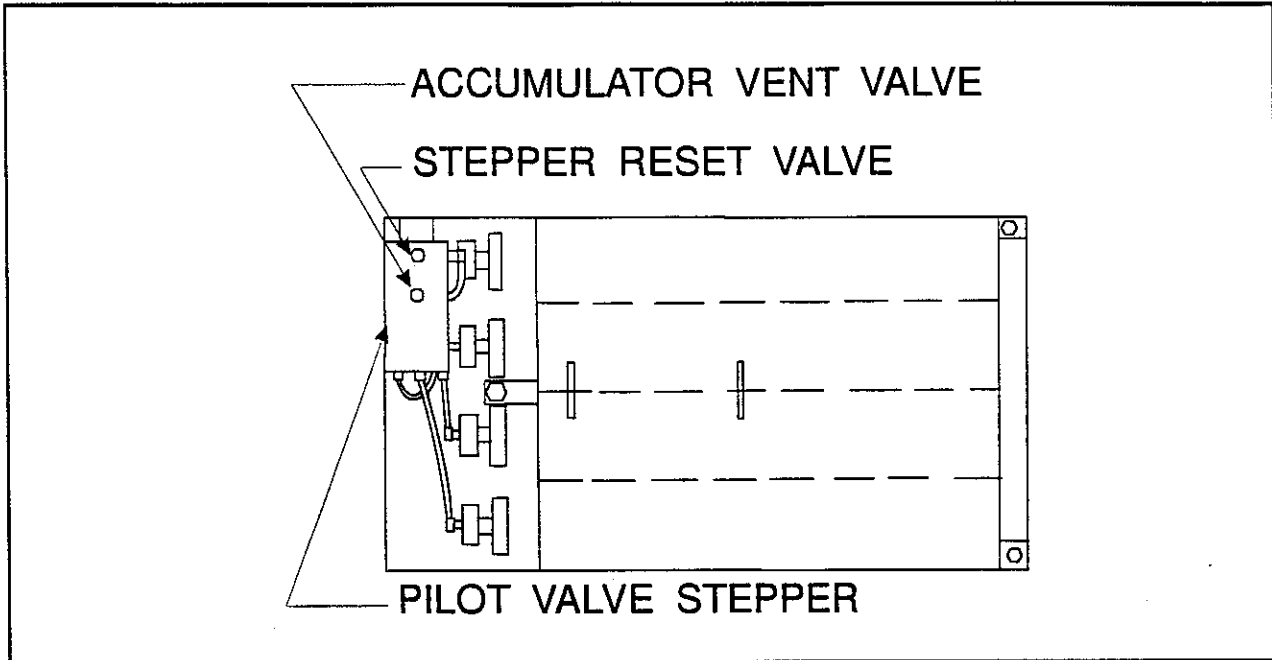
P-4488-1

Figure 24

BROOM FLAPS

The Urethane Flaps are susceptible to damage and should be inspected regularly and maintained in good condition. The side and hopper flaps are adjustable and should be maintained even with the floor. The rear flap must be maintained 1/16" (16 cm.) above the floor. All flaps should be replaced when worn or damaged to such an extent that they cannot perform their normal function.

CDC MAINTENANCE



P-4965

Figure 25

CDC STEPPER MAINTENANCE

Every 50 hours of machine operation remove the accumulator vent valve and the stepper reset valve from the pilot valve stepper. Coat the inside of the stepper with a spray of liquid silicon lubricant. Put the two valves back into position on the pilot valve stepper.

CDC HOPPER FILTER

Replace the pleated filter. Properly align filter segment dividers to face of clean air plenum. Torque filter clamping bolt to compress seals. Do not over torque and collapse filter.

CDC EXHAUST VALVE SEALS

Refer to the repair kit. At installation, properly orient diaphragm to valve seat and pilot orifice pin. Evenly torque retainer cap screws.

NOTE

Thoroughly clean and avoid contamination.

CDC STEPPER SEALS

Refer to the repair kit.

NOTE

Thoroughly clean and avoid contamination.

CHARGING THE CDC STEPPER ACCUMULATOR

Newly installed systems and service repair may permit valve steppers that uncharges the accumulator to extend the stepper cam pilot pin. This pilots to open an exhaust valve. The valve will bark or chatter as the manifold attempts to fill with compressed air.

Correct this condition by charging the accumulator. With the compressor at operating speed, place index finger over the the stepper case vent valve opening for 5 to 8 seconds. Too sudden release of the case vent will continue unstable valve action.

Delayed release of the case vent port will overcharge the accumulator to single stroke the exhaust valve pilot. Correct this condition by pushing the stepper accumulator vent valve.

CDC EXHAUST PILOT VALVE

System filter cleaning problems are isolated by pushing the stepper reset button. If operation begins and then ceases, repeat the sequence and note the exhaust valve that fails to open. The part of the system operating this exhaust valve is most likely the problem. Check related pilot tubing leakage, exhaust valve seal leakage, and pilot valve sticking.

ENGINE AIR INTAKE SYSTEM

NOTE

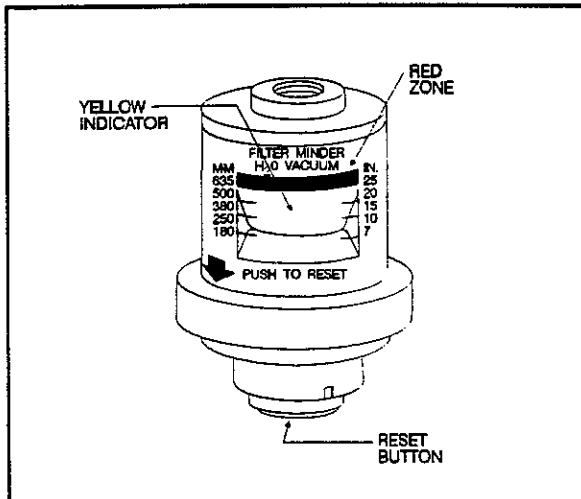
Monitor the air filter indicator daily

The importance of maintaining an air filter cannot be overemphasized. Dirt ingested through improperly installed, improperly serviced, or inadequate air filter elements wears out more engines than long hours of operation. Even a small amount of dirt will wear out a set of piston rings in just a few hours. Operating with a clogged air filter element also causes the fuel mixture to be richer, which can lead to formation of harmful sludge deposits in the engine. Always cover the air intake when the air filter is removed for servicing. Do not neglect servicing the air filter. Use only approved replacement parts. Keep all other air intake components such as hoses and clamps secure and in good condition to prevent entrance of unfiltered air.

Overmaintenance can cause more damage than good. Removing the air filter element more often than is needed allows contaminants to enter the engine unnecessarily.

AIR FILTER

The engine air filter housing includes a dust cap and a dry cartridge type air filter element. The dust cap must be emptied of dirt daily. The air filter element must be replaced every 75 to 100 hours. The filter element must be replaced if it is damaged or has been cleaned three times.



P-4713

Figure 26

Replace the engine air filter only when the Yellow Filter Service Indicator reaches the red band at the top of the indicator. The yellow indicator will stay at the red band when the engine is off. Reset the indicator by depressing the black button at the bottom of the indicator.

TO REPLACE AIR FILTER ELEMENT

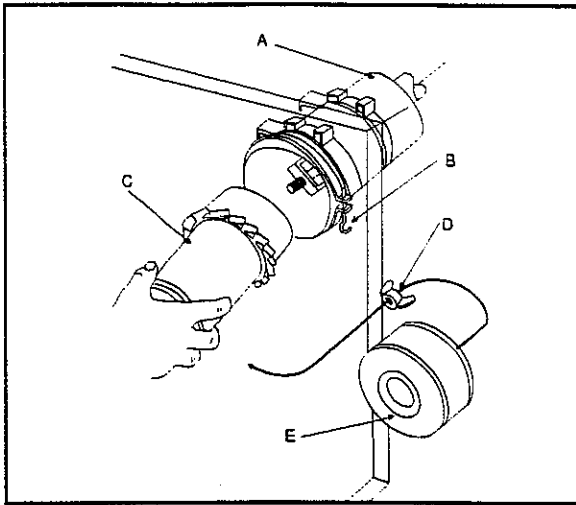
1. Stop the engine and engage the machine parking brake.

WARNING

Always park on a level surface, stop the engine, and engage parking brake before working on the machine to keep it from creeping or rolling.

2. Tilt the hopper forward until it is over the bumper.
3. Unscrew the clamp ring on the filter.
4. Remove the dust cap.
5. Empty the dust cap.

6. Remove the filter wing nut.
7. Gently pull the filter element out of the filter housing.



REMOVING AIR FILTER ELEMENT

- A. Filter Housing
- B. Clamp Ring
- C. Filter Element
- D. Wing Nut
- E. Dust Cap

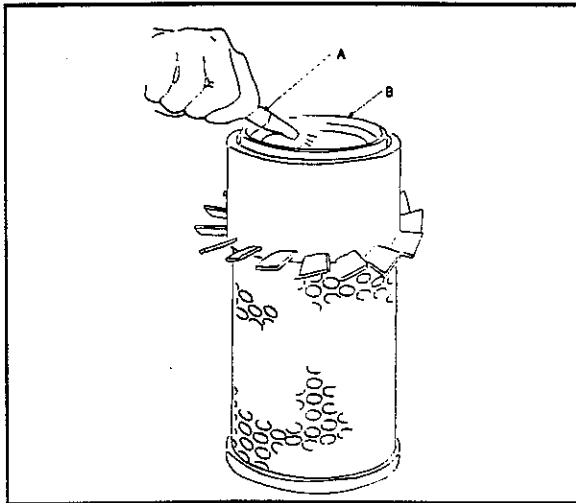
P-4599

Figure 27

8. Clean the interior of the air cleaner housing with a damp cloth. Clean the element housing sealing surfaces.
9. Using an air hose, direct dry, clean air maximum 30 PSI up and down pleats on the inside of the filter. Do not rap, tap, or pound dust out of the element.

WARNING

Wear approved eye protection when using air or water hoses to prevent eye injury.



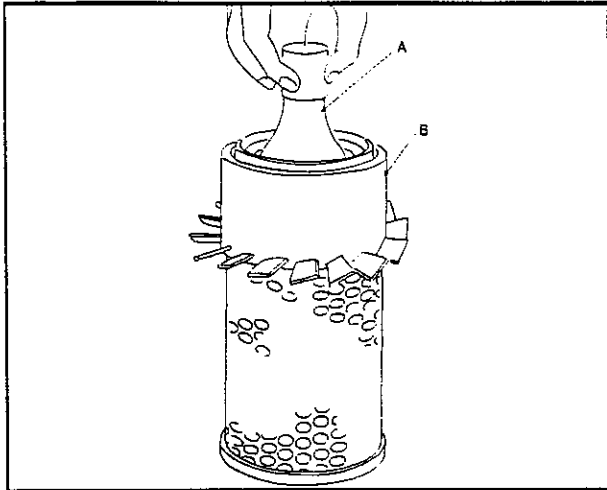
CLEANING AIR FILTER ELEMENT

- A. Air Hose
- B. Filter Element

P-4504

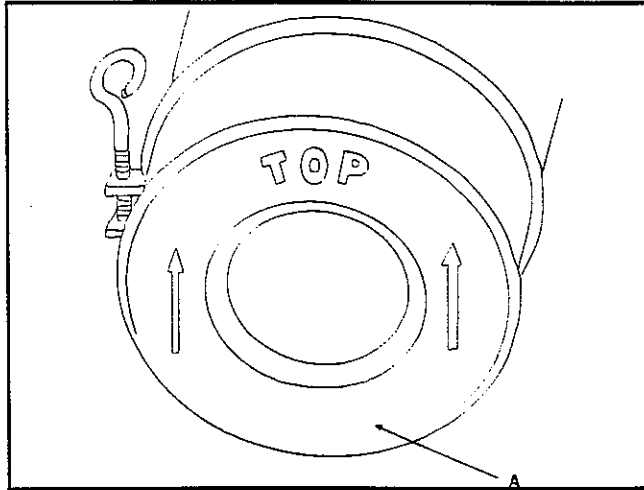
Figure 28

10. After cleaning the air filter element (8-24-04106), inspect it for damage by placing a bright light inside. The slightest rupture requires replacement of the filter. Clean and inspect the ends of the element. They should be unbroken and flexible. Remember, the element must be replaced after it has been cleaned three times.



P-4503

Figure 29



P-4505

Figure 30

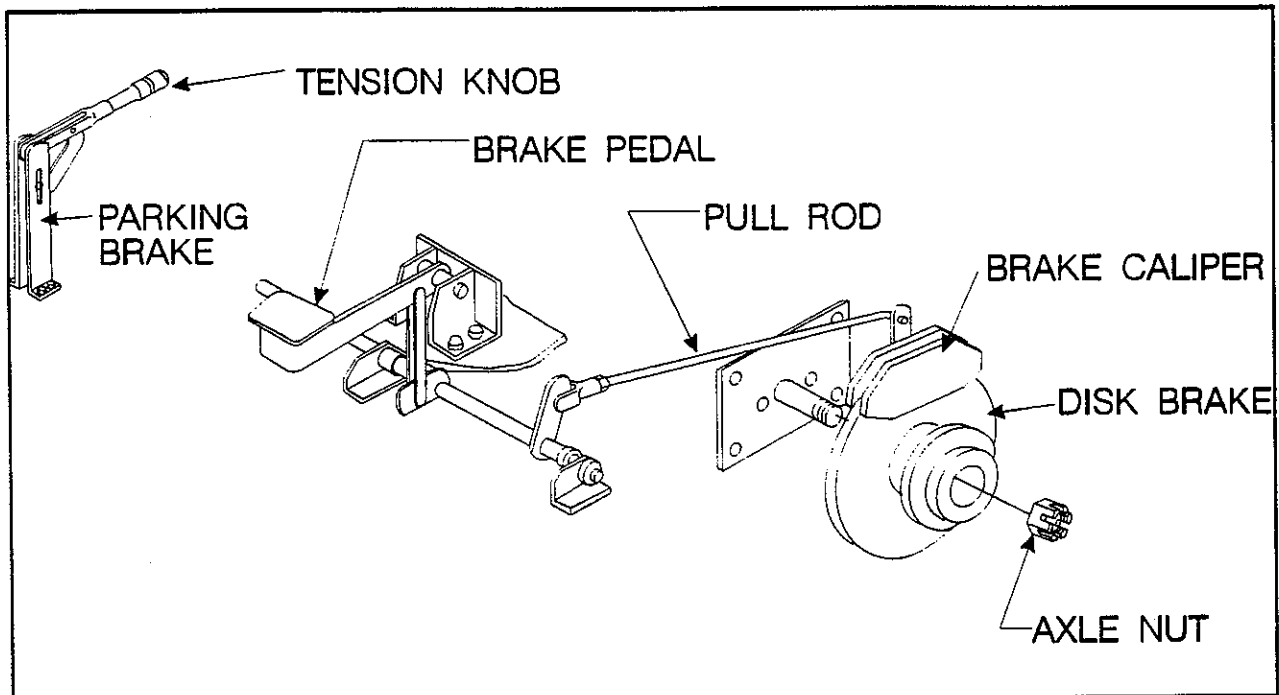
INSPECTING AIR FILTER ELEMENT DUST CAP

- A. Bright Light
- B. Filter Element

- A. Dust Cap

11. Install the new or cleaned filter element so that fins on the element are at the intake end of the air cleaner. Use care so the fins are not damaged. Tighten the wing nut attaching the element.
12. Install the dust cap with the arrows pointing up. Tighten the clamp ring to hold it in place. Check all intake hose connections for leaks or abrasion.
13. Reset filter monitor after any filter service.
14. Retract the hopper.

BRAKE ADJUSTMENT

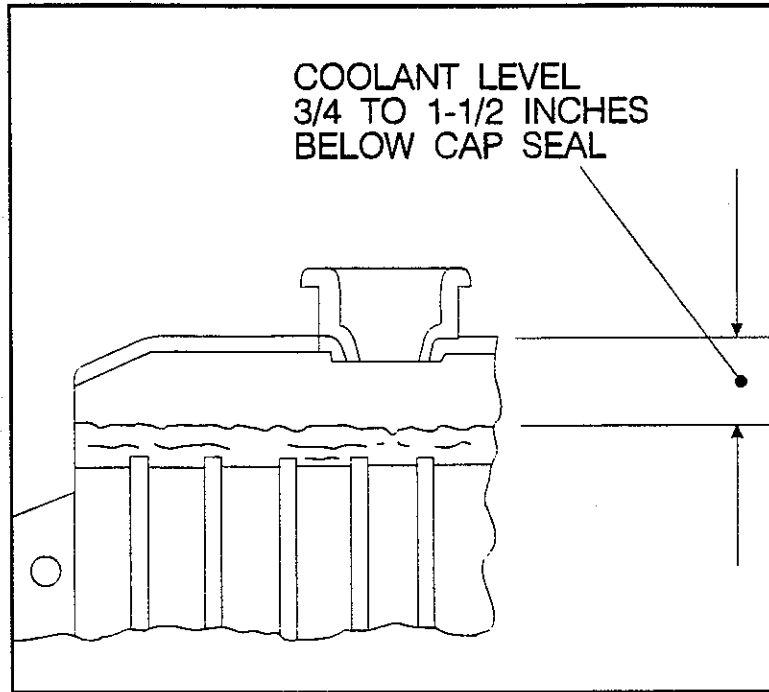


C-0264

Figure 31

1. Connect pull rod to brake lever then adjust to fit with brake pedal full up and the spring not attached.
2. Adjust tension knob on parking brake lever to hold machine on a 8 degree incline.
3. Attach the brake lever spring.

COOLING SYSTEM



P-4404

Figure 32

COOLANT LEVEL

Check the coolant level in the radiator daily, only when the engine is cool.

Maintain the coolant level at approximately 3/4 inches (1.9 cm.) below the filler neck seat on the radiator when the coolant is cold. See Figure 32

Whenever coolant level checks are made, check condition of radiator cap rubber seal. Make sure it is clean and free of any dirt particles. Rinse off with clean water if necessary. When replacing cap on radiator, also make sure radiator filler neck is clean.

WARNING

Never remove the radiator cap under any conditions while the engine is operating. Failure to follow these instructions could result in damage to the cooling system or engine and/or personal injury. To avoid having scalding hot coolant or steam blow out of the radiator, use extreme care when removing the cap from a hot radiator, if possible, wait until the engine has cooled, then wrap a thick cloth around the radiator cap and turn it slowly to the first stop. Step back while the pressure is released from the cooling system. When you are sure all the pressure has been released, press down on the cap (still with a cloth), turn and remove it.

Do not add coolant to an engine that has become overheated until the engine cools. Adding coolant to an extremely hot engine can result in a cracked block or cylinder head.

Use only a permanent type coolant that meets FORD specification ESE-M97B44-A such as FORD Cooling System Fluid. Refer to the coolant chart on the container for additional antifreeze protection information. Do not use alcohol or methanol antifreeze, or mix them with the specified coolant.

Plain water may be used in an emergency, but replace it with the specified coolant as quickly as possible to avoid damage to the system. With only water in the system, do not let engine run hot.

RADIATOR

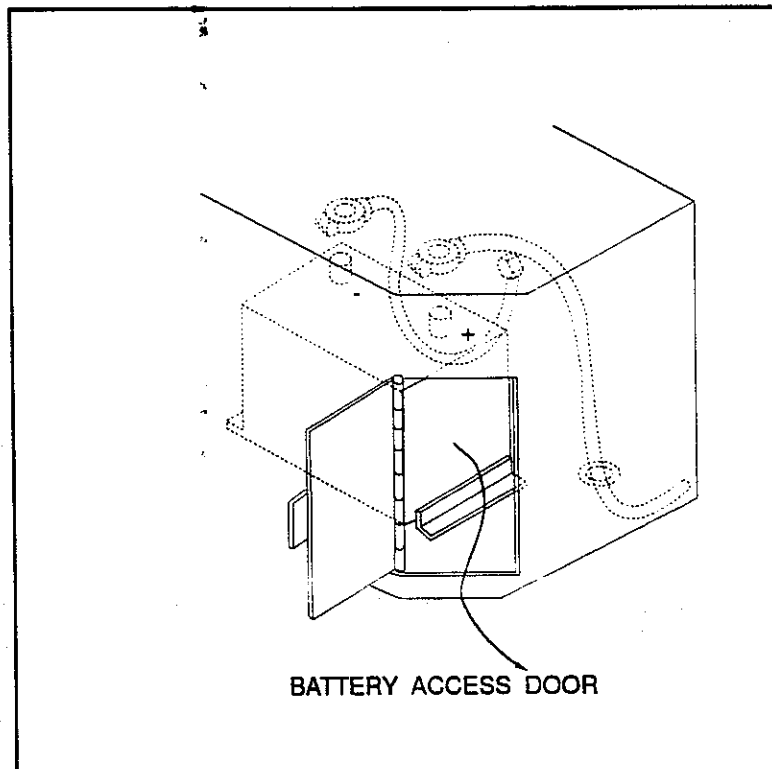
Inspect the exterior of the radiator for obstructions. Remove all bugs, dirt or foreign material with a soft brush or cloth. Use care to avoid damaging the fins. If available, use compressed air or a stream of water in the opposite direction to normal airflow. Open door for access.

Check all hoses and connections for leaks. If any of the hoses are cracked, frayed, or feel spongy, they should be replaced.

DRIVE BELTS

The drive belt(s) should be properly adjusted at all times. A loose drive belt causes improper alternator, fan and water pump operation, and overheating. Overtightening the belt may result in excessive wear on the alternator and water pump bearings, as well as premature wear on the belt itself. Therefore, it is recommended that proper belt tension be maintained.

BATTERY



P-4694

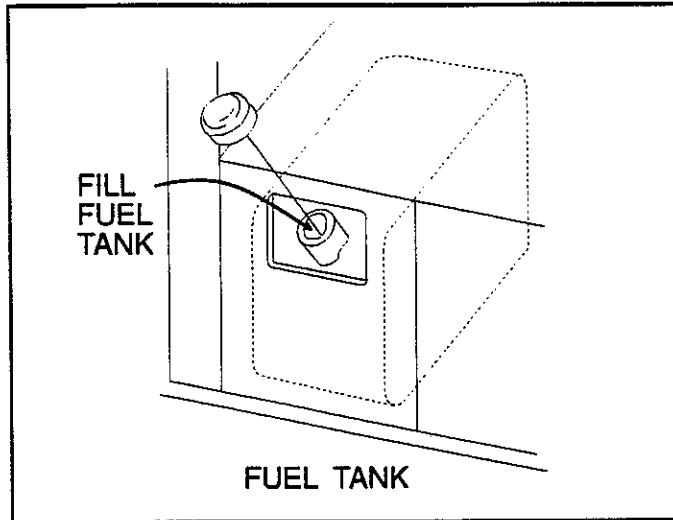
Figure 33

1. Access to the battery is through the door located beneath the driver's seat.

2. Keep the top of the battery clean and dry. Keep the terminals and connectors clean. To clean the tops of the batteries, use a damp cloth with a weak solution of ammonia or bicarbonate of soda solution. To clean the terminals and connectors, use a terminal and connector cleaning tool.

! WARNING

NEVER allow the soda solution to enter the cells. This will permanently discharge the battery.



P-4692

Figure 34

GAS TANK

The gas tank is located under the drivers seat. It may be filled from the rear of the machine.

SERVICE PARTS FOR ENGINES

FORD VSG 411

8-03-03002 Alternator with Pulley
 8-29-00171 Carburetor Gasket
 0869-078 Carburetor without Gasket
 8-14-07008 Coil
 8-90-07343 Coil Wire
 8-11-00041 Distributor Cap
 8-66-08006 Distributor Rotor
 8-24-04129 Fuel Filter
 8-70-00066 Fuel Pump with Gasket
 0885-065 Governor
 8-24-04099 Oil Filter
 8-70-00063 Spark Plug Wire Set
 8-75-03007 Spark Plugs (4 included)
 8-60-05013 Water Pump with Gasket
 2-00-04865 Belt, Alternator
 2-00-04866 Belt, Governor
 8-29-00163 Gasket, Head
 0880-489 Gasket, Oil Pan
 8-29-00167 Gasket, Thermostat
 8-29-00164 Gasket, Valve Cover
 0875-080 Starter
 8-84-08001 Thermostat

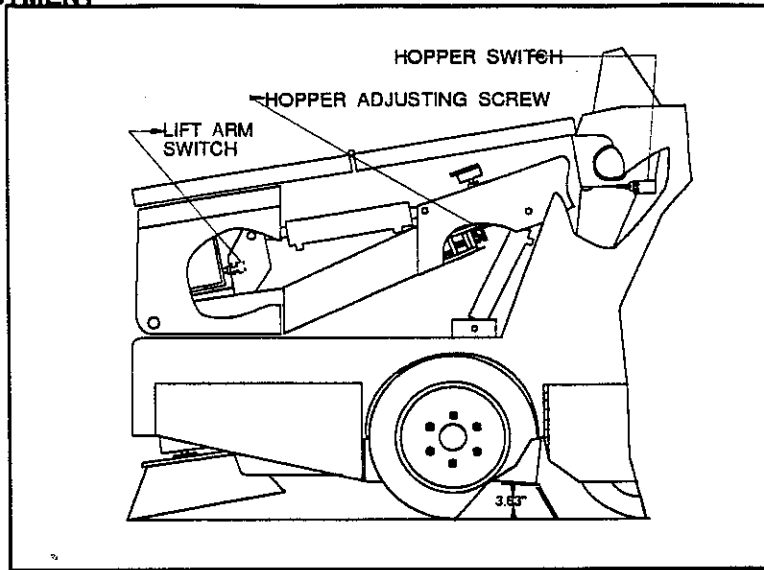
FORD VSG 413

8-03-03002 Alternator with Pulley
 8-29-00217 Carburetor Gasket
 0869-081 Carburetor without Gasket
 8-14-07011 Coil
 0875-080 Starter
 8-24-04132 Fuel Filter
 8-70-00066 Fuel Pump with Gasket
 0869-073 Fuel Pump w/o Gasket
 8-29-00159 Fuel Pump Gasket
 0869-083 Governor
 8-24-04099 Oil Filter
 8-70-00072 Spark Plug Wire Set
 8-75-03007 Spark Plugs (4 included)
 8-60-05019 Water Pump with Gasket
 2-00-04865 Belt, Alternator
 2-00-05146 Belt, Governor
 8-29-00216 Gasket, Head
 0880-502 Gasket, Oil Pan
 8-84-08001 Thermostat
 8-29-00167 Gasket, Thermostat
 8-29-00164 Gasket, Valve Cover

PERKINS 104.19

2-60-02240 Oil Filter Element
 2-60-02241 Fuel Filter Element
 2-60-02242 Alternator & Water Pump Belt
 2-60-02243 Injector
 2-60-02244 Injector Seat Washer
 2-60-02245 Valve Cover Gasket
 2-60-02246 Cylinder Head Gasket
 2-60-02247 Cylinder Head Gasket
 2-60-02248 FAT Timing Gear Cover Gasket
 2-60-02249 FAT Timing Gear Housing Gasket
 2-60-02250 Gasket Set, Complete Service Kit
 2-60-02251 Crankshaft Seal
 2-60-02252 Water Pump Gasket
 2-60-02253 Water Pump Gasket
 2-60-02254 Thermostat
 2-60-02255 Thermostat Gasket
 2-60-02256 Injection Pump
 2-60-02257 Injection Pump Shim +0.2mm
 2-60-02258 Injection Pump Shim +0.3mm
 2-60-02259 Injection Pump Shim +0.4mm
 2-60-02260 Injection Pump Shim +0.5mm
 2-60-02261 Pipe, Inj. #1 Cylinder
 2-60-02262 Pipe, Inj. #2 Cylinder
 2-60-02263 Pipe, Inj. #3 Cylinder
 2-60-02264 Pipe, Inj. #4 Cylinder
 2-60-02265 Water Pump

HOPPER ADJUSTMENT

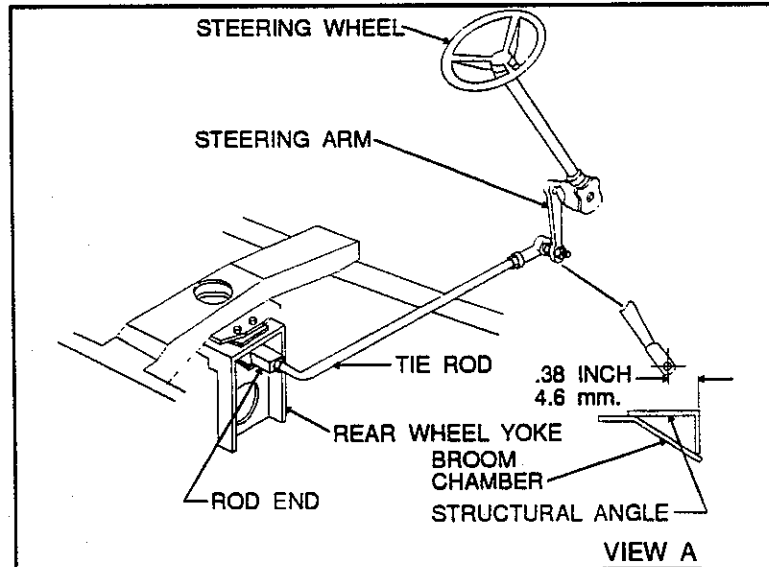


C-0136

Figure 35

The following adjustments are made to the hopper at the factory. Once adjusted, no further attention should be required.

1. Install hopper stops loosely.
2. Adjust stops to give $3 \frac{5}{8}$ (9.2 cm.) inches clearance under rear bottom edge of hopper, then secure.
3. Using the adjusting screw, set the hopper square in the machine with equal clearance between the wheel wells and the outer edges of the hopper on both sides. Set the jam nut.



P-4720

Figure 36

STEERING ADJUSTMENT

1. Turn the steering wheel fully clockwise. Assemble steering rod so that the centerline of the hole is .38 inch (9.6 mm.) back from the structural angle portion of the frame.
2. Turn the steering wheel fully counter clockwise until the steering arm makes contact with the floor panel.
3. Turn rear wheel yoke to a 90 degree left hand turn. Insert tie rod, preassembled with the rod end centerlines at 24.62 inch (62.5 cm.) centers leaving rod end at least one full turn from tight.
4. Connect yoke and steering arm.

LP GAS SYSTEM

The propane powered Model 2260 is identical to the "standard" gasoline powered 2260, except that its fuel system has been modified to operate on LP vapor fuel.

The LP fuel system consists of several components not found on the gasoline system. The LP fuel system also contains the associated mounting hardware and plumbing for the LP components. The major LP components are as follows:

1. An LP carburetor
2. A combination water heated vaporizer and regulator
3. A combination LP fuel line filter and lock off valve
4. LP fuel tank and fittings

These components are factory set, attempts at adjusting these components should only be made by authorized service personnel.

LP GAS VAPORIZER-REGULATOR QUICK CHECK





Turn on the ignition switch and open the radiator cap. Check the coolant for bubbles. If bubbles are present, the vaporizer may have a leaking gasket or may have developed a pinhole leak, allowing the LP fuel to enter the cooling system.

LP GAS FUEL TANK




The LP tank is located on top of the engine cover in the tank mounting bracket.

Use only the proper size and type of LP tank. The 2260 LP powered sweeper uses 33.5 lb. horizontal liquid withdraw tank. The designation of the tank is DOT 4BW-240.



LEGEND - FORD 413 ENGINE

A	Amber	FSV	Fuel Shut Off Valve	PH (G)	Plug Housing (G)
BATT	Battery	FU-1	Fuse 15 AMP	PH (H)	Plug Housing (H)
BR-SW	Brake Switch	FU-2	Fuse 15 AMP	PH (J)	Plug Housing (J)
BU-SW	Backup Alarm Switch	G	Ground	PH (K)	Plug Housing (K)
(C)	Common	GP-SW	Glow Plug Switch	PH (L)	Plug Housing (L)
C-WH	Camel Wiring Harness	GS	Ground Stud	PM	Permanent Magnet
CB-1	Circuit Breaker - 15 Amp	H-PB	Hom Push Button	R	Red
CB-2	Circuit Breaker - 15 Amp	HM	Hour Meter	R1	Variable Resistor (Rheostat)
CB-3	Circuit Breaker - 15 Amp	HO-SW	Hopper Switch	REC-SW	Resistor (Detergent Pump)
CB-4	Circuit Breaker - 15 Amp	HO-WA	Hopper Wire Assembly	RH-SW	Recovery High Switch
CB-5	Circuit Breaker - 15 Amp	IP-WH	Instrument Panel Wiring Harness	SH-SW	Solution High Switch
CB-6	Circuit Breaker - 15 Amp	K-SW	Key Switch	SL-SW	Solution Low Switch
CB-7	Circuit Breaker - 15 Amp	L-SW	Light Switch	SM	Shaker Motor
CB-8	Circuit Breaker - 15 Amp	LS-DMP	Limit Switch - Dump	SOL	Solenoid
CB-9	Circuit Breaker - 15 Amp	M-WH	Machine Wiring Harness	TB-1	Terminal Block Number One
CB-WH	Circuit Breaker Wiring Harness	M1	Relay (Starter Motor)	TC	Normally Open with Time Delay Closing
CH(A)	Cap Housing (A)	M2	Relay (Shaker Motor)	TD-1	Time Delay Relay
CH(B)	Cap Housing (B)	M3	Relay (Glow Plug)	VM	Volt Meter
CH(C)	Cap Housing (C)	MTR	Motor	WT	Water Temperature Gauge
CH(D)	Cap Housing (D)	(NC)	Normally Closed	WTS	Water Temperature Sender
CH(E)	Cap Housing (E)	(NO)	Normally Open		
CH(F)	Cap Housing (F)	OP	Oil Pressure Gauge		Solenoid
CH(G)	Cap Housing (G)	OP-SW	Oil Pressure Switch		Wire(s) not in harness
CH(H)	Cap Housing (H)	OPS	Oil Pressure Sender		Wire Number
CH(P)	Cap Housing (P)	PH (A)	Plug Housing (A)		Wires on Terminal Block # 1
D1	Diode	PH (B)	Plug Housing (B)		
D2	Diode	PH (C)	Plug Housing (C)		
DL-SW	Detergent Low Switch	PH (D)	Plug Housing (D)		
E-WH	Engine Wiring Harness	PH (E)	Plug Housing (E)		
FE-WH	FORD Engine Wiring Harness	PH (F)	Plug Housing (F)		
FG	Fuel Gauge				

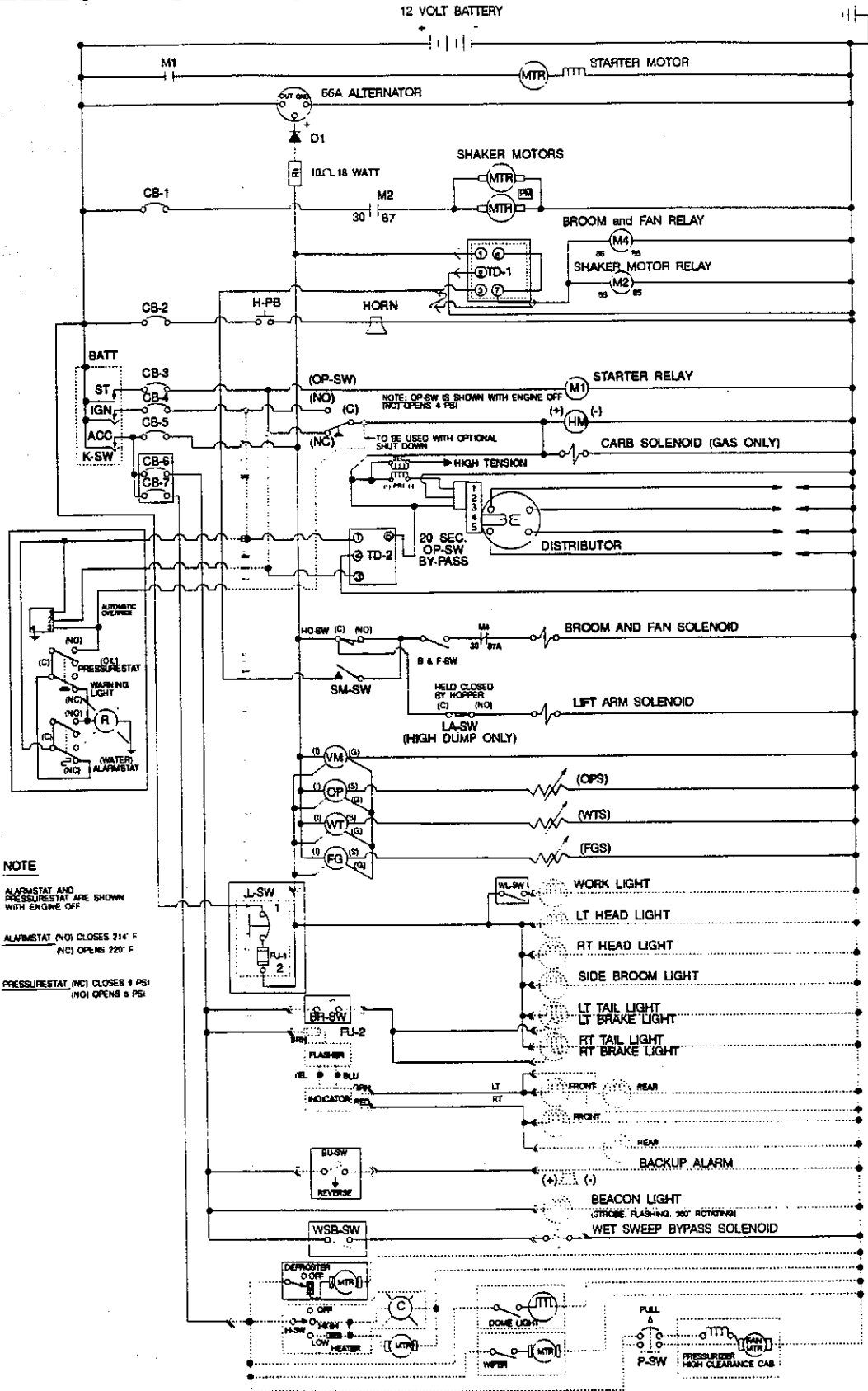
LEGEND - FORD 411 ENGINE

A	Amber	GS	Ground Stud	PM	Permanent Magnet
B&F-SOL	Broom and Fan Solenoid	H-PB	Horn Push Button	P-SW	Pressure Switch
B&F-SW	Broom and Fan Switch	H-SW	Heater Switch	R	Red
BR-SW	Brake Switch	HM	Hour Meter	SM	Shaker Motor
BU-SW	Backup Alarm Switch	HO-LV	Hopper Lock Valve	SM-SW	Shaker Motor Switch
(C)	Common	HO-SW	Hopper Switch	SMJ-WH	Shaker Motor Jumper Wiring
CB-1	Circuit Breaker - 25 Amp	HO-WA	Hopper Wire Assembly		Harness
CB-2	Circuit Breaker - 15 Amp	IP-WH	Instrument Panel Wiring Harness	TB-1	Terminal Block Number One
CB-3	Circuit Breaker - 15 Amp	K-SW	Key Switch	TD-1	Time Delay Relay
CB-4	Circuit Breaker - 15 Amp	L-SW	Light Switch	VM	Volt Meter
CB-5	Circuit Breaker - 15 Amp	LA-SOL	Lift Arm Solenoid	WL-SW	Work Light Switch
CB-6	Circuit Breaker - 15 Amp	LA-SW	Lift Arm Swing	WSB-SOL	Wet Sweep Bypass Solenoid
CB-7	Circuit Breaker - 15 Amp	M-WH	Machine Wiring Harness	WSB-SW	Wet Sweep Bypass Switch
CH(A)	Cap Housing (A)	M1	Relay (Starter Motor)	WT	Water Temperature Gauge
CH(B)	Cap Housing (B)	M2	Relay (Shaker Motor)	WTS	Water Temperature Sender
CH(C)	Cap Housing (C)	M4	Relay (Broom & Fan)		Wire(s) not in Harness
CH(N)	Cap Housing (N)	MTR	Motor		Wire Number (In Harness)
E-WH	Engine Wiring Harness	(NC)	Normally Closed		Terminal Block Numbers
FE-WH	FORD Engine Wiring Harness	(NO)	Normally Open		
FG	Fuel Gauge	OP	Oil Pressure Gauge		
FU-1	Fuse 20 AMP	OP-SW	Oil Pressure Switch		
FU-2	Fuse 15 AMP	OPS	Oil Pressure Sender		
		PH (A)	Plug Housing (A)		
		PH (B)	Plug Housing (B)		
		PH (C)	Plug Housing (C)		
		PH (L)	Plug Housing (L)		

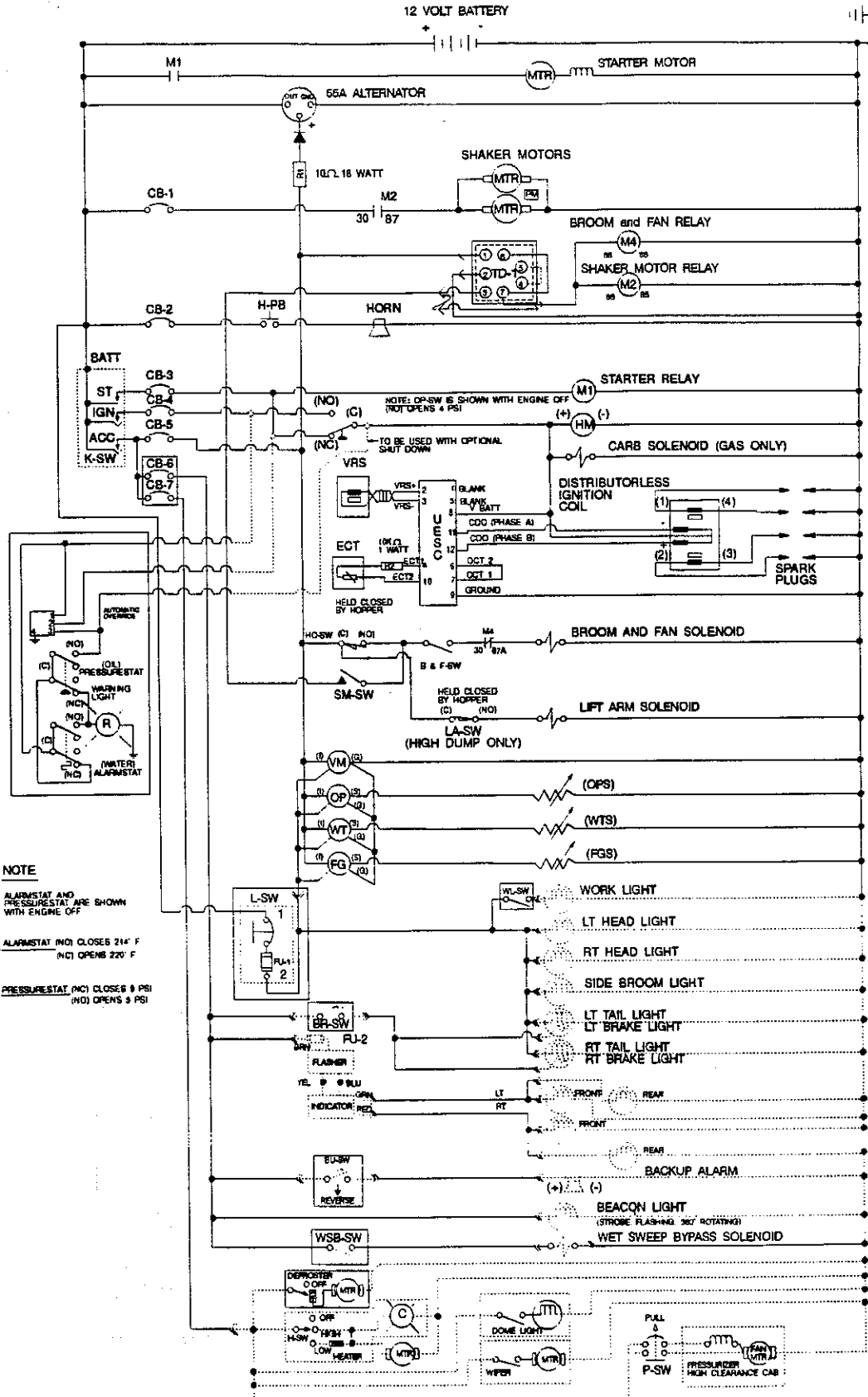
LEGEND - DIESEL ENGINE

A	Amber	GP-SW	Glow Plug Switch	PM	Permanent Magnet
B&F-SOL	Broom and Fan Solenoid	GS	Ground Stud	P-SW	Pressure Switch
B&F-SW	Broom and Fan Switch	H-PB	Horn Push Button	R	Red
BR-SW	Brake Switch	H-SW	Heater Switch	SM	Shaker Motor
BU-SW	Backup Alarm Switch	HM	Hour Meter	SM-SW	Shaker Motor Switch
(C)	Common	HO-LV	Hopper Lock Valve	SMJ-WH	Shaker Motor Jumper Wiring
CB-1	Circuit Breaker - 25 Amp	HO-SW	Hopper Switch		Harness
CB-2	Circuit Breaker - 15 Amp	HO-WA	Hopper Wire Assembly	TD-1	Time Delay Relay
CB-3	Circuit Breaker - 15 Amp	IP-WH	Instrument Panel Wiring Harness	VM	Volt Meter
CB-4	Circuit Breaker - 15 Amp	K-SW	Key Switch	WL-SW	Work Light Switch
CB-5	Circuit Breaker - 15 Amp	L-SW	Light Switch	WSB-SOL	Wet Sweep Bypass Solenoid
CB-6	Circuit Breaker - 15 Amp	LA-SOL	Lift Arm Solenoid	WSB-SW	Wet Sweep Bypass Switch
CB-7	Circuit Breaker - 15 Amp	LA-SW	Lift Arm Swing	WT	Water Temperature Gauge
CH(A)	Cap Housing (A)	M-WH	Machine Wiring Harness	WTS	Water Temperature Sender
CH(B)	Cap Housing (B)	M1	Relay (Starter Motor)		Wire(s) not in Harness
CH(C)	Cap Housing (C)	M2	Relay (Shaker Motor)		Wire Number (In Harness)
CH(N)	Cap Housing (N)	M3	Glow Plug Relay		
D-1	Diode	M4	Relay (Broom & Fan)		
E-WH	Engine Wiring Harness	MTR	Motor		
FG	Fuel Gauge	(NC)	Normally Closed		
FGS	Fuel Gauge Sender	(NO)	Normally Open		
FSV	Fuel Shut-Off Valve	OP	Oil Pressure Gauge		
FU-1	Fuse 20 AMP	OP-SW	Oil Pressure Switch		
FU-2	Fuse 15 AMP	OPS	Oil Pressure Sender		
		PH (A)	Plug Housing (A)		
		PH (B)	Plug Housing (B)		
		PH (C)	Plug Housing (C)		
		PH (K)	Plug Housing (K)		

ELECTRICAL SCHEMATIC FORD 411 ENGINE

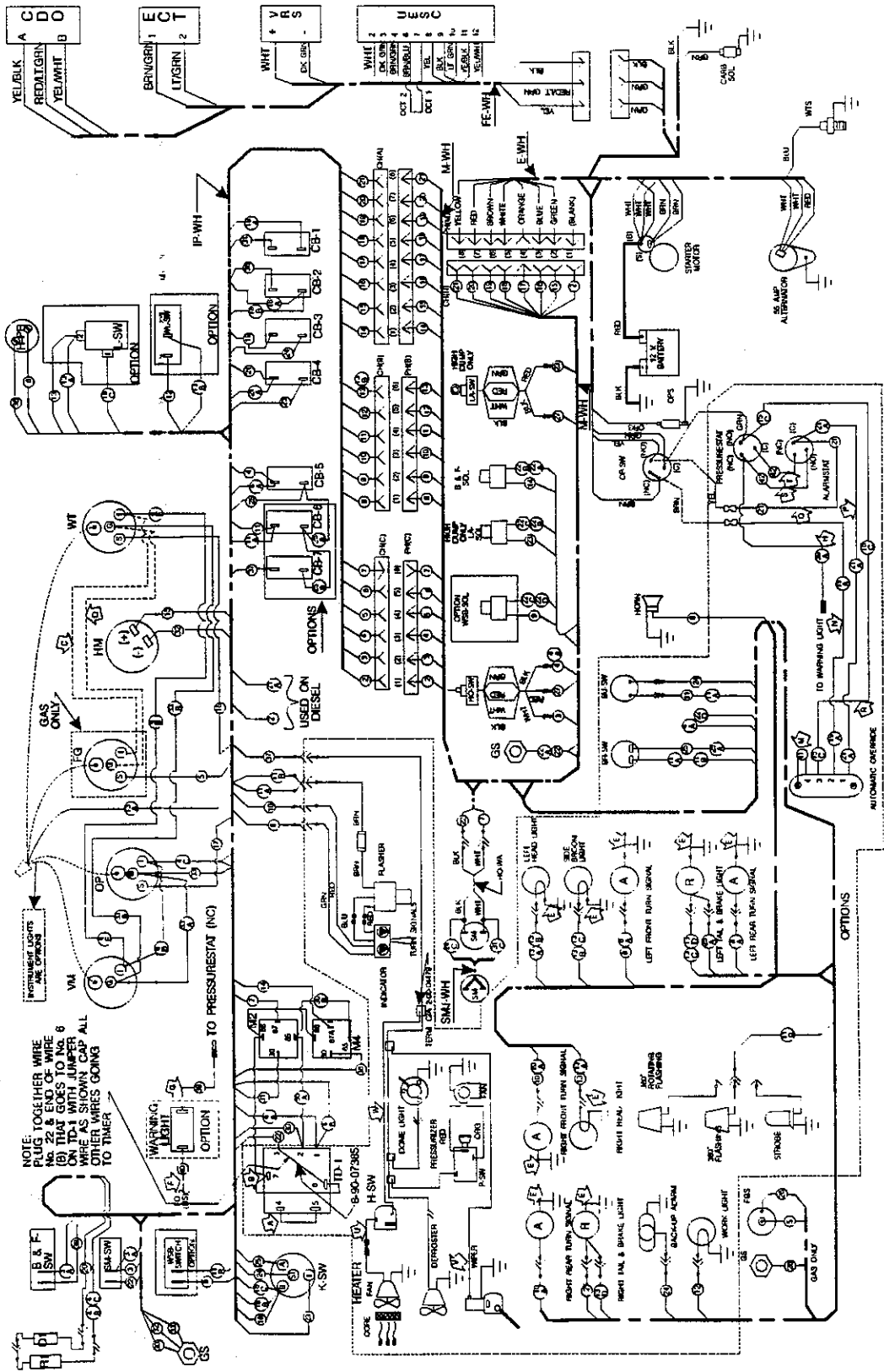


ELECTRICAL SCHEMATIC FORD 413 ENGINE



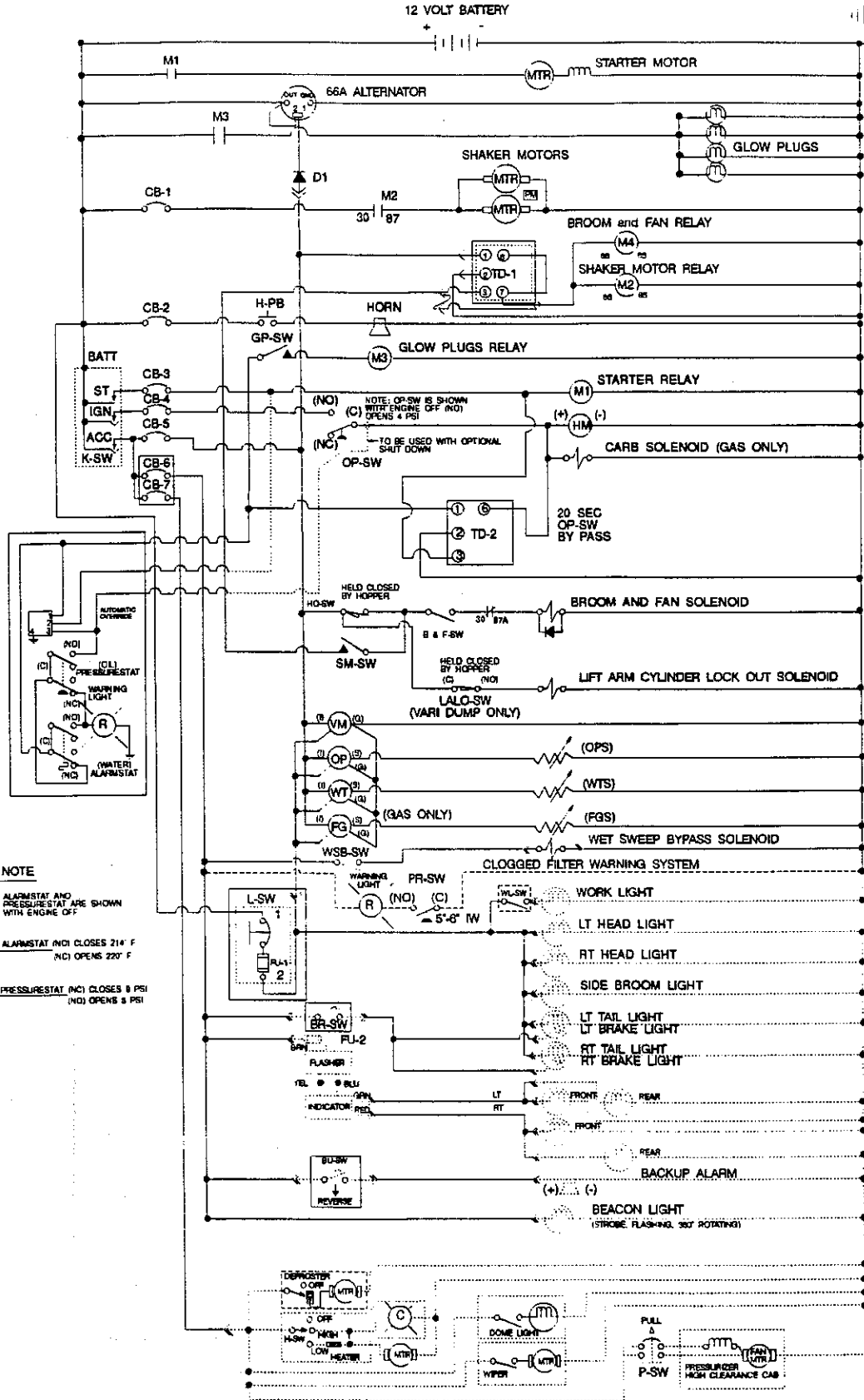
C-0101

ELECTRICAL CONNECTION DIAGRAM FORD 413 ENGINE

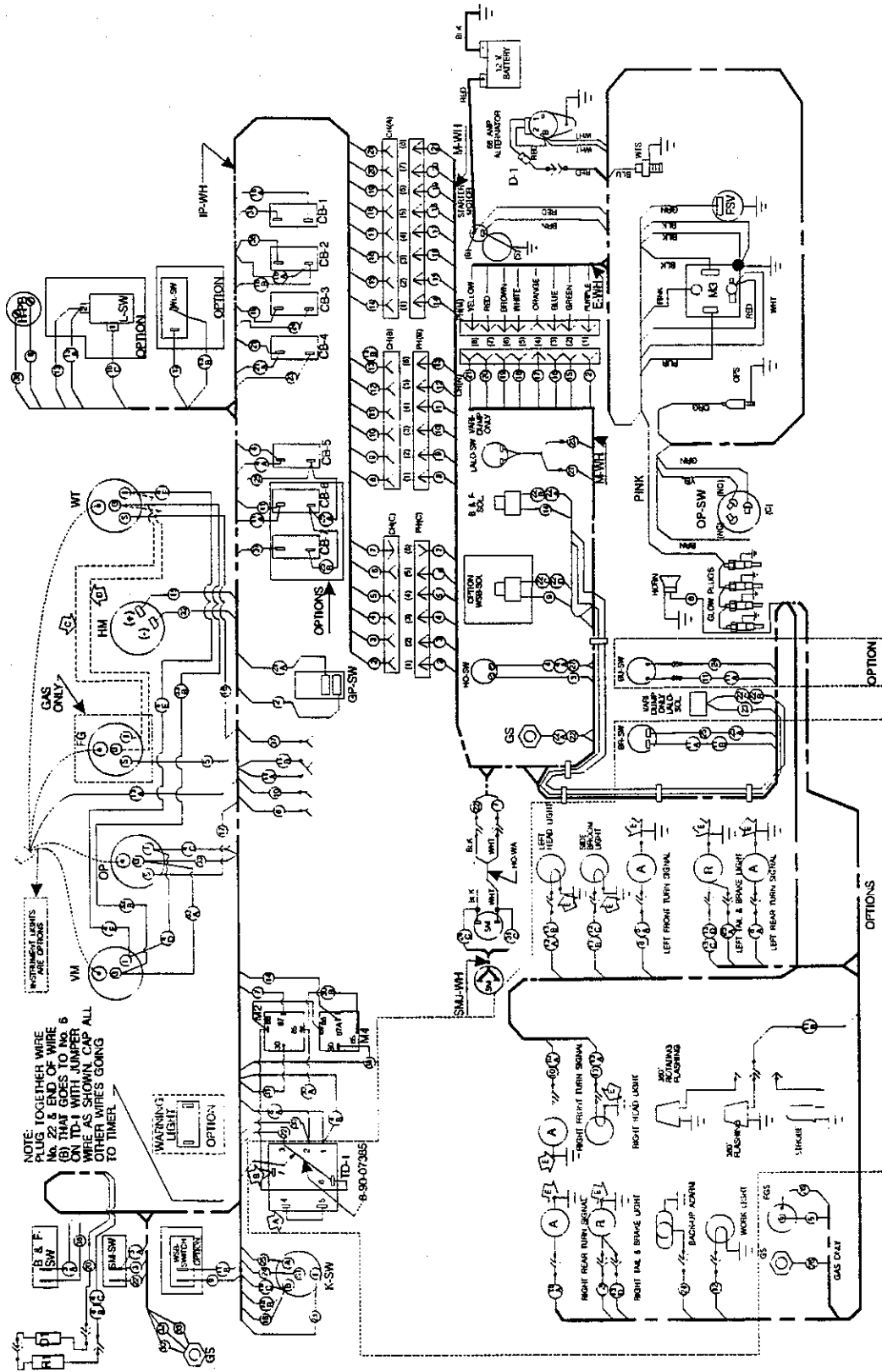


C-0104

ELECTRICAL SCHEMATIC PERKINS 104.19 ENGINE



ELECTRICAL CONNECTION DIAGRAM PERKINS 104.19 ENGINE



P-4661

TROUBLE SHOOTING - GENERAL

PROBLEM	PROBABLE CAUSE	REMEDY
Engine shuts off & won't start.	1. Low Oil Shutdown activated.	1. Add proper oil to engine crankcase.
Poor sweeping	1. Worn broom 2. Brush jammed by bulky debris. 3. Worn or damaged flaps. 4. Sweeping broom not adjusted properly. 5. Low engine rpm 6. Low relief valve pressure 7. Hydraulic drive motor worn or damaged. 8. Broom drive hub worn	1. Inspect for damage. Replace if broom OD diameter is 1 1/2" or less. 2. Dump hopper and clean. 3. Inspect for damage. Replace &/or adjust. Refer to Maint. Section Flaps 4. Refer to Broom Adjustment 5. Check engine rpm. See Throttle Control. 6. Check and reset relief valve pressure. 7. Check motor. 8. Check and repair.
Engine runs, but machine will not move on level ground	1. Foot pedal and/or linkage jammed or not adjusted. 2. Front wheels jammed or brakes locked. 3. Hydraulic pump trouble. 4. Rear wheel hyd. motor, broken shaft key, broken shaft, etc.	1. Check pedal linkage. 2. Check wheels and brakes 3. Check & repair. See CESSNA Section 4. Check & repair. See CHAR-LYNN Section
Machine moves slowly	1. Low hydraulic oil level. 2. Brake dragging. 3. Hydraulic oil temp. too high 4. Worn hydraulic pump or drive wheel motor.	1. Add oil to reservoir. 2. Check brakes. 3. Check oil level, add SAE 5 (FORD Type F) ATF, if required. 4. See Hydraulic CESSNA or CHAR-LYNN Section.
Hydraulic pump making excessive noise.	1. Clogged inlet strainer or suction line. 2. Air bubbles in hydraulic fluid 3. Hydraulic pump is worn or damaged.	1. Clean inlet strainer. Check inlet line. Drain & flush reservoir, if oil is dirty. Refill with clean SAE 5 (FORD Type F) ATF. 2. Check for low hyd. fluid level, leaking fitting or hoses. 3. See CESSNA Pump Section.

PROBLEM	PROBABLE CAUSE	REMEDY
Poor dust control at main broom.	<ol style="list-style-type: none"> 1. Broom chamber & hopper flaps worn. 2. Impeller fan failure - shaft key broken or hydraulic motor worn 	<ol style="list-style-type: none"> 1. Check condition of flaps. Replace torn or badly worn flaps. Side flaps can be adjusted if not damaged. 2. Check and repair.
Hopper dumps slowly or will not dump	<ol style="list-style-type: none"> 1. Load in hopper too heavy 2. Defective lift cylinder(s). 3. Low relief valve pressure. 4. Wear or failure of hand control valve. 	<ol style="list-style-type: none"> 1. Shovel material from hopper or dump in low dump position. 2. Repair and replace cylinder(s). 3. Check & adjust if necessary. See Hydraulic Section. 4. Check and replace or repair. See CESSNA Valve Section.
Hopper will not lift	<ol style="list-style-type: none"> 1. Load too heavy. 2. Lift switch out of adjustment. 3. Lift solenoid not shifting. 4. Wear or failure of hand control valve. 	<ol style="list-style-type: none"> 1. Low dump partial load. 2. Adjust switch. 3. Check for loose wire. 4. Repair or replace cylinders.
Hopper will lift but not come down	<ol style="list-style-type: none"> 1. Hopper Lock Valve failure 	<ol style="list-style-type: none"> 1. Check for loose wire. 2. Repair or replace valve.

DIESEL SMOKE DIAGNOSIS CHART

COLOR: BLACK OR DARK GRAY

SYMPTOM	PROBABLE DIAGNOSIS	CURE
Smoke at full load at any engine speed, but particularly at highest and lowest speeds, and power at least normal.	<p>Maximum fuel setting of injection pump too high.</p> <p>Excess fuel device not tripping automatically to normal after starting.</p>	<p>Remove pump, have reset to engine maker's maximum flow figure (or less by authorized service agent if own equipment not available.</p> <p>Have repaired by authorized agent - removal of pump may be necessary.</p>
Smoke at full load particularly at high and medium speeds, engine quieter than normal.	Pump timing retarded (or advance device not installed correctly).	Correct timing according to engine maker's instructions taking up pump drive backlash (or rectify advance device if fitted.
Smoke at full load particularly at low and medium speeds, engine noisier than normal.	Pump timing too advanced	
Smoke at full load particularly at high and medium speeds probably with loss of power.	Injector nozzle hole(s) wholly or partially blocked.	Replace injectors by reconditioned set, or clean and recondition with proper equipment.
Smoke at full load at higher speeds only.	Air cleaner restricted due to blockage with dirt, or damage.	Clean or replace air cleaner element according to type.
Intermittent or puffy exhaust smoke sometimes with white or blue tinge, usually coupled with knocking.	Injector nozzle valve stuck open intermittently.	Have injectors examined for sticking valve, broken spring, or grossly low opening pressure, or sign of cross-binding in cylinder head. Replace as necessary.

COLOR: BLACK OR DARK GRAY

SYMPTOM	PROBABLE DIAGNOSIS	CURE
Smoke at full loads at high speed, engine running faster than normal when on governor.	Governor speed setting considerably above engine maker's maximum.	With mech. or hyd. governors, reduce governor speed advancement & seal stops, or remove pump for attention.
Smoke at most speeds and loads, tending to blue or white when cold and when starting.	Nozzle sprays impinging on cylinder head, due to incorrect fitting of injector into cylinder head.	Examine for number of washers between injector and cylinder head only one required at most (some engines none required, refer to instruction book).
Smoke at higher loads & speeds, not necessarily at maximum.	Injector nozzle valve lift excessive, due to repeated valve or seat refacing w/o lift correction.	Can be rectified by proper equipment during reconditioning.
Smoke at all speeds at high loads mostly low & medium speeds and probably coupled with poor starting.	Loss of cylinder compression due to stuck rings, bore wear, valve wear or burning, sticking valves, incorrect valve setting.	Engine requires top overhaul at least; ringing or sleeving; piston renewal if wear indicates.
Smoke at full load, either at lower or higher speeds only, but in some cases at all speeds.	Incorrect nozzle type fitted, or mixed types, or out of date type, or type for different duty.	Will be automatically corrected if injectors are reconditioned by an authorized agent, but it is essential to quote exact details of engine type and application.
Smoke at full load, mostly at medium and high speeds, probably coupled with low power.	Injection high pressure pipes of incorrect length or bore, or having badly closed in bore at ends, or due to sharp bends.	Fit only the engine maker's listed pipe. Check ends for closing in.

COLOR: BLUE TO BLUISH GRAY OR GRAYISH WHITE

SYMPTOM	PROBABLE DIAGNOSIS	CURE
Blue or whitish smoke, particularly when cold and at high speeds & light load, but reducing or changing to black when hot & at full load, and with loss of power at least at high speeds.	Pump timing retarded (or advance device not correct if fitted)	Reset timing (or rectify advance device if fitted).
Blue or whitish smoke when cold, particularly at light loads, but persisting when hot, probably with knocking.	Injector nozzle valve stuck open or tip broken off nozzle.	Examine for sticking valve or broken spring, but suspect suspect handling of injectors out of engine if tip is found broken.
Blue smoke at all speeds and loads, hot or cold.	Engine oil being passed by piston rings due to sticking rings or worn bores.	Engine recondition indicated
Blue smoke, particularly when accelerating from period of idling, tending to clear with running.	Engine oil being passed by inlet valve guides due to wear, or valve guide oil shields misplaced.	Recondition cylinder head and make certain that guide oil shields (if any) are in place.
Light blue smoke at high speed light loads or running downhill, usually with acrid odor.	Engine running too cold, thermostat stuck or not fitted.	Replace thermostat.

TROUBLESHOOTING - LIQUID PROPANE GAS

	WILL NOT START	RUNS UNEVENLY AND LACKS POWER	STOPS DURING OPERATION
(1) FUEL TANK	<p>Check fuel tank type and fuel supply (vapor tank for vapor withdrawal system).</p> <p>Be sure tank hand valve is open (always open valve slowly). If hand valve is opened too fast, shut-off valve in tank will automatically shut off fuel supply. If this happens, close the hand valve and then re-open it slowly.</p>	<p>Out of fuel</p> <p>Check fuel tank type & fuel supply (liquid tank for liquid withdrawal system.)</p>	<p>Tank valve not opened sufficiently</p> <p>Check fuel tank type & fuel supply (liquid tank for liquid withdrawal system)</p>
(2) FUEL LINE	<p>Check hoses, connections, leaks etc., using soap bubble test method.</p> <p>When changing LP fuel tanks, always be sure fuel is getting into carburetor. Crank engine briefly and push primer button until vapor fumes are smelled or are visible at carburetor, or around air filter.</p> <p>Check fuel tank and lines for frosting up. To relieve frosting, open shut-off valve slowly (approx. 1/4 open). Start engine and idle until warm. Then open tank valve completely before loading the engine. If frost forms on connection fittings, check for fuel leakage, kinked lines, or restriction at frost points.</p> <p>Check fuel filter. Remove and clean it if dirty filter is restricting fuel line. Check quick disconnect fitting at LP tank: if LP tank valve is not properly seated, no fuel will flow through the line. A broken fuel line or loose connection could cause the the tank shut-off valve to close.</p>	<p>Broken fuel line or loose fuel line connection could cause tank internal shut off valve to close automatically and shut off the fuel supply.</p>	
<p>NOTE Always check through the LP fuel system in order of numerical sequence.</p>			

	WILL NOT START	RUNS UNEVENLY AND LACKS POWER	STOPS DURING OPERATION
(3) I G N I T I O N S Y S T E M	<p>Remove and check spark plug to be sure it is the correct type with proper gap.</p> <p>Check ignition points and condenser.</p> <p>Check ignition coil.</p> <p>Check ignition switch.</p> <p>Check wiring for loose connections or wire breakage.</p> <p>Check battery terminals for corrosion or loose ground cable.</p> <p>Check for possible shorts in wiring.</p> <p>Battery dead.</p> <p>No current to filter - fuel lock solenoid valve or possible defective solenoid.</p>	<p>Check electrical system for loose connections or intermittent shorts.</p> <p>Check spark & electrical system for malfunction of condenser, points, etc.</p> <p>Check for broken wires or defective relay. Relay can be checked by bypassing relay & directly energizing the solenoid valve in filter fuel lock.</p>	<p>Check ignition for poor connections or weak or worn ignition parts.</p>
(4) C A R B U R E T O R	<p>Always check carburetor for proper settings before tampering with regulator adjustment</p> <p>Flooded carburetor - Shut off LP tank valve with ignition switch "on"; crank engine through a few times. If the engine starts, then slowly open tank valve to provide fuel flow through line. If engine does not start before opening fuel tank valve, then choke engine & use standard starting procedure.</p>	<p>Restricted air cleaner.</p> <p>Clean or replace filter element.</p>	<p>Check carburetor setting.</p> <p>Check ignition system.</p>
(5) R E G U L A T O R	<p>Be sure carburetor is properly adjusted before attempting to adjust regulator setting.</p> <p>Check vaporizer regulator. Be sure it is functioning properly. In trouble-shooting, be sure all of the previous five check points have been checked thoroughly before making any adjustment to regulator.</p>	<p>Only after checking the carburetor setting should the regulator be checked (too rich too lean). Could very definitely affect operation if carburetor adjustment is correct.</p>	<p>Could be improper setting. Allow too rich or too lean mixture to carburetor. Check and adjust only after checking carburetor adjustment.</p>
<p>NOTE</p> <p>Always check through the LP fuel system in order of numerical sequence.</p>			

	WILL NOT START	RUNS UNEVENLY AND LACKS POWER	STOPS DURING OPERATION
(6) E N G I N E	Under ordinary circumstances an engine, should start easily if the components previously mentioned have been checked thoroughly and properly adjusted. On an older engine, if proper adjustment on other components are correct, it is possible that major repairs may be required to the basic engine.		
NOTE Always check through the LP fuel system in order of numerical sequence.			

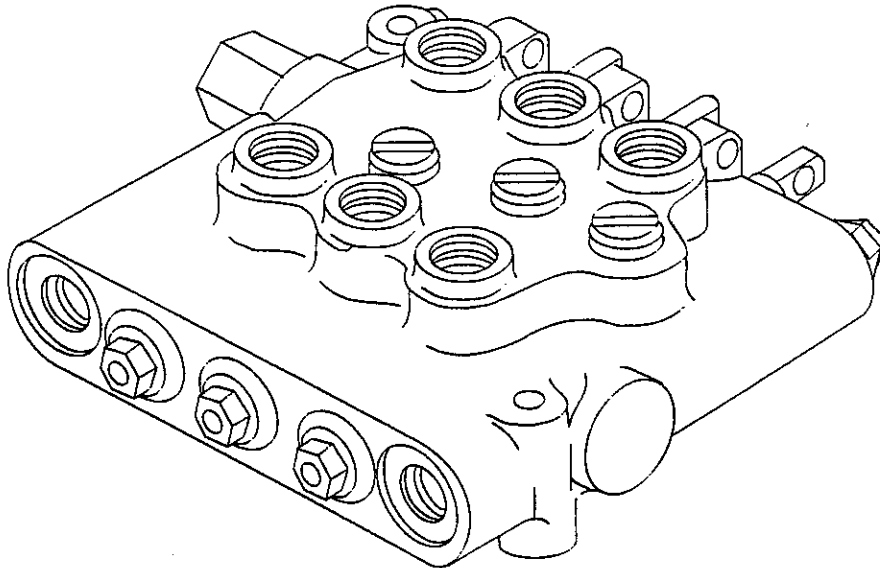
TROUBLE SHOOTING - CDC

PROBLEM	PROBABLE CAUSE	REMEDY
Stepper cycle lapsed time exceeds 20 seconds	<ol style="list-style-type: none"> 1. Engine air filter plugged 2. Compressor drive belt slipping 3. Blocked compressor 4. Leaking Compressor plumbing 5. Manifold pressure exceeds 40 PSIG 6. Exhaust Valve discharge port leaking 7. Leak in Manifold Assembly 	<ol style="list-style-type: none"> 1. Replace filter. 2. Adjust or replace 3. Check hose for kinks or pinched conditions 4. Tighten joints or replace 5. Replace Stepper Operator Valve 6. Replace seal 7. Repair
Stepper cycle lapse time less than 10 seconds.	<ol style="list-style-type: none"> 1. Manifold pressure less than 35 Valve 	<ol style="list-style-type: none"> 1. Replace Stepper Operator PSIG
Manifold Relief Valve vents & Exhaust Valve will not open	<ol style="list-style-type: none"> 1. Stepper Operator Valve pilot line leaking or pinched 2. Stepper Operator Valve exhaust port leaking 3. Stepper Operator Valve will not open at 35/40 PSIG 4. Stepper Indexing Cam locked 5. Stepper Piston dragging 6. Exhaust Pilot Valve will not open 7. Exhaust Valve Pilot Orifice 	<ol style="list-style-type: none"> 1. Replace 2. Replace 3. Replace 4. Push Stepper Reset. See Exhaust Pilot Valve 5. Six drops silicon lube in Stepper Reset Valve & Vent Valve ports 6. Clean Stepper Pilot Valve 7. Clean Orifice
Same Exhaust Valve "barks" and/or not closed	<ol style="list-style-type: none"> 1. Gas Accumulator not charged 2. Exhaust Valve pilot line leaking or pinched 3. Exhaust Valve Seal ruptured or seat damaged 4. Exhaust Pilot Valve will not close 	<ol style="list-style-type: none"> 1. Refer to manual charge procedure 2. Replace 3. Replace seal 4. Clean stepper exhaust pilot valve
Same Exhaust Valve repeatedly opens & Stepper not indexing	<ol style="list-style-type: none"> 1. Accumulator pressure overcharged 	<ol style="list-style-type: none"> 1. Push Stepper Accumulator Vent Valve & manually recharge if necessary

TROUBLE SHOOTING - CESSNA VALVE & PUMPS

CESSNA DIRECTIONAL CONTROL VALVE
30900 Series

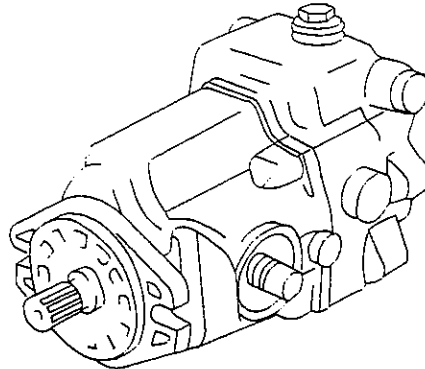
PART NO. 8-16-00052 & 8-16-00054
CONTROL VALVE



PROBLEM	PROBABLE CAUSE	REMEDY
1. Sticky spool valve	<p>A. Misaligned control linkage.</p> <p>B. Foreign matter in spool</p> <p>C. Check mounting bolt torque</p>	<p>A. Correct alignment.</p> <p>B. Remove spool & clean valve bore.</p> <p>C. Retorque mounting bolts 12 - 15 ft lbs.</p>
2. External leakage	<p>A. Damaged o-rings or wiper seal.</p>	<p>A. Disassemble valve, replace o-ring or wiper seal</p>
3. Load drops with spool in centered position.	<p>A. Damaged cylinder packing.</p> <p>B. Line to cylinder leaking.</p> <p>C. Internal leakage between spool and valve body.</p>	<p>A. Replace cylinder packing.</p> <p>B. Tighten fittings or replace hose.</p> <p>C. Replace control valve assembly.</p>

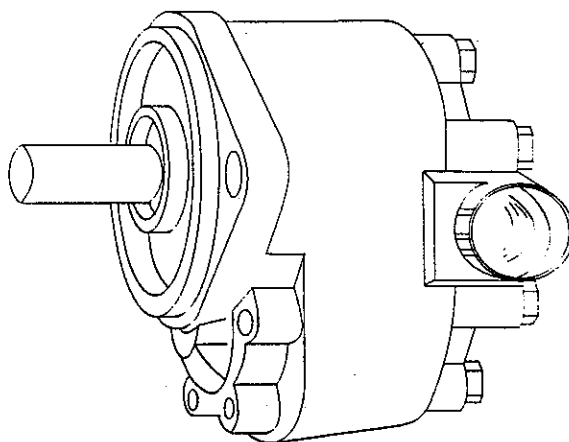
TROUBLESHOOTING - CESSNA PUMPS

CESSNA FLUID POWER PUMP
70142 SERIES
PART NO. 8-60-05006-2
MAIN PUMP



PROBLEM	PROBABLE CAUSE	REMEDY
1. System will not operate either direction	<p>A. Oil supply low</p> <p>B. Oil filter clogged</p> <p>C. Oil too heavy</p> <p>D. Control linkage misadjusted</p> <p>E. Low charge pressure</p> <p>F. Charge pump key sheared</p> <p>G. Charge pump relief valve damaged</p> <p>H. Charge pump gears worn or scored.</p> <p>I. Internal charge pump damage.</p> <p>J. Drive coupling broken</p> <p>K. Relief valve stuck open</p> <p>L. Damaged check valve</p>	<p>A. Check oil level, fill.</p> <p>B. Replace filter element</p> <p>C. Use proper viscosity oil.</p> <p>D. Check to see if control linkage is binding or unfastened.</p> <p>E. See below : F, G, H & I. Pressure should be 60 - 100 PSI.</p> <p>F. Inspect charge pump for damage & replace key.</p> <p>G. Remove relief valve parts, examine parts and seat. Replace necessary parts.</p> <p>H. Remove parts & examine. Replace defective parts. If severe scoring is indicated, remove complete pump unit, disassemble, clean & inspect for damage.</p> <p>I. Disassemble pump, inspect for damage.</p> <p>J. Inspect coupling for sheared spline, key or broken chain.</p> <p>K. Remove relief valve, clean or replace.</p> <p>L. Disassemble & check if check valve is faulty or damaged.</p>
2. System Noisy	<p>A. Air in system</p> <p>B. Loose suction line</p> <p>C. Clogged suction filter</p> <p>D. Internal pump or motor damage</p>	<p>A. Low oil level in reservoir</p> <p>B. Tighten fittings.</p> <p>C. Replace filter element.</p> <p>D. Disassemble, inspect & repair.</p>
3. Sluggish response to acceleration or deceleration	<p>A. Air in system</p> <p>B. Low charge pressure</p> <p>C. Internal pump or motor wear or damage.</p> <p>D. Relief valve dirty or damaged.</p>	<p>A. See step 1-A, 1-B, 1-C, 2-B</p> <p>B. See step 1-F, 1-G & 1-I</p> <p>C. Disassemble, inspect and repair</p> <p>D. Remove, clean or replace.</p>

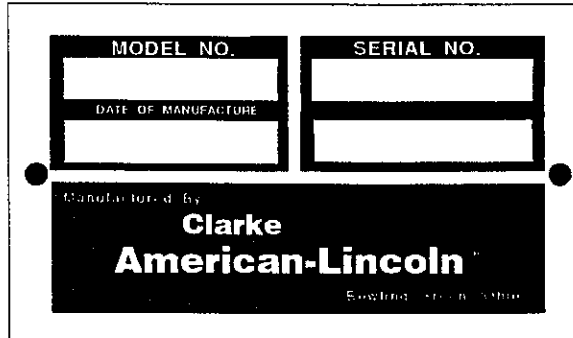
CESSNA FLUID POWER PUMP
 25300 SERIES
 PART NO. 8-60-05022
 AUXILIARY PUMP



PROBLEM	PROBABLE CAUSE	REMEDY
1. Noisy pump caused by cavitation	A. Oil supply low B. Oil too heavy C. Oil filter plugged D. Suction line plugged or too small	A. Fill reservoir B. Change to proper viscosity. C. Clean filters. D. Clean line and check for size.
2. Oil heating	A. Oil supply low B. Contaminated oil C. Setting of relief valve too high or too low D. Oil in system too light	A. Fill reservoir B. Drain reservoir & refill with clean oil. C. Set to correct pressure D. Drain reservoir & refill with proper viscosity oil.
3. Shaft seal leakage	A. Worn shaft seal B. Broken diaphragm seal or back-up gasket C. Bearings out of position D. Excessive internal wear	A. Replace shaft seal. B. C. D. If replacing the shaft seal does not stop leakage the pump should be disassembled and checked for items b, c, d.
4. Foaming Oil	A. Low oil level B. Air leaking into suction line. C. Wrong kind of oil	A. Fill reservoir B. Tighten fittings. C. Drain and fill reservoir with non-foaming oil.

ORDERING PARTS

Parts can be ordered from Clarke/American-Lincoln authorized distributors. Inspect the Clarke/American-Lincoln serial plate to stop delays in filling your orders:



P-4588

1. Use the model number, catalog number and serial number when ordering.
2. Give the part number, description and quantity of parts needed.
3. Give shipping instructions for either freight, UPS or parcel post.

Parts and supplies listed in this manual can be ordered from the following address:

Clarke/American-Lincoln	Clarke/American-Lincoln Distributor
1100 Haskins Road Bowling Green, Ohio 43402 (419) 352-7511	

MACHINE CATALOG NUMBER

- 578-530 Gasoline Powered Variable Dump Sweeper - FORD 411 Engine
- 578-531 Gasoline Powered Low Dump Sweeper - FORD 411 Engine
- 578-532 Gasoline Powered Variable Dump Sweeper - FORD 413 Engine
- 578-533 Gasoline Powered Low Dump Sweeper - FORD 413 Engine
- 578-534 Diesel Powered Variable Dump Sweeper - Perkins Engine
- 578-535 Diesel Powered Low Dump Sweeper - Perkins Engine

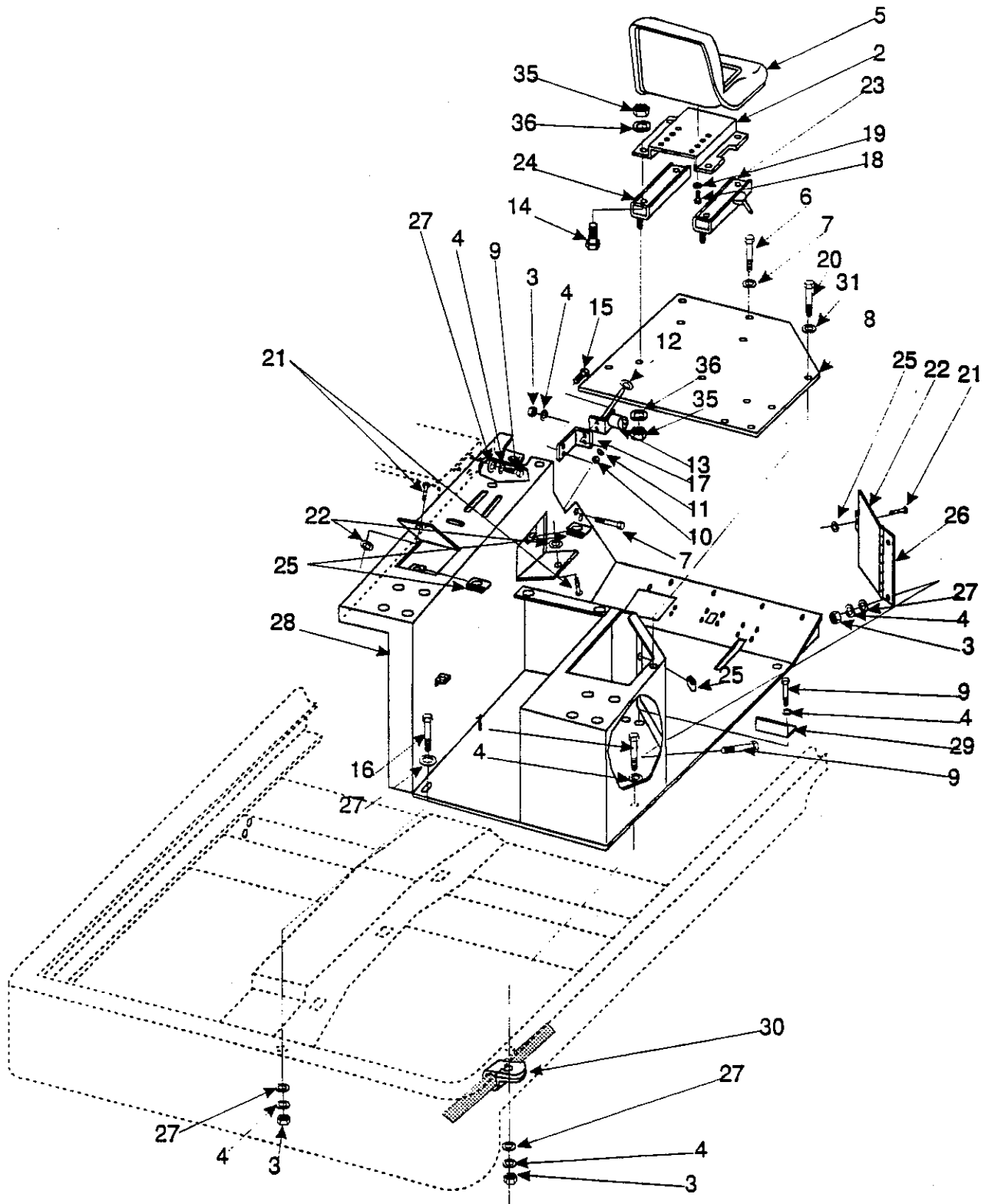
PARTS LIST LEGEND - SCREWS

ADJ	=	Adjusting Screw
ADJ.SP	=	Adjusting Plunger Screw
BHM	=	Binding Head Machine Screw
BHS	=	Button Head Socket Screw
CAPT.SL	=	Captivated Slotted Screw
CAPT.WG	=	Captivated Wing Screw
FHM	=	Flat Head Machine Screw
FWW	=	Flat Head Wood Screw
FIL.HM	=	Filister Head Machine Screw
HHC	=	Hexagon Head Cap Screw
HHM	=	Hexagon Head Machine Screw
HHHD	=	1/2 High Head Screw
HSFC	=	Hexagonal Socket Flat Head Cap Screw
HSFHC	=	Hexagonal Socket Flat Head Cap Screw
KNH	=	Knurled Head Screw
MHHC	=	Metric Hexagon Head Cap Screw
OHM	=	Oval Head Machine Screw
PHM	=	Pan Head Machine Screw
RHD	=	Round Head Drive Screw
RHM	=	Round Head Machine Screw
RHW	=	Round Head Wood Screw
SH	=	Shoulder Screw
SHC	=	Shiny Crown Cap Screw
SHTB	=	Shoulder Thumb Screw
SQ	=	Square Head Screw
SWHM	=	Slotted Washer Head Machine Screw
SEMSM	=	SEMS Machine Screw
SEMST	=	SEMS Self Tapping Screw
TB	=	Thumb Screw
T/C FH	=	Thread Cutting Flat Head Screw
T/C FIL.H	=	Thread Cutting Filister Head Screw
T/C HH	=	Thread Cutting Hexagon Head Screw
T/C OH	=	Thread Cutting Oval Head Screw
T/C PH	=	Thread Cutting Pan Head Screw
T/C RH	=	Thread Cutting Round Head Screw
T/F FH	=	Thread Forming Flat Head Screw
T/F FIL.H	=	Thread Forming Filister Head Screw
T/F HH	=	Thread Forming Hexagon Head Screw
T/F OH	=	Thread Forming Oval Head Screw
T/F PH	=	Thread Forming Pan Head Screw
T/F RH	=	Thread Forming Round Head Screw
THM	=	Truss Head Machine Screw
WFHMM	=	Washer Head Hexagon Head Machine Screw
WG	=	Wing Screw

LEGEND - SETSCREWS

HS	=	Hexagonal Socket Setscrew
S	=	Slotted Setscrew
SH	=	Square Head Setscrew
-KCP	=	Knurled Cup Point Setscrew
-CP	=	Cup Point Setscrew
-OP	=	Oval Point Setscrew
-FDP	=	Full Dog Point Setscrew
-HDP	=	Half Dog Point Setscrew
-FP	=	Flat Point Setscrew
-COP	=	Cone Point Setscrew

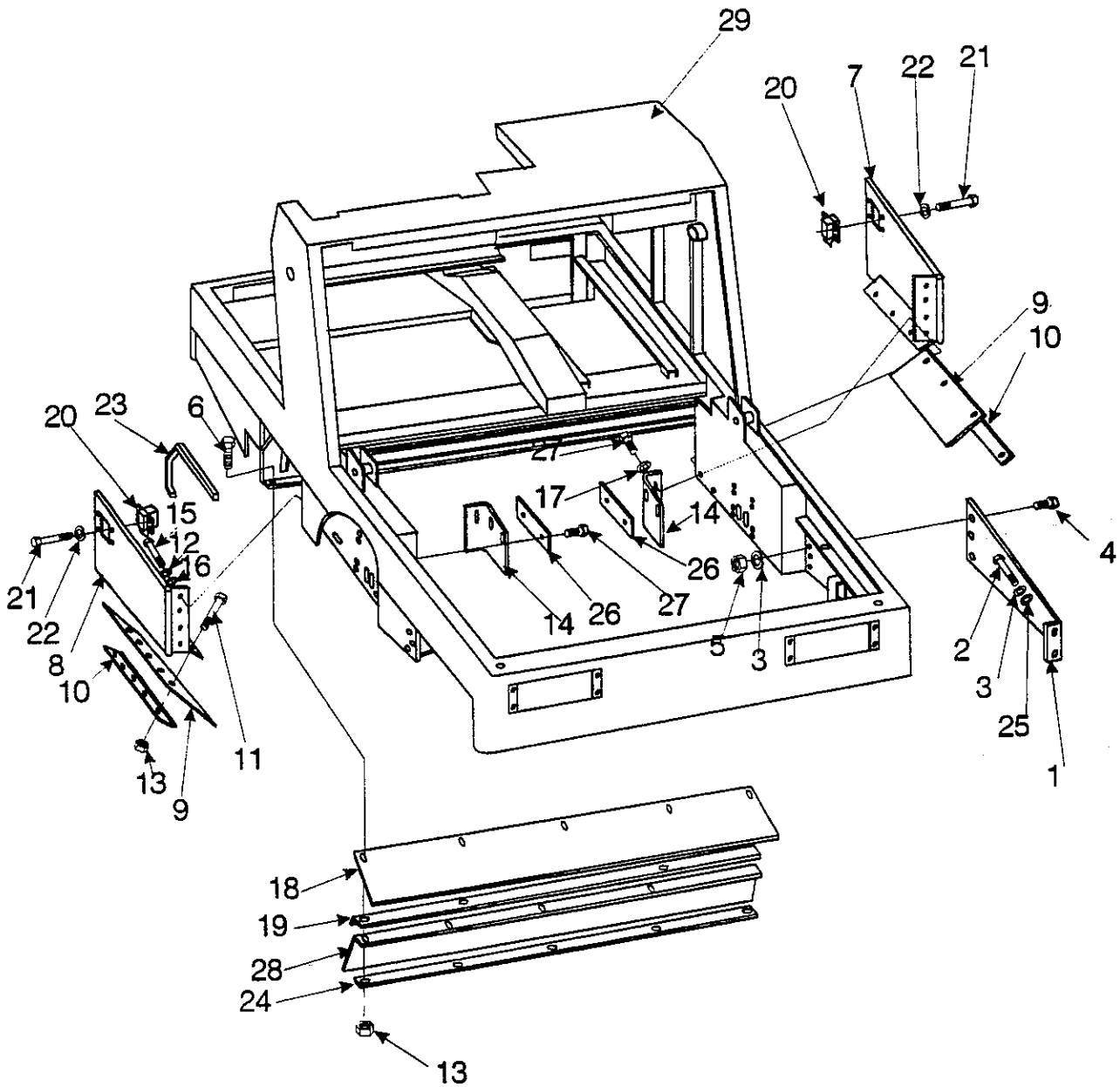
DRIVER COMPARTMENT



C-0267

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-00222	Screw, 1/4-20 x 1.25 HHM	1
2	8-08-00672	Seat Bracket	1
3	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	6
4	2-00-00518	Lock Washer, Helical Spring 1/4 Med	23
5	8-69-00003	Seat	1
6	2-00-00183	Screw, 1/4 - 20 x .750 THM	4
7	2-00-03575	Carriage Bolt, 1/4-20 x .750	2
8	8-52-00140	Seat Deck Panel	1
9	2-00-00221	Screw, 1/4 - 20 x .750 HHC	14
10	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	4
11	2-00-00519	Lock Washer, Helical Spring #10 Med	4
12	2-00-00492	Grommet	1
13	8-82-00051	Switch	1
14	2-00-03569	Carriage Bolt, 5/16 - 18 x .750	4
15	2-00-03061	Screw, 10-24 x .500 THM	4
16	2-00-00205	Screw, 1/4-20 x 1.00 HHC	1
17	8-08-00741	Switch Bracket	1
18	2-00-00232	Screw, 3/8 - 16 x .750 HHC	4
19	2-00-02310	Lock Washer, Helical Spring 3/8 Med	4
20	2-00-00239	Screw, 1/2 - 13 x 1.000 HHC	1
21	7-23-03089	Screw, #17(.312) x 1.000 CAPT.SL.	3
22	7-23-03087	Retainer Washer, .265 x .625 x .025	3
23	8-72-05003	Seat Adjuster Slide	1
24	8-72-05002	Seat Slide	1
25	8-23-03058	U - Clip,	1
26	8-19-08042	Battery Access Door	1
27	2-00-00407	Flat Washer, .562 x .265 x .062	13
28	8-33-05113	Operator's Compartment	1
29	8-08-00588	Battery Hold Down Bracket	1
30	2-00-04602	Clamp	1
31	2-00-02312	Lock Washer, Helical Spring 1/2 Med	1

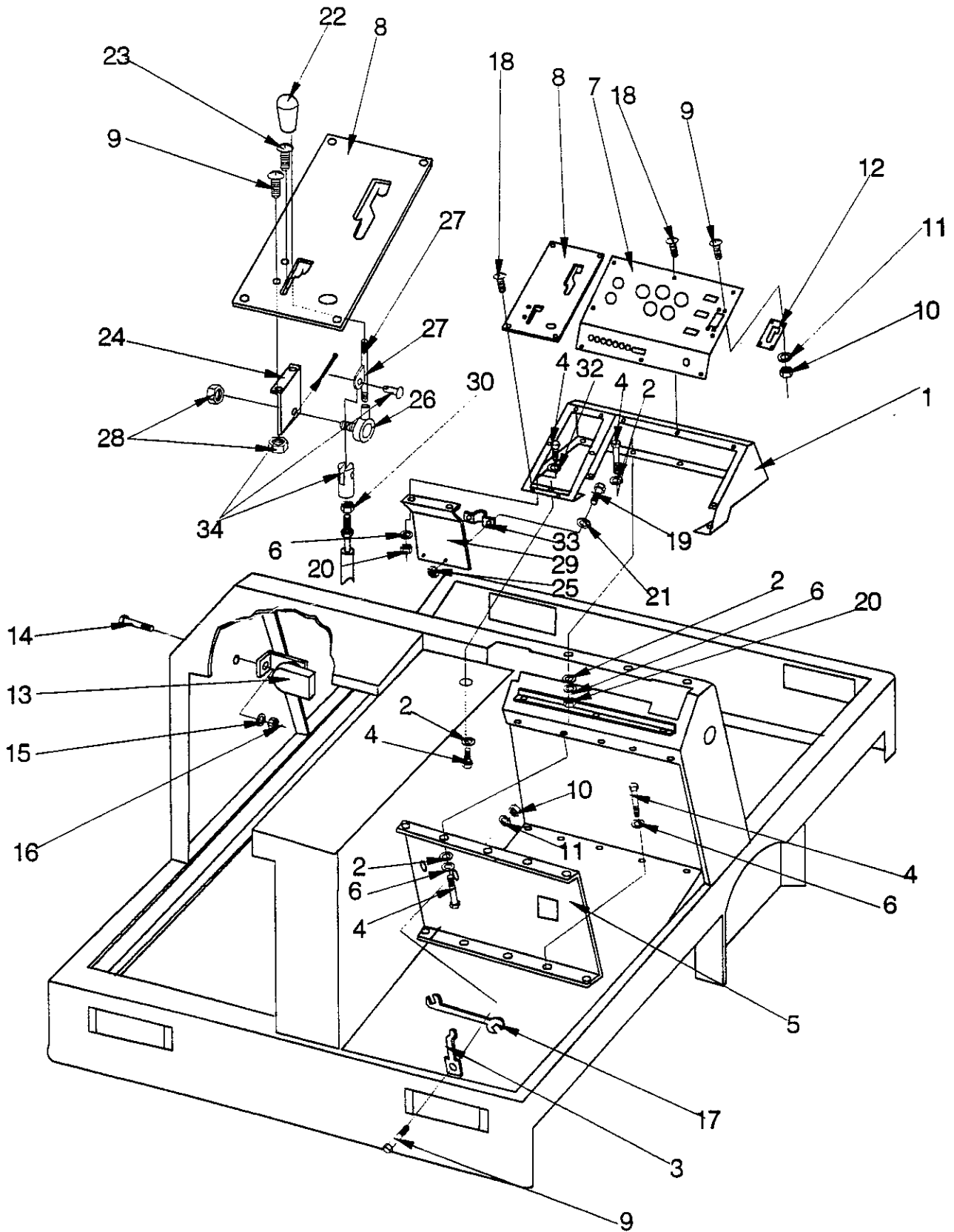
FRAME, BROOM DOORS & FLAPS



C-0268

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-52-00155	Front Skirt	1
2	2-00-00233	Screw, 3/8 - 16 x 1.00 HHC	2
3	2-00-02310	Lock Washer, Helical Spring 3/8 Med	5
4	2-00-04667	Screw, 3/8 - 16 x 1.25 BHS	3
5	2-00-02360	Lock Washer, Hex 3/8 - 16	3
6	2-00-00193	Carriage Bolt, 1/4 - 20 x 1.500	5
7	8-19-08046	Broom Chamber Door (L.H.)	1
8	8-19-08045	Broom Chamber Door (R.H.)	1
9	8-25-08169	Broom Chamber Door Flap	2
10	8-58-05260	Broom Door Flap Clamping Plate	2
11	2-00-02196	Carriage Bolt, 1/4-20 x 1.00	6
12	2-00-00518	Lock Washer, Helical Spring 1/4 Med	6
13	2-00-01752	Nut, Fiber 1/4 - 20 Hex	11
14	8-25-08171	Broom Chamber / Hopper Flap	2
15	2-00-00221	Screw, 1/4 - 20 x 0.750 HHC	6
16	2-00-03702	Flat Washer, .625 x .281 x .062	6
17	2-00-01676	Flat Washer, 1.062 x .265 x .062	2
18	8-25-08166	Flap - Rear Broom	1
19	8-18-03013	Broom Flap Deflector (Rear)	1
20	8-41-00032	Broom Door Latch	2
21	2-00-01081	Screw, #8 - 32 x .500 T/C RH	8
22	2-00-00529	Lock Washer, Helical Spring #8 Med	8
23	8-68-05072	Broom Chamber Seal	2
24	8-58-05220	Plate - Broom Flap Clamping	1
25	2-00-00402	Flat Washer, .750 x .390 x .093	2
26	8-79-00122	Broom Chamber / Hopper Flap Strap	2
27	2-00-04880	Screw, 1/4 - 20 x .750	6
28	8-25-08147	Rear Broom Flap	1
29	8-27-07106	Frame	1

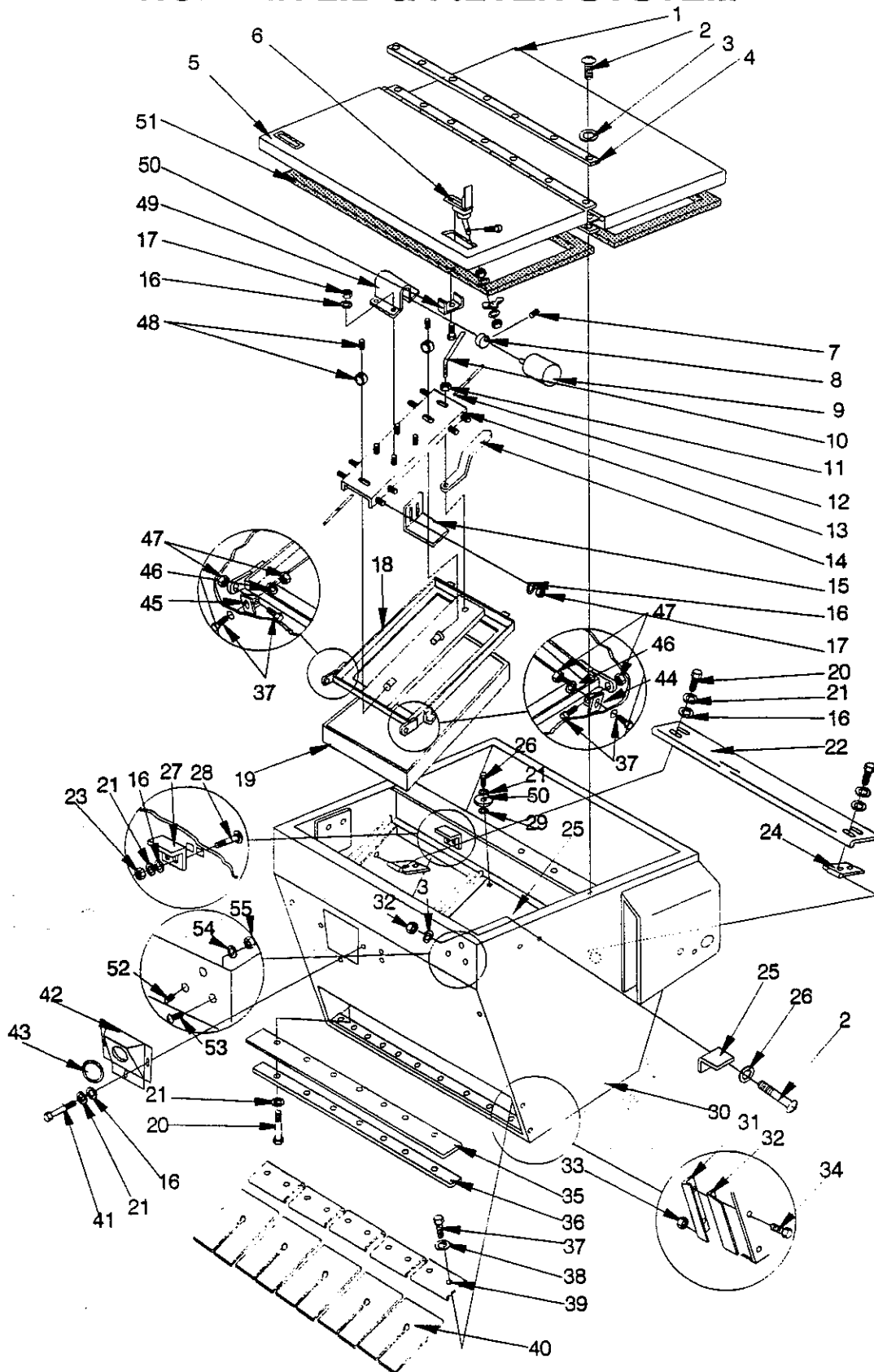
CONTROL PANEL and HORN



C-0269

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-33-05111	Instrument Housing	1
2	2-00-00407	Flat Washer, .562 x .265 x .062	12
3	8-13-07068	Clip	2
4	2-00-00221	Screw, 1/4 - 20 x .750 HHC	19
5	8-52-00157	Kickboard Panel	1
6	2-00-00518	Lock Washer, Helical Spring 1/4 Med	17
7	8-58-05252	Face Plate - Instrument Compartment	1
8	8-58-05265	Face Plate - Main Broom Control	1
9	2-00-03061	Screw, #10 - 24 x .500 THM	3
10	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	9
11	2-00-00519	Lock Washer, Helical Spring #10 Med	9
12	8-58-05222	Backing Plate - Brush Control Lever	1
13	8-32-09013	Horn	1
14	2-00-00208	Screw, 5/16 - 18 x .750 HHC	1
15	2-00-00530	Lock Washer, Helical Spring 5/16 Med	1
16	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	1
17	2-00-00686	Wrench, 3/4 - 9/16	1
18	2-00-03466	Screw, #10 - 16 x .500 T/F RH	13
19	2-00-04794	Screw, #10-24 x .625	2
20	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	8
21	2-00-00426	Flat Washer, .500 x .218 x .062	3
22	7-39-00017	Knob,	1
23	2-00-00054	Screw, 1/4-20 x .500 RHM	1
24	8-08-00752	Bracket,	1
25	2-00-01246	Nut, Hex Fiber Insert #10-24	4
26	7-25-02050	Rod End,	1
27	8-41-05074	Throttle Lever	1
28	2-00-00633	Nut, Hex Fiber 1/4-28	1
29	8-08-00735	Throttle Cable Bracket,	1
30	2-00-04563	Screw, #10-24 x .625 x .375 SH	1
31			
32	2-00-03702	Flat Washer, .625 x .281 x .062	2
33	8-13-07094	Clamp,	1
34	7-14-07006	Clevis Assembly	1

HOPPER LID & FILTER SYSTEM

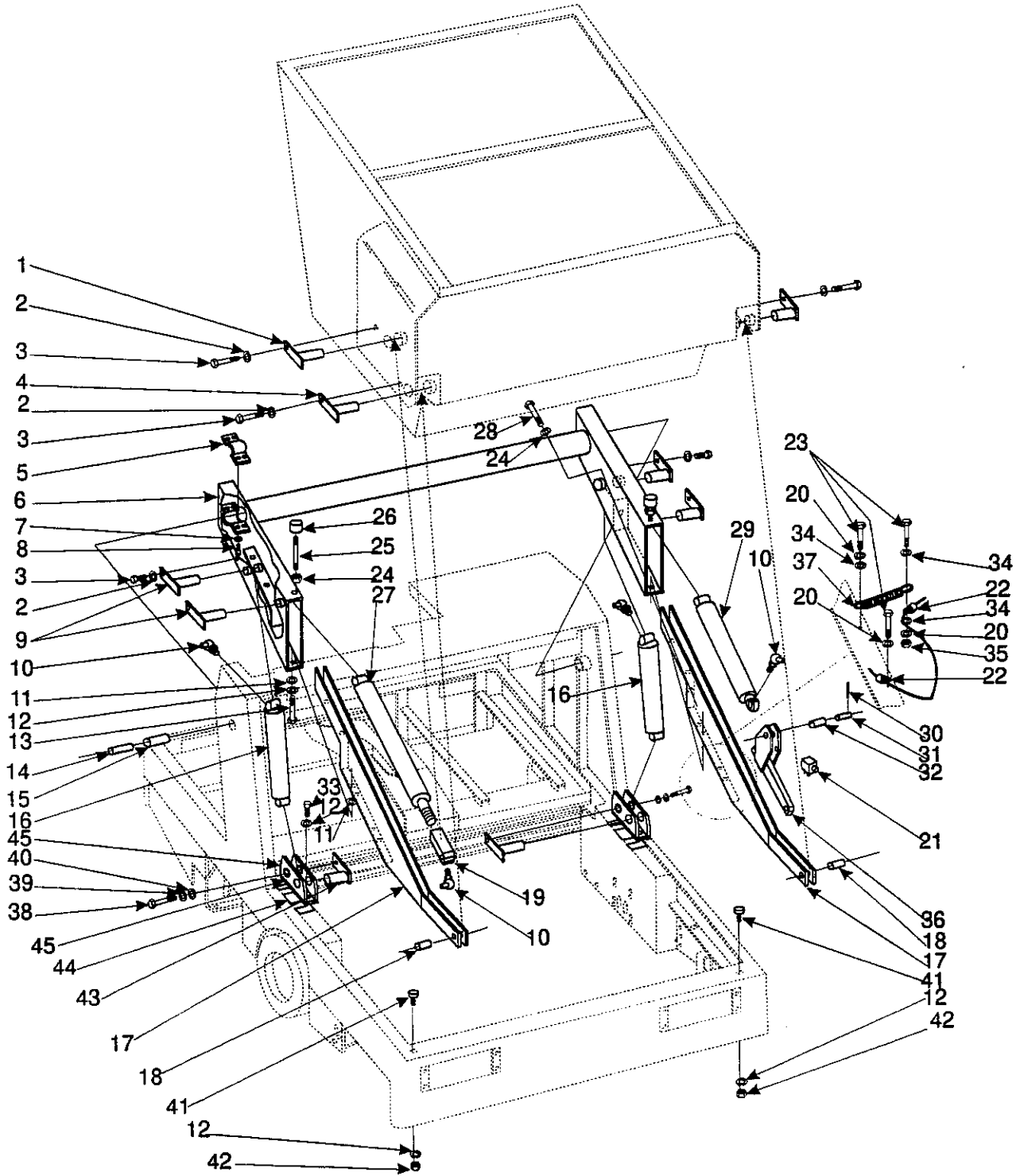


C-0270

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-16-07317	Hopper Lid	1
2	2-00-04667	Screw, 3/8-16 x 1.250 BHS	11
3	2-00-02310	Lock Washer, Helical Spring 3/8 Med	11
4	8-75-01186	Spacer	2
5	8-29-00207	Gasket	1
6	8-41-00044	Latch	2
7	2-95-01929	Setscrew, 1/4 - 20 x .250 HS-CS (Nylok)	2
8	8-89-04006	Shaker Weight	2
9	0882-027	Shaker Motor	2
10	8-80-05032	Latch Arm Stud	1
11	2-00-02371	Nut, Hex Jam 1/2 - 13 x .750 x .312	1
12	8-66-00156	Rocker Pivot Rod	2
13	8-58-05257	Rocker Plate	1
14	8-41-00042	Shaker Frame Latch	1
15	8-50-05056	Rocker Plate Pad	8
16	2-00-00407	Flat Washer, .562 x .274 x .062	35
17	2-00-00641	Nut, Hex Fiber Insert 1/4 - 20	24
18	8-27-07094	Shaker Frame	1
19	8-24-04134	Panel Filter	1
20	2-00-00221	Screw, 1/4 - 20 x .750 HHC	22
21	2-00-00518	Lock Washer, Helical Spring 1/4 Med	14
22	8-25-08145	Air Flow Deflector	1
23	2-00-00594	Nut, Hex 1/4-20	6
24	8-57-05019	Deflector Pivot	2
25	8-52-00158	Hopper Panel	1
26	2-00-00205	Screw, 1/4 - 20 x 1.00 HHC	7
27	8-08-00701	Frame Lock Bracket	2
28	2-00-02196	Carriage Bolt, 1/4-20 x 1.000	4
29	2-00-03702	Flat Washer, .625 x .281 x .062	4
30	8-32-06097	Hopper	1
31	8-13-07095	Hopper Side Flap Clamp	2
32	8-25-08170	Hopper Side Flap	2
33	2-00-01246	Nut, Fiber Lock #10 - 24	4
34	2-00-04794	Screw, 10-24 x .625 BHS	4
35	8-25-08151	Primary Deflector Flap	1
36	8-79-00110	Strap	1
37	2-00-00209	Screw, 5/16 - 18 x .750 HHM	20
38	2-00-00530	Lock Washer, Helical Spring 5/16 Med	12
39	8-13-07084	Bottom Hopper Flap Clamp	6
40	8-25-08182	Bottom Hopper Flap	12
41	2-00-00220	Screw, 1/4 - 20 x .625 HHC	3
42	8-58-05237	Blower Mating Plate	1
43	8-29-00183	Blower Gasket	1
44	8-08-00692	Right Hand Frame Mounting Bracket	1
45	8-08-00691	Left Hand Frame Mounting Bracket	1
46	2-00-00409	Flat Washer, .687 x .343 x .062	4
47	2-00-00644	Nut, Hex Fiber Insert 5/16 - 18	8
48	7-15-01022	Setscrew Collar, .750 x .378 x .375	4
49	8-16-07181	Shaker Motor Cover	2
50	7-23-03092	Flat Washer, 1.50 x .265 x 1.25	2
51	3-73-00060	Bulb Seal	21.4
52	2-00-03778	Plug, 1/8 NPT - Hex Socket	1
53	2-00-03061	Screw, #10 - 24 x .5000 THM	2
54	2-00-00519	Lock Washer, #10	2
55	2-00-00695	Nut, Hex #10 - 24	2

C-0270

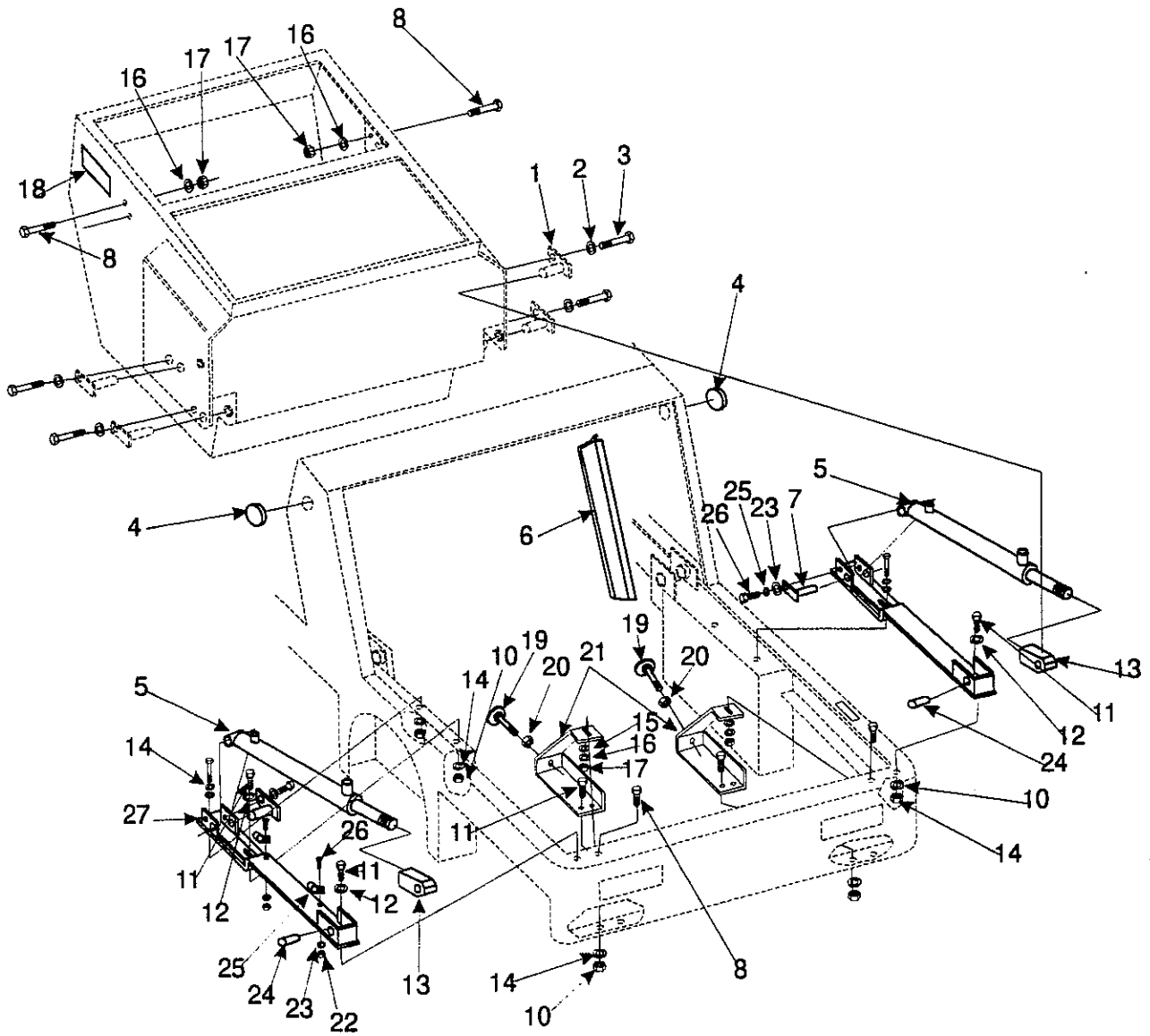
HOPPER LIFT SYSTEM - VARIABLE DUMP



C-0183

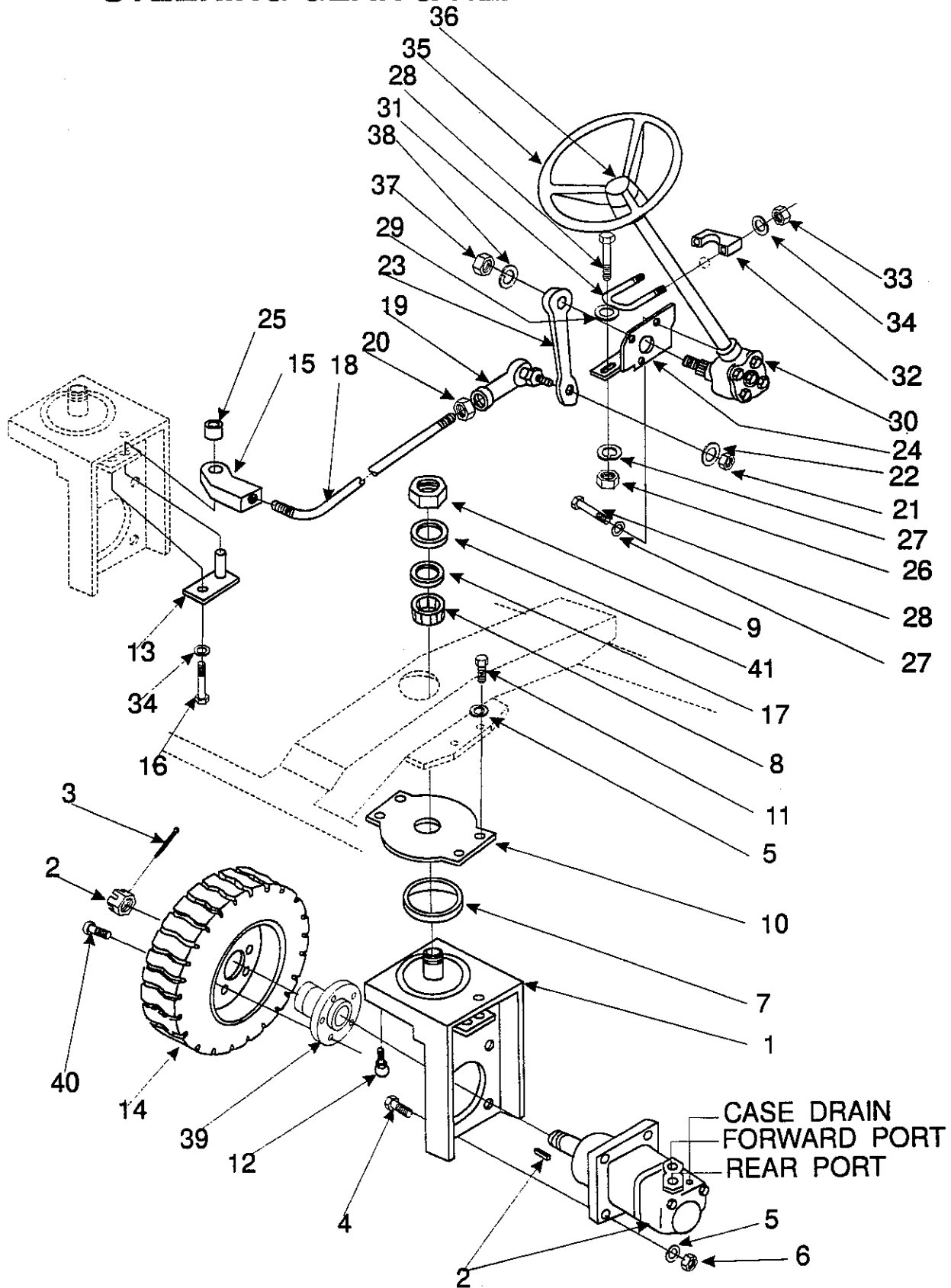
KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-55-08105	Hopper Dump Pin	1
2	2-00-00518	Lock Washer, Helical Spring 1/4 Med	7
3	2-00-00221	Screw, 1/4 - 20 x .750 HHC	7
4	8-55-08104	Hopper Pivot Pin	2
5	8-13-07083	Pivot Pin Half Clamp	2
6	8-03-04247	Arm Pivot Bracket Assembly	1
7	2-00-02310	Lock Washer, Helical Spring 3/8 Med	1
8	2-00-00209	Screw, 3/8 - 16 x 1.250 HHC	4
9	8-55-08102	Pin (Upper)	4
10	2-00-02558	Lubrication Fitting, 45° 1/8 NPT	4
11	2-00-04159	Flat Washer, 1.375 x .562 x .109	8
12	2-00-02312	Lock Washer, Helical Spring 1/2 Med	8
13	2-00-01254	Screw, 1/2 - 13 x 1.500 HHC	6
14	8-55-08107	Pin (Arm Pivot)	2
15	2-00-04893	Sleeve Bearing, 2.005 x 1.503 x 2.000	2
16	8-17-05029	Lift Cylinder	2
	0880-449	Seal Kit for Lift Cylinder	2
17	8-03-04246	Lower Arm	2
18	2-00-04894	Sleeve Bearing, 1.254 x 1.003 x 2.500	2
19	8-14-01010	Clevis, Dump Cylinder	1
20	2-00-00519	Lock Washer, Helical Spring #10 Med	5
21	8-82-00050	Switch Lift Arm Lockout	1
22	2-00-04378	Clip, .281	2
23	2-00-00056	Screw, #10 - 24 x .750 RHM	3
24	2-00-00598	Nut, Hex Hvy. Jam 1/2 - 13 x .875 x .296	4
25	8-80-05014	Stud, 1/2-13 UNF-2A	2
26	7-78-05009	Stop Pad	2
27	8-17-05028	Dump Cylinder	1
	0880-451	Seal Kit for Dump Cylinder	1
28	2-00-04967	Screw, 1/2 - 13 x 2.500 HHM	2
29	8-17-05030	Rotation Cylinder	1
	0880-450	Seal Kit for Rotation Cylinder	1
30	2-00-02436	Cotter Pin, .187 x 1.750	1
31	8-55-08103	Hopper Rotate Pin	1
32	8-06-01083	Bushing,	1
33	2-00-00071	Screw, #10 - 24 x 1.250 RHM	2
34	2-00-00426	Flat Washer, .500 x .218 x .062	5
35	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	3
36	8-03-00743	Rotate Cylinder Bracket	1
37	7-76-00050-1	Spring	1
38	2-00-00213	Screw, 5/16 - 18 x .625 HHC	2
39	2-00-00530	Lock Washer, Helical Spring 5/16 Med	2
40	2-00-00409	Flat Washer, .687 x .343 x .062	2
41	8-50-05054	Rubber Pad	2
42	2-00-00596	Nut, Hex 1/2 - 13 x .750 x .437	2
43	8-55-08102	Pin (Lower)	2
44	8-71-00017	Shim	-
45	8-08-00742	Lift Cylinder Bracket	2

HOPPER LIFT SYSTEM - LOW DUMP



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-55-08105	Hopper Dump Pin	1
2	2-00-00518	Lock Washer, Helical Spring 1/4 Med	4
3	2-00-00221	Screw, 1/4 - 20 x .750 HHC	4
4	2-00-04432	Plug Button, 2.093	2
5	8-17-05033	Low Dump Cylinder	2
	0880-505	Seal Kit for Low Dump Cylinder	2
6	8-21-04041	Low Dump Lintel Edging	2
7	8-55-08102	Pin	2
8	2-00-00233	Screw, 3/8 - 16 x 1.000 HHC	6
9	8-18-00305	Decal, Warning Pinch Point	Ref
10	2-00-00596	Nut, Hex 1/2 - 13 x .750 x .437	6
11	2-00-00240	Screw, 1/2 - 13 x 1.250 HHC	10
12	2-00-04159	Flat Washer, 1.375 x .562 x .109	6
13	8-14-01010	Clevis,	2
14	2-00-02312	Lock Washer, Helical Spring 1/2 Med	10
15	2-00-00402	Flat Washer, .750 x .390 x .093	2
16	2-00-02310	Lock Washer, Helical Spring 3/8 Med	6
17	2-00-02360	Nut, Hex 3/8 - 16 x .562 x .328	6
18	8-18-00314	Decal, Warning Service Precaution	Ref
19	8-78-05019	Hopper Stop	2
20	2-00-00598	Nut, Hex Jam 1/2 - 13 x .875 x .296	2
21	8-08-00628	Low Dump Hopper Stop Bracket	2
22			
23	2-00-00409	Flat Washer, 5/16	2
24	2-00-04894	Sleeve Bearing, 1.254 x 1.003 x 2.500	2
25	2-00-00530	Lock Washer, 5/16	2
26	2-00-00213	Screw, 5/16-18 x 5/8	2
27	8-08-00751	Low Dump Mounting Bracket	2

STEERING GEAR & REAR DRIVE SYSTEM

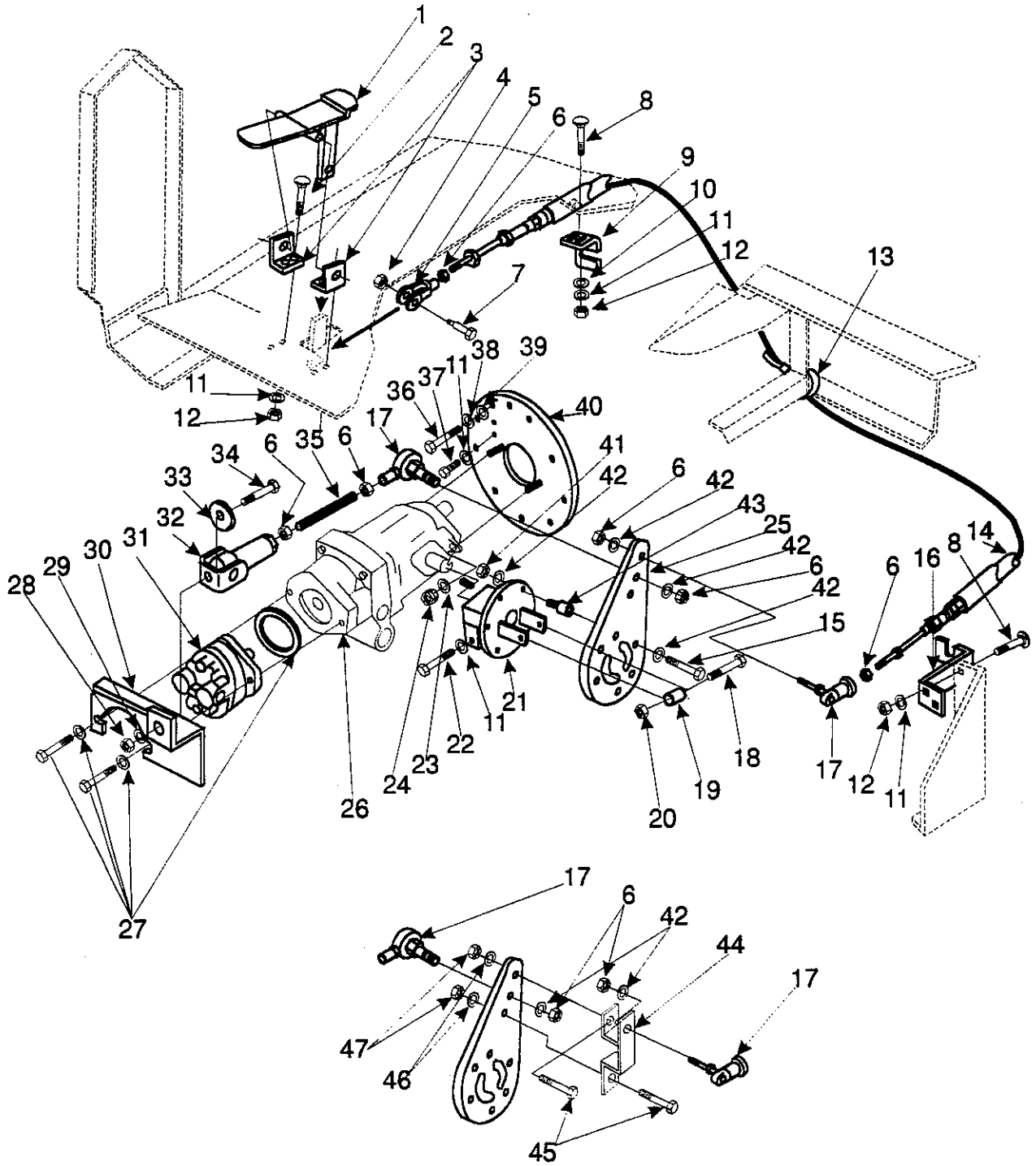


C-0271

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-92-00037	Rear Wheel Yoke	1
2	0885-080	Hydraulic Motor	Ref
	0880-464	Seal Kit for 0885-080 Hydraulic Motor	1
	2-00-04489	Key, .437 x 1.250 SQ	1
	8-23-03054	Nut, Hex Slotted 1 1/4 - 12	1
3	2-00-00776	Cotter Pin, .125 x 1.500	1
4	2-00-00242	Screw, 1/2 - 13 x 2.250 HHC	4
5	2-00-02312	Lock Washer, Helical Spring 1/2 Med	8
6	2-00-00596	Nut, Hex 1/2 - 13 x .750 x .437	4
7	2-00-04455	Thrust Bearing, 7.000 x 5.812	1
8	2-00-02079	Roller Bearing, 2.328 x 1.250 x .703	1
9	2-00-04454	Nut, Hex Fiber Insert 1 1/4 - 12	1
10	8-58-05226	Rear Wheel Pivot Pin	1
11	2-00-00239	Screw, 1/2 - 13 x 1.000 HHC	4
12	2-00-02557	Lubrication Fitting, 90° 1/8 NPT	1
13	8-55-08106	Rear Wheel Tab Pin	1
14	8-89-08057	Rear Pneumatic Wheel - 18" Dia.	1
15	8-66-00147	Rear Wheel Steering Rod End	1
16	2-00-00221	Screw, 1/4 - 20 x .750 HHC	1
17	2-00-04621	Roller Bearing, Outrace (Cup Only)	1
18	8-66-00148	Steering Arm Tie Rod	1
19	8-66-00149	Rod End (MPB # VFS-126)	1
20	2-00-00618	Nut, Hex Jam 3/4 - 16 x 1.125 x .421	1
21	2-00-00617	Nut, Hex 3/4 - 16 x 1.125 x .640	1
22	2-00-00522	Lock Washer, Helical Spring 3/4 Light	1
23	8-03-04239	Steering Arm	1
24	8-08-00577	Bracket	1
25	8-09-01084	Bushing	1
26	2-00-02349	Nut, Hex Hy. 7/16 - 14 x .750 x .421	2
27	2-00-02311	Lock Washer, Helical Spring 7/16 Med	2
28	2-00-00238	Screw, 7/16 - 14 x 1.250 HHC	5
29	2-00-00415	Flat Washer, .937 x .468 x .068	3
30	0801-550	Steering Shaft	1
31	8-13-07085	U - Bolt,	1
32	8-08-00578	Bracket	1
33	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	2
34	2-00-00518	Lock Washer, Helical Spring 1/4 Med	3
35	8-89-08016	Steering Wheel	1
36	8-11-00022	Steering Wheel Cap	1
37	2-00-00590	Nut, Hex 5/8 - 18 x .937 x .546	1
38	2-00-02313	Lock Washer, Helical Spring 5/8 Med	1
39	8-80-09083	Drive Wheel Hub	1
40	8-80-05035	Tapered Head Stud	5
41	8-75-01136	Thrust Washer,	1

C-0271

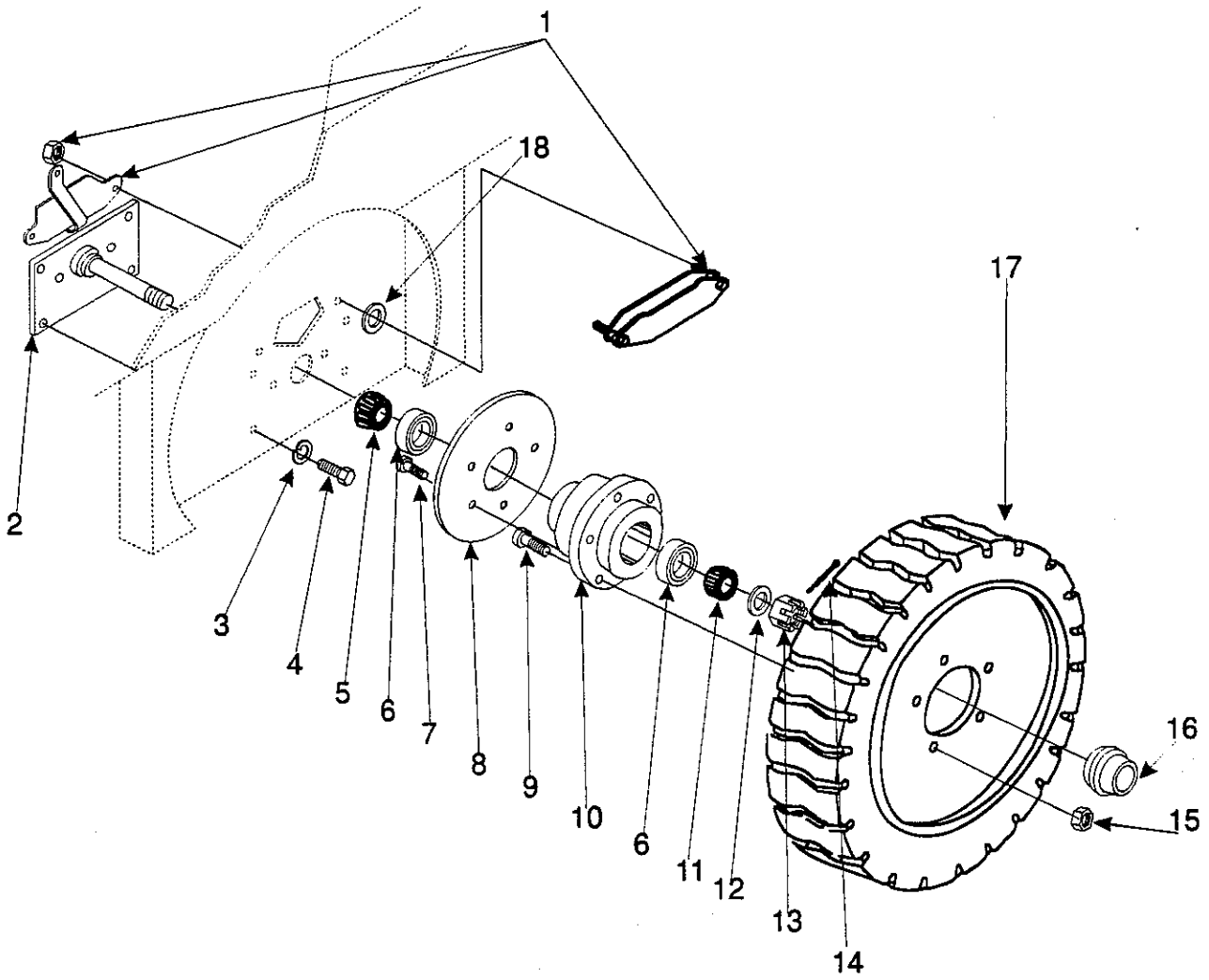
FORWARD AND REVERSE CONTROL



C-0272

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-55-00029	Forward/Reverse Pedal	1
2	2-00-03569	Carriage Bolt, 5/16-18 x .750	4
3	8-08-00723	Forward/Reverse Pedal Bracket	2
4	2-00-01246	Nut, Hex Fiber Insert #10-24	1
5	8-14-01006	Clevis	1
6	2-95-01999	Nut, Hex Jam 1/4 - 28 x .437 x .156	6
7	2-00-04563	Screw, #10-24 x .625 x .375 SH	1
8	2-00-00196	Carriage Bolt, 5/16-18 x 1.000	4
9	8-08-00585	Forward/Reverse Cable Mount. Bracket	1
10	2-00-00409	Flat Washer, .687 x .343 x .062	2
11	2-00-00530	Lock Washer, Helical Spring 5/16 Med	10
12	2-00-00585	Nut, Hex 5/16-18 x .50 x .265	8
13	2-00-04345	Plastic Tie Wrap	2
14	8-16-00030	Control Cable	1
15	2-00-00219	Screw, 1/4-20 x .500 HHC	6
16	8-08-00675	Hydroback Bracket (FORD 413)	1
17	7-25-02050	Rod End, 1/4-28	2
18	2-00-00246	Screw, 1/4-20 x 2.250 HHC	1
19	7-75-01110	Transmission Arm Spacer	1
20	2-00-00641	Nut, Hex Fiber Insert 1/4-20	1
21	7-03-04105	Transmission Arm	1
22	2-00-00225	Screw, 5/16-18 x 1.500 HHC	1
23	2-00-04801	Flat Washer, .875 x .375 x .125	2
24	2-00-03412	Nut, Hex Lock 3/8 - 24 x .562 x .281	2
25	7-58-05220	Transmission Plate	1
26	8-60-05006-2	Pump, 1.24 C.I.R.	1
27	0880-404	Pump Assembly Kit	1
28	2-00-00596	Nut, Hex 1/2-13 x .750 x .437	1
29	2-00-02312	Lock Washer, Helical Spring 1/2 Med	1
30	8-08-00678	Hydroback Bracket	1
31	8-60-05022	Pump, 1.20 C.I.R.	1
32	8-16-00025	Centering Control	1
33	2-00-00405	Flat Washer, 1.062 x .531 x .093	1
34	2-00-00240	Screw, 1/2-13 x 1.250 HHC	1
35	7-66-00147	Rod, 1/4-28 x 3.000	1
36	2-00-00233	Screw, 3/8-16 x 1.000 HHC	8
37	2-00-00224	Screw, 5/16-18 x .500 HHC	2
38	2-00-02310	Lock Washer, Helical Spring 3/8 Med	8
39	2-00-00402	Flat Washer, .750 x .390 x .093	8
40	8-58-05171	Pump Mounting Plate (FORD 411/413)	1
41	2-00-00594	Nut, Hex 1/4-20 x .437 x .218	6
42	2-00-00501	Lock Washer, 1/4 Int.	14
43	7-75-01089	Isolator	6
44	8-08-00682	Swivel Mounting Bracket (Diesel)	1
45	2-00-00221	Screw, 1/4-20 x .750 HHC	2
46	2-00-00501	Lock Washer, 1/4 Int.	2
47	2-00-00594	Nut, Hex 1/4 - 20	2

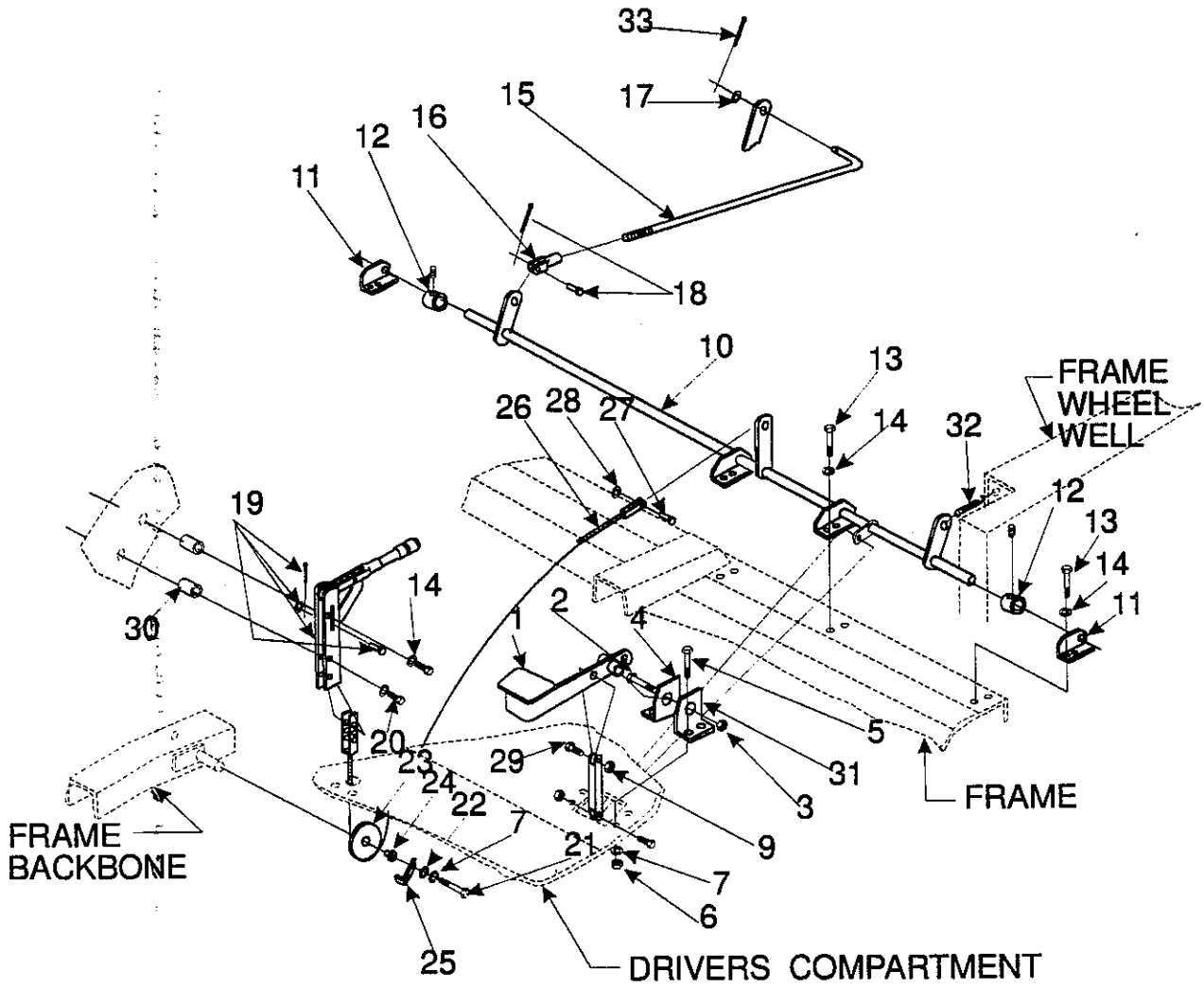
BRAKE & FRONT WHEEL ASSEMBLY



C-0273

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	7-08-02006	Brake Caliper Assembly Weldment	2
2	7-03-09007	Stub Axle Weldment	2
3	2-00-02312	Lock Washer, Helical Spring 1/2 Med	12
4	2-00-02689	Screw, 1/2-20 x 1.000 HHC	12
5	2-00-02079	Roller Bearing, 2.328 x 1.250 x .703	2
6	2-00-04621	Roller Bearing, Cup Only	4
7	2-00-03051	Screw, 1/4-20 x .750 HSHC	10
8	7-08-02007	Brake Disc	2
9	8-80-05036	Stud, 1/2-20 x 1.56	10
10	7-33-09027	Front Wheel Hub	2
11	2-00-04622	Roller Bearing, Cone	2
12	2-95-01977	Flat Washer, 1.062 x 2.00	2
13	2-00-05026	Nut, Hex 1 - 14 UNF Slotted	2
14	2-00-02436	Cotter Pin, .187 x 1.500	2
15	8-23-03065	Nut, Chamfered 1/2-20 x .80 x .62	10
16	8-11-00030	Dust Cap	2
17	8-89-08053	Molded Wheel	2
18	2-00-04953	Flat Washer, 0.6875 x .390	2

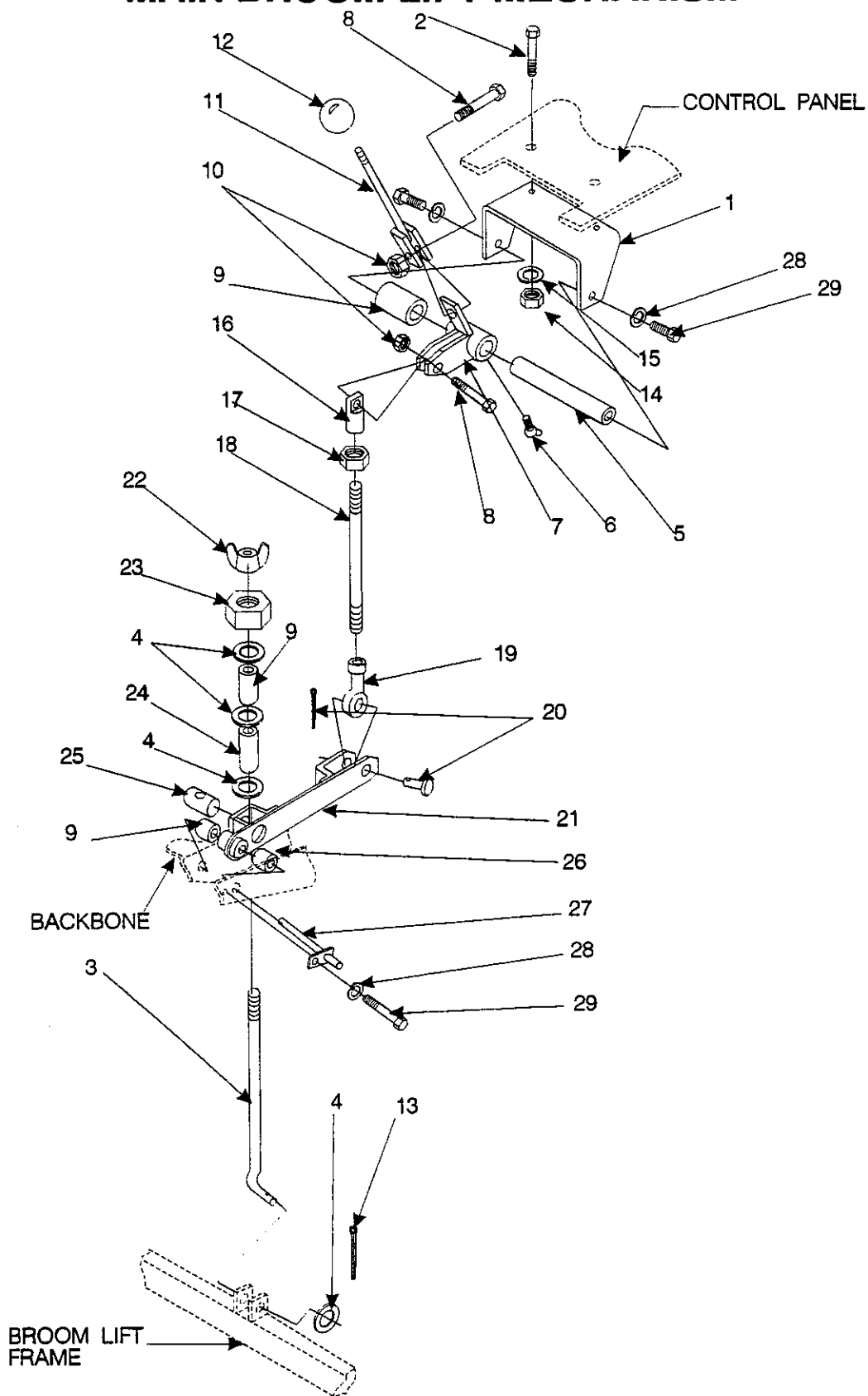
BRAKE CONTROL LINKAGE



C-0274

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	7-55-00011	Brake Pedal	1
2	2-00-02682	Screw, 1/2 - 13 x 2.750 HHC	1
3	2-00-04936	Nut, Hex Fiber Insert 1/2 - 13	1
4	8-08-00665	Brake Pedal Bracket (Left Hand)	1
5	2-00-00232	Screw, 3/8 - 16 x .750 HHC	4
6	2-00-02360	Nut, Hex 3/8 - 16 x .562 x .328	4
7	2-00-02310	Lock Washer, Helical Spring 3/8 Med	5
8	8-42-05126	Extension Arm Linkage	1
9	2-95-04182	Nut, Hex Fiber Insert 3/8 - 16	2
10	8-70-05278	Brake Pedal Pivot Shaft	1
11	8-08-00571	Pivot Shaft Bracket	2
12	8-15-01003	Setscrew Collar, 1.125 x .750 x .562	2
13	2-00-00213	Screw, 5/16 - 18 x .625 HHC	8
14	2-00-00530	Lock Washer, Helical Spring 5/16 Med	10
15	8-66-00164	Pull Rod,	2
16	8-14-01006	Clevis	2
17	2-00-03702	Flat Washer, 1/4	2
18	2-00-04909	Clevis Pin and Cotter Pin	2
19	7-41-05083	Parking Brake Lever	1
20	2-00-01770	Screw, 5/16-18 x 2.50 HHC	2
21	2-00-00234	Screw, 3/8 - 16 x 1.500 HHC	1
22	2-00-00402	Flat Washer, .750 x .390 x .093	1
23	8-60-00140	Pulley	1
24	8-09-01065	Pulley Bushing	1
25	8-08-00436	Cable Retainer	1
26	8-10-00032	Parking Cable	1
27	8-55-08083	Clevis Pin (Parking Brake)	1
28	2-00-00546	Retaining Ring, Ext. .312	1
29	2-00-00233	Screw, 3/8 - 16 x 1.000 HHC	2
30	8-75-01184	Spacer,	2
31	8-08-00666	Brake Pedal Bracket (Right Hand)	1
32	8-76-00042	Spring	2
33	2-00-00771	Cotter Pin, .094 x .75	2

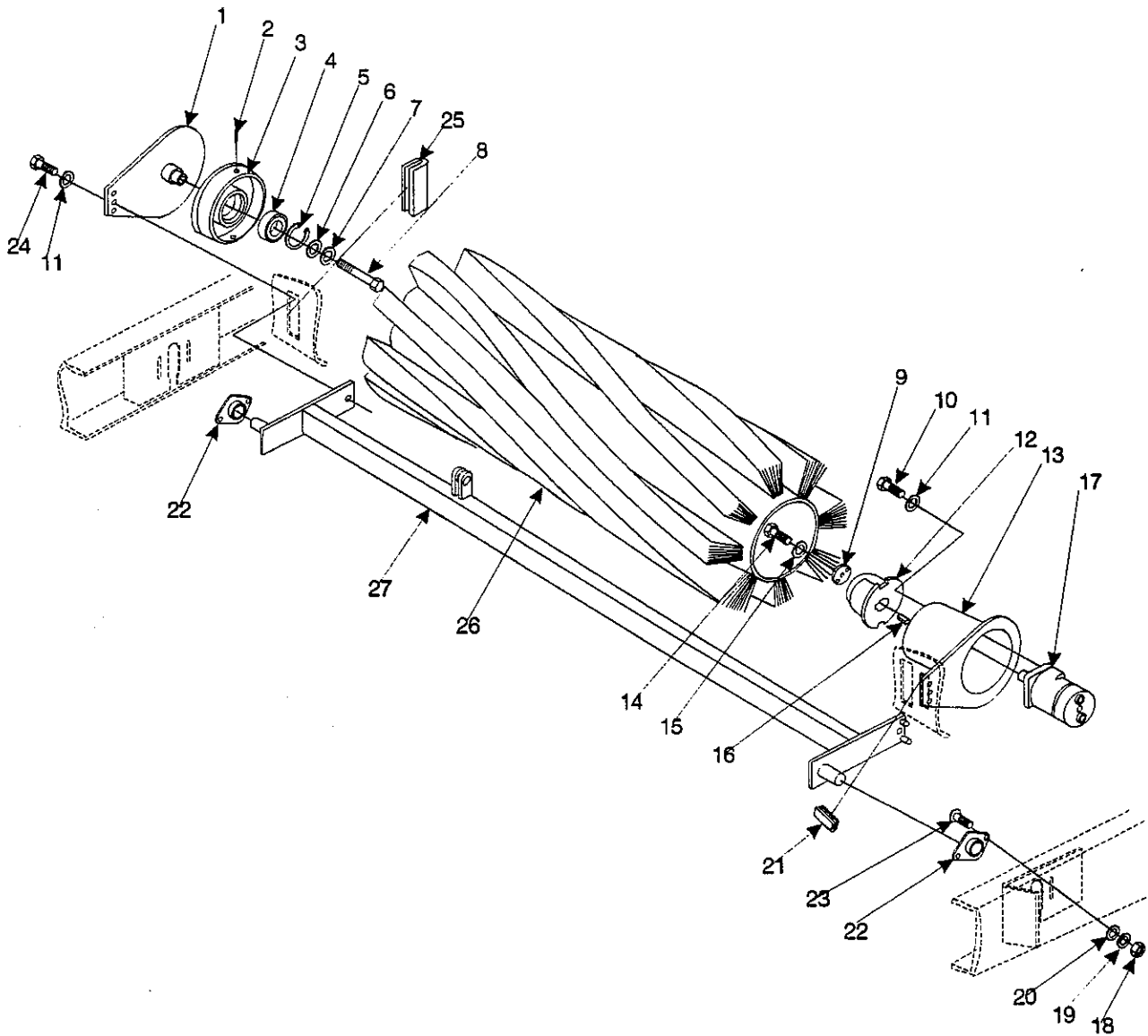
MAIN BROOM LIFT MECHANISM



C-0275

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-08-00645	Shaft Bracket	1
2	2-00-00208	Screw, 5/16 - 18 x .750 HHC	2
3	8-66-00163	Rod - Linkage (Main Broom)	1
4	2-00-00432	Flat Washer, - 1.125 x .765 x .062	4
5	8-70-05284	Shaft	1
6	2-00-02558	Lubrication Fitting, 45° 1/8 NPT	1
7	8-16-00035	Pivot Block	1
8	2-00-00234	Screw, 3/8 - 16 x 1.500 HHC	2
9	8-75-01177	Pivot Tube	3
10	2-95-04182	Nut, Hex Fiber Insert 3/8 - 16	2
11	8-16-00034	Lever	1
12	8-39-00003	Knob	1
13	2-00-02436	Cotter Pin, 1.500 x 1.875	1
14	2-00-00530	Lock Washer, Helical Spring 5/16 Med	2
15	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	2
16	8-66-00141	Rod End	1
17	2-00-00591	Nut, Hex Jam 1/2 - 20 x .750 x .312	2
18	8-66-00150	Control Rod Lift Linkage Rod	1
19	8-66-00144	"MPB" Rod End # WF-8-32	1
20	8-55-08101	Clevis Pin # 1/2 - 1 3/4 - E&E	1
21	8-16-00037	Lift Linkage	1
22	2-00-04891	Wing Nut, 3/4 - 10	1
23	8-39-00011	Torque Knob	1
24	8-75-01180	Spacer,	1
25	8-55-08099	Pivot Pin	1
26	8-75-01178	Spacer, .78 x .97	3
27	8-16-00038	Pulley Shaft	1
28	2-00-00518	Lock Washer, Helical Spring 1/4 Med	3
29	2-00-00221	Screw, 1/4 - 20 x .750 HHC	3

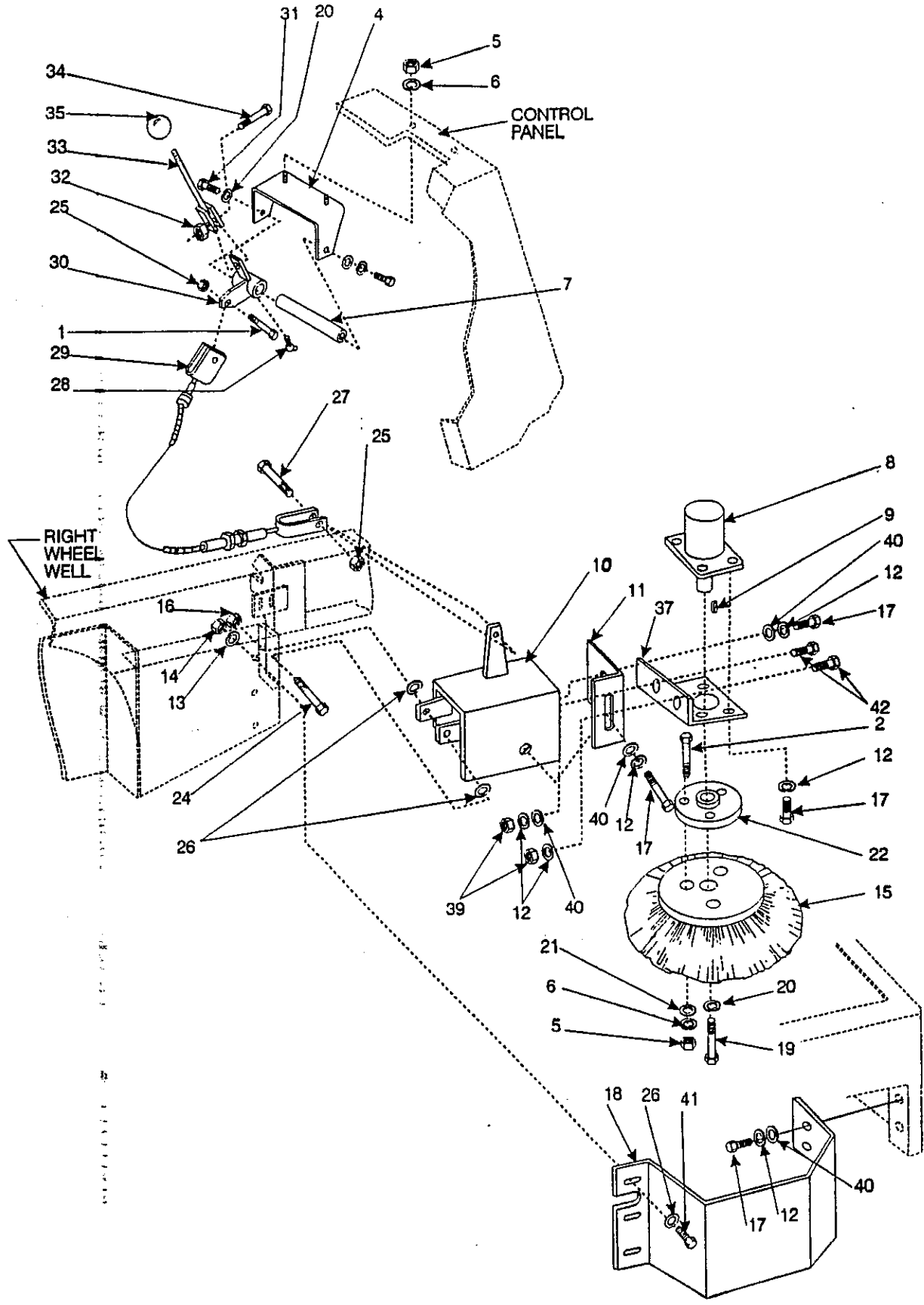
MAIN BROOM



C-0118

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-16-00039	Idler Broom Arm	1
2	2-00-04886	Screw, 3/8 - 16 x .500 HSHC	2
3	8-33-09074	Idler Hub	1
4	2-00-04889	Ball Bearing	1
5	2-00-04890	Retaining Ring, 2.437 Int.	1
6	2-00-04888	Flat Washer, 3/4 (Series W)	1
7	2-00-00522	Lock Washer, Helical Spring 3/4 Light	1
8	2-00-04887	Screw, 3/4 - 10 x 1.250 HHC	1
9	8-58-05160	Locking Hub Plate	1
10	2-00-00232	Screw, 3/8 - 16 x .750 HHC	4
11	2-00-02310	Lock Washer, Helical Spring 3/8 Med	8
12	8-33-09046-1	Drive Hub	1
13	8-16-00041	Drive Broom Arm	1
14	2-00-03039	Screw, 1/4 - 20 x .625 HSHC	3
15	2-00-00518	Lock Washer, Helical Spring 1/4 Med	10
16	2-00-03838	Woodruff Key, .25 x 1 (#15)	1
17	0882-040	Hydraulic Motor	Ref
18	2-00-00585	Nut, Hex 5/16 -18 x .500 x .265	4
19	2-00-00530	Lock Washer, Helical Spring 5/16 Med	4
20	2-00-00409	Flat Washer, .687 x .343 x .062	4
21	8-21-04048	Edging	2
22	2-00-03997	Flange Bearing, 3.750 x 1.000	2
23	2-00-00196	Carriage Bolt, 5/16 - 18 x 1.000	4
24	2-00-00233	Screw, 3/8-16 x 1.000 HHC	2
25	8-29-00220	Broom Chamber Gasket,	4
26	----	See Page 155 for Broom Options	-
27	8-16-00049	Main Broom Lift Frame	1

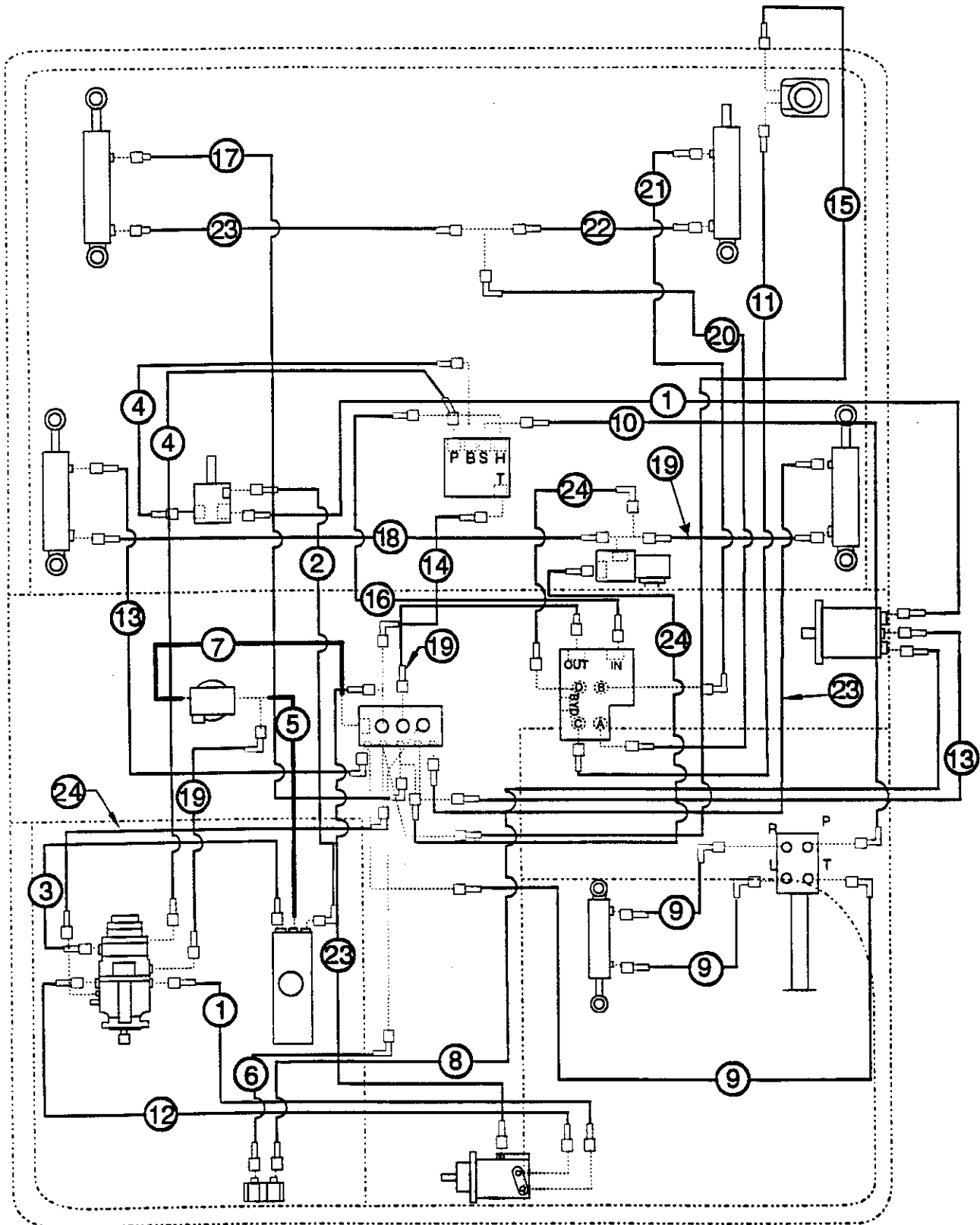
SIDE BROOM



C-0119

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-08-00590	Valve Mounting Bracket	1
2	2-00-00211	Screw, 5/16 - 18 x 1.750 HHC	3
3	2-00-00208	Screw, 5/16 - 18 x .750 HHS	2
4	8-08-00646	Side Broom Pivot Bracket	1
5	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	5
6	2-00-00530	Lock Washer, Helical Spring 5/16 Med	5
7	8-70-05285	Shaft - Broom Pivot R.H.	1
8	0882-023	Side Broom Motor	1
9	2-00-00722	Woodruff Key, .250 x 1.000 (#15)	1
10	8-03-04291	Side Broom Arm (R.H.)	1
11	2-00-05187	Carriage Bolt, 3/8 - 16 x 1.250	2
12	2-00-02310	Lock Washer, Helical Spring 3/8 Med	13
13	2-00-02312	Lock Washer, 1/2	3
14	2-00-00596	Nut, Hex 1/2-13	3
15	8-08-03212	Side Broom, Polypropylene	1
16	2-00-04936	Nut, Hex Fiber Insert 1/2 - 13	1
17	2-00-00233	Screw, 3/8 - 16 x 1.000 HHC	6
18	8-30-05151	Side Broom Guard	1
19	2-00-01490	Screw, 1/4 - 20 x .875 HSHC (Nylok)	1
20	2-00-00518	Lock Washer, Helical Spring 1/4 Med	3
21	2-00-00409	Flat Washer, .687 x .343 x .062	3
22	8-25-06008	Side Broom Flange	1
23	2-00-00199	Carriage Bolt, 1/4-20 x 1.750	2
24	2-00-04914	Screw, 1/2 - 13 x 4.250 HHC	1
25	2-00-00644	Nut, Hex Fiber Insert 5/16 - 18	2
26	2-00-04159	Flat Washer, 1.375 x .562 x .109	2
27	2-00-02708	Screw, 5/16 - 18 x 1.000 HHC	2
28	2-00-02558	Lubrication Fitting, 45 1/8 NPT	1
29	8-10-00028	Cable, R.H. Side Broom	1
30	8-57-05021	Pivot Block (Side Broom)	1
31	2-00-00221	Screw, 1/4 - 20 x .750 HHC	2
32	2-95-04182	Nut, Hex Fiber Insert 3/8 - 16	1
33	8-16-00034	Lever	1
34	2-00-00234	Screw, 3/8 - 16 x 1.500 HHC	1
35	8-39-00003	Knob	1
36	2-00-00641	Nut, Hex Fiber Insert 1/4-20	2
37	8-08-00747	Motor Mounting Bracket,	1
38	2-00-00584	Nut, Hex 3/8 - 24 x .562 x .328	2
39	2-00-04801	Flat Washer, 3/8	3
40	2-00-00240	Screw, 1/2 - 13 x 1.250 HHC	2

HYDRAULIC HOSE SYSTEM - VARIABLE DUMP



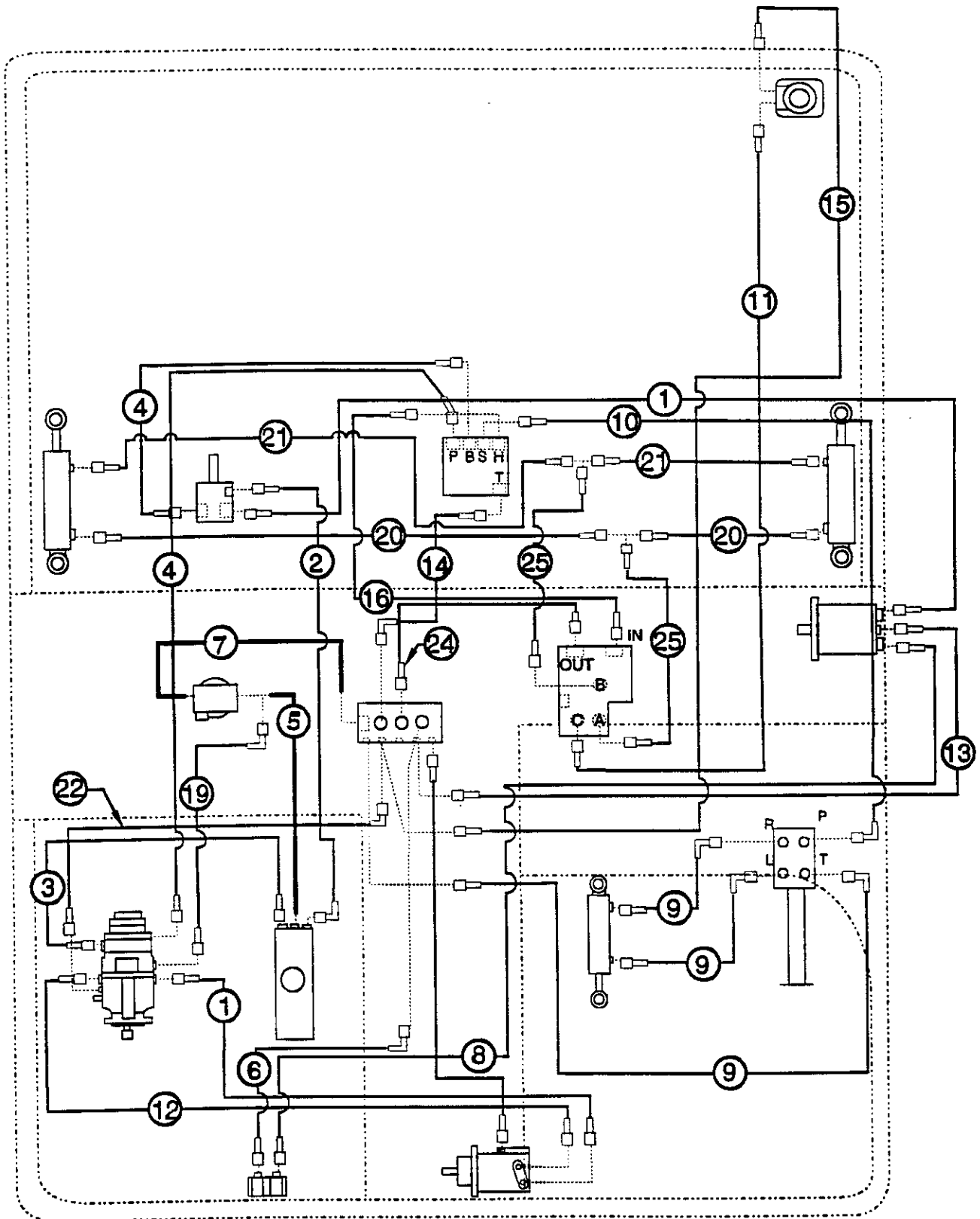
C-1160/9410

C-0120

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-33-02267	Hose, #8 x 62.000 -0-0-ors-2wb	2
2	7-33-02189	Hose, #4 x 26.000 -0-90-ors-1wb	1
3	8-33-02215	Hose, #12 x 36.000 -0-0-ors-1wb	1
4	8-33-02265	Hose, #8 x 23.000 -0-45-ors-2wb	2
5	8-33-02273	Hose, 1 x 15.000 return	1
6	8-33-02264	Hose, #8 x 52.000 -0-jic-90-ors-1wb	1
7	7-33-02317	Hose, 1 x 15.000 return	1
8	8-33-02246	Hose, #8 x 90.000 -0-jic-0-ors-1wb	2
9	7-33-02190	Hose #4 x 67.000 -0-90-ors-1wb	3
10	7-33-02200	Hose, #4 x 56.000 -0-90-ors-1wb	1
11	8-33-02278	Hose, #4 x 130.000 -0-0-ors-1wb	1
12	8-33-02195	Hose, #8 x 69.500 -0-0-ors-2wb	1
13	7-33-02193	Hose, #4 x 49.000 -0-90-ors-1wb	1
14	7-33-02206	Hose, #8 x 14.250 -0-90-ors-1wb	1
15	8-33-02277	Hose, #4 x 110.00 -0-0-ors-1wb	1
16	8-33-02178	Hose, #4 x 15.000 -0-0-ors-1wb	1
17	8-33-02198	Hose, #4 x 107.000 -0-90-ors-1wb	1
18	8-33-02184	Hose, #4 x 50.500 -0-0-ors-1wb	1
19	8-33-02217	Hose, #4 x 32.000 -0-0-ors-1wb	3
20	8-33-02174	Hose, #4 x 16.500 -0-90-ors-1wb	2
21	8-33-02204	Hose, #4 x 76.000 -0-90-ors-1wb	1
22	8-33-02179	Hose, #4 x 46.000 -0-0-ors-1wb	1
23	8-33-02185	Hose, #4 x 56.000 -0-0-ors-1wb	3
24	7-33-02225	Hose, #4 x 32.000 -0-90-ors-1wb	3

C-0120/9410

HYDRAULIC HOSE SYSTEM - LOW DUMP



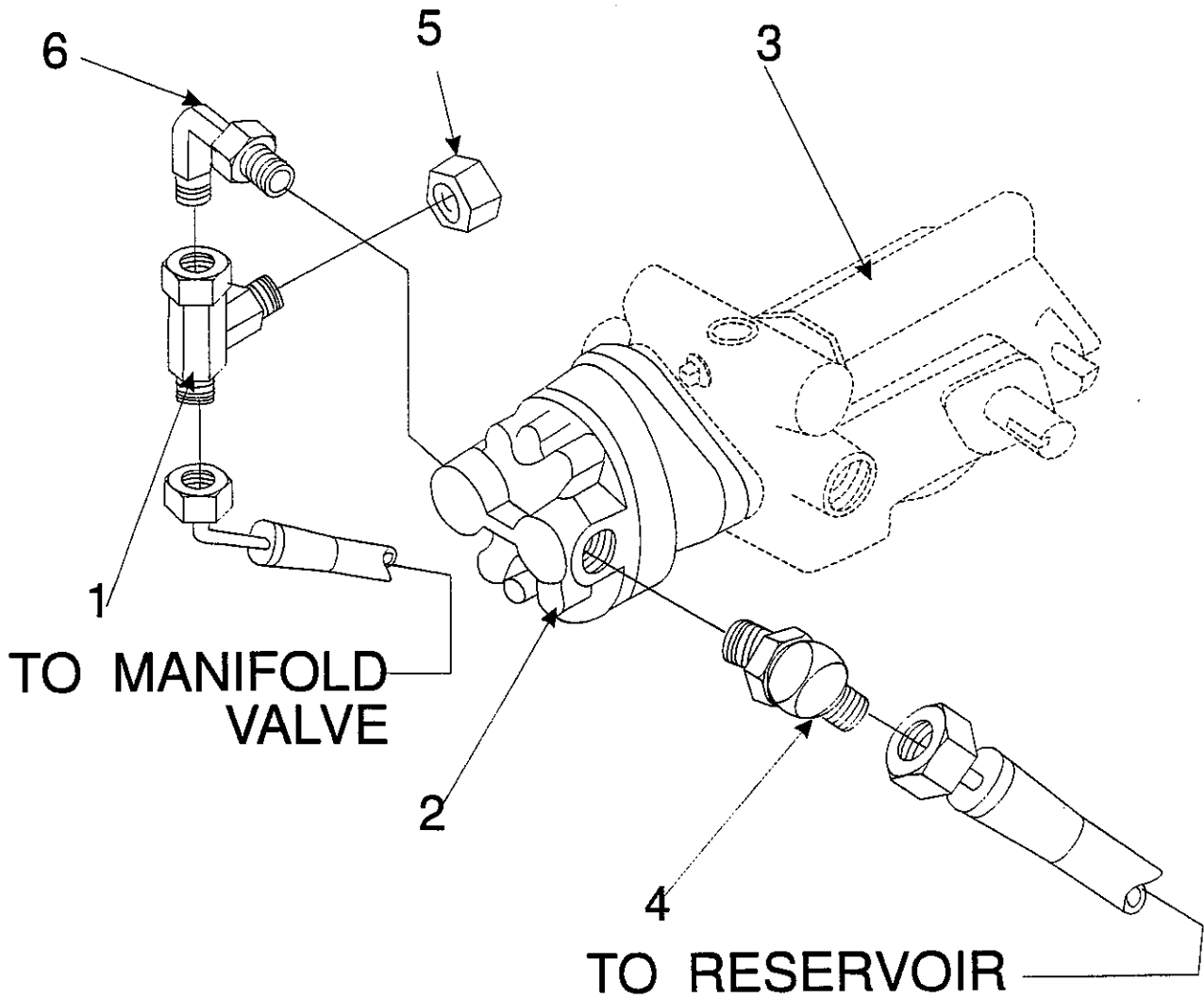
C-0121/9410

C-0121

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-33-02267	Hose, #8 x 62.000 -0-0-ors-2wb	2
2	7-33-02189	Hose, #4 x 26.000 -0-90-ors-1wb	1
3	8-33-02215	Hose, #12 x 36.000 -0-0-ors-1wb	1
4	8-33-02265	Hose, #8 x 23.000 -0-45-ors-2wb	2
5	8-33-02273	Hose, 1 x 15.000 return	1
6	8-33-02264	Hose, #8 x 52.000 -0-jic-90-ors-1wb	1
7	7-33-02317	Hose, 1 x 15.000 return	1
8	8-33-02246	Hose, #8 x 90.000 -0-jic-0-ors-1wb	2
9	7-33-02190	Hose #4 x 67.000 -0-90-ors-1wb	3
10	7-33-02200	Hose, #4 x 56.000 -0-90-ors-1wb	1
11	8-33-02278	Hose, #4 x 130.000 -0-0-ors-1wb	1
12	8-33-02195	Hose, #8 x 69.500 -0-0-ors-2wb	1
13	7-33-02193	Hose, #4 x 49.000 -0-90-ors-1wb	1
14	7-33-02206	Hose, #8 x 14.250 -0-90-ors-1wb	1
15	8-33-02277	Hose, #4 x 110.00 -0-0-ors-1wb	1
16	8-33-02178	Hose, #4 x 15.000 -0-0-ors-1wb	1
17			
18			
19	8-33-02217	Hose, #4 x 32.000 -0-0-ors-1wb	1
20	8-33-02185	Hose, #4 x 56.000 -0-0-ors-1wb	2
21	8-33-02177	Hose, #4 x 73.000 -0-0-ors-1wb	2
22	8-33-02217	Hose, #4 x 32.000 -0-0-ors-1wb	1
23	7-33-02184	Hose, #4 x 25.500 -0-0-ors-1wb	1
24	7-33-02225	Hose, #4 x 38.000 -0-0-ors-1wb	1
25	7-33-02186	Hose, #4 x 30.000 -0-0-ors-1wb	2

C-0121

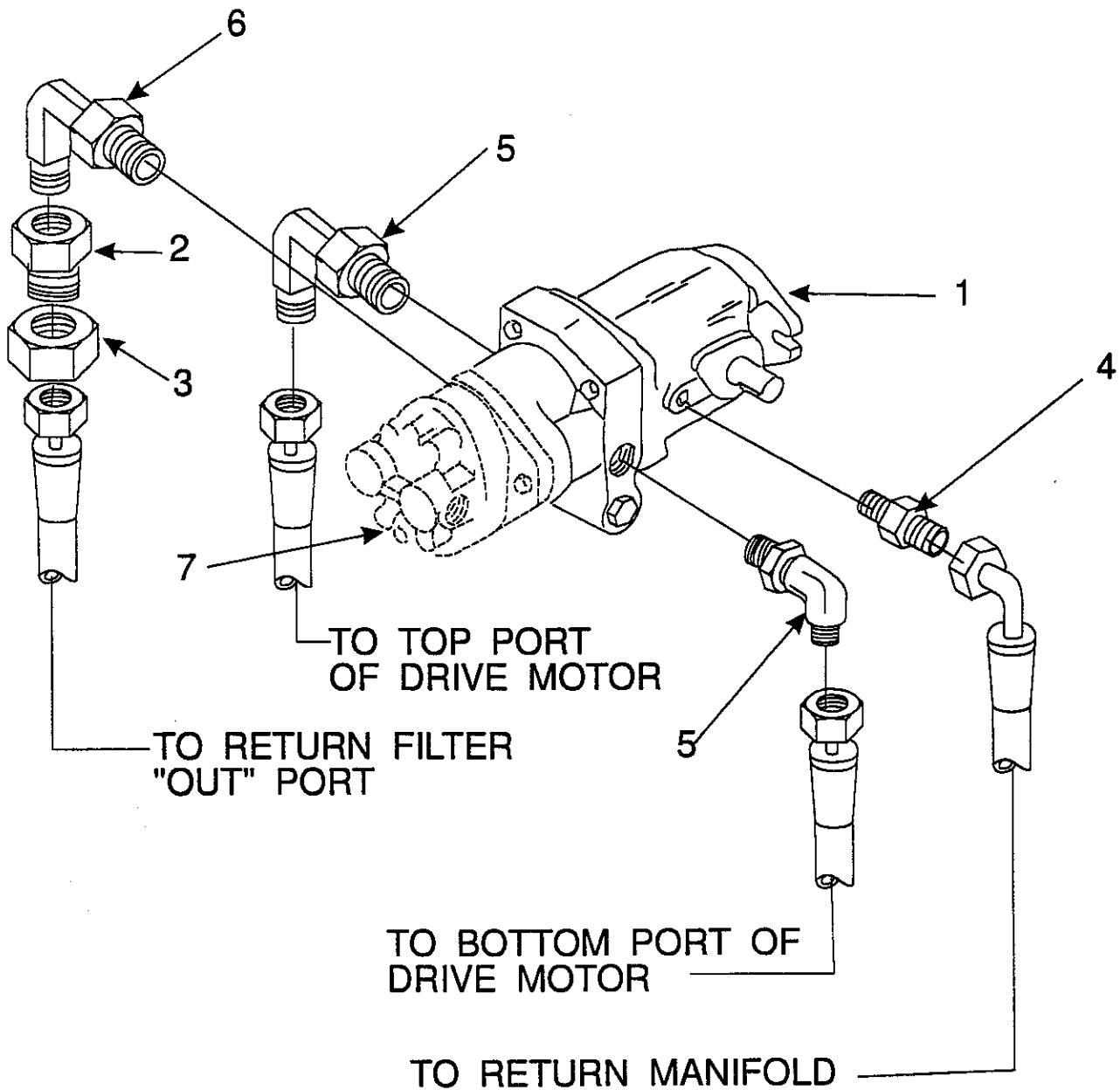
AUXILIARY PUMP & FITTINGS



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-04928	ORFS Run Tee, 13/16-16	1
2	8-60-05022	Auxiliary Pump	1
NS	0880-404	Pump Assembly Kit	1
3	8-60-05006-2	Main Pump	1
4	2-00-04920	ORFS 90° Elbow, 1 5/16-12 to 1 3/16-12	1
5	2-00-04957	ORFS Cap, #8 ORS	1
6	2-00-04921	ORFS 90° Elbow, 7/8-14 to 13/16-16	1

C-0279

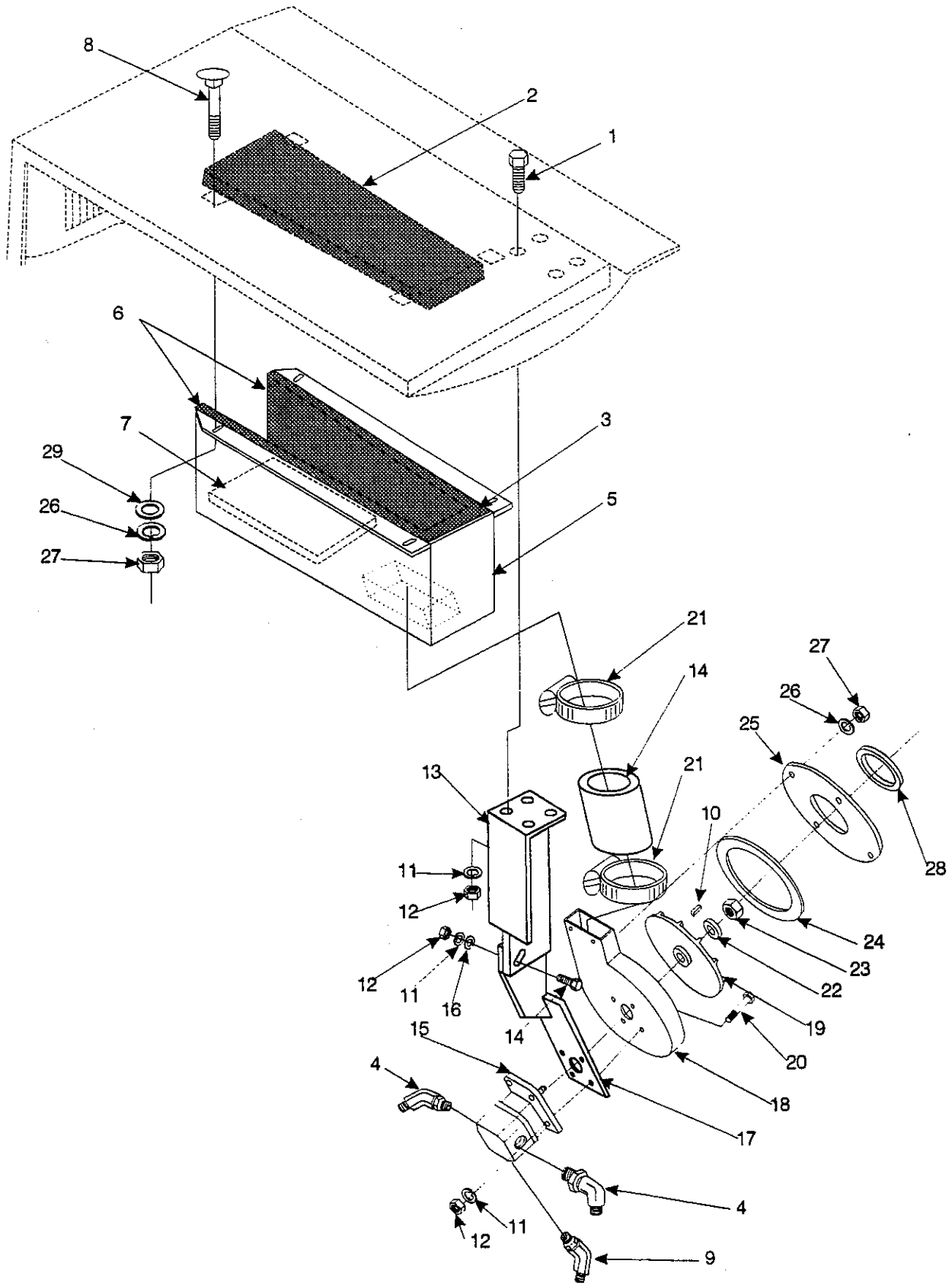
MAIN PUMP & FITTINGS



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-60-05006-2	Main Pump	1
NS	0885-404	Pump Assembly Kit	1
2	2-00-04929	Reducer Fitting	1
3	2-00-04939	Nut Fitting	1
4	2-00-04918	Straight Fitting	1
5	2-00-04922	ORFS 90° Elbow, 1 1/16-12 to 13/16-16	2
6	2-00-04885	90° Elbow,	1
7	8-60-05022	Auxiliary Pump	1

C-0280

IMPELLER AND FITTINGS

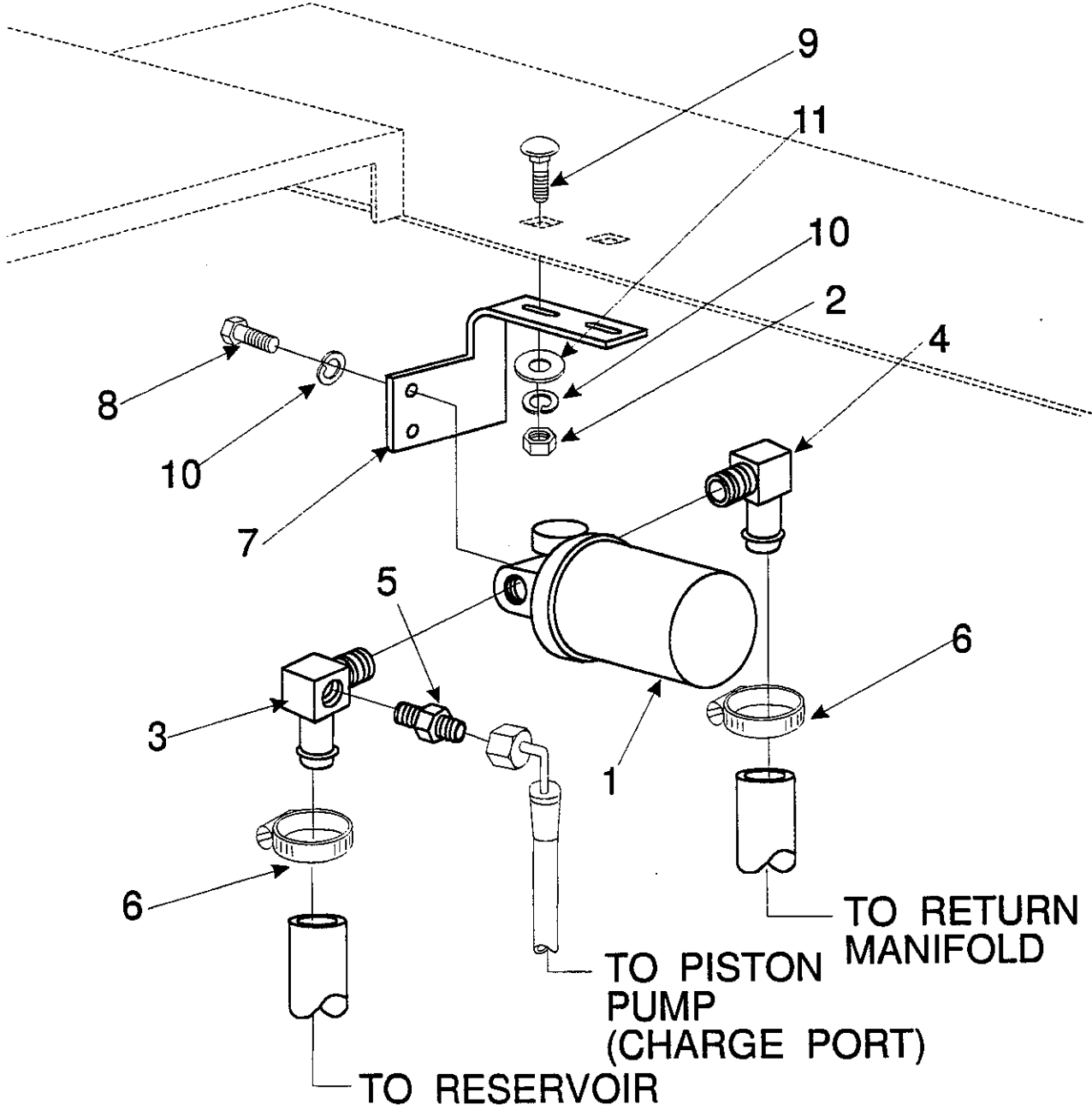


C-0281

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-00196	Carriage Bolt, 5/16 - 18 x 1.000	6
2	8-34-09006	Insulation, Blower Box (Top)	1
3	8-34-09009	Side Insulation	1
4	2-00-04885	ORFS 90° Elbow, 3/4-16 to 13/16-16	2
5	8-20-06020	Blower Exhaust Box Duct	1
6	8-34-09007	Front Insulation	2
7	8-34-09005	Insulation, Blower Box (Bottom)	1
8	2-00-03575	Carriage Bolt, 1/4 - 20 x .75	4
9	2-00-04976	Fitting, #4 SAE - #4 ORS 45° Elbow	1
10	2-00-02227	Key, .125 x .750 SQ	1
11	2-00-00530	Lock Washer, Helical Spring 5/16 Med	8
12	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	8
13	8-03-04290	Impeller Bracket	1
14	8-33-02271	Blower Exhaust Hose	1
15	0882-048	Hydraulic Motor, .458 C-I-R	1
16	2-00-01803	Flat Washer, 5/16	10
17	8-03-04289	Impeller Bracket (lower)	1
18	8-72-00005	Impeller Shroud	1
19	8-23-00012	Impeller	1
20	2-00-02708	Screw, 5/16-18 x 1.000	4
21	2-00-03454	Clamp,	2
22	2-00-00484	Flat Washer, .625 x .375 x .046	1
23	2-00-00632	Nut, Hex Fiber Insert 3/8 - 24	1
24	8-29-00111	Shroud Gasket	1
25	8-20-06028	Blower Throat Duct	1
26	2-00-00518	Lock Washer, Helical Spring 1/4 Med	22
27	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	20
28	8-29-00183	Gasket	1
29	2-00-03702	Flat Washer, .625 x .281 x .062	10

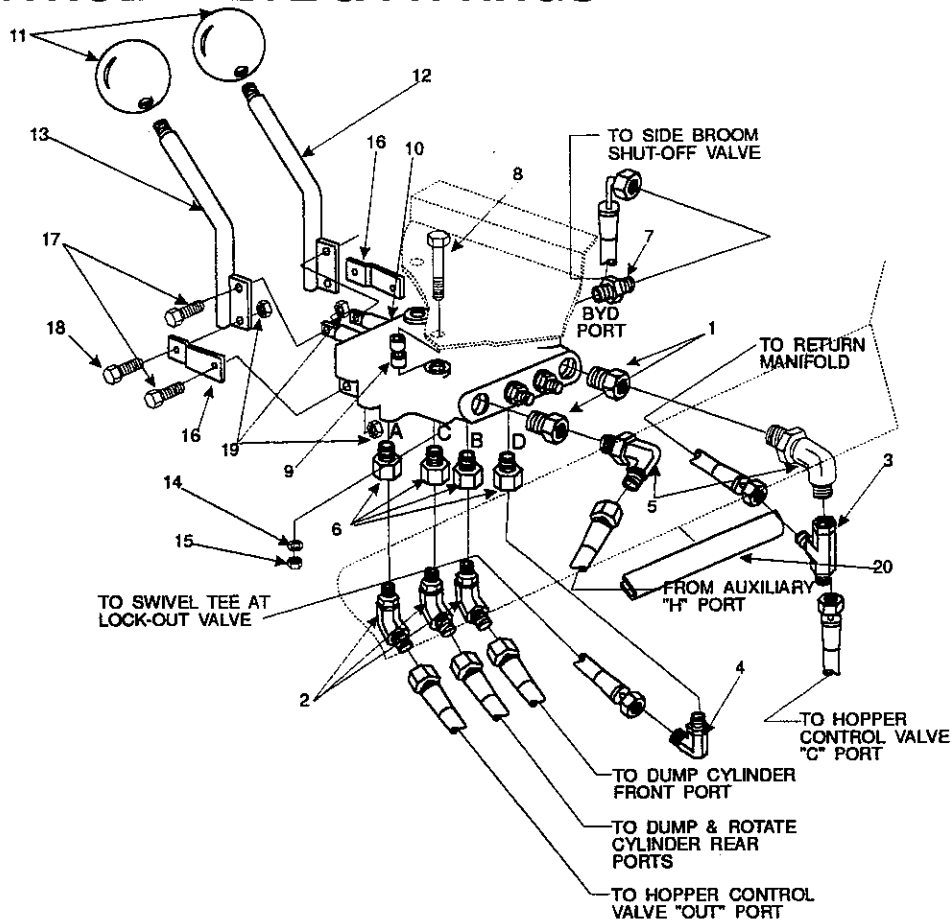
C-0281

RETURN FILTER AND FITTINGS



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-24-04133	Return Filter	1
2	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	2
3	8-56-05077	Fitting, Special 90° Elbow	1
4	2-00-05133	Fitting, 90° Elbow 1" NPT	1
5	2-00-04997	Fitting, Strt #4 ORS - 1/4 NPT	1
6	2-00-02220	Hose Clamp, .812 - 1.500	3
7	8-08-00749	Filter Mounting Bracket,	1
8	2-00-00205	Screw, 1/4 - 20 x 1.000 HHC	4
9	2-00-02196	Carriage Bolt, 1/4 - 20 x 1.000	4
10	2-00-00518	Lock Washer, Helical Spring 1/4 Med	4
11	2-00-00407	Flat Washer, 1/4	2

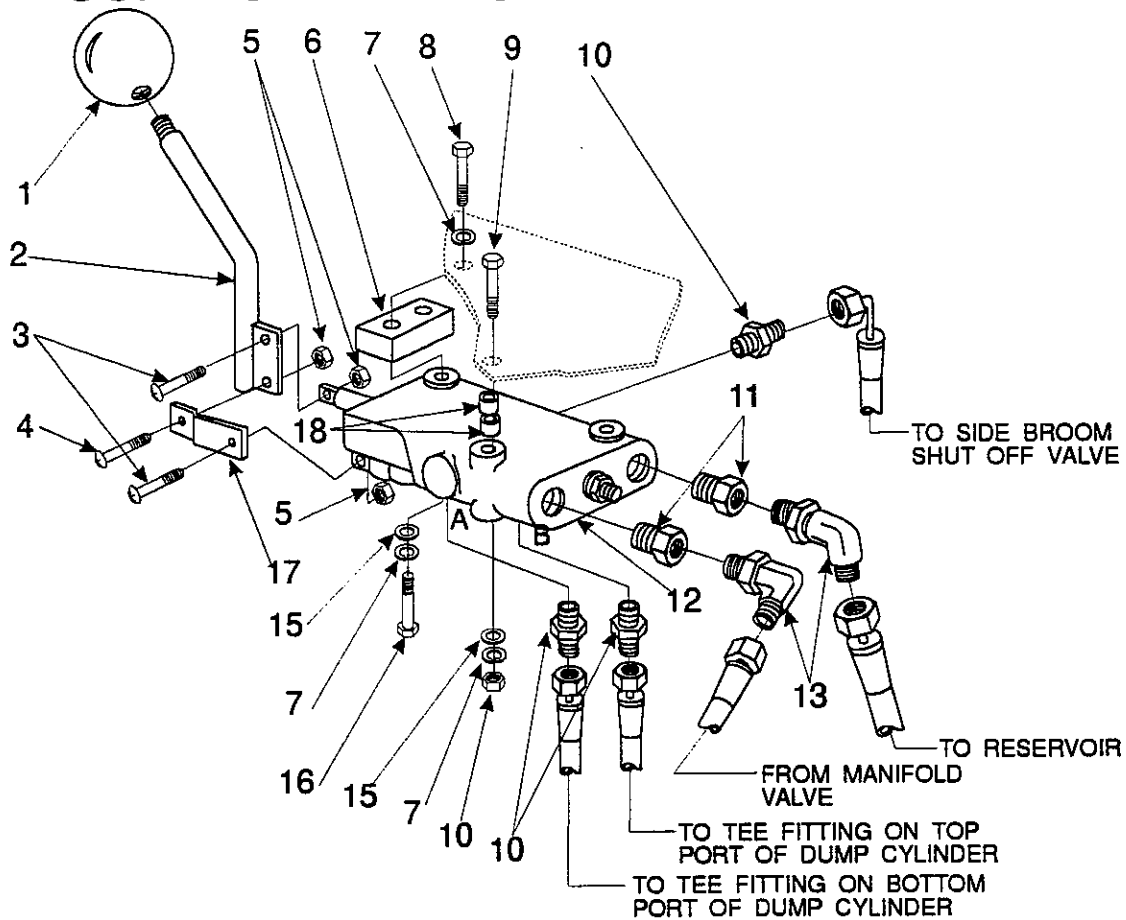
CONTROL VALVE & FITTINGS - VARIABLE DUMP



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-04932	Reducer, #8 SAE to #6 SAE	2
2	2-00-04976	45° Elbow, #4 SAE to #4 ORS	2
3	2-00-05162	Swivel Tee, #4 ORS	1
4	2-00-04892	ORFS 90° Elbow, #4 SAE to #4 ORS	2
5	2-00-04926	90° Elbow, #6 SAE to #4 ORS	2
6	2-00-04917	ORFS Boss Reducer, #6 SAE to #4 SAE	4
7	2-00-04918	ORFS Connector, #6SAE to #4 ORS	2
8	2-00-01980	Screw, 1/4 - 20 x 2.500 HHC	2
9	8-15-01008	Setscrew Collar, .625 x .312 x .343	4
10	8-88-00052	Control Valve	1
11	8-39-00002	Valve Lever Knob	2
12	8-41-05066	Control Valve Lever (L.H.)	1
13	8-41-05068	Control Valve Lever (R.H.)	1
14	2-00-00518	Lock Washer, Helical Spring 1/4 Med	2
15	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	2
16	8-41-05067	Linkage	2
17	2-00-04795	Screw, #10 - 24 x .750 BHS	4
18	2-00-04794	Screw, #10 - 24 x .625 BHS	2
19	2-00-01246	Nut, Hex Fiber Insert #10 - 24	6
20	7-21-04031	Edging	1

C-0283

CONTROL VALVE & FITTINGS - LOW DUMP



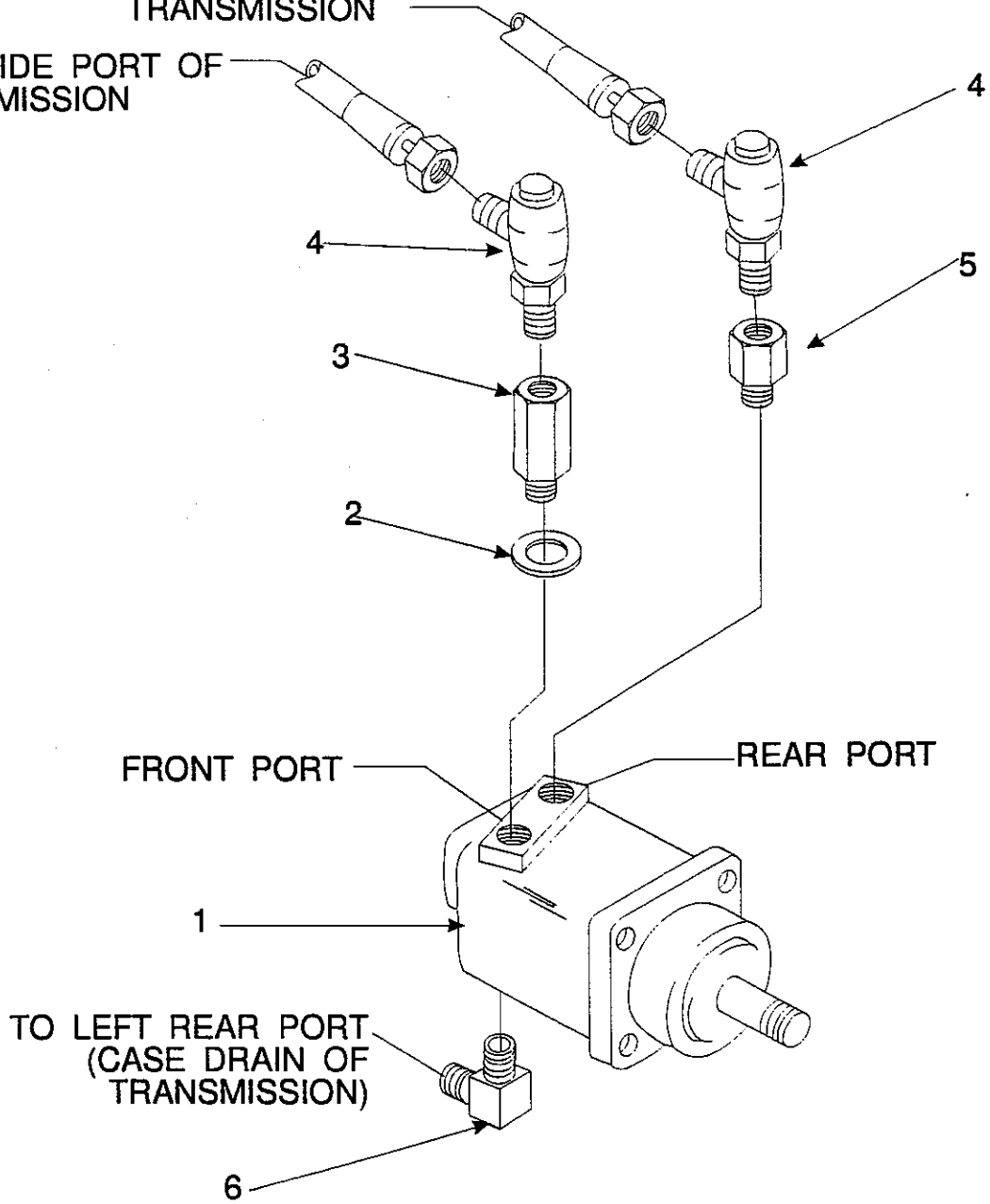
KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-39-00002	Valve Lever Knob	1
2	8-41-05068	Control Valve Lever	1
3	2-00-04795	Screw, #10 - 24 x .750 BHS	2
4	2-00-04794	Screw, #10 - 24 x .625 BHS	1
5	2-00-01246	Nut, Hex Fiber Insert #10 - 24	3
6	8-75-01170	Spacer Block	1
7	2-00-00518	Lock Washer, Helical Spring 1/4 Med	3
8	2-00-02587	Screw, 1/4 - 20 x 1.250 HHM	1
9	2-00-01980	Screw, 1/4 - 20 x 2.500 HHC	1
10	2-00-04918	ORFS Connector, 7/16-18 to 9/16-18	3
11	2-00-04917	ORFS Boss Reducer, 9/16-18 to 7/16-20	2
12	8-88-00054	Control Valve	1
13	2-00-04892	ORFS 90° Elbow, 7/16-20 to 9/16-18	2
14	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	1
15	2-00-03702	Flat Washer, .625 x .281 x .062	2
16	2-00-02589	Screw, 1/4 - 20 x 2.000 HHC	1
17	8-41-05067	Linkage	1
18	8-15-01008	Setscrew Collar, .625 x .312 x .343	2

P-4596-2

REAR DRIVE MOTOR & FITTINGS

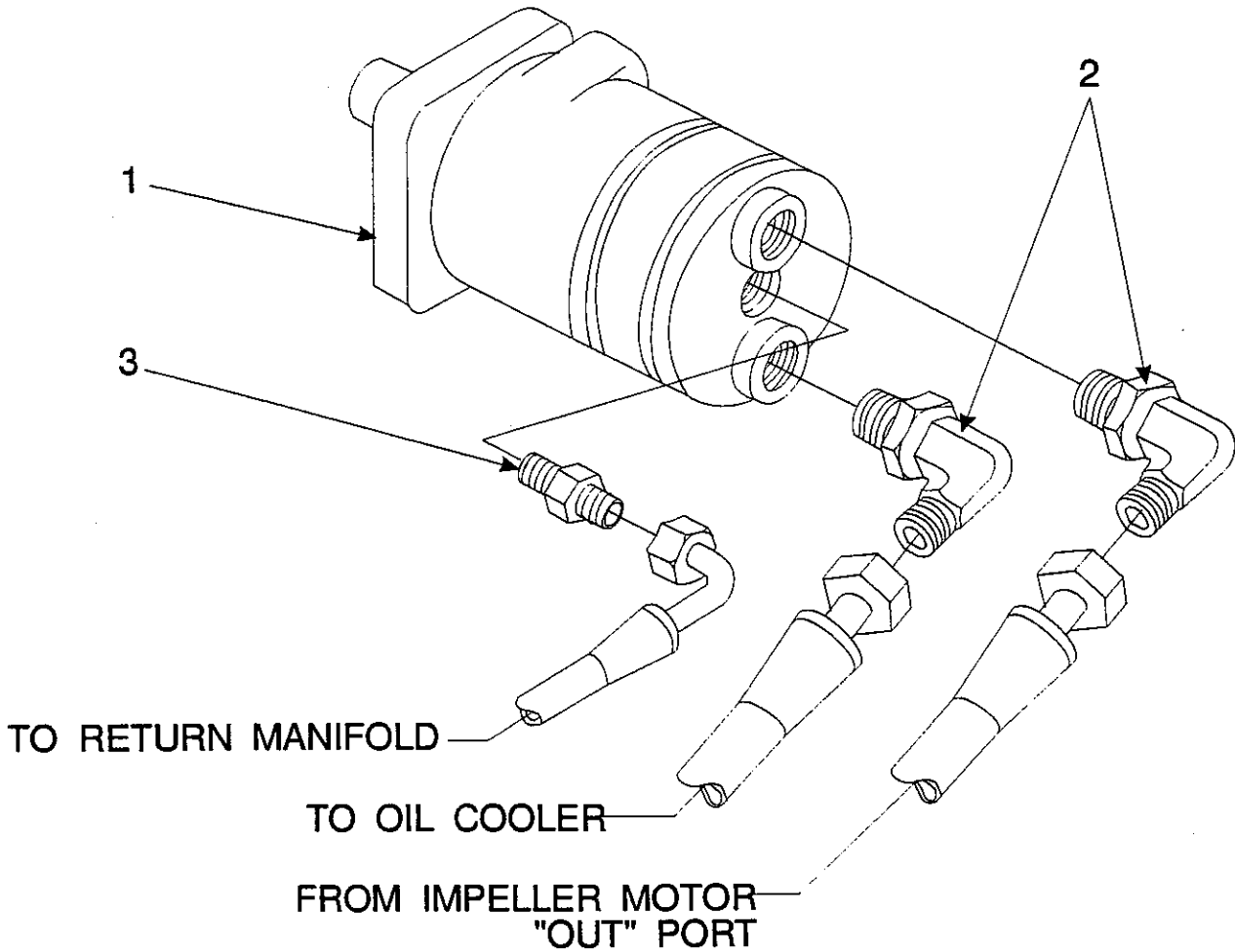
TO OUTSIDE PORT OF TRANSMISSION

TO INSIDE PORT OF TRANSMISSION



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	0885-080	Hydraulic Motor	1
2	2-00-04748	Seal	1
3	8-03-02037	Adapter	1
4	2-00-04900	ORFS Swivel, 13/16-16 to 3/4-16	2
5	8-03-04990	Pipe Reducer Coupling,	1
6	2-00-04892	90° Connector, #4 SAE to #4 ORS	1

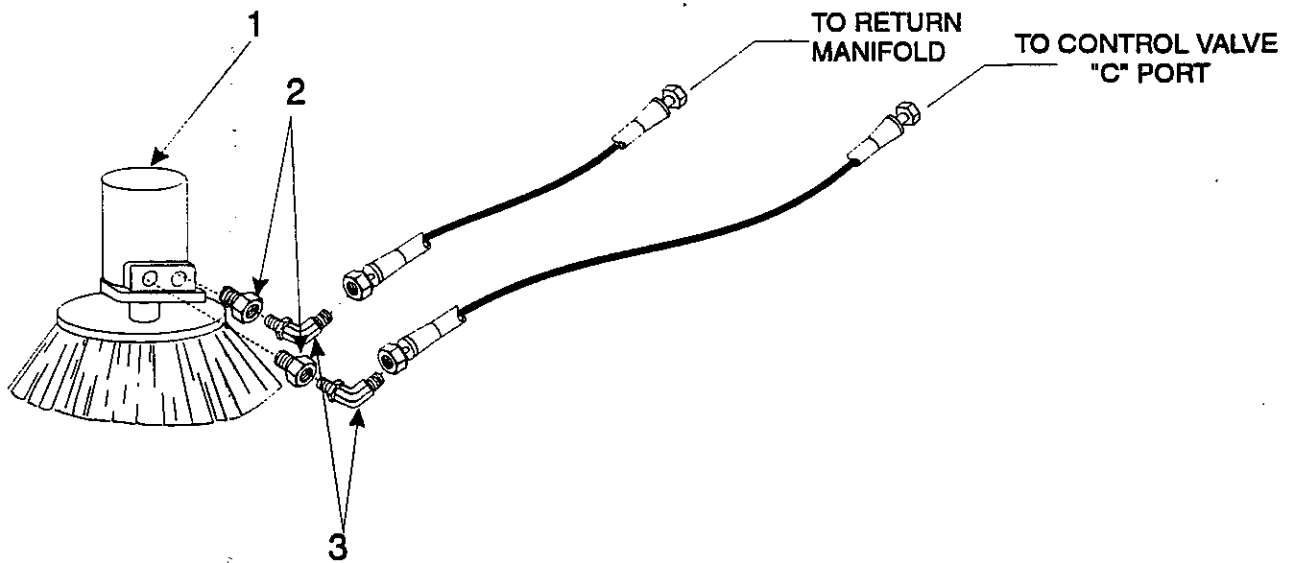
MAIN BROOM MOTOR & FITTINGS



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	0882-040	Hydraulic Motor	1
NS	0880-448	Motor Seal Kit	1
2	2-00-04885	ORFS 90° Elbow, 3/4-16 to 13/16-16	2
3	2-00-04895	ORFS Connector, 7/16-20 to 9/16-18	1

C-0112

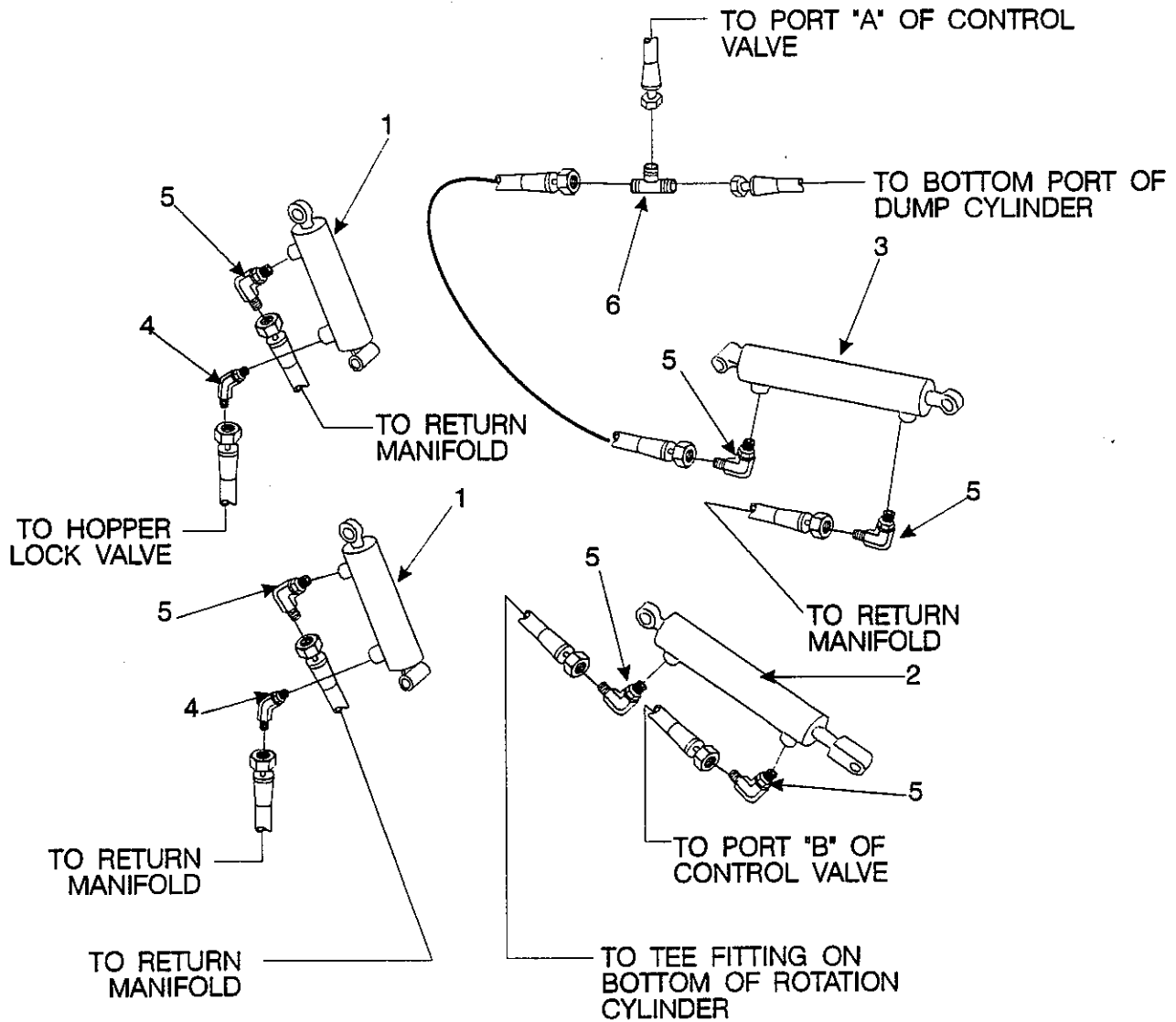
SIDE BROOM MOTOR & FITTINGS



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	0882-047	Hydraulic Motor	1
NS	0880-448	Motor Seal Kit	1
2	2-00-04915	ORFS Boss Reducer, 7/8-14 to 9/16-18	2
3	2-00-04926	ORFS 90° Elbow, 9/16-18	4

C-0111

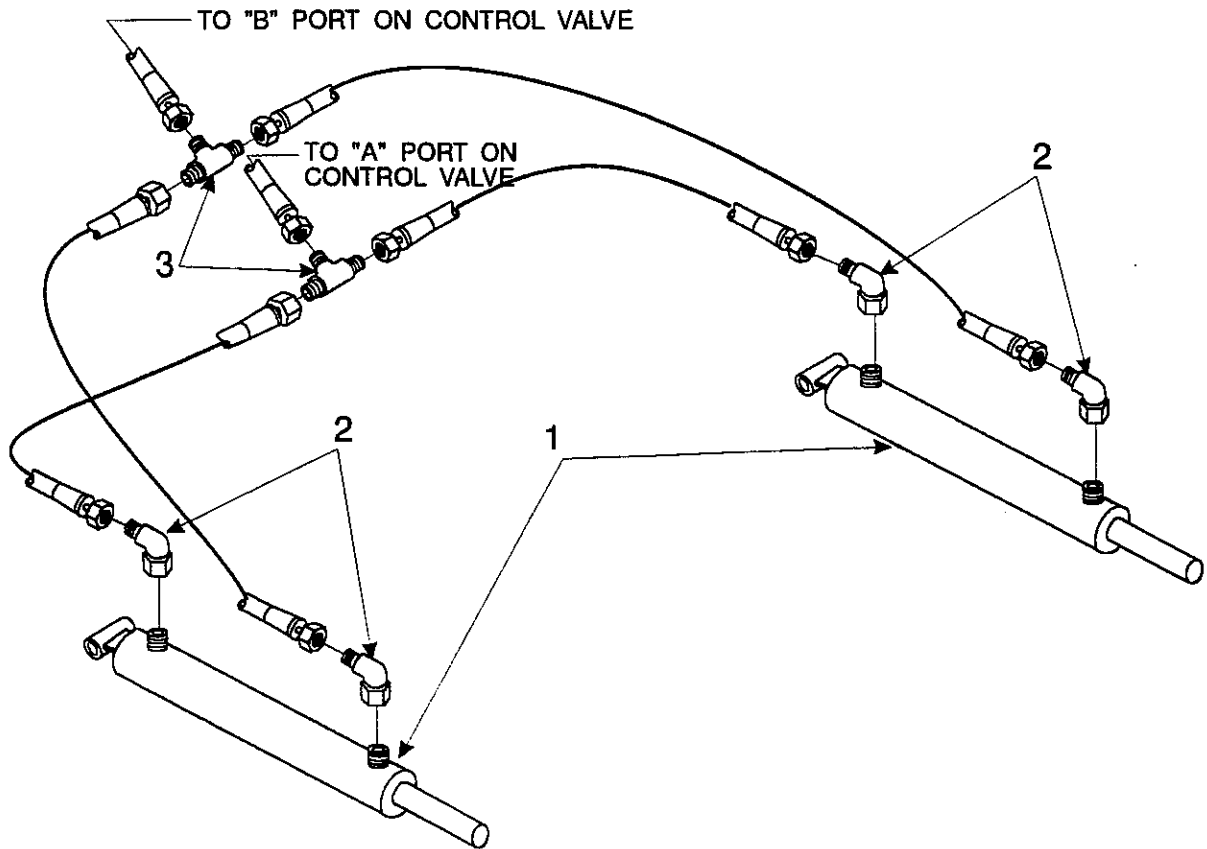
LIFT, ROTATION & DUMP CYLINDERS WITH FITTINGS - VARIABLE DUMP



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-17-05029	Lift Cylinder	2
2	8-17-05028	Dump Cylinder	1
3	8-17-05030	Rotation Cylinder	1
4	2-00-04976	ORFS Connector, 7/16-20 to 9/16-18	2
5	2-00-04892	ORFS 90° Elbow, 7/16-20 to 9/16-18	6
6	2-00-04930	ORFS Union Tee, 9/16-18	2
NS	0880-449	Lift Cylinder Seal Kit	1
NS	0880-451	Dump Cylinder Seal Kit	1
NS	0880-450	Rotation Cylinder Seal Kit	1

C-0110

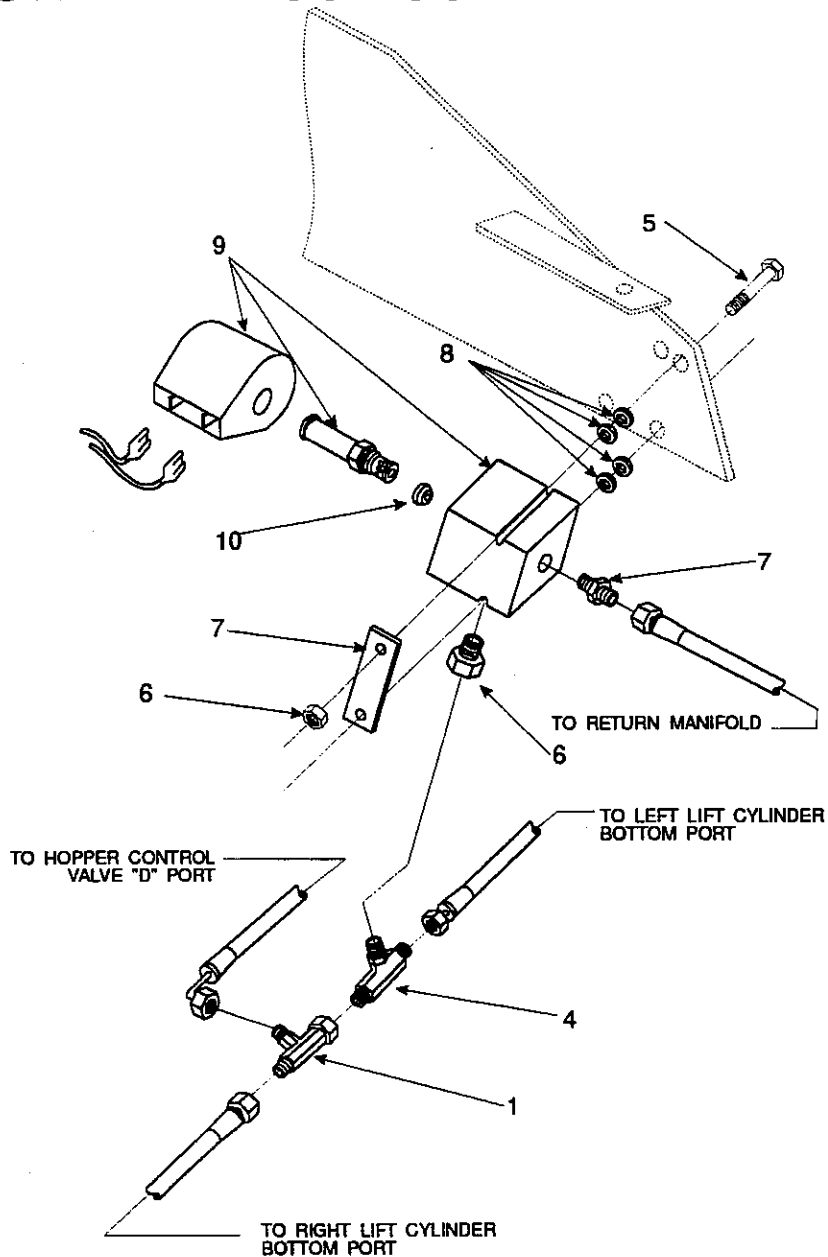
DUMP CYLINDERS WITH FITTINGS - LOW DUMP



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-17-05031	Dump Cylinder	2
	0880-452	Seal Kit for Low Dump Cylinder	2
2	2-00-04892	ORFS 90° Elbow, 7/16-20 to 9/16-18	4
3	2-00-04930	ORFS Union Tee, 9/16-18	2

P-4908

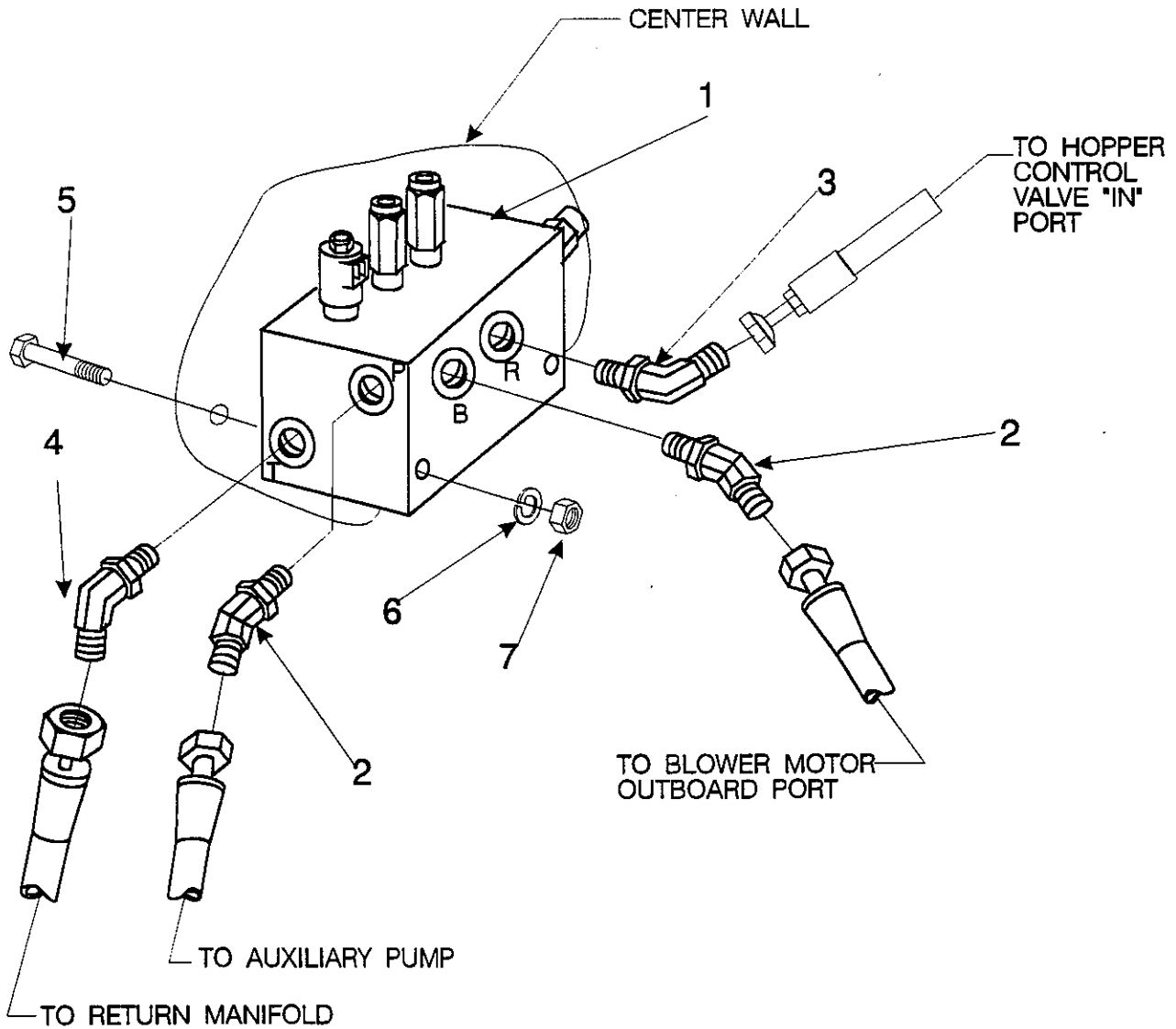
LIFT CYLINDER LOCK-OUT VALVE & FITTINGS



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-05162	Tee, Swivel #4 ORS	2
2	2-00-04917	ORFS Boss Reducer, 9/16-18 to 7/16-20	1
3	2-00-04918	ORFS Connector, 7/16-18 to 9/16-18	1
4	2-00-04919	ORFS Branch Tee, 7/16-20 x (2) 9/16-18	1
5	2-00-02589	Screw, 1/4 - 20 x 2.000 HHC	4
6	2-00-00641	Nut, Hex Fiber Insert 1/4 - 20	2
7	8-08-00590	Bracket	1
8	2-00-03702	Flat Washer, .625 x .281 x .0625	4
9	8-88-00044	Hopper Lock Valve	1
10	8-88-00056	Orifice Disc	1

C-0185

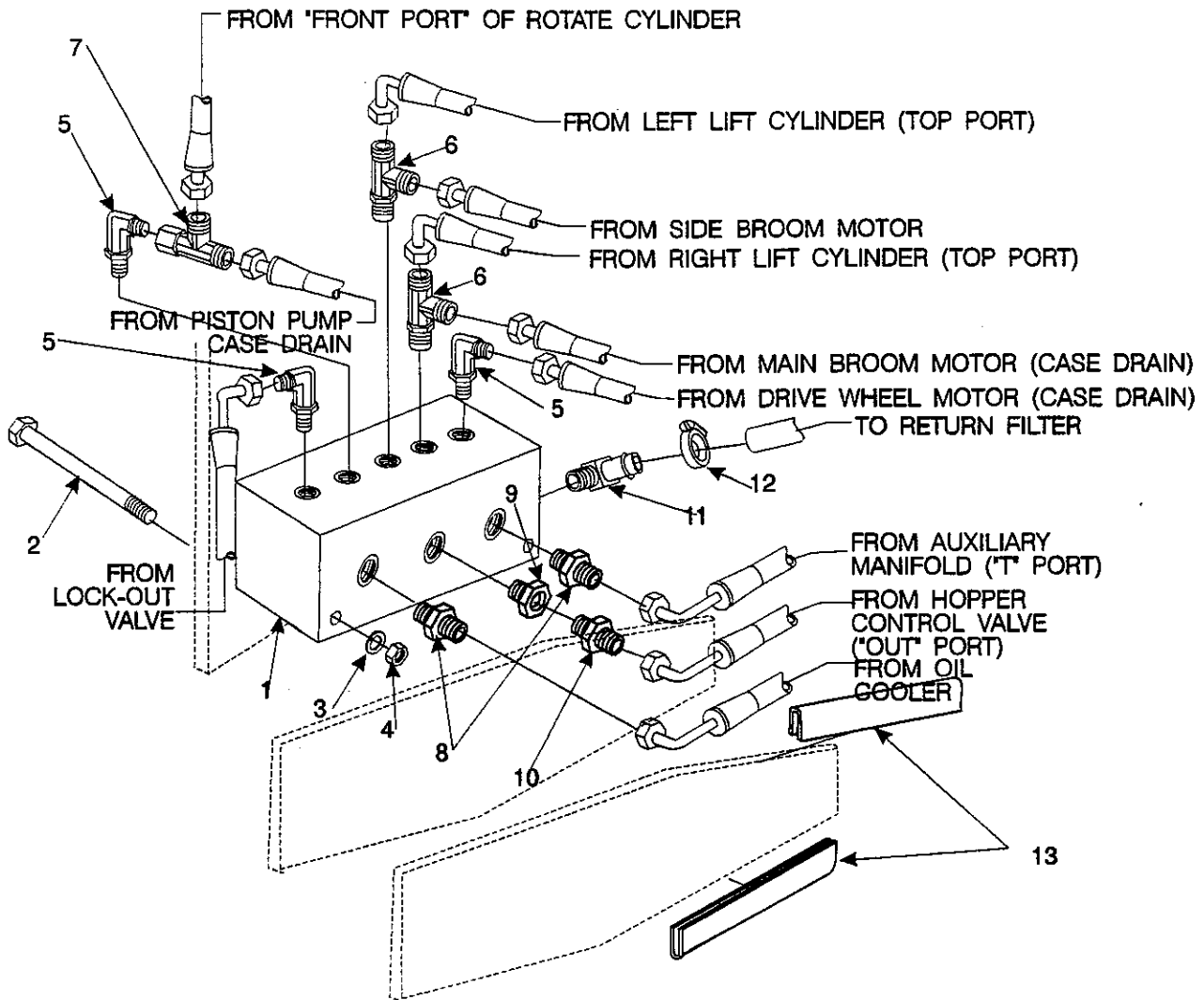
AUXILIARY MANIFOLD ASSEMBLY



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-48-00017	Auxiliary Manifold	1
2	2-00-04975	45° Elbow	2
3	2-00-04892	90° Elbow	1
4	2-00-04885	ORFS 90° Elbow, 3/4-16 to 13/16-16	1
5	2-00-04596	Screw, 1/4-20 x 3.50	2
6	2-00-00518	Lock Washer, Helical Spring 1/4 Med	2
7	2-00-00594	Nut, Hex 1/4 - 20	2

C-0284

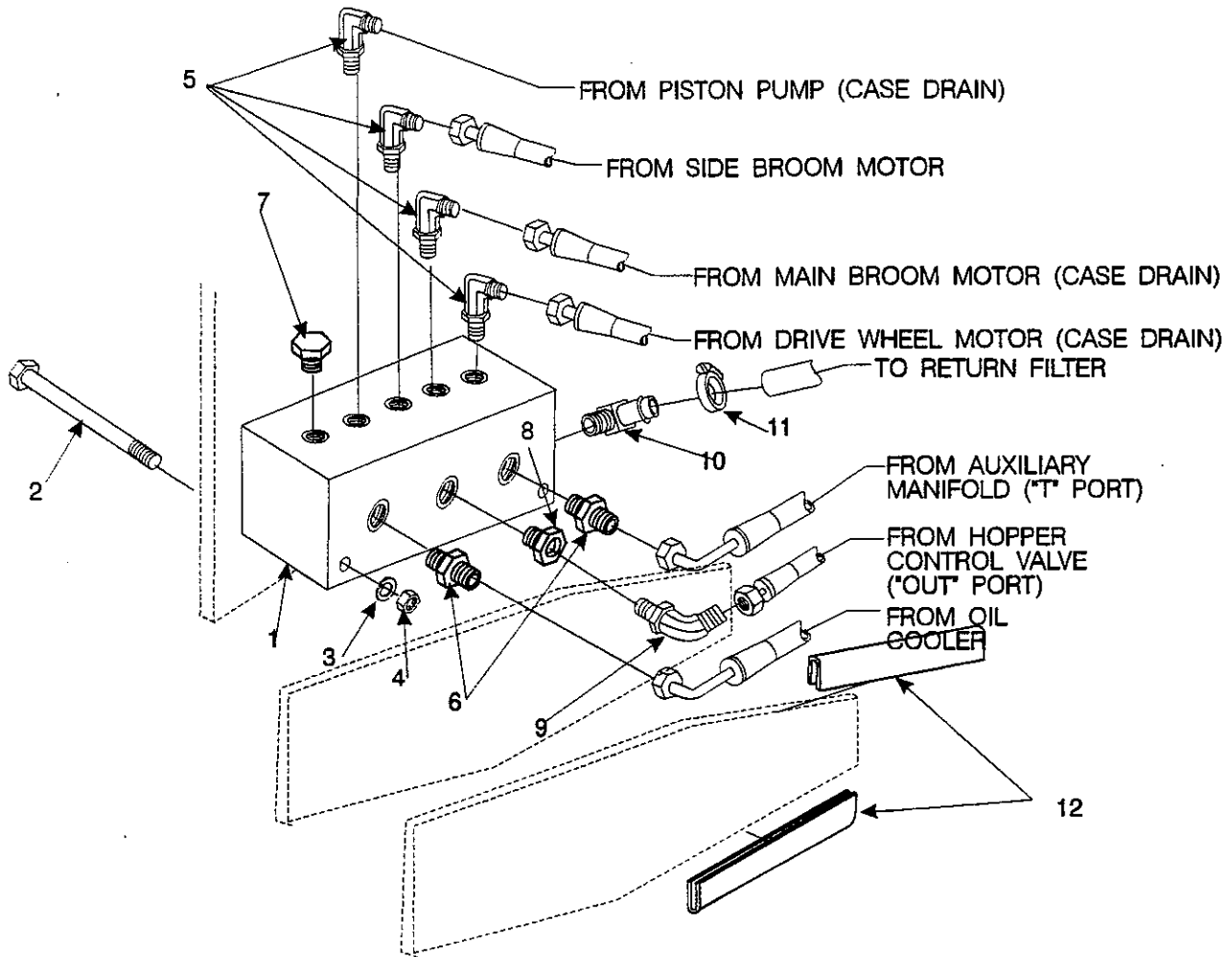
RETURN MANIFOLD ASSEMBLY - VARI-DUMP



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	7-48-00019	Return Manifold	1
2	2-00-04576	Screw, 1/4 - 20 x 3.50	2
3	2-00-00518	Lock Washer, Helical Spring 1/4 Med	2
4	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	2
5	2-00-04892	ORFS 90° Elbow, 7/16-20 to 9/16-18	3
6	2-00-04927	Run Tee,	2
7	2-00-05162	Swivel Tee,	1
8	2-00-04970	Straight Fitting	2
9	2-00-04932	Reducer Bushing	1
10	2-00-04918	Straight Fitting	1
11	2-00-05133	90° Elbow	1
12	2-00-02220	Clamp	1
13	7-21-04031	Edging	2

C-0285

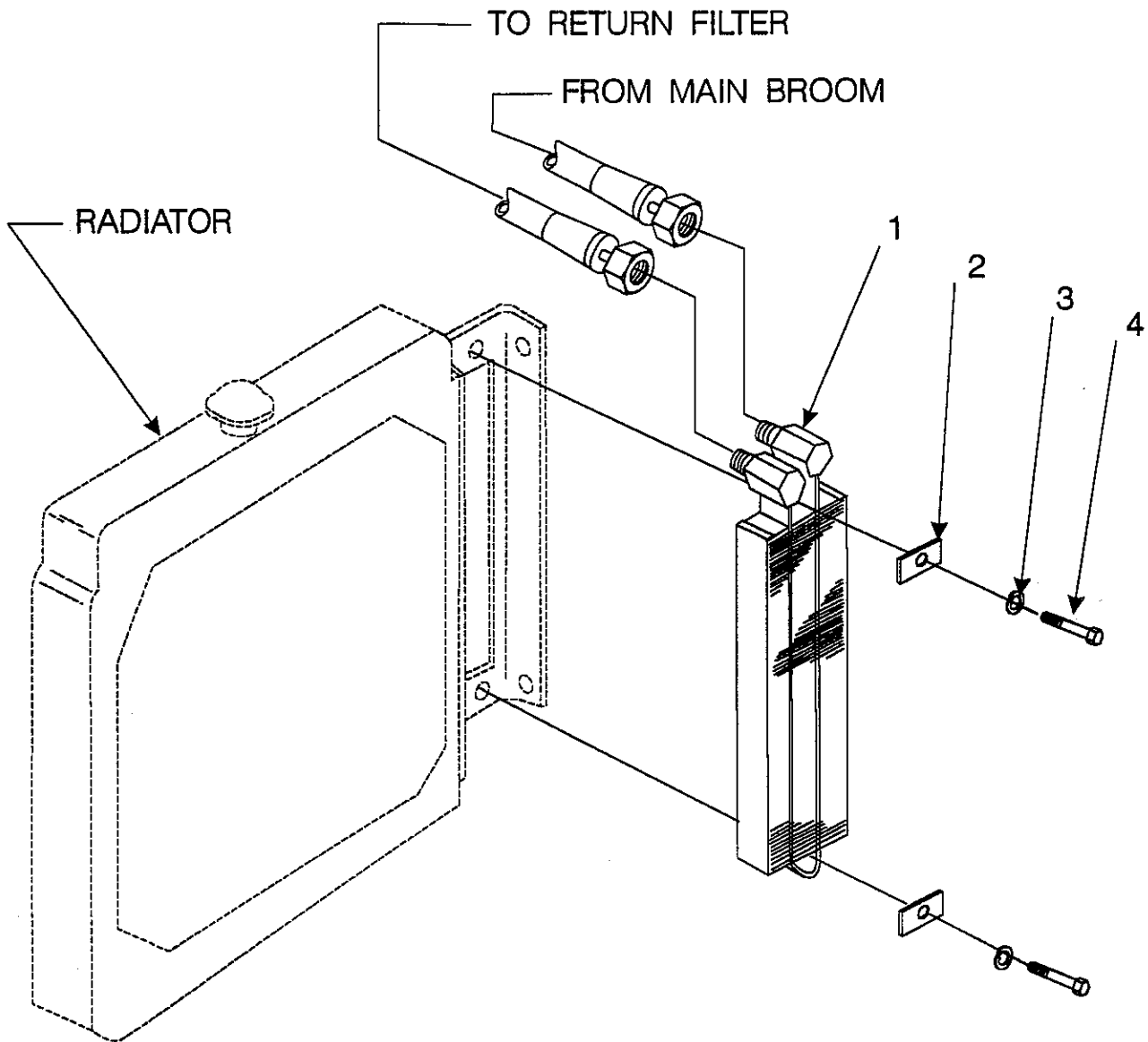
RETURN MANIFOLD ASSEMBLY -LOW-DUMP



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	7-48-00019	Return Manifold	1
2	2-00-04576	Screw, 1/4 - 20 x 3.50	2
3	2-00-00518	Lock Washer, Helical Spring 1/4 Med	2
4	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	2
5	2-00-04892	ORFS 90° Elbow, 7/16-20 to 9/16-18	4
6	2-00-04970	Straight Fitting	2
7	2-00-05177	Plug, 7/16-20 SAE	1
8	2-00-04932	Reducer Bushing	1
9	2-00-04926	90° Elbow	1
10	2-00-05133	90° Elbow	1
11	2-00-02220	Clamp	1
12	7-21-04031	Edging	2

C-0286

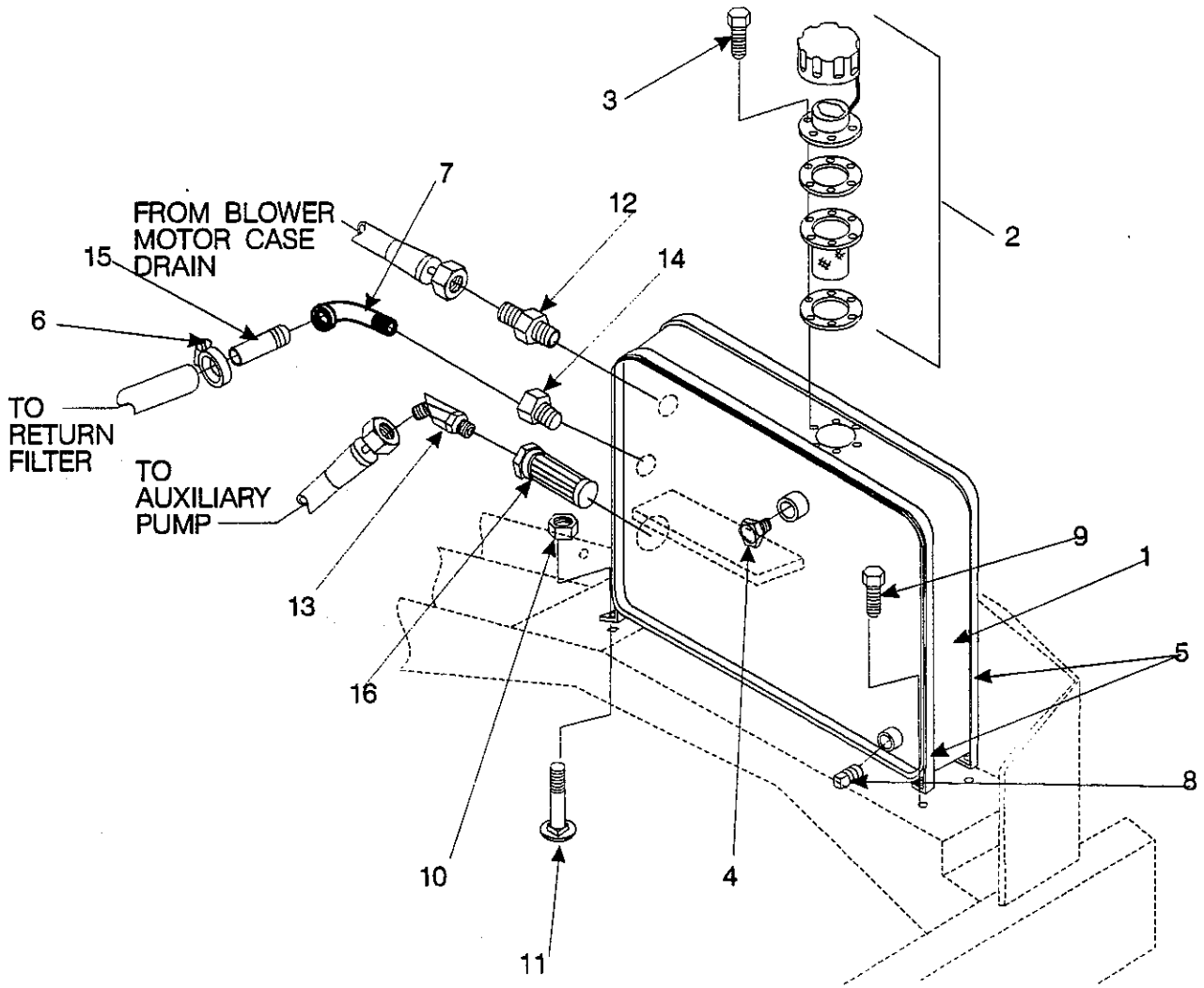
HYDRAULIC OIL COOLER



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-62-01010	Oil Cooler	1
2	8-13-07088	Clip	2
3	2-00-00518	Lock Washer, Helical Spring 1/4 Med	2
4	2-00-02589	Screw, 1/4 - 20 x 2.000 HHC	2

P-4382-1

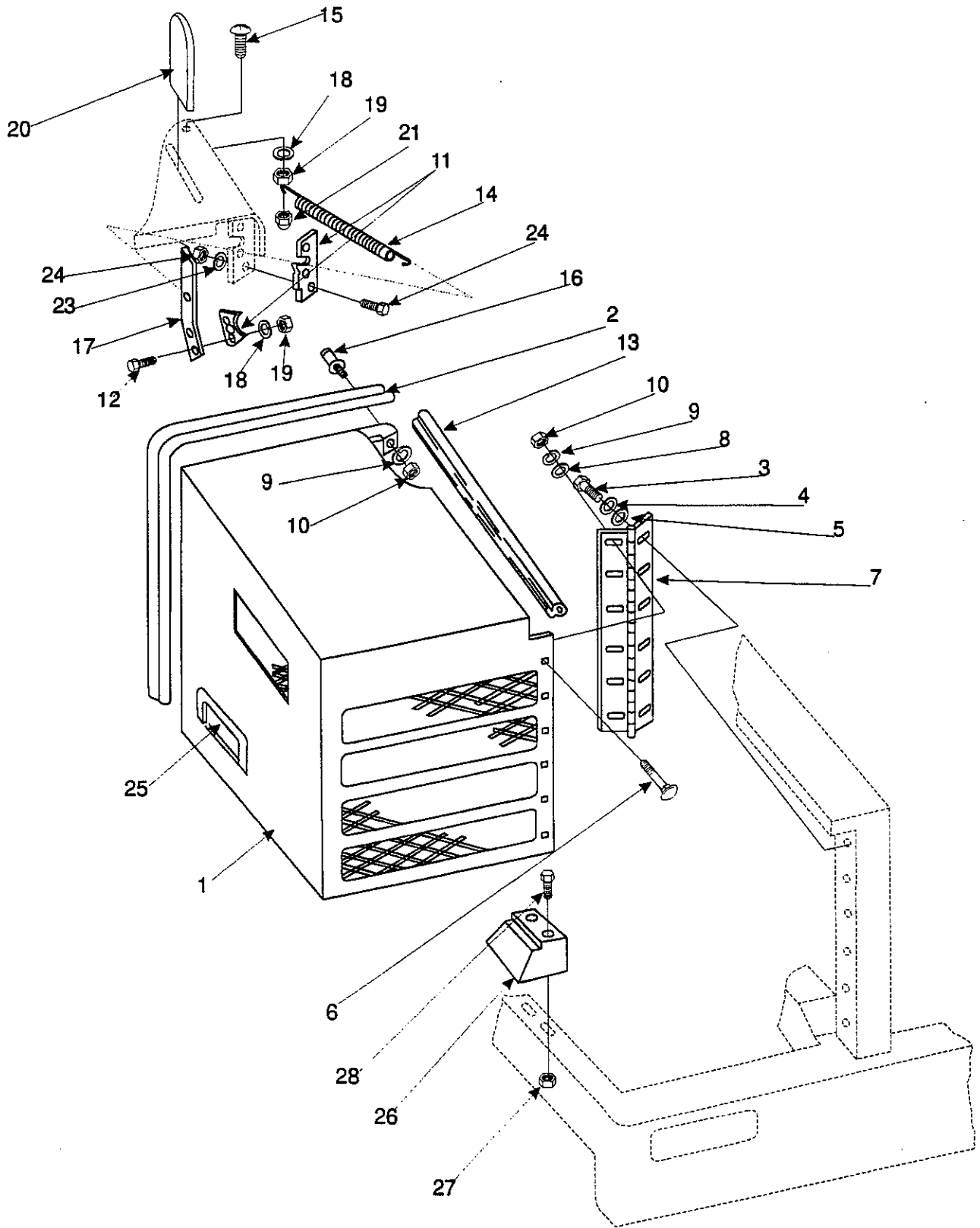
HYDRAULIC RESERVOIR AND FITTINGS



C-0287

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-83-04036	Hydraulic Reservoir	1
2	8-11-00026	Filler Cap Assembly	1
3	2-00-03940	Screw, #10-24 x .500 T/C HH	6
4	8-48-05033	Sight Glass	1
5	8-79-00114	Strap	2
6	2-00-02220	Hose Clamp, .812 - 1.500	3
7	2-00-04469	Elbow, 3/4 NPT Straight	1
8	2-00-02474	Pipe Plug, 1/2 NPT	1
9	2-00-00205	Screw, 1/4 - 20 x 1.000 HHC	4
10	2-00-04997	Fitting, Strt #4 ORS - 1/4 NPT	1
11	2-00-02196	Carriage Bolt, 1/4 - 20 x 1.000	4
12	2-00-04895	Fitting Strt, #4 SAE - #4 ORS	1
13	2-00-05037	Adapter, 3/4 ORS x 3/4 NPT 45° Elbow	1
14	2-00-04572	Reducer, #12 Ste - 3/4 NPT	1
15	2-00-03585	Pipe Nipple, 3/4 NPT	1
16	8-24-04115	Strainer	1

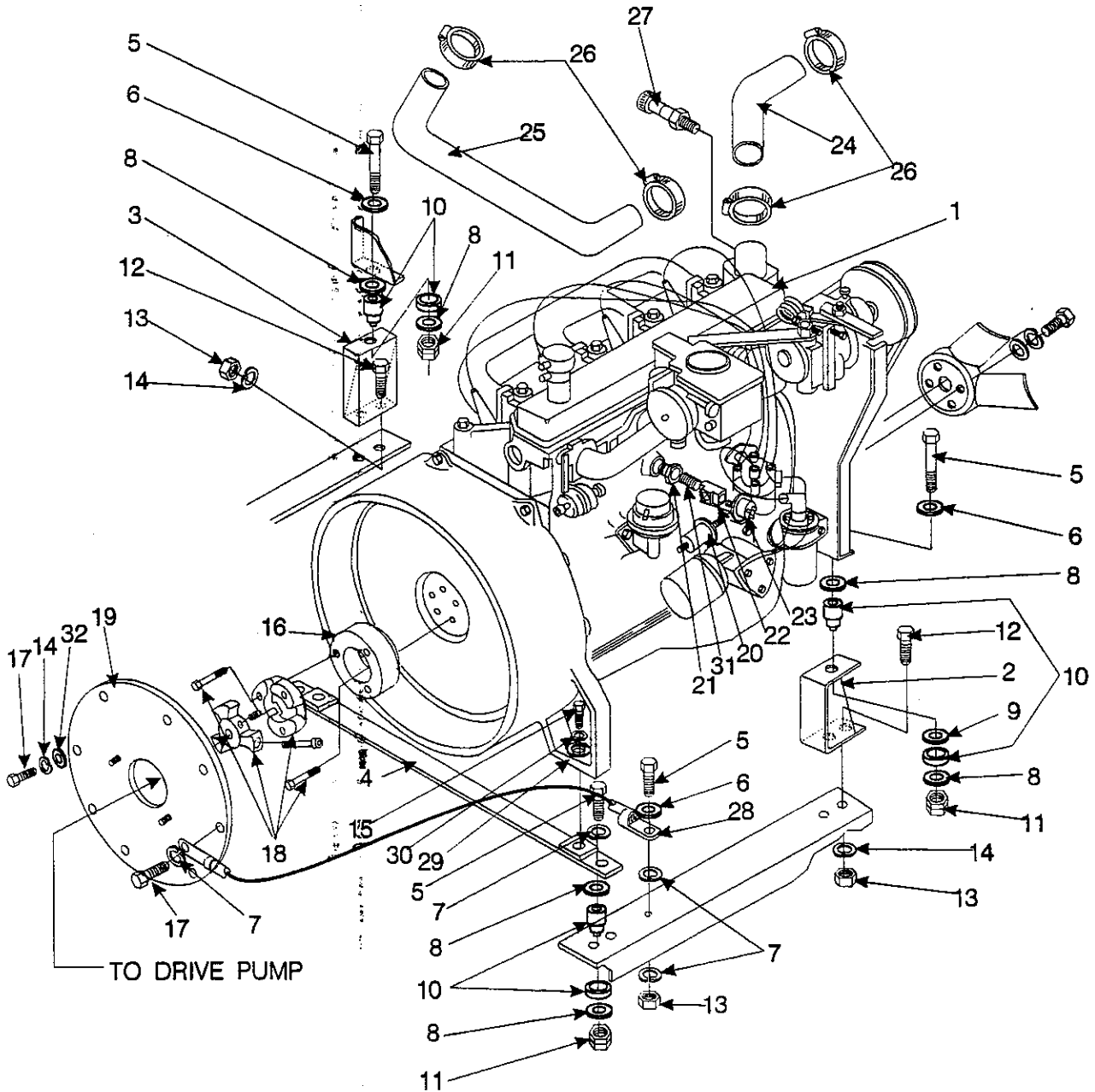
ENGINE COVER



C-0187

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-16-07338	Engine Cover	1
2	8-21-04043	Edging, Engine Cover Seal	1
3	2-00-00232	Screw, 3/8 - 16 x .750 HHC	6
4	2-00-02310	Lock Washer, Helical Spring 3/8 Med	6
5	2-00-00410	Flat Washer, .875 x .375 x .062	7
6	2-00-03569	Carriage Bolt, 5/16-18 x .750	6
7	8-32-00042	Engine Cover Hinge	1
8	2-00-00409	Flat Washer, 5/16 x .69	6
9	2-00-00530	Lock Washer, Helical Spring 5/16	7
10	2-00-00585	Nut, Hex 5/16-18	7
11	8-41-00046	Rotary Latch	1
12	2-00-04794	Screw, #10-24 x .625 BHS	2
13	8-21-04042	Edging, Engine Cover Seal	1
14	7-76-00106	Lever Return Spring	1
15	2-00-03063	Screw, #10-24 x .625 THM	1
16	7-55-08116	Striker Latch Pin	1
17	8-41-05073	Latch Release Lever	1
18	2-00-00519	Lock Washer, Helical Spring #10	3
19	2-00-00605	Nut, Hex #10 - 24	3
20	7-31-06061	Lever Cover	1
21	2-00-03780	Nut, Hex Fibre Lock #10-24	1
22	2-00-00594	Nut, Hex 1/4-20	3
23	2-00-00518	Lock Washer, Helical Spring 1/4	3
24	2-00-02587	Screw, 1/4-20 x 1.250 HHC	3
25	8-21-04038	Edging	1
26	7-78-05016	Engine Cover Stop	1
27	2-00-00641	Nut, Hex Fiber Lock 1/4-20	2
28	2-00-01769	Screw, 1/4-20 x 1.75 HHC	2

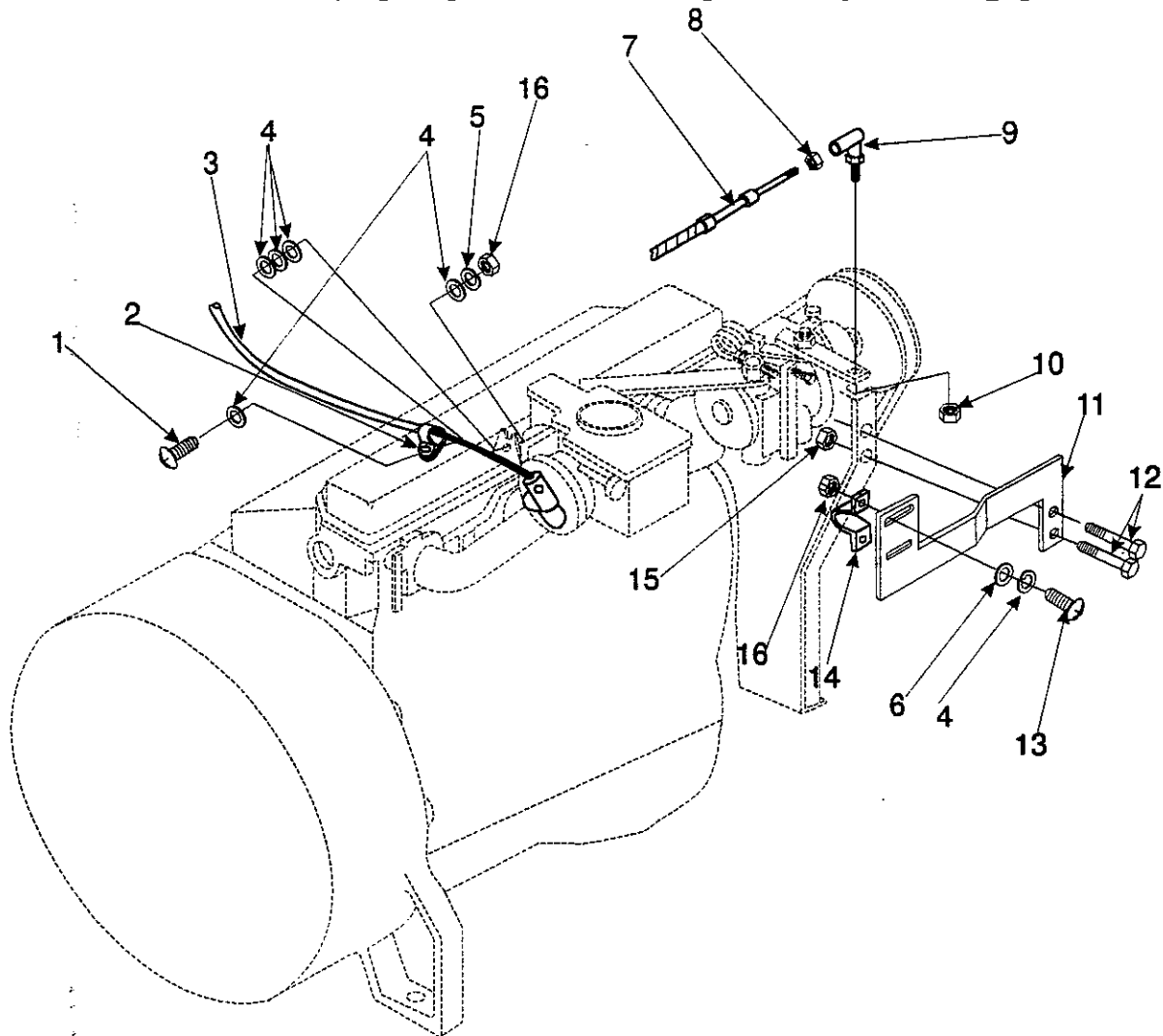
FORD VSG 411 ENGINE



C-0288

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	0887-045	Engine, FORD VSG 411	1
2	8-08-00576	Motor Mount R.H. Front	1
3	8-08-00575	Motor Mount L.H. Front	1
4	8-08-00574	Motor Mount Rear	1
5	2-00-04699	Screw, 3/8 - 16 x 2.750 HHC	4
6	2-00-03266	Flat Washer, 1.296 x .375 x .125	4
7	2-00-03829	Lock Washer, .375 Int.	3
8	2-00-04581	Flat Washer, 1.560 x .391 x .090	8
9	8-75-01163	Spacer,	2
10	8-75-01155	Isolator Mount	4
11	2-00-00643	Nut, Hex Fiber Insert 3/8 - 16	4
12	2-00-00209	Screw, 3/8-16 x 1.250 HHC	4
13	2-00-02360	Nut, Hex 3/8 - 16 x .562 x .328	5
14	2-00-02310	Lock Washer, Helical Spring 3/8 Med	11
15	2-00-01254	Screw, 1/2 - 13 x 1.500 HHC	2
16	8-03-00043	Flywheel Adapter Plate	1
17	2-00-00233	Screw, 3/8 - 16 x 1.000 HHC	9
18	0885-059	Coupling	1
19	8-58-05171	Pump Mounting Plate	1
20	8-69-00005	Oil Pressure Sender	1
21	2-00-04853	Reducer Bushing	1
22	2-00-03874	Pipe Tee, 1/8 NPT	1
23	8-82-00046	Pressure Switch	1
24	8-33-02161	Upper Radiator Hose	1
25	8-33-02160	Lower Radiator Hose	1
26	2-00-03404	Hose Clamp, 1.062 x 2.000	4
27	8-69-00006	Water Temperature Sender	1
28	8-90-07328	Ground Cable	1
29	2-00-04159	Flat Washer, 9/16 ID	2
30	2-00-02312	Lock Washer, Helical Spring 1/2 Med	2
31	2-00-05004	Nipple, 1/8 NPT	1
32	2-00-00402	Flat Washer, 3/8	7

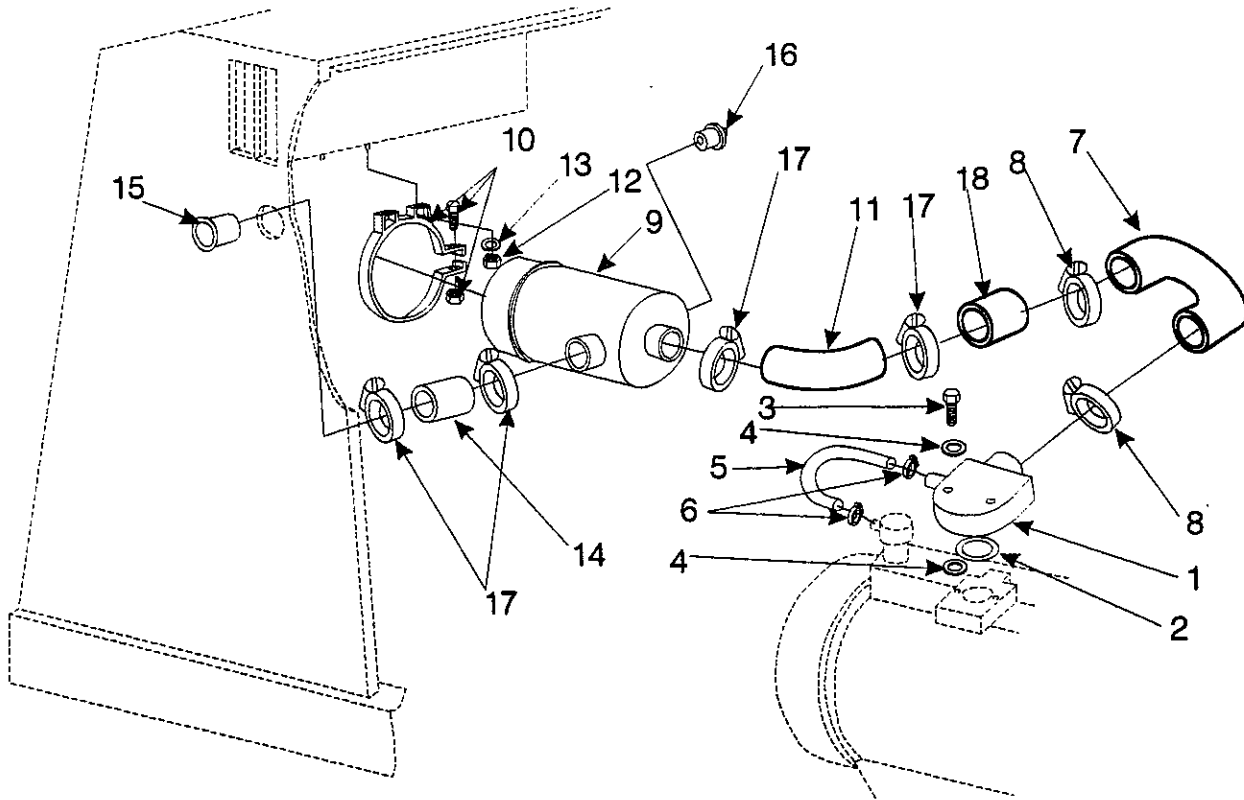
THROTTLE and CHOKE LINKAGE - FORD VSG 411



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-04795	Screw, #10-24 x .75 BHS	1
2	2-00-04250	Cable Clamp, .187	1
3	8-16-00021	Choke Cable	1
4	2-00-00426	Flat Washer, .500 x .218 x .062	7
5	2-00-00519	Lock Washer, Helical Spring #10 Med	1
6	2-00-02296	Lock Washer, #10Int.	2
7	8-10-00033	Throttle Cable	1
8	2-00-00626	Nut, Hex MS #10-32 x .375 x .125	1
9	8-25-02036	Ball Joint Connector	1
10	2-00-00633	Nut, Hex Fiber Insert 1/4-28	1
11	8-08-00706	Throttle Cable Bracket	1
12	2-00-00233	Screw, 3/8 - 18 x 1.000 HHC	2
13	2-00-04794	Screw, #10-24 x .625 BHS	2
14	8-13-07094	Conduit Clamp	1
15	2-00-00643	Nut, Hex Fiber Insert 3/8-16	2

C-0289

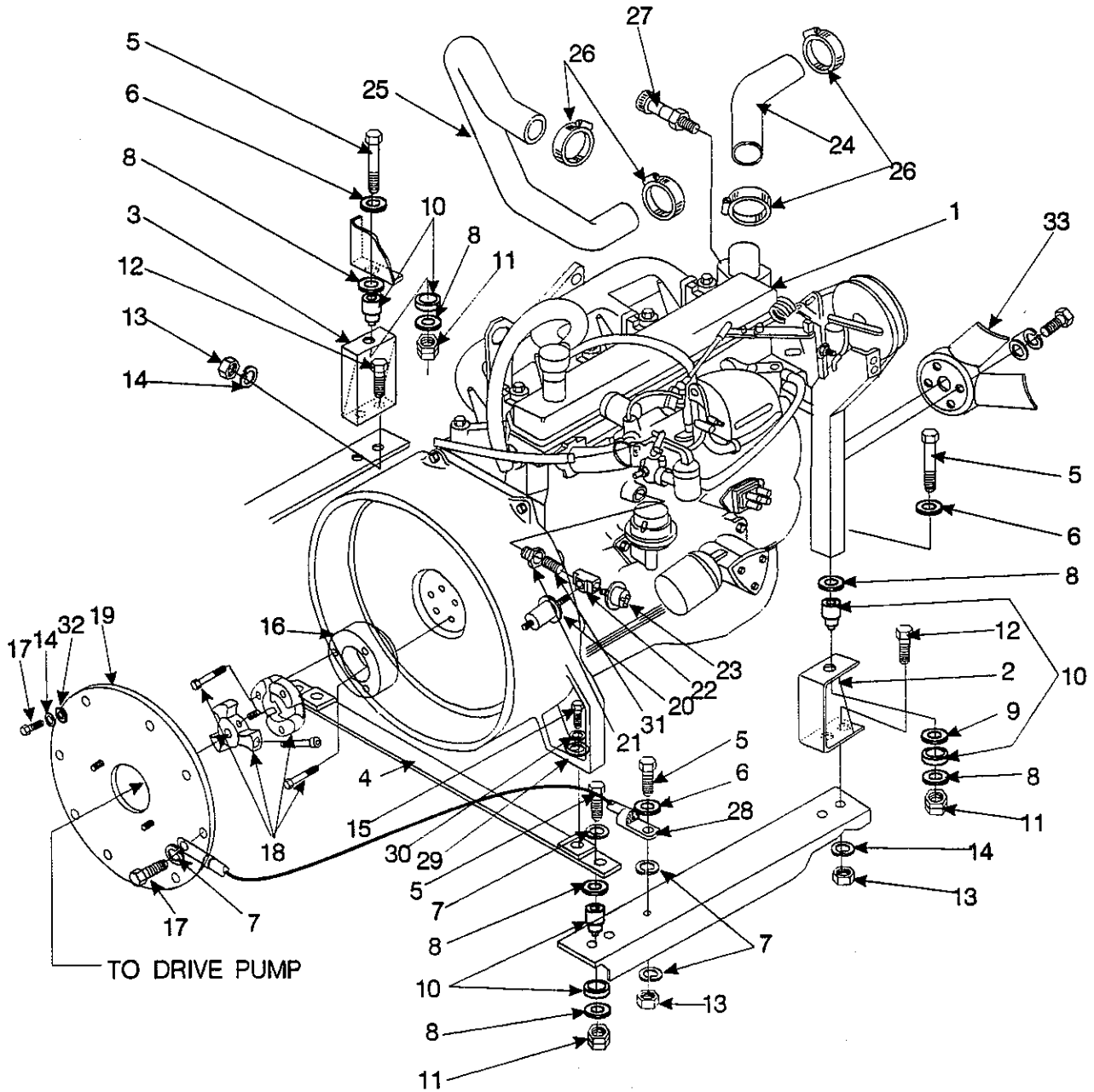
INTAKE SYSTEM - FORD VSG 411



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-25-02027	Fitting, Carburetor Inlet	1
2	2-00-02495	O-Ring .125 x 1.750 x 2.000	1
3	2-00-04860	Screw, M6 - 55mm MHHC	2
4	2-00-04590	Sealing Washer, .625 x .250	4
5	8-33-02155	Hose, 5/8 ID	1
6	2-00-03407	Hose Clamp, .562 - 1.062	2
7	8-33-02272	Molded Hose	1
8	2-00-02216	Hose Clamp, 1.562 - 2.500	2
9	8-24-04100	Air Cleaner Assembly	1
NS	8-24-04106	Air Cleaner Element	1
10	8-24-04093	A/C Mounting Bracket	1
11	8-33-02266	Molded Elbow	1
12	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	4
13	2-00-00518	Lock Washer, Helical Spring 1/4 Med	4
14	8-33-02171	Hose, Air Cleaner intake	1
15	8-25-02028	Fitting Console Insert	1
16	8-24-04101	Meter, Engine Air Cleaner	1
17	2-00-02217	Hose Clamp, 2.062 - 3.000	4
18	8-87-02110	Tube	1

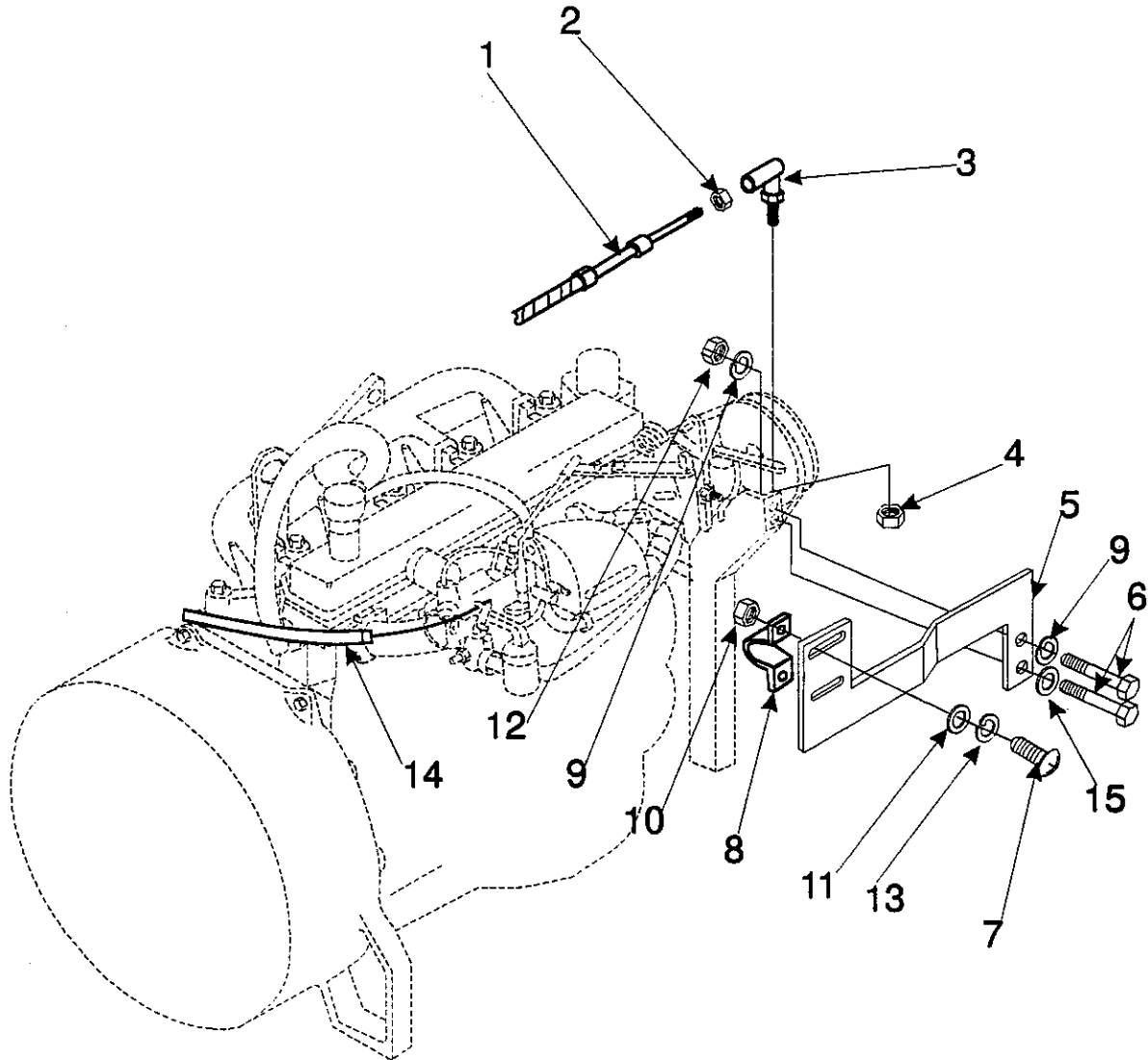
C-0298

FORD VSG 413 ENGINE



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	0877-050	Engine, FORD VSG 413	1
2	8-08-00679	Motor Mount R.H. Front	1
3	8-08-00674	Motor Mount L.H. Front	1
4	8-08-00574	Motor Mount Rear	1
5	2-00-04699	Screw, 3/8 - 16 x 2.750 HHC	4
6	2-00-03266	Flat Washer, 1.296 x .375 x .125	4
7	2-00-03829	Lock Washer, .375 Int.	3
8	2-00-04851	Flat Washer, 1.560 x .391 x .090	8
9	8-75-01163	Spacer,	2
10	8-75-01155	Isolator Mount	4
11	2-00-00643	Nut, Hex Fiber Insert 3/8 - 16	4
12	2-00-00209	Screw, 3/8-16 x 1.250 HHC	4
13	2-00-02360	Nut, Hex 3/8 - 16 x .562 x .328	5
14	2-00-02310	Lock Washer, Helical Spring 3/8 Med	11
15	2-00-01254	Screw, 1/2 - 13 x 1.500 HHC	2
16	8-58-05225	Flywheel Adapter Plate	1
17	2-00-00233	Screw, 3/8 - 16 x 1.000 HHC	9
18	0885-059	Coupling	1
19	8-58-05171	Pump Mounting Plate	1
20	8-69-00005	Oil Pressure Sender	1
21	2-00-04853	Reducer Bushing	1
22	2-00-03874	Pipe Tee, 1/8 NPT	1
23	8-82-00046	Pressure Switch	1
24	8-33-02161	Upper Radiator Hose	1
25	8-33-02248	Lower Radiator Hose	1
26	2-00-03404	Hose Clamp, 1.062 x 2.000	4
27	8-69-00006	Water Temperature Sender	1
28	8-90-07328	Ground Cable	1
29	2-00-04159	Flat Washer, 9/16 ID	2
30	2-00-02312	Lock Washer, Helical Spring 1/2 Med	2
31	2-00-05004	Nipple, 1/8 NPT	1
32	2-00-00402	Flat Washer, 3/8	7
33	8-23-00011	Fan	1

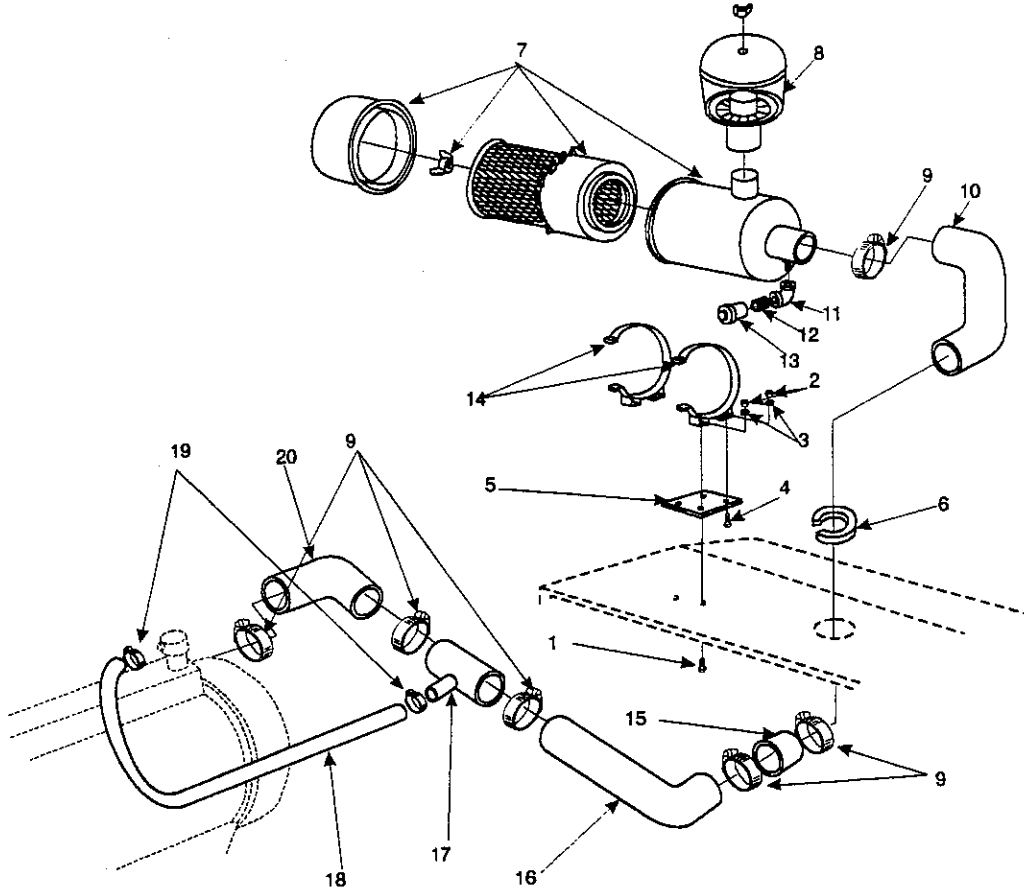
THROTTLE and CHOKE LINKAGE - FORD VSG 413



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-10-00033	Throttle Cable	1
2	2-00-00626	Nut, Hex MS #10-32 x .375 x .125	1
3	8-25-02036	Ball Joint Connector	1
4	2-00-00633	Nut, Hex Fiber Insert 1/4-28	1
5	8-08-00706	Throttle Cable Bracket	1
6	2-00-02708	Screw, 5/16 - 18 x 1.000 HHC	2
7	2-00-04794	Screw, #10-24 x .625 BHS	2
8	8-13-07094	Conduit Clamp	1
9	2-00-00530	Lock Washer, Helical Spring 5/16 Med	2
10	2-00-01246	Nut, Hex Fiber Insert #10-24	1
11	2-00-02296	Lock Washer, #10 Ext.	2
12	2-00-00585	Hex Nut, 5/16-18	1
13	2-00-00426	Flat Washer, .500 x .218 x .062	2
14	8-16-00021	Choke Cable,	1
15	2-00-00409	Flat Washer, 5/16	1

C-0300

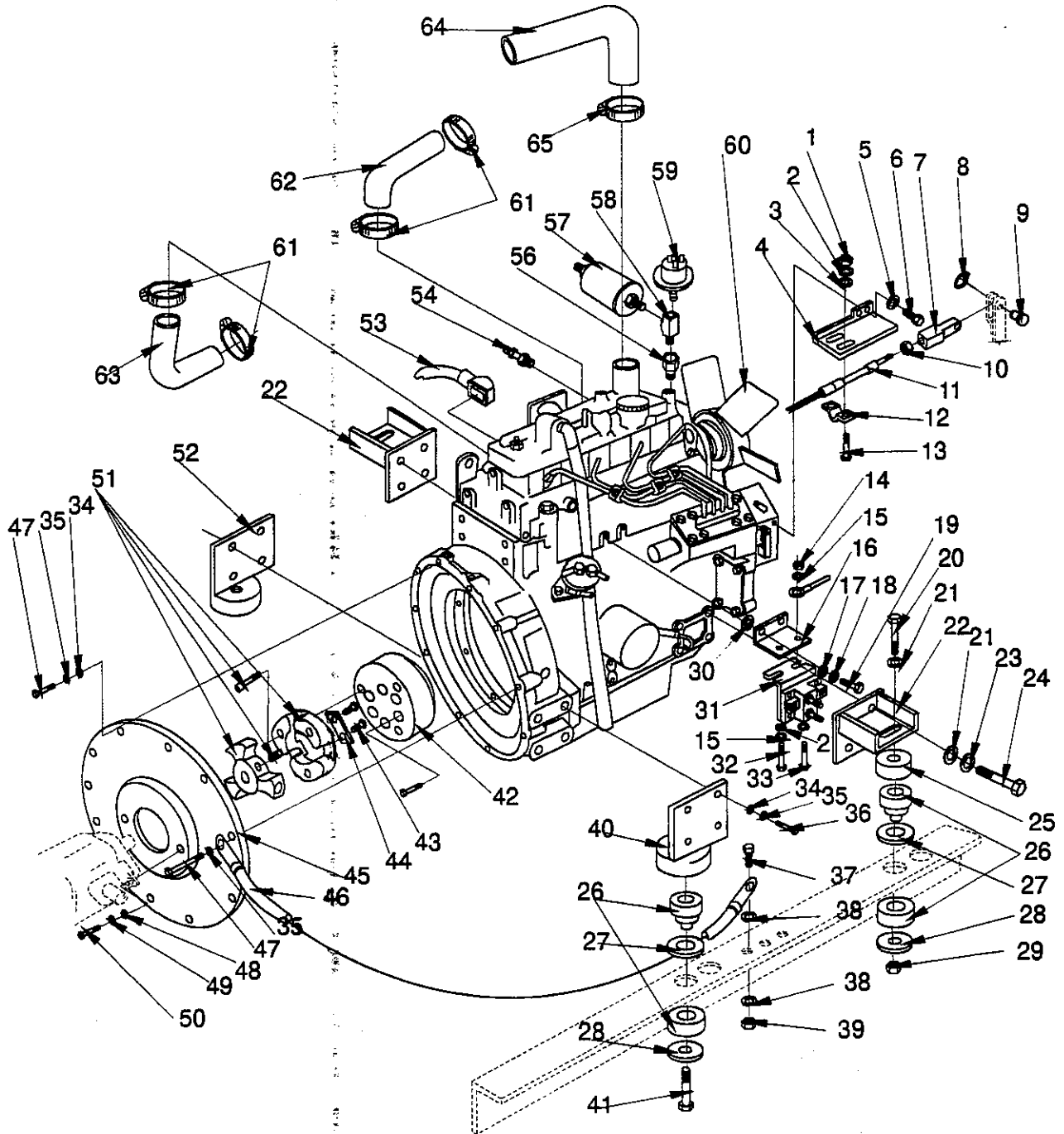
INTAKE SYSTEM - FORD VSG 413



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-00205	Screw, 1/4 - 20 x 1.000 HHC	2
2	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	4
3	2-00-00518	Lock Washer, Helical Spring 1/4 Med	4
4	2-00-03027	Screw, 1/4-20 x .625 HSFHS	2
5	8-52-05263	Mounting Plate	1
6	7-21-04022	Edging	1
7	8-24-04100	Air Cleaner Assembly	1
8	8-24-04092	Pre-Cleaner Assembly	1
9	2-00-02217	Hose Clamp,	5
10	2-00-02272	Molded Hose	1
11	2-00-03641	90° Elbow 1/9 NPT	1
12	2-95-02519	Close Nipple - 1/8 NPT	1
13	8-24-04101	Meter, Engine Air Cleaner	1
14	8-24-04093	A/C Mounting Bracket	1
15	8-87-02110	Tube - Air Intake	1
16	8-33-02236	Molded Hose	1
17	8-87-02107	Air Inlet Tube	1
18	8-33-02155	PVC to Carb. Hose	1
19	2-00-03407	Hose Clamp,	2
20	8-33-02260	Inlet Elbow	1

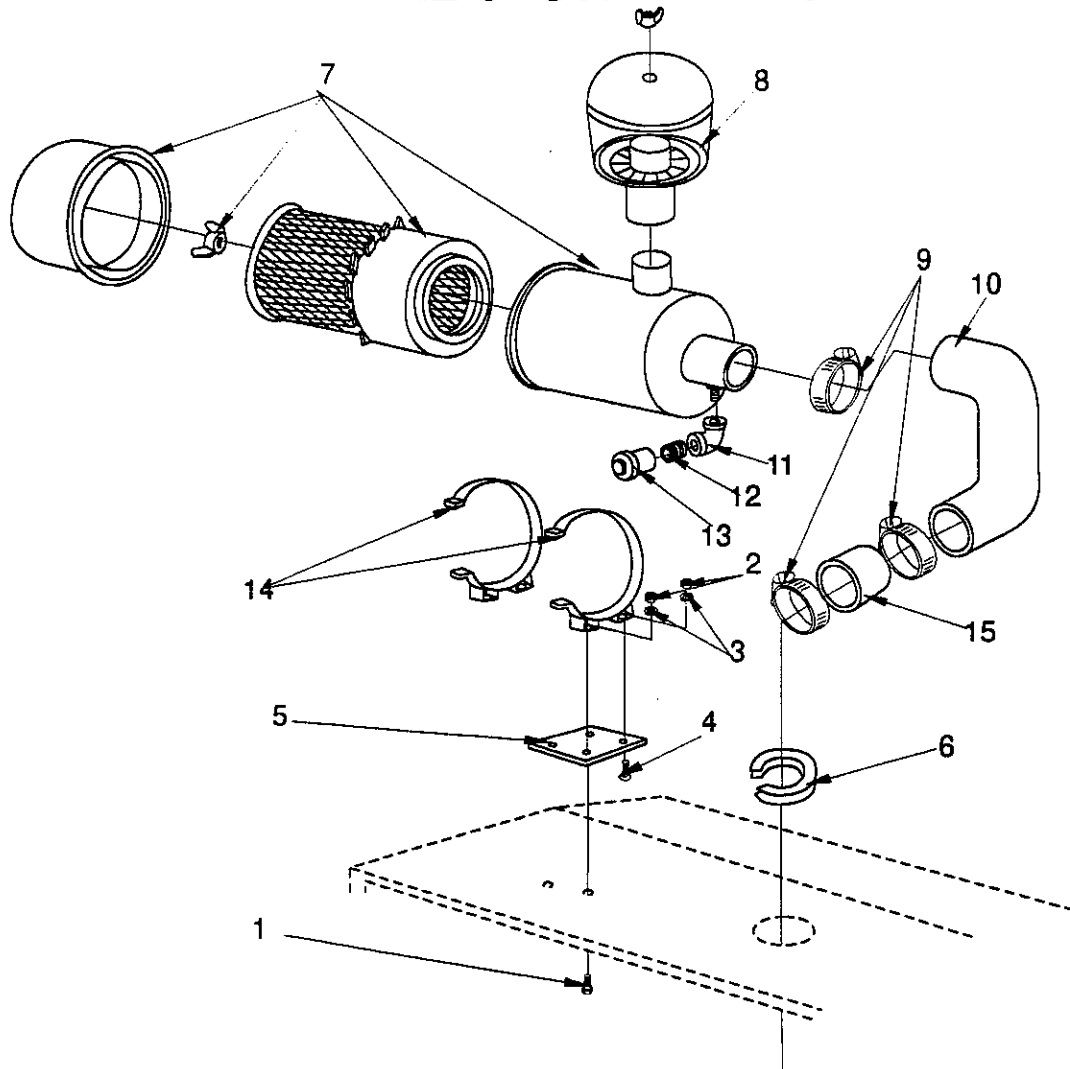
C-0301

PERKINS 104.19 DIESEL ENGINE



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-01246	Nut, Hex Fiber Insert #10-24	2
2	2-00-00426	Flat Washer, .500 x .218 x .062	4
3	2-00-02296	Lock Washer, #10 Ext.	2
4	8-08-00714	Throttle Cable Bracket	1
5	2-00-00518	Lock Washer, Helical Spring 1/4 Med	2
6	2-00-05078	Screw, M6 x 1.000 x 10mm MHHC	2
7	8-14-01012	Throttle Adjustment Clevis	1
8	2-00-00546	Retaining Ring, Ext. .312	1
9	8-55-08083	Clevis Pin,	1
10	2-00-00626	Nut, Hex MS #10-32 x .375 x .125	1
11	8-10-00033	Throttle Cable	1
12	8-13-07094	Conduit Clamp	1
13	2-00-04794	Screw, #10-24 x .625 BHS	2
14	2-00-00605	Nut, Hex MS #10-24 x .375 x .125	1
15	2-00-00519	Lock Washer, Helical Spring #10 Med	2
16	8-08-00604	Glow Plug Solenoid Bracket	1
17	2-00-00409	Flat Washer, .687 x .343 x .062	2
18	2-00-00530	Lock Washer, Helical Spring 5/16 Med	2
19	2-00-04363	Screw, M8 x 1.255 x 20mm MHHC	2
20	2-00-04914	Screw, 1/2-13 x 4.500 HHC	2
21	2-00-04159	Flat Washer, 1.375 x .562 x .109	10
22	8-08-00713	Motor Mounting Bracket	2
23	2-00-05044	Lock Washer, Helical Spring (M14)	8
24	2-00-05079	Screw, M14 x 1.500 x 25mm MHHC	8
25	8-75-01190	Spacer, Front Engine Mount	2
26	7-35-00017	Isolator	4
27	8-75-01167	Spacer, 2.000 x 1.250 x .188	4
28	2-00-05067	Flat Washer, 11.750 x .531 x .100	4
29	2-00-04936	Nut, Hex Fiber Insert 1/2 - 13	2
30	2-00-02303	Lock Washer, 5/16 Int.	2
31	-	Glow Plug Relay (Supplied with Engine)	1
32	2-00-03060	Screw, #10-24 x .250 THM	1
33	2-00-03063	Screw, #10-24 x .750 THM	1
34	2-00-00404	Flat Washer, 1.000 x .625 x .031	20
35	2-00-02310	Lock Washer, Helical Spring 3/8 Med	22
36	2-00-00233	Screw, 3/8-16 x 1.000 HHC	8
37	2-00-00232	Screw, 3/8 - 16 x .750 HHC	2
38	2-00-03829	Lock Washer, 3/8 Int./Ext.	2
39	2-00-02360	Nut, Hex 3/8 - 16 x .562 x .328	1
40	8-08-00712	Motor Mount Bracket	1
41	2-00-02682	Screw, 1/2-13 x 2.750 HHC	2
42	8-58-05259	Adapter Plate	1
43	2-00-03061	Screw, #10-24 x .500 THM (3300)	2
44	8-58-05236	Pump Shaft Stop Plate (3300)	1
45	8-33-05108	Pump Mounting Plate Casting (3300)	1
46	8-90-07328	Ground Cable,	1
47	2-00-00233	Screw, 3/8-16 x 1.000 HHC	12
48	2-00-00405	Flat Washer, 1.062 x .531 x .093 (3300)	2
49	2-00-02312	Lock Washer, Helical Spring 1/2 Med (3300)	2
50	2-00-00239	Screw, 1/2-13 x 1.000 HHC (3300)	2
51	0885-070	Coupling (3300)	1
52	8-08-00711	Motor Mount Bracket	1
53	8-90-07211	Battery Case (Positive)	1
54	8-69-00014	Water Temperature Sender	1
55	0877-048	PERKINS 104.19 Diesel Engine	1
56	2-00-05049	Adapter, 1/8 BSPT to 1/8 NPTF	1
57	8-69-00005	Oil Pressure Sender	1
58	2-00-04982	Street Tee, (2) 1/8-27 F to 1/8-27 M	1
59	8-69-00046	Oil Pressure Switch	1
60	7-23-00016	Fan	1
61	2-00-03404	Hose Clamp, 1.062 x 2.000	4
62	8-33-02255	Upper Radiator Hose	1
63	-	Lower Radiator Hose (Part of Engine)	1
64	8-33-02274	Air Intake Hose	1
65	2-00-02217	Hose Clamp	1

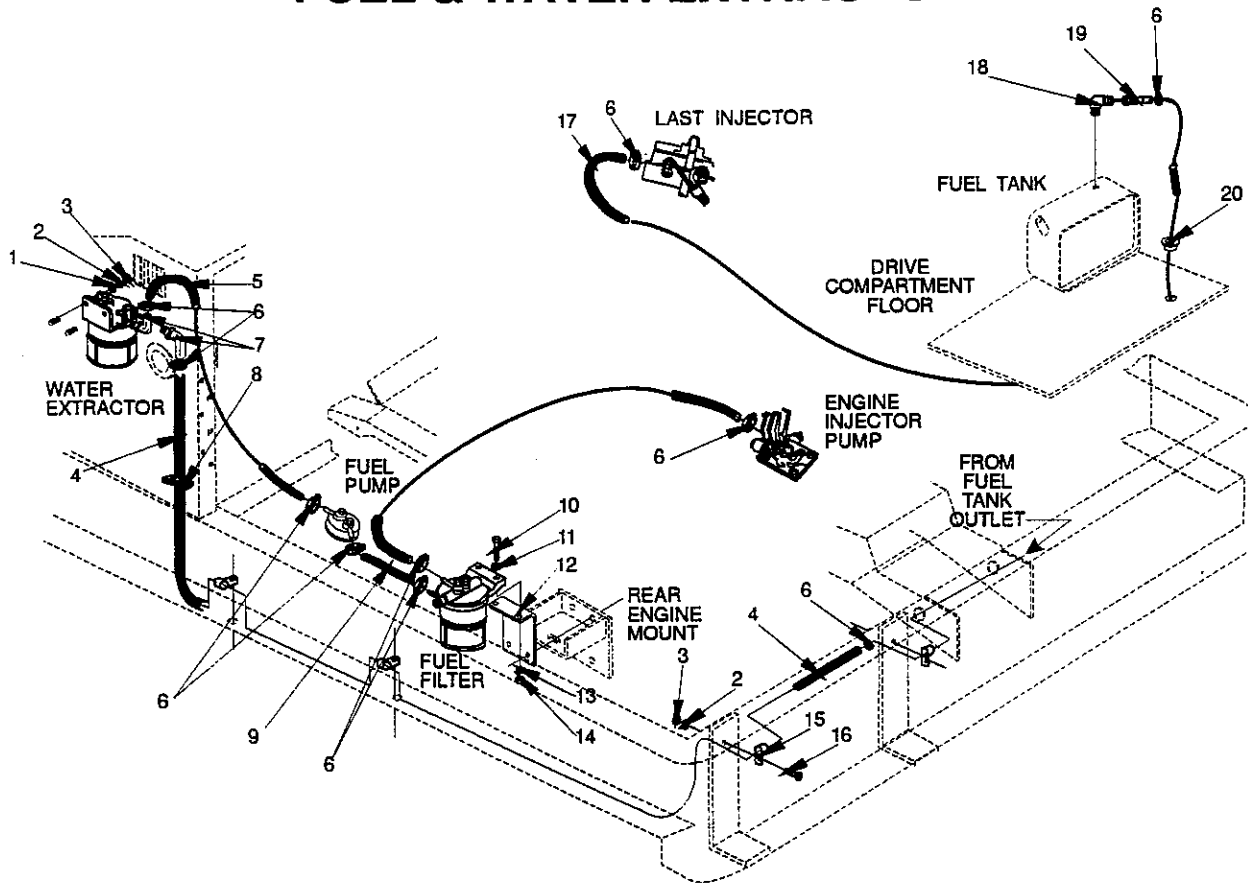
AIR INTAKE SYSTEM - DIESEL



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-00205	Screw, 1/4 - 20 x 1.000 HHC	2
2	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	4
3	2-00-00518	Lock Washer, Helical Spring 1/4 Med	4
4	2-00-03027	Screw, 1/4-20 x .625 HSFHS	2
5	8-52-05263	Mounting Plate	1
6	7-21-04022	Edging	1
7	8-24-04100	Air Cleaner Assembly	1
8	8-24-04092	Pre-Cleaner Assembly	1
9	2-00-02217	Hose Clamp,	2
10	2-00-02272	Molded Hose	1
11	2-00-03641	90° Elbow 1/9 NPT	1
12	2-95-02519	Close Nipple - 1/8 NPT	1
13	8-24-04101	Meter, Engine Air Cleaner	1
14	8-24-04093	A/C Mounting Bracket	1
15	8-87-02110	Tube - Air Intake	1

C-0193

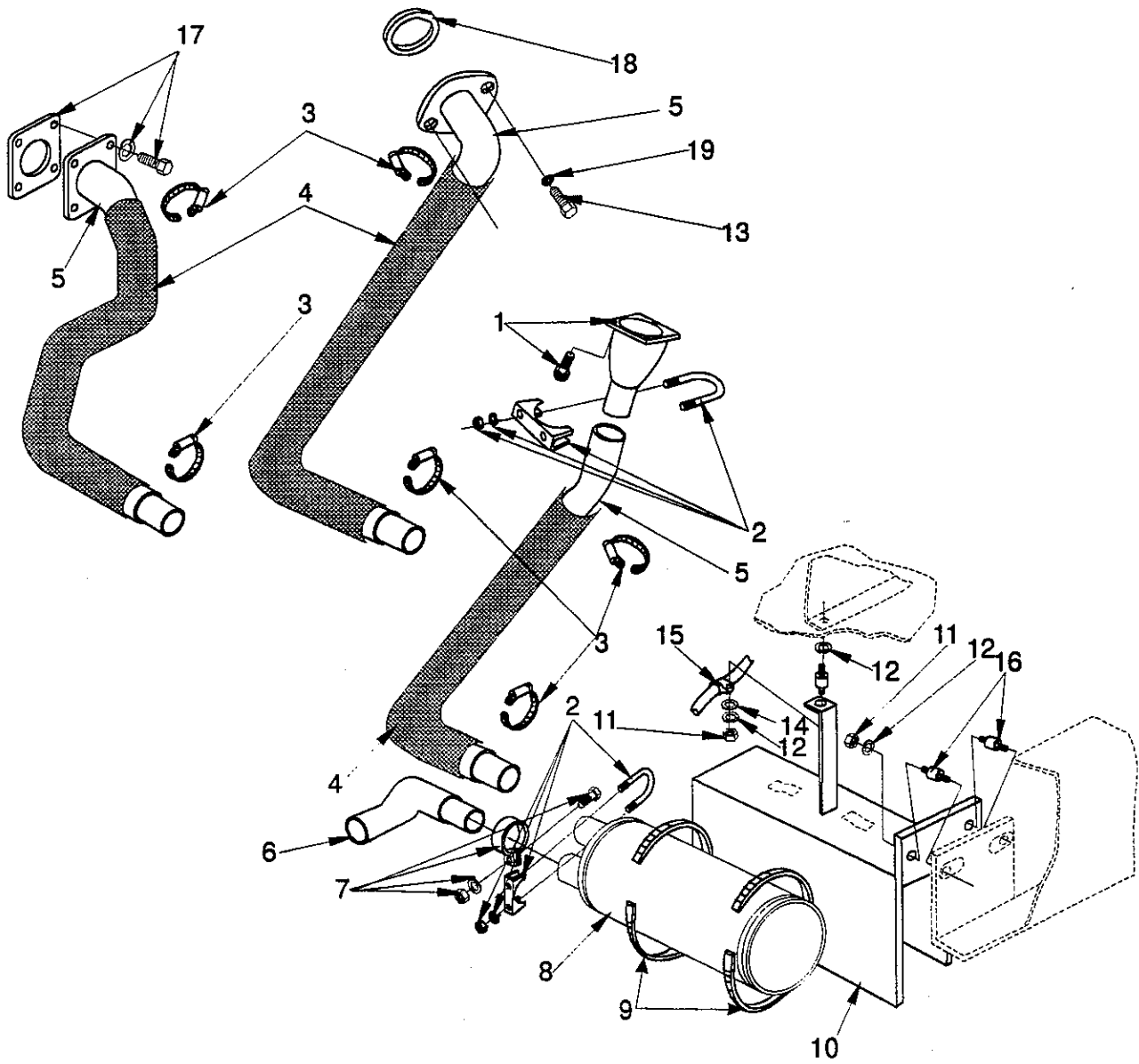
FUEL & WATER EXTRACTOR



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-03702	Flat Washer, .620 x .281 x .062	3
2	2-00-00518	Lock Washer, Helical Spring 1/4 Med	2
3	2-00-00594	Nut, Hex 1/4-20 x .437 x .218	2
4	8-33-02268	Hose, Fuel Line 80.00	1
5	8-33-02208	Hose, Seperator to Pump, 90.000	1
6	2-95-04388	Hose Clamp, .625	8
7	8-87-02101	Fuel Line Outlet	2
8	8-08-07045	Edging	1
9	8-33-02257	Fuel Line, Pump to Filter 13.50	1
10	2-00-00234	Screw, 3/8-16 x 1.500 HHC	2
11	2-00-00402	Flat Washer, .750 x .390 x .093	2
12	8-08-00710	Fuel Filter Bracket	1
13	2-00-02310	Lock Washer, Helical Spring 3/8 Med	2
14	2-00-02360	Nut, Hex 3/8-16 x .562 x .328	2
15	2-00-04602	Clamp, Fuel Line Hose	4
16	2-00-00221	Screw, 1/4-20 x .750 HHC	1
17	8-33-02270	Fuel Return Hose	1
18	8-56-05021	45° SAE Male 90° Elbow, 1/4	1
19	2-00-04618	Hose Fitting Barbed,F 45° Flared Swivel, 7/16-20	1
20	8-09-01077	Snap Bushing, 2.125 x .453	1

C-0194

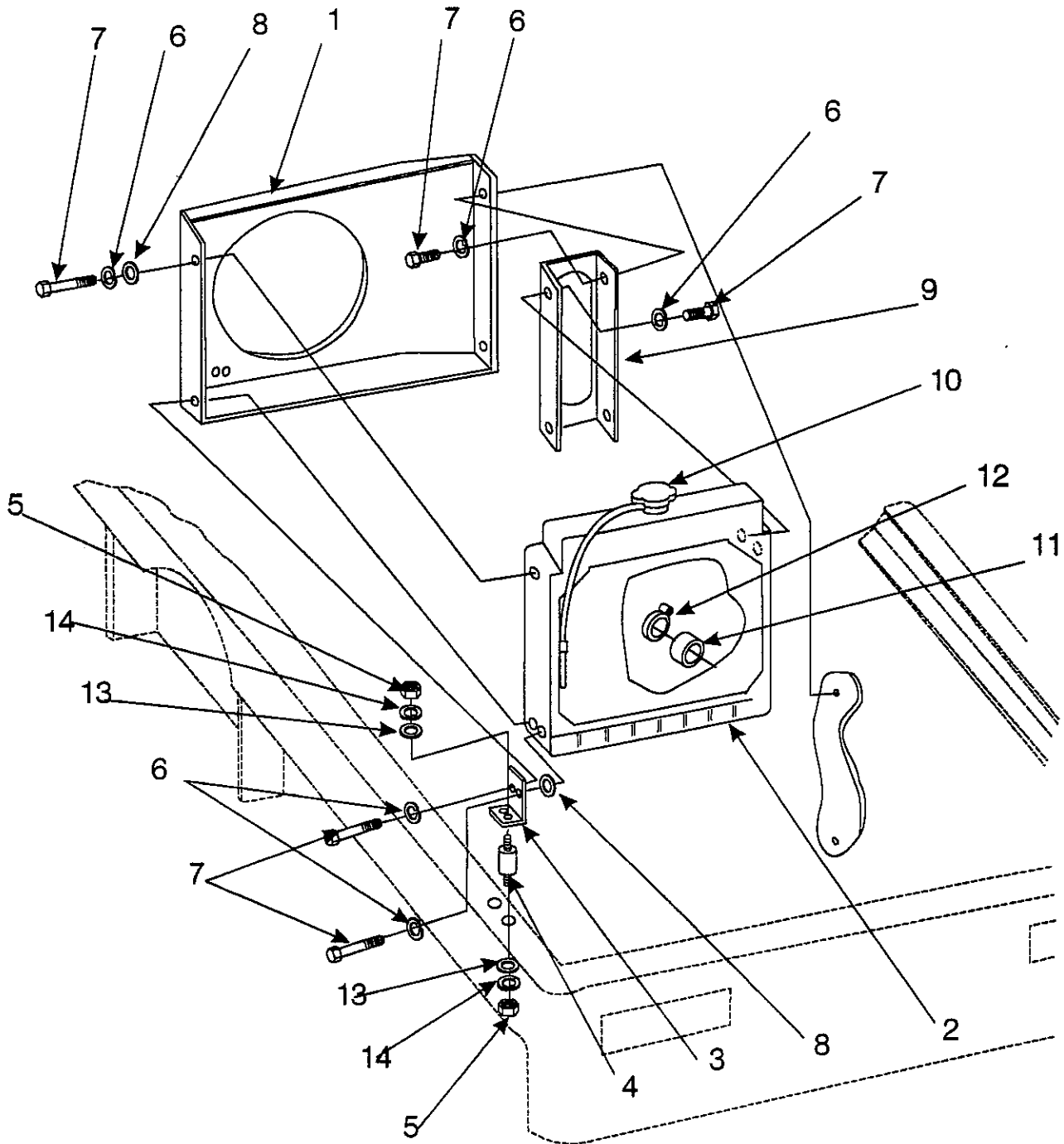
EXHAUST SYSTEM



C-0302

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-25-02026	Fitting, Exhaust (FORD 411)	1
		Screw, M10 x 10.9mm MHHC	3
2	2-00-04040	Muffler Clamp, 1.500 Tube Size	1
3	2-00-03404	Hose Clamp, 1.062 - 2.000	2
4	7-34-09015	Insulation Sleeve	1
5	8-56-04029	Exhaust Pipe (FORD 411)	1
5	8-56-04041	Exhaust Pipe (FORD 413)	1
5	8-56-04042	Exhaust Pipe (PERKINS 104.19)	1
6	8-56-04030	Tail Pipe	1
7	7-13-07082	Muffler Clamp, 1.250	1
8	7-49-00027	Muffler	1
9	2-00-04400	Hose Clamp, 5.000 - 7.000	2
10	8-72-00006	Muffler Shroud	1
11	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	3
12	2-00-00530	Lock Washer, Helical Spring 5/16 Med	4
13	2-00-05005	Screw, M10 x 1.5 x 30 MM	2
14	2-00-00409	Flat Washer, .687 x .343 x .062	1
15	2-00-04441	Cable Clamp, .625	1
16	8-50-05037	Radiator Mounting Pad	3
17	-	PERKINS 104.19 Engine Parts	-
18	8-29-00199	Exhaust Gasket (FORD 413)	1
19	2-00-02311	Lock Washer, Helical Spring 7/16 Med	2

RADIATOR AND SHROUD



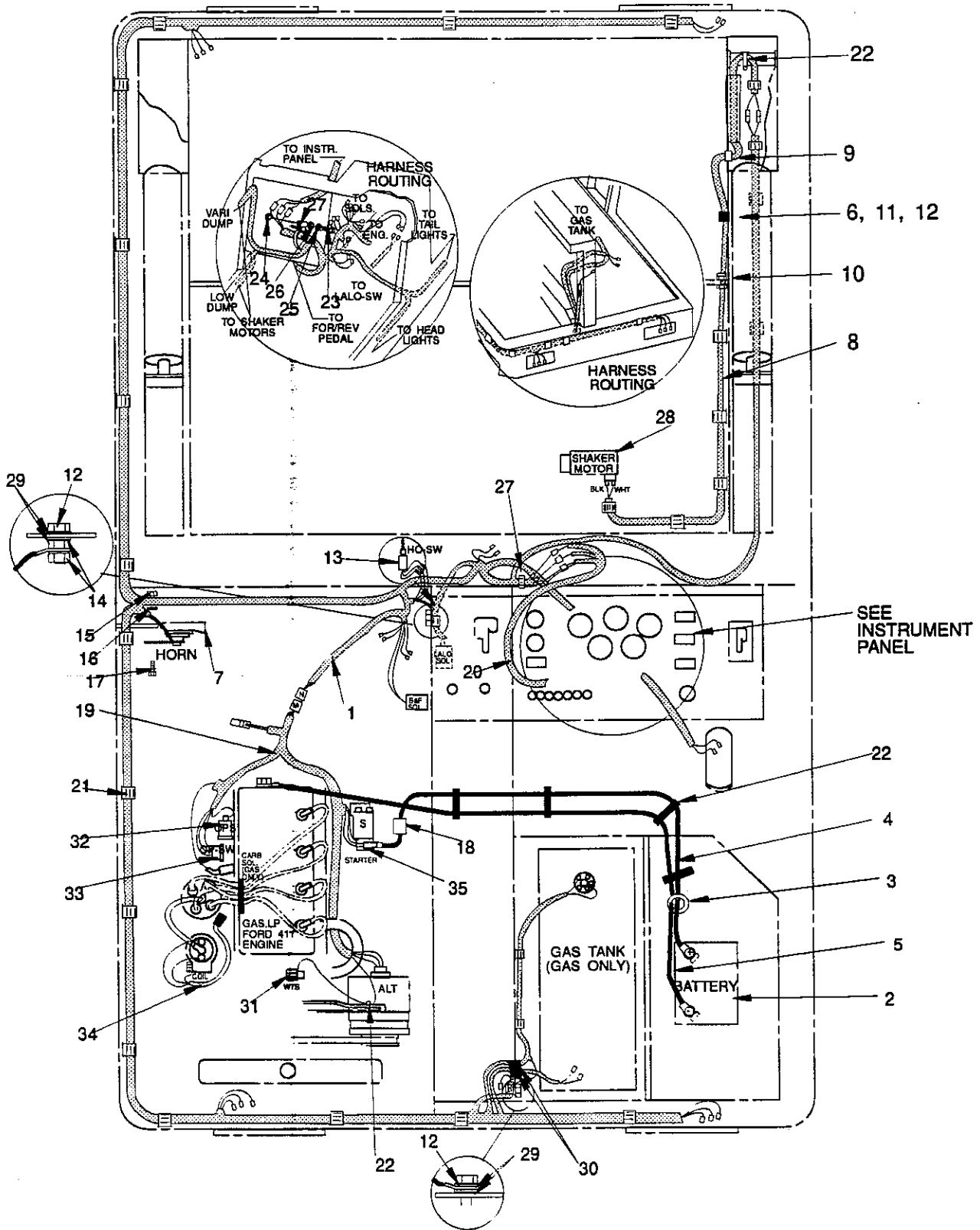
C-0131

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-72-00007	Radiator Shroud	1
1	8-72-00008	Radiator Shroud (Diesel)	1
2	8-62-01009	Radiator	1
2	8-62-01011	Radiator, 4 Core (Option)	1
3	8-08-00587	Radiator Mounting Bracket	1
4	8-50-05053	Radiator Mounting Pad	2
5	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	4
6	2-00-00518	Lock Washer, Helical Spring 1/4 Med	7
7	2-00-00220	Screw, 1/4 - 20 x .625 HHC	7
8	2-00-00447	Flat Washer, 1.250 x .281 x .089	2
9	8-81-00143	Radiator Support	1
10	8-11-00045	Radiator Cap	1
11	2-00-04913	Lower Outlet Plug, 1.500	1
12	2-00-03404	Hose Clamp, 1.062 - 2.000	1
13	2-00-03702	Flat Washer, .625 x .281 x .062	4
14	2-00-00501	Lock Washer, 1/4 Int.	4

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-02369	Nut, Hex Jam 3/8 - 16 x .562 x .218	2
2	7-50-05144	Pad	1
3	8-83-04029	Fuel Tank	1
4	2-00-00518	Lock Washer, Helical Spring 1/4 Med	6
5	2-00-04901	Compression Male 90° Elbow, 1/8(Gasoline Only)	1
6	8-87-02109	Fuel Line (FORD 413 - Gas)	1
7	8-52-00127	Rear Wall	1
8	2-00-00221	Screw, 1/4 - 20 x .750 HHC	6
9	7-11-00029	Fuel Cap	1
10	8-08-07038	Bumper, Fuel Line	2
11		Plug, 1/2 NPT (Gasoline Only)	2
12	8-26-04003	Fuel Tank Sender Float	1
13	2-00-04737	Screw, #10 - 32 x .44 (Self Seal)	5
14	8-29-00131	Gasket	1
15	2-00-00503	Lock Washer, 1/4 Int/Ext	1
16	2-00-00407	Flat Washer, .562 x .265 x .062	5

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-03061	Screw, #10 - 24 x .500 THM	6
2	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	13
3	2-00-00519	Lock Washer, Helical Spring #10 Med	8
4	2-00-03063	Screw, #10 - 24 x .750 THM	3
5	2-00-00466	Flat Washer, .625 x .203 x .031	4
6	0895-085	Instrument Panel Harness	1
7	8-48-05028	Water Temperature Gauge	1
8	8-48-05023	Hour Meter Gauge	1
9	8-48-00016	Volt Meter Gauge	1
10	8-48-05027	Oil Pressure Gauge	1
11	7-82-00026	Key Switch	1
12	2-00-00512	Lock Washer #10 Int	9
13	2-00-04694	Nut, Hex MS #10 - 32 x .375 x .125	4
14	8-82-00024	Horn Push Button	1
15	8-82-00045	Switch - SPST (Momentary)(ON)-OFF	1
16	8-82-00044	Switch - SPST ON-OFF	1
17	8-64-00008	Circuit Brefaker (15 AMP)	4
18	8-11-00044	Boot (Circuit Brefaker)	5
19	2-00-04757	Plug Button, .375 Circuit Brefaker	2
20	8-90-07385	Wire - Jumper	1
21	8-90-07361	Wire - TD-1 #6 to #7 to M2 #86 to M4 #86	1
22	8-64-00012	Shaker Motor Relay	1
23	2-00-04897	Screw, #10 - 24 x 1.250 THM	2
24	2-00-04937	Tie Cable	1
25	2-00-00581	Plug Button, .530 (Light Switch)	2
26	8-82-00045	Switch - SPST (Momentary)(ON)-OFF (Diesel only)	1
27	2-00-04432	Plug Button, 2.093 (LP only)	Ref
28	8-13-07087	Clip	Ref
29	8-64-05007	Resistor Assembly (413 Engine. only)	Ref
30	8-48-05032	Fuel Gauge (Gas & Diesel only)	Ref
31	2-00-03061	Screw, #10-24 x .500 THM	4
32	8-90-07357	Wire, W.T. Gauge to F.G. (Gas & Diesel only)	Ref
33	8-64-05009	Relay, Broom and Fan	1
34	0875-087	Diode Assembly	1
35	2-00-00594	Nut, Hex 1/4-20	5
36	8-64-00013	Circuit Breaker (25A)	1
37	2-00-01246	Hex Nut, #10-24 Fiber Lock	3
38	2-00-00067	Screw, #6-32 x 1.00 RHM	2
39	2-00-00455	Flat Washer, #6	2
40	2-00-01499	Lock Washer, #6	2
41	2-00-00624	Nut, Hex #6-32	2
42	8-08-00748	Relay Bracket	1
43	8-64-05011	Relay (20 Sec. Time Delay)	1
44	8-90-07422	Wire, TD-2 Pin 1	1
45	8-90-07423	Wire, TD-2 Pin 2	1
46	8-90-07424	Wire, TD-2 Pin 3	1
47	8-90-07425	Wire, TD-2 Pin 6	1
NS	8-11-00015	Terminal	15
NS	2-00-04479	Connector-3-way	3

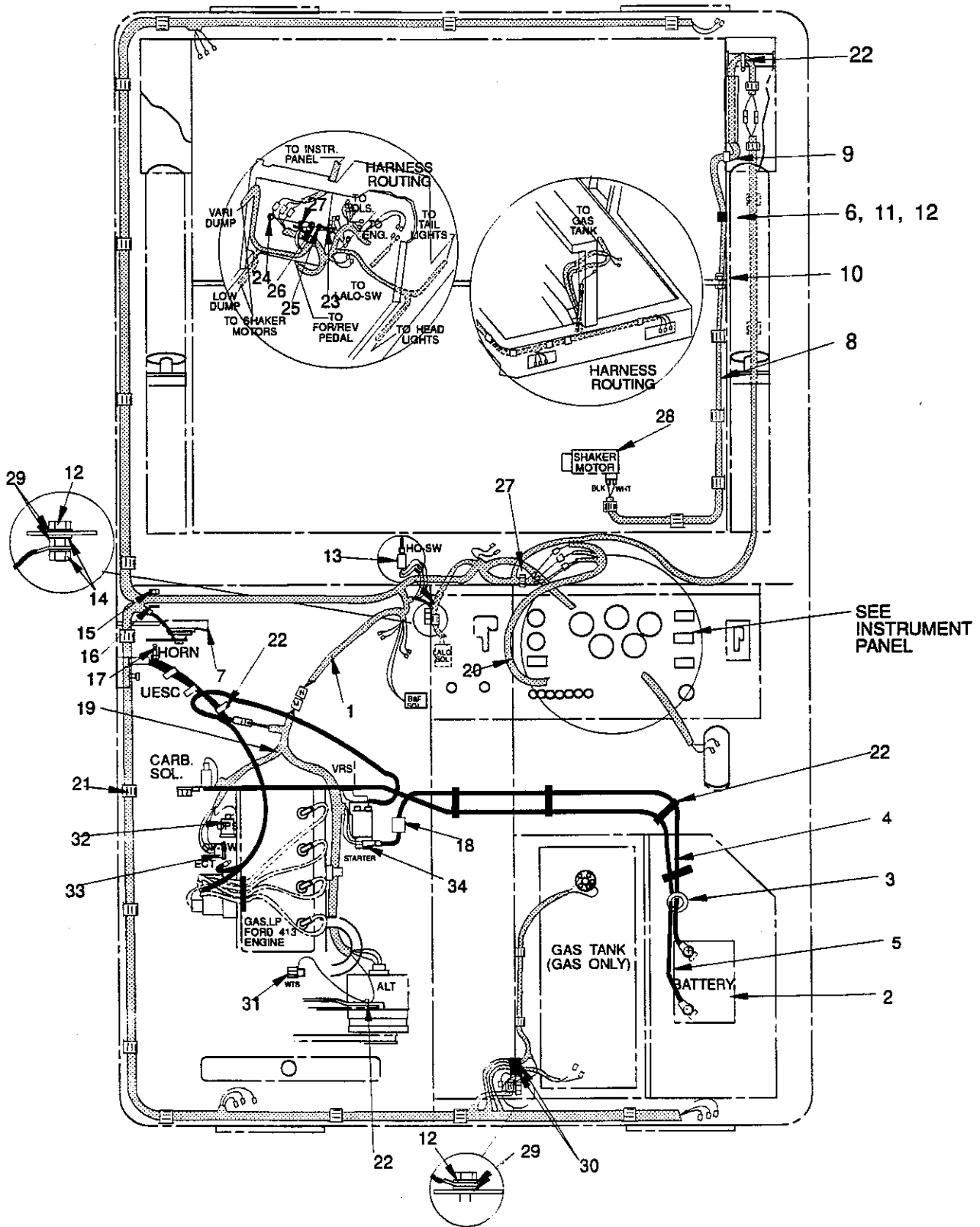
WIRING PARTS LIST - FORD VSG 411



C-0304

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	0895-096	Machine Harness	1
2	0875-008	Battery	1
3	8-09-01077	Snap Bushing	1
4	8-90-07211	Battery Cable - (Positive)	Ref
	2-00-05171	Protective Boot, Red	1
5	7-90-07262	Battery Cable - (Negative)	Ref
	2-00-05173	Protective Boot, Black	1
6	2-00-00641	Nut, Hex 1/4 - 20 Fiber Lock	1
7	8-32-09013	Horn	1
8	0875-108	Hopper Wire Assembly	1
9	8-09-01082	Bushing - Universal	1
10	8-09-01083	Bushing - Connector (Liquid Tight)	1
11	2-00-04378	Clip, .281	2
12	2-00-00221	Screw, 1/4 - 20 x .750 HHC	3
13	8-82-00049	Hopper Switch	Ref
14	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	3
15	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	1
16	2-00-00530	Lock Washer, Helical Spring 5/16 Med	1
17	2-00-00208	Screw, 5/16 - 18 x .750 HHC	1
18	2-00-04873	Clamp,	1
19	0895-100	411 Engine Harness	1
20	0895-085	Instrument Panel Harness	Ref
21	7-13-07096	Clamp - Adjustable	20
22	2-00-04345	Ty-Rap	5
23	2-00-03063	Screw, #10-24 x .750 HHC	1
24	2-00-01246	Nut, Hex #10 - 24 Fiber Lock	1
25	2-00-00519	Lock Washer, Helical Spring #10 Med	1
26	2-00-00605	Nut, Hex #10-24	1
27	2-00-04937	Cable Tie	1
28	0882-027	Shaker Motor	Ref
29	2-00-00503	Lock Washer, 1/4 Int/Ext	5
30	8-09-01081	Snap Bushing	2
31	8-69-00006	Water Temperature Sender (WTS)	Ref
32	8-69-00005	Oil Pressure Sender (OPS)	Ref
33	8-82-00046	Oil Pressure Switch (OP-SW)	Ref
34	0895-077	Wiring Harness (BI-WH)	Ref
35	2-00-04952	Protective Boot, Red	1

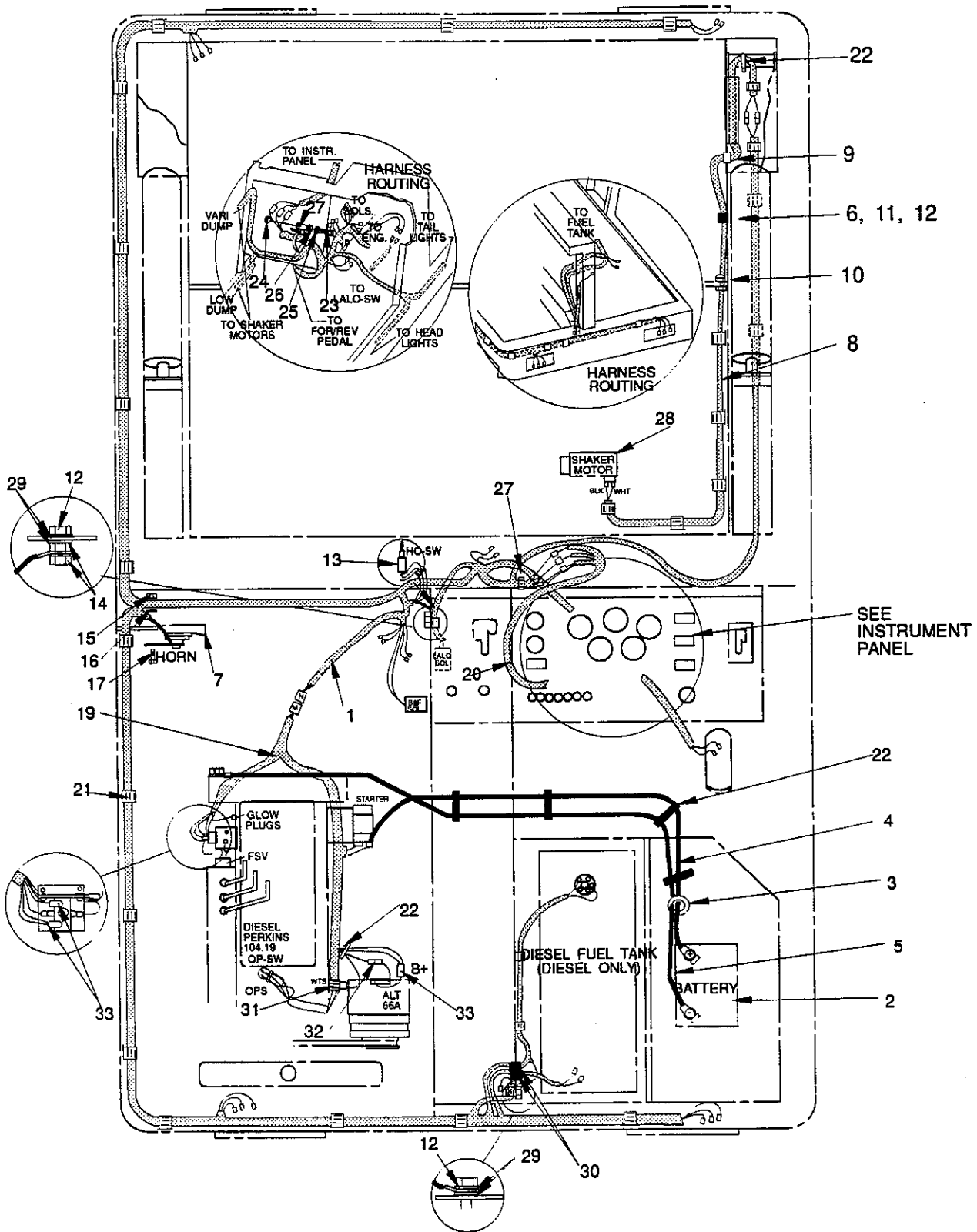
WIRING PARTS LIST - FORD VSG 413



C-0305

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	0895-096	Machine Harness	1
2	0875-008	Battery	1
3	8-09-01077	Snap Bushing	1
4	8-90-07211	Battery Cable - (Positive)	Ref
	2-00-05171	Protective Boot, Red	1
5	7-90-07262	Battery Cable - (Negative)	Ref
	2-00-05173	Protective Boot, Black	1
6	2-00-00641	Nut, Hex 1/4 - 20 Fiber Lock	1
7	8-32-09013	Horn	1
8	0875-108	Hopper Wire Assembly	1
9	8-09-01082	Bushing - Universal	1
10	8-09-01083	Bushing - Connector (Liquid Tight)	1
11	2-00-04378	Clip, .281	2
12	2-00-00221	Screw, 1/4 - 20 x .750 HHC	3
13	8-82-00049	Hopper Switch	Ref
14	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	3
15	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	1
16	2-00-00530	Lock Washer, Helical Spring 5/16 Med	1
17	2-00-00208	Screw, 5/16 - 18 x .750 HHC	1
18	2-00-04873	Clamp,	1
19	0895-104	413 Engine Harness	1
20	0895-085	Instrument Panel Harness	Ref
21	7-13-07096	Clamp - Adjustable	20
22	2-00-04345	Ty-Rap	5
23	2-00-03063	Screw, #10-24 x .750 HHC	1
24	2-00-01246	Nut, Hex #10 - 24 Fiber Lock	1
25	2-00-00519	Lock Washer, Helical Spring #10 Med	1
26	2-00-00605	Nut, Hex #10-24	1
27	2-00-04937	Cable Tie	1
28	0882-027	Shaker Motor	Ref
29	2-00-00503	Lock Washer, 1/4 Int/Ext	5
30	8-09-01081	Snap Bushing	2
31	8-69-00006	Water Temperature Sender (WTS)	Ref
32	8-69-00005	Oil Pressure Sender (OPS)	Ref
33	8-82-00046	Oil Pressure Switch (OP-SW)	Ref
34	2-00-04952	Protective Boot, Red	1

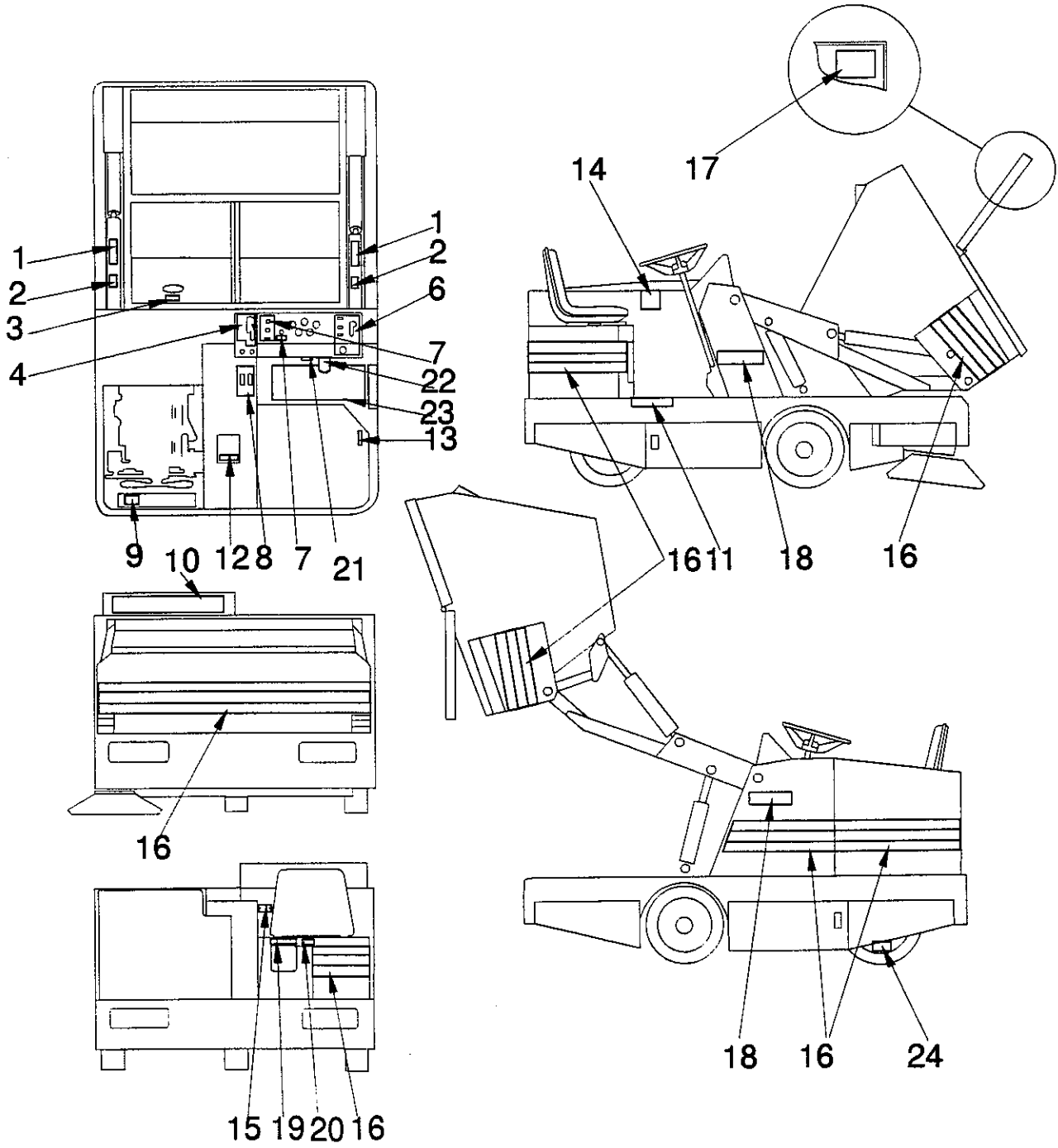
WIRING PARTS LIST - PERKINS 104.19



C-0306

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	0895-096	Machine Harness	1
2	0875-008	Battery	1
3	8-09-01077	Snap Bushing	1
4	8-90-07211	Battery Cable - (Positive)	Ref
	2-00-05171	Protective Boot, Red	1
5	7-90-07262	Battery Cable - (Negative)	Ref
	2-00-05173	Protective Boot, Black	1
6	2-00-00641	Nut, Hex 1/4 - 20 Fiber Lock	1
7	8-32-09013	Horn	1
8	0875-108	Hopper Wire Assembly	1
9	8-09-01082	Bushing - Universal	1
10	8-09-01083	Bushing - Connector (Liquid Tight)	1
11	2-00-04378	Clip, .281	2
12	2-00-00221	Screw, 1/4 - 20 x .750 HHC	3
13	8-82-00049	Hopper Switch	Ref
14	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	3
15	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	1
16	2-00-00530	Lock Washer, Helical Spring 5/16 Med	1
17	2-00-00208	Screw, 5/16 - 18 x .750 HHC	1
18	2-00-04873	Clamp,	1
19	0895-105	104.19 Engine Harness	1
20	0895-085	Instrument Panel Harness	Ref
21	7-13-07096	Clamp - Adjustable	20
22	2-00-04345	Ty-Rap	5
23	2-00-03063	Screw, #10-24 x .750 HHC	1
24	2-00-01246	Nut, Hex #10 - 24 Fiber Lock	1
25	2-00-00519	Lock Washer, Helical Spring #10 Med	1
26	2-00-00605	Nut, Hex #10-24	1
27	2-00-04937	Cable Tie	1
28	0882-027	Shaker Motor	Ref
29	2-00-00503	Lock Washer, 1/4 Int/Ext	5
30	8-09-01081	Snap Bushing	2
31	8-69-00006	Water Temperature Sender (WTS)	Ref
32	0895-092	Wire Assembly Harness	1
33	2-00-04203	Protective Boot, Black	1

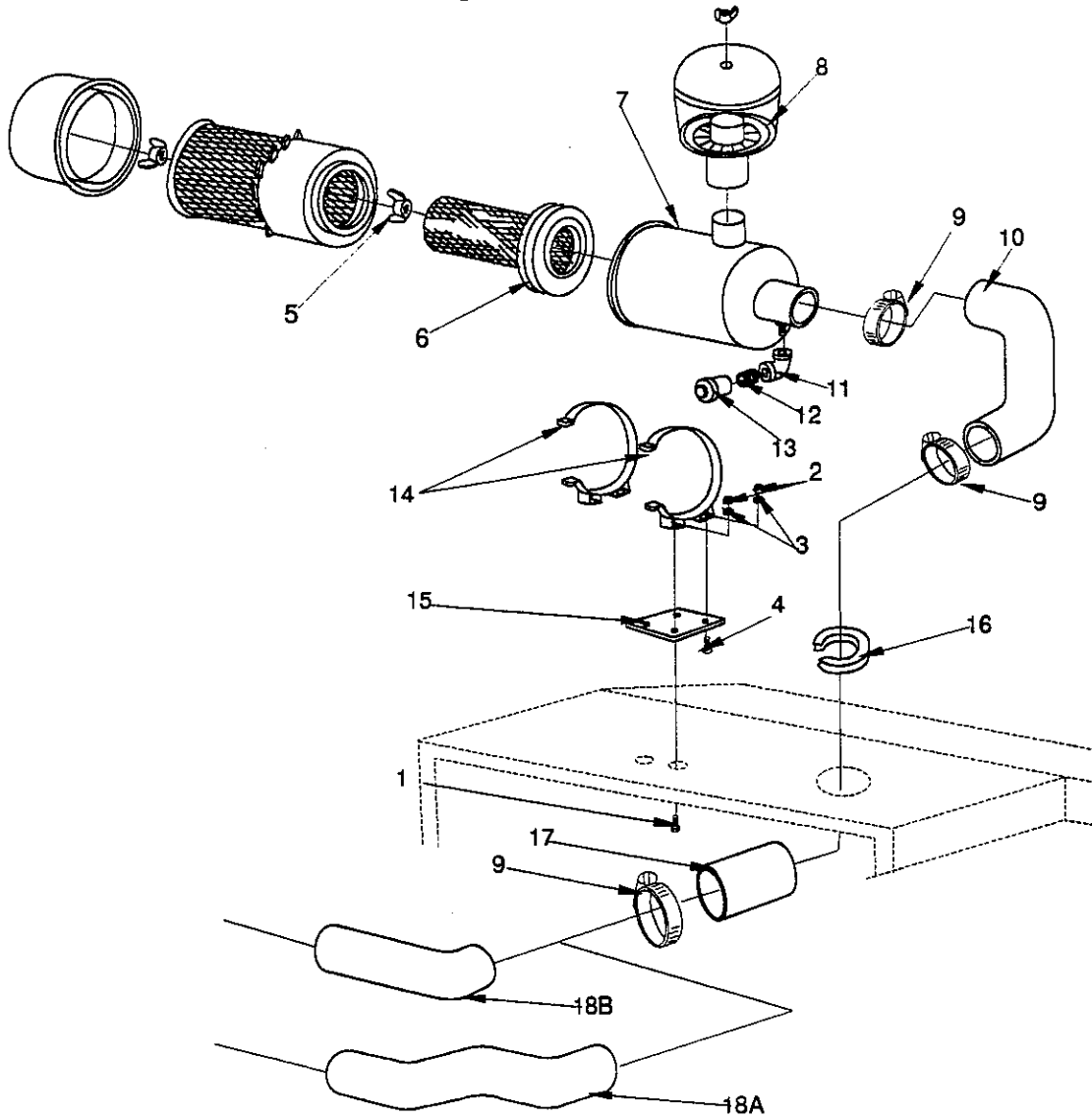
DECALS



C-0186

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-18-00314	Decal, Service Precautions	2
2	8-18-00305	Decal, Pinch Point	2
3	8-18-00074	Decal, Warning Fan	1
4	8-18-00332	Decal, Main Broom	1
5			
6	8-18-00315	Decal, Instrument Panel - Ignition	1
7	8-18-00317	Decal, Instrument Panel - Horn	1
8	8-18-00316	Decal, Hopper Controls	1
9	8-18-00307	Decal, Warning - Fan & Belts	1
10	8-18-00347	Decal, Clarke/American-Lincoln	1
11	7-50-05132	Pad, Frame Edge	1
12	8-18-00306	Decal, Hydraulic Fluid Only	1
13	8-18-00313	Decal, Seat Adjustment	1
14	8-18-00272	Decal, General Warning	1
15		Serial and Name Plate	1
16	8-18-00225	6" Bulk Tape 13.75	
17	8-18-00348	Decal, Maintenance Chart	1
18	8-18-00353	Decal, Model 2260	2
18	8-18-00354	Decal, Model 2260XP	2
19	8-18-00310	Decal, Gasoline Fuel	1
19	8-18-00311	Decal, Diesel Fuel	1
20	8-18-00277	Decal, Warning (Gasoline Only)	1
21	8-50-05050	Pad, Brake Pedal	1
22	8-50-05055	Pad, Forward/Reverse Pedal	1
23	8-50-05052	Pad, Drive Compartment Floor	1
24	7-18-00159	Decal, Pneumatic Wheel Warning	1
NS	0880-405	Gray Touch up Paint	1

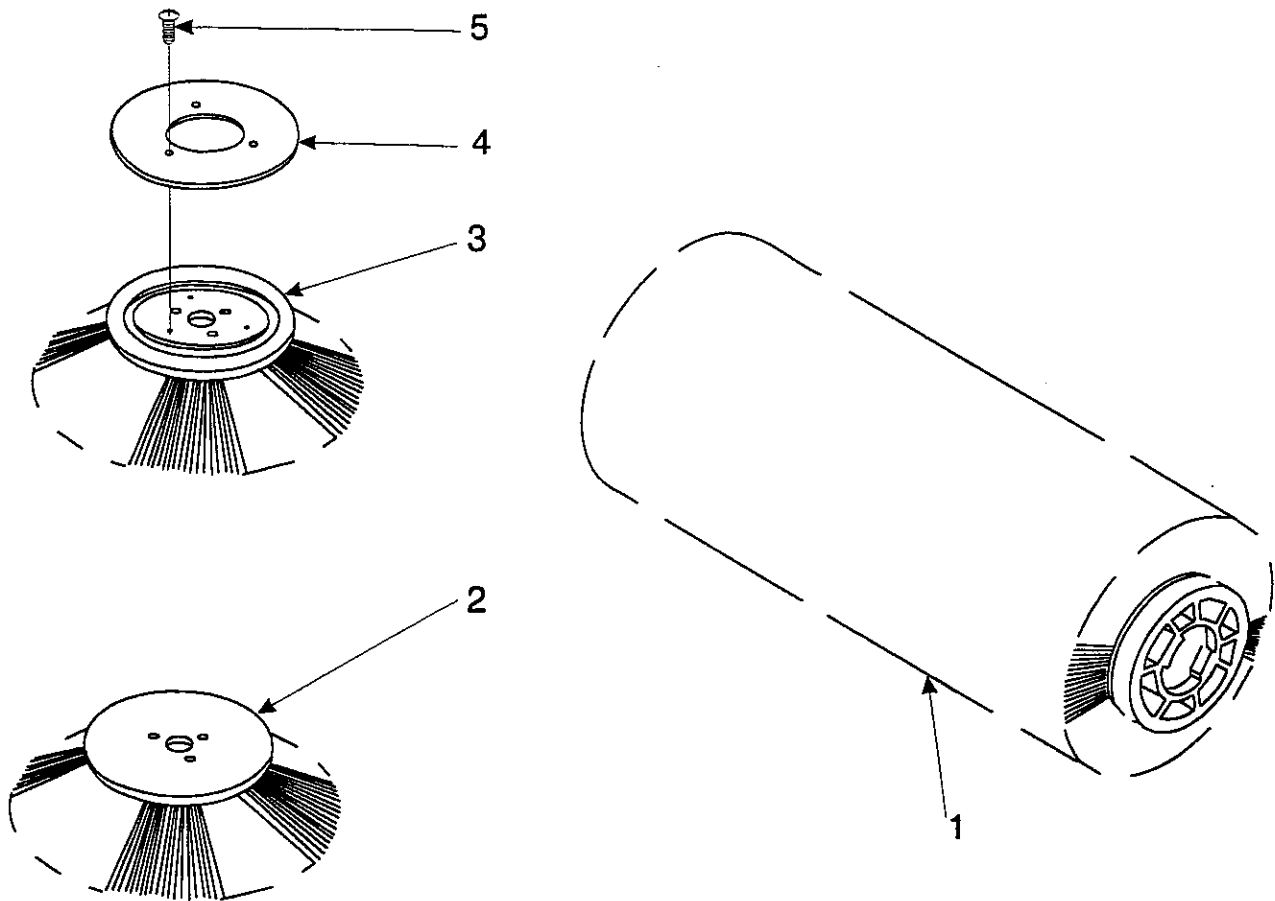
HEAVY DUTY AIR CLEANER



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-00205	Screw, 1/4-20 x 1.000 HHC	2
2	2-00-00594	Nut, Hex 1/4-20	4
3	2-00-00518	Lock Washer, Helical Spring 1/4	4
4	2-00-03027	Screw, 1/4-20 x .625 HSFHS	2
5	8-23-03064	Wing Nut Assembly	1
6	8-24-04111	Filter Element	1
7	8-24-04100	Air Cleaner Assembly	1
8	8-24-04092	Pre-Cleaner Assembly	1
9	2-00-02217	Hose Clamp	3
10	8-33-02272	Molded Hose	1
11	2-00-03641	90° Elbow, 1/8 NPT	1
12	2-95-02519	Close Nipple, 1/8 NPT	1
13	8-24-04101	Filter Minder (Meter)	1
14	8-24-04093	Clamp Assembly	2
15	8-58-05263	Clamp Assembly Mounting Plate	1
16	7-21-04022	Edging	1
17	8-87-02110	Air Intake Tube	1
18A	8-33-02212	Flex Hose (FORD 411)	1
18B	8-33-02236	Molded Elbow (FORD 413)	1
	0880-525	FORD 411 Engine	
	0880-526	FORD 413 Engine	

C-0314

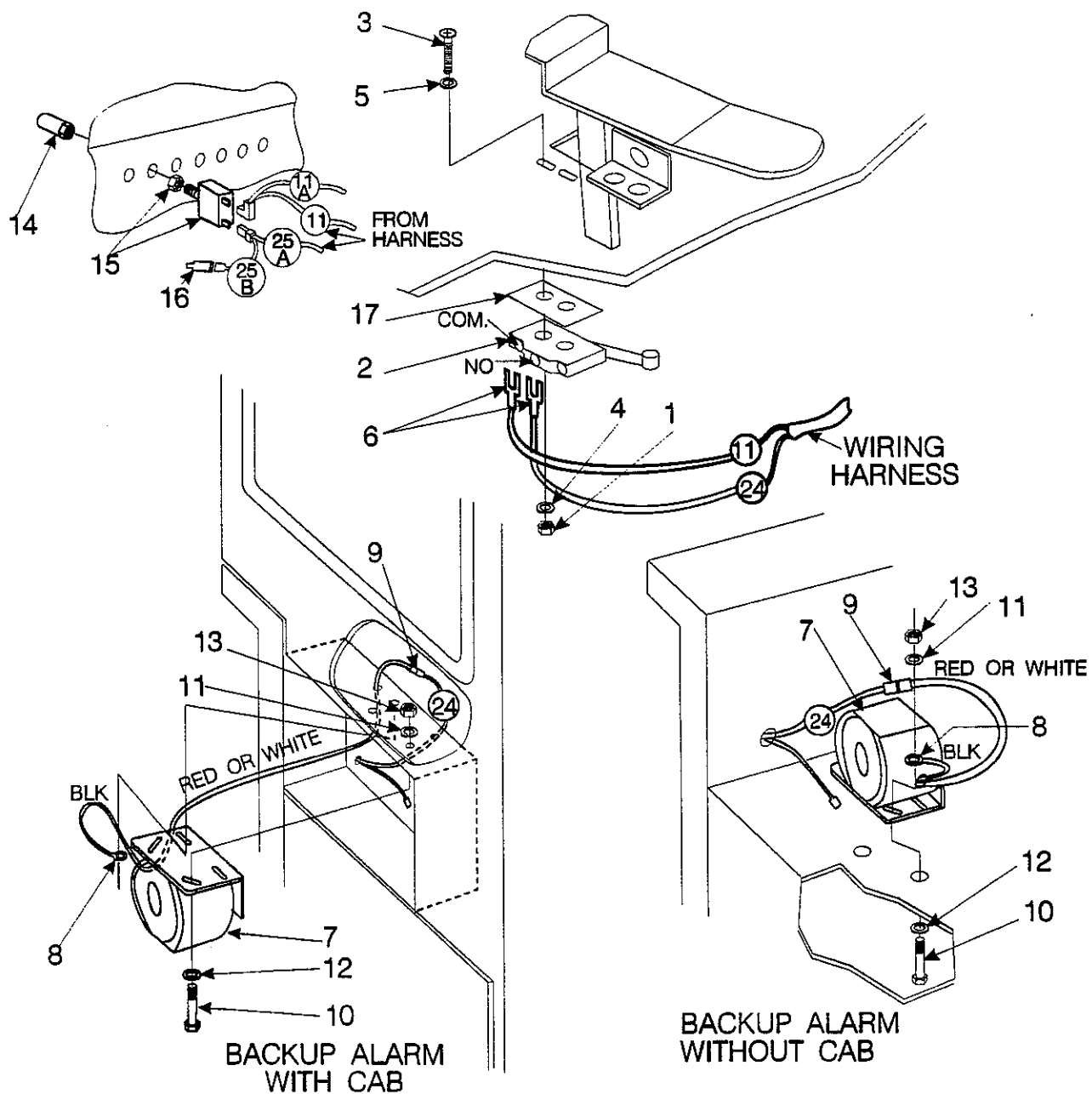
BROOM OPTIONS



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-08-03167	Proex and Wire	1
1	8-08-03168	Proex	1
1	8-08-03171	Natural Fiber and Wire	1
1	8-08-03172	Natural Fiber	1
1	8-08-03173	Nylon	1
1	8-08-03174	Crimped Wire	1
1	8-08-03175	Nylon (Herringbone)	1
1	8-08-03187	Nylon, High Density	1
1	8-08-03188	Fiber, High Density	1
1	8-08-03189	Fiber and Wire, High Density	1
2	8-08-03212	Black Prolene	1
2	8-08-03211	Nylon	1
3	8-08-03199	Wire Broom	1
4	8-58-05248	Plate	1
5	2-00-04121	Screw, #10 - 13 x .750 RHW	3

P-4195-1

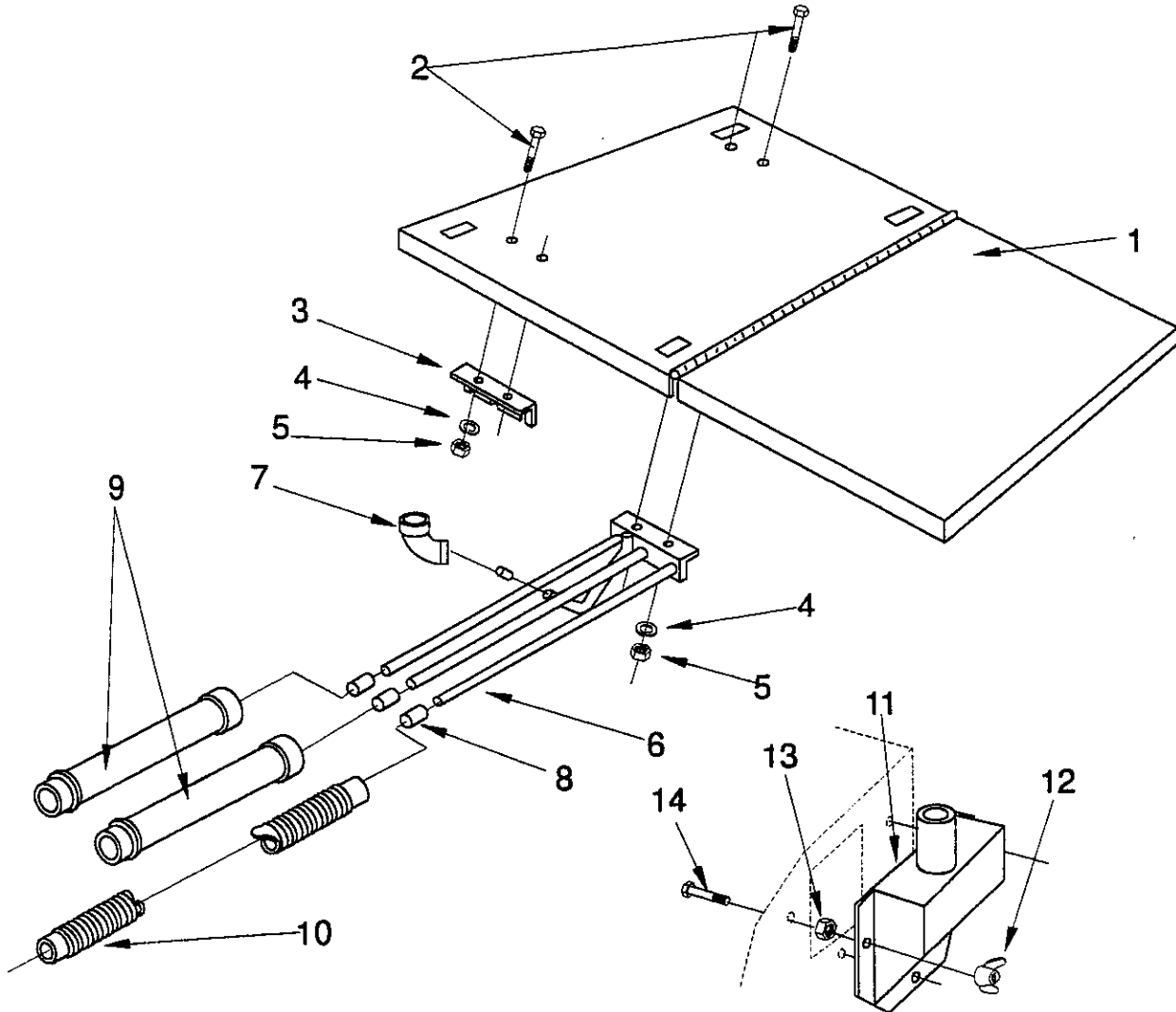
BACK UP ALARM 0880-392



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-08-00624	Nut, Hex MS #6-32 x .312 x .109	2
2	7-82-00009	Mechanical Switch	1
3	2-00-05060	Screw, #6-32 x 1.250 RHM	2
4	2-00-01499	Lock Washer, Helical Spring #6 Med	2
5	2-00-00455	Flat Washer, .375 x .156 x .046	2
6	2-00-04808	Terminal, #8 Screw	2
7	8-32-09009	Backup Alarm	1
8	2-00-04282	Terminal, .31 Ring	1
9	2-00-04578	Terminal, Male Bullet	1
10	2-00-00213	Screw, 5/16 - 18 x .625 HHC	2
11	2-00-02303	Lock Washer, 5/16 Int.	2
12	2-00-00409	Flat Washer, .687 x .343 x .062	2
13	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	2
14	8-11-00044	Boot	1
15	8-64-00008	Circuit Brefaker	1
16	8-11-00015	Terminal	1
17	7-35-00013	Insulation	1

P-4879

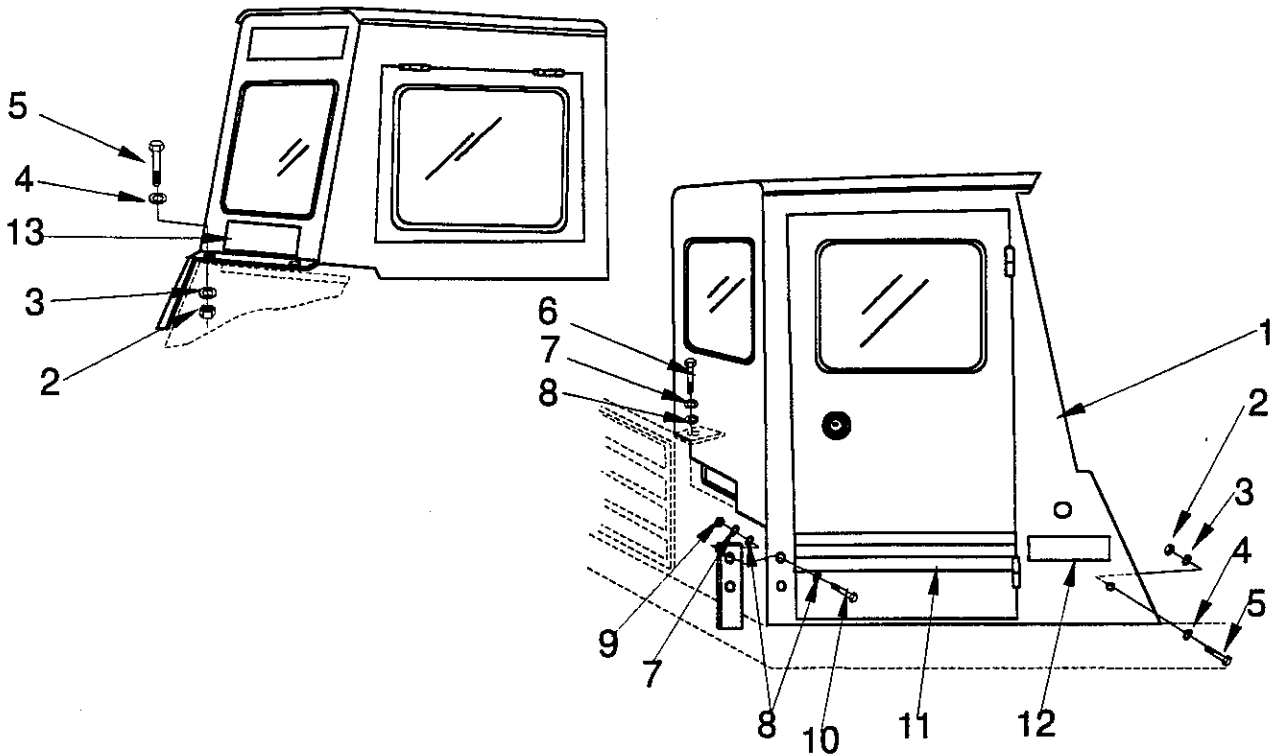
BLOWER ATTACHMENT



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-16-07304	Hopper Lid	Ref
2	2-00-01481	Screw, 5/16 - 18 x 1.000 RHM	4
3	8-08-00622	Latch Bracket	1
4	2-00-00530	Lock Washer, Helical Spring 5/16 Med	4
5	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	4
6	8-08-00670	Blower Component Storage Bracket	1
7	8-21-07019	90° Elbow Adapter	1
8	8-11-00034	Cap	4
9	8-89-00002	Wand Section	2
10	8-33-02121	Hose	1
11	8-07-06018	Transition Box	1
12	2-00-00672	Wing Nut, 1/4 - 20	3
13	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	3
14	2-00-02706	Screw, 1/4 - 20 x 1.000 HHM	3

P-4988

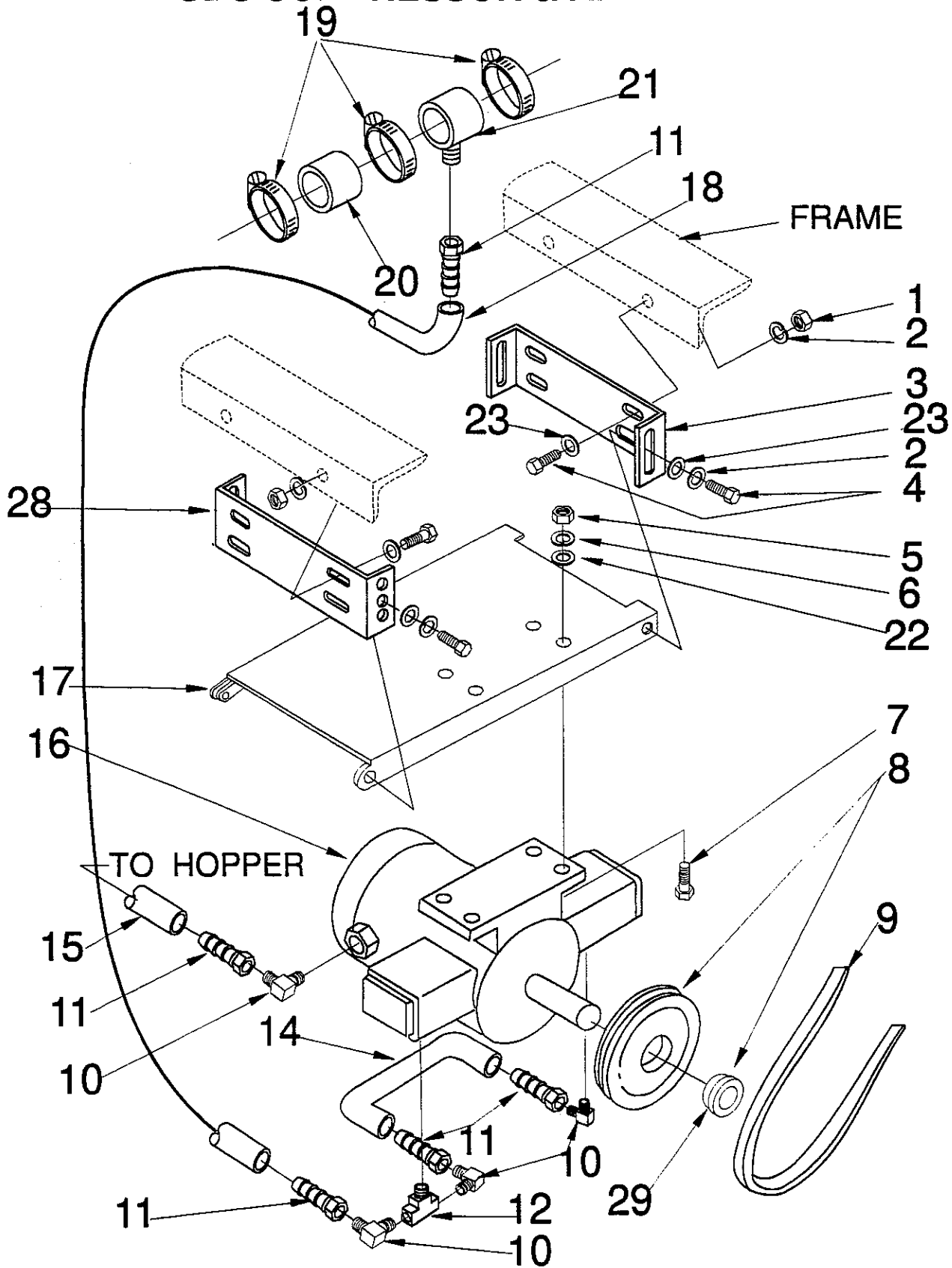
CAB



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	0880-414	Cab	1
1	0880-415	Low Cab	1
2	2-00-02360	Nut, Hex 3/8 - 16 x .562 x .328	3
3	2-00-02310	Lock Washer, Helical Spring 3/8 Med	3
4	2-00-00402	Flat Washer, .750 x .390 x .093	3
5	2-00-00233	Screw, 3/8 - 16 x 1.000 HHC	3
6	2-00-01254	Screw, 1/2 - 13 x 1.500 HHC	1
7	2-00-02312	Lock Washer, Helical Spring 1/2 Med	3
8	2-00-00405	Flat Washer, 1.062 x .531 x .093	5
9	2-00-00596	Nut, Hex 1/2 - 13 x .750 x .437	2
10	2-00-02618	Screw, 1/2 - 13 x 3.500 HHC	2
11	8-18-00225	Bulk Tape	3ft
12	8-18-00353	Decal, 2260	1
12	8-18-00354	Decal, 2260XP	1
13	8-18-00280	Decal,	1

P-4846

CDC COMPRESSOR & AIR INTAKE



P-5081

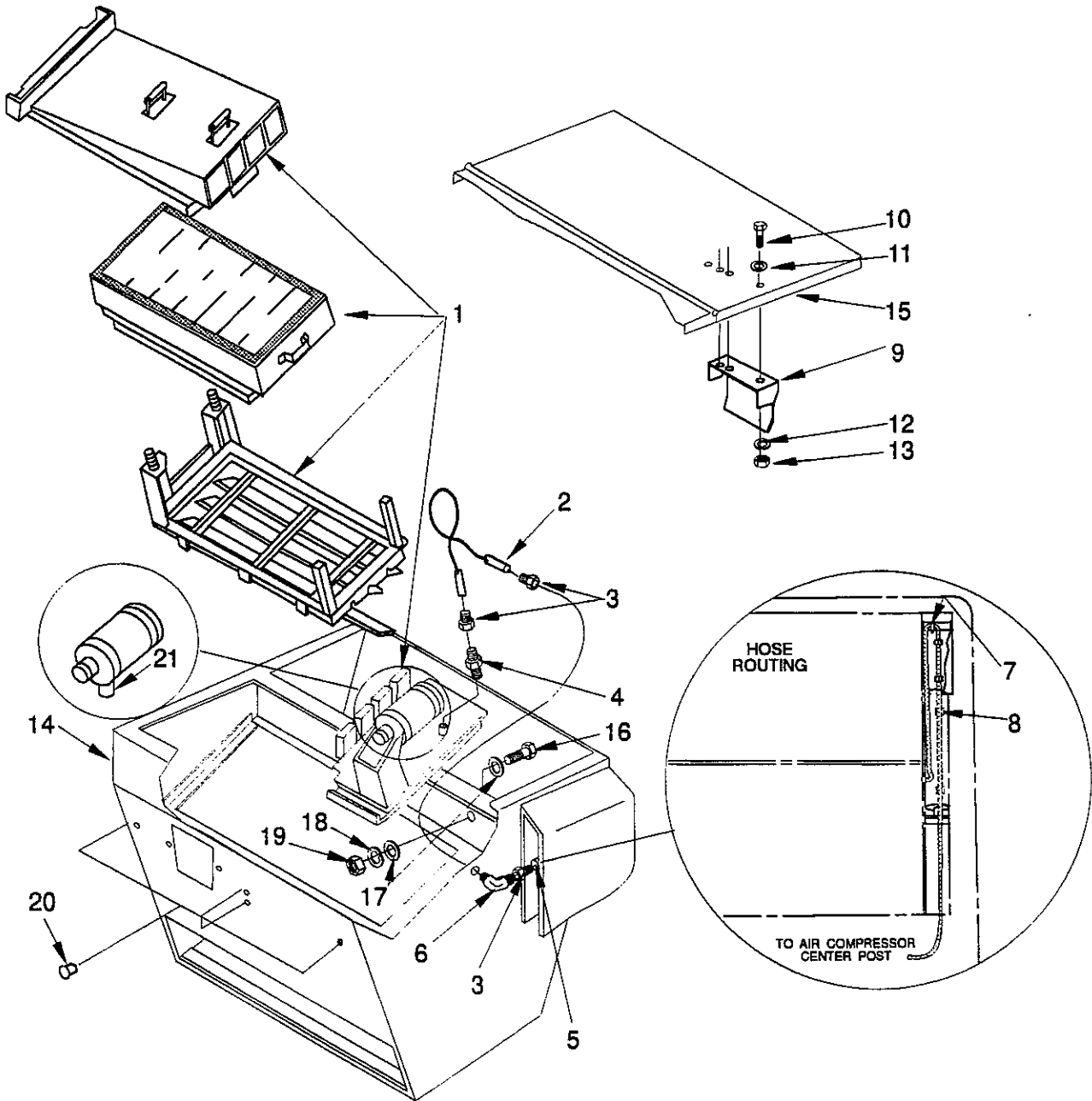
KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-02360	Nut, Hex 3/8 - 16 x .562 x .328	4
2	2-00-02310	Lock Washer, Helical Spring 3/8 Med	8
3	8-08-00718	Bracket	1
4	2-00-00233	Screw, 3/8 - 16 x 1.000 HHC	8
5	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	4
6	2-00-00518	Lock Washer, Helical Spring 1/4 Med	4
7	2-00-00221	Screw, 1/4 - 20 x .750 HHC	4
8	8-60-00165	Pulley (FORD)	1
8	7-60-00137	Pulley (PERKINS 104.19)	1
9	2-00-05017	V-Belt, 46.00 x .437 x .312 (FORD)	1
9	2-00-01043	Belt, Compresssor Drive (PERKINS 104.19)	1
10	2-00-04477	37° JIC 90° Elbow M, 1/4-18/9 / 16-18	4
11	2-00-04856	Hose Fitting Barbed, F 37° JIC Swivel 9/16-18	5
12	2-00-04498	Male Branch Tee, 1/2-14 M-F	1
13	2-00-05050	Hose Clamp, (Ford 413 Radiator Hose Only)	1
14	8-33-02166	Hose,	1
15	8-33-02240	Hose, Compressor to Solenoid	1
16	0890-006-1	Compressor	1
17	8-08-00658	Compressor Bracket	1
18	8-33-02241	Hose,	1
19*	2-00-02216	Hose Clamp, 1.562 - 2.500	3
20*	8-33-02234	Hose,	1
21*	8-16-05021	Coupling	1
22	2-00-03702	Flat Washer, .625 x .281 x .062	4
23	2-00-00402	Flat Washer, .750 x .390 x .093	8
24	2-00-00207	Screw, 5/16 - 18 x 1.000 HHC	4
25	2-00-03702	Flat Washer, .625 x .281 x .062	1
26	2-00-00530	Lock Washer, Helical Spring 5/16 Med	1
27	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	1
28	8-08-00719	Bracket	1
29	8-60-00171	Bushing (PERKINS 104.19)	1
NS	2-00-02084	V-Belt, 31.500 x .375 x .312 (Alternator & Belt Drive - FORD 413 Only)	1

* Order and position vary with installed engine.

0880-538 CDC Option for FORD 413 Engine

0880-539 CDC Option for PERKINS Engine

CDC AIR FILTER



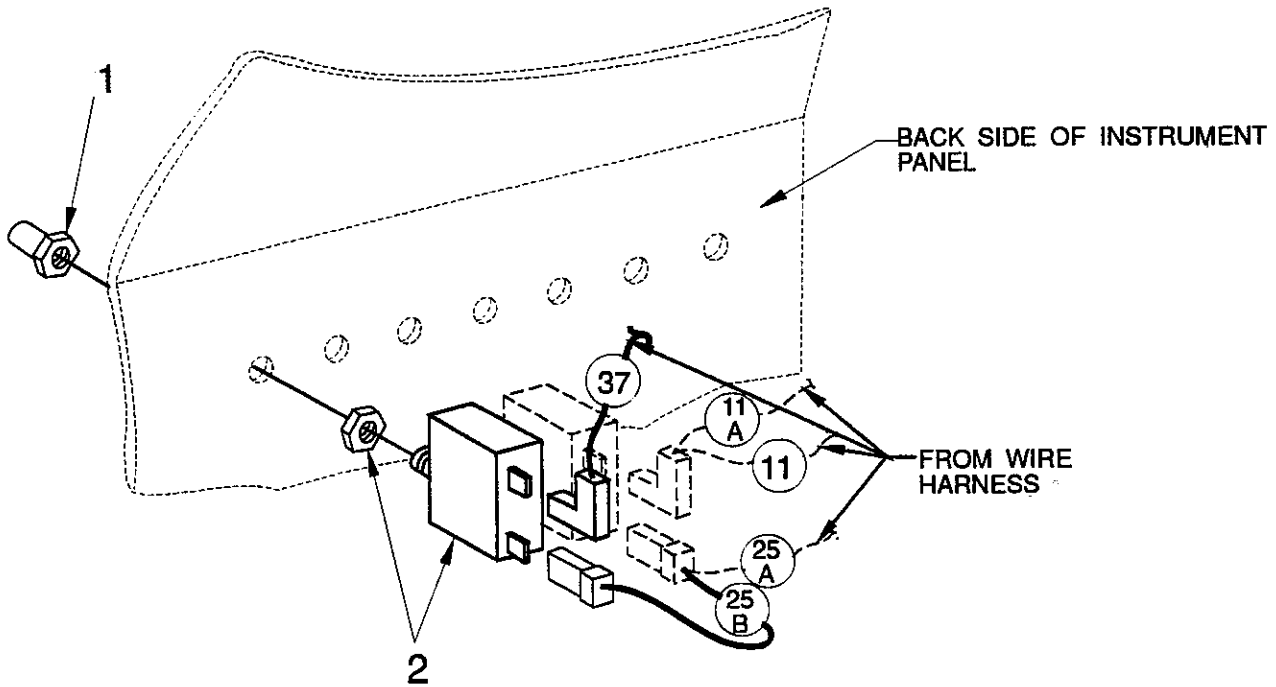
KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	0880-422	CDC Filter Assembly	1
	8-24-04113	CDC Hopper Filter	1
2	8-33-02239	Hose	1
3	2-00-04856	Hose Fitting Barbed, F 37° JIC Swivel 9/16-18	3
4	2-00-05001	37° JIC Adapter, 9/16-18 3/8-18	1
5	8-33-02239	Hose,	1
6	2-00-04857	37° JIC 90° Bulkhead Union El, 9/16-18	1
7	2-00-04345	Ty-Rap	1
8	7-13-07096	Clamp	4
9	0880-431*	Debris Guard Assembly	4
10	*	Screw, 3/8 - 16 x 1.000 HHC	15
11	*	Flat Washer, 3/8	15
12	*	Lock Washer, 3/8	15
13	*	Lock Nut, Hex 3/8 - 16	15
14	8-32-06082	Hopper,	Ref
15	8-16-07304	Hopper Lid,	Ref
16	2-00-00239	Screw, 1/2 - 13 x 1.000 HHC	1
17	2-00-00405	Flat Washer, 1.062 x .531 x .093	2
18	2-00-02312	Lock Washer, Helical Spring 1/2 Med	1
19	2-00-02371	Nut, Hex Jam 1/2 - 13 x .750 x .312	1
20	2-00-04757	Plug Button, .375	4
21	8-70-00069	Stepper Operator Valve Assembly	1

* Part of Debris Guard Assembly 0880-431

0880-538 CDC Option for FORD 413 Engine

0880-539 CDC Option for PERKINS Engine

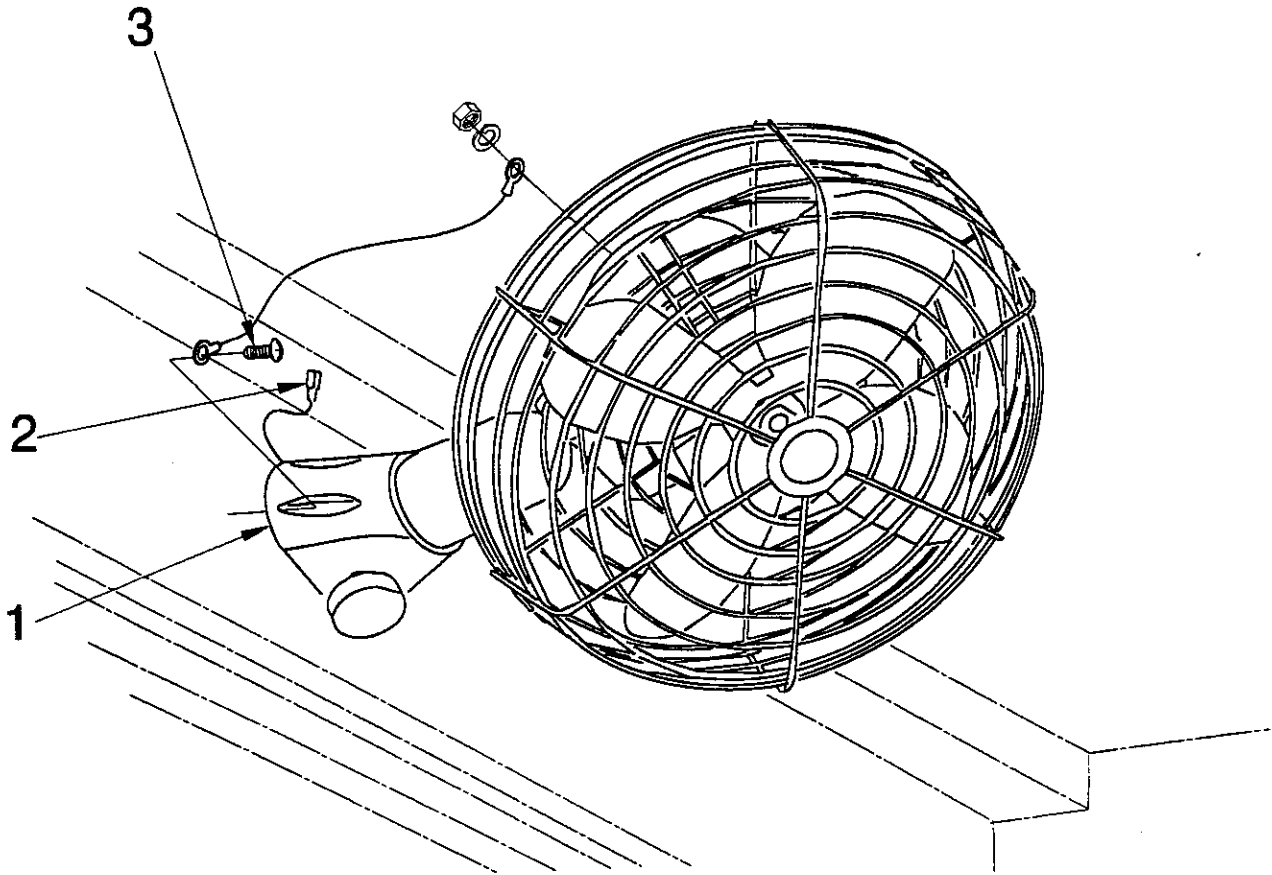
CIRCUIT BREAKER FOR CAB OPTIONS



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-11-00044	Boot	1
2	8-64-00008	Circuit Breaker (15 AMP)	1

P-4869

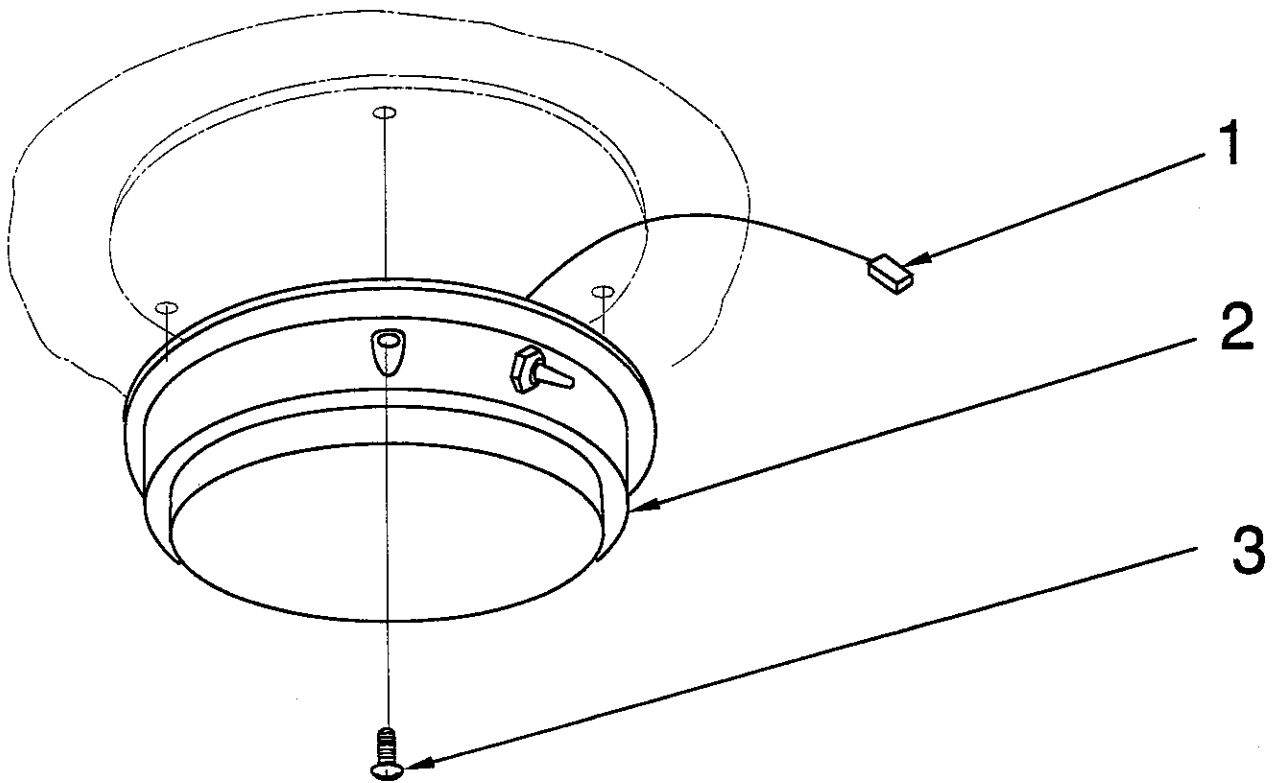
DEFROSTER FAN (CAB)



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	0880-413	Defroster Fan	1
2	8-11-00015	Connector	1
3	2-00-00049	Screw, #10 - 24 x .500 RHM	4

P-4867

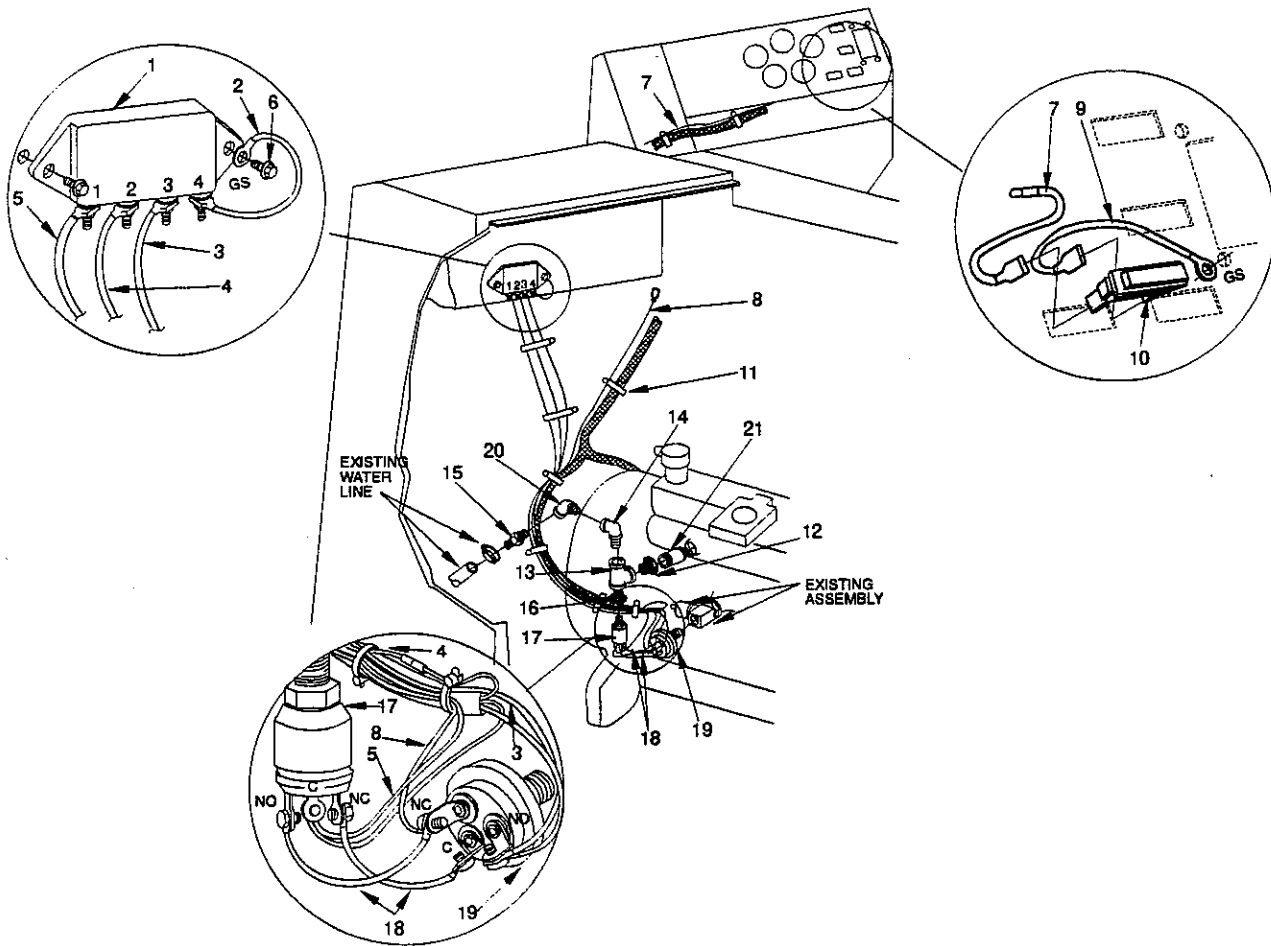
DOME LIGHT - (CAB)



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-11-00015	Connector,	1
2	8-40-05031	Dome Light	1
3	2-00-00044	Screw, #8 - 32 x .500 THM	3

P-4850

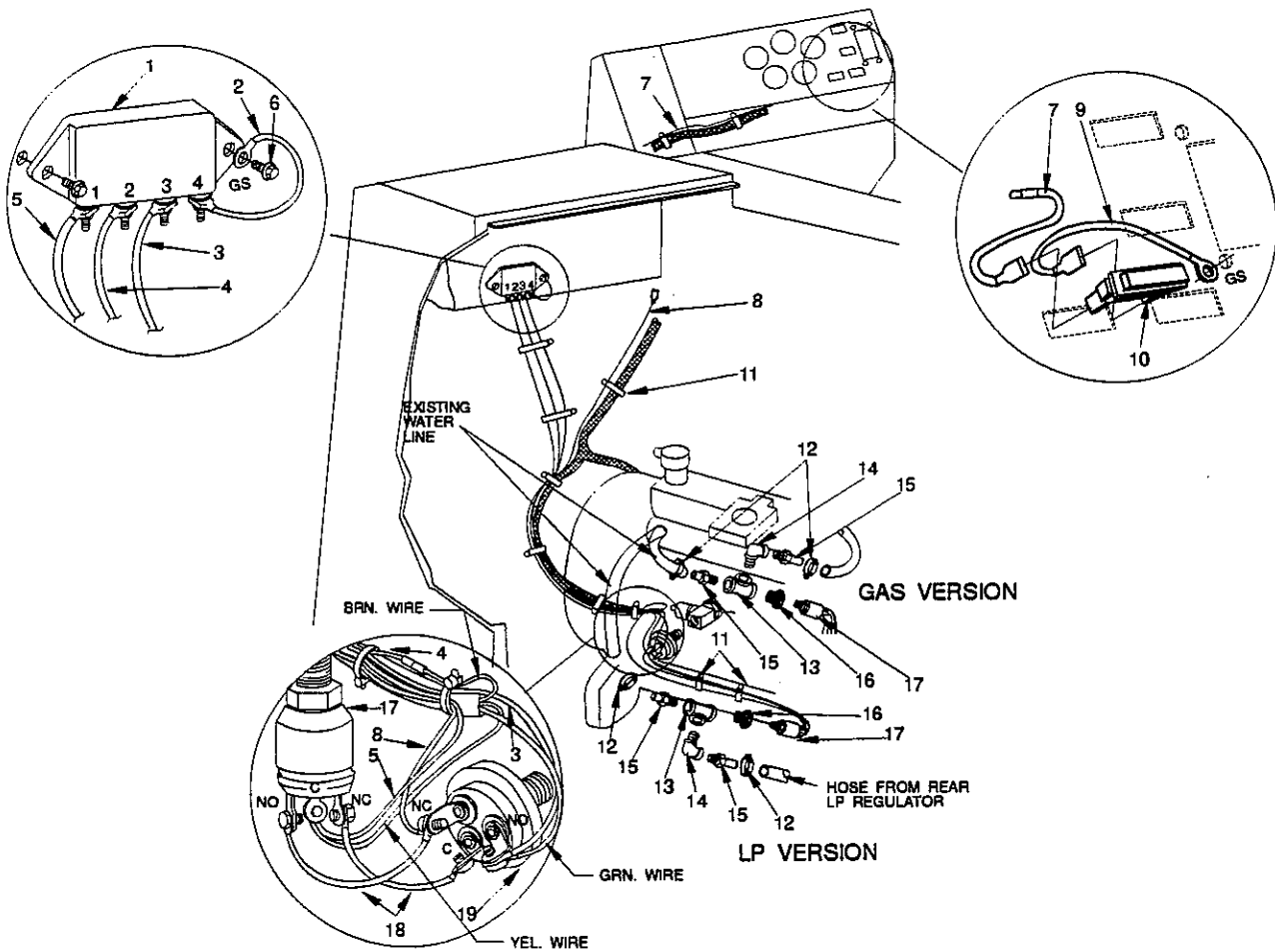
ENGINE SHUTDOWN - FORD 411



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-64-00004	Relay, Automatic Override	1
2	8-90-07365	Wire, (GS) to Auto. Override #4	1
3	8-90-07370	Wire, Auto. Over. #3 to Pressurestat(NO)	1
4	8-90-07366	Wire, Auto. Override #2 to Butt Splice	1
5	8-90-07367	Wire, Auto. Over. #1 to Alarmstat (C)	1
6	2-00-04312	Screw, #10 - 24 x .625 T/C HH	2
7	8-90-07364	Wire, Warning Light to Bullet Plug	1
8	8-90-07368	Wire, Bullet Recept. to Pressurestat(NC)	1
9	8-90-07371	Wire, (GS) to Warning Light	1
10	7-40-05028	Warning Light	1
11	2-00-04345	Ty-Rap	10
12	2-00-04574	Reducer, 3/8 to 1/2 Pipe	1
13	2-95-02537	Pipe Tee, 1/2 NPT Female	1
14	2-00-04616	Street Elbow, 90° 1/2-14 M-F	1
15	7-25-02040	Straight Barb Stern, 1/2-14	1
16	8-09-01070	Bushing, 3/8 Reducer	1
17	8-63-05011	Regulator, Alarmstat	1
18	8-90-07369	Wire, Pressure.(NC) to Alarmstat(NO) & Pressurestat(C) to Alarmstat(NC)	2
19	8-63-05013	Regulator, Pressurestat	1
20	2-00-04747	Fitting, 45° Street Elbow 1/2 NPT	1
21	2-00-04988	Pipe Nipple, 3/8 NPT x 2.00 Lg.	1

P-4832

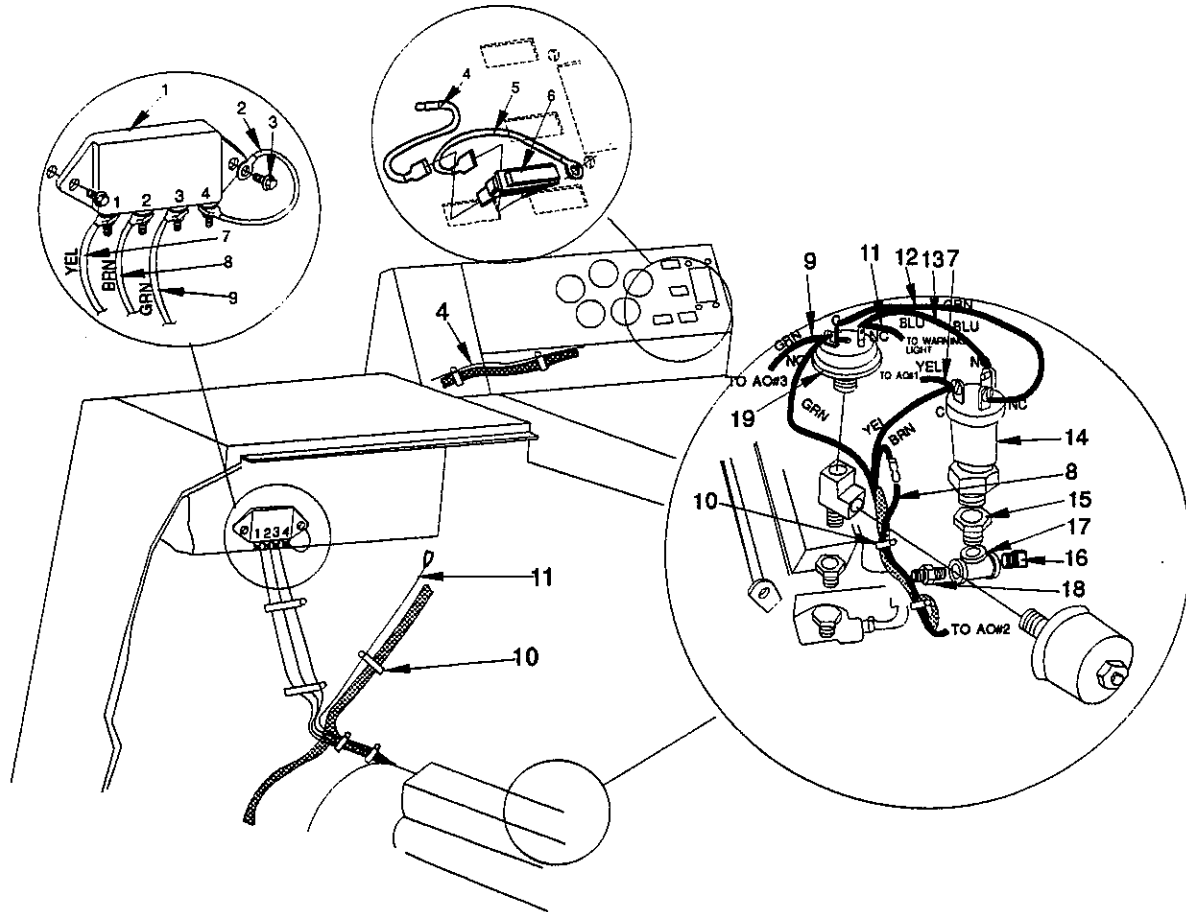
ENGINE SHUTDOWN - FORD 413



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-64-00004	Relay, Automatic Override	1
2	8-90-07365	Wire, (GS) to Auto. Override #4	1
3	8-90-07370	Wire, Auto. Over. #3 to Pressurestat(NO)	1
4	8-90-07366	Wire, Auto. Override #2 to Butt Splice	1
5	8-90-07367	Wire, Auto. Over. #1 to Alarmstat (C)	1
6	2-00-04312	Screw, #10 - 24 x .625 T/C HH	2
7	8-90-07364	Wire, Warning Light to Bullet Plug	1
8	8-90-07368	Wire, Bullet Recept. to Pressurestat(NC)	1
9	8-90-07371	Wire, (GS) to Warning Light	1
10	7-40-05028	Warning Light	1
11	2-00-04345	Ty-Rap	10
12	2-00-03407	Hose Clamp	2
13	2-95-02537	Pipe Tee, 1/2 NPT Female	1
14	2-00-04616	Street Elbow, 90° 1/2-14 M-F	1
15	7-25-02040	Straight Barb Stem, 1/2-14	1
16	8-09-01070	Bushing, 3/8 Reducer	1
17	8-63-05011	Regulator, Alarmstat	1
18	8-90-07369	Wire, Pressure.(NC) to Alarmstat(NO) & Pressurestat(C) to Alarmstat(NC)	2
19	8-63-05013	Regulator, Pressurestat	1
20	7-29-00174	Gasket	1

P-4842

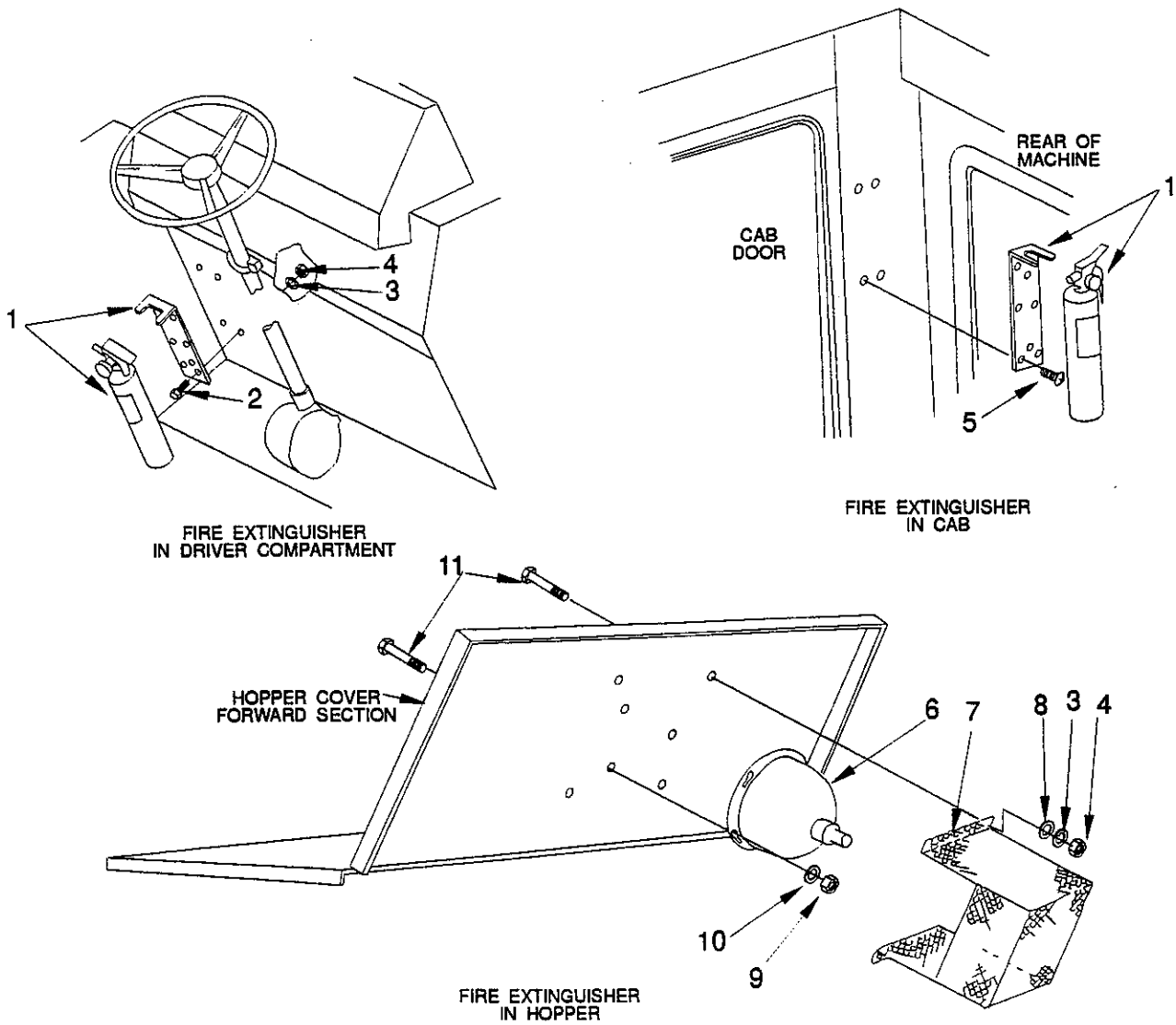
ENGINE SHUTDOWN - PERKINS 104.19



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-64-00004	Relay, Automatic Override	1
2	8-90-07365	Wire, (GS) to Automatic Override #4	1
3	2-00-04312	Screw, #10 - 24 x .625 T/C HH	2
4	8-90-07364	Wire, Warning Light to Bullet Plug	1
5	8-90-07371	Wire, (GS) to Warning Light	1
6	7-40-05028	Light, Warning	1
7	8-90-07398	Wire, (AO #1) to Alarmstat C	1
8	8-90-07399	Wire, (AO #2) to Butt Splice	1
9	8-90-07400	Wire, (AO #3) to Pressurestat (NO)	1
10	2-00-04345	Ty-Rap	11
11	8-90-07403	Wire, Bullet Receptacle to Pressurestat (NC)	1
12	8-90-07402	Wire, Pressurestat(C) to Alarmstat(NC)	1
13	8-90-07401	Wire, Pressurestat(NC) to Alarmstat(NC)	1
14	8-63-05012	Regulator, Alarmstat	1
15	8-09-01070	Bushing, 3/8-1/2 NPT	1
16	2-00-02474	Pipe Plug, 1/2 NPT	1
17	2-95-02537	Tee	1
18	2-00-04638	Reducer, 3/8 to 1/2	1
19	8-63-05013	Regulator, Pressurestat	1

P-5115

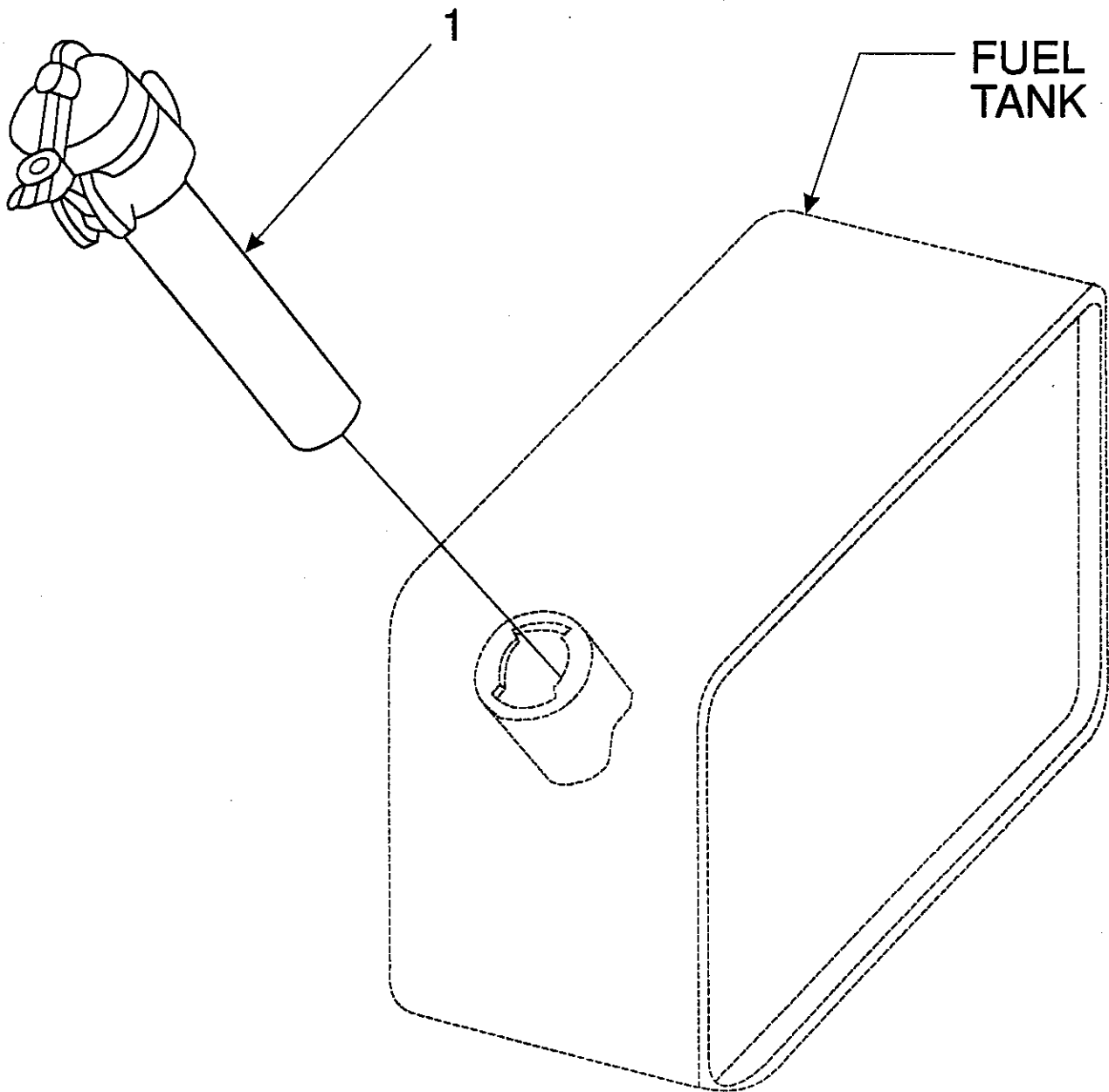
FIRE EXTINGUISHERS



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-83-04033	Fire Extinguisher	1
2	2-00-00221	Screw, 1/4 - 20 x .750 HHC	4
3	2-00-00518	Lock Washer, Helical Spring 1/4 Med	8
4	2-00-03546	Nut, Hex MS 1/4 - 20 x .437 x .187	8
5	2-95-01998	Screw, #1/4 - 10 x .750 T/F RH	4
6	8-83-04023	Fire Extinguisher (In Hopper)	1
7	8-30-05111	Fire Extinguisher Cover	1
8	2-00-00447	Flat Washer, 1.250 x .281 x .089	4
9	2-00-00641	Nut, Hex Fiber Insert 1/4 - 20	3
10	2-00-03702	Flat Washer, .625 x .281 x .062	3
11	2-00-00051	Screw, 1/4 - 20 x .750 RHM	7

P-4872

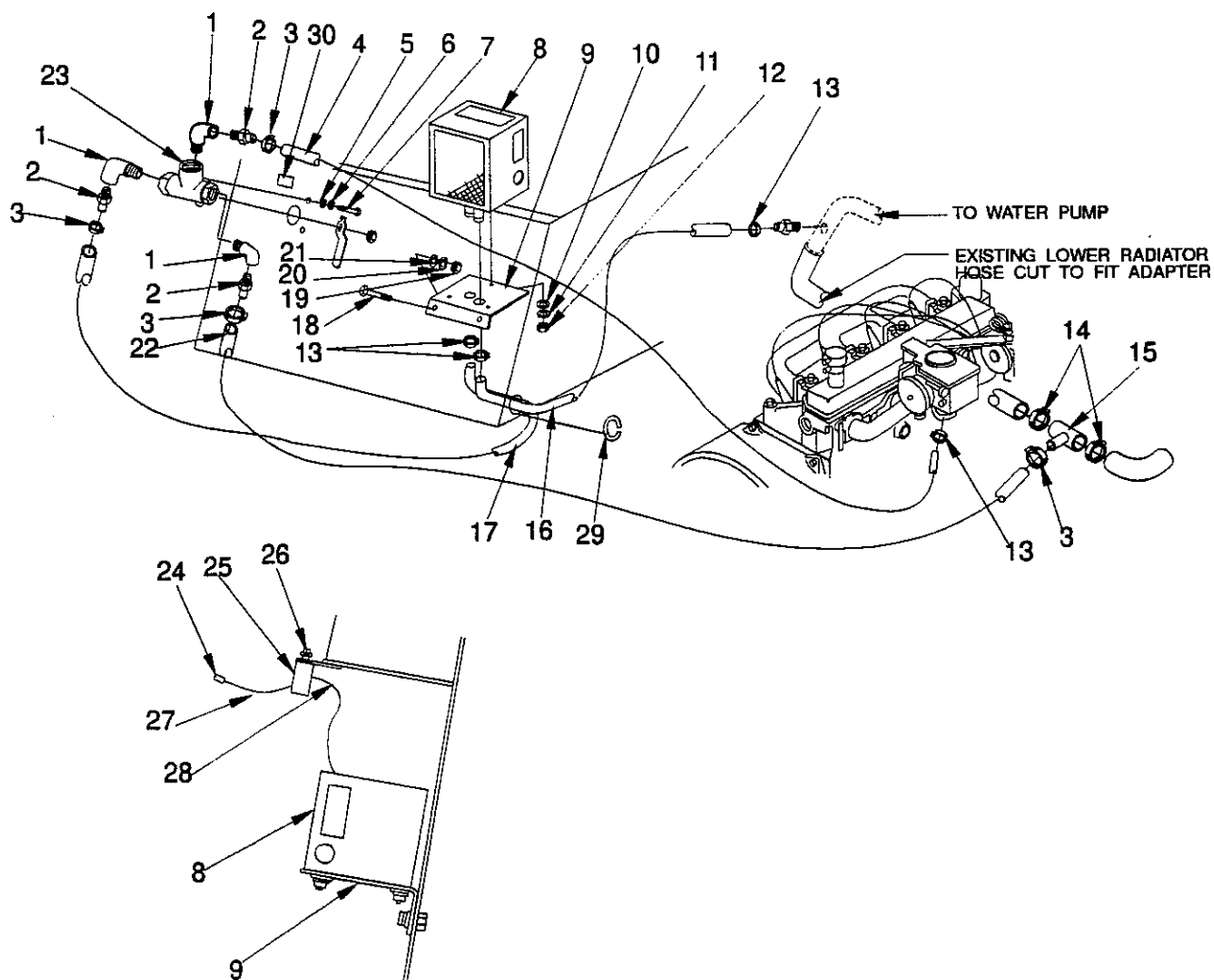
FLAME ARRESTING GAS CAP



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-11-00024	Flame Arresting Gas Cap	1

P-4875

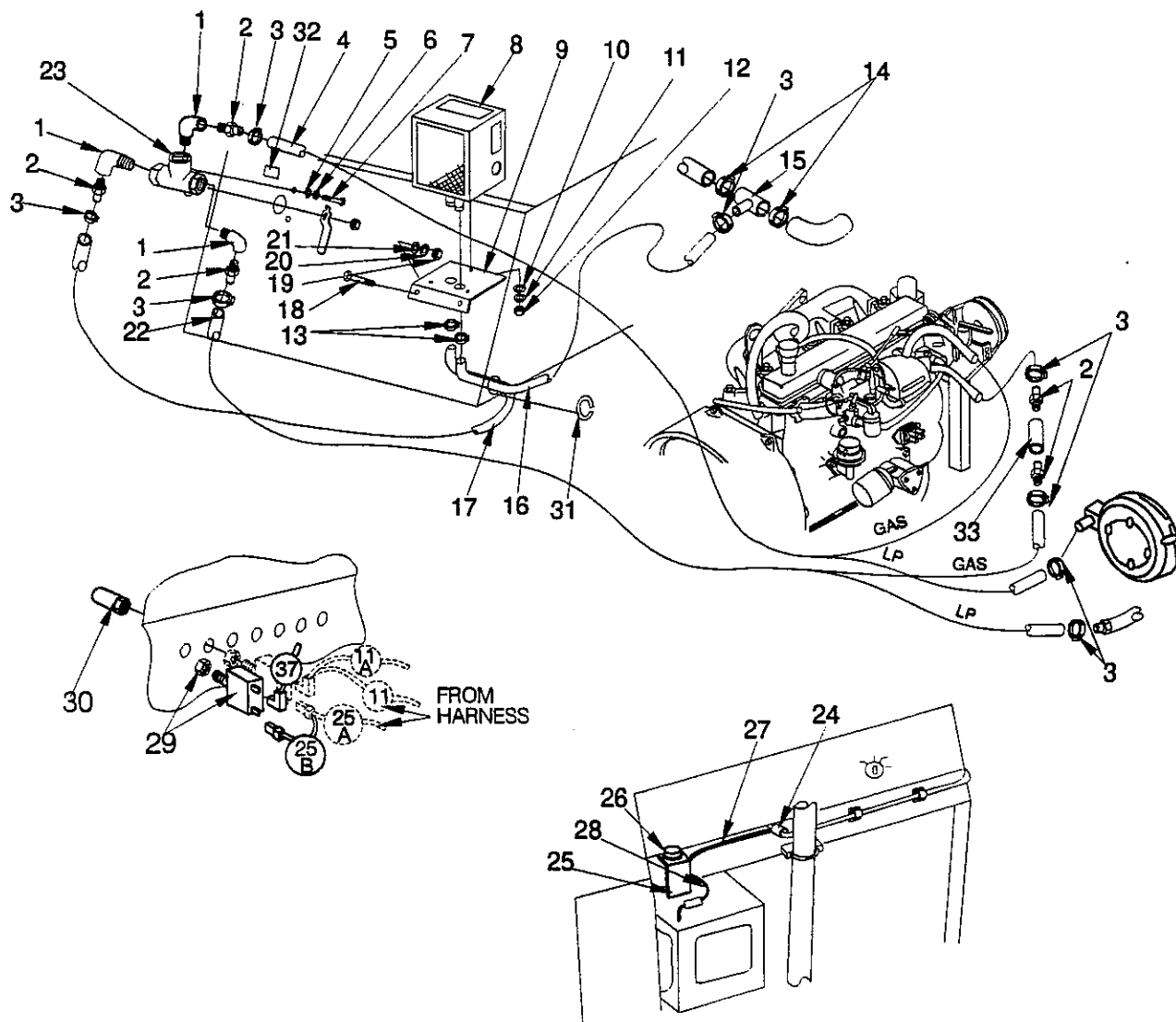
HOT WATER HEATER (CAB) - FORD 411



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-04328	Street Elbow 90°, 1/2 NPT	3
2	7-25-02040	Straight Barb Stem, 1/2-14	3
3	2-00-03407	Hose Clamp, .562 - 1.062	4
4	*	Heater Hose, 5/8	1
5	2-00-01987	Flat Washer, .437 x .200 x .036	4
6	2-00-00519	Lock Washer, Helical Spring #10 Med	2
7	2-00-03059	Screw, #10 - 24 x .375 RHM	2
8	*	Heater Assembly	1
9	*	Mounting Bracket	1
10	*	Flat Washer	3
11	*	Lock Washer,	3
12	*	Nut,	3
13	*	Hose Clamp,	4
14	2-00-03404	Hose Clamp, 1.062 - 2.000	2
15	*	Adapter	1
16	*	Hose, 5/8 x 39	1
17	*	Hose, 5/8 x 39	1
18	2-00-00208	Screw, 5/16 - 18 x .750 HHC	2
19	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	2
20	2-00-00530	Lock Washer, Helical Spring 5/16	2
21	2-00-00409	Flat Washer, .687 x .343 x .062	2
22	*	Hose, 5/8 x 67	1
23	8-88-00043	Heat Valve	1
24	2-00-04479	Connector, 3 wire	1
25	*	Switch Mounting Bracket	1
26	*	Switch	1
27	8-90-07379	Wire, Heater Switch to Power	1
28	8-90-07378	Wire, Heater Switch to Heater	1
29	8-08-07048	Edging	1
30	8-18-00331	Decal, Heater Valve	1

* Part of Heater Kit # 0880-410
All the Above Parts are Heater Option #0880-382

HOT WATER HEATER (CAB) - FORD 413

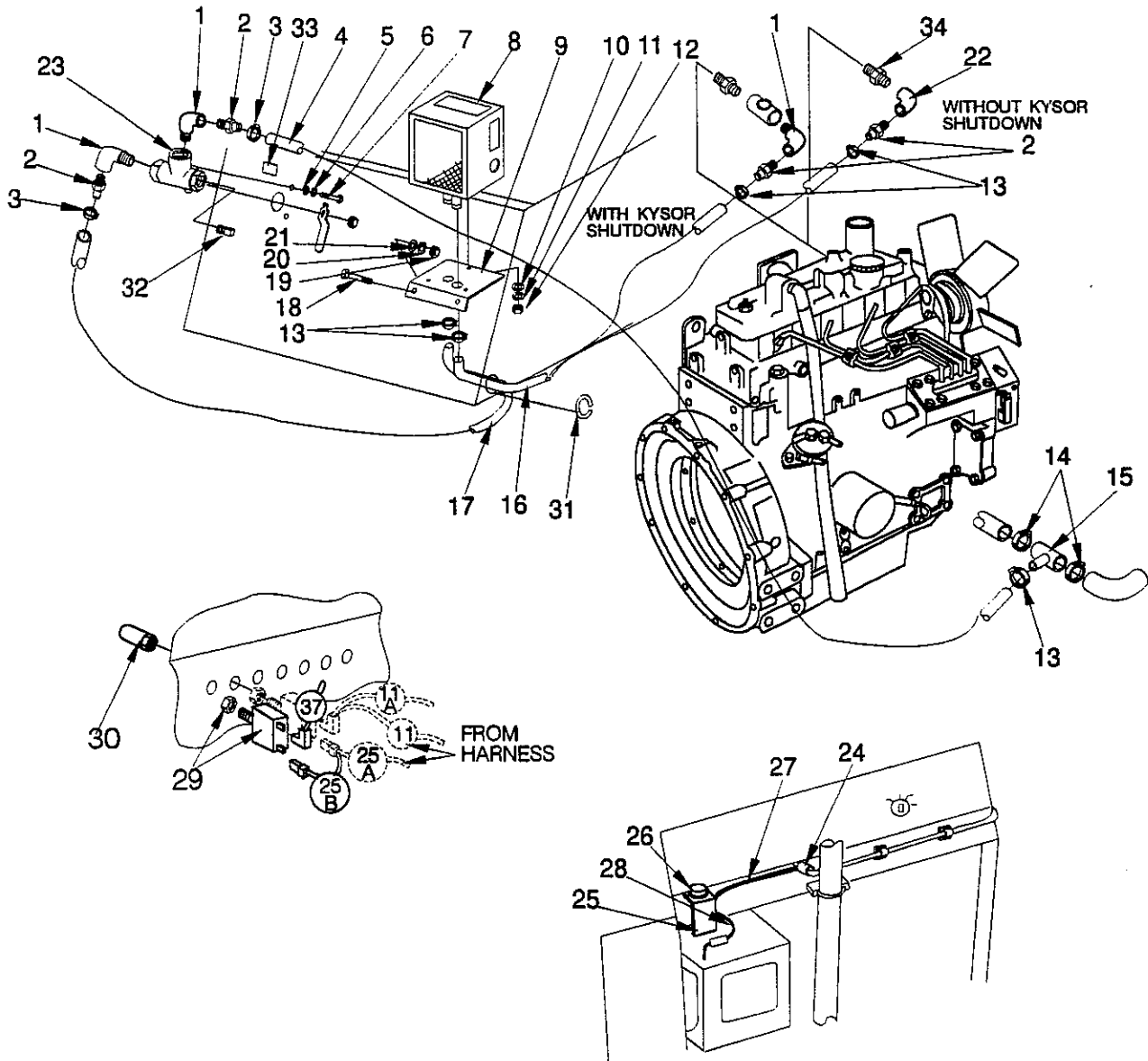


C-0307

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-04328	Street Elbow 90°, 1/2 NPT	3
2	7-25-02040	Straight Barb Stem, 1/2-14	5
3	2-00-03407	Hose Clamp, .562 - 1.062	6
4	*	Heater Hose, 5/8	1
5	2-00-01987	Flat Washer, .437 x .200 x .036	4
6	2-00-00519	Lock Washer, Helical Spring #10 Med	2
7	2-00-03059	Screw, #10 - 24 x .375 RHM	2
8	*	Heater Assembly	1
9	*	Mounting Bracket	1
10	*	Flat Washer	3
11	*	Lock Washer,	3
12	*	Nut,	3
13	*	Hose Clamp,	4
14	2-00-03404	Hose Clamp, 1.062 - 2.000	2
15	*	Adapter	1
16	*	Hose, 5/8 x 39	1
17	*	Hose, 5/8	1
18	2-00-00208	Screw, 5/16 - 18 x .750 HHC	2
19	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	2
20	2-00-00530	Lock Washer, Helical Spring 5/16	2
21	2-00-00409	Flat Washer, .687 x .343 x .062	2
22	*	Heater Hose 5/8	1
23	8-88-00043	Heat Valve	1
24	2-00-04479	Connector, 3 wire	1
25	*	Switch Mounting Bracket	1
26	*	Switch	1
27	8-90-07379	Wire, Heater Switch to Power	1
28	8-90-07378	Wire, Heater Switch to Heater	1
29	8-64-00008	Circuit Breaker 15 Amp	1
30	8-11-00044	Boot	1
31	8-08-07048	Edging	1
32	8-18-00331	Decal, Heater Valve	1
33	2-00-04725	Pipe Coupling 1/2 NPT	1

* Part of Heater Kit # 0880-410
All the Above Parts are Heater Option #0880-384

HOT WATER HEATER (CAB) - PERKINS

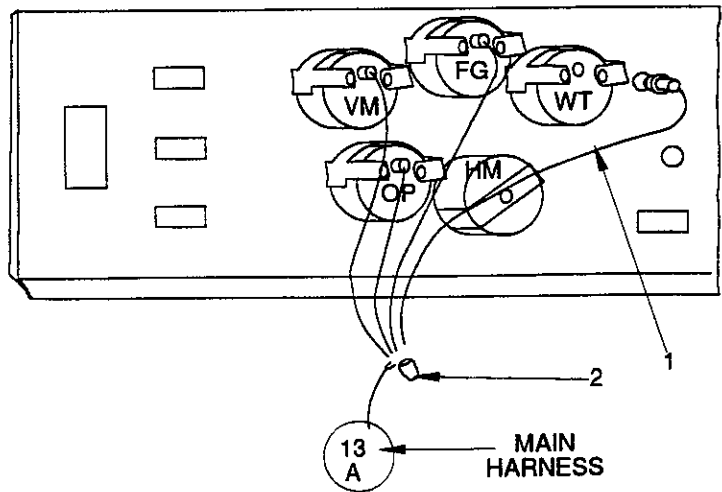
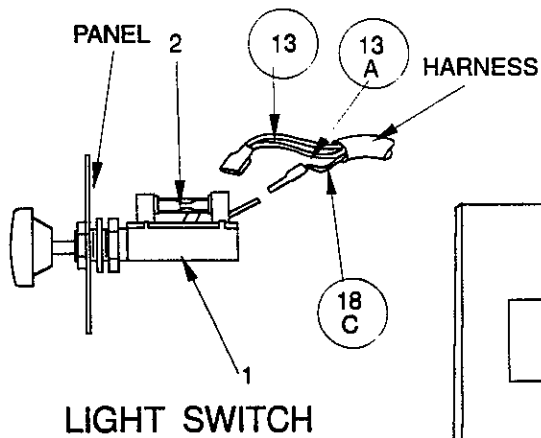
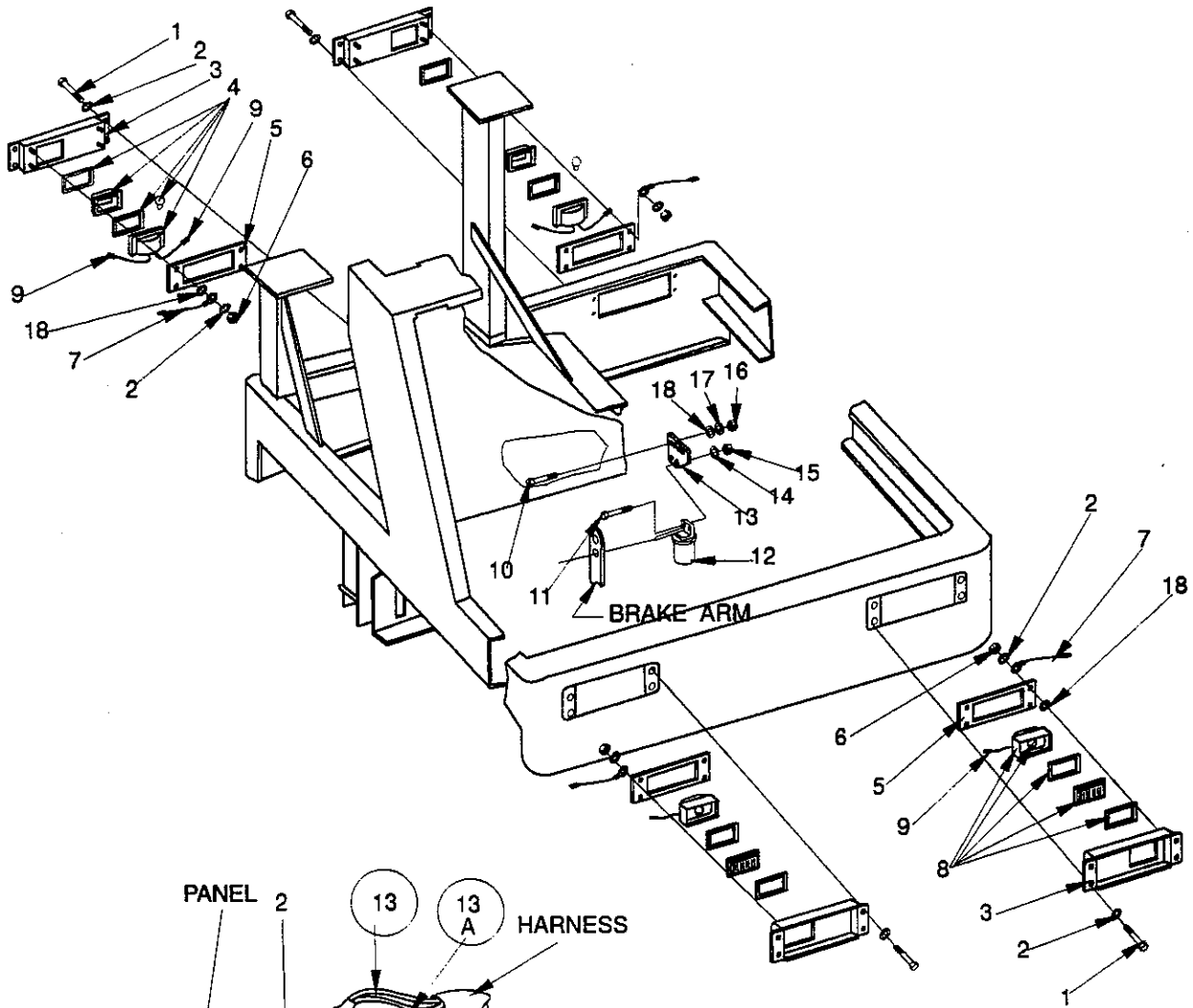


C-0308

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-04328	Street Elbow 90°, 1/2 NPT	3
2	7-25-02040	Straight Barb Stem, 1/2-14	3
3	2-00-03407	Hose Clamp, .562 - 1.062	2
4	*	Heater Hose, 5/8	1
5	2-00-01987	Flat Washer, .437 x .200 x .036	4
6	2-00-00519	Lock Washer, Helical Spring #10 Med	2
7	2-00-03059	Screw, #10 - 24 x .375 RHM	2
8	*	Heater Assembly	1
9	*	Mounting Bracket	1
10	*	Flat Washer	3
11	*	Lock Washer,	3
12	*	Nut,	3
13	*	Hose Clamp,	4
14	2-00-03404	Hose Clamp, 1.062 - 2.000	2
15	*	Adapter	1
16	*	Hose, 5/8 x 39	1
17	*	Hose, 5/8	1
18	2-00-00208	Screw, 5/16 - 18 x .750 HHC	2
19	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	2
20	2-00-00530	Lock Washer, Helical Spring 5/16	2
21	2-00-00409	Flat Washer, .687 x .343 x .062	2
22	2-95-02527	Elbow 90° 1/2 NPT	1
23	8-88-00043	Heat Valve	1
24	2-00-04479	Connector, 3 wire	1
25	*	Switch Mounting Bracket	1
26	*	Switch	1
27	8-90-07379	Wire, Heater Switch to Power	1
28	8-90-07378	Wire, Heater Switch to Heater	1
29	8-64-00008	Circuit Breaker 15 Amp	1
30	8-11-00044	Boot	1
31	8-08-07048	Edging	1
32	2-00-02474	Pipe Plug 1/2 NPT	1
33	8-18-00331	Decal, Heater Valve	1
34	2-00-04638	Nipple, 3/8 - 1/2 NPT	1

* Part of Heater Kit # 0880-410
All the Above Parts are Heater Option #0880-384

LIGHT OPTIONS, HEADLIGHTS, TAIL LIGHTS, INSTRUMENT LIGHTS & BRAKES



HEADLIGHTS/TAILLIGHTS

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-00221	Screw, 1/4 - 20 x .750 HHC	16
2	2-00-00501	Lock Washer, 1/4 Int	32
3	8-08-00745	Single Light Bracket	4
4	8-40-05029	Taillight	2
5	8-08-00599	Backing Plate	4
6	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	16
7	8-90-07358	Ground Wire	4
8	8-40-05028	Headlight	2
9	2-00-04578	Male Bullet Plug	6
10	2-00-00220	Screw, 1/4 - 20 x .625 HHC	2
11	2-00-03061	Screw, #10 - 24 x .500 THM	2
12	8-82-00039	Bracket Switch	1
13	8-08-00611	Brake Light Switch Bracket	1
14	2-00-00519	Lock Washer, Helical Spring #10 Med	2
15	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	2
16	2-00-03546	Nut, Hex MS 1/4 - 20 x .437 x .187	2
17	2-00-00518	Lock Washer, Helical Spring 1/4 Med	2
18	2-00-00409	Flat Washer, .687 x .343 x .062	18

P-4624

LIGHT SWITCH

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-82-00027	Light Switch	1
2	8-28-05012	Fuse - 20 Amp	1

P-4501

INSTRUMENT LIGHTS

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-40-05030	Instrument Light and Lead	4
2	2-00-04588	Wire Nut	1

P-4594

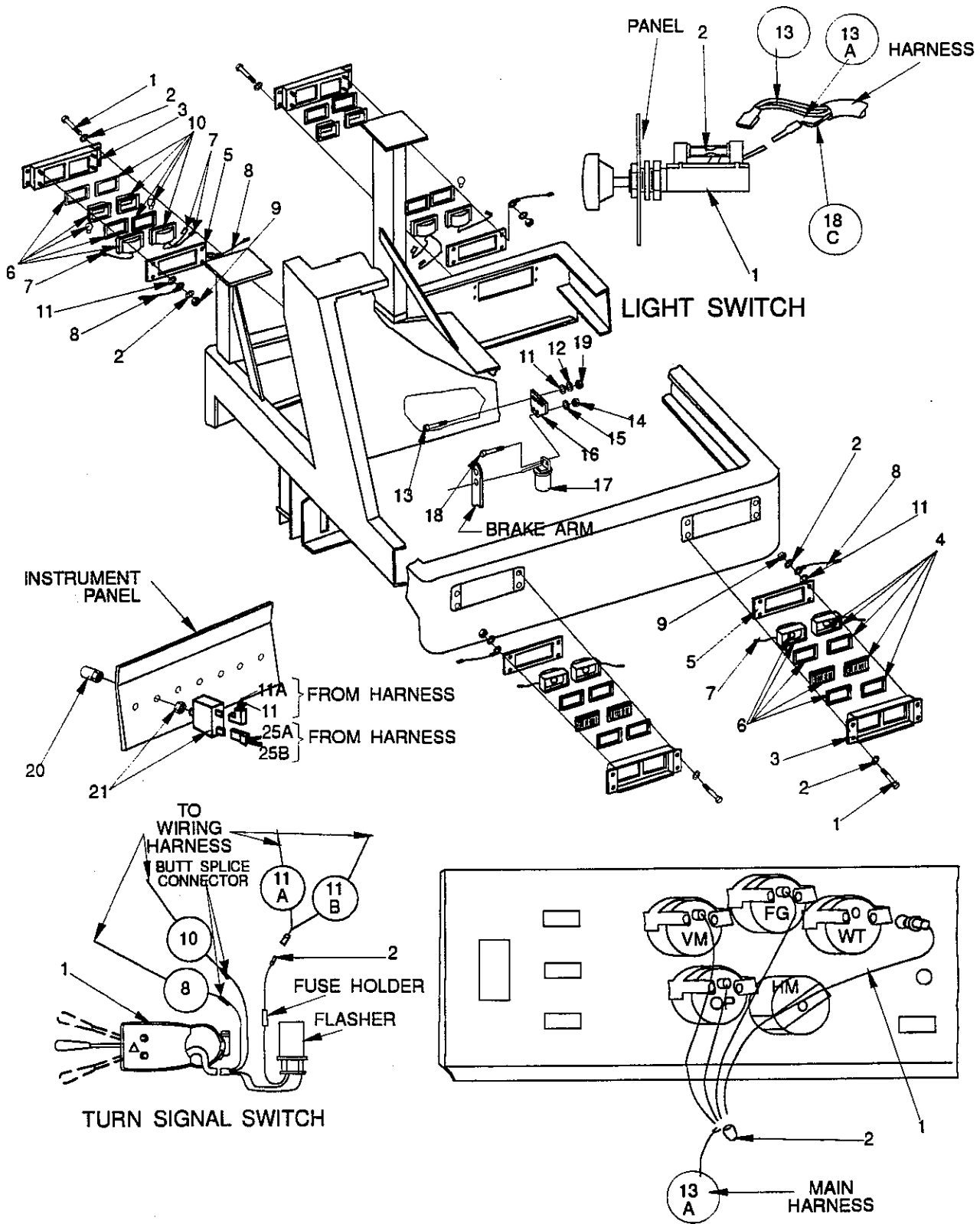
NOTE:

0880-351 Includes: Headlights, Taillights and Instrument Lights

0880-354 Includes: Headlights, Taillights, Instrument Lights and Brake Lights

P-4624

LIGHT OPTIONS, TURN SIGNALS & BRAKES



TURN SIGNALS

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-00221	Screw, 1/4 - 20 x .750 HHC	16
2	2-00-00501	Lock Washer, 1/4 Int.	32
3	8-08-00745	Knockout Light Bracket	4
4	8-40-05028	Head Light	2
5	8-08-00599	Backing Plate	4
6	8-40-05027	Turn Signal Light	4
7	2-00-04578	Bullet Plug (Male)	10
8	8-90-07358	Ground Wire	8
9	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	16
10	8-40-05029	Tail Light / Brake Light	2
11	2-00-00409	Flat Washer, .687 x .343 x .062	18
12	2-00-00518	Lock Washer, Helical Spring 1/4 Med	2
13	2-00-00220	Screw, 1/4 - 20 x .625 HHC	2
14	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	2
15	2-00-00519	Lock Washer, Helical Spring #10 Med	2
16	8-08-00611	Brake Light Switch Bracket	1
17	8-82-00039	Bracket Switch	1
18	2-00-03061	Screw, #10 - 24 x .500 THM	2
19	2-00-03546	Nut, Hex MS 1/4 - 20 x .437 x .187	2
20	8-11-00044	Circuit Breaker Boot	1
21	8-64-00008	Circuit Breaker (15A)	1

TURN SIGNAL SWITCH

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-82-00025	Turn Signal Switch	1
2	2-00-04423	Terminal	1

LIGHT SWITCH

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-82-00027	Light Switch	1
2	8-28-05012	Fuse - 20 Amp	1

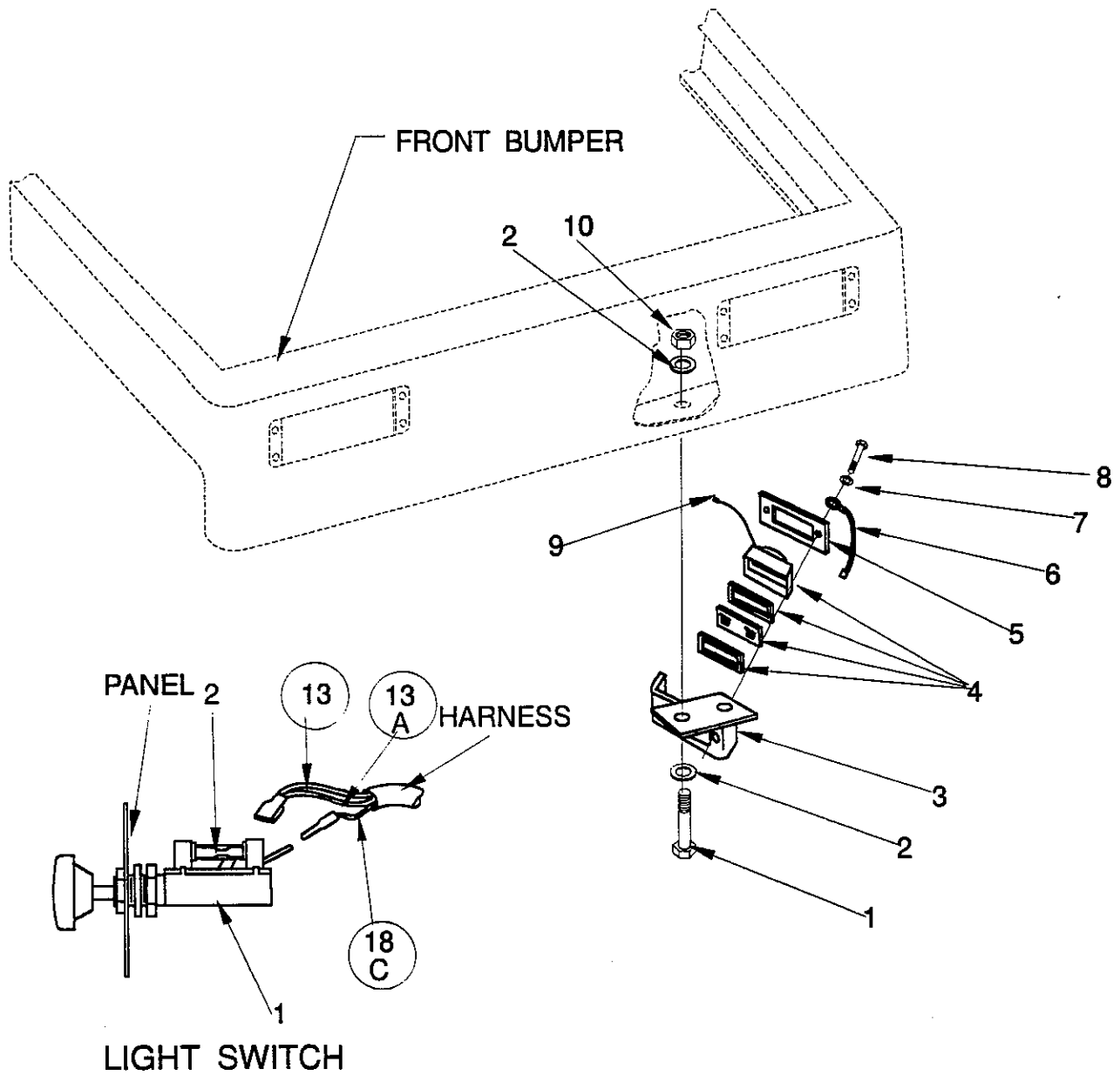
INSTRUMENT LIGHTS

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-40-05030	Instrument Light and Lead	4
2	2-00-04588	Wire Nut	1

NOTE:

0880-355
Includes: Headlights, Taillights, Instrument Lights,
Brake Lights and Turn Signals

LIGHT OPTIONS, SIDE BROOM LIGHT



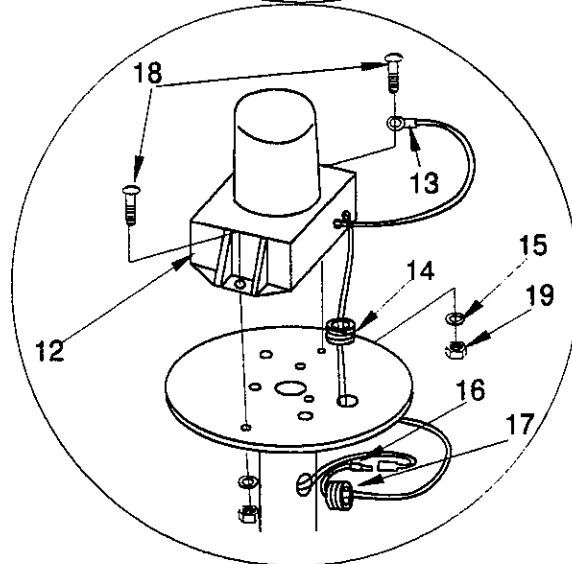
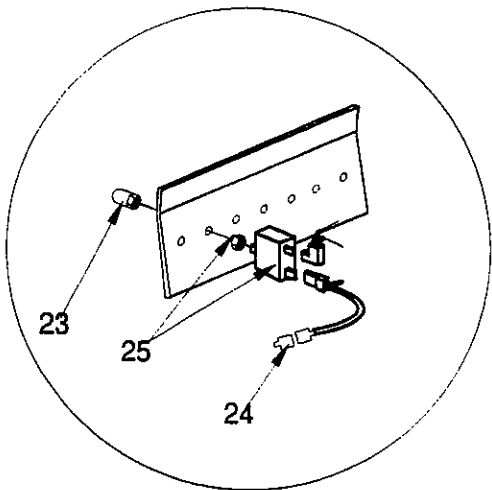
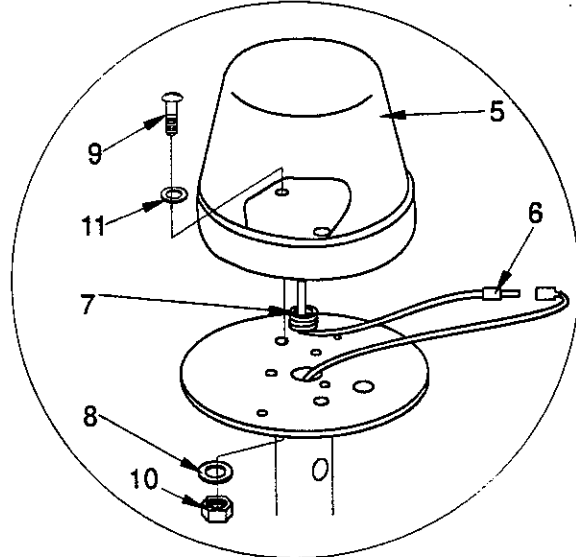
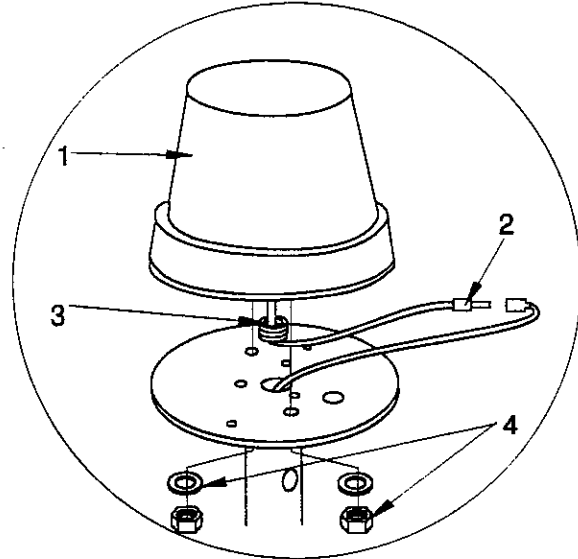
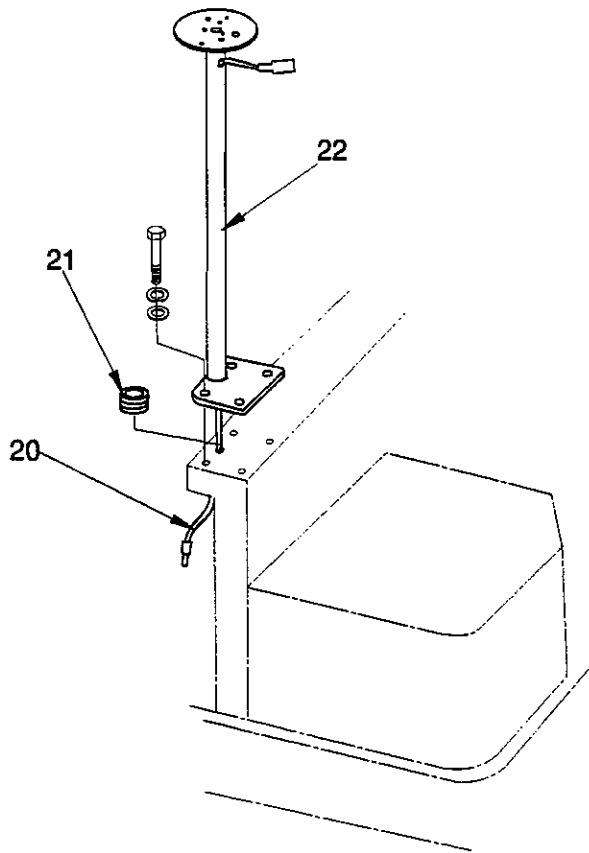
SIDE BROOM LIGHT

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-00233	Screw, 3/8 - 16 x 1.000 HHC	2
2	2-00-00505	Lock Washer, 3/8 Int	4
3	8-08-00612	Side Light Bracket	1
4	8-40-05028	Light	1
5	8-58-05233	Retainer Plate	1
6	8-90-07358	Ground Wire	1
7	2-00-00501	Lock Washer, 1/4 Int	2
8	2-00-00221	Screw, 1/4 - 20 x .750 HHC	2
9	2-00-04578	Male Connector	1
10	2-00-00584	Nut, Hex 3/8 - 24 x .562 x .328	2

LIGHT SWITCH

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-82-00027	Light Switch	1
2	8-28-05012	Fuse - 20 Amp	1

LIGHT OPTIONS, WARNING LIGHT - STANDARD



ROTATING LIGHT

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-40-05010	Red	1
1	8-40-05010-1	Yellow	1
2	2-00-04578	Connector	1
3	2-00-00491	Grommet, .750 x .375 x .375 x .125	1
4	2-00-00512	Lock Washer, #10 Int	1

FLASHING LIGHT

KEY NO.	PART NUMBER	DESCRIPTION	QTY
5	8-40-05033	Red	1
5	8-40-05033-1	Amber	1
6	2-00-04578	Connector	1
7	2-00-00491	Grommet, .750 x .375 x .375 x .125	1
8	2-00-00512	Lock Washer, #10 Int	2
9	2-00-04897	Screw, #10 - 24 x 1.250 TH	2
10	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	2
11	2-00-00426	Flat Washer, .500 x .218 x .062	2

STROBE LIGHT

KEY NO.	PART NUMBER	DESCRIPTION	QTY
12	8-40-05018	Red	1
12	8-40-05018-1	Yellow	1
13	2-00-00838	Terminal	1
14	2-00-00491	Grommet, .750 x .375 x .375 x .125	1
15	2-00-00512	Lock Washer, #10 Int	2
16	2-00-04578	Connector	1
17	2-00-04341	Grommet, .875 x .375 x .375 x .125	1
18	2-00-03063	Screw, #10 - 24 x .750 TH	2
19	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	2

LIGHT SUPPORT

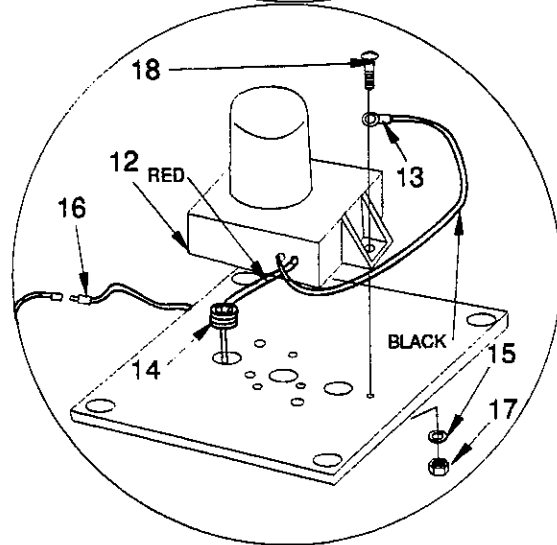
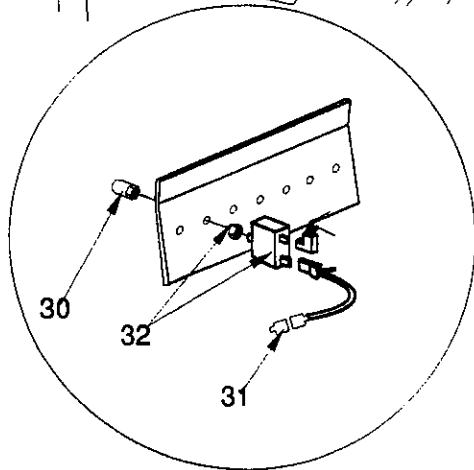
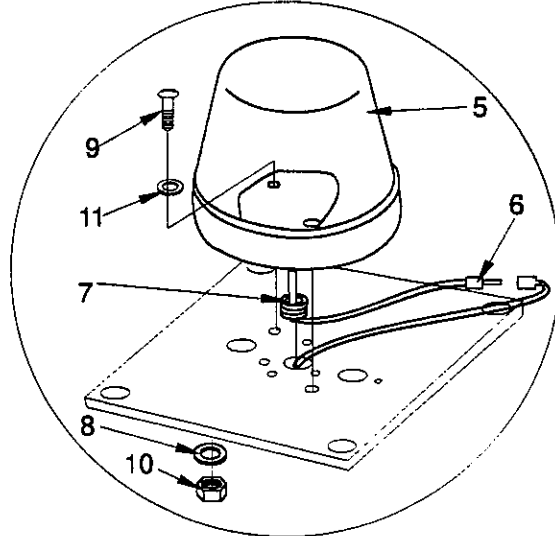
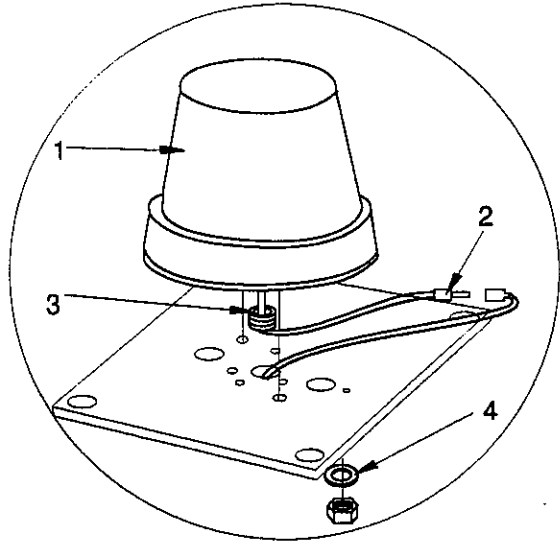
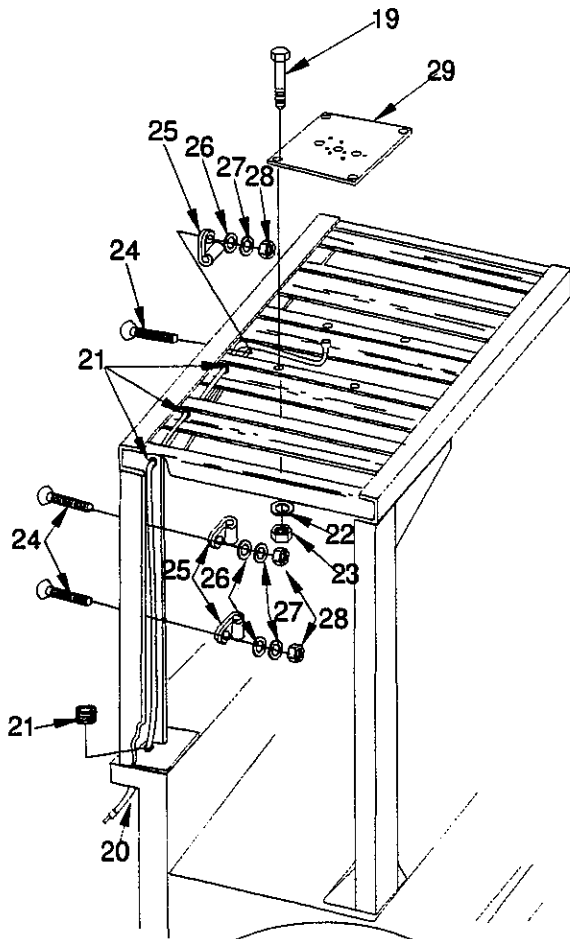
KEY NO.	PART NUMBER	DESCRIPTION	QTY
20	8-90-07362	Wire Assembly	1
21	2-00-00491	Grommet, .750 x .375 x .375 x .125	1
22	8-81-00145	Weldment	1

INSTRUMENT PANEL

KEY NO.	PART NUMBER	DESCRIPTION	QTY
23	8-11-00044	Boot	1
24	8-11-00015	Terminal	1
25	8-64-00008	Circuit Breaker (15AMP)	1

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LIGHT OPTIONS, WARNING LIGHT WITH OVERHEAD GUARD



P-4841

ROTATING LIGHT

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-40-05010	Red	1
1	8-40-05010-1	Yellow	1
2	2-00-04578	Connector	1
3	2-00-00491	Grommet, .750 x .375 x .375 x .125	1
4	2-00-00512	Lock Washer, #10 Int	1

FLASHING LIGHT

KEY NO.	PART NUMBER	DESCRIPTION	QTY
5	8-40-05033	Red	1
5	8-40-05033-1	Amber	1
6	2-00-04578	Connector	1
7	2-00-00491	Grommet, .750 x .375 x .375 x .125	1
8	2-00-00512	Lock Washer, #10 Int	2
9	2-00-04897	Screw, #10 - 24 x 1.250 TH	2
10	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	2
11	2-00-00426	Flat Washer, .500 x .218 x .062	2

STROBE LIGHT

KEY NO.	PART NUMBER	DESCRIPTION	QTY
12	8-40-05018	Red	1
12	8-40-05018-1	Yellow	1
13	2-00-00838	Terminal	1
14	2-00-00491	Grommet, .750 x .375 x .375 x .125	1
15	2-00-00512	Lock Washer, #10 Int	2
16	2-00-04578	Connector	1
17	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	1
18	2-00-03063	Screw, #10 - 24 x .750 TH	2

GUARD WIRE & SUPPORT ASSEMBLY

KEY NO.	PART NUMBER	DESCRIPTION	QTY
19	2-00-00221	Screw, 1/4 - 20 x .750 HHC	4
20	8-90-07363	Wire Assembly	1
21	2-00-00491	Grommet, .750 x .375 x .375 x .125	1
22	2-00-00518	Lock Washer, Helical Spring 1/4 Med	4
23	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	4
24	2-00-03063	Screw, #10 - 24 x .750 TH	3
25	2-00-04209	Cable Clamp,	3
26	2-00-00426	Flat Washer, .500 x .218 x .062	3
27	2-00-00512	Lock Washer, #10 Int	3
28	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	3
29	8-58-05228	Light Support	1

INSTRUMENT PANEL

KEY NO.	PART NUMBER	DESCRIPTION	QTY
30	8-11-00044	Boot	1
31	8-11-00015	Terminal	1
32	8-64-00008	Circuit Breaker (15AMP)	1

ROTATING LIGHT

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-40-05010	Red	1
1	8-40-05010-1	Yellow	1
2	2-00-04578	Connector	1
3	2-00-00491	Grommet, .750 x .375 x .375 x .125	1
4	2-00-00512	Lock Washer, #10 Int	1

FLASHING LIGHT

KEY NO.	PART NUMBER	DESCRIPTION	QTY
5	8-40-05033	Red	1
5	8-40-05033-1	Amber	1
6	2-00-04578	Connector	1
7	2-00-00491	Grommet, .750 x .375 x .375 x .125	1
8	2-00-00512	Lock Washer, #10 Int	2
9	2-00-03063	Screw, #10 - 24 x .750 TH	2
10	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	2
11	2-00-00426	Flat Washer, .500 x .218 x .062	2

STROBE LIGHT

KEY NO.	PART NUMBER	DESCRIPTION	QTY
12	8-40-05018	Red	1
12	8-40-05018-1	Yellow	1
13	2-00-00838	Terminal	1
14	2-00-00491	Grommet, .750 x .375 x .375 x .125	1
15	2-00-00512	Lock Washer, #10 Int	2
16	2-00-04578	Connector	1
17	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	2
18	2-00-03063	Screw, #10 - 24 x .750 TH	2

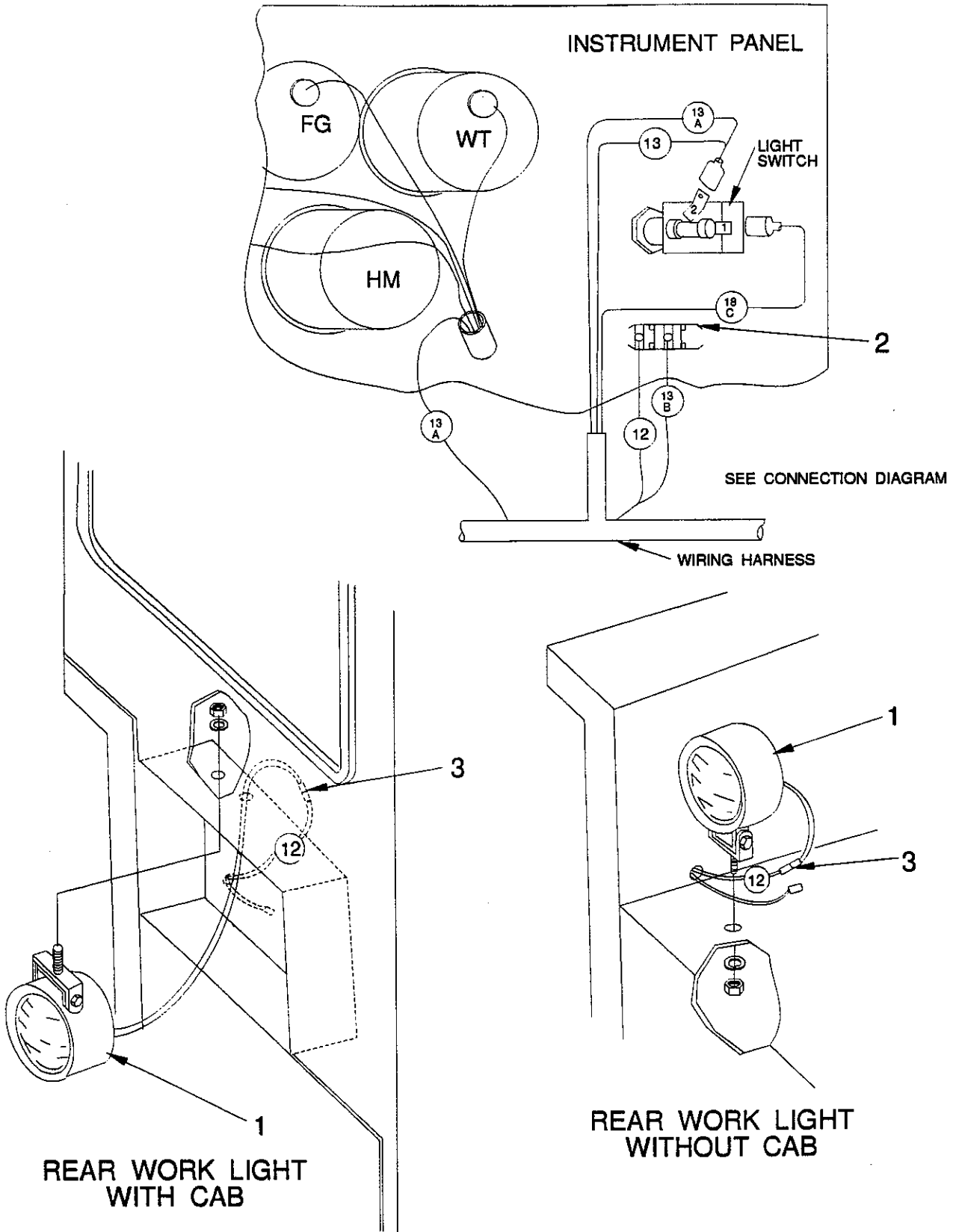
SUPPORT ASSEMBLY

KEY NO.	PART NUMBER	DESCRIPTION	QTY
19	2-00-00491	Grommet, .750 x .375 x .375 x .125	1
20	7-13-07096	Adjustable Clamp	2

INSTRUMENT PANEL

KEY NO.	PART NUMBER	DESCRIPTION	QTY
21	8-11-00044	Boot	1
22	8-64-00008	Circuit Breaker (15AMP)	1

LIGHT OPTIONS, WORK LIGHT

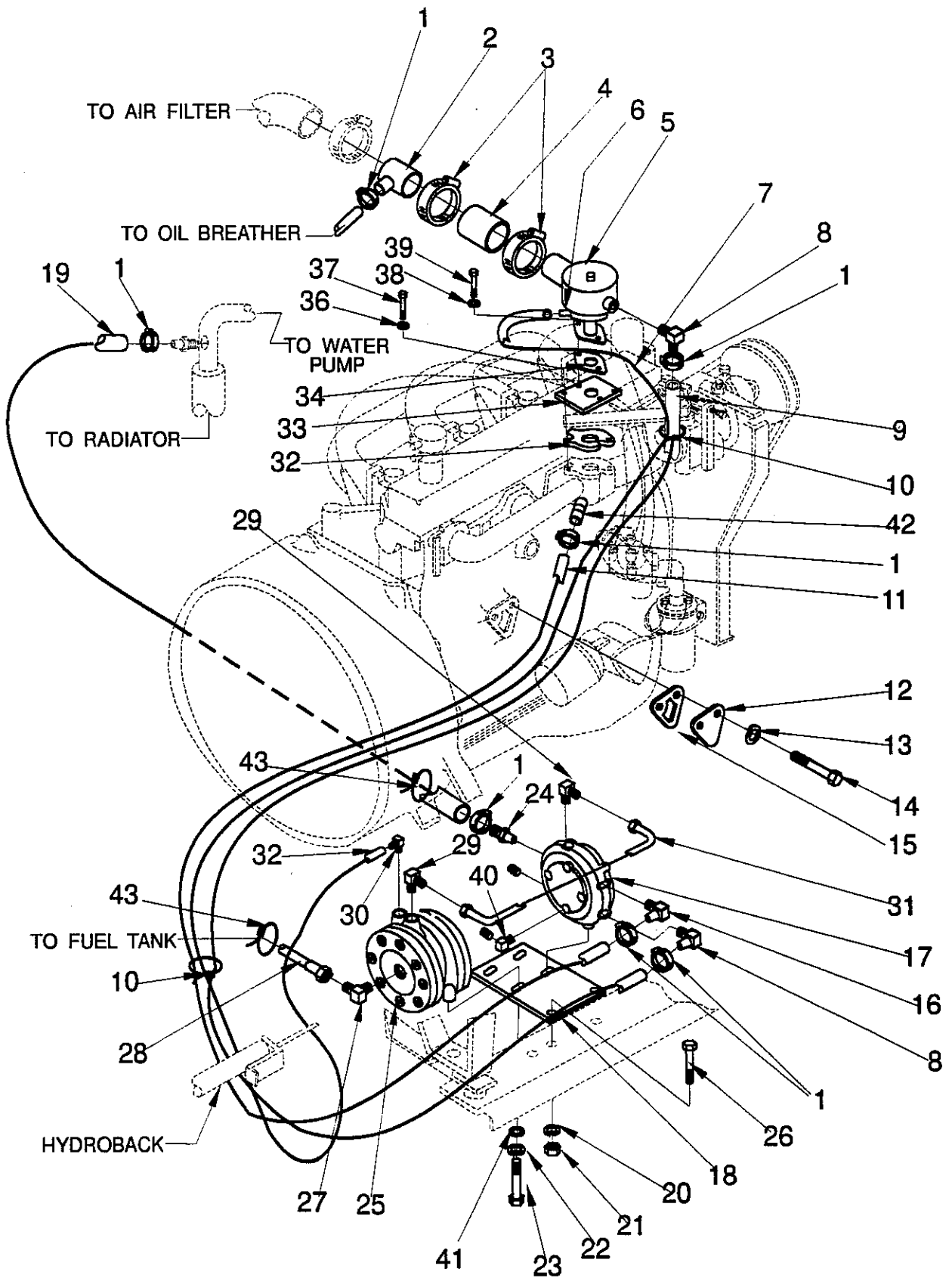


P-4870

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-40-05002	Rear Work Light	1
2	8-82-00044	Switch, SPST on/off	1
3	2-00-04578	Terminal, Male Bullet	1

P-4870

LP - FORD 411 ENGINE



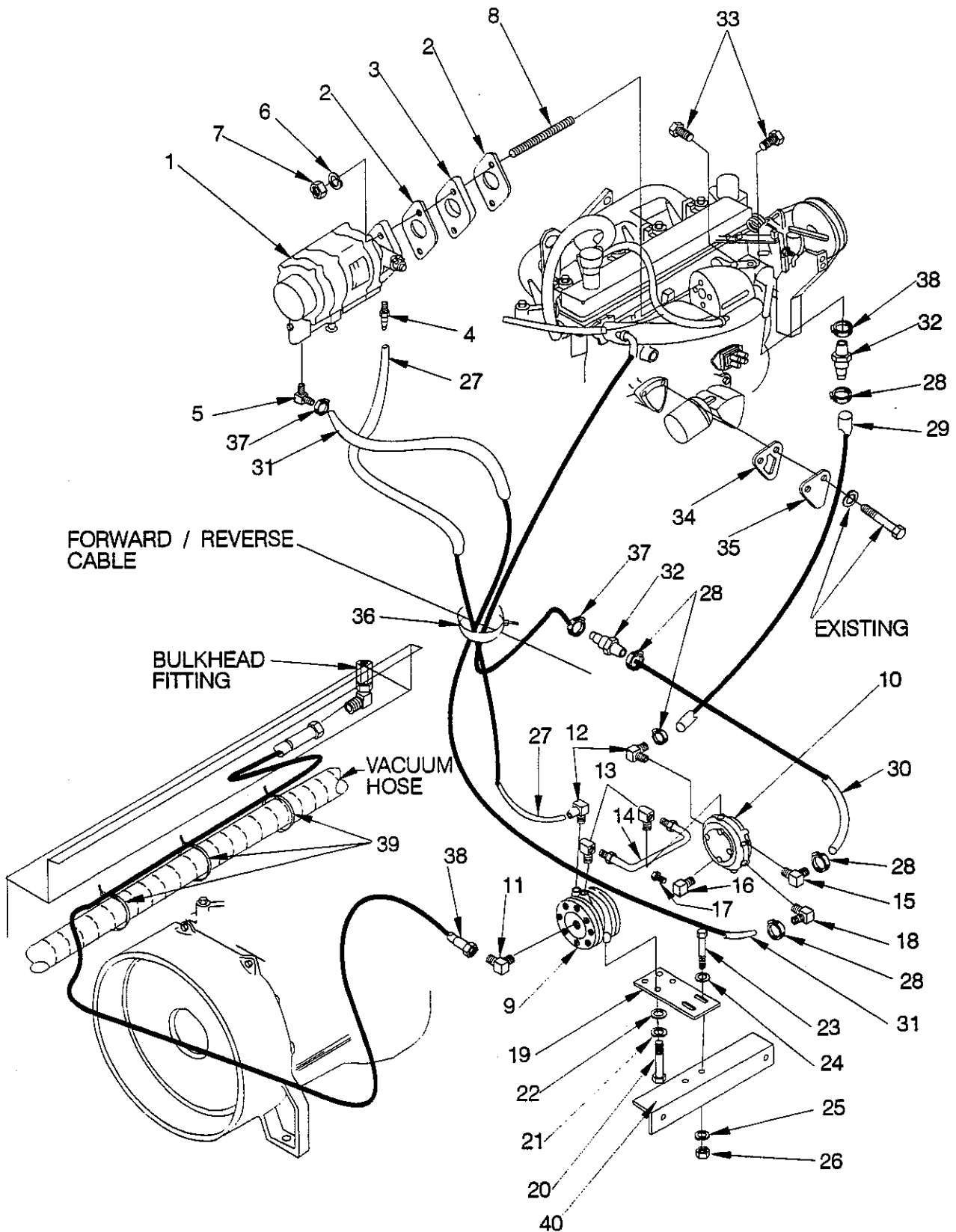
C-0310

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-03407	Hose Clamp, .562 - 1.062	6
2		Tube Connector	1
3	2-00-02216	Hose Clamp, 1.562 - 2.500	2
4		Hose, 2 x 3"	1
5		Carburetor	1
6		Fitting, .25 x .28 Tube	1
7		Hose, Vac.- .25 x 28.50	1
8		Fitting, 1/2 NPT x 5/8 Tube 90° Elbow	2
9		Hose, Vapor 5/8 x 31"	1
10	2-00-04345	Ty-Rap	2
11		Hose, Water 5/8 x 2"	1
12		Cover, Fuel Pump Opening	1
13		Lock Washer	Ref
14		Screw, HHC	Ref
15		Gasket, Fuel Pump Cover	1
16		Fitting	1
17		Regulator - Vaporizer	1
18		Bracket	1
19		Water Hose, 5/8	1
20	2-00-02310	Lock Washer, Helical Spring 3/8 Med	2
21	2-00-02360	Nut, Hex 3/8 - 16 x .562 x .328	2
22	2-00-00518	Lock Washer, Helical Spring 1/4 Med	1
23	2-00-00220	Screw, 1/4 - 20 x .625 HHC	4
24		Fitting, 3/8 NPT x 5/8 Tube 180°	1
25		Fuel Lock Filter	1
26	2-00-00233	Screw, 3/8 - 16 x 1.000 HHC	2
27	8-25-02012	Fitting, 1/4 NPT x 3/8 SAE 90° Elbow	1
28		Hose, 5/16 x 88.00	1
29		Fitting, 1/4 NPT x 1/4 Invt. 90° Elbow	2
30		Fitting, 1/8 NPT x 7/32 Tube 90° Elbow	1
31		Fuel Crossover Live	1
32		Carburetor Mounting Gasket	1
33		Carburetor Mounting Plate	1
34		Carburetor Mounting Gasket	1
35		Hose, PVC 5/8 x 12.00	1
36	2-00-02303	Lock Washer, 5/16 Int	2
37		Screw, M8 - 20 MHHM	1
38	2-00-00530	Lock Washer, 5/16	2
39	2-00-00213	Screw, 5/16 - 18 x .625 HHC	2
40		Fitting, 1/8 NPT x 1/8 FM 90°	1
41	2-00-00406	Flat Washer, 1/4	4
42		Fitting, 3/8 NPT x 5/8 Tube 45° Elbow	1
43	2-00-04345	Nylon Tyrap	3

LP Kit for FORD 411 Engine is Part Number 8-11-04015

C-0310

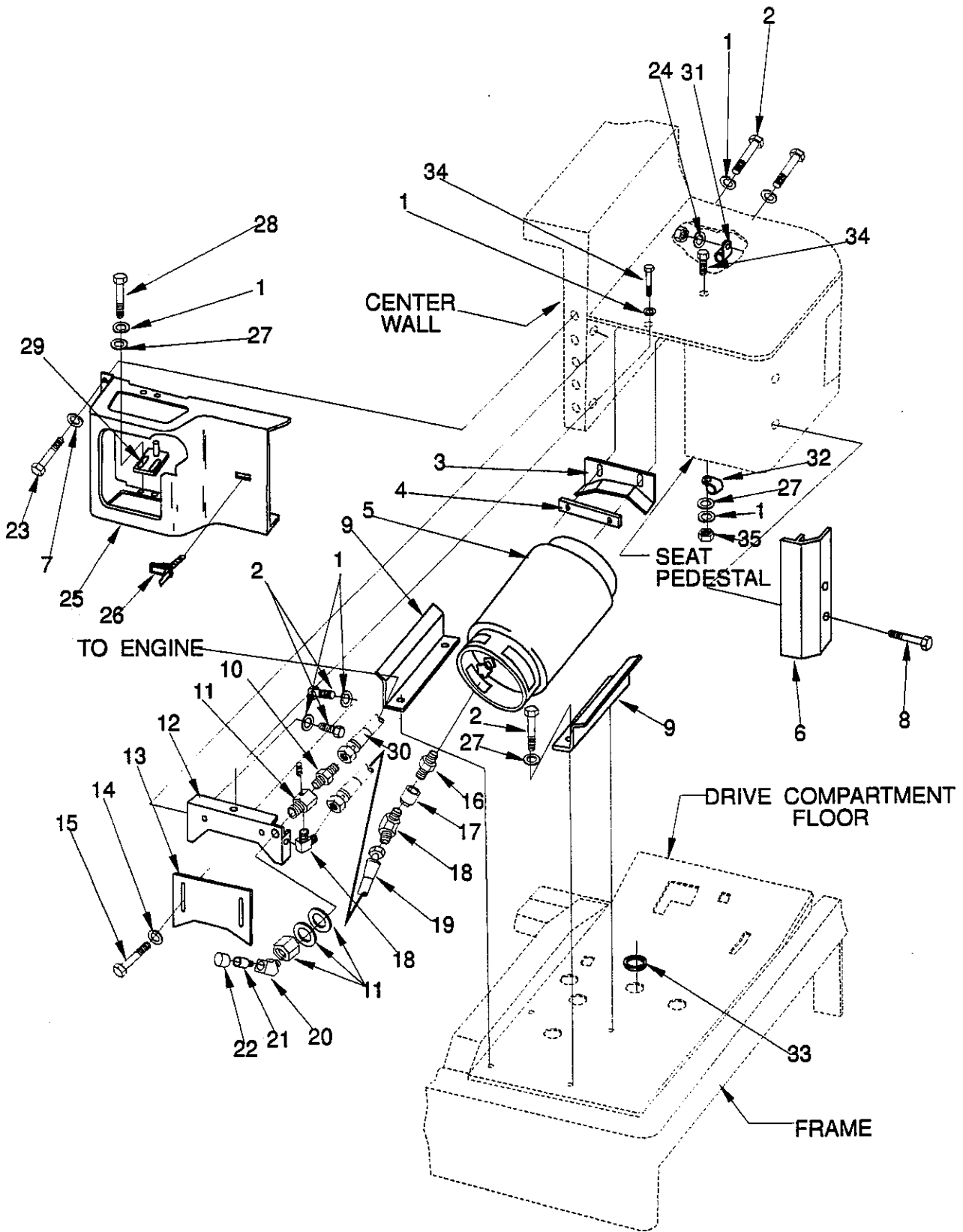
LP - FORD 413 ENGINE (IMCO)



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	*	Throttle Body & Mixer Assembly	1
2	*	Gasket	1
3	*	Spacer	1
4	*	Vacuum Fitting, 1/4 -28 Str x 1/4 Hose	1
5	*	Vapor Fitting, 3/8 NPT(M) x 5/8 Hose x 90° Elbow	1
6	*	Lock Washer, 5/16	2
7	*	Metric Hex Nut, M8 x 1.250	4
8	*	Metric Stud, M8 x 1.250 (43MM Lg.)	2
9	*	Fuel Lock Filter	1
10	*	Vaporizer/Regulator	1
11	*	Fitting, 1/4 NPT(M) x 3/8 SAE x 90° Elbow	1
12	*	Vacuum Fitting, 1/8 NPT(M) x 1/4 Hose x 90° Elbow	1
13	*	Fitting, 1/4 NPT(M) x 1/4 Tube x 90° Elbow	2
14	*	U-Tube, 1/4 Tube	1
15	*	Water Fitting, 3/8 NPT(M) x 5/8 Hose x 90° Elbow	2
16	*	Fitting, 1/8 NPT Street Elbow	1
17	*	Plug, 1/8 NPT	1
18	*	Vapor Fitting, 1/2 NPT(M) x 5/8 Hose x 90° Elbow	1
19	*	Mounting Plate	1
20	*	1/4 He Bolt, .625" LG.	4
21	*	1/4 Split Lock Washer,	4
22	*	1/4 Washer,	4
23	*	3/8 Hex Bolt x 1.000 LG.	2
24	*	3/8 Washer,	2
25	*	3/8 Splt Lock Washer	2
26	*	3/8 Hex Nut	2
27	*	1/4 Vacuum Hose, 21.000" LG.	1
28	*	Hose Clamp	5
29	*	5/8 ID Water Hose, 20.000" LG.	1
30	*	5/8 ID Water Hose, 9.500" LG.	1
31	*	5/8 ID Vapor Hose, 24.500" LG.	1
32	*	5/8 Barb x Barb	2
33	*	3/8 Plug, Hex Head	2
34	*	Pump Gasket	1
35	*	Pump Cover	1
36	*	Tie	1
37	*	Hose Clamp	3
38	7-33-02246	Hose, 5/16 ID x 54" LG.	Ref
39	2-00-04345	Ties	Ref
40	7-81-00159	Support Bracket,	1
*	8-11-04019	IMCO LP Carburetion Kit (Items 1 thru 37)	1

C-0062

LP TANK SYSTEM



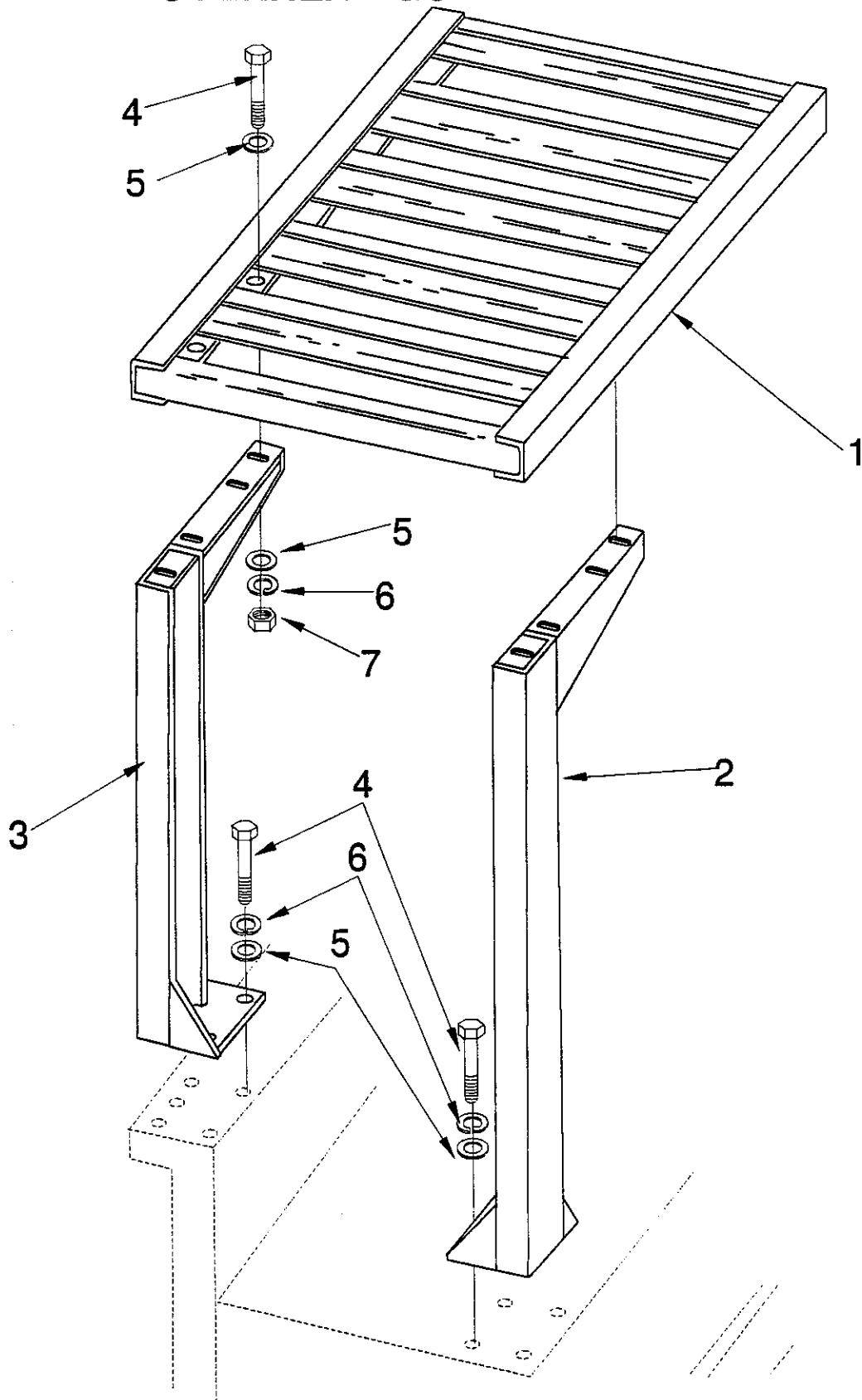
P-4787

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-00518	Lock Washer, Helical Spring 1/4 Med	12
2	2-00-00219	Screw, 1/4 - 20 x .500 HHC	8
3	8-65-00041	Rear Retainer	1
4	8-08-00619	Tapped Strap	1
5	8-83-04016	LP Tank	1
6	8-78-05018	Tank Support	1
7	2-00-02312	Lock Washer, Helical Spring 1/2 Med	5
8	2-00-02617	Screw, 1/2 - 13 x 3.250 HHC	2
9	8-81-00144	Tank Support	2
10	**	Fitting, 1/4 NPT x 3/8 SAE Str.	1
11	**	Fitting, Bulk Head Plus Hardware	1
12	8-52-00122	Seat Compartment Wall	1
13	8-65-00042	Tank Retainer	1
14	2-00-00409	Flat Washer, .687 x .343 x .062	2
15	2-00-04867	Screw, 5/16 - 18 x 1.000 TB	2
16	*	Fitting	1
17	**	Coupling	1
18	**	Fitting, 1/4 NPT x 3/8 SAE 90° Elbow	2
19	**	Hose, Tank to Relief Valve	1
20	**	Fitting, 1/4 NPT x 1/4 FM 45° Elbow	1
21	**	Relief Valve	1
22	**	Plastic Cap	1
23	2-00-00239	Screw, 1/2 - 13 x 1.000 HHC	1
24	2-00-02310	Lock Washer, Helical Spring 3/8 Med	6
25	8-08-07052	Bumper	1
26	8-41-00040	Latch	1
27	2-00-00407	Flat Washer, .562 x .265 x .062	7
28	2-00-00221	Screw, 1/4 - 20 x .750 HHC	2
29	8-08-00620	Tank Locating Pin	1
30	8-33-02238	Hose, Engine to Relief Valve (FORD)	Ref
31	8-13-07091	Clamp	1
32	2-00-04564	Cable Clamp, .812	1
33	8-09-01077	Grommet	1
34	2-00-00205	Screw, 1/4 - 20 x 1.000 HHC	1
35	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	5

* Comes with Tank Part Number 8-83-04016

** All Parts without a number aref contained in LP Kit Number 8-11-04014

OVERHEAD GUARD OPTION



P-4622

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	7-30-05055	Guard	1
2	8-30-05131	Right Hand Upright Guard	1
3	8-30-05130	Left Hand Upright Guard	1
4	2-00-00240	Screw, 1/2 - 13 x 1.250 HHC	16
5	2-00-00420	Flat Washer, 1.000 x .515 x .062	24
6	2-00-02312	Lock Washer, Helical Spring 1/2 Med	16
7	2-00-00596	Nut, Hex 1/2 - 13 x .750 x .437	8

P-4622

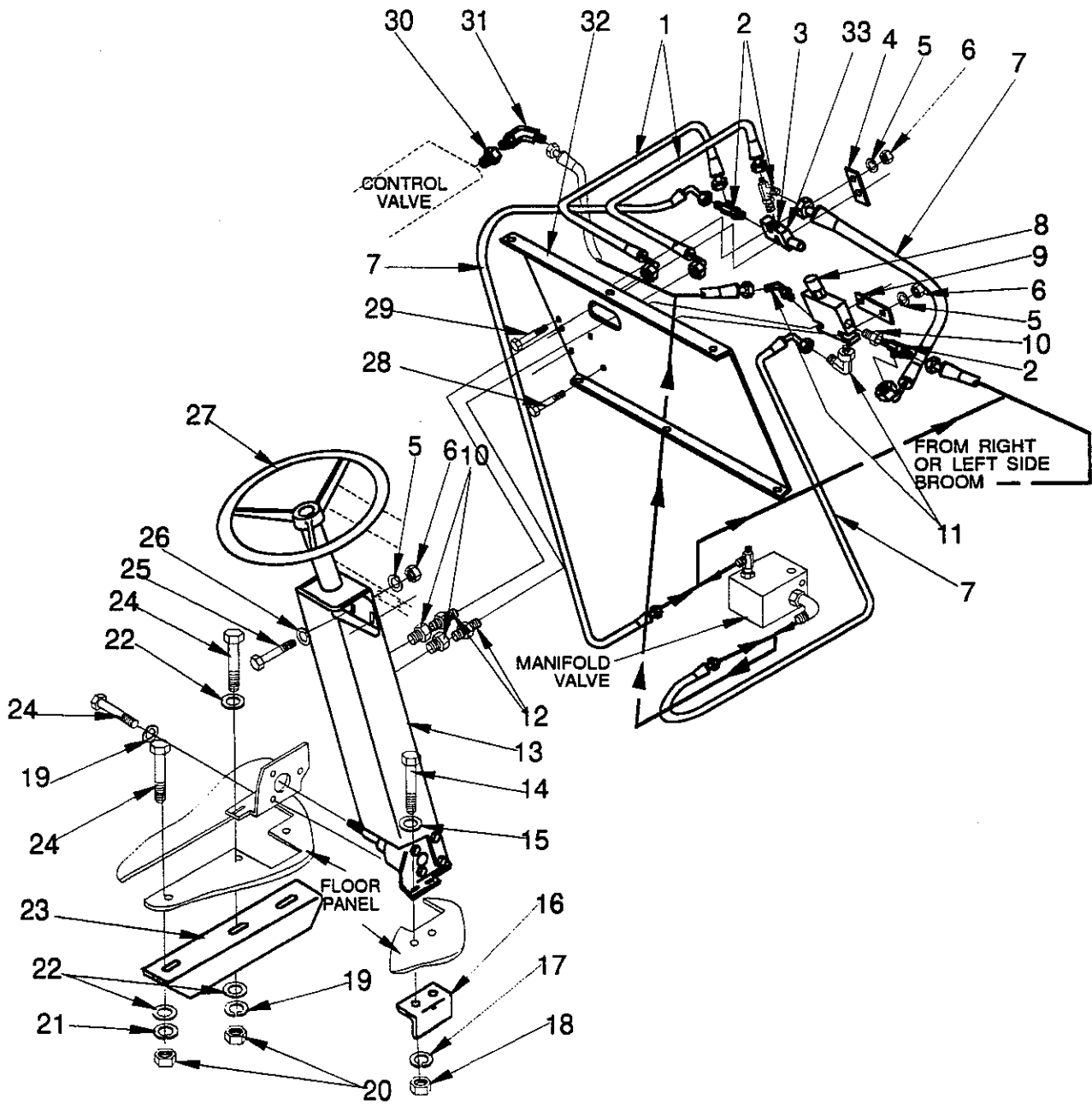
OXY-CATALYTIC MUFFLER FOR GAS ENGINES

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-56-04029	Exhaust Pipe (FORD 411)	1
2	2-00-04040	Muffler Clamp, 1.500 Tube Size	1
3	8-49-00024	Oxy-Catalytic Muffler	1
4	8-56-04030	Tail Pipe	Ref
5	7-13-07082	Clamp	Ref
6	2-00-04400	Hose Clamp, 5.000 - 7.000	Ref
7	8-75-01174	Spacer	2
8	2-00-02471	Pipe Plug, 1/4 NPT	1

OXY-CATALYTIC MUFFLER FOR DIESEL ENGINE

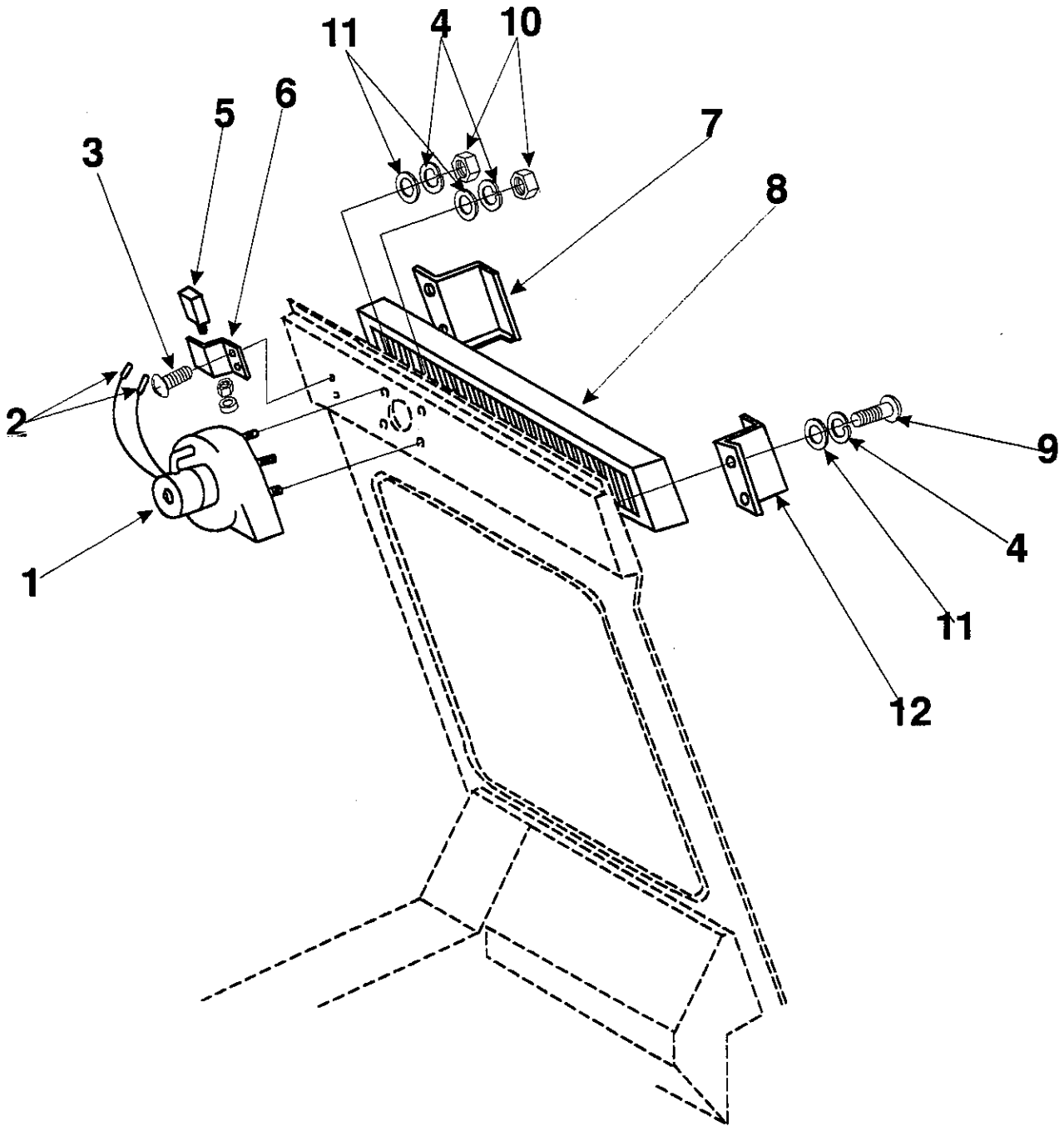
KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	2-00-03404	Hose Clamp, 1.062 - 2.000	Ref
2	8-56-04042	Exhaust Pipe (PERKINS)	Ref
3	2-00-04040	Muffler Clamp, 1.500 Tube Size	Ref
4	8-56-04030	Tail Pipe	Ref
5	7-13-07082	Clamp	Ref
6	8-49-00025	Oxy-Catalytic Muffler	1
7	2-00-04400	Hose Clamp, 5.000 - 7.000	Ref
8	8-75-01174	Spacer	2
9	2-00-02471	Pipe Plug, 1/4 NPT	1

POWER STEERING



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-33-02174	Hose, 4 ORS 90° to Str. 16.5"	4
2	2-00-04927	ORFS Branch Tee, 7/16-20 / 9/16-18	3
3	0891-009	Pressure Relief Valve	1
4	8-08-00590	Valve Mounting Bracket	1
5	2-00-00518	Lock Washer, Helical Spring 1/4 Med	6
6	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	6
7	8-33-02176	Hose, 4 ORS 90° to Str. 21.0"	3
8	0891-010	Flow Regulator Valve	1
9	8-65-00043	Valve Retainer	1
10	2-00-04917	ORFS Boss Reducer, 9/16-18 / 7/16-20	3
11	2-00-04926	ORFS 90° Elbow, 9/16-18	2
12	2-00-04980	ORFS Long Connector, 7/16-20 / 9/16-18	2
13	0860-534	Power Assist Steering Assembly	1
14	2-00-00209	Screw, 3/8-16 x 1.250 HHC	2
15	2-00-00402	Flat Washer, .750 x .390 x .093	2
16	8-81-00150	Steering Gear Support	1
17	2-00-02310	Lock Washer, Helical Spring 3/8 Med	2
18	2-00-02360	Nut, Hex 3/8-16 x .562 x .328	2
19	2-00-01879	Lock Washer, Helical Spring 7/16 Heavy	5
20	2-00-02349	Nut, Hex Hvy. 7/16-14 x .750 x .421	3
21	2-00-02311	Lock Washer, Helical Spring 7/16 Med	1
22	2-00-00415	Flat Washer, .937 x .468 x .068	5
23	8-81-00149	Steering Gear Assembly Support	1
24	2-00-00238	Screw, 7/16-14 x 1.250 HHC	6
25	2-00-00221	Screw, 1/4 - 20 x .750 HHC	2
26	2-00-00406	Flat Washer, .750 x .281 x .062	2
27	8-89-08016	Steering Wheel	1
28	2-00-02589	Screw, 1/4-20 x 2.000 HHC	2
29	2-00-01769	Screw, 1/4 - 20 x 1.750 HHC	2
30	2-00-04917	ORFS Boss Reducer, 9/16-18 to 7/16-20	1
31	2-00-04892	ORFS 90° Elbow, 7/16-20 / 9/16-18	1
32	8-52-00126	Kick Panel	1
33	7-12-02016	Cartridge for Pressure Relief Valve	1

PRESSURIZER (CAB)

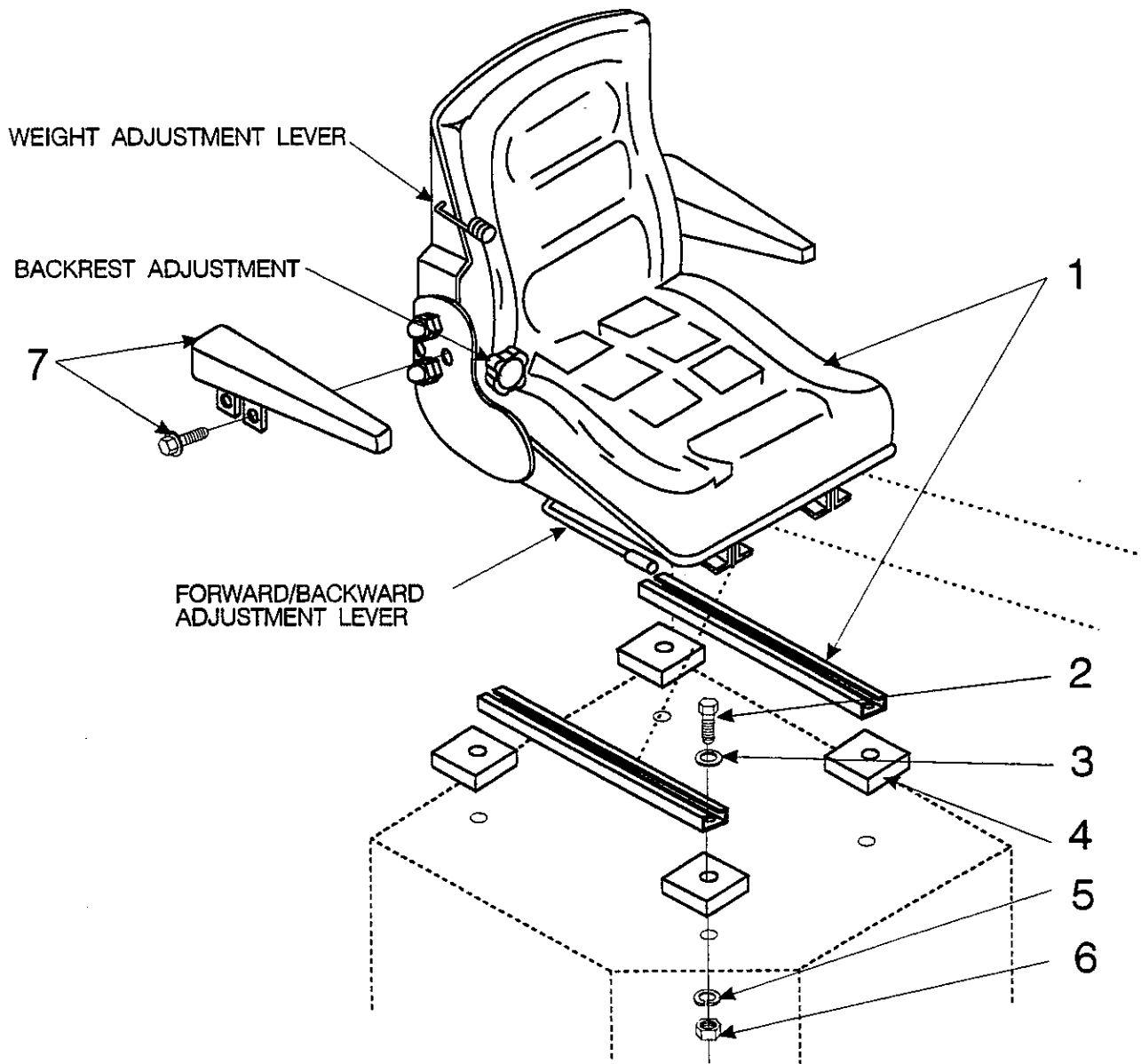


P-4847

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	*	Pressurizer Motor	1
2	8-11-00015	Connector	2
3	2-00-00054	Screw, 1/4 - 20 x .500 RHM	4
4	2-00-00518	Lock Washer, Helical Spring 1/4 Med	10
5	*	Switch,	1
6	*	Switch Bracket	1
7	*	Filter Bracket	1
8	*	Filter	1
9	2-00-00219	Screw, 1/4 - 20 x .500 HHC	4
10	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	6
11	2-00-00416	Flat Washer, .750 x .265 x .062	4
12	*	Filter Bracket	1

* Items are included in Pressurizer Kit # 0880-412

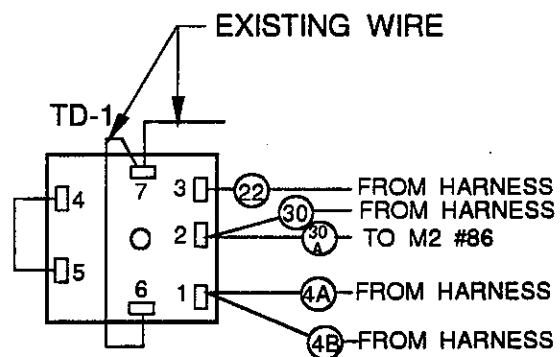
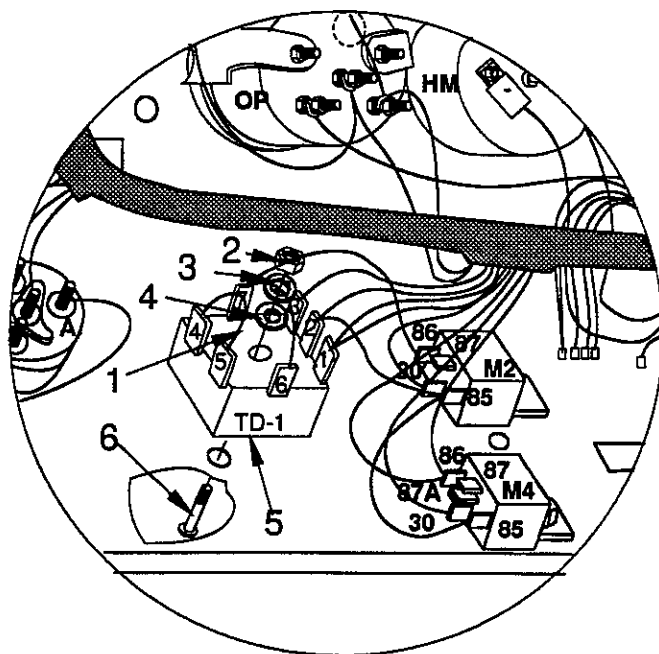
SUSPENSION SEAT OPTION



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-69-00015	Seat without armrests	1
2	2-00-00225	Screw, 5/16-18 x 1.500 HHC	4
3	2-00-00409	Flat Washer, .687 x .343 x .062	4
4	8-71-00016	Shim Block	4
5	2-00-02322	Lock Washer, Helical Spring 5/16 Med	4
6	2-00-00585	Nut, 5/16-18 x .500 x .265	4
7	8-09-04272	Armrest Kit (Includes both Armrests)	1
	0880-474	Suspension Seat Option (Includes all the Above)	1

P-5080

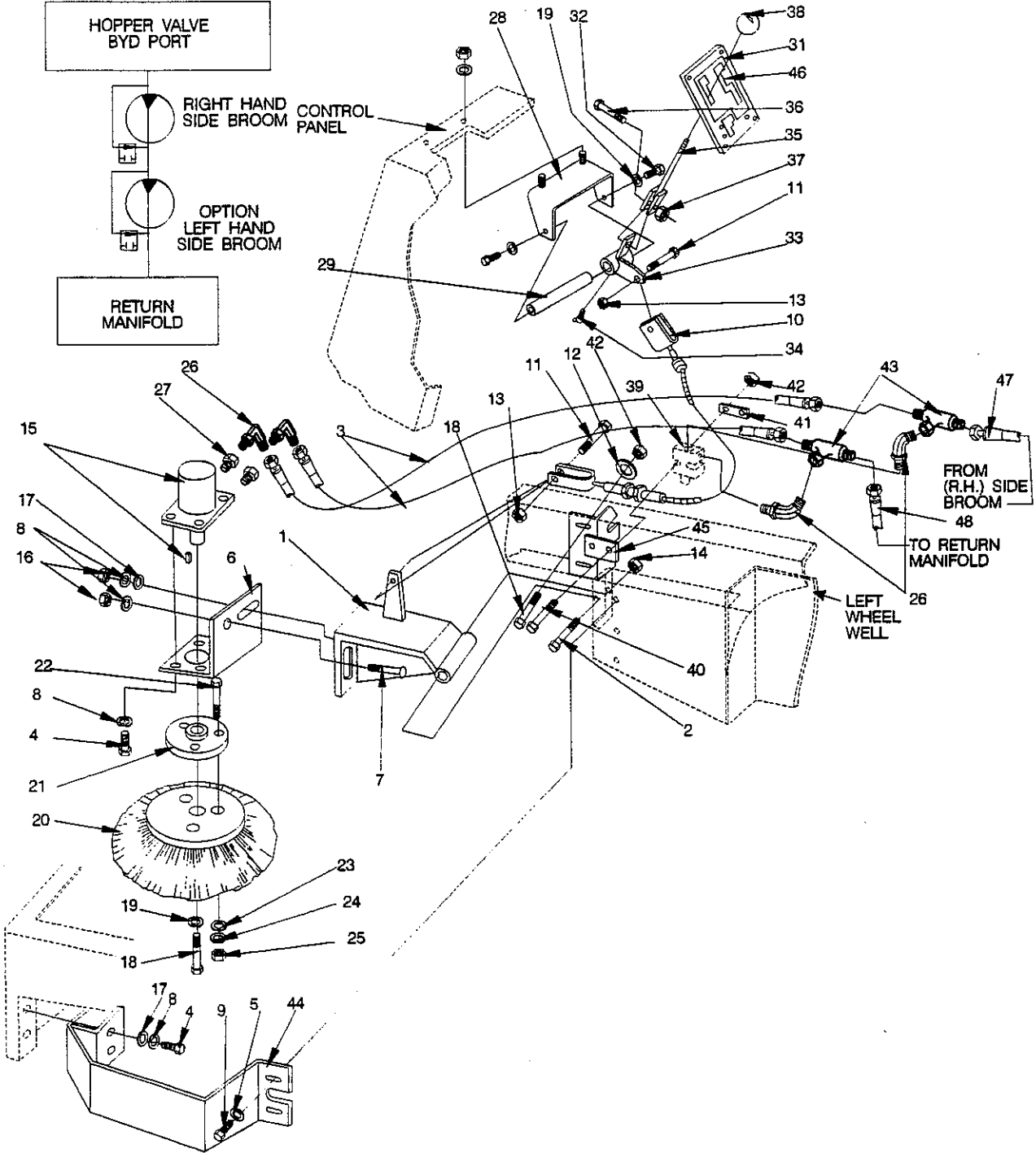
TIMED SHAKER MOTORS



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-90-07356	Wire, TD-1 #4 to TD-1 #5	1
2	2-00-00605	Nut, Hex MS #10 - 24 x .375 x .125	1
3	2-00-00512	Lock Washer, #10 Int.	1
4	2-00-00466	Flat Washer, .625 x .203 x .031	1
5	8-64-05010	Timer	1
6	2-00-04897	Screw, #10 - 24 x 1.250 THM	1

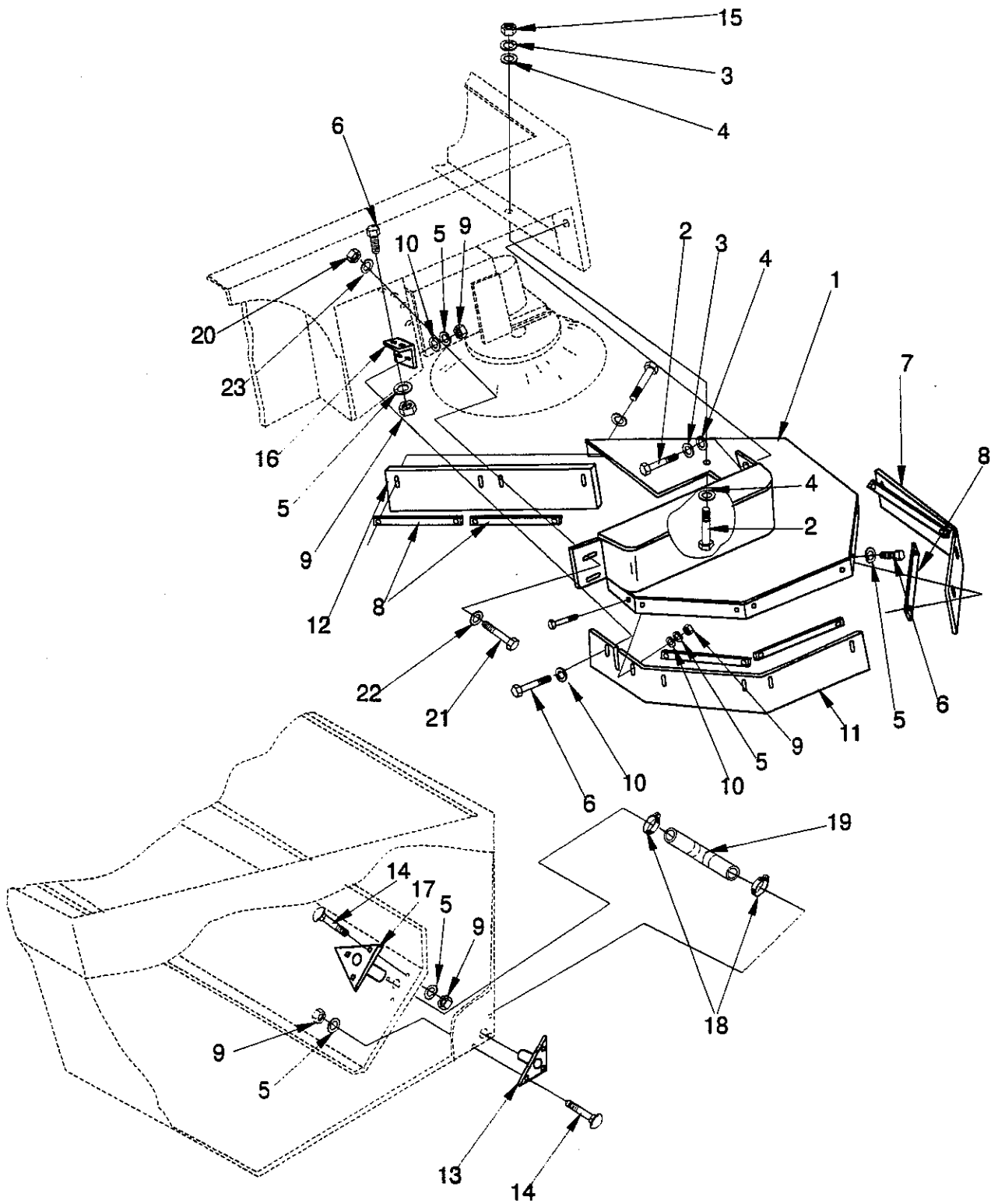
P-4964

LEFT SIDE BROOM



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-03-04292	Side Broom Arm (L.H.)	1
2	2-00-04914	Screw, 1/2 - 13 x 4.500 HHC	1
3	8-33-02181	Hose, Hydraulic ORS 4 Str. Ends 18"	2
4	2-00-00233	Screw, 3/8 - 16 x 1.000 HHC	4
5	2-00-04159	Flat Washer, 1.375 x .562 x .109	4
6	8-08-00750	Side Broom Motor Bracket L.H.	1
7	2-00-05187	Bolt, Carriage 3/8-16 x 1.25	2
8	2-00-02310	Lock Washer, Helical Spring 3/8 Med	8
9	2-00-01254	Screw, 1/2-13 x 1.500 HHC	2
10	8-10-00030	Cable, L.H. Side Broom	1
11	2-00-02708	Screw, 5/16-18 x 1.000 HHC	2
12	2-00-00407	Flat Washer, .562 x .265 x .062	3
13	2-00-00644	Nut, Hex Fiber Insert 5/16 - 18	2
14	2-00-04936	Nut, Hex Fiber Insert 1/2 - 13	1
15	0882-023	Side Broom Motor,	1
15	2-00-00722	Woodruff Key .250 x 1	1
16	2-00-00584	Nut, Hex 3/8-16	2
17	2-00-04801	Flat Washer, 3/8	3
18	2-00-01490	Screw, 1/4 - 20 x .875 HHC	4
19	2-00-00518	Lock Washer, Helical Spring 1/4 Med	1
20	8-08-03210	Side Broom	1
21	8-25-06008	Side Broom Flange	1
22	2-00-00211	Screw, 5/16 - 18 x 1.750 HHC	3
23	2-00-00409	Flat Washer, .687 x .343 x .062	3
24	2-00-00530	Lock Washer, Helical Spring 5/16 Med	3
25	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	3
26	2-00-04926	ORFS 90° Elbow, 9/16-18	4
27	2-00-04915	ORFS Boss Reducer, 7/8-14 to 9/16-18	2
28	8-08-00646	Shaft Pivot Bracket L.H.	Ref
29	8-70-05285	Shaft - Broom Pivot L.H.	Ref
30	2-00-00221	Screw, 1/4 - 20 x .750 HHC	Ref
31	8-58-05266	Face Plate, Main and Left Broom	1
32	2-00-00221	Screw, 1/4-20 x .750 HHC	Ref
33	8-57-05021	Pivot Block (Side Broom)	1
34	2-00-02558	Lubrication Fitting, 45° 1/8 NPT	1
35	8-16-00034	Lever	1
36	2-00-00234	Screw, 3/8 - 16 x 1.50 HHC	1
37	2-95-04182	Nut, Hex Fiber Insert 3/8 - 16	1
38	8-39-00002	Knob	3
39	0891-008	Side Broom Valve	1
40	2-00-00199	Carriage Bolt, 1/4 - 20 x 1.750	2
41	8-08-00590	Valve Mounting Bracket	1
42	2-00-00641	Nut, Hex Fiber Insert 1/4-20	5
43	2-00-04940	ORFS Swivel Nut Branch Tee, #4 ORS	2
44	8-30-05151	Side Broom Guard - L.H.	1
45	8-08-00716	Valve & Valve Mounting LH Bracket	1
46	8-18-00352	Decal, Main and Left Broom	1
47	7-33-02181	Hose, Hydraulic ORS 4 Str. Ends 160"	1
48	8-33-02187	Hose, Hydraulic ORS 4 Str. Ends 97"	1

VACUUM SIDE BROOMS



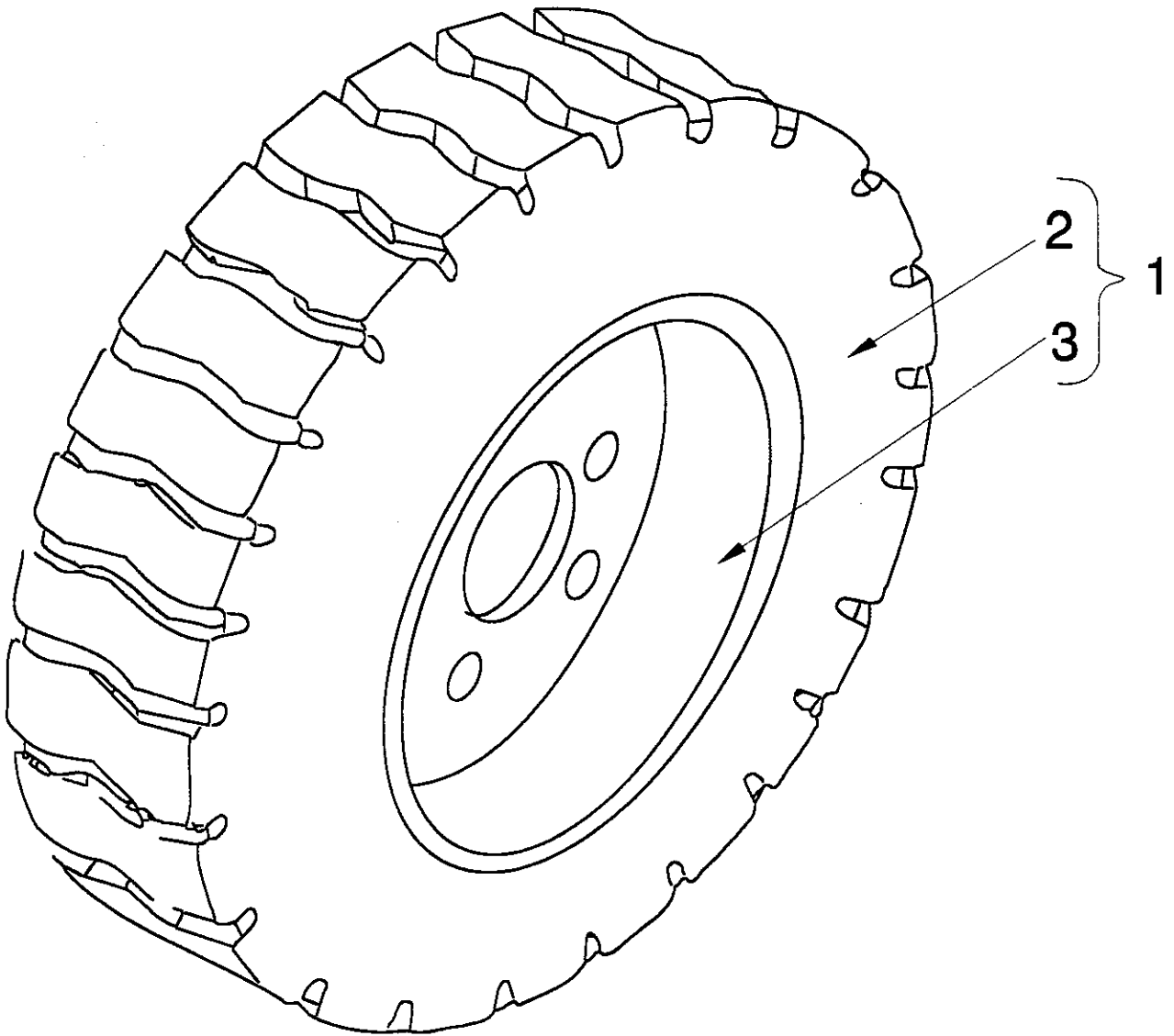
C-0312

RIGHT HAND VACUUM SIDE BROOM (0880-542)

LEFT HAND VACUUM SIDE BROOM (0880-543)

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-30-05154	Right Hand Guard	1
1	8-30-05155	Left Hand Guard	1
2	2-00-00209	Screw, 3/8 - 16 x 1.250 HHC	3
3	2-00-02310	Lock Washer, Helical Spring 3/8 Med	3
4	2-00-00402	Flat Washer, .750 x .390 x .093	4
5	2-00-00518	Lock Washer, Helical Spring 1/4 Med	22
6	2-00-00221	Screw, 1/4 - 20 x .750 HHC	16
7	8-25-08164	Flap	1
8	8-08-00662	Strap	6
9	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	10
10	2-00-00407	Flat Washer, 1/4	7
11	8-25-08165	Flap	1
12	8-25-08163	Flap	1
13	8-03-02041	Tube Adapter	1
14	2-00-03575	Carriage Bolt, 1/4 - 20 x .750	6
15	2-00-02360	Nut, Hex 3/8-16	1
16	8-08-00732	Side Broom Flap Bracket	1
17	8-03-02042	Tube Adapter	1
18	2-00-02217	Clamp	2
19	7-33-02234	Hose	1
20	2-00-00596	Nut, Hex 1/2-13	2
21	2-00-00241	Screw, 1/2-13 x 1.750 HHC	2
22	2-00-04159	Flat Washer, 1.38 x .56 x .109	2
23	2-00-02312	Lock Washer, Helical Spring 1/2	2

TIRE OPTIONS



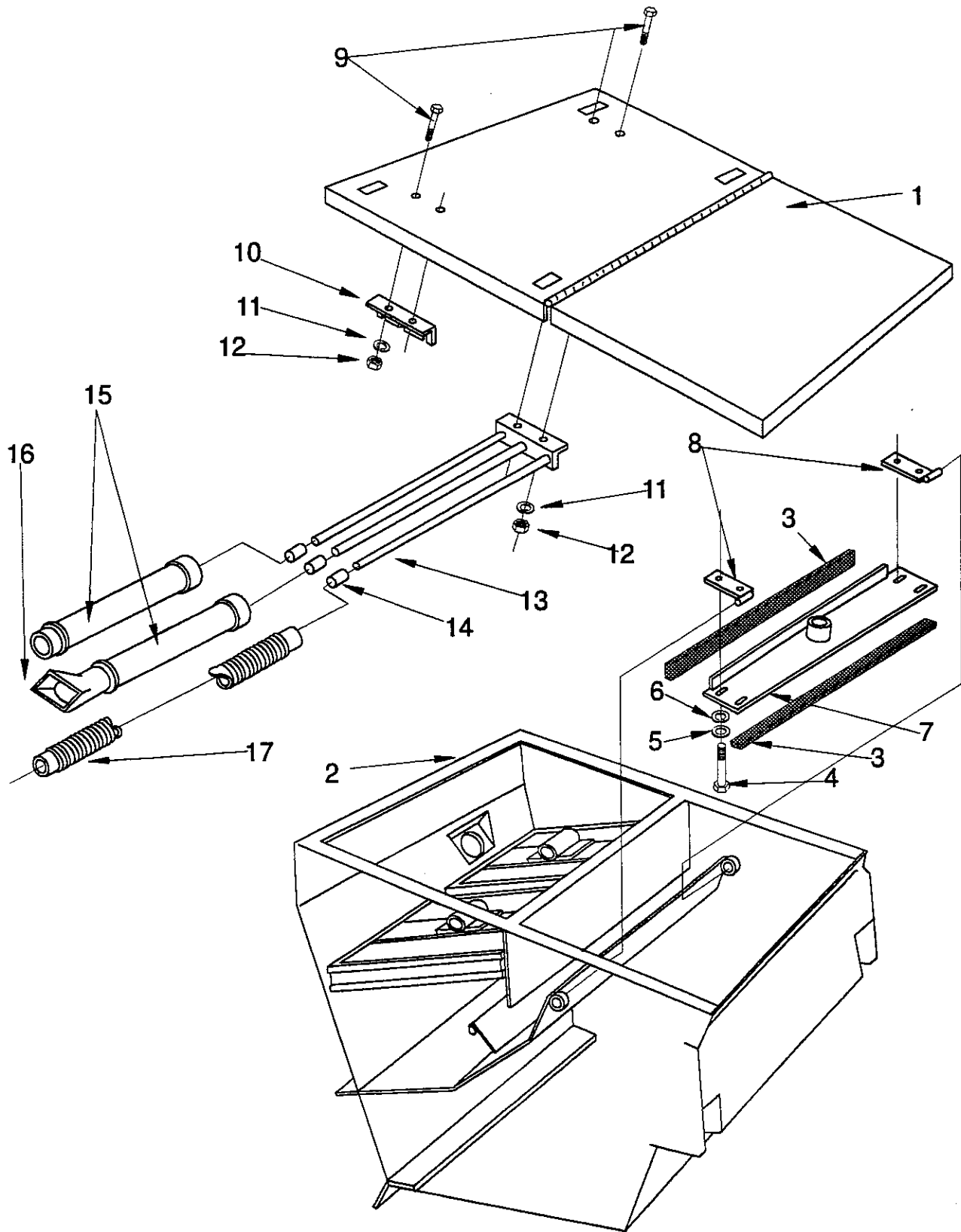
C-0309

SOLID CUSHION REAR WHEEL - 0880-527

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-89-08058	Solid Cushion Rear Wheel Assembly 17.9"	1
2	8-85-06018	Solid Cushion Tire, 5.00 x 8	-
3	8-70-00080	Split Rim Assembly, 8"	-

C-0309

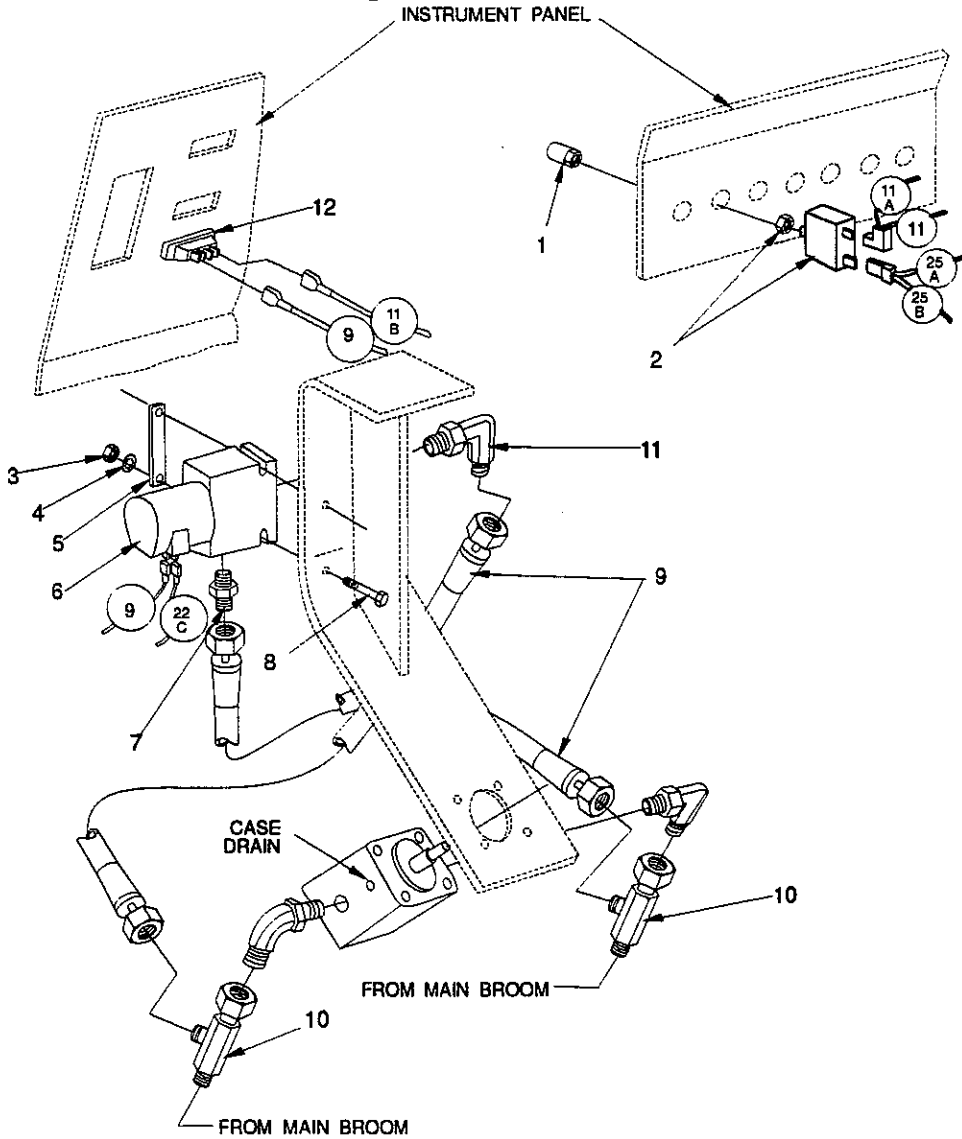
VACUUM WAND



P-4838

KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-16-07304	Hopper Lid	Ref
2	8-32-06082	Hopper Weldment	Ref
3	8-29-00181	Gasket	2
4	2-00-00221	Screw, 1/4 - 20 x .750 HHC	4
5	2-00-00518	Lock Washer, Helical Spring 1/4 Med	4
6	2-00-03702	Flat Washer, .625 x .281 x .062	4
7	8-58-05238	Adapter Plate	1
8	8-57-05019	Pivot	2
9	2-00-01481	Screw, 5/16 - 18 x 1.000 RHM	4
10	8-08-00622	Latch Bracket	1
11	2-00-00530	Lock Washer, Helical Spring 5/16 Med	4
12	2-00-00585	Nut, Hex 5/16 - 18 x .500 x .265	4
13	8-08-00623	Hose Storage Bracket	1
14	8-11-00034	Cap	3
15	8-89-00002	Wand Section	2
16	8-86-08010	Floor Tool	1
17	8-33-02121	Vacuum Hose	1

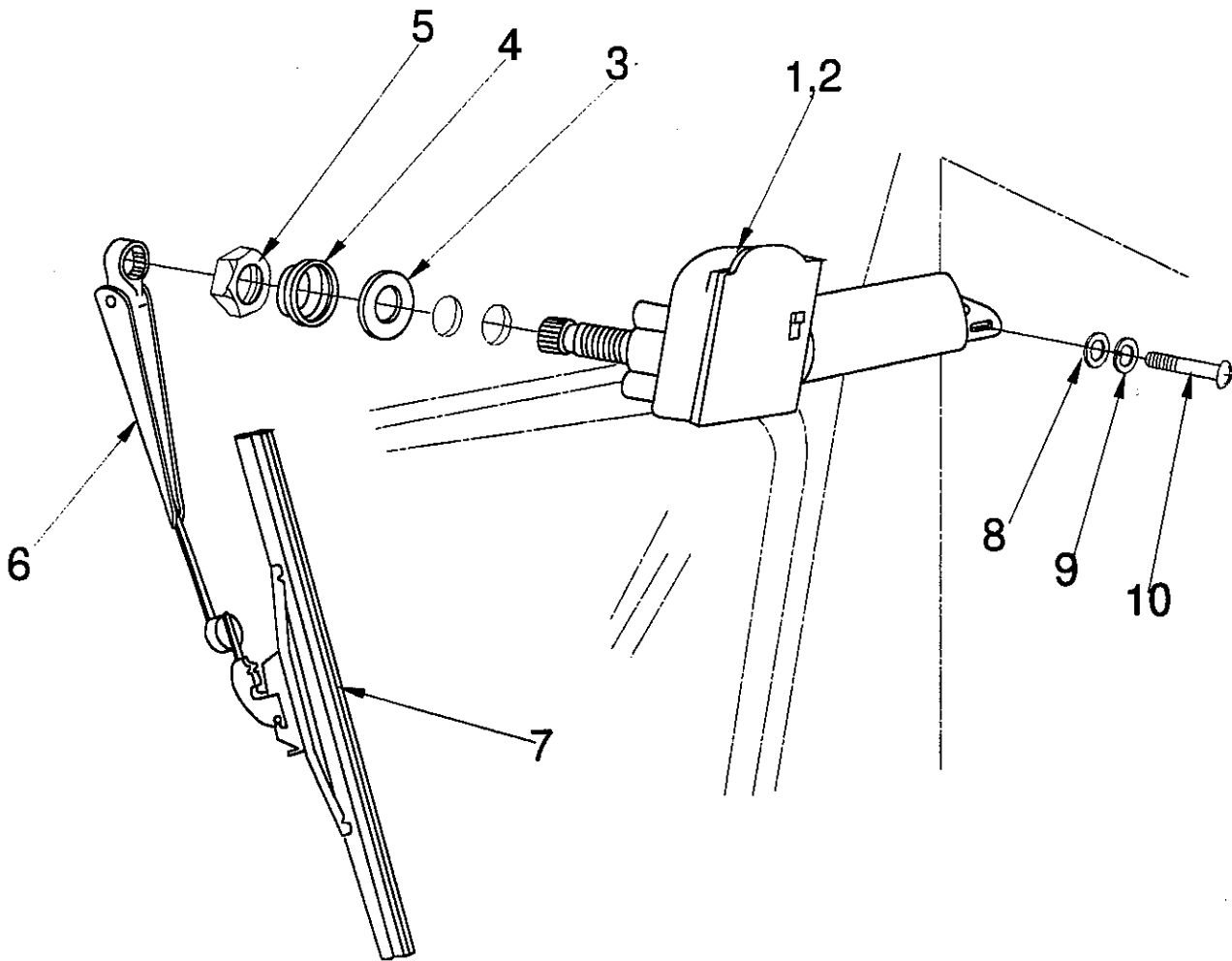
WET SWEEP BYPASS



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-11-00044	Circuit Breaker Boot	1
2	8-64-00008	Circuit Breaker (15A)	1
3	2-00-00594	Nut, Hex 1/4 - 20 x .437 x .218	2
4	2-00-00518	Lock Washer, Helical Spring 1/4 Med	2
5	8-08-00590	Bracket	1
6	8-88-00042	Valve, Solenoid N.C.	1
7	7-12-02018	Replacement Cartridge for 8-88-00042	1
8	2-00-04970	ORFS Connector, 3/4-16 / 13/16-16	1
9	2-00-02589	Screw, 1/4 - 20 x 2.000 HHC	2
9	8-33-02193	Hose, Hydraulic ORS 8/str.ends - 18"	2
10	2-00-04928	ORFS Run Tee, 13/16 - 16	2
11	2-00-04885	ORFS 90° Elbow, 3/4-16 / 13/16-16	1
12	8-82-00044	Switch SPST	1

P-4706

WINDSHIELD WIPER (CAB)

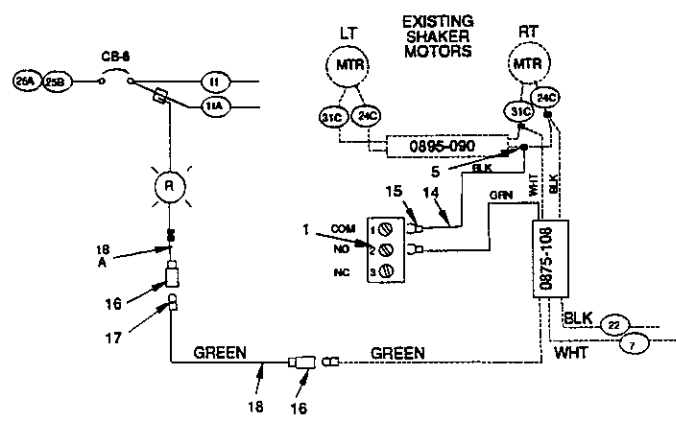
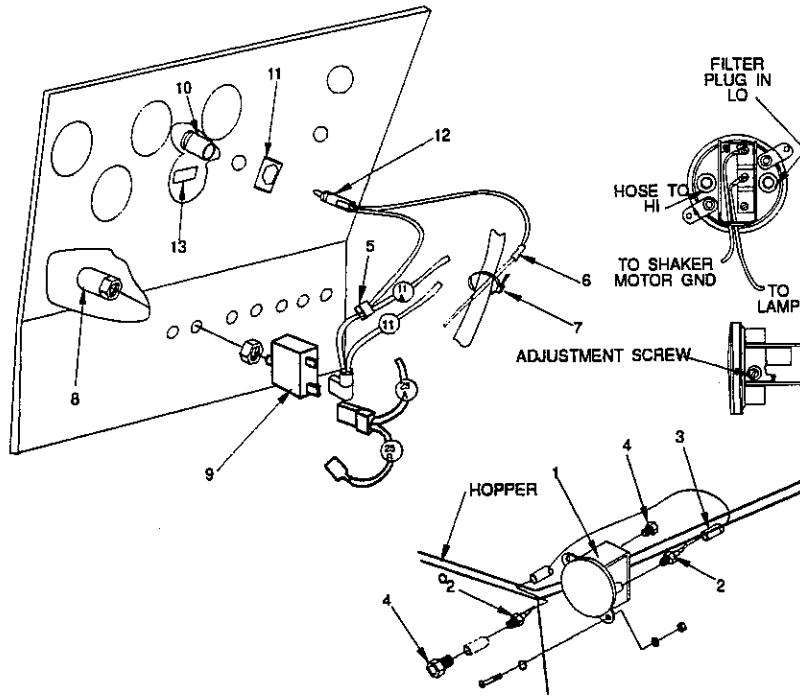


KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	0880-411	Windshield Wiper Assembly	1
2	*	Wiper Motor	1
3	*	Leather Seal	1
4	*	Spacer	1
5	*	Nut,	1
6	*	Adjustable Wiper Arm	1
7	*	Wiper Blade, 14"	1
8	2-00-00426	Flat Washer, .500 x .218 x .062	1
9	2-00-00519	Lock Washer, Helical Spring #10 Med	1
10	2-00-00049	Screw, #10 - 24 x .500 RHM	1

* Items come with the Windshield Wiper Assembly # 0880-411

P-4866

FILTER WARNING SYSTEM



KEY NO.	PART NUMBER	DESCRIPTION	QTY
1	8-63-05014	Pressure Differential Switch	1
2	2-00-04518	Hose Fitting Barbed, Rigid Pipe Male 1/8 NPT	2
3	7-87-02155	Plastic Hose, 8.00 L.	1
4	8-24-04075	Filter Plug,	1
5	2-00-04479	Connector, 3 way	1
6	2-00-01128	Terminal, Butt Connector 16-14 / 1.07 x .170	1
7	2-00-04345	Wire Tie	10
8	8-11-00044	Boot, Protective	1
9	8-64-00008	Circuit Breaker, 15 AMP	1
10	7-41-03004-1	Lens, Red	1
11	2-00-04735	Nut, Spring Clip	1
12	7-40-05027	Lamp Socket, 14 V	1
13	8-18-00144	Decal, Warning Dirty Filter	1
14	3-61-00189	Wire, Bulk Black 16 AWG	16.00
15	2-00-04717	Terminal, #6 Spring Spade	1
16	2-00-04626	Terminal, .156 Female Bullet	2
17	2-00-04578	Terminal, .156 Male Bullet	1
18	3-61-00249	Wire, 16 AWG. GRN	92.50
18A	3-61-00249	Wire, 16 AWG. GRN	20.00

C-0313

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**AMERICAN-LINCOLN RIDER MACHINE
"BUMPER-TO-BUMPER" LIMITED WARRANTY**

I. COVERAGE

A. Subject to the terms and limitations stated herein, American-Lincoln warrants, to the original purchaser only, to repair or replace, at its option and upon the terms set out below, this product or any parts thereof (excluding normal maintenance items) which are defective in materials or workmanship, for a period of two (2) years or 2,000 hours of normal operation from the date of purchase, whichever comes first, but not to exceed three (3) years from the date of factory shipment, provided that the product is operated and maintained in accordance with American-Lincoln's Maintenance and Operations Instruction.

1. (a) During the first thirty (30) days from the date of purchase, American-Lincoln will provide, without charge, parts and on-site labor (including up to three (3) hours total roundtrip travel time) to remedy a defective product or part.

(b) During the next eleven (11) months or 1,000 hours (whichever comes first) American-Lincoln will provide, without charge, parts and labor to remedy a defective product or part; however all travel time for on-site remedy and all shipping and freight charges for off-site remedy of the product or parts thereof shall be the sole responsibility of the purchaser.

(c) During the remainder of the warranty period, as itemized hereinabove, American-Lincoln will provide, without charge, parts to remedy a defective product or part; however all labor, travel time for on-site remedy and all shipping and freight charges for off-site remedy of the product or parts thereof shall be the sole responsibility of the purchaser.

B. Furthermore, if this product is powered by a liquid-cooled engine, American-Lincoln warrants to the original purchaser only, to provide replacement parts on the liquid cooled engine, which is defective in workmanship, for a period of three years or 2,500 hours (whichever comes first) of normal operation. All labor, travel time, shipping and freight charges shall be the sole responsibility of the purchaser.

C. In addition to the above, if applicable, American-Lincoln, warrants to the original purchaser only, to repair or replace, at its option and upon the terms set out below, the main frame, debris hopper, solution tank, and the recovery tank, for eight (8) years against failure caused by defects in workmanship or total rust through. For purposes of this coverage, cosmetic deterioration or surface rust does not constitute a failure.

II. EXCLUSIONS

A. This warranty does not cover normal maintenance parts and labor, including but not limited to, rubber parts, seals, flaps, brushes, engine maintenance parts, hoses, carbon motor brushes, fluids and routine adjustments.

B. This warranty does not cover damage or failure of the product or any parts thereof which is the result of misuse, negligent operation, handling or repair, or which is the result of modification by any person other than an authorized American-Lincoln service representative.

III. LIMITATIONS

A. AMERICAN-LINCOLN MAKES NO WARRANTIES OTHER THAN THOSE SPECIFIED HEREIN. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. AMERICAN-LINCOLN'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO REPAIR AND/OR REPLACEMENT OF PRODUCTS OR PARTS AS SET OUT HEREIN. AMERICAN-LINCOLN SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM A PRODUCT OR PART DEFECT OR FAILURE. ANY EXTENSIONS OF OR MODIFICATIONS MADE TO THIS WARRANTY BY A DISTRIBUTOR OF AMERICAN-LINCOLN ARE THE SOLE RESPONSIBILITY OF THE DISTRIBUTOR.

IV. PROCEDURES AND CONDITIONS FOR WARRANTY CLAIMS

A. AMERICAN-LINCOLN SHALL NOT BE LIABLE FOR REPAIR OR REPLACEMENT OF ANY DEFECTIVE PRODUCT OR PART THEREOF UNLESS AND UNTIL THE ORIGINAL PURCHASER FULFILLS THE FOLLOWING CONDITIONS PRECEDENT TO RECOVERY UNDER THIS WARRANTY:

1. The original purchaser shall promptly complete and return the warranty and installation registration form included with the product at the time of the purchase;

2. Upon product or part failure, the original purchaser shall promptly provide notice thereof to his nearest authorized American-Lincoln Service Representative; and

3. The original purchaser shall permit the product or part to be inspected by American-Lincoln or its authorized representatives, as necessary, and expenses for shipping or travel time shall be borne by the parties itemized in paragraph I hereinabove.

American-Lincoln reserves the right to make changes or improvements to its machines without notice. For best results use only the correct American-Lincoln Service Parts.

Clarke

American-Lincoln®

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