

INSTRUCTIONS-PARTS LIST



308-517

Rev A

Supersedes
802-776, 802-777

This manual contains **IMPORTANT**
WARNINGS and **INSTRUCTIONS**
READ AND RETAIN FOR REFERENCE

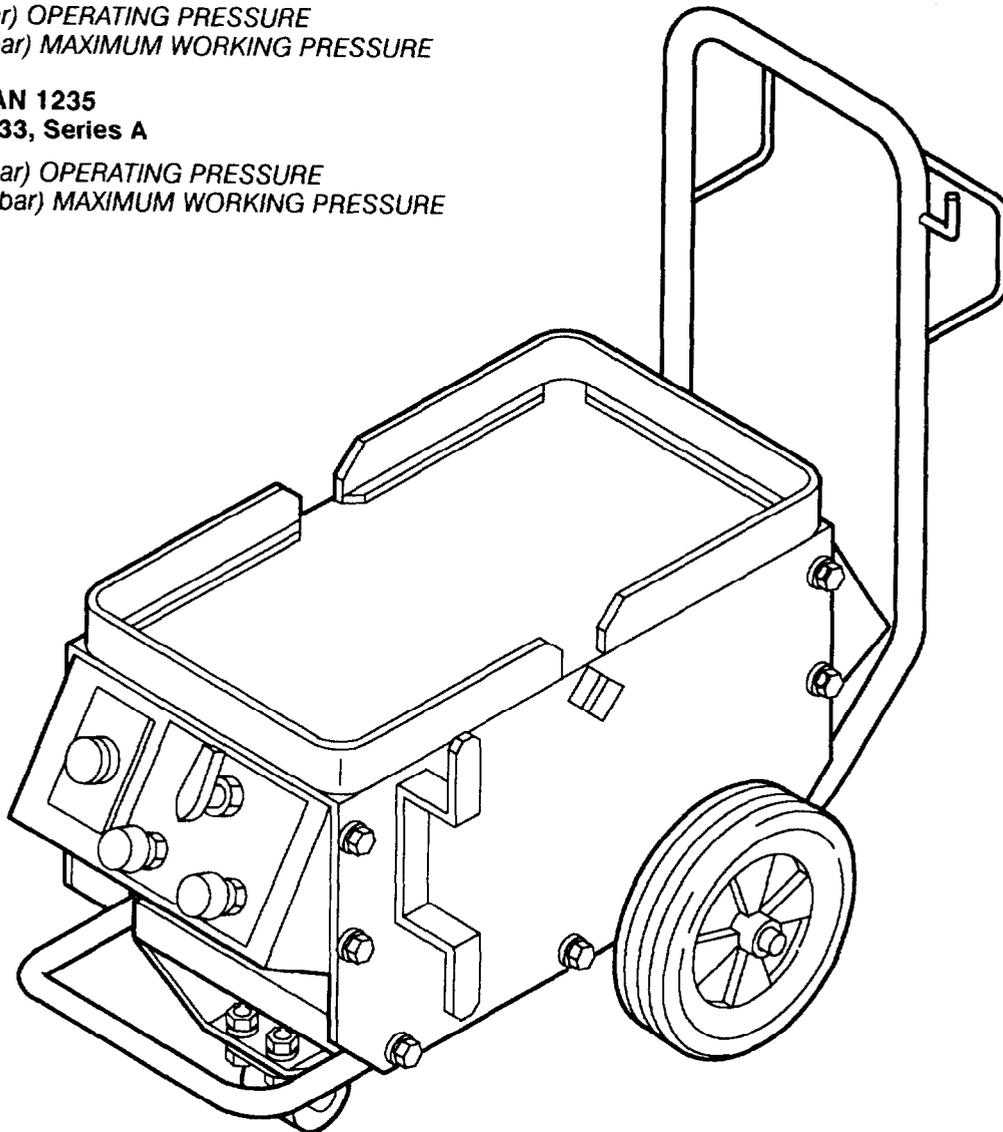
HYDRA-CLEAN® 826, 1235 Pressure Washers

HYDRA-CLEAN 826
Model 800-232, Series B

800 psi (55 bar) OPERATING PRESSURE
1100 psi (76 bar) MAXIMUM WORKING PRESSURE

HYDRA-CLEAN 1235
Model 800-233, Series A

1200 psi (82 bar) OPERATING PRESSURE
1500 psi (103 bar) MAXIMUM WORKING PRESSURE



GRACO INC. P.O. Box 1441 MINNEAPOLIS, MN 55440-1441

©COPYRIGHT 1990, GRACO INC.

WARNING

**HIGH PRESSURE SPRAY CAN CAUSE SERIOUS INJURY.
FOR PROFESSIONAL USE ONLY. OBSERVE ALL WARNINGS.**

Read and understand all instruction manuals before operating equipment.

FLUID INJECTION HAZARD

General Safety

This pressure washer generates very high fluid pressure. Spray from the gun, leaks or ruptured components can inject fluid through your skin and into your body and cause extremely serious bodily injury including the need for amputation. Also, fluid injected or splashed into the eyes or on the skin can cause serious damage.

NEVER point the spray gun or wand at anyone or at any part of the body. *NEVER* put hand or fingers over the spray tip.

ALWAYS follow the **Pressure Relief Procedure**, before cleaning or servicing any part of the sprayer.

NEVER try to stop or deflect leaks with your hand or body.

Be sure equipment safety devices are operating properly before each use.

Medical Treatment

If any fluid appears to penetrate your skin, get **EMERGENCY MEDICAL TREATMENT AT ONCE. DO NOT TREAT AS A SIMPLE CUT.** Tell the doctor exactly what fluid was injected.

NOTE TO PHYSICIAN: *Injection in the skin is a traumatic injury. It is important to treat the injury surgically as soon as possible. Do not delay treatment to research toxicity. Toxicity is a concern with some exotic coatings injected directly into the bloodstream. Consultation with a plastic surgeon or reconstructive hand surgeon may be advisable.*

Pressure Relief Procedure

To reduce the risk of serious bodily injury, including fluid injection and splashing in the eyes, or on the skin, always follow this procedure whenever you stop spraying for more than 10 minutes, when shutting down, and before checking or repairing any part of the system.

1. Engage the trigger safety latch.
2. Turn the sprayer off.
3. Disconnect the electrical supply.
4. Shut off the water supply.
5. Disengage the trigger safety latch and trigger the gun to relieve pressure, and then engage the trigger safety latch again.
6. Before long-term (overnight) storage, disconnect the water supply and disconnect the electricity.

Spray Gun Safety Devices

Be sure all gun safety devices are operating properly before each use. Do not remove or modify any part of the gun; this can cause a malfunction and result in serious bodily injury.

SAFETY LATCH: Whenever you stop spraying for a moment, always set the gun safety latch in the engaged or "safe" position, making the gun inoperative. Failure to properly set the safety latch can result in accidental triggering of the gun.

SPRAY TIP SAFETY: Use extreme caution when cleaning or changing spray tips. If a spray tip clogs while spraying, engage the gun safety latch immediately. *ALWAYS* follow the **Pressure Relief Procedure** and then remove the spray tip to clean it.

GROUNDING INSTRUCTIONS

This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This equipment is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER

Improper connection of the equipment-grounding conductor can result in the risk of electrocution. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the product – if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

GROUND FAULT CIRCUIT INTERRUPTER PROTECTION (826)

The 826 pressure washer is provided with a ground-fault circuit-interrupter (GFCI) built into the power supply cord. This device provides additional protection from the risk of electric shock. Should replacement of the cord become necessary, use only identical replacement parts that include GFCI protection.

CAUTION

DO NOT use the switch on the GFCI cord to start the unit. This may cause premature failure of the GFCI. *ALWAYS* turn the machine off at the switch before resetting the GFCI.

GROUND FAULT CIRCUIT INTERRUPTER PROTECTION (1235)

To comply with the National Electrical Code (NFPA 70) and to provide additional protection from the risk of electric shock, connect the 1235 pressure washer to a

receptacle that is protected by a ground-fault circuit-interrupter (GFCI).

EXTENSION CORDS

Use only 3-wire extension cords that have 3-prong grounding-type plugs and 3-pole cord connectors that accept the plug from the product. Use only extension cords that are intended for outdoor use. These extension cords are identified by a marking "Acceptable for use with outdoor appliances; store indoors while not in use." Use only extension cords having an electrical rating not less than the rating of the product. Do not use damaged extension cords. Examine extension cord before using and replace if damaged. Do not abuse extension cord and do not yank or pull on any cord to

disconnect. Keep cord away from heat and sharp edges. Always disconnect the extension cord from the receptacle before disconnecting the product from the extension cord.

WARNING

To reduce the risk of electrocution, keep all connections dry and off the ground. Do not touch plug with wet hands.

EQUIPMENT MISUSE HAZARD

General Safety

Any misuse of the pressure washer or accessories, such as overpressurizing, modifying parts, using incompatible chemicals and fluids, or using worn or damaged parts, can cause them to rupture and result in fluid injection, splashing in the eyes or on the skin, or other serious bodily injury, fire, explosion or property damage.

NEVER alter or modify any part of this equipment; doing so could cause it to malfunction.

CHECK all spray equipment regularly and repair or replace worn or damaged parts immediately.

ALWAYS wear protective eyewear and appropriate clothing. If using a chemical injector, read and follow the chemical manufacturer's literature for recommendations on additional protective equipment, such as a respirator.

HOSE SAFETY

High pressure fluid in the hoses can be very dangerous. If the hose develops a leak, split or rupture due to any kind of wear, damage or misuse, the high pressure spray emitted from it can cause a fluid injection injury or other serious bodily injury or property damage.

ALL FLUID HOSES MUST HAVE STRAIN RELIEFS ON BOTH ENDS. The strain reliefs help protect the hose from kinks or bends at or close to the coupling, which can result in hose rupture.

TIGHTEN all fluid connections securely before each use. High pressure fluid can dislodge a loose coupling or allow high pressure spray to be emitted from the coupling.

MOVING PARTS HAZARD

Moving parts can pinch or amputate fingers or other body parts. *KEEP CLEAR* of moving parts when starting or operating the pressure washer.

NEVER operate the pressure washer without all guards and interlocks installed and functioning. Follow the

System Pressure

This sprayer can develop high operating pressure. Be sure that all spray equipment and accessories are rated to withstand the maximum working pressure of this sprayer. *DO NOT* exceed the maximum working pressure of any component or accessory used in the system.

Chemical Compatibility

BE SURE that all chemicals used in the chemical injector are compatible with the wetted parts of the hose, gun, wand and tip, as given in the Technical Data (inside back cover). Always read the chemical manufacturer's literature before using any chemical in this pressure washer.

NEVER use a damaged hose. Before each use, check entire hose for cuts, leaks, abrasion, bulging cover, or damage or movement of the hose couplings. If any of these conditions exist, replace the hose immediately. *DO NOT* try to recouple high pressure hose or mend it with tape or any other device. A repaired hose cannot contain the high pressure fluid.

HANDLE AND ROUTE HOSES CAREFULLY. Do not pull on hoses to move the pressure washer. Do not use chemicals which are not compatible with the inner tube and cover of the hose. *DO NOT* expose Graco hose to temperatures above 200° F (93° C) or below -40° F (-40° C).

Pressure Relief Procedure before checking or servicing the pressure washer to prevent discharging high pressure fluid from the gun.

TERMS

WARNING or DANGER: Alerts user to avoid or correct conditions that could cause bodily injury.

CAUTION: Alerts user to avoid or correct conditions that could cause damage to or destruction of equipment.

NOTE: Identifies helpful procedures and information.

IMPORTANT

United States Government safety standards have been adopted under the Occupational Safety and Health Act. These standards – particularly the General Standards, Part 1910, and the Construction Standards, Part 1926 – should be consulted.

INSTALLATION

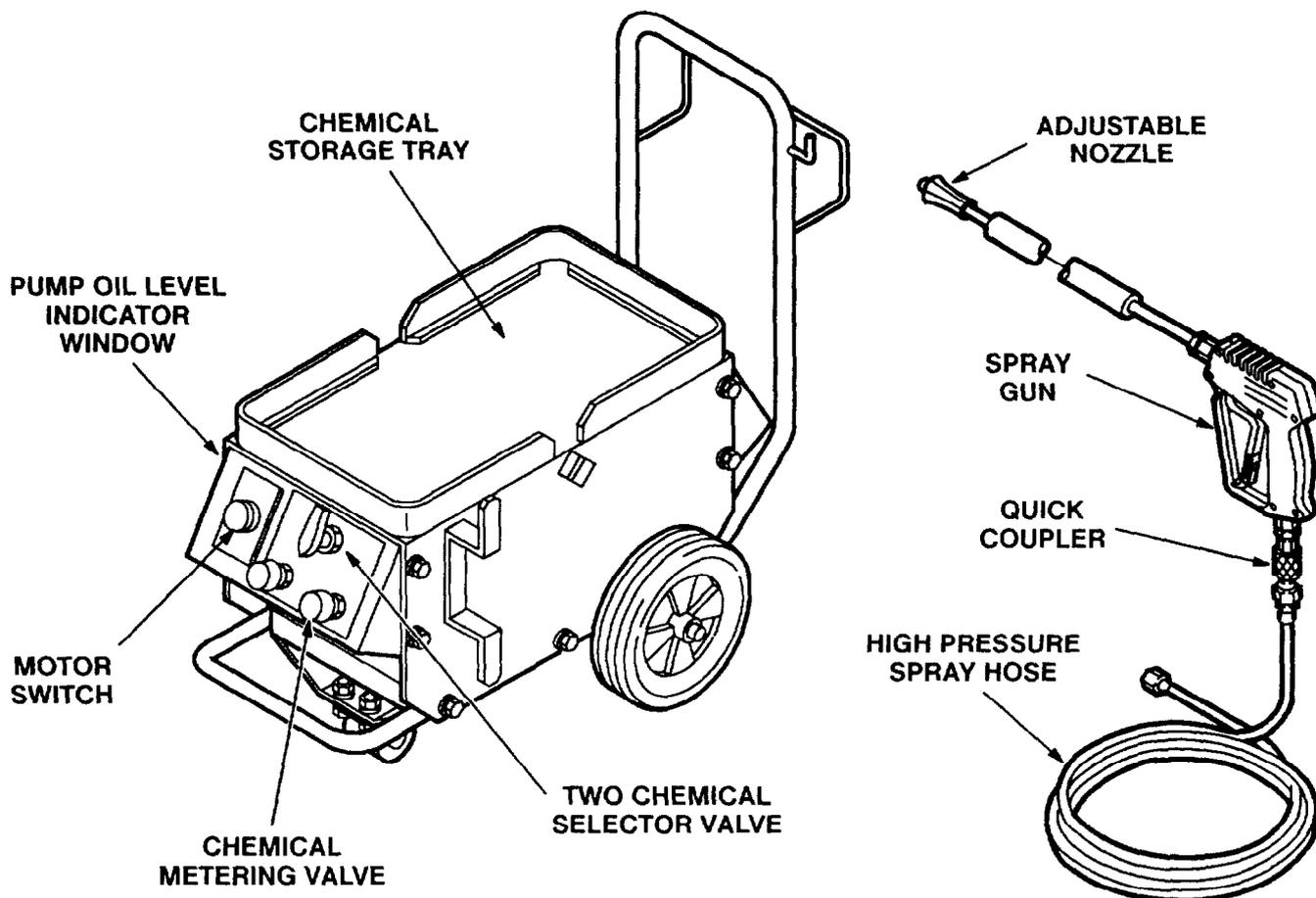


Figure 1

Check for Shipping Damage

Check the unit for any damage that may have occurred in shipping. Note any damage and **notify the carrier immediately**.

Set Up

Before plugging in the unit, be sure the electrical service matches the specification in Technical Data (inside back cover) and the voltage label on the unit. With the unit off, plug the power supply cord into a grounded, GFCI-protected outlet. Do not remove the electrical plug which comes with the unit or bend connecting prongs to fit an improper outlet! Use an extension cord that meets the requirements of the *EXTENSION CORD* section and is no more than 100 ft (30 m) long. Added length of cord will affect current draw of unit.

Connect the high pressure hose between the pump outlet and the gun inlet.

CAUTION

Up to 100 ft (30 m) of high pressure hose may be used. Longer hoses may affect sprayer performance, and chemical injector performance.

Connect to Water Supply

CAUTION

Before attaching to the water supply, check your local plumbing code regarding cross-connection to the water supply.

A backflow preventer P/N 801-133 is available to prevent backflow of contaminated water into the fresh water supply. Install it upstream from the pump.

Install a regulating water valve, P/N 800-258, if inlet water pressure is over 60 psi (4.1 bar).

Do not exceed 160° F (70° C) inlet water temperature.

Connect a hose with at least a 3/4 inch (19 mm) ID and not longer than 50 ft (15 m) to the unit's 3/4 inch garden hose inlet.

NOTE: The water source at the unit *must* have a minimum flow rate equal to that of the unit (see Technical Data, inside back cover).

STARTUP

Use this procedure whenever starting the pressure washer to help insure that the unit is ready to operate and starting is done safely.

1. Check the oil level.

Pump: Add SAE 20 or 30 weight non-detergent oil as necessary.

2. Turn on the water supply.

CAUTION

Never run the unit dry. Costly damage to the pump will result. Always be sure the water supply is completely turned on before operating.

3. Trigger the gun until water sprays from the tip indicating that the air is purged from the system.
4. Plug the electrical cord into a proper, grounded, GFCI-protected outlet.
5. **ALWAYS** engage the gun's trigger safety latch whenever you stop spraying, even for a moment to reduce the risk of fluid injection or splashing in the eyes or on the skin if the gun is bumped or triggered accidentally.
6. Most pressure washer spraying is done at full pressure. On this pressure washer, there is an adjustable unloader valve that permits operation at less than maximum pressure. To reduce pressure, for special cleaning applications, turn the pressure control knob on the unloader counterclockwise, as needed.
7. **ALWAYS** observe the following **CAUTIONS** to avoid costly damage to the pressure washer.

CAUTION

DO NOT allow the pressure washer to idle for more than 10 minutes. Doing so may cause the recirculating water to overheat and seriously damage the pump. Turn off the pressure washer if it will not be spraying or cleaning at least every 10 minutes. If heated inlet water is used, reduce this time further.

DO NOT run the pump dry, which will quickly damage the pump. Be sure the water supply is fully turned on before starting the pump.

DO NOT operate the pressure washer with the inlet water screen removed. This screen helps keep abrasive sediment out of the pump, which could clog or scratch the pump. Keep this screen clean.

DO NOT pump caustic materials; such materials may corrode the pump components.

Chemical Injector

BE SURE that all chemicals used in the chemical injector are compatible with the wetted parts of the hose, gun, wand and tip, as given in the Technical Data (inside back cover). Always read the chemical manufacturer's literature before using any chemical in this pressure washer.

WARNING

Observe chemical manufacturer's safety precautions regarding use of goggles, protective clothing or respirators.

A downstream chemical injector is provided with the pressure washer. There is a three position selector valve for no chemical (off), chemical 1 or chemical 2. Chemical 1 and chemical 2 cannot be applied simultaneously. There are also metering valves to control the flowrate of each chemical. The chemical adjustment knob on the injector under the hood should be a full two turns counterclockwise from the closed (clockwise) position. Insert each chemical filter (attached with clear tubing to the chemical metering valves) into a container of chemical. Turn the control ring on the adjustable nozzle clockwise. This causes a drop in pressure that actuates the chemical injector. Closing the adjustable nozzle deactivates the chemical injector and produces high pressure for rinsing.

WARNING

DO NOT attempt to open or close the adjustable nozzle when the spray gun is in use. Be sure that the trigger safety latch on the gun is in the "ON" position before adjusting to avoid serious bodily injury or fluid injection.

Check the distance that you will need to hold the spray nozzle from the surface by test spraying on a scrap of similar material. For soft surfaces, such as wood, hold the nozzle about 3 ft (1 m) from the surface and gradually bring it closer, checking to see if the high pressure spray is damaging the surface.

Mist wet the surface with cleaning solution. Let it soak briefly, then use the high pressure rinse to "chisel" off the soil. Keep the nozzle at an angle to the surface and at a distance determined to be best for the surface. If some soil remains, repeat the procedure, letting the chemical soak a little longer. Stubborn soil can be cleaned off better with a stronger, heated cleaning solution.

Protect surfaces that might be damaged by the cleaning solution or the high pressure spray. Rinse the solution before it dries.

Trigger Safety Latch

WARNING

To reduce the risk of serious bodily injury, including fluid injection, splashing in the eyes or on the skin, **ALWAYS** engage the trigger safety latch whenever spraying stops, even for a moment.

In the engaged position, the trigger safety latch prevents the gun from being triggered accidentally by hand or if it is dropped or bumped. Be sure the latch is pushed fully down when engaging it or it cannot prevent the gun from being triggered. See Figure 2.

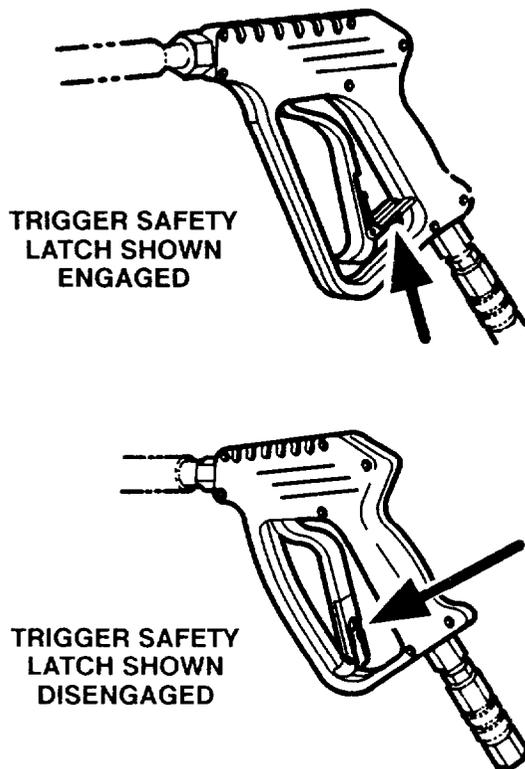


Figure 2

SHUTDOWN, FLUSHING AND STORAGE

WARNING

Pressure Relief Procedure

To reduce the risk of serious bodily injury, including fluid injection and splashing in the eyes, or on the skin, always follow this procedure whenever you stop spraying for more than 10 minutes, when shutting down, and before checking or repairing any part of the system.

1. Engage the trigger safety latch.
2. Turn the sprayer off.
3. Disconnect the electrical supply.
4. Shut off the water supply.
5. Disengage the trigger safety latch and trigger the gun to relieve pressure, and then engage the trigger safety latch again.
6. Before long-term (overnight) storage, disconnect the water supply and disconnect the electricity.

1. If the pressure washer will be exposed to freezing temperatures, drain all water out of the pump. If it must be stored in freezing temperatures, flush the unit with a 50% anti-freeze solution. Relieve pressure. Flush the pressure washer before using it again to remove the anti-freeze.

NOTE: An anti-freeze flush kit P/N 802-327 is available to make flushing easier.

CAUTION

If water does freeze in the pressure washer, thaw it in a warm room before trying to start it. **DO NOT** pour hot water on or into the pump; it may crack the ceramic plungers!

2. After each use, wipe all surfaces of the pressure washer with a clean, damp cloth.
3. Perform the appropriate maintenance. See the maintenance chart.

MAINTENANCE

Observing regular maintenance intervals helps ensure that you get maximum performance and life from the pressure washer.

There is a break-in period for the pump. After changing the oil initially, the interval between required changes is longer.

WARNING

To reduce the risk of serious bodily injury, including fluid injection, splashing in the eyes or on the skin or injury from moving parts, always follow the **Pressure Relief Procedure Warning** before proceeding.

Interval	What to do
Daily	Clean water inlet screen and filter. Check pump oil level. Fill as necessary.
After first 50 hours of operation	Change pump break-in oil. Use SAE 20 or 30 non-detergent oil.
Each 500 hours of operation or 6 months	Change pump oil. Use SAE 20 or 30 non-detergent oil.

TROUBLESHOOTING CHART

WARNING

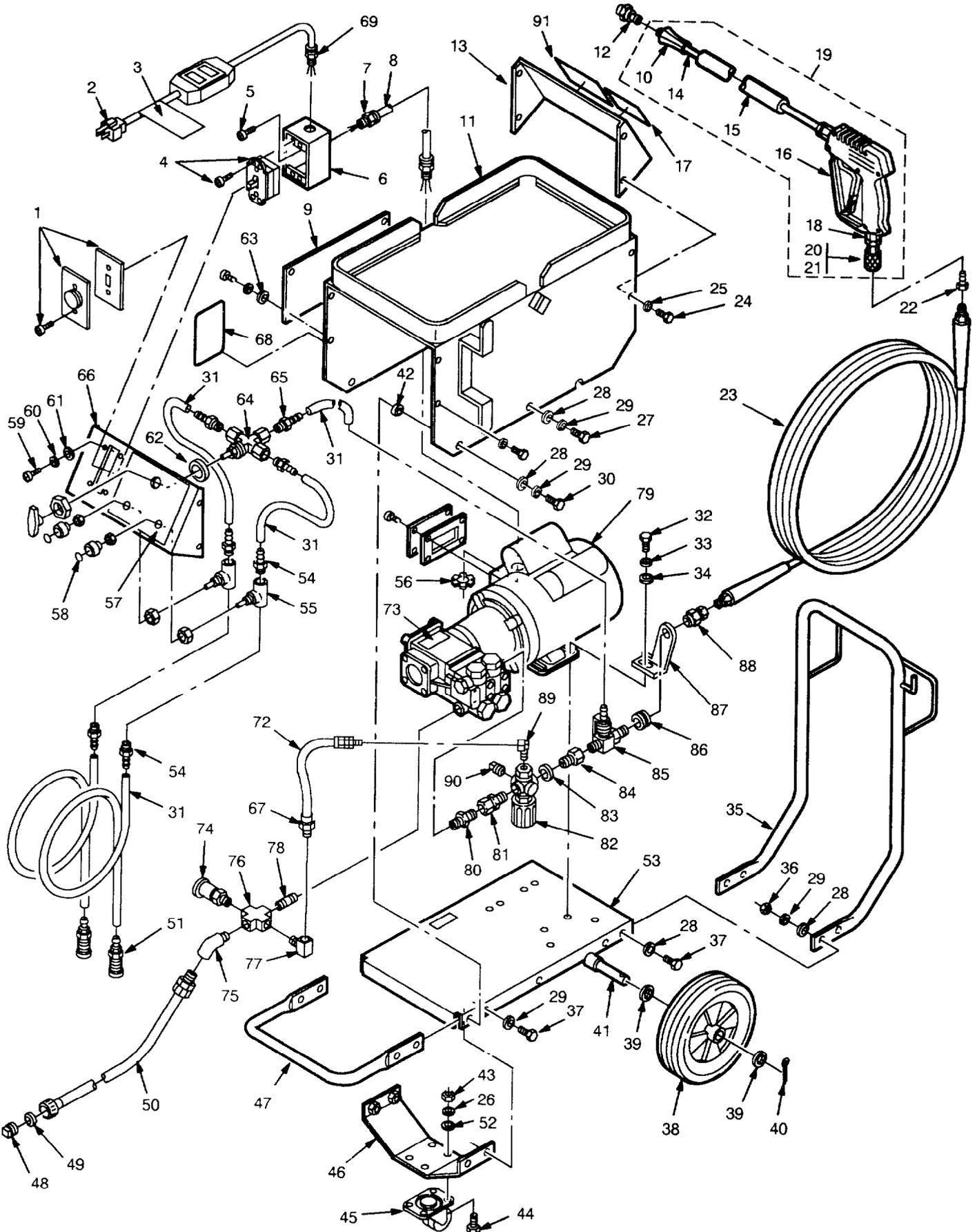
To reduce the risk of serious bodily injury, including fluid injection, splashing in the eyes or on the skin, or injury from moving parts, always follow the **Pressure Relief Procedure Warning** before proceeding.

Problem	Cause	Solution
Low pressure and/or pump runs rough	Worn or wrong size tip. Inlet filter clogged. Worn packings, abrasives in water or natural wear. Inadequate water supply. Coupling slippage. Fouled or dirty inlet or discharge valves. Even a small particle can cause the valve to stick. Restricted inlet. Worn inlet or discharge valves. Leaking high pressure hose.	Replace with tip of proper size. Clean. Check more frequently. Check filter. Replace packings. See PUMP SERVICE. Check water flow rate to pump. Tighten or replace. Clean inlet and discharge valve assemblies. Check filter. Check garden hose, may be collapsed or kinked. Replace worn valves. Replace high pressure hose.
Water leakage from under pump manifold	Worn packings.	Install new packings. See PUMP SERVICE.
Water in pump	Humid air condensing inside crankcase. Worn packings. Oil seals leaking.	Change oil as specified in MAINTENANCE. Install new packings. See PUMP SERVICE. Install new oil seals. See PUMP SERVICE.
Frequent or premature failure of the packings	Scored, damaged or worn plungers. Abrasive material in the fluid being pumped. Inlet water temperature too high. Overpressurizing pump. Excessive pressure due to partially plugged or damaged tip. Pump running too long without spraying. Running pump dry.	Install new plungers. See PUMP SERVICE. Install proper filtration on pump inlet plumbing. Check water temperature; may not exceed 160°F. Do not modify any factory-set adjustments. See EQUIPMENT MISUSE HAZARD. Clean or replace tip. See Installing and Changing Spray Tips. Never run pump more than 10 minutes without spraying. Do not run pump without water.
Strong surging at the inlet and low pressure on the discharge side	Foreign particles in the inlet or discharge valve or worn inlet and/or discharge valves.	Clean or replace valves. See PUMP SERVICE.
Unit will not start	Unit not plugged in. Electrical service off/GFCI activated. Thermal overload has tripped.	Check power cord. Check fuse/circuit breaker. Check for proper grounding. Press reset button on motor.
Chemical injector will not siphon	Chemical injector clogged. Adjustable nozzle completely closed. Low chemical level.	Disassemble chemical valve and clean chemical hose and filter. Turn control ring on nozzle clockwise to cause drop in pressure. Check level of chemical.

PARTS DRAWING

800-232 Hydra-Clean® 826 Pressure Washer (Wiring Diagram - see page 12)

800-233 Hydra-Clean® 1235 Pressure Washer (Wiring Diagram - see page 13)



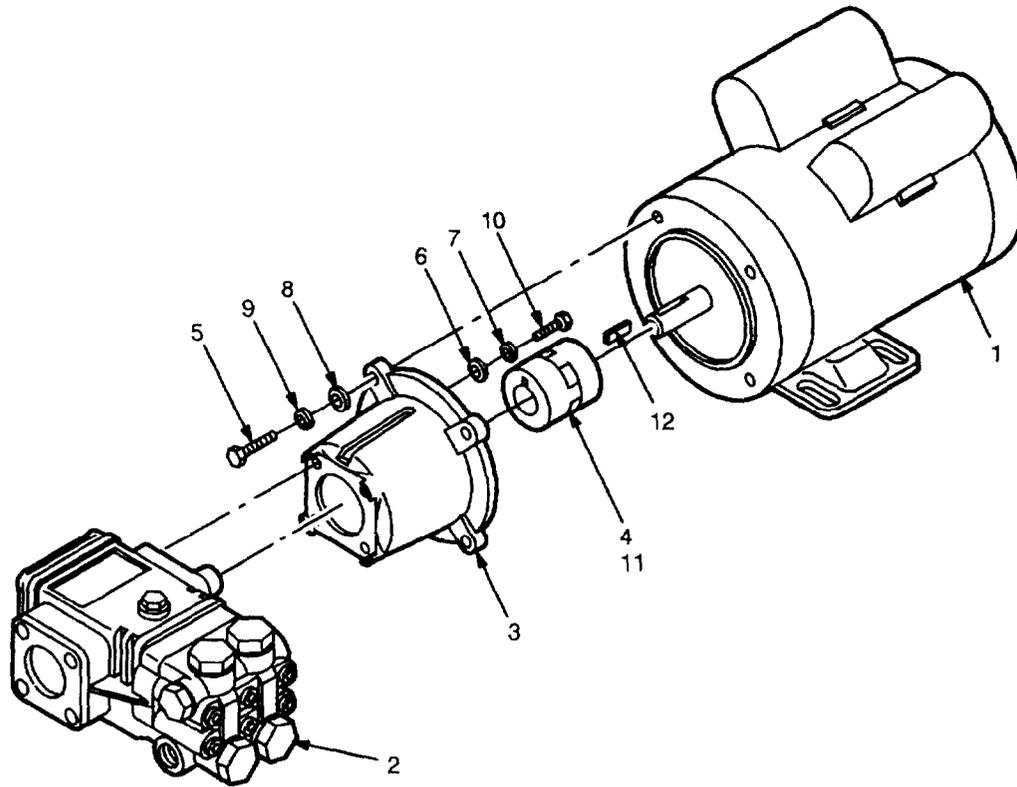
PARTS LIST

800-232 Hydra-Clean® 826 Pressure Washer 800-233 Hydra-Clean® 1235 Pressure Washer

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
1	802-760	COVER, Switch	1	45	802-703	CASTER	1
2	● 803-155	CORD SET, GFCI, 115V	1	46	800-247	BRACKET, Caster	1
	* 803-149	CORD SET, 230V	1	47	802-730	BUMPER	1
3	● 803-185	LABEL, Warning, GFCI	1	48	402-278	PLUG, Plastic	1
	* 803-186	LABEL, Warning, cord set	1	49	801-112	STRAINER, Garden Hose	1
4	801-223	SWITCH, Motor	1	50	802-735	HOSE ASSEMBLY, Inlet	1
5	801-894	SCREW, Ground, self-tapping	1	51	801-683	FILTER, Chemical	2
6	801-893	BOX, Switch	1	52	801-023	WASHER, Flat 1/4	4
7	801-931	GRIP, Cord	2	53	800-246	CHASSIS	1
8	802-704	CORD, 14/3	40 in	54	802-669	HOSEBARB, 1/8 x 1/4	4
	802-153	CORD, 12/3	40 in	55	802-683	VALVE, Metering	2
9	802-685	PLATE, Instruction	1	56	801-937	NUT, Lock, electrical	1
10	800-118	NOZZLE, Adjustable	1	57	802-686	LABEL, Control Panel	1
11	802-664	HOOD	1	58	802-843	LABEL, Knob	2
12	● 801-666	TIP, Spray, 15°	1	59	802-733	SCREW, Machine #6-32 x 1/2	4
	* 801-883	TIP, Spray, 15°	1	60	802-731	WASHER, Lock #6	4
13	802-751	PANEL, End	1	61	802-732	WASHER, Flat #6	4
14	801-935	WAND, 20"	1	62	801-547	WASHER, Flat 3/4	1
15	801-957	SLEEVE, 18"	1	63	801-606	WASHER, Flat #10	4
16	803-350	GUN, Spray	1	64	802-684	VALVE, 3 Way	1
17	803-396	LABEL, Caution/Warning	1	65	801-733	HOSEBARB, 1/4 x 1/4	3
18	801-103	NIPPLE, Hex 3/8 x 1/4	1	66	802-636	PANEL, Control	1
19	800-396	GUN AND WAND ASSEMBLY (incl 10, 14, 15, 16, 18, 20)	1	67	802-627	ADAPTER	1
20	801-009	COUPLER, Female, 1/4 (incl 21)	1	68	● 803-165	LABEL, Voltage, 115V	1
21	801-202	O-RING, Female Coupler, 1/4	1		* 801-445	LABEL, Voltage, 230V	1
22	801-090	COUPLER, Male, 1/4	1	69	● 802-765	GRIP, Cord	1
23	801-967	HOSE, High Pressure, 30'	1		* 801-931	GRIP, Cord	1
24	801-605	SCREW, Machine, #10-24 x 3/4	10	70	801-226	CONNECTOR, Wire (see page 12)	4
25	801-875	WASHER, Lock #10	10	71	● 801-304	TERMINAL, Ring (see page 12)	2
26	801-025	WASHER, Lock 5/16	4		* 801-221	TERMINAL, Ring (see page 12)	2
27	801-546	SCREW, Cap, hex hd, 3/8-16 x 1-1/4	2	72	801-866	HOSE ASSEMBLY, Bypass (incl 67)	1
28	801-015	WASHER, Flat 5/16	12	73	803-083	LABEL, Keep from Freezing	1
29	801-363	WASHER, Lock 3/8	10	74	800-115	VALVE, Thermal Relief	1
30	801-214	SCREW, Cap, hex hd, 3/8-16 x 1-3/4	2	75	● 802-665	ELBOW, Street 1/2 x 45°	1
31	801-813	TUBING, PVC 1/4	16 ft	76	801-622	CROSS, 1/2	1
32	● 801-941	SCREW, Cap, hex hd, 5/16-18 x 1	4	77	801-178	ELBOW, Street 1/2 x 90°	1
	* 801-818	SCREW, Cap, hex hd, 3/8-16 x 1	4	78	801-523	NIPPLE, 1/2 x 2	1
33	● 801-025	WASHER, Lock 5/16	4	79	● 800-154	PUMP AND MOTOR ASSEMBLY (see page 12)	1
	* 801-363	WASHER, Lock 3/8	4		* 800-248	PUMP AND MOTOR ASSEMBLY (see page 13)	1
34	● 801-023	WASHER, Flat 1/4	4	80	801-891	NIPPLE, Hex 3/8 x 3/8 NPSM (m)	1
	* 801-015	WASHER, Flat 5/16	4	81	801-890	SWIVEL, 3/8 x 3/8 NPSM (f)	1
35	802-729	HANDLE	1	82	● 801-865	UNLOADER, 800 PSI	1
36	801-878	NUT, Hex 3/8-16	4		* 802-842	UNLOADER, 1200 PSI	1
37	801-818	SCREW, Cap, hex hd, 3/8-16 x 1	6	83	801-907	WASHER, Aluminum	1
38	108-179	WHEEL	2	84	801-905	ADAPTER 3/8 x 3/8 G	1
39	801-235	WASHER, Flat, 5/8	4	85	803-486	CHEMICAL INJECTOR	1
40	801-880	PIN, Cotter 1/8 x 1-1/2	2	86	● 801-900	GROMMET, Rubber	1
41	801-857	AXLE	1	87	● 801-901	SUPPORT, Unloader	1
42	802-648	SPACER, Pivot	2	88	801-881	SWIVEL, 3/8 x 1/4	1
43	801-024	NUT, Hex 5/16-18	4	89	801-620	ELBOW, Street 1/4	1
44	801-940	SCREW, Cap, hex hd 5/16-18 x 3/4	4	90	801-709	PLUG, Squarehead 1/4	1
				91	801-129	LABEL, Warning	1

- 800-232 Hydra-clean 826 Pressure Washer
- * 800-233 Hydra-clean 1235 Pressure Washer

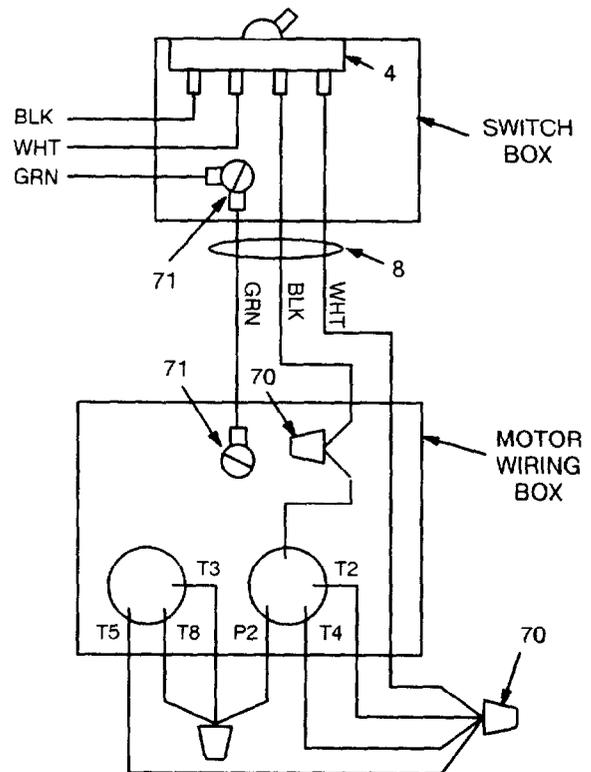
PARTS DRAWING
800-154 Pump and Motor Assembly



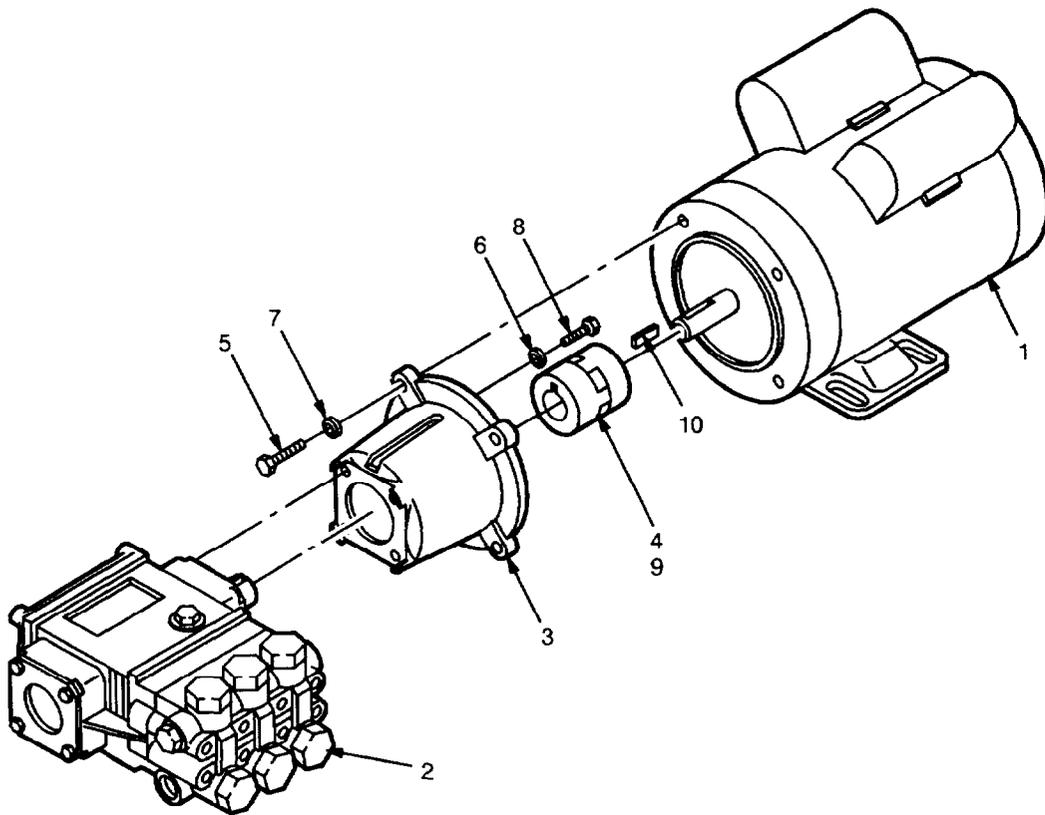
PARTS LIST
800-154 Pump and Motor Assembly

REF NO.	PART NO.	DESCRIPTION	QTY
1	801-862	MOTOR, 1.5 hp TEFC, 1 phase (incl 12)	1
2	801-864	PUMP, 800 psi, (see parts drawing, page 14)	1
3	801-870	HOUSING, Coupler	1
4	801-871	COUPLER (incl 11)	1
5	801-872	SCREW, Cap, hex hd M6 x 20	4
6	801-023	WASHER, Flat, 1/4	4
7	801-139	WASHER, Lock, 1/4	4
8	801-015	WASHER, Flat, 5/16	4
9	801-363	WASHER, Lock, 3/8	4
10	802-818	SCREW, Cap, hex hd	4
11	801-887	SPIDER	1
12	801-137	KEY	1

WIRING DIAGRAM
115 Volt, 1 Phase (see page 11)



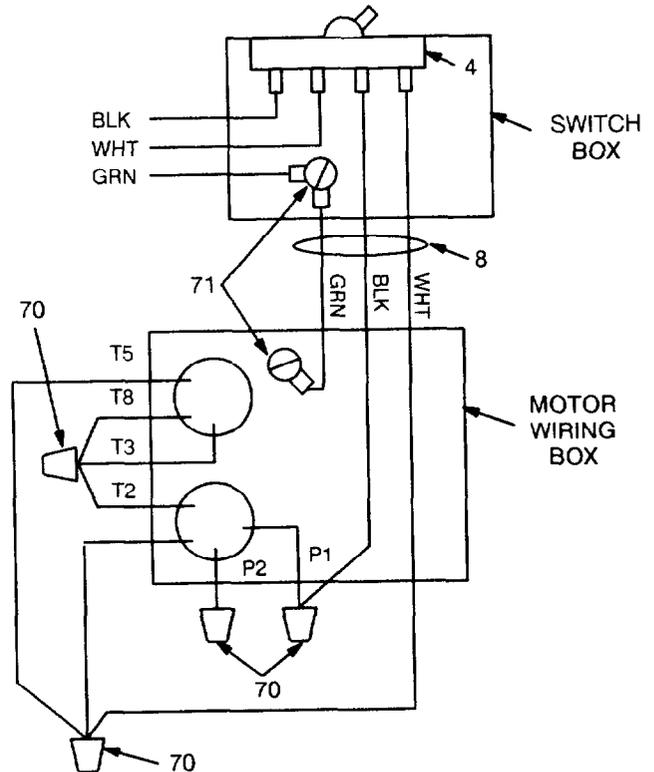
PARTS DRAWING
800-248 Pump and Motor Assembly



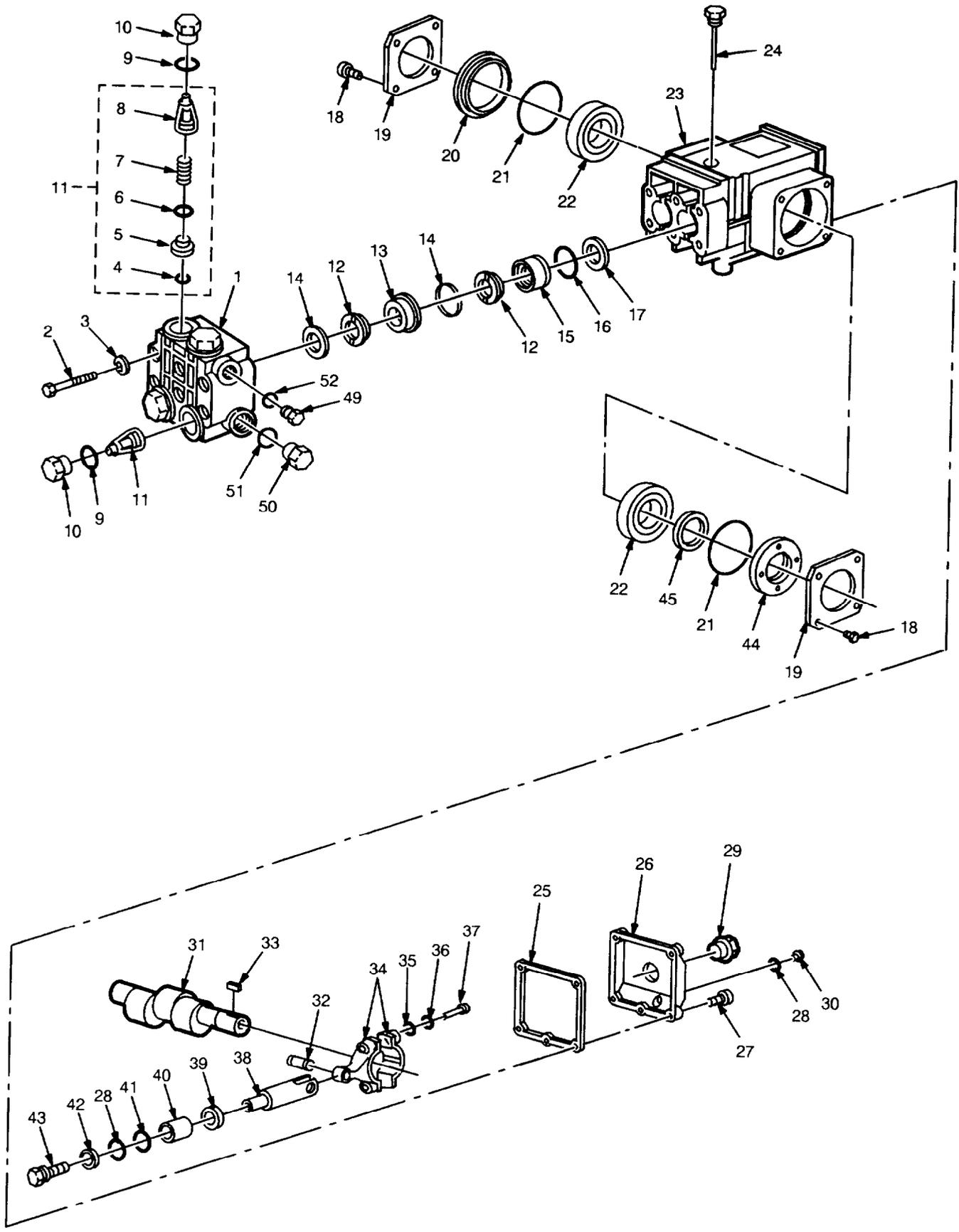
PARTS LIST
800-248 Pump and Motor Assembly

REF NO.	PART NO.	DESCRIPTION	QTY
1	802-625	MOTOR, 3.0 hp TEFC, 1 phase (incl 10)	1
2	802-629	PUMP, 1200 psi (see parts drawing, page 16)	1
3	802-633	HOUSING, Coupler	1
4	802-698	COUPLER (incl 9)	1
5	802-786	SCREW, Cap, hex hd M6 x 16	4
6	801-139	WASHER, Lock 1/4	4
7	802-784	WASHER, Lock 1/2	4
8	802-785	SCREW, Cap, socket hd 1/2-13 x 1-1/4	4
9	801-887	SPIDER	1
10	801-137	KEY	1

WIRING DIAGRAM
230 Volt, 1 Phase (see page 11)



PARTS DRAWING
802-265 Pump Assembly, 800 psi

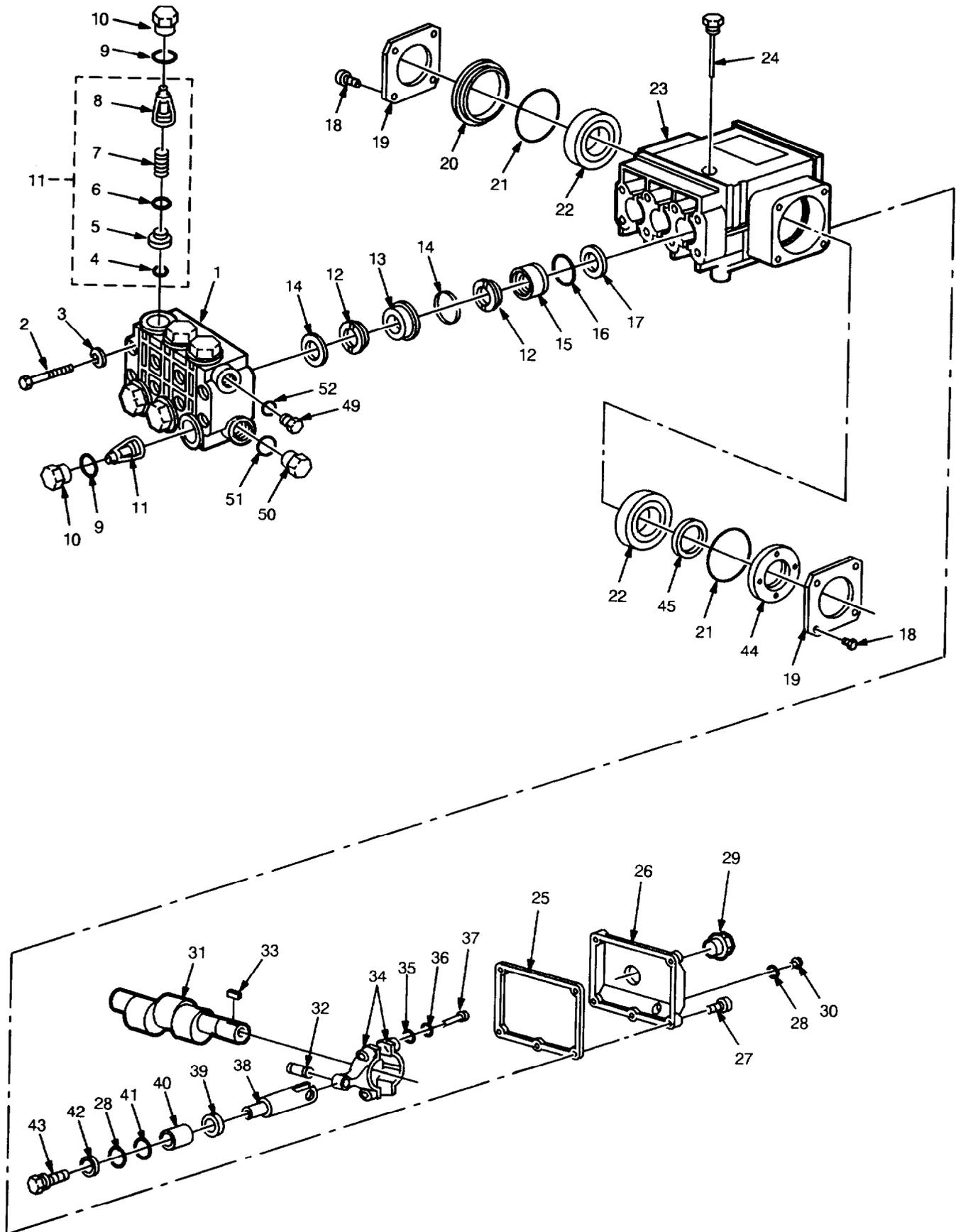


PARTS LIST
802-265 Pump Assembly, 800 psi

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
1	801-899	MANIFOLD, Aluminum	1	25	803-271	GASKET, Cover	1
	802-795	MANIFOLD, Brass	1	26	803-272	COVER, Crankcase	1
2	801-651	SCREW, Cap, socket hd.	6	27	803-273	SCREW, Cap, socket hd.	4
3	801-652	WASHER, Lock	6	28	KIT 6	O-RING	
4	KIT 1	O-RING		29	802-345	GAUGE, Sight	1
5	KIT 1	SEAT, Valve		30	802-793	PLUG, Oil Drain	1
6	KIT 1	PLATE, Valve		31	803-274	CRANKSHAFT	1
7	KIT 1	SPRING		32	803-275	PIN, Wrist	2
8	KIT 1	GUIDE, Valve		33	802-794	KEY	1
9	KIT 4	O-RING		34	803-276	ROD, Connecting	2
10	KIT 4	CAP		35	803-277	WASHER, Flat	4
11	KIT 1	VALVE ASSEMBLY		36	803-278	WASHER, Lock	4
12	KIT 19, 27	PACKING		37	803-279	SCREW, Cap, socket hd.	4
13	KIT 27	RETAINER, Packing		38	803-280	GUIDE, Piston	2
14	KIT 27	RING, Head		39	801-489	WASHER, Flinger	2
15	KIT 27	RETAINER, Packing		40	801-661	PLUNGER, Ceramic	2
16	KIT 27	O-RING		41	KIT 6	RING, Backup	
17	KIT 23	SEAL, Oil		42	KIT 6	WASHER	
18	803-265	SCREW, Cap, hex hd	8	43	KIT 6	SCREW, Piston	
19	803-266	COVER, Crankcase	2	44	803-281	SPACER	1
20	803-267	SPACER	1	45	803-282	SEAL, Crankshaft	1
21	803-268	O-RING	2	49	801-484	PLUG, Hex	1
22	803-269	BEARING, Ball	2	50	801-482	PLUG, Hex	1
23	803-270	CRANKCASE	1	51	801-483	WASHER, Flat	1
24	801-659	DIPSTICK	1	52	801-485	WASHER, Flat	1

Kit No.	Repair Kit Part No.	Ref No.	Description	Qty. Incl.
1	801-472 Valve	4	O-ring	6
		5	Seat, valve	6
		6	Plate, valve	6
		7	Spring	6
		8	Guide, valve	6
		11	Valve Assy.	6
4	802-306 Valve Cap	9	O-ring	6
		10	Cap	6
6	801-474 Plunger Repair	28	O-ring	3
		41	Ring, backup	3
		42	Washer	3
		43	Screw, piston	3
19	801-662 Packing	12	Packing	6
23	801-658 Oil Seal	17	Seal, oil	6
27	801-664 Packing & Retainer	12	Packing	1
		13	Retainer, packing	1
		14	Ring, head	1
		15	Retainer, packing	1
		16	O-ring	1

PARTS DRAWING
802-629 Pump Assembly, 1200 psi



PARTS LIST

802-629 Pump Assembly, 1200 psi

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
1	802-319	MANIFOLD, 1200 psi	1	26	802-526	COVER, Crankcase	1
2	801-651	SCREW, Cap, socket hd.	8	27	803-273	SCREW, Cap, socket hd.	5
3	801-652	WASHER, Lock	8	28	KIT 6	O-RING	
4	KIT 1	O-RING		29	802-345	GAUGE, Sight	1
5	KIT 1	SEAT, Valve		30	802-793	PLUG, Oil Drain	1
6	KIT 1	PLATE, Valve		31	803-329	CRANKSHAFT	1
7	KIT 1	SPRING		32	803-275	PIN, Wrist	3
8	KIT 1	GUIDE, Valve		33	802-794	KEY	1
9	KIT 4	O-RING		34	803-276	ROD, Connecting	3
10	KIT 4	CAP		35	803-277	WASHER, Flat	6
11	KIT 1	VALVE ASSEMBLY		36	803-278	WASHER, Lock	6
12	KIT 19, 27	PACKING		37	803-279	SCREW, Cap, socket hd.	6
13	KIT 27	RETAINER, Packing		38	803-330	GUIDE, Piston	3
14	KIT 27	RING, Head		39	801-660	WASHER, Flinger	3
15	KIT 27	RETAINER, Packing		40	801-661	PLUNGER, Ceramic	3
16	KIT 27	O-RING		41	KIT 6	RING, Backup	
17	KIT 23	SEAL, Oil		42	KIT 6	WASHER	
18	803-265	SCREW, Cap, hex hd	8	43	KIT 6	SCREW, Piston	
19	803-266	COVER, Crankcase	2	44	803-281	SPACER	1
20	803-267	SPACER	1	45	803-282	SEAL, Crankshaft	1
21	803-268	O-RING	2	49	801-484	PLUG, Hex	1
22	803-269	BEARING, Ball	2	50	801-482	PLUG, Hex	1
23	803-326	CRANKCASE	1	51	801-483	WASHER, Flat	1
24	801-659	DIPSTICK	1	52	801-485	WASHER, Flat	1
25	803-327	GASKET, Cover	1				

Kit No.	Repair Kit Part No.	Ref No.	Description	Qty. Incl.
1	801-472 Valve	4	O-ring	6
		5	Seat, valve	6
		6	Plate, valve	6
		7	Spring	6
		8	Guide, valve	6
4	802-306 Valve Cap	9	O-ring	6
		10	Cap	6
6	801-474 Plunger Repair	28	O-ring	3
		41	Ring, backup	3
		42	Washer	3
		43	Screw, piston	3
19	801-662 Packing	12	Packing	6
23	801-658 Oil Seal	17	Seal, oil	6
27	801-664 Packing & Retainer	12	Packing	1
		13	Retainer, packing	1
		14	Ring, head	1
		15	Retainer, packing	1
		16	O-ring	1

PUMP SERVICE

WARNING

To reduce the risk of serious bodily injury, including fluid injection, splashing in the eyes or on the skin, or injury from moving parts, always follow the **Pressure Relief Procedure Warning** before proceeding.

NOTE: The following metric wrenches are needed: M10, M13 and M30. Repair kits are available. Refer to the individual repair sections and the pump parts page for more details. For the best results, use all parts in the kits.

NOTE: There are two different tool kits to aid in servicing the pump. P/N 800-298 is used to ease installation of packings. P/N 800-271 includes the items in 800-298 and tools to aid in the removal of packing retainers.

Valves

NOTE: For a set of six valves, order P/N 801-472.

1. Remove the hex plug from the manifold using an M30 wrench.
2. Examine the o-ring under the hex plug and replace it if it is cut or distorted.
3. Remove the valve assembly from the cavity; the assembly may come apart.
4. Install the new valve. Install the o-ring and hex plug; torque to 75 ft-lb (103 Nm).

NOTE: Retorque the plug after 5 hours of operation.

Pumping Section

1. Remove the eight capscrews and lockwashers from the manifold using an M13 wrench.
2. Carefully separate the manifold from the crankcase.

NOTE: It may be necessary to tap the manifold lightly with a soft mallet to loosen.

CAUTION

Keep the manifold properly aligned with the ceramic plungers when removing to avoid damage to the plunger or seals.

3. Carefully examine each plunger for any scoring or cracking and replace as necessary.

Servicing the Plungers

NOTE: Plunger repair kit, P/N 801-474 is available to replace retainers, o-rings, washers and backup rings for three cylinders.

1. Loosen the plunger retaining screw five to six turns, using an M10 wrench. Push the plunger towards the crankcase to separate the plunger and retaining screw.
2. Remove the screw from the plunger and examine the o-ring, backup ring and copper bearing/gasket washer. Replace these parts if necessary using kit 801-474.
3. Remove the plunger and flinger from the plunger shaft. Clean, examine and replace parts as necessary.
4. Inspect the plunger shaft for oil leakage from the crankcase. If leaking is obvious, replace the oil seals. Otherwise, DO NOT remove these seals as they cannot be reused. An oil seal kit is available to replace the seals.
5. Lightly grease the oil seal, if it is being replaced, and the flinger and replace them on the plunger shaft. Then install the plunger.
6. Lightly grease the retaining screw and the outer end of the plunger. Place the washer, o-ring and backup ring around the screw and install the screw through the plunger. Torque to 14.4 ft-lb (19.5 Nm).

NOTE: If you plan to replace the packings, refer to Servicing the V-Packings.

7. Lubricate the outside of each plunger. Slide the manifold onto the crankcase, being careful not to damage the seals.
8. Install the capscrews and washers finger-tight. Torque the screws to 21.7 ft-lb (29 Nm) following the tightening pattern (Figure 3). Uneven tightening may cause the manifold to bind or jam.

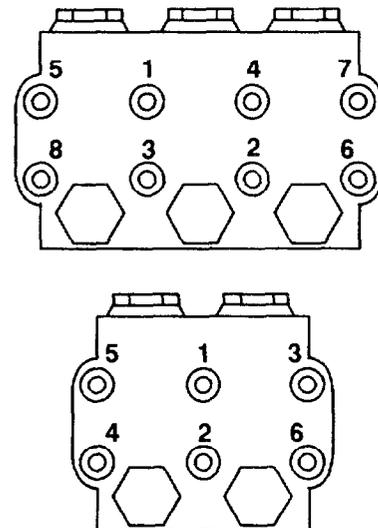


Figure 3

Servicing the V-Packings

NOTE: There are two types of packing kits: one is just packings, the other includes the packings, rings and retainers.

1. Remove the manifold as outlined in the Pumping Section.
2. Carefully pull the packing retainer from the manifold. Examine the o-ring and replace it if it is cut or damaged.
3. Remove the v-packing and head ring. Pull out the intermediate retainer ring. Remove the second v-packing and second head ring.
4. Inspect all parts and replace as necessary.

5. Thoroughly clean the packing cavities and examine.
6. Lightly grease the packing cavities and then replace the packings in the following order: head ring, v-packing, intermediate ring, head ring, v-packing and packing retainer with the o-ring installed in the retainer groove.

CAUTION

Be very sure the parts are installed in the proper order and facing the correct direction. Improperly installed parts will cause a malfunction.

7. Reassemble the manifold as instructed in Servicing the Plungers.

ACCESSORIES

(Must be purchased separately)

UPSTREAM CHEMICAL INJECTOR KIT 800-257

For injecting mild cleaning chemicals upstream into the pump.

BACKFLOW PREVENTOR 801-133

Prevent back-up of contaminated water into fresh supply. Install upstream of pump.

ANTI-FREEZE FLUSH KIT 802-327

For flushing system with 50% anti-freeze solution prior to transporting or storing pressure washer in below freezing temperatures.

INLET PRESSURE REGULATOR 800-258

Regulates inlet water pressure to 60 psi (4 bar) maximum.

TECHNICAL DATA

	Model 800-232	Model 800-233
Motor (Totally Enclosed Fan Cooled)	1.5 hp, 1 phase	3.0 hp, 1 phase
Electrical Service	115 volts/15 amps/60 Hz	230 volt/20 amp/60 Hz
Water Pump Maximum Working Pressure	800 psi (55 bar)	1200 psi (82 bar)
Water Pump Maximum Flow	2.6 gpm (10 lpm)	3.5 gpm (13 lpm)
Unit Weight	100 lbs (46 kg)	150 lbs (68 kg)
Dimensions		
Length	38 in (965 mm)	38 in (965 mm)
Width	19 in (482 mm)	19 in (482 mm)
Height	33 in (838 mm)	33 in (838 mm)
Maximum Inlet Water Temperature	160° F (70° C)	160° F (70° C)
Inlet Hose Connection	3/4 in garden hose (f)	3/4 in garden hose (f)
Wetted Parts		
High Pressure Hose	Acrylonitrile and Buna-N cover and tube	
Bypass Hose	Synthetic yarn and EPDM	
Pressure Washer (including fittings)	Anodized aluminum, Aluminum or Bronze alloys, Brass, Copper, Nylon, PTFE [®] composite, Ceramic, Buna-N, Cotton Phenolic, 303, 304, and 316 Stainless Steel, Polyimide-12 Thermoplastic, PTFE [®] , Carbon Steel, Zinc with or without Yellow Chromate Plate	
	PTFE [®] is a registered trademark of the DuPont Company.	

THE GRACO WARRANTY

WARRANTY AND DISCLAIMERS

Graco warrants all equipment manufactured by it and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. As purchaser's sole remedy for breach of this warranty, Graco will, for a period of twenty four months from date of sale, repair or replace any part of the equipment proven defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for, any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility with Graco equipment of structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective for examination by Graco to verify the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor and transportation.

DISCLAIMERS AND LIMITATIONS

THE TERMS OF THIS WARRANTY CONSTITUTE THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY AND ARE IN LIEU OF ANY OTHER WARRANTIES (EXPRESS OR IMPLIED), INCLUDING WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY NON-CONTRACTUAL LIABILITIES, INCLUDING PRODUCT LIABILITIES, BASED ON NEGLIGENCE OR STRICT LIABILITY. EVERY FORM OF LIABILITY FOR DIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSS IS EXPRESSLY EXCLUDED AND DENIED. IN NO CASE SHALL GRACO'S LIABILITY EXCEED THE AMOUNT OF THE PURCHASE PRICE. ANY ACTION FOR BREACH OF WARRANTY MUST BE BROUGHT WITHIN THREE (3) YEARS OF THE DATE OF SALE.

EQUIPMENT NOT COVERED BY GRACO WARRANTY

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motor, switches, hose, etc.) are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

IMPORTANT PHONE NUMBERS

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you: **1-800-328-0211 Toll Free**

FOR TECHNICAL ASSISTANCE, service repair information or assistance regarding the application of Graco equipment: **1-800-543-0339 Toll Free**

Factory Branches: Atlanta, Chicago, Dallas, Detroit, Los Angeles, West Caldwell (N.J.)
Subsidiary and Affiliate Companies: Canada; England; Switzerland; France; Germany; Hong Kong; Japan

GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441

PRINTED IN U.S.A. 308-517 2/90