

Water

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Water Distribution System (Excella Rear Bath)

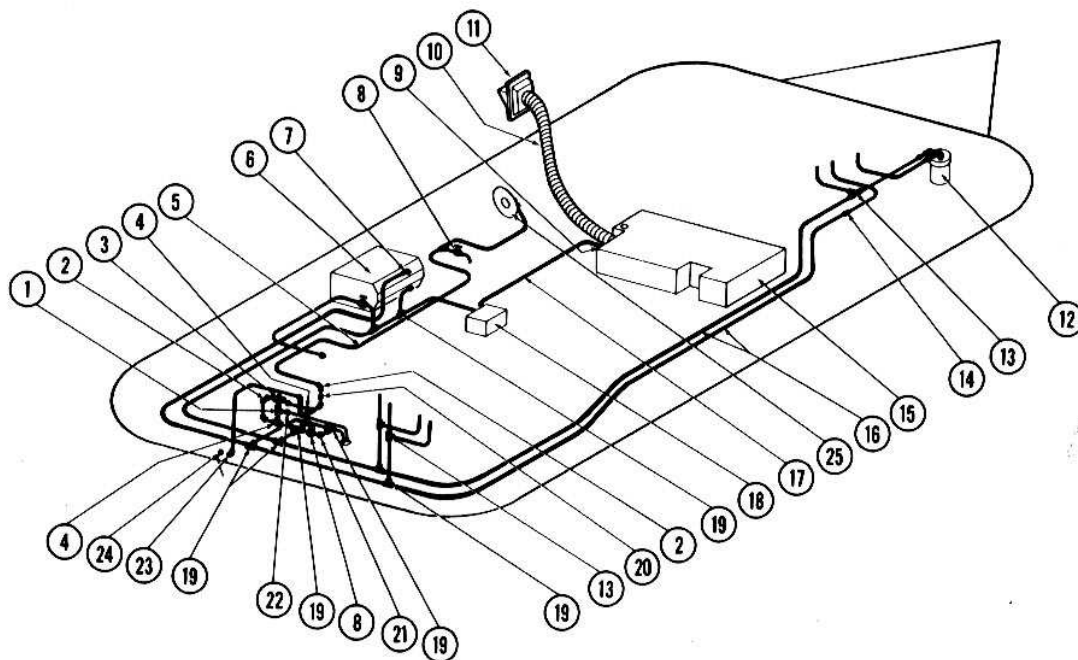


Fig. 3

No.	Part No.	Description
1	600369	Relief valve
2	600040	Elbow 5/8" x 5/8"
3	600309	Water regulator
4	600047	TEE 5/8" x 5/8" x 5/8"
5	600004	Copper tubing 5/8" O.D.
6	690115	Water heater
7	600048	Elbow (male) 5/8" x 1/2"
	600036	Flare nut 1/2"
8	600064	Stop valve
9	600760	Male pipe adapter 1/2" MPT x 1/2" POLY
10	600579	Flex hose 1 1/2" x 36"
11	600351	Waterfill spout w/gasket
12	600471	Water purifier
13	600044	TEE 1/2" x 3/8" x 3/8"
14	600256	Reducer 1/2" x 3/8"
15	600833	Water tank
16	600099	Copper tubing 1/2" O.D.
17	600758	Polybutylene tubing 1/2" O.D.
18	600262	Water pump
19	600050	TEE 3/8" x 3/8" x 3/8"
20	600139	Check valve
21	600266	Elbow 3/8" x 3/8" I.D. 90°
22	600452	Connector 5/8" Flare x 1/2" Female
23	600293	Close nipple 1/2"
24	600336	Plug & strap
25	600799	Hose reel

Water Distribution System (Excella Center Bath)

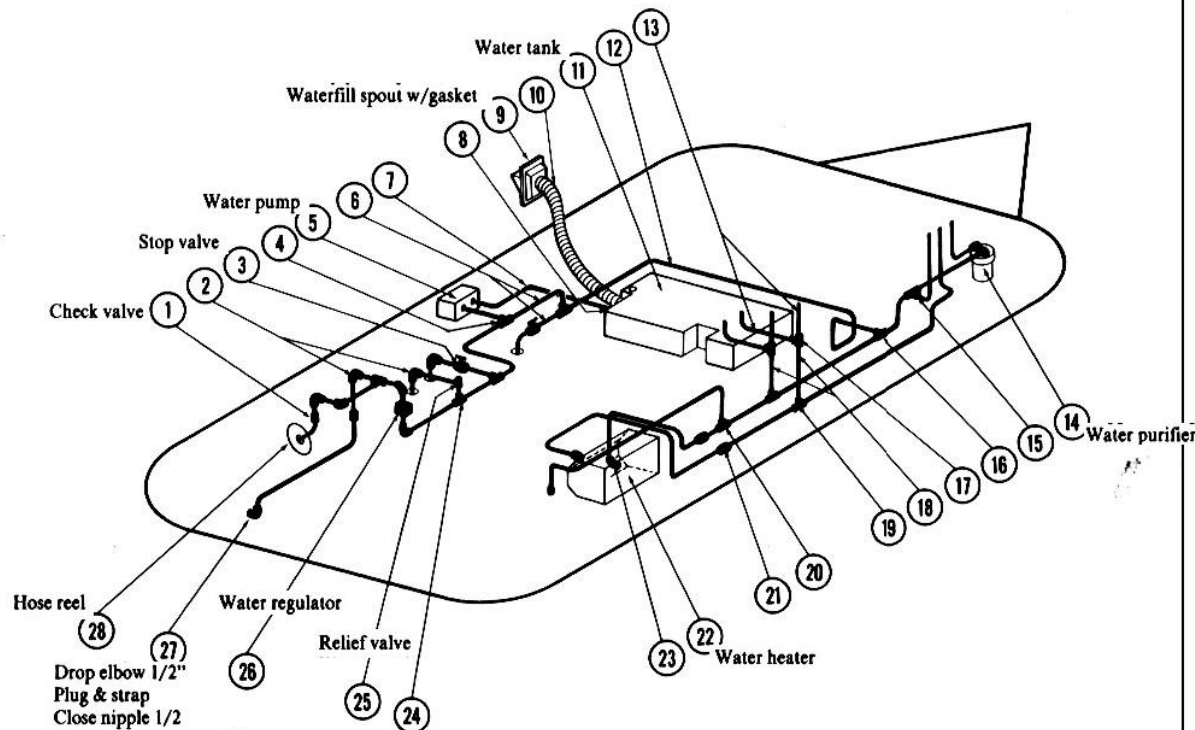


Fig. 4

No.	Part No.	Description
1	600139	Check valve
2	600040	Elbow 5/8" x 5/8"
3	600064	Stop valve
4	600046	TEE 5/8" x 5/8" x 1/2"
5	600262	Water pump
6	600004	Copper tubing 5/8" O.D.
7	600758	Polybutylene tubing 1/2" O.D.
8	600760	Male pipe adapter 1/2" MPT x 1/2" POLY
9	600351	Waterfill spout w/gasket
10	600579	Flex hose 1/4" x 36"
11	600833	Water tank
12	600004	Copper tubing 5/8" O.D.
13	600008	Copper tubing 3/8" O.D.
14	600471	Water purifier
15	600050	TEE 1/2" x 1/2" x 1/2"
16	600281	TEE 5/8" x 5/8" x 3/8"
17	600044	TEE 1/2" x 3/8" x 3/8"
18	600099	Copper tubing 1/2" O.D.
19	600347	TEE 3/8" x 1/2" x 1/4"
20	600228	TEE 5/8" x 1/2" x 5/8"
21	600468	5/8" x 5/8" FL union 42 F
	600010	Flare nut 3/8"
22	690115	Water heater
23	600036	Flare nut 1/2"
	600048	Elbow (male) 5/8" x 1/2"
24	600047	TEE 5/8" x 5/8" x 5/8"
25	600369	Relief valve
26	600309	Water regulator
27	600284	Drop elbow 1/2"
	600336	Plug & strap
	600293	Close nipple 1/2"
28	600799	Hose reel

Water Distribution System Tubing & Fittings

- Copper Fittings -



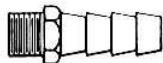
Elbow

600038 - 3/8" x 3/8"
600039 - 1/4" x 1/4"
600040 - 1/2" x 1/2"
600048 - 5/8" x 1/2"
600096 - 1/2" x 3/8"



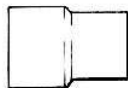
Coupling

600049 - 3/8" x 3/8"
600261 - 1/2" x 1/2"
600361 - 1/4" x 1/4"



Nipple

600274 - 3/8" x 5/8" Barb
600534 - 1/2" x 1/2" Barb



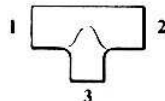
Reducer coupler

600233 - 3/8" x 1/4"
600256 - 1/2" x 3/8"



Female adapter

600283 - 1/2" x 3/8"



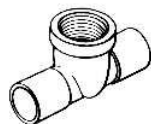
Tee

600044 - 1/2" x 3/8" x 3/8" Copper
600046 - 1/2" x 1/2" x 3/8" Copper
600047 - 1/2" x 1/2" x 1/2" Copper
600050 - 3/8" x 3/8" x 3/8" Copper
600067 - 3/8" x 1/4" x 1/4" Copper
600228 - 1/2" x 3/8" x 1/2" Copper
600347 - 3/8" x 3/8" x 1/2" x 1/4" Copper
600360 - 1/2" x 1/4" x 3/8" Copper
600370 - 1/2" x 3/8" x 1/4" Copper
600397 - 3/8" x 1/4" x 1/4" Copper
600543 - 1/4" x 1/4" x 1/4" Copper



Elbow

600284 - 1/2" Drop



Tee adapter

600257 - 1/2" x 1/2" x 1/2" FPT



Male connector adapter

600254 - 1/2" x 1/2"



Hose connector

600362 - 3/4" x 1/2"



Union

600377 - 1/4" x 1/4"
(inverted flare with male pipe thread)



Elbow

600048 - 5/8" x 1/2" (flare to female pipe)



Female coupling

600452 - 5/8" FL x 1/2" Female



Union (flare to flare)

600468 - 5/8"



Short flare nut

600001 - 5/8"



Tee

600758 - 1/2" x 1/2" x 1/2" (Polybutylene)



Clamping ring

600775 - for 1/2" tubing (Polybutylene)



Male pipe adapter

600760 - 1/2" MPT x 1/2" Polybutylene

- Plastic Fittings -

683765 - 1 1/2" MP x 1 1/4" barbed water fill elbow
683766 - 1 1/4" barbed water fill elbow
683767 - 1/4" barbed water tank vent elbow
683768 - 1/4" barbed x 3/8" MP x 1/4" barbed tee
683769 - 1/4" barbed x 1/4" barbed x 1/4" barbed tee
683770 - 3/8" MP x 3/8" barbed coupling
683771 - 1/2" barbed x 1/2" barbed coupling
683772 - 1 1/4" ID x 1 1/4" ID barbed coupling
683773 - 3/8" barbed elbow
683774 - 1/4" plastic plug
683775 - 1/4" barbed x 3/8" P Plastic elbow
683776 - 3/8" plastic plug
683777 - 1 1/2" clear tygon tubing per ft.
683778 - 1/4" clear tygon tubing per ft.
683779 - 3/8" clear tygon tubing per ft.
600265 - 1/2" clear tygon tubing per ft.
683780 - 1/4" clear tygon tubing per ft.
600579 - 1 1/2" I.D. water fill hose style 1976-77 per ft.
683782 - 1/4" I.D. black water tank vent tubing per ft.
600343 - 1 1/4" I.D. black water tank fill tubing per ft.

City Water Inlet Check Valve Removal and Replacement

1. Unhook water supply.
2. Shut off pump switch.
3. Open faucet.
4. Open drain valve.
5. Use 2 wrenches. Hold 90° elbow with one and loosen flare nut with the other.
6. Remove screw from support clamp and remove clamp.
7. Thread check valve and 90° fitting from adaptor.
8. Separate check valve from 90° fitting
9. Reverse above to reinstall.
10. Use teflon thread tape on fitting and valve threads.

City Water Pressure Regulator Removal and Replacement

Start with above instructions for check valve removal, then proceed as follows:

1. Use back-up wrench on water feed line fitting and second wrench on regulator outlet casting. Thread valve out of fitting.

Reverse above to install. Use Teflon tape on threads.

NOTE: Pressure Regulator set at 32 to 38 PSI at 75 PSI line pressure.

Pressure Relief Valve Removal and Replacement

1. Use wrench on drain line flare nut with back-up wrench on pressure relief valve.
2. After line removal, place back-up wrench on water line sweat adapter and other wrench on pressure relief valve. Thread valve out of fitting.
3. Reverse for installation. Use Teflon tape on threads.

Sweat Joint Installation

1. Make sure lines to be soldered are clean, both inside and outside.

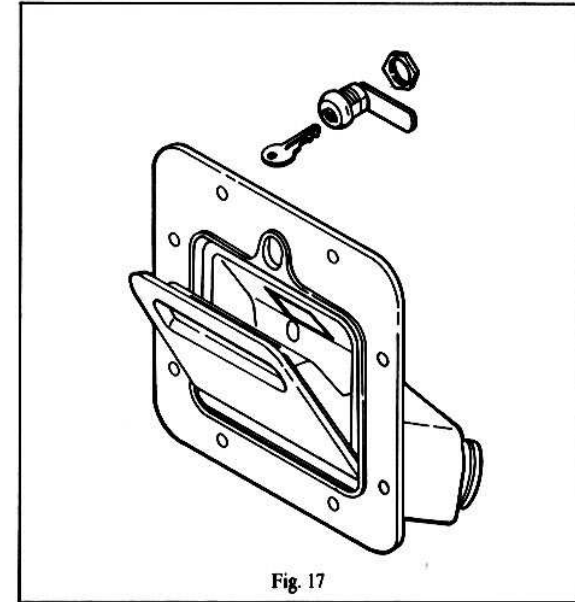
Cleaning can be done with a fine emery cloth, or by using a copper tubing brush. (Purchased at most plumbing shops.)

2. After the lines and fittings have been cleaned, apply "Wet-Oil", which is available at the factory parts department.
3. After flux has been applied to both lines and fittings, insert line into fitting, making sure line is inserted far enough to make a good connection. Apply heat, by means of a small torch, to female fitting. Using 50/50 solder, hold the solder against the fitting until the flame heats the fitting to the melting point of the solder. Allow it to flow into the fittings to make an airtight seal. When applying heat, be careful not to damage the surrounding area.
4. When attempting to stop a line which is leaking at a joint, first drain the line of all water. Then apply "Wet-Oil" to fitting and re-solder as in Step No. C. All joints must be clean and dry.

Water Fill Spout Removal and Replacement

1. Open sliding door under galley.
2. Loosen clamp and 1½" Tygon tubing. Remove tubing from spout by pulling straight back towards you.
3. Loosen clamp on ¼" ID plastic air vent hose and remove.
4. Move both to one side.
5. It will then be necessary to trim inside skin around fill spout to allow the removal and inserting of the new fill spout.
6. From the outside, drill out the 12 hard rivets with No. 30 drill. (Care should be taken not to enlarge holes.)
7. Remove fill spout and clean sealer off body.
8. Install new spout and rivet with hard bucking rivets.
9. Olympic rivets may be used if preferred.
10. Seal with Ten-X.
11. Using a section of vinyl covered aluminum approximately 10" square, pop rivet in place with white rivets.
12. Reinstall hose and water test.

Water Fill Spout



Water Hose Reel Assembly

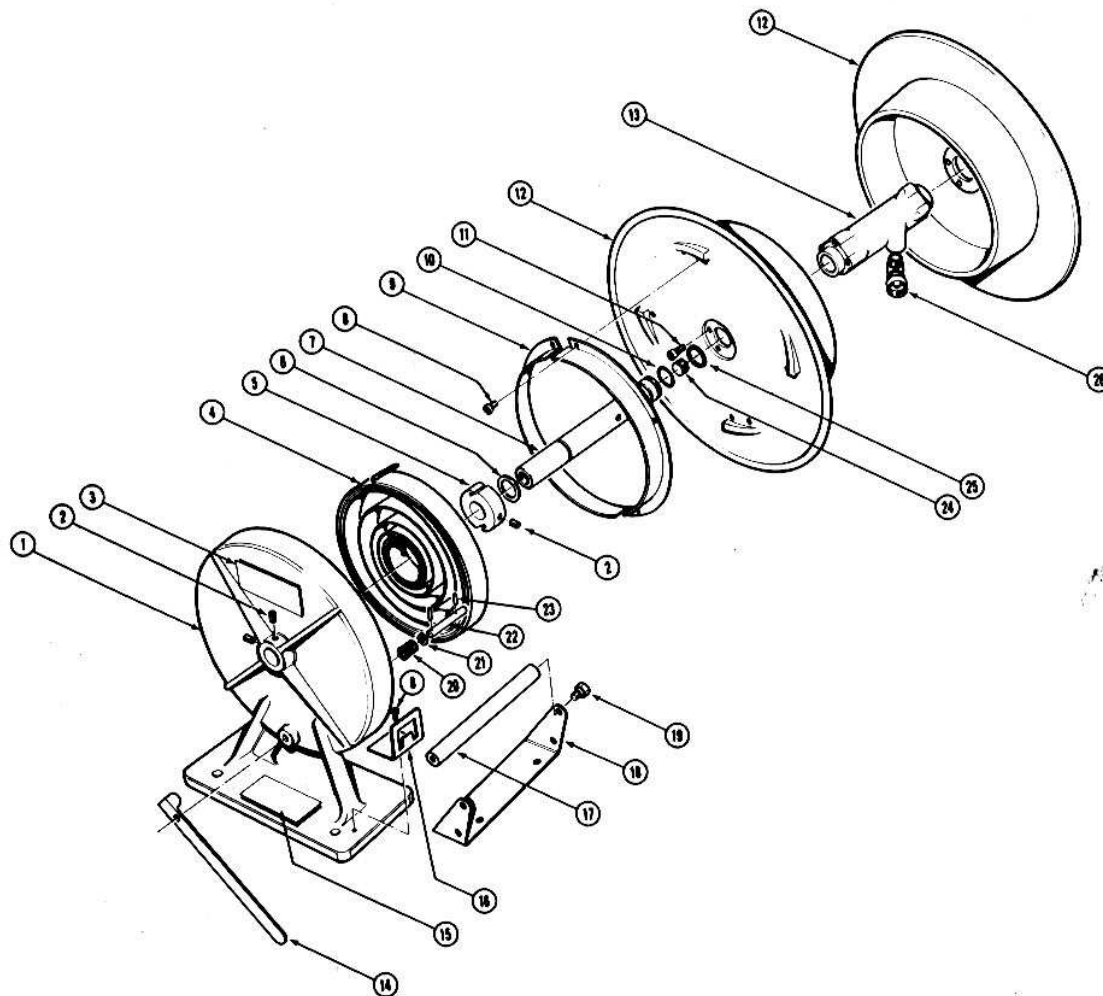


Fig. 18

No	Part No.	Description
1	1104-06	Base
2	-	Set screw 1/4" - 28 x 3/8" LG soc. H.D.
3	1104-26	Decal, warning - disassemble
4	1104-09	Spring
5	1104-20	Spring retainer - I.D.
6	1104-12	Washer wear
7	1104-08	Shaft
8	-	Screw 10-32 x 3/8" LG P.H.
9	1104-21	Spring retainer O.D.
10	2-310-N508-7	"O" ring
11	-	Cap screw 10-32 x 1/2" LG Soc. H.D.
12	1104-02	Reel segment
13	1104-03	Hub assembly
14	1104-23	Latch handle
15	1104-26	Decal, warning - release
16	1104-24	Latch retainer
17	1104-18	Roller
18	1104-15	Guide bracket
19	1104-25	Shoulder screw
20	1104-11	Spring - latch
21	-	Washer 5/16" I.D.
22	1104-10	Latch shaft
23	-	Pin - drive - lock 3/32 x 5/8" LG
24	-	Pipe plug 3/8"
25	5160-98-M	Snap ring - Tru-arc
26	-	Female hose connector

Water Hose Reel Removal and Replacement

1. Remove ABS cover. Accessible through roadside wardrobe or under roadside bed.
2. Remove bolts securing reel base to plywood platform.
3. Remove hose coupler, on reel, from trailer water system.
4. Remove complete assembly with hose coiled on reel. If hose must be removed prior to reel removal follow step 5 thru 7.
5. Uncoil hose with latch handle (Item #14) in ratchet position.
6. Remove hose from swivel connector.
7. Grasp reel casting (Item #12) with one hand and release latch handle (Item #14) with other hand, now slowly let reel recoil using hand on reel as brake. Once reel has completely recoiled, return latch handle to ratchet position (right hand notch).

Water Hose Reel Disassembly

After hose reel assembly has been removed from trailer, hose may be removed in the same manner as described in assembly removal section steps 5 thru 7. With reel spring (Item #4) in relaxed condition unit is now ready for disassembly.

1. Disassemble base (Item #1) and reel (Item #12) by loosening the two 1/4 x 28 socket set screws (Item #2) found in the hub of the base casting and slide reel assembly from base. This allows access to service the return spring (Item #4) or any related parts of the latch handle assembly.
2. Remove spring pin to disassemble latch assembly from base casting.
3. Disassemble the shaft (Item #7) and reel by removing the spring (Item #4). CAUTION. Be careful handling spring. lay on flat surface during service. DO NOT allow spring to start uncoiling as the tension and sharp edges may cause injury.
4. Remove snap ring (Item #25) from opposite end of shaft or set screws (Item #2) found in spring I.D. retainer (Item #5).
5. Slide shaft from reel. This allows access to the two "O" rings (Item #10) which seal against leakage.
6. Disassemble the reel and hub by removing four #10-32 x 1/2" socket head screws (Item #11) from each reel segment.
7. Slide off reel segments from each end of the hub assembly. This will allow closer inspection and/or replacement of reel segments or hub assembly.
8. For assembly reverse above procedure.

Galley Faucet Removal and Replacement

1. Shut off water supply and drain down system using drain valves in rear, both hot and cold.
2. Shut off pump switch.
3. Open galley faucet.
4. Open drain valve (at rear of trailer).
5. Open slide doors under galley and cover shelf with corrugated paper protection. Have towels and drip pan available for surplus water and clean up.

Galley Filter Faucet Assembly

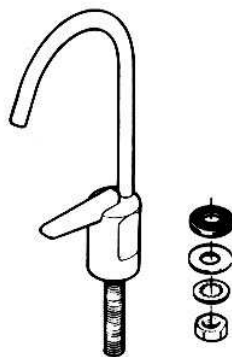


Fig. 19

No.	Part No.	Description
	600333	Filter faucet assembly

On Models with Copper Plumbing:

6. Using a torch, apply heat to cold water copper line on faucet side of coupler until line can be pulled out of coupler.
7. Repeat Step No. 6 to hot water line.
8. After lines cool, apply slight pressure to shape both lines together. (Parallel)

On Models With Plastic Plumbing:

9. Use pliers to release spring type clamps holding plastic hot and cold lines to copper pig tails on faucet. Remove plastic lines.
10. With basin wrench, remove 1/4" retaining nut on underside of galley top. Remove nut and washer plate from lines and lift faucet upward from galley.
11. Reverse above for installation.
12. On copper plumbing installations, after cleaning the last 1 inch of the copper line on the faucet, tin with solder before resweating into coupler.
13. On plastic plumbing installations replace spring clamps with screw type clamps.

Galley Faucet Assembly

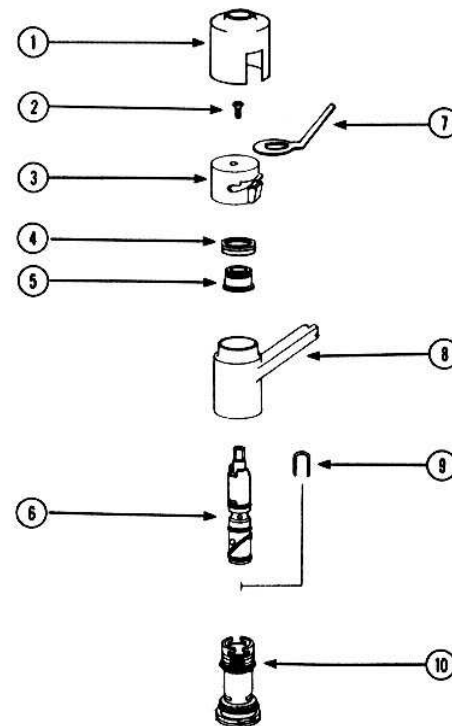


Fig. 20

No.	Part No.	Description
	600588	Complete assembly
1	13093	Handle cap
2	13092	Handle screw
3	13094	Handle body
4	10688	Retainer nut
5	1304	Grooved sleeve
6	1200	Valve cartridge
7	0690	Handle lever
8	0739	Spout - 9 inch
9	1883	Retainer clip
10	0137	Spout seals
	3920	Swivel spray aerator (not shown)

Galley Faucet Disassembly and Assembly

To Disassemble: (Need Pliers and Screwdriver.)

1. Turn "Off" both hot and cold water supplies and remove handle screw.
2. Pull handle down. Place screwdriver in screw hole and press down on cartridge stem. Lift and tilt handle housing off.
3. Remove pivot nut with pliers.
4. Lift and twist spout off.
5. Pry out retainer clip with screwdriver.
6. Grasp cartridge stem with pliers. Lift cartridge out.
7. To flush supply lines, turn on both hot and cold water supplies slowly.



To Assemble

1. With cartridge stem UP, insert cartridge and push DOWN by its ears.
2. Turn cartridge ears to front and back as shown.
3. Turn red (notched) flat of cartridge stem toward sink. (Note: For cross piping installations where supply piping is reversed, red (notched) flat faces BACK of sink.)
4. Replace clip all the way.
5. Replace spout. Push down until it nearly touches the faucet escutcheon.
6. Screw on pivot nut. Do not cross thread. Tighten with pliers.
7. Press cartridge stem down. Holding handle UP, hook ring in handle housing into groove on sleeve.
8. Swing handle back and forth until it drops down into place.
9. Replace handle screw. Tighten securely.



To Flush the Installation

1. Faucet body and supplies should be flushed under pressure to remove pipe chips or other foreign material that might clog faucet when in service. To do this, make sure the water supplies are

"Off". Follow the detailed instructions below and disassemble the faucet. Turn on both hot and cold water supplies slowly, and thoroughly flush the installation. Reassemble faucet as shown in the instructions.

NOTE:

- a. If handle won't operate properly, you have not hooked handle ring into sleeve groove. (See Step 7)
- b. If hot and cold reversed, red (notched) flat not toward sink. Remove handle assembly. Turn red (notched) edge of stem so it faces sink. (See Step c.)
- c. For proper water flow, aerator must be free of foreign particles. If flow is weak or irregular, unscrew aerator, clean and replace.

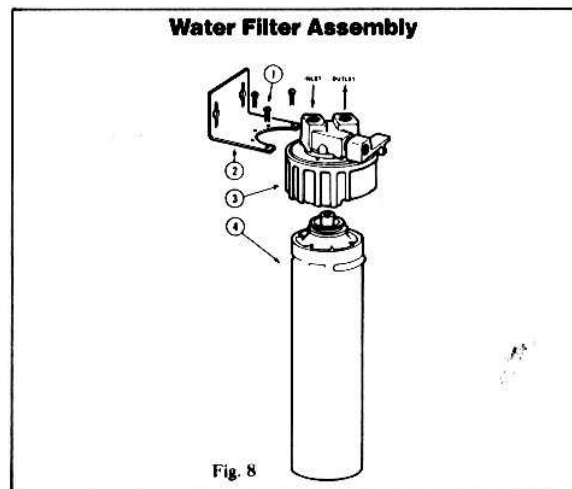


Fig. 8

No.	Part No.	Description
	600471	Complete assembly QC2-AC
1	3017-00	Screw #10-32 (3)
2	3016-00	Bracket
3	5273-00	Head QC2
4	AC	Cartridge

Water Filter Cartridge Removal and Replacement

To remove used cartridge:

1. Shut off pump switch.
2. Place shallow pan under filter to catch surplus water.
3. Shut off water by lifting valve handle. Move counterclockwise as

far as possible.

3. Turn colored ring all the way to the left. Ring will drop about 1/2".
4. Lift cartridge slightly and turn it further to the left until it can be disengaged.
5. Lower cartridge to disengage it from ring. Discard used cartridge.

To install new cartridge:

1. With colored ring in lowered position (turned all the way to the left) orient lug on cartridge with cutout under label on ring.
2. Insert cartridge straight up into ring as far as it will go. Holding colored ring steady, turn cartridge as far to the right as possible.
3. Then turn colored ring far to right to drive cartridge up into head.
4. To lock ring in place and turn water on, move valve handle down. Be sure handle leg engages ring locking-lug.
5. Turn pump switch on.

NOTE: Cartridge should be changed when flow of water on cold side of galley faucet becomes too slow for your convenience, or at least once a year.

Water Filter Removal and Replacement

Before starting any of these procedures, be sure to cover surrounding floor areas with a protective plastic sheet. Have pan and towel available to catch surplus water.

1. Open galley roof locker door and shut off water pump switch. (Place a pan under the filter assembly.)
2. Open galley door and disconnect water supply line.
3. Open bathtub faucet and galley faucet. Allow surplus water to drain.
4. Disconnect flare nut on intake side.
5. Disconnect flare nut on exhaust side.
6. Remove four screws holding the bracket to the divider panel, and remove the filter assembly.
7. To install reverse the removal procedures.

Galley Soap Brush Assembly

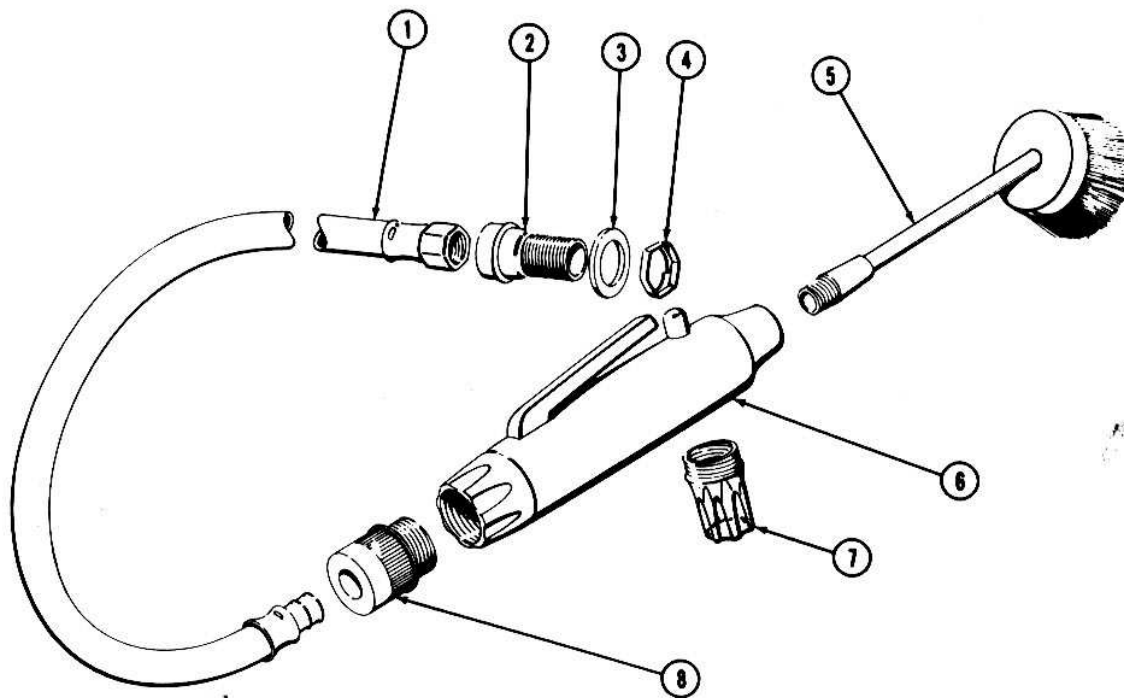


Fig. 21

No.	Part No.	Description
1	4-C	Hose with union nut
2	D-300	Hose guide
3	10047	Washer
4	-	Stamped nut
5	510-1	Extension tube & brush
6	510-4C	Body assembly
7	510-64	Detergent cup & gasket
8	511-82	Ferrile

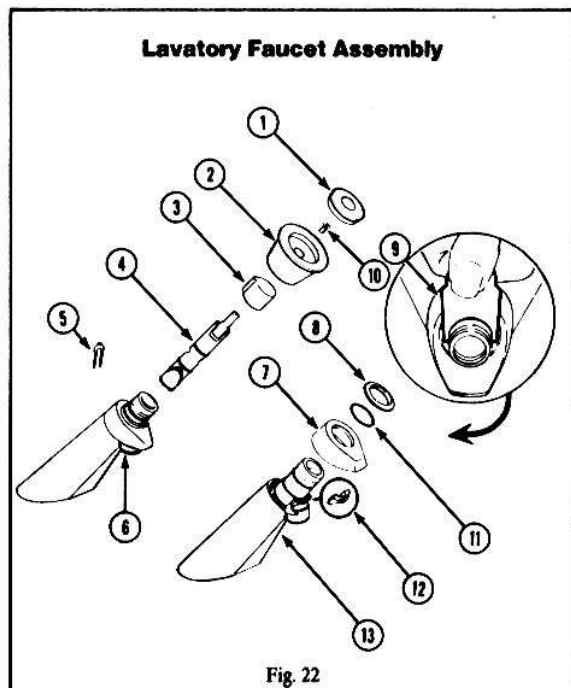


Fig. 22

No.	Part No.	Description
	600796	Complete assembly Moen 4270
1	526	Handle cover
2	515	Handle assembly
3	524*	Stop tube
4	1200	Valve cartridge
5	883	Retainer clip
6	545	Aerator
7	11538*	Spout cap,
8	11529*	Collar nut
9	11547*	Special wrench
10	1233	Handle screw
11	11559*	"O" ring cushion
12	-	Spout seal cap
13	-	Spout body

* Included in Service Kit No. 11576

Lavatory Faucet Removal and Replacement

Shut off water pressure for entire system

DISASSEMBLE: Remove handle cover. Take out handle screw and remove handle and stop tube. Lift out retainer clip and pull the cartridge out of the body by the stem.

CAUTION: Reinsert cartridge by pushing it all the way into the body and until the front of the ears on the cartridge shell are flush and aligned with the body. (see illustration). Replace the retainer clip so that the legs straddle the cartridge ears and slide down into the bottom slot in the body. This prevents the cartridge from rotating and locks it in the body. Re-install stop tube and handle. Tighten handle screw securely and replace the handle cover. The red flat on the stem must point UP when mounting the handle. If hot and cold positions are reversed, remove handle, turn flat of stem of cartridge 180° and re-install handle.

To Replace Spout Cap or Collar Nut:

Use Special Wrench furnished with Service Kit and unscrew collar nut as shown in inset drawing.

Remove "O"-ring cushion and spout cap. Replace parts. Spout cap seal must be in the position shown. Install "O"-ring cushion on collar nut as shown before threading nut onto valve body.

Make sure both the cap seal and "O"-ring cushion remain in place. Tighten collar nut with Special Wrench by hand only. Do not use any other tool as it is important not to overtighten and strain the body assembly.

Galley Faucet, Lavatory Faucet & Shower Mixing Valve Cartridge Removal

Shut off water pressure for entire system.

DISASSEMBLE: Remove handle cover. Take out handle screw and remove handle and stop tube. Lift out retaining clip and pull the cartridge out of the body by the stem.

CAUTION: Reinsert cartridge by pushing it all the way into the body and until the front of the ears on the cartridge shell are flush and aligned with the body. Replace the retainer clip so that the legs straddle the cartridge ears and slide down into the bottom slot in the body. This prevents the cartridge from rotating and locks it in the body. Reinstall stop tube and handle. Tighten handle screw securely, and replace the handle cover. The red flat on the stem must point UP when mounting the knob handle (down for lever handle).

If cold water is on left side and hot water is on right side (red flat pointed down), remove cartridge and reinstall 180°.

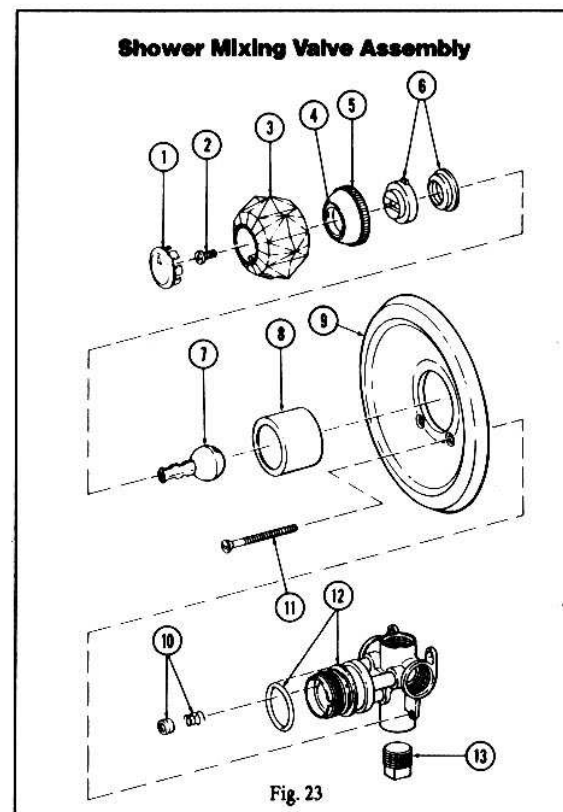


Fig. 23

No.	Part No.	Description
	600789	Shower mixing valve assembly
1	2411	Button
2	119	Screw
3	2391	Duralac handle
4	250	Adjusting ring
5	50	Cap assembly
6	188	Cam assembly
7	212	Ball assembly
8	189	Sleeve
9	117	Escutcheon
10	3569	Seat assembly
11	196	Screw
12	2375	Stop stem assembly & "O" ring
13	-	Plug

Shower Mixing Valve and Telephone Shower Removal and Replacement

1. Disconnect city water supply.
2. Shut off pump switch.
3. Open rear compartment door.
4. Remove aluminum panel concealing plumbing in rear compartment.
5. Open 2 drain valves inside rear compartment lower left corner.
6. Cover carpet completely and cover bottom of bathtub to protect from damage.
7. Open all faucets.
8. On models with copper plumbing, heat coupling on 3/8 copper water lines located at lower right hand corner of rear compartment opening until they can be separated. On models with plastic plumbing, use pliers to release spring clamps, then slide plastic lines off copper pig tails.
9. Remove bottom shelf of medicine chest to gain access to mixing valve and elbow.
10. Pop out metal insert in control valve handle. Remove screw and pull knob off.
11. Remove 4 screws in escutcheon plate.
12. Disconnect shower hose.
13. Using wrench, hold adaptor fitting behind chrome 90° fitting.
14. Wrap masking tape on chrome fitting so as not to scratch chrome.
15. Remove fitting.
16. Tub valve, shower outlet, tube and hot and cold feed lines may then be removed from space behind skirt by pulling upward and outward.
17. Replace by reversing above procedure.

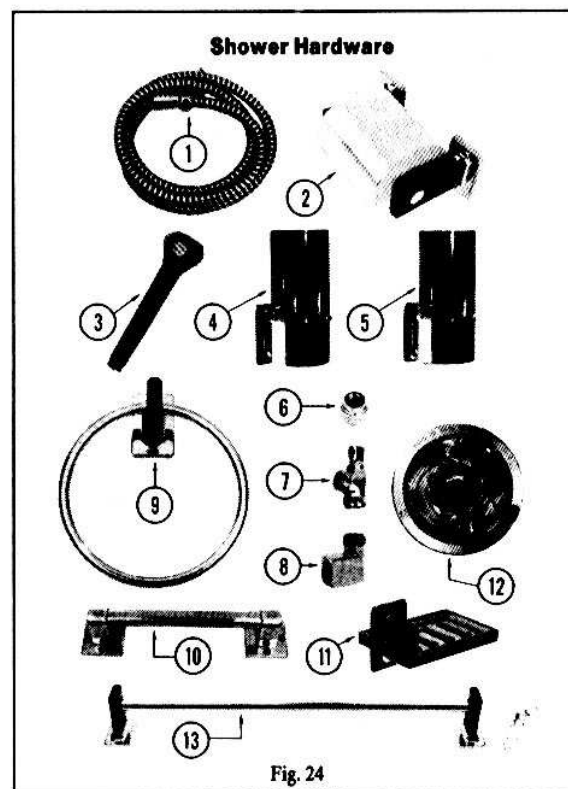


Fig. 24

18. Clean all sealer off edge of top and fit back into space.
19. Pop rivet in original holes with one exception; the row that was sheared off cannot be replaced.
20. After installation has been completed, seal all seams with G.E. silicone sealer.

No.	Part No.	Description
1	600792	Shower hose
2	600804	Paper holder
3	600790	Shower head
4	600791	Holder/tumbler
5	600827	Paper cup holder
6	600810	Vacuum breaker
7	600812	Swivel
8	600809	Adapter elbow
9	600805	Towel ring - 8"
10	600795	Grab bar
11	600794	Soap tray
12	600789	Shower mixer valve
13	600806	Towel bar - 18"
Not shown:		
	600811	Wall bracket
	600813	Shower volume control
	600826	Shower hose guide ring

Shower Head Service

The services required on shower head are few in number and minor in nature.

1. The slotted faceplate occasionally becomes stopped up with calcium deposits and it will need to be removed and cleaned. Remove center screw and plate. Clean slots with brush. (In severe cases use muriatic acid.)
2. Head is replaced as a unit.
3. The valve located just behind spray plate in handle is a flow control valve and not a shut off valve.
4. Hose is replaced as a unit.
5. Hose gaskets are replaced by removing chrome nuts at either end of hose and removing old gasket from inside nut.

Water Pump Assembly (PAR 36800)

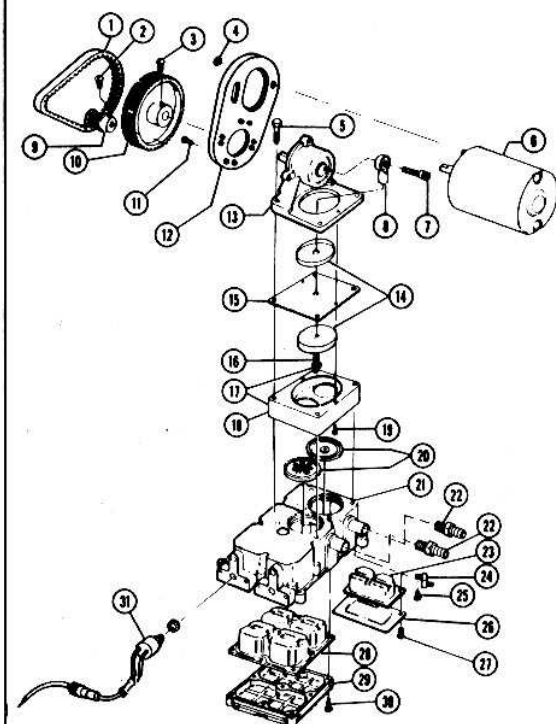


Fig. 13

No.	Part No.	Description
1	600267	Complete assembly par 36800
2	30021-0000	Belt
3	•	Set screw
4	•	Set screw
5	•	Motor nut (includes star washer)
6	•	Tie down screw
7	30200-0000	Motor 12 VDC (with two motor nuts)
	•	Eccentric screw

8	37173-0000	Connecting rod assembly
9	37169-0000	Small pulley
10	37170-0000	Large pulley
11	•	Motor mount screw
12	34628-0000	Motor mount
13	35506-0000	Jack shaft assembly
14	35503-0000	Diaphragm plate
15	30015-0000	Diaphragm
16	•	Diaphragm screw
17	•	Washer - teflon
18	35497-0000	Diaphragm retainer
19	•	Diaphragm retainer screw
20	30004-0000	Valve set (intake and discharge)
21	35625-0100	Base assembly
22	37176-0000	Port, inlet & discharge
23	37177-0000	Small pulsation dampener
24	37180-0000	Vibration pad kit
25	35618-0000	Screw
26	35628-0000	Small bottom plate
27	•	Screw
28	37178-0000	Large pulsation dampener (screw sleeve-guide inc.)
29	35623-0000	Bottom plate
30	•	Screw
31	37121-0010	Pressure switch (includes sealing washer)
	30122-0000	Service kit
•	37165-0000	Hardware kit

Water Pump Removal and Replacement

1. Shut off water supply.
2. Shut off pump switch and open a faucet to relieve any system pressure.
3. Disconnect plug on 12 volt wires at pump.
4. With screwdriver, loosen clamps on intake and discharge hoses at pump and remove hose. (Note which hose goes on each port.)
5. Remove four screws attaching pump to platform.
6. Remove pump by lifting clear of plumbing lines.
7. Replace by reversing above procedure.

Operation

To start pump:

1. Check level of fresh water tank.
2. Check all strainers and orators and clean thoroughly.
3. Open all outlets and turn on power to pump.
4. Keep outlets open until all air is cleared from lines and then close outlets. Close hotwater faucets last, wait for water heater to fill. Pump is ready for operation.
5. Turn off power to pump and open faucet to relieve system pressure before hooking up to city water.

Troubleshooting

PROBLEMS

CAUSES

- | | |
|---|---|
| 1. Pump operates but no water flows through faucet. | <ul style="list-style-type: none"> — Low water level in tank. — Suction lines are clogged. — Pumpgord clogged — Air leak in suction line or loose clamp(s) — Defective pump valves |
| 2. Pump cycles on and off although all faucets are closed. | <ul style="list-style-type: none"> — Water leak in plumbing. — Water leak in flush toilets. — Internal leak in pump. — Outlet check valve not sealing. |
| 3. Pump operates roughly and has excessive noise and vibration. | <ul style="list-style-type: none"> — Flow through intake line is restricted, kink in hose. — Pump mounted on flimsy board. |
| 4. Pump fails to start when faucet is opened. | <ul style="list-style-type: none"> — Deformed or ruptured pulsation dampener in pump. — Worn connecting rod bearing. |
| 5. Pump fails to stop when faucets are closed. | <ul style="list-style-type: none"> — Ice in pressure switch chamber. — Clogged or kinked outlet line. — No voltage to pump. — Blown fuse. — Defective pressure switch. |
| | <ul style="list-style-type: none"> — Empty water tank. — Very low voltage to pump. — Air in system. — Defective pressure switch. — Outlet valve not sealing. |

Valves Replacement

1. Remove four tie down screws. Lift jack shaft to expose valves.
2. Lift valves from pockets. Clean all foreign materials from valves and seats. Inspect rubber flappers for cuts.
3. Reinstall valves into same pockets, being sure rubber valve with small hole is UP on intake and rubber valve without the small hole is DOWN on discharge.
CAUTION: Do not use valve with small hole in rubber on discharge side of pump.

Diaphragm and Connecting Rod Replacement

1. Remove four tie down screws, then lift jack shaft and attached diaphragm assembly from pump base.
2. Expose diaphragm by removing two diaphragm retainer screws and detaching retainer.
3. Remove diaphragm screw to separate diaphragm, plates and washer/spacer from connecting rod. Inspect diaphragm for cuts and ruptures.
4. Remove eccentric screw to separate connecting rod from jack shaft.
5. When reassembling, be sure to align diaphragm and connecting rod so that rod slips straight onto jack shaft and diaphragm rests squarely on diaphragm retainer.

Pulsation Dampener Replacement

1. Remove nine screws from bottom plate and three screws from small bottom plate.
2. Pull out rubber pulsation dampeners from base. Inspect for excessive deformation, ruptures and cuts.
3. When installing new large pulsation dampener, check that its metal screw sleeve-guide is positioned between center hole and screw-way in the base. Make sure that flanges of both pulsation dampeners are well-seated to effect a proper water and air seal.

Base Replacement

1. Follow service instructions above to remove pressure switch and pulsation dampener.
2. To separate base from motor mount and diaphragm assembly remove four tie down screws.
3. When reassembling, do not overtighten screws.

Motor Replacement

1. Remove two motor nuts to separate motor.
2. Loosen set screw to remove small pulley from motor shaft.
3. When reassembling, adjust belt tension so belt between pulleys can be depressed 1/4" after motor nuts are tightened.

SYMPTOM: DECREASE IN BELT LIFE. MODEL 36800

Remedy:

Belt has proper tension if it can be moved in and out on one side a total of 1/4" at a point halfway between pulleys.

ADJUST BELT AS FOLLOWS: Loosen motor mount lock nuts and slide motor up or down until desired tension is gained and retighten nuts. Recheck tension for proper 1/4" play.

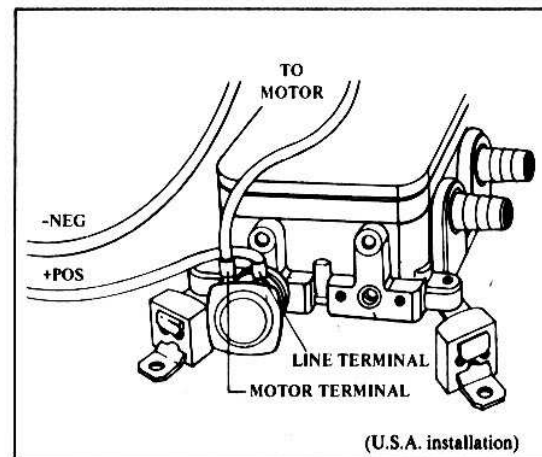
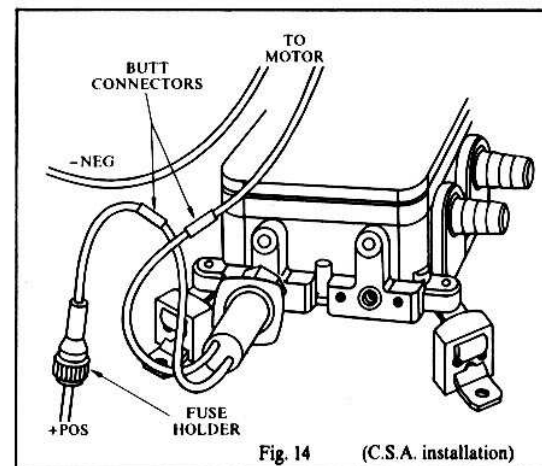
SYMPTOM: CONNECTING ROD NEEDS RE-OILING (Model 36970)

Remedy:

The connecting rod bearing is made of oil-impregnated metal and the cover is packed with enough lubricant to last approximately 500 hours. Relubricate by removing cover and packing built-in reservoir with automotive chassis lube (obtained at most automotive service stations).

Pressure Switch Replacement

1. Turn off power to pump and open faucet to relieve the pressure.
2. Disconnect wires from pressure switch.
3. Unscrew switch from base.
4. Thread switch with washer into pump base, with metallic side of washer facing switch. Tighten securely.
5. Rewire according to wiring diagram.



Water Pump Filter Assembly

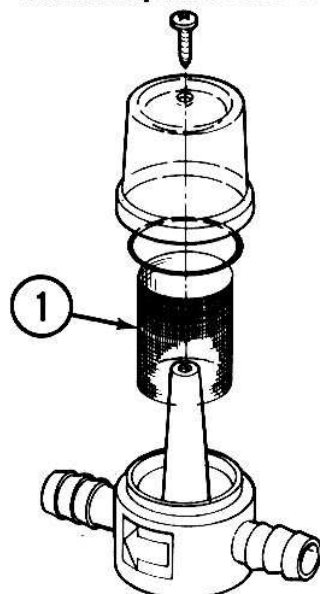


Fig. 15

Water Pump Filter Assembly

No.	Part No.	Description
	600593	Complete assembly
1	36138-0000	Filter screen

Water Pump Filter Removal and Replacement

1. With screwdriver, loosen clamps on both hoses at filter.
2. Remove hoses.
3. Remove screws attaching filter to platform.
4. Remove filter.
5. Replace by reversing above procedure. Note that arrow on side of filter points in direction of flow (toward pump).

Disassemble Pump Filter

1. Remove screw through top.
2. Pull top from base. Do not damage "O" ring seal.
3. Remove screen to clean or replace.
4. Lift "O" ring from its cavity, lubricate with silicone grease.
5. Assemble by reversing above procedure.

Winterizing Procedure

1. Level the trailer from side to side and front to rear. Open all faucets.
2. Turn the water pump switch to the ON position to expel water from the storage tank.
3. Open all drain valves. On rear bath models, two are located in the rear trunk (roadside). On center bath models, one is located under the bed on the roadside, and three are under the galley sink. On all models one is located on the water heater accessible through the exterior access panel.
4. While the water is draining from the system, open and flush the toilet flushing valve. Depress hand spray lever while holding the spray head down inside the bowl. Depress hand spray thumb button and hold the spray head down inside the tub and drain all water from telephone shower head flexible hose. Unscrew the heads on both spray units and store.
5. After pump has removed all water from the storage tank, turn the pump switch OFF.
6. Remove outlet hose from water pump.
7. Disconnect the water pump inlet connection, and with check valve removed, turn the pump by hand until all the water is expelled.

8. Lower the front of the trailer as far as the jack will allow until water ceases to drain, then crank the jack up as high as it will go and let any remaining water drain out the rear drain valves.
9. After the water has stopped running from the drain lines, apply air pressure at the city water inlet, be sure all drain valves and faucets are open. This will force any remaining water from the water heater and remove any water which may be trapped in low areas.
10. Pour a cup of antifreeze (Glycol) into the lavatory sink, and tub drains to prevent freezing of water in traps.
11. Be sure to open the waste-holding tank drain valves and drain and flush the tanks thoroughly. (This is very important as the sewage in the tanks, if frozen, could seriously damage the tanks.)
12. Remove the lower portion of the water purifier, if your trailer is so equipped, and drain the purifier.
13. It is very important for optimum life of your battery to check it periodically and to keep it fully charged. This is especially true in winter months when the temperature may drop below freezing. Please refer to the battery section for more information on battery maintenance.
14. Remove any items (food, cosmetics, etc.) from trailer interior that might be damaged by freezing — or might damage the trailer if containers break.

For additional winterizing protection add a nontoxic antifreeze (approved for drinking water systems) to the water lines using the following procedure:

1. Reconnect all lines except the hose to the pump inlet port. Close all drain valves (see step No. 3).
2. Attach a length of hose to the pump inlet port. This piece of hose should be long enough for the free end to be inserted into and reach the bottom of the antifreeze container.
3. Dilute the antifreeze solution in accordance with the manufacturer's instructions.
4. Open all water faucets.
5. Insert hose length into the antifreeze container, turn the pump switch on, and run the water pump until the antifreeze solution fills all water lines and the water heater. Flush toilet, work hand spray while holding down in bowl. Work hand shower spray while holding down in tub.
6. Shut off the pump, make sure system pressure is relieved and close all faucets.
7. Disconnect the hose length from pump inlet fitting and reconnect water system inlet line.