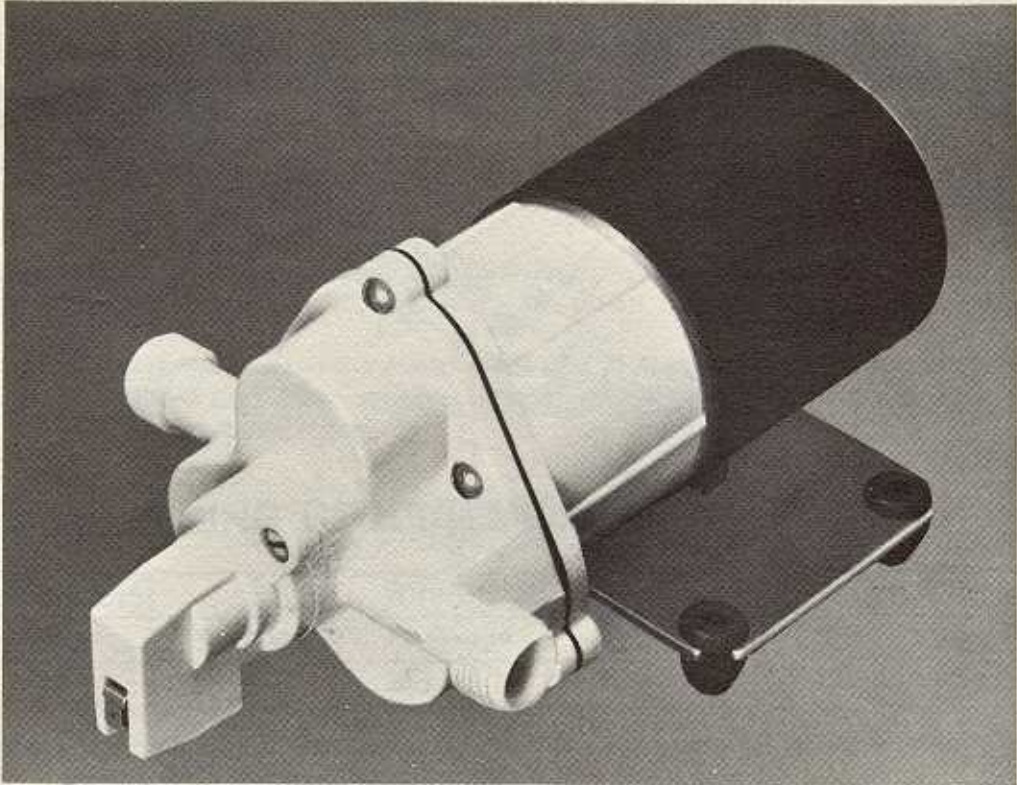


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**IMPORTANT**  
See warranty  
procedure and list  
of authorized service  
centers on back page.

# THE TRI-A-FRAM PUMP



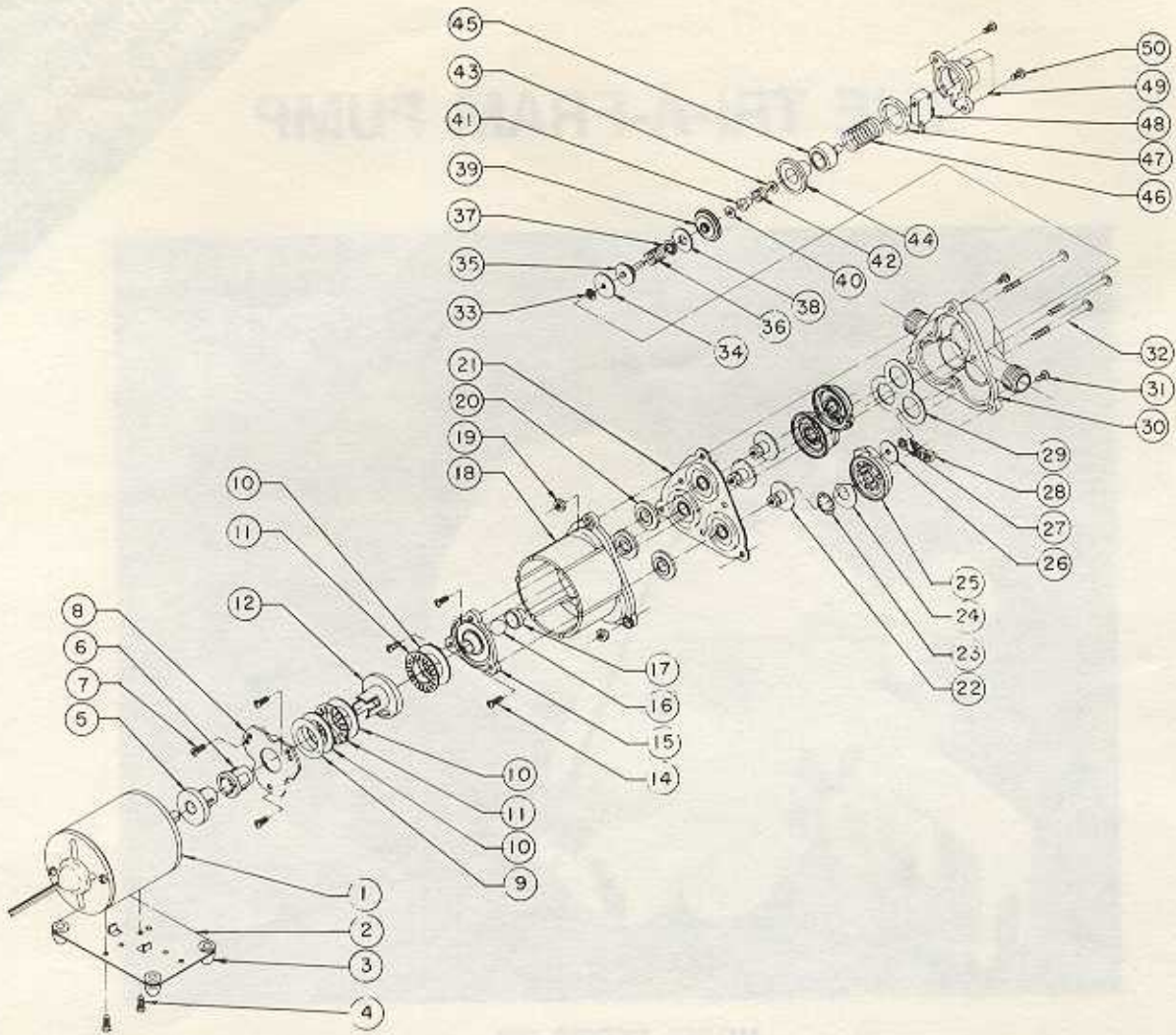
MODEL SERIES 200

The manufacturer of your coach has knowingly selected what many people believe to be the finest pump available to him today. He could have bought a lesser brand for less money but he felt you should have the best. Please read this manual to get the greatest possible satisfaction from his choice.

## INSTALLATION & OPERATION MANUAL

**SHURflo** *The "Water Management Team"!*  
CARR-GRIFF, INC.

1400 Cerritos Ave. East □ Anaheim, California 92805 □ (714) 533-7700



1.	11-008	Motor	1	\$25.00					
2.	30-014	Base Plate	1	.75	27.	6-005	Retainer Ring	3	\$ .10
3.	7-001	Rubber Foot	4	.10	28.	30-047	Filter Screen	3	.10
4.	1-026	Screw	2	.10	29.	40-036	Gasket	1	.65
5.	35-003	Coupling	1	2.00	30.	21-091	Upper Housing	1	4.10
6.	41-008	Bushing	1	.48	31.	1-052	Screw	3	.10
7.	1-005	Screw	3	.10	32.	1-053	Screw	3	.15
8.	35-004	Support Plate	1	2.75	33.	6-007	Retainer Ring	1	.10
9.	23-008	Mylar Shim	2	.10	34.	40-020	Check Valve	1	.15
10.	6-025	Bearing Cover	1	.10	35.	21-069	Valve Stem	1	.25
11.	6-024	Bearing	1	2.75	36.	32-010	Spring	1	.45
12.	35-002	Drive Coupling	1	2.25	37.	6-013	Retainer Ring	1	.10
14.	1-005	Screw	3	.10	38.	40-014	Seal Washer	1	.35
15.	35-001	Wobble Plate	1	2.85	39.	21-071	Valve Plate	1	.55
16.	6-023	Ball, Steel	1	.75	40.	22-002	Seal Washer	1	.15
17.	33-003	Bushing	1	.75	41.	21-068	Poppet	1	.30
18.	21-090	Lower Housing	1	3.50	42.	32-013	Spring	1	.35
19.	3-011	Nut, Hex	3	.10	43.	22-002	Seal Washer	1	.15
20.	21-094	Piston Bottom	3	.55	44.	41-002	Diaphragm	1	.75
21.	41-009	Diaphragm	1	3.10	45.	21-070	Plunger	1	.45
22.	21-093	Piston Top	3	.25	46.	32-015	Spring	1	.65
23.	6-008	Retainer Ring	3	.30	47.	21-067	Bridge Ring	1	.30
24.	40-038	Inlet Valve	3	.25	48.	10-113	Switch	1	1.55
25.	21-092	Valve Chamber	3	1.55	49.	21-076	Switch Cap	1	1.65
26.	40-037	Outlet Valve	3	.15	50.	1-006	Screw	2	.10

# INSTALLATION TECHNIQUE

## INSTALL THE PUMP IN A READILY ACCESSIBLE LOCATION

**THE SERIES 200 PUMPS HAVE EXCEPTIONAL PRIMING CHARACTERISTICS.** If required the pumps may be located several feet from the tank. The pump may be located above the tank, even with the tank, or below the tank.

Secure the mounting plate in the desired location with at least two screws (no 10 X 1 $\frac{1}{4}$ ) placed diagonally. Do not compress the rubber feet. To do so prevents the shock absorber effect.

The water supply tank must be vented so air can enter as water is removed. The most satisfactory arrangement is to vent to the outside of the coach. Down thru the floor is excellent.

It is essential that a filter be used in the pump input line to keep large particles out of the system. The most satisfactory is a tank filter because it protects the hose also. But a filter in the line is acceptable. Shurflo makes both types.

## ELECTRICAL WIRING REQUIREMENTS

Pump Series	Wire Gauge			Fuse Requirement
Model	14 Gauge	12 Gauge	10 Gauge	10 to 15 Amp
200	0 - 20 ft.	20 - 50 ft.	Over 50 ft.	in-line fuse

The pump should be on a circuit of its own. Do not use a skin ground. Run the ground back to the source or to a ten gauge wire common ground.

The Model 200 is not affected by polarity. But, it is preferable to attach the positive line to the pump switch.

In an accessible location install a 10 amp or greater wall-mounted switch. This switch is used to shut off the pump when traveling, when the coach is unattended, or in an emergency such as running out of water.

## PLUMBING TUBING - HOSE - AND PIPE

A special hose is available for installing the pump. It is a high pressure potable water hose. The length used depends on the installation situation. However, the output hose should not exceed 24 inches in code approval installations. Any length may be used on the input side or non-pressure side.

**AVOID KINKS IN THE HOSE.** Kinks will prevent proper operation. Use clamps at both ends of each hose. Clamps prevent air leaks into the water line. Air leaks prevent proper priming. Remember the output hose may see high water pressure when the coach is hooked up to city water sources.

The internal diameter (I.D.) of the plumbing lines is of the utmost importance. Lines that are too small increase the back pressure and reduce the flow. Excessive pump cycling results. The main lines should be at least 1/2" I.D. and risers or short lines to one fixture at least 3/8". The water passage within the faucet should be at least 3/8" also. Filter screens should be removed from faucets. They clog up and create problems.

**CHECK VALVES** used in the system must be a free flow design. If you can blow thru in the direction of flow the check valve is suitable. If you cannot it may present excessive restriction.

**FITTINGS** used to join sections of plumbing should have the same flow diameter as the lines. Do not use pipe dope of any kind between the tank and the end of the output hose. Pipe dope may get into the pump mechanism and create problems.

**WATER PURIFIERS** must be on a separate line. They create a high back pressure.

## CHECK OUT PROCEDURE

**PRELIMINARY CHECK.** Examine the installation. Is it complete ..clamps tight.. no kinks in the hose.. fuse good.. etc?

12 volts DC must be provided for the check-out. Use a fully charged battery or a 12 volt DC converter of at least 10 amps capacity. **caution.** . . a 110 volt AC to 12 volt AC is **not** suitable.

### INITIAL OPERATION

- 1** Fill the tank with water.
- 2** Open all faucets — hot and cold.
- 3** Switch pump to ON position. Allow time for the hot water tank to fill. Shut off each faucet as the flow becomes steady and free of air.

With the hot water tank filled and all the air expelled from the system shutting off the last faucet should cause the pump to shut off.

## CHECK FOR LEAKS

This can be done visually but many connections are hidden. We recommend a positive pressure check with a pressure gauge. This will indicate any leaks by a drop in the gauge. Even a tiny leak will cause the pump to cycle on and off. And, in transit, even a small leak can become a big leak.

## TROUBLE SHOOTING

**IF MOTOR DOES NOT OPERATE.** Make the following checks. Is the battery charge too low? Are the wires disconnected or terminals corroded? Is the switch in the ON position? Is the fuse good? Is the pump head frozen? If so, thaw with a lamp bulb placed near the pump.

**IF PUMP RUNS BUT WATER DOES NOT APPEAR.** Is there water in the tank? Are there kinks in the inlet hose? Is air leaking in at the inlet fittings? Tighten or add clamps. Is there a plugged-up inlet line? Remove the output hose and try again. If water appears the problem is further into the system.

**IF MOTOR RUNS BUT WATER SPATTERS.** Air is getting into the lines. Check or add clamps on the input side of the pump. Restart and try again. Allow time to clear air from the hot water tank and lines.

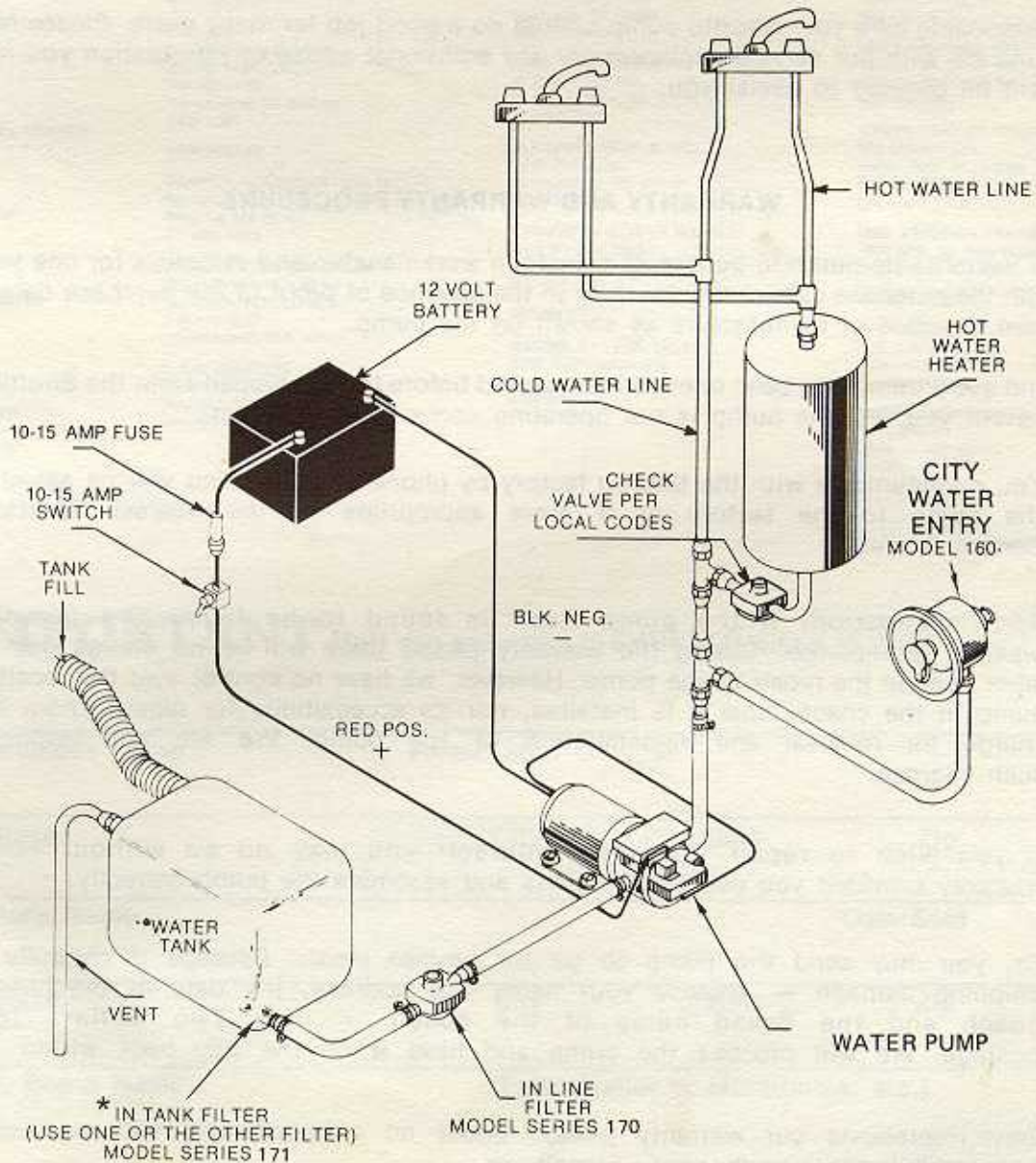
**PUMP CYCLING** a rapid on and off condition.

Normal — and not harmful to the pump. The model 200 has been set to flow water just like home. However, many times water conservation is important and faucets are opened only a little bit. Under these conditions — high pump output and low faucet flow — the pump will cycle on and off in a rhythmic interval. This is normal and will not harm the pump.

Abnormal cycling — If the pump cycles on and off when all faucets are closed something is wrong. Most likely there is a leak somewhere. Check faucets for dripping and especially the toilet valve. Correct any leak no matter how small.

If no leak can be detected shut the pump off. Remove the output hose where it joins the system (not at the pump). Insert a plug in the hose and clamp it. (You can make a perfect plug from a barb fitting, 1/2" size with a cap tightly screwed on the threads. It must not leak.) Turn the pump switch on. The pump should come on, run a few seconds, and then shut off. If it remains off — the problem is not the pump. The problem is in the system. If, however, the pump goes on and off there may be a problem in the pump. There may be an internal pump leak which allows water to escape from the high pressure area back into the low pressure inlet area. Look for a valve held open or a crack in the casting. Although this can happen it is not common.

**IF PUMP DOES NOT SHUT OFF.** The wall switch may be used for temporary control of the pump. A low battery charge may be the cause. Or the switch mechanism may be stuck. Try tapping the switch cap on the end of the pump with the handle of a screw driver. If you decide to open the switch mechanism be sure to note the assembly sequence of the parts. The cap retains a spring. Hold the cap when removing the screws.



## WINTERIZING YOUR WATER SYSTEM

Satisfactory winterizing requires the draining of water from the entire system. Because of the check valve mechanism built into the pump, blowing the lines will not remove the water from the pump and tank. Proceed as follows:

Drain the tank through the drain provided. If none is provided open a faucet and turn the pump on to pump the tank dry. Then drain the lines by opening the lowest outlet or drain in the system.

Remove the output hose at the pump. Turn the pump on and pump out any remaining water — about a cupful. Use a towel or rag to catch the water. If you feel the lines should be blown apply the air nozzle to the system lines where the hose was removed.

Attach the hose now or later as you feel necessary. The system is now winterized. It's a lot easier to use the new potable antifreeze solutions. Merely follow the directions.

With reasonable care your Shurflo pump should do a good job for many years. Please feel free to communicate with our service engineers for any additional advice or information you may need. They will be pleased to assist you.

### WARRANTY AND WARRANTY PROCEDURE

Shurflo warrants its pump to be free of defects in workmanship and materials for one year beginning with the purchase date of the coach or in the absence of proof of the purchase date then one year from the date of manufacture as shown on the pump.

Each and every pump has been operated and tested before being shipped from the Shurflo factory. In the event you feel the pump is not operating correctly we suggest:

You communicate with the Shurflo factory by phone or letter. You will be asked to return the pump to the factory or if more appropriate to the nearest Shurflo Official Service Center.

Upon inspection, if the pump itself is found to be faulty the pump will be repaired or replaced. During the warranty period there will be no charge for parts or labor used in the repair of the pump. However, we have no control over the location of the pump in the coach, how it is installed, nor its accessibility for repair. There may be a charge for removal and reinstallation of the pump. We are not responsible for such charges.

If you wish to repair the pump yourself you may do so without voiding the warranty provided you use Shurflo parts and assemble the pump correctly.

Or, you may send the pump to us for prompt repair. Package it carefully to avoid shipping damage — enclose your name and address, the date of purchase of your coach and the Brand name of the coach — plus Two Dollars for return postage. We will process the pump and have it on the way back within 48 hours.

The above represents our warranty policy. Under no circumstances will we assume nor accept responsibility for unauthorized expenditures.

# SHURFLO OFFICIAL SERVICE CENTERS

## MID-WEST

### NATIONAL REPAIR & SERVICE

3000 Holiday Place  
Elkhart, Ind. 46514  
219-294-7674

### NATIONAL R.V. SALES

7417 W. Central  
Toledo, Ohio 43617  
419-641-2444

### PIONEER CAMPER SALES

3091 W. Huron  
Pontiac, MI 48054  
313-681-0720  
(Detroit area)

### GRIMES CAMPER SERVICE & ACCESSORIES

745 1/2 Aurora Avenue  
Aurora, IL 60505  
312-896-2455

### HOMEBASE, INC.

286 Twinsborg Road  
Northfield, Ohio 44067  
216-467-2000

### TOM RAPER, INC.

1410 N.W. Fifth Street  
Richmond, Ind. 47374  
317-966-4526

### DAYTON RECREATIONAL CENTER

3000-08 N. Dixie Dr.  
Dayton, Ohio 45414  
513-275-9595

### WYSE WAY CAMPERS INC.

4915 Fulton Way N.W.  
Canton, Ohio 44718  
216-253-1770

### WIND-DRIFT TRAILER SALES

6508 W. Vienna Road  
Clio, Mich. 48420  
313-686-9510

### CENTRAL EAST

#### C & A CAMPERS CORNER

500 School Lane  
Newcastle, Delaware 19720  
302-328-8975

### CUSTOM COACH CO.

8332 Pulaski Hwy.  
Baltimore, MD 21237  
301-687-7200

### HAPPY TRAVELERS, INC.

Maryland No. 3  
Millersville, MD 21108  
301-959-6060

### INDIAN VALLEY CAMPING CENTER

Rt. 309 & County Line Rd.  
Souderton, PA 18964  
(Philadelphia—Trenton area)  
215-723-4852

### MEADOWBROOK TRAVEL TRAILER SALES

Route 30  
Paradise, PA 17562  
717-768-8665  
(Near Lancaster)

### MODERN TRAVELER INC.

Route No. 46  
Lodi, N.J. 07644  
201-778-3553

### REC-AID

P.O. Box 868, Main St.  
Stuarts Draft, VA 24477  
703-337-1089  
CB Channel 10: Call No.  
KBN 7381

### NORTHEAST

#### CAMPER HEADQUARTERS INC.

Route 1 & 27  
Walpole, MA 02081  
617-668-6565

#### CHARLIE'S TRAILER SALES

363 N. Newbridge Road  
Levittown, N.Y. 11756  
516-822-1688  
(Long Island, N.Y. area)

#### L & M CAMPERS

Rt. 27  
Augusta, Maine 04330  
207-623-4047

### BERKSHIRE TRAILER SALES

2144 Boston Rd., Rt. 20  
North Wilbraham, Mass. 01067  
413-543-5420  
(Near Springfield, Mass.)

### BORNMAN REC. VEHICLES

131 S. Delsea Drive  
Glassboro, N.J. 08028  
609-681-7979

### SOUTHEAST

#### EARL'S MOBILE HOME & R.V. SALES & SERV.

7707 S. Tamiami Trail  
Sarasota, Fla. 33581  
813-922-3509

#### GREEN STAR CO.

2800 Taft Avenue  
Orlando, Fla. 32804  
805-423-4008  
(Disneyworld area)

#### KINGS TRAILER SUPPLY INC.

256 N. 4 Lane Hwy.  
Marietta, GA 30062  
404-422-0441

#### DIXIE TRAILER SUPPLY

4135 N. Dixie Hwy.  
Ft. Lauderdale, Fla. 33334  
305-565-9210

#### PLEASURE WORLD INC.

5408 San Juan  
Jacksonville, Fla. 32210  
904-368-9348

#### SOUTHERN MOBILE SUPPLY

2316 N. Pace Blvd.  
Pensacola, Fla. 32505  
904-434-4469

### MIDWEST

#### RACINE CAMPER SALES

8100 Washington Ave.  
Racine, Wisc. 53402  
414-886-4476

### CEN-TEX SALES & SERVICE

10700 N. IH 35 — Middle Fiske Road  
Austin, Texas 78753  
512-836-3884

(Central Texas)

### R.V. DEALERS WAREHOUSE

2623 Myrtle Springs  
Dallas, TX 75220  
214-351-3236

### REFRIGERATION SERVICE CO.

6841 N. Peoria Avenue  
Tulsa, OK 74126  
918-425-0669  
(North East Oklahoma)

### TEXAS MOBILE HOME SUPPLY CO.

2211 Austin Hwy.—P.O. Box 18126  
San Antonio, TX 78218  
512-855-1761  
(South Texas)

### WONDER GAS / R.V. WONDERLAND

7612 S. Shields St.  
Oklahoma City, OK 73149  
405-632-9977

### LEE'S PROPANE SERVICE

625 W. "O" St.  
Lincoln, Nebraska 68526  
402-432-3269

### CROFT TRAILER HITCH

101 Shady Lane  
Valley Park, MO 63088  
314-225-3621  
(St. Louis area)

### ORB JOHNSON TRAILER SUPPLY

1808 N.W. By-Pass Road  
Springfield, MO 65803

417-866-0839

### GROH CAMPING HDQ.

R.R. 1, Box 131-B  
Elgin, IL 60120  
312-741-4636

### ALPINE ACRES INC.

Rt. 1, Box 13  
Decatur, Ind. 46733  
214-251-2410

**IMPORTANT** Must sign and return to SHURFLO within 10 days!

Customer's Name	Please print or type!		
Address	City	State	Zip
Dealer's Name	Date Sold		
Address	City	State	Zip
R.V. Brand Name	Type (Trailer or Motorhome, etc.)		

**BUD'S TRAILER CENTER**

G-6149 Lapeer Road  
 Davison, MI 48423  
 313-P12-0018  
 (Near Flint, Mich.)

**ROYAL R.V. SERVICE CENTER**

Rt. 2, US 131 South  
 White Pigeon, MI 49099  
 616-483-7420 or 483-9134

**SOUTHWEST****CERTIFIED TRAILER REPAIR**

8340 San Fernando Road  
 Sun Valley, CA 91352  
 213-875-0134  
 (San Fernando Valley)

**DISCOUNT CAMPERS & PARTS**

1339 E. 223 St.  
 Carson, CA 90745  
 213-830-5631  
 (Long Beach area)

**DON'S TRAILER SUPPLY**

1020 1/2 S. Hacienda Blvd.  
 Hacienda Hts., CA 91745  
 213-333-4325

**EVERETT CUSTOM CAMPERS**

7275 E. 22nd St.  
 Tucson, AZ 85710  
 602-298-8633  
 (South Arizona area)

**4 WHEELS R.V. SALES**

308 N. Sullivan St.  
 Santa Ana, CA 92703  
 714-543-5511  
 (Disneyland area)

**BILL MOORE MOTOR HOMES**

1412 N. Scottsdale Road  
 Tempe, AZ 85204  
 602-946-4279  
 (Phoenix area)

**OXNARD TRAILER SUPPLIES & SERVICE**

2645 Wagon Wheel Road  
 Oxnard, CA 93030  
 805-485-1814

**PENSINGER MOTOR HOMES**

1720 Golden State Hwy.  
 Bakersfield, CA 93301  
 805-325-5055

**HUNTINGTON BEACH TRAILER SUPPLY**

16242 Beach Blvd.  
 Huntington Beach, CA 92647  
 714-556-8500

**HANSON ENTERPRISES**

2655 E. Colorado Blvd.  
 Pasadena, CA 91107  
 213-449-3150

**PAULSON'S CAMPER SPECIALTIES**

8632 Sepulveda Blvd.  
 Sepulveda, CA 91343  
 213-894-6454  
 (San Fernando Valley area)

**R & D SERVICE CO.**

789 E. Baseline St.  
 San Bernardino, CA 92410  
 714-868-5536

**ROADS END**

1630 Cabrillo Ave.  
 Torrance, CA 90501  
 213-320-2681

**SACRAMENTO CAMPER SHOP**

1500 Fianza Ave.  
 Sacramento, CA 95815  
 916-922-3742  
 (Central California area)

**S.O.S. CAMPER & TRAILER**

**SUPPLY CENTER**  
 2915 S. First St.  
 San Jose, CA 95111  
 408-225-4810  
 (San Francisco area)

**VEGAS TRAILER SUPPLY**

3078 E. Fremont  
 Las Vegas, Nevada 89104  
 702-457-4265

**JINK'S RV & TRAILER SALES**

4005 W. Charleston Blvd.  
 Las Vegas, Nevada 89102  
 702-878-0626

**KING COMPANY**

600-610 E. Haley St.  
 Santa Barbara, CA 93103  
 805-963-7744

**HOLIDAY R.V. & MARINE**

Hwy. 95—Holiday Shores  
 Bullhead City, AZ 86430  
 602-754-2322

**DYNA-LIFT CAMPER SERVICE**

1473 Chester St.  
 Aurora, CO 80010  
 303-366-6130

**NORTHWEST****AUBREY'S CAMPER REPAIR & SUPPLY**

2010 Landon Avenue  
 Yakima, Washington 98902  
 509-GL2-0513  
 (Central Washington area)

**BEAVERTON TRAILER SERVICE**

4330 S.W. 142nd St.  
 Beaverton, Oregon 97005  
 503-644-9309  
 (Portland, Oregon area)

**CASTLE MART SERVICE CENTER**

7220 Crater Lake Hwy.  
 White City, Oregon 97501  
 503-826-5678  
 (Southwest Oregon area)

**COMPLETE TRAILER SUPPLY**

1531 S. Central  
 Kent, Washington 98031  
 206-854-2100  
 (South Seattle area)

**CUSTOM CAMPER & TRAILER REPAIR**

12303 North Division  
 Spokane, Washington 99218  
 509-489-3342  
 (Eastern Washington area)

**MOUNT VERNON TRAILER PARTS**

1320 Riverside Drive  
 Mount Vernon, Wash. 98273  
 206-424-7007  
 (North Washington area)

**PLANTATION TRAILER SUPPLY**

8715 W. State St.  
 Boise, Idaho 83703  
 208-344-5551

**RANDALL'S R.V. CENTER**

920 21st Street  
 Lewiston, Idaho 83501  
 208-746-0149

**VETRO SERVICE & REPAIR**

4736 S.E. 82nd Ave.  
 Portland, Oregon 97266  
 503-777-4739

**SPORTS UNLIMITED**

212 Omak Ave. — P.O. Box 1716  
 Omak, WA 98841  
 509-826-4481

**MOTOR HOMES NORTHWEST**

23122 Hwy. 99 North  
 Edmonds, Washington 98020  
 206-778-0111

**CANADA**

Please contact one of the following for instructions on the nearest service center.

**TRACO MANUFACTURING LTD.**

1045 Hargrieve Rd.  
 London, Ontario, Canada  
 514-631-4587

**TRACO MANUFACTURING LTD.**

736 Avenue Renaud  
 Dorval 760, Quebec, Canada  
 519-433-8201

**TRACO MANUFACTURING LTD.**

7041 Farrell Road  
 Calgary, Alberta, Canada  
 403-253-2231

STAMP

**SHURflo** CARR-GRIFF, INC.

*The "Water Management Team"!*

1400 Cerritos Ave. East  
 Anaheim, California 92805

**MODEL 200**