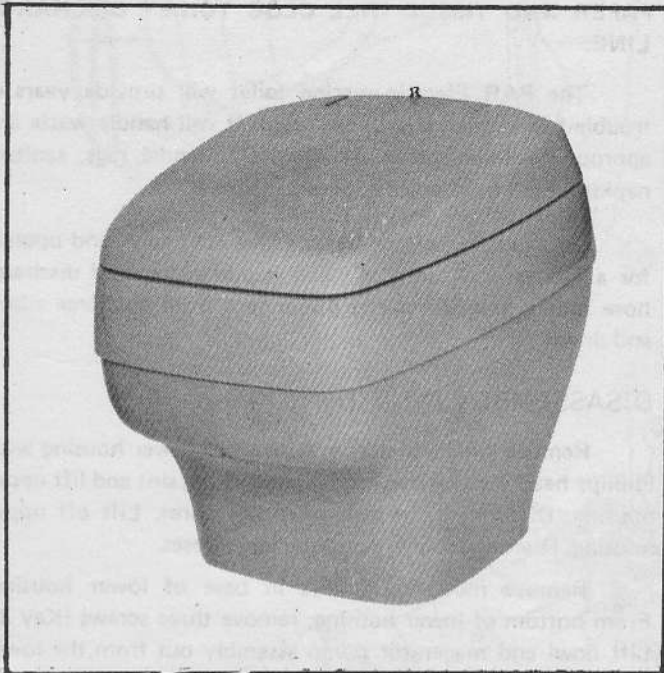


PAR™

ELECTRIC MARINE TOILET
PUSH BUTTON OPERATION

MODEL 18100-Series

PRODUCT DATA



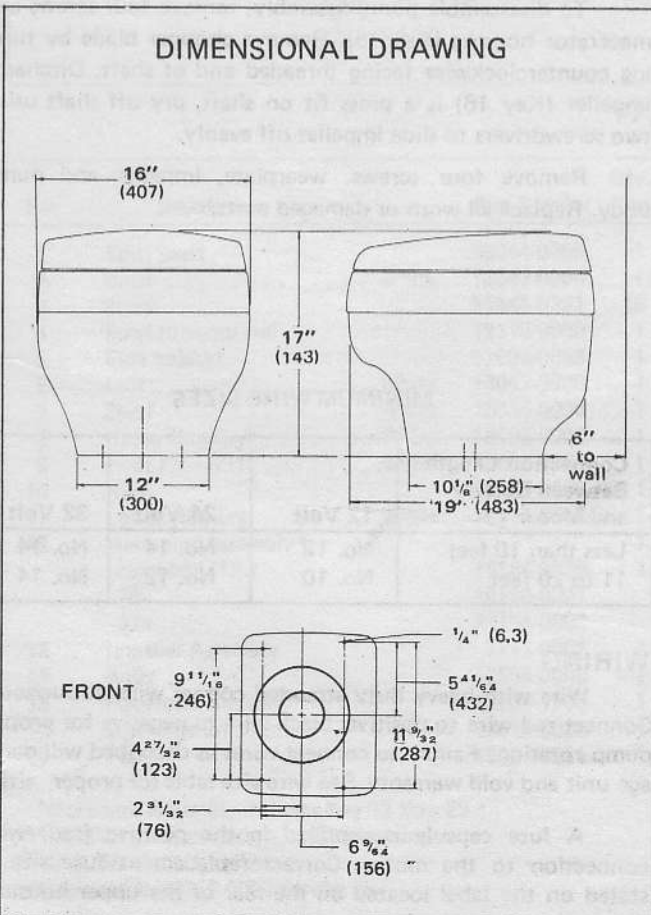
FEATURES

- Simple push button operation.
- Less than one quart of water required per flush.
- Sparkling contemporary styling, available in attractive white color
- Self-priming flexible impeller flush pump.
- High capacity macerator and bowl scavenger pump.
- Safety interlock switch, operates only with lid closed.
- All corrosion resistant materials for marine use.

SPECIFICATIONS

Dimensions: 17" high, 16" wide, 19" front to rear
Connections: 3/4" inlet, 1 1/2" discharge
Voltages: 12, 24, or 32 Volt DC versions
Weight: 25 lbs.

DIMENSIONAL DRAWING



STANDARD MODELS

Model No.	Color	Voltage	Amps
18100-1000	White	12	18
18100-1001	White	24	9
18100-1002	White	32	7.5

Model No.	Voltage	Fuse Size (Amp)
18100-1000	12	25
18100-1001	24	15
18100-1002	32	10

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Form 43000-0173 Rev. 4/81

MODEL 18100-SERIES
ELECTRIC MARINE TOILET

INSTALLATION INSTRUCTIONS

The PAR electric toilet may be installed above or below the waterline. Flush pump is self priming up to 2 feet, discharge macerator pump can operate up to 3 foot head. This toilet may be used with either holding, tank or sanitation treatment devices, however, when the toilet is installed in these system types, the installer must prevent excess head on the discharge pump. To prevent this installation complication, install the head, and the holding tank (or treatment device) as close as possible. In addition, minimize the distance from the toilet to the raw water intake seacock.

If, after installation, the flush water flow is considerably more than the discharge pump can handle, the discharge head is too high. If the discharge line cannot be shortened to reduce the discharge head, a larger diameter discharge hose may correct the problem. The flow of the flush water intake pump may be reduced by **slightly** restricting the flow with the use of a ball valve or the intake seacock. Excessive restriction will damage the intake pump and cause excessive amperage draw.

To install toilet, upper housing must be removed to gain access to mounting screw holes. Remove retaining screw at lower front of housing with a Phillips screwdriver (see parts view), and press rear locking tabs while pulling upper housing out to clear locking tabs. The upper housing may then be lifted up to gain access to the wiring harness. This wiring harness consists of a black and a red wire that lead to the upper housing. Disconnect these wires at the quick disconnects provided.

After the upper housing has been lifted off and set aside, fasten the lower housing to the deck with four screws through the mounting holes provided.

While the upper housing is off, the necessary plumbing connections can be conveniently made. Connect a 3/4" diameter inlet hose to the pump inlet port. Install the check valve supplied (No. 18097-0000) in the inlet hose at any convenient location other than within 8 inches of the pump intake. (The preferred location is near the seacock.) This will prevent the pump from losing its prime between each flush.

Connect a 1-1/2" or larger diameter hose to the discharge elbow with a stainless steel clamp and lead to a holding tank or other waste discharge system. Make hose routing as short as possible and avoid sharp bends or restrictions. For installations where the toilet is installed below the water line, use a vented loop on any discharge line that is connected to a thru-hull fitting. For installations above the water line, make a loop in the discharge line about 8 inches above the mounting surface to retain water in the bowl.

NOTE: All inlet and discharge lines should be fitted with a seacock and thru-hull fitting at the hull. Make sure all inlet connections are air tight and free of sharp bends or restrictions. All connections must be secured with band clamps.

Replace the upper housing (re-connect the wires leading from the motor to the upper housing), lock the housing over the locking tabs, and replace the retaining screw. Be sure that the bowl gasket has not been dislocated during re-assembly.

OPERATION INSTRUCTIONS

Make sure inlet and outlet seacocks are open. Close lid and push button to flush. The lid must be completely closed to operate (it is fitted with an interlock safety switch). If vented loop is used on the inlet, hold finger tip over inlet valve for initial priming.

USE ONLY MARINE GRADE TOILET PAPER IN THIS TOILET. MANY HOUSEHOLD GRADE TOILET PAPER AND TISSUE WILL CLOG TOILET DISCHARGE LINE.

The PAR Electric marine toilet will provide years of trouble-free service if properly used. It will handle waste and appropriate toilet tissue. It will NOT handle rags, sanitary napkins, hard solid objects, or paper towels.

To drain for winter layup, close inlet valve and operate for a few seconds until all water is pumped out. If discharge hose retains trapped water, disconnect from discharge elbow and drain.

DISASSEMBLY INSTRUCTIONS

Remove retaining screw at front of lower housing with Phillips head screwdriver, press rear locking slot and lift upper housing. Disconnect the pair of motor wires. Lift off upper housing. Disconnect inlet cord discharge hoses.

Remove mounting screws in base of lower housing. From bottom of lower housing, remove three screws (Key 3). Lift bowl and macerator pump assembly out from the lower housing.

To disassemble pump assembly, remove four screws and macerator housing (Key 15). Remove chopper blade by turning counterclockwise facing threaded end of shaft. Discharge impeller (Key 16) is a press fit on shaft, pry off shaft using two screwdrivers to slide impeller off evenly.

Remove four screws, wearplate, impeller and pump body. Replace all worn or damaged parts.

MINIMUM WIRE SIZES

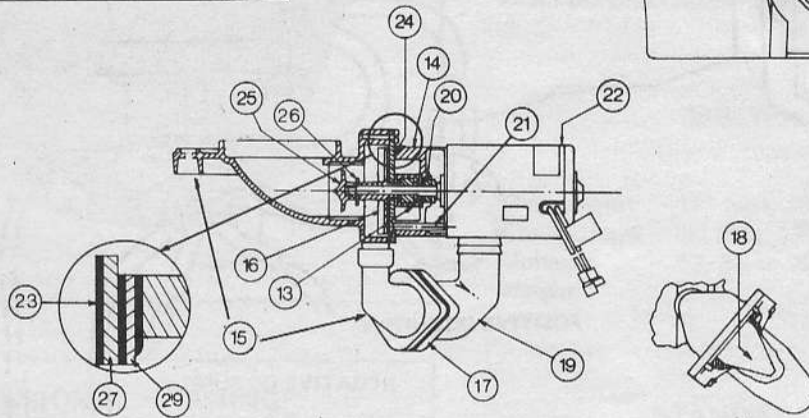
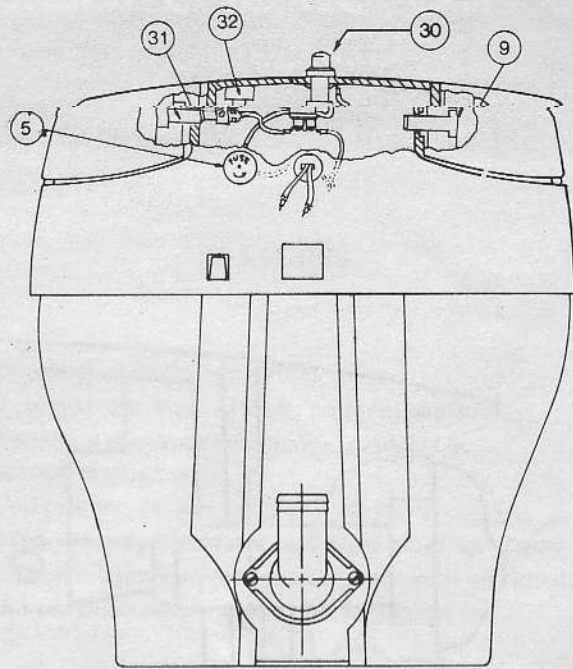
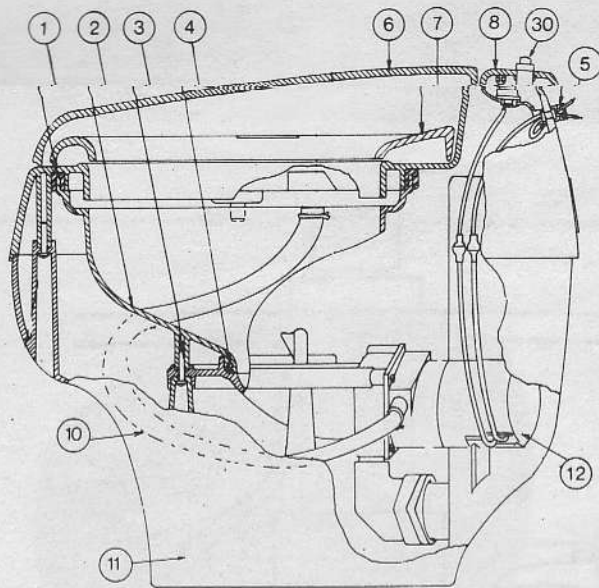
Connection Length Between Battery and Motor	12 Volt	24 Volt	32 Volt
Less than 10 feet	No. 12	No. 14	No. 14
11 to 20 feet	No. 10	No. 12	No. 14

WIRING

Wire with heavy duty stranded copper wire throughout. Connect red wire to positive; black wire to negative for proper pump rotation. Failure to connect wires as described will damage unit and void warranty. See wire size table for proper size.

A fuse capsule is supplied in the positive (red) wire connection to the motor. Correct replacement fuse size is stated on the label located on the rear of the upper housing.

PARTS VIEW



PARTS LIST

Key	Description	Part Number	Qty. Req.	Key	Description	Part Number	Qty. Req.
1	Bowl Seal†	18044-0000	1	18	Duck Bill Valve	18267-0000	1
2	BowlWhite	18043-0000	1	19	Elbow	59127-7012	1
3	Screw	91045-0361	10	20	Seal	1040-0000	1
4	Bowl to pump seal	18110-0000	1	21	Screw	91010-0130	2
5	Fuse holdert	92006-0053	1	22	Motor - 12 VDC	93004-2460	1
6	Lid†White	18047-0000	1		Motor - 24 VDC	93004-2594	1
7	Seat†White	18046-0000	1		Motor - 32 VDC	93004-2580	1
8	Upper Housing†White	18109-0000	1	23	Gasket	37019-0000	1
9	Pivot Pin Left†White	18034-0000	1	24	Gasket	12558-0000	1
10	Hose	18075-0000	1	25	Chopper Assembly	18111-0000	1
11	Lower Housing.White	18114-0000	1	26	Slinger	6342-0000	1
12	Macerator Assembly*, complete (12v)	18104-0000	1	27	Wearplate	37018-0001	1
	24v	18104-0001		28	Screw - Wearplate to pump, not shown	91009-0040	2
	32v	18104-0002		29	Wearplate	18316-0000	1
13	Impeller Assembly	7273-0001	1	30	Push Button, Switch†	96370-0637	1
14	Body	12554-0000	1	31	Pivot Pin (Right) Assembly**†	18316-0001	1
15	Macerator Housing***	18298-1000	1	32	Housing Connector/bracket†	18316-0002	1
16	Discharge Impeller	18112-0000	1	(not shown)	Intake check valve assembly	18097-0000	1
17	Flange	59127-7011	1				

*Macerator Assembly includes Key 13 thru 29

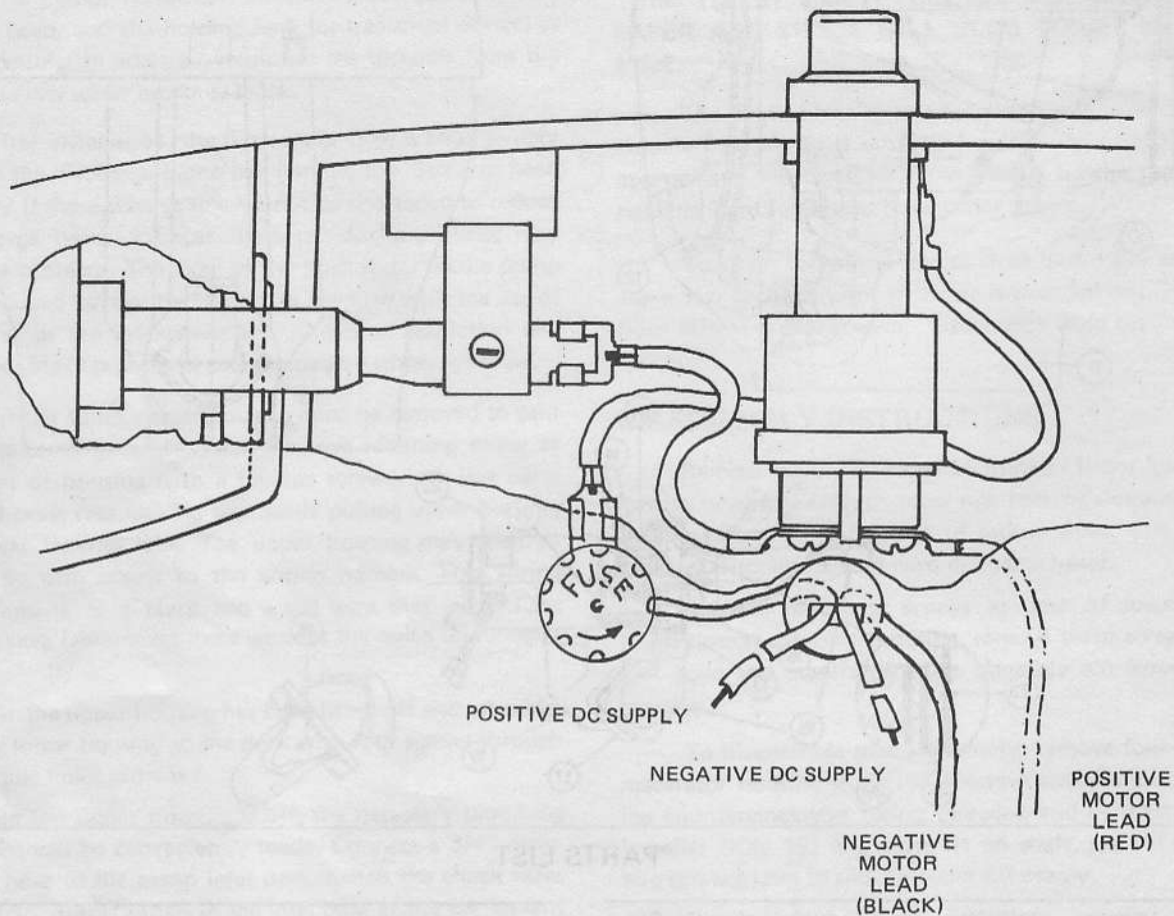
**Includes pivot pin, screw, and cotter ring

***Includes discharge elbow

†Included in 18325-0000 Service kit

Use 18325-0000 Service Kit to repair 18100-000X and 18100-010X toilets with inoperative timer relay circuits.

WIRING DIAGRAM



REASSEMBLY INSTRUCTIONS

Install pump assembly on motor; lubricate impeller bore with water pump grease; install new impeller, gasket and wearplate. Tighten four flat hand screws evenly.

Press discharge impeller on shaft; shoulder on bore of impeller will seat itself, leaving proper impeller to wearplate clearance.

Screw chopper blade on shaft, position gasket (Key 23) on wearplate and replace macerator housing with four screws. Tighten screws firmly. CAUTION overtightening may strip threads in plastic macerator housing.

Replace pump assembly on mounting posts in lower housing, position seal ring in the groove provided in the neck of the bowl and replace bowl in lower housing. Hold bowl firmly in place and fasten entire assembly with three screws (Key 3).

NOTE: Bowl seat (Key 1) is bonded to bowl at factory and should have remained during disassembly. Apply a thin film of grease on the bowl seal. Set upper housing and lid assembly in place, reconnect switch leads. Lock rear of upper housing in tabs on lower housing and press upper housing down. Be sure bowl gasket is in place, and fasten upper housing with retaining screw (Key 3).

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