

a xylem brand

### SELF-PRIMING PUMPS

### ENGINE COOLING

#### FEATURES

|                         |                          |
|-------------------------|--------------------------|
| <b>Body:</b>            | Bronze                   |
| <b>Bearing Housing:</b> | Bronze                   |
| <b>Impeller:</b>        | Jabsco Neoprene Compound |
| <b>Shaft:</b>           | Stainless Steel          |
| <b>Shaft Seal:</b>      | Carbon Ceramic Face Type |
| <b>Bearings:</b>        | Sealed Ball Bearing      |
| <b>Pulley:</b>          | 6-1/2" "A" Size Belt     |
| <b>Ports:</b>           | 1" (25.4mm) ID Hose      |
| <b>Weight:</b>          | 7 lb (3.2 kg)            |

#### VARIATIONS AVAILABLE

| MODEL NO.         | DESCRIPTION  |
|-------------------|--|
| <b>18840-0010</b> | Includes 6-1/2" "A" belt pulley                              |
| <b>18840-1010</b> | Includes 6-1/2" "A" belt pulley and high pressure impeller** |
| <b>Nissan LDM</b> | 4 cylinder   |

#### APPLICATION

Marine engine cooling

#### INSTALLATION AND OPERATION

The pump may be mounted in any position. The direction of rotation of the pump determines the location of the intake and discharge ports (refer to dimensional drawings). Before installing, rotate the pump shaft in the direction of the normal operating rotation of the engine that the pump will be mounted on. The mounting bracket used to support the pump must be designed to enable adjustment of the pump position for proper drive belt tension.

Attach the pump to the mounting bracket using 3/8" x 16 hex head screws. The pump mounting holes are tapped to this thread size.

Put pulley drive belt over both the drive pulley and the pump pulley. An "A" section pulley belt should be sufficient to drive the 18840-Series pump. Position the pump to allow 1/2" deflection of the drive belt midway between the engine and pump pulleys. Secure the pump mounting brackets. Attach 1" ID hose to the ports and clamp, using



Model 18840-Series

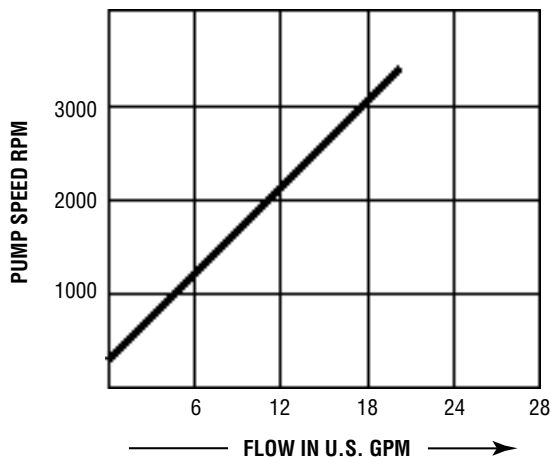
two stainless steel band clamps per port (be sure to attach the water intake line to the proper pump port).



**WARNING** Injury hazard. Exposed pulleys and belts can cause injury. Install shield around pulleys and belts. Stay clear while machinery is operating.

Be sure that all suction lines are airtight so that the pump will self-prime. Start the engine and run at low speed. This pump depends on the water for lubrication. Do Not Run Dry for more than 30 seconds. Lack of water will damage the impeller. This pump is designed for liquids between 45° and 180°F. Pumping colder water will shorten impeller life.

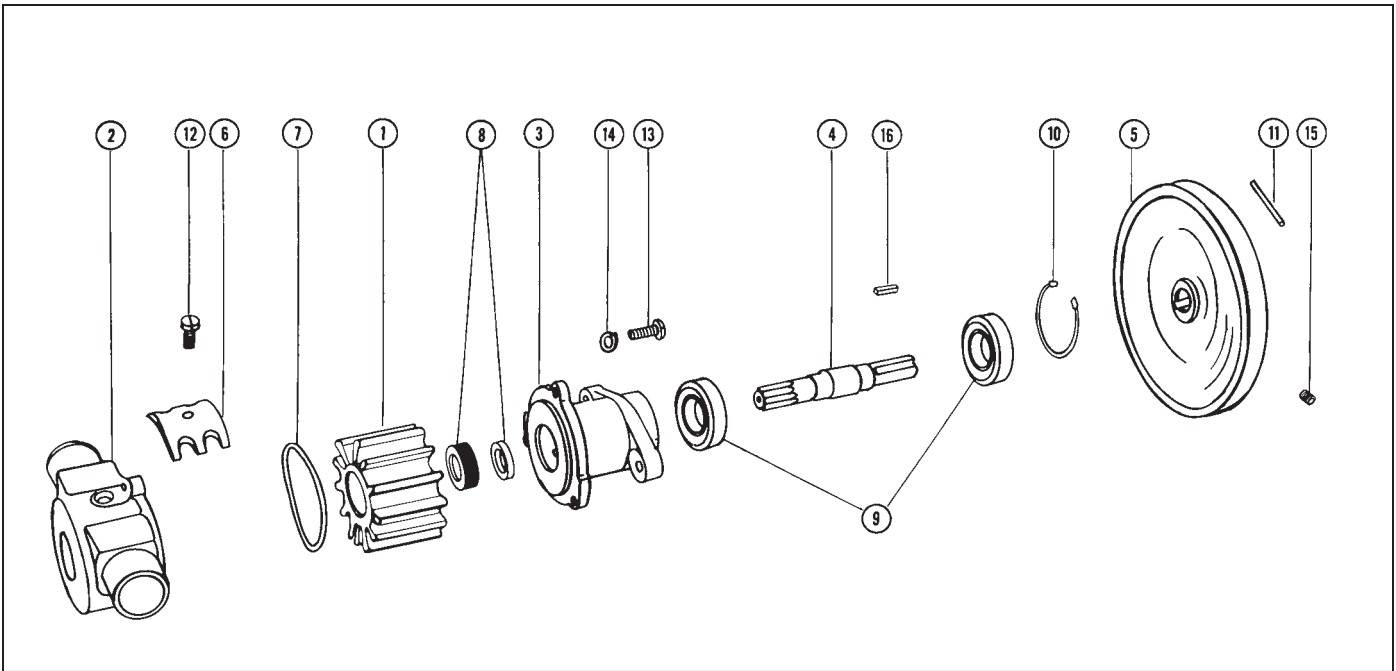
**PUMP FLOW CHART**



Typical flow in average engine cooling application\*

#### WINTERIZING

Drain the pump by loosening the impeller housing bolts and loosening the housing. Flush cooling system with an



## PARTS LIST

| Key | Description                    | Qty. | Part Number   |
|-----|--------------------------------|------|---------------|
| 1   | Impeller and Spline Seal*      | 1    |               |
|     | Model 18840-0010               | 1    | 1210-0001     |
|     | Model 18840-1010               | 1    | 3085-0001     |
| 2   | Impeller Housing               | 1    | 18834-1000    |
| 3   | Bearing Housing                | 1    | 18943-1000    |
| 4   | Shaft                          | 1    | 18836-1000    |
| 5   | Pulley                         | 1    | 18753-0006    |
| 6   | Cam                            | 1    | 490-0001      |
| 7   | O-Ring*                        | 1    | 18753-0005    |
| 8   | Seal*                          | 1    | 96080-0080    |
| 9   | Ball Bearing                   | 2    | 92600-0120    |
| 10  | Retaining Ring†                | 1    | See Hrdw. Kit |
| 11  | Roll Pin†                      | 1    | See Hrdw. Kit |
| 12  | Cam Screw                      | 1    | 91003-0010    |
| 13  | Screw Kit (3 ea. with Washers) | 1    | 18753-0001    |
| 14  | Split Washer                   |      | See Screw Kit |
| 15  | Set Screw†                     | 1    | See Hrdw. Kit |
| 16  | Key†                           | 1    | See Hrdw. Kit |
|     | Service Kit(Model 18840-0010)  | 1    | 90180-0001    |
|     | Hardware Kit                   | 1    | 18753-0010    |

\*Included in Service Kit

†Included in Hardware Kit

## SERVICE INSTRUCTION

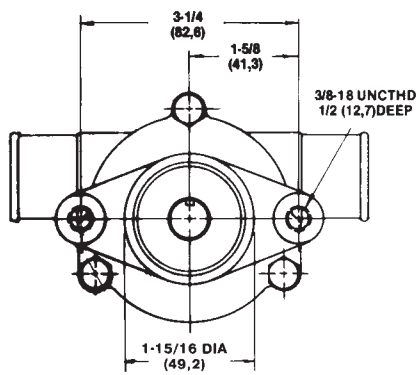
### DISASSEMBLY

1. Remove the three impeller housing screws (key 13).
2. Slide impeller housing (key 2) off the bearing housing (key 3) and shaft (key 4) assembly.
3. Grasping hub of impeller (key 1) with pliers, remove it from impeller housing.
4. Remove cam screw (key 12) from the impeller housing. Slide the cam (key 6) out of the impeller housing.
5. Remove cam screw (key 12) from the impeller housing. Slide the cam (key 6) out of the impeller housing groove. TO REMOVE SEAL ASSEMBLY, THE SHAFT AND BEARING ASSEMBLY MUST BE REMOVED FROM THE BEARING HOUSING (KEY 3).
6. Drive roll pin (key 11) out of the pulley and shaft subassembly.
7. Remove pulley (key 5) and key (16) from shaft.
8. Remove the retaining ring (key 10) out of the bearing housing (key 3).
9. Lightly tap the spline end of the shaft. Shaft and ball bearings (key 9) should slide out of the bearing housing. BE CAREFUL NOT TO DAMAGE SPLINE END OF SHAFT.
10. Ceramic portion of the seal (key 8) assembly normally will stay on the shaft. THE BRASS/CARBON PORTION OF THE SEAL SHOULD HAVE REMAINED IN THE BEARING HOUSING. Lightly press this portion from the pulley end of the bearing housing toward the impeller end of the bearing housing.
11. Press ball bearings (key 9) off the shaft by supporting each bearing on its inner race to prevent damage.

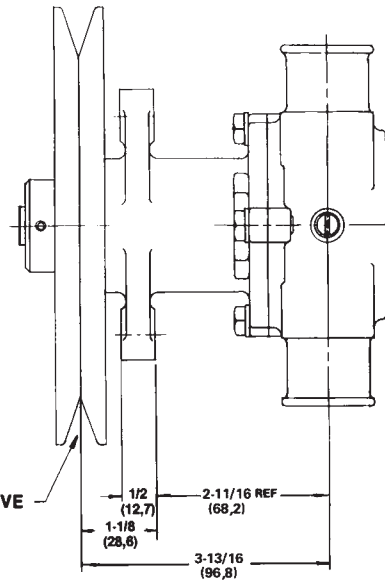
### ASSEMBLY

1. Clean and inspect all components for wear or damage. Replace all components where needed.
2. Lightly lubricate pump shaft (key 4) and press bearings (key 9) onto shaft by applying force to inner race of the bearing. DO NOT APPLY FORCE TO OUTER RACE OF BEARING.
3. Slide ceramic (white) portion of seal (key 8) onto spline end of shaft with large white face toward spline end.
4. Lightly press the brass/carbon portion of the seal into the bearing housing (key 3); be careful not to damage the carbon face of the seal. Brass face should face toward impeller end of pump and be pressed flush with bottom of counter-bore.
5. Lightly press shaft, bearing and shaft seal (ceramic portion) subassembly into bearing housing; be careful not to damage shaft end or seal components during this assembly.
6. Replace bearing retaining ring (key 10) into bearing housing.
7. Slide pulley (key 5) onto shaft. Make sure that roll pin hole in shaft lines up with hole in pulley.\*\*
8. Drive roll pin (key 11) into pulley and shaft and tighten set screw.
9. Apply a thin coat of sealant to convex side of cam (key 6) and threads of cam screw (key 12), and fasten cam to impeller housing.
10. Slide impeller (key 1) onto shaft spline and place spline seal in impeller bore.
11. Place O-ring (key 7) into groove in impeller housing and cam subassembly. Lubricate impeller bore. With a twisting motion, slide the impeller housing over the impeller. Be sure the direction the impeller blades are bent matches the direction of normal engine and pump rotation.
12. Fasten impeller housing to bearing housing with the three machine screws and washers (key 13 and 14).
13. TEST pump following instructions under **Installation and Operation section**.

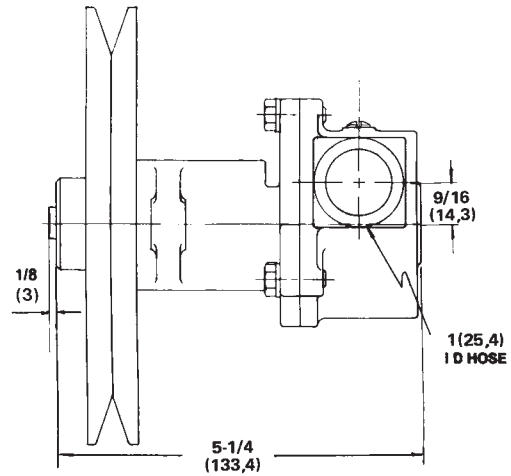
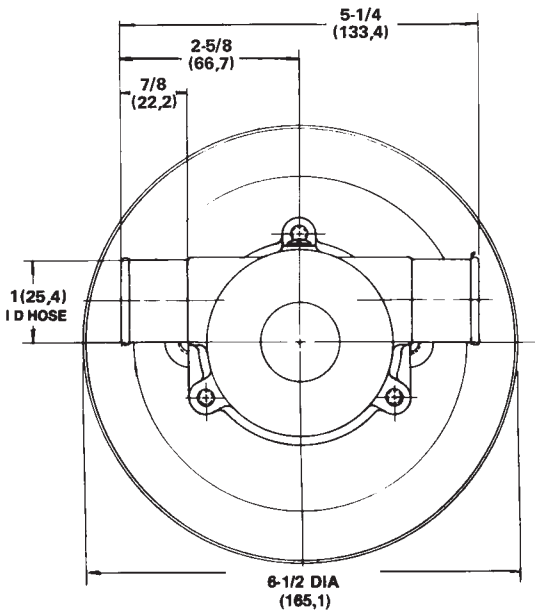
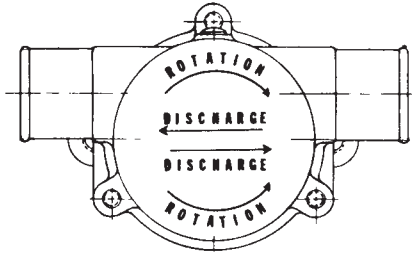
\*\*If the roll pin hole cannot be aligned through pulley and shaft, drill a new 1/8" hole for roll pin at an angle 45° from original hole. Center punch pulley hub or file a flat spot on hub to ease start of drilling procedure.



PULLEY NOT SHOWN



"A" BELT PULLEY GROOVE



THE PRODUCTS DESCRIBED HEREIN ARE SUBJECT TO THE JABSCO ONE YEAR LIMITED WARRANTY, WHICH IS AVAILABLE FOR YOUR INSPECTION UPON REQUEST.

[www.xylemflowcontrol.com](http://www.xylemflowcontrol.com)

Jabco, 100 Cummings Center, Ste. 535-N, Beverly, MA 01915  
Tel: +1 978 281 0440 Fax: +1 978 283 2619

Jabco, Bingley Road, Hoddesdon, Hertfordshire, EN11 0BU  
Tel: +44 (0) 1992 450 145 Fax: +44 (0) 1992 467 132

NHK Jabco Co Ltd, 3-21-10, Shin - Yokohama Kohoku-ku, Yokohama 222  
Tel: +81 (0) 45 475 8906 Fax: +81 (0) 45 475 8908

Jabco GmbH, Oststraße 28, 22844 Norderstedt  
Tel: +49 (0) 40 53 53 73 0 Fax: +49 (0) 49 53 53 73 11

Jabco Italia, s.r.l., Via Tommaseo, 6, 20059 Vimercate, Milano  
Tel: +39 039 685 2323 Fax: +39 039 666 307

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