



OWNER'S MANUAL


Hydraulic-Motor Frame Mounted
Centrifugal Pump Direct Couo40 1 6ng Drive86


BERKELEY®


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
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) . 3 4 2 5 # 4) / . 3

 This is the safety alert symbol. When you see this symbol on your pump or in this manual, look for one of the following signal words and be alert to the potential for personal injury.

 **DANGER** warns about hazards that will cause serious personal injury, death or major property damage if ignored.

 **WARNING** warns about hazards that will or can cause serious personal injury, death or major property damage if ignored.

 **CAUTION**

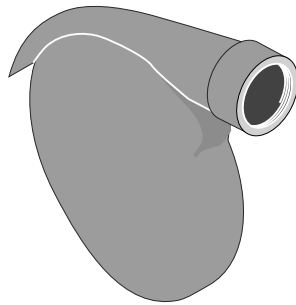
Safety First

General Information

3 5 # 4) / . 0) 0) . ')

(% # 2 / 4 ! 4) / :

Before pump is put into operation, rotational direction must be checked to assure proper performance of pump. See Figure 1.



This pump has
LOCK WISE
when viewed from this end.

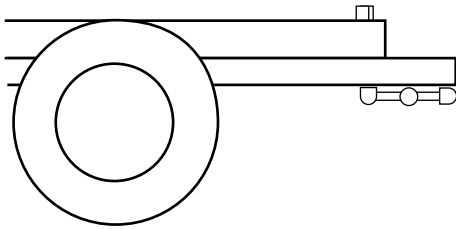
Start pump momentarily
to observe direction
of rotation.

Start-up

Pump Priming

0 2) -) . ' .

Pump priming is the displacement of air with water in the pump and suction piping. Pump - 5 3 4 " % completely filled with water when operating.



Refer to Page 6 for instruction on priming the pump with suction lift (water source below pump), using the Han-Dee Primer.

3 4 ! 2 4) . : ' .

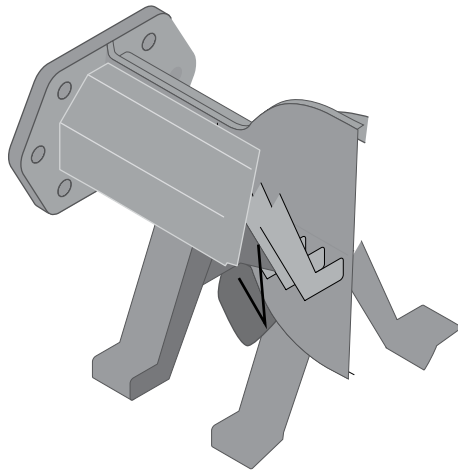
. / 4) # % Never run pump dry. Running pump without water will overheat pump and damage internal parts. Always make sure pump is primed prior to start-up.

. / 4) # % If pump has packing, refer to maintenance section for adjustment prior to start-up.

Prime pump. Turn on power to pump.

Check with motor instruction and operation manual or motor manufacturer to determine how rotation is defined, then use illustration on Page 4 for proper connection.

Start-up Pump Priming



7 IT & LOO D ECTION

- s / P E N I R E N D R I P E L U I G N T H E I G H E S T P P E D
- s / P E N N E I T O L A T V O W A L O W M A G E R O U T E
- s 2 O T A S T H E A S T O W L Y O W I N N G R R A P P N E D
- s # L O / S E O P E N W H E N A T V E R T H A O U R M E R G E S

7 I T H I F T I N G C T I A O N

- . / 4) # % Pump must be engine vacuum or hand below pump.
- s # L O S S C H A
- s (A N \$ O R I
- / P E N A N
- 2. Work ha evacua
- (Re
- pr
- 3.

, 5 " 2) # ! 4) / : .

LIQUID END of pump requires no lubrication. Wear rings and packing rings are lubricated by the liquid being pumped. Do not run dry!

0 % 2 & / 2 - ! . # % # (% #

Periodically check the output of the pump. If performance is noticeably reduced, refer to Troubleshooting Chart.

/ " 3 % 2 6 ! 4) / . ! , - !) . 4 % . ! . # %

When the pump and system operation have been stabilized, verify that pump unit is operating properly.

/ B S E R T H E O L L O W I N G

6 I B R A T I O N D O N T A M A N G H I N G A S E E X P E C T E D
produce some vibration, however, excessive vibration can reduce the life of the unit. If the vibration seems excessive, discontinue operation, determine cause of the excessive vibration, and correct.

. O I S E H E N T H E N I S O P E R A T I N G R A D I S T E N
closely for unusual sounds that might indicate that the unit is in distress. Determine the cause and correct.

/ P E R A T I N G

2/54) . % !) . 4 % . ! . # %

A well maintained pumping system will extend the life of the unit and will require fewer repairs. This means less down time which can be very critical when a constant delivery of water is required.

A routine maintenance and inspection schedule should be set up on a weekly, quarterly, and annual basis with records kept of these actions. For weekly checks see observational maintenance on Page 7. For quarterly and annual maintenance, refer to check list on the following page. Copy page as necessary for continual usage.

2 % # / - - % . \$ % \$ 0 ! 2 % 0 ! 2 4 3

It is recommended that the following spare parts be kept on-site as a minimum back-up to service your pump and reduce down-time. Check your model/style against parts breakdown drawing on Page 12 when selecting spares.

- s 0 A C K I N G D A C K I N G S
- s 3 H A F T E E V E S
- s 3 H A F I T T
- s 2 E T A I N I N G S

If having a pump non-operational has severe consequences, a back-up pump should be considered. / T H E R W A B A C U I P M P E L L E O R I T E A E S B A R I N G S and shaft, would be prudent.

7) . 4 % 2) . '

If pump is to be out of service for an extended period of

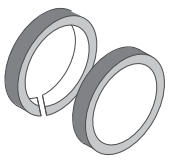
Maintenance

Packing Ring Replacement

Removal

- s 5 N F A S T A R I D W H A C L E D O N G K I N S I D E P L A C E s 2 E M P A C K R I N G S O M U F B O N E S I N T O O
and slide back on shaft to expose packing rings. A commercially available Packing Hooks as shown.
- s 3 L I D E N T E R I N G I F U S E B A C K O X P O S E Y
remaining rings, including metallic. Remove them in the same manner.

Installing New Rings



- s # L E A S H A S F L T E E A M E D A C K I N S I D E s 3 L I D E P A C K I N G A N D T R O S I T T E I N E N A I N D
) N S I E H A S F L T E E F O R E A R E P L A C E D E D evenly tighten nuts to force rings into place and seat
) N S T A L W P A C K R I N G S I N T U F B O N E P L A C I N G s 3 T A R T M E D M A N D A L L O W C K I T I N G E A K
them over shaft sleeve and pushing them in as far liberally.
- s 2 O T A R T I N G I N T D E G R E W H E I N S T A E I A I N G s 7 H I L F U M I P S R U N N I T N G H G E A N D T O S N E
ring as shown. complete turn at a time each until leakage is reduced to 40 to 60 drops per minute.

s 2 E M O V E U T E X P O I S E P E L L E R
s 0 E E F L O S I O R T 2 I N A N D

Pump Nomenclature

B4ZRK Bearing Frame Mount

Parts Breakdown



Maintenance

Troubleshooting

Engine Drive Pumps

1 5 3 %

/ 2 2 % # # 4 6 %

)% . ') . %

A. Speed too low

Refer to engine manufacturer's manual.

B.

Berkeley Warranty

LIMITED WARRANTY

BERKELEY warrants to the original consumer purchaser ("Purchaser" or "You") of the products listed below, that they will be free from defects in material and workmanship for the Warranty Period shown below.

PRODUCT	WARRANTY PERIOD
WATER SYSTEMS	
Water Systems Products — jet pumps, small centrifugal pumps, submersible pumps and related accessories	WHICH EVER FIRST 12 months from date of original installation, or 18 months from date of manufacture
Pro-Source™ Composite Tanks	5 years from date of original installation
Pro-Source™ Steel Pressure Tanks	5 years from date of original installation
Pro-Source™ Epoxy-Lined Tanks	3 years from date of original installation
Sump/Sewage/Effluent Products	12 months from date of original installation, or 18 months from date of manufacture
AGRICULTURAL & COMMERCIAL	
Centrifugals – close-coupled motor drive, frame mount, SAE mount, engine drive, VMS, 3 3 # 8 3 3 (- SOLID DISINTEGRATOR) & SUBMERSIBLE HANDLING	12 months from date of original installation, or 24 months from date of manufacture
Submersible Turbines, 6" diameter and larger	12 months from date of original installation, or 24 months from date of manufacture

THIS WARRANTY IS LIMITED TO THE ORIGINAL PURCHASER OF THE PRODUCT.

