EST.
DPS
DIESEL PARTS & SERVICE
1970

NS

INSTRUCTIONS

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Safety Warning

1. Disconnect all power sources to ensure the pump will remain inoperative
2. Allow the pump to cool before starting maintenance
3. Close the suction and discharge valves if fitted
4. Vent the pump slowly and cautiously
5. Drain the pump

- When working near the pump, dress appropriately, avoid baggy or loose items which could get caught in moving parts. Always wear safety clothing, gloves, safety glasses, helmet etc.

- This pump is designed to handle WATER ONLY. Do not attempt to pump volatile, corrosive or flammable liquids that may damage the pump or endanger personnel.

- Use lifting and moving equipment with ample capacity and in good repair. Remove all suction and discharge piping before lifting.

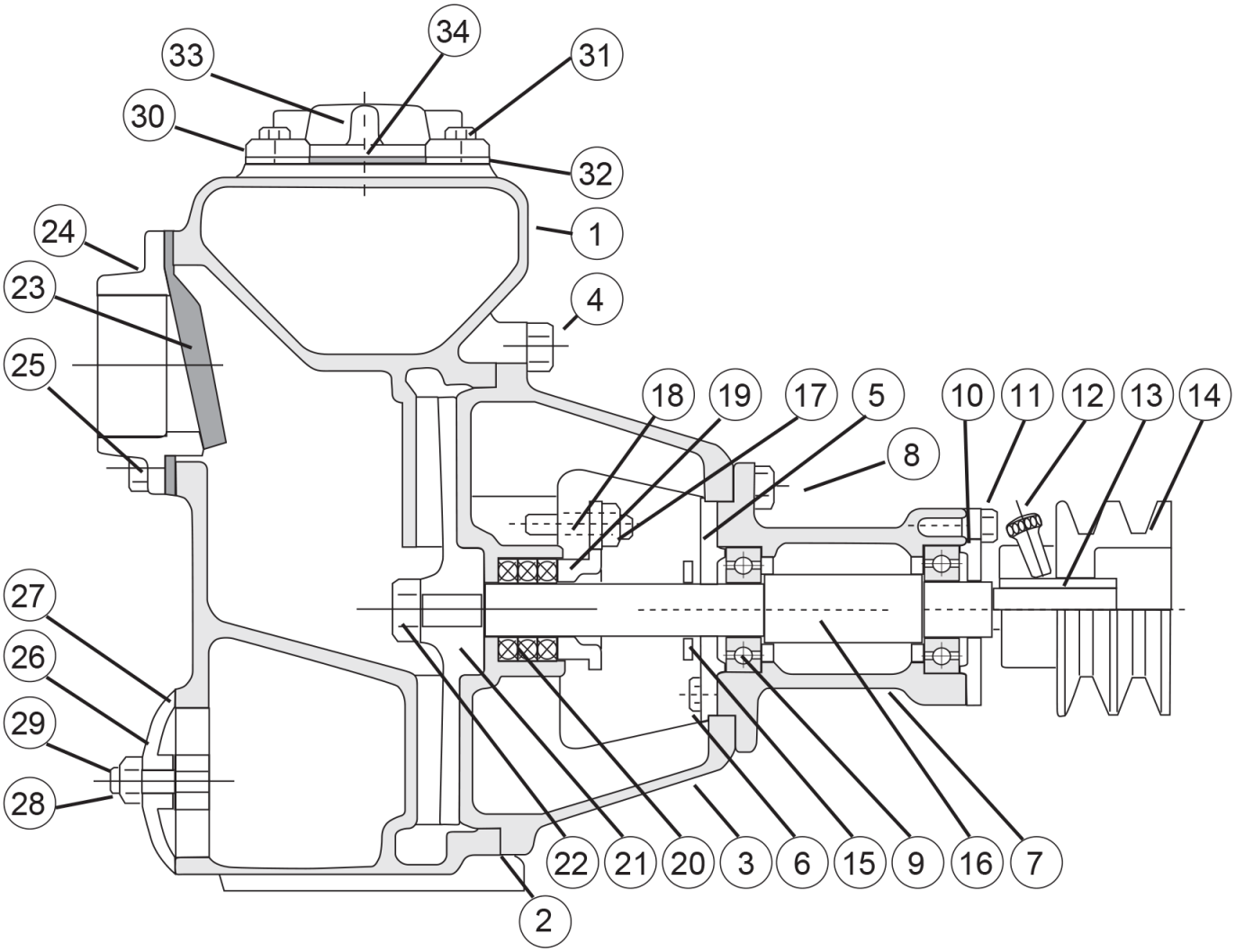
- Do not remove any items from an overheated pump. Pressure build up within the pump can cause parts being disengaged to be ejected with force. Allow the pump to cool before commencing any maintenance.

- Do not operate the pump with a closed discharge valve for any length of time. Running the pump in this configuration could cause the liquid to boil and cause the pump casing to explode.

- Do not operate the pump without all guards in place over rotating parts.

- After the pump has been positioned make sure all the pump mountings and any fixtures are properly secured and supported before operation.

PARTS LIST



PUMP PARTS

1	CASING	18	STUD BOLT
2	GASKET	19	GLAND
3	PEDESTAL	20	GLAND PACKING
4	BOLT	21	IMPELLER
5	INSIDE COVER	22	IMPELLER NUT
6	BOLT	23	CHECK VALVE
7	BEARING CAS	24	SUCTION FLANGE
8	BOLT	25	BOLT
9	BEARING	26	DRAIN COVER
10	OUTSIDE COVER	27	GASKET
11	BOLT	28	NUT
12	BOLT	29	STUD
13	KEY	30	DISCHARGE FLANGE
14	PULLEY (NOT SUPPLIED)	31	BOLT
15	WATER SLINGER	32	GASKET
16	SHAFT	33	PRIMING PLUG
17	NUT	34	RUBBER SEAL RING

General Description
Type NS pumps are open impeller centrifugal self-priming water pumps. Pumps are suitable for agricultural irrigation or industrial water supply and drainage.

Direction of Rotation:
The NS series pumps are available in clockwise or anti-clockwise rotation.
e.g. NS100 anti-clockwise rotation and NS100C clockwise rotation

Construction:
- Type NS pumps are composed of pump casing, pump pedestal with impeller shaft and bearings housing.
- NS pumps are self-priming
- NS pumps are packed gland sealing and water must be kept flowing out from the gland drip by drip
- Bearing fitted are sealed for life so no greasing required
- Stainless steel shaft fitted as standard

Installation:
- For the pump to self-prime and initial fill of water into the pump casing is required. Water can be add into casing via the priming plug on top of the pump. This will not need to be done again unless the pump is moved as water will always be in the pump casing.
- The pump should be located as close as possible to the water source to reduce the length of suction pipe and reduce friction loss in the pipe
- The end of the suction pipe must be fitted with a strainer or netted to prevent objects entering into the impeller.

Maintenance:
- Check shaft movement for signs of bearing wear
- Check impeller nut and all bolts and plugs regularly for loosening from vibration or cavitation.
- Check shaft connection for alignment and adjustment.
- Check all gaskets for signs of leakage

TROUBLE SHOOTING

Troubles	Causes
Pump fails to prime	• Not enough water in casing • Check valve damaged • Air leak in suction line • leaking or worn packing • Suction lift to high • Strainer clogged
Pump fails to deliver rated flow or pressure or stops	• Air leak in suction line • Leaking or worn seal • Strainer clogged • Suction line not submerged or water level to low • Impeller clogged • Pump speed to slow • Discharge head to high • Suction lift to high
Pump requires to much power	• Pump speed to high • Discharge head to low • Pumped product to thick • Bearings failed
Pump clogs frequently	• Liquid is to thick • Discharge flow to slow • check valve shut or clogged
Noise and vibration	• Cavitation in pump • Air in system • drive not aligned properly

If you are struggling for water on a suction lift, increasing the speed will only make it worse. Decrease the speed will help with high suction lifts, the faster you run the pump the less suction lift you have