ARMSTRONG	
HOLDEN BROOKE PULLEN	

Leaflet No.	1-3/OM/2
Date:	Jan 2005
Supercedes:	K5.501
Date:	Jan 1992

Installation & Operating Instructions

HIGH DUTY CIRCULATORS

Models H51 to H54 & H63 to H68

STARTING THE PUMP

The pump must be fully primed on start-up. Fill system piping and pump body with liquid and vent complete system, turning pump by hand to discharge air from body. Make sure fittings and drain valves are air-tight, then add any additional fill required.

Check motor electrics against available supply, then start pump, making sure rotation is correct: when viewed from motor end, rotation is counter-clockwise on models H51 – H54 and on models H63 – H68.

If pressure does not develop stop pump, re-check, vent and fill. Never attempt to fill system when pump is running.

CAUTION

Do not fit support under motor.

Before operating pump, carefully check:

- 1) Is the pump primed ?
- 2) Is rotation correct ?
- 3) Is pump properly lubricated ?
- 4) Does the power supply agree with data on motor nameplate ?
- 5) Is overload protection provided ?
- 6) Is the system clean ?

LUBRICATION

Stop motor while adding oil.

PUMP LUBRICATION

For maximum water temperature upto 135°C use a non -detergent Shell Oil Tellus 68 or equivalent.

Immediately after pump is installed and before running, slowly add oil to oil cup located on top of pump bearing assembly, as follows:

Pump Model No. Cast Iron or Bronze	Quantity of Tellus 68 Oil
H51 to H54	Add third contents of tube
	supplied
H63 to H68	Half contents of 8 oz (250 ml) bottle supplied, until oil is visible between top and centre of view window.

At the start of each following heating season, lubricate with Tellus 68 oil or equivalent:-

H51 to H54 – add approx $\frac{1}{2}$ oz.

Lubricate every 6 months for temperatures above 107°C or constant operation.

On models H63 to H68, be sure oil is visible between top and centre of window at all times.

Do not over oil or spill on resilient motor rings where fitted. Unless requested circulators are supplied fitted with seal assemblies for maximum water temperature of 107°C. For temperatures over 107° to a maximum design temperature of 135°C special Viton mechanical seals are available.

MOTOR LUBRICATION

On motors with oil cups, add approximately 15 drops of oil to each cup at the start of each following heating season. (Lubricate every 6 months for high temperature or constant operation). Do not force oil into cups, and stop if cup fills before addition of specified amount. If motor is fitted with grease fittings, follow motor manufacturers recommended procedure. Motors without oil cups or grease fittings are custom-greased for several years operation and require little or no attention.

SEAL REPLACEMENT

Amongst the common causes of early seal failure are careless handling of the seal faces or flexible members during fitting. The faces of the mechanical seals are very highly lapped and care must be taken to ensure that the lapped sealing surfaces are not scratched or chopped.

Remove the impeller, damaged seal assembly, ceramic insert and rubber cup. Clean the recess in bearing bracket coverplate and install a new retainer cup and ceramic. Check the condition of the shaft sleeve. If scored, replace the shaft assembly, otherwise clean shaft extension and polish sleeve with fine crocus cloth if required.

Press against coupler end of shaft to take up end play, while pressing new seal firmly against stationary face. A slight amount of clean washing detergent (similar to Fairy Liquid) may be put on shaft sleeve to assist installation. Press down firmly and evenly, using a screwdriver and pushing against the four ears of driving band (the metal ring around rubber bellows) on H63 to H68, or around outer edge of driving band on H51 to H54.

Re-mount impeller and re-assemble the seal bearing assembly into body. Install a new body gasket and clean gasket surface of both volute and bracket coverplate if necessary.

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