INSTALLATION MANUAL

FOR

HYDROIL™
Vane Motors

MOUNTING

HYDROIL Vane Motors are designed to operate in any position. The position with respect to the HYDROIL Reducer may be changed by rotating the adapter on the reducer.

The mounting adapter into which the motor pilots must be concentric with the motor and driven shaft to prevent bearing failures. Therefore, when the motor is used with other than a HYDROIL Reducer, the alignment should be carefully checked with a dial indicator. The concentricity is particularly important if the motor shaft is rigidly connected to the driven load without an intermediate flexible coupling.

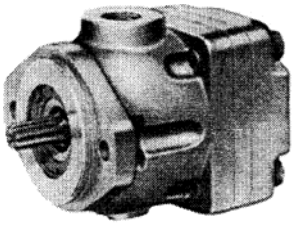
PIPING

Flexible hose must be used (not rigid piping) to prevent strains on motor housing which could result from external alignment problems.

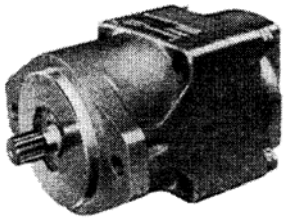
Three hoses are required; two larger diameter high pressure supply and return hoses which are connected to the high pressure motor parts (A & B) and a smaller diameter low pressure housing drain hose. The supply and return hoses should be of adequate size and strength to assure proper motor operation and withstand the high operating pressures. The drain line must be connected directly to the reservoir tank with hose capable of withstanding pressures of up to 50 PSI. For best results the drain should be extended below the oil level. No drain is required on sizes A10 and A20 if the housing port (see drawing) is the low pressure port and is never subjected to more than 20 PSI, in which case the drain plug should be installed.

All hoses should be thoroughly cleaned with solvent before the motor is connected. Be sure that entire hydraulic system is free from dirt, lint, scale or other foreign matter. Oil filters should be used to insure a clean hydraulic system. Filters should be used at the reservoir breather and the oil filler openings.

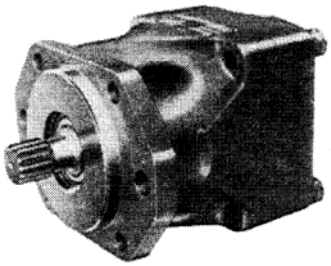
Because the porting is symmetrical the motor can be reversed by reversing oil flow to the ports. Flow into port A (see drawing) will result in clockwise rotation as viewed from shaft end of motor. Flow into port B will result in counterclockwise rotation.



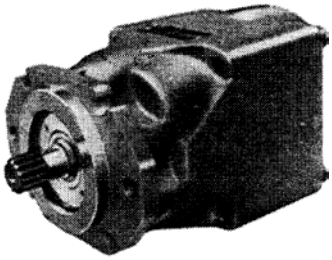
HYDROIL Vane Motors A10 and A20



HYDROIL Vane Motor B30



HYDROIL Vane Motor B40



HYDROIL Vane Motor B50

OIL

CAUTION: For applications where reverse rotation could cause damage, check HYDROIL motor rotation before connecting motor to driven shaft.

The efficient operation of the entire hydraulic system depends largely on the ability of the oil to convey the power generated by the pump and lubricate the moving parts within the system. Therefore, the importance of selecting a high-grade hydraulic oil from a reputable manufacturer cannot be over emphasized. High-grade mineral base oils with anti-wear additives, and rust and oxidation inhibitors are recommended. The viscosities required at operating and starting temperatures for each motor are listed in the following table. Never use multi-grade oils and applications requiring the use of fire resistant fluids should be referred to factory.

Motor Size	Viscosity Range SUS at 100º F ▲	Viscosity Index	Maximum Viscosity at Starting Temperature	Maximum Allowable Motor Pressure
A10	150 to 300	80 or above	3000 SUS	2100 PSI
A20	150 to 300	80 or above	3000 SUS	2100 PSI
B30	150 to 300	90 or above	4000 SUS	2500 PSI
B40	150 to 300	90 or above	4000 SUS	2500 PSI
B50	150 to 300	90 or above	4000 SUS	2000 PSI

▲ Use the lighter weight (150 SUS) oil for ambient temperatures of -10°F to 70°F. For ambient temperatures of 50°F to 150°F use heavier oils to keep efficiency high.

NOTE: Temperatures of the oil should never exceed 150°F for most efficient operation.

WARNING: Because of the possible danger to persons(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed: Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions in the instruction manuals must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be desirable or as may be specified in safety codes should be provided, and are neither provided by Baldor Electric Company nor are the responsibility of Baldor Electric Company. This unit and its associated equipment must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. When risk to persons or property may be involved, a holding device must be an integral part of the driven equipment beyond the speed reducer output shaft.

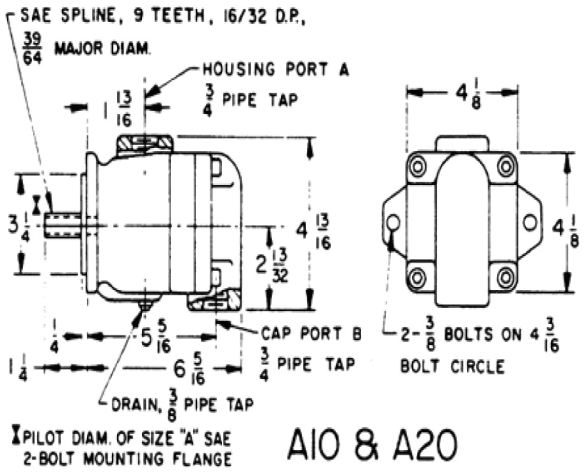
REPLACEMENT PARTS

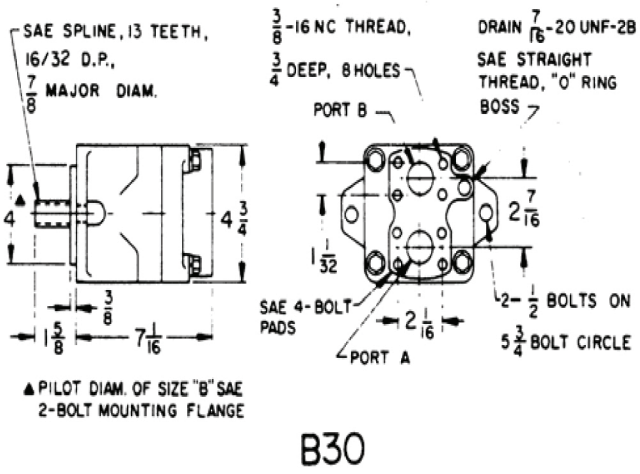
HYDROIL™ Motor Size	Part Numbers		
	Motor Shaft	Seal Kit ★	Motor Shaft Seal
A10	391658	391657	391659
A20	391658	391657	391659
B30	444059	444058	.....
B40	444062	444061	.....
B50	.....	.....	.....

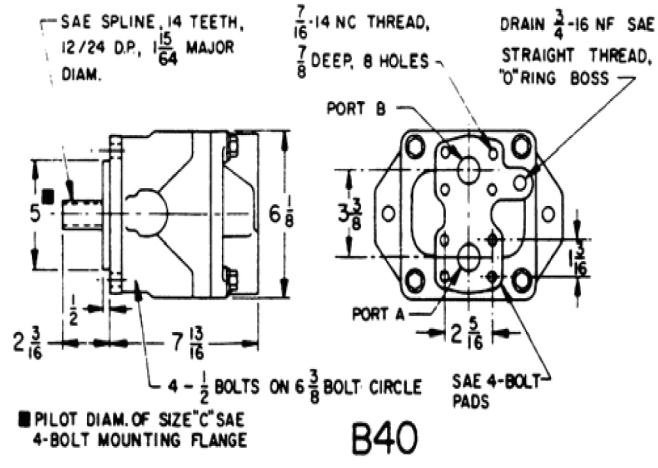
★ **Seal Kit includes Motor Shaft Seal.**

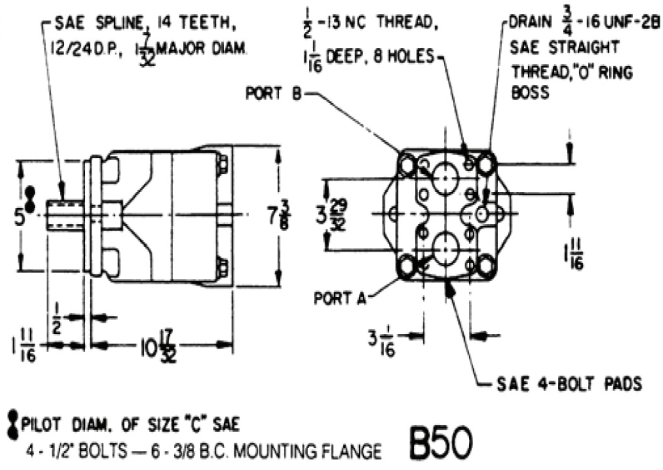
B40 motors are shipped with 6 special cap screws. These cap screws must be used when replacing an A40 motor that is used on an HC515 or HT515. Replace the cap screws that are currently used to hold the motor adapter to the reducer housing with the special cap screws. If these cap screws are not replaced, the pilot of the B40 motor may not seat properly in the adapter because of interference with the head of the cap screw. Installation of these special cap screws will eliminate this potential interference.

Note: A30 and A40 vane motors are no longer available and have been replaced by the B30 and B40 vane motors.









World Headquarters
P.O. Box 2400, Fort Smith, AR 72902-2400 U.S.A., Ph: (1) 479.646.4711, Fax (1) 479.648.5792, International Fax (1) 479.648.5895
Dodge Product Support
6040 Ponders Court, Greenville, SC 29615-4617 U.S.A., Ph: (1) 864.297.4800, Fax: (1) 864.281.2433
www.baldor.com

MN1653
(Replaces 499521)

06/30/09

1653-0609