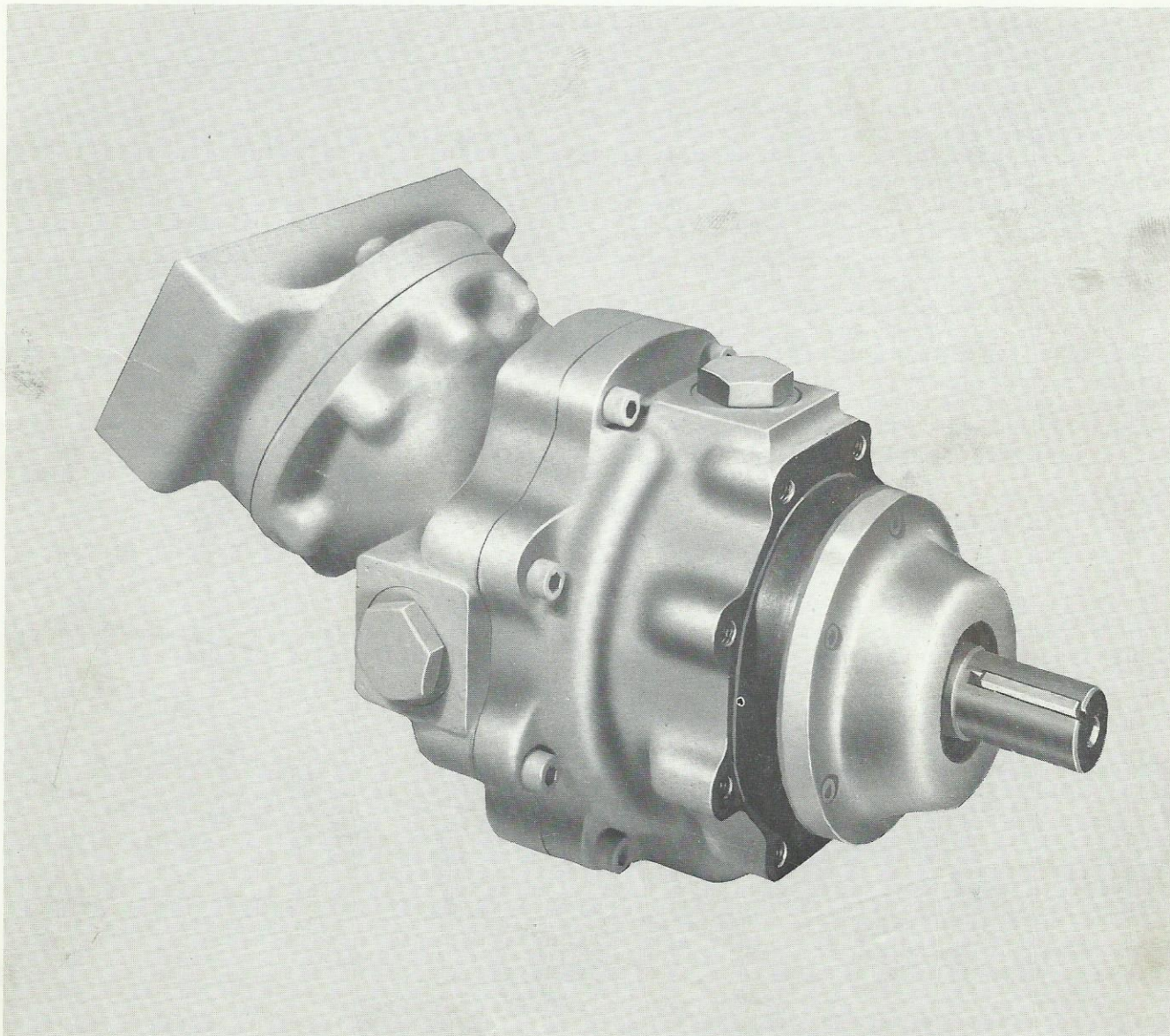


Fixed Angle Piston Type Pumps and Motors

PFA120-**-**(F)***-10/11/12/13/14

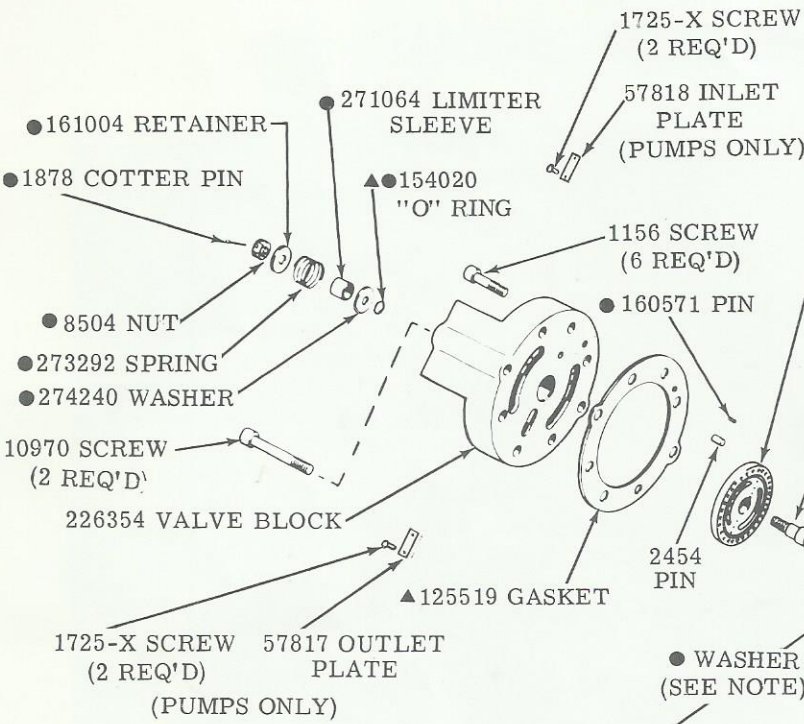
MFA120-**-**(F)***-10/11/12/13/14



Vickers Incorporated
A TRINOVA Company
5445 Corporate Drive
P.O. Box 302
Troy, Michigan 48007-0302
U.S.A.

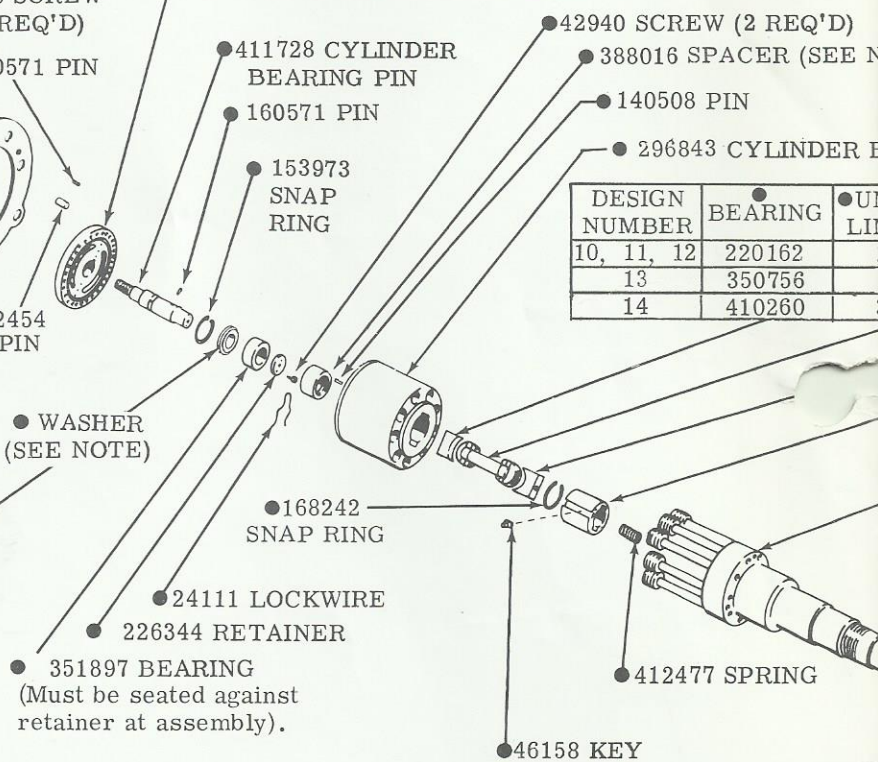
⊖ OMIT THESE FACE TYPE SHAFT SEAL PARTS WHEN A ONE PIECE SHAFT SEAL IS USED (PVA120-10/11/12/13). FACE TYPE SHAFT SEALS ARE STANDARD ON THE -14 DESIGN ONLY.

⊖ -14 DESIGN FACE TYPE SHAFT SEAL S/A PARTS INCLUDED IN 942319.



MODEL	VALVE PLATE
PFA120-23-(F)R -1*	267827
PFA120-30-(F)R -1*	
PFA120-23-(F)L -1*	267828
PFA120-30-(F)L -1*	
MFA120-23-(F)U -1*	267829
MFA120-30-(F)U -1*	

Valve plate **NOT** included in rotating group subassembly.



DESIGN NUMBER	BEARING	UN LIN
10, 11, 12	220162	2
13	350756	3
14	410260	3

NOTE
227705 spacer in -10 design replaced by 388016 spacer and 388017 washer and 140508 pin used in -11, -12, -13, -14 designs.

CONNECTION FLANGE MODEL NUMBERS		PIPING SIZE	FLANGE DESIGN
WELDED	THREADED		
FL-20-WS-20	FL-20-PS-20	2-1/2"	STRAIGHT
FL-20-WL-20	FL-20-PL-20	2-1/2"	ELL
FL-24-WS-20	FL-24-PS-20	3"	STRAIGHT
FL-24-WL-30	FL-24-PL-20	3"	ELL

FLANGE ASSEMBLY INCLUDES: FLANGE (1), "O" RING (1), SCREWS (4) AND WASHERS (4)

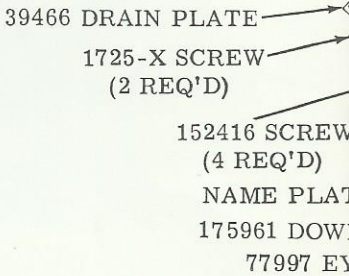
Flanges tabulated above are rated for 3000 PSI. Straight flanges with SAE Grade 8 screws for use to 5000 PSI can be supplied. Specify by adding "HP" to model number. Example: FL-20-WS-HP-20. Torque "HP" flange screws to 175 - 200 lb. ft.

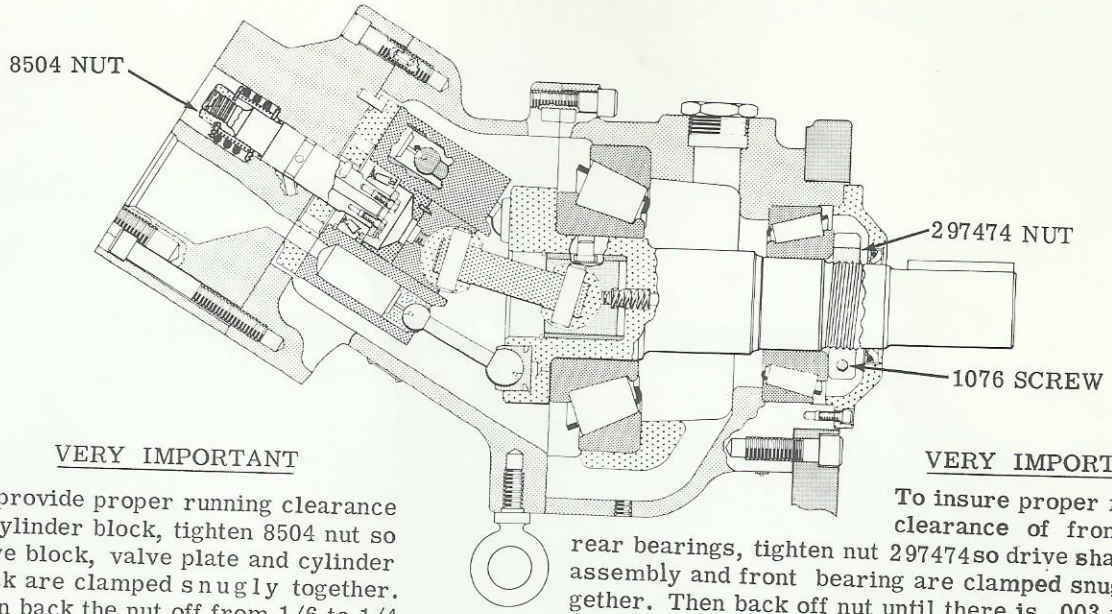
MODEL	ANGLE HOUSING
PFA120-23-(F)R -1*	249839
PFA120-23-(F)L -1*	
MFA120-23-(F)U -1*	237237
PFA120-30-(F)R -1*	
PFA120-30-(F)L -1*	
MFA120-30-(F)U -1*	

● INCLUDED IN ROTATING GROUP SUBASSEMBLY

▲ INCLUDED IN 919189 SEAL KIT

F3 EQUIVALENT SEAL KIT 920144





VERY IMPORTANT

To provide proper running clearance of cylinder block, tighten 8504 nut so valve block, valve plate and cylinder block are clamped snugly together. Then back the nut off from 1/6 to 1/4 turn to align the slot with the key hole in the pin.

VERY IMPORTANT

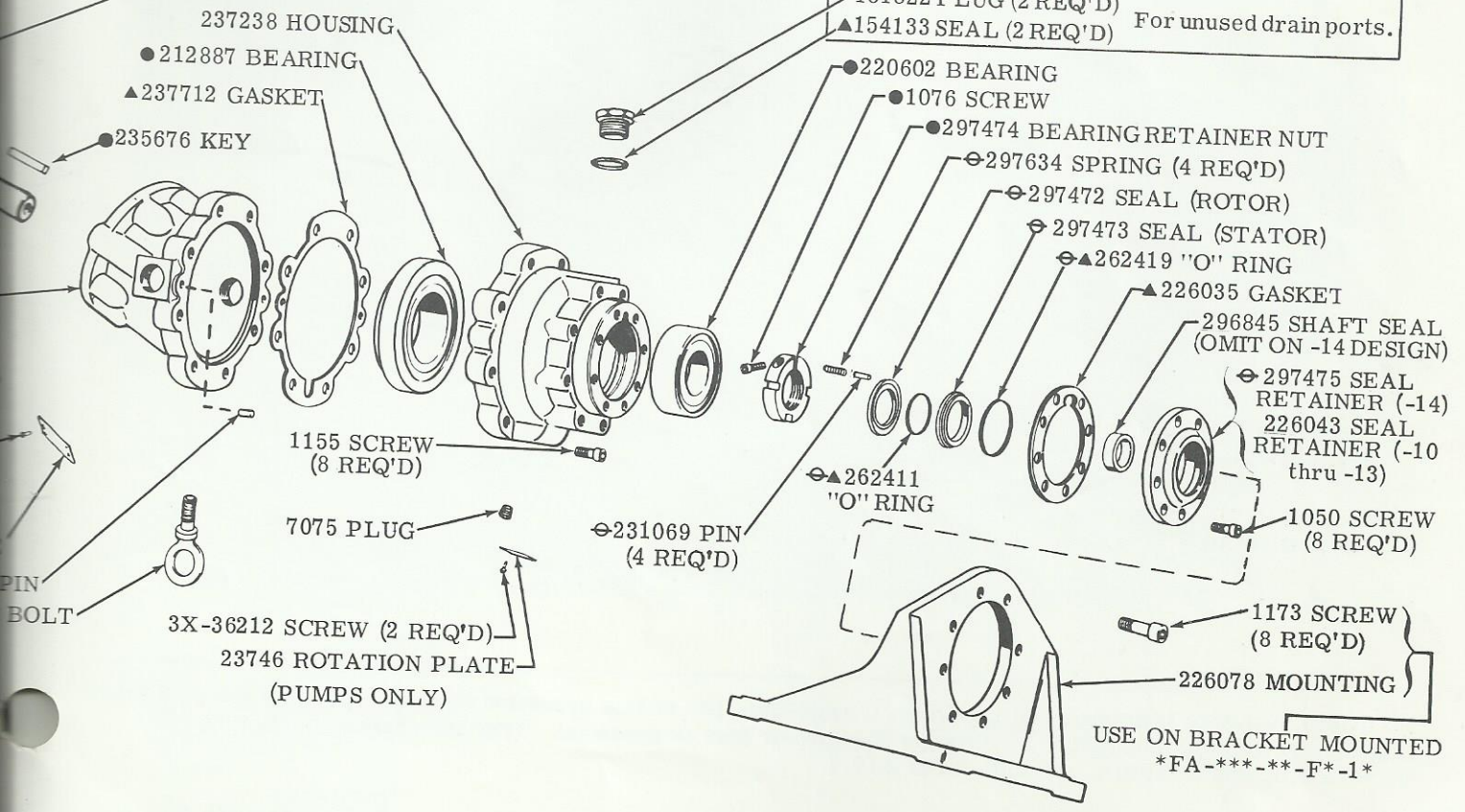
To insure proper running clearance of front and rear bearings, tighten nut 297474 so drive shaft sub-assembly and front bearing are clamped snugly together. Then back off nut until there is .003 to .005 clearance between nut and bearing. Insert screw 1076 in nut and tighten. Recheck clearance. Tap end of shaft until nut is flush with front bearing.

NOTE)
LOCK

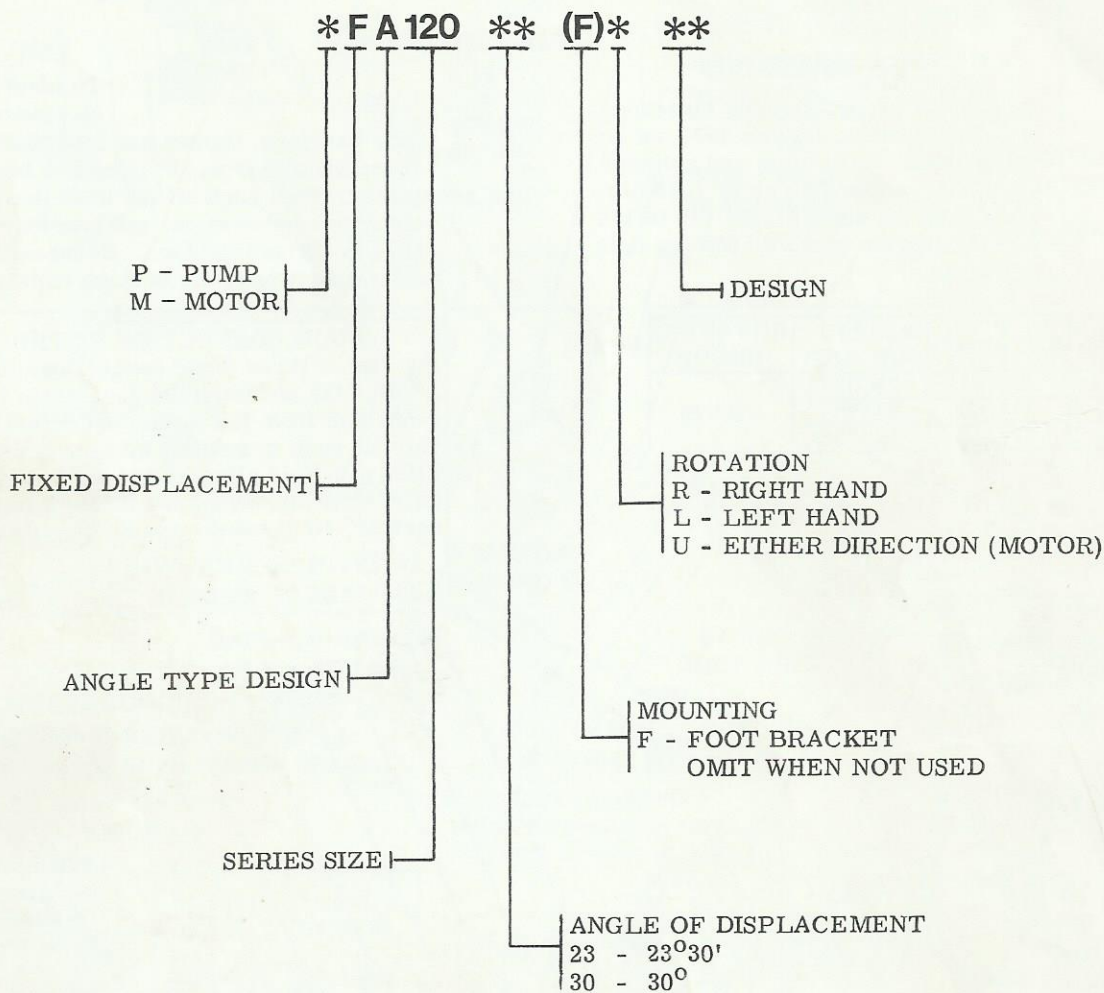
UNIVERSAL KEY & PIN	BEARING	RETAINER	SHAFT SUB-ASSY	ROTATING GROUP
20161	220162	220163	226033	938070
49456	341841	341842	344755	
49456	341841	388015	344755	

DRAIN CONNECTION INSTRUCTIONS
Any one of three drain connections may be used. A full size unrestricted case drain line must be connected from the drain port directly to reservoir in such a manner that the housing remains filled with fluid. Drain line loop must extend above top of case and terminate below fluid level in reservoir, to prevent syphoning action.

181822 PLUG (2 REQ'D)
▲154133 SEAL (2 REQ'D) For unused drain ports.



MODEL CODE BREAKDOWN



To insure sustained efficiency and maximum trouble-free life of this precision equipment, initial and continuous filtration of the fluid medium to 35 microns absolute or less is essential. (For information pertaining to Vickers economical filters, see bulletin 81-216.)