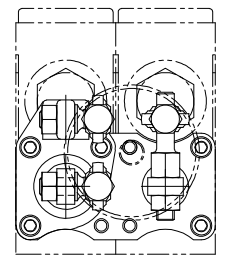
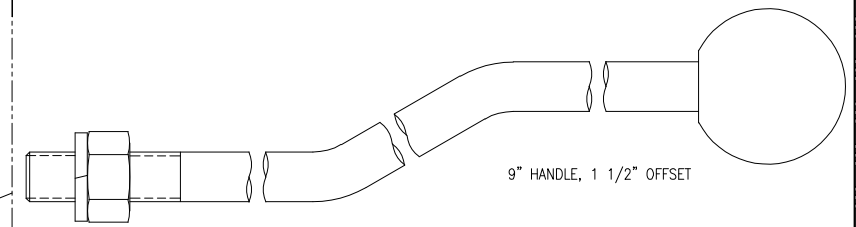
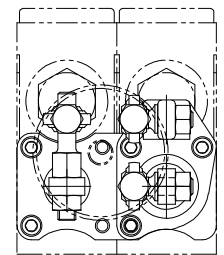


NOTES:  
 1. ITEM 12 WRENCH FLATS APPROXIMATELY VERTICAL AS SHOWN. ITEM 11 WRENCH FLATS APPROXIMATELY HORIZONTAL AS SHOWN.  
 2. CLEAN THESE THREADED PARTS WITH ALCOHOL, APPLY LOCTITE PRIMER AND INSTALL WITH LOCTITE 680.  
 TORQUE:  
 ITEM 3 & 8: 60-80 IN.-LBS.  
 ITEM 5 & 7: 170-190 IN.-LBS.  
 PLACE A COPY OF THIS PRINT INSIDE THE BAG CONTAINING THESE PARTS.

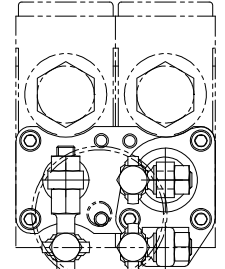
**EXF** LOCATION OF CLEVIS TANG IS A KEY REFERENCE. LOCATE IN STANDARD POSITION UNLESS OTHERWISE DIRECTED.



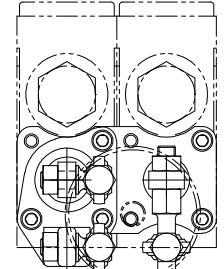
CLEVIS TANG UPPER LEFT



CLEVIS TANG UPPER RIGHT



CLEVIS TANG LOWER RIGHT (RIGHT HAND)



**EXF** CLEVIS TANG LOWER LEFT (LEFT HAND); STANDARD POSITION UNLESS OTHERWISE NOTED.

SYM.	REVISION
1	REDESIGNED AND REDRAWN; ECN 12972, 2/15/99. MDM
2	QTY FOR ITEM 12 WAS 1, & ITEM 13 WAS 2; ECN 13133, 3/29/99. MDM
3	NOTE 2 CALLED OUT 277 & 281
D	LOCTITE; ECN 13431, 8/6/99. MDM
	TORQUE FOR ITEM 3 & 8 WAS 110 IN.-LB. AND ADDED TORQUE TO ITEM 5; ECN 13670, 10/22/99. MDM
E	ADDED MOUNTING ORIENTATIONS AND REFER TO FINAL ASSY PRINT NOTE; ECN 16861, 1/23/03. MDM
F	REV NOTE, ADD STD LOCATION NOTE; ECN-1779, 5/21/04 WP

SYM.	REVISION (CONTD):
G	ADD NOTE 3 & ITEM 15; ECN-21901 10/11/12 WP

**Prince**  
 PRINCE MANUFACTURING CORPORATION  
 612 North Derby Lane, P.O. Box 7000  
 North Sioux City, South Dakota 57049-7000  
 www.princehyd.com

DRAWN BY	DATE	SCALE	CHK'D BY	DATE	APP'D BY	DATE	NEXT ASSY.
MDM	3/24/97	FULL	MO	3/26/99	MO	2/14/03	SERIES 20; 20JO
PART NUMBER							
660190017							
DESCRIPTION							
JOYSTICK ASSY							
MATERIAL							
SEE DRAWING							
FINISH							
-							
DEBURR & BREAK ALL EDGES DO NOT SCALE DRAWING							

UNLESS OTHERWISE SPECIFIED; DIMENSIONS ARE IN INCHES OR [MILLIMETERS]	TOLERANCES: ANGLES: ± 1° FRACTIONS: ± 1/32 [± .79]	.00 ± .010 [± .25] .000 ± .005 [± .13]
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ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	671200037	SPACER
2	1	671400165	CLEVIS
3	3	170003034	CAP SCREW
4	1	671900050	SPOOL STUD
5	3	220000125	HEX NUT
6	1	671400166	HANDLE PLATE
7	3	170002114	HEX HD. CAP SCREW
8	2	170003006	CAP SCREW
9	2	190100071	ROLL PIN
10	2	671400230	SPOOL ADAPTER LINK
11	1	671400252	ROD END
12	2	660390016	ROD END W/STUD
13	1	660180047	HANDLE KIT, OFFSET
14	1	671300028	BOOT (NOT SHOWN)
15	1	-	INSTRUCTION SHEET