MEYER

UTILITY STRUCTURES

Meyer's Hydraulic Pole Jack Assembly Guide

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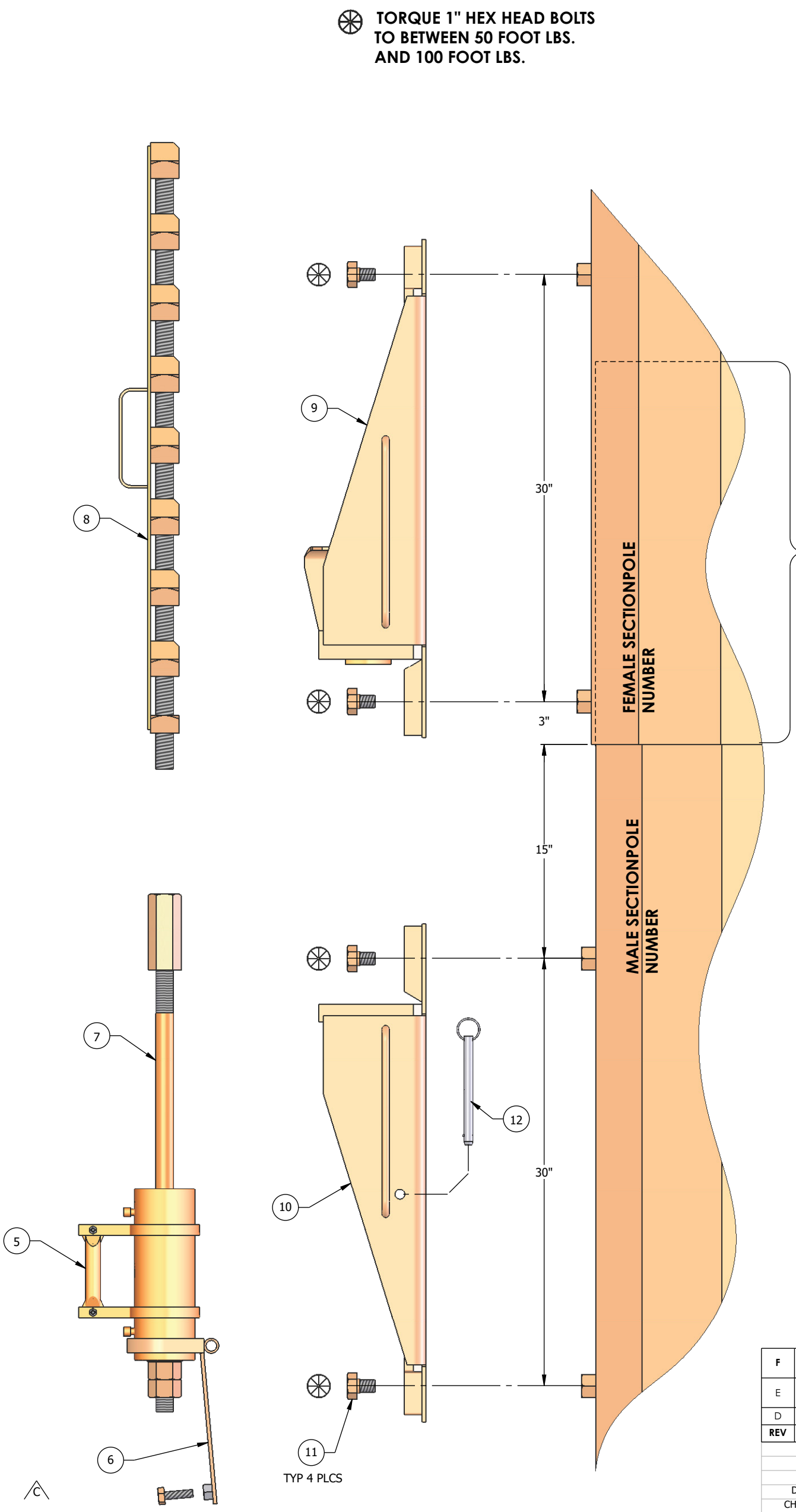
Assembly Diagram: Hydraulic System Slipjoint Jacking Device



100% SLIP JOINT LAP SHOWN HERE
TOLERANCE ON LAP = +5" / -10% LAP
(FOR INTERCHANGABLE SECTIONS) = +10" / - 10% OF LAP

EXAMPLE:
FOR A POLE WITH A 50" SLIP JOINT LAP
THE ACCEPTABLE LAP IS BETWEEN
45" (50" - 10%) AND 55" (50" + 5") OR
FOR INTERCHANGABLE SECTIONS:
45" (50" - 10%) AND 60" (50" + 10")

REV	DESCRIPTION	DRFT/DATE
F	UPDATED PAINT NOTE TO INCLUDE SHERWIN WILLIAMS	TW/01-15-25
E	UPDATED PROPERTIES AND ADDED ITS SPECIFICATIONS	RJ/09-17-24
D	UPDATED TITLE BLOCK	DT/10-17-19

PROJECT:	HYDRAULIC JACK DRAWINGS	
CUSTOMER:	MEYER UTILITY STRUCTURES	
JOB NO:	P0001	
DRAWN/DATE:	TW	10/07/2013
CHECKED/DATE:	--	--
ENGINEER:	--	

MEYER
UTILITY STRUCTURES

HYDRAULIC SYSTEM
SLIPJOINT JACKING DEVICE

SHEET 1 OF 2 **P0001-ORDERSAT** REV. F

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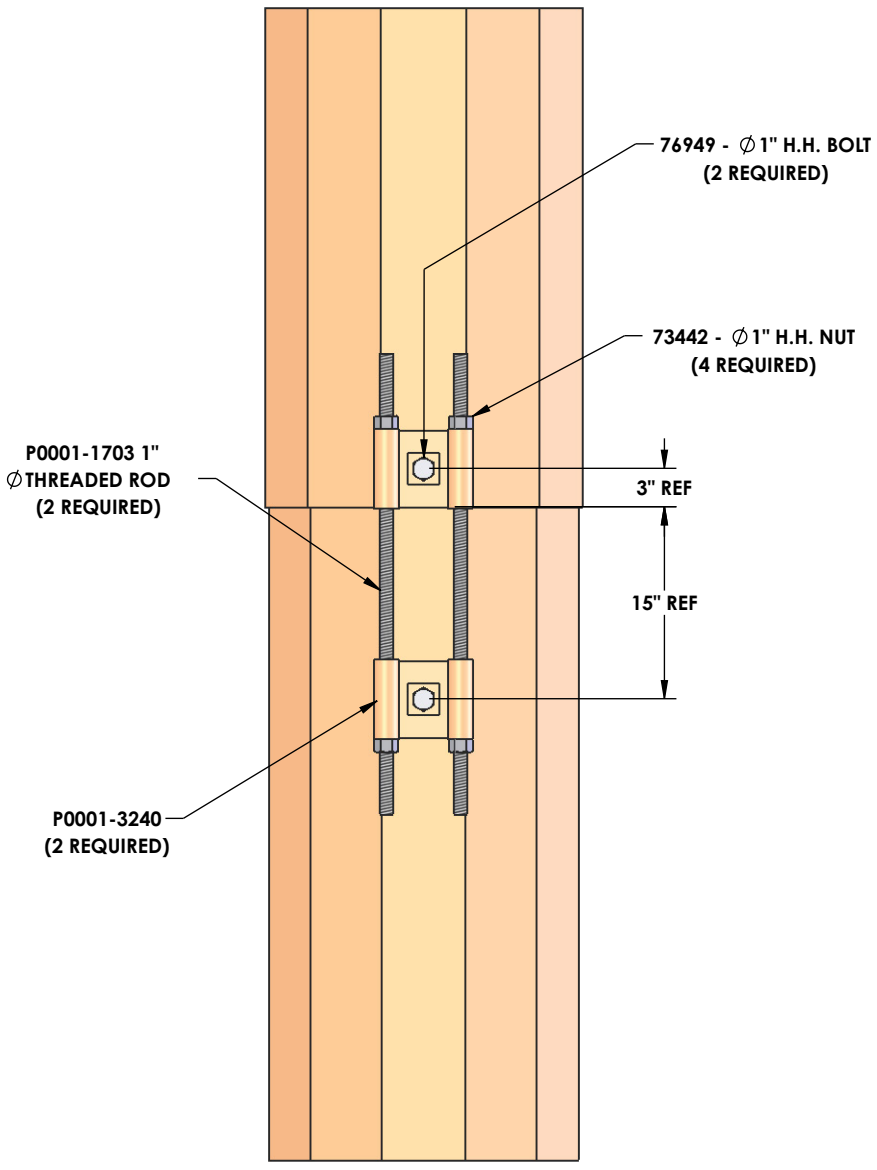
Assembly Diagram: Slipjoint Joint Keepers



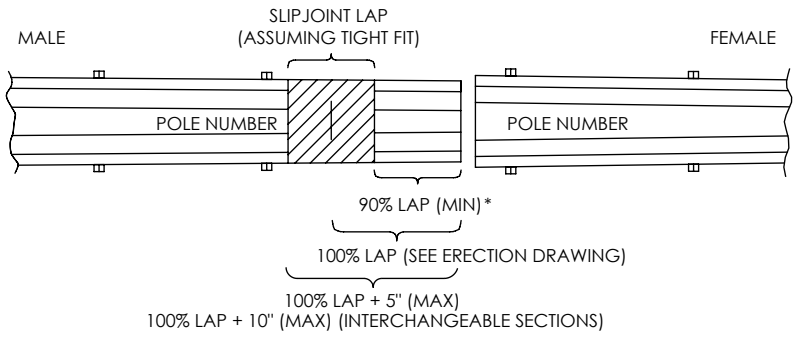
MEYER
UTILITY STRUCTURES

SLIP JOINT KEEPERS

SHEET 1 OF 1 **P0001-SJKEEPER** REV. **D**

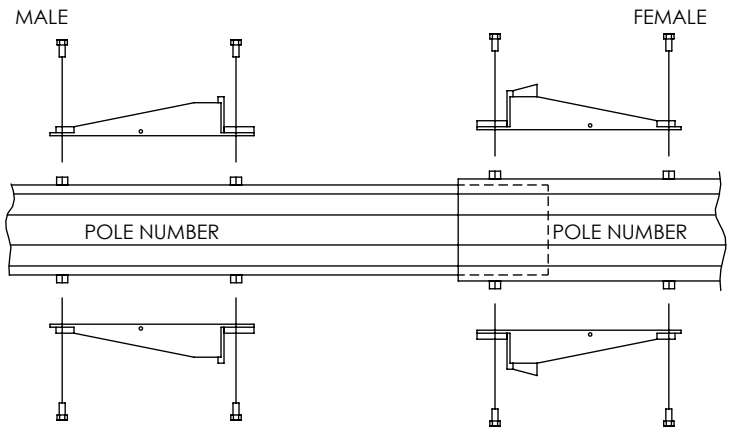
Jacking Instructions

THIS INFORMATION APPLIES ONLY TO MEYER JACKS FOR USE ON MEYER POLES. ONLY MEYER JACKS ARE RECOMMENDED FOR USE ON MEYER POLES

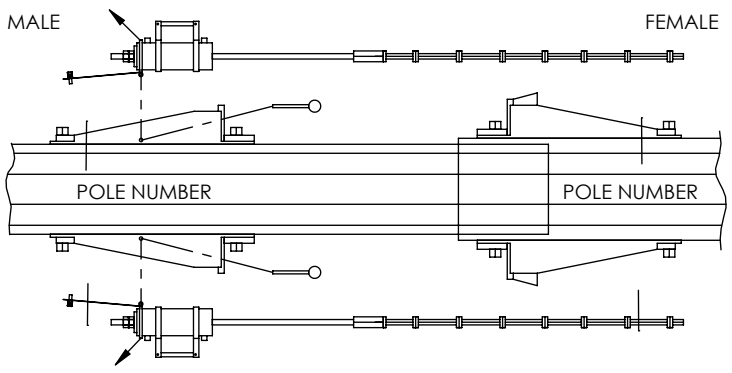


1. **CLEAN JOINT** (REMOVE ANY FOREIGN MATERIAL). **MEASURE AND MARK** THE MAXIMUM AND MINIUM SLIP JOINT LAP ON THE MALE SECTION AS SHOWN ABOVE
   EXAMPLE:
   POLE DRAWINGS SHOW THEORETICAL SLIP LAP (100%) TO BE 5'-6" OR 66"
   THE MINIUMUM LAP IS 0.9 x 66" = 59.5" AND THE MAXIMUM LAP IS 66" +5" = 71".
   EXAMPLE: (INTERCHANGEABLE SECTIONS)
   POLE DRAWINGS SHOW THE THEOREITCAL SLIP JOINT LAP (100%) TO BE 5'-6" OR 66"
   THE MINIMUM LAP IS 0.9 x 66" = 59.5" AND THE MAXIMUM LAP IS 66" + 10" 76"

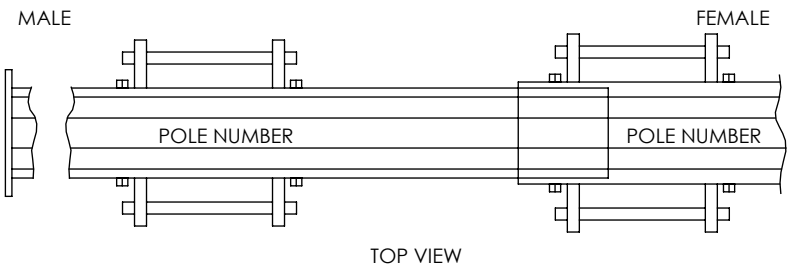
   CHECK SLIP JOINT **LAP ONLY AFTER** JOINT IS **FULLY SEATED**. (SEE NOTE 6)



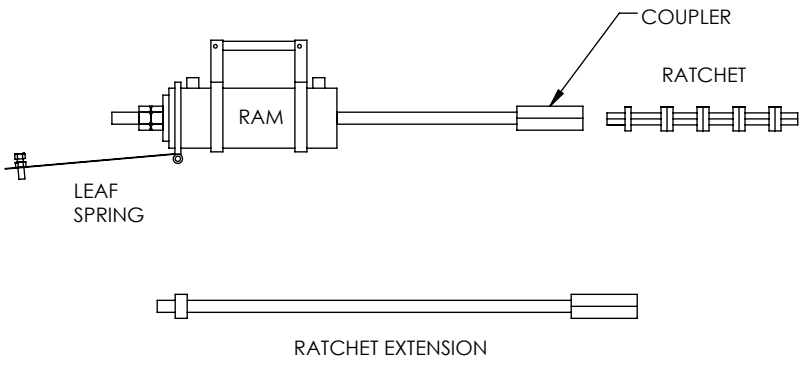
3. **ATTACH MEYER JACK FRAMES** TO SHAFT AS SHOWN ABOVE USING (8)1" DIAMETER HEX HEAD BOLTS TORQUED BETWEEN 50 AND 100 FOOT POUNDS.
   MEYER JACK FRAMES NEED TO BE SEATED FLAT ON THE TOWER WALLS AND AGAINST THE FLAT OF THE JACKING NUT BEFORE JACKING THE POLE SECTIONS TOGETHER.



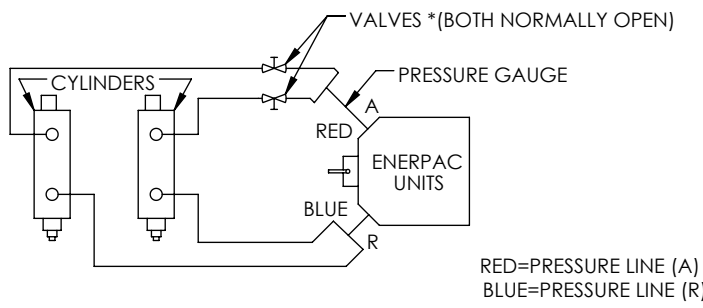
5. **ATTACH RAMS TO MEYER JACK FRAMES** AS SHOWN ABOVE USING 5/8" x 6 1/2" LONG PINS. BEFORE APPLYING FULL JACKING FORCE **MAKE CERTAIN THAT BOTH RATCHETS BARS ARE FIRMLY SEATED** IN THE BOTTOM OF THEIR SLOTS. PARTIALLY SEATED RATCHETS CAN RESULT IN UNEVEN FORCES WHICH MAY BEND OR BREAK THE BARS RENDERING THE JACK USELESS. **STAND CLEAR** AS FULL PRESSURE IS APPLIED.



2. **ALIGN POLE NUMBERS** AND ASSEMBLE JOINT AS FAR AS POSSIBLE WITHOUT USING JACK.
   NOTE: **DO NOT LUBRICATE** JOINT

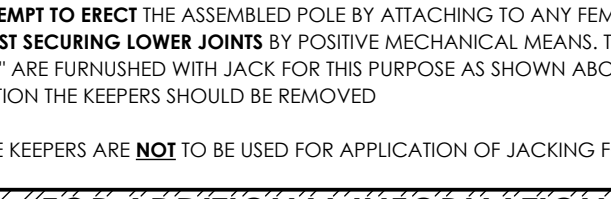


4. **ASSEMBLE RAM** TO RATCHET USING FULL 2 1/2" OF THREADS IN COUPLER.
   (RATCHET EXTENSIONS USED ONLY ON VERY LONG JOINTS).



6. **ATTACH HYDRAULICS** AS SHOWN ABOVE. JACK **SECTIONS TOGETHER** UNTIL THEY STOP (USING THE FULL JACKING FORCE OF 60 TONS, **30 TONS PER JACK, WHICH IS ACHIEVED BY SETTING THE PRESSURE TO 8310 psi.)**).
   H **JACK TOGETHER WITH VALVES SET TO APPLY EQUAL PRESSURE**, **ONLY** USE UNEQUAL VALVE SETTINGS FOR JACKING ALIGNMENT PURPOSES.
   THE SLIP JOINT SHOULD BE TIGHT WITHOUT ANY MAJOR GAPS OR MISALIGNMENT BETWEEN THE MATING POLE SECTIONS.
   NOW **CHECK** TO SEE THAT THE ACTUAL **SLIP JOINT LAP** FALLS WITHIN THE LIMITS SPECIFIED IN STEP ONE.

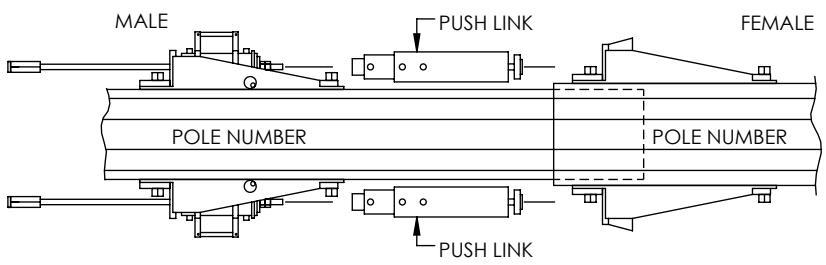
USAGE FOR ERECTION



7. **DO NOT ATTEMPT TO ERECT** THE ASSEMBLED POLE BY ATTACHING TO ANY FEMALE SECTION **WITHOUT FIRST SECURING LOWER JOINTS** BY POSITIVE MECHANICAL MEANS. TWO SETS OF "KEEPERS" ARE FURNUSHED WITH JACK FOR THIS PURPOSE AS SHOWN ABOVE.
   AFTER ERECTION THE KEEPERS SHOULD BE REMOVED

   NOTE: THESE KEEPERS ARE **NOT** TO BE USED FOR APPLICATION OF JACKING FORCE.

USAGE FOR JACKING APART



8. **TO JACK APART, REMOVE THE RAM FRAME** (CONTAINING RAM) FROM POLE **ROTATE 180° AND REINSTALL**. INSERT PUSH LINK BETWEEN RAM AND RATCHET FRAME ACTIVATE HYDRAULICS AS SHOWN ABOVE.

   NOTE: SECURE PUSH LINKS TO THE POLE WITH A CIRCUMERENTIAL CHAIN AND LOAD BINDER OR WITH A CABLE HOIST.

FOR ADDITIONAL INFORMATION

9. ALL JACKING UNITS CHECK MUST BE CHECKED TO VERIFY THAT ALL PARTS ARE PRESENT BEFORE AND AFTER EACH USUAGE. DRAIN ALL GASOLINE FROM THE ENERPAC UNIT FOR STORAGE.

   RETURN RENTAL UNITS TO:
   MEYER UTILITY STRUCTURES

10. FOR ADDITIONAL INFORMATION OR ASSEMBLY ISSUES CONTACT YOUR REGIONAL MEYER MDM, A LOCAL SALES AGENT, OR CALL:
    MEYER UTILITY STRUCTURES, LLC.
    STEEL STRUCTURES GROUP
    1-901-566-6500

REV	DESCRIPTION	DRFT/DATE
K	UPDATED SHEET FORMAT FOR PE SEAL	TW/06-10-24
J	UPDATED COMPANY NAME	WR/12-20-18
H	ADDED JACKING PRESSURE NOTE	WR/09-28-18

PROJECT:	
CUSTOMER:	Meyer Utility Structures
JOB NO:	
DRAWN/DATE:	KB 12/27/2013
CHECKED/DATE:	- -
ENGINEER:	-

MEYER
UTILITY STRUCTURES

JACKING INSTRUCTIONS

SHEET 1 OF 1	SSG005	REV. K

PSI Requirements

# of Force	Area of 2 Cylinders	PSI (GAUGE)
20,000	14.44	1,385
25,000	14.44	1,731
30,000	14.44	2,078
35,000	14.44	2,424
40,000	14.44	2,770
45,000	14.44	3,116
50,000	14.44	3,463
55,000	14.44	3,809
60,000	14.44	4,155
65,000	14.44	4,501
70,000	14.44	4,848
75,000	14.44	5,194
80,000	14.44	5,540
85,000	14.44	5,886
90,000	14.44	6,233
95,000	14.44	6,579
100,000	14.44	6,925

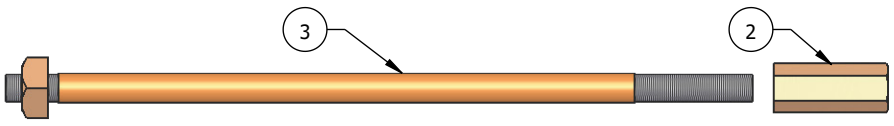
# of Force	Area of 2 Cylinders	PSI (GAUGE)
105,000	14.44	7,271
110,000	14.44	7,618
115,000	14.44	7,964
120,000	14.44	8,310
125,000	14.44	8,657
130,000	14.44	9,003
135,000	14.44	9,349
140,000	14.44	9,695
144,400	14.44	10,000
144,400 = Max force that can be applied with Meyer jacks.		

The Enerpac cylinders that we use on the Meyer Jacking Devices are RRH-307's. The active area for pulling the sections together is 7.22 square inches. To convert to force, multiply the PSI as read on the pump pressure gauge by the active area. Since you have two cylinders, the active area of the cylinders is 14.44 square inches. You need 60 tons = 120,000 lbs. of force to pull the Meyer slip joints together, divide 120,000 by the active area of the two cylinders and you will get the PSI required at the pump. Example: 120,000 lbs/14.44 sq" = 8,310 pounds per square inch.

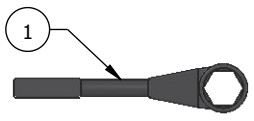
Parts Breakdown

E PARTS AND ASSEMBLIES LIST

ITEM NO.	PART NUMBER	QTY.	DESCRIPTION	MATERIAL DIMENSION	MATERIAL GRADE	WT. EACH	EXTD. WT.
1	78399	1	1 5/8" BOX END PROTO STRIKING WRENCH	-	036-ASTM A36	2.19	2.19
2	P0001-1619	4	COUPLER, 1 1/4" DIA.	75383, 2" HEX BAR 12L14	ASTM 108	4.05	16.20
3	P0001-3222	2	EXTENTION ROD ASSY			16.22	32.44
	P0001-1616	1	EXTENTION ROD	78169, 1 1/4" ROUND STOCK	ASTM A-354 GR.BC	15.27	
	75380	1	HEAVY SQUARE NUT, 1 1/4" DIA.,TAP STD, PLAIN	-	ASTM A-563 GRADE A	0.95	
4	P0001-3221	2	PUSHER BAR ASSY			55.85	111.70
	P0001-2143	1	FEMALE PUSHER BAR ASSY			31.63	
	P0001-2137	1	MALE PUSHER BAR			20	
	76264	2	BOLT, 1" DIA. x 6 1/4"	-	ASTM A-354 GRADE BC	1.68	
	73442	2	NUT, 1" DIA.	-	ASTM A-563 GRADE DH	0.43	
5	P0001-3230	2	HYDRAULIC CYLINDER ASSY			52.35	104.70
	78642	1	ENERPAC RRH-307 HYDRAULIC CYLINDER (LST-9573)	-	Weathering	50	
	P0001-1620	2	WRAP	70542, 0.19 X 0.75	ASTM A-1010 CS TYPE B OR M-1008/1010	0.85	
	P0001-1621	1	HANDLE	70908, 3/4" SCH.40 PIPE	ASTM A-53 GR.B OR A-106 GR.B	0.59	
	78167	2	BOLT, 5/16" DIA. x 1 1/2"	-	ASTM A-307 GALV	0.04	
	73863	2	NUT, 5/16" DIA. GALV	-	ASTM A-563 GRADE A	0.02	
6	P0001-3220	2	LEAF SPRING ASSY			6.15	12.30
	70058	1	CYLINDER RETENTION WELDMENT			2.88	
	P0001-1612	1	LEAF SPRING	0.25 X 4.00 X 10.63	265-ASTM A871 Gr65	2.23	
	P0001-1613	1	PIPE PIVOT	72521, 3/4" SCH.80 PIPE	ASTM A-53 GR.B OR A-106 GR.B	0.66	
	74136	1	NUT, 5/8" DIA.	-	ASTM A-563 GRADE DH	0.12	
	80152	1	BOLT, 5/8" DIA. x 2"	-	ASTM A-325 TYPE 3	0.26	
7	P0001-3223	2	RAM ROD ASSY			12.89	25.50
	P0001-1617	1	RAM ROD	78169, 1 1/4" ROUND STOCK	ASTM A-354 GR.BC	11.19	
	P0001-1639	1	RING COLLAR	72291, 1.63 X 1.63		0.11	
	72941	2	NUT, 1 1/4" DIA.	-	ASTM A-563 GRADE DH	0.78	
	72237	3	1/4"-20 X 1/4" HEX SOCKET SET SCREW	-	STAINLESS STEEL TYPE 304	0.01	
8	P0001-3224	2	RATCHET ASSEMBLY			33.97	67.94
	P0001-2149	1	RATCHET WELDMENT HANDLE ASSY			2.03	
	P0001-1618	1	RATCHET	78169, 1 1/4" ROUND STOCK	ASTM A-354 GR.BC	15.31	
	75380	9	HEAVY SQUARE NUT, 1 1/4" DIA.,TAP STD, PLAIN	-	ASTM A-563 GRADE A	0.95	
	P0001-1636	8	CHAMFERED 1 1/4" NUT	75380, 1 1/4"-7 HEAVY SQUARE NUT	ASTM A-563 GR.A	1.01	
9	P0001-3226	2	RATCHET END FRAME ASSY			64.2	128.40
	P0001-1602	1	RATCHET END FRAME	0.25 X 35.00 X 19.38	265-ASTM A871 Gr65	27.9	
	P0001-1600	1	RIGHT HAND GUIDE BRACKET	0.25 X 5.25 X 7.06	265-ASTM A871 Gr65	2.37	
	P0001-1601	1	LEFT HAND GUIDE BRACKET	0.25 X 5.25 X 7.06	265-ASTM A871 Gr65	2.37	
	P0001-2122	1	RATCHET STOP PLATE ASSY			18.4	
	P0001-1605	1	RATCHET END PRESSURE BLOCK	1.25 X 4.00 X 5.38	160-ASTM A871 Gr60	6.17	
	P0001-1606	1	PRESSURE PAD	1.25 X 4.00 X 5.50	160-ASTM A871 Gr60	5.17	
	P0001-1635	2	FRAME HANDLE	72323, 1/2" ROD	ASTM A-36	0.9	
10	P0001-3227	2	CYLINDER END FRAME ASSY			54.98	109.96
	P0001-1610	1	CYLINDER END FORMED FRAME	0.25 X 35.00 X 19.38	265-ASTM A871 Gr65	27.84	
	P0001-2101	1	PUSH PLATE ASSY			13.11	
	P0001-1609	1	PRESSURE BLOCK	1.25 X 4.00 X 5.38	160-ASTM A871 Gr60	6.17	
	P0001-1606	1	PRESSURE PAD	1.25 X 4.00 X 5.50	160-ASTM A871 Gr60	5.17	
	P0001-1635	2	FRAME HANDLE	72323, 1/2" ROD	ASTM A-36	0.9	
11	75626	16	BOLT, 1" DIA. x 1 1/4"	-	ASTM A-354 GRADE BC	0.49	7.84
12	75437	2	5/8" X 6 1/2" QUICK RELEASE LOCKING PIN	-	GALVANIZED	0.6	1.20
						TOTAL MODEL WEIGHT	620.37
						TOTAL FINISHED WEIGHT	640.00



RATCHET EXTENTION COUPLER



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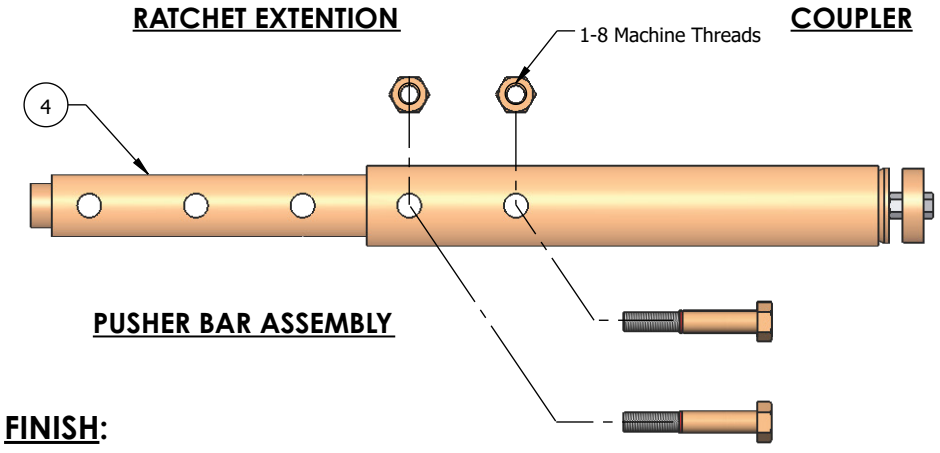

PUSHER BAR ASSEMBLY

FINISH:

ALL WELDING OUTSIDE SURFACES WITH THE EXCEPTION OF THE MACHINED SURFACES SHALL BE PAINTED WITH CARBOLINE 859 ZINC RICH PRIMER (2.5 MILS DRY MINIMUM). TOPCOAT WITH CARBOLINE 3043 URETHANE GLOSS SAFETY YELLOW (2.5 MILS DRY MINIMUM) WITH A TOTAL OF 6 MILS DRY AVERAGE. -OR-

SHERWIN WILLIAMS MACROPOXY 646 PRIMER (2.5 MILS DRY MINIMUM). TOPCOAT WITH SHERWIN WILLIAMS ACROLON 218 HS GLOSS SAFETY YELLOW (2.5 MILS DRY MINIMUM) WITH A TOTAL OF 6 MILS DRY AVERAGE.

F	**UPDATED PAINT NOTE TO INCLUDE SHERWIN WILLIAMS**	**TW/01-15-25**
E	UPDATED PROPERTIES AND ADDED ITS SPECIFICATIONS	RJ/09-17-24
D	**REV DESCRIPTION** PROJECT: HYDRAULIC JACK	DT/10-17-19
	DRAWINGS CUSTOMER: MEYER UTILITY	**DRFT/DATE**

STRUCTURES JOB NO: P0001

DRAWN/DATE:	TW	10/07/2013
CHECKED/DATE:	--	--
ENGINEER:	--	

MEYER

UTILITY STRUCTURES

HYDRAULIC SYSTEM
SLIPJOINT JACKING DEVICE
BILL OF MATERIAL

SHEET 2 OF 2 | **P0001-ORDERSAT** | REV. **F**

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