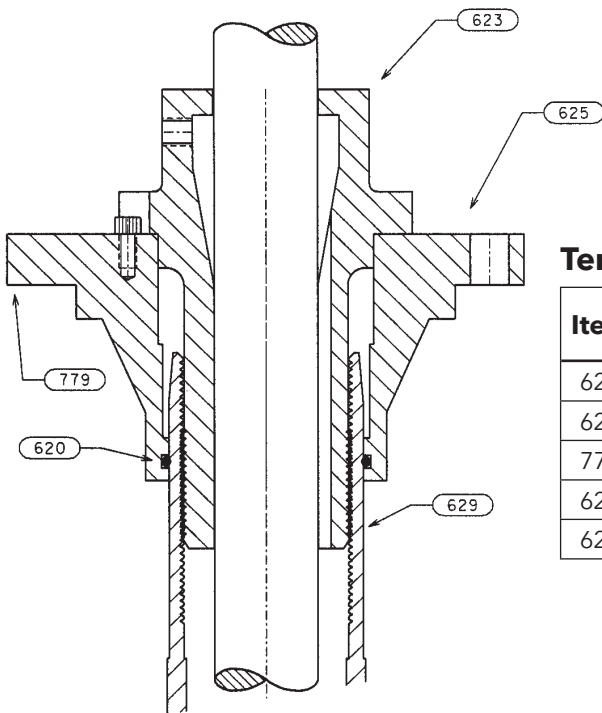


Tension Plate Assembly

200.C.12 *(Effective June, 2001)*



Tension Plate Assembly

Item	Description	Code	Material Description	ASTM
623	Tension Nut	2242	Carbon Steel 1018	A108
625	Tension Plate	1003	Cast Iron	A48 CL30
779	Tension Plate Gasket	5136	Acrylic Gasket	Garlock Blue Guard
620	O-ring	5302	Nitrile	D2000 2BG715B14
629	Tube Nipple	9645	Carbon Steel	A53

Installation and Operation

1. Remove the lock bolt and o-ring and thoroughly clean the tension plate including the o-ring groove. Lightly grease the o-ring and reinstall.
2. Clean the surface of the discharge head and install the tension plate by evenly tightening the capscrews.
3. Pour one pint of recommended mineral oil down the oil tube.
4. Clean the tension nut and lightly oil the bore and threads. Thread the nut into the tube nipple until the flange face contacts the tension plate.
5. Tighten the tension nut per the chart to the proper amount of tube tension. Back off the tension nut until a slot aligns with the locking bolt. Install the locking bolt.
6. Connect the lubrication line to the tension nut. Fill the container with the recommended mineral oil.
7. Prior to initial startup or after a shutdown of 150 hours or longer. The lubricator should be adjusted for the recommended number of drops per minute and allowed to drip for 20 minutes per 100 feet of setting.
8. Check and fill the reservoir periodically.

Drops per Minute per 100 Feet of Setting	Shaft Size (Inch)
8	0.75 - 1.00
16	1.19 - 1.94
20	2.18 and up

Tension Plate Assembly

200.C.12A *(Effective June, 2001)*

Column	Shaft	Tube	Setting (Feet)														
			100			200			300			400			500		
			Tube Tension	Shaft Rise	Shaft Pull-up	Tube Tension	Shaft Rise	Shaft Pull-up	Tube Tension	Shaft Rise	Shaft Pull-up	Tube Tension	Shaft Rise	Shaft Pull-up	Tube Tension	Shaft Rise	Shaft Pull-up
4"	1.00	1.50	0.02	<.01	0.02	0.09	0.03	0.07	0.20	0.08	0.15	0.36	0.14	0.27			
6"	1.00	1.50	0.02	<.01	0.02	0.08	0.02	0.06	0.17	0.04	0.14	0.30	0.08	0.25	0.47	0.12	0.39
	1.19	2.00	0.02	<.01	0.02	0.08	0.03	0.06	0.19	0.06	0.15	0.34	0.11	0.26	0.53	0.17	0.41
	1.50	2.50	0.02	0.01	0.02	0.10	0.04	0.07	0.22	0.10	0.15	0.40	0.17	0.28	0.62	0.27	0.43
	1.69	2.50	0.02	0.01	0.02	0.10	0.05	0.07	0.23	0.11	0.16	0.41	0.19	0.29	0.65	0.30	0.45
8"	1.19	2.00	0.02	0.01	0.02	0.08	0.02	0.06	0.17	0.05	0.14	0.31	0.08	0.25	0.49	0.13	0.40
	1.50	2.50	0.02	0.01	0.02	0.09	0.03	0.07	0.20	0.07	0.15	0.36	0.13	0.27	0.56	0.21	0.42
	1.69	2.50	0.02	0.01	0.02	0.09	0.04	0.07	0.21	0.08	0.16	0.37	0.15	0.28	0.58	0.23	0.43
	1.94	3.00	0.03	0.01	0.02	0.11	0.05	0.07	0.24	0.11	0.16	0.43	0.20	0.29	0.67	0.31	0.45
	2.19	3.50	0.03	0.02	0.02	0.12	0.06	0.08	0.27	0.14	0.17	0.48	0.25	0.30	0.75	0.40	0.47
	2.44	3.50	0.03	0.02	0.02	0.13	0.07	0.08	0.28	0.16	0.18	0.50	0.28	0.32	0.79	0.44	0.50
10"	1.19	2.00	0.02	0.01	0.02	0.07	0.02	0.06	0.16	0.04	0.14	0.29	0.07	0.25	0.46	0.11	0.39
	1.50	2.50	0.02	0.01	0.02	0.08	0.03	0.06	0.18	0.06	0.15	0.33	0.10	0.26	0.51	0.16	0.41
	1.69	2.50	0.02	0.01	0.02	0.09	0.03	0.07	0.19	0.06	0.15	0.34	0.12	0.27	0.53	0.18	0.42
	1.94	3.00	0.02	0.01	0.02	0.10	0.04	0.07	0.22	0.09	0.16	0.38	0.16	0.28	0.60	0.25	0.44
	2.19	3.50	0.03	0.01	0.02	0.11	0.05	0.07	0.24	0.11	0.16	0.43	0.20	0.29	0.67	0.32	0.45
	2.44	3.50	0.03	0.01	0.02	0.11	0.05	0.07	0.24	0.11	0.16	0.43	0.20	0.29	0.67	0.32	0.45
12"	1.50	2.50	0.02	0.01	0.02	0.08	0.03	0.06	0.18	0.06	0.15	0.33	0.10	0.26	0.51	0.16	0.41
	1.69	2.50	0.02	0.01	0.02	0.09	0.03	0.07	0.19	0.06	0.15	0.34	0.12	0.27	0.53	0.18	0.42
	1.94	3.00	0.02	0.01	0.02	0.10	0.04	0.07	0.22	0.09	0.16	0.38	0.16	0.28	0.60	0.25	0.44
	2.19	3.50	0.03	0.01	0.02	0.11	0.05	0.07	0.24	0.11	0.16	0.43	0.20	0.29	0.67	0.32	0.45
	2.44	3.50	0.03	0.01	0.02	0.11	0.05	0.07	0.24	0.11	0.16	0.43	0.20	0.29	0.67	0.32	0.45

Notes:

1. All dimensions in inches except setting.
2. Tube Tension - The distance the top end of the tubing must be pulled up for the correct amount of the tube tension.
3. Shaft Rise - The distance the lineshaft will rise when applying tube tension.
4. Shaft Pull-Up - The distance the top end of the lineshaft must be pulled up for barely lift the impellers off the bowls.
5. Divide the required Tube Tension by the In Per Turns from table below to find approximate turns of the tension nut.

Tube	TPI	In Per Turn
1.50	14	0.07
2.00	14	0.07
2.50	10	0.10
3.00	10	0.10
3.50	10	0.10

Example:

6" Column x 1.50 shaft x 2.50 tube x 400' setting
 Reading from the table the Tube Tension is 0.40.
 Dividing by the In Per Turn, the number of turns is $0.40 / 0.10 = 4$.

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