
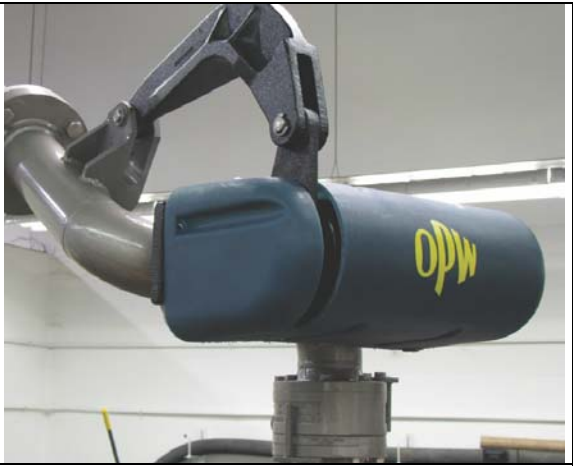
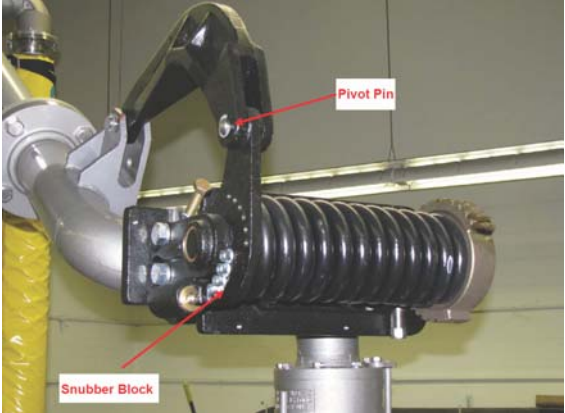
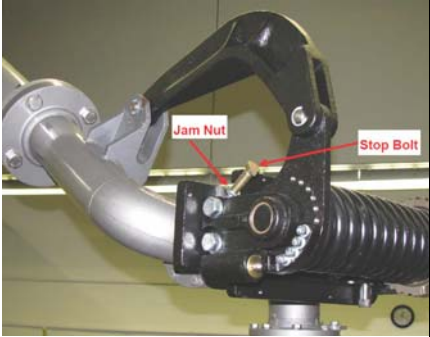


Equipment:	Torsion Balance	Type:	790A,B,C
Balance Unit for balancing Loading Arms			
Suitable for: Loading Arm Balancing			
<ul style="list-style-type: none"> • Easy, Precise Adjustment • No special tools required 			
Specifications			
Type	: Right-Hand: 790A (white), 790B, 790C Left-Hand: 790 ALH, 790BLH, 790CLH		
Working Temperature Range	: -4°F - 176°F (-20°C to +80°C)		
Installation			
	Spring Unit Assembly		
	<ol style="list-style-type: none"> 1. Position balance unit on the bosses at back of swivel joint. 2. Fix balance unit with Bolts and Lock Washers 3. Attach backside of Link Arm [20] to Spring Arm [16] with Pin [22] and 2 Retaining Rings[21] 4. Remove the 4 Socket Head Screws [19] and take Snubber Block [17] off 5. Raise loading arm to highest position (as vertical as possible) 6. Attach front side of Link Arm [20] to mounting ears on loading arm with Pin [22] and 2 Retaining Rings [21] 7. Check balancing action by pulling down the arm. If adjustment is necessary, follow adjustment instructions below. 8. Install lock-down unit 788-L, if used, by following 788-L installation instructions. 9. Replace Cover [13] with the 6 Screws [12]. 		
Adjustment			
	When to adjust torque		
	<ol style="list-style-type: none"> A. To raise loading arm higher or for more lifting action INCREASE torque B. To decrease loading arm vertical travel or to slow the rate at which the arm rises, DECREASE torque C. Note: Prior to any disassembly, Spring balance tension should be completely relieved to allow safe disassembly of level arm. 		
Torque	For more lifting action increase torque. For less lifting action decrease torque.		
	<p>Place ¾" socket wrench on worm gear hex drive</p> <p>To INCREASE torque rotate the worm gear hex drive counter-clockwise (to the left).</p>  <p>To DECREASE torque rotate the worm gear hex drive clockwise (to the right).</p> <p>Release wrench and test loading arm lifting action.</p> <p>Note: Prior to any loading arm disassembly, spring tension should be completely relieved.</p> <p>Tip: Spring coil will be loose in housing when completely relieved of tension.</p>		



	<p>NOTE: Left hand spring balance shown</p> <p>NOTE: The worm gear adjustment mechanism provides significant mechanical advantage during adjustment. Under high load conditions (790) it is recommended that the loading arm be raised to approximately 45° above horizontal. Under low load conditions it is possible to adjust the spring torque without raising/supporting the loading arm</p>	
Travel Stop	Upward	Downward
	<p>Remove the (4) socket head screws in snubber block, then rotate snubber block toward pivot pin to allow for more upward travel or away from pivot pin for less upward travel. Replace the (4) screws and tighten</p> 	<p>Loosen Jam Nut (located below lever arm) and turn stop bolt in for more downward travel or out for less downward travel. Then hold bolt and tighten jam nut securely</p> 

Maintenance

Lubrication	The torsion balance is provided with a self-lubricating Cylindrical Bearing. Only when operating under severe conditions, a little oil may be applied to Bearing [7]. Pins [13] on Spring Arm [23] and Link Arm [9] should have some oil monthly.
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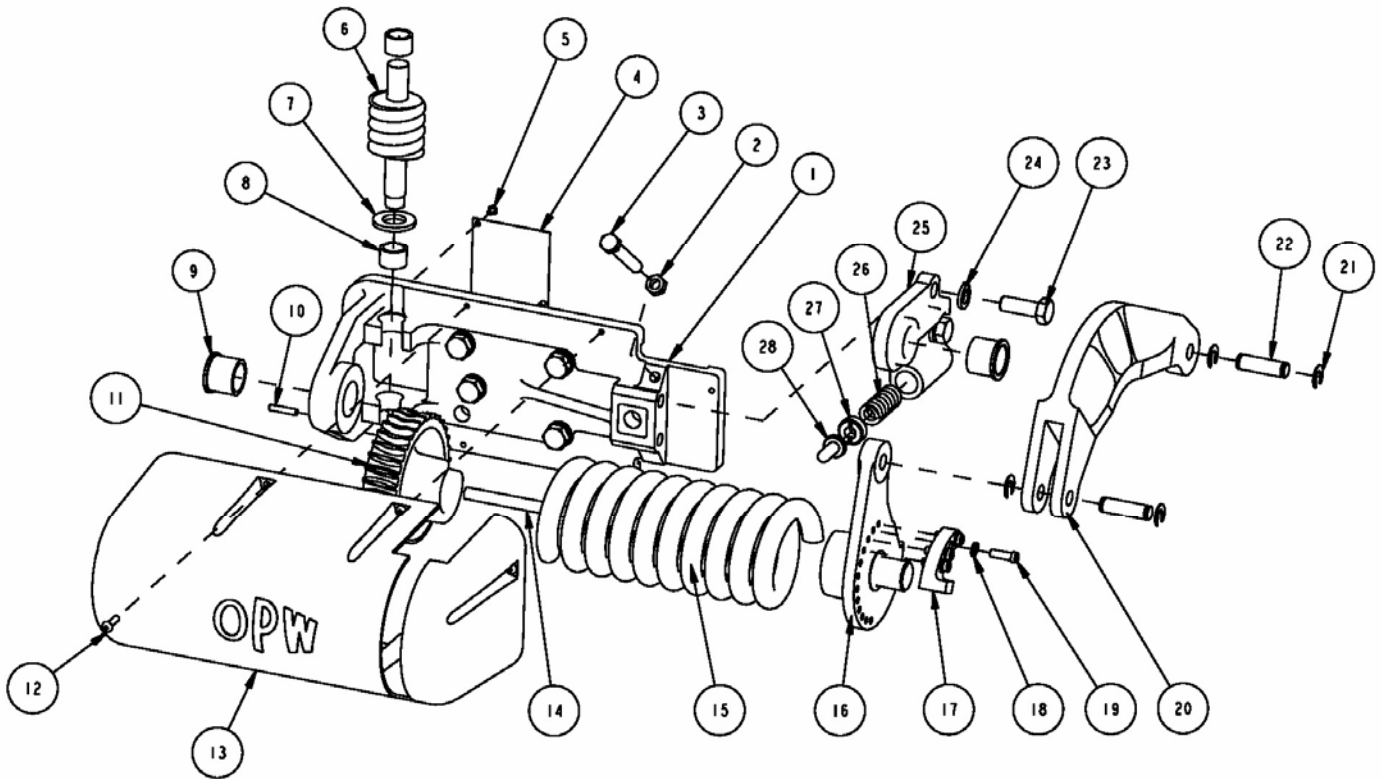
Safety

! DANGER Danger! Before performing any maintenance, always secure the Loading Arm and remove all tension from the counterbalance -- a torsion spring. The Loading Arm counterbalance spring contains a substantial amount of stored energy. You must relieve this energy before any disassembly. Failure to remove all tension from the counterbalance spring of the Loading Arm before maintenance may cause serious personal injury or death.

! WARNING WARNING! While installing and using the Loading Arm, always wear adequate personal protection, including hard hats, gloves, and steel-toed work boots. Failure to wear adequate personal protection may cause serious personal injury and death.

! WARNING WARNING! Always follow the procedures prescribed in this Document. Failing to follow the procedures prescribed may damage the Loading Arm and cause serious personal injury and death. Consult Loading Arm Installation, Maintenance & Safety Manual for more details.

Parts List



Note: 790C, Right-Handed Spring Assembly Shown. Some part #'s would vary for other spring sizes & orientations. Consult factory for assistance.

Index	Qty	Part #	Description	Index	Qty	Part #	Description
1	1	E-20039-DI	RH Support Bracket	15	1	C-00626-M	Spring, Torsion, RH-C
2	1	H-30049-M	Jam Nut, Hex, CST, ZP	16	1	D-00350-DI	Spring Arm
3	1	H-30018-M	Bolt-1/2"-13 x 3-1/2"	17	1	H-01489-DI	Snubber Block, RH
4	1	H-30740-M	Worm Cover Plate	18	4	H-03563-M	Washer, Lock
5	2	H-30741-M	Screw, Drive #10 x 3/8"	19	4	H-301278-M	Socket Head Screw
6	1	C-20184-EW	Drive Worm	20	1	E-20041-DI	Link Arm
7	1	H-30742-M	Washer, Thrust	21	4	H-30321-M	Retaining Ring
8	2	H-30739-M	Bearing, Cylindrical, Bronze	22	2	H-30320-RE	Pin, Torsion Spring, SST
9	2	H-01490-M	Flange, Bearing, Brz.	23	8	H-05910-M	Screw, Hex Cap
10	1	H-30744-M	Dowel Pin	24	6	H-02507-M	Lockwasher
11	1	C-20185-BW	Spring Regulator	25	1	C-00635-DI	Support, RH, DI
12	6	H-06994-M	RH Phillips Screws	26	1	H-01502-M	Spring, Compression
13	1	E-00072-M	Spring Balance Cover	27	1	H-01486-RB	Snubber Retainer
14	1	H-30742-RS	Safety Bar	28	1	H-01487-RE	Snubber Plunger, SST