Adjustment Procedure for standard & A95 anti-backlash devices

Step 1: Loosen the sleeve cap set screws a minimum of 5 turns. The set screws are located in the top or sleeve cap of the jack and there are usually four (4) of them.

Step 2: Tighten the sleeve cap as much as possible by hand, or with a chain or strap wrench if required. This will clamp the anti-backlash nut against the screw (i.e., zero backlash). To verify the clamped condition, try to turn the worm (input) shaft. It should be difficult or not turn at all. Once the anti-backlash nut is clamped to the screw, the proper backlash can be set.

Step 3: For applications outdoors or in an environment with a large temperature change use the "Backlash change for various temperature changes" on the following page. Select the jack size and appropriate temperature change. There will be a corresponding cap rotation (in degrees) listed on the chart. Loosen the sleeve cap per the cap rotation listed. This will set the proper backlash setting.
For applications with a small temperature change, tighten the sleeve cap (step 2) and back the cap off by five degrees.

Step 4: Verify that the worm (input) shaft turns freely. If the worm shaft is tight, carefully strike the screw end with a dead-blow mallet and check again. If the worm still does not turn, begin backing the sleeve cap off at five degree increments, and applying careful blows to the screw. A couple trials will generally yield a good feel between stiffness (of the screw) and rotation of the worm. Each five degrees of rotation of the sleeve cap equals .001" backlash.

Step 5: Once step #4 is complete, tighten the set screws that were loosened in step #1. This completes the adjustment procedure.

Note: On jacks used outdoors, it is possible for a jack adjusted in the summer months to tighten up during the winter months. This can cause circuit breakers to trip. If this happens, loosen the sleeve cap approximately 10 degrees in accordance with the above procedures.

Backlash Change For Various Temperature Changes

Temp. Constant = 3.66667E-06 in/ºF

Model	Nut Length	Cap Dia.	Linear Change	Cap Rotation Degrees	Cap Rotation Linear	Temp. Change
3 Ton	2.5	3.75	0.00092	4.0	0.149	
5 Ton	2.688	4	0.00099	4.3	0.149	
10 Ton	2.3440	5.750	0.00086	3.7	0.186	
15 Ton	2.8750	5.938	0.00105	4.6	0.236	
20 Ton	3.8125	5.938	0.00140	6.0	0.313	
25 Ton	4.5000	7.500	0.00165	7.1	0.467	
35 Ton	5.2500	8.500	0.00193	8.3	0.617	100
50 Ton	6.0000	11.625	0.00220	9.5	0.964	
75 Ton	7.5000	13.500	0.00275	11.9	1.400	
100 Ton	10.6040	14.250	0.00389	16.8	2.089	
3 Ton	2.5	3.75	0.00083	3.6	0.134	
5 Ton	2.688	4	0.00089	3.8	0.168	
10 Ton	2.3440	5.750	0.00077	3.3	0.168	
15 Ton	2.8750	5.938	0.00095	4.1	0.212	
20 Ton	3.8125	5.938	0.00126	5.4	0.282	
25 Ton	4.5000	7.500	0.00149	6.4	0.420	
35 Ton	5.2500	8.500	0.00173	7.5	0.555	90
50 Ton	6.0000	11.625	0.00198	8.6	0.868	
75 Ton	7.5000	13.500	0.00248	10.7	1.260	
100 Ton	10.6040	14.250	0.00350	15.1	1.880	
3 Ton	2.5	3.75	0.00073	3.2	0.119	
5 Ton	2.688	4	0.00079	3.4	0.149	
10 Ton	2.3440	5.750	0.00069	3.0	0.149	
15 Ton	2.8750	5.938	0.00084	3.6	0.189	
20 Ton	3.8125	5.938	0.00112	4.8	0.250	
25 Ton	4.5000	7.500	0.00132	5.7	0.373	
35 Ton	5.2500	8.500	0.00154	6.7	0.493	80
50 Ton	6.0000	11.625	0.00176	7.6	0.771	
75 Ton	7.5000	13.500	0.00220	9.5	1.120	
100 Ton	10.6040	14.250	0.00311	13.4	1.671	
3 Ton	2.5	3.75	0.00064	2.8	0.104	
5 Ton	2.688	4	0.00069	3.0	0.130	
10 Ton	2.3440	5.750	0.00060	2.6	0.130	
15 Ton	2.8750	5.938	0.00074	3.2	0.165	
20 Ton	3.8125	5.938	0.00098	4.2	0.219	
25 Ton	4.5000	7.500	0.00116	5.0	0.327	
35 Ton	5.2500	8.500	0.00135	5.8	0.432	70
50 Ton	6.0000	11.625	0.00154	6.7	0.675	
75 Ton	7.5000	13.500	0.00193	8.3	0.980	
100 Ton	10.6040	14.250	0.00272	11.8	1.462	
3 Ton	2.5	3.75	0.00055	2.4	0.089	
5 Ton	2.688	4	0.00059	2.6	0.112	
10 Ton	2.3440	5.750	0.00052	2.2	0.112	
15 Ton	2.8750	5.938	0.00063	2.7	0.142	
20 Ton	3.8125	5.938	0.00084	3.6	0.188	
25 Ton	4.5000	7.500	0.00099	4.3	0.280	
35 Ton	5.2500	8.500	0.00116	5.0	0.370	60
50 Ton	6.0000	11.625	0.00132	5.7	0.578	
75 Ton	7.5000	13.500	0.00165	7.1	0.840	
100 Ton	10.6040	14.250	0.00233	10.1	1.253	
3 Ton	2.5	3.75	0.00046	2.0	0.074	
5 Ton	2.688	4	0.00049	2.1	0.093	
10 Ton	2.3440	5.750	0.00043	1.9	0.093	
15 Ton	2.8750	5.938	0.00053	2.3	0.118	
20 Ton	3.8125	5.938	0.00070	3.0	0.156	
25 Ton	4.5000	7.500	0.00083	3.6	0.233	
35 Ton	5.2500	8.500	0.00096	4.2	0.308	50
50 Ton	6.0000	11.625	0.00110	4.8	0.482	
75 Ton	7.5000	13.500	0.00138	5.9	0.700	
100 Ton	10.6040	14.250	0.00194	8.4	1.044	
3 Ton	2.5	3.75	0.00037	1.6	0.059	
5 Ton	2.688	4	0.00039	1.7	0.075	
10 Ton	2.3440	5.750	0.00034	1.5	0.075	
15 Ton	2.8750	5.938	0.00042	1.8	0.094	
20 Ton	3.8125	5.938	0.00056	2.4	0.125	
25 Ton	4.5000	7.500	0.00066	2.9	0.187	
35 Ton	5.2500	8.500	0.00077	3.3	0.247	40
50 Ton	6.0000	11.625	0.00088	3.8	0.386	
75 Ton	7.5000	13.500	0.00110	4.8	0.560	
100 Ton	10.6040	14.250	0.00156	6.7	0.836	