



Lovejoy S-Flex Coupling Installation Instructions

Installation Instructions

S-Flex flanges (hubs) and elastomeric sleeves come in many sizes and types. Determine the size and type of the components being used. Remove all components from their boxes and loosely assemble the coupling on any convenient surface. (Do not attempt to install the wire ring on the two-piece E or N sleeve at this time). Check maximum RPM values in Table 2 against operating speed. All rubber sleeves (EPDM, and Neoprene) have the same ratings for a given size and may be used interchangeably.

1. Inspect all coupling components and remove any protective coatings or lubricants from bores, mating surfaces, and fasteners. Remove any existing burrs, etc. from the shafts.
2. Slide one coupling flange onto each shaft, using keys where required. Keys should fit snugly. With the Model B flange (with QD bushing) it may be necessary to expand the bore of the bushing by wedging a screwdriver into the saw cut of the bushing bore.
3. Position the flanges on the shafts to approximately achieve the X, dimension shown in Table 2. It is usually best to have an equal length of shaft extending into each flange. Tighten one flange in its final position. If possible, slide the other flange far enough away to install the sleeve. If flange cannot be slid back, or if "blind" assembly, tighten second flange on shaft and bring equipment together. Tighten setscrews or bushing cap screws to the appropriate value shown in Table 1.

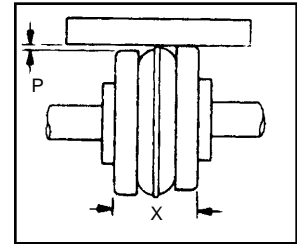
With a two-piece sleeve, do not move the wire ring to its final position. Allow it to hang loosely in the groove adjacent to the teeth until completing alignment (5) and (6).

4. Check parallel alignment by placing a straightedge across the two coupling flanges and measuring the maximum offset at various points around the periphery of the coupling without rotating the coupling. If the maximum offset exceeds the figure shown under "Parallel" in Table 2, realign the shafts.
5. Check angular alignment with a micrometer, vernier, or caliper. Refer to X and $X_{(max)}$ dimensions in Table 2. Measure from the outside of one flange to the outside of the other at intervals around the periphery of the coupling. Determine the maximum and minimum dimensions without rotating the coupling. These measurements must be within the range of X and $X_{(max)}$. If a correction is necessary, be sure to recheck the parallel alignment.

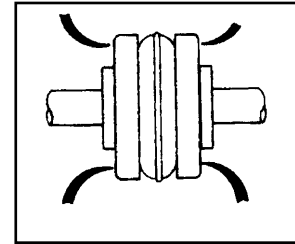
6. If the coupling employs the two-piece sleeve with the wire ring, force the ring into its groove in the center of the sleeve. It may be necessary to pry the ring into position with a blunt screwdriver.
7. Install coupling guards per OSHA or ASME B15.1 requirements.

CAUTION: Coupling sleeves may be thrown from the coupling's assembly with substantial force when the coupling is subjected to severe shock load or abuse

NOTE: Any coupling and connected equipment will normally operate longer and more economically when the coupling is carefully aligned.



Parallel



Angular

Fastener Torque Values (ft-lbs)

Table 1

Cplg Size	Type J	Type J	Type S	Types S & SC	Type SC	Type B	Type B	Type B	Type SC	Type	Type
	2SS	SS	2 SS	SS ¹	2 SS at 90°	3 HexHd	Cap Scr ²	QD	4 HexHd	Type SCH	SCHS
	at 90°	Size	at 90°	Size	in Hub ³	Cap Scr	Size	Size	Flange/Hub	Cap Scr	Cap Scr
3	7	1/4-20	--	--	--	--	--	--	--	--	--
4	7	1/4-20	--	--	--	--	--	--	--	--	--
5	7	1/4-20	7	1/4-20	7	--	--	--	4	10-24 x 1 1/2	--
6	13	5/16-18	13	5/16-18	13	5	10-24 x 1	JA	9	1/4-20 x 1 1/4	--
7	--	--	23	3/8-16	23	5	10-24 x 1	JA	9	1/4-20 x 1 1/4	--
8	--	--	23	3/8-16	23	9	1/4-20 x 1 1/8	SH	18	5/16-18 x 2 1/4	--
9	--	--	50	1/2-13	50	9	1/4-20 x 1 1/8	SD	31	3/8-16 x 2 1/4	5/16-16 x 2 1/4
10	--	--	50	1/2-13	50	15	5/16-18 x 2	SK	50	3/8-14 x 3 1/4	1/8-14 x 2 1/2
11	--	--	50	1/2-13	50	30	3/8-16 x 2	SF	75	1/2-13 x 3 1/2	1/2-13 x 2 1/4
12	--	--	50	1/2-13	50	60	1/2-13 x 2 1/4	E	150	5/8-11 x 4	5/8-11 x 3 1/2
13	--	--	100	5/8-11	100	75	5/8-12 x 3 3/8	F	150	5/8-11 x 4 1/4	5/8-11 x 3 1/2
14	--	--	100	5/8-11	100	75	5/8-12 x 3 3/8	F	150	5/8-11 x 5	--
16	--	--	100	5/8-11	--	135	5/8-11 x 4 1/2	J	--	--	--

- Notes:**
1. Supplied as standard with vibration resistant nylon patch setscrews.
 2. Capscrews supplied with split-lock washers.
 3. Use hub torque values when hub size differs from flange size.

Maximum RPM and Allowable Misalignment - Inch

Table 2

Sleeve Size	Maximum RPM	Types JE, JN, E & N			EPDM		Type H	Hytrel	
		Parallel	Angular ¹	X_1	$X_{(max)}$	Parallel	Angular ¹	X	
3	9200	0.010	0.035	1.188	1.223	--	--	--	
4	7600	0.010	0.043	1.500	1.543	--	--	--	
5	7600	0.015	0.056	1.938	1.994	--	--	--	
6	6000	0.015	0.070	2.438	2.508	0.010	0.016	2.500	
7	5250	0.020	0.081	2.563	2.644	0.012	0.020	2.625	
8	4500	0.020	0.094	2.938	3.032	0.015	0.025	3.000	
9	3750	0.025	0.109	3.500	3.609	0.017	0.028	3.562	
10	3600	0.025	0.128	4.063	4.191	0.020	0.032	4.125	
11	3600	0.032	0.151	4.875	5.026	0.022	0.037	4.938	
12	2800	0.032	0.175	5.688	5.863	0.025	0.042	5.750	
13	2400	0.040	0.195	6.625	6.820	0.030	0.050	6.688	
14	2200	0.045	0.242	7.750	7.992	0.035	0.060	7.812	
16	1500	0.062	0.330	10.25	10.58	--	--	--	

- Notes:**
1. $X_{(max)}$ minus X_1 , equals angular misalignment allowance.
 2. Values shown above apply if the actual torque transmitted is more than 1/2 the coupling rating. For lesser torque, reduce the above values by 1/2.
 3. Typically factors such as environment, loading, misalignment, balance & types of connected equipment influence very high speed (RPM) limits. Please contact LOVEJOY Application Engineering for assistance.