Lovejoy Torsional Coupling

Torsional “HY” Assembly Instructions

Note: Read all instructions, front and back, before proceeding.

Model 1	Model 2	Model 3	Model 4
Shaft to Flange Configuration	Shaft to Shaft Configuration	Shaft to Flywheel Configuration	Special shallow shaft to flywheel configuration - for close-coupled flywheel housing to bell housing arrangments.

Instructions

For sizes 8HY, 16HY, 25HY, 140HY & 250HY (Models 1, 2 & 3):

Step 1. Mount radial aluminum inserts to the cylindrical hub and tighten to specified torque T1 in Table 1. If inserts are already mounted, do not disassemble. We recommend inspection of bolt torque. Do not loosen bolts to check torque.

Step 2. Place the cylindrical hub with the radial inserts on it onto the driven shaft. If there is a spline locking feature (C-Loc), tighten the locking screws to specified torque T2 in Table 1.

Step 3. Install the axial pins and screws to the driver side equipment. Tighten to the recommended torque T1 in Table 1. Slide the Hytrel® element onto the cylindrical hub, or if “blind assembly” is being made, place element onto the driver equipment. The portion of the element with the web must always be oriented toward the driver equipment. Axial clearance must be provided for. That is, the element must be able to slide a small amount axially (from 1/32” to 1/8”) when driver and driven equipment are posisitoned. *There must be no axial force on the Hytrel® element.* Size 140 elements consist of 4 pieces of Hytrel® and 4 axial pins. Install elements with the web side toward the driver. Size 250 elements consist of 8 pieces of Hytrel® and 4 axial pins. Install with plain element toward driver and slotted element away from driver (has milled slot on bottom surface to engage radial pins in hub.)

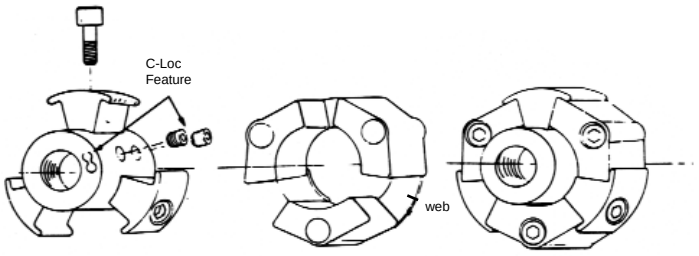
Step 4. Pilot the equipment together.

For sizes 30HY & 50HY (Models 1, 2, & 3)

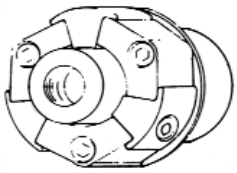
Step 1. See Step 1 above.

Step 2. Mount axial inserts on driven equipment. Inserts must be carefully aligned. See “Important Hints,” #2 and Fig. 1. Place the cylindrical hub onto the driven shaft. If there is a spline locking feature, tighten the locking screws to specified torque T2 in Table 1.

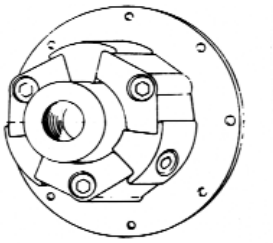
Step 3. Slide the Hytrel® element onto the cylindrical hub, or if “blind assmebly” is being made, place element onto the driver equipment. The web portion of the element must always be oriented towrad the driver equipment. Axial clearance must be provided for. That is, the element must be able to slide a small amount axially (from 1/32” to 1/8”) when driver and driven equipment are positioned. *There must be no axial force on the Hytrel® element.*



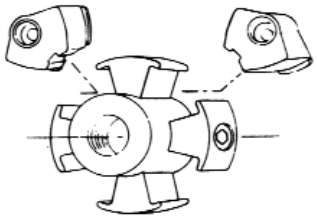
Hub & radial inserts (Sizes 8/16/25) **HY Element (Sizes 8/16/25)** **Model 1 (Sizes 8/16/25)**



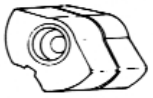
Model 2 Flange Hub Assembly (Sizes 8/16/25)



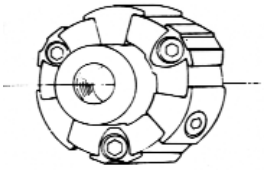
Model 3 Flange Plate Assmebly (Sizes 8/16/25)



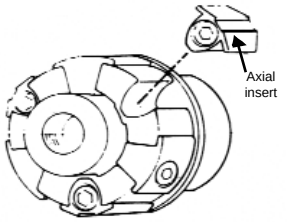
Hub with radial inserts & axial elements (Sizes 140/250)



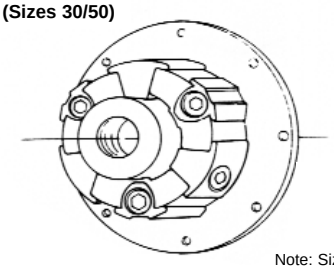
Double element (Size 250)



Model 1 (Sizes 30/50)



Model 2 Flange hub assembly (Sizes 30/50)



Model 3 Flange plate assembly (Sizes 30/50)

Note: Size 30 shown; size 50 has 4 inserts.

Lovejoy Torsional Coupling

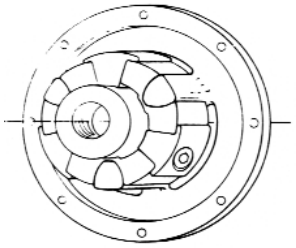
Torsional "HY" Assembly Instructions

For sizes 30HY and 50HY (Model 4):

Step 1. Repeat Step 1 and Step 2, except that axial inserts are unnecessary.

Step 2. Mount the cast aluminum flange plate, with the Hytrel® element installed, to the engine flywheel. The web portion of the element must be oriented toward the flywheel. Axial clearance must be provided for.

Step 3. Pilot the equipment together.



Model 4
Cast flange assembly
(Sizes 30/50)

Model 4 has cast flange with integral axial inserts. No *axial* screws required.

Table 1

Lovejoy Torsional Size	**8HY**	**16HY**	**25HY**	**30HY**	**50HY**	**140HY**	**250HY**
Screw Size	M10X30	M12X35	M14X40	M16X50	M16X50	M20X50	M20X50 (radial) M20x100 (axial)
Tightening Torque T1 (ft.-lbs.)	35-40	65-70	100-110	155-165	155-165	330-370	330-370
C-Loc Locking Screw Size	M10	M12	M12	M16	M16	M20	M20
Tightening Torque T2 (ft.-lbs.)	20-22	35-40	35-40	85-90	85-90	150-160	150-160

Please note the following important hints:

1) **All screws must be tightened with a torque wrench** to the specified torques in Table 1. The correct tightening torque is essential to prevent the coupling from loosening.

2) When tightening screws, make sure that **the aluminum inserts are not twisted.** See Figure 1. To help reduce twisting, place a drop of oil or grease under the screwhead. This eliminates friction between the screwhead and the inserts. If twisted, the radial inserts will not seat properly on the hub. For sizes 30HY and 50HY, position the axial inserts with the Hytrel® element and tighten screws. If the inserts are properly installed, the Hytrel® element will move easily back and forth axially.

3) **Use only the screws supplied.** They are coated with a dry material, an anerobic adhesive which ruptures and mixes upon tightening. The purpose of the adhesive is to prevent the loosening of the screws during operation. At ambient temperature (70°F) it takes approximately 4-5 hours from tightening for the adhesive to harden sufficiently. The coupling should not be operated during this time. After 24 hours the adhesive is fully cured. Higher temperatures will accelerate the curing (e.g., at 158°F it takes only 15 minutes for curing.)
The fasteners can be tightened a maximum of 3 times, after which the adhesive is insufficient and screws should be replaced. If for any reason screws furnished by Lovejoy are not available, the screws that are used must be locked carefully into position with another microencapsulated adhevsive. Do not use liquid adhesive.

4) **Alignment:** We recommentd the Torsional Hytrel couplings be pilot mounted only.

5) **Maintenance:** This coupling is completely free of lubrication. The Hytrel Material is insensitive to most lubricating oils and greases. The only periodic maintnenacne is to inspect the coupling element for unusual wear or deterioration. The element can be reomoved without loosening the inserts.

6) **Keep rubber free of all solvents, grease, oils and any other hydrocarbon-based products.** Do not use anaerobic adhesives; even the vapor from such materials can damage the bond between rubber and metal.

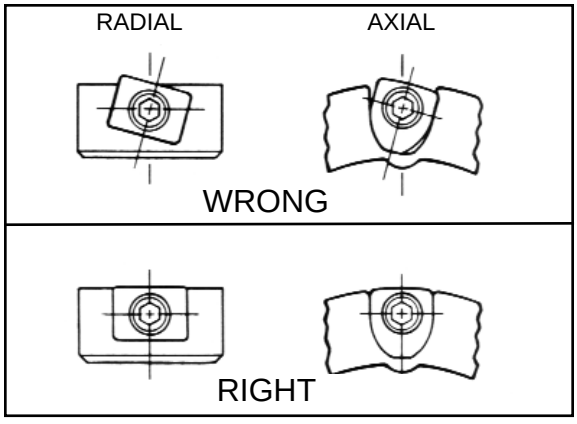


Figure 1. Correct and incorrect installation of inserts.

NOTE: Specifications are subject to change without notice, and without liability therefore.

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