Torque Limiting Adjustment Instructions

The Hersey Clutch Company Torque Limiting Direct Couplings must be adjusted if the clutch needs to disengage at a different torque and to account for wear overtime.

Assembly

Refer to Figure 1 and the accompanying bill of materials for information on the individual parts of the torque limiting direct coupling.

Different size hubs can be purchased separately if drive configuration changes. Custom drive hubs are available upon request.

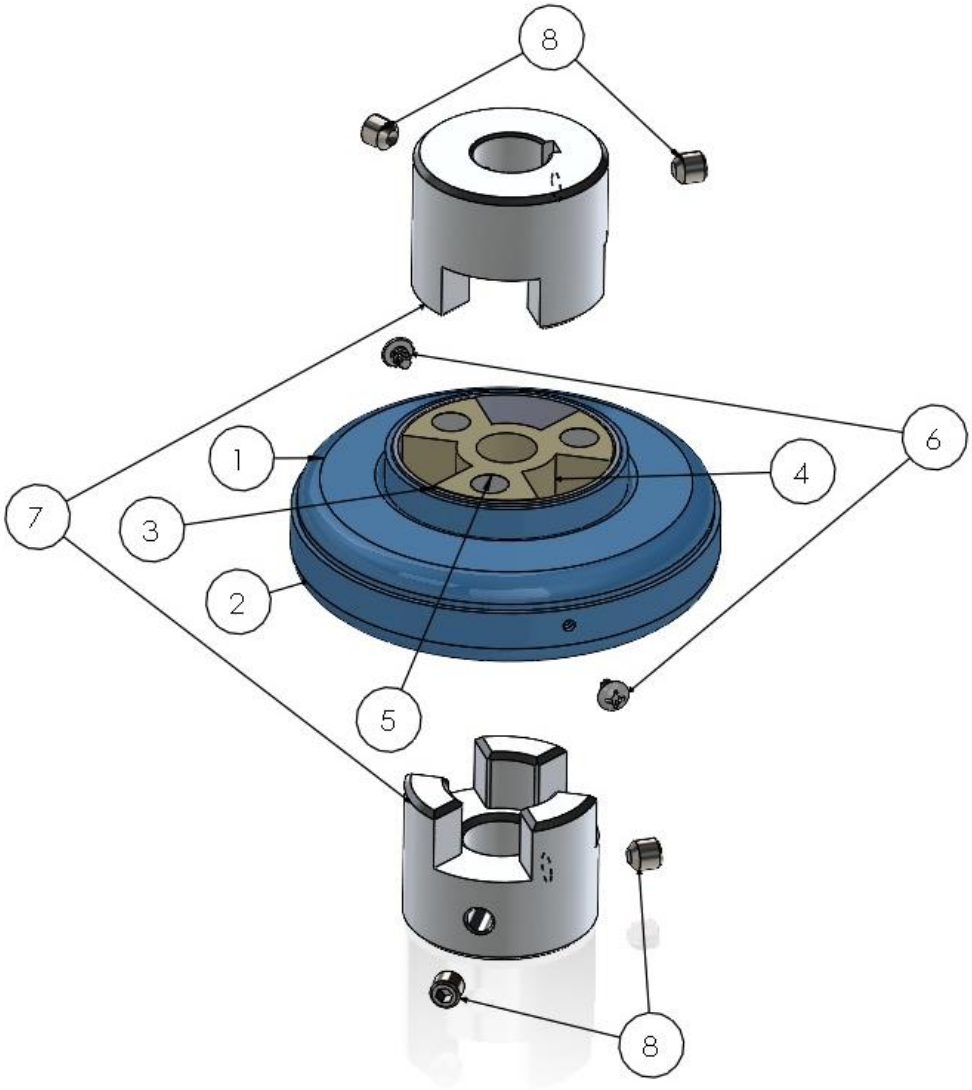

Figure 1

ITEM NO.	Part	QTY.
1	Inner Threaded Housing	1
2	Outer Threaded Housing	1
3	DC Bushing	2
4	DC Spider	2
5	DC Rivet	6
6	Self-Tapping Screw	2
7	DC Hub: Bore Size differs depending on model	2
8	Set Screw 1/4-28 x 1/4"	4

Torque Setting

1. To find the appropriate disengagement torque, attach a deflection style torque wrench to the output shaft of your application and measure the maximum force required to move the system through a cycle. Running torque is almost always lower than starting torque.
    a. Setting the disengagement torque to this value will ensure that the clutch will protect the system if it sees an unusually high amount of torque.
2. To adjust the torque setting from the factory preset value, first remove the two self-tapping screws (6) locking the inner and outer threaded housings together.
3. To decrease torque carrying capacity, unscrew the housings (1 &2); screw together further if increased torque carrying capacity is needed. Begin with 2-1/2 turns in either direction to start with. Take care not to dent or damage the housing when changing the threaded position as this will impede the free movement of the inner components.
    a. Carefully squeezing the hubs between the soft jaws of a bench vice will remove the tension from the internal springs on the housing and make it easier to screw in/out the cases. Do not compress more than an 1/8” as this can deform the internal springs and compromise performance.
    b. The cases can be grasped with pliers on the surfaces indicated in figure 2 if they cannot be rotated by hand.

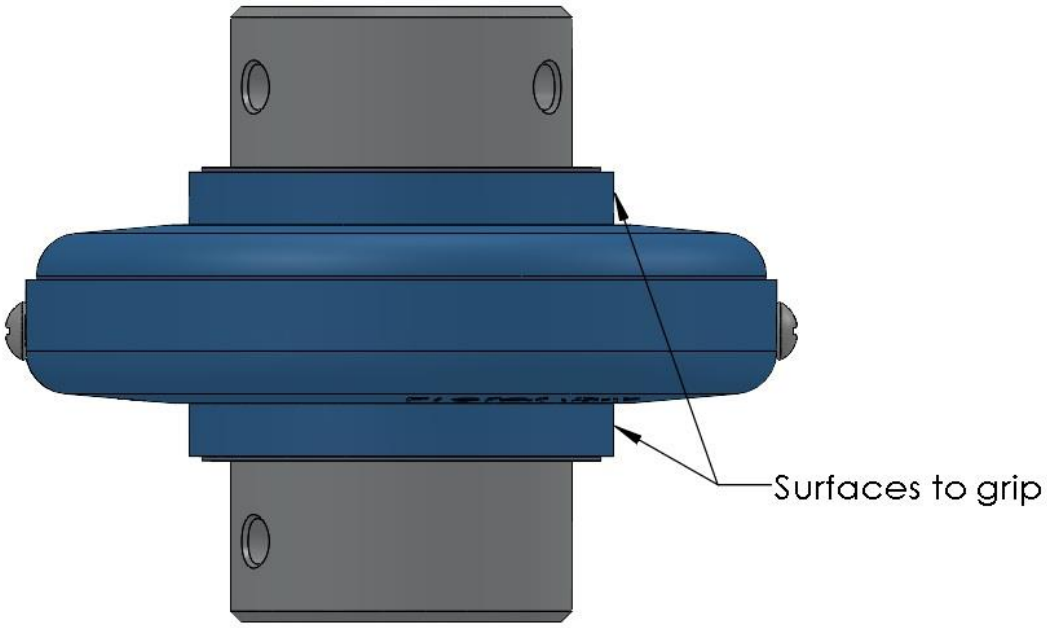

Figure 2

4. To determine the value of the revised torque setting, tighten a stub shaft in a bench vise. Slip the clutch's bored hub over the shaft and tighten the set screws. Mount a second stub shaft onto a deflection style torque wrench to drive and disengage the opposite, un-clamped, end.
    a. If a stub shaft isn't available, a 3/8" drive socket can stand in its place by inserting it in the bore and securing it with the set screws.
5. Rotate un-clamped side of clutch until it "snaps" into place to ensure its engaged prior to measurement.
6. Slowly rotate either direction while paying attention to what the torque wrench is reading until it rotates freely.
    a. The highest torque shown on the torque wrench will be the new disengagement torque.
7. Repeat steps 2 through 5 until optimal disengagement torque is achieved.
8. Record this value as the new disengagement torque.
9. Drill a new pilot hole in the case with a #31 drill and reinstall the self -tapping screws to ensure the clutch remains adjusted as set.

Note: Factory torque checking is performed using an automated test machine to ensure accuracy.

Setup

Maximum acceptable angular misalignment of the input and output shafts should be six degrees. Maximum parallel misalignment should be 0.03 inches. Axial load on the hubs will change the disengagement torque.

Caution

- Failure to properly set torque can result in a failure of the clutch to protect drive system and people as designed. This can lead to broken equipment, injuries and death.

Maintenance

- Excessive disengagement causes wear and will reduce the transmitted torque the clutch is able to hold. Replacement may be necessary if the required torque cannot be corrected by adjustment.
- Replacement clutches are available from the Hersey Clutch Company. Refer to exploded view in Figure 1 for items.
- No lubrication required: factory assembled with lifetime lubrication.