



INSTRUCTION MANUAL

Perma-Tork® Units

HB6-1, HC6-58, HC6-34

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Periodically there will be updates to this manual. The latest version is available at www.magpowr.com or by calling 1-800-MAGPOWR (624-7697).

Handling

Handle and install with care. This is a precision-assembled unit with close internal clearances. The magnetic materials used are brittle by nature. Avoid subjecting to shock loads. **DO NOT DROP.**

Installation

Perma-Tork hollow shaft units are easily adaptable for use as either a clutch or brake. As a clutch, either the hollow shaft or the housing can be the input. The unit mounts on a shaft, and a convenient bolt circle and pilot diameter provide ease of attachment to a gear, pulley, etc. A stub shaft adapter can be used where a shaft is required.

Brake Units

HB6-1

1. Brake units must be securely mounted to a mounting bracket or plate, using three ¼-20 screws and lockwashers (see "A" in Figure 1 and Figure 4).

Locking bolts and spanner wrench holes must be readily accessible for adjustment.
(See Figure 4).

2. Mount sheave, pulley, or sprocket to output shaft as shown in Figure 1.

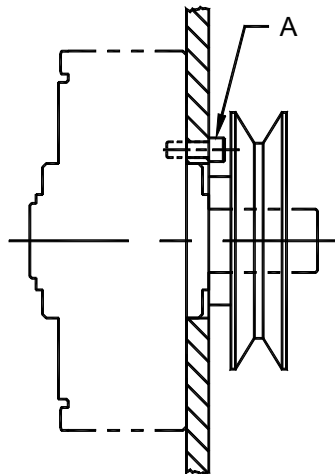


Figure 1

Clutch Units

HC6-58 and HC6-34

Clutch units are designed to fit NEMA 56C motors with keyed 5/8" or 3/4" output shafts.

1. Drill two 0.18 diameter clearance holes in sheave or pulley 90° apart for access to set screws in clutch shaft.
2. Counterbore sheave or pulley to a diameter of 2.442/2.445 inches to permit piloting on outer diameter of clutch bearing. Secure sheave or pulley to clutch using three 1/4-20 socket head cap screws and lockwashers.
3. Mount and firmly secure clutch on motor or prime mover output shaft as shown in Figure 2.
4. Align per timing-belt or drive-belt manufacturer's specifications.

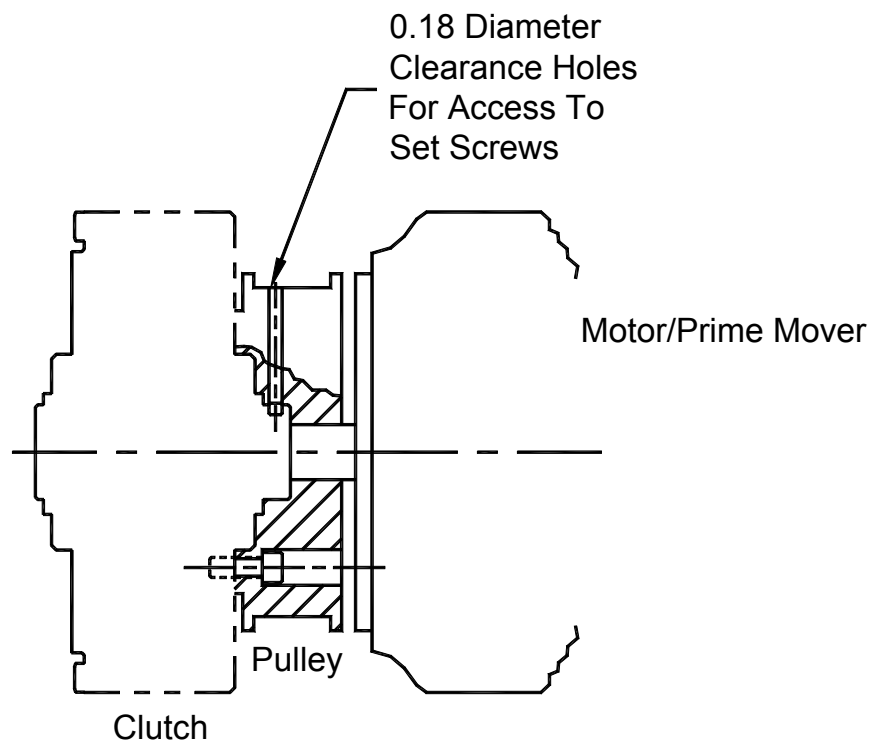


Figure 2

Clutch Coupling

HC6-58 and HC6-34

Mounting Requirements: This will require an adapter (not supplied) and a coupling (not supplied).

1. Mount clutch to motor or prime-mover output shaft.
2. Make up and secure output shaft adapter to clutch using 1/4-20 socket head cap screws. Couple input shaft adapter to load, using a shaft coupling (see Figure 3). Follow coupling manufacturers mounting and alignment instruction, to minimize misalignment and maximize Perma-Tork life.

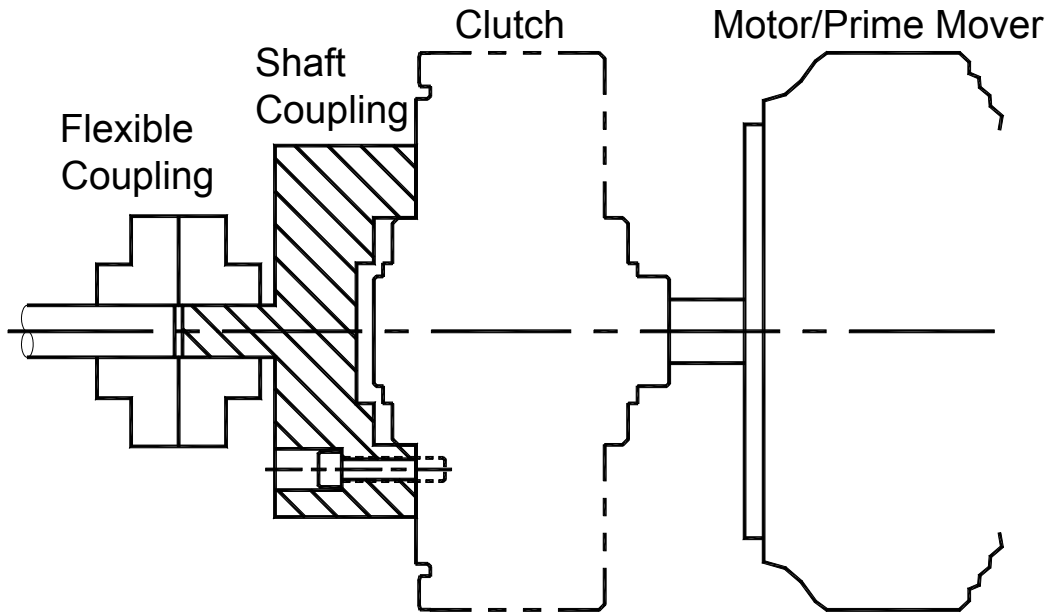


Figure 3

Adjusting Torque

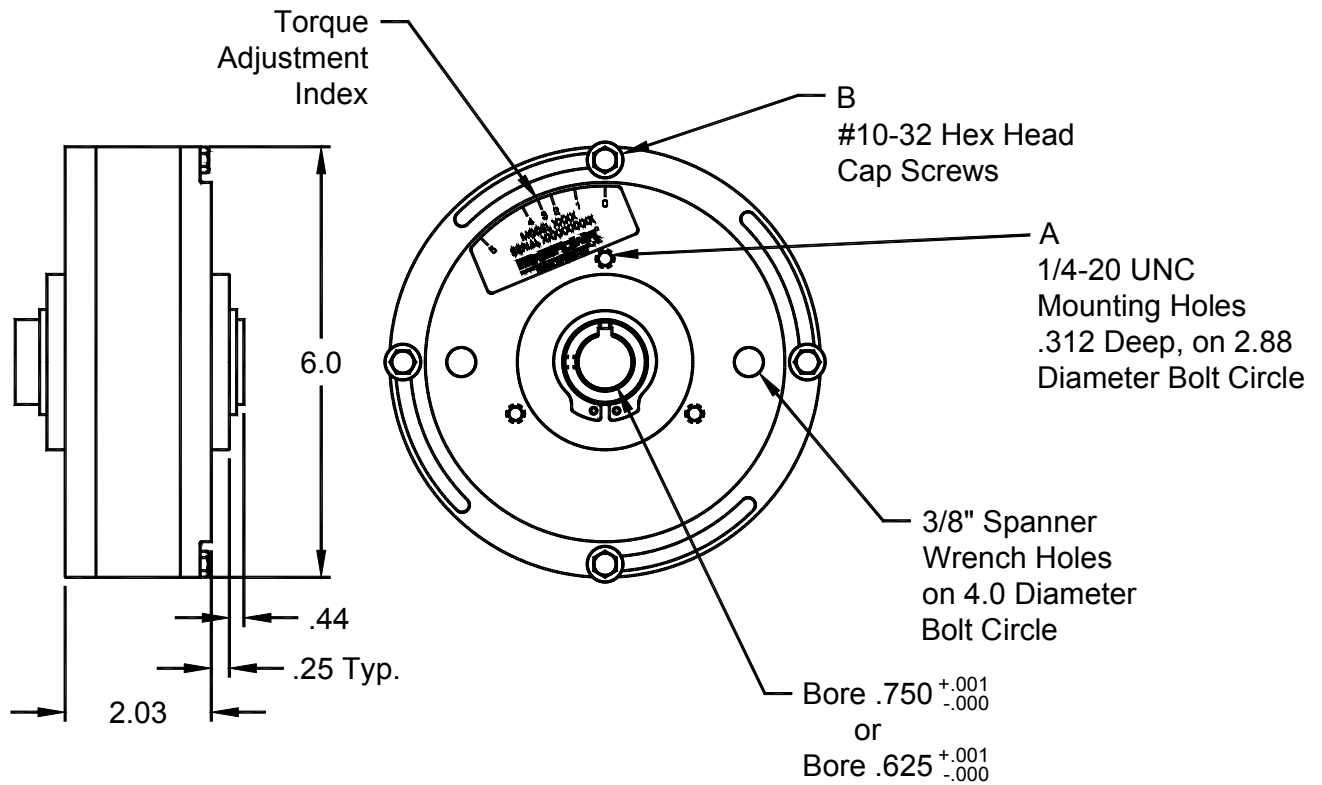
Generally, this should be done while the unit is firmly and properly mounted in place. The exception to this is when the adjustment must be done prior to mounting due to space limitations. This can be accomplished by restraining the housing and adjusting the end cap with a spanner wrench while rotating either the output shaft (brake) or input member (clutch).

NOTE: This is a magnetically strong unit. Always take extreme caution while adjusting. It is recommended that one person adjust unit with a spanner wrench, while a second person moves prime-mover output shaft.

Torque Adjustment Procedure:

These units are designed to use a standard 4" spanner wrench with 3/8" pins.

1. Make sure system is at a complete stop.
2. Loosen by one turn the four socket-head cap screws "B" located on curved slots (see Figure 4)
 - a. On **BRAKE** units, use spanner wrench to carefully hold Perma-tork magnets while making adjustment.
 - b. On **CLUTCH** units, the Perma-Tork housing must first be securely RESTRAINED in order to make adjustments. Use spanner wrench to carefully make adjustment.
3. Starting slowly, rotate prime mover or output shaft while making torque adjustment to eliminate possible cogging. (see note below)
4. After adjusting unit, tighten adjustment screws and remove spanner wrench.



Cogging

With any Hysteresis clutch or brake, there can be a slight “memory” effecting the Hysteresis disc when changing from a high to a low torque setting. This can result in “magnet lobes” causing minor cogging. It is correctable by rotating the output shaft slowly (25 to 250 rpm) while moving the torque adjustment from maximum to minimum.

Overhung Load Capacity

40 lbs within 2 inches from clutch face of Perma-Tork unit.

Maintenance

Properly installed, these units are designed to be maintenance free.



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