

CB Series Size 2

Service & Installation Instructions

P-1315-WE
819-0448



**Warner**[®]
Electric

An **Altra Industrial Motion** Company

Warner Electric wrap spring clutches and clutch/brakes are factory assembled, requiring no adjustments during installation.

⚠ WARNING Failure to follow these instructions may result in product damage, equipment damage, and serious or fatal injury to personnel.

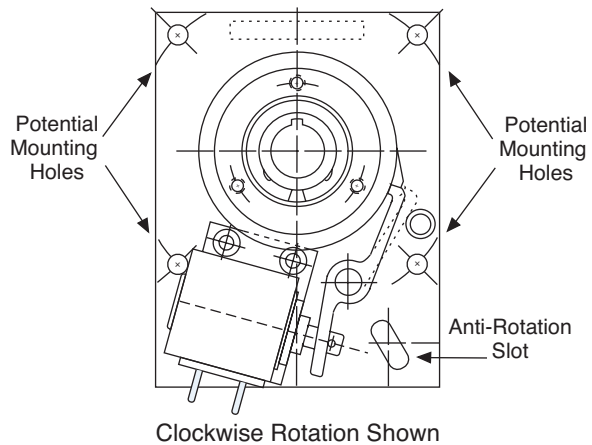
Pre-Installation Inspection

Examine the unit for any damage, which may have occurred during shipping. Check the unit to insure it meets your application's requirements, such as shaft fit and coil voltage. In addition, make sure all parts are clean and free of any foreign material prior to assembly.

Mounting and Installation

⚠ WARNING Whenever attempting to install this type of product used for engaging and stopping components on a machine, it is strongly recommended that the machine be put in a safe condition prior to servicing.

1. Each clutch/brake backing plate assembly has three or four mounting holes plus an anti-rotation slot (with grommet), and is designed to serve as a torque arm rather than as a rigid mounting plate. The plate should be restrained from rotating by a pin or shoulder bolt, while allowing it to float axially. The anti-rotation device must be capable of withstanding the braking torque required by the load.



IMPORTANT: Do not rigidly mount unit. Plate must be allowed to “float” axially.

2. On CB type units, the input rotation is always connected to the input hub, and the output is always through the shaft through the hollow bore of the clutch/brake.

3. When mounting the CB-2, the brake spring must be fully wrapped down.

Note: Simply rotating the input hub until the actuator hits the cam will not fully wrap down the brake spring.

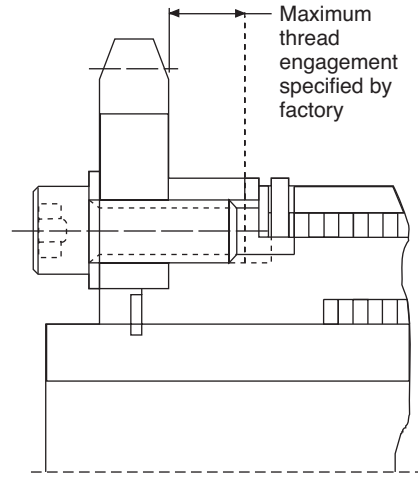
Wrapping the brake spring down completely can be accomplished by rotating the output shaft in the driving direction until it cannot travel any further.

4. All Warner Electric wrap spring products are designed to be installed in parallel shaft applications where they are fully supported by the shaft on which they are mounted.
5. Mount the CB-2 clutch shaft to the through shaft by using one or both of the methods described as follows. The preferred, and easiest way, is to use the clamp collar provided. It is important that the clamp collar be positioned directly over the slots of the shaft to insure good clamping. The clamp collar screw must be tightened to 32 lb.in. (3.6 Nm). A pilot hole is also provided on the clutch output shaft for drilling through your shaft to couple the clutch and shaft with a pin.

6. When connecting the parallel shaft to the CB by using a belt, chain or gear drive, the input hub's radial bearing load capacity must not be exceeded. (See Chart below). It may be necessary to counter bore or bearing mount the input pulley sprocket or gear.

Maximum Radial Bearing Load at Maximum Speed

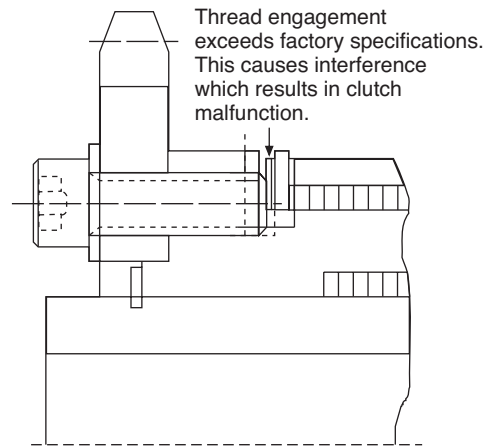
- CB-2 = 7.5 lbs.
- CB-4 = 14 lbs.
- CB-5/Super CB-5 = 32 lbs.
- CB-6/Super CB-6 = 63 lbs.
- CB-8/Super CB-8 = 300 lbs.



Correct Thread Engagement

7. CB and Super CB style clutch/brakes are designed for horizontal shaft mounting. While it is possible to mount units vertically, vertically mounted units will see lower life than those mounted horizontally due to the wear between hubs resulting from gravity.

8. **Input hub thread engagement requirements.** Just a reminder...While mounting a sprocket or pulley to the input hub of your CB-2, CB-4, CB-5 CB-6, or CB-8, the screws/bolts used must not protrude through the flange or hub. This will interfere or jam the control collar assembly, thereby causing the clutch to malfunction by failing to “drive” or causing the clutch to “slip.”



Incorrect Thread Engagement

Maximum Thread Engagement

- CB-2 = .150 in.
- CB-4 = .280 in.
- CB-5/Super CB-5 = .350 in.
- CB-6/Super CB-6 = .312 in.
- CB-8/Super CB-8 = .360 in.

9. Connect the solenoid to a power supply.
10. After the unit has been operating for a short period, check the drive component mounting, anti-rotation device, clamp collar screw torque, etc. to ensure proper installation and operation.

Horizontal Mounting

Figure 1 illustrates an ideal clutch/brake mounting application. The unit is attached to the output shaft with both a key and set screws. The plate is restrained from rotating, but not from axial movement, reducing the side load on the CB's internal plate bearing.

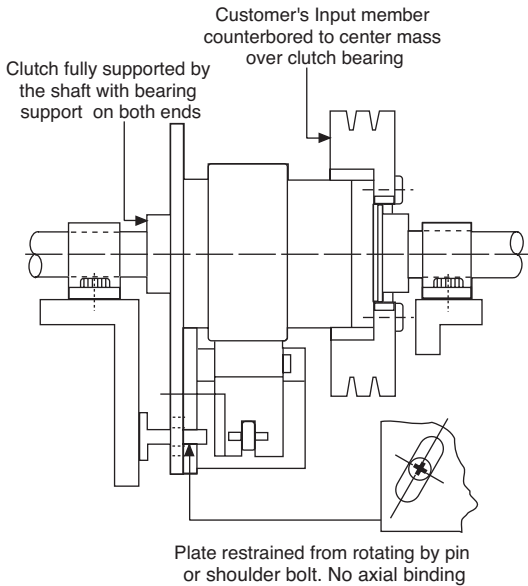


Figure 1 - Ideal Mounting

In cases where easy access to the input is desirable, the clutch/brake can be mounted on a stub shaft. However, the unit must still be fully supported, while overhung loads on the input member must be avoided to maintain the life of the radial bearing.

Figures 2 and 3 illustrate alternate mounting configurations for achieving proper support. Inputs are usually face-mounted to the input hub of the CB unit as shown in Figure 1. This type of mounting is facilitated by the drilled and tapped holes provided in the free hub flange. The configuration shown in Figure 2 is a possibility, if the radial load on the input hub of the CB is small compared to the specified load.

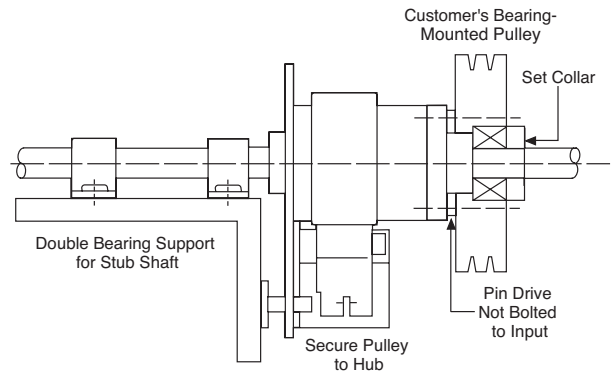
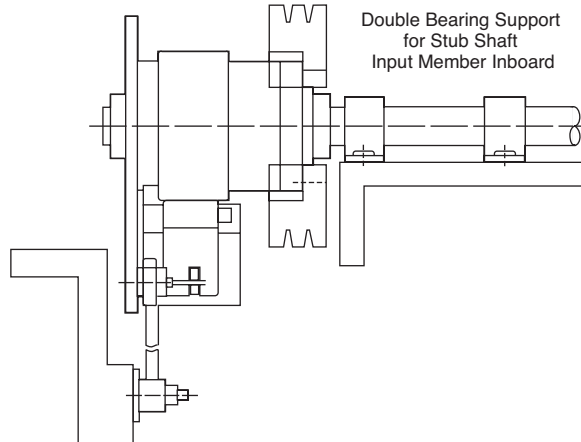


Figure 2 - Acceptable Mounting

If the application contains a substantial radial bearing load, arrange the pulley over the centerline of the clutch free hub as illustrated in Figure 3. Place one support bearing as close to the pulley as possible, using a torque arm for anti-rotation.

Figure 3 - Acceptable Mounting



The smaller CB units (sizes 2, 4 and 5) have pilot holes in the output shaft, which guide drilling through the machine shaft for attaching the unit with a pin.

Vertical Mounting

When it is necessary to mount a unit vertically, mount it so the input hub is oriented in the upward position as illustrated in Figure 4.

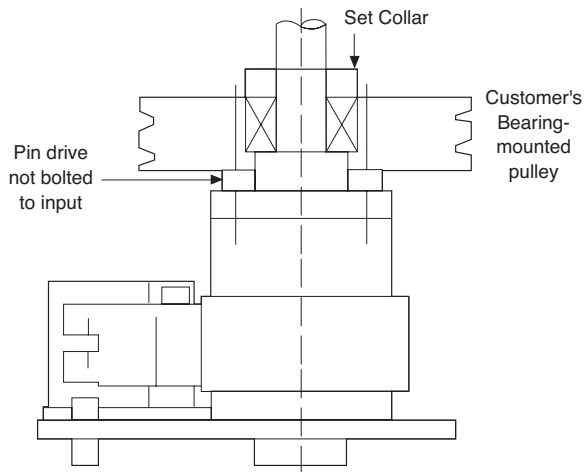


Figure 4

Lubrication

All CB Series clutch/brakes are manufactured with oil impregnated, sintered metal components. A properly applied and installed Warner Electric wrap spring clutch/brake requires no lubrication throughout the life of the unit. Adding lubrication may result in a mis-match of lubricants which may lead to premature spring failure.

Warranty

Warner Electric LLC warrants that it will repair or replace (whichever it deems advisable) any product manufactured and sold by it which proves to be defective in material or workmanship within a period of one (1) year from the date of original purchase for consumer, commercial or industrial use.

This warranty extends only to the original purchaser and is not transferable or assignable without Warner Electric LLC's prior consent.

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