

# CB Series and Super CB Series CB-2 to CB-10

Installation Instructions

P-1302-WE  
819-0447



 **Warner Electric**<sup>®</sup>  
*Altra Industrial Motion*

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.

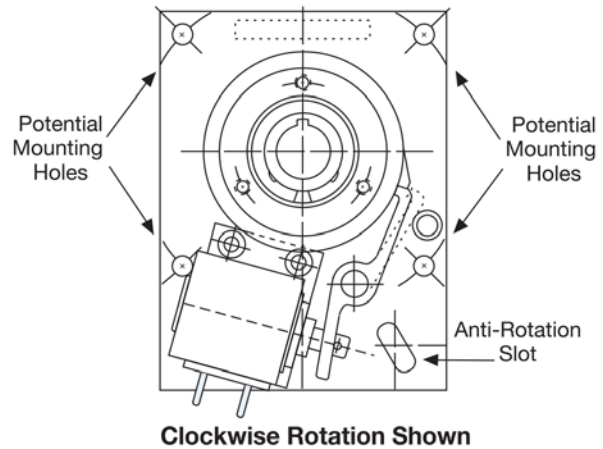
## Pre-Installation Inspection

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, 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. 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. Connecting the unit to the parallel shaft may be accomplished by pinning (for sizes 2, 4, and 5) or by key and set screw (for sizes 6, 8 and 10).
4. 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.

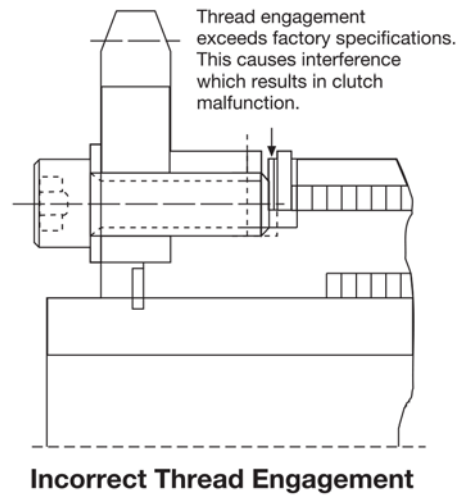
CB-5/Super CB-5 = 32 lbs.

CB-6/Super CB-6 = 63 lbs.

CB-8/Super CB-8 = 300 lbs.

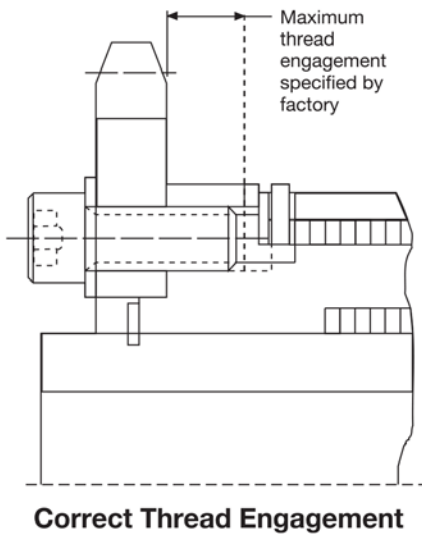
CB-10/Super CB-10 = 500 lbs.

5. 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.
6. Input hub thread engagement requirements. Just a reminder...While mounting a sprocket or pulley to the input hub of your CB, 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.”



### 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.
- CB-10/Super CB-10 = .500 in.



### 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.

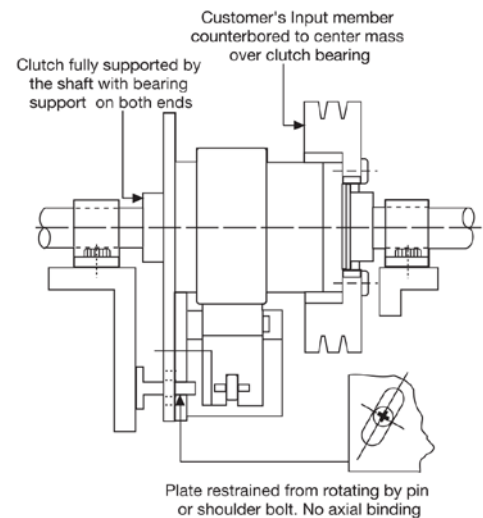


Figure 1 - Ideal Mounting

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.

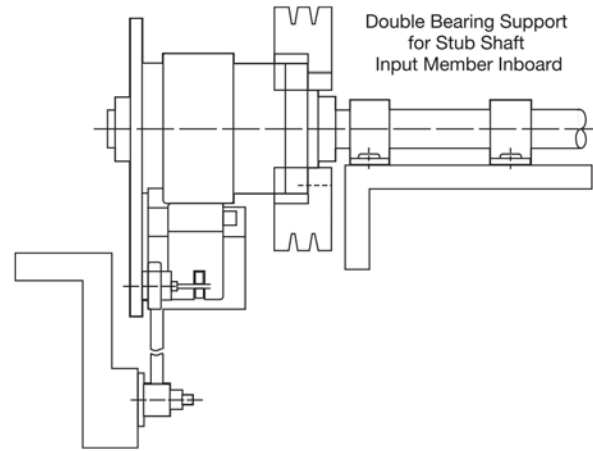


Figure 3 - Acceptable Mounting

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.

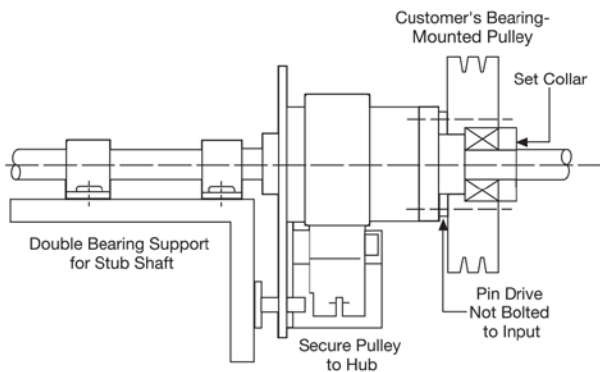


Figure 2 - Acceptable Mounting

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.

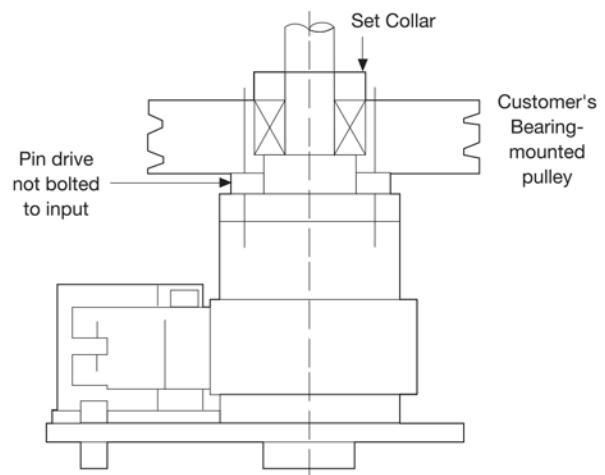


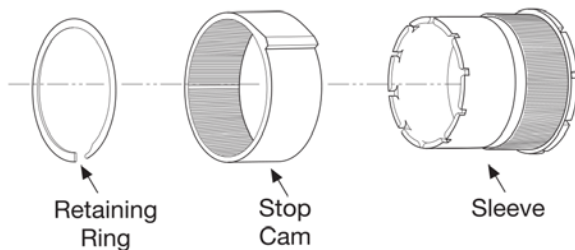
Figure 4

## 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 mismatch of lubricants which may lead to premature spring failure.

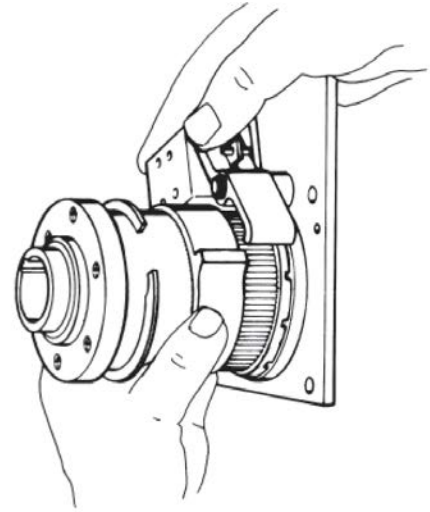
## Stop Collar Adjustment

Each CB Series unit has an incrementally adjustable collar, allowing for changes to the output orientation.



To adjust the stop collar output orientation:

1. Remove the retaining ring from its groove and slide it forward on the sleeve.
2. Hold the actuator clear while sliding the cam off the sleeve. Rotate the cam to the desired stop position, and slide it back onto the sleeve. (The brake should be fully wrapped down to ensure setting the proper stop point).



**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.

3. Slide the retaining ring back into position.

### Adjustment Increments with Standard Stop Collars:

CB-2	Infinitely Adjustable
CB-4	2.4° Adjustable
CB-5/Super CB-5	1.8° Adjustable
CB-6/Super CB-6	1.8° Adjustable
CB-8/Super CB-8	1.6° Adjustable
CB-10/Super CB-10	1.5° Adjustable

## Warranty

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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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A purchase receipt or other proof of original purchase will be required before warranty service is rendered. If found defective under the terms of this warranty, repair or replacement will be made, without charge, together with a refund for transportation costs. If found not to be defective, you will be notified and, with your consent, the item will be repaired or replaced and returned to you at your expense.

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### **Changes in Dimensions and Specifications**

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