

# Form-Flex<sup>®</sup> Double Flex Coupling Type AY, All Sizes, All Classes

## Installation & Maintenance Instructions

P-5007-TBW  
Form 1177

### Parts List

1. Hub (2)
2. Long Bolt (2)
3. Thin Washer (16)
4. Spacer (1)
5. Flex Disc (2)
6. Set Screw (2)
7. Key (Not Included)
8. Nut (6)
9. Short Bolt (4)

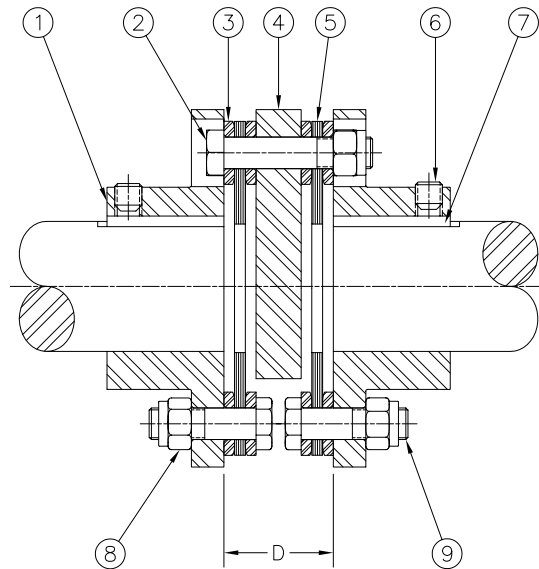


Figure 1

The spacer is not service removable, and the couplings must be bench assembled before installation onto the equipment.

Proper care in installing and aligning will permit coupling to operate to full capacity, compensate for angular misalignment, and provide very good service life.

Shafts may become misaligned as a result of many natural and unavoidable causes. Heat, vibration, bearing wear, settling of foundations, etc., all tend to alter initial alignment. To ensure long life, re-check alignment after a short period of actual running.

In general, coupling life is increased when shafts are initially aligned carefully. If this is not done and a coupling is heavily stressed by torque or other forces, it will have little reserve left to accommodate misalignment stresses; and it might not provide the length of service intended. The closer the alignment TIR is to zero, the better the service life of the coupling.

### Installation

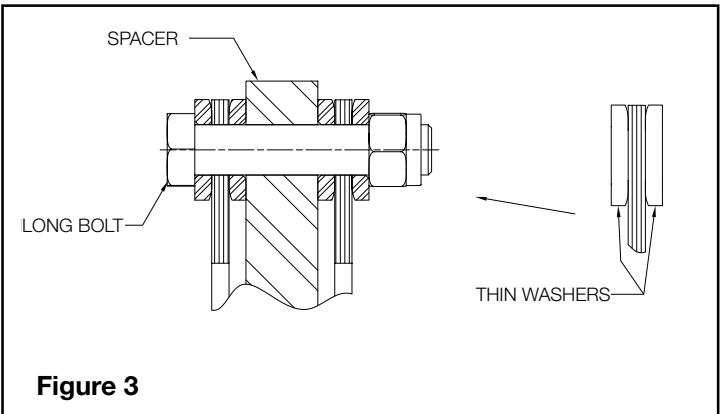
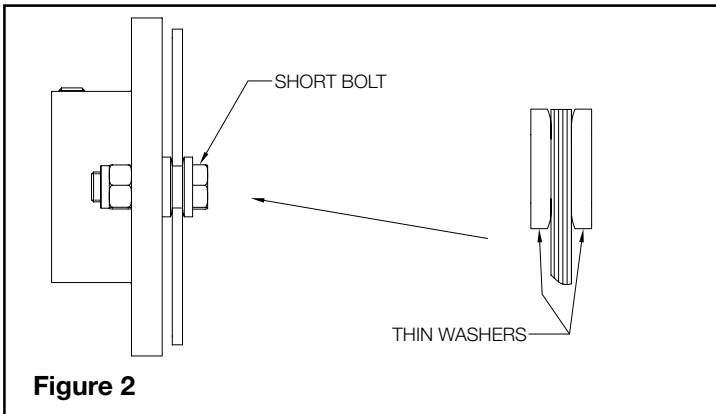
1. Inspect shafts and hubs and make sure they are free from burrs.
2. Check for proper fit of the keys to the shafts and hubs.
3. Assemble the long bolts to the spacer as shown in Figure 3. Ensure that the curved faces of each washer is facing toward the disc pack as shown in Figure 3. Install the nuts and tighten to the proper torque as indicated in Table 1.  
Note: The short bolts should be installed onto the disc pack prior to assembling the disc packs onto the spacer. The bolt threads should point away from the spacer and toward the hubs as shown in Figure 2.
4. Assemble the pre-assembled spacer sub-assembly onto the hubs with the short bolts oriented as shown in Figure 2. Ensure that the curved face of the washers is facing toward the disc pack as shown in Figure 2. Install the nuts and tighten to 20% of the torque indicated in Table 1.

**Table 1 - Nut Tightening Torque  
(Lightly Oiled Threads)**

| Size   | 5 | 10 | 15 | 20 | 25 |
|--------|---|----|----|----|----|
| FT* LB | 8 | 8  | 17 | 17 | 40 |

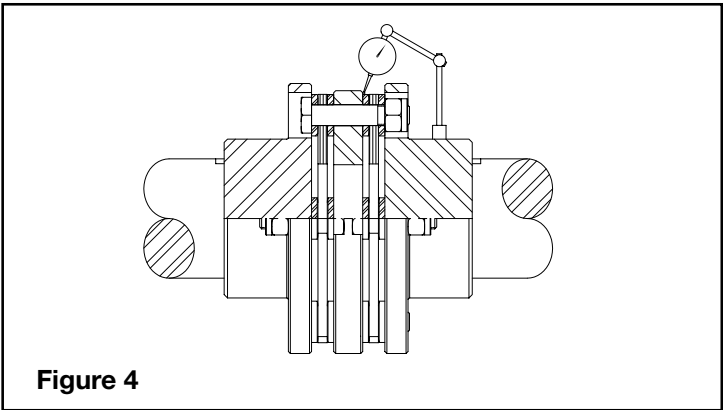
**Table 2 - Dimensional Data**

| Size    | 5    | 10   | 15   | 20   | 25   |
|---------|------|------|------|------|------|
| D MIN   | 0.49 | 0.50 | 0.56 | 0.56 | 0.87 |
| D MAX   | 0.85 | 0.91 | 1.07 | 1.12 | 1.53 |
| DISC ID | 1.00 | 1.17 | 1.28 | 1.65 | 1.78 |



## Alignment

1. Bring the equipment into an approximate good alignment while sliding the assembled coupling onto the shafts. Move the equipment to be connected into position. Set the distance between hub faces to the "D Max" dimension from Table II. Shaft may protrude through hub, as required, to a "D Min" distance between shafts ends providing the shaft O.D. does not exceed the flex disc I.D.. Shaft must not touch the spacer. Tighten set screws.
2. Attach a dial indicator to one of the hubs. Indicate a point on the nearest spacer face as close to the edge as possible. See Figure 4.
3. Rotate the coupling 360° to locate the minimum reading on the dial, then rotate the body or face of the indicator so that the zero reading lines up with the pointer.
4. Rotate the coupling 360° while watching the indicator for misalignment readings. The driver and driven equipment will be aligned when the maximum indicator readings are within the allowable limits as shown in Table 3. Adjust the equipment as necessary to comply with the limits. TIR should be as close to zero as possible. Readings should not exceed those shown in Table 3. Repeat for both ends of coupling.



- Notes: When the equipment is properly aligned, it is advisable to dowel a right angle gear box to its base. Experience has shown that right angle gear boxes tend to creep in a counter rotational direction. Recheck alignment after doweling.
5. After alignment is proper, tighten the nuts that are on the hub flange to the value indicated in Table 1.
  6. With equipment aligned and coupling assembled make sure all bolts and washers are in the proper orientation. The curved face of the washer must face the flex disc as shown in Figures 2 and 3. **Important:** To ensure long life re-check alignment after a short period (one to two hours) of actual running. At this time also re-torque the nuts to values in Table 1.

**Table 3 - Total Indicator Reading, Maximum; Inches**

| Size    | 5    | 10   | 15   | 20   | 25   |
|---------|------|------|------|------|------|
| T.I.R.* | .020 | .024 | .028 | .032 | .038 |

\* Equivalent to .50° per flex disc. Lower T.I.R. readings will provide better alignment of shafts and longer service life.

NOTE: The closer to zero misalignment the better the service that can be expected.

### REPLACEMENT PARTS

To order replacement parts it is necessary to furnish the complete part number(s) and the required part(s). Order must be placed with your distributor.

### ▲ WARNING:

ROTATING EQUIPMENT IS POTENTIALLY DANGEROUS AND MUST BE PROPERLY GUARDED. THE USER SHOULD COMPLY WITH APPLICABLE SAFETY CODES IN ACCORDANCE TO OSHA STANDARDS.

▲ **WARNING: Cancer and Reproductive Harm -**  
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P-5007-TBW Form 1177 8/18