ATI PERFORMANCE PRODUCTS

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CW3 Indicating Kit

Operator's Manual

Part #991700

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CW3 Inspection and Aligning Procedures

Checks assume that the center bolt holding the coupler to the moving shaft has not been loosened and that the coupler body has clearance to the machine plate when fully retracted.

ATI's Indicating Kit, Part #991700 consists of the following:

1. Dial test Indicator
2. Indicol Indicator Mount
3. A ground 1.750" sleeve
4. A set rod extension

Set Rod Extension

The set rod extension is necessary so the face plate may be positioned 5 3/4" above the chuck jaws with a load simulating the weld position.

1. Remove chuck jaws using the chuck wrench only and DO NOT unbolt top jaws from the master jaws. Clean jaw and scroll, spray with silicone and reinstall jaws.

2. Install a ground-hollow 1.750" diameter sleeve in the chuck.

3. Use a magnetic base indicator and indicate the sleeve to zero by adjusting the 4 set screws on the chuck.

4. Install the Indicol or a similar device with a dial test indicator **to the ground sleeve** that is now zero to the chuck.

5. Install the long pusher and adjust the set nut to position the face plate 5 3/4" above the flats on the chuck jaws. Set and lock must be activated to hold the face plate in position.

6. Rotate the face plate to put the zero mark on the OD at 12 o'clock.

7. Jog the chuck to align one of the adjusting screws with the dimple at 12 o'clock on the plate at the base of the chuck. Mark the screw on the chuck **#1**. Jog the chuck 1/4 turn and mark the screw at the dimple **#3**. Jog another 1/4 turn and mark the screw at the dimple **#2**. Jog the last 1/4 turn and mark the screw **#4**. Jog the chuck another 1/4 turn back to **#1**.

8. Position the indicator to read at 12 o'clock on the face plate approximately 1" in from the OD and zero the indicator.

   ⚠ ***CAUTION: Most dial test indicators have .030" maximum travel.***

9. With the indicator set at zero, use the clamp switch to move the face plate up and down several times to be certain that the indicator zero repeats each time the plate stops against the set rod at 5 3/4" above the chuck. Sweep the plate one full turn stopping with the chuck on **#1** and make certain zero is repeating on the indicator.

10. Jog the chuck until the **#2** is aligned with the dimple (180 degrees) and read the indicator. Jog back to **#1** (180 degrees) and be certain zero repeats.

11. Jog to **#3** (90 degrees) and read the indicator. Jog to **#4** (180 degrees) and read the indicator. All readings should be .002 maximum from the established zero at 12 o'clock.

Adjustments to the faceplate plane

Adjustments to the face plate perpendicular plane should **never** be required. If it becomes necessary, perform the following steps.

There are 4 holes in the center of the plate which allow access to 4 set screws that are threaded in the coupler body and set against the moving shaft. Rotate the face plate until one of these holes is at 12 o'clock.

a. Always tighten - **never loosen** these screws.

b. If the screw will not tighten enough to zero the four quadrants, you can, with **extreme care,** back off the center bolt to 30 - 50 ft lbs of torque (it is torqued to 90 ft lbs.)

CAUTION: If you completely loosen the center bolt you will have to:

1. Remove the face plate from the coupler.
2. Indicate the OD of the coupler to zero to the chuck.
3. Re-torque to 50 ft lbs.
4. Re-adjust the face plate plane.

Use care to **never** completely loosen the center bolt and allow the coupler to move off center.

REMEMBER! Each time you move a screw to correct the face plate, always move the clamp switch to cycle the plate up and down several times and insure zero repeats on the indicator before proceeding.

Zero the indicator

After correcting the face plate plane, move the indicator to the center hole and zero the indicator.

1. Use the clamp switch to cycle the face plate up and down several times and insure zero repeats on the indicator.

2. Using the same **#1** through **#4** on the chuck:
   a) Zero at **#1**
   b) Jog to **#2** and record reading
   c) Jog to **#1** and check zero. Must repeat.
   d) Repeat for **#3** and **#4**

Adjusting the center hole to .0005"

To easily adjust the center hole to .0005":
NOTE: Refer to drawing #990763 included in your CW3 manual.
(Locknut #20, set screw #30)

1. The set screw will move the inner race. The nuts lock the screws.

2. Unlock nuts at the 2,4,8 and 10 o'clock positions. Back set screws off 1/4 turn and snug locknuts. Locknuts have a face seal to keep oil from leaking out of the coupler. They must be kept snug especially if left overnight.

The set screws located at the 12,3,6 and 9 o'clock positions are used to adjust to zero runout.

If you need to move toward 6 o’clock, loosen the nuts at 6 and 12 o'clock. Lightly loosen the **#6** set screw and slightly tighten the **#12** set screw. Always keep both screws snug, tightening one and loosening the other.

6. Repeat steps 4 and 5 for the screws at 3 and 9 o’clock.

CAUTION: After each adjustment you must cycle the clamp up and down and recheck indicator zero after at least one revolution of the chuck to sweep the bore.

7. After the bore indicates zero:
   a) Jog the chuck to position the indicator at 10 o’clock. Snug set screw to move indicator to .0005".
   b) Jog the chuck to put the indicator at the 4 o’clock screw. Snug the screw to return indicator to zero.
   c) Repeat for positions at 2 and 8 o’clock.

8. Holding the set screw, lightly tighten all lock nuts.

9. Cycle the face plate. Make certain zero repeats.

10. Sweep the bore one (1) full turn. Make certain zero repeats.

11. Jog 1 - 2 - 3 - 4 on chuck and verify .0005" max TIR.

Weld a convertor with a good pilot. Do not remove it from the chuck. Raise the face plate and indicate the pilot of the converter in the CW3’s chuck to verify accuracy.

Converters must have some clearance, pump to cover, to allow the CW3 to locate centers.