Reynolds Equipment Company
Process Document

Title: Field Installation Instructions For Heavy Duty Index Retrofit Kit
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Drawn By: ____________________ Date: ________________
Checked By: ____________________ Date: ________________
QC approved By: ____________________ Date: ________________

This document describes the steps required to convert a RECOR 323 LVC with the flexible shaft driven index to the heavy duty gear driven index. Refer to drawings A,B, C & D as required (See Figure 3 and 4).

MATERIAL AND TOOLS REQUIRED

Material (Contents of the Kit):

1. 61-9720 Qty 1 ea. Heavy Duty Index Assembly
2. 61-9785 Qty 1 ea. HD drive shaft
3. 63-3440 Qty 1 ea. HD coupler
4. 62-4630 Qty 1ea. Set Screw, 6-32 3/16 cone pt sk hd
5. 62-0640 Qty 4 ea. E-clip (two required)
6. 31-4000 Qty 2 ea. SS1/4-20 1/2" long, hex head bolt
7. 62-4811 Qty 2 ea. Internal tooth lock washer (for ¼-20)
8. 62-4530 Qty 6 ea. Shims, thin (3/16")(for shafting)
9. 62-3690 Qty 2 ea. Flat Washer ¼-20 (spacers for adjusting height)
10. 61-9190 Qty 1ea. Braided Ground Harness and Clamp Assembly.

Tools Required:

1. 1/8" hex wrench (not included)
2. 5/64 " hex wrench (63-3200) (included)
3. 1/16" hex wrench (34-1490) (included)
4. 3/64" hex wrench (63-3030) (included)
5. Needle nose pliers
6. ¼ " drive ratchet, 7/16" socket, and 2" extension
7. Flat blade screw driver
8. Drill motor with ½" drill bit

PROCEDURE

STEP ONE:

1. Using the 5/64" hex wrench remove the flexible shaft (not shown) from the drive shaft (12).
2. Using the 1/16" hex wrench remove the set screw (1) securing the interrupt disk (2) on the drive shaft.

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3. Disconnect the index wire harness (not shown) from the interrupt PC Board (5).
4. Using the 7/16” socket and ratchet, remove the ¼-20 nuts (3) securing the index (4) and PC Board (5).
5. Using the 7/16 socket and ratchet remove the ¼-20” nuts (7) to free the pedestal and base plate assembly (9).
6. Using the 1/8” hex wrench remove the front two ¼-20 all thread (10).
7. Using needle nose pliers or flat head screw driver remove the e-clip (11) from the top side of the old drive shaft (12) to free shaft. Remove the old drive shaft from bottom of the pedestal.
8. Measure access hole on case bottom. If hole is ¼” OD or less, it may be necessary to enlarge this hole to prevent binding of the drive shaft. Use the ½ drill bit as required.

STEP TWO:

1. If unit is equipped with a temperature probe, it will be necessary to remove copper bonding clamp and green jacketed ground wire and replace with ground clamp and braid ground wire assembly (61-9190) provided.
2. Ensure that the clamp is securely fastened to the last turn and ½ of the spiral armor sheathing. Use the tie wrap provided to reinforce the clamp.

STEP THREE:

1. Insert the new drive shaft (13) through the bottom of the pedestal assembly (14) and place shims (15) as required and the e-clip (16) using the needle nose pliers in the lower groove to install. Shaft should have no more than .005” of up and down movement (about the thickness of a sheet of copy paper).
2. Reattach the pedestal assembly (14) with the two remaining ¼-20 all threads (17) to the rear of the housing. Start the ¼-20 nuts (19) on all threads.
3. Using ¼-20 x ½ “ bolts (20) provided, secure front portion of the pedestal assembly to the housing. Tighten ¼-20 nuts (19) on the rear all threads and bolts (20) using 7/16” socket and ratchet.
4. Using needle nose pliers, install the e-clip (21) on the upper groove of the new drive shaft (13).
5. Place the drive coupler (22) on the new drive shaft (13) until it stops against the upper e-clip (21). Secure the set screw (23) against the flat of the new drive shaft (13) using the 1/16” hex wrench.
6. Place the Heavy Duty Index assembly (24) onto the all threads (17). Install washers (26) and start ¼-20 nuts (25).
7. Ensure that the drive couplers are engaging and hand tighten ¼-20 nuts (25) using 7/16” socket and ratchet.
8. Check again that drive couplers are engaging, that the counter is advancing and that no bind is present in the mechanism. If no bind is found, continue to tighten the ¼-20 nuts. If the couplers are binding, use flat washers (27) as spacers between nut and index assembly.

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9. Reconnect the index wire harness (not shown).
10. Using the 1/16” hex wrench slide the driven gears to effect the desired meter rotation (See Step 5).

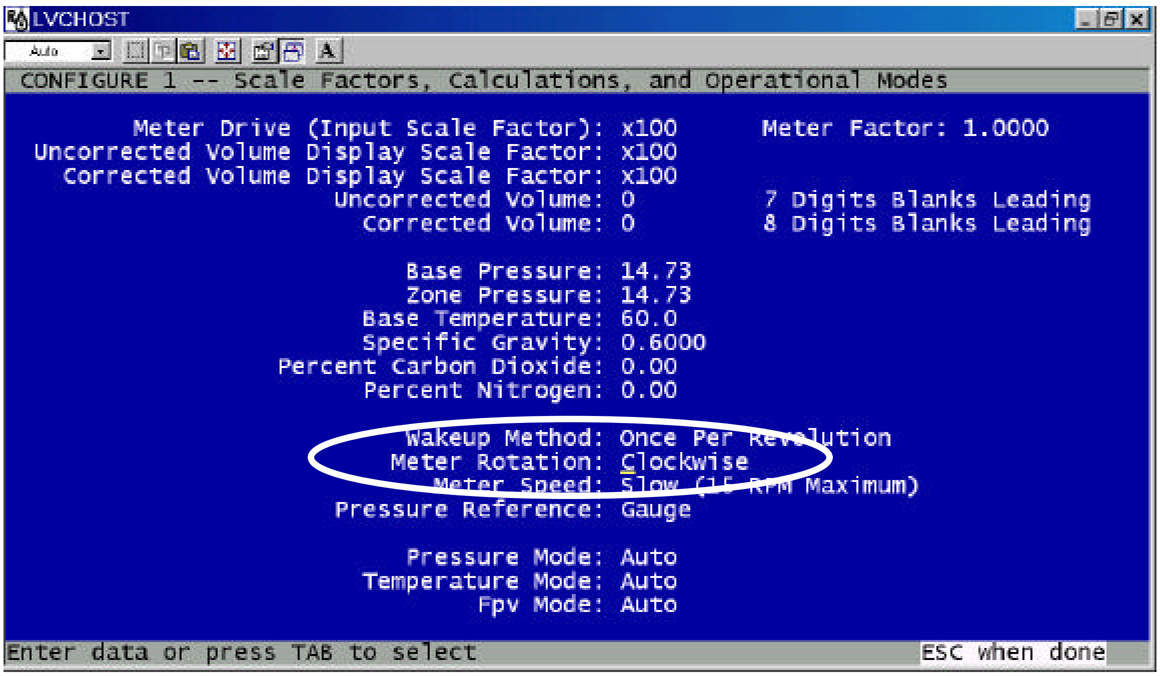


Figure 1

STEP FOUR:

1. Using LVCHOST CONFIGURE/CONFIGURE 1 menu (see Figure 1 above) set the “Meter Rotation” selection to CLOCKWISE regardless of the physical meter rotation.
2. Using LVCHOST DISPLAY/DIAGNOSTICS/Index Pulse Out screen, view index “arrow” while rotating the drive dog in the selected meter rotation. The arrow should advance through North East South West in a clockwise rotation.
3. Configure instrument as required and return to service

STEP FIVE:

1. To change physical meter rotation from CW to CCW, refer to figure 2 below (counter clockwise shown) and follow these steps:

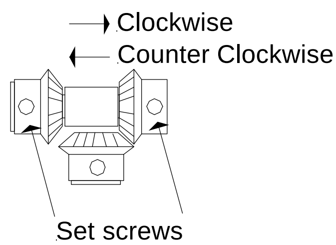


Figure 2

a) Using 1/16” Allen Wrench (supplied), loosen engaged gear setscrew.
b) Slide engaged gear away from main drive gear all the way over against “E” clip. Tighten setscrew to secure.
c) Loosen setscrew on other gear. Slide over to engage main drive gear. Tighten setscrew to secure.
d) Confirm proper gear lash by rotating assembly with finger insuring that rotation is smooth and free.

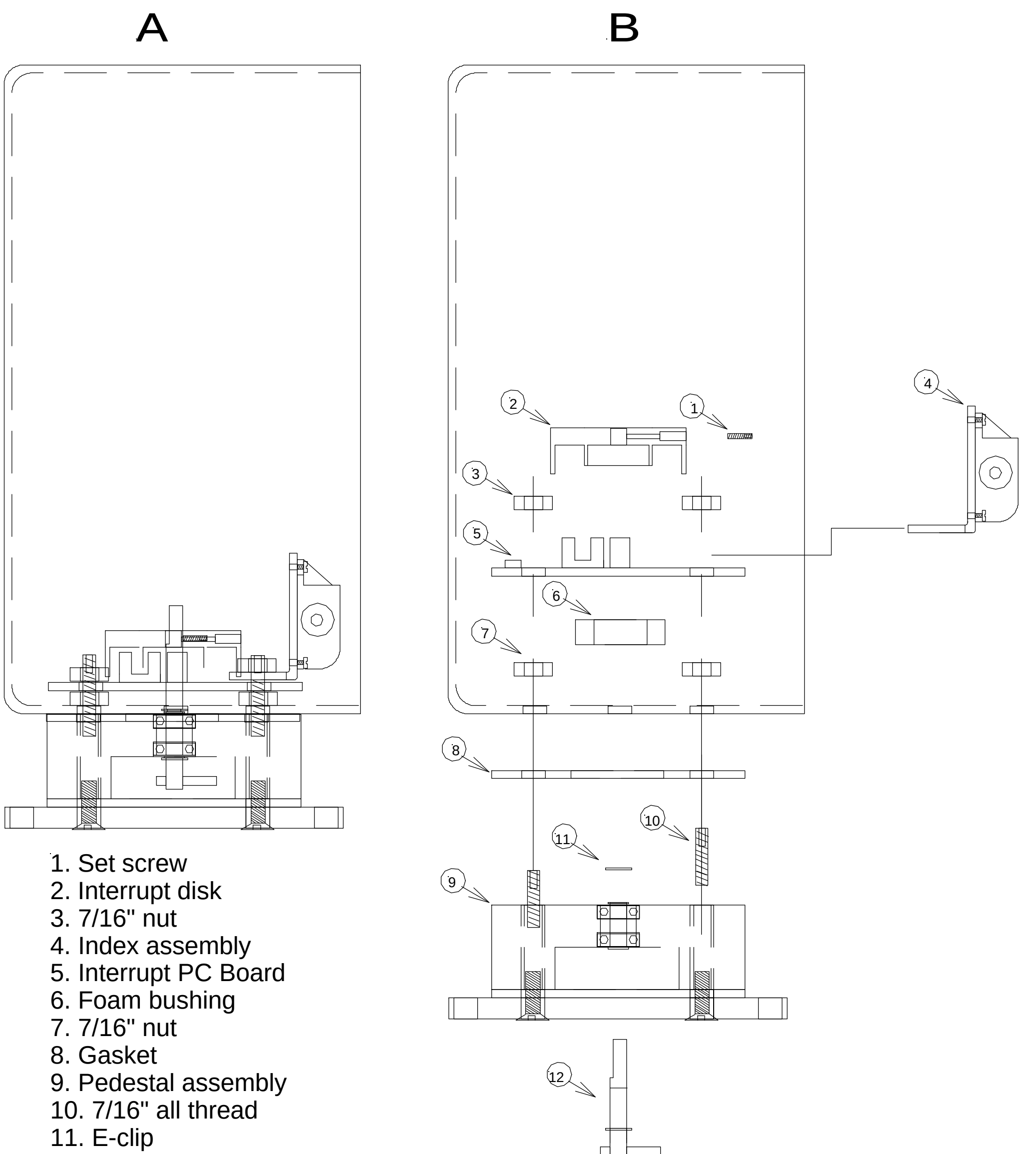
STEP SIX:

1. Dispose of old parts or return to Reynolds Equipment Company.

If you have questions or comments regarding this or any Reynolds Equipment Company product or service please call:

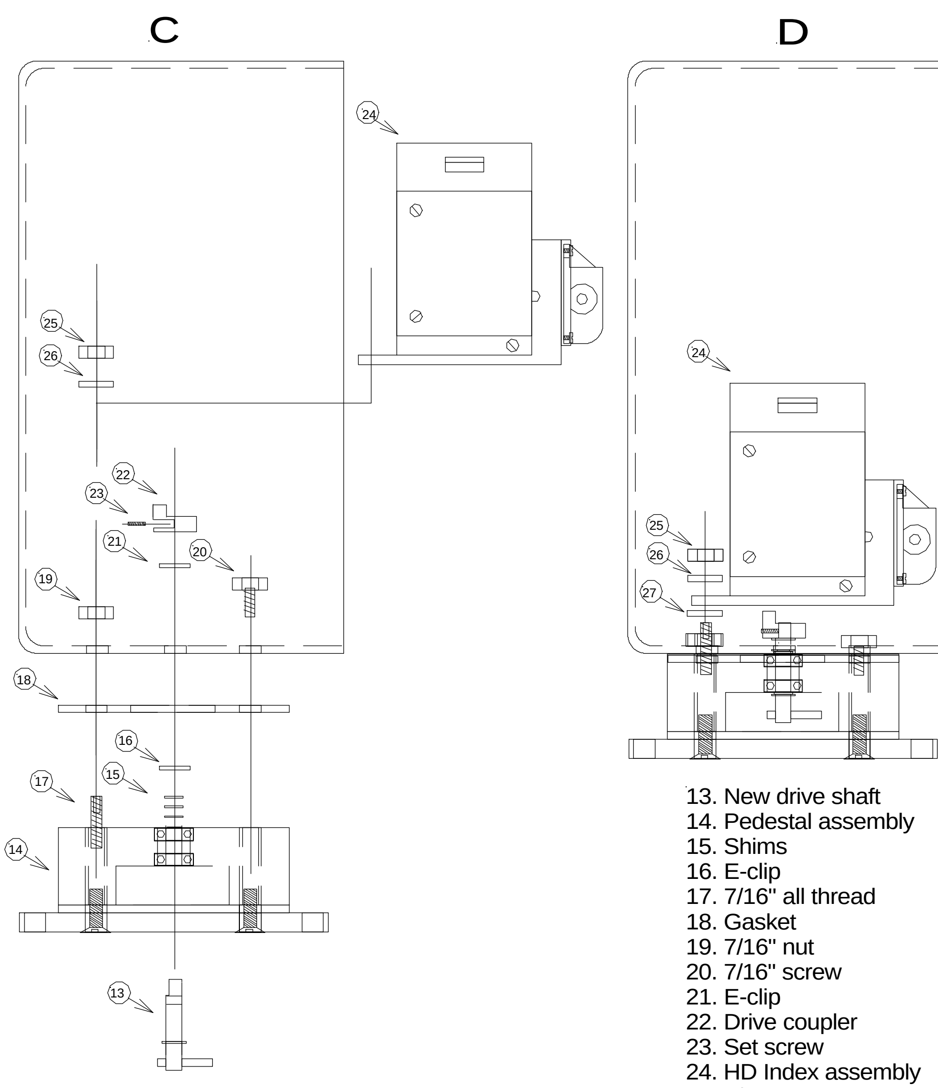
Reynolds Equipment Company
410 Kirby Street
Garland, Texas 75042
Tel 972-272-3424
Fax 972-272-3455
www.reynoldsequipment.com

Figure 3



1. Set screw
2. Interrupt disk
3. 7/16" nut
4. Index assembly
5. Interrupt PC Board
6. Foam bushing
7. 7/16" nut
8. Gasket
9. Pedestal assembly
10. 7/16" all thread
11. E-clip
12. Drive shaft

Figure 4



13. New drive shaft
14. Pedestal assembly
15. Shims
16. E-clip
17. 7/16" all thread
18. Gasket
19. 7/16" nut
20. 7/16" screw
21. E-clip
22. Drive coupler
23. Set screw
24. HD Index assembly
25. 7/16" nut
26. Lock washer
27. Flat spacer (1/4 ID) (if necessary)