HC(X) Compactor Piston Alignment Procedure

Approvals

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<th>Name</th>
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<tr>
<td>Engineering</td>
<td>Paul H Dick</td>
<td></td>
<td>8/26/2014</td>
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<tr>
<td>Manufacturing</td>
<td>Chris Bazell</td>
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HC(X) Compactor Piston Alignment

The gap between the compactor piston and cutting plate is factory set to a specific critical dimension. If for some reason this gap changes, or the piston assembly is disassembled for cleaning or maintenance, a special alignment fixture must be used to rest the gap correctly. An incorrectly set gap may cause excessive swarf bypass between the cutting plate and piston when the compactor is running. The stroke is fully compressed.

This Service Bulletin describes the procedure for setting the piston to cutting plate gap on HC(X) Compactors.

Tools Required:

- Piston Alignment Fixture # 6SBTJ097
- 1 ea 3mm Allen wrench (to remove rear cover screws)
- 1 ea 5mm Allen wrench (to remove Piston Alignment screws)
- 1 ea 6mm Allen wrench (to remove Cutting Plate and Swarf Chute assembly screws)
- 2 ea 17mm wrenches
- 1 ea 17mm socket and torque wrench set to 42 N-m
- 1 ea 12” Adjustable crescent wrench (to remove Shoulder bolt)
- 1 ea set of feeler gauges
- Putty knives, various sizes and thicknesses
- Stainless Steel wire brush
- Leather or synthetic work gloves
- Paper towels or wipes
- High pressure air hose with safety nozzle

DANGER – Insure the system has been powered down completely before attempting this realignment. Severe injury may result if the system is started while performing the piston alignment procedure.

To gain access to the piston area, first, the Front Panel (Item 4 in the drawing below) is removed by unscrewing the six M5 screws (with 3mm Allen wrench), then lift the front of the panel and slide it out. Second, remove the four M5 screws securing the Lower Front Panel (Item 5) and remove the panel.
Next, remove the four M5 screws that secure the entire cover assembly to the compactor as shown in the picture below.

Lastly, remove the M5 screw on the bottom portion of the rear cover as shown below. Remove the entire cover assembly from the rear of the compactor by lifting up and sliding it back at the same time to clear the inlet plumbing. It is recommended two people perform this task as the cover assembly can be awkward to remove in tight installations. Set the cover assembly and screws aside.
Remove Swarf Chute:
Use a 3mm Allen wrench to remove the four 5mm button head screws. Set aside.

Remove Swarf Compression Assembly:
Use a 6mm Allen wrench to remove the front outer screws (on left and right sides) leaving both middle screws in place. Remove the 2 back screws. Loosen the upper screws of the swarf compression assy. Grasp both sides of the swarf compression assembly, lift while angling back. Set aside.

Remove Compactor Splash Guard:
Using a 3mm L key Allen wrench, unscrew the 3 button head socket screws and set aside. Use a 6mm Allen wrench to remove the 2 screws from the pipe compactor assy. Remove front cover and set aside.

Remove Pipe Compactor Assembly:
Use a 6mm Allen wrench to remove the 4 screws (on left and right sides). Grasping both sides of the pipe compactor assembly, lift while angling back. Set aside.
Rotate Piston Assembly to fully retracted position:
Using Motor Arm and Connecting Rod rotate the Piston to full forward position as shown.
Caution pinch hazard (Motor Arm and Connecting Rod)!

Removing Debris:
Don a pair of nitrile gloves and a pair or work gloves over top. Use a putty knife to remove as much debris as possible. Use the stainless steel wire brush or thin side of the putty knife to remove particulates from between wedge wires, both sides and bottom. Do not use excessive force or damage to the wedge wire assemblies may result. Once all surface debris and wedge wire are clean, blow off surface area with air hose and wipe down mating surfaces for chute assembly. Ensure no debris has fallen down screw inserts.
Compactor wedge wire cleaned

Use a 6mm Allen wrench to loosen the 12 screws securing the Clevis Piston, Bushing Shafts to the Piston Mount.
Use a 17mm wrench and a 12” adjustable wrench to remove Crank Shoulder bolt from Motor Arm and Connecting Rod.

**Install Piston Alignment fixture:**
Piston alignment fixture attaches to the Piston and Side Wedge wire assemblies.
Set Piston alignment fixture with pins facing downwards toward the Piston Pin holes and screw down to Piston Assembly. Use a 5mm Allen wrench to install 2 screws loosely securing alignment fixture to piston.

Align fixture 6mm screw holes with Side Wedge wire assemblies and tighten down screws. Use a 5mm Allen wrench to install 4 screws loosely securing piston alignment fixture to piston. Tighten all screws in piston alignment fixture.
Now adjust both Bushing Mounts, they are to be centered to Piston assembly hole using 22awg bare copper wire.

Use a 6mm Allen wrench to tighten the 8 screws securing the Bushing Shafts to the Piston Mount. Push down on the Clevis Piston and use a 6mm Allen wrench to tighten Clevis Piston to the Piston Mount.
Use a 17mm wrench and a 12” adjustable wrench to install Crank Shoulder bolt to the Motor Arm and Connecting Rod.

Verify Compactor Rear Bushing Alignment:
Use Service Bulletin SB00012_A - HCX Compactor Rear Bushing Alignment Procedure

Remove Piston Alignment Fixture:
Place Piston Alignment Fixture in safe location or ship back to Bazell Technologies.

Install Pipe Compactor Assembly:
Grasping both sides of the pipe compactor assy set on to Wedge Wire Side plates. Use a 6mm Allen wrench to install the 4 screws (on left and right sides).

Install Compactor Splash Guard:
Set Splash Guard Cover in place.
Using a 3mm L key Allen wrench, screw the 3 button head socket screws and set aside. Use a 6mm Allen wrench to install the 2 screws from the pipe compactor assy.

Install the Swarf Compression Assembly:
Lifting the swarf compression assembly by its base set the assembly into place. Ensure rear is flush against the tube assembly plate. Check that left and right sides are aligned with base. Install rear screws finger tight. Tighten the 2 upper swarf compression screws with Allen wrench. Torque all four screws to 140in-lb (16N-m).
Install Foam Block:

Foam block orientation

Replace cover assembly from the rear of the compactor by lifting up and sliding it forward at the same
time to clear the inlet plumbing. It is recommended two people perform this task as the cover assembly
can be awkward to replace in tight installations.
Secure cover assembly with the four M5 screws (with 3mm Allen wrench).
Lastly, secure the M5 screw on the bottom portion of the rear cover as shown below (with 3mm Allen wrench).

Replace Lower Front Panel (Item 5) and securing with the four M5 screws (with 3mm Allen wrench). Replace Front Panel (Item 4 in the drawing below) is removed by unscrewing the six M5 screws (with 3mm Allen wrench).