



INSTALLATION INSTRUCTIONS

PART NUMBER	154-8673
PART DESCRIPTION	HEAD TIMING PROX SENSOR UPGRADE
REV DATE	2/20/2005
MACHINE MODELS	STD, PXS-A,B



Basic knowledge on ALL aspects of the lane machine, including mechanical, electrical and operating software

TOOLS NEEDED:

Phillips Screwdriver
 4' Level
 1/8" Drill bit

Feeler gauge
 Wrenches (1/2", 9/16" & 1/4")
 Electric Drill

Allen Wrench set
 Rags or Towels
 Small flat head screwdriver



TECHNICAL NOTE

Please thoroughly read the instructions prior to performing the installation of this assembly.

To avoid any potential problems, if at any time during the process you have a question, stop and contact our Tech Support department at the numbers listed below.

Please visit our growing library of videos to see if these instructions are available!



www.youtube.com/user/KegelBowling81



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VERY IMPORTANT

You must have the ability to upgrade the software at the conclusion of the hardware installation procedure!

Disassembly of Machine

1. Disconnect power and lay machine in the operating position.
2. Open the lid over the oil and the electrical compartment and remove the Head sensor guard.
3. On the Oil Head Timing Assembly, remove the clamp holding the sensor cable. Unplug sensors, and unscrew the old sensors and the sensor mount blocks from plate.
4. Remove the timing disc and hub by using an Allen cluster.
5. Unscrew the Phillips screw that mounts the plate to the assembly and remove .
6. Now you can remove the old sensor wires or tie them back into the harness. If you choose to remove them and have a Sanction Standard AC, VB or SE the terminal block is under the relay plate next to the PC. If you have a Phoenix-S, Echo or SM2 the terminal block is on top of the relay plate to the right.

Adding New Components:

1. Take the new plate from kit and screw to block the way the old one came off, but use the new flat heads from kit **w/ a countersunk lockwasher**. There will be an extra countersunk hole in plate at the top, disregard this hole.
2. After plate is installed slide the three ¼” nylon washers from kit on to shaft up to plate.
3. Take the new 6-Tooth Sensor Disk with set screw from kit and slide on to shaft, snug set screw but do not tighten till later.
4. Bolt new Prox Sensor on to plate with the two 4-40 x 1” ms Phillip screws, flat washers and locknuts.
5. Using feeler gauge measure between Prox and disc 0.015” then tighten prox to plate making sure the Prox is mounted square to plate.
6. Run new Prox cable threw grommet hole and wire tie to harness to the terminal block the old ones ran to.



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Wiring the Sensor:

1. Now strip the Prox sensor wire insulation back about 3", strip the blue, brown and black wire ½" to ¾". Fold the striped part of wire together so the wire is doubled on all three. Now to wire the Prox sensor cable to terminal block, take the brown wire. On one side of block with other brown wires take a small flat head screwdriver push in the top of the orange block and push wire in side of block. Release the top and make sure wire is seeded properly in block. If you have white terminal blocks use a flat head screwdriver.
2. Do the same for the blue wire in the blue block with other blue wires or if you have white terminal blocks use flat head screwdriver.
3. If you haven't all ready remove the old black sensor wire from terminal block across from the Red/White wire. Install new black Prox wire to the terminal block across from Red/White wire.
4. Power machine up and go to * **DUST CTRL&RSET** screen and put in managers password to access the Managers Menus, then hit menu till **EMERGENCY MENU** then hit the next key till **OIL SENSOR REROUTE** and use the LEFT and RIGHT arrows to choose the # 1. Press ENTER to change the NO to YES. The sensor is now by-passed.
5. The next procedure is to adjust the board counting target by using the indicator lights on the proximity sensors. These lights come on when metal passed by the face of the sensors. The goal is to have the indicator light for the board counting proximity sensor come on when the oil head target is in the middle of both the left and right lane edge sensor (or very close to middle).

NOTE: The distance between the metal target on the oil head and the proximity sensor should be a gap of **0.025"**.

6. Move the oil head all the way to the 10-pin side wall (outside of the proximity sensor). Slowly move the head toward the middle of the lane edge proximity sensor. When the board counting sensor light comes on stop and note the position of the oil head target to the lane edge sensor. Use this same procedure for the 7-pin side.
7. After doing step #6 if you have the board counting sensor indicator light coming on in the same position for both lane edge sensors then the adjustment is good. If not, go to the next step.



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8. If on the 10-pin side the board counting sensor comes on too soon and the 7-pin side comes on late, the board counting target will need to be turned in a counter-clockwise direction and vice-versa if they are off in the other direction.
9. **NOTE:** When determining the direction to turn the target look at the face of the target for clock direction.
10. Now it is time to make sure that the board counting target is secured and the head assembly is tight. Place the cover back on the head assembly and tighten the acorn nuts.
11. Run machine to make sure everything has been timed properly.



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