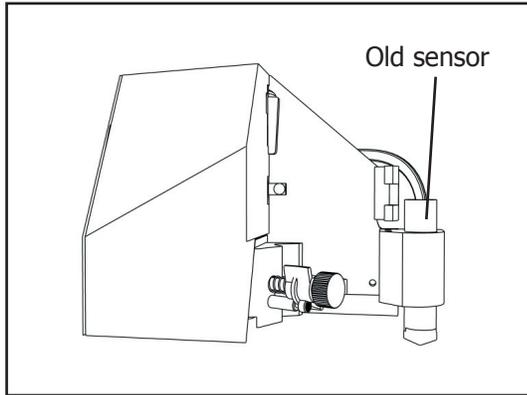
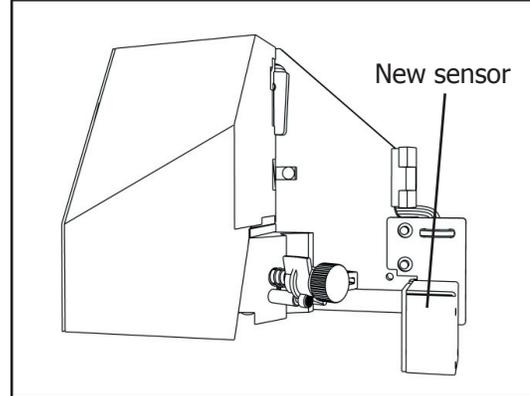


600Ae - Nonus Sensor replacement

Description: This procedure describes the steps for upgrading the sensor on the 600Ae carriage assembly. (*See below*)



Old style "Wand" sensor



New style "Nonus" sensor

Tools Required:

- Philips screwdriver
- 11/32 Socket & Driver
- Soldering Iron & Solder
- 9/64" allen wrench

Included with the upgrade kit

- 1) Sensor unit with wires.
- 2) (2) Screws for mounting new sensor.
- 3) Tyrap

NOTE: You must have the ability to solder electronic components.

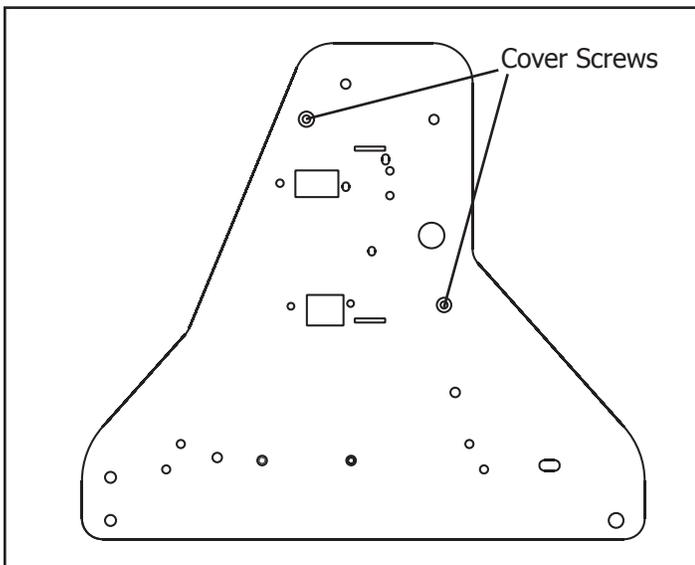
1 Remove the left end cover

1. Remove the two (2) black phillips screws on the left side of the machine that hold the left cover on.
2. Remove the left end cover from the machine and set it aside.

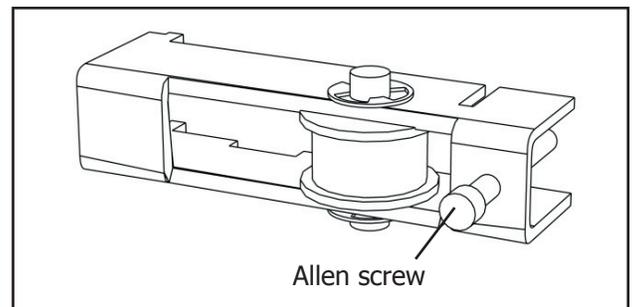
2 Remove the carriage assembly

1. Loosen the 9/64" allen screw on the Y axis belt tensioner until the belt is loose enough to remove from the carriage.

Note: While loosening the screw count the number of turns you make and write it down. This will help later when tightening the screw.

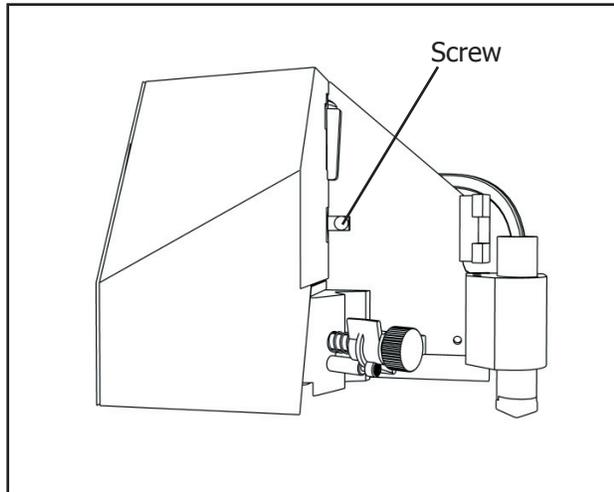


Left end plate

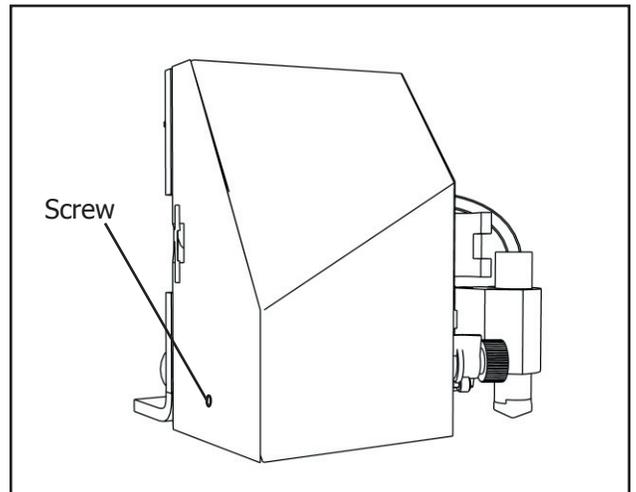


Y axis belt tensioner

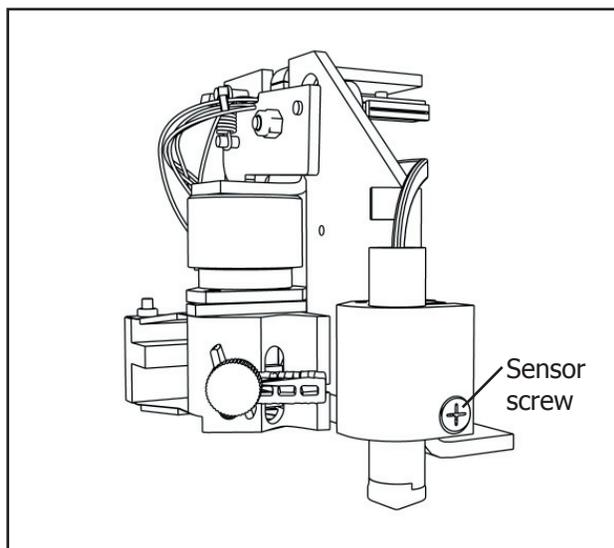
2. Remove the cover on the carriage. One screw on the right side.



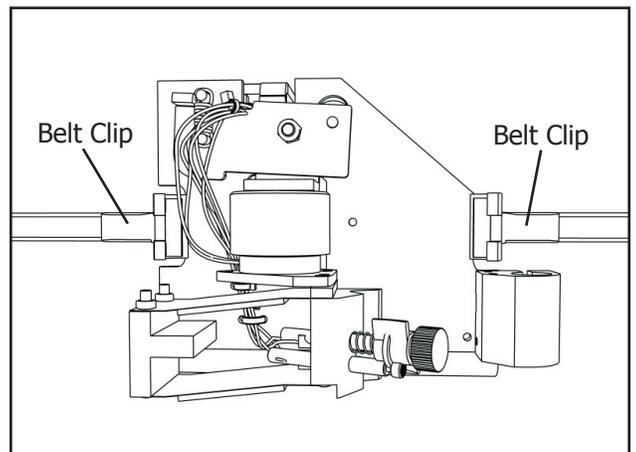
3. One screw on the left side.



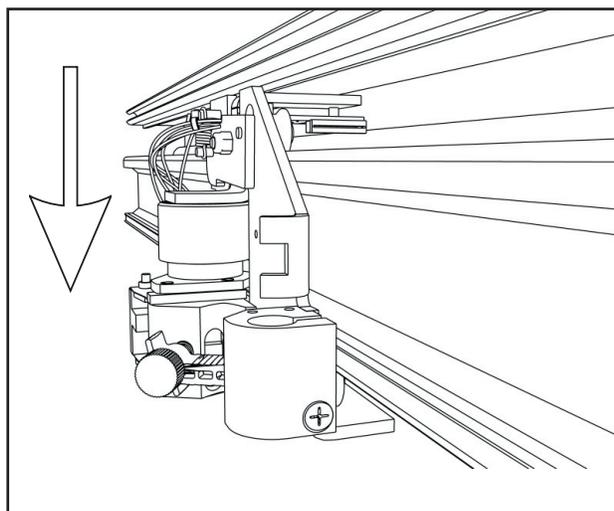
4. Loosen the phillips screw on the right side of the sensor unit and pull the sensor out of the holder.



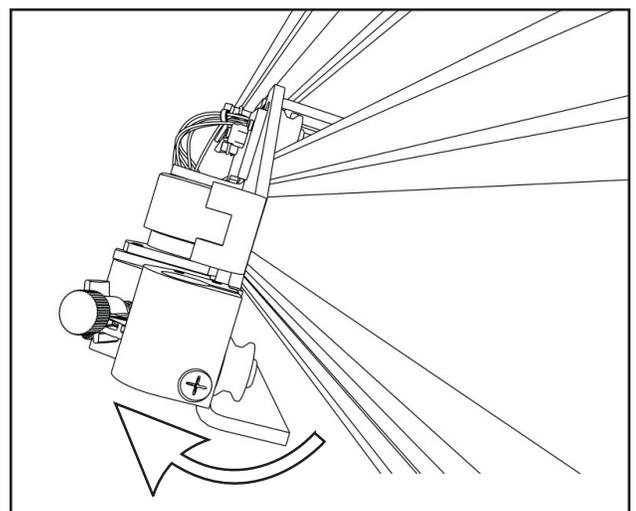
5. Un-clip the ends of the belt from the carriage.



6. Remove the carriage from the rail.
a. Push down on the top of the carriage.

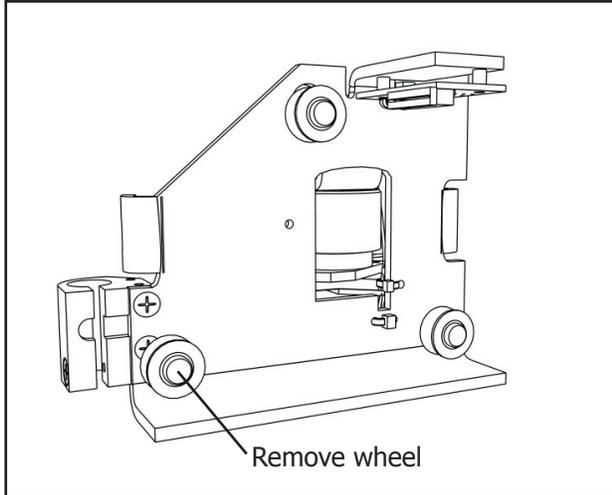


b. Pull the bottom towards you.

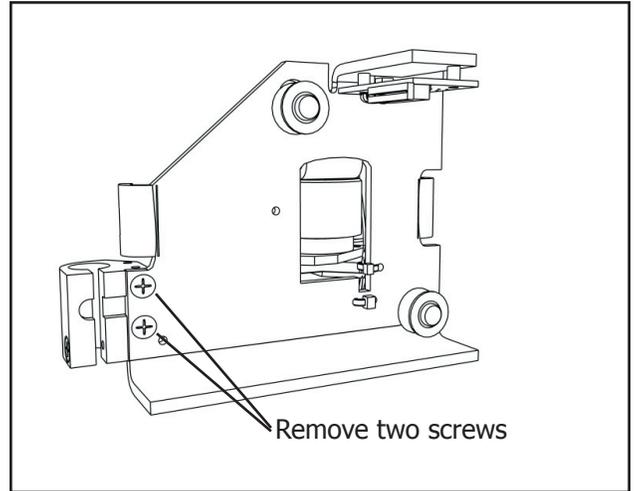


3 Replacing the sensor bracket

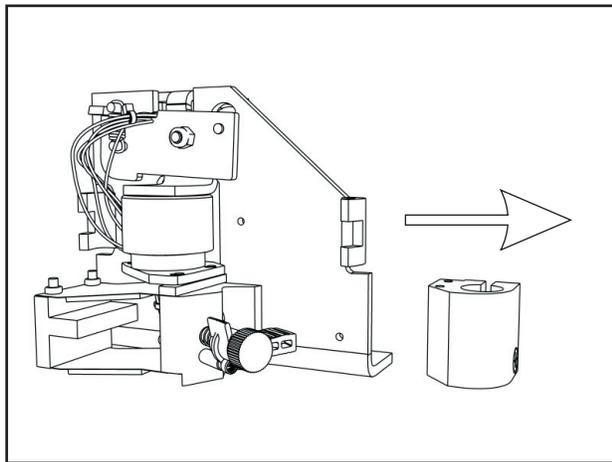
1. On the back of the carriage are 3 wheels, remove the bottom left wheel using the 11/32" socket driver (from the back).



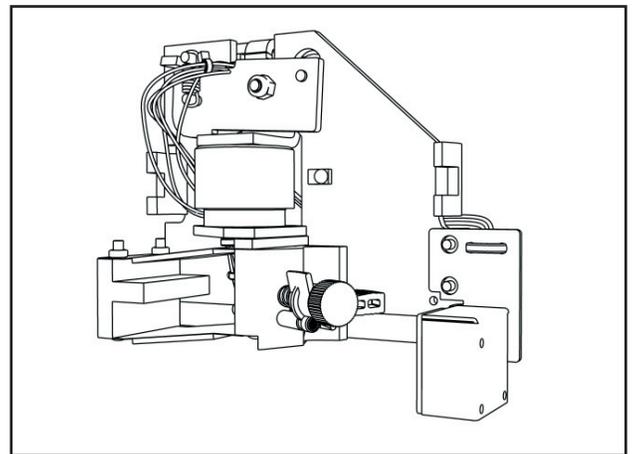
2. Remove the two screws behind the wheel



3. Remove the old sensor bracket from the carriage.



4. Install the new sensor bracket on the carriage.
NOTE: Use the screws that came with the new sensor to mount it.



4 Re-Install the carriage wheel

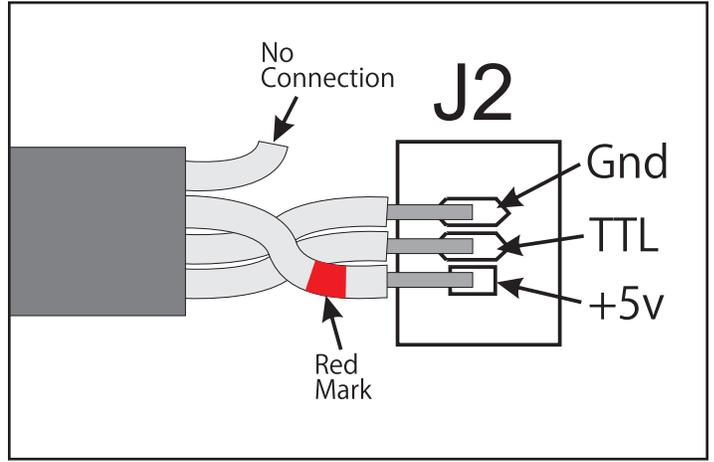
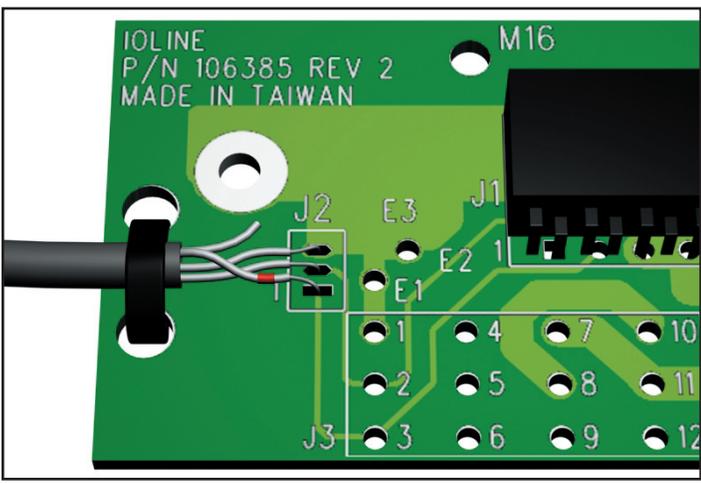
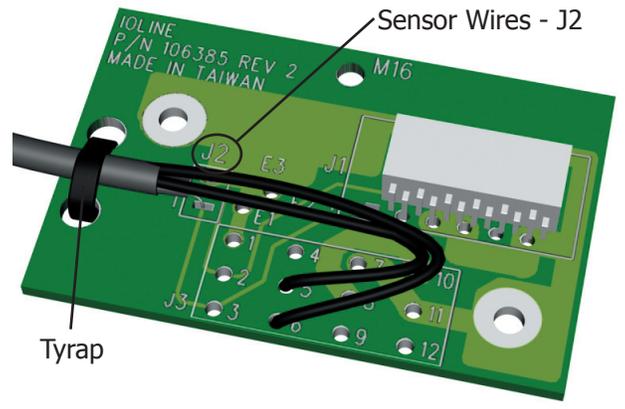
1. Re-install the wheel on the back of the carriage.
- Note: If the wheel is attached using a HEX bolt you can tighten the bolt snug. If it's attached using a nylock nut then make sure you don't overtighten the nut. In both cases the wheel should rotate freely without play.

6 Soldering

1. Start by un-soldering the old sensor wires from the board (3 wires at J2). Set the old sensor aside.
2. Locate the "Red" mark on the new sensor wire.
3. Solder the new sensor wires to the holes located in the J2 section on the printed circuit board. (See below for wiring diagram).

5 Identifying the sensor wires.

1. Remove the screws holding the printed circuit board on the back of the carriage assembly.
 2. Cut the tyrap holding the wires to the printed circuit board.
 3. Locate the "J2" section on the printed circuit board. (See below)
- NOTE:** Pull the two long wires aside to see the sensor wires (3 total)



4. Once the wires are soldered in install the tyrap through the holes shown above.
5. You are ready to test the new sensor. Follow the disassembly procedure in reverse order to re-attach the carriage to the rail.
6. If problems arise contact Ioline Tech Support for further help.

