



**BinMaxx
Troubleshooting Guide
14mm Bolt
22mm Socket**

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Checking AD Readings

1. Turn the vehicle on to power the scale.
2. Turn on your scale display. Press ESC until you see **PRINT, ERASE** blinking.
3. Scroll down to **DIAGNOSTICS** and press **OK**.
4. Scroll down to **ECU** and press **OK**.
5. **SENSOR DATA** will be blinking. Press **OK**.
6. The screen will display **LT SENSOR** and **RT SENSOR** with numerical values. These are your A/D readings. These numbers should be between 500 and 1500.
7. If your sensors are not between 500 and 1500, please see “Setting A/D Values for Deflection Sensors” shown below, for instructions on how to set the values correctly.

NOTE:

After initial installation, or anytime after the sensors have been reset, and prior to the “break in procedures” being performed (see below for break in procedures and explanation), the A to D readings should be between 750 and 1250. Anytime after the “break in procedures” have been performed, the acceptable reading is between 500 and 1500.

A to D readings should **ONLY** be checked when there is **NO WEIGHT ON THE FORKS** and the torque tube is lowered close to the ground.

Setting A/D Values for Deflection Sensors

1. Gather the following tools:
 - 120 ft-lb. capable Torque wrench
 - 22mm socket
 - Ladder
 - Air-Weigh deflection sensor test box (p/n 1001) or use the in-cab display diagnostics menu seen on the page above to view the AD readings throughout this process.

2. If A/D reading is BELOW 500:
 - Loosen both nuts on the sensor.
 - Exert downward pressure with your finger on the **plastic nut found at the end of the cable side of the sensor** until you reach an A/D reading between 750 and 1250.
 - Torque the nut on the **non-cable end** of the sensor to 60 ft-lbs while maintaining the required AD reading via continuing finger pressure on the plastic nut.
 - Repeat this process on the cable end of the sensor.
 - If the A/D readings are still within the proper range when both bolts have been torqued to 60 ft-lbs, proceed to Step 4, if not repeat these steps under Step 2.

3. If A/D reading is ABOVE 1500:
 - Loosen both nuts on the sensor.
 - Exert upward pressure with your finger on the **plastic nut found at the end of the cable side of the sensor** until you reach an A/D reading between 750 and 1250.
 - Torque the nut on the **non-cable end** of the sensor to 60 ft-lbs while maintaining the required AD reading via continuing finger pressure on the plastic nut.
 - Repeat this process on the cable end of the sensor.
 - If the A/D readings are still within the proper range when both bolts have been torqued to 60 ft-lbs, proceed to Step 4, if not repeat these steps under Step 3.

4. Final sensor torque:
 - Complete tightening the nut on the non-cable end of the sensor FIRST by torquing to 120 ft-lbs.
 - Complete tightening the nut on the cable end of the sensor NEXT by torquing to 120 ft-lbs.
 - Perform a final check of the A/D values. If not within range, repeat steps 2 or 3 and then 4.
 - If using the Deflection Sensor Test Device, disconnect the test fixture and connect the deflection sensor cable to the sensor extension cable.

Seating Arm Sensors

- Sensor seating needs to take place any time after the torque on the weighing sensors has been adjusted.

1. Start the vehicle and lower the forks.
2. Place a container filled with some type of non-liquid material on the vehicle forks.
2. Lift the weighted container above the windshield and then lower it about 20 times. Do not worry if the lift process is slightly jerky, but be careful not to let the bin touch the ground.
3. When you have lifted and lowered the container approximately 20 times, the seating process is complete. This repeated lifting and lowering will “seat” the hardware associated with the deflection sensors so that they do not move minute amounts and cause inaccurate weight readings.
4. Check the A to D readings to ensure that they are now between 500 and 1500. If they have moved beyond this range, the sensors will again need re-torqued and the seating procedures also will then need to be performed again. It is a very rare occurrence that this would occur.

Checking Prox Switch and Target Distance

When either the low or high-prox switch is NOT activated (i.e. the target plate is NOT in front of the appropriate prox sensor), the value displayed for that sensor should be between 0 and 5. When either the low or high-prox switch IS activated (i.e. the target plate IS in front of the appropriate prox sensor), the values displayed should be a four digit number.

A two or three digit sensor reading is an indication that the prox sensor is either too far away from the target plate or that there may be a problem with the cabling either being cut or dysfunctional.

1. Start the truck. Lower the fork torque tube so that it is near the ground.
2. On the BinMaxx display, enter the following key sequence:
 - Hit **ESC** until **DIAGNOSTICS** displays at the bottom of the screen
 - Scroll down to **DIAGNOSTICS** and press **OK**
 - Scroll down to **ECU** and press **OK**
 - Scroll down to **Sensor Data** and press **OK**
 - Scroll down to **Prox Switches** and press **OK**
3. Slowly raise the fork torque tube until the LO PROX reading on the display changes from a single digit number to a four digit number. Try to stop your movement at the EXACT spot at which the change from a single digit number to a four digit number occurs. Measure to see how far the center of the fork torque tube is from the ground, at the EXACT spot that the change took place. This needs to be approximately 50" from the ground (anywhere between 48" to 52" is fine). If it is not, proceed to "**IF THE LO PROX ACTIVATION HEIGHT IS OUT OF SPEC**" seen below to adjust the activation height.
4. Next, slowly raise the fork torque tube until the HI PROX reading on the display changes from a single digit number to a four digit number. Try to stop your movement at the EXACT spot at which the change from a single digit number to a four digit number occurs. Measure to see how far the center of the fork torque tube is from the ground, at the EXACT spot that the change took place. This needs to be approximately 100" from the ground (anywhere between 98" to 102" is fine). If it is not, proceed to "**IF THE PROX ACTIVATION HEIGHT IS OUT OF SPEC**" seen below to adjust the activation height.

IF THE PROX ACTIVATION HEIGHT IS OUT OF SPEC (Non McNeilus FEL)

1. Locate the proximity sensors and their target plates, typically on the passenger side on the torque tube. The prox sensors will be hanging from a holder that is welded to the body and the targets will be wrapped around the torque tube via a band clamp.
2. With the center of the fork torque tube already sitting at either 50" from the ground for setting the LO prox or 100" from the ground for setting the Hi prox, loosen the screw on the band clamp that holds the target plates and that wraps around the torque tube, relevant to the sensor on which you are adjusting.
3. Rotate the target plate so that it is just beginning to activate (i.e. changing from a single digit to a four digit reading).
4. Tighten the screw on the band clamp that wraps around the torque tube, ensuring that it does not slip at all during this process.
4. Start the vehicle. Make sure that the BinMaxx display is still showing **Prox Switches** information. If it is not, follow the instructions in Step 4 above to show the correct display readings for the prox sensors.
5. Lower the forks a few inches. The **LO PROX** display should read between 0 and 5. Raise the forks slowly until the **LO PROX** display changes and immediately stop raising the forks. Re-measure the fork torque tube height to make sure the tube is between 48" and 52" from the ground for the LO Prox or 98" to 102" for the HI prox. Repeat steps 1 thru 4 until the desired fork heights have been obtained.

FOR McNEILUS FEL

All above procedures are basically appropriate; however the prox sensors are located on the McNeilus cam found on the passenger side of the truck, near the torque tube and the McNeilus target moves forward as the fork torque tube is raised. There are typically three prox sensors found on this McNeilus cam. The first sensor, the one farthest from the front of the truck, is the Air-Weigh LO prox sensor. The middle prox sensor is shared by McNeilus and Air-Weigh and functions as the McNeilus above cab alarm and the Air-Weigh HI prox sensor. The third sensor, the one closest to the front of the truck is solely used by McNeilus as the in hopper alarm sensor and has nothing to do with the BinMaxx scale.

Procedurally and operationally, the alignment of the McNeilus target plate with the BinMaxx Lo and HI prox sensors is adjusted conceptually much the same; therefore follow the directions in the section above.