

03/27/2015

BOOM JOYSTICK CONTROLLERS

The joystick controllers used on the Skyjack telescoping (40/45 T & 61/66 T) and the articulating (46/51 AJ & 63 AJ) boom lift models all operate similarly. Whether it is a single or dual function joystick, testing and troubleshooting steps are the same.

When the joystick is powered, it shows a neutral signal to the On-board Control Module or OCM. This neutral signal is between 4.2 and 4.8 volts. As the joystick is moved in any direction, this signal changes by either rising toward 8.5 volts maximum, or dropping to .5 volts minimum. This change in signal tells the OCM which direction you are asking the function to move – the volts drop or rise, and how fast you want the function to move – how much rise or drop in voltage occurs.

Reading this on a voltmeter would show the neutral signal sitting at 4.2/4.8 volts. As the joystick is moved forward, and the voltage rises to 4.9, the valve will start to move the function and as the voltage continues to rise toward the 8.5 volt maximum, the function speed will increase. When the boom is to be lowered, the volt reading would start again at the neutral signal of 4.2/4.8 volts. As the joystick is moved backward, and the voltage drops to 4.1, the valve will start to move the function and as the voltage continues to drop toward the .5 volt minimum, the function speed will increase.

Troubleshooting the joystick is simple. Connect your voltmeter to the power and ground wires at the joystick. Power up the control box and you should read your system voltage. If no voltage is seen, repair the ground or power circuit to the joystick. With good power and ground to the joystick established, move the meter positive lead to the signal wire to the OCM. Power up the controls and check that the OCM is powered and shows FUNCTIONS OFF. The signal wire should read 4.2 to 4.8 VDC. If not, check the OCM and if OK, replace the joystick. If OK, operate the joystick and watch the signal raise or lower as the handle is moved. If no signal change is seen replace the joystick. If the signal changes as it should, the joystick is working.

The correct service manual for the model and serial number of the machine you are servicing has complete joystick controller and OCM information and voltage references for troubleshooting. You can contact Skyjack Product Support at 1-800-275-9522 or email service@skyjack.com if you have any questions regarding this or any Skyjack product.