An Oshkosh Corporation Company

Troubleshooting Manual

Models

1200SJP
1350SJP

3128463

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SECTION 1. DTC DICTIONARY AND SELECTED TROUBLESHOOTING

For a list of Diagnostic Trouble Codes (DTC's), see the table of contents.

DTC 001 - EVERYTHING OK

Everything OK. The "normal" help message when the analyzer is plugged into the platform. No problem is detected.

DTC 002 - GROUND MODE OK

Ground mode OK. The "normal" help message when the analyzer is plugged into the ground module. No problem is detected.

DTC 0010 - RUNNING AT CUTBACK - OUT OF TRANSPORT POSITION

Running at cutback - out of transport position. Drive speed is limited to programmed maximum because the vehicle is out of transport position. Maximum drive speed is set in the Personality of the machine. Transport position is defined as main boom retracted, and the boom angle less than +15.0° (default) from gravity. Sensor failures can change these conditions. .

Note	Pretest Instructions	Test	Result	Corrective Action
Step 1	Read faults	Are there any length sensor, boom angle sensor, switch or transport length switch faults?	Yes	Troubleshoot those faults first
			No	Go to step 2
Step 2	Return machine to transport position	Did fault clear?	Yes	Troubleshooting Complete
			No	Go to step 3
Step 3	ANALYZER ⇒ DIAGNOSTICS ⇒ TRANSPORT DATA ⇒ TRANSPORT MODE	Does it read OUT OF TRANSPORT?	Yes	Go to step 4
			No	Reprogram/replace ground module
Step 4	ANALYZER ⇒ DIAGNOSTICS ⇒ TRANSPORT DATA ⇒ MAIN LIFT STATUS	Does it read STOWED, or can the main boom be lowered to make it read STOWED?	Yes	Keep analyzer connected. Go to step 5
			No	Calibrate boom sensors. See 5.9 Calibrating the Boom Sensors on Pg. 228.
Step 5	ANALYZER ⇒ DIAGNOSTICS ⇒ TRANSPORT DATA ⇒ MAIN TELESCOPE STATUS	Does it read RETRACTED, or can the main boom be moved within the transport position envelope to make it read RETRACTED?	Yes	Normal operation. Troubleshooting complete.
			No	Calibrate boom sensors. See 5.9 Calibrating the Boom Sensors on Pg. 228.

DTC 0011 - FSW OPEN

Footswitch open. A drive or boom function has been selected but the platform footswitch [X152] is open. This could be caused by operator not depressing the footswitch before utilizing a machine control in the platform.

Note	Pretest Instructions	Test	Result	Corrective Action
Step 1	Go to ANALYZER ⇒ DIAGNOSTICS ⇒ SYSTEM ⇒ FOOTSWITCH INPUT PLATFORM	Does the analyzer read OPEN? -AND- Does the analyzer read CLOSED with the footswitch depressed?	Yes	If fault is clear, this is normal operation. Otherwise reprogram/replace the ground module
			No	Go to step 2
Step 2	Locate platform passthru - 15 pos [X164]. Ground meter. See Grounding on Pg. 245 for details. Take the following reading by backprobing. See Backprobing on Pg. 245 for details.	Turn on machine. Is there about 12 VDC on platform passthru terminal 8 [X164.8]?	Yes	Keep the test setup in same condition. Go to step 4
			No	Go to step 3

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Note	Pretest Instructions	Test	Result	Corrective Action
Step 9	Connect a 5000 psi pressure gauge to MP port on the main valve manifold	Adjust the low pressure relief on the function pump until gauge reads 400 psi. See Figure 3-2. Pumps Layout on Pg. 164 for location. Can adjustment be made to correct pressure?	Yes	Keep gauge installed. Make note of results. Go to step 10.
			No	Replace function pump compensating valve.
Step 10	Connect a 5000 psi pressure gauge to MP on the main valve manifold. Remove the solenoid from the main tele proportional valve.	While activating main telescope in, adjust the high pressure relief on the function pump till the gauge reads 3400 psi. See Figure 3-2. Pumps Layout on Pg. 164 for location. Can adjustment be made to correct pressure?	Yes	Keep gauge connected. Make note of results. Go to step 12
			No	Go to step 17
Step 11	Remove Main Tele Extend [X071] and Main Tele Retract [X073] connectors	Measure resistances. Do they both measure about 5 Ohms?	Yes	Replace Main Tele Extend/Retract valve cartridge
			No	Replace Main Tele Extend/Retract coil.
Step 12	Connect a 5000 psi pressure gauge to M8 on the main valve manifold. Cap the hose and port on port 8.	Activate telescope out. Does pressure read or adjust to 3000 psi? See Figure 3-1. Main Valve Layout on Pg. 163 for location of extend pressure adjustment.	Yes	Make note of results. Go to step 13
			No	Make note of results. Go to step 13
Step 13	Connect a 5000 psi pressure gauge to M7 on the main valve manifold. Cap the hose and port on port 7.	Activate telescope in. Does pressure read or adjust to 3200psi? See Figure 3-1. Main Valve Layout on Pg. 163 for location of retract pressure adjustment.	Yes	Make note of results Go to step 14
			No	Make note of results Go to step 14
Step 14		Did ONE of either M7 or M8 fail to adjust to pressure listed above?	Yes	Replace relief that did not adjust to proper pressure.
			No	Go to step 15
Step 15		Did both M7 and M8 pressures fail to adjust to pressures above	Yes	Go to step 16
			No	Go to step 6
Step 16	Swap Tele proportional valve [X072] cartridge with the Lift proportional [X286] cartridge.	Does fault move?	Yes	Replace cartridge originally in Tele proportional valve [X072]
			No	Go to step 17
Step 17	Disconnect main dump [X074]	Measure resistance. Is coil resistance about 5 Ohms?	Yes	Go to step 18
			No	Replace main dump coil.
Step 18	On main valve, cap port B and P2 (to aux pump). Install 5000psi gauge on MP port and.	Activate telescope in. Does pressure read or adjust to 3400 psi with high pressure relief?	Yes	Keep test setup in place. Go to step 19
			No	Go to step 20
Step 19	Remove cap from port B and restore connection.	Activate telescope in. Does pressure read or adjust to 3400psi with high pressure relief?	Yes	Repack/reseal swivel
			No	Replace check valve in aux pump.
Step 20	Replace main dump cartridge.	Does fault clear?	Yes	Troubleshooting complete
			No	Replace function pump compensating valve.

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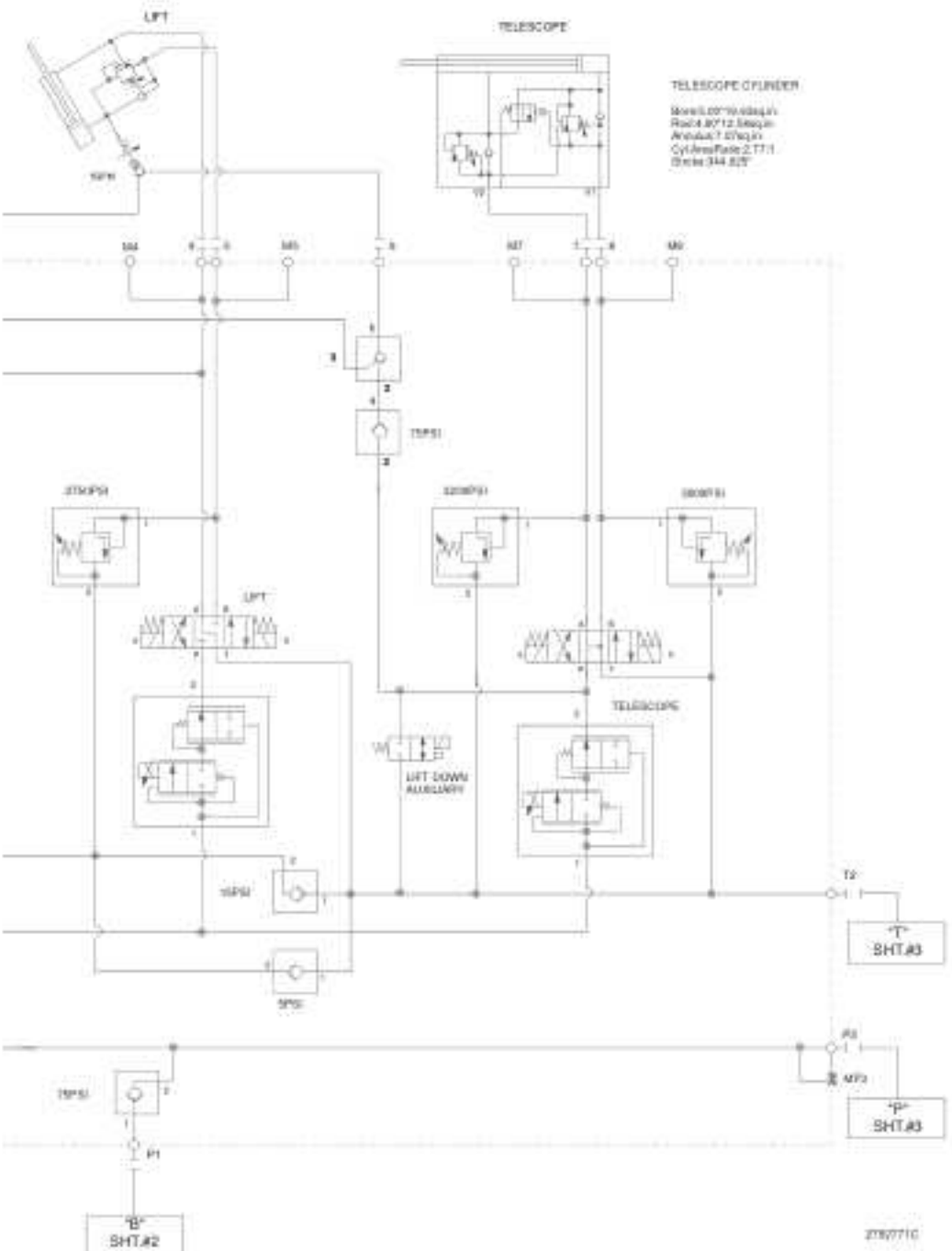


Figure 3-13. Hydraulic Schematic - Boom Control - Sheet 2 of 2

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5.2 CALIBRATING STEER

When calibrating steering, each individual wheel must be calibrated in order to make the tire and wheel parallel with the frame. Two methods to help ensure proper calibration are the use of a carpenter's square to square the spindle to the axle or aligning the two wheels on one side using a stretched string.





1. Position the Platform/Ground select switch to the Platform position.



2. Plug the analyzer into the connector at the base of the platform control box.



3. Pull out the Emergency Stop switch and Start the engine.



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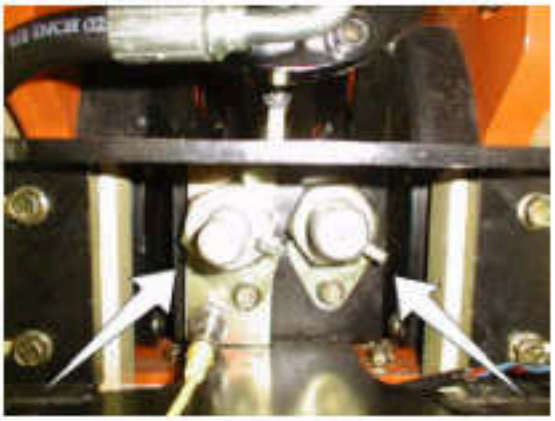
4. Using tool P/N 4120043, torque fly retract adjuster nuts to 80 ft.lb. (112 Nm), alternating between the two ropes until both maintain the required torque.



5. Retract boom 2 to 3 feet (0.6 to 0.9 m) from extension point reached in Step #2.

NOTE: *Ensure the boom is not fully retracted for following steps.*

6. Using tool P/N 4120043, torque outer mid extend adjuster nuts to 80 ft.lb. (112 Nm), alternating between the two ropes until both maintain the required torque.



7. Using tool P/N 4120040, torque fly extend adjuster nuts to 10 ft.lb. (14 Nm), alternating between the four ropes until all maintain the required torque.



8. Fully retract the boom assembly and verify the exposed boom section dimensions meet the dimension tolerances shown in Figure 5-11., Wire Rope Tensioning Figure A.
9. Reinstall nylon collar locknuts to fly extend wire rope fittings. Torque locknuts to 10 ft.lb. (14 Nm).
10. Reinstall lock plates to remaining adjuster nuts.
11. Install all covers and check for proper function of boom assembly.

NOTICE

DO NOT REPEAT STEPS #2 THROUGH #7 MULTIPLE TIMES TO VERIFY ROPE TENSION. VERIFICATION OF THE ROPE TENSION SHOULD BE DETERMINED BY PROPER FUNCTION OF THE BOOM ASSEMBLY.

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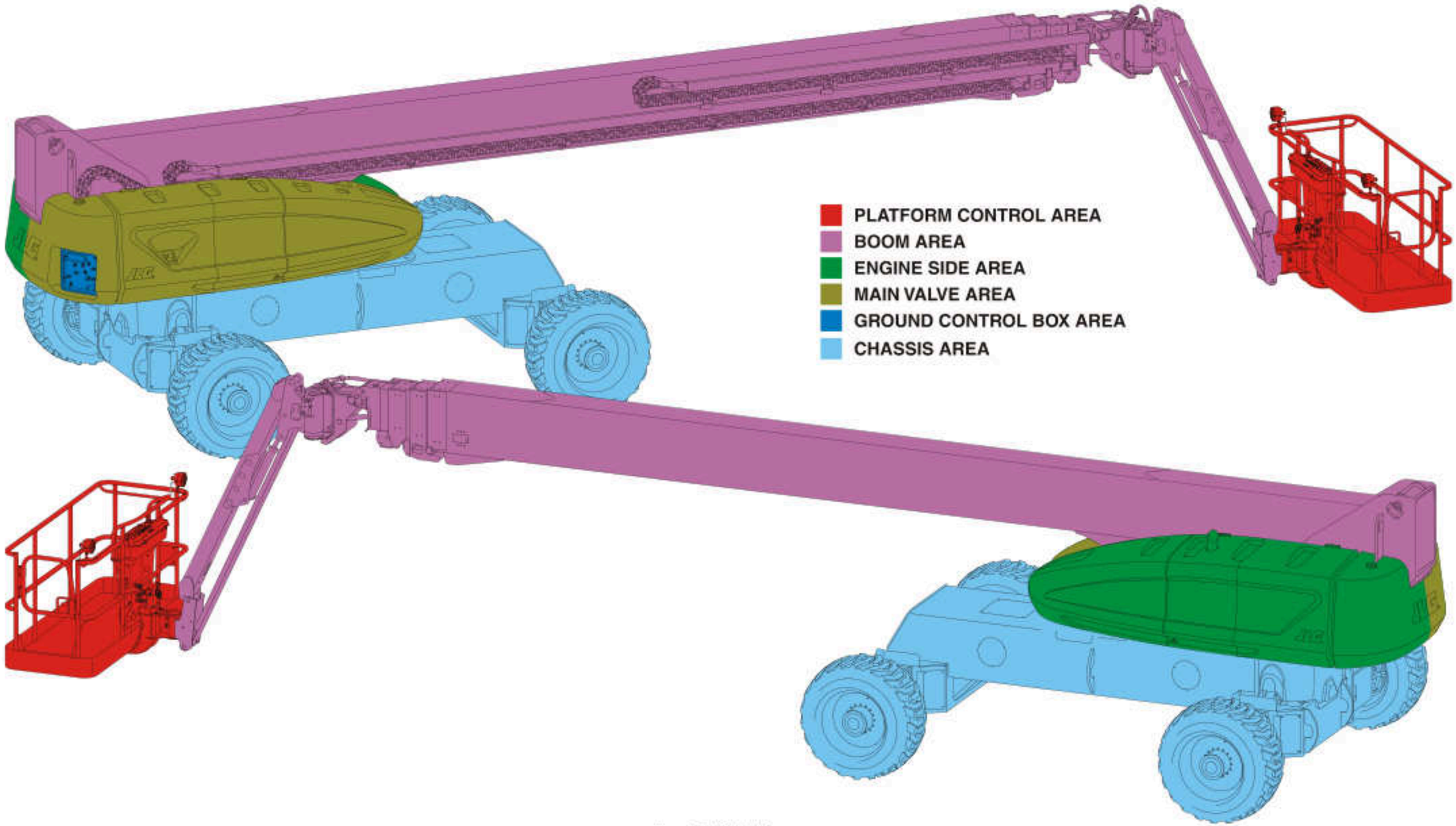


Figure 2-1. Color Key

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