

TECHNICAL SERVICE BULLETIN



NSS Enterprises, Inc.



Please post for your Service Department to see

To: NSS Distributors & Service Centers
Date: 7-31-07
Product: ALL Wrangler and Charger Models that use a Curtis Board
Subject: Curtis Control Troubleshooting

Curtis Control Troubleshooting

Drive Motor Output Test

1. Turn the machine off and disconnect the batteries.
2. Refer to TSB 00.15 and perform the test procedure for the potentiometer to verify that the potentiometer is good condition.
3. Remove the green and white wire from the Curtis board. **Take care not to damage the connectors or Curtis board when removing the wires.**
4. Set your meter to DC Volts and connect your meter leads to the Curtis board.
5. Connect the batteries and turn the machine on. Your meter should be reading 0 volts.
6. Twist the handle to the forward position the voltage should climb up to the battery pack voltage.
7. Twist the handle to the reverse position, the voltage should drop to 0 and climb to about 70 % of the battery pack voltage.

Note: The polarity on the meter will change when you twist the handle to the reverse position.

Note: Test performed on a 36volt system



Forward



Reverse

If you have questions please contact:
NSS Technical Services 800-261-3499

Bush solenoid output test.

1. **Important:** Leave the drive motor wires disconnected or disengage the drive motor breaker to disable the drive motor.
2. **Make sure** the brushes are in the operate position and that the brush safety switch is engaged and working properly. Note: refer to wiring diagram if necessary.
3. Twist the handles forward; you should hear the brush solenoid click.
4. Did the solenoid click? Yes, stop the output from the Curtis board is working. No, go to step 5.
5. Disconnect the control wires from the solenoid and connect your meter leads to them. You should read 35 volts when the machine is in neutral. The voltage will jump up to about 38 volts when you twist the handle. The voltage readings will be lower if your batteries are run down or your testing a 24 Volt system. You should however see about a 3 Volt difference when you twist the handle.

Note: The Curtis board limits current flow in the brush solenoid circuit to protect against shorts. The board will cut power if the solenoid shorts out.



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