CEBM002104

SHOP MANUAL

KOMATSU®

GD750A-1

MOTOR GRADER

SERIAL NUMBERS GD750A-1 - 7001 and up

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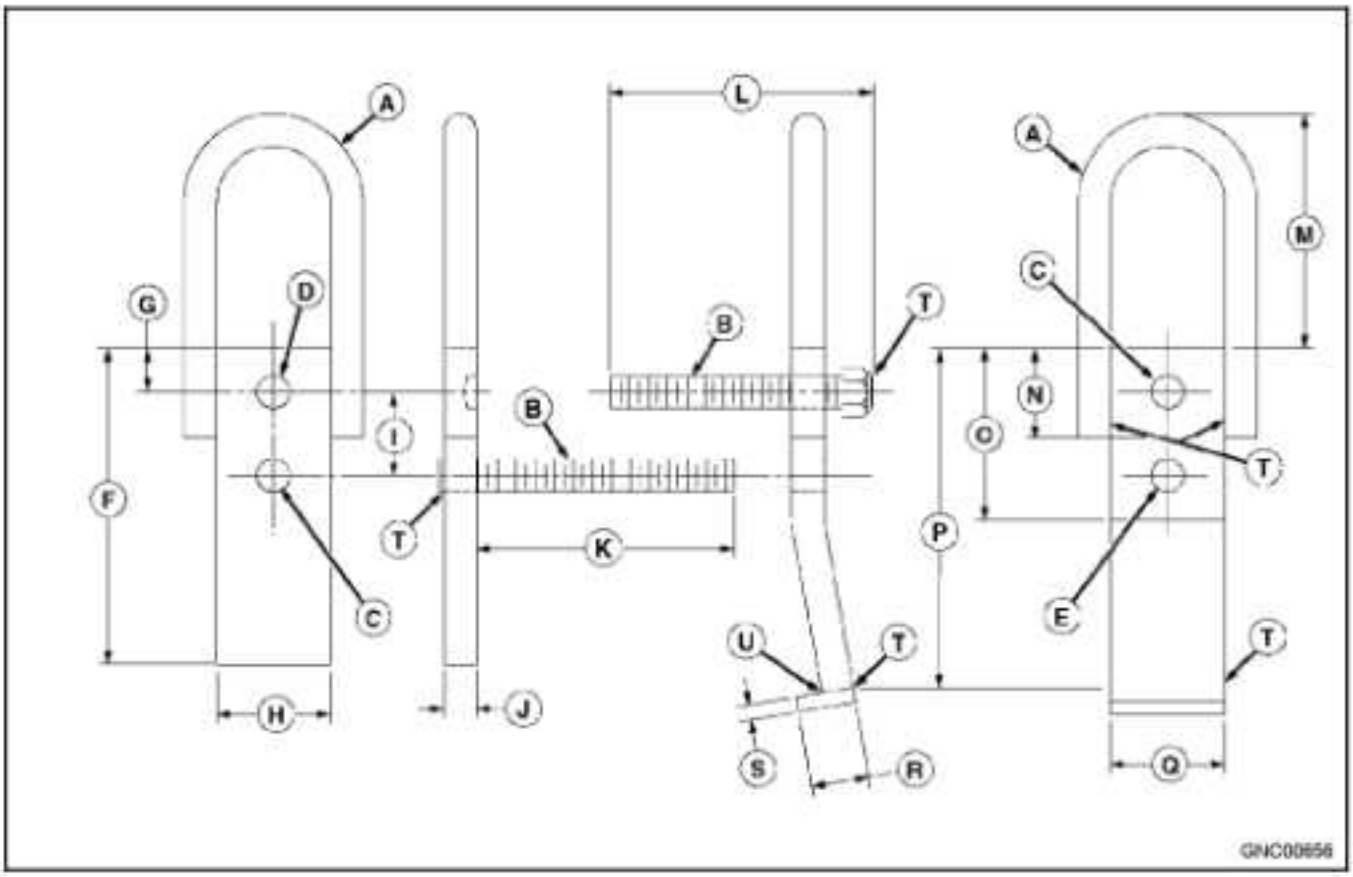
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CODE 176

Symptom	Problem	Solution
Solenoid driver 12 cannot get up to requested current. There is a problem in the pin J3-J1 (output) to pin J3-J2 (return) circuit path.	Solenoid disconnected.	Verify harness is connected to solenoid.
	Open circuit in wiring to solenoid.	1. Inspect wiring in solenoid circuit between solenoid and ECU for cuts, frayed areas, or pinched spots. 2. Replace or repair wire(s) as necessary.
	Solenoid return line shorted to GND or vehicle frame.	1. Disconnect connector J3 from ECU. 2. Check continuity between return pin J3-J2 and common GND pin J3-A2. 3. If continuity is found, a short exists; inspect and repair. 4. Visually inspect return line for damaged insulation and verify that it is not shorted to the vehicle frame.
	Solenoid output line shorted to GND or vehicle frame.	1. Disconnect connector J3 from ECU. 2. Check continuity between output pin J3-J1 and common GND pin J3-A2. 3. If continuity is found, a short exists; inspect and repair. 4. Visually inspect output line for damaged insulation and verify that it is not shorted to the vehicle frame.
	Open circuit in solenoid.	1. Disconnect solenoid from harness. 2. Check continuity of solenoid. 3. If an open circuit is indicated, or a resistance measurement indicates more than 50 ohms, replace solenoid.
	Solenoid is incorrect voltage type (12V vs. 24V).	1. Disconnect solenoid from harness. 2. Measure solenoid resistance. 3. Resistance should be approximately 10 ohms for a 12V system (may range from 7 to 14 ohms depending on solenoid temperature), and approximately 40 ohms for a 24V system. 4. If resistance is incorrect, replace solenoid.
	Faulty ECU.	After all other possible causes have been eliminated, replace ECU.

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DIFFERENTIAL LIFTING TOOL



A. 12.70 mm (0.500 in.) Round	H. 50.8 mm (2 in.)	P. 152.4 mm (6 in.)
B. ½ in. x 13 UNC Threaded Rod	I. 38.1 mm (1.500 in.)	Q. 50.8 mm (2 in.)
C. ½ in. x 13 UNC	J. 12.7 mm (0.500 in.)	R. 25.4 mm (1 in.)
D. 9/16 in. Drill 6.35 mm (0.250 in.) Deep Max.	K. 114.3 mm (4.500 in.)	S. 6.35 mm (0.250 in.)
E. 9/16 in. Drill Through	L. 114.3 mm (4.500 in.)	T. Weld
F. 139.7 mm (5.500 in.)	M. 101.6 mm (4 in.)	U. No Weld
G. 19.05 mm (0.750 in.)	N. 38.1 mm (1.500 in.)	
	O. 76.2 mm (3 in.)	

Material Required:

2 ½ in. x 13 UNC Nuts
2 305 mm (12 in.) of 12.70 mm (0.500 in.) Round
1 241 mm (9.5 in.) of ½ in. x 13 UNC Threaded Round
1 6.35 x 50.80 x 25.40 mm (0.250 x 2 x 1 in.) Flat Steel
1 2.92 mm (11.5 in.) of 12.70 x 50.80 mm (0.500 x 2 in.) Flat Steel

The differential lifting tool is used to remove and install the differential housing.

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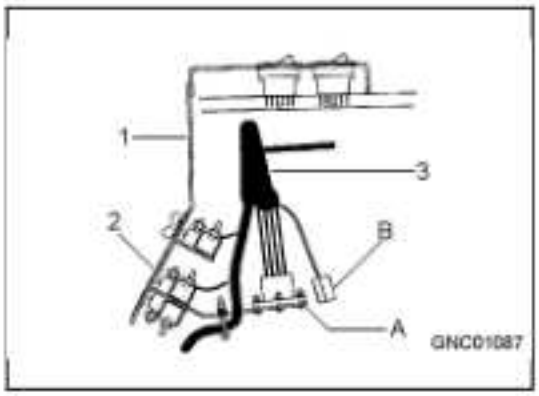
WARNING! Stop machine on level ground and lower all work equipment. Apply parking brake and put blocks under wheels to prevent machine from moving.

WARNING! Disconnect cable from the negative (-) terminal right hand side battery. The battery to machine ground is on the LEFT battery. Therefore, if the RIGHT battery is disconnected before the LEFT, you will have the possibility to have a 12V short-circuit to the machine.

DISASSEMBLY

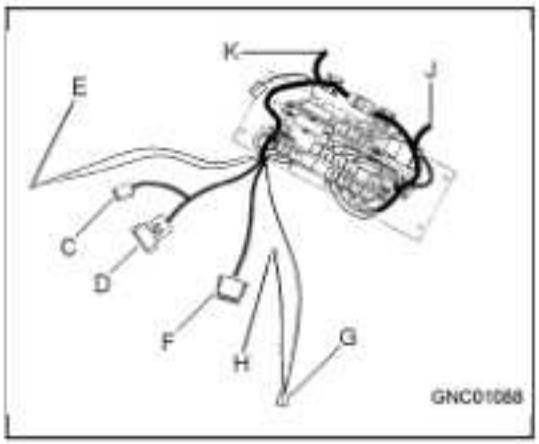
1. Open front access cover of shifter tower and disconnect switch panel harness (3) from cab harness at connector (A), also disconnect harness (3) from main harness (key switch) at connector (B).

NOTE: Switch panel harness (3) is secured to switch panel (1) with four #8-32 x 5/8 pan head screws, four #8 lock washers, and four #8-32 nuts at connector (A).



2. Disconnect switch panel harness (3) from the following connections:

   - Main harness (C) - light, wiper, and back-up alarm.
   - Cab harness (D) - light and wiper connection.
   - Cab ground (E).
   - Transmission harness (F).
   - Air Conditioner/Heater harness (G).
   - Air Conditioner/Heater ground (H)



3. Points (J) and (K) go to switches on panel.

4. Remove six screws from side and four screws from top of switch panel (1) and lift off shifter tower.

NOTE: When removing switch panel assembly, be careful to make sure all electrical wiring is disconnected.

ASSEMBLY

Assemble in reverse order of disassembly.

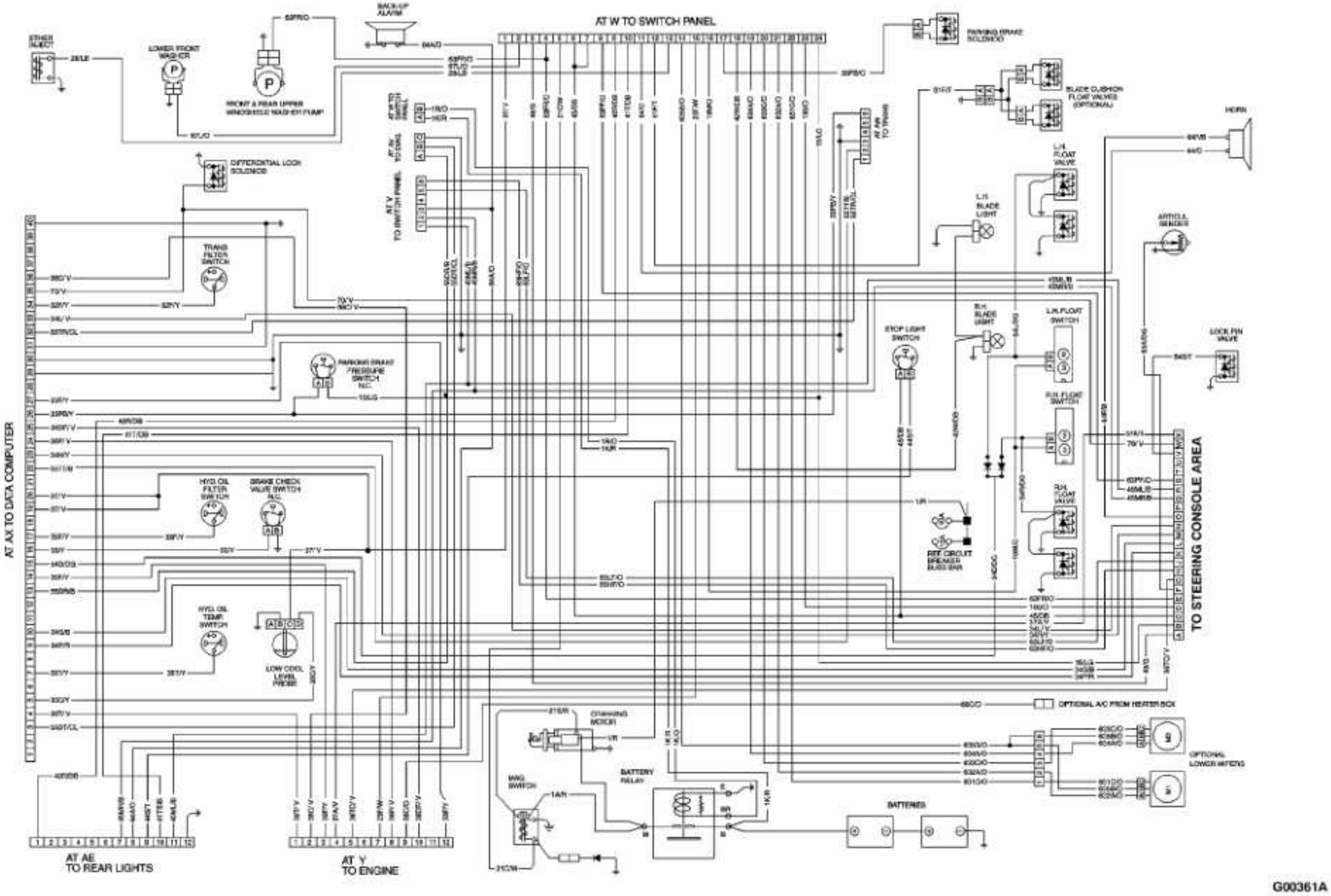
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Symptom	Problem	Solution
Differential Lock Chatters: (Perform Differential Lock Function Test).	Passes	Normal for application. Some chatter is normal in articulated vehicles with dual tires and high steering capacities.
	Fails	Vehicle problem.
Poor Brake Performance.	Low fluid level. Brake or hole in lines. Pressure low.	Fill to correct level. Replace as necessary. Inspect and repair or replace brake valve.
	Air in brake system. Brake valve malfunction.	Bleed brakes. Inspect and repair or replace brake valve.
	Worn brake parts	Inspect and replace as necessary.
	Brake system pressure low - disconnect brake line and deadhead against gauge.	Compare to specifications.
	Brake accumulator charge low.	Inspect and repair or replace as necessary.
	Seal damage	Inspect and replace as necessary
	Harden seals	Check brake valve release. Improper brake fluid type. One pint in five gallons of incorrect fluid type will contaminate system.
Brakes Chatter/Squeal	Check discs/piston	Replace as necessary. Residual brake back pressure. Drain and fill with hydraulic oil having anti-chatter additive. Use of friction modifying additives is **not** recommended.
	Air in brake system	Bleed brakes
	Wrong oil in differential	Drain and refill with correct oil
Brakes Operate Only on One Side: Dual Brakes Individual Brakes	 One side not braking. Both sides not braking.	 Plugged crossover line. Do leak down test.
Brakes Drag	Brake pedal not returning. Warped brake disc. Debris holding brake valve open. Stuck brake piston.	Inspect floor mat and pedal. Inspect brake disc. Inspect and repair or replace as necessary. Repair
Brakes Lock Up	Brake valve malfunction	Inspect and repair or replace as necessary.

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MAIN HARNESS

Foldout No. 10-169



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