NEW HOLLAND



TG210
TG230
TG255
TG285
Tractor

REPAIR MANUAL

SERVICE

87367126

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TG Tractor
Repair Manual 87367126
(Replaces Service Manual 87012641)
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TROUBLESHOOTING SUMMARY

STEPS	SPECIFICATIONS	SRT CODE
STEP 1: Check the sensor accuracy.		
STEP 1A: Verify the sensor accuracy with a thermocouple or similar temperature probe.	Sensor reading is correct	
STEP 2: Clear the fault code.		
STEP 2A: Disable the fault code.	Fault Code 146 inactive	
STEP 2B: Clear the inactive fault codes.	All faults cleared	

TROUBLESHOOTING STEP

STEP 1: Check the sensor accuracy.

STEP 1A: Verify the sensor accuracy with a thermocouple or similar temperature probe.

Condition:
- Key switch in the "ON" position.

Action	Specifications/Repair	Next Step
Verify the sensor accuracy with a thermocouple or similar temperature probe. • Connect the temperature probe to the engine near the coolant temperature sensor. • Connect an electronic service tool to the vehicle data bus. • Compare the coolant temperature reading on the service tool monitor screen to the reading from the temperature probe. **Note**: If a temperature measuring device is **not** available then answer "OK" to this step.	**OK** **Sensor reading is correct** Refer to the Troubleshooting and Repair Manual for CDC 24 Valve 8.3 Liter Engine	2A
	NOT OK **Sensor reading incorrect.** Replace the coolant temperature sensor. Refer to Procedure 019-019.	2A

STEP 2: Clear the fault code.

STEP 2A: Disable the fault code.

Condition:
- Connect all the components.
- Key switch in the "ON" position.

Action	Specifications/Repair	Next Step
Disable the fault code. • Start the engine and let idle for one minute. • Using an electronic service tool, verify Fault Code 146 is inactive.	**OK** **Fault Code 146 inactive**	2B
	NOT OK Return to the troubleshooting steps or contact the Technical Services Group (if all the steps have been completed and checked again).	1A

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Engine Speed Surges Under Load or in Operating Range

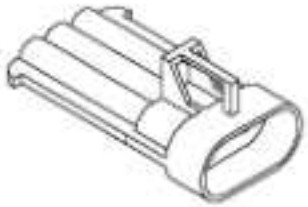
This is symptom tree T067

Cause	Correction
Fuel level low in the tank	Fill the supply tank.
OK	
Electronic fault codes active or high counts of inactive fault codes	Refer to Section TF for fault code troubleshooting.
OK	
Fuel filter is plugged	Measure the fuel pressure before and after the fuel filter. Refer to Procedure 005-011 in the Troubleshooting and Repair Manual for CDC 24 Valve, 8.3 Liter Engines.
OK	
Electronic Control Module (ECM) calibration is outdated	Compare the calibration stored in the ECM with the most recent calibration version available. If necessary, calibrate the ECM.
OK	
Electronic Control Module (ECM) calibration is **not** correct	Compare the calibration stored in the ECM with the engine rating and the Control Parts List (CPL). If necessary, calibrate the ECM.
OK	
J1939 control devices are interfering with the engine controls	Alternately disconnect all other J1939 control devices from the data bus circuit until communications or functionality is restored. Refer to the vehicle service manual to locate and repair J1939 control devices.
OK	
Accelerator pedal is restricted or malfunctioning	Check the percent throttle reading on an electronic service tool. Verify that it reads 100 percent with the accelerator pedal depressed. Calibrate the accelerator if possible. Replace the accelerator pedal if necessary. Refer to the vehicle service manual
OK	

(Continued)

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214F
PIN HOUSING
411988A1



214M
SOCKET HOUSING
ENGINE HARNESS
411986A1



CONNECTOR 214F		
INJECTION PUMP SOLENOID		
CAV	WIRE NUMBER	CIRCUIT REFERENCE
A	SOL WIRE (W)	FUEL SHUT-OFF (HOLD IN)
B	SOL WIRE (W)	STARTER RELAY (PULL IN)
C	SOL WIRE (B)	GROUND

CONNECTOR 214M		
INJECTION PUMP SOLENOID		
CAV	WIRE NUMBER	CIRCUIT REFERENCE
A	601A	FUEL SHUT-OFF (HOLD IN)
B	604A	STARTER RELAY (PULL IN)
C	603A	GROUND

215F
PIN HOUSING
ENGINE HARNESS
182068A1



215M
SOCKET HOUSING
SENSOR
182069A1

CONNECTOR 215F		
COOLANT TEMP SENDER		
CAV	WIRE NUMBER	CIRCUIT REFERENCE
A	SENSOR	COOLANT TEMP
B	SENSOR	COOLANT TEMP GND

CONNECTOR 215M		
COOLANT TEMP SENDER		
CAV	WIRE NUMBER	CIRCUIT REFERENCE
A	235C	COOLANT TEMP
B	181F	COOLANT TEMP GND

216M
SOCKET HOUSING
198456A1



CONNECTOR 216M		
ENGINE OIL PRESSURE		
CAV	WIRE NUMBER	CIRCUIT REFERENCE
A	181H	OIL PRESSURE GROUND
B	255C	OIL PRESSURE +5V
C	256C	OIL PRESSURE SIGNAL

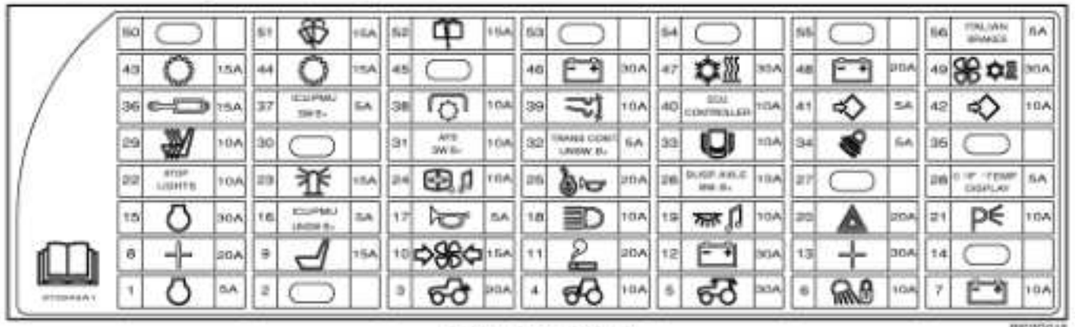
217
ENGINE HARNESS



CONNECTOR 217		
RING TERMINAL		
CAV	WIRE NUMBER	CIRCUIT REFERENCE
1	604A	START RELAY-FUEL SHUTOFF PULL IN

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Fuse and Relay Panel, Key Electrical Connectors

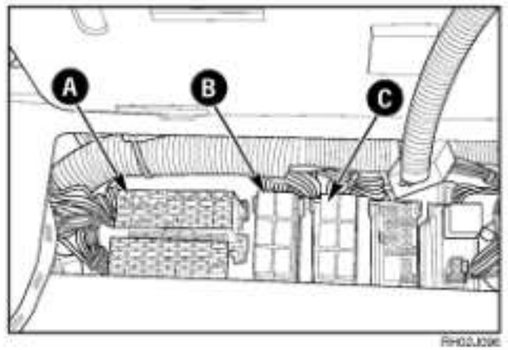


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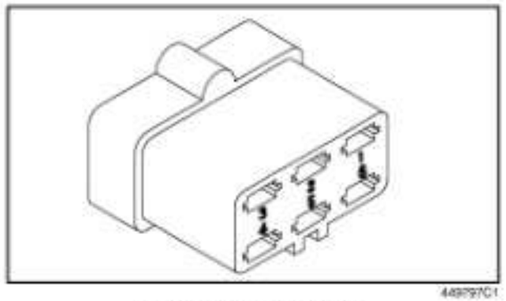
Tractor Fuse Layout

NOTE: *Fuses (A) and relays (B) are located to the rear of the operators seat, under the floor cover mat and metal cover.*

A. FUSES
B. RELAYS
C. CAB PRESSURIZER BLOWER RELAY
10. CAB PRESSURIZER BLOWER FUSE
47. CONTROLLER SWITCHED B+ FUSE
49. BLOWER MOTOR SWITCHED B+ FUSE



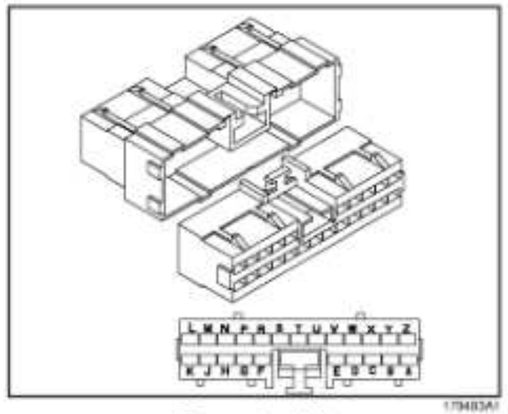
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449797C1

Blower Speed Switch

Cav	Wire No	Reference
1	- -	Not Used (A)
2	820-R	B+ from Fuse 49
3	800-Or	High Speed (4)
4	823-Or	Medium Speed (3)
5	822-Or	Low Speed (2)
6	800-Or	B+ to Clutch Relay (2)



179483A1

Connector 139

Cav	Wire No	Reference
A	800-Or	B+ to Clutch Relay from Switch
B	802-Or	High Pressure Switch
C	835-Or	B+ to Compressor Clutch
D	822-Or	Blower Speed - Low
E	823-Or	Blower Speed - Medium
F	178-Bk	HVAC Ground
G	824-Or	Blower Speed - High

Connector 139 (Continued)

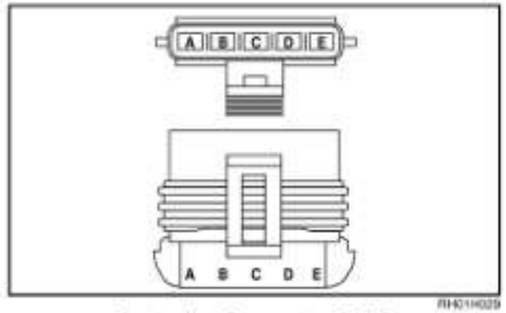
Cav	Wire No	Reference
H	- -	Not Used
J	- -	Not Used
K	- -	Not Used
L	826-Or	B+ A/C On/Off Switch
M	827-Or	Warning Lamp on Switch
N	- -	Not Used
P	- -	Not Used
R	825-R	B+ to Standard Controller
S	803-Bk	Pot Ground
T	807-LU	Temperature Control Pot
U	- -	Not Used
V	- -	Not Used
W	- -	Not Used
X	- -	Not Used
Y	- -	Not Used
Z	- -	Not Used



RH01H030

Controller Connector CCU1

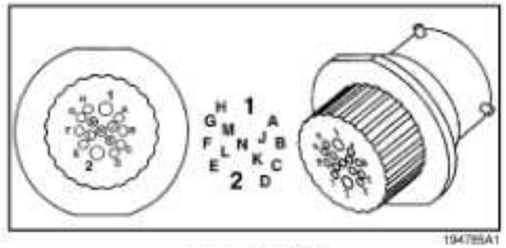
Cav	Wire No	Reference
A	252-Or	B+ to Controller
B	PB-S	Evap Temperature Sensor
C	80-Or	High Pressure Switch
D	103-Or	Temperature Control Pot
E	112-Or	B+ On/Off Switch
F	MOD-Bk	Controller GND



RH01H029

Controller Connector CCU2

Cav	Wire No	Reference
A	1A-Or	Switched GND to Relay
B	LP-Or	Low Pressure Switch
C	111-Or	B+ to Pres Warning Lamp
D	9C-Or	Heater Valve Control Signal
E	6D-Bk	Heater Valve/Motor B+



194785A1

Connector 322

Cav	Wire No	Reference
1	820-R	Blower B+ (Std)
2	824-Or	Blower High Speed (Std)
A	827-Or	Gnd Signal Pres Warn - (Std) Defrost Position (ATC)
B	821-R	Pressure Warn Lamp B+ (Std)
C	801-Bk	Chassis Gnd to A/C Switch
D	826-Or	B+ to On/Off Switch (Std) Auto Position (ATC)
E	- -	Not Used
F	850-LU	Blower Signal (ATC)
G	803-Bk	Blower Speed Pot (ATC)
H	805-R	5V LCD Display (ATC)
J	804-Bk	LCD Display GND (ATC)
K	806-LU	Data to Display (ATC)
L	800-Or	B+ to Clutch Relay (Std)
M	822-Or	Blower Low Speed (Std)
N	823-Or	Blower Medium Speed Std)

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