SERVICE MANUAL

U80C Tier 4

Tractor Backhoe

from PIN NCC570800

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NEW HOLLAND CONSTRUCTION

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Hydraulic control components - General specification Special torques

Nut for the steering wheel	**41 - 54 N·m (30.2 - 39.8 lb ft)**
Steering cylinder two wheel drive axle	**335 N·m (247.1 lb ft)**
Steering cylinder four wheel drive axle	**120 N·m (88.5 lb ft)**
Front drive shaft	**33 - 39 N·m (24.3 - 28.8 lb ft)**
Front drive shaft guard	**50 - 90 N·m (36.9 - 66.4 lb ft)**
Nut that fastens the tie rod end to the pivot arm	
Four wheel drive axle	**165 N·m (121.7 lb ft)**
Two wheel drive axle all models	**165 N·m (121.7 lb ft)**
Wheel nuts 4 WD axles	**122 N·m (90.0 lb ft)+ 3 - 10 N·m (2.2 - 7.4 lb ft)** Then turn nut an additional **90 ° +/- 5 °**
Wheel bolts 2 WD axles	**251 N·m (185.1 lb ft)**

Hydraulic control components - General specification Steering relief valve

SPECIFICATIONS

Location of steering relief valve	In steering control valve
Pressure setting	**172 +0/-10 bar (2500 +0/-150 psi)**

Hydraulic control components - General specification Rotor and stator clearance

Rotor and stator clearance	**0.13 mm (0.005 in)**
Special torques	
Allen Head Plug	**11 N·m (97.4 lb in)**
Ferry Head Screws	**25 - 31 N·m (221.3 - 274.4 lb in)**

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Wire harnesses - Electrical schematic frame 07 Hydraulics

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3283-Sensor Supply Voltage 2 - High

NOTICE: *Check alternator output voltage. Troubleshoot charging system before proceeding.*

NOTE: *Besides the 3 independent 5V voltage supplies the ECU also provides a 12V supply for the sensors. This 12V supply is monitored to ensure it remains within a certain range. This is done by using an analog input of the ECU. The lower and upper thresholds depend on the battery voltage.*

Cause:

1. Faulty alternator output.
2. Faulty wiring.
3. Connectors not mated fully, pins not pushed into connector fully, bent pin or broken wire at rear of connector.
4. Faulty reading from ECU.

Solution:

1. Verify that the fault code is active.

   (1) Connect the Electronic Service Tool to the service tool connector.

   (2) To check for fault code: Start and operate machine.

   A. NOT OK – Fault code 3283 is recorded again. Go to Step **2**.

   B. OK – Fault is not recorded again. OK for return to service.

2. Measure the ECU unswitched input voltage

   (1) Turn ignition OFF. Disconnect Engine Control Unit (ECU) connector B from engine controller.

   (2) Inspect pins on Engine Control Unit (ECU) connector and on engine controller. Clean connections.

   (3) Turn the ignition ON.

   (4) Measure the voltage from pins 1, 3, 5, and 28 on ECU connector X-461 to ground (ECU connector X-461 pins 2, 4, and 6). The voltage should be between **11.5 V** and . **13 V**.

   A. NOT OK – Voltage is too high. Troubleshoot the charging system. Return to Step **1** to confirm elimination of fault.

   B. NOT OK – Voltage is to low. Verify battery voltage. Check fuses and wiring to ECU. Return to Step **1** to confirm elimination of fault.

   C. OK – Go to Step **3**.

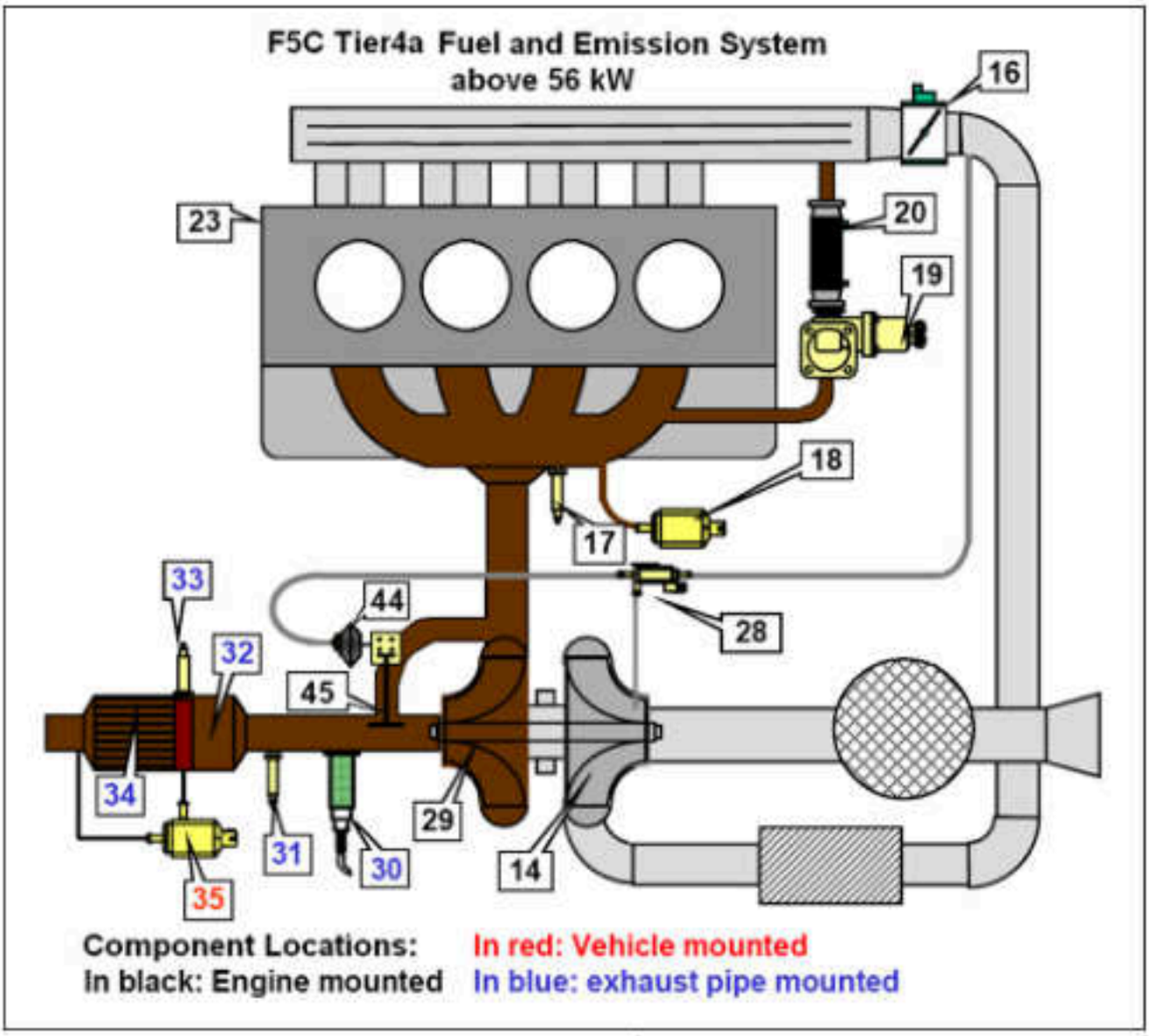
3. Replace the engine control unit.

   (1) Remove and replace engine control unit.

   A. Return to Step 1 to confirm elimination of fault.

Wire harnesses - Electrical schematic frame 04 (55.100.DP-C.20.E.04)
Wire harnesses - Electrical schematic frame 05 (55.100.DP-C.20.E.05)

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RAL12FRK1170GA 2

F5C/F5H Tier 4a Fuel and Emission System – above 56kW

Component Locations:

- Black = Engine mounted
- Red = Vehicle mounted
- Blue = Exhaust pipe mounted

F5C/F5H Tier 4a Diesel Particulate Filter (DPF) System Components	
14. Turbocharger Compressor	30. Heated Exhaust Gas Oxygen Sensor (HEGO)
16. Intake Throttle Valve (TVA)	31. DOC Inlet Temperature Sensor
17. Exhaust Manifold Temperature Sensor (T3)	32. Diesel Oxidation Catalyst (DOC)
18. Exhaust Manifold Pressure Sensor (P3)	33. DPF Inlet Temperature Sensor
19. EGR Valve with Position Feedback	34. Diesel Particulate Filter (DPF)
20. Exhaust Gas Recirculation (EGR) Cooler	35. DPF Differential Pressure Sensor
23. Engine	44. Turbocharger Waste Gate Diaphragm
28. Waste Gate Turbo Pressure Modulator	45. Turbocharger Waste Gate Valve
29. Fixed Geometry Turbocharger Turbine	

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CONTACT CONFIGURATIONS

1-P. ST | 1-P. OT | D-P. ST | D-P. OT

MISCELLANEOUS SYMBOLS

FUSE | RELAY | GROUND | BATTERY

SYMBOLS

PRESSURE SWITCH | LAMP | MOTOR | DIODE

PRESSURE | TEMPERATURE | SPEAKER | LIGHT EMITTING DIODE (LED)

VARIABLE RESISTOR | RESISTOR | COIL

CIRCUIT DIAGRAM LEGENDS

WIRE BREAK OUT | WIRE ID | COLOR | WIRE SIZE | SPLICE

WB - WIRE ID BREAKOUT
FB - FUSE BREAKOUT
GB - GROUND BREAKOUT

SP-XXX — INDICATES CIRCUIT SPLICE

INDICATES CIRCUIT CONNECTION

INDICATES CIRCUIT CROSSING NOT CONNECTED

INDICATES INTERNALLY GROUNDED UNITS

STANDARD SYMBOLD/ LEGEND

POWER DISTRIBUTION/ CHARGING SYSTEM 1

STARTING SYSTEM 2

GROUNDING 3

ENGINE CONTROL 4

ENGINE CONTROL 5

DRIVES 6

HYDRAULICS 7

FRONT EXTERIOR LIGHTS 8

INTERIOR LIGHTING 9

WIPERS AND WASHERS 10

INSTRUMENT CLUSTER 11

POWER POINTS 12

SAHR PARK BRAKE 13

HVAC 14

U80C
ELECTRICAL SCHEMATIC
RAC 47430253

LEGEND

- INDICATES CONSTANT POWER
- INDICATES POWER WHEN KEY SWITCH IS ON
- INDICATES POWER WHEN KEY SWITCH IS IN START POSITION
- INDICATES SWITCHED POWER FROM CONTROL RELAY #1
- INDICATES SWITCHED POWER FROM CONTROL RELAY #2 and #3

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