SERVICE MANUAL

Cursor® 13
Two Stage Turbocharger
Tier 4B (final) and Stage IV
Engine

See the following page for engine model numbers

Part number 47869999
English
May 2015
Replaces part numbers 47608423, 47608433, 47608443, 47608453

MidWestTech | New Holland Cursor 13 Two StageTurbocharger Tier 4B & Stage IV F3DFE613F*B001, F3DFE613F*B002, F3DFE613G*B001, F3DFE613G*B002, F3DFE613J*B001, F3DFE613J*B002 Engine Service Manual | Publication 47869999

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Problem	Possible Cause	Correction
The engine is consuming an excessive amount of engine oil.	Engine oil consumption can be caused by faulty piston rings, valve guide seals, main bearings, connecting rod bearings, camshaft bearings, crankshaft journals, tapered or out-of-round cylinders etc.	Verify that the engine is using the correct engine oil. Perform testing on the engine to help locate the cause of oil consumption. Perform an engine leak down test or wet cylinder compression test.
The cooling system is leaking coolant.	Cooling system leaks can be caused by faulty seals, gaskets, hoses, radiator or radiator cap etc.	Visually inspect all hoses, thermostat housing, water pump, radiator, and all other cooling system components for signs of leakage. If no visual leakage is found, pressure test the cooling system and check for leakage.
The engine is leaking engine oil.	Engine oil leakage can be caused by faulty seals or gaskets, excessive crankcase pressure, faulty lubrication system components, or the wrong engine oil.	Visually inspect the engine lubrication system for any signs of leakage. Inspect the engine oil filter, oil cooler, oil pump, and all seals and gaskets for leaks. Verify that the engine oil is the recommended oil. Verify that the engine oil level is not overfull.
The engine is leaking refrigerant.	Refrigerant leaks can be caused by faulty air condition components such as the compressor, condenser, evaporator, or faulty seals.	Use a refrigerant dye kit to locate the leak.
The engine is firing when not commanded.	A runaway engine condition is caused when diesel fuel continues to be injected or leaked into the engine when not commanded by the operator. Engine oil leakage into the cylinder can also cause this condition.	Leaking fuel injectors Engine oil leakage into cylinders Faulty ECU software
The engine is misfiring.	Engine misfires can be caused by faulty injection timing, malfunctioning injectors, malfunctioning injection pump or internal engine failures such as a burnt valve or a hole in a piston.	Check injection timing. Test for proper fuel pressure. Test fuel injectors for proper operation. Perform an engine compression test.
Low oil pressure	Engine oil level low	Fill to proper level
	Wrong grade of oil	Replace with correct grade oil
	Clogged oil filter	Change oil and filter
	Faulty oil pressure relief valve	Replace relief valve
	Worn oil pump drive shaft gears, or broken oil pipe	Inspect oil system and components. Replace defective components
	Excessive main or connecting rod bearing clearances	Replace bearings or shaft if necessary
	Oil pump axial clearance not properly set	Check pump clearance and shim as needed to proper tolerance.
	Faulty oil pressure sensor/oil pressure switch or electrical circuit	Check for fault codes, and testing procedures to check electrical circuits.

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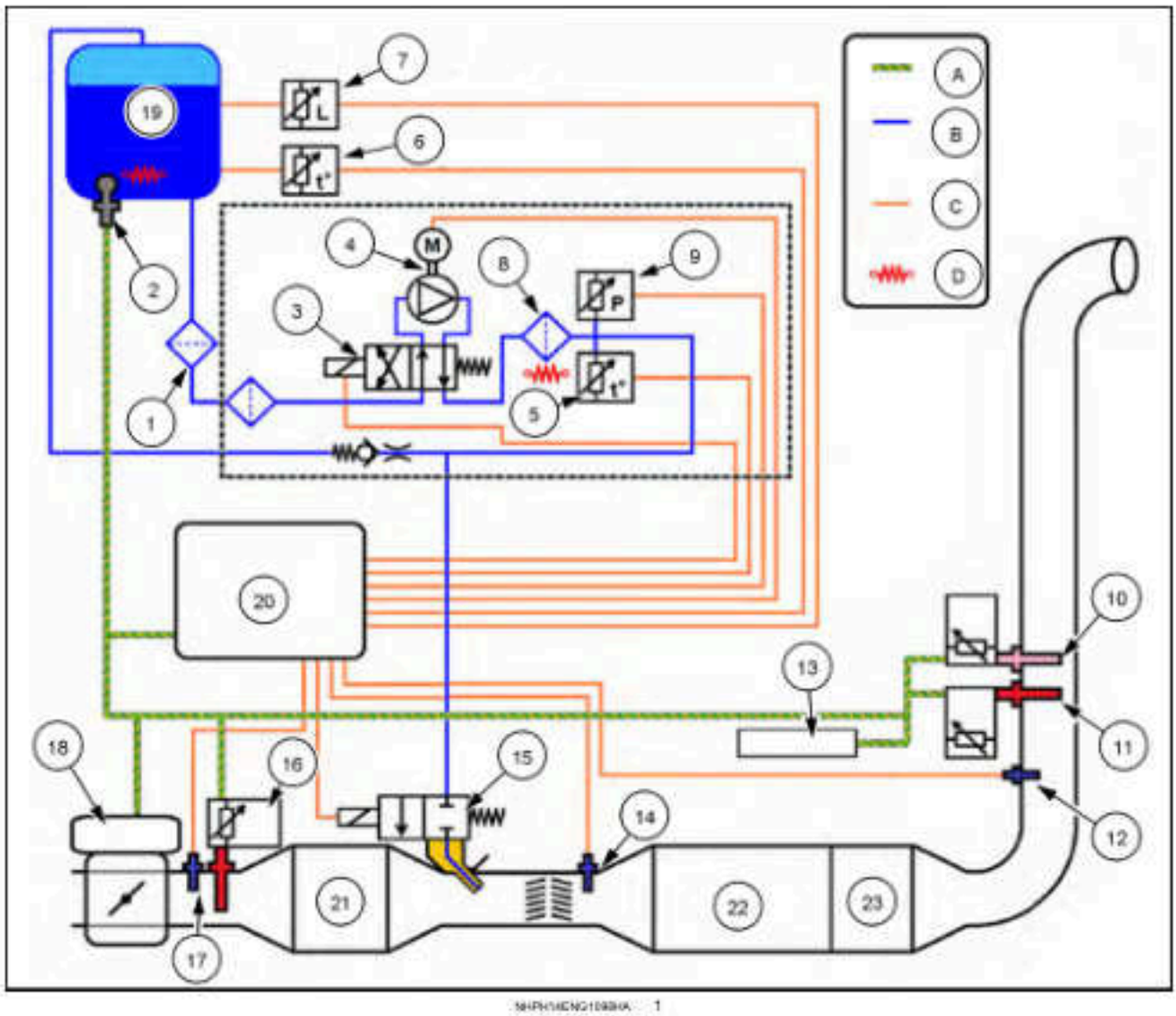
Selective Catalytic Reduction (SCR) temperature sensors - General specification

Grey wire	**5 V** supply
White wire	Ground
Operational current	**2.9 - 4.2 mA**
Pull-up voltage	**5 V**

Temperature	Straight sensor resistance	90 ° sensor resistance
-40 °C (-40 °F)	169.7 Ω	170.2 Ω
0 °C (32 °F)	200.5 Ω	201 Ω
25 °C (77 °F)	219.6 Ω	220.1 Ω
50 °C (122 °F)	238.5 Ω	239 Ω
100 °C (212 °F)	275.9 Ω	276.4 Ω
150 °C (302 °F)	312.7 Ω	313.2 Ω
200 °C (392 °F)	349 Ω	349.5 Ω
250 °C (482 °F)	384.6 Ω	385.1 Ω
300 °C (572 °F)	419.7 Ω	420.2 Ω
350 °C (662 °F)	454.2 Ω	454.7 Ω
400 °C (752 °F)	488.1 Ω	488.6 Ω
450 °C (842 °F)	521.4 Ω	521.9 Ω
500 °C (932 °F)	554.1 Ω	554.6 Ω
550 °C (1022 °F)	586.2 Ω	586.7 Ω
600 °C (1112 °F)	617.8 Ω	618.3 Ω
650 °C (1202 °F)	648.8 Ω	649.3 Ω
700 °C (1292 °F)	679.2 Ω	679.7 Ω
750 °C (1382 °F)	709 Ω	709.5 Ω

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Selective Catalytic Reduction (SCR) exhaust treatment - Overview - Hydraulic



(A) Engine Controller Area Network (CAN)
(B) Diesel Exhaust Fluid (DEF)/AdBlue® plumbing
(C) Electrical wiring
(D) DEF/AdBlue® heater

(1) Pre-filter
(2) DEF/AdBlue® quality sensor
(3) Reverting valve (internal to the supply module)
(4) Supply module
(5) DEF/AdBlue® temperature sensor (internal to the supply module)
(6) DEF/AdBlue® level and temperature sensor (combination sensor)
(7) DEF/AdBlue® level and temperature sensor (combination sensor)
(8) Filter
(9) DEF/AdBlue® pressure sensor (internal to the supply module)
(10) NH_3 sensor
(11) No_x sensor (downstream)
(12) SCR downstream temperature sensor
(13) Controller Area Network (CAN) terminator
(14) SCR upstream temperature sensor
(15) DEF/AdBlue® dosing module injector
(16) No_x sensor (upstream)
(17) Diesel Oxidation Catalyst (DOC) upstream temperature sensor (inlet)
(18) Exhaust flap
(19) DEF/AdBlue® tank
(20) Engine Control Unit (ECU)
(21) Diesel Oxidation Catalyst (DOC)
(22) Selective Catalytic Reduction (SCR)
(23) Clean Up Catalyst (part of the SCR)

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