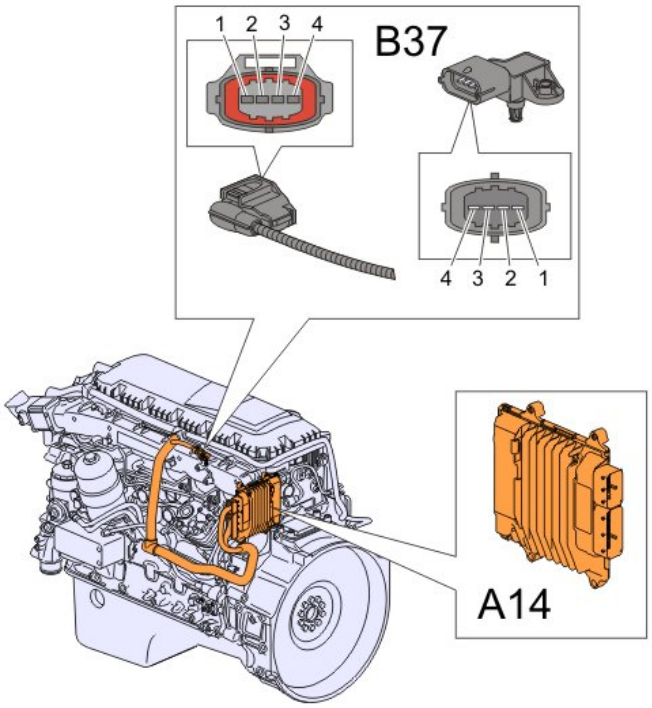
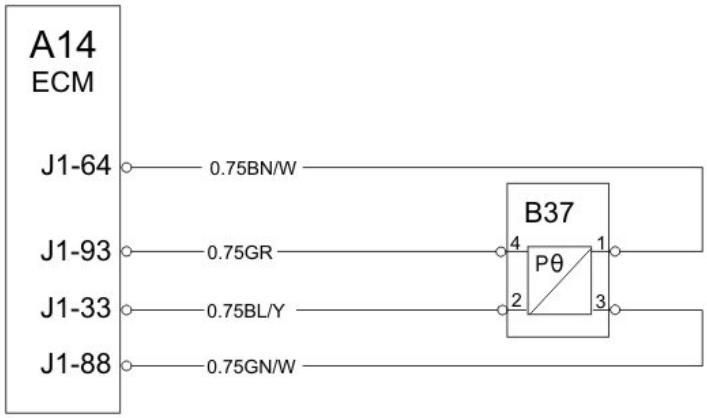
P0110 - Intake Air Temperature Sensor 1 Bank 1

B37: Charge pressure and temperature sensor.	Schematics:
	

Fault type	Condition for Fault	Observable Symptoms	Possible cause
P0110 FTB 13	• The voltage at pin A14.J1:33 is more than 4.57 V.	Engine is running but could be difficult to start in cold conditions.	• Wiring harness. • Charge pressure and temperature sensor.

Connector check:

Purpose:	Action:	Evaluation:
Check connector B37 & A14 (J1–J2).	• Check that the connectors are properly connected and locked into position. • Disconnect and check the component connector. • Inspect pins and terminals for oxidations or corrosion. • Ensure that the pins and terminals are locked into the connectors and that they are not pushed back out of the sockets. • Check the pins and terminal are not damaged (which can cause poor connection). • Carefully insert the correct test pin from special tool 9990008 and verify that pin connections are in good condition.	None.

Resistance measurement.



Measuring	Key position	Measurement points		Reference value	Measured value	Other (Special tool No.)
		Breakout box	Wiring diagram			
Component	OFF	2 — 1	B37.2 — B37.1	R = 0Ω — 10Ω	Compare the measured value to the table below.	9990216, 88890074

Reference table:

[°F]	[°C]	MIN > [Ω]	R [Ω]	MAX < [Ω]
14	-10	5000	8000	11000
32	0	3000	5000	7000
50	10	2000	3250	4500
68	20	1000	2000	3000
77	25	1500	2000	2500
86	30	1000	1500	2000
104	40	700	1100	1500
122	50	500	700	900
140	60	400	525	650
158	70	300	400	500
176	80	200	275	350
194	90	200	250	300



Measuring	Key position	Measurement points		Reference value	Measured value	Other (Special tool No.)
		Breakout box	Wiring diagram			
Open circuit	OFF	B:02 — 1	A14,J1:64 — B37.1	R = 0Ω — 10Ω		9990216, 88890074, 9990061/62, 88890227, 9998699
Open circuit	OFF	A:33 — 2	A14,J1:93 — B37.2	R = 0Ω — 10Ω		9990216, 88890074, 9990061/62, 88890227, 9998699
Open circuit	OFF	B:26 — 3	A14,J1:88 — B37.3	R = 0Ω — 10Ω		9990216, 88890074, 9990061/62, 88890227, 9998699



Measuring	Key position	Measurement points		Reference value	Measured value	Other (Special tool No.)
		Breakout box	Wiring diagram			
Short circuit	OFF	A:33 — All other pins	A14,J1:33 — All other pins	R = Open circuit		9990061/62, 88890074, 88890227, 9998699