

Electrical Test Program – Electronic Accelerator (EA) Test





⚠ WARNING!

Risk of severe injury when touching ignition parts which produce high voltages. Do not touch ignition components.


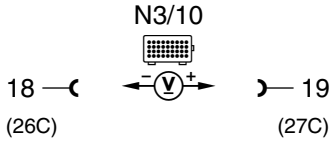
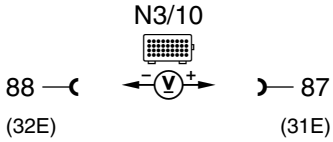
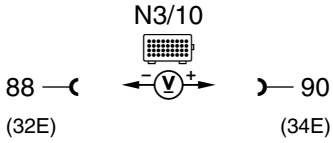
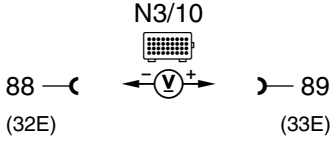
Persons with heart pacemakers are not to perform repairs on this type of ignition system.

Preparation for Test:


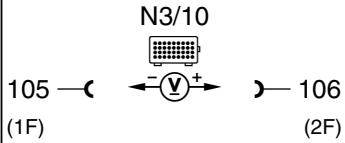
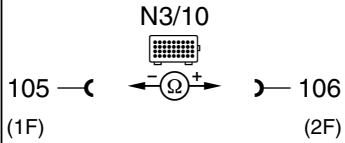
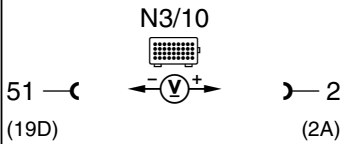
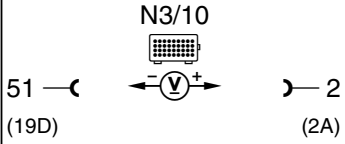
1. Review 11, 21, 22 entirely.
2. Readout DTC's in engine control module (N3/10), review 11
3. Ignition: **OFF**
4. Connect test cable with socket box to engine control module (N3/10), as per connection diagram (see section 0).

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy
1.0	PI 542 PO 507	Pedal value sensor (B37) Signal Nominal value potentiometer 1	N3/10  15 ← (23C) ← (V) + → 16 (24C)	Ignition: ON Accelerator pedal position: CTP WOT with kick-down	0.2 – 0.5 V 4.3 – 4.8 V	⇒ 1.1, Wiring, B37
1.1		Voltage supply Nominal value potentiometer 1 (Hall-sensor)	N3/10  15 ← (23C) ← (V) + → 14 (22C)	Ignition: ON	4.75 – 5.25 V	Wiring, N3/10
2.0	PI 542 PO 507	Pedal value sensor (B37) Signal Nominal value potentiometer 2	N3/10  18 ← (26C) ← (V) + → 17 (25C)	Ignition: ON Accelerator pedal position: CTP WOT with kick-down	0.1 – 0.4 V 2.1 – 2.5 V	⇒ 2.1, Wiring, B37


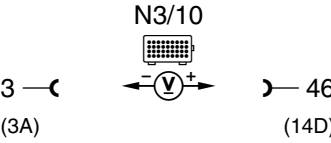
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⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy
2.1		Voltage supply Nominal value potentiometer 2	<p>N3/10</p> 	Ignition: ON	2.25 – 2.75 V	Wiring, N3/10
3.0	PD 507 PD 120 PI 186 PI 580	EA/CC/ISC actuator (M16/6) Signal Actual value potentiometer 1	<p>N3/10</p> 	Ignition: ON Accelerator pedal position: CTP WOT or kick-down	4.0 – 4.6 V < CTP value	⇒ 3.1, Wiring, M16/6
		Actual value potentiometer 2	<p>N3/10</p> 	Accelerator pedal position: CTP WOT or kick-down	0.3 – 0.9 V > CTP value	
3.1		Voltage supply Actual value potentiometers 1 and 2	<p>N3/10</p> 	Ignition: ON	4.75 – 5.25 V	Wiring, N3/10

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⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy
4.0	PI 1186 PI 580	EA/CC/ISC actuator (M16/6) Activation of actuator motor Actuator motor resistance	<p>N3/10 </p> <p>N3/10 </p>	<p>Ignition: ON</p> <p>Engine: at Idle ECT > 70 °C</p> <p>Ignition: OFF</p>	<p>0.8 – 2.3 V</p> <p>1.0 – 2.5 V Value oscillates.</p> <p>< 10 Ω</p>	Wiring, M16/6, N3/10
5.0		With AT only P/N recognition	<p>N3/10 </p>	<p>Ignition: ON</p> <p>Selector lever position: P/N</p> <p>R, D, 4, 3, 2, 1</p>	<p>11 – 14 V</p> <p>< 2.0 V</p>	Wiring, Test ETC, see DM, Chassis & Drivetrain, Vol. 1.
6.0		Manual Transmission only Clutch engage/release switch (S40/2) Signal	<p>N3/10 </p>	<p>Ignition: ON</p> <p>Clutch pedal not depressed:</p> <p>Clutch pedal depressed:</p>	<p>< 1.0 V</p> <p>11 – 14 V</p>	Wiring, S40/2

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7.0		Manual Transmission only Backup lampswitch (S16/2) Signal		Ignition: ON Reverse gear not engaged:	< 1.0 V	Wiring, S16/2
				Reverse gear engaged:	11 – 14 V	