
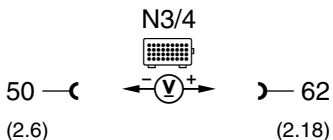
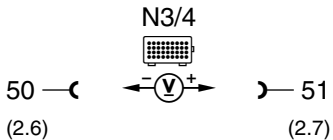
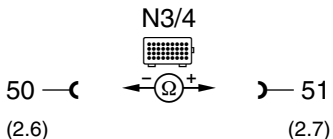

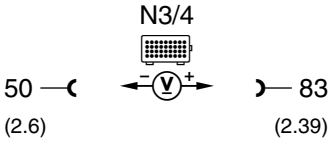
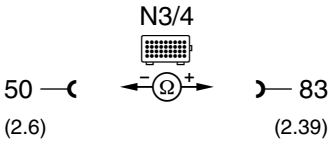



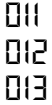

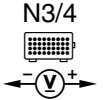
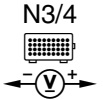
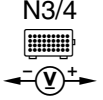
Electrical Test Program – Idle Speed Control (ISC) Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0	017 018 019 135	ISC actuator (M16/6) Voltage supply		Ignition: ON	4.7 - 5.3 V	Wiring, M16/6, Engine control module (N3/4), ⇒ 2.0
2.0	017 018 019 130 136	Drive actual value potentiometer (M16/6r2)		Engine: at Idle	3.0 - 4.2 V	⇒ 2.1, N3/4.
2.1		Resistance (M16/6r2)		Ignition: OFF Unplug connector 2 from engine control module (N3/4).	0.5 - 1.6 kΩ	Wiring, M16/6


Electrical Test Program – Idle Speed Control (ISC) Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
3.0	014 015 016	Throttle valve actual value potentiometer (M16/6r1)		Ignition: ON CTP (idle) WOT (full throttle)	Voltage changes continuously up to wide open throttle position >4 V <1 V	⇒ 3.1, Engine control module (N3/4).
3.1		Resistance (M16/6r1)		Ignition: OFF Unplug connector 2 from engine control module (N3/4). CTP (idle) WOT (full throttle)	1.0 - 3.0 kΩ 0.5 - 2.2 kΩ	Wiring, ISC actuator (M16/6).

Electrical Test Program – Idle Speed Control (ISC) Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.0		CTP switch (M16/6s1)	<p>N3/4</p>  <p>66 — 66 (2.22) 78 — 78 (2.34)</p>	<p>Ignition: ON</p> <p>CTP (idle)</p> <p>Accelerator pedal depressed</p>	<p><3 V</p> <p>>10 V</p>	<p>Wiring, M16/6s1, ⇒ 5.0 Engine control module (N3/4)</p>
5.0		Actuator motor (M16/6m1) Control signal	<p>N3/4</p>  <p>48 — 48 (2.4) 70 — 70 (2.26)</p>	<p>Engine: at Idle</p>	<p>Voltage changes continuously between 1.2 - 3.2 V</p>	<p>Wiring, Engine control module (N3/4), M16/6m1</p>
6.0		Starter lock-out/backup lamp switch (S16/1) Recognition of park/neutral (P/N) position	<p>N3/4</p>  <p>20 — 20 (1.20) 39 — 39 (1.39)</p>	<p>Ignition: ON</p> <p>Selector lever position</p> <p>P/N →</p> <p>R, D, 3, 2 →</p>	<p>11 - 14 V</p> <p><1 V</p>	<p>Wiring, S16/1.</p>
7.0		A/C compressor engagement signal Voltage	<p>N3/4</p>  <p>32 — 32 (1.32) 11 — 11 (1.11)</p>	<p>Engine: at Idle</p> <p>A/C system: ON</p>	<p><1 V</p> <p>9 - 14 V</p>	<p>Wiring, A/C pushbutton control module (N22).</p>

Electrical Test Program – Idle Speed Control (ISC) Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
8.0	139	Non-USA vehicles only. Continue to next test step.				
8.1	163 164	Non-USA vehicles only. Continue to next test step.				
9.0	120 121	Non-USA vehicles only. Continue to next test step.				
10.0		Non-USA vehicles only. Continue to next test step.				
11.0	143	Non-USA vehicles only. Continue to next test step.				

Electrical Test Program – Idle Speed Control (ISC) Test

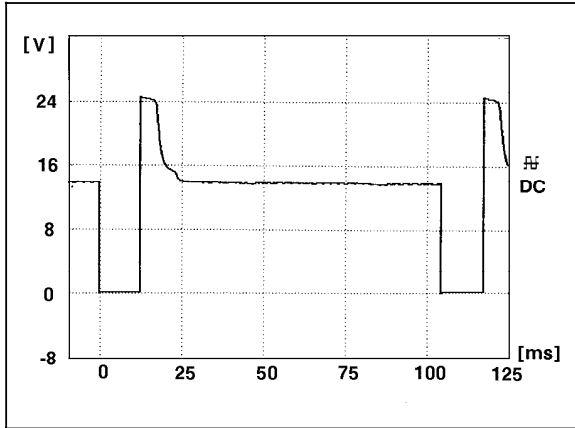


Figure 1
Actuator motor control signal without consumers

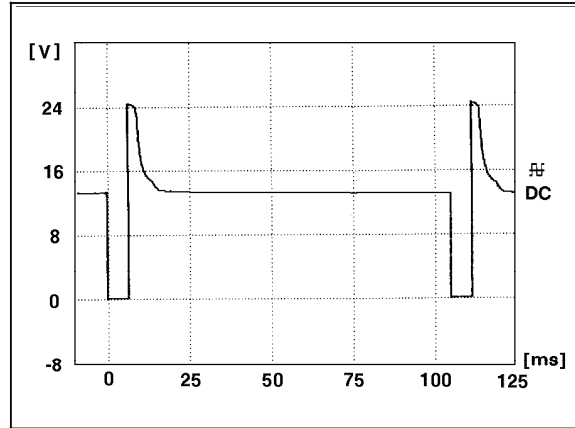


Figure 2
Actuator motor control signal with consumers