

Monday, April 19, 2010
3:04 PM



03 GT-GTS
ECU Pinout

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Vehicle: Connector Views

Engine Control Module

CHECK AT THE ENGINE CONTROL MODULE (ECU) <M/T> OR POWERTRAIN CONTROL MODULE (PCM) <A/T>

M1131153700146

TERMINAL VOLTAGE CHECK CHART

ECM <M/T> or PCM <A/T> Connector Terminal Arrangement

<M/T>

1	2	3	4		5	6	7	8	41	42	43	44		45	46	47	71	72	73	74		75	76	77
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	48	49	50	51	52	53	54	55	56	57
24	25	26	27	28	29	30	31	32	33	34	35	60	61	62	63	64	65	66	67	68	91	92	93	94
																					95	96	97	98
																					99	100		

<A/T>

1	2	3	4		5	6	7	8	41	42	43		44	45	46	71	72	73	74		75	76	77	101	102	103	104		105	106	107	
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	47	48	49	50	51	52	53	54	55	56	57	78	79	80	81	82	83	84
24	25	26	27	28	29	30	31	32	33	34	35	58	59	60	61	62	63	64	65	66	67	68	69	91	92	93	94	95	96	97	98	

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TERMINAL NO. <M/T>	TERMINAL NO. <A/T>	INSPECTION ITEM	INSPECTION CONDITION (ENGINE CONDITION)	NORMAL CONDITION
1	1	No.1 injector	<ul style="list-style-type: none"> Engine: warming up, idling Suddenly depress the accelerator pedal 	From 11 – 14 V momentarily drops slightly
9	9	No.2 injector		
24	24	No.3 injector		
2	2	No.4 injector		
10	10	No.5 injector		
25	25	No.6 injector		

ECM <M/T> Or PCM <A/T> Connector Terminal Arrangement Part 1

TERMINAL NO. <M/T>	TERMINAL NO. <A/T>	INSPECTION ITEM	INSPECTION CONDITION (ENGINE CONDITION)	NORMAL CONDITION
3	3	Left bank heated oxygen sensor heater (front)	Engine: warming up, idling	9 – 11 V
			Engine: Revving	9 – 11 V → B+ (momentarily)
4	4	Right bank heated oxygen sensor heater (front)	Engine: warming up, idling	9 – 11 V
			Engine: Revving	B+
6	6	EGR solenoid	Ignition switch: "ON"	B+
			•Engine: idling •Suddenly depress the accelerator pedal.	From B+, drops momentarily
8	8	Generator G terminal	•Engine: warming up, idling (radiator fan: stopped) •Headlight: OFF to ON •Rear defogger switch: OFF to ON •Stop light switch: OFF to ON	Voltage rises by 0.2 – 3.5 V
52	54	Generator FR terminal	•Engine: warming up, idling (radiator fan: stopped) •Headlight: OFF to ON •Rear defogger switch: OFF to ON •Stop light switch: OFF to ON	Voltage drops
11	11	Ignition power transistor	Engine: 3,000 r/min	0.3 – 3.0 V
14	14	Stepper motor coil <A1>	•Engine: warming up, idling •A/C switch: OFF → ON •Headlight switch: OFF → ON	B+ ↔ 1 V or less (changes repeatedly)
28	28	Stepper motor coil <A2>		
15	15	Stepper motor coil <B1>		
29	29	Stepper motor coil <B2>		
18	18	Fan controller	Radiator fan and A/C condenser fan are not operating	0 – 0.3V
			Radiator fan and A/C condenser fan are operating	0.7 V or more
19	19	Volume air flow sensor reset signal	Engine: idling	0 – 1 V
			Engine: 3,000 r/min	6 – 9 V
21	21	Fuel pump relay	Ignition switch: "ON"	B+
			Engine: idling	0 – 3V
20	20	A/C compressor clutch relay	•Engine: idling •A/C switch: OFF → ON (A/C compressor is operating)	B+ → 1 v or less as A/C clutch cycles
22	22	Malfunction indicator lamp (SERVICE ENGINE SOON or check engine lamp)	Ignition switch: "OFF" → "ON"	1 V or less → 9 – 13 V (after several seconds have elapsed)

ECM <M/T> Or PCM <A/T> Connector Terminal Arrangement Part 2

TERMINAL NO. <M/T>	TERMINAL NO. <A/T>	INSPECTION ITEM	INSPECTION CONDITION (ENGINE CONDITION)		NORMAL CONDITION
26	26	Left bank heated oxygen sensor heater (rear)	Engine: warming up, idling		1 V or less
			Engine: Revving		B+
27	27	Right bank heated oxygen sensor heater (rear)	Engine: warming up, idling		1 V or less
			Engine: Revving		B+
16	34	Evaporative emission purge solenoid	Ignition switch: "ON"		B+
			Engine: warm up, 3,000 r/min		3 – 13 V
35	35	Evaporative emission ventilation solenoid	Ignition switch: "ON"		B+
			Carry out the Actuator test to drive the solenoid valve		For approx. six seconds 1 V or less
44	44	Engine coolant temperature sensor	Ignition switch: "ON"	When engine coolant temperature is -20°C (-4°F)	3.9 – 4.5 V
				When engine coolant temperature is 0°C (32°F)	3.2 – 3.8 V
				When engine coolant temperature is 20°C (68°F)	2.3 – 2.9 V
				When engine coolant temperature is 40°C (104°F)	1.3 – 1.9 V
				When engine coolant temperature is 60°C (140°F)	0.7 – 1.3 V
				When engine coolant temperature is 80°C (176°F)	0.3 – 0.9 V
43	45	Crankshaft position sensor	Engine: cranking		0.4 – 4.0 V
			Engine: idling		1.5 – 2.5 V
42	46	Sensor supplied voltage	Ignition switch: "ON"		4.5 – 5.5 V
47	41	Power supply	Ignition switch: "ON"		B+
59	47				
57	49	MFI relay (power supply)	Ignition switch: "OFF"		B+
			Ignition switch: "ON"		1V or less

ECM <M/T> Or PCM <A/T> Connector Terminal Arrangement Part 3

TERMINAL NO. <M/T>	TERMINAL NO. <A/T>	INSPECTION ITEM	INSPECTION CONDITION (ENGINE CONDITION)		NORMAL CONDITION
96	51	Fuel temperature sensor	Ignition switch: "ON"	When fuel temperature is 0°C (32°F)	2.7 – 3.1 V
				When fuel temperature is 20°C (68°F)	2.1 – 2.5 V
				When fuel temperature is 40°C (104°F)	1.6 – 2.0 V
				When fuel temperature is 80°C (176°F)	0.8 – 1.2 V
54	52	Power steering pressure switch	Engine: warming up, idling	When steering wheel is stationary	B+
				When steering wheel is turned	1 V or less
32	53	Variable induction control solenoid	Engine: idling		1 V or less
			Engine: 5,000 r/min		B+
51	55	Barometric pressure sensor	Ignition switch: "ON"	When altitude is 0 m (0 ft)	3.7 – 4.3 V
				When altitude is 600 m (1,969 ft)	3.4 – 4.0 V
				When altitude is 1,200 m (3,937 ft)	3.2 – 3.8 V
				When altitude is 1,800 m (5,906 ft)	2.9 – 3.5 V
50	56	Camshaft position sensor	Engine: cranking		0.4 – 3.0 V
			Engine: idling		0.5 – 2.0 V
68	58	Ignition switch-ST	Engine: cranking		8 V or more
65	61	A/C switch 2	•Engine: idling •Outside air temperature: 25°C or more	When A/C is maximum cooling condition (when the load by A/C is high)	B+
				When A/C is maximum heating condition (when the load by A/C is low)	1 V or less

ECM <M/T> Or PCM <A/T> Connector Terminal Arrangement Part 4

TERMINAL NO. <M/T>	TERMINAL NO. <A/T>	INSPECTION ITEM	INSPECTION CONDITION (ENGINE CONDITION)		NORMAL CONDITION
62	64	Intake air temperature sensor	Ignition switch: "ON"	When Intake air temperature is -20°C (-4°F)	3.8 – 4.4 V
				When Intake air temperature is 0°C (32°F)	3.2 – 3.8 V
				When Intake air temperature is 20°C (68°F)	2.3 – 2.9 V
				When Intake air temperature is 40°C (104°F)	1.5 – 2.1 V
				When Intake air temperature is 60°C (140°F)	0.8 – 1.4 V
				When Intake air temperature is 80°C (176°F)	0.4 – 1.0 V
61	65	Volume air flow sensor	Engine: idling		2.2 – 3.2 V
			Engine: 2,500 r/min		
60	66	Backup power supply	Ignition switch: "LOCK" (OFF)		B+
71	71	Left bank heated oxygen sensor (front)	•Engine: warming up, 2,500 r/min (check using a digital voltmeter)		0 ⇔ 0.8 V (changes repeatedly)
72	72	Right bank heated oxygen sensor (front)	•Engine: warming up, 2,500 r/min (check using a digital voltmeter)		0 ⇔ 0.8 V (changes repeatedly)
73	73	Left bank heated oxygen sensor (rear)	•Engine: warming up •Revving		0 and 0.6 – 1.0 V alternates
74	74	Right bank heated oxygen sensor (rear)	•Engine: warming up •Revving		0 and 0.6 – 1.0 V alternates
78	78	Throttle position sensor	Ignition switch: "ON" (check for smooth voltage increase as throttle is moved from idle position to wide open throttle)	Idling	0.535 – 0.735 V
				Wide open throttle	4.5 – 5.5 V
79	79	Idle position signal	Ignition switch: "ON"	Set throttle valve to idle position	0 – 1 V
				Open throttle slightly	4 V or more
80	–	Vehicle speed sensor	•Ignition switch: "ON" •Move the vehicle slowly forward		0 ⇔ 8 – 12 V (changes repeatedly)

ECM <M/T> Or PCM <A/T> Connector Terminal Arrangement Part 5

TERMINAL NO. <M/T>	TERMINAL NO. <A/T>	INSPECTION ITEM	INSPECTION CONDITION (ENGINE CONDITION)		NORMAL CONDITION
83	83	A/C switch	Engine: idling	Turn the A/C switch OFF	1V or less
				Turn the A/C switch ON (A/C compressor is operating)	B+
92	91	Manifold differential pressure sensor	Engine: idling		0.8 – 2.4 V
			<ul style="list-style-type: none"> •Engine: idling •Suddenly depress the accelerator pedal 		Rises from 0.8 – 2.4 V suddenly
93	92	Fuel tank differential pressure sensor	Engine: idling		1.2 – 3.8 V
99	98	Ignition switch-IG	Ignition switch: "ON"		B+

ECM <M/T> Or PCM <A/T> Connector Terminal Arrangement Part 6

TERMINAL VOLTAGE CHECK CHART