

Monday, April 19, 2010
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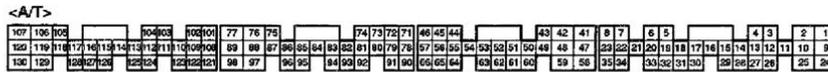
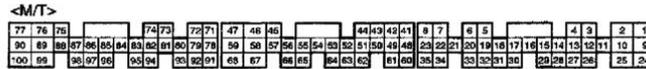


02 GT ECU
Pinout

Inserted from: <[file:///C:/Documents and Settings/Dale Mellinger/Desktop/pinouts/02_GT_ECU Pinout.MDI](file:///C:/Documents%20and%20Settings/Dale%20Mellinger/Desktop/pinouts/02_GT_ECU_Pinout.MDI)>

Vehicle: Connector Views
Engine Control Module

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



AK000069 AB

TERMINAL NO. <M/T>	TERMINAL NO. <A/T>	INSPECTION ITEM	NORMAL CONDITION (INSPECTION CONDITION)
1 - 47	1 - 41	No.1 injector	13 - 16 Ω [at 20°C (68°F)]
9 - 47	9 - 41	No.2 injector	
24 - 47	24 - 41	No.3 injector	
2 - 47	2 - 41	No.4 injector	
10 - 47	10 - 41	No.5 injector	
25 - 47	25 - 41	No.6 injector	
3 - 47	3 - 41	Left bank heated oxygen sensor heater (front)	4.5 - 8.0 Ω [at 20°C (68°F)]
4 - 47	4 - 41	Right bank heated oxygen sensor heater (front)	4.5 - 8.0 Ω [at 20°C (68°F)]
6 - 47	6 - 41	EGR solenoid	29 - 35 Ω [at 20°C (68°F)]
14 - 47	14 - 41	Stepper motor coil (A1)	28 - 33 Ω [at 20°C (68°F)]
28 - 47	28 - 41	Stepper motor coil (A2)	
15 - 47	15 - 41	Stepper motor coil (B1)	
29 - 47	29 - 41	Stepper motor coil (B2)	
26 - 47	26 - 41	Left bank heated oxygen sensor heater (rear)	11 - 18 Ω [at 20°C (68°F)]
27 - 47	27 - 41	Right bank heated oxygen sensor heater (rear)	11 - 18 Ω [at 20°C (68°F)]
16 - 47	34 - 41	Evaporative emission purge solenoid	30 - 34 Ω [at 20°C (68°F)]
35 - 47	35 - 41	Evaporative emission ventilation solenoid	17 - 21 Ω [at 20°C (68°F)]
46 - Body ground	42 - Body ground	ECM or PCM ground	Continuity (0 Ω)
58 - Body ground	48 - Body ground	ECM or PCM ground	

ECM (M/T) / PCM (A/T) Connector Terminal Arrangement And Terminals Part 1

TERMINAL NO. <M/T>	TERMINAL NO. <A/T>	INSPECTION ITEM	NORMAL CONDITION (INSPECTION CONDITION)
44 - 49	44 - 57	Engine coolant temperature sensor	14 - 17 kΩ [when engine coolant temperature is -20°C (-4°F)]
			5.1 - 6.5 kΩ [when engine coolant temperature is 0°C (32°F)]
			2.1 - 2.7 kΩ [when engine coolant temperature is 20°C (68°F)]
			0.9 - 1.3 kΩ [when engine coolant temperature is 40°C (104°F)]
			0.48 - 0.68 kΩ [when engine coolant temperature is 60°C (140°F)]
			0.26 - 0.36 kΩ [when engine coolant temperature is 80°C (176°F)]
62 - 49	64 - 57	Intake air temperature sensor	13 - 17 kΩ [when intake air temperature is -20°C (-4°F)]
			5.3 - 6.7 kΩ [when intake air temperature is 0°C (32°F)]
			2.3 - 3.0 kΩ [when intake air temperature is 20°C (68°F)]
			1.0 - 1.5 kΩ [when intake air temperature is 40°C (104°F)]
			0.56 - 0.76 kΩ [when intake air temperature is 60°C (140°F)]
			0.30 - 0.42 kΩ [when intake air temperature is 80°C (176°F)]

Terminals Part 2

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

<M/T>

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
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<A/T>

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107
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AK00057AB

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		
3	3	Left bank heated oxygen sensor heater (front)	Engine: warming up, idling Engine: Revving	9 - 11 V 9 - 11 V → B+ (momentarily)

ECM (M/T) / PCM (A) Connector Terminal Arrangement And Terminals Part 1

TERMINAL NO. <M/T>	TERMINAL NO. <A/T>	INSPECTION ITEM	INSPECTION CONDITION (ENGINE CONDITION)	NORMAL CONDITION
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+
			<ul style="list-style-type: none"> • Engine: idling • Suddenly depress the accelerator pedal. 	From B+, drops momentarily
8	8	Generator G terminal	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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>	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Engine: idling • A/C switch: OFF → ON (A/C compressor is operating) 	B+ → 1 v or less as A/C clutch cycles
22	22	Service engine soon/malfunction indicator lamp	Ignition switch: "OFF" → "ON"	1 V or less → 9 – 13 V (after several seconds have elapsed)
26	26	Left bank heated oxygen sensor heater (rear)	Engine: warming up, idling	1 V or less
			Engine: Revving	B+

Terminals Part 2

TERMINAL NO. <M/T>	TERMINAL NO. <A/T>	INSPECTION ITEM	INSPECTION CONDITION (ENGINE CONDITION)		NORMAL CONDITION
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
59	41	Power supply	Ignition switch: "ON"		B+
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
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	1V or less

Terminals Part 3

TERMINAL NO. <M/T>	TERMINAL NO. <A/T>	INSPECTION ITEM	INSPECTION CONDITION (ENGINE CONDITION)		NORMAL CONDITION
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
97	60	Fuel level sensor (Fuel gauge unit)	Ignition switch: "ON"	When fuel gauge is near "FULL"	0.1 – 3.6 V
				When fuel gauge is near "EMPTY"	2.7 – 6.2 V
65	61	A/C switch 2	<ul style="list-style-type: none"> • 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
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)	<ul style="list-style-type: none"> • Engine: warming up • Revving 		0 and 0.6 – 1.0 V alternates

Terminals Part 4

TERMINAL NO. <M/T>	TERMINAL NO. <A/T>	INSPECTION ITEM	INSPECTION CONDITION (ENGINE CONDITION)		NORMAL CONDITION
74	74	Right bank heated oxygen sensor (rear)	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Ignition switch: "ON" • Move the vehicle slowly forward 		0 ⇔ 8 -12 V (changes repeatedly)
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	<ul style="list-style-type: none"> • Engine: idling • Suddenly depress the accelerator pedal 	0.8 – 2.4 V
					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+

Terminals Part 5