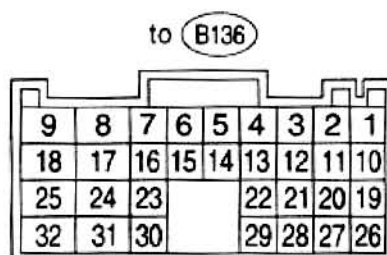
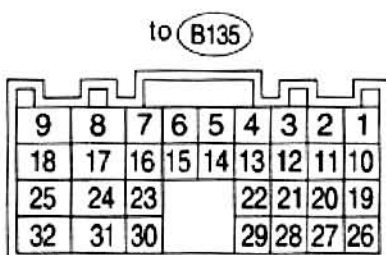
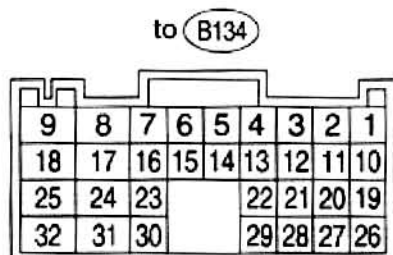


4. Specified Data

A: ENGINE CONTROL MODULE (ECM) I/O SIGNAL



5. Control Module I/O Signal

Content		Connector No.	Terminal No.		Signal (V)		Note
					Ignition SW	Engine ON (Idling)	
					ON (Engine OFF)		
Crankshaft position sensor	Signal (+)	B136	5*	6	0	±6	Sensor output waveform
	Signal (-)	B136	23		0	0	—
	Shield	B136	30		0	0	—
Camshaft position sensor	Signal (+)	B136	6*	5	0	±6	Sensor output waveform
	Signal (-)	B136	23		0	0	—
	Shield	B136	30		0	0	—
Mass air flow sensor	Signal	B136	1		1	1.0 — 1.7	—
	Shield	B136	30		0	0	—
	GND	B136	31		0	0	—
Throttle position sensor	Signal	B136	20		Fully closed: 0.5±0.3 Fully opened: 4.3±0.3		—
	Power supply	B136	12		5	5	—
	GND	B136	24		0	0	—
Oxygen sensor	Signal	B136	21		0	Rich mixture: 0.7 Lean mixture: 0	
	Shield	B136	30		0	0	—
Engine coolant temperature sensor	Signal	B136	28		0.6 — 1.0	0.6 — 1.0	After warm-up
	GND	B136	24		0	0	—
Vehicle speed sensor		B135	26		0 or 5	0 or 5	"5" and "0" are repeatedly displayed when vehicle is driven.
Starter switch		B135	2		0	0	Cranking: 10 to 14
A/C switch		B135	11		ON: 10 — 13 OFF: 0	ON: 13 — 14 OFF: 0	—
Ignition switch		B136	25		10 — 13	13 — 14	—
Neutral position switch (MT)		B135	29		ON: 5 OFF: 0		Switch is ON when gear is in neutral position.
Park/Neutral position switch (AT)		B135	29		ON: 0 OFF: 5		Switch is ON when shift lever is in "P" or "N" position.
Test mode connector		B135	22		5	5	When connected: 0
Read memory connector		B135	13		5	5	When connected: 0
Back-up power supply		B135	17		10 — 13	13 — 14	—
Control unit power supply		B136	9		10 — 13	13 — 14	—
			8				
Ignition control	# 1, # 2	B134	7		0	3.4, max.	—
	# 3, # 4	B134	16		0	3.4, max.	—
Fuel injector	# 1	B134	31		10 — 13	13 — 14	Waveform
	# 2	B134	32		10 — 13	13 — 14	Waveform
	# 3	B134	25		10 — 13	13 — 14	Waveform
	# 4	B134	18		10 — 13	13 — 14	Waveform

*: With immobiliser

Content	Connector No.	Terminal No.		Signal (V)		Note
				Ignition SW	Engine ON (Idling)	
				ON (Engine OFF)		
Idle air control solenoid valve	Signal 1	B134	14	—	1 — 13	Waveform
	Signal 2	B134	5	—	1 — 13	Waveform
	Signal 3	B134	15	—	1 — 13	Waveform
	Signal 4	B134	6	—	1 — 13	Waveform
Torque control signal 1	B135	3		5	5	—
Torque control signal 2	B135	12		5	5	—
Fuel pump relay control	B134	1*	21	ON: 0 OFF: 10 — 13	0	—
A/C relay control	B134		22	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—
Radiator fan relay 1 control	B134		4	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—
Radiator fan relay 2 control	B134		13	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—
Self-shutoff control	B136		32	10 — 13	13 — 14	—
Malfunction indicator lamp	B134		28	—	—	Light "ON": 1, max. Light "OFF": 10 — 14
Engine speed output	B135		14	—	0 — 13, min.	Waveform
Knock sensor	Signal	B136	26	2.8	2.8	—
	Shield	B136	29	0	0	—
Wastegate control	B134		19	10 — 13	13 — 14	—
Pressure sources switching solenoid valve	B134		26	10 — 13	13 — 14	—
Purge control solenoid valve	B135		7	ON: 0 OFF: 10 — 13	ON: 0 OFF: 13 — 14	—
GND (sensors)	B136		24	0	0	—
GND (injectors)	B134		9	0	0	—
GND (ignition system)	B134		17	0	0	—
GND (power supply)	B134		8	0	0	—
GND (control systems)	B136		18	0	0	—
	B136	1*	21	0	0	—
Select monitor signal	B136		3	—	—	—
			4	—	—	—
Power steering switch	B135		1	ON: 0 OFF: 10 — 13	ON: 0 OFF: 10 — 13	—
Torque control cut signal	B135		15	8	8	—
AT load signal	B136		2	0 — 0.3	0.8 — 1.2	—
MT/AT identification	B135		4	MT: 0 AT: 5	MT: 0 AT: 5	—
Pressure sensor	B136		7	5	5	—

*: With immobiliser