E.C.U. inspection table

*Data are reference values.

TERMINAL NO.	ITEM	CONDITION	*DATA	ENGINE	
				VG30i	Z24i
2	Idle-up solenoid	Engine is running. — For about 20 seconds after starting engine. — Steering wheel is turned. — Blower switch is "ON". — Headlamps are in high beam position.	Approximately 1.0V	○	○
		Engine is running. — Except the conditions shown above	BATTERY VOLTAGE (11 - 14V)		
3	Ignition check	Engine is running. — Idle speed	9 - 12V (Decreases as engine revs up.)	○	○
4	E.G.R. cut solenoid	Engine is running. — High engine revolution — Idle speed	0.8 - 1.0V	○	○
		Engine is running. — Except the above	BATTERY VOLTAGE (11 - 14V)		
5	Ignition signal	Engine is running. — Idle speed	0.4 - 0.6V	○	
			0.2 - 0.4V		○ (Intake)
		Engine is running. — Engine speed is 2,000 rpm.	Approximately 1.0V	○	
			Approximately 0.8V		○ (Intake)
6	Main relay	Engine is running. ↓ Ignition switch "OFF" — For 15 seconds after turning off ignition switch.	0.8 - 1.0V	○	○
		Ignition switch "OFF" — In 15 seconds after turning off ignition switch.	BATTERY VOLTAGE (11 - 14V)		

*Data are reference values.

TERMINAL NO.	ITEM	CONDITION	*DATA	ENGINE	
				VG30i	Z24i
8	Crank angle sensor (Position signal)	Engine is running. **Do not run engine at high speed under no load.**	2.5 - 2.7V	○	○
9	Start signal	Cranking	8 - 12V	○	○
10	Neutral/clutch switch or Inhibitor switch	Ignition switch "ON" └ Neutral/Parking	0V	○	○
		Ignition switch "ON" └ Except the above gear position	Approximately 5V (0V: with clutch disengaged)		
12	Mixture heater relay	Engine is running. └ Engine is cold or during warm up. [Water temperature is below 70°C (158°F).]	0.7 - 0.9V	○	○
		Engine is running. └ After warming up. [Water temperature is above 70°C (158°F).]	BATTERY VOLTAGE (11 - 14V)		
14	Ignition signal	Engine is running. └ Idle speed	0.2 - 0.4V		○ (Exhaust)
		Engine is running. └ Engine speed is 2,000 rpm	Approximately 0.8V		
17	Crank angle sensor (Reference signal)	Engine is running. **Do not run engine at high speed under no load.**	0.2 - 0.4V	○	○
18	Idle switch (⊖ side)	Ignition switch "ON" └ Throttle valve: idle position **Inspection should be done after warming up engine sufficiently.**	Approximately 8 - 10V	○	○
		Ignition switch "ON" └ Throttle valve: except idle position	Approximately 0V		

*Data are reference values.

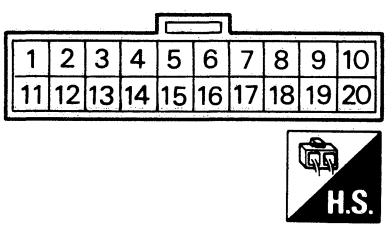
TERMINAL NO.	ITEM	CONDITION	*DATA	ENGINE	
				VG30i	Z24i
19	Throttle sensor	Ignition switch "ON" **Inspection should be done after warming up engine sufficiently.**	0.4 - 4.0V Output voltage varies with the throttle valve opening angle.	○	○
20	A.I.V. cut solenoid	Engine is running. — Engine is cold. [Water temperature is below 15°C (59°F).]	0.8 - 0.9V	○	○ (Only 2WD)
		Engine is running. — During warming up [Water temperature is between 15°C (59°F) and 40°C (104°F).]	BATTERY VOLTAGE (11 - 14V)		
		Engine is running. — After warming up. [Water temperature is above 40°C (104°F).] Idle condition after 3,000 rpm no load driving for 10 seconds	0.8 - 0.9V		
		When depressing accelerator pedal at the above condition.	BATTERY VOLTAGE (11 - 14V)		
22	Load signal	Engine is running. — Steering wheel is turned. — Blower switch is "ON". — Headlamps are in high beam.	BATTERY VOLTAGE (11 - 14V)	○	
		Engine is running. — Except the conditions shown above	Approximately 0V		
23	Water or cylinder head temperature sensor	Engine is running.	1.0 - 5.0V Output voltage varies with engine water temperature.	○	○
24	Exhaust gas sensor	Engine is running. — After warming up sufficiently.	0 - Approximately 1.0V	○	○

*Data are reference values.

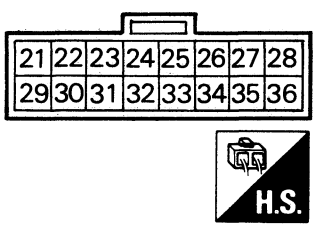
TERMINAL NO.	ITEM	CONDITION	*DATA	ENGINE	
				VG30i	Z24i
33	Idle switch (⊕ side)	Engine is running. └ Idle speed	9 - 11V	○	○
		Engine is running. └ Engine speed is 2,000 rpm.	BATTERY VOLTAGE (11 - 14V)		
27 35	Power source for E.C.U.	Ignition switch "ON"	BATTERY VOLTAGE (11 - 14V)	○	○
31	Air flow meter	Engine is running. **Do not run engine at high speed under no load.**	1.0 - 3.0V Output voltage varies with engine revolution and throttle valve movement.	○	○
101 102 103* 104* 114	Injector (*: VG30i model only)	Engine is running.	BATTERY VOLTAGE (11 - 14V)	○	○
108	Fuel pump relay	Ignition switch "ON" └ For 5 seconds after turning ignition switch "ON". Engine is running.	0.7 - 0.9V	○	○
		Ignition switch "ON" └ In 5 seconds after turning ignition switch "ON".	BATTERY VOLTAGE (11 - 14V)		
111	Exhaust gas temperature sensor	Engine is running. └ Idle speed	1.0V or more	○ (Only California model)	○
		Engine is running. └ E.G.R. system is operating.	0 - 1.0V		

PIN CONNECTOR TERMINAL LAYOUT

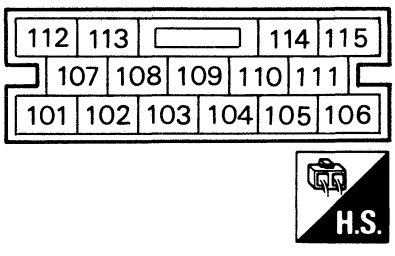
20-pin connector



16-pin connector



15-pin connector



SEF005F