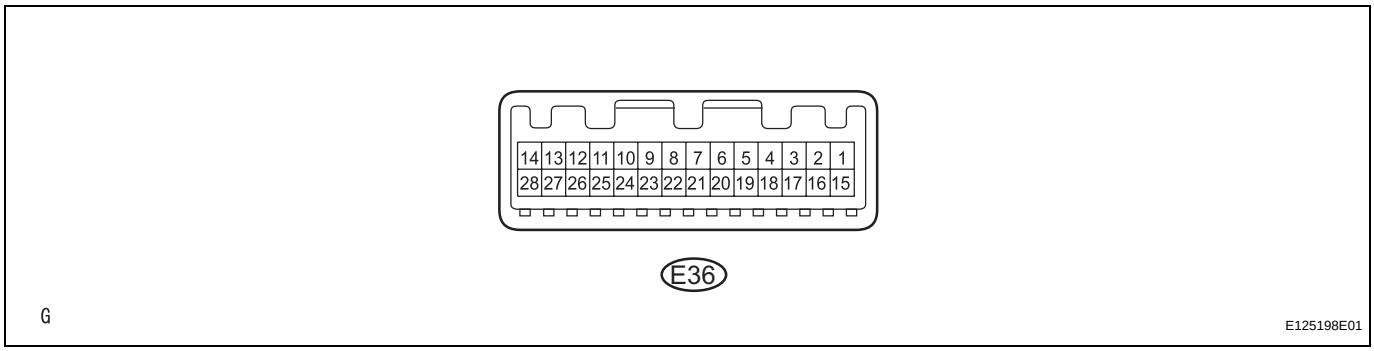
TERMINALS OF ECU

(2005/11-2006/01)

1. CHECK AIR CONDITIONING AMPLIFIER

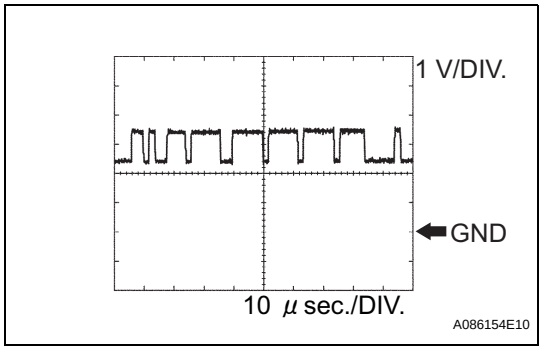


(a) Measure the voltage and resistance of the connectors.
HINT:
Check from the rear of the connector while it is connected to the air conditioning amplifier.

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
S5-3 (E36-7) - GND (E36-24)	B - W-B	Power supply for pressure sensor	Ignition switch ON	4.5 to 5.5 V
CANH (E36-8) - GND (E36-24)	V - W-B	Hi-level CAN bus line	Ignition switch ON	Pulse generation (see waveform 1)
CANL (E36-9) - GND (E36-24)	W - W-B	Lo-level CAN bus line	Ignition switch ON	Pulse generation (see waveform 2)
SG-3 (E36-23) - Body ground	B - Body ground	Ground for evaporator temperature sensor	Always	Below 1 Ω
PRE (E36-12) - SG-2 (E36-10)	L - G	Air conditioning pressure sensor signal	Refrigerant pressure: normal	0.76 to 4.74 V
PRE (E36-12) - SG-2 (E36-10)	L - G	Air conditioning pressure sensor signal	Refrigerant pressure: Abnormal (less than 0.196 MPa [2.0 kgf/cm^2, 28 psi]	Below 0.76 V
PRE (E36-12) - SG-2 (E36-10)	L - G	Air conditioning pressure sensor signal	Refrigerant pressure: Abnormal (more than 3.14 MPa [32 kgf/cm^2, 455 psi])	4.74 V or more
SG-2 (E36-10) - Body ground	B - Body ground	Ground for pressure sensor	Always	Below 1 Ω
SOL+ (E36-13) - GND (E36-24)	GR - W-B	A/C compressor operation signal	Engine idling	Pulse generation (see waveform 3)
			Heater control (blower switch): 1	
			A/C switch ON	
IG+ (E36-14) - GND (E36-24)	Y - W-B	Power source (IG)	Ignition switch ON	10 to 14 V
SBLW (E36-21) - GND (E36-24)	GR - W-B	Blower motor ON signal	Ignition switch ON	10 to 14 V → Below 1 V
			Heater control (blower switch): 0 → 1	
TE (E36-22) - SG-3 (E36-23)	W - B	Evaporator temperature sensor signal	Ignition switch ON	1 to 1.3 V
			Temperature near evaporator: 15°C (59°F)	
GND (E36-24) - Body ground	W-B - Body ground	Ground for main power supply	Always	Below 1 Ω
A/C (E36-27) - GND (E36-24)	P - W-B	A/C switch signal	Ignition switch ON	Below 1 V → 10 to 14 V
			A/C switch OFF → ON	

AC

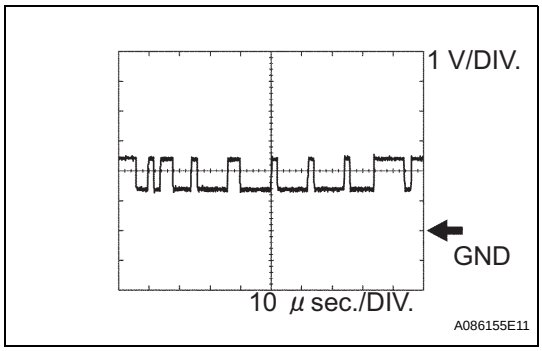
Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
LED (E36-28) - Body ground	GR - Body ground	A/C switch indicator signal	Engine idling	10 to 14 V → Below 4 V
			A/C switch ON	
			Heater control (blower switch): 0 → 1	



(b) Using an oscilloscope, check waveform 1.
CAN communication signal

Item	Content
Symbols (Terminal No.)	CANH (E36-8) - GND (E36-24)
Tool Setting	1 V/DIV., 10 μsec./DIV.
Condition	Ignition switch ON

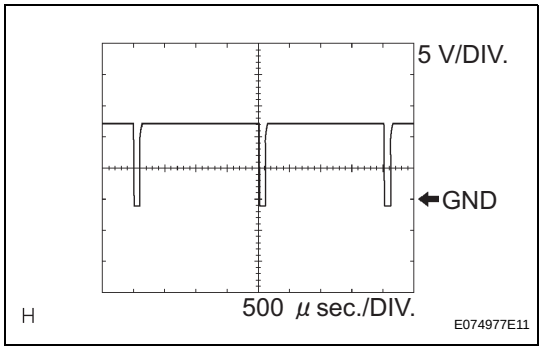
HINT:
The waveform varies depending on the CAN communication signal.



(c) Using an oscilloscope, check waveform 2.
CAN communication signal

Item	Content
Symbols (Terminal No.)	CANL (E36-9) - GND (E36-24)
Tool Setting	1 V/DIV., 10 μmsec./DIV.
Condition	Ignition switch ON

HINT:
The waveform varies depending on the CAN communication signal.



(d) Using an oscilloscope, check waveform 3.
Compressor and pulley operation signal

Item	Content
Symbols (Terminal No.)	SOL+ (E36-13) - GND (E36-24)
Tool Setting	5 V/DIV., 500 μsec./DIV.
Condition	Engine idling, Blower switch LO, A/C switch ON

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