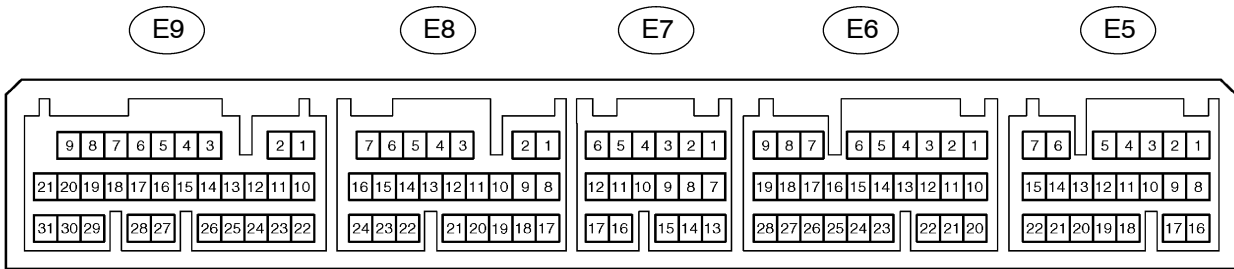
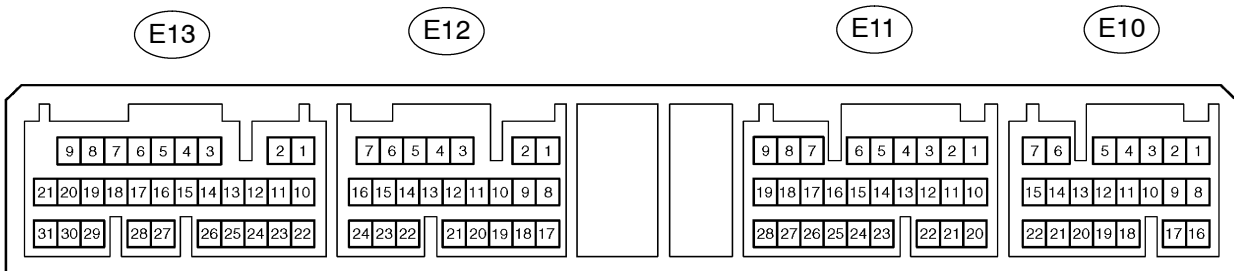


# TERMINALS OF ECU

## LH Bank Engine ECU:



## RH Bank Engine ECU:



N

D04916

## LEFT BANK ECU:

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATT (E5-1) - E1 (E8-17)	B-Y ↔ BR	Always	9 - 14
IGSW (E5-9) - E1 (E8-17)	B-O ↔ BR	IG switch ON	9 - 14
+B1 (E5-16) - E1 (E3-17)	B-R ↔ BR		
+B2 (E5-7) - E1 (E8-17)	L ↔ BR		
VC (E8-2) - E5 (E8-21)	B-R ↔ BR	IG switch ON	4.5 - 5.5
VC2 (E6-8) - E3 (E6-28)	L-B ↔ Y-G		
VTA (E8-15) - E5 (E8-21)	B ↔ BR	IG switch ON Throttle valve fully closed	0.3 - 0.8
		IG switch ON Throttle valve fully opened	3.2 - 4.9
IDL (E9-26) - E5 (E8-21)	R-L ↔ BR	IG switch ON Throttle valve fully closed	-0.1 - 3.0
		IG switch ON Throttle valve fully opened	9 - 14
PAS (E6-14) - E3 (E6-28)	R-B ↔ Y-G	IG switch ON Accelerator pedal released	0.3 - 0.9
		IG switch ON Accelerator pedal depressed	3.2 - 4.8
PSWL (E6-4) - E1 (E8-17)	R-Y ↔ BR	IG switch ON (Accelerator pedal released)	0 - 2
		IG switch ON (Accelerator pedal fully depressed)	3 - 5
RL+L (E5-17) - RL-L (E5-18)	R-L ↔ O	IG switch ON (Engine stopped)	9 - 14

1GZ-FE ENGINE (RM677E)

## DIAGNOSTICS - ENGINE

FPR2 (E5-2) - E1 (E8-17)	G-R ↔ BR	IG switch ON (Engine stopped)	Below 3
		Idling	9 - 14 Below 3
VG (E8-10) - EVG (E8-19)	Y-G ↔ B-L	Idling, P or N position, A/C switch OFF	0.5 - 2.5
#10 (E8-5) - E01 (E9-21) #30 (E8-6) - E01 (E9-21) #50 (E9-1) - E01 (E9-21) #70 (E9-2) - E01 (E9-21) #90 (E9-3) - E01 (E9-21) #110 (E9-4) - E01 (E9-21)	L-Y ↔ W-B W ↔ W-B R ↔ W-B B-W ↔ W-B Y ↔ W-B L ↔ W-B	IG switch ON	9 - 14
		Idling	Pulse generation (See page DI-139)
IGT1 (E9-11) - E1 (E8-17) IGT3 (E9-12) - E1 (E8-17) IGT5 (E9-13) - E1 (E8-17)	B-R ↔ BR B ↔ BR Y-B ↔ BR	Idling	Pulse generation (See page DI-106)
IGF (E9-25) - E1 (E8-17)	L-Y ↔ BR	IG switch ON	4.5 - 5.5
		Idling	Pulse generation (See page DI-106)
G2 (E9-10) - NE- (E8-24)	R ↔ G	Idling	Pulse generation (See page DI-74)
NE (E9-22) - NE- (E8-24)			
MREL (E5-10) - E1 (E8-17)	GR-L ↔ BR	IG switch ON	9 - 14
FPM (E6-5) - E1 (E8-17)	G ↔ BR	IG switch ON (Engine stopped)	0 - 3
		Idling	2 - 9.5
STP (E6-6) - E1 (E8-17)	V ↔ BR	Brake pedal is depressed	7.5 - 14
		Brake pedal is released	Below 1.5
PRG (E8-7) - E01 (E9-21)	L-B ↔ W-B	IG switch ON	9 - 14
FPU (E9-29) - E01 (E9-21)	L-W ↔ W-B	IG switch ON	9 - 14
OX1 (E5-6) - E1 (E8-17) OXL2 (E8-13) - E1 (E8-17)	B ↔ BR	Maintain engine speed at 2,500 rpm for 2 minutes after warming up	Pulse generation (See page DI-56)
HT (E5-15) - E1 (E8-17) HTL2 (E8-4) - E1 (E8-17)	R ↔ BR	Idling	Below 3.0
	G-R ↔ BR	IG switch ON	9 - 14
KNK1 (E9-28) - E1 (E8-17)	B ↔ BR	Maintain engine speed at 4,000 rpm after warming up	Pulse generation (See page DI-70)
KNK3 (E9-27) - E1 (E8-17)	W ↔ BR		
TC (E6-5) - E1 (E8-17)	P-B ↔ BR	IG switch ON	9 - 14
ACMG (E6-13) - E01 (E9-21)	P-L ↔ W-B	A/C switch ON (At idling)	Below 3.0
		A/C switch OFF	9 - 14
OCV+ (E9-24) - OCV- (E9-23)	P ↔ P-L	IG switch ON	Pulse generation
ACIS (E8-1) - E1 (E8-17)	L-W ↔ BR	IG switch ON	9 - 14
		Engine speed between 2,500 and 4,000 rpm	Below 3.0
THA (E8-16) - E2 (E8-18)	Y-B ↔ BR	Idling, Intake air temp. 20°C (68°F)	0.5 - 3.4
THW (E8-14) - E2 (E8-21)	R-L ↔ BR	Idling, Engine coolant temp. 80°C (176°F)	0.2 - 1.0
STA (E5-22) - E1 (E8-17)	B ↔ BR	Shift lever position P or N position, ignition switch START	9 - 14
A+L (E9-8) - E1 (E8-17) A-L (E9-7) - E1 (E8-17) B+L (E9-6) - E1 (E8-17) B-L (E9-5) - E1 (E8-17)	W ↔ BR G ↔ BR B ↔ BR R ↔ BR	Idling	Pulse generation
SIL (E5-11) - E1 (E8-17)	W ↔ BR	IG switch ON	9 - 14
SPDM (E6-22) - E1 (E8-17)	Y-R ↔ BR	Vehicle is driving	Pulse generation

## RH BANK ECU

Symbols (Terminals No.)	Wiring Color	Condition	STD Voltage (V)
BATR (E10-1) - E1R (E12-17)	B-Y → BR	Always	9 - 14
IGSR (E10-9) - E1 (E12-17)	B-O → BR	IG switch ON	9 - 14
+B1R (E10-16) - E1 (E12-17)	B-R → BR		
+B2R (E10-7) - E1 (E12-17)	BR-R → BR		
VC1R (E12-2) - E2R (E12-18)	B-R → BR	IG switch ON	4.5 - 5.5
VC2R (EM-8) - E3R (E11-28)	P → BR		
VTAR (E12-15) - E2R (E12-18)	Y-G → BR	IG switch ON Throttle valve fully closed	0.3 - 0.8
		IG switch ON Throttle valve fully opened	3.2 - 4.9
IDLR (E13-26) - E2R (E12-18)	R-L → BR	IG switch ON Throttle valve fully closed	-0.1 - 3.0
		IG switch ON Throttle valve fully opened	9 - 14
PAMR (E11-14) - E3R (E11-28)	P → BR	IG switch ON Accelerator pedal released	Below 2.0
PASR (E11-19) - E1R (E12-17)	R-W → BR	IG switch ON Accelerator pedal depressed	3 - 5
VGR (E12-10) - EVGR (E12-19)	G → G-W	Idling, P or N position, A/C switch OFF	0.5 - 2.5
THAR (E12-16) - E2R (E12-18)	Y-B → BR	Idling, Intake air temp. 20 °C (68 °F)	0.5 - 3.4
THW2 (E12-14) - E5R (E12-21)	R-L → BR	Idling, Engine coolant temp. 80 °C (176 °F)	0.2 - 1.0
STAR (E10-22) - E1R (E12-17)	B → BR	Shift lever position P or N position, Ignition switch START	9 - 14
#20 (E12-5) - E1R (E12-17)	R-L → BR	IG switch ON	9 - 14
#40 (E12-6) - E1R (E12-17)	B-L → BR		
#60 (E13-1) - E1R (E12-17)	R ↔ BR		
#80 (E13-2) - E1R (E12-17)	W-R ↔ BR		
#100 (E13-3) - E1R (E12-17)	Y ↔ BR		
#120 (E13-4) - E1R (E12-17)	L ↔ BR		
IGT2 (E13-11) - E1R (E12-17)	GR ↔ BR	Idling	Pulse generation (See page DI-106)
IGT4 (E13-12) - E1R (E12-17)	B ↔ BR		
IGT6 (E13-13) - E1R (E12-17)	Y-B ↔ BR		
IGFR (E13-25) - E1R (E12-17)	L-Y ↔ BR	IG switch ON	4.5 - 5.5
		Idling	Pulse generation (See page DI-74)
G2R (E13-22) - NE-R (E12-24)	B ↔ W	Idling	Pulse generation (See page DI-74)
NE+R (E12-23) - NE-R (E12-24)	B ↔ W		
MRER (E10-10) - E1R (E12-17)	GR-L ↔ BR	IG switch ON	9 - 14
FPMR (E10-8) - E1R (E12-17)	L ↔ BR	IG switch ON	Below 1.5
		Idling	Pulse generation (0 and 4.5 - 5.5)

## DIAGNOSTICS - ENGINE

ST1R (E11-26) - E1R (E12-17)	R-L ↔ BR	Brake pedal depressed	7.5 - 14
		Brake pedal released	Below 1.5
PRGR (E12-7) - E1R (E12-17)	L-B ↔ BR	IG switch ON	9 - 14
OX2 (E10-6) - E2R (E12-18) OXR2 (E12-4) - E2R (E12-18)	W ↔ BR B ↔ BR	Maintain engine speed at 2,500 rpm for 2 minutes after warming up	Pulse generation (See page DI-56)
HT2 (E10-15) - E1R (E12-17) HTR2 (E7-26) - E1R (E12-17)	Y ↔ BR G-O ↔ BR	Idling	Below 3.0
		IG switch ON	9 - 14
KNK2 (E13-28) - E1R (E12-17)	W ↔ BR	Maintain engine speed at 4,000 rpm after warming up	Pulse generation (See page DI-70)
KNK4 (E13-27) - E1R (E12-17)	B ↔ BR		
TCR (E11-5) - E1R (E12-17)	P-B ↔ BR	IG switch ON	9 - 14
OCR+ (E13-24) - OCR- (E13-23)	P ↔ P-L	IG switch ON	Pulse generation
ACSR (E12-1) - E1R (E12-7)	B-L ↔ BR	IG switch ON	9 - 14
		Engine speed between 2,500 and 4,000 rpm	Below 3.0
A+R (E13-8) - E1R (E12-17)	W ↔ BR	Idling	Pulse generation
A-R (E13-7) - E1R (E12-17)	G ↔ BR		
B+R (E13-6) - E1R (E12-17)	B ↔ BR		
B-R (E13-5) - E1R (E12-17)	R ↔ BR		
SILR (E10-11) - E1R (E12-17)	W ↔ BR	IG switch ON	9 - 14
SRDI (E11-10) - E1R- (E12-17)	Y-R ↔ BR	Vehicle is driving	Pulse generation
RL+R (E10-17) - RL-R (E10-18)	R-B ↔ R	IG switch ON (Engine stopped)	9 - 14
PSWR (E11-4) - E1R (E12-17)	R-Y ↔ BR	IG switch ON (Accelerator pedal released)	Below 2.0
		IG switch ON (Accelerator pedal fully depressed)	3 - 5
SOL+ (E13-9) - SOL- (E13-20)	B-L ↔ B-Y	IG switch ON OP1 and E1 of check connector connected	Pulse generation
TH+ (E11-18) - TH- (E13-27)	P-L ↔ BR-W	IG switch ON, water temperature 20 °C (68 °F)	3.5 - 4.6
		IG switch ON, water temperature 80 °C (176 °F)	2.5 - 3.5
CLVL (E11-17) - E1R (E12-17)	Y-G ↔ BR	IG switch ON, coolant level switch ON	Below 1.5
		IG switch ON, coolant level switch OFF	7.5 - 13