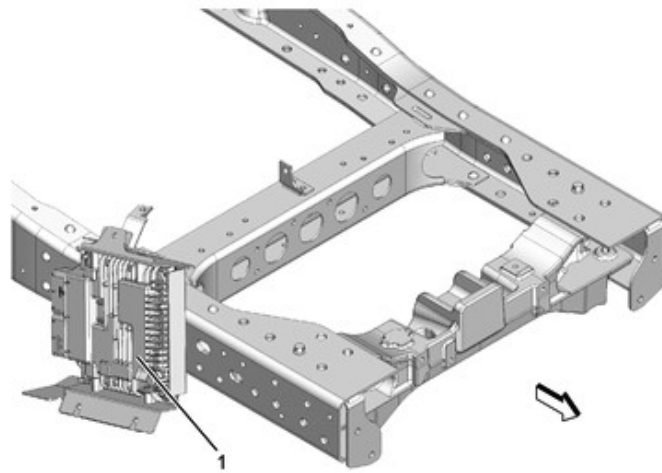


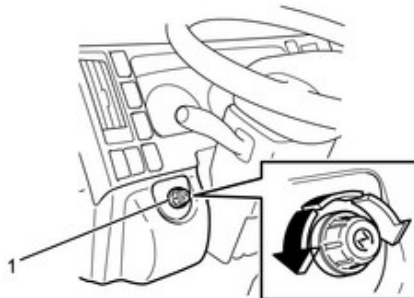
LNWE1ASF001201

1. ECM
NMS



LNWJ1ASF001101

1. ECM



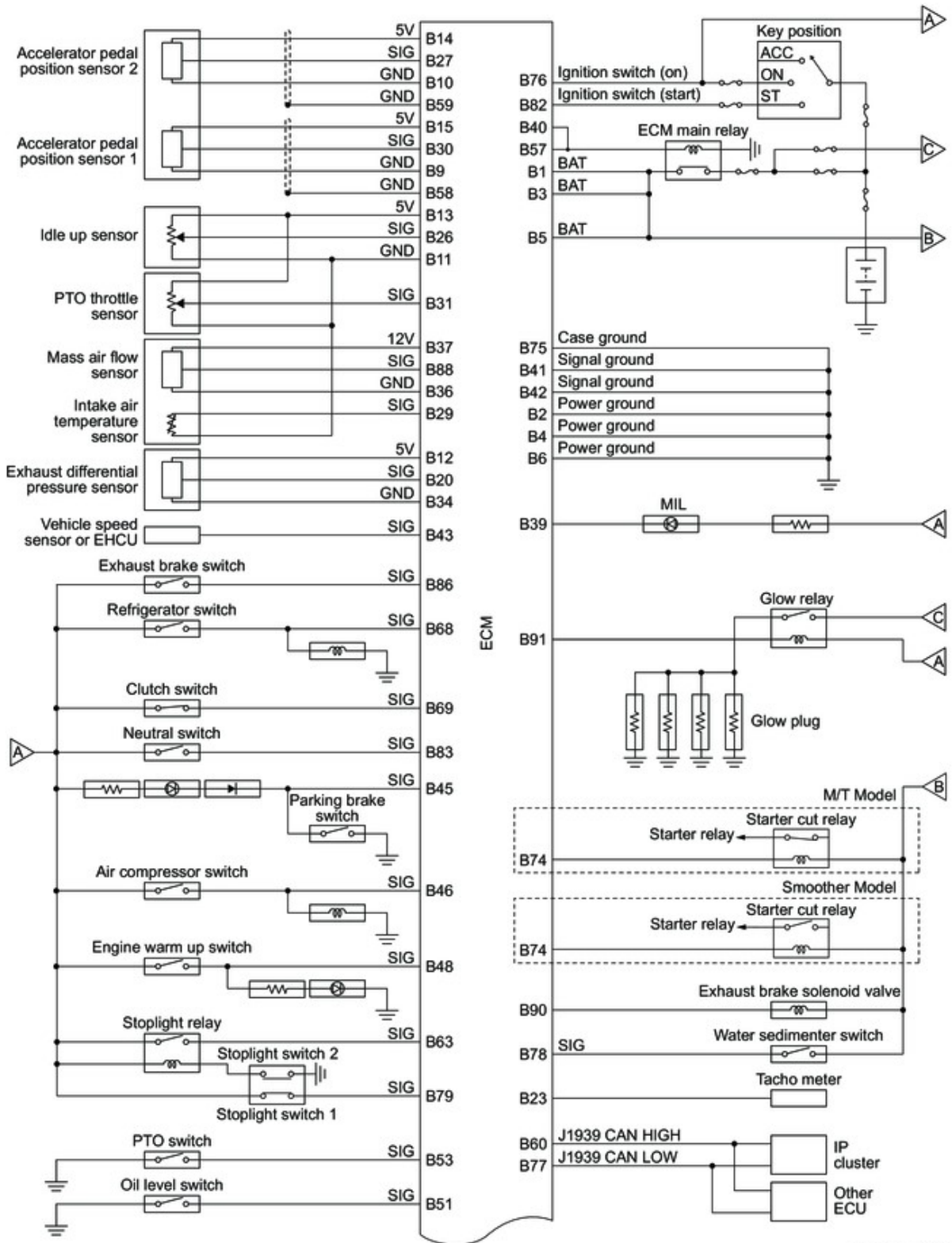
LNWE20SF002901

1. Idling control knob

16. General Circuit Diagram

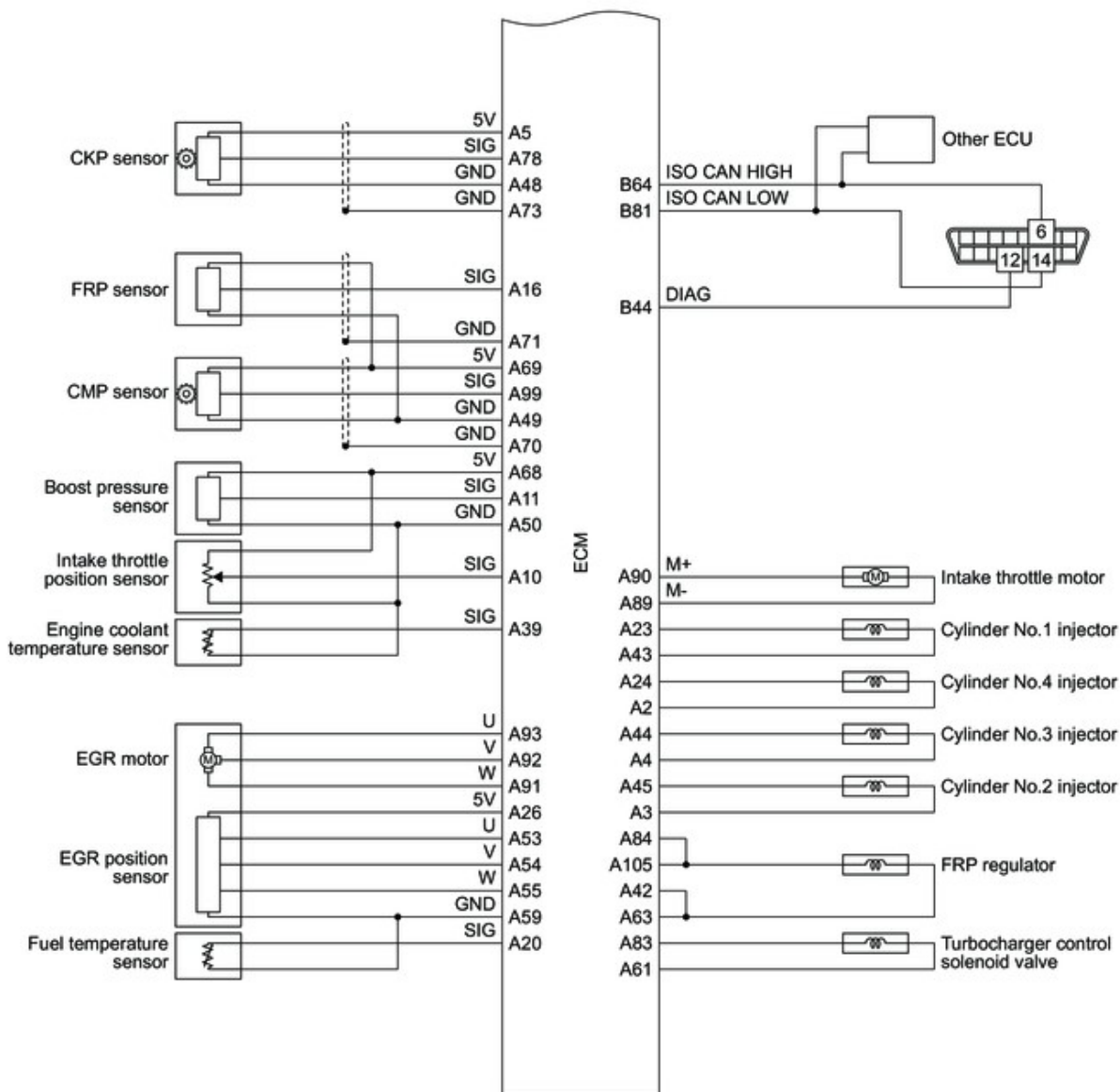
1. General circuit diagram

1/2



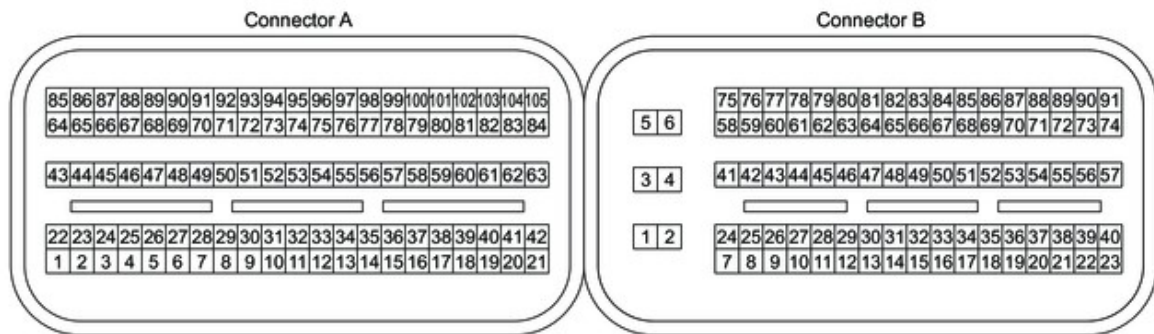
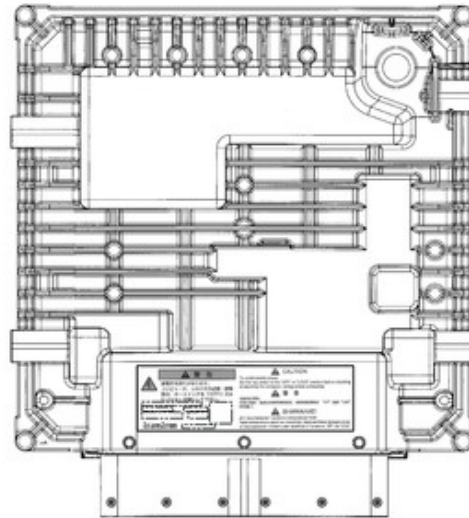
LNWG1AXF002801

2/2



LNWJ1AXF007901

2. ECM outline



MNWE1ALF000101

3. ECM pin layout

105 pin (A connector)

PIN No.	Pin function
1	-
2	Cylinder No. 4 injector solenoid control
3	Cylinder No. 2 injector solenoid control
4	Cylinder No. 3 injector solenoid control
5	CKP sensor 5V reference
6	-
7	-
8	-
9	-
10	Intake throttle position sensor signal
11	Boost pressure sensor signal
12	-
13	-
14	-
15	-
16	FRP sensor signal

17	-
18	-
19	-
20	Fuel temperature sensor signal
21	-
22	-
23	Cylinder No. 1 injector charge voltage
24	Cylinder No. 4 injector charge voltage
25	-
26	EGR position sensor 5 V reference
27	-
28	-
29	-
30	-
31	-
32	-
33	-
34	-
35	-
36	-
37	-
38	-
39	Engine coolant temperature sensor signal
40	-
41	-
42	FRP regulator control low side (PWM)
43	Cylinder No. 1 injector solenoid control
44	Cylinder No. 3 injector charge voltage
45	Cylinder No. 2 injector charge voltage
46	-
47	-
48	CKP sensor low reference
49	CMP sensor and FRP sensor low reference
50	Boost pressure sensor, intake throttle position sensor, and engine coolant temperature sensor low reference
51	-
52	-
53	EGR position sensor signal 1
54	EGR position sensor signal 2
55	EGR position sensor signal 3
56	-
57	-
58	-
59	EGR position sensor and fuel temperature sensor low reference
60	-
61	Turbocharger control solenoid valve low side
62	-
63	FRP regulator control low side (PWM)
64	-
65	-
66	-

67	-
68	Intake throttle position sensor and boost pressure sensor 5 V reference
69	CMP sensor and FRP sensor 5 V reference
70	CMP sensor shield ground
71	FRP sensor shield ground
72	-
73	CKP sensor shield ground
74	-
75	-
76	-
77	-
78	CKP sensor signal
79	-
80	-
81	-
82	-
83	Turbocharger control solenoid valve high side
84	FRP regulator control high side (PWM)
85	-
86	-
87	-
88	-
89	Intake throttle motor low side (PWM)
90	Intake throttle motor high side (PWM)
91	EGR motor control 3 (PWM)
92	EGR motor control 2 (PWM)
93	EGR motor control 1 (PWM)
94	-
95	-
96	-
97	-
98	-
99	CMP sensor signal
100	-
101	-
102	-
103	-
104	-
105	FRP regulator control high side (PWM)

91 pin (B connector)

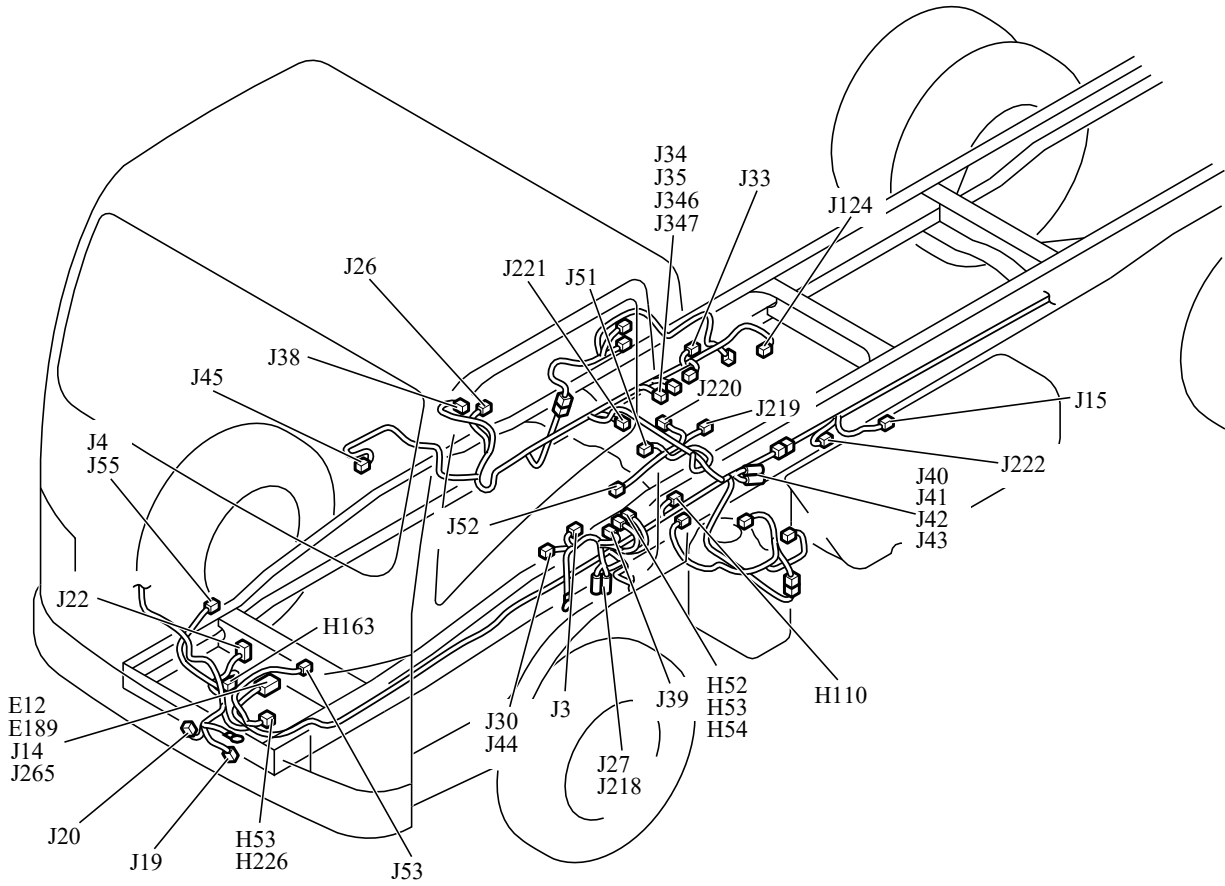
PIN No.	Pin function
1	Battery voltage
2	ECM power ground
3	Battery voltage
4	ECM power ground
5	Battery voltage
6	ECM power ground
7	-
8	-

9	Accelerator pedal position sensor 1 low reference
10	Accelerator pedal position sensor 2 low reference
11	Idle-up sensor, PTO throttle sensor, and IAT sensor low reference
12	Exhaust differential pressure sensor 5 V reference
13	Idle up sensor and PTO throttle sensor 5 V reference
14	Accelerator pedal position sensor 2, 5 V reference
15	Accelerator pedal position sensor 1, 5 V reference
16	-
17	-
18	-
19	-
20	Exhaust differential pressure sensor signal
21	-
22	-
23	Engine speed signal output
24	-
25	-
26	Idle up sensor signal
27	Accelerator pedal position sensor 2 signal
28	-
29	IAT sensor signal
30	Accelerator pedal position sensor 1 signal
31	PTO throttle sensor
32	-
33	-
34	Exhaust differential pressure sensor low reference
35	-
36	MAF sensor low reference
37	MAF sensor 12 V reference
38	-
39	MIL control
40	ECM main relay control
41	ECM signal ground
42	ECM signal ground
43	Vehicle speed signal
44	Diagnostic request switch signal
45	Parking brake switch signal
46	A/C signal
47	-
48	Engine warm up switch signal
49	-
50	-
51	Engine oil level switch signal
52	-
53	PTO switch signal
54	-
55	-
56	-
57	ECM main relay control
58	Accelerator pedal position sensor 1 shield ground
59	Accelerator pedal position sensor 2 shield ground

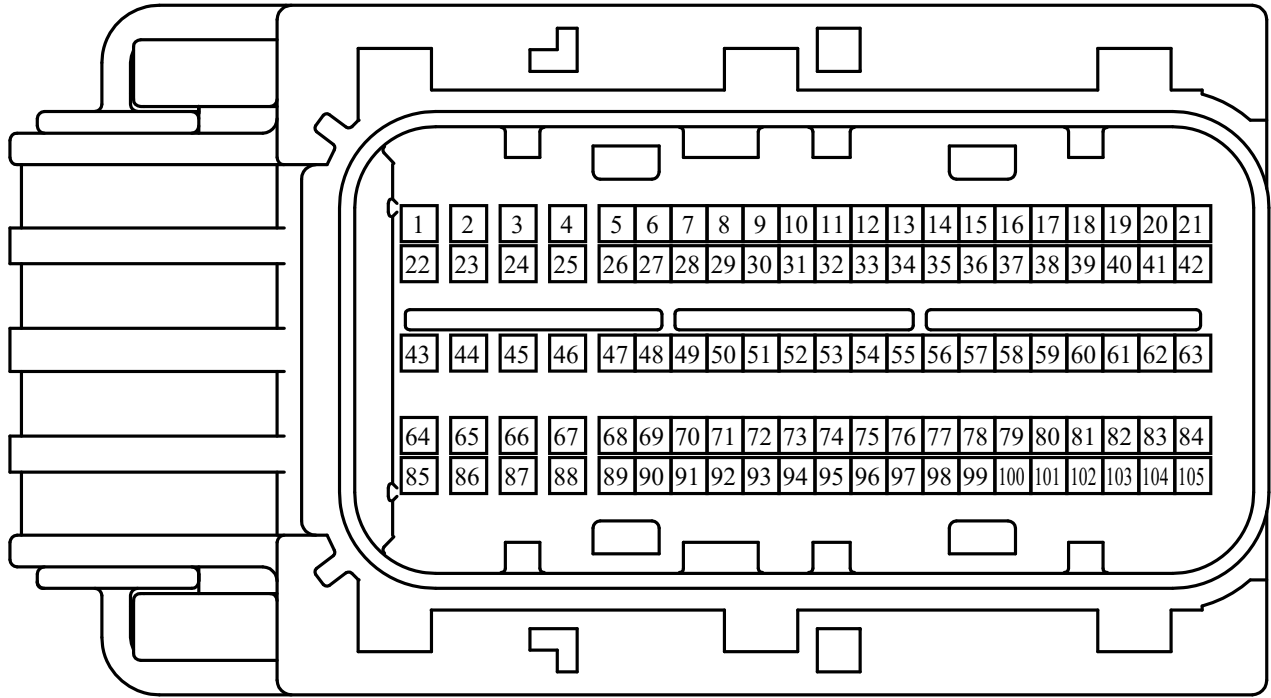
60	J1939 CAN high
61	-
62	-
63	Stoplight switch 2 signal
64	ISO CAN high
65	-
66	-
67	-
68	Refrigerator switch signal
69	Clutch switch signal (Manual transmission)
70	-
71	-
72	-
73	-
74	Starter cut relay control
75	ECM case ground
76	Ignition switch signal
77	J1939 CAN low
78	Water sedimenter switch signal
79	Stoplight switch 1 signal
80	-
81	ISO CAN low
82	Ignition switch signal
83	Neutral switch signal
84	-
85	-
86	Exhaust brake switch signal
87	-
88	MAF sensor signal
89	-
90	Exhaust brake solenoid valve control
91	Glow relay control

17. Engine Number

NLR, NMR, NMS

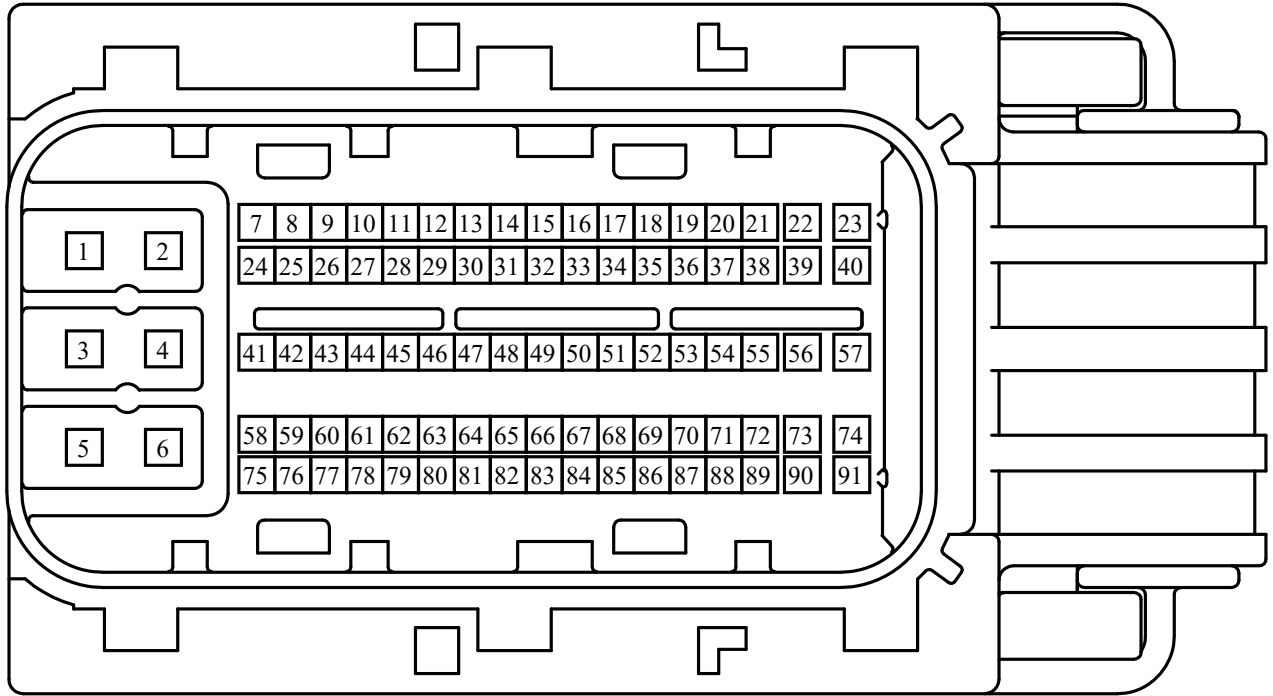


LHD Connector Location Diagram Frame Front 1



Black

E189



Black

J265

