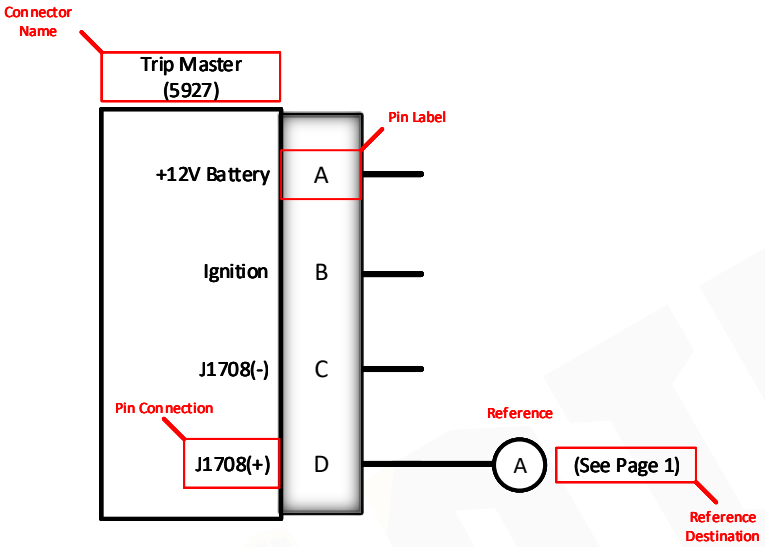
DIESEL® LAPTOPS

MACK

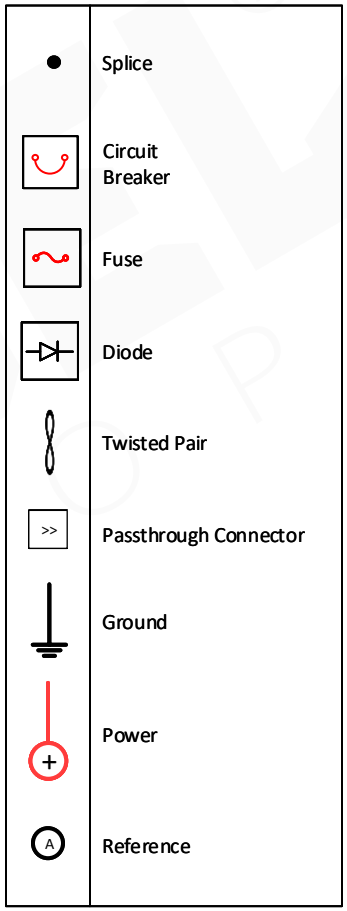
(AI E-Tech 2002)

Engine Electrical Circuit Diagram

How to Read This Document



SYMBOLS



ABBREVIATION	COLOR
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OR	ORANGE
YL/YE	YELLOW
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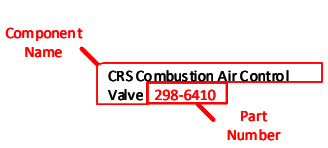
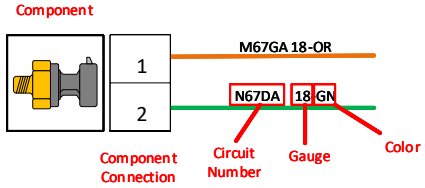
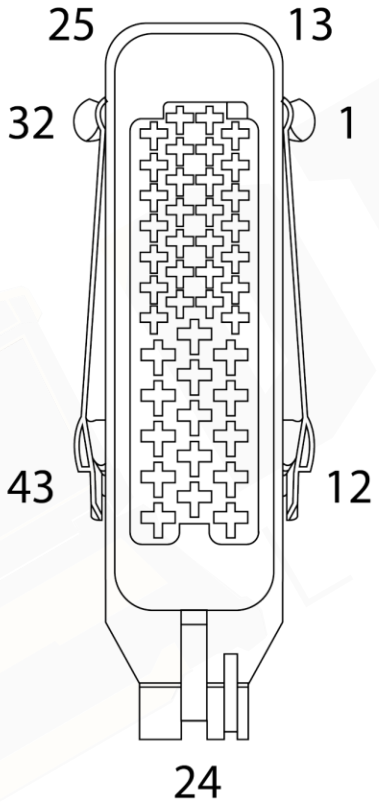
BK	BLACK
GY	GRAY
PU/VT	PURPLE
BR/BN	BROWN
GN	GREEN
BU/BL	BLUE

Capital Abbreviation's Represent Wire Main Color
Lower Case Abbreviation's Represent Secondary Color

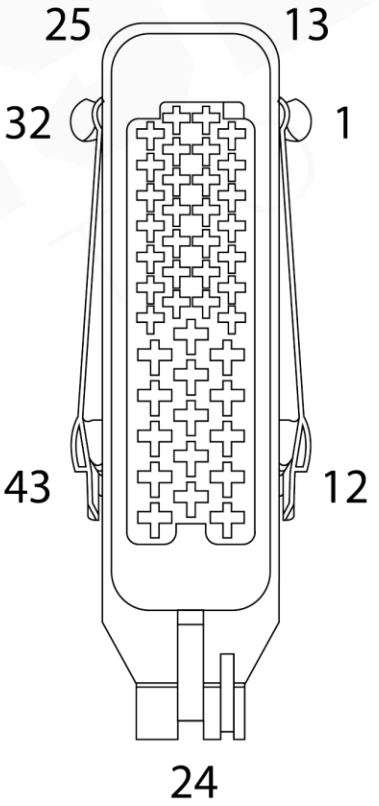




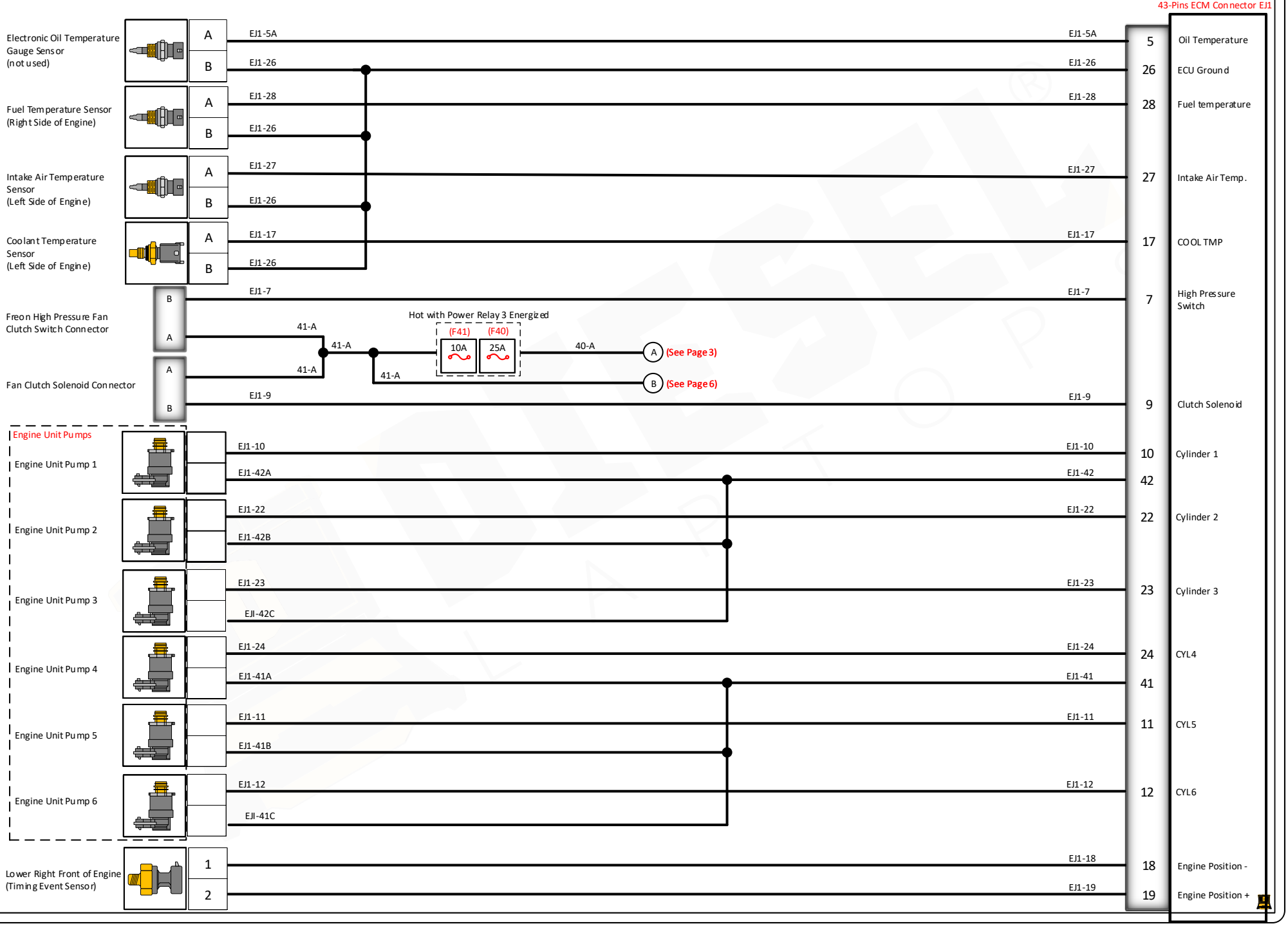
43-PINS ECM CONNECTOR
EJ1

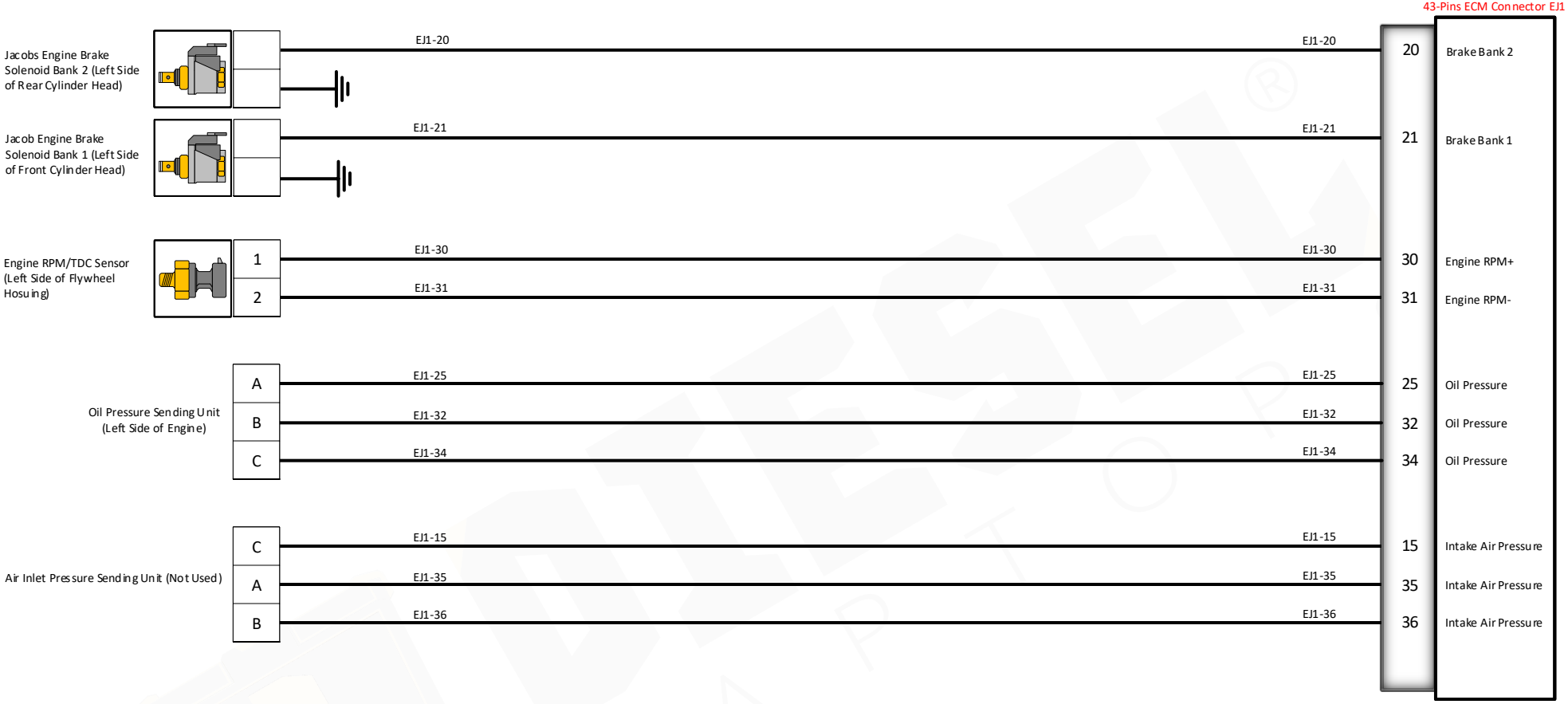


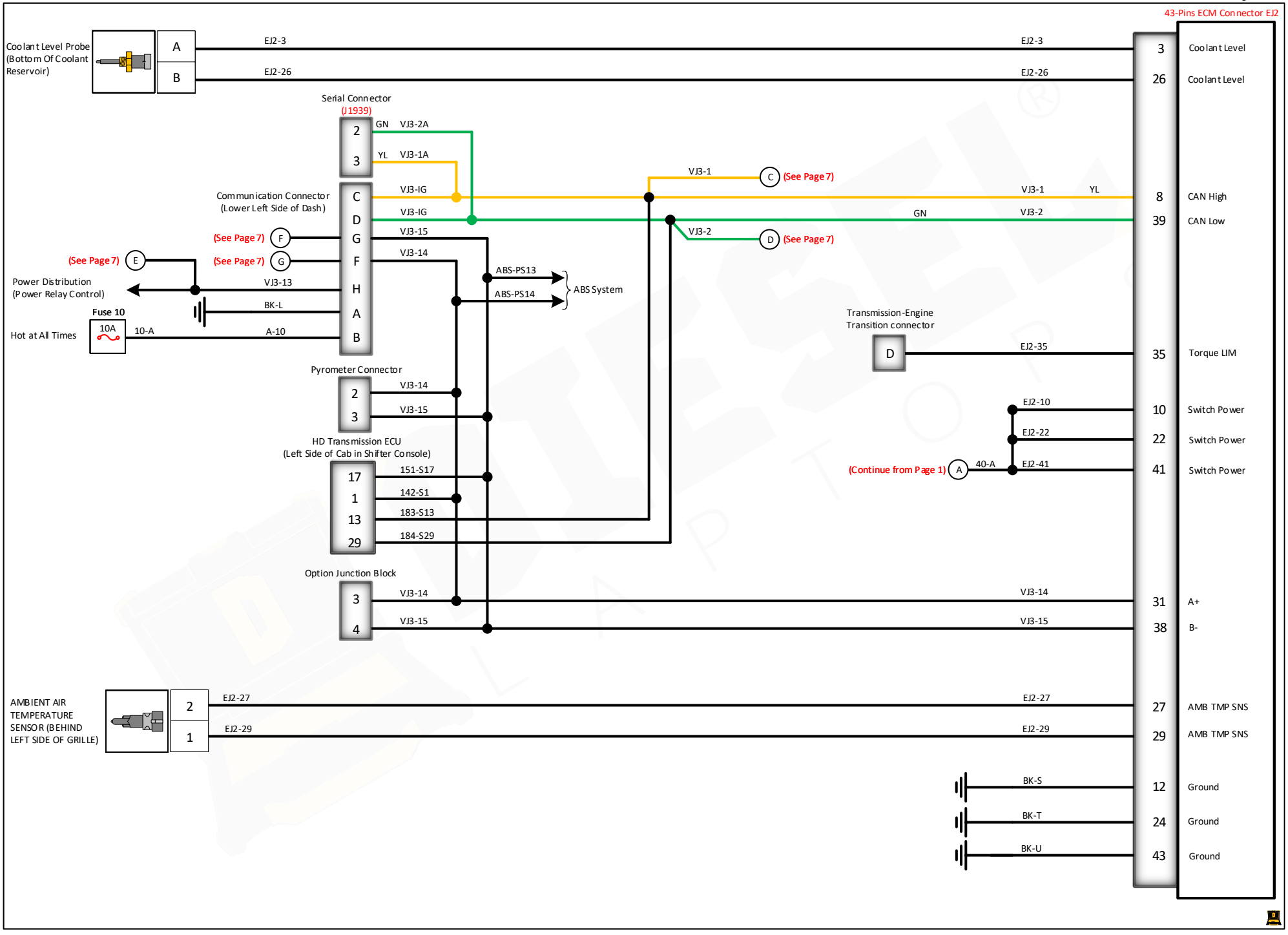
43-PINS ECM CONNECTOR
EJ2

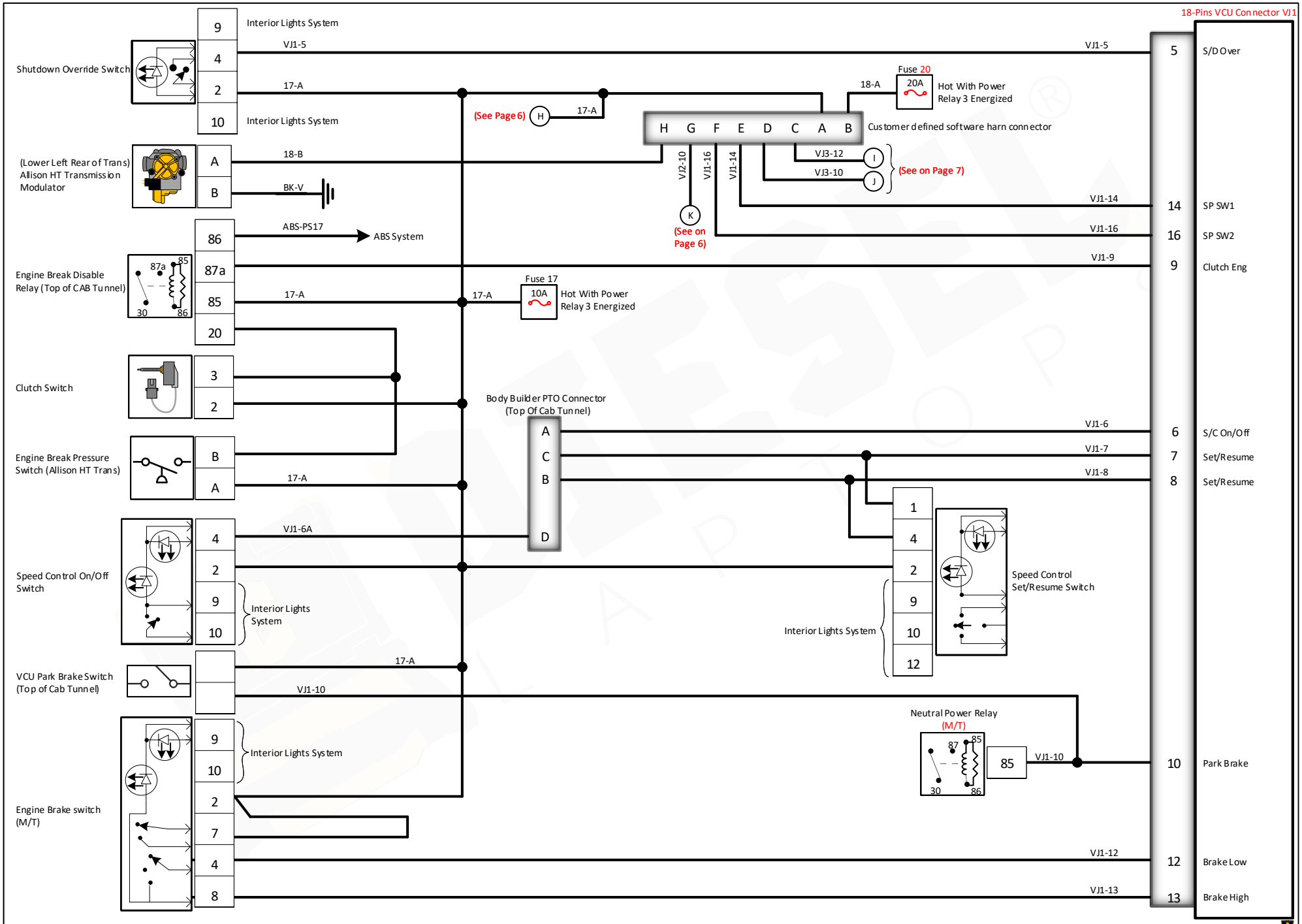


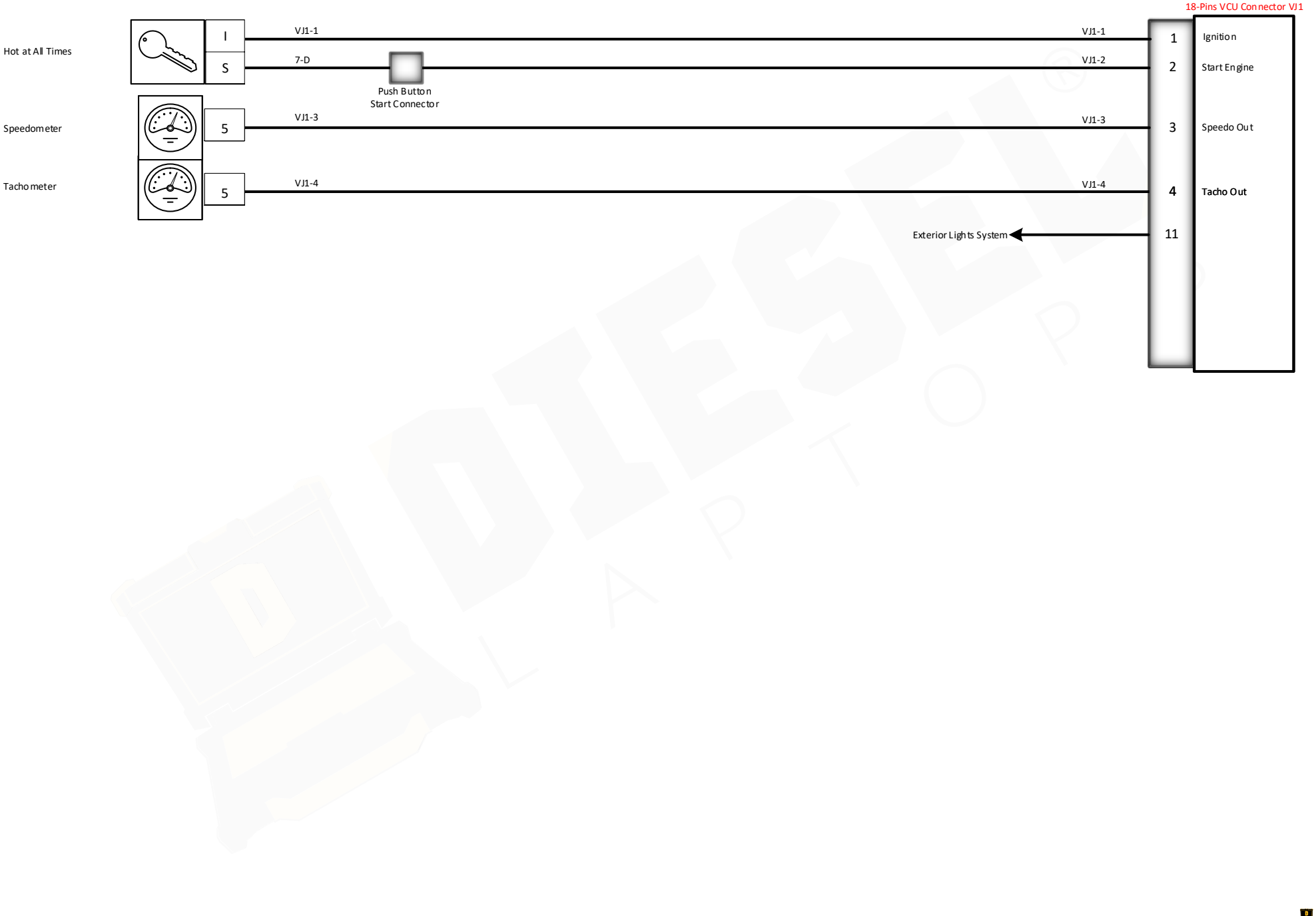
Mack III (AI)

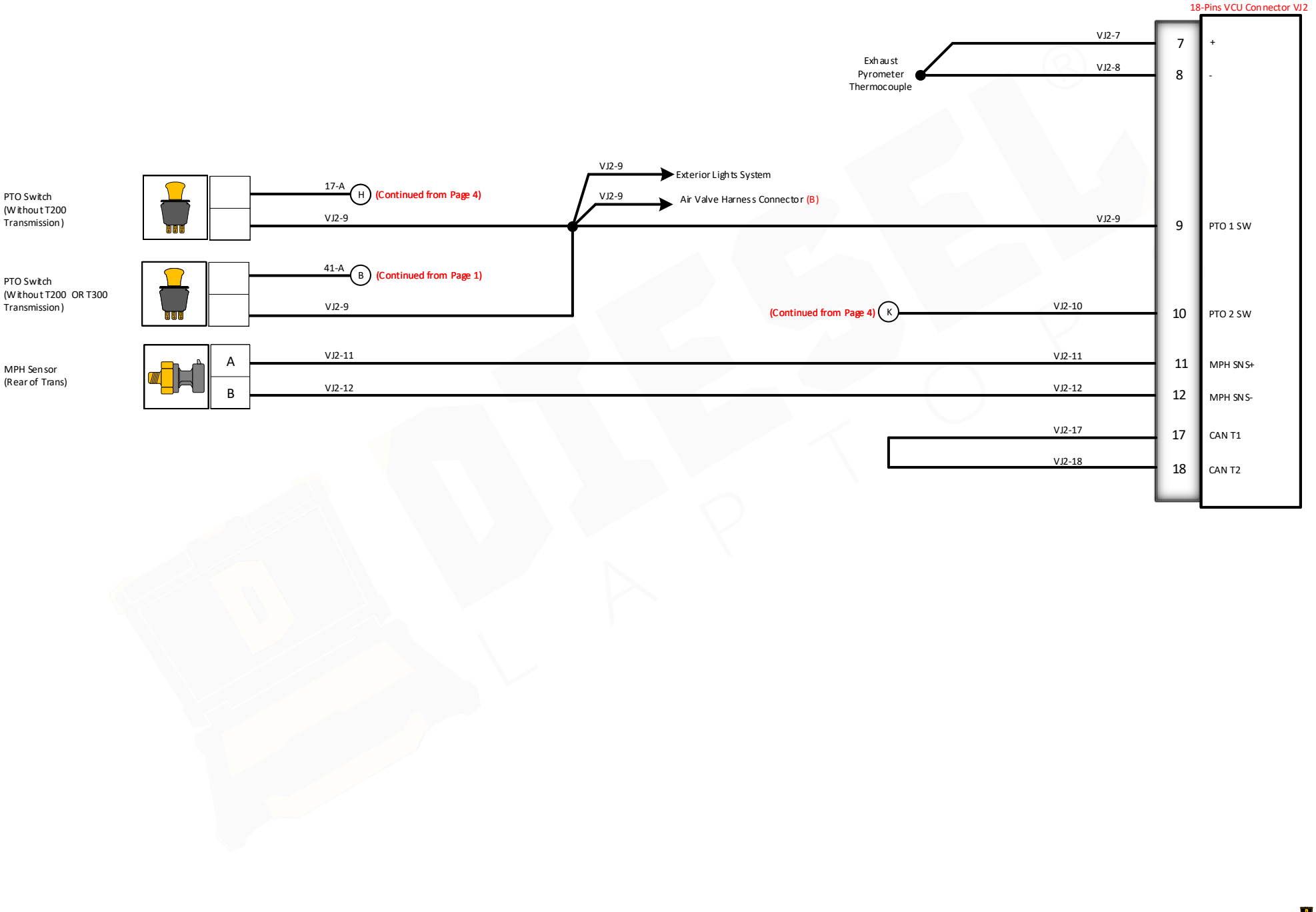

43-Pins ECM Connector EJ1
Electronic Oil Temperature Gauge Sensor (not used)
A
B
EJ1-5A
EJ1-26
Fuel Temperature Sensor (Right Side of Engine)
EJ1-28
EJ1-26
Intake Air Temperature Sensor (Left Side of Engine)
EJ1-27
EJ1-26
Coolant Temperature Sensor (Left Side of Engine)
EJ1-17
EJ1-26
Freon High Pressure Fan Clutch Switch Connector
EJ1-7
Hot with Power Relay 3 Energized
(F41) 10A
(F40) 25A
41-A
40-A
A (See Page 3)
B (See Page 6)
Fan Clutch Solenoid Connector
EJ1-9
Engine Unit Pumps
Engine Unit Pump 1
EJ1-10
EJ1-42A
Engine Unit Pump 2
EJ1-22
EJ1-42B
Engine Unit Pump 3
EJ1-23
EJI-42C
Engine Unit Pump 4
EJ1-24
EJ1-41A
Engine Unit Pump 5
EJ1-11
EJ1-41B
Engine Unit Pump 6
EJ1-12
EJI-41C
Lower Right Front of Engine (Timing Event Sensor)
1
2
EJ1-18
EJ1-19
5 Oil Temperature
26 ECU Ground
28 Fuel temperature
27 Intake Air Temp.
17 COOL TMP
7 High Pressure Switch
9 Clutch Solenoid
10 Cylinder 1
42
22 Cylinder 2
23 Cylinder 3
24 CYL4
41
11 CYL5
12 CYL6
18 Engine Position -
19 Engine Position +

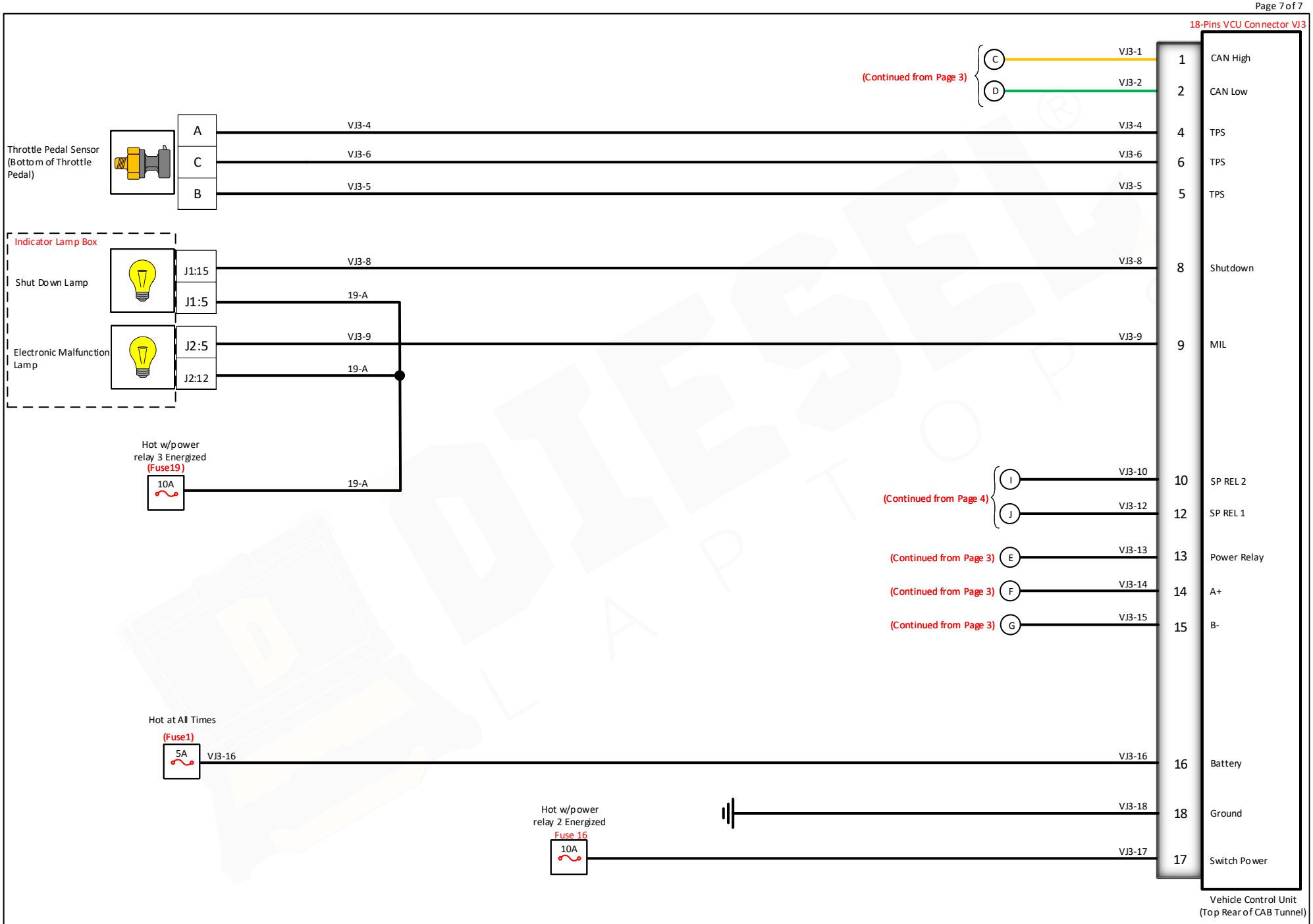

43-Pins ECM Connector EJ1
Jacobs Engine Brake Solenoid Bank 2 (Left Side of Rear Cylinder Head)
EJ1-20
EJ1-20
20
Brake Bank 2
Jacob Engine Brake Solenoid Bank 1 (Left Side of Front Cylinder Head)
EJ1-21
EJ1-21
21
Brake Bank 1
Engine RPM/TDC Sensor (Left Side of Flywheel Hosuing)
1
2
EJ1-30
EJ1-31
EJ1-30
EJ1-31
30
Engine RPM+
31
Engine RPM-
Oil Pressure Sending Unit (Left Side of Engine)
A
B
C
EJ1-25
EJ1-32
EJ1-34
EJ1-25
EJ1-32
EJ1-34
25
Oil Pressure
32
Oil Pressure
34
Oil Pressure
Air Inlet Pressure Sending Unit (Not Used)
C
A
B
EJ1-15
EJ1-35
EJ1-36
EJ1-15
EJ1-35
EJ1-36
15
Intake Air Pressure
35
Intake Air Pressure
36
Intake Air Pressure


43-Pins ECM Connector EJ2
Coolant Level Probe (Bottom Of Coolant Reservoir)
A
B
EJ2-3
EJ2-26
3 Coolant Level
26 Coolant Level
Serial Connector (J1939)
2
3
GN VJ3-2A
YL VJ3-1A
Communication Connector (Lower Left Side of Dash)
C
D
G
F
H
A
B
VJ3-IG
VJ3-IG
VJ3-15
VJ3-14
VJ3-13
BK-L
A-10
10-A
10A
Fuse 10
Hot at All Times
Power Distribution (Power Relay Control)
(See Page 7) E
(See Page 7) F
(See Page 7) G
ABS-PS13
ABS-PS14
ABS System
VJ3-1
VJ3-2
(See Page 7) C
(See Page 7) D
VJ3-1 YL
GN VJ3-2
8 CAN High
39 CAN Low
Transmission-Engine Transition connector
D
EJ2-35
35 Torque LIM
Pyrometer Connector
2
3
VJ3-14
VJ3-15
HD Transmission ECU (Left Side of Cab in Shifter Console)
17
1
13
29
151-S17
142-S1
183-S13
184-S29
EJ2-10
EJ2-22
EJ2-41
10 Switch Power
22 Switch Power
41 Switch Power
(Continue from Page 1) A
40-A
Option Junction Block
3
4
VJ3-14
VJ3-15
VJ3-14
VJ3-15
31 A+
38 B-
AMBIENT AIR TEMPERATURE SENSOR (BEHIND LEFT SIDE OF GRILLE)
2
1
EJ2-27
EJ2-29
EJ2-27
EJ2-29
27 AMB TMP SNS
29 AMB TMP SNS
BK-S
BK-T
BK-U
12 Ground
24 Ground
43 Ground


18-Pins VCU Connector VJ1
Shutdown Override Switch
9
4
2
10
Interior Lights System
VJ1-5
17-A
Interior Lights System
(See Page 6)
H
17-A
18-A
Fuse 20
20A
Hot With Power Relay 3 Energized
H G F E D C A B
Customer defined software harn connector
VJ1-5
5
S/D Over
(Lower Left Rear of Trans) Allison HT Transmission Modulator
A
B
18-B
BK-V
VJ2-10
VJ1-16
VJ1-14
VJ3-12
VJ3-10
I
J
(See on Page 7)
K
(See on Page 6)
VJ1-14
14
SP SW1
VJ1-16
16
SP SW2
86
87a
85
20
ABS-PS17
ABS System
Engine Break Disable Relay (Top of CAB Tunnel)
87a
85
30
86
17-A
17-A
Fuse 17
10A
Hot With Power Relay 3 Energized
VJ1-9
9
Clutch Eng
Clutch Switch
3
2
Body Builder PTO Connector (Top Of Cab Tunnel)
A
C
B
D
VJ1-6
6
S/C On/Off
VJ1-7
7
Set/Resume
VJ1-8
8
Set/Resume
Engine Break Pressure Switch (Allison HT Trans)
B
A
17-A
1
4
2
9
10
12
Interior Lights System
Speed Control Set/Resume Switch
4
2
9
10
Speed Control On/Off Switch
VJ1-6A
Interior Lights System
VCU Park Brake Switch (Top of Cab Tunnel)
17-A
VJ1-10
Neutral Power Relay (M/T)
87
85
30
86
85
VJ1-10
10
Park Brake
9
10
2
7
4
8
Interior Lights System
Engine Brake switch (M/T)
VJ1-12
12
Brake Low
VJ1-13
13
Brake High


18-Pins VCU Connector VJ1
Hot at All Times
I
S
VJ1-1
7-D
Push Button
Start Connector
VJ1-1
VJ1-2
1
2
Ignition
Start Engine
Speedometer
5
VJ1-3
VJ1-3
3
Speedo Out
Tachometer
5
VJ1-4
VJ1-4
4
Tacho Out
Exterior Lights System
11


18-Pins VCU Connector VJ2
Exhaust Pyrometer Thermocouple
VJ2-7
VJ2-8
7
8
+
-
PTO Switch (Without T200 Transmission)
17-A
H
(Continued from Page 4)
VJ2-9
VJ2-9
Exterior Lights System
VJ2-9
Air Valve Harness Connector (B)
VJ2-9
9
PTO 1 SW
PTO Switch (Without T200 OR T300 Transmission)
41-A
B
(Continued from Page 1)
VJ2-9
(Continued from Page 4)
K
VJ2-10
10
PTO 2 SW
MPH Sensor (Rear of Trans)
A
B
VJ2-11
VJ2-12
VJ2-11
VJ2-12
11
MPH SNS+
12
MPH SNS-
VJ2-17
VJ2-18
17
CAN T1
18
CAN T2


18-Pins VCU Connector VJ3
(Continued from Page 3)
C
D
VJ3-1
VJ3-2
1
CAN High
2
CAN Low
Throttle Pedal Sensor (Bottom of Throttle Pedal)
A
C
B
VJ3-4
VJ3-6
VJ3-5
4
TPS
6
TPS
5
TPS
Indicator Lamp Box
Shut Down Lamp
J1:15
J1:5
VJ3-8
19-A
8
Shutdown
Electronic Malfunction Lamp
J2:5
J2:12
VJ3-9
19-A
9
MIL
Hot w/power relay 3 Energized
(Fuse19)
10A
19-A
(Continued from Page 4)
I
J
VJ3-10
VJ3-12
10
SP REL 2
12
SP REL 1
(Continued from Page 3)
E
VJ3-13
13
Power Relay
(Continued from Page 3)
F
VJ3-14
14
A+
(Continued from Page 3)
G
VJ3-15
15
B-
Hot at All Times
(Fuse1)
5A
VJ3-16
16
Battery
Hot w/power relay 2 Energized
Fuse 16
10A
VJ3-18
18
Ground
VJ3-17
17
Switch Power
Vehicle Control Unit
(Top Rear of CAB Tunnel)

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In the interest of continuing product development, Diesel Laptops reserves the right to change specifications within this document at any time without prior notice.
If you require additional reference materials or information, please contact Diesel Laptops.

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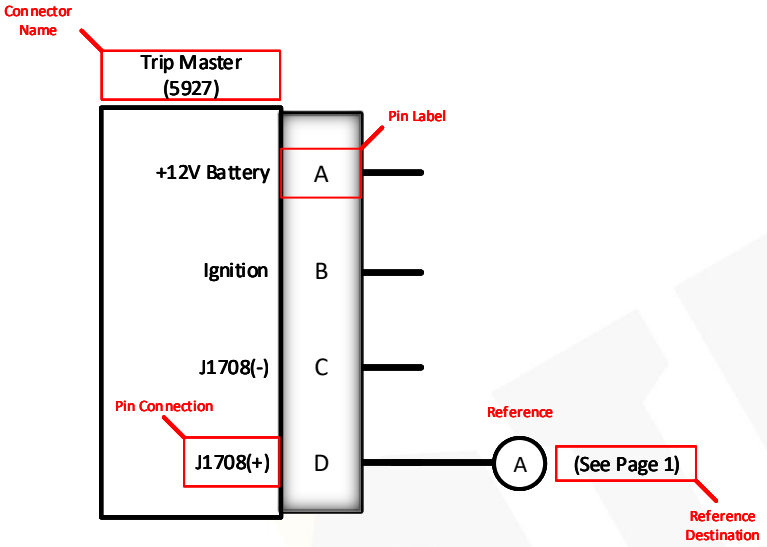
Diesel Laptops will not be held accountable for any inappropriate safety measures or faults made by the user while performing diagnostics.

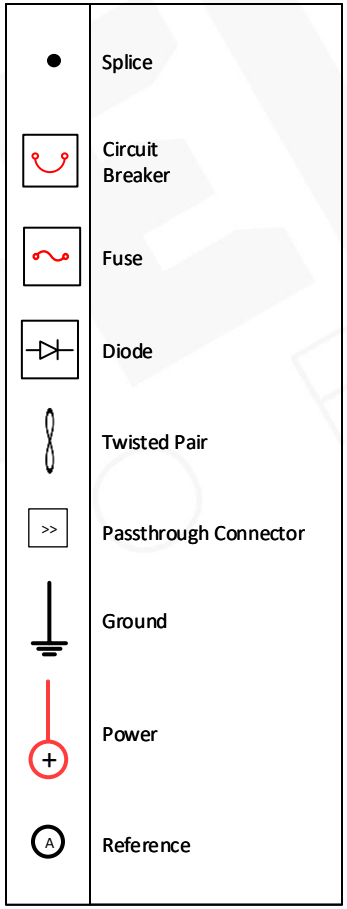
MACK
(VMAC III – AC)

Mack Engine Wiring Diagram

How to Read This Diagram



SYMBOLS



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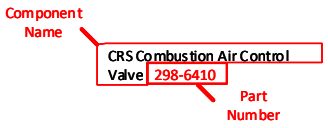
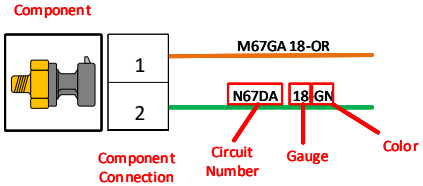
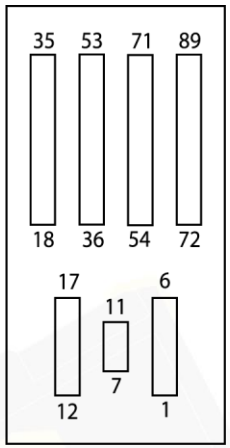
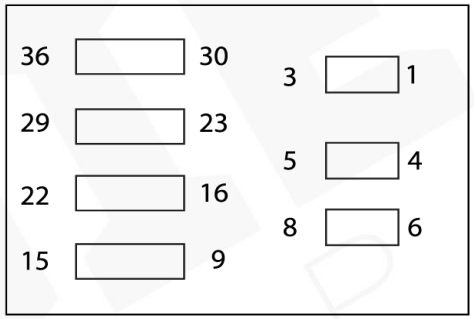




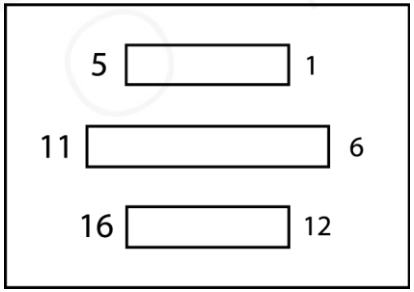
Connectors



89-Pins ECM Connector



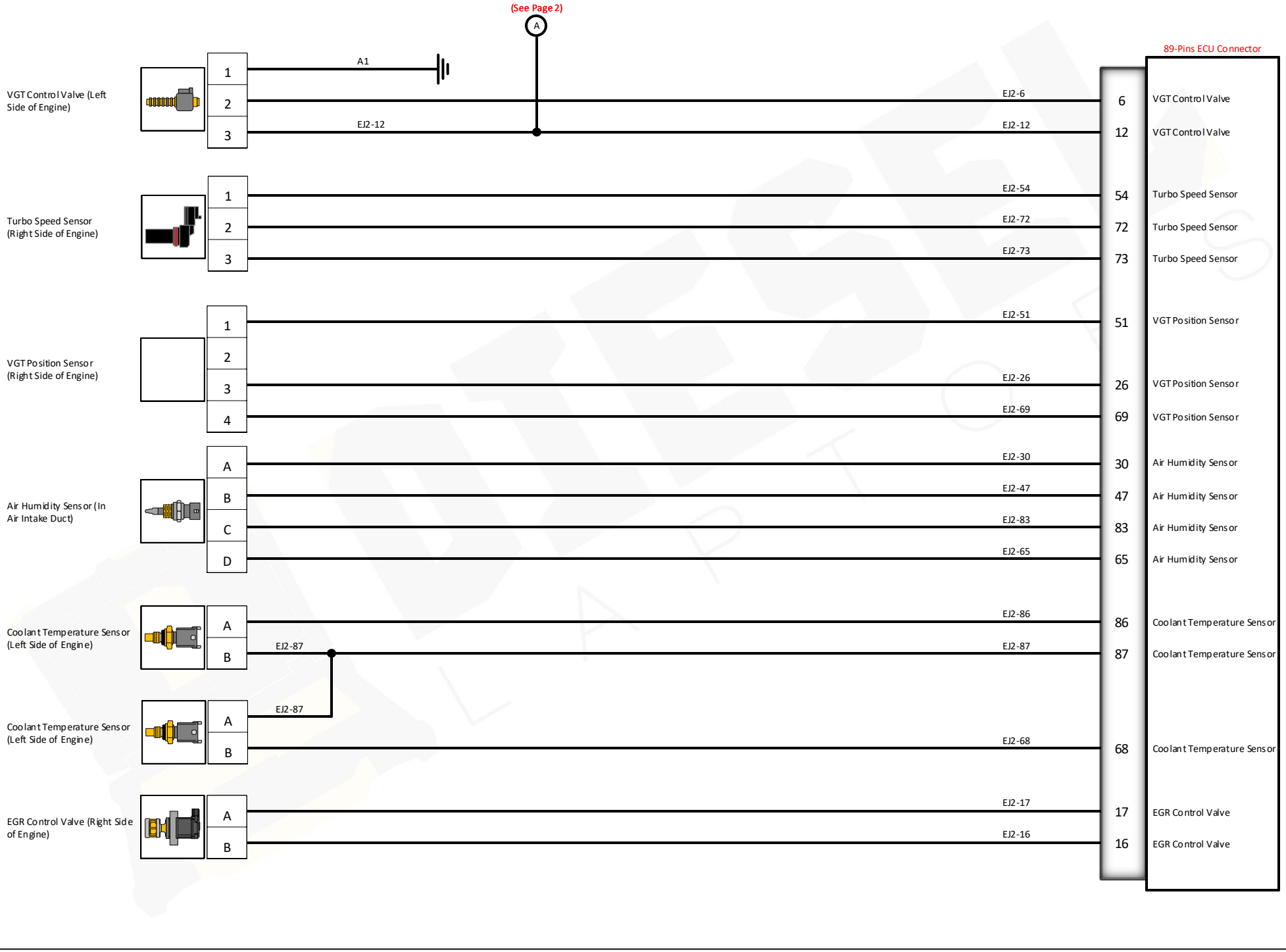
36-Pins ECM Connector



16-Pins ECM Connector

Mack Engines (VMAC III - AC)

(See Page 2)



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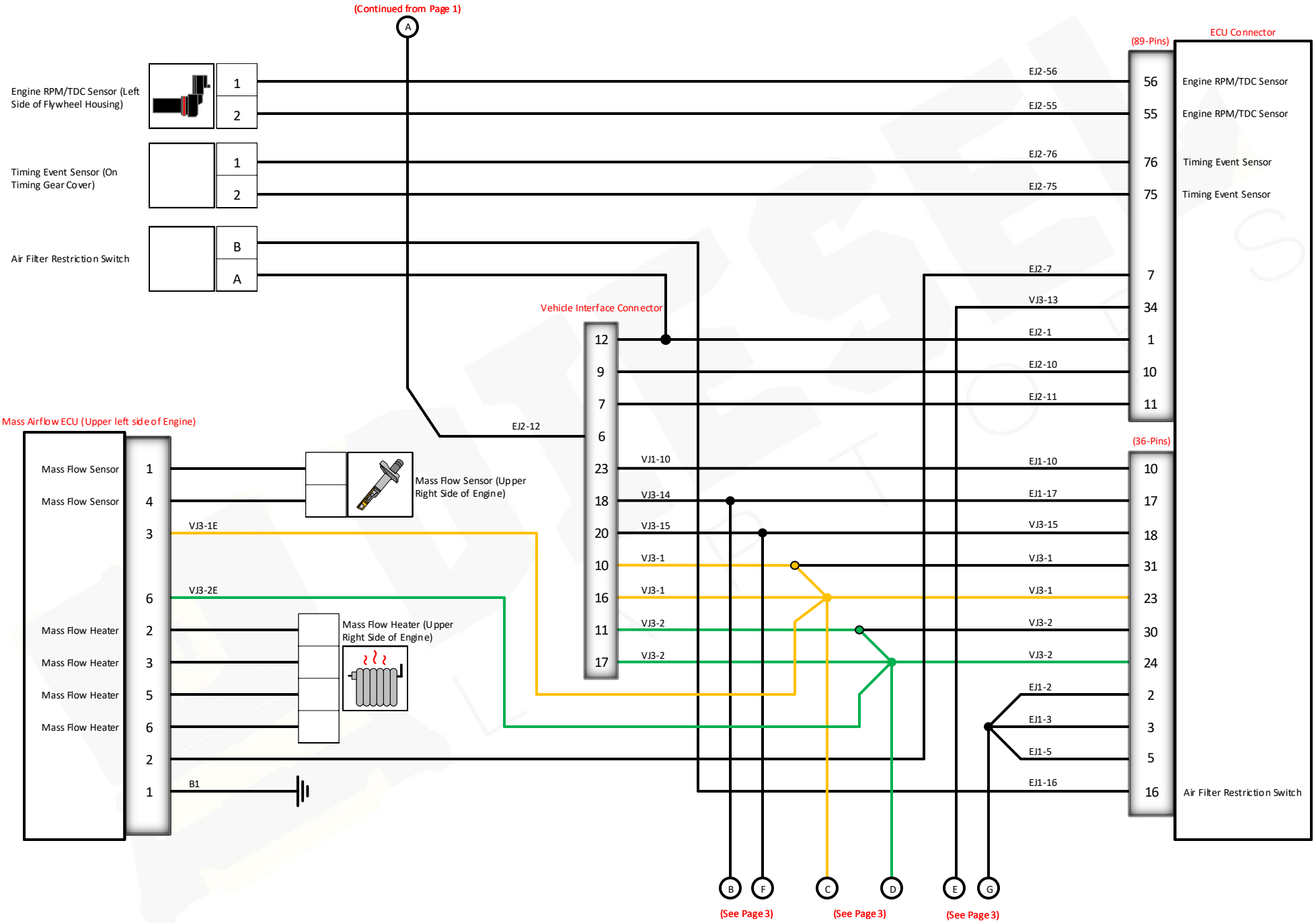

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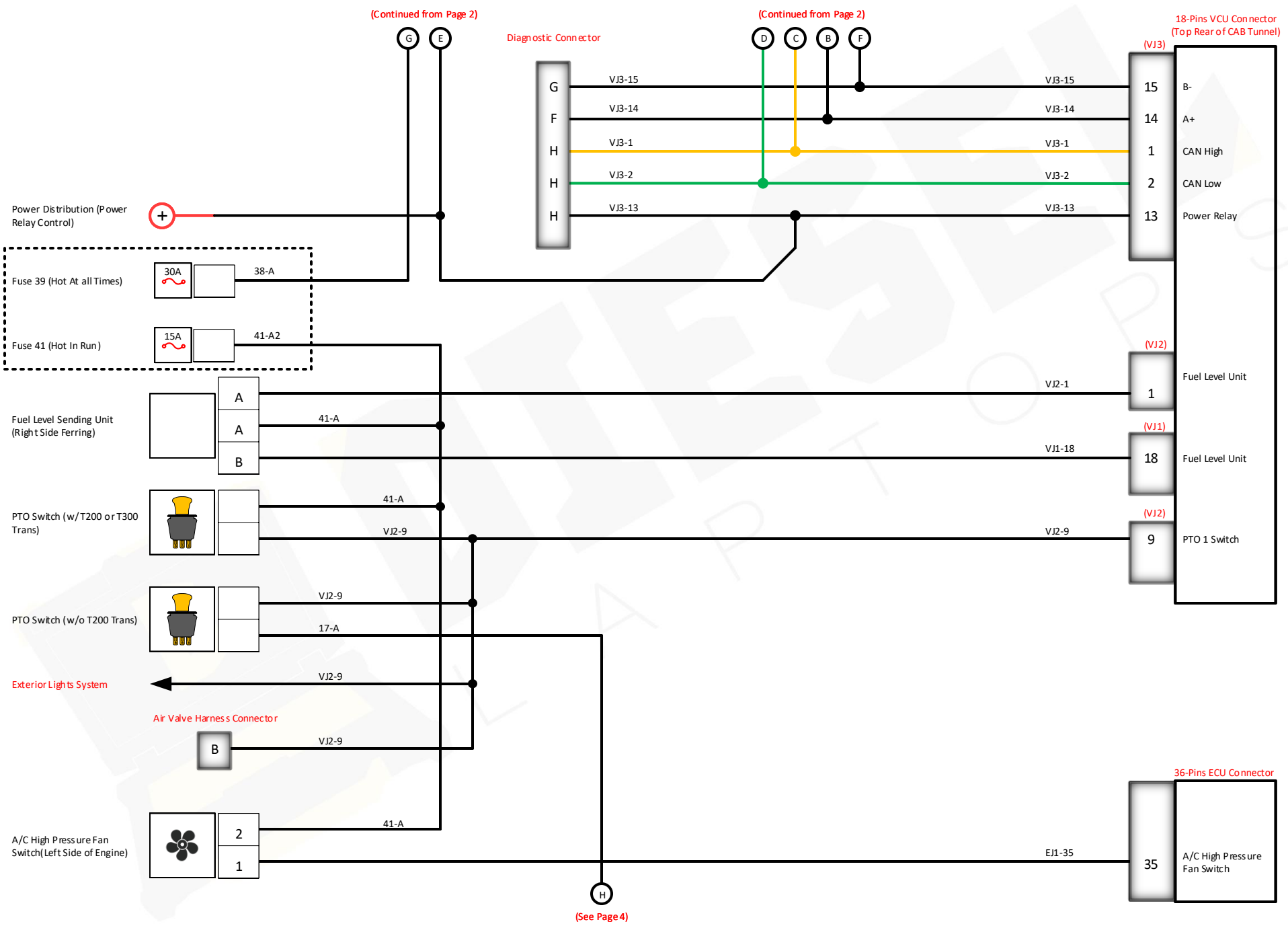

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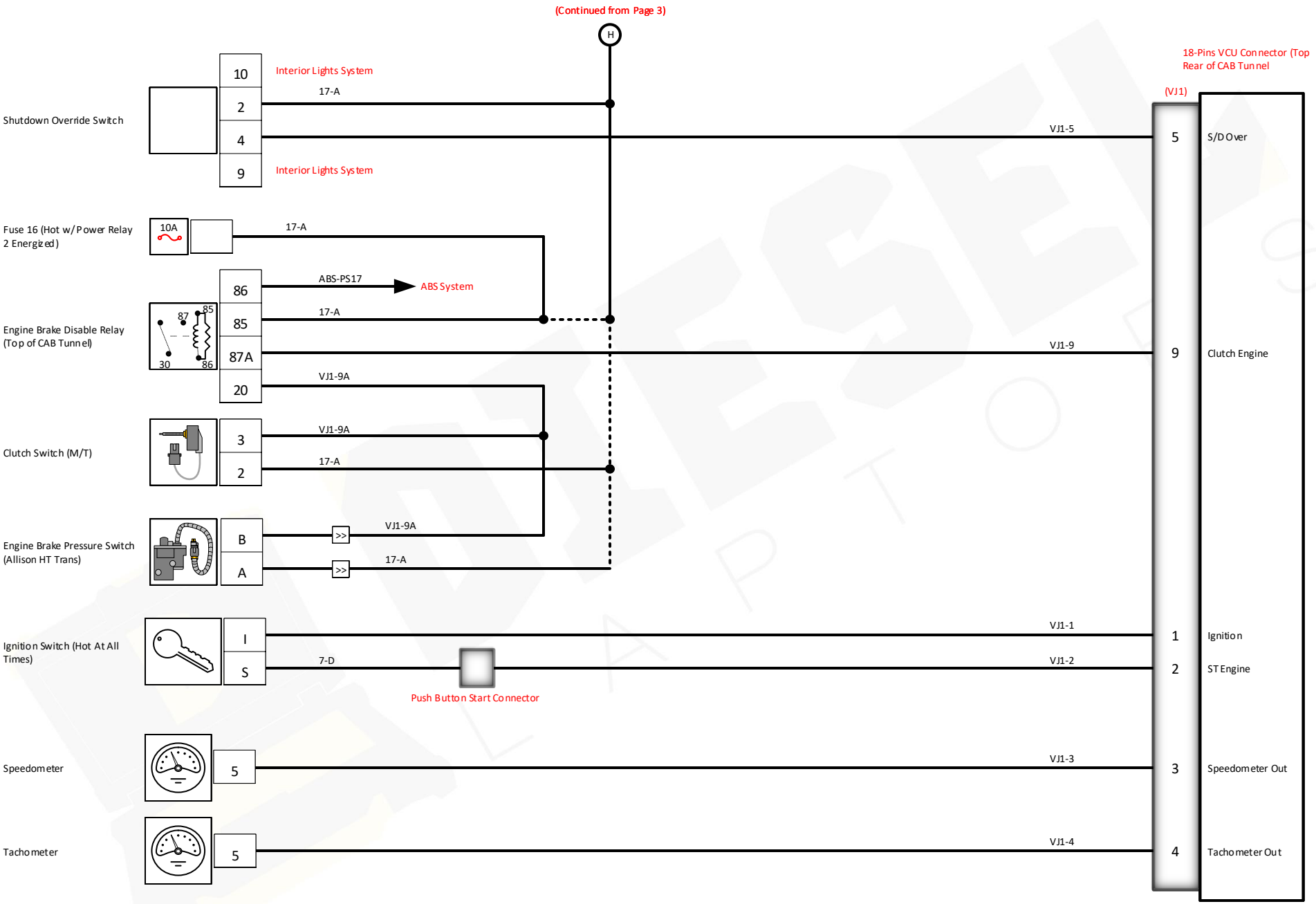
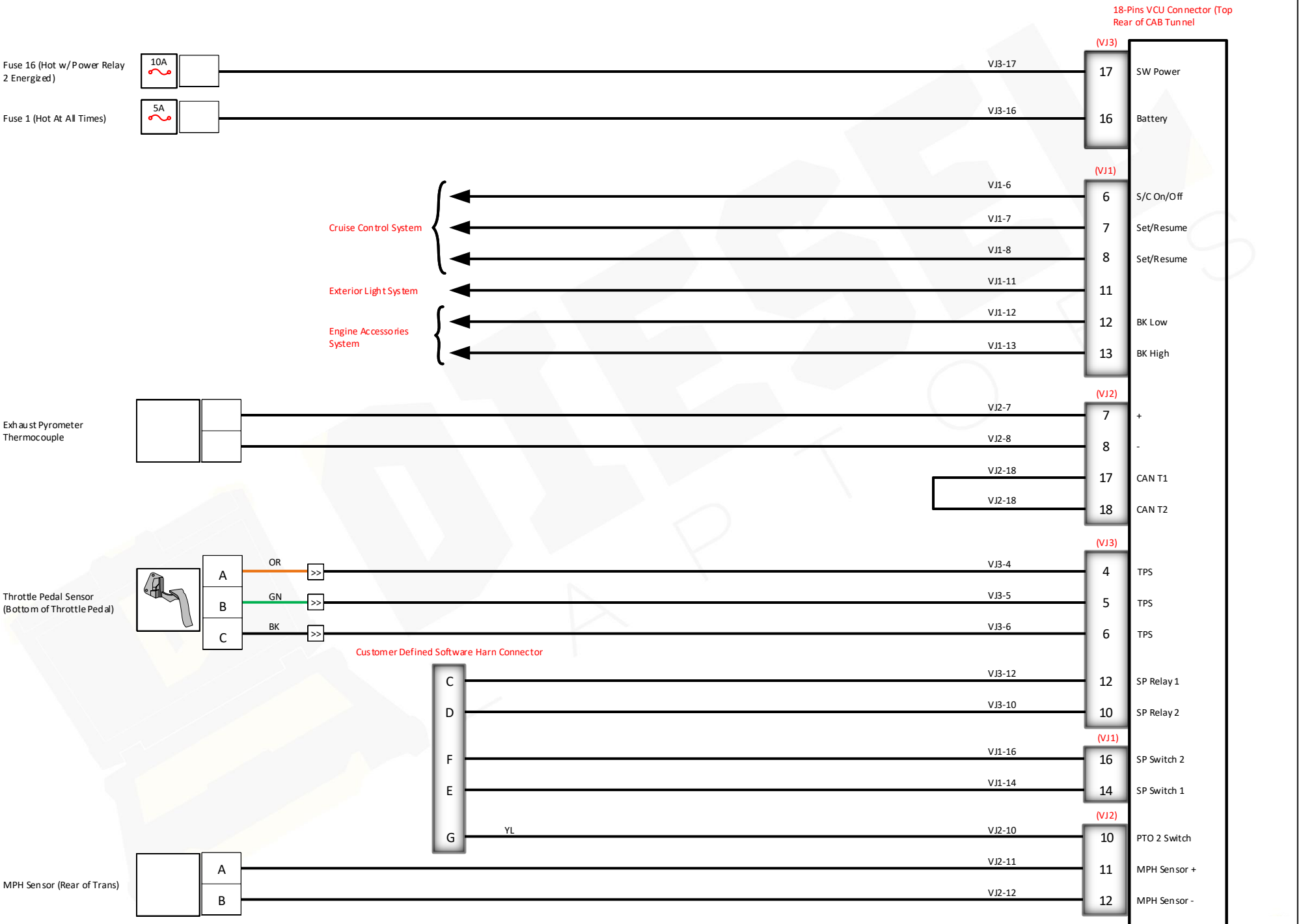


Mack Engines (VMAC III)



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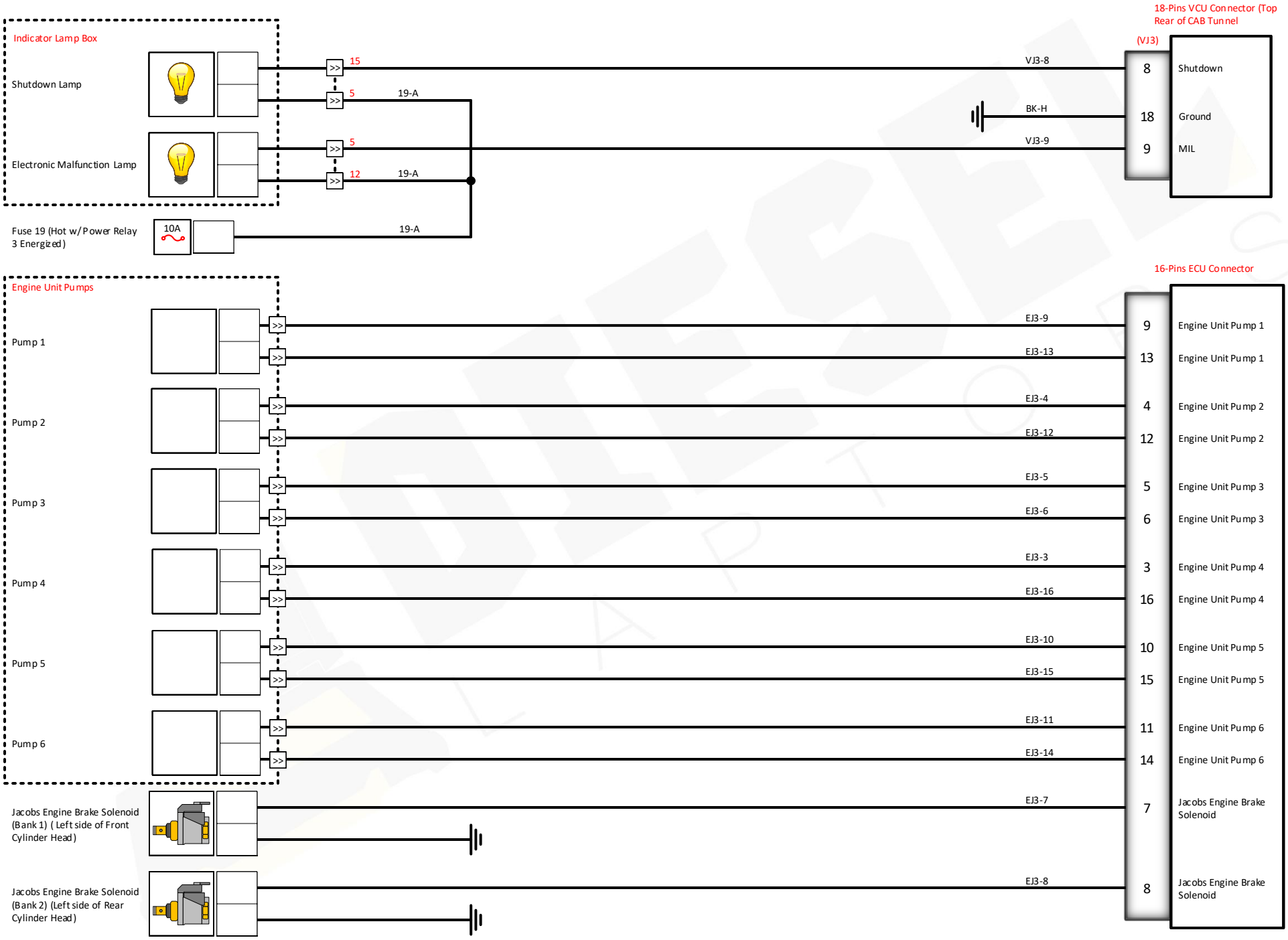

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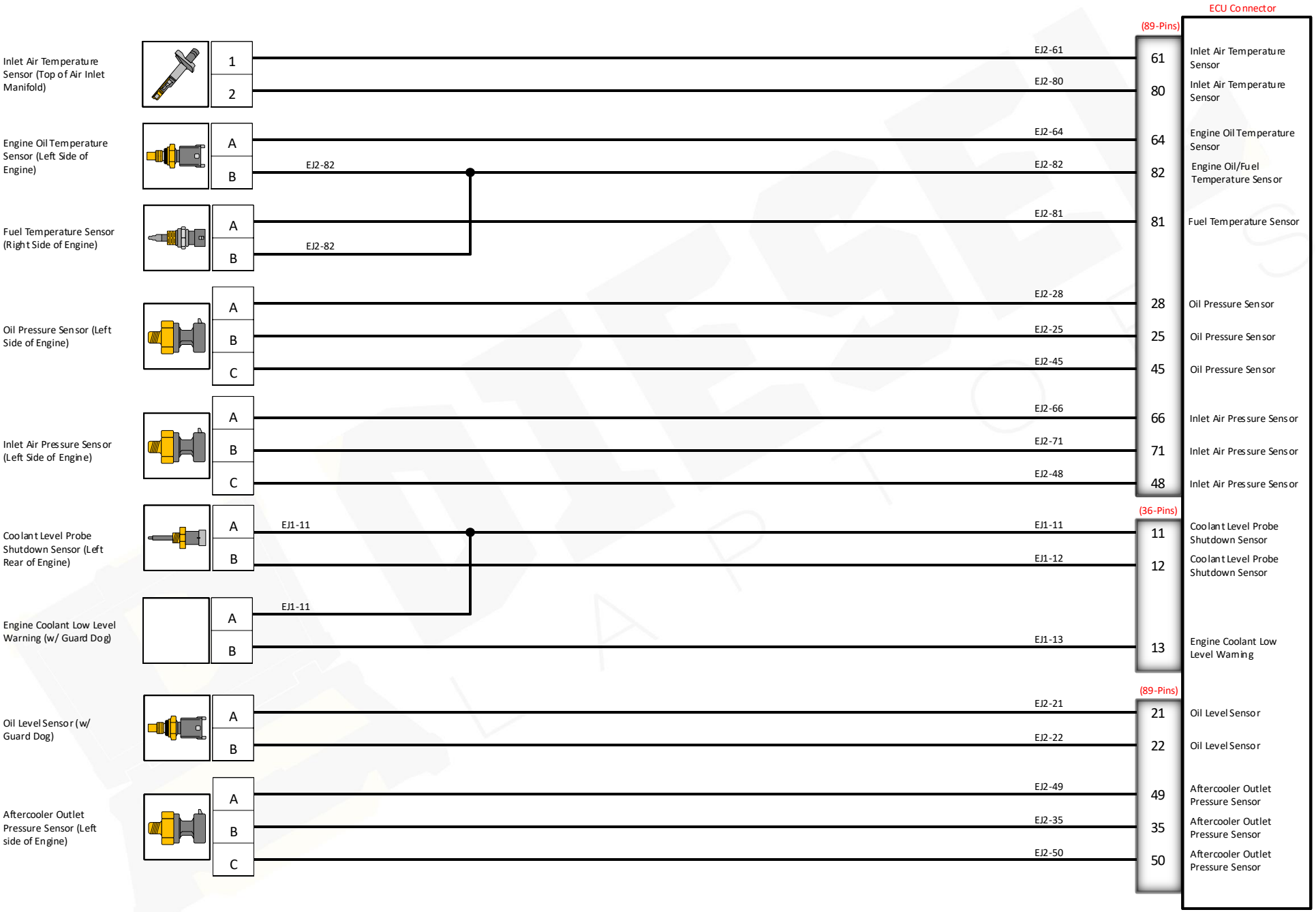
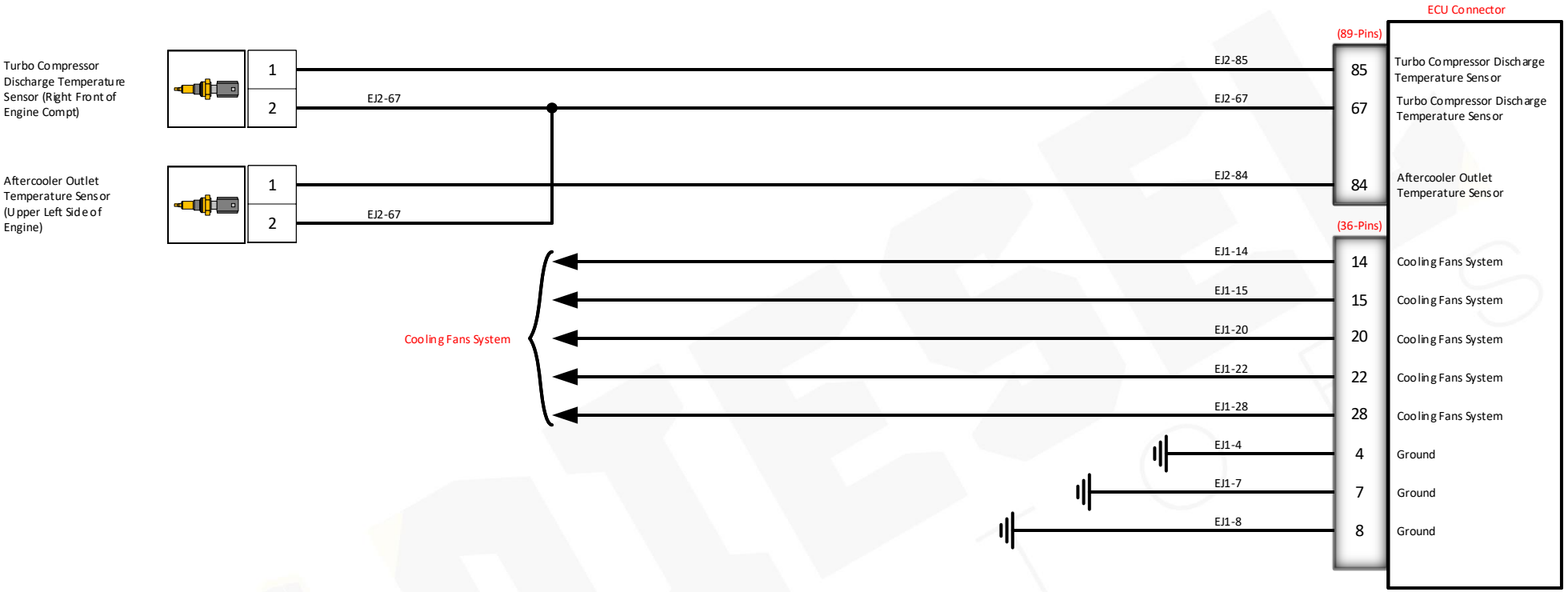
Mack Engines (VMAC III - AC)