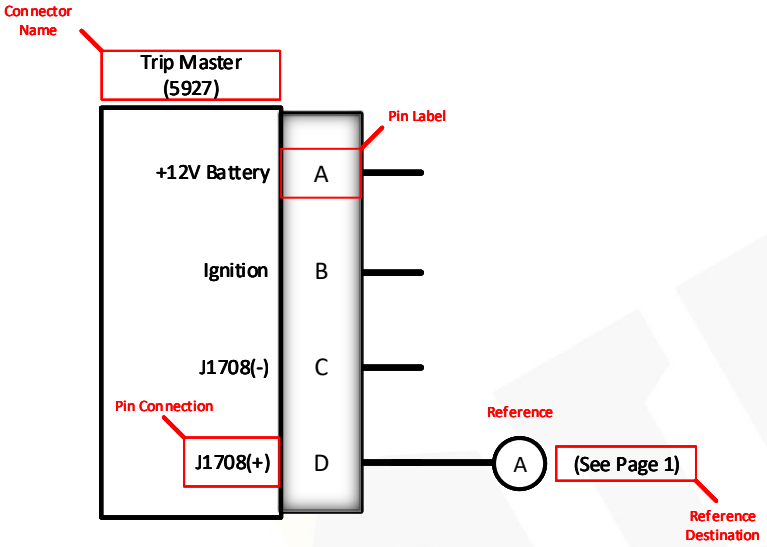
# MACK

## LEU (US10)

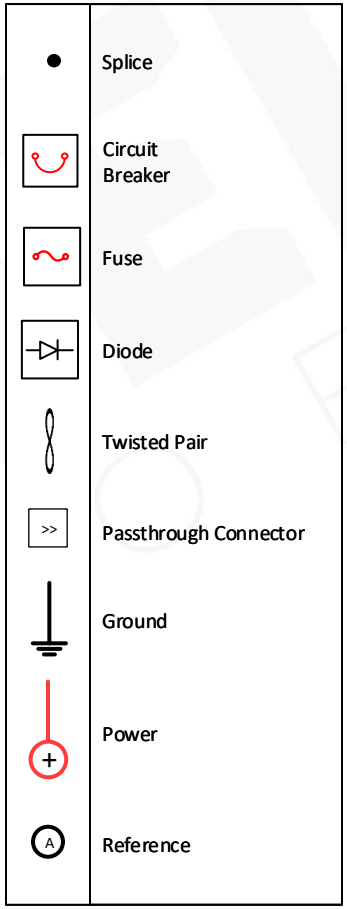
(2012)

Aftertreatment Wiring Schematics

# How to Read This Diagram

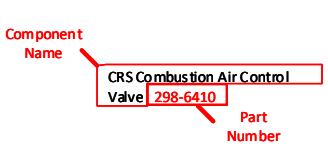


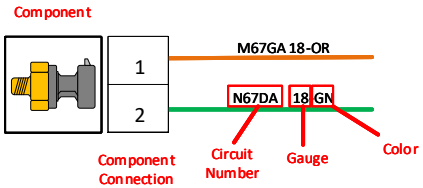

## SYMBOLS




| ABBREVIATION | COLOR |
|---|---|
| RD | RED |
| WH | WHITE |
| OR | ORANGE |
| YL/YE | YELLOW |
| PK | PINK |
| 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



DIESEL LAPTOPS

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## Section 2 : Connectors and Components (Continued..)


| | |
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| SXN2_14 | R31 (AFT DEF Line Heater 1) |
| SXN2_15 | R29 (AFT DEF Line Heater 3) |
| SXN2_16 | Y76 (AFT DPF Ignition Coil) |
| SXN2_17 | S111 (Aftertreatment DPF Regeneration Inhibit Switch) |
| SXN2_18 | B211_B (DPF Temperature Assembly) |
| SXN2_19 | Y81 (AFT DEF Tank Heater Valve) |
| SXN2_20 | Y80 (AFT DEF Dosing Valve) |
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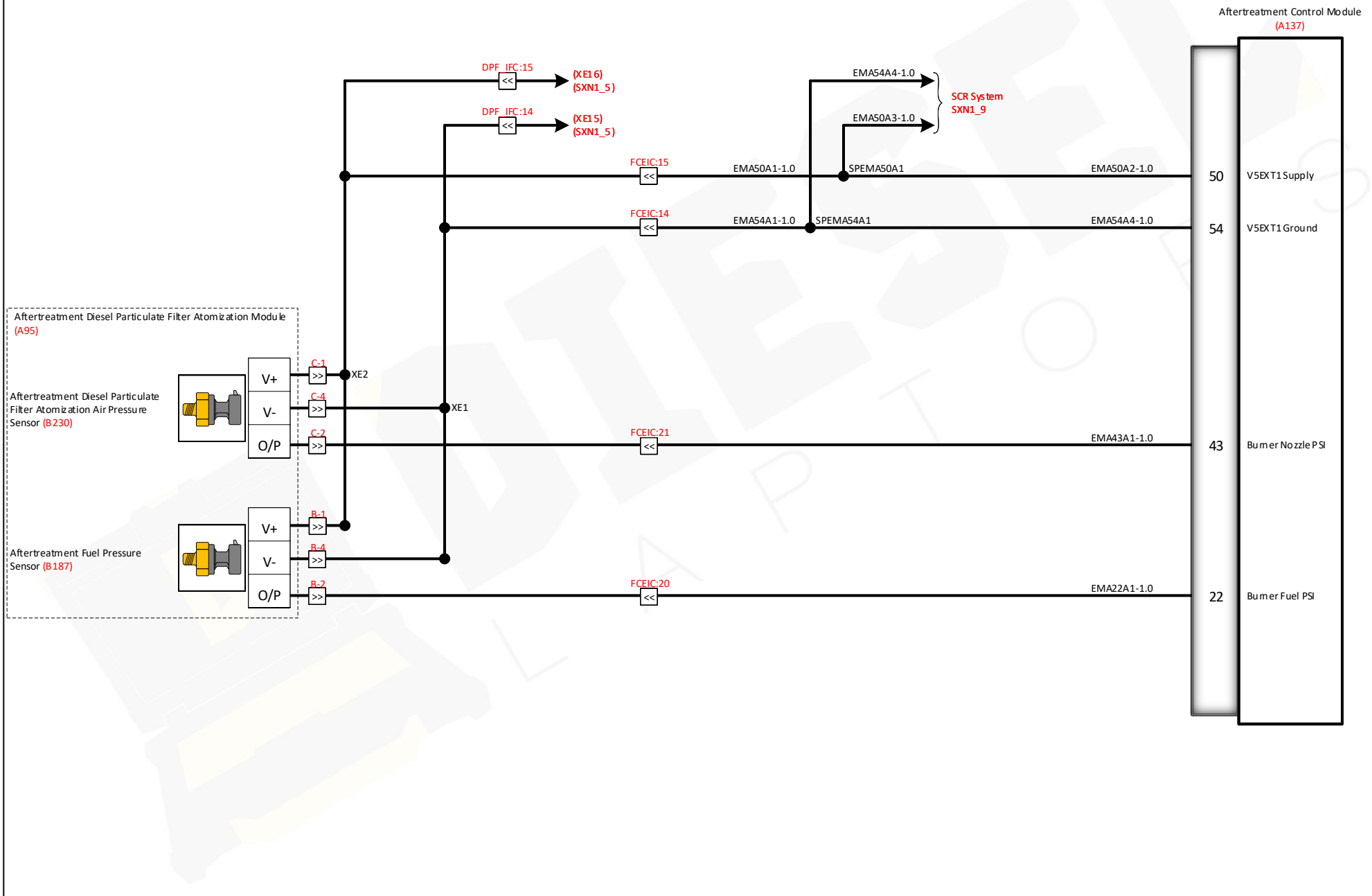
| SXN2_22 | B142B (AFT DEF Tank Level/Temperature Sensor) |
| SXN2_23 | X11 - Engine Management Interface Connector |
| | |
| | |
| | |
| | |

# DPF System: Aftertreatment Diesel Particulate Filter Atomization Module



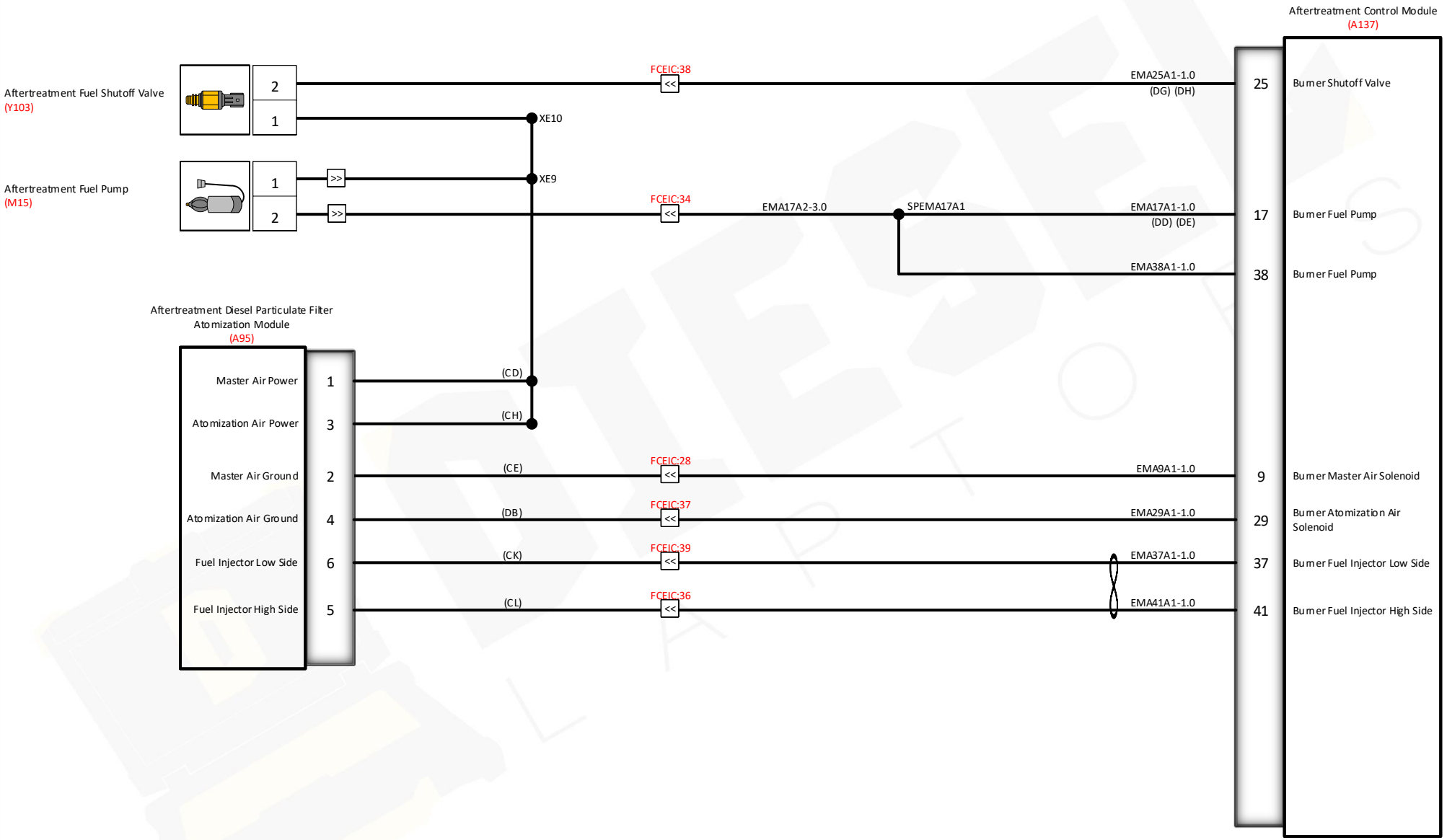
Return To Table



# DPF System: Aftertreatment Diesel Particulate Filter Atomization Module, Aftertreatment Fuel Pump, Aftertreatment Fuel Shutoff Valve

SXN1_2

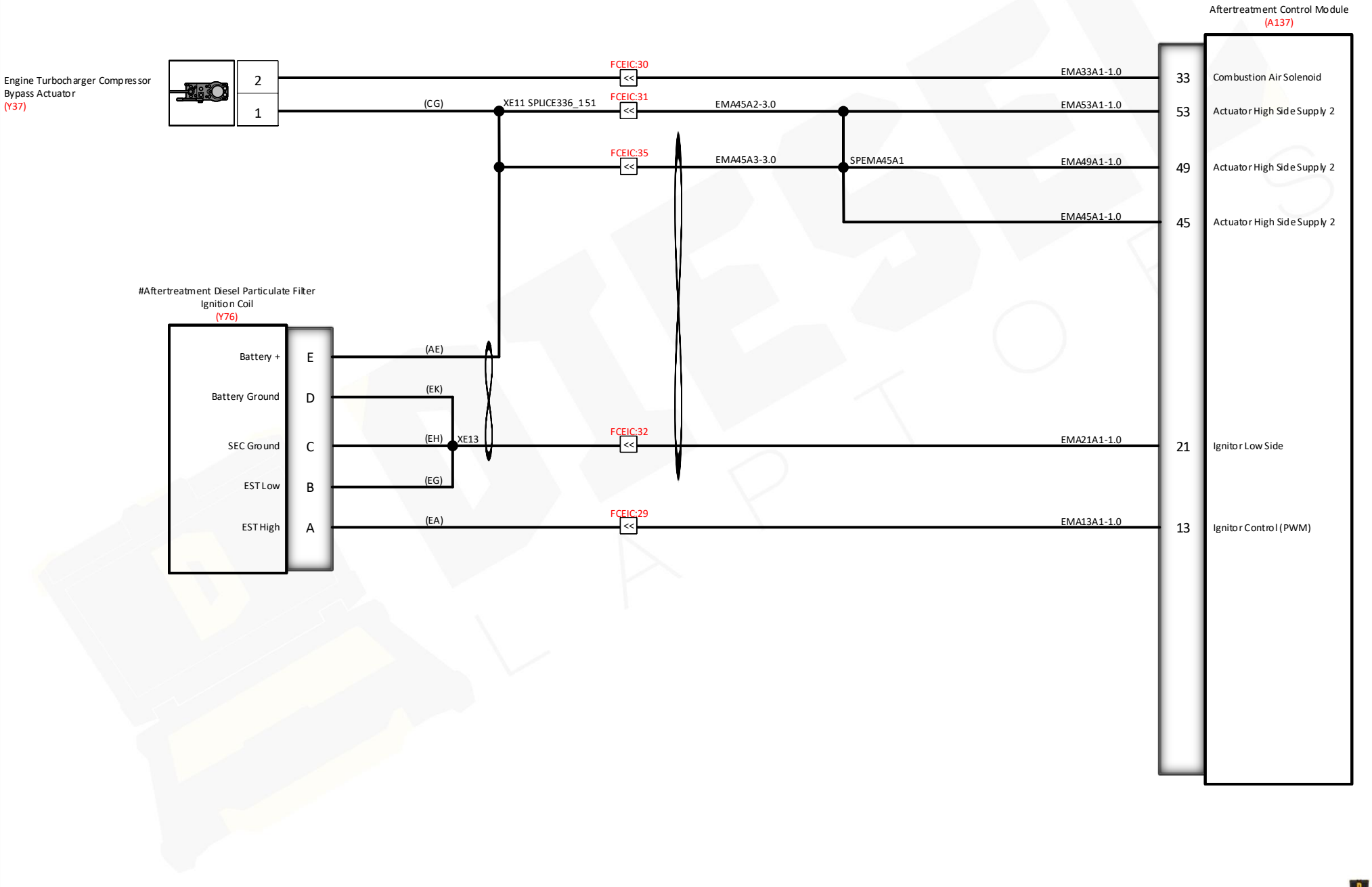
Return To Table



# DPF System: Aftertreatment Diesel Particulate Filter Ignition Coil, Engine Turbocharger Compressor Bypass Actuator



Return To Table




#Minimum Voltage Drop for Ignitor is 1V, 12AWG.

# DPF System: Data Lines & Aftertreatment Diesel Particulate Filter Regeneration Inhibit Switch



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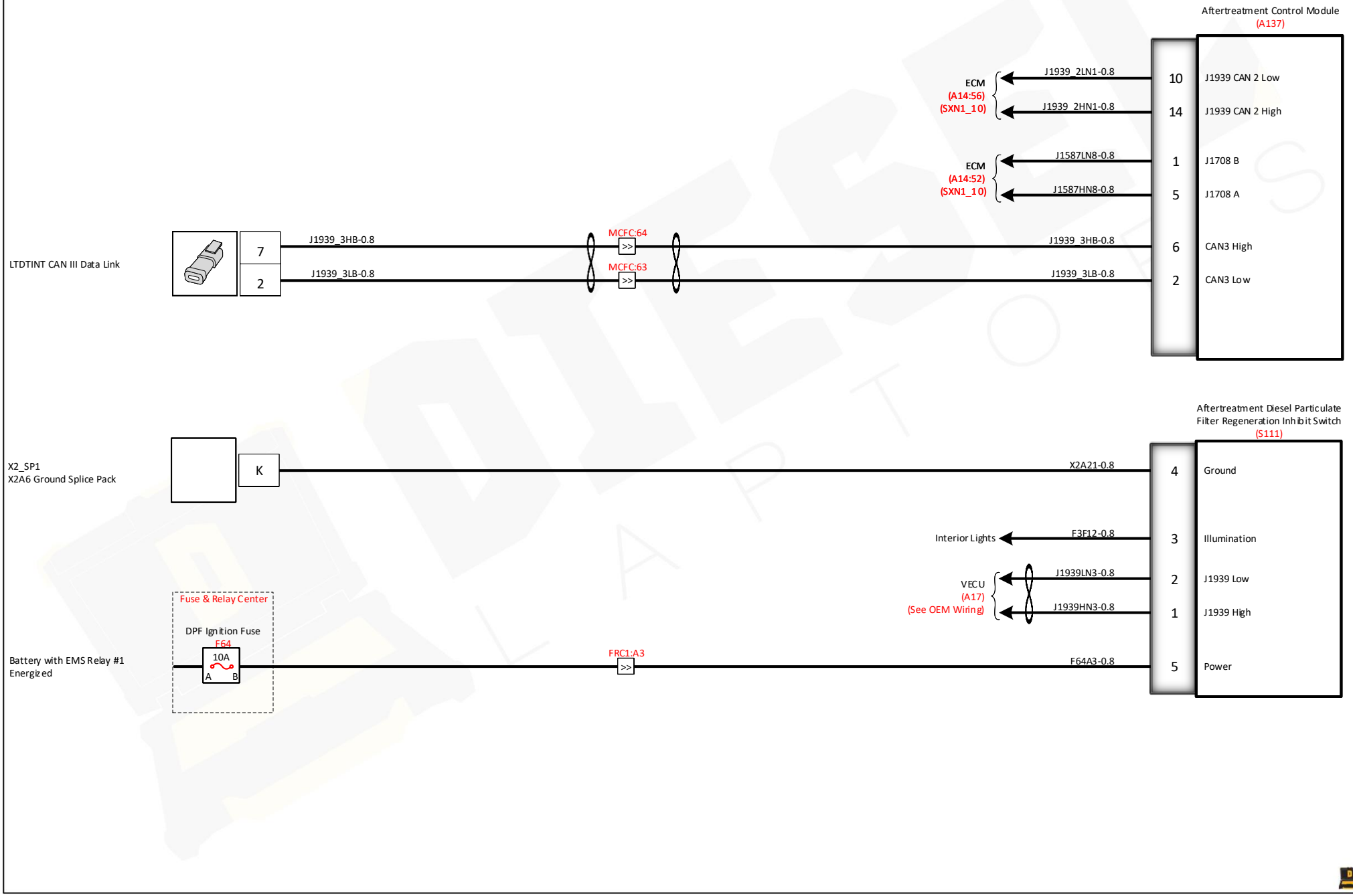

# DPF System: DPF Temperature Sensor Assembly & Aftertreatment DPF Differential Pressure Seneor



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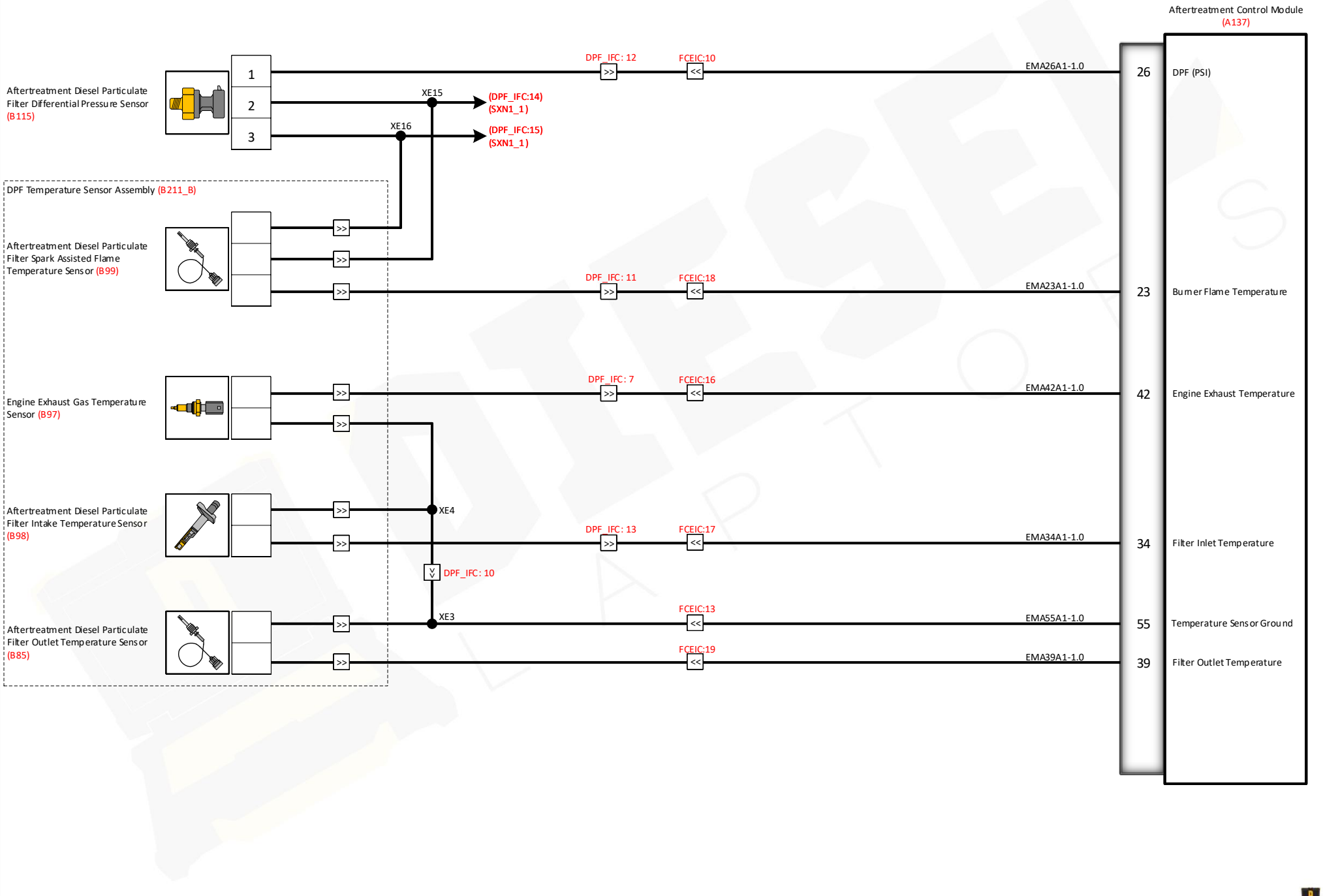
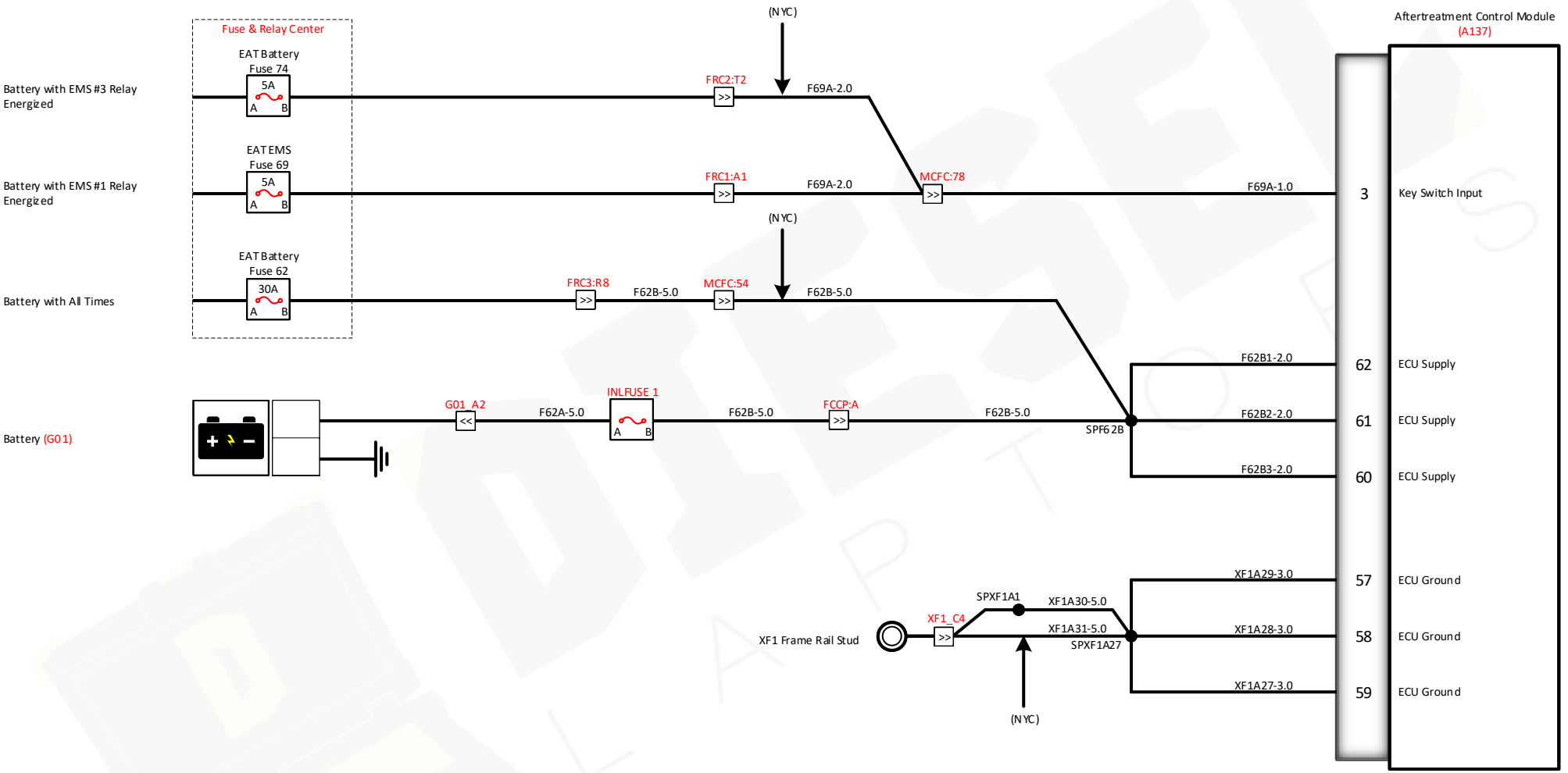


# DPF System: Power & Ground

Return To Table

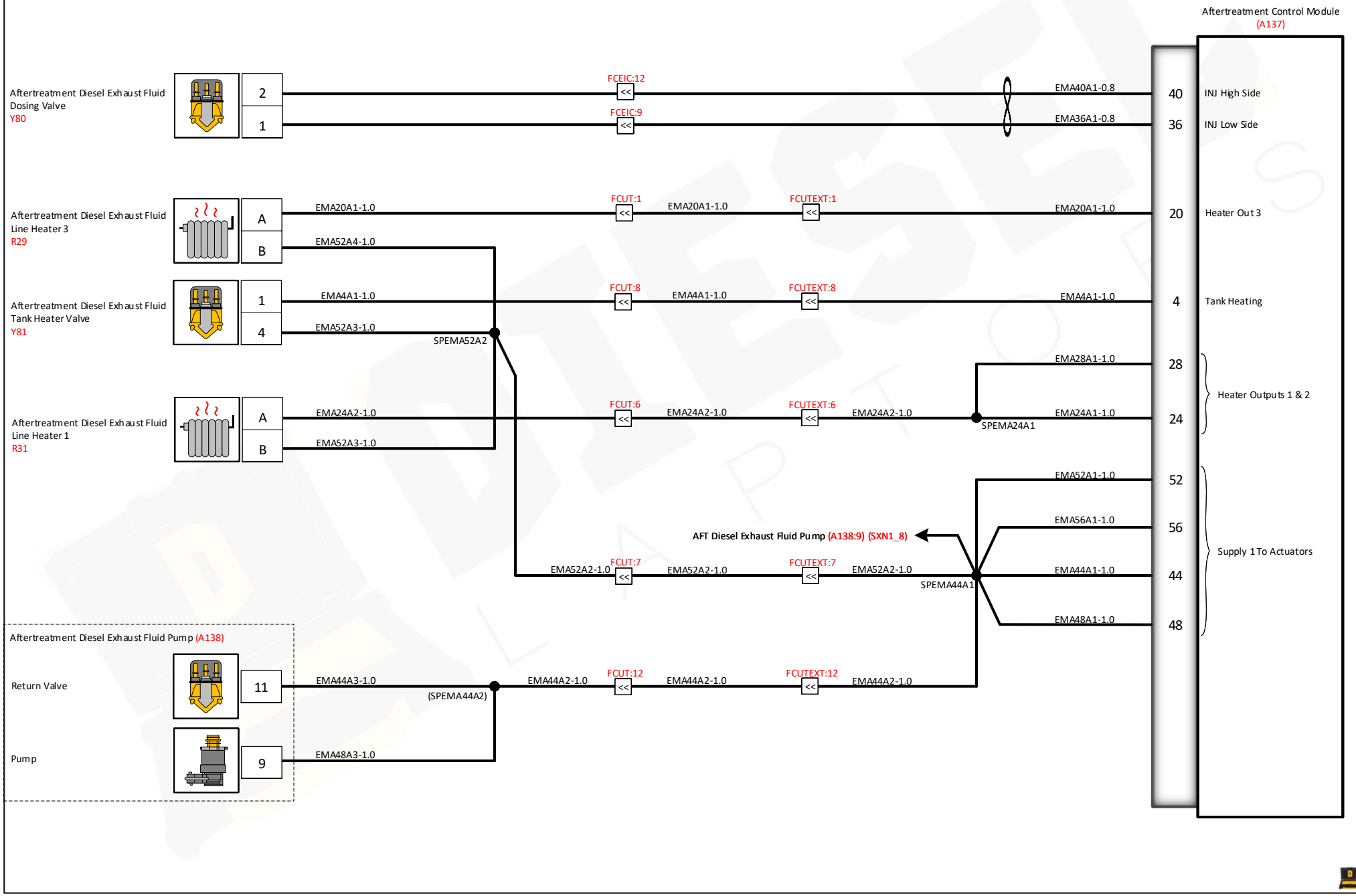



Note: Max Voltage Drop For Igniter is 1V,12AWG

# SCR System: ADEF line heater 1 & 3,ADEF Tank Heater Valve, ADEF Dosing Valve, ADEF Pump

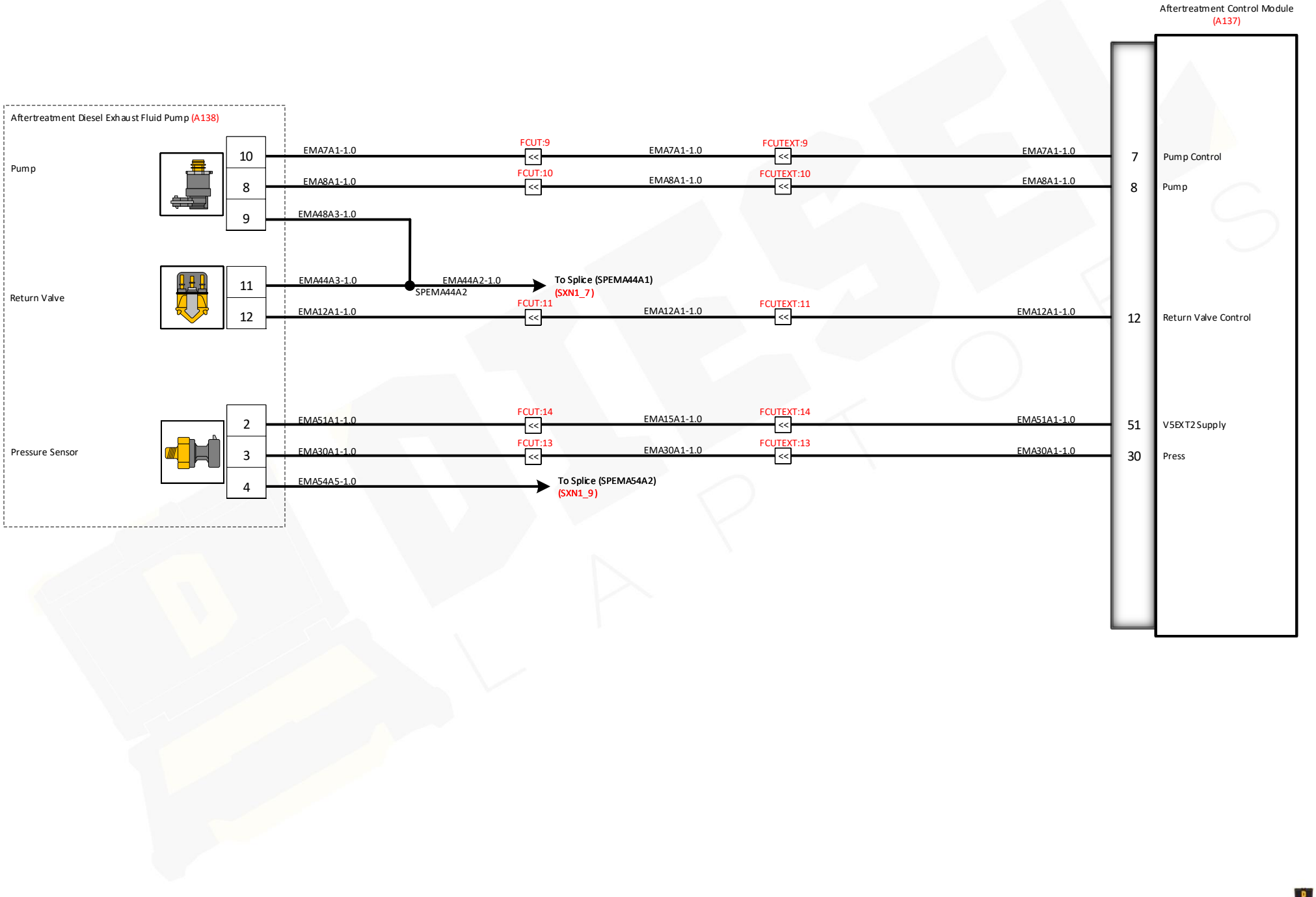


Return To Table



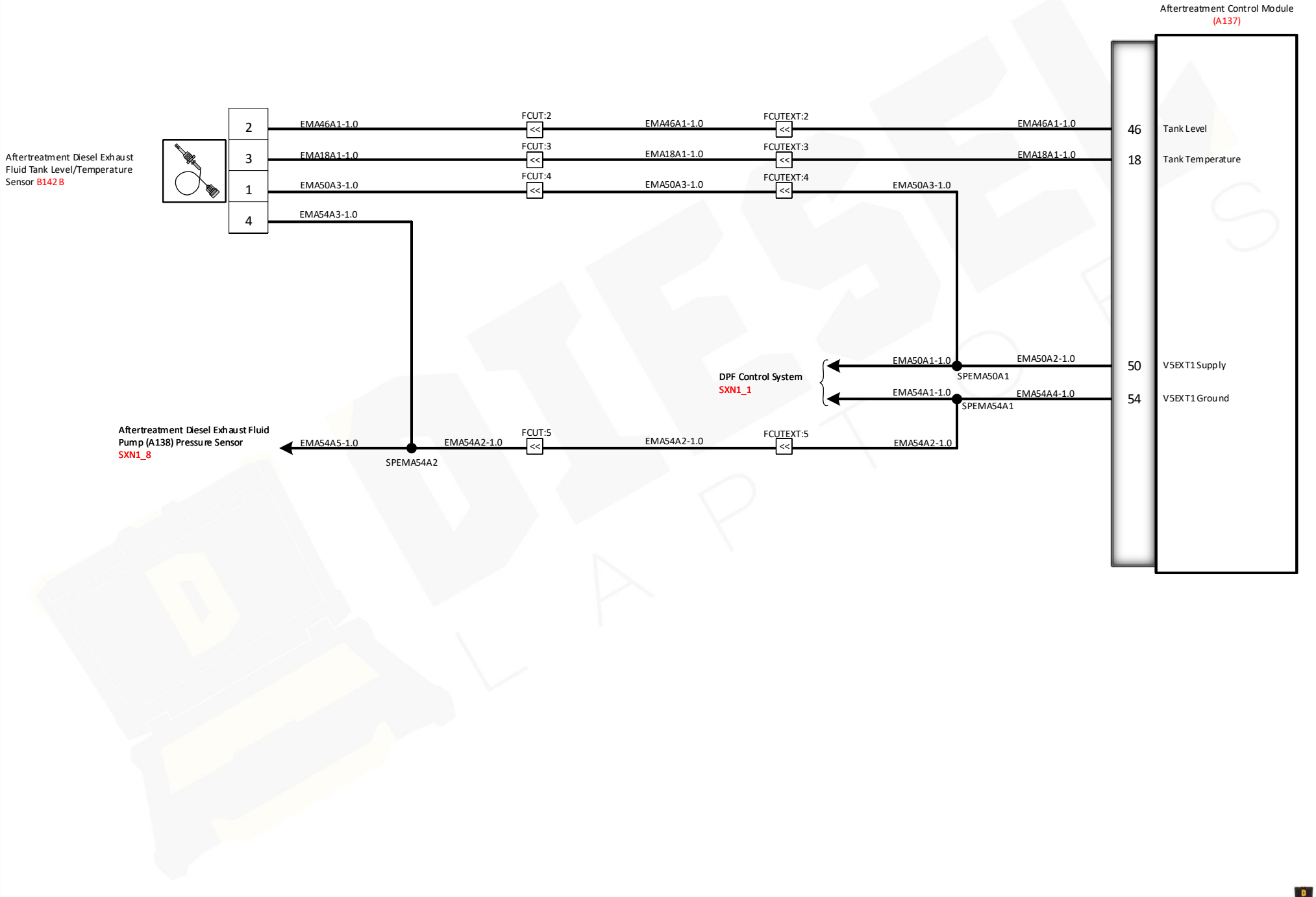
# SCR System: Aftertreatment Diesel Exhaust Fluid Pump

Return To Table



# SCR System: ADE Fluid Tank Level/Temperature Sensor, ADE Fluid Pump

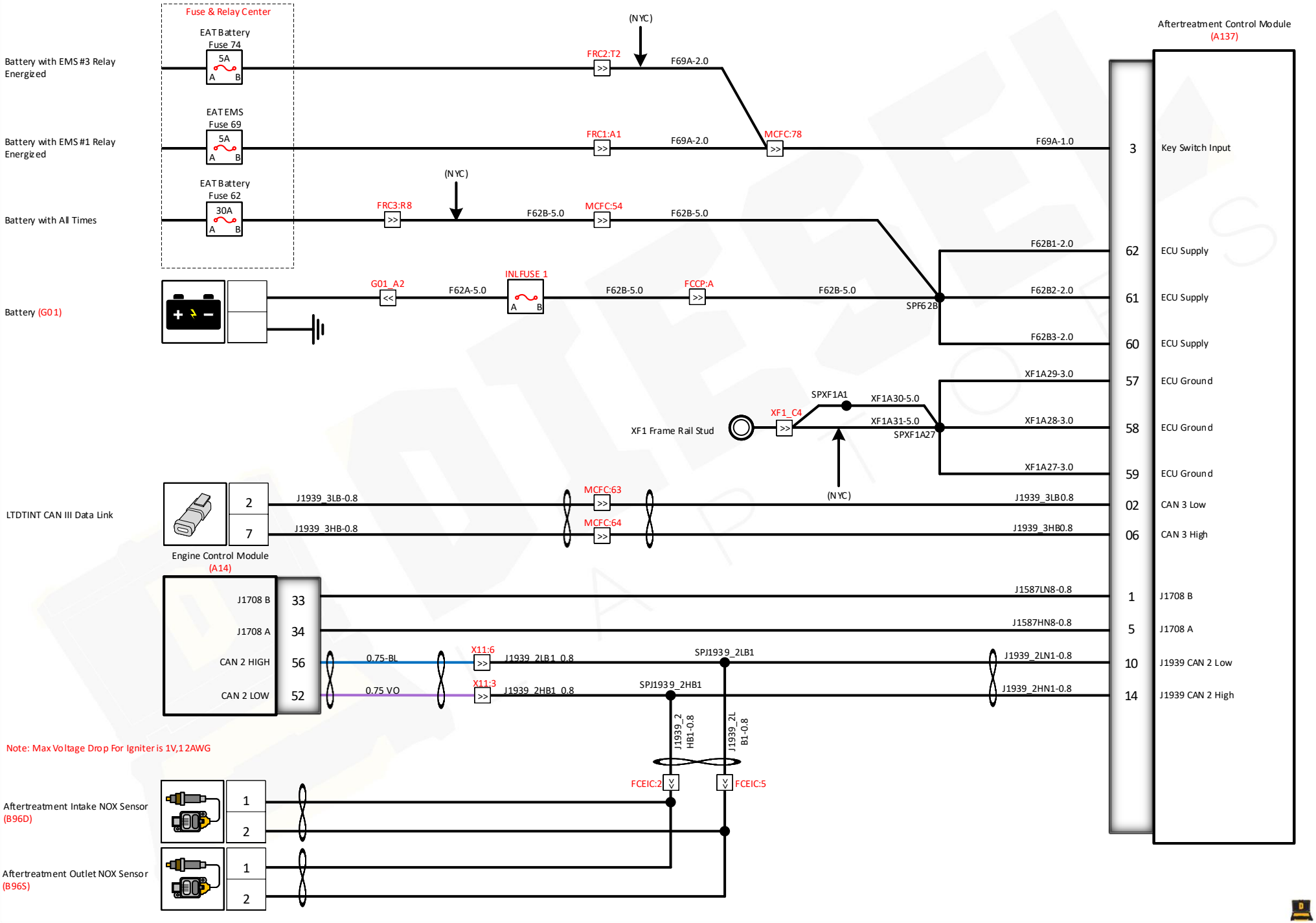
Return To Table



# SCR System: Power, Grounds, & Data Lines



Return To Table



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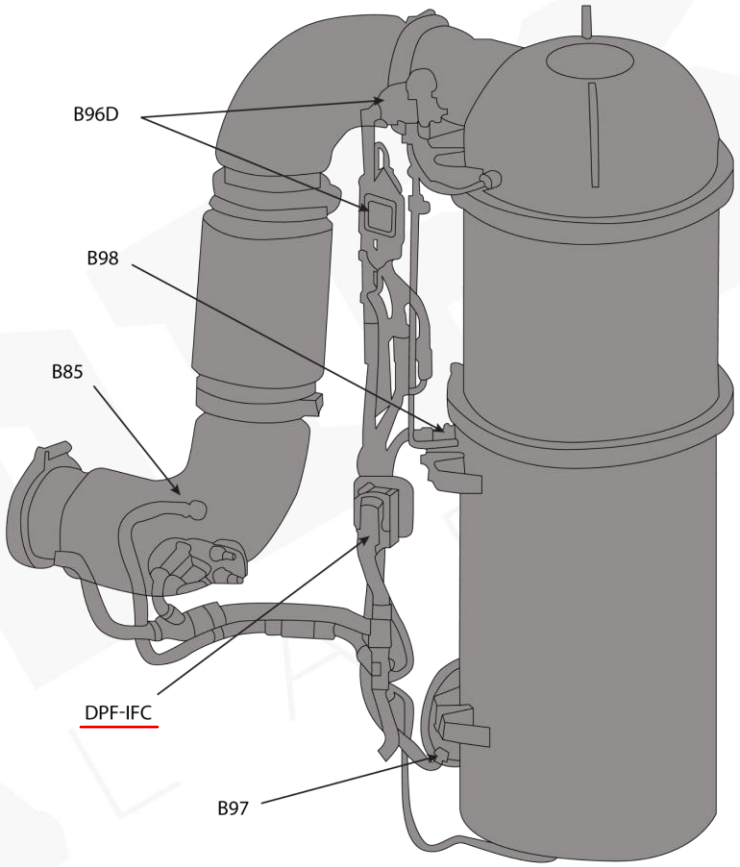
## (DPF RACEWAY)



Return To Table

| FCEIC | | |
|---|---|---|
| Harness : FRONT_CHASSIS | | |
| Part Number : 21082469 | | |
| Pin Number | Circuit Number | Function |
| 1 | - | - |
| 2 | J1939HB18 | J1939-11/J1939-15 |
| 3 | F46B1 | Ignition Buss Feed |
| 4 | - | - |
| 5 | J1939LB18 | J1939-11/J1939-15 |
| 6 | XF1A5 | Battery Ground |
| 7 | EMA42A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 8 | EMA34A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 9 | EMA36A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 10 | EMA26A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 11 | EMA39A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 12 | EMA40A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 13 | EMA55A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 14 | EMA54A2 | Starting Aid (Ether, Preheat, Glow Plug) |
| 15 | EMA50A2 | Starting Aid (Ether, Preheat, Glow Plug) |

# MCFC

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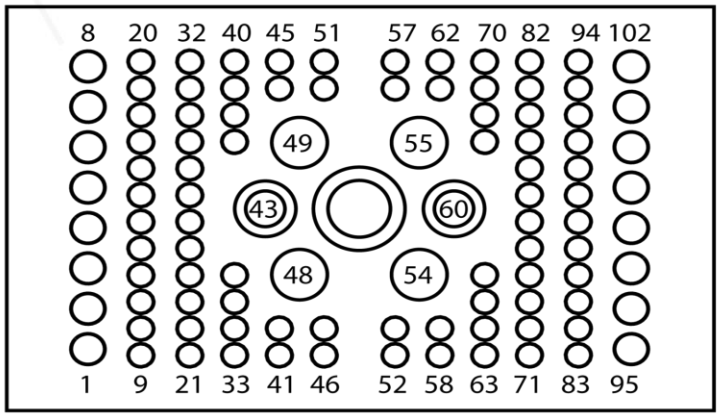
| MCFC | | |
|---|---|---|
| Harness : FRONT_CHASSIS | | |
| Part Number : 598AX247 | | |
| Pin Number | Circuit Number | Function |
| 1 | CB11A | Park Brake |
| 2 | F8E | PTO Control |
| 3 | F42B1 | Back Up |
| 4 | F42A2 | Ignition Buss Feed |
| 5 | F17U | PTO Control |
| 6 | F64B1 | Lamp Monitoring |
| 7 | F26B3 | Hook Lamps |
| 8 | F15B2; F65C | Heated Mirrors |
| 9 | AATCV2 | ABS |
| 10 | AFLWS2 | ABS |
| 11 | HB3 | Fuel Level Gauge |
| 12 | AFLWS1 | ABS |
| 13 | AFRMVG | ABS |
| 14 | F2E | Fog/Road (Forward Facing) |
| 15 | F51B1 | Headlamps |
| 16 | ARLMVG | Cab Ground; ABS |
| 17 | F50B1 | Headlamps |
| 18 | F2C2 | Headlamps |
| 19 | HC19B | Rear Axle Indicators |
| 20 | F52H | Battery Buss Feed |
| 21 | HB11 | Oil Temp Gauge |
| 22 | HB10 | Oil Temp Gauge |
| 23 | XC1B56; F17S | Shift Control |
| 24 | F5E3; F5E1 | Stop; Turn (Directional) |
| 25 | F5D3; F5D1 | Stop; Turn (Directional) |
| 26 | F21A2 | Windshield Wipers |
| 27 | HB17 | Miscellaneous Gauges |
| 28 | HB6 | Miscellaneous Gauges |
| 29 | HA12G | Instrument Ground |
| 30 | CB6A1 | Vehicle Speed |
| 31 | CB20A1; CB25A1 | Vehicle Speed |
| 32 | AFLMVG | ABS |
| 33 | J1587LN18 | J1587/J1708 |
| 34 | J1587HN18 | J1587/J1708 |
| 35 | HB12 | Oil Temp Gauge |
| 36 | F53A | Heater/AC (Cab) |
| 37 | F64A1 | Ignition Buss Feed |
| 38 | F8J | PTO Control |
| 39 | F8B | PTO Control |
| 40 | HC20B | Rear Axle Indicators |
| 41 | CB3 | Traction Control and Axle Lock |
| 42 | F8A6 | PTO Control |
| 43 | - | - |
| 44 | AFRWS1 | ABS |
| 45 | AFRWS2 | ABS |
| 46 | CB17 | Electronic Engine Control |
| 47 | AX3_2; F5B2; HC11 | Electronic Ground; Stop |
| 48 | F39A1 | Ignition Buss Feed |
| 49 | F39B1 | Ignition Buss Feed |
| 50 | AFLMVO | ABS |
| 51 | AFRMVI | ABS |
| 52 | F52G | Brake Wear Sensor |
| 53 | F52C | Brake Wear Sensor |
| 54 | F32A | Ignition Buss Feed |
| 55 | F32B | Ignition Buss Feed |
| 56 | ARRWS2 | ABS |
| 57 | ARRMVG | Cab Ground; ABS |
| 58 | F8H | PTO Control |
| 59 | F8C | PTO Control |
| 60 | - | - |
| 61 | ARRWS1 | ABS |
| 62 | ARRMVI | ABS |
| 63 | HB5 | Pyrometer |
| 64 | HB4 | Pyrometer |
| 65 | F8F | PTO Control |
| 66 | F7A1 | Battery Buss Feed |
| 67 | AATCV1 | ABS |
| 68 | ARLWS2 | ABS |
| 69 | F8D | PTO Control |
| 70 | ARRMVO | ABS |
| 71 | HB9 | Ambient Air Temperature |
| 72 | CB4 | Controls |
| 73 | ARLMVO | ABS |
| 74 | AFLMVI | ABS |
| 75 | F17N | PTO Control |
| 76 | F17A14 | Ignition Buss Feed |
| 77 | AFRMVO | ABS |
| 78 | F21D | Windshield Wipers |
| 79 | F21B | Windshield Wipers |
| 80 | F21C | Windshield Wipers |
| 81 | F21H | Windshield Wipers |
| 82 | HC4 | Lamp Monitoring |
| 83 | J1939LB; J1939LB8; | J1939-11/J1939-15 |
| 84 | J1939HB; J1939HB8; | J1939-11/J1939-15 |
| 85 | ARLMVI | ABS |
| 86 | F65A4 | Battery Buss Feed |
| 87 | F17R; F26B9 | Hook Lamps; Miscellaneous Gauges |
| 88 | F41B1 | Heater/AC (Cab) |
| 89 | HE3A | Collision Avoidance |
| 90 | HE4A | Collision Avoidance |
| 91 | F3B8 | Park |
| 92 | ARLWS1 | ABS |
| 93 | F8G | PTO Control |
| 94 | HE5A | Collision Avoidance |
| 95 | HD1; F62B3 | Turn (Directional); Rear Axle Indicators |
| 96 | - | - |
| 97 | - | - |
| 98 | - | - |
| 99 | - | - |
| 100 | - | - |
| 101 | - | - |
| 102 | F27B; F4D3 | Turn (Directional); Miscellaneous |

| MCFC | | |
|---|---|---|
| Harness : MAIN_CAB | | |
| Part Number : 598AX246 | | |
| Pin Number | Circuit Number | Function |
| 1 | CB11A | Park Brake |
| 2 | F8E | PTO Control |
| 3 | F42B1 | Back Up |
| 4 | F42A2 | Ignition Buss Feed; Electronic Controlled Transmission |
| 5 | F17U | PTO Control |
| 6 | F64B1 | Lamp Monitoring |
| 7 | F26B3 | Hook Lamps |
| 8 | F15B2; F65C | Heated Mirrors |
| 9 | AATCV2 | ABS |
| 10 | AFLWS2 | ABS |
| 11 | HB3 | Fuel Level Gauge |
| 12 | AFLWS1 | ABS |
| 13 | AFRMVG; XC1B11 | Cab Ground; ABS |
| 14 | F2E | Fog/Road (Forward Facing) |
| 15 | F2G | DRL (Daytime Running Lamps) |
| 16 | ARLMVG; XC1B13 | Cab Ground; ABS |
| 17 | F2H | DRL (Daytime Running Lamps) |
| 18 | F2C2 | Headlamps |
| 19 | HC19B | Rear Axle Indicators |
| 20 | F52H | Battery Buss Feed |
| 21 | HB11 | Rear Axle Indicators |
| 22 | HB10 | Rear Axle Indicators |
| 23 | XC1B56; F17S | Shift Control; Electronic Controlled Transmission |
| 24 | F5E3; F5E1 | Tail |
| 25 | F5D3; F5D1 | Tail |
| 26 | F21A2 | Ignition Buss Feed |
| 27 | HB17 | Miscellaneous Gauges |
| 28 | HB6 | Miscellaneous Gauges |
| 29 | HA12G | Electronic Ground |
| 30 | CB6A1 | Vehicle Speed |
| 31 | CB20A1; CB25A1 | Vehicle Speed |
| 32 | AFLMVG; XC1B12 | Cab Ground; ABS |
| 33 | J1587LN1 | J1587/J1708 |
| 34 | J1587HN1 | J1587/J1708 |
| 35 | HB12 | Oil Temp Gauge |
| 36 | F53A | Heater/AC (Cab) |
| 37 | F64A2; F64A1 | Ignition Buss Feed |
| 38 | F8J | PTO Control |
| 39 | F8B | PTO Control |
| 40 | HC20B | Rear Axle Indicators |
| 41 | CB3 | Traction Control and Axle Lock |
| 42 | F8A6 | Ignition Buss Feed |
| 43 | - | - |
| 44 | AFRWS1 | ABS |
| 45 | AFRWS2 | ABS |
| 46 | CB17 | Electronic Engine Control |
| 47 | AX3_2; F5B2; HC11 | Electronic Ground; Stop; Electronic Controlled Transmission |
| 48 | F39A1 | Ignition Buss Feed |
| 49 | F39B1 | Ignition Buss Feed |
| 50 | AFLMVO | ABS |
| 51 | AFRMVI | ABS |
| 52 | F52G | Brake Wear Sensor |
| 53 | F52C | Brake Wear Sensor |
| 54 | F32A | Ignition Buss Feed |
| 55 | F32B | Ignition Buss Feed |
| 56 | ARRWS2 | ABS |
| 57 | ARRMVG; XC1B14 | Cab Ground; ABS |
| 58 | F8H | PTO Control |
| 59 | F8C | PTO Control |
| 60 | - | - |
| 61 | ARRWS1 | ABS |
| 62 | ARRMVI | ABS |
| 63 | HB5 | Pyrometer |
| 64 | HB4 | Pyrometer |
| 65 | F8F | PTO Control |
| 66 | F7A1 | Battery Buss Feed |
| 67 | AATCV1 | ABS |
| 68 | ARLWS2 | ABS |
| 69 | F8D | PTO Control |
| 70 | ARRMVO | ABS |
| 71 | HB9 | Ambient Air Temperature |
| 72 | CB4 | Controls |
| 73 | ARLMVO | ABS |
| 74 | AFLMVI | ABS |
| 75 | F17N | PTO Control |
| 76 | F17A14 | Ignition Buss Feed |
| 77 | AFRMVO | ABS |
| 78 | F21D | Windshield Wipers |
| 79 | F21B | Windshield Wipers |
| 80 | F21C | Windshield Wipers |
| 81 | F21H | Windshield Wipers |
| 82 | HC4 | Lamp Monitoring |
| 83 | J1939LB; J1939LB8; | J1939-11/J1939-15 |
| 84 | J1939HB; J1939HB8; | J1939-11/J1939-15 |
| 85 | ARLMVI | ABS |
| 86 | F65A4 | Battery Buss Feed |
| 87 | F17R; F26B9 | Hook Lamps; Miscellaneous Gauges |
| 88 | F41B1 | Heater/AC (Cab) |
| 89 | HE3A | Collision Avoidance |
| 90 | HE4A | Collision Avoidance |
| 91 | F3B8 | Park |
| 92 | ARLWS1 | ABS |
| 93 | F8G | PTO Control |
| 94 | HE5A | Collision Avoidance |
| 95 | HD1; F62B3 | Turn (Directional); Rear Axle Indicators |
| 96 | - | - |
| 97 | - | - |
| 98 | - | - |
| 99 | - | - |
| 100 | - | - |
| 101 | - | - |
| 102 | F27B; F62B4 | Turn (Directional); Miscellaneous |

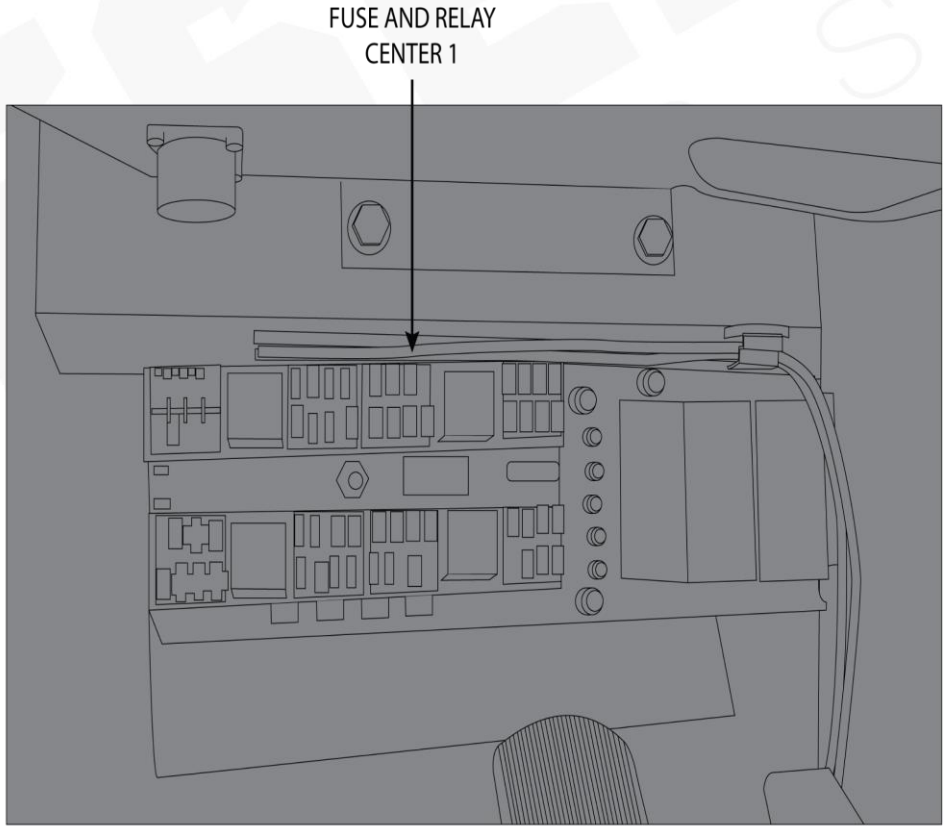
## 102-WAY HARNESS (MCFC)



Return To Table

| FRC1 | | |
|---|---|---|
| Harness : MAIN_CAB | | |
| Part Number : 82241315 | | |
| Pin Number | Circuit Number | Function |
| A1 | F69A; URDD1; F69A; URDD1 | Ignition Buss Feed; Battery Buss Feed; Ignition Buss Feed; Battery Buss Feed |
| A2 | URDD | Ignition Buss Feed |
| A3 | F64A3 | Ignition Buss Feed |
| A4 | F63A | Ignition Buss Feed |
| A5 | F31A | Ignition Buss Feed |
| A6 | F18A | Ignition Buss Feed |
| A7 | F17A | Ignition Buss Feed |
| A8 | F16A | Ignition Buss Feed |
| A9 | F66A | Ignition Buss Feed |
| B1 | F29B1 | Ignition Buss Control - Control of buss relay by Vehicle ECU |
| B2 | X2D1 | Cab Ground |
| B3 | F7A1 | Battery Buss Feed |
| B4 | CB1A | Ignition Buss Control - Control of buss relay by Vehicle ECU |
| C1 | N110 | Battery Buss Feed |
| C2 | F68A | Battery Buss Feed |
| C3 | - | - |
| C4 | - | - |
| C5 | F61A; F61A | Battery Spare; Battery Buss Feed; Battery Spare;Battery Buss Feed |
| C6 | F60A | Battery Buss Feed |
| C7 | - | - |
| C8 | F51A | Battery Buss Feed |
| C9 | F10A | Battery Buss Feed |
| D1 | F25A | Battery Buss Feed |
| E1 | F26A | Battery Buss Feed |
| E2 | F20A | Battery Buss Feed |
| E3 | F19A | Battery Buss Feed |
| E4 | F15A | Battery Buss Feed |
| E5 | - | - |
| E6 | F13A | Battery Buss Feed |
| E7 | F12A | Battery Buss Feed |
| E8 | F11A | Battery Buss Feed |
| E9 | F50A | Battery Buss Feed |
| F1 | X2D2 | Cab Ground |
| F2 | F29B2 | Ignition Buss Control - Control of buss relay by Vehicle ECU |
| F3 | CB1B | Ignition Buss Control - Control of buss relay by Vehicle ECU |
| F4 | F7A3 | Battery Buss Feed |
| F8 | F38A1 | Ignition Buss Feed |
| G1 | F58A | Ignition Buss Feed |
| G2 | F49A | Ignition Buss Feed |
| G3 | F47A | Ignition Buss Feed |
| G4 | F46A | Battery Buss Feed |
| G5 | F76A; F41A | Ignition Buss Feed |
| G6 | F39A; F39A | Ignition Buss Feed; Ignition Buss Feed |
| G7 | F38A | Ignition Buss Feed |
| G8 | F43A | Ignition Buss Feed |
| G9 | F57A | Ignition Buss Feed |
| A10 | F30A | Ignition Buss Feed |
| A11 | F27A | Ignition Buss Feed |
| A12 | F24A | Ignition Buss Feed |
| A13 | F23A | Ignition Buss Feed |
| A14 | F22A | Ignition Buss Feed |
| A15 | F21A | Ignition Buss Feed |
| A16 | F8A | Ignition Buss Feed |
| C10 | F9A | Battery Buss Feed |
| C11 | F7A | Battery Buss Feed |
| C12 | F6A | Battery Buss Feed |
| C13 | F5A | Battery Buss Feed |
| C14 | F4A | Battery Buss Feed |
| C15 | F3A | Battery Buss Feed |
| C16 | F2A | Battery Buss Feed |
| E10 | F37A | Battery Buss Feed |
| E11 | F36A | Battery Buss Feed |
| E12 | F35A | Battery Buss Feed |
| E13 | F34A | Battery Buss Feed |
| E14 | F33A | Battery Buss Feed |
| E15 | F32A | Battery Buss Feed |
| E16 | F29A | Battery Buss Feed |
| G10 | F56A | Ignition Buss Feed |
| G11 | F55A | Ignition Buss Feed |
| G12 | F52A | Ignition Buss Feed |
| G13 | F45A | Ignition Buss Feed |
| G14 | F44A | Ignition Buss Feed |
| G15 | F42A | Ignition Buss Feed |
| G16 | F40A; F40A | Ignition Buss Feed; Ignition Buss Feed |

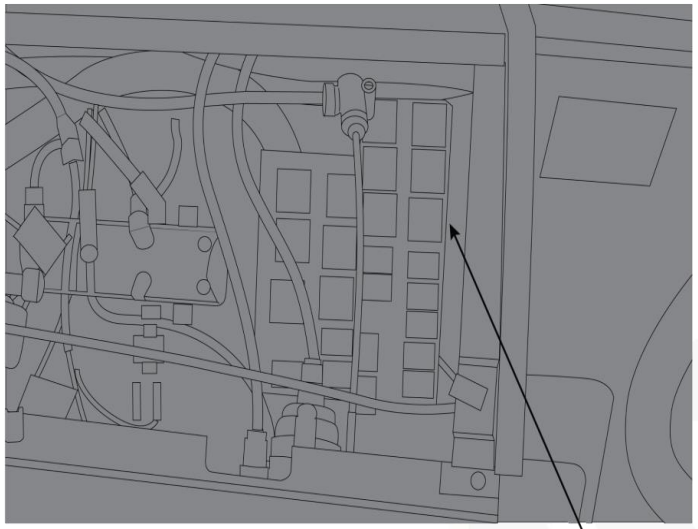
UNDER LEFT SIDE OF DASH



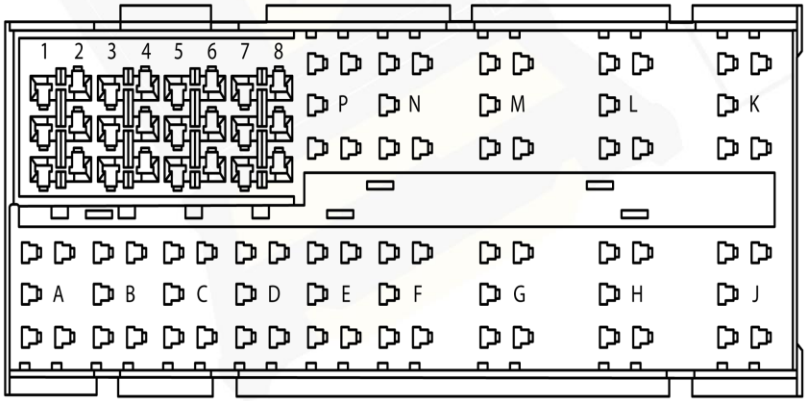
# FRC2

Return To Table

RIGHT CENTER OF DASH




## 94- WAY HARNESS (FRC2)

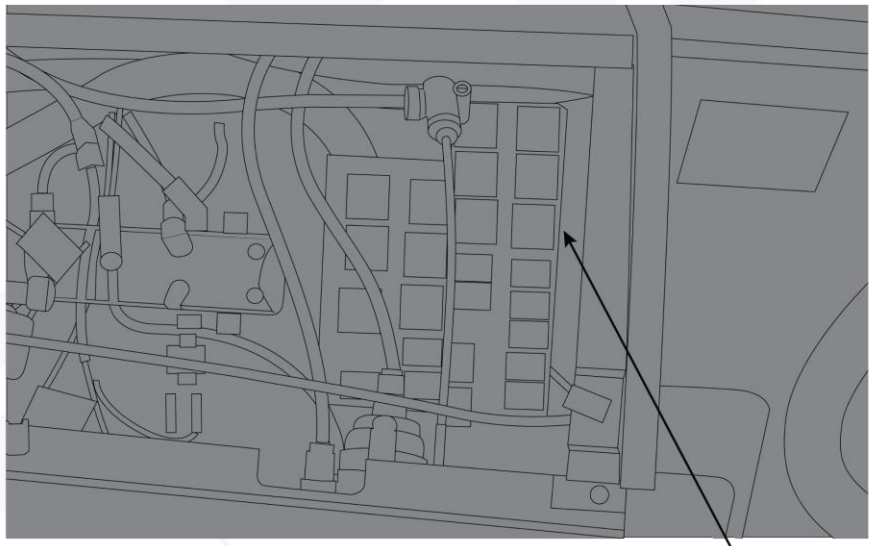



| FRC2 | | |
|---|---|---|
| Harness : MAIN_CAB | | |
| Part Number : 87RU520M | | |
| Pin Number | Circuit Number | Function |
| R1 | CB13A1 | - |
| R2 | - | - |
| R3 | CA23 | Electronic Engine Control |
| R4 | CB13A5 | - |
| R5 | - | - |
| R6 | F4B1 | Turn (Directional) |
| R7 | U77A; URDE1; U77A; URDE1 | Ignition Buss Feed; Ignition Buss Feed |
| R8 | F38A; F77B; F38A; F77B | Ignition Buss Feed; Ignition Buss Feed |
| S1 | CA23B | Electronic Engine Control |
| S2 | CA23A | Electronic Engine Control |
| S3 | F58A1 | Ignition Buss Feed |
| S4 | F4F | Turn (Directional) |
| S5 | F4E | Turn (Directional) |
| S6 | F58A4 | Ignition Buss Feed |
| S7 | U76A; URDE3; U76A; URDE3 | Ignition Buss Feed; Ignition Buss Feed |
| S8 | F41A; F76B; F41A; F76B | Ignition Buss Feed; Ignition Buss Feed |
| T1 | F72A1; URDE4 | Ignition Buss Feed; Ignition Buss Feed |
| T2 | F74A; F69A; F74A; F69A | Battery Buss Feed; Battery Buss Feed |
| T3 | F77B; URDB12; F77B; URDB12 | Battery Cable; Battery Cable |
| T4 | F60A; F77C | Battery Buss Feed |
| T5 | F77D; URDB6; F77D; URDB6 | Battery Cable; Battery Cable |
| T6 | F77C1; F75A; F77C1; F75A | Battery Buss Feed; Battery Buss Feed |
| T7 | U75A; URDE2; U75A; URDE2 | Ignition Buss Feed; Ignition Buss Feed |
| T8 | F49A; F75B; F49A; F75B | Ignition Buss Feed; Ignition Buss Feed |
| A30 | F5B4 | Stop |
| A85 | F31A2 | Ignition Buss Feed |
| A86 | N124CM1 | Electronic Controlled Transmission |
| A87 | F5A4 | Battery Buss Feed |
| B30 | F5A3; F5A4 | Battery Buss Feed |
| B85 | F16A2 | Ignition Buss Feed |
| B86 | CB11A | Park Brake |
| B87 | F5B3; F5B4 | Stop |
| C30 | F5A2; F5A3 | Battery Buss Feed |
| C85 | F7H | Brake (Air/Hydraulic) Indicator and Gauge |
| C86 | X2D9 | Cab Ground |
| C87 | F5B2 | Stop |
| D30 | F8A4; F30H1 | Winch; Ignition Buss Feed |
| D85 | F34B5; F30G2; F34B5; F30G2 | Winch; Back Up; Winch; Back Up |
| D86 | X2A22; X2D14; X2A22; X2D14 | Cab Ground; Cab Ground |
| D87 | F30K | Winch |
| E30 | F33A | Battery Buss Feed |
| E85 | F5B6 | Stop |
| E86 | X2D8; X2D9 | Cab Ground |
| E87 | F33B | Stop |
| F30 | F60A | Battery Buss Feed |
| F85 | F38A3 | Ignition Buss Feed |
| F86 | X2D18 | Cab Ground |
| F87 | F60B2 | Ignition Buss Feed |
| G30 | F35A | Battery Buss Feed |
| G85 | F3B13 | Clearance |
| G86 | X2D13 | Cab Ground |
| G87 | F35B | Clearance |
| H30 | F25A1 | Battery Buss Feed |
| H85 | F25A2 | Battery Buss Feed |
| H86 | CB1C | Ignition Buss Control - Control of buss relay by Vehicle ECU |
| H87 | F25B | Ignition Buss Feed |
| J30 | F34A2; F34A2 | Battery Buss Feed; Battery Buss Feed |
| J85 | F42B2 | Back Up |
| J86 | X2D4; X2D5 | Cab Ground |
| J87 | F34B; F34B | Back Up; Back Up |
| K30 | N130A; F34A1; N130A; F34A1 | Battery Buss Feed; Electronic Controlled Transmission; |
| K85 | N145NO1; N145NO2 | Electronic Controlled Transmission |
| K86 | X2D5 | Cab Ground |
| K87 | N130; F34C; N130; F34C | Electronic Controlled Transmission, Electronic Controlled Transmission, |
| L30 | F42A | Ignition Buss Feed |
| L85 | F31A5; F31A4 | Ignition Buss Feed |
| L86 | N165 | Electronic Controlled Transmission |
| L87 | F42B4 | Back Up |
| M30 | N130CM; F30B1; N130CM; F30B1 | Winch; Electronic Controlled Transmission; Winch; Electronic Controlled Transmission |
| M85 | N130; N130A | Electronic Controlled Transmission |
| M86 | N169F; | Cab Ground; Cab Ground |
| M87 | N130NO; F30H; N130NO; F30H | Winch; Electronic Controlled Transmission; Winch; Electronic Controlled Transmission |
| N30 | N124CM | Electronic Controlled Transmission |
| N85 | F31A5; F31A6 | Ignition Buss Feed |
| N86 | N124 | Electronic Controlled Transmission |
| N87 | - | - |
| P30 | F31A3 | Ignition Buss Feed |
| P85 | F31A6 | Ignition Buss Feed |
| P86 | N145 | Electronic Controlled Transmission |
| P87 | N145NO1; N145NO | Electronic Controlled Transmission |
| A87A | - | - |
| B87A | - | - |
| C87A | - | - |
| D87A | F8G | Two Speed Rear Axle |
| E87A | - | - |
| F87A | - | - |
| G87A | - | - |
| H87A | - | - |
| J87A | - | - |
| K87A | - | - |
| L87A | - | - |
| M87A | N130NC | Electronic Controlled Transmission |
| N87A | X2D3 | Cab Ground |
| P87A | N145NC | Electronic Controlled Transmission |

Return To Table

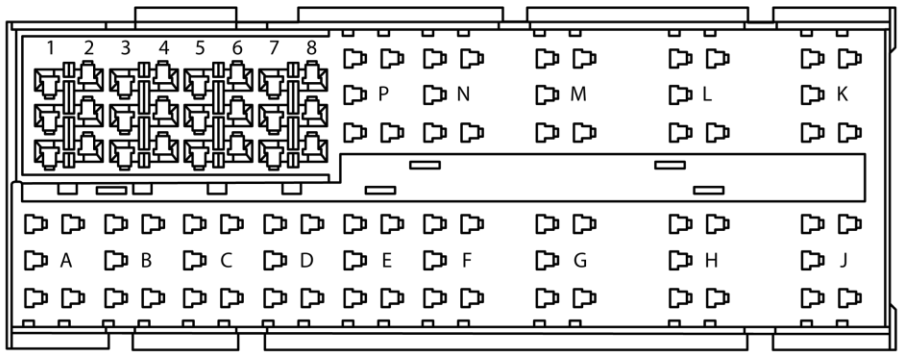
| FRC3 | | |
|---|---|---|
| Harness : MAIN_CAB | | |
| Part Number : 87RU520M | | |
| Pin Number | Circuit Number | Function |
| R1 | X2D26 | Cab Ground |
| R2 | - | - |
| R3 | F7C1 | - |
| R4 | CB13A3 | - |
| R5 | - | - |
| R6 | CB8 | Electronic Engine Control |
| R7 | URDB7 | Battery Cable |
| R8 | F62B | Battery Buss Feed |
| S1 | - | - |
| S2 | F7C2 | - |
| S3 | F17M4 | PTO Control |
| S4 | CB8B | Electronic Engine Control |
| S5 | CB8A | Electronic Engine Control |
| S6 | F58A3 | Ignition Buss Feed |
| S7 | URDB14 | Battery Cable |
| S8 | F36A | Battery Buss Feed |
| T1 | URDB13 | Battery Cable |
| T2 | F29A | Battery Buss Feed |
| T3 | URDB3 | Battery Cable |
| T4 | F19A | Battery Buss Feed |
| T5 | URDB8 | Battery Cable |
| T6 | N110 | Battery Buss Feed |
| T7 | URDB4 | Battery Cable |
| T8 | F13A | Battery Buss Feed |
| A30 | F50A | Battery Buss Feed |
| A85 | F3D1; F3D2; F3 | Headlamps |
| A86 | F3H4; F3H3 | ; |
| A87 | F50B | Headlamps |
| B30 | F51A | Battery Buss Feed |
| B85 | F3D2 | Headlamps |
| B86 | F3H3; F3H2 | ; |
| B87 | F51B | Headlamps |
| C30 | F2A2 | Battery Buss Feed |
| C85 | F3B12 | Clearance |
| C86 | F3H | - |
| C87 | - | - |
| D30 | F9A | Battery Buss Feed |
| D85 | F7B | Accessory Buss Feed |
| D86 | X2D6; X2D11 | Cab Ground |
| D87 | F9B | Accessory Buss Feed |
| E30 | F7A4 | Battery Buss Feed |
| E85 | CB28 | Starter Relay and Controls |
| E86 | X2D11; X2D10 | Cab Ground |
| E87 | F7E | - |
| F30 | F29A; F29A1 | Battery Buss Feed |
| F85 | F29A1 | Battery Buss Feed |
| F86 | CB15 | Ignition Buss Control - Control of buss Relay by Vehicle ECU |
| F87 | F29B | Ignition Buss Control - Control of buss Relay by Vehicle ECU |
| G30 | F37A | Battery Buss Feed |
| G85 | F3B6 | Clearance |
| G86 | X2D6 | Cab Ground |
| G87 | F37B | Tail |
| H30 | F22A2 | Ignition Buss Feed |
| H85 | F23D1 | Windshield Wipers |
| H86 | F23A5; F23A4 | Ignition Buss Feed |
| H87 | F22D | Windshield Wipers |
| J30 | F22C | Windshield Wipers |
| J85 | F23C1 | Windshield Wipers |
| J86 | F23A4; F23A3 | Ignition Buss Feed |
| J87 | F22E | Windshield Wipers |
| K30 | F21C | Windshield Wipers |
| K85 | F23C2 | Windshield Wipers |
| K86 | F23A6; F23A5 | Ignition Buss Feed |
| K87 | F21E | Windshield Wipers |
| L30 | F21A2 | Ignition Buss Feed |
| L85 | F23D2 | Windshield Wipers |
| L86 | F23A6 | Ignition Buss Feed |
| L87 | F21D | Windshield Wipers |
| M30 | F36B | Horn |
| M85 | F36A1 | Battery Buss Feed |
| M86 | F36D; F36D1 | Horn |
| M87 | F36A; F36A1 | Battery Buss Feed |
| N30 | F15A1; F17M1; F15A1; F17M1 | PTO Control; Battery Buss Feed; PTO Control; Battery Buss Feed |
| N85 | F30B1; F31B3 | Electronic Controlled Transmiss |
| N86 | X2D14; X2D15; X2D14; X2D15 | Cab Ground; Cab Ground |
| N87 | F15B; CA29 | PTO Control |
| P30 | F15A2; F17M3; F15A2; F17M3 | PTO Control; Battery Buss Feed; PTO Control; |
| P85 | F34B3; F30G1; F34B3; F30G1 | Winch; Back Up; Winch; Back Up |
| P86 | X2D15; F76P | Lamp Monitoring; Cab Ground |
| P87 | F15B1; CB21; F15B1; CB21 | PTO Control; PTO Control |
| A87A | F50C | - |
| B87A | F51C | - |
| C87A | F2B | - |
| D87A | F9D | Headlamps |
| E87A | - | - |
| F87A | - | - |
| G87A | - | - |
| H87A | F22E | Windshield Wipers |
| J87A | F22B | Windshield Wipers |
| K87A | F21B | Windshield Wipers |
| L87A | F21E | Windshield Wipers |
| M87A | - | - |
| N87A | - | - |
| P87A | - | - |

RIGHT CENTER OF DASH



FUSE AND RELAY CENTER 2 & 3

94- WAY HARNESS (FRC3)



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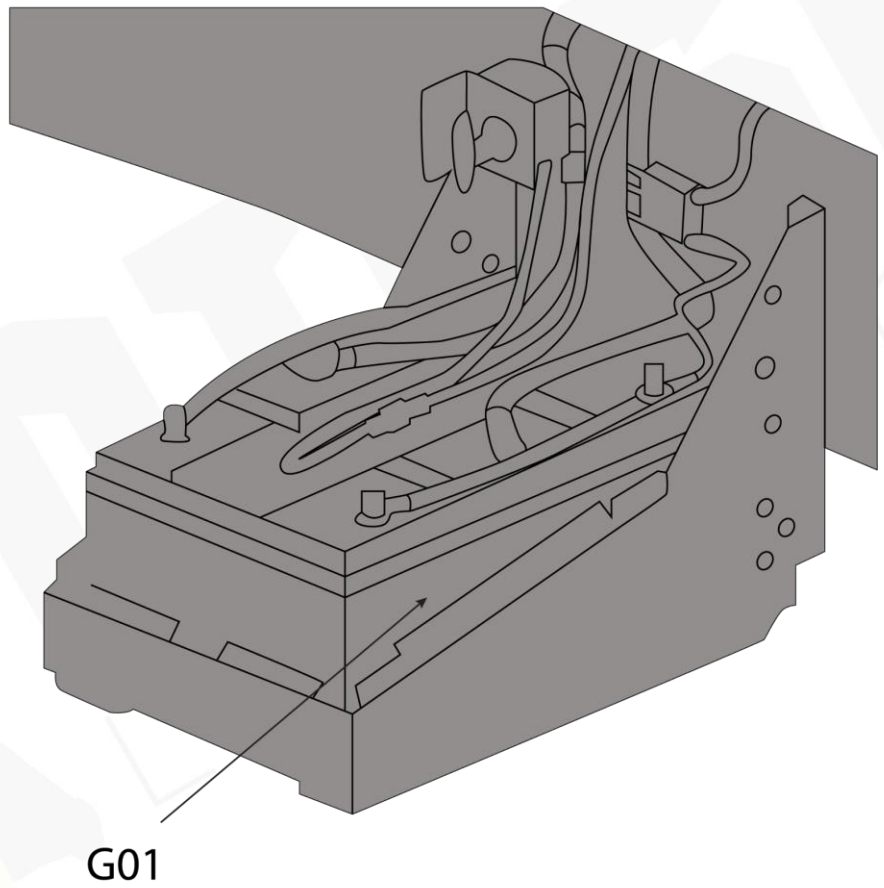
# Battery



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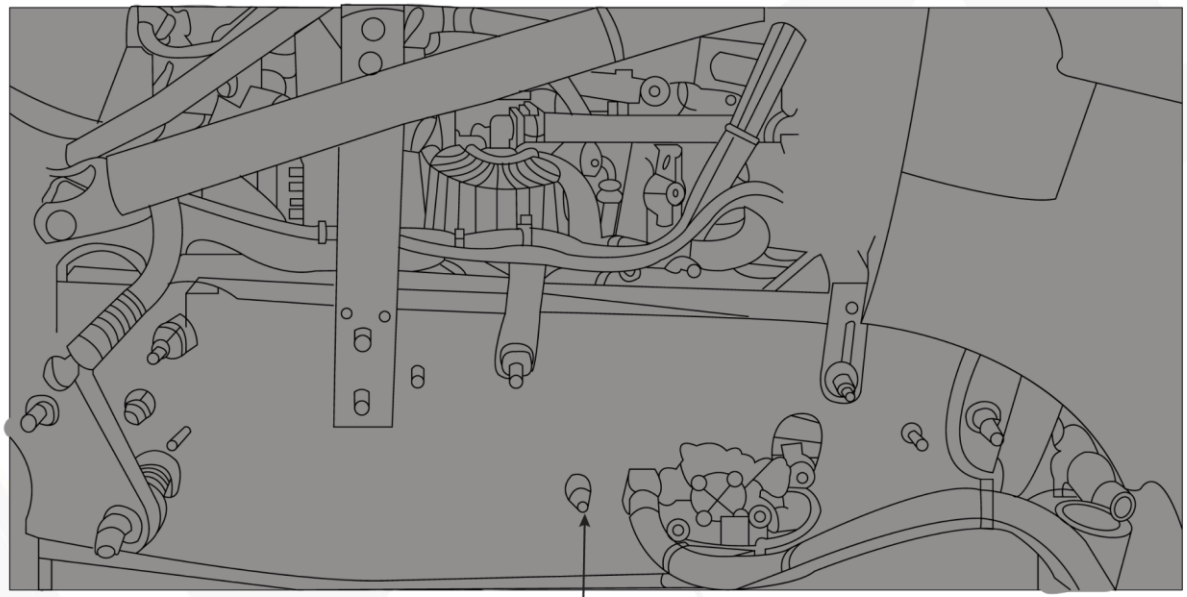
## LEFT SIDE OF FRAME RAIL



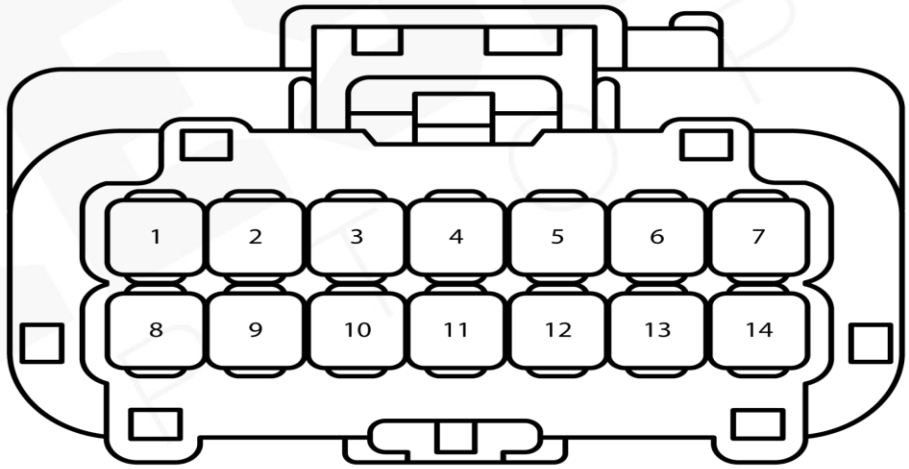
XF1 FRAME RAIL STUD

Return To Table

| FCUT | | |
|---|---|---|
| Harness : UREA_TANK | | |
| Part Number :20734995 | | |
| Pin Number | Circuit Number | Function |
| 1 | - | Cab Ground |
| 2 | EMA46A1 | - |
| 3 | EMA18A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 4 | EMA50A3 | Starting Aid (Ether, Preheat, Glow Plug) |
| 5 | EMA54A4 | Starting Aid (Ether, Preheat, Glow Plug) |
| 6 | EMA20A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 7 | EMA52A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 8 | EMA4A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 9 | EMA7A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 10 | EMA8A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 11 | EMA12A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 12 | EMA44A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 13 | EMA30A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 14 | EMA51A1 | Starting Aid (Ether, Preheat, Glow Plug) |

| FCUT | | |
|---|---|---|
| Harness : FRONT_CHASSIS | | |
| Part Number :20734993 | | |
| Pin Number | Circuit Number | Function |
| 1 | - | - |
| 2 | EMA46A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 3 | EMA18A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 4 | EMA50A3 | Starting Aid (Ether, Preheat, Glow Plug) |
| 5 | EMA54A4 | Starting Aid (Ether, Preheat, Glow Plug) |
| 6 | EMA20A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 7 | EMA52A2 | Starting Aid (Ether, Preheat, Glow Plug) |
| 8 | EMA4A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 9 | EMA7A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 10 | EMA8A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 11 | EMA12A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 12 | EMA44A2 | Starting Aid (Ether, Preheat, Glow Plug) |
| 13 | EMA30A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 14 | EMA51A1 | Starting Aid (Ether, Preheat, Glow Plug) |

## 14 - WAY HARNESS (FCUT)



# Aftertreatment Control Module

Return To Table

| A137 | | | | | |
|---|---|---|---|---|---|
| Harness : FRONT_CHASSIS | | | | | |
| Part Number : 20429842 | | | 31 | - | - |
| Pin Number | Circuit Number | Function | 32 | - | - |
| 1 | J1587LN8 | J1587/J1708 | 33 | EMA33A1 | Electronic Engine Control |
| 2 | J1939_3LB | J1939-11/J1939-15 | 34 | EMA34A1 | Electronic Engine Control |
| 3 | F69A | Ignition Buss Feed | 35 | - | - |
| 4 | EMA4A1 | Electronic Engine Control | 36 | EM36A1 | Electronic Engine Control |
| 5 | J1587HN8 | J1587/J1708 | 37 | EMA37A1 | Electronic Engine Control |
| 6 | J1939_3HB | J1939-11/J1939-15 | 38 | EMA38A1 | - |
| 7 | EMA7A1 | Electronic Engine Control | 39 | EMA39A1 | Electronic Engine Control |
| 8 | EMA8A1 | Electronic Engine Control | 40 | EMA40A1 | Electronic Engine Control |
| 9 | EMA9A1 | Electronic Engine Control | 41 | EMA41A1 | Electronic Engine Control |
| 10 | J1939_2LN1 | J1939-11/J1939-15 | 42 | EMA42A1 | Electronic Engine Control |
| 11 | - | - | 43 | EMA43A1 | Electronic Engine Control |
| 12 | EMA12A1 | Electronic Engine Control | 44 | EMA44A1 | Electronic Engine Control |
| 13 | EMA13A1 | Electronic Engine Control | 45 | EMA45A1 | Electronic Engine Control |
| 14 | J1939_2HN1 | J1939-11/J1939-15 | 46 | EMA46A1 | Electronic Engine Control |
| 15 | - | - | 47 | - | - |
| 16 | - | - | 48 | EMA48A1 | Electronic Engine Control |
| 17 | EMA17A1 | Electronic Engine Control | 49 | EMA49A1 | Electronic Engine Control |
| 18 | EMA18A1 | Electronic Engine Control | 50 | EMA50A2 | Electronic Engine Control |
| 19 | - | - | 51 | EMA51A1 | Electronic Engine Control |
| 20 | EMA20A1 | - | 52 | EMA52A1 | Electronic Engine Control |
| 21 | EMA21A1 | Electronic Engine Control | 53 | EMA53A1 | Electronic Engine Control |
| 22 | EMA22A1 | Electronic Engine Control | 54 | EMA54A4 | Electronic Engine Control |
| 23 | EMA23A1 | Electronic Engine Control | 55 | EMA55A1 | Electronic Engine Control |
| 24 | EMA24A1 | Electronic Engine Control | 56 | EMA56A1 | Electronic Engine Control |
| 25 | EMA25A1 | Electronic Engine Control | 57 | XF1A29 | Electronic Engine Control |
| 26 | EMA26A1 | Electronic Engine Control | 58 | XF1A28 | Electronic Engine Control |
| 27 | - | - | 59 | XF1A27 | Electronic Engine Control |
| 28 | EMA28A1 | Electronic Engine Control | 60 | F62B3 | Battery Buss Feed |
| 29 | EMA29A1 | Electronic Engine Control | 61 | F62B2 | Battery Buss Feed |
| 30 | EMA30A1 | Electronic Engine Control | 62 | F62B1 | Battery Buss Feed |

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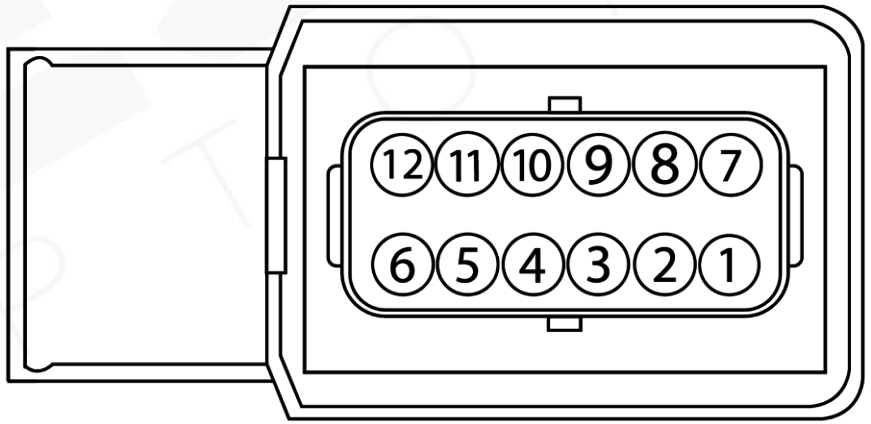
# 12-WAY HARNESS (A138)

## DEF PUMP

| A138 - Aftertreatment Diesel Exhaust Fluid Pump | | |
|---|---|---|
| Harness : UREA_TANK | | |
| Part Number : 993376 | | |
| Pin Number | Circuit Number | Function |
| 1 | | - |
| 2 | EMA51A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 3 | EMA30A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 4 | EMA54A4 | Starting Aid (Ether, Preheat, Glow Plug) |
| 5 | - | - |
| 6 | - | - |
| 7 | - | - |
| 8 | EMA8A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 9 | EMA48A2 | Starting Aid (Ether, Preheat, Glow Plug) |
| 10 | EMA7A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 11 | EMA44A2 | Starting Aid (Ether, Preheat, Glow Plug) |
| 12 | EMA12A1 | Starting Aid (Ether, Preheat, Glow Plug) |



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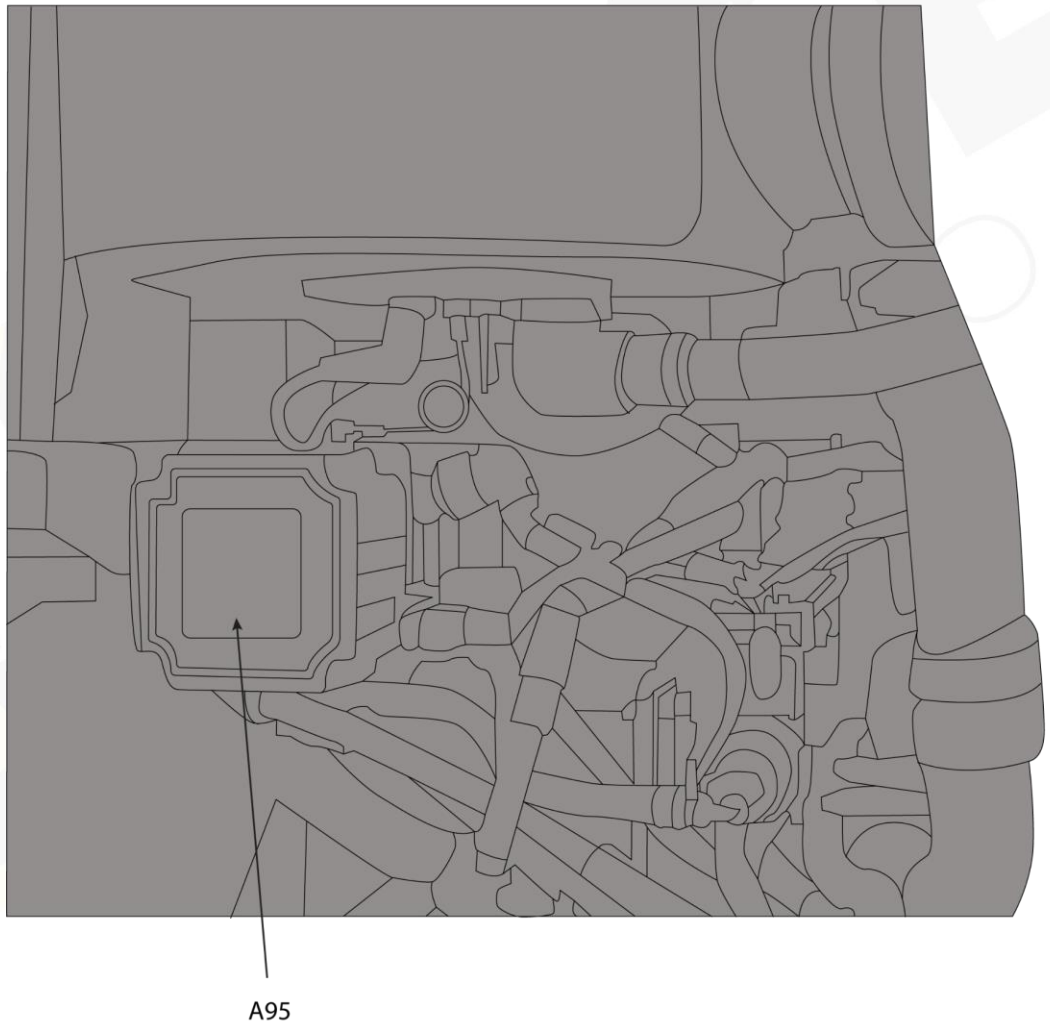
# Aftertreatment Diesel Particulate Filter Atomization Module

(LEFT SIDE OF STANTION)



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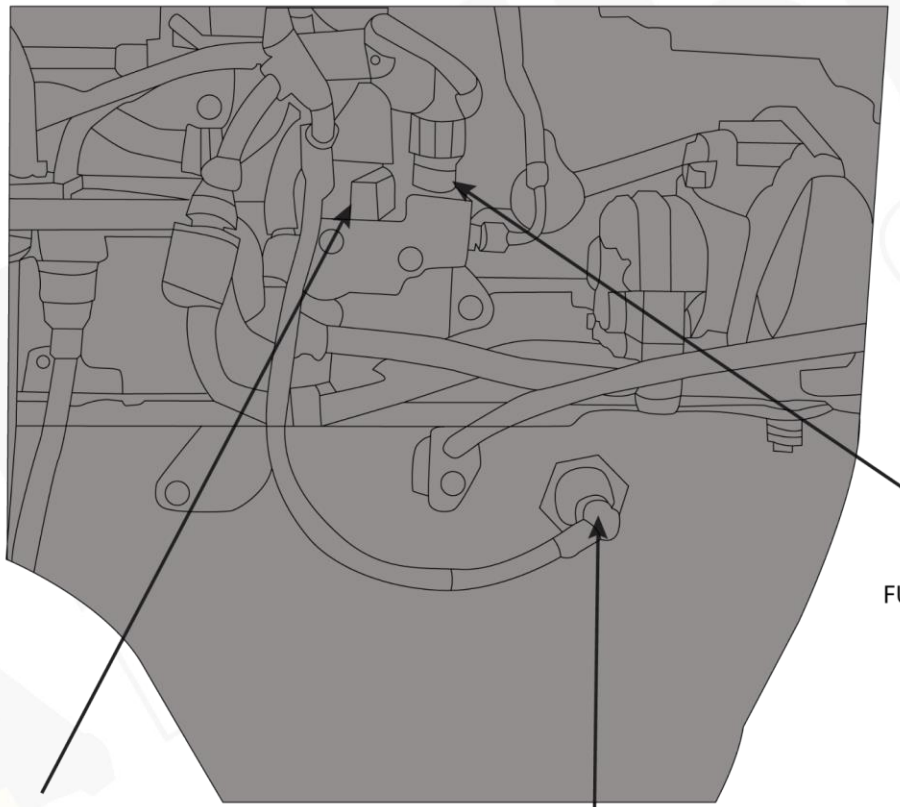
# Aftertreatment Fuel Pressure Sensor

(LOWER LEFT SIDE OF ENGINE)



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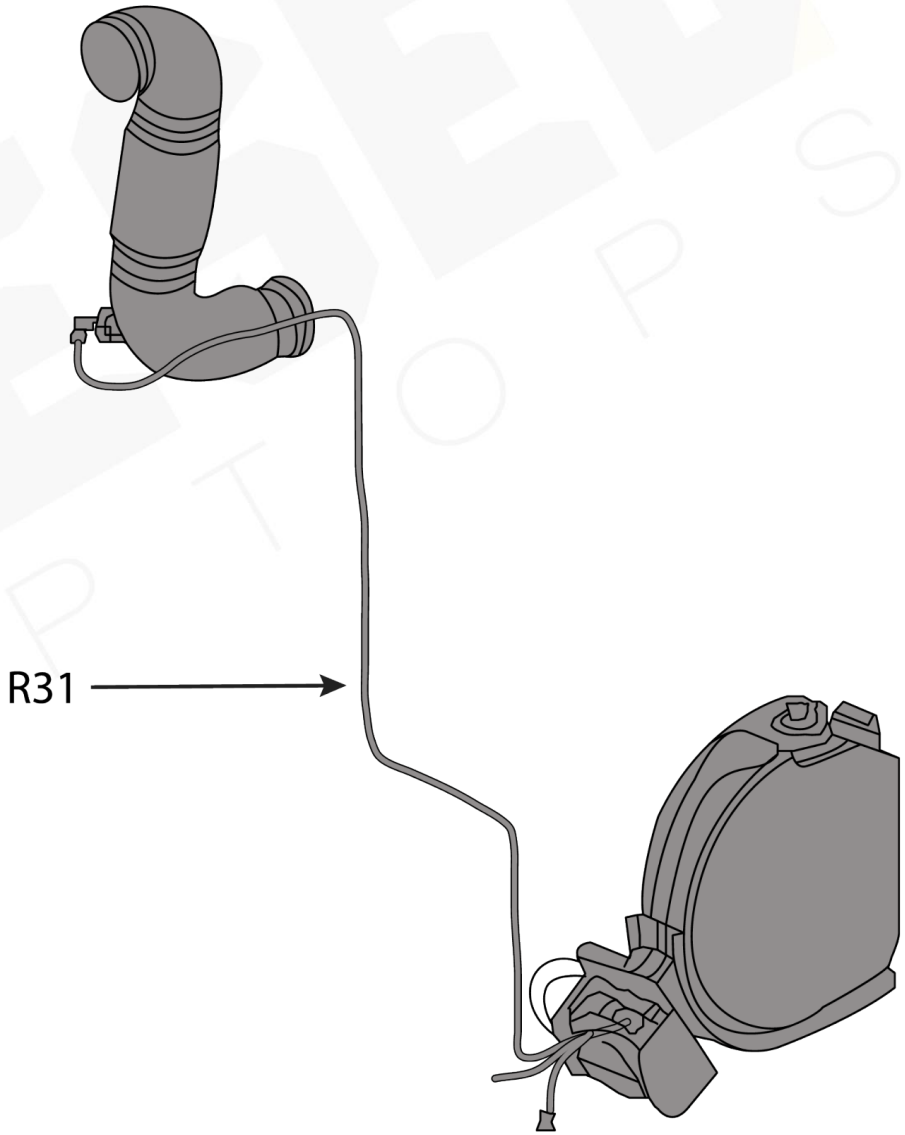
# Aftertreatment Diesel Exhaust Filter Fluid Line Heater #1

| R31 | | |
|---|---|---|
| Harness : UREA_TANK | | |
| Part Number : 954AM13 | | |
| Pin Number | Circuit Number | Function |
| A | EMA20A1 | Starting Aid (Ether, Preheat, Glow Plu |
| B | EMA52A2 | Starting Aid (Ether, Preheat, Glow Plu |



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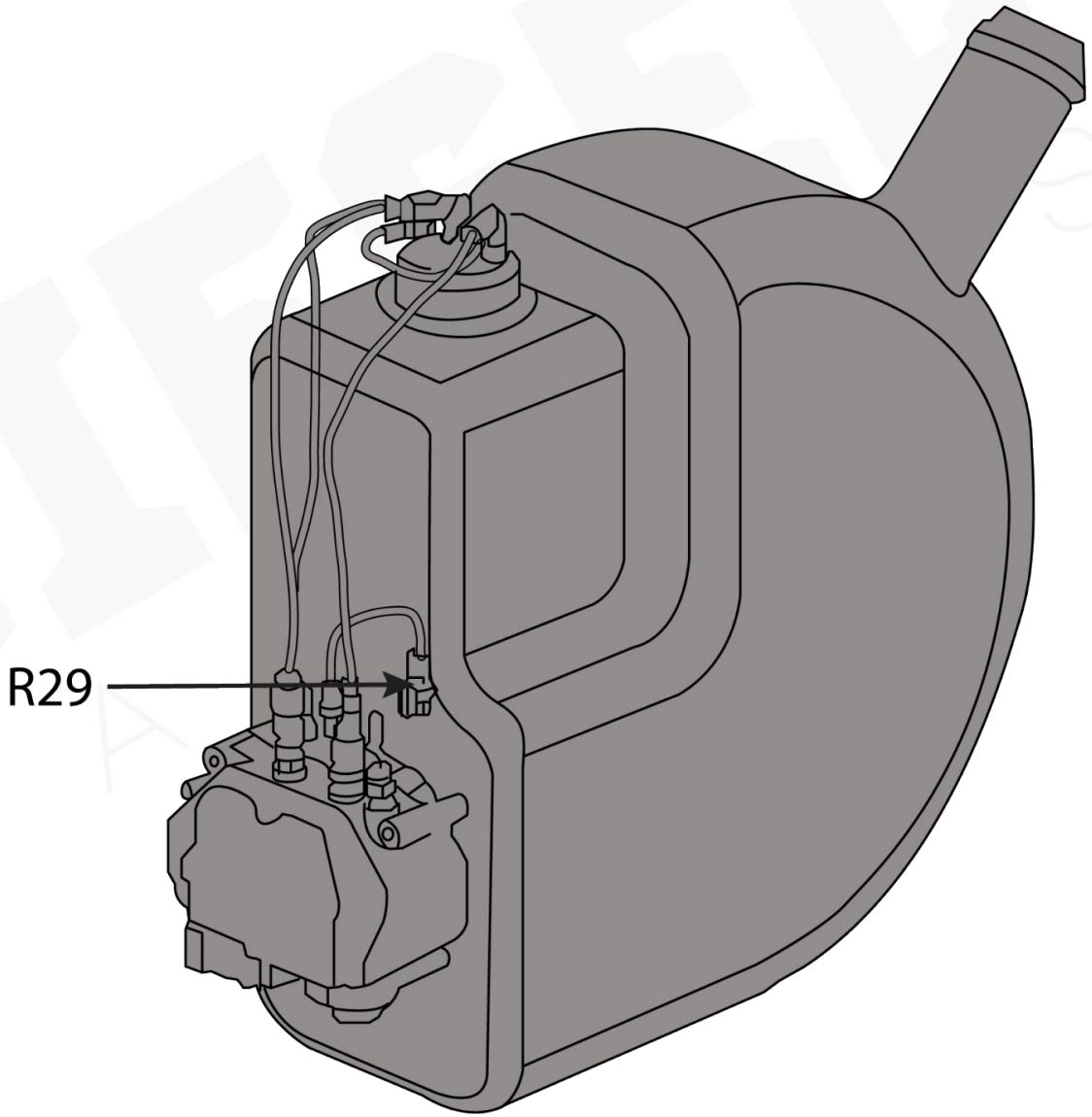
# Aftertreatment Diesel Exhaust Filter Line Heater #3

(DEF TANK)

| R29 | | |
|---|---|---|
| Harness : HTD_WIND_ROOF | | |
| Part Number : 598AX140 | | |
| Pin Number | Circuit Number | Function |
| A | F28B1 | Ignition Buss Feed |
| R29 | | |
| Harness : HTD_WIND_ROOF | | |
| Part Number : 598AX140 | | |



# Aftertreatment DPF Ignition Coil

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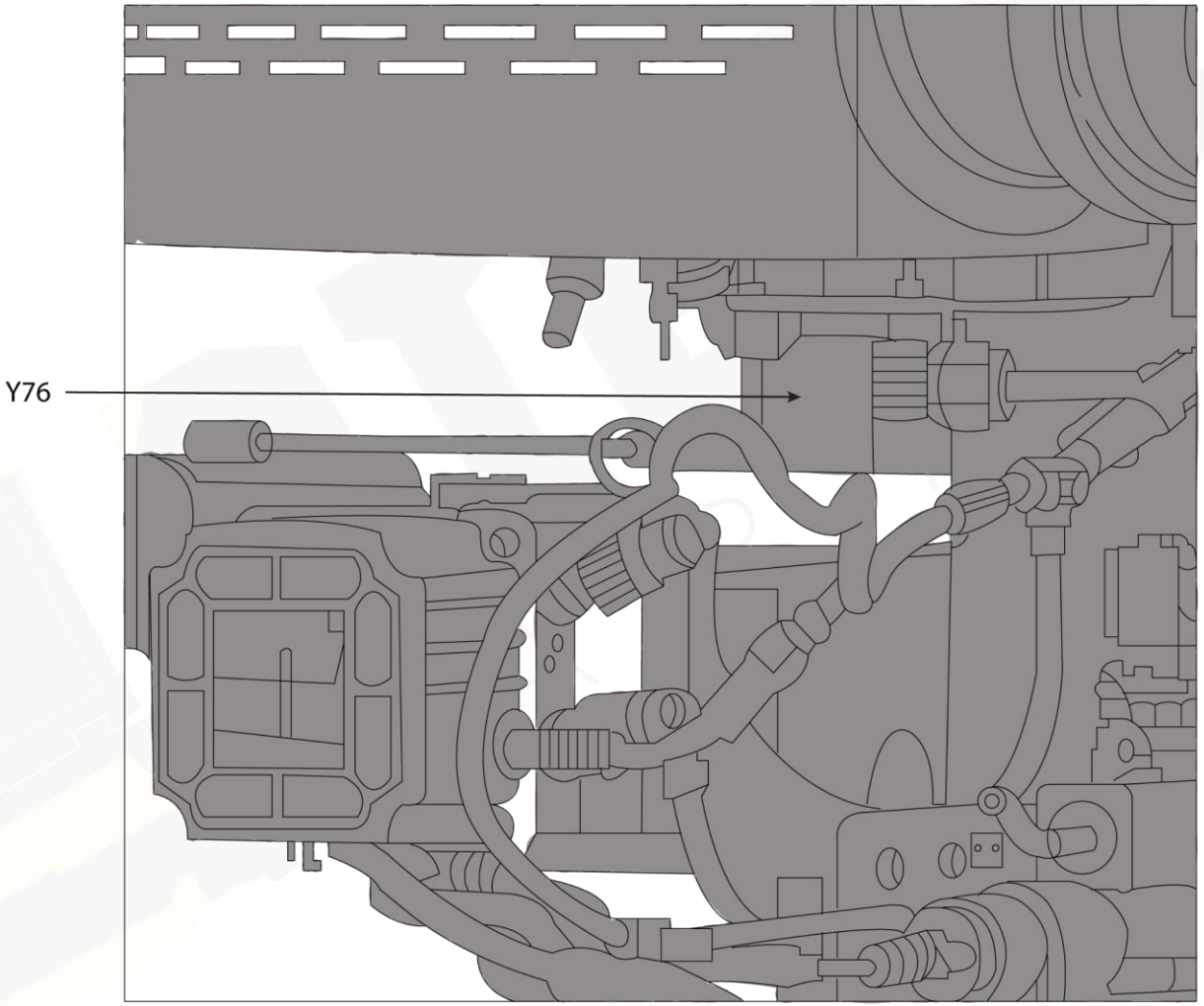
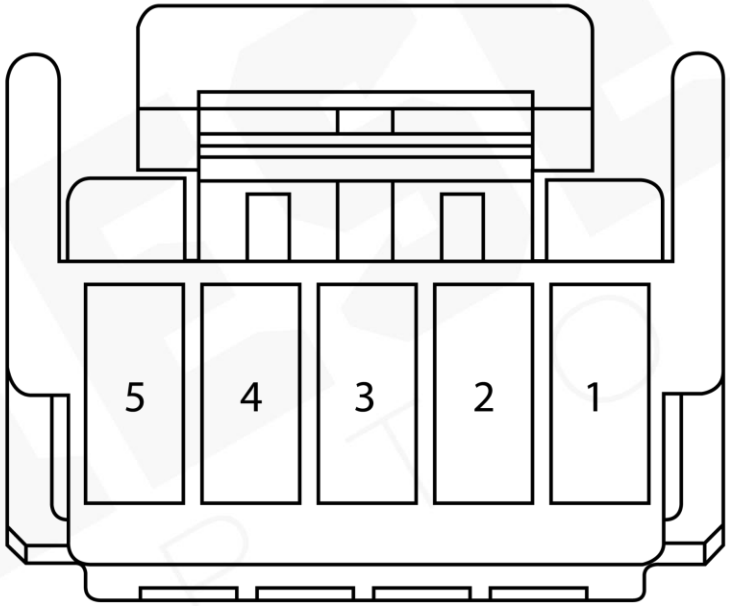


# Aftertreatment DPF Regeneration Inhibit Switch

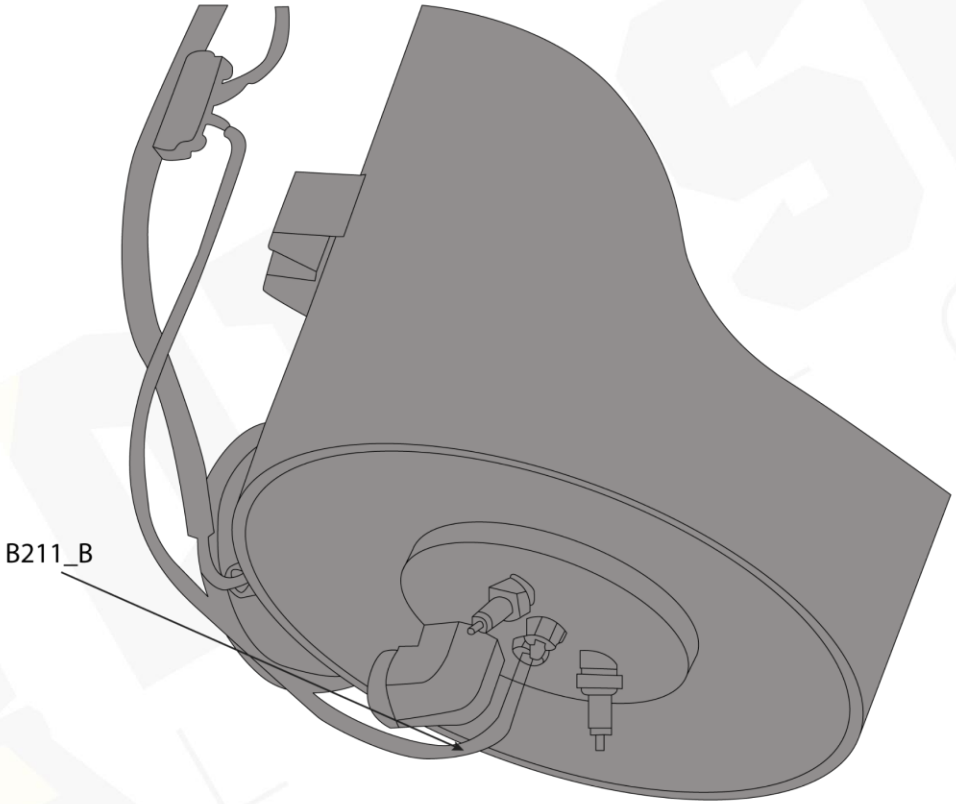
Return To Table

| S111 | | |
|---|---|---|
| Pin Number | Circuit Number | Function |
| A | XC1C8 | Cab Ground |
| Part Number : 598AX223 | | |
| Pin Number | Circuit Number | Function |
| A | F67C | HVAC External Add on |
| S111 | | |
| Harness : MAIN_CAB | | |
| Part Number : 598AX223 | | |
| Pin Number | Circuit Number | Function |
| A | F67B | HVAC External Add on |



# DPF Temperature Assembly

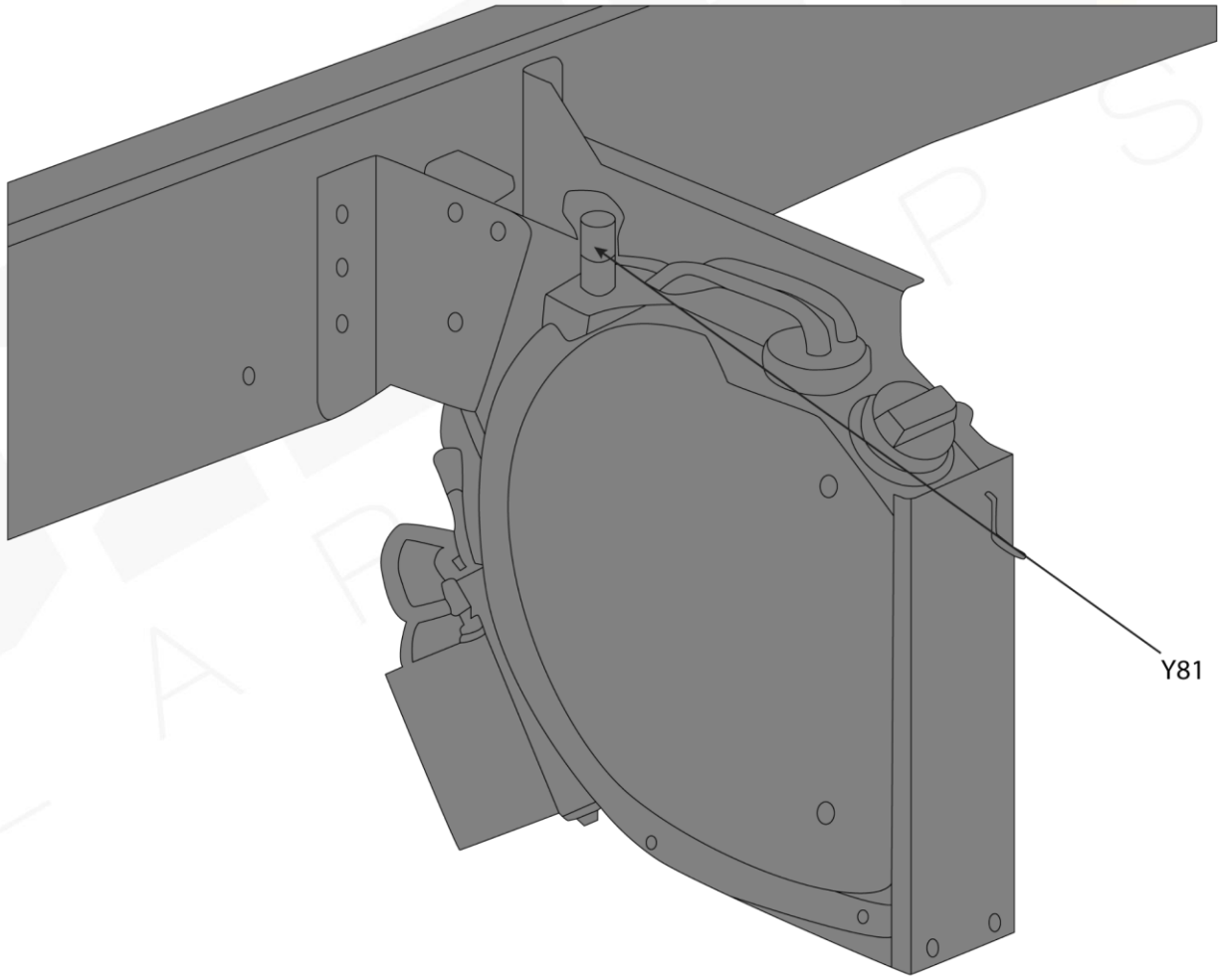
Return To Table



# Aftertreatment Diesel Exhaust Fluid Tank Heater Valve

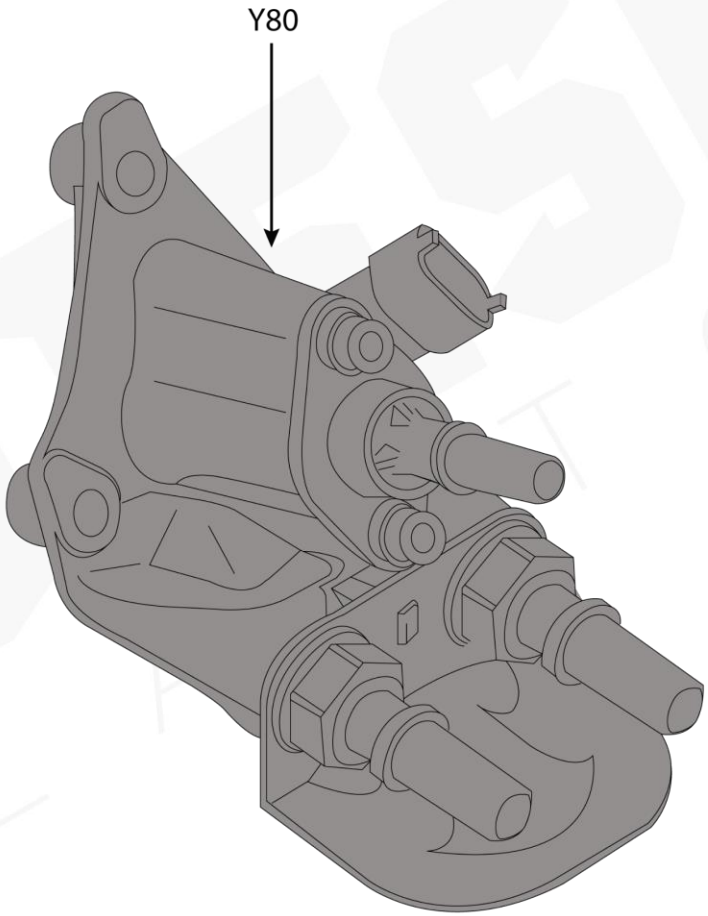
Return To Table

| Y81 | | |
|---|---|---|
| Harness : UREA_TANK | | |
| Part Number : 8086028 | | |
| Pin Number | Circuit Number | Function |
| 1 | EMA4A1 | Starting Aid (Ether, Preheat, Glow Plug) |
| 2 | - | - |
| 3 | - | - |
| 4 | EMA52A3 | Starting Aid (Ether, Preheat, Glow Plug) |



# Aftertreatment DEF Dosing Valve

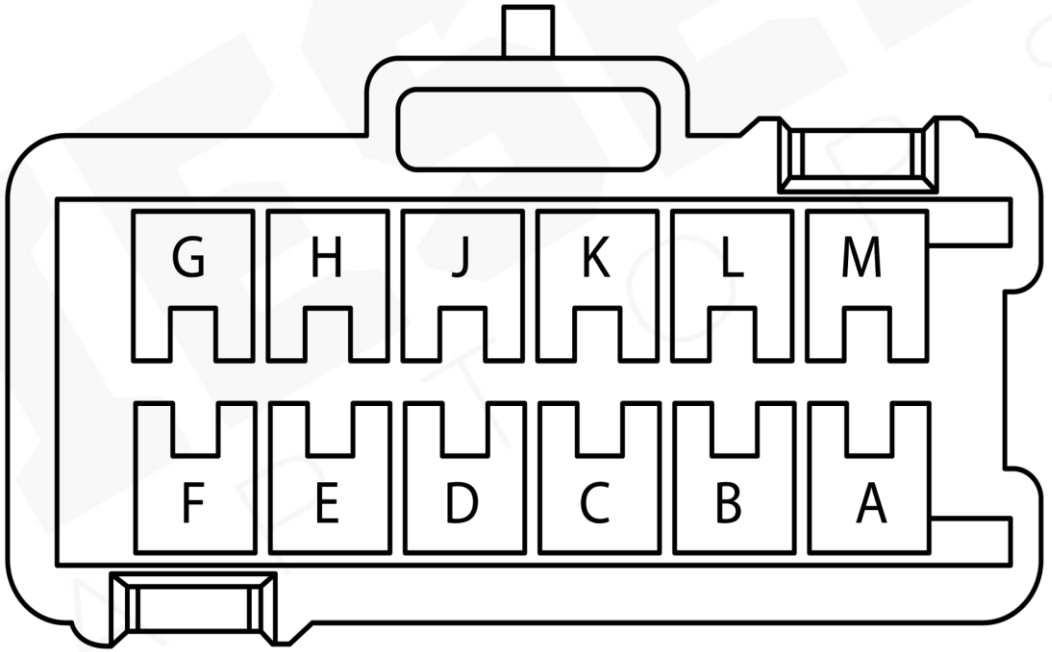
Return To Table



Return To Table

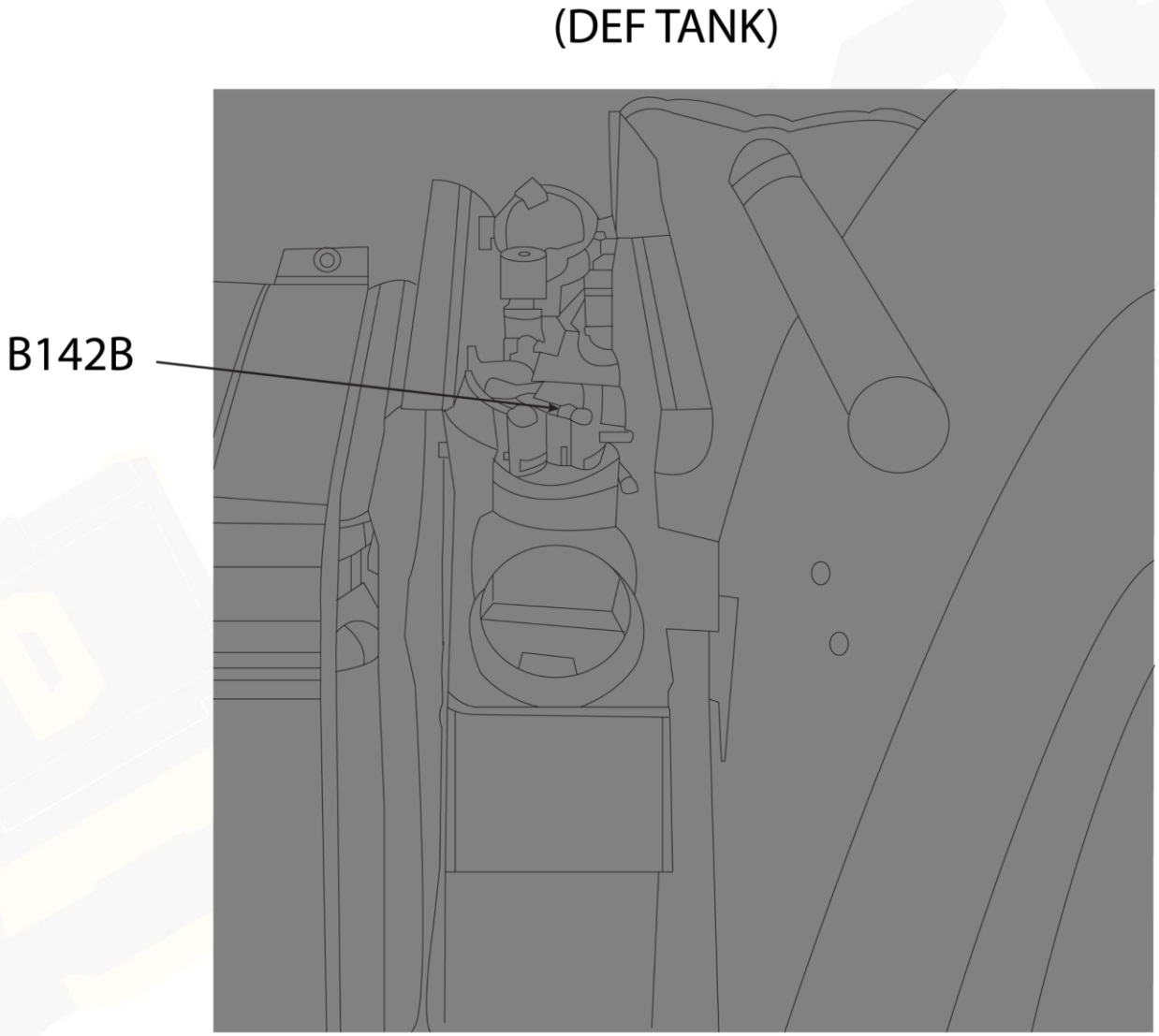
| X2_SP1_X2A6 | | |
|---|---|---|
| Harness : MAIN_CAB | | |
| Part Number : 8086028 | | |
| Pin Number | Circuit Number | Function |
| A | X2A6 | Cab Ground |
| B | X2A35 | Cab Ground |
| C | X2A18 | Cab Ground |
| D | - | - |
| E | X2A17 | Cab Ground |
| F | X2A57 | Cab Ground |
| G | X2A102 | Cab Ground |
| H | X2A40 | Cab Ground |
| J | X2A24 | Cab Ground |
| K | X2A21 | Cab Ground |
| L | X2A12 | Cab Ground |
| M | X2A26 | Cab Ground |

12 - WAY HARNESS
(X2_SP1.A)

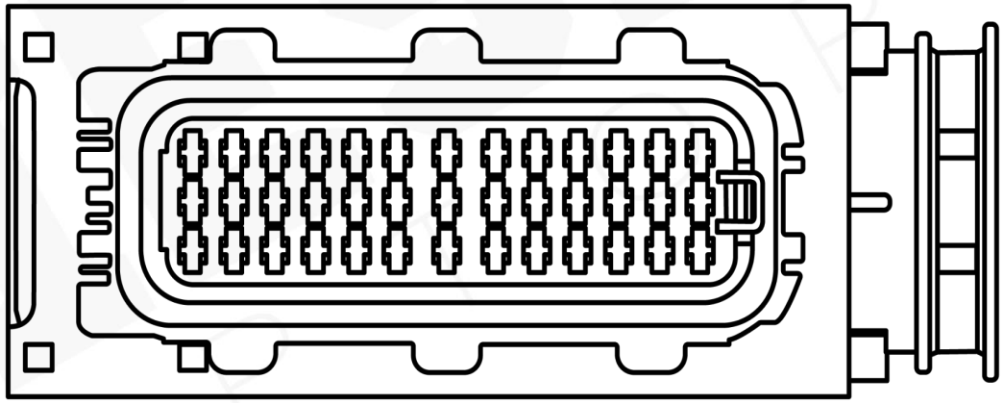


# Aftertreatment Diesel Exhaust Fluid Tank Level/Temperature Sensor

Return To Table



Return To Table

| X11 | | |
|---|---|---|
| Harness : FRONT_CHASSIS | | |
| Part Number : 20567733 | | |
| Pin Number | Circuit Number | Function |
| 1 | J1939HBA; J1939HB | J1939-11/J1939-15 |
| 2 | J1587HN1 | J1587/J1708 |
| 3 | J1939HB17 | J1939-11/J1939-15 |
| 4 | J1939LBA, J1939LB | J1939-11/J1939-15 |
| 5 | J1587LN1 | J1587/J1708 |
| 6 | J1939LB17 | J1939-11/J1939-15 |
| 7 | - | - |
| 8 | CB17 | Electronic Engine Control |
| 9 | - | - |
| 10 | - | - |
| 11 | - | - |
| 12 | - | - |
| 13 | F38A4 | Ignition Buss Feed |
| 14 | | - |
| 15 | F38A3 | Ignition Buss Feed |
| 16 | | - |
| 17 | - | - |
| 18 | EM18 | Low Coolant Lamp |
| 19 | - | - |
| 20 | - | - |
| 21 | F43A2 | Ignition Buss Feed |
| 22 | - | - |
| 23 | F53B | Heater/AC (Cab) |
| 24 | - | - |
| 25 | F41A1 | Key Switch Feed |
| 26 | - | - |
| 27 | XC1G3 | Cab Ground |
| 28 | EM28 | Low Coolant Lamp |
| 29 | - | - |
| 30 | - | - |
| 31 | XC1G4 | Cab Ground |
| 32 | - | - |
| 33 | F43B3 | Fan Control |
| 34 | - | - |
| 35 | F7E | Starter Relay and Controls |
| 36 | - | - |
| 37 | F45A | Ignition Buss Feed |
| 38 | - | - |
| 39 | XC1G5 | Cab Ground |

39-WAY HARNESS
(X11)