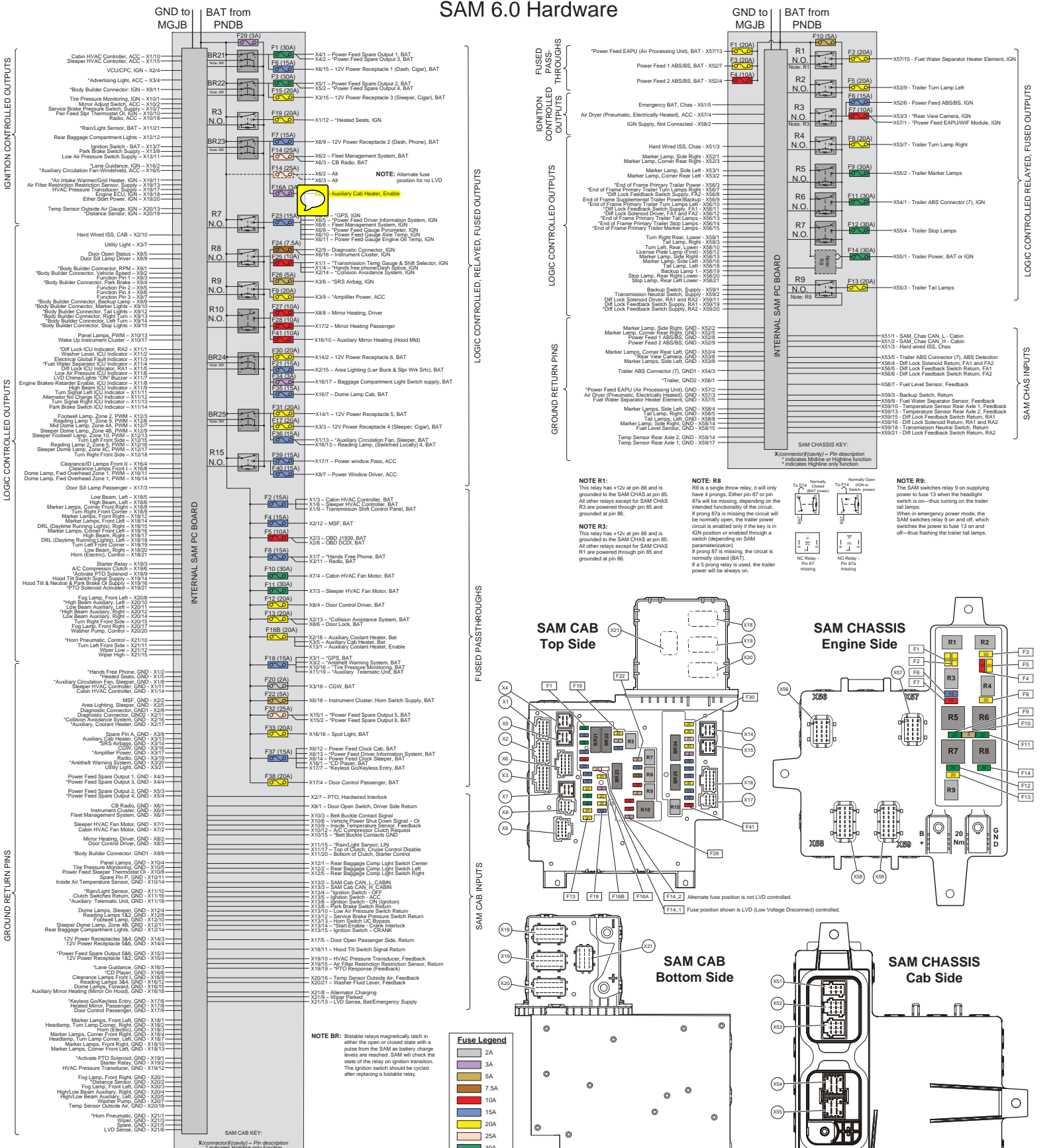


SAM CAB

SAM CHASSIS



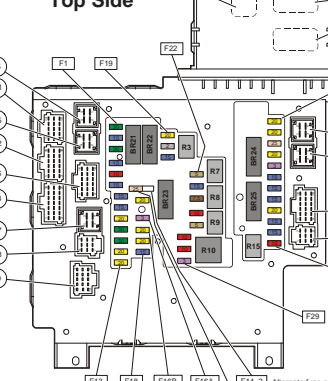
- IGNITION CONTROLLED OUTPUTS**
- Cabin HVAC Controller, ACC - X170
 - Sleeper HVAC Controller, ACC - X175
 - VU/CUPC, IGN - X24
 - Advertising Light, ACC - X34
 - *Body Builder Connector, IGN - X911
 - The Pressure Monitoring, IGN - X101
 - Minor Adjust Switch, ACC - X102
 - Service Brake Pressure Switch, Supply - X103
 - PIR Feed Stop Thermistor, IGN - X1010
 - Relay, ACC - X1011
 - *RainLight Sensor, BAT - X1121
 - Rear Baggage Compartment Lights - X1212
 - Ignition Switch - BAT - X137
 - Pass Brake Switch Supply - X139
 - Low Air Pressure Switch Supply - X1311
 - *Lane Guidance, IGN - X162
 - *Air Intake Warmer/Grid Heater, IGN - X1811
 - Air Filter Restriction Restriction Sensor, Supply - X1815
 - HVAC Pressure Transducer, Supply - X1817
 - Engine Oil, GND - X1818
 - Ether Start Power, IGN - X1920
 - Temp Sensor Outside Air, GND - X2013
 - Distance Sensor, IGN - X2014

- LOGIC CONTROLLED OUTPUTS**
- Hard Wired ISS, Cab - X210
 - Utility Light - X37
 - Door Open Status - X95
 - Door Sill Lamp Driver - X98
 - *Body Builder Connector, RPM - X99
 - *Body Builder Connector, Vehicle Speed - X99
 - *Body Builder Connector, Fuel Pressure - X99
 - *Body Builder Connector, Park Brake - X99
 - *Body Builder Connector, Function Pin 2 - X99
 - *Body Builder Connector, Function Pin 3 - X99
 - *Body Builder Connector, Master Lights - X99
 - *Body Builder Connector, Tail Lamp - X99
 - *Body Builder Connector, Right Turn - X99
 - *Body Builder Connector, Left Turn - X99
 - *Body Builder Connector, Stop Lights - X99
 - Panel Lamps, PWM - X107
 - Wake Up Instrument Cluster - X107
 - Diff Lock ICU Indicator, RA2 - X111
 - Washer Level, ICU Indicator - X112
 - Electrical Global Fault Indicator - X113
 - Fuel Water Separator ICU Indicator - X114
 - Diff Lock ICU Indicator, RA1 - X115
 - Fuel Air Pressure ICU Indicator - X116
 - LVD Chime/Lights, ON Buzzer - X117
 - Engine Brakes/Retarder Enable, ICU Indicator - X118
 - Turn Signal Left ICU Indicator - X119
 - Turn Signal Right ICU Indicator - X120
 - Alternator Charge ICU Indicator - X121
 - Park Brake Switch ICU Indicator - X122
 - Footwell Lamp, Zone 2, PWM - X123
 - Reading Lamp, Zone 9, PWM - X124
 - Mid Dome Lamp, Zone 8, PWM - X125
 - Sleeper Dome Lamp, Zone 10, PWM - X126
 - Sleeper Dome Lamp, Zone 11, PWM - X127
 - Reading Lamp, Zone 2, PWM - X128
 - Sleeper Dome Lamp, Zone 4, PWM - X129
 - Turn Right Front Side - X1218
 - Clearance/Lamp Front II - X164
 - Clearance Lamp Front I - X165
 - Dome Lamp, Fed Overhead Zone 1, PWM - X1108
 - Dome Lamp, Fed Overhead Zone 2, PWM - X1109
 - Door Sill Lamp Passenger - X173
 - Low Beam, Left - X185
 - High Beam, Left - X186
 - Marker Lamps, Corner Front Right - X188
 - Turn Right Front Corner - X189
 - Marker Lamps, Front Right - X192
 - DRL (Daytime Running Lights), Right - X193
 - Marker Lamps, Left - X194
 - DRL (Daytime Running Lights), Left - X195
 - Turn Left Front Corner - X196
 - Low Beam, Right - X197
 - Horn (Electric), Control - X211
 - Starter Relay - X190
 - ACC Computer, Chassis - X191
 - Hood Throttle PTO Sensor, Chassis - X192
 - Hood Throttle & Neutral & Park Brake Oil Supply, Chassis - X193
 - PTO Sensor, Chassis - X194
 - Fog Lamp, Front Left - X208
 - High Beam Auxiliary, Left - X209
 - High Beam Auxiliary, Right - X210
 - Low Beam Auxiliary, Right - X211
 - Turn Right Front Side - X212
 - Turn Left Front Side - X213
 - Wiper, Low - X214
 - Wiper, High - X215
 - *Hands Free Phone, GND - X12
 - *Heated Seats, GND - X15
 - *Auxiliary Circulation Fan, Sleeper, ACC - X111
 - Sleeper HVAC Controller, GND - X111
 - Cabin HVAC Controller, GND - X112
 - MSF, GND - X22
 - Diagnostic Connector, GND1 - X28
 - Diagnostic Connector, GND2 - X29
 - Collision Avoidance System, GND - X216
 - Auxiliary, Coolant Heater, GND - X217
 - Spare Pin A, GND - X38
 - Auxiliary Cab Heater, GND - X313
 - *SRS Airbag, GND - X314
 - *Amplifier, GND - X317
 - *Anti-theft Warning System, GND - X320
 - Utility Light, GND - X321
 - Power Feed Spare Output 1, GND - X43
 - Power Feed Spare Output 2, GND - X44
 - Power Feed Spare Output 3, GND - X45
 - Power Feed Spare Output 4, GND - X46
 - Power Feed Spare Output 5, GND - X47
 - Power Feed Spare Output 6, GND - X48
 - Power Feed Spare Output 7, GND - X49
 - Power Feed Spare Output 8, GND - X50
 - Power Feed Spare Output 9, GND - X51
 - Power Feed Spare Output 10, GND - X52
 - Power Feed Spare Output 11, GND - X53
 - Power Feed Spare Output 12, GND - X54
 - Power Feed Spare Output 13, GND - X55
 - Power Feed Spare Output 14, GND - X56
 - Power Feed Spare Output 15, GND - X57
 - Power Feed Spare Output 16, GND - X58
 - Power Feed Spare Output 17, GND - X59
 - Power Feed Spare Output 18, GND - X60
 - Power Feed Spare Output 19, GND - X61
 - Power Feed Spare Output 20, GND - X62
 - Power Feed Spare Output 21, GND - X63
 - Power Feed Spare Output 22, GND - X64
 - Power Feed Spare Output 23, GND - X65
 - Power Feed Spare Output 24, GND - X66
 - Power Feed Spare Output 25, GND - X67
 - Power Feed Spare Output 26, GND - X68
 - Power Feed Spare Output 27, GND - X69
 - Power Feed Spare Output 28, GND - X70
 - Power Feed Spare Output 29, GND - X71
 - Power Feed Spare Output 30, GND - X72
 - Power Feed Spare Output 31, GND - X73
 - Power Feed Spare Output 32, GND - X74
 - Power Feed Spare Output 33, GND - X75
 - Power Feed Spare Output 34, GND - X76
 - Power Feed Spare Output 35, GND - X77
 - Power Feed Spare Output 36, GND - X78
 - Power Feed Spare Output 37, GND - X79
 - Power Feed Spare Output 38, GND - X80
 - Power Feed Spare Output 39, GND - X81
 - Power Feed Spare Output 40, GND - X82
 - Power Feed Spare Output 41, GND - X83
 - Power Feed Spare Output 42, GND - X84
 - Power Feed Spare Output 43, GND - X85
 - Power Feed Spare Output 44, GND - X86
 - Power Feed Spare Output 45, GND - X87
 - Power Feed Spare Output 46, GND - X88
 - Power Feed Spare Output 47, GND - X89
 - Power Feed Spare Output 48, GND - X90
 - Power Feed Spare Output 49, GND - X91
 - Power Feed Spare Output 50, GND - X92
 - Power Feed Spare Output 51, GND - X93
 - Power Feed Spare Output 52, GND - X94
 - Power Feed Spare Output 53, GND - X95
 - Power Feed Spare Output 54, GND - X96
 - Power Feed Spare Output 55, GND - X97
 - Power Feed Spare Output 56, GND - X98
 - Power Feed Spare Output 57, GND - X99
 - Power Feed Spare Output 58, GND - X100
 - Power Feed Spare Output 59, GND - X101
 - Power Feed Spare Output 60, GND - X102
 - Power Feed Spare Output 61, GND - X103
 - Power Feed Spare Output 62, GND - X104
 - Power Feed Spare Output 63, GND - X105
 - Power Feed Spare Output 64, GND - X106
 - Power Feed Spare Output 65, GND - X107
 - Power Feed Spare Output 66, GND - X108
 - Power Feed Spare Output 67, GND - X109
 - Power Feed Spare Output 68, GND - X110
 - Power Feed Spare Output 69, GND - X111
 - Power Feed Spare Output 70, GND - X112
 - Power Feed Spare Output 71, GND - X113
 - Power Feed Spare Output 72, GND - X114
 - Power Feed Spare Output 73, GND - X115
 - Power Feed Spare Output 74, GND - X116
 - Power Feed Spare Output 75, GND - X117
 - Power Feed Spare Output 76, GND - X118
 - Power Feed Spare Output 77, GND - X119
 - Power Feed Spare Output 78, GND - X120
 - Power Feed Spare Output 79, GND - X121
 - Power Feed Spare Output 80, GND - X122
 - Power Feed Spare Output 81, GND - X123
 - Power Feed Spare Output 82, GND - X124
 - Power Feed Spare Output 83, GND - X125
 - Power Feed Spare Output 84, GND - X126
 - Power Feed Spare Output 85, GND - X127
 - Power Feed Spare Output 86, GND - X128
 - Power Feed Spare Output 87, GND - X129
 - Power Feed Spare Output 88, GND - X130
 - Power Feed Spare Output 89, GND - X131
 - Power Feed Spare Output 90, GND - X132
 - Power Feed Spare Output 91, GND - X133
 - Power Feed Spare Output 92, GND - X134
 - Power Feed Spare Output 93, GND - X135
 - Power Feed Spare Output 94, GND - X136
 - Power Feed Spare Output 95, GND - X137
 - Power Feed Spare Output 96, GND - X138
 - Power Feed Spare Output 97, GND - X139
 - Power Feed Spare Output 98, GND - X140
 - Power Feed Spare Output 99, GND - X141
 - Power Feed Spare Output 100, GND - X142

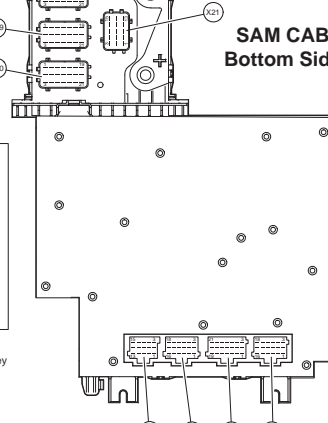
- GROUND RETURN PINS**
- *Activate PTO Solenoid, GND - X191
 - HVAC Pressure Transducer, GND - X1912
 - Fog Lamp, Front Right, GND - X207
 - Fog Lamp, Front Left, GND - X208
 - Fog Lamp, Front Middle, GND - X209
 - High/Low Beam Auxiliary, Right, GND - X210
 - High/Low Beam Auxiliary, Left, GND - X211
 - Washer Pump, GND - X217
 - Temp Sensor Outside Air, GND - X2013
 - *Horn Pneumatic, GND - X211
 - Wiper, GND - X214
 - Wiper, High, GND - X215
 - Marker Lamps, Front Left, GND - X181
 - Headlamp, Turn Lamp, Corner, Right, GND - X182
 - Marker Lamps, Corner, Right, GND - X183
 - Headlamp, Turn Lamp, Corner, Left, GND - X184
 - Marker Lamps, Front Right, GND - X185
 - Marker Lamps, Corner, Left, GND - X186
 - Marker Lamps, Front Left, GND - X187
 - Headlamp, Turn Lamp, Corner, Right, GND - X188
 - Headlamp, Turn Lamp, Corner, Left, GND - X189
 - Marker Lamps, Corner, Right, GND - X190
 - Marker Lamps, Corner, Left, GND - X191
 - *Activate PTO Solenoid, GND - X191
 - Starter Relay, GND - X1912
 - HVAC Pressure Transducer, GND - X1912
 - Fog Lamp, Front Right, GND - X207
 - Fog Lamp, Front Left, GND - X208
 - Fog Lamp, Front Middle, GND - X209
 - High/Low Beam Auxiliary, Right, GND - X210
 - High/Low Beam Auxiliary, Left, GND - X211
 - Washer Pump, GND - X217
 - Temp Sensor Outside Air, GND - X2013
 - *Horn Pneumatic, GND - X211
 - Wiper, GND - X214
 - Wiper, High, GND - X215
 - LVD Sense, GND - X218

- Ignition Controlled Pins** – Turned on by FETs depending on ignition switch status, with three types, BAT, ACC, or IGN
- Logic Controlled Outputs** – Turned on and off by FETs depending on SAM inputs (from CAN and other input pins), interlocks and parameter settings. They are unfused, but will turn off in the case of an over current. Not all are powered pins, some pins are turned on and off to a ground, and are noted by GND.
- Ground Return Pins** – Dedicated ground pins connected internally to the SAM GND.
- Logic Controlled, Related, Fused Outputs** – Fused and controlled by a relay depending on either ignition switch status or by inputs to the SAM. The control side of all the relays are fused through one fuse on each SAM.
- Fused Passthroughs** – Constant BAT power through a fuse
- SAM Inputs** – All the inputs, either CAN inputs or sensor feedback. Many of these inputs are chopped signals.
- Logic Controlled, Fused Output** – Turned on and off by FETs depending on SAM inputs. Same as logic controlled outputs but fuse protected.
- SAM 6.0 Hardware** – Start of production August 2, 2010.

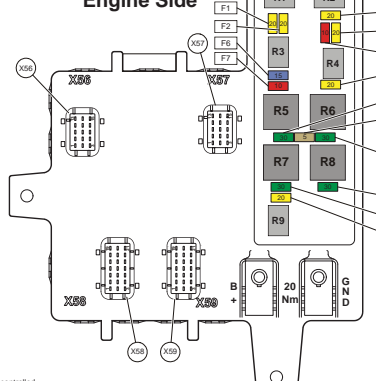
SAM CAB Top Side



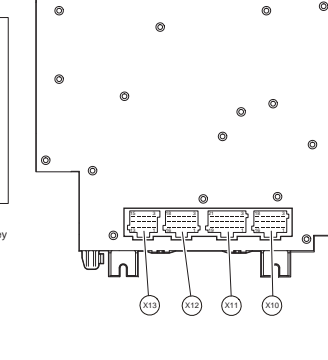
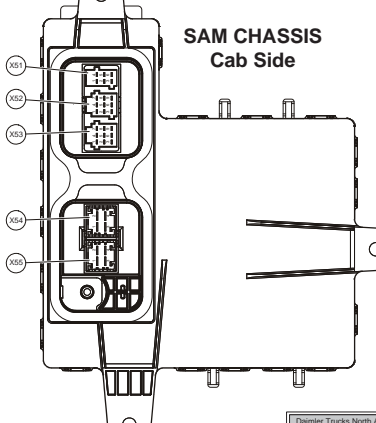
SAM CAB Bottom Side



SAM CHASSIS Engine Side



SAM CHASSIS Cab Side



- IGNITION CONTROLLED OUTPUTS**
- *Power Feed EAPU (Air Processing Unit), BAT - X5713
 - Power Feed 1 ABS/BS, BAT - X527
 - Power Feed 2 ABS/BS, BAT - X524
 - Emergency Bat, Chas - X515
 - Air Dryer (Pneumatic, Electrically Heated), ACC - X574
 - IGN Supply, Not Connected - X582
 - Hard Wired ISS, Chas - X510
 - Marker Lamp, Side Right - X521
 - Marker Lamp, Corner Rear Right - X522
 - Marker Lamp, Side Left - X531
 - Marker Lamp, Corner Rear Left - X532
 - Marker Lamp, Side Left - X531
 - Marker Lamp, Side Right - X532
 - *End of Frame Primary Trailer Power/Backup - X563
 - *End of Frame Supplemental Trailer Power/Backup - X569
 - *Diff Lock Solenoid Driver, RA1 and RA2 - X561
 - *Diff Lock Feedback Switch Supply, FA1 - X5611
 - *Diff Lock Feedback Switch Supply, FA2 - X5612
 - *End of Frame Primary Trailer Stop Lamps - X5614
 - *End of Frame Primary Trailer Head Lamps - X5615
 - Turn Right Rear, Lower - X581
 - Turn Left Rear, Lower - X582
 - License Plate Lamp (Front) - X5812
 - Marker Lamp, Side Right - X5813
 - Turn Left, Side Left - X5818
 - Turn Right, Side Right - X5819
 - Stop Lamp, Rear Right Lower - X5821
 - Stop Lamp, Rear Left Lower - X5822
 - Backup Switch, Supply - X5821
 - Transmission Neutral Switch, Supply - X5822
 - Diff Lock Solenoid Driver, RA1 and RA2 - X5611
 - Diff Lock Feedback Switch Supply, RA1 - X56111
 - Diff Lock Feedback Switch Supply, RA2 - X56112
 - Marker Lamp, Side Right, GND - X552
 - Marker Lamp, Corner Rear Right, GND - X552
 - Power Feed 1 ABS/BS, GND - X528
 - Power Feed 2 ABS/BS, GND - X529
 - Marker Lamp, Corner Rear Left, GND - X534
 - Marker Lamp, Side Right, GND - X533
 - Marker Lamp, Side Left, GND - X534
 - Trailer ABS Connector (7), GND1 - X543
 - Trailer, GND2 - X561
 - *Power Feed EAPU (Air Processing Unit), GND - X572
 - Power Feed 1 ABS/BS, GND - X528
 - Power Feed 2 ABS/BS, GND - X529
 - Fuel Water Separator Heater Element, GND - X575
 - Marker Lamp, Side Left, GND - X531
 - Turn Left, Right, GND - X585
 - Turn Right, Right, GND - X586
 - Marker Lamp, Side Right, GND - X583
 - Fuel Level Sensor, GND - X5611
 - Temp Sensor Rear Axle 2, GND - X5914
 - Temp Sensor Rear Axle 1, GND - X5917

- LOGIC CONTROLLED RELATED, FUSED OUTPUTS**
- X5715 - Fuel Water Separator Heater Element, IGN
 - X539 - Trailer Turn Lamp Left
 - X526 - Power Feed ABS/BS, IGN
 - X571 - *Power Feed EAPU/WFM Module, IGN
 - X537 - Trailer Turn Lamp Right
 - X552 - Trailer Marker Lamps
 - X541 - Trailer ABS Connector (7), IGN
 - X504 - Trailer Stop Lamps
 - X511 - SAM Chas CAN L1 - Cabin
 - X512 - SAM Chas CAN L1 - Cabin
 - X513 - Hard Wired ISS, Chas
 - X535 - Trailer ABS Connector (7), ABS Detection
 - X564 - Diff Lock Solenoid Return, FA1 and FA2
 - X565 - Diff Lock Feedback Switch Return, FA1
 - X566 - Diff Lock Feedback Switch Return, FA2
 - X587 - Fuel Level Sensor, Feedback
 - X593 - Backup Switch, Return
 - X599 - Fuel Water Separator Sensor, Feedback
 - X5910 - Temperature Sensor Rear Axle 1, Feedback
 - X5913 - Temperature Sensor Rear Axle 2, Feedback
 - X5915 - Diff Lock Feedback Switch Return, RA1
 - X5916 - Diff Lock Solenoid Return, RA1 and RA2
 - X5918 - Transmission Neutral Switch, Return
 - X5921 - Diff Lock Feedback Switch Return, RA2

- SAM CHAS INPUTS**
- X511 - SAM Chas CAN L1 - Cabin
 - X512 - SAM Chas CAN L1 - Cabin
 - X513 - Hard Wired ISS, Chas
 - X535 - Trailer ABS Connector (7), ABS Detection
 - X564 - Diff Lock Solenoid Return, FA1 and FA2
 - X565 - Diff Lock Feedback Switch Return, FA1
 - X566 - Diff Lock Feedback Switch Return, FA2
 - X587 - Fuel Level Sensor, Feedback
 - X593 - Backup Switch, Return
 - X599 - Fuel Water Separator Sensor, Feedback
 - X5910 - Temperature Sensor Rear Axle 1, Feedback
 - X5913 - Temperature Sensor Rear Axle 2, Feedback
 - X5915 - Diff Lock Feedback Switch Return, RA1
 - X5916 - Diff Lock Solenoid Return, RA1 and RA2
 - X5918 - Transmission Neutral Switch, Return
 - X5921 - Diff Lock Feedback Switch Return, RA2

