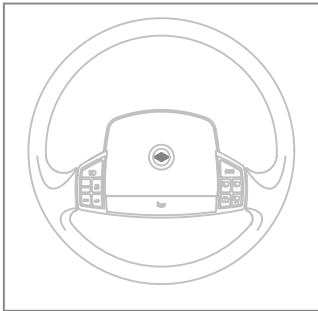
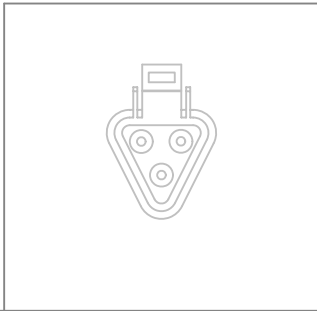
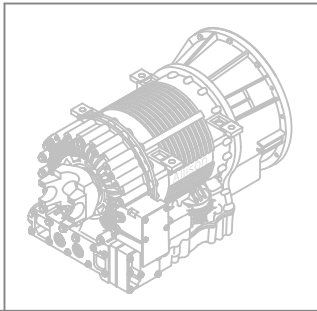
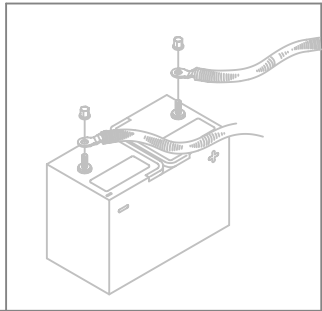
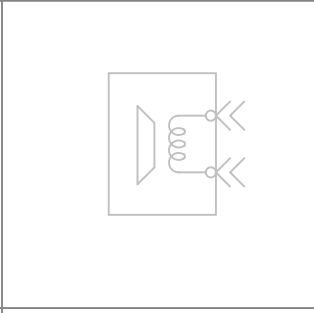
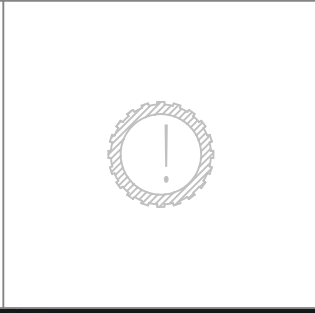
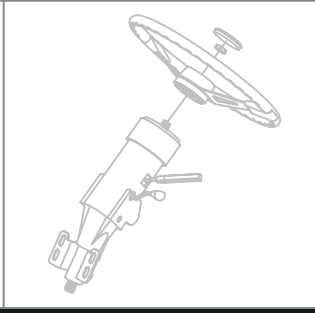
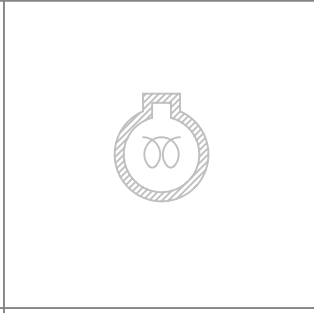
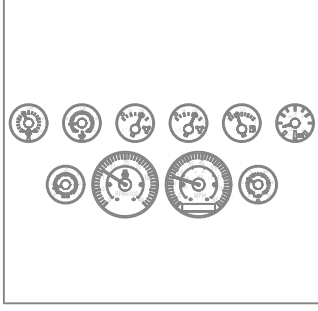
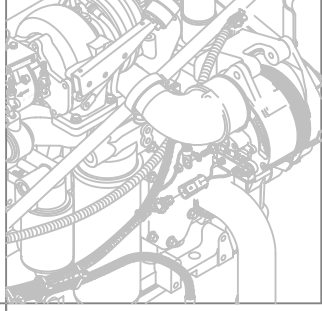
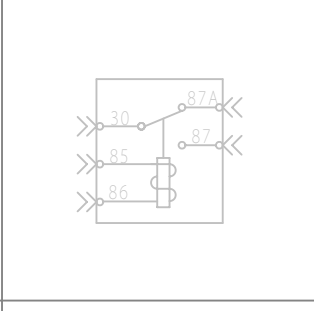
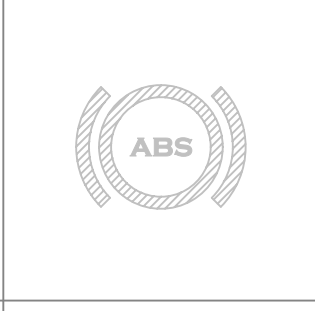
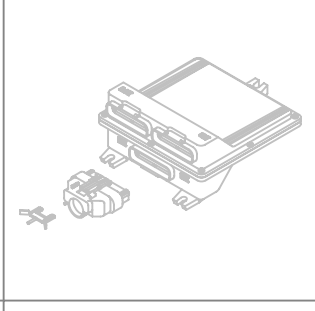
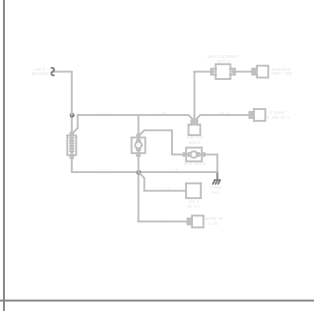
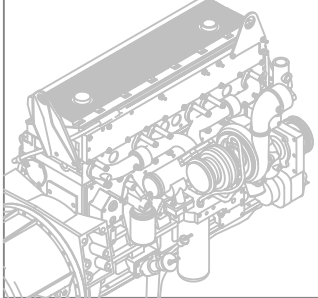
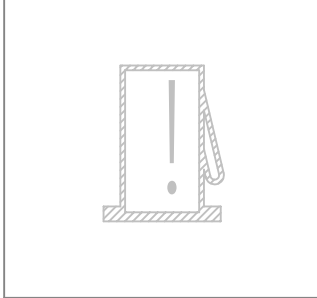
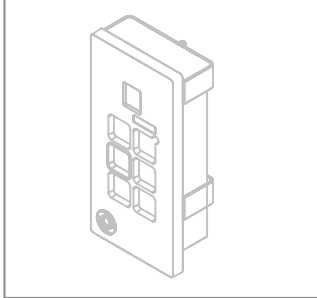
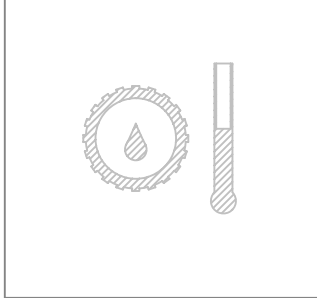
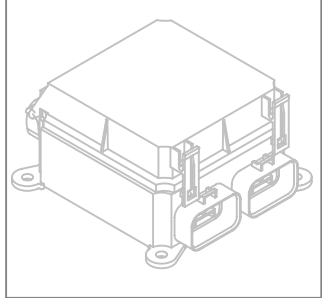


ELECTRICAL SYSTEMS GUIDE

								
								
	 UTILIMASTER DRIVING INTELLIGENT VEHICLE SOLUTIONS							
								
								

CIRCUIT FUNCTION	GROUP NUMBER
INDEX	2
SYMBOLS	3
MODULAR LAYOUT	9
GROUND DISTRIBUTION CENTER	10
POWER DISTRIBUTION CENTER	12
LIGHTING	25
HVAC	39
WIPER	53
KEYLESS ENTRY	62
GPS	63

HARNESS DESCRIPTION	HARNESS DRAWING
HARNESS TTI KEYLESS UAS BH LATCH	16514814
HARNESS TTI KEYLESS UAS RR LATCH	16514815
HARNESS WIPER HVAC STD REACH #43	16515127
HARNESS FRONT LIGHT STD #43	16515128
HARNESS SGL CAB/CRGO LIGHT STD #43	16515130
HARNESS DUAL CARGO LIGHT #43	16515132
HARNESS 3-WAY SWITCH #43	16515134
HARNESS COND FAN PRESSURE SW #43	16515135
HARNESS MAIN DASH REACH PARCEL	16515182
HARNESS CAB/CARGO LT SWITCH UPS #43	16515194
HARNESS ROOF PARCEL CHART #43 (133 WB X 10)	16515198-01000
HARNESS ROOF PARCEL CHART #43 (151 WB X 12)	16515198-01200
HARNESS ROOF PARCEL CHART #43 (151 WB X 14)	16515198-01400
HARNESS REAR DOOR AJAR SWITCH #43	16515223
HARNESS REAR LIGHTING STANDARD INC BU #43	16516367
HARNESS UPS SEAT AND BHD SW #43	16516378
HARNESS FRONT OVERHEAD PARCEL #43	16516433

LEGEND

	HOT AT ALL TIMES
	HOT IN RUN OR START
	HOT IN ACC OR RUN

REVISION HISTORY				
REVISION	DATE / ECN	AUTHOR	DESCRIPTION	PAGE (S)
A	7-23-2014/506931	A. HUNTER	SCHEMATIC BOOK CREATION	ALL
B	8-5-2014/507190	A. HUNTER	CHANGED MODEL YEAR ON COVER PAGE, WAS 2011	SECTION 01

LEGEND

	HOT AT ALL TIMES
	HOT IN RUN OR START
	HOT IN ACC OR RUN

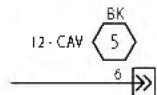
										M.CAMPEAU.HUNTER											SCHEMATIC																		
INITIAL RELEASE 506931										MAC											T.BROCK 07/23/2014										01 - COVER								
																														58431027									



ENTIRE
COMPONENT
SHOWN



PARTIAL
COMPONENT
SHOWN



CONNECTOR W/THE FOLLOWING:
WIRE IN CAVITY 6
CONNECTOR IS ITEM #5
CONNECTOR IS BLACK (BK)
CONNECTOR HAS 12 CAVITIES



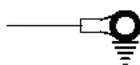
BATT = HOT AT ALL TIMES



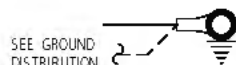
IGN = HOT IN RUN OR START



ACC = HOT IN ACC OR RUN

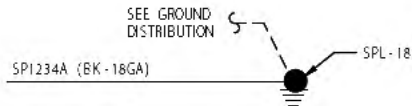


WIRE IS TERMINATED AT A RING
TERMINAL AND ATTACHED TO
GROUND



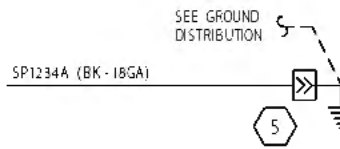
SEE GROUND
DISTRIBUTION

ADDITIONAL CIRCUITS NOT SHOWN.
REFERENCE THE GROUND
DISTRIBUTION SCHEMATIC FOR
MORE DETAILS



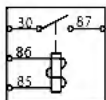
SEE GROUND
DISTRIBUTION

CIRCUIT SP1234A ENDS AT
SPLICE-18.
REMAINING CIRCUITS NOT SHOWN
AND ARE RETURNED TO GROUND.

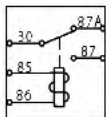


SEE GROUND
DISTRIBUTION

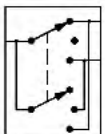
CIRCUIT SP1234A ENDS AT
CONNECTOR #5.
REMAINING CIRCUITS NOT SHOWN
AND ARE RETURNED TO GROUND.



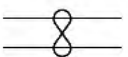
UNLESS SPECIFIED, RELAYS ARE
SHOWN IN THE DE-ENERGIZED
STATE.
TERMINALS 30 AND 87 ARE
CLOSED WHEN THE RELAY COIL IS
ENERGIZED.



UNLESS SPECIFIED, RELAYS ARE
SHOWN IN THE DE-ENERGIZED
STATE.
87a IS THE NORMALLY CLOSED
CONTACT AND 87 IS THE
NORMALLY OPEN CONTACT.



A DASHED LINE BETWEEN SWITCH
CONTACTS IMPLIES A MECHANICAL
CONNECTION AND THEY MOVE
TOGETHER.

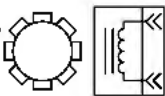


REPRESENTS AN ELECTRICALLY
CONTROLLED SOLENOID.

RIGHT REAR
HEIGHT CONTROL
VALVE

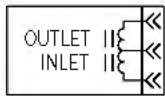


RIGHT FRONT ABS
WHEEL SPEED
SENSOR



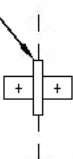
REPRESENTS A HALL EFFECT
SENSOR

RIGHT FRONT
ABS VALVE

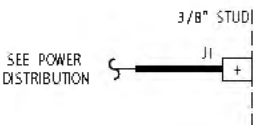


REPRESENTS A DUAL SOLENOID
ASSEMBLY. TYPICALLY A VALVE.

FRONT CHASSIS
POWER PASS
THROUGH STUD



POSITIVE PASS THROUGH STUD
W/LOCATION



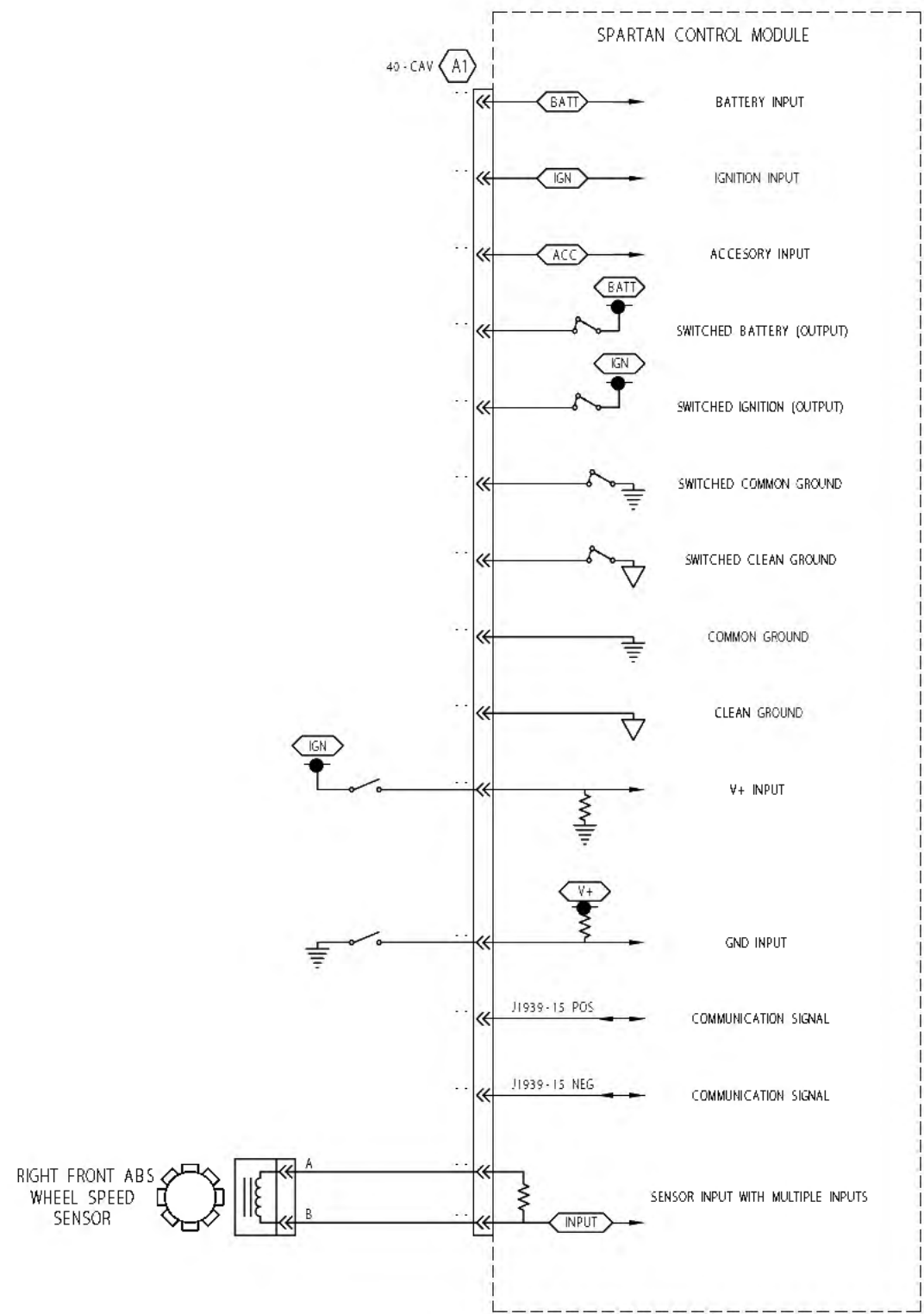
REPRESENTS A 3/8" STUD AS
PART OF A DEVICE

ABS BATTERY



F11(15A)

REPRESENTS A FUSED RATED FOR
15A, LOCATED IN POSITION "F11"
AND LABELED AS "ABS BATTERY".



VARIOUS INPUT AND OUTPUT SYMBOLS USE TO REPRESENT THE INTERNAL OPERATION OF AN ELECTRONIC CONTROL MODULE (ECM).

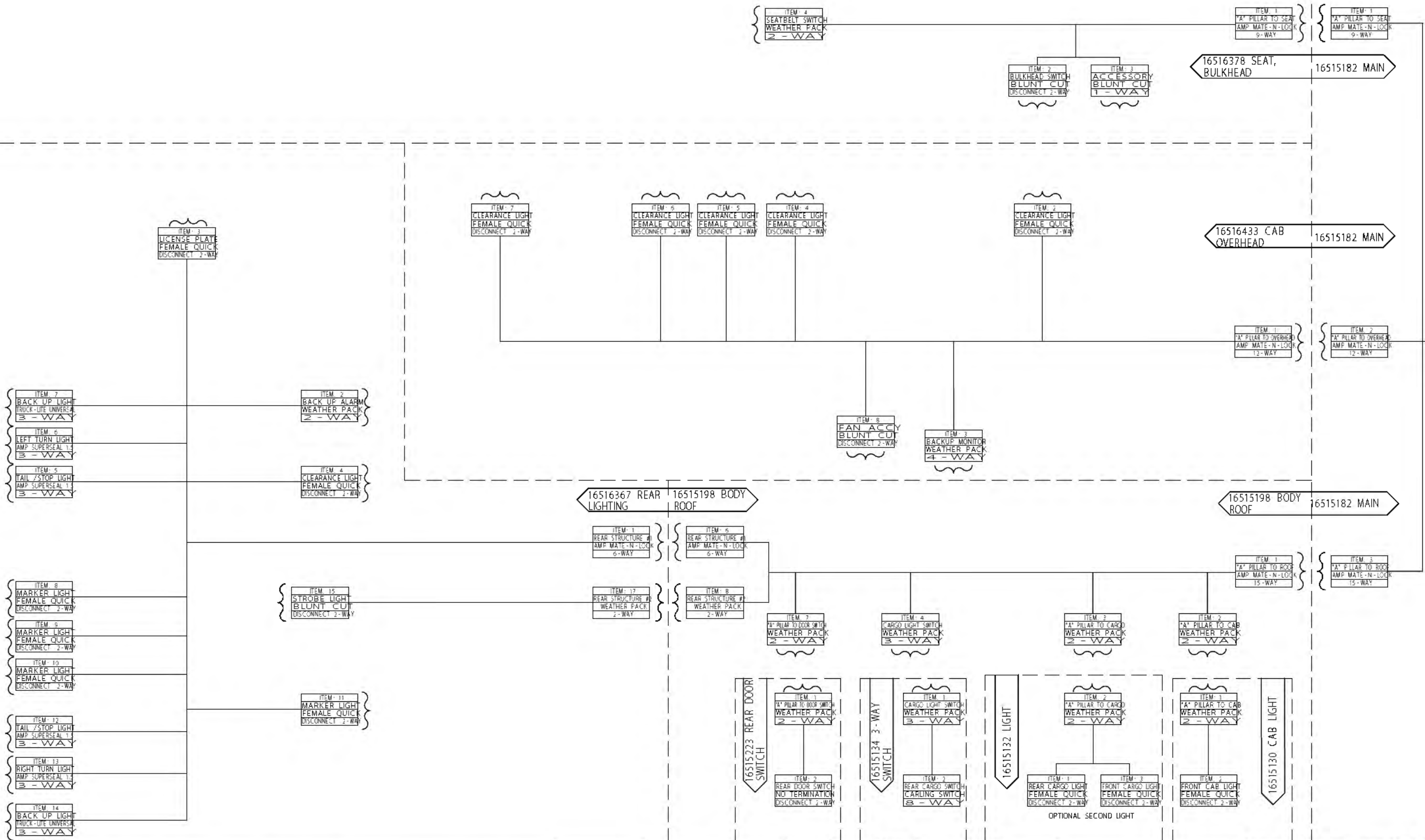
EXAMPLE V+ INPUT SHOWN.
A V+ INPUT REQUIRES THE SWITCH OUTSIDE OF THE MODULE TO PROVIDE POWER WHEN THE SWITCH IS CLOSED.
THE INTERNAL CIRCUIT INTERPRETS THE INPUT AS TRANSITIONING FROM LOW (SWITCH OPEN) TO HIGH (SWITCH CLOSED) AND RESPONDS ACCORDINGLY.

EXAMPLE GROUND INPUT SHOWN.
A GND INPUT REQUIRES THE SWITCH OUTSIDE OF THE MODULE TO PROVIDE GROUND WHEN THE SWITCH IS CLOSED.
THE INTERNAL CIRCUIT INTERPRETS THE INPUT AS TRANSITIONING FROM HIGH (SWITCH OPEN) TO LOW (SWITCH CLOSED) AND RESPONDS ACCORDINGLY.

EXAMPLE SENSOR INPUT SHOWN.
A SENSOR HAVING MULTIPLE INPUTS MAY BE SHOWN LIKE THIS EXAMPLE. THE RESISTOR SYMBOL IS NOT A TRUE REPRESENTATION OF THE ACTUAL CIRCUIT AND IS SHOWN FOR SIMPLISTIC REASONS ONLY.

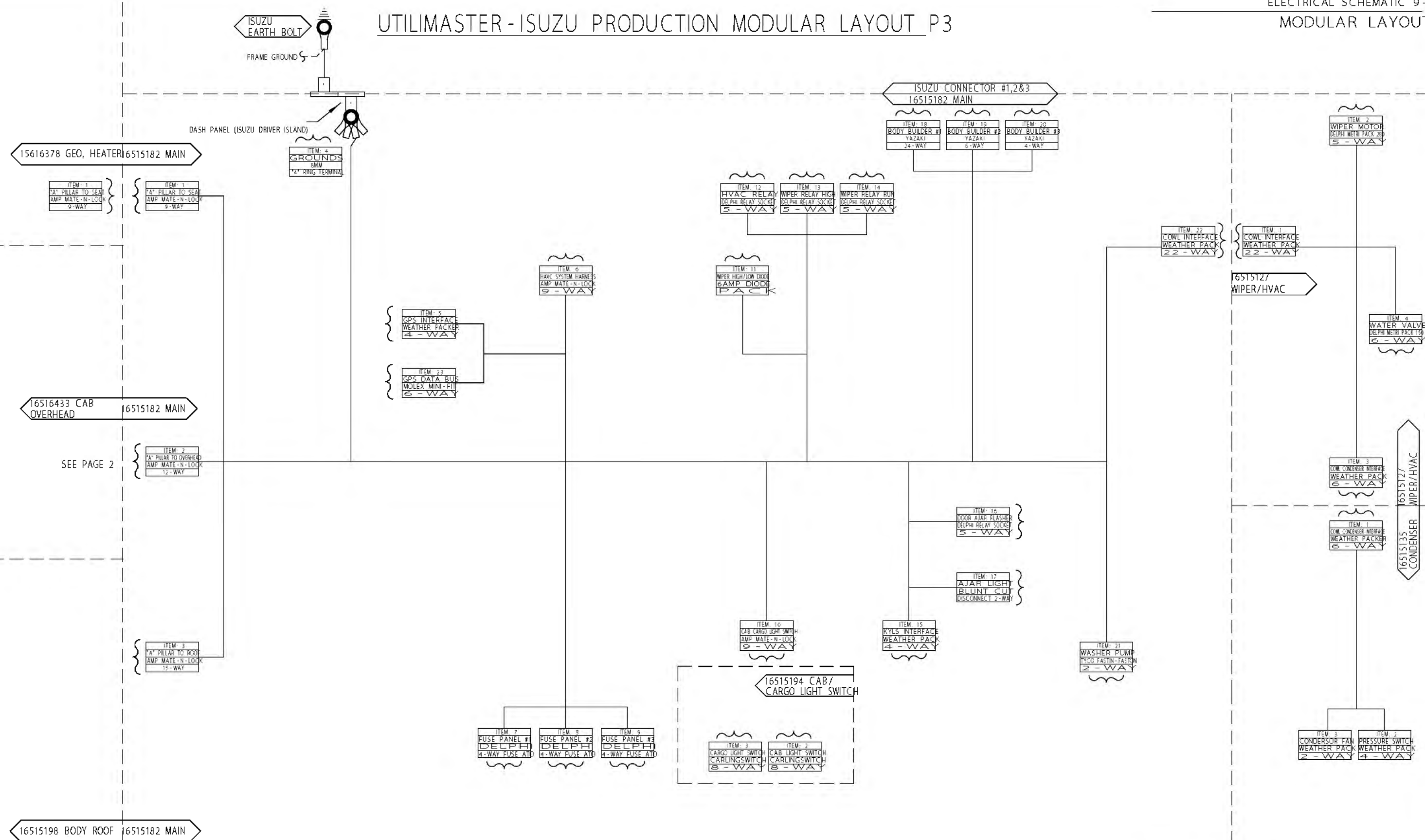
UTILIMASTER-ISUZU PRODUCTION MODULAR LAYOUT P2

ELECTRICAL SCHEMATIC 9-2
MODULAR LAYOUT



SEE PAGE 3

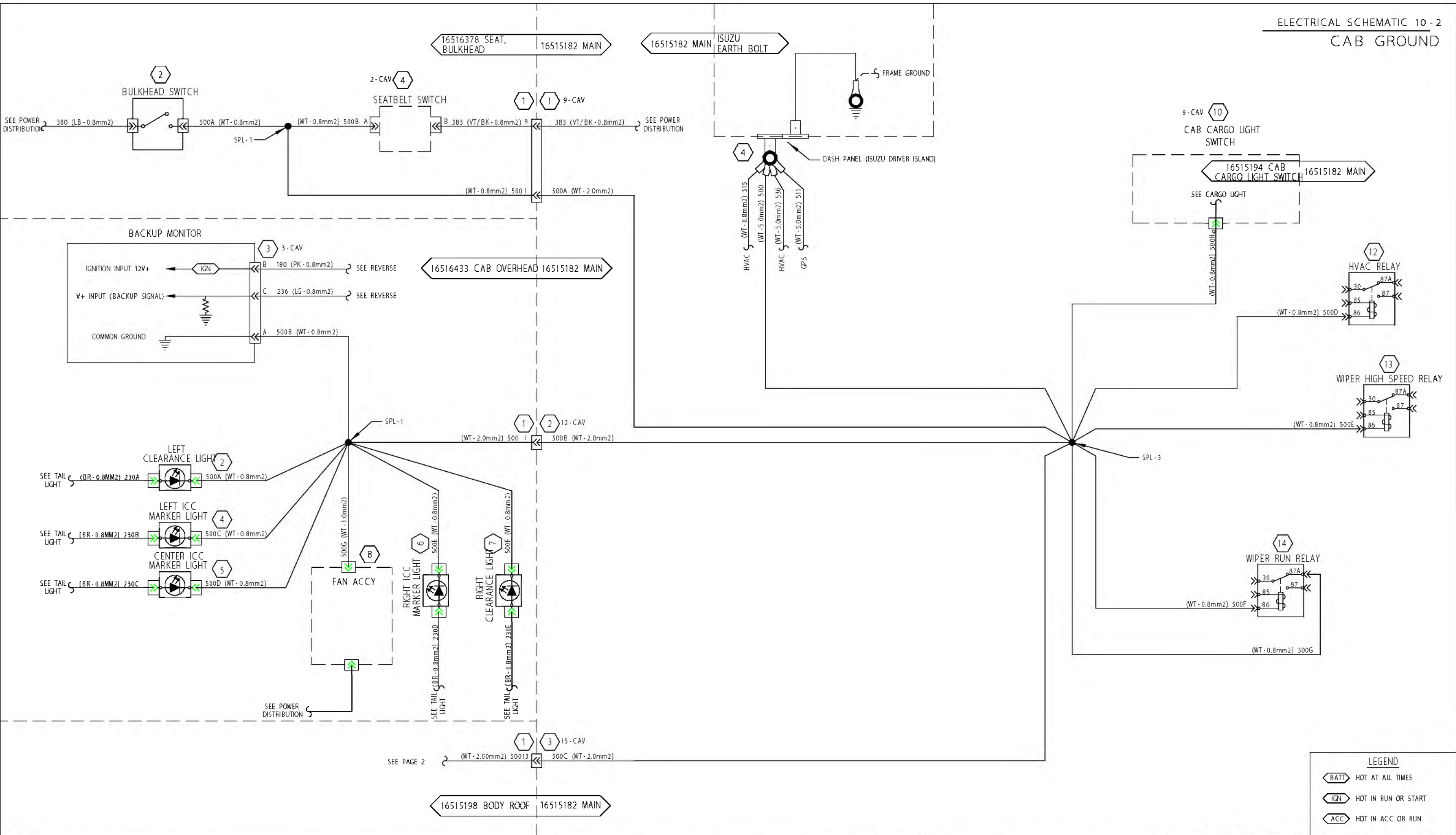
UTILIMASTER-ISUZU PRODUCTION MODULAR LAYOUT P3



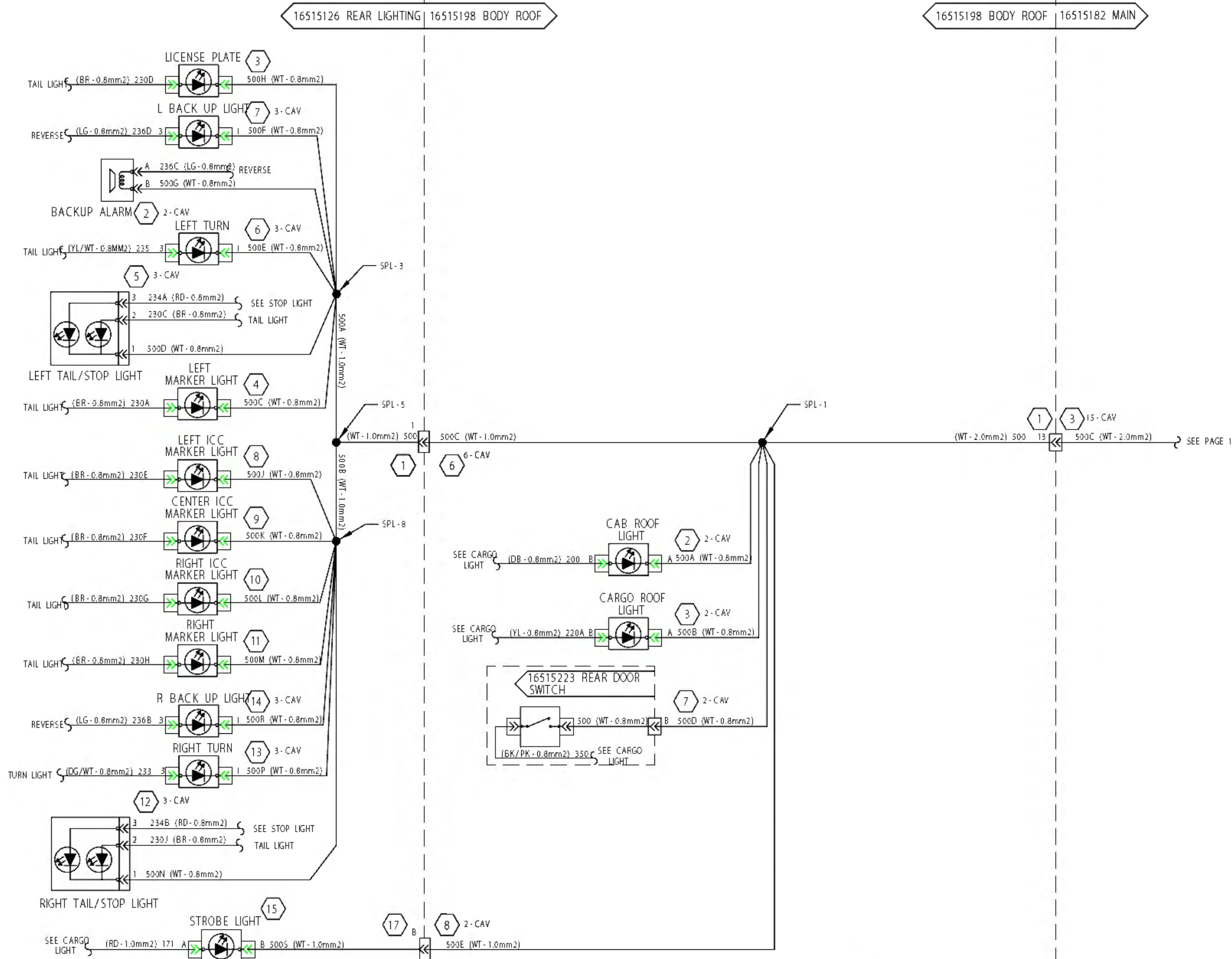
UTILIMASTER-ISUZU PRODUCTION MODULAR LAYOUT P5

ELECTRICAL SCHEMATIC 9-5
MODULAR LAYOUT





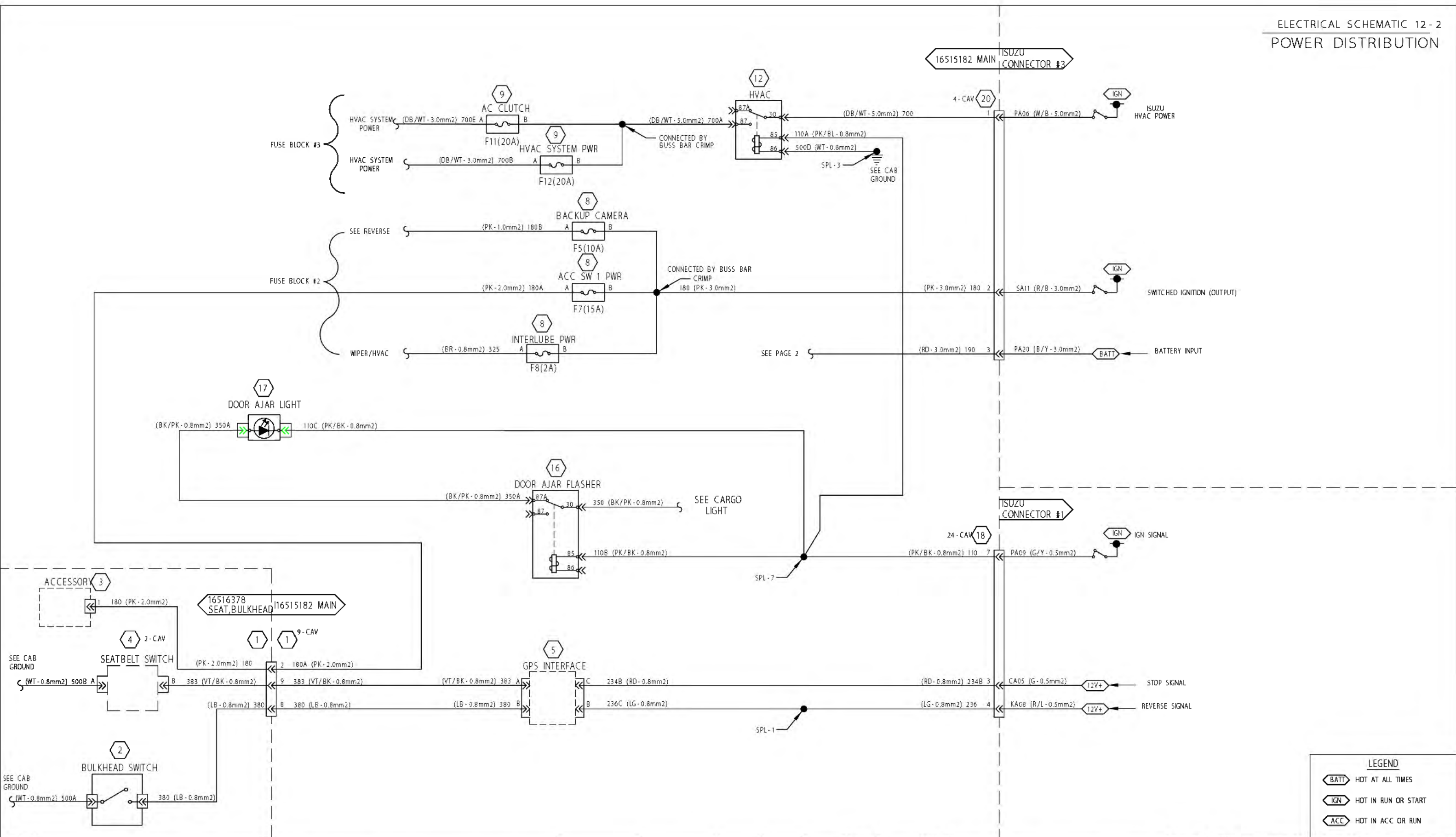
- LEGEND
- BATT HOT AT ALL TIMES
 - IGN HOT IN RUN OR START
 - ACC HOT IN ACC OR RUN



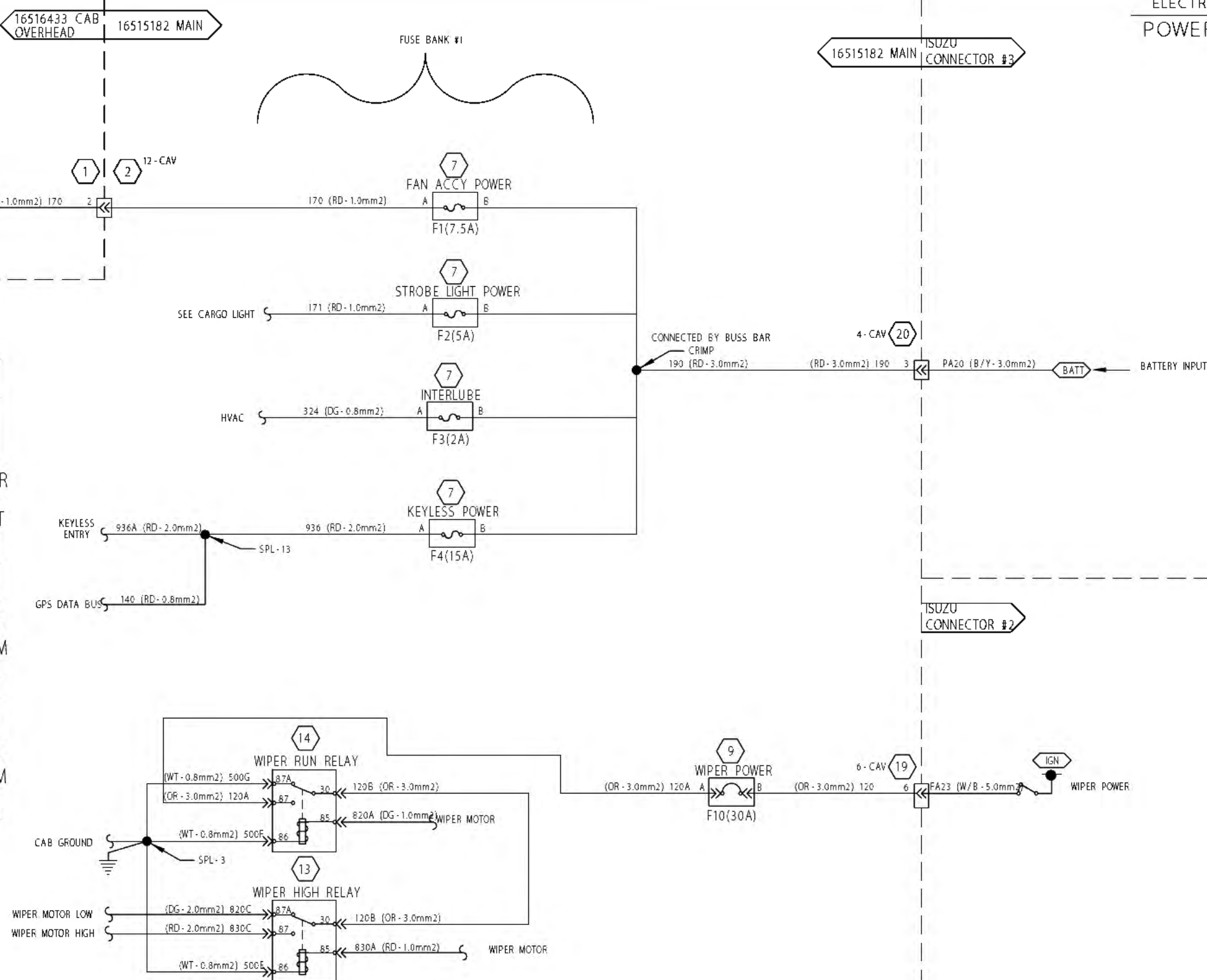
LEGEND
BATT HOT AT ALL TIMES
IGN HOT IN RUN OR START
ACC HOT IN ACC OR RUN

PAGE 3 OF 3		INITIAL RELEASE		E50693		MAC		ENGINEER M. CAMPEAU		DRAWN BY A. HUNTER		UTILIMASTER CORP.		TITLE SCHEMATIC 10 - GROUND DISTRIBUTION		CAGE CODE 36MVQ		DWG. NUMBER 58431027		A	
REV		REVISIONS		AUTH		DATE		BY		CHECKED BY T. BROCK		DATE 07/23/2014		APPROVED BY		DOCUMENT IS ELECTRONICALLY CONTROLLED. VERIFY REV PRIOR TO USE.					

ELECTRICAL SCHEMATIC 12-2
POWER DISTRIBUTION

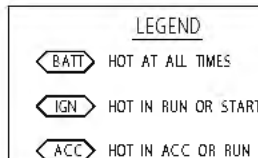


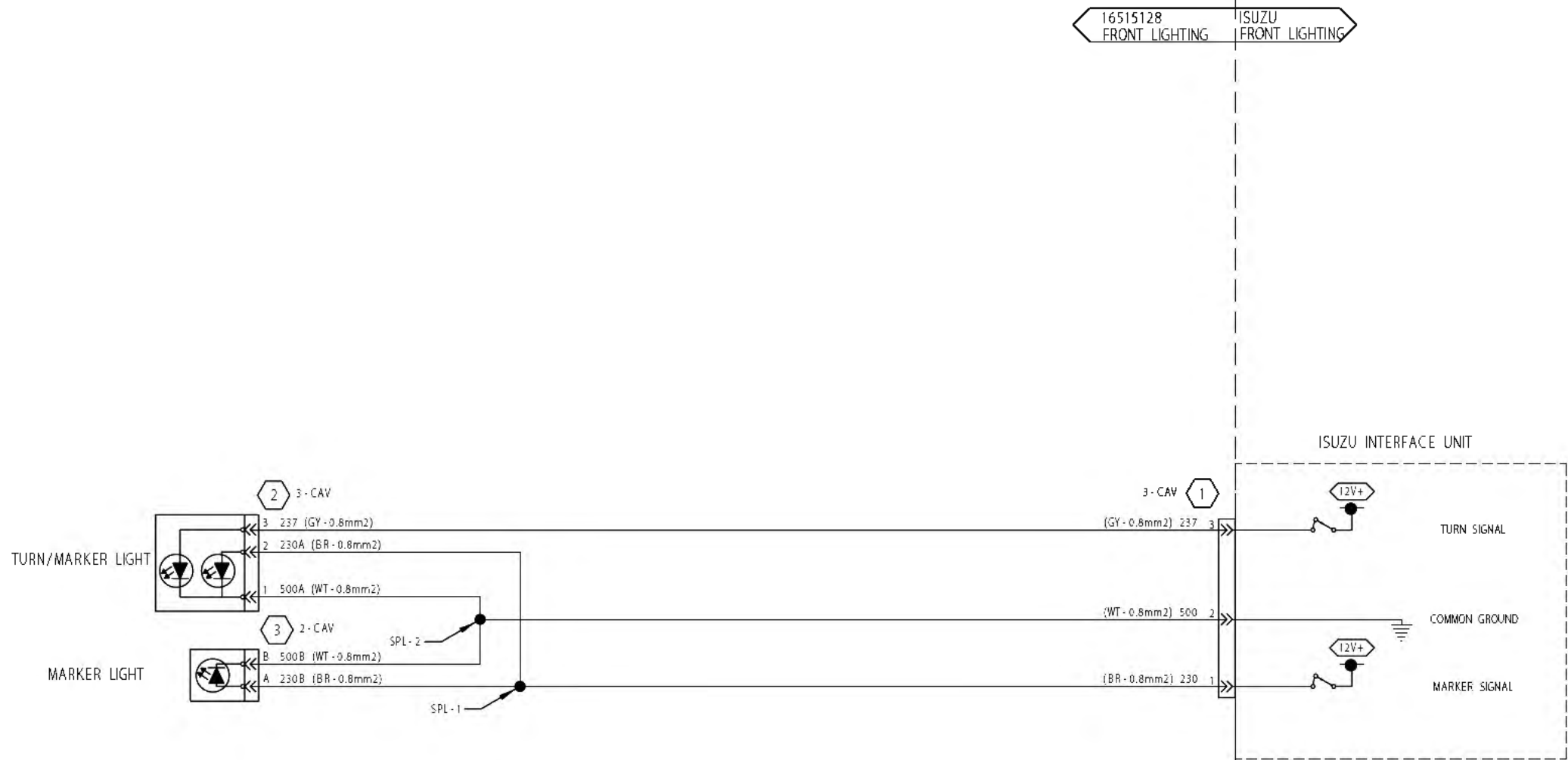
- LEGEND
- (BATT) HOT AT ALL TIMES
 - (IGN) HOT IN RUN OR START
 - (ACC) HOT IN ACC OR RUN



LEGEND

	HOT AT ALL TIMES
	HOT IN RUN OR START
	HOT IN ACC OR RUN



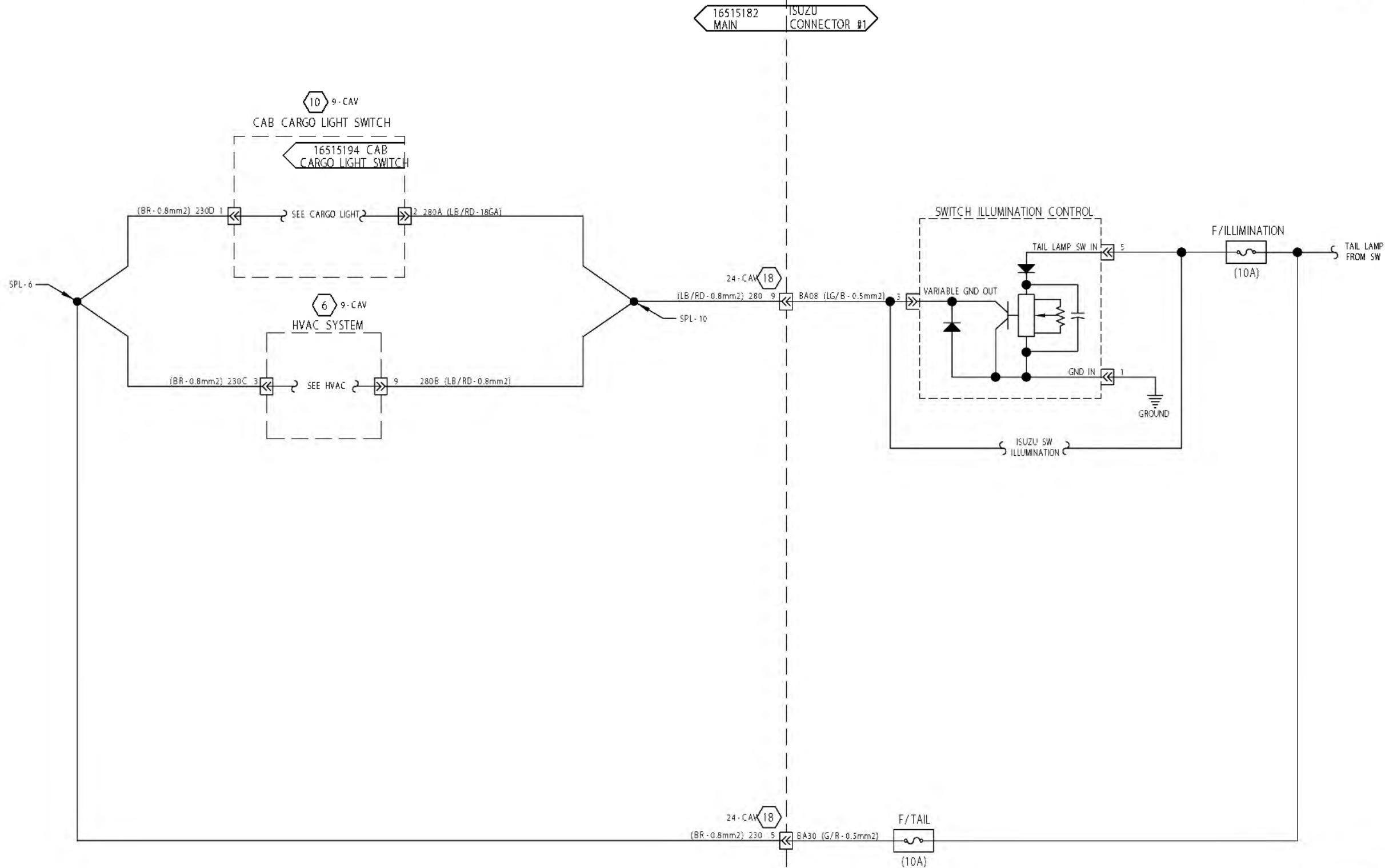


LEGEND

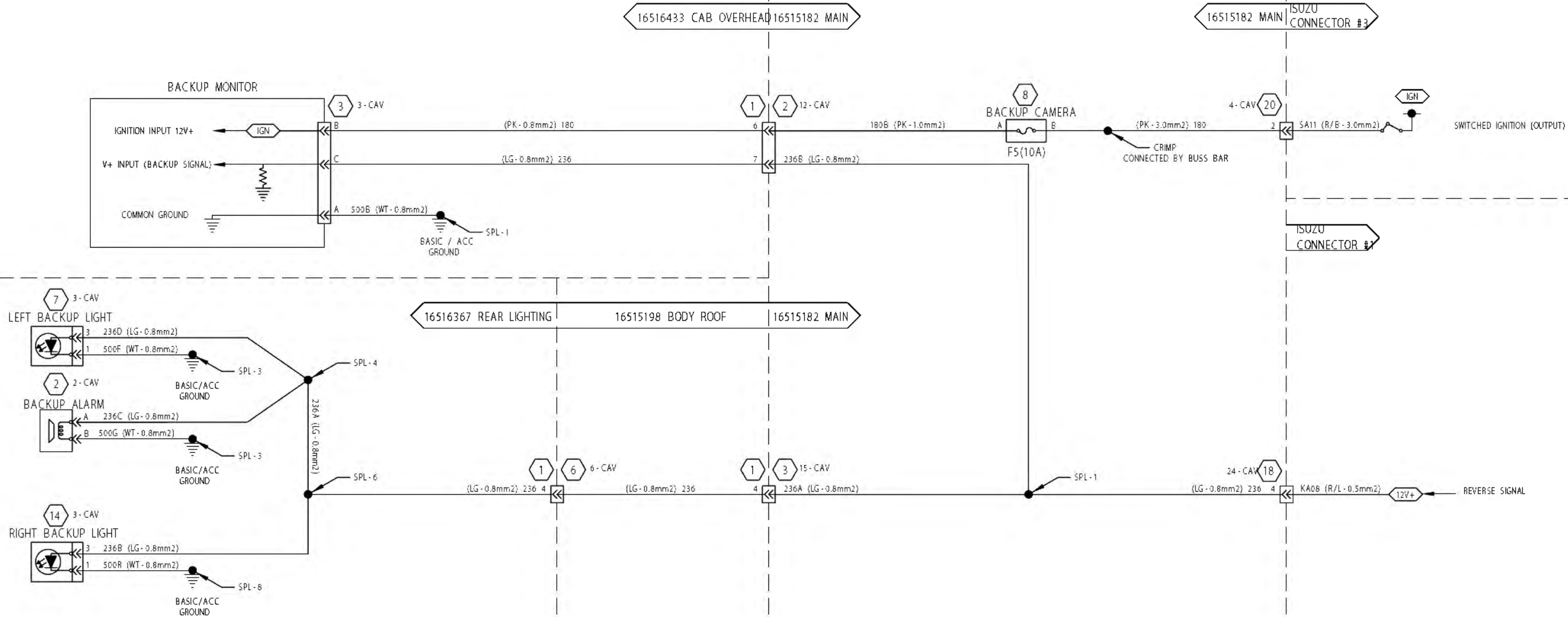
BATT HOT AT ALL TIMES

IGN HOT IN RUN OR START

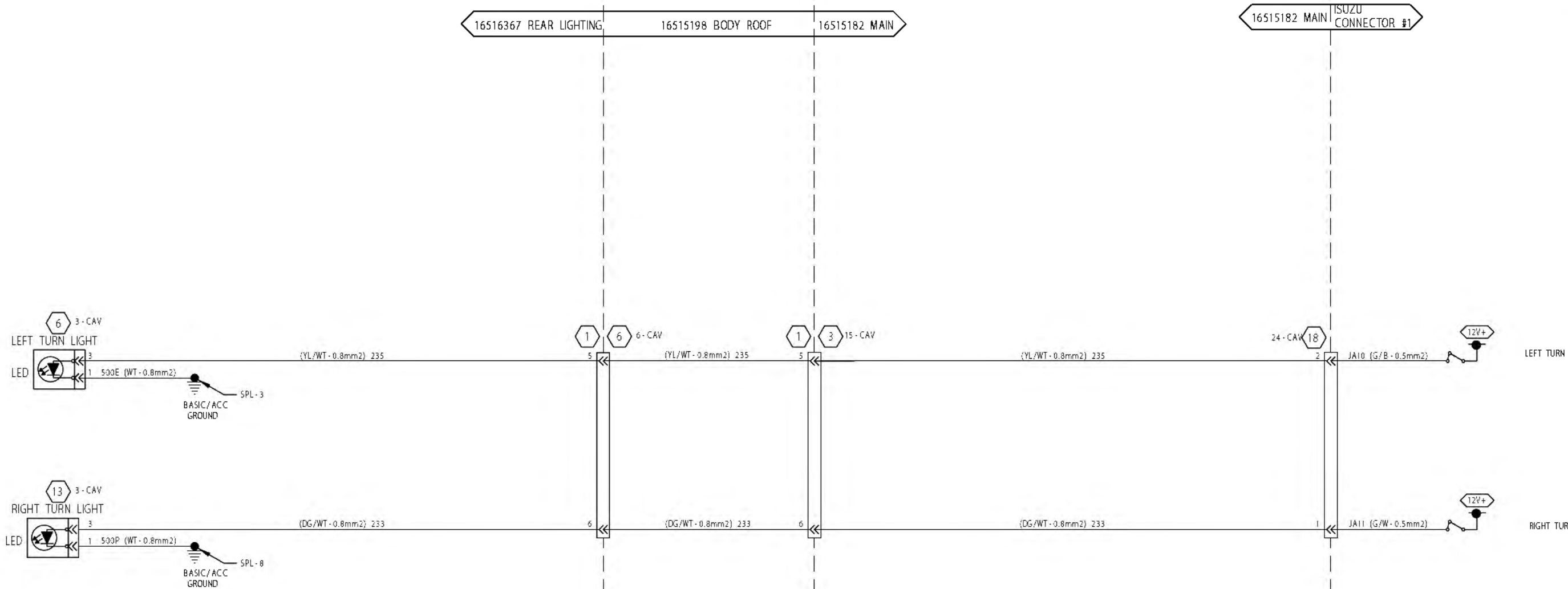
ACC HOT IN ACC OR RUN



- LEGEND
- BATT HOT AT ALL TIMES
 - IGN HOT IN RUN OR START
 - ACC HOT IN ACC OR RUN



LEGEND
BATT HOT AT ALL TIMES
IGN HOT IN RUN OR START
ACC HOT IN ACC OR RUN



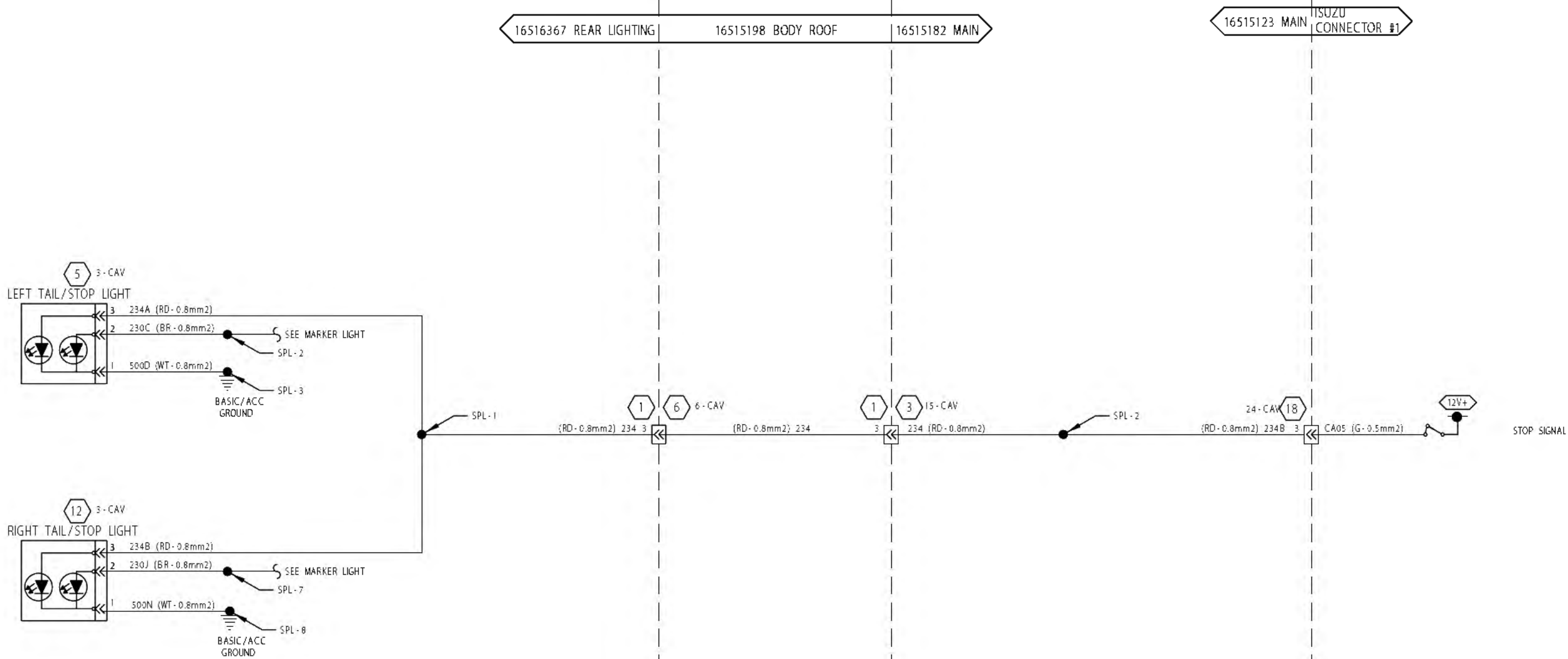
- LEGEND
- BATT HOT AT ALL TIMES
 - IGN HOT IN RUN OR START
 - ACC HOT IN ACC OR RUN

INITIAL RELEASE 50693

M.CAMPEAU.A.HUNTER

T.BROCK 07/23/2014

SCHEMATIC
25 - LIGHTING
58431027A

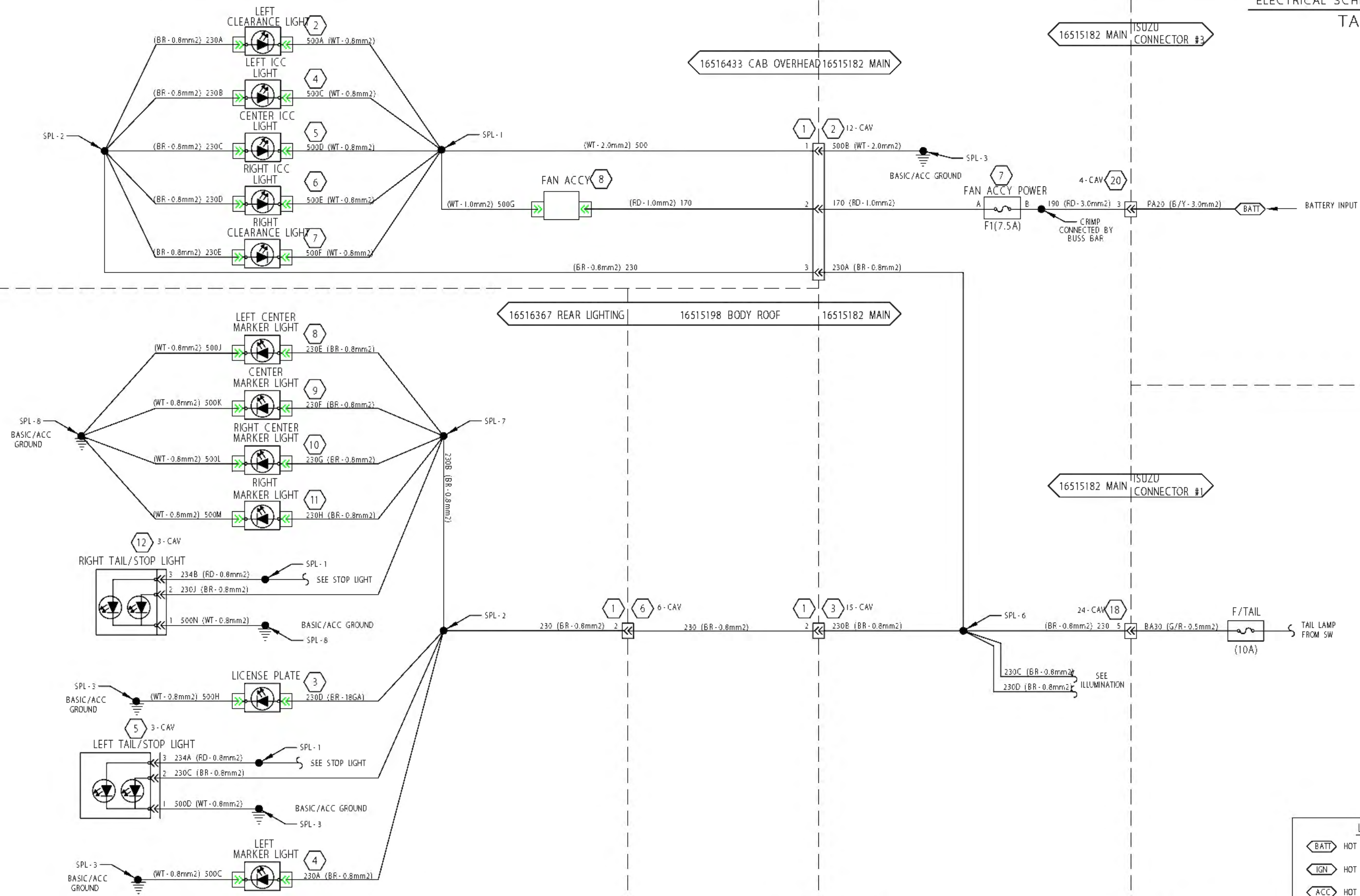


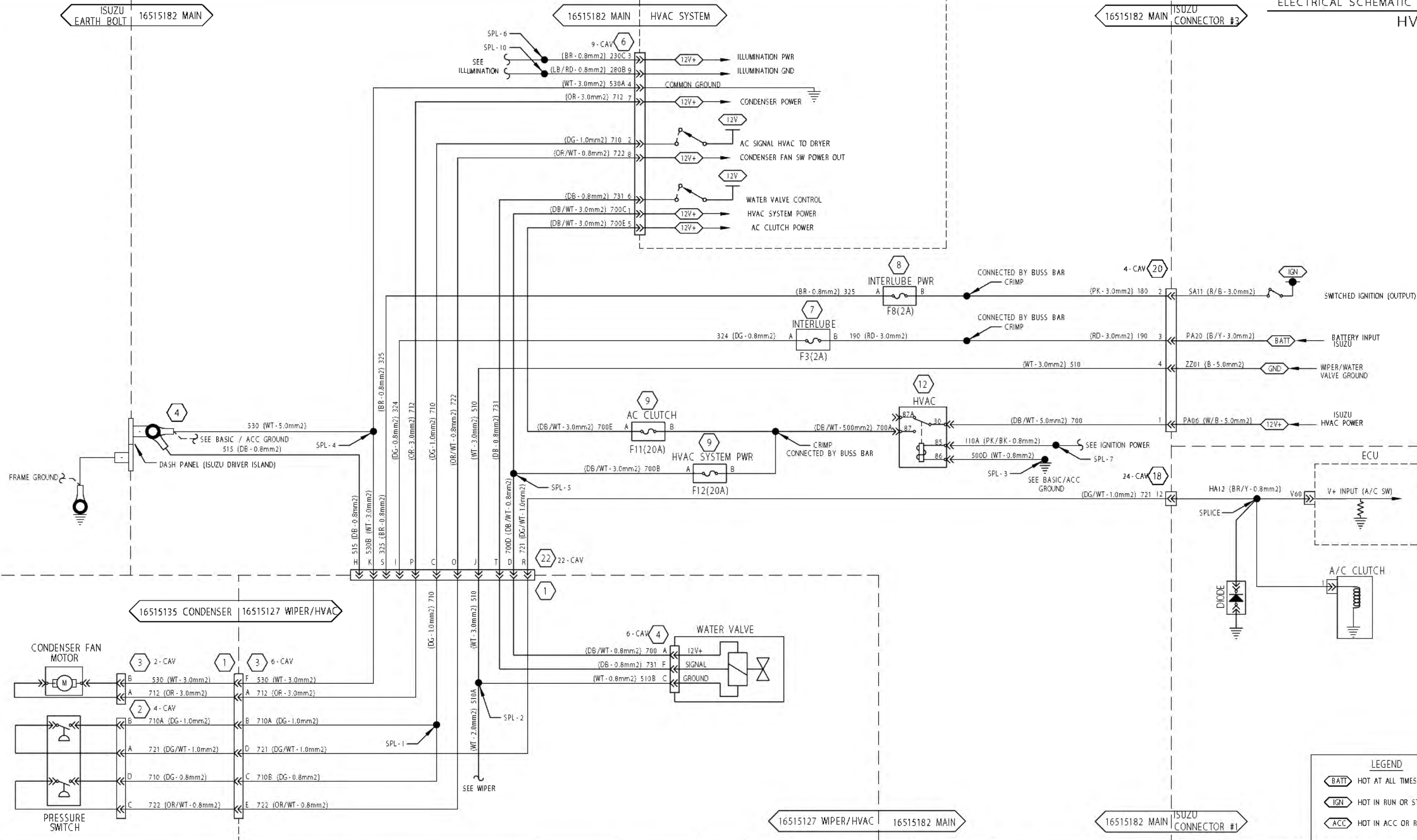
INITIAL RELEASE 50693

M.CAMPEAU.A.HUNTER

T.BROCK 07/23/2014

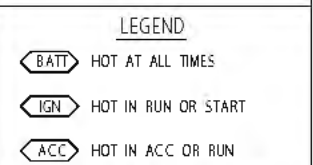
SCHEMATIC
25 - LIGHTING
58431027 A

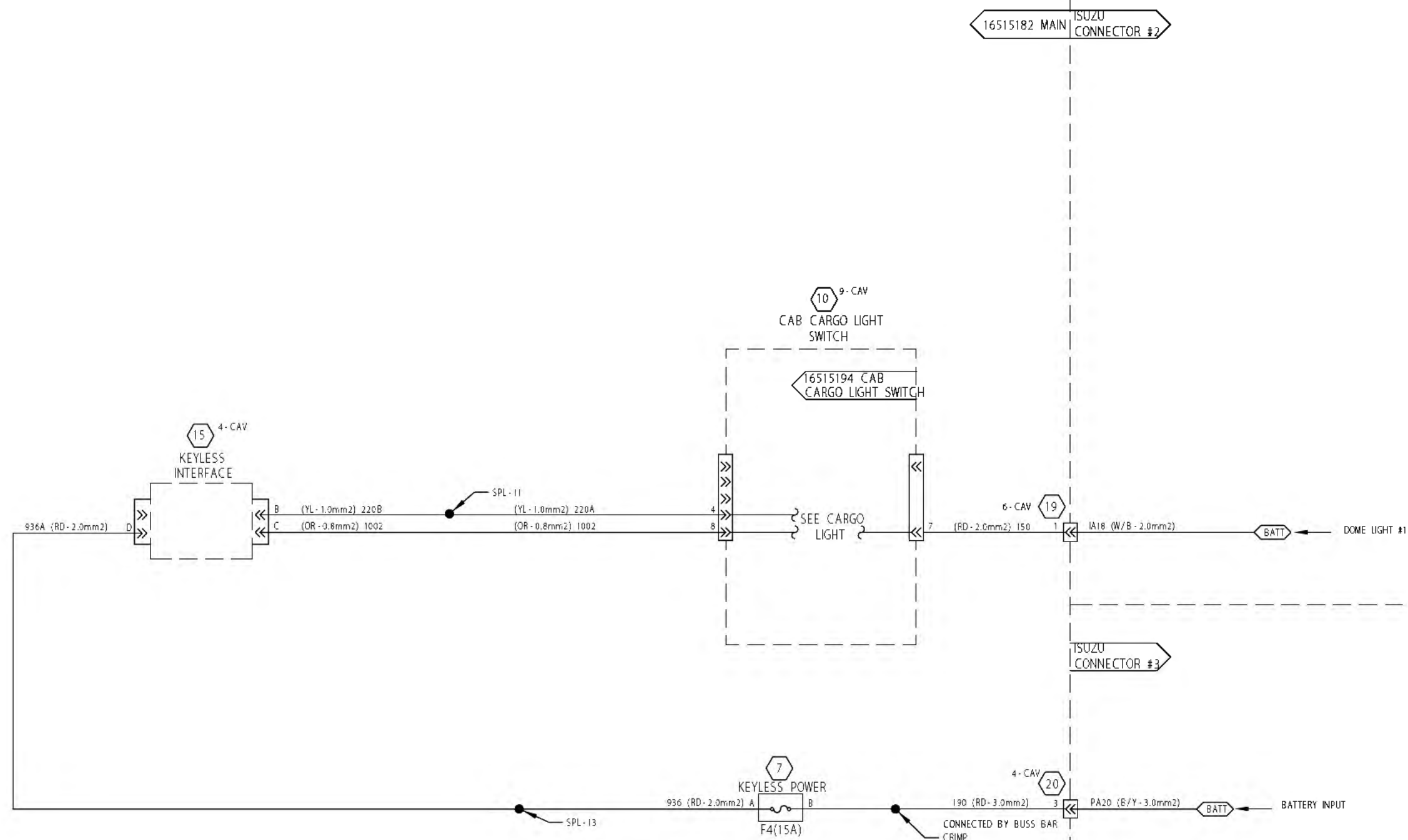




LEGEND

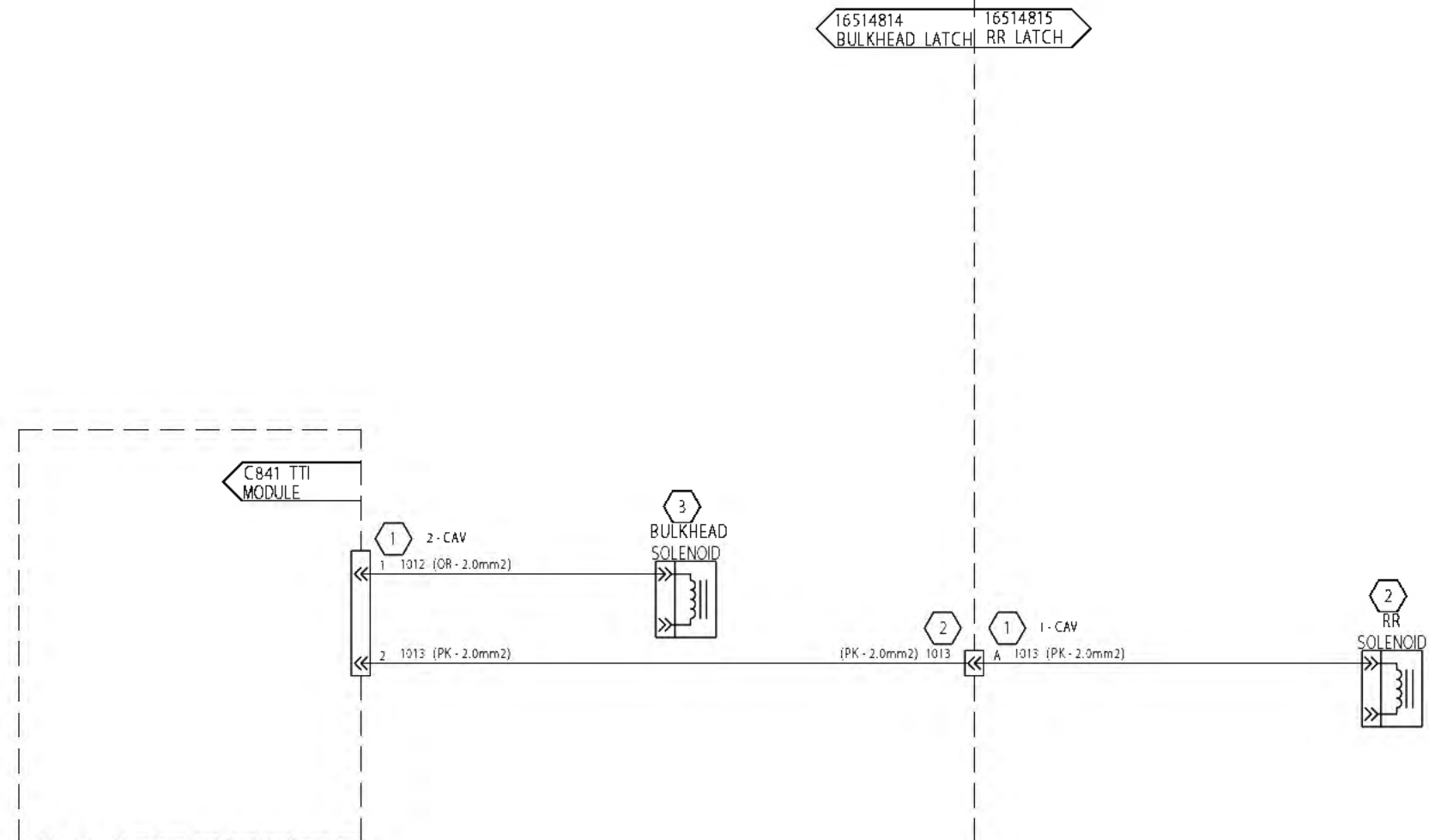
- BATT HOT AT ALL TIMES
- IGN HOT IN RUN OR START
- ACC HOT IN ACC OR RUN





LEGEND
BATT HOT AT ALL TIMES
IGN HOT IN RUN OR START
ACC HOT IN ACC OR RUN

KEYLESS ENTRY

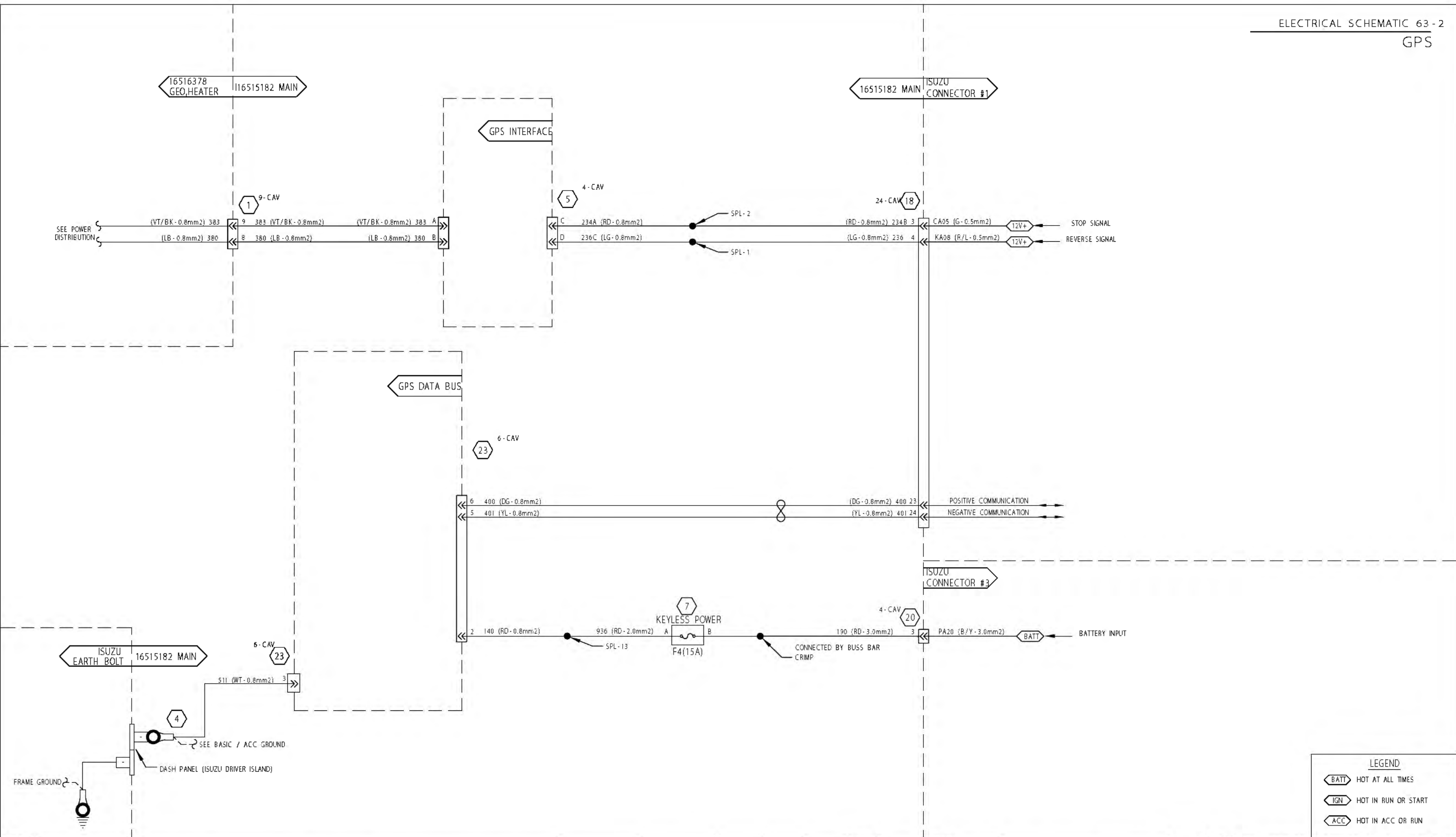


LEGEND

BATT HOT AT ALL TIMES

IGN HOT IN RUN OR START

 HOT IN ACC OR RUN



LEGEND

BATT HOT AT ALL TIMES

IGN HOT IN RUN OR START

ACC HOT IN ACC OR RUN