

Electrical Circuit Diagrams



**Elektrische
Circuitdiagrammen**

Schémas Eléctriques

Elektrische Schaltpläne

Schema di Circuiti

**Esquemas de Circuitos
Eléctricos**

**Diagramas dos Circuitos
Eléctricos**



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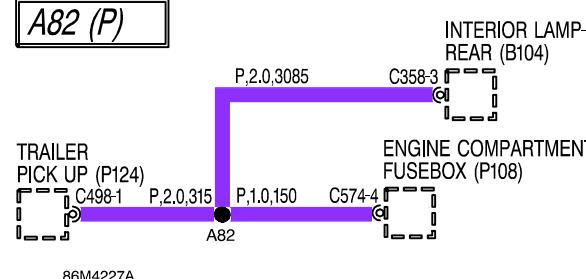
HOW TO USE THE CIRCUIT DIAGRAMS

All of the information in this folder is intended for use with the Electrical Reference Library booklet.

The circuit diagrams are presented with Power and Earth distribution first, followed by individual circuits for each electrical system on the car.

Power Distribution

The Power Distribution diagram shows the connections from the battery to the engine and passenger compartment fuseboxes. It also shows the internal circuitry of the fuseboxes.



These fuse box details are followed by a Headers and Splices section outlining the way in which internal harness splices and header joints distribute power in the harnesses. This information should be used during diagnosis of electrical faults to check for symptoms in associated circuits and narrow down the search area.

Headers and splices

Header and splice tables present the joint(s) and wiring up to the first component. Splices are identified by a number with an alphabetical prefix and the wire colour.

The splice information shown on individual system circuits is not complete. Always refer to the splices circuit for complete information on each splice.

Wire attributes

Additional information (separated by a ',') is shown alongside the wire colour:
Wire gauge - the cross-sectional area of the wire in square millimetres. This is included to help you select the correct wire during harness repair.

Some wires do not have a gauge shown, these wires are of unique construction and will have a three or four letter code printed after the colour code, eg MAB. The code identifies the type of wire for manufacturing purposes. Usually, only the first two characters have significance in service, but in some instances the third character also becomes significant, see table.

Wire type

The following table lists the wire type codes together with an explanation of their meaning.

Code	Description
D	Single core DIN wire
F	Single core flexible wire
H	Single core high temperature wire
SA*	Single core resistive wire (0.9 ohms/m)
SB*, SC*, SD*	Single core dual extruded wire
SE*, SF*	Single core fusible wire
MA*, MAC, MAD, MAE, MAF, MAG, MAH	Coaxial screened wire
MB*, MO*, MAK	Single core screened wire
MC*, MI*, MP*, MQ*, MAB, MAP	Twin core screened wire
MD*, MJ*, MAM	Twin core ABS sensor wire
ME*, TA*, TB*, MM*, MN*, MU*, MAI	Twisted pair of wires
MF*	Heated oxygen sensor (HO2S) screened wire
MG*	Twin core twisted, screened wire
MH*	Four core twisted, screened wire
MK*	Three core SRS sensor wire
ML*, MAA, MAR	Four core screened wire
MR*	Six core screened, flexible wire
MS*	Four core screened, flexible wire
MT*	Single core screened, flexible wire
MV*	Twin core flat wire
MW*	Three core round wire

Code	Description
MX*, MY*	Seven core round wire
MZ*	Three core screened, flexible wire
MAJ	Twin core round cable
MAQ, MAU	Three core screened wire
MAS	Single core, double sheath wire
MAT	Double core, double sheath wire
MAL	SRS wire
MAN	Twin core braided, screened wire

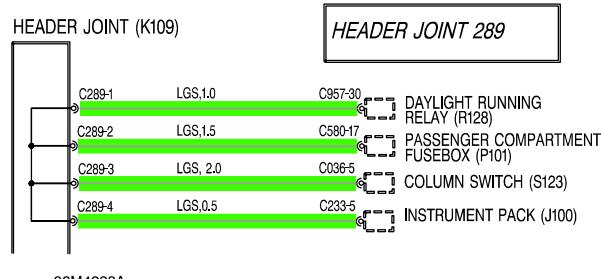
Wire length (Power & Earth Distribution only) - the length of the wire in millimetres. This can be used to locate internal harness splices; look for the shortest wire between the joint and connector. For example, it can be seen that C574-4 is 150mm from joint A82.

Earth Distribution

The ground distribution section comprises a number of Headers and Splices tables. These are used in a similar manner to those in Power Distribution; to narrow the search area by checking for fault symptoms in associated circuits.

HOW TO USE THE CIRCUIT DIAGRAMS

Connectors



Header joints are identified by their corresponding connector number with a numbered suffix to indicate the pin-out detail of the wire, i.e. C289-1 identifies connector 289, pin number 1. Wire insulation colour is identified in the normal way. Where wires have a predominant colour with a secondary colour stripe, the main colour is identified first, i.e. LGS - Light Green with a Slate stripe.

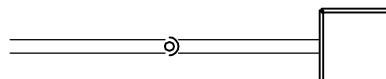
Line Types



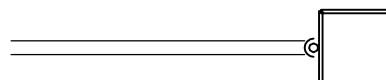
86M4229A

This means the wire connects to another circuit.

A



B

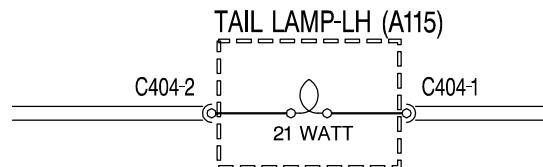


86M4230A

The cup and ball symbol indicates the male and female halves of connector.

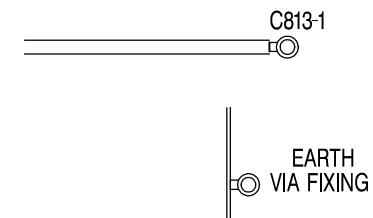
- A. Plug on lead (Flylead) wired directly to the component.
- B. Connector plugs directly into component.

Components



The name or description of the component is shown. A dotted outline indicates that the component is not shown in its entirety.

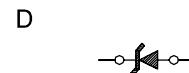
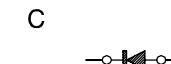
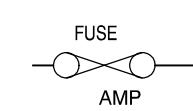
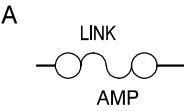
Earth points



86M4232A

Earth points are identified with an eyelet symbol and a connector number, except where components are grounded through their fixings, when only the eyelet is shown.

Fuses and Diodes

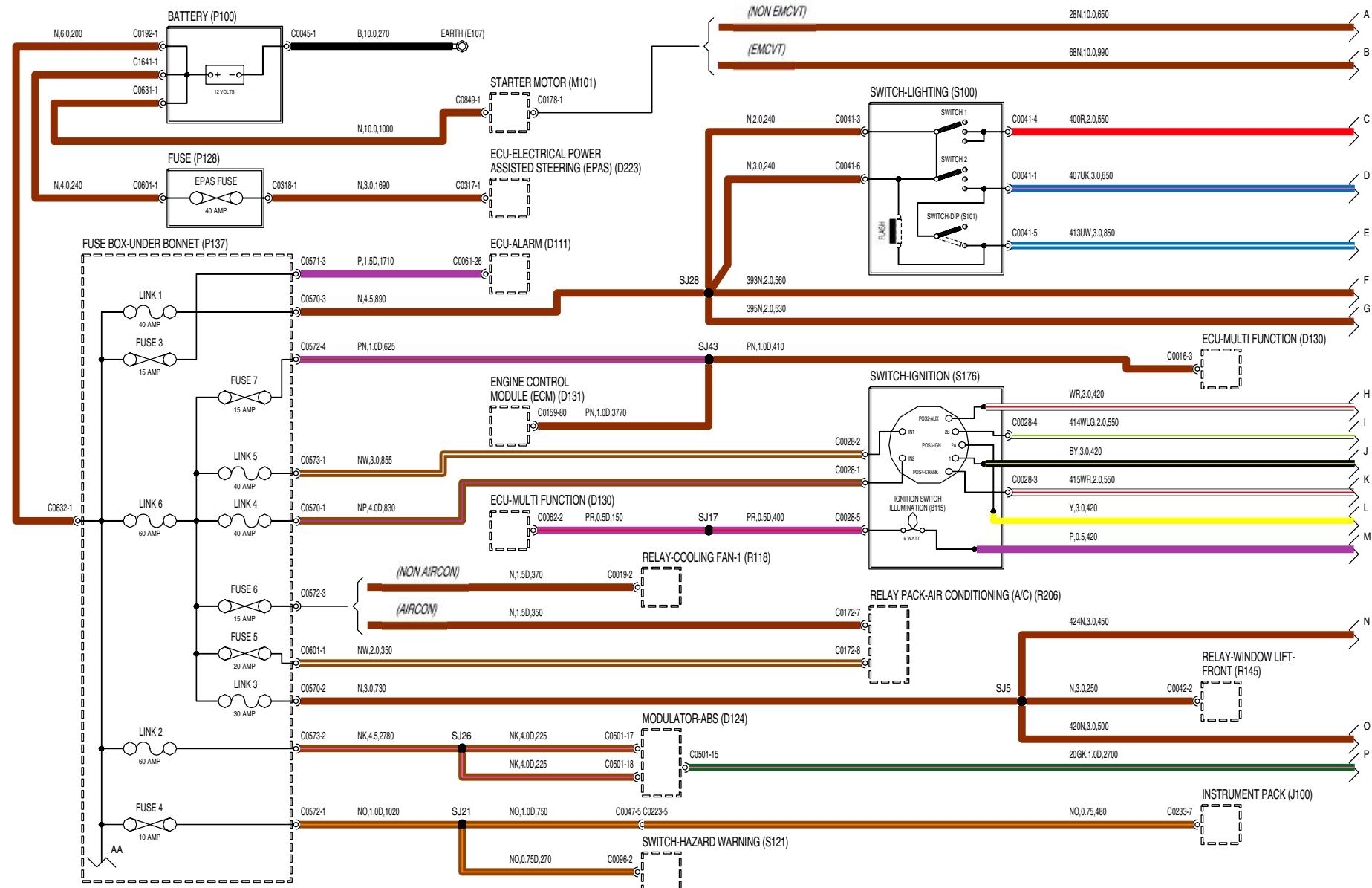


86M4234A

Fusible links (A) and current rated fuses (B) are identified as shown.

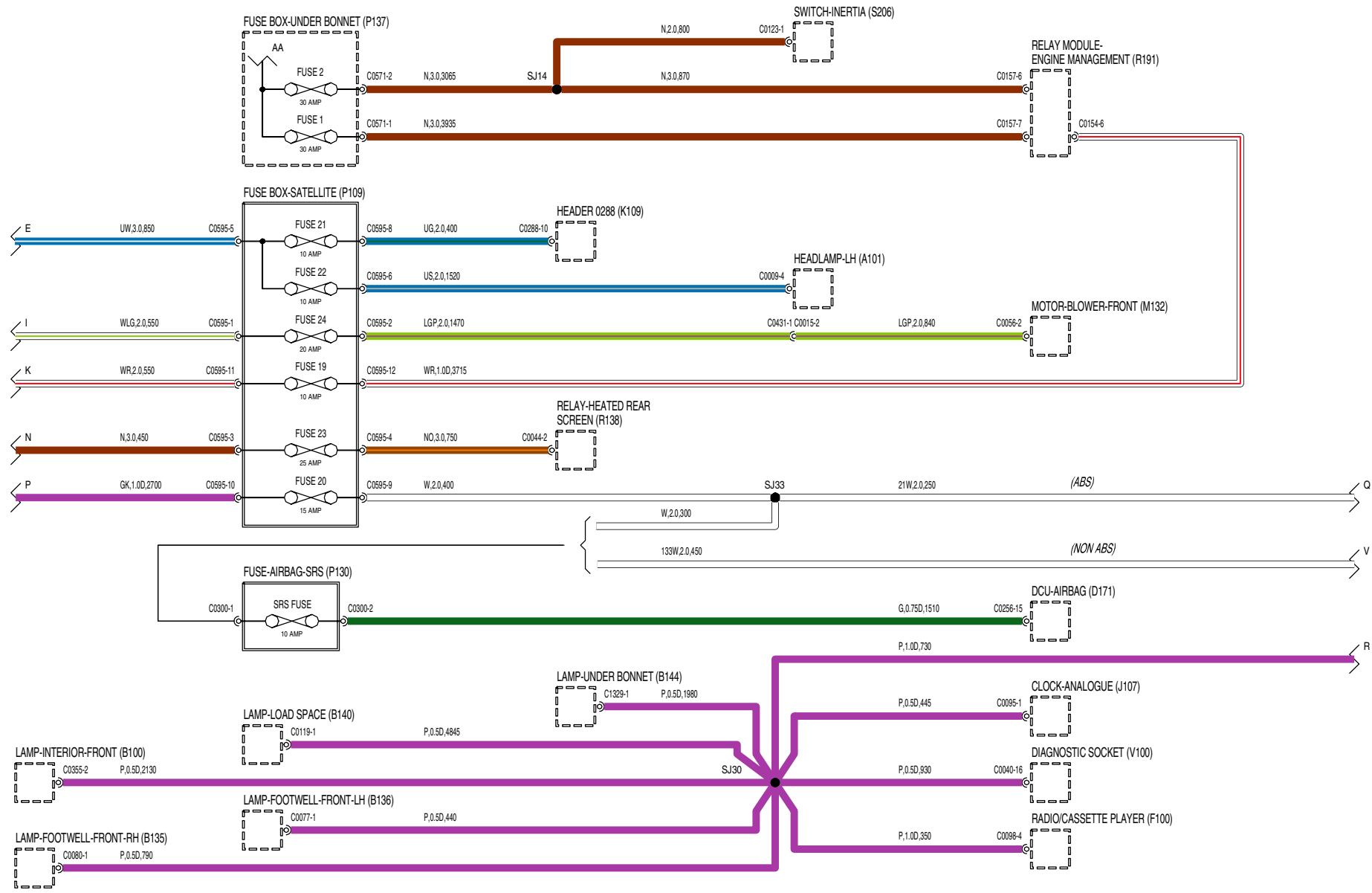
The direction of the arrow in a Diode symbol (C) indicates the direction of current flow. The Zener diode (D) - prevents current flow until a precise voltage is reached.

POWER DISTRIBUTION



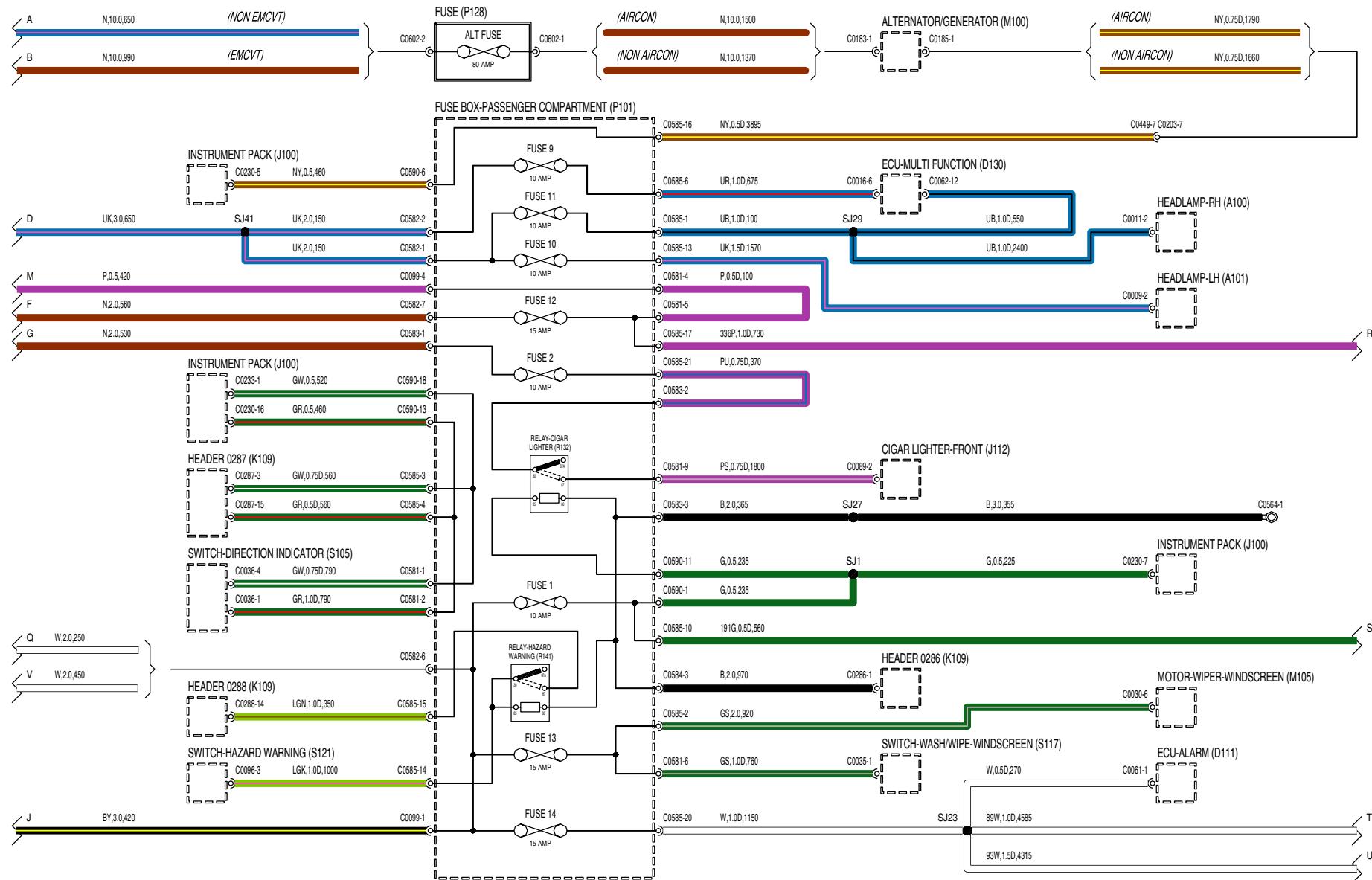
VWR119750-1of4

POWER DISTRIBUTION



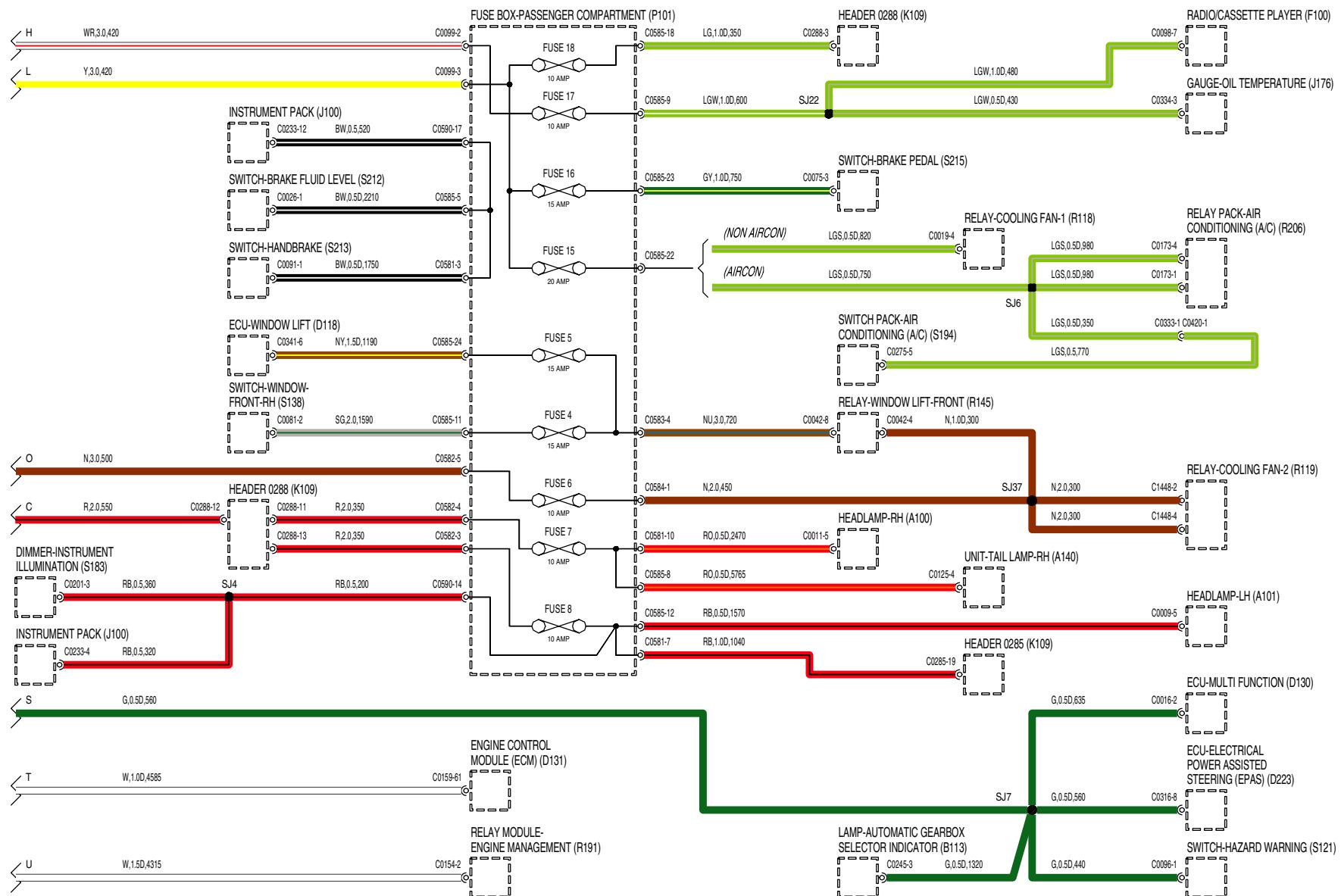
VWR119750-2a4

POWER DISTRIBUTION



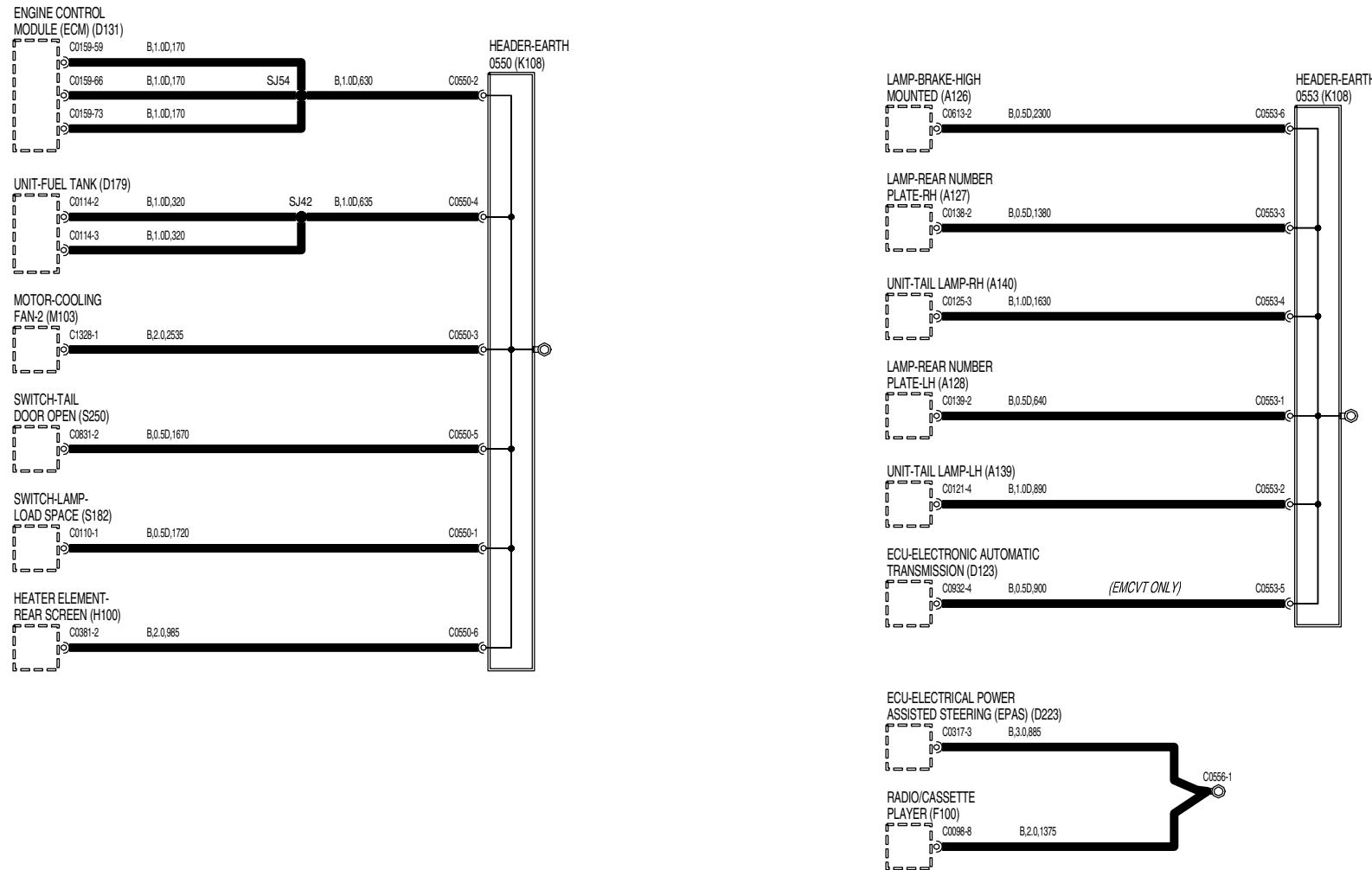
VWR119750-3c4

POWER DISTRIBUTION

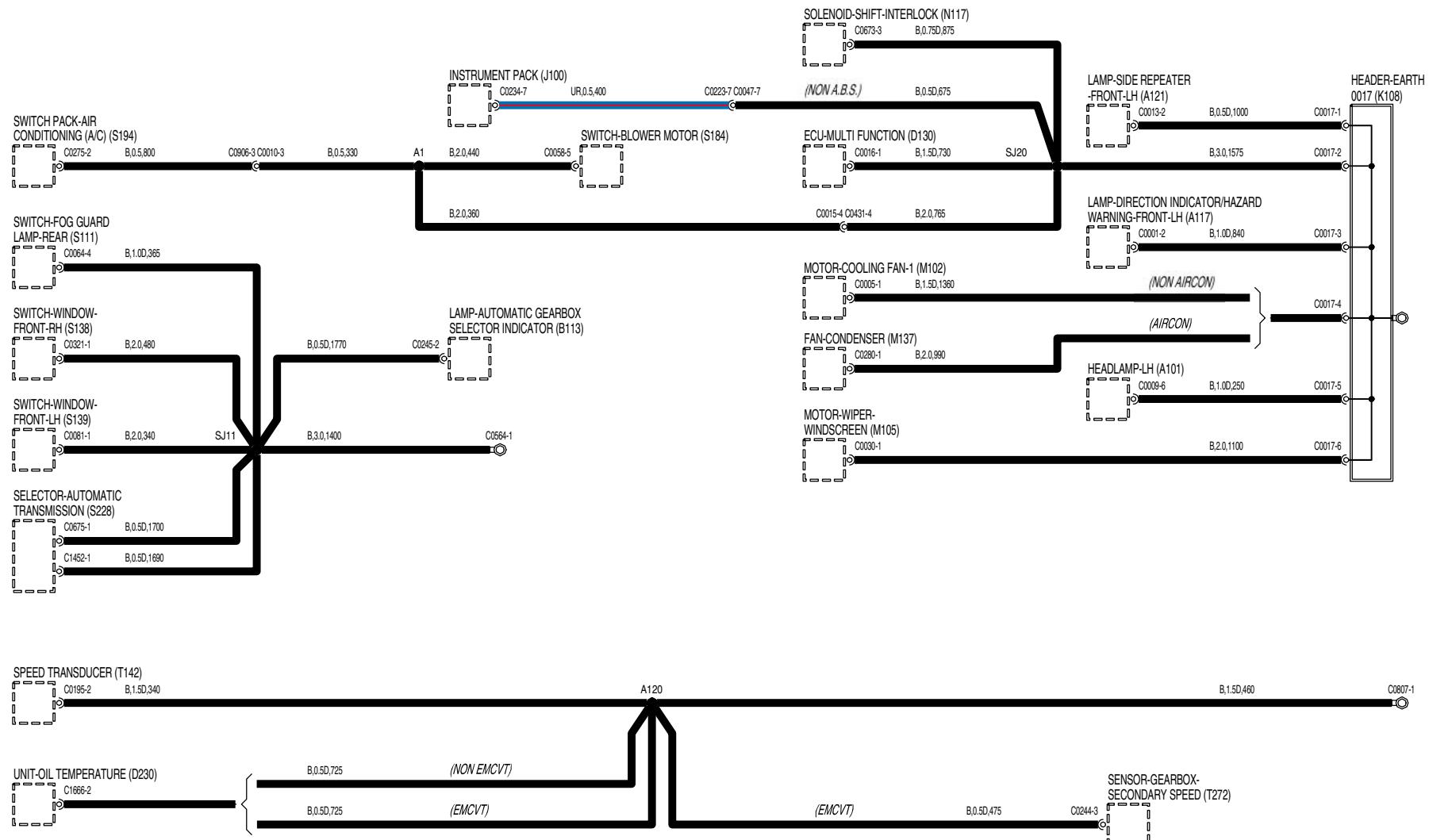


VWR19750-404

EARTH DISTRIBUTION

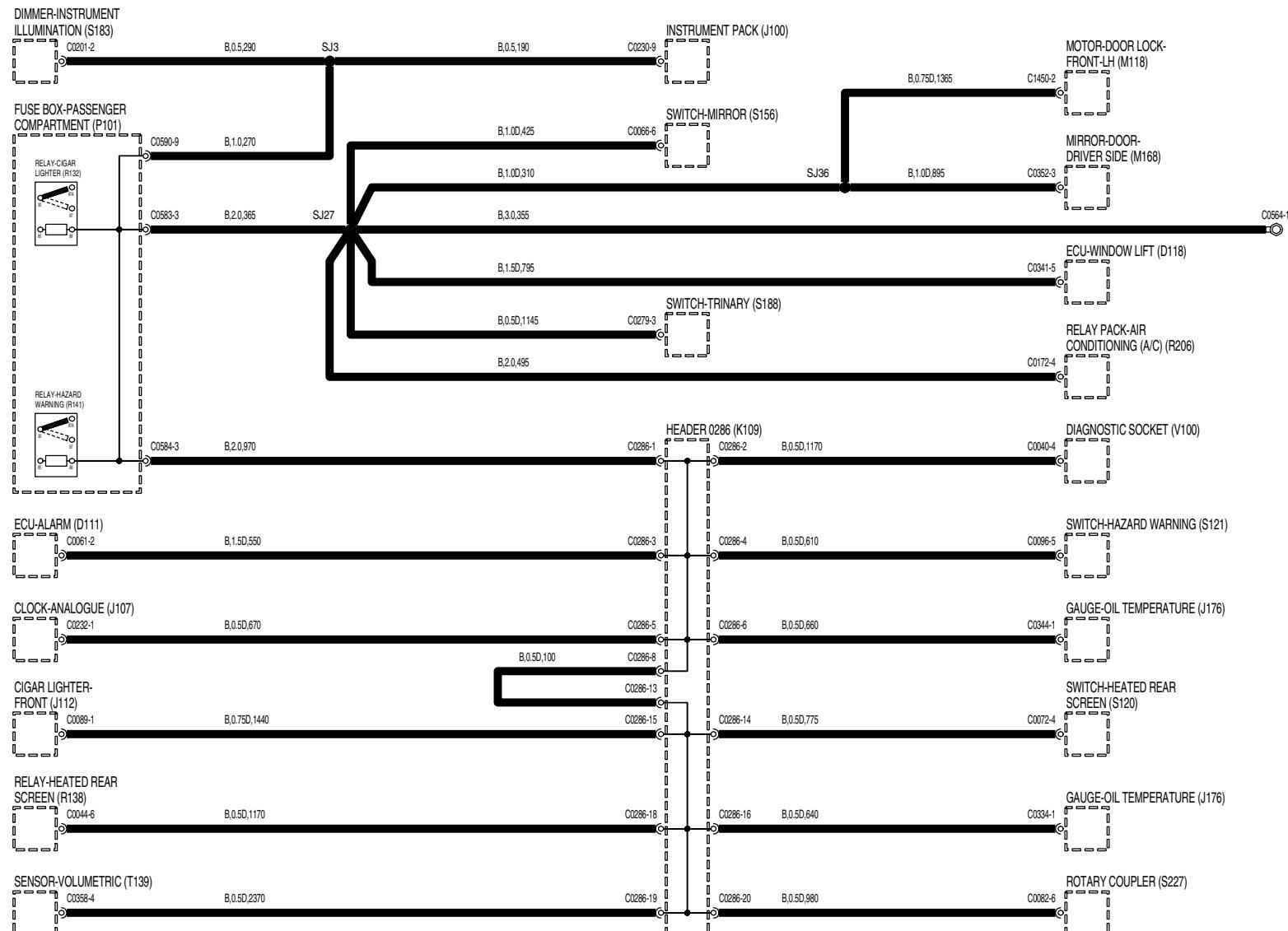


EARTH DISTRIBUTION

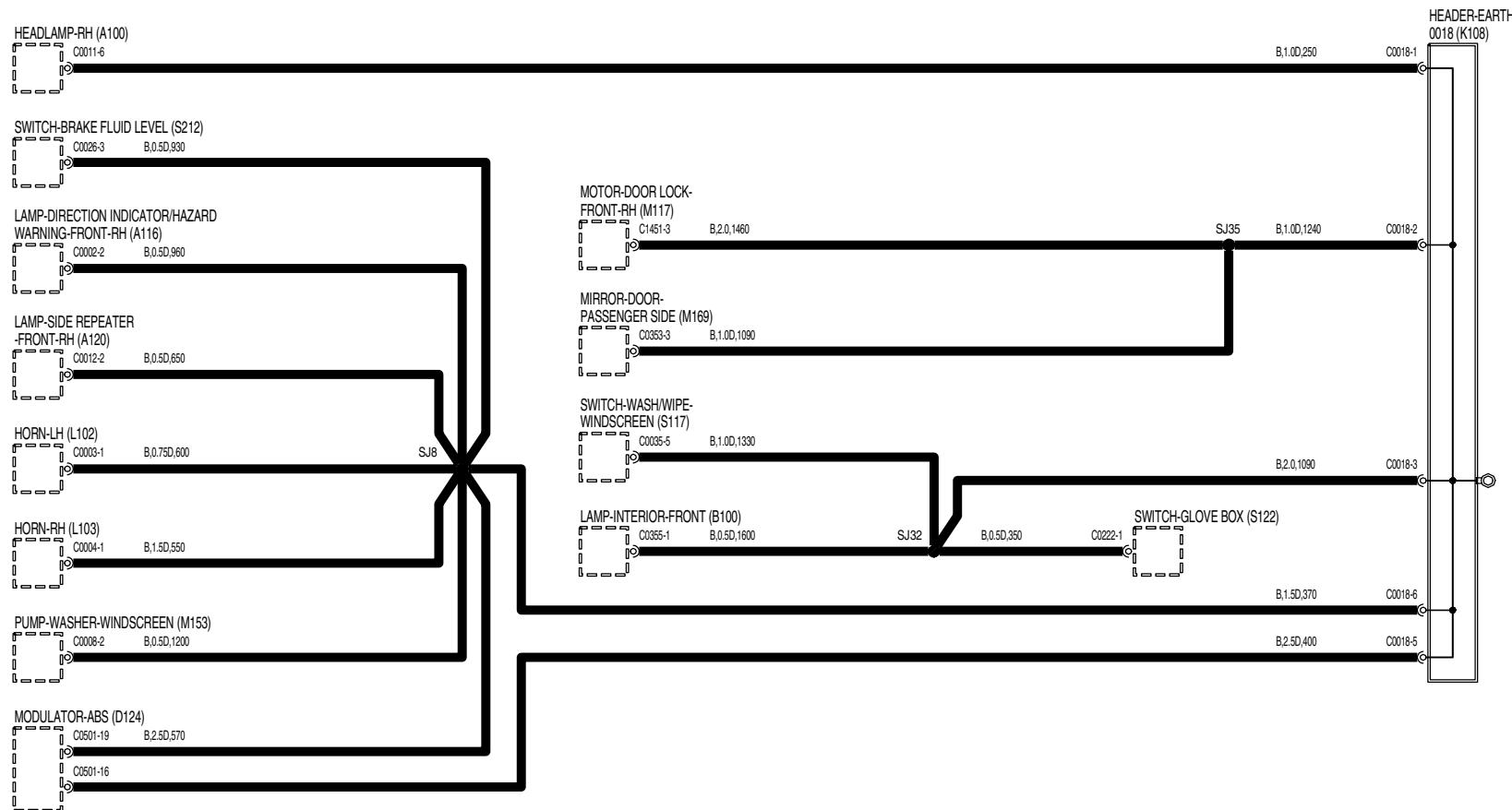


VWR119330-2a4

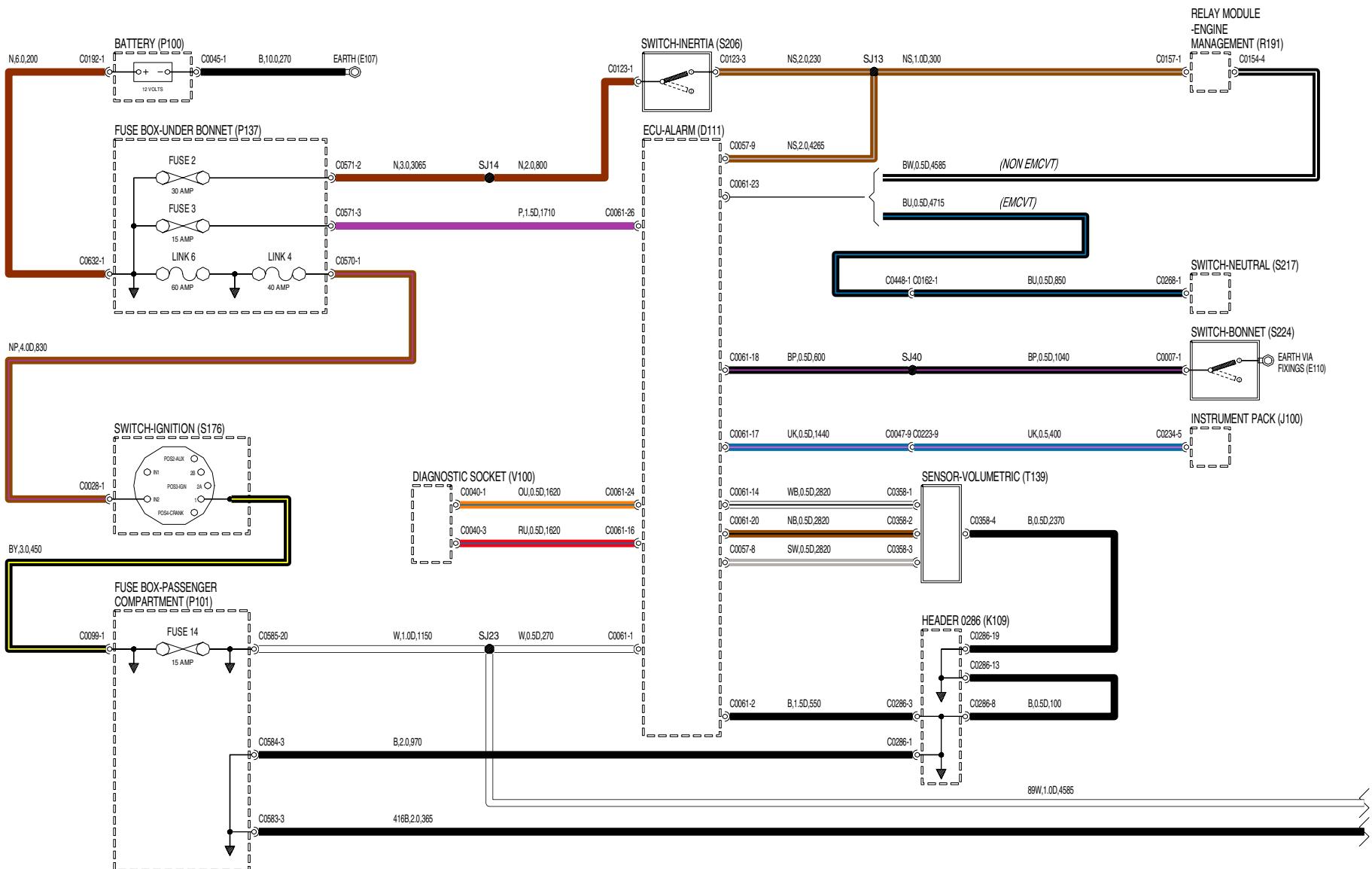
EARTH DISTRIBUTION



EARTH DISTRIBUTION



ANTI-THEFT ALARM AND CENTRAL DOOR LOCKING (CDL)

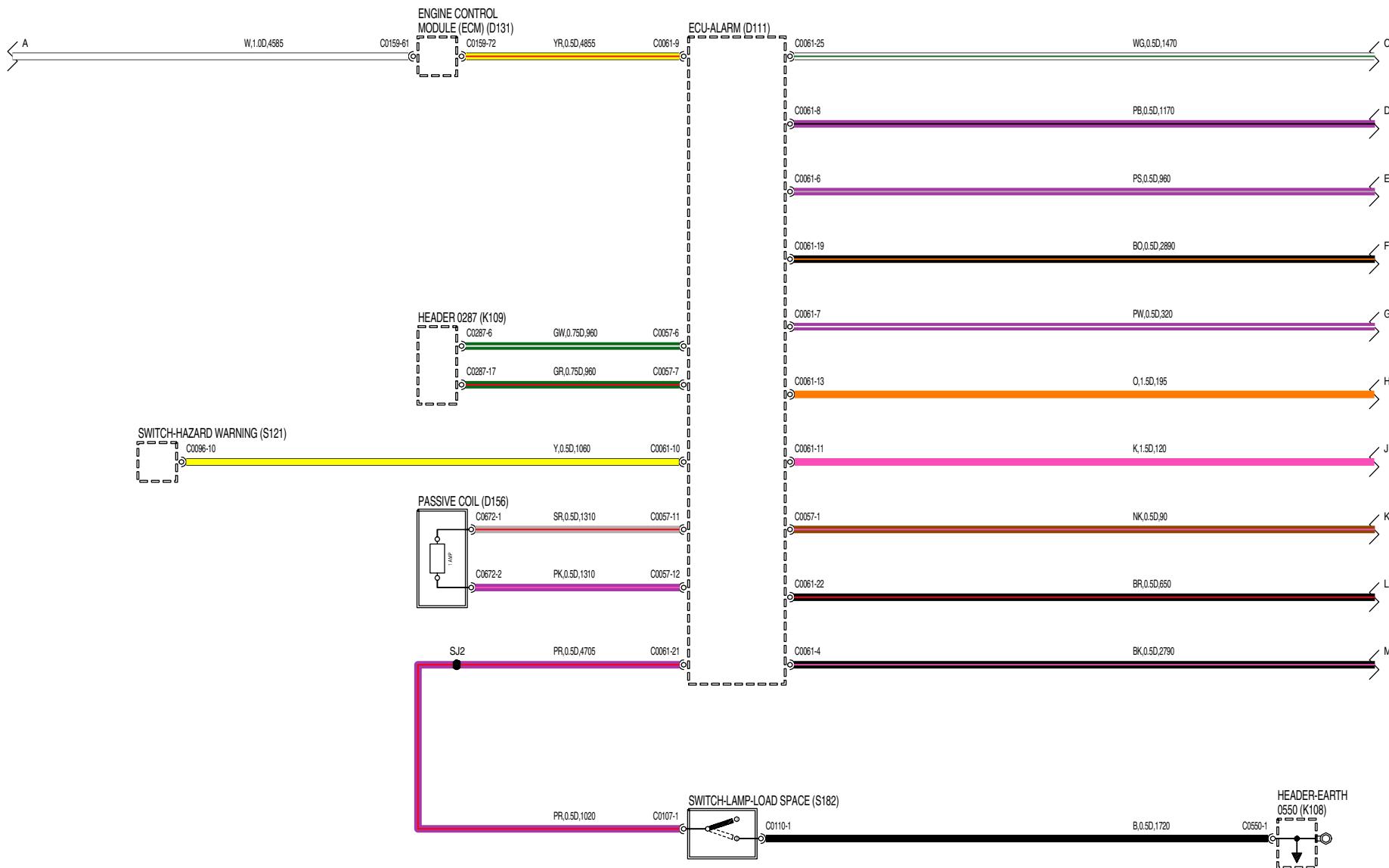


VWR119190-1a3

MGF 2001 Model Year (LHD)

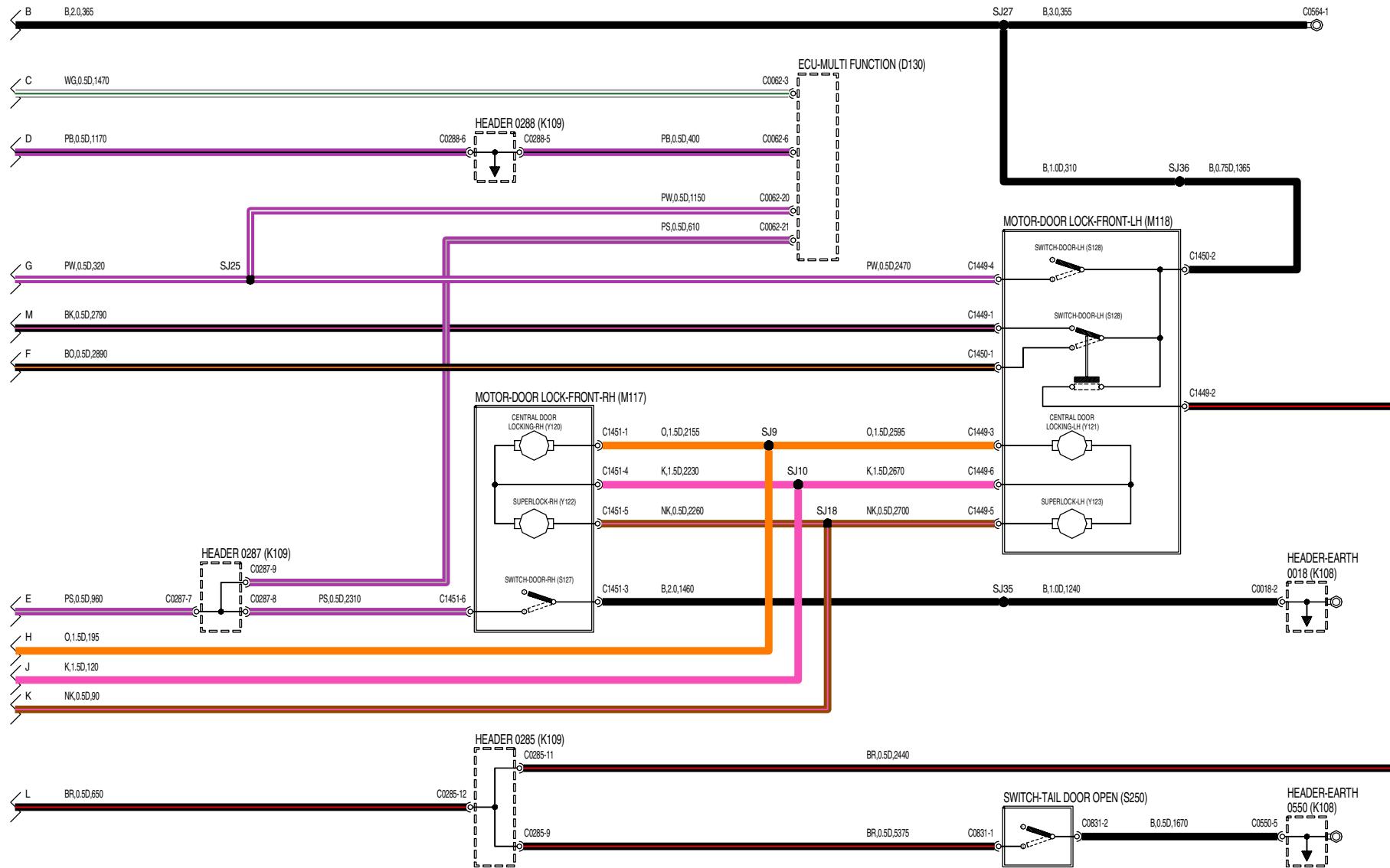
3.1

ANTI-THEFT ALARM AND CENTRAL DOOR LOCKING (CDL)



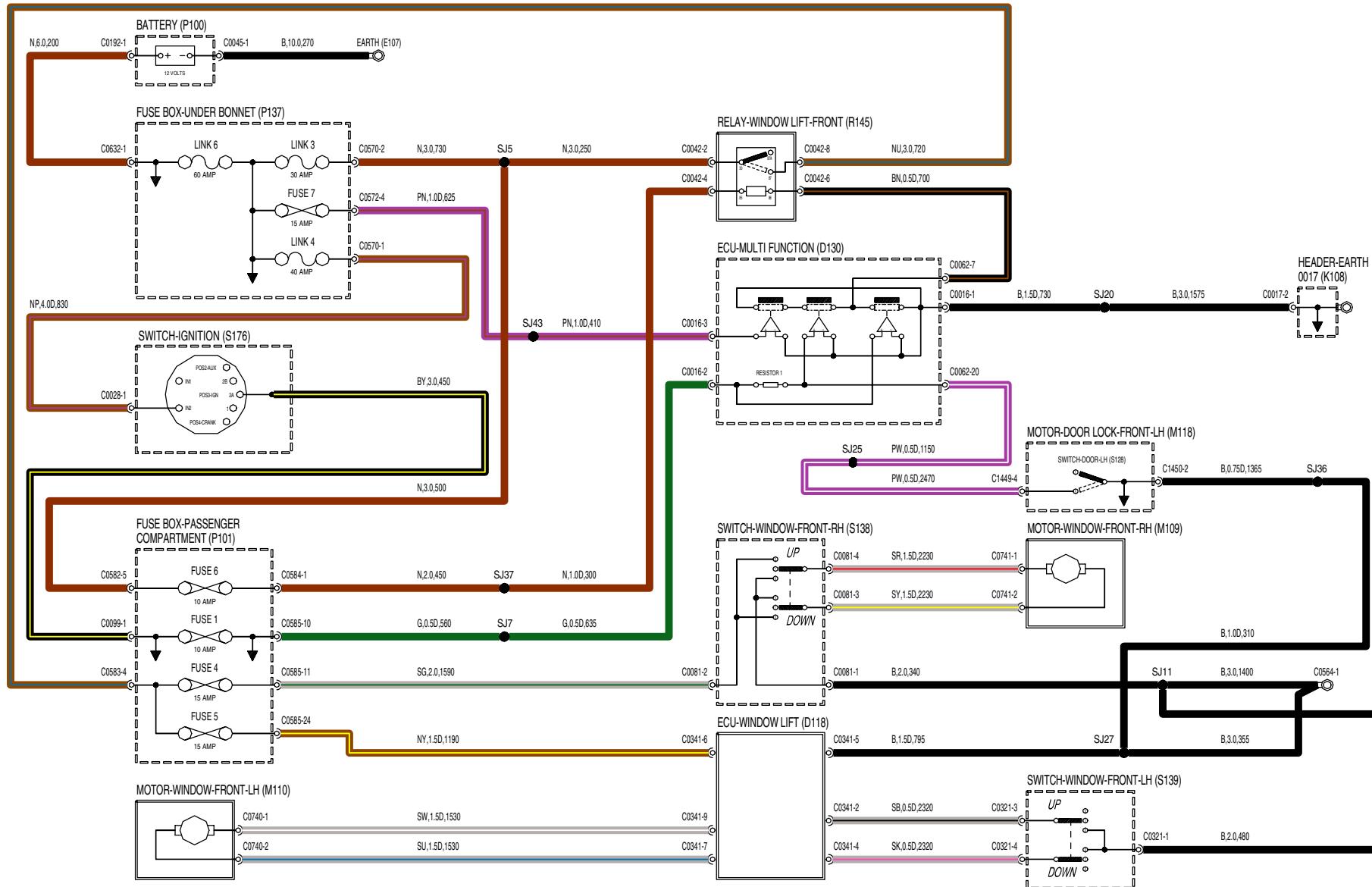
VWR119190-2nf3

ANTI-THEFT ALARM AND CENTRAL DOOR LOCKING (CDL)



VWR119190-3cf3

WINDOW LIFT

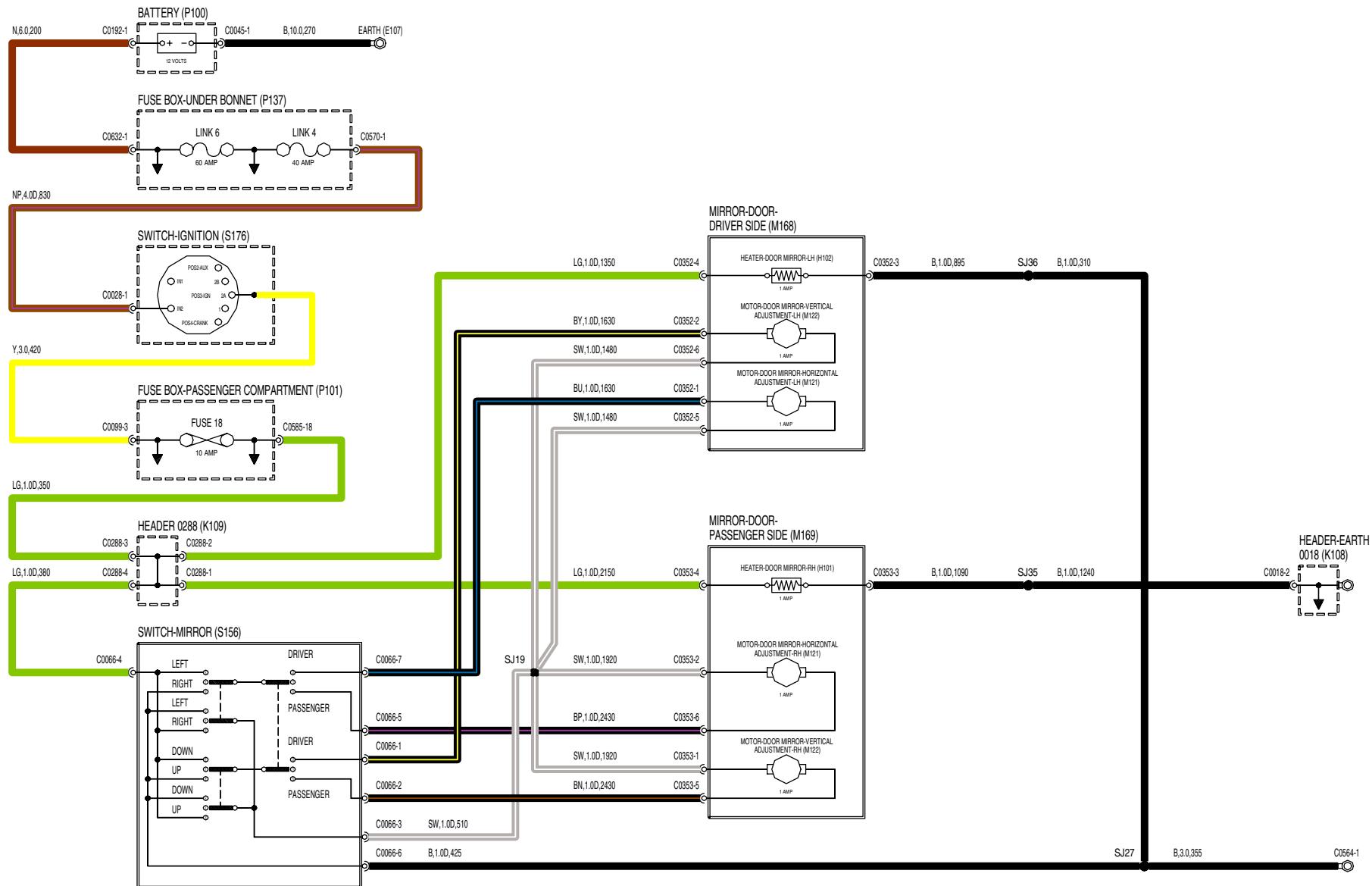


VWR119850-1af1

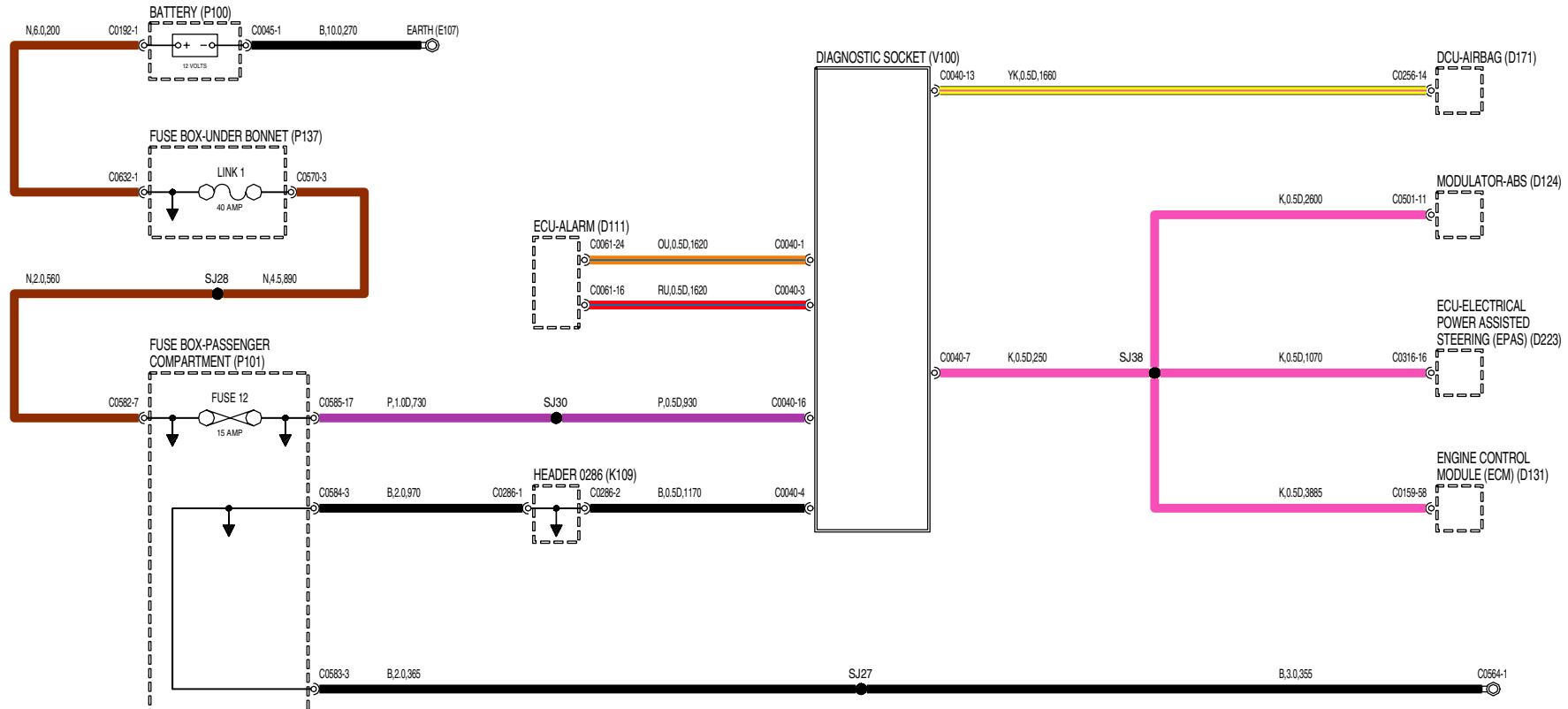
MGF 2001 Model Year (LHD)

5.1

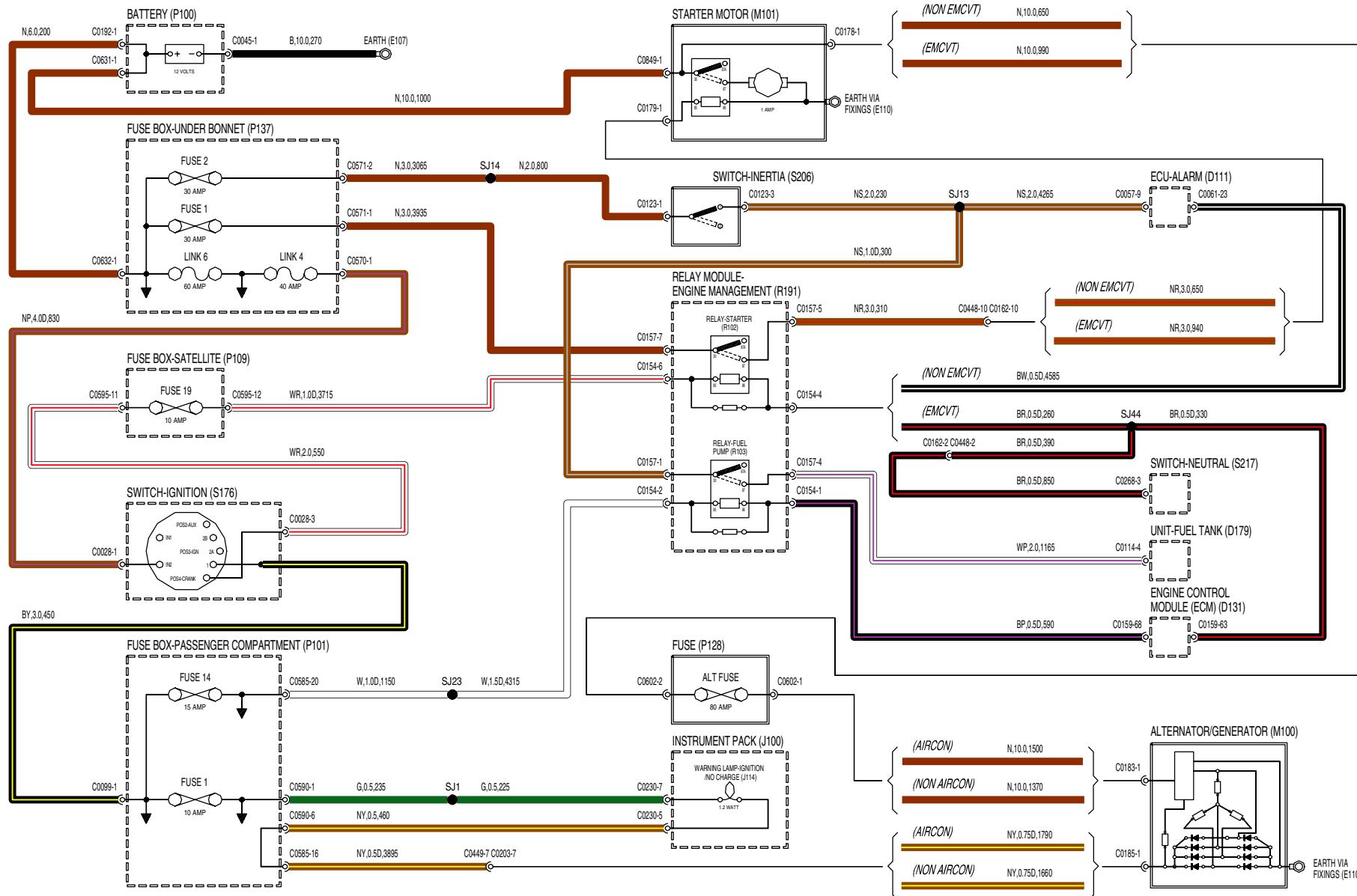
DOOR MIRRORS



DIAGNOSTIC SOCKET

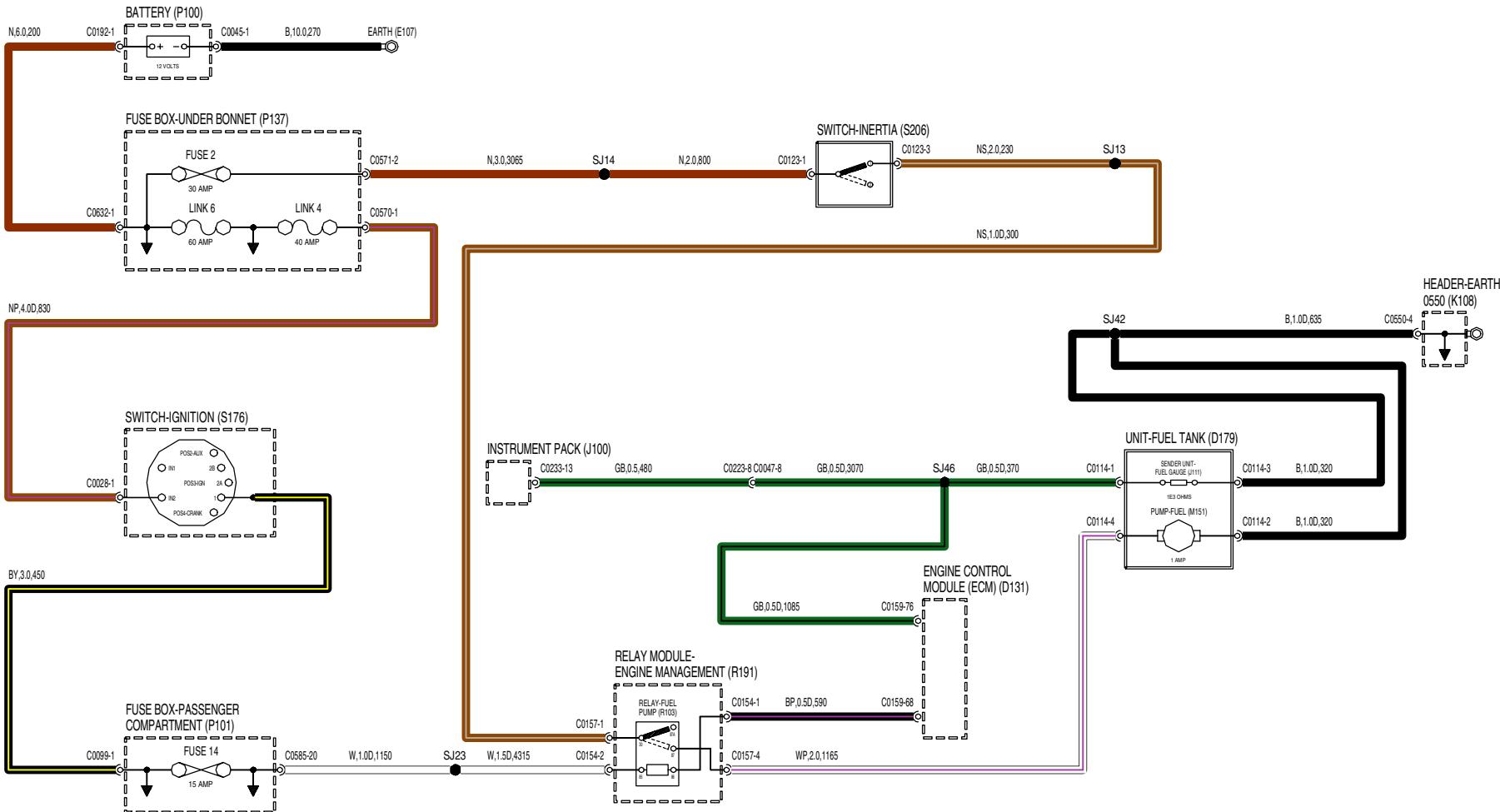


STARTING AND CHARGING



VWR119910-10f1

FUEL PUMP



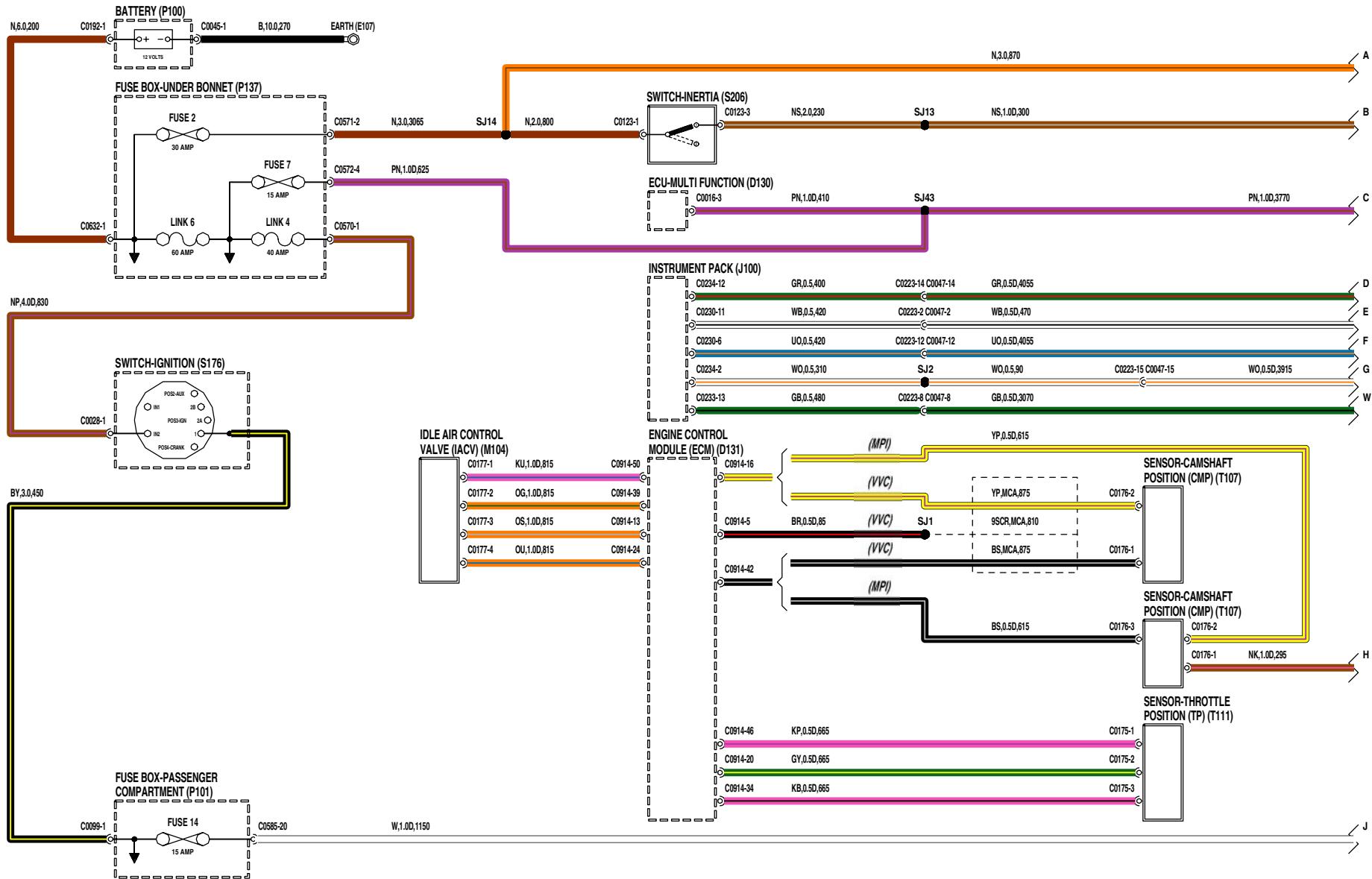
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MGF 2001 Model Year (LHD)

15.2

ENGINE MANAGEMENT

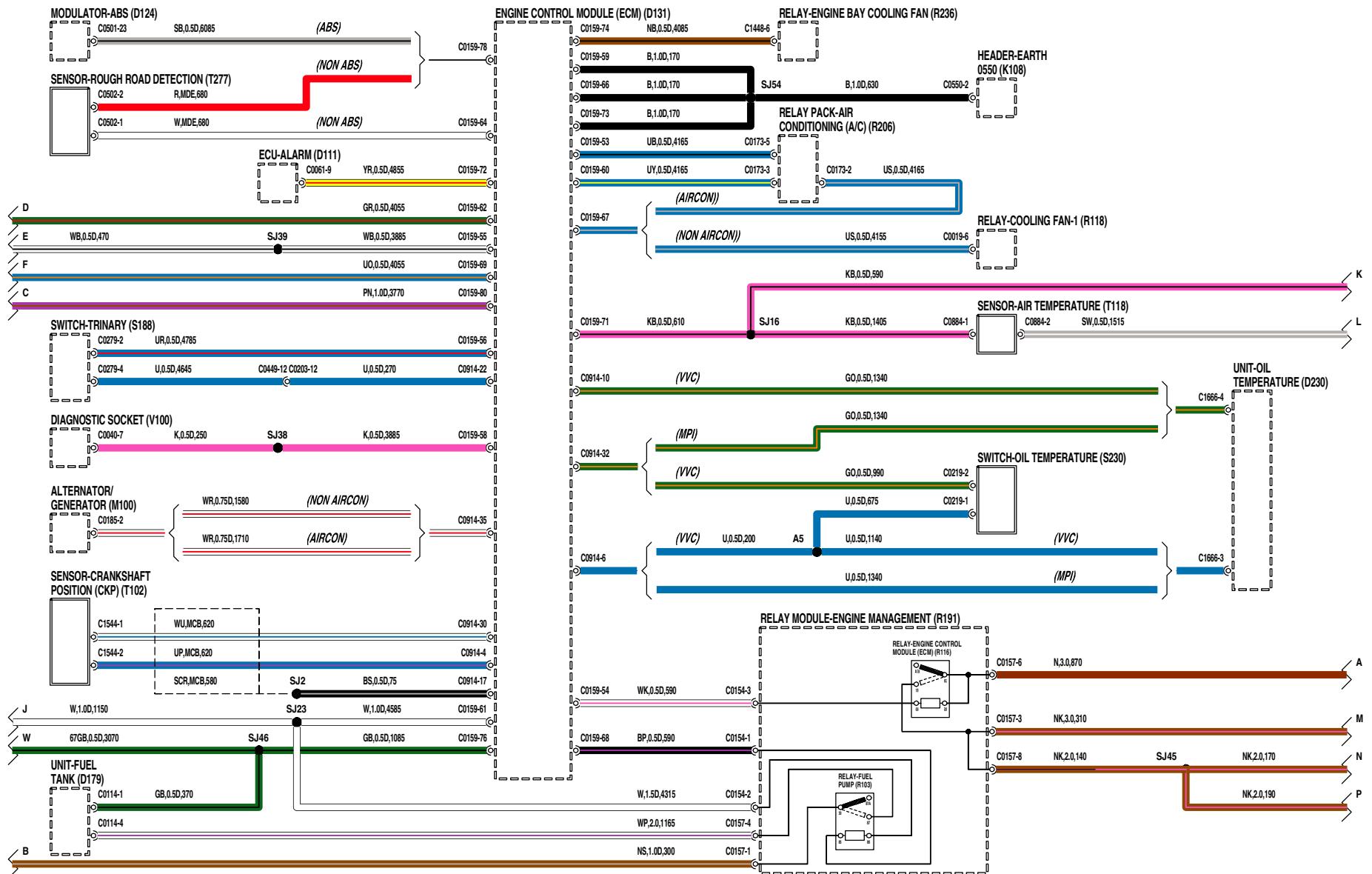
MEMS 3



VWR119410-10f3

ENGINE MANAGEMENT

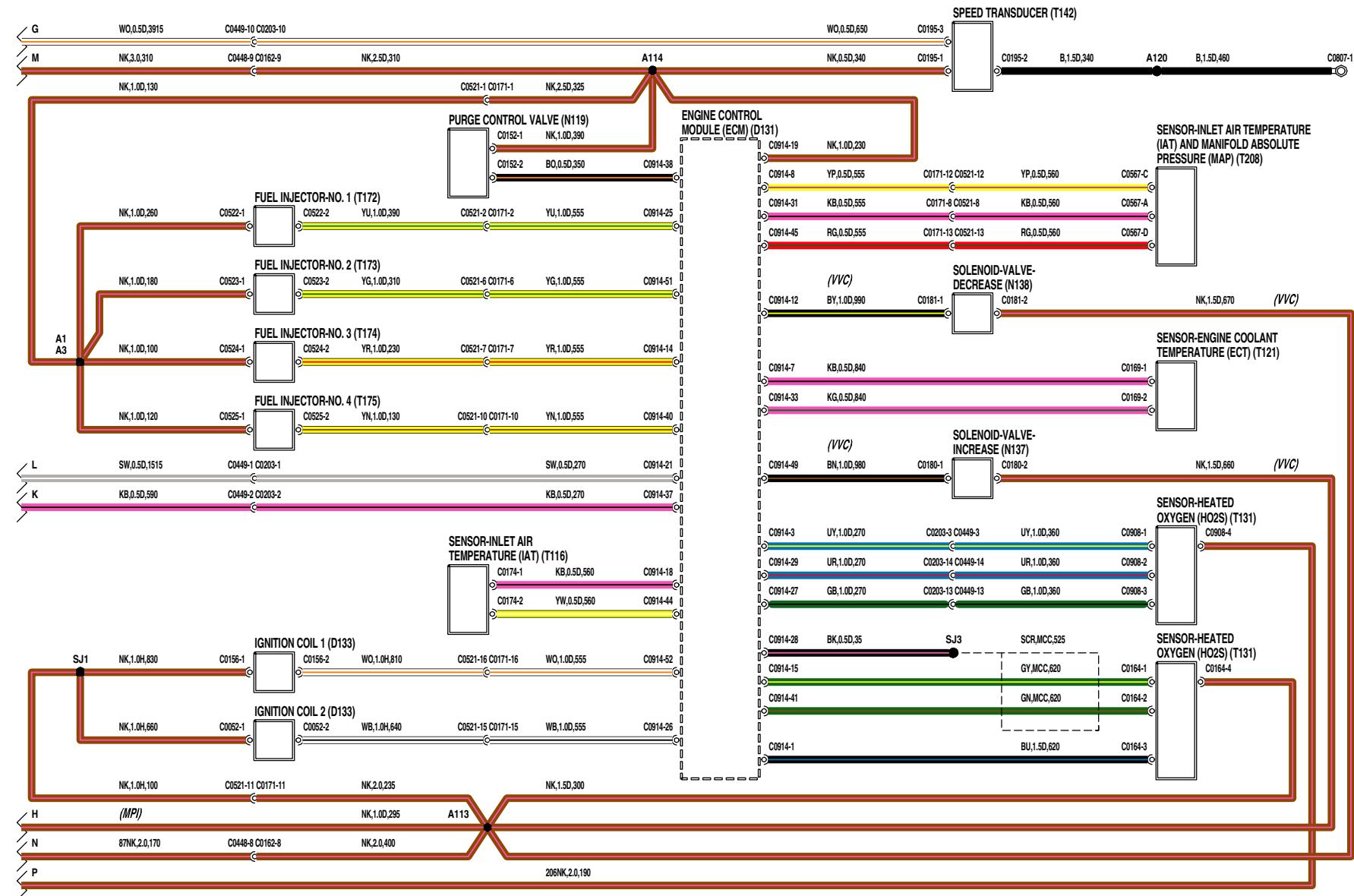
MEMS 3



VWR19410-2n3

ENGINE MANAGEMENT

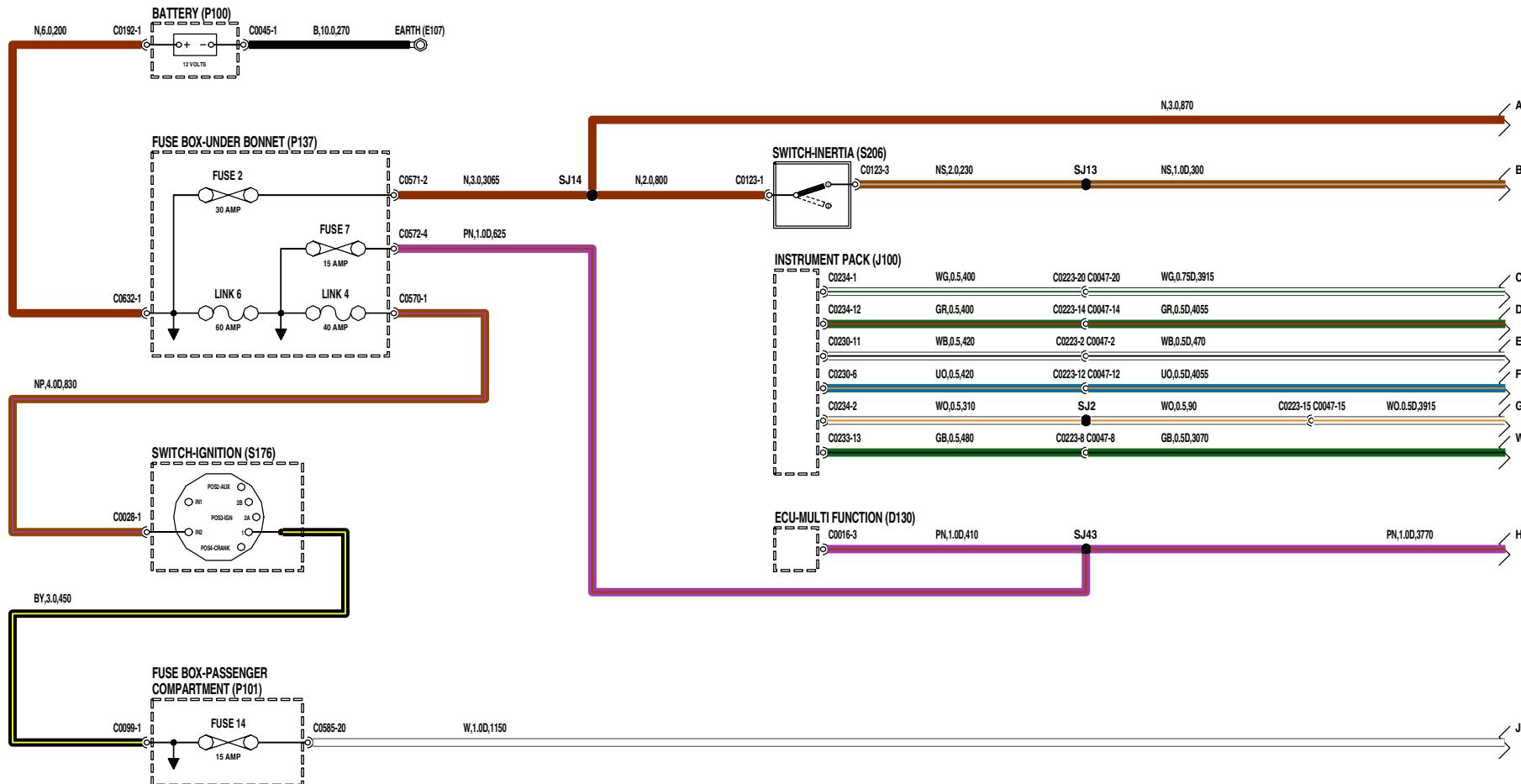
MEMS 3



VWR119410-3c3

ENGINE MANAGEMENT

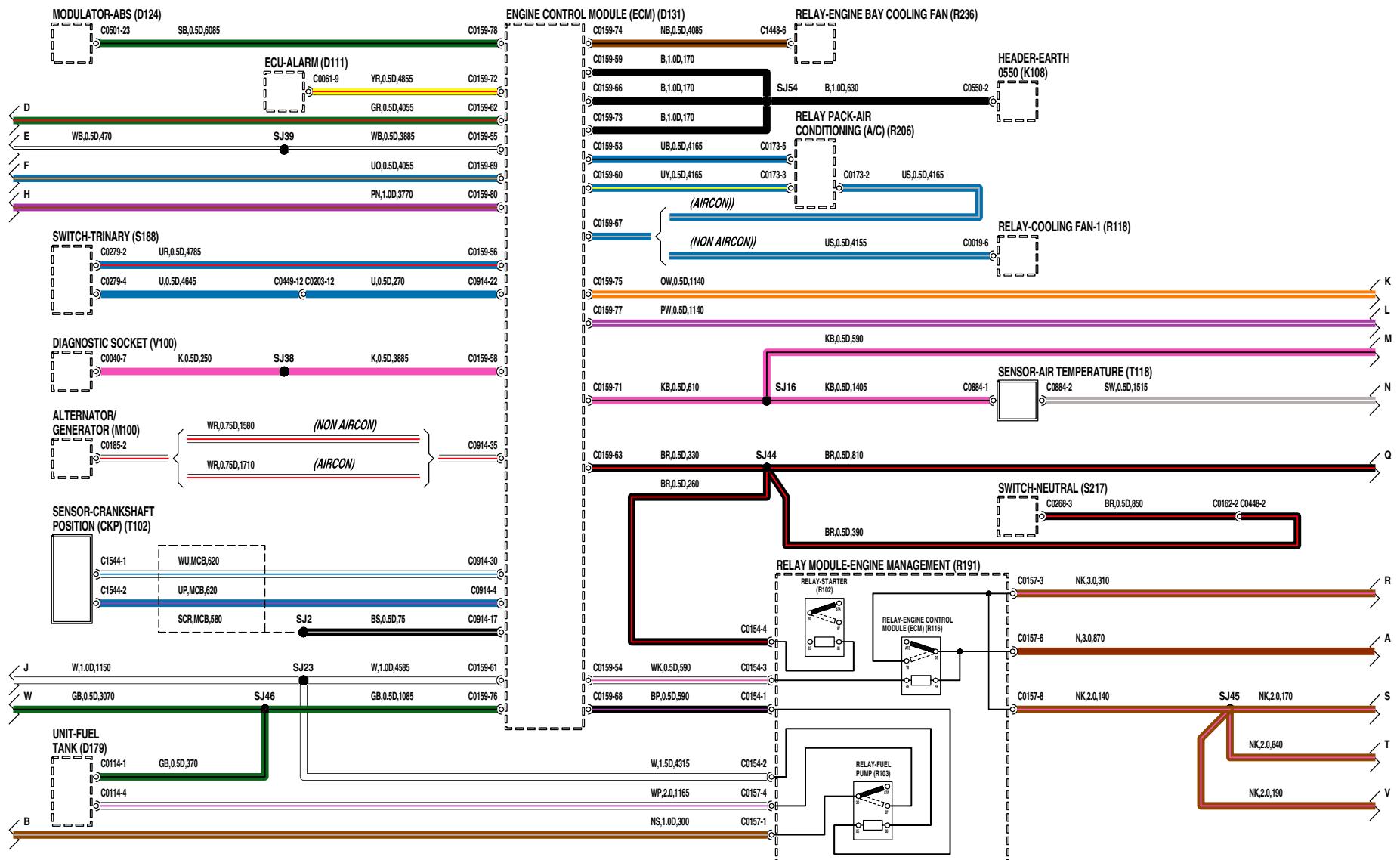
MEMS 3 with Em-CVT



VWR119370-1of4

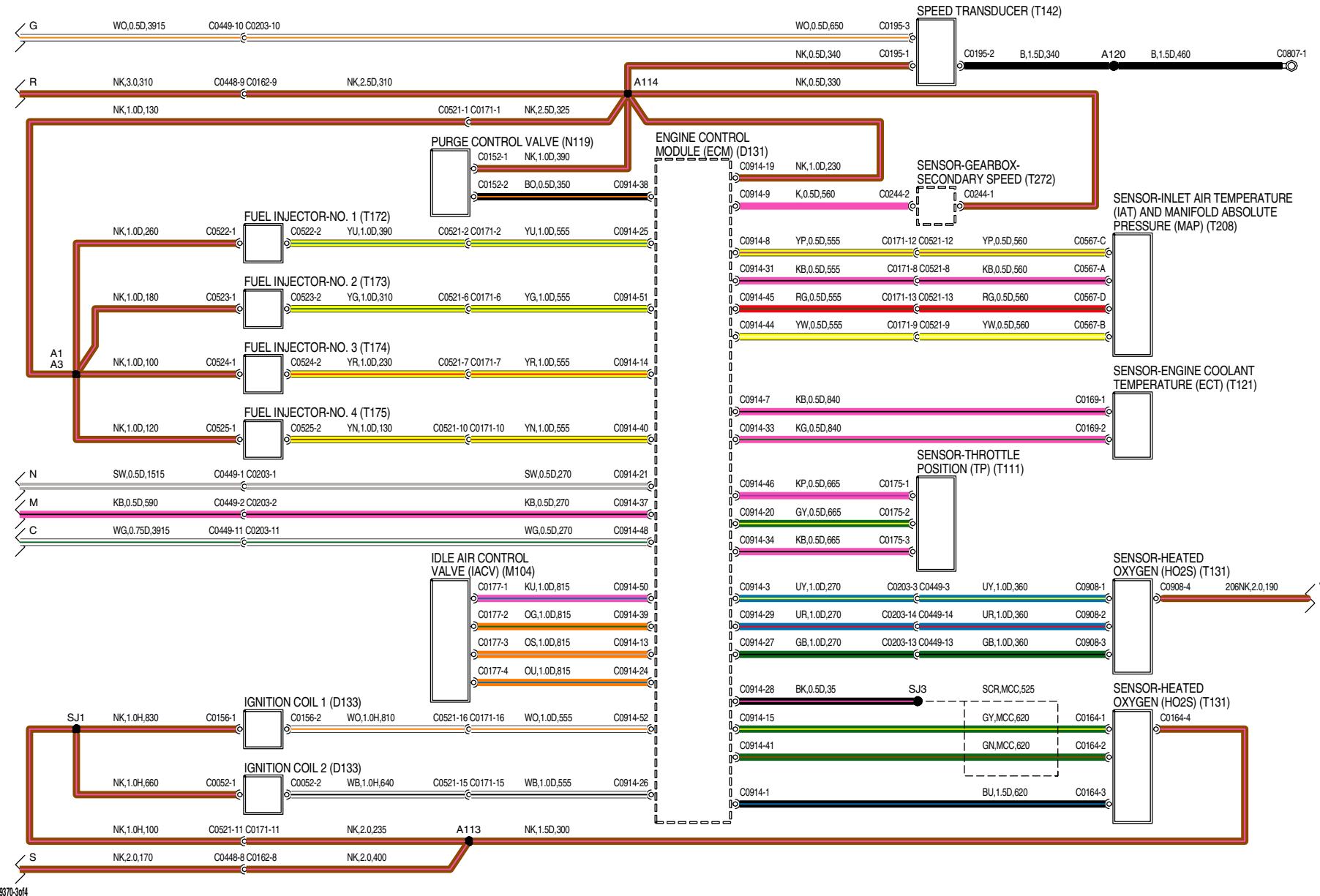
ENGINE MANAGEMENT

MEMS 3 with Em-CVT



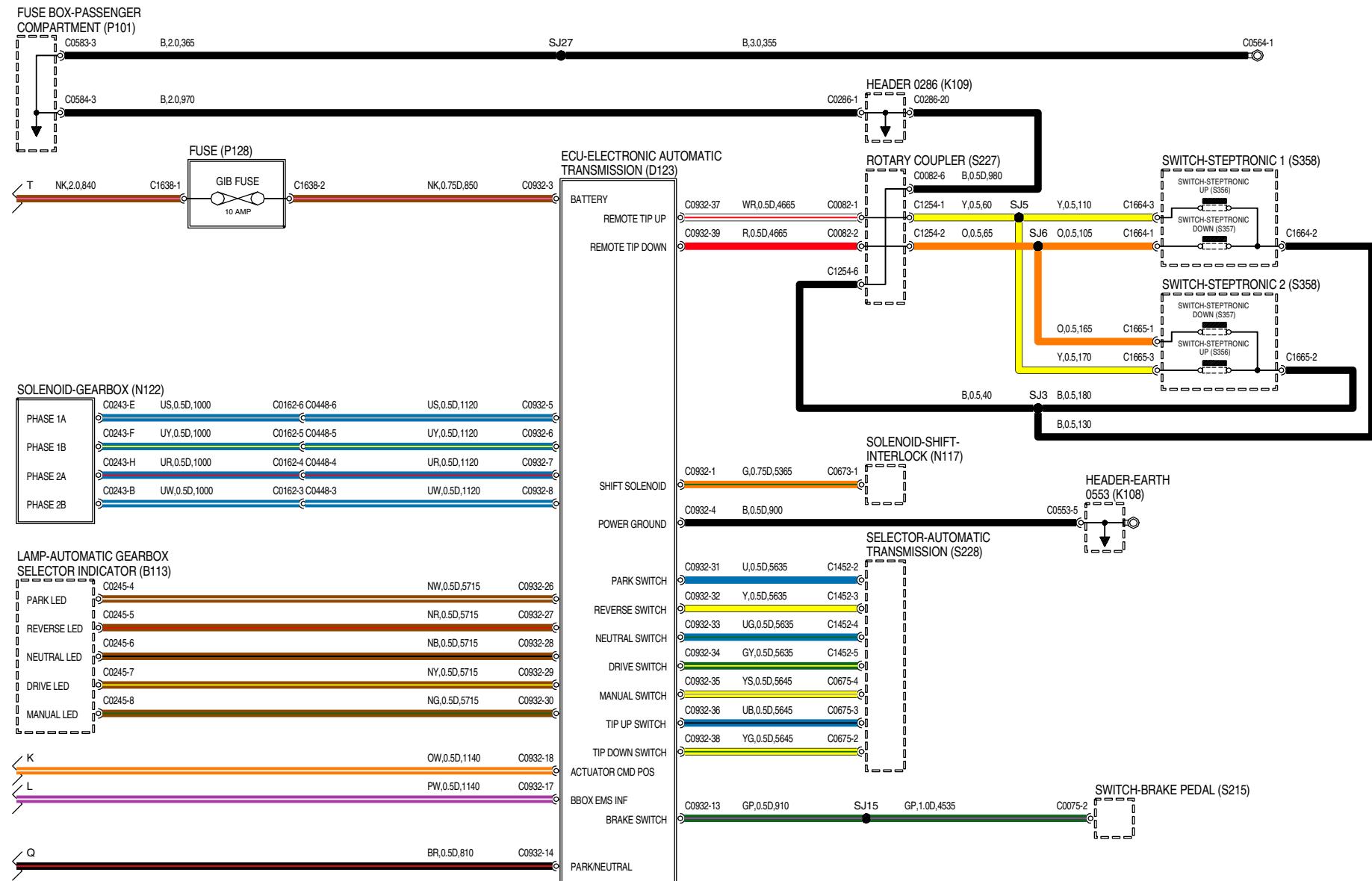
ENGINE MANAGEMENT

MEMS 3 with Em-CVT



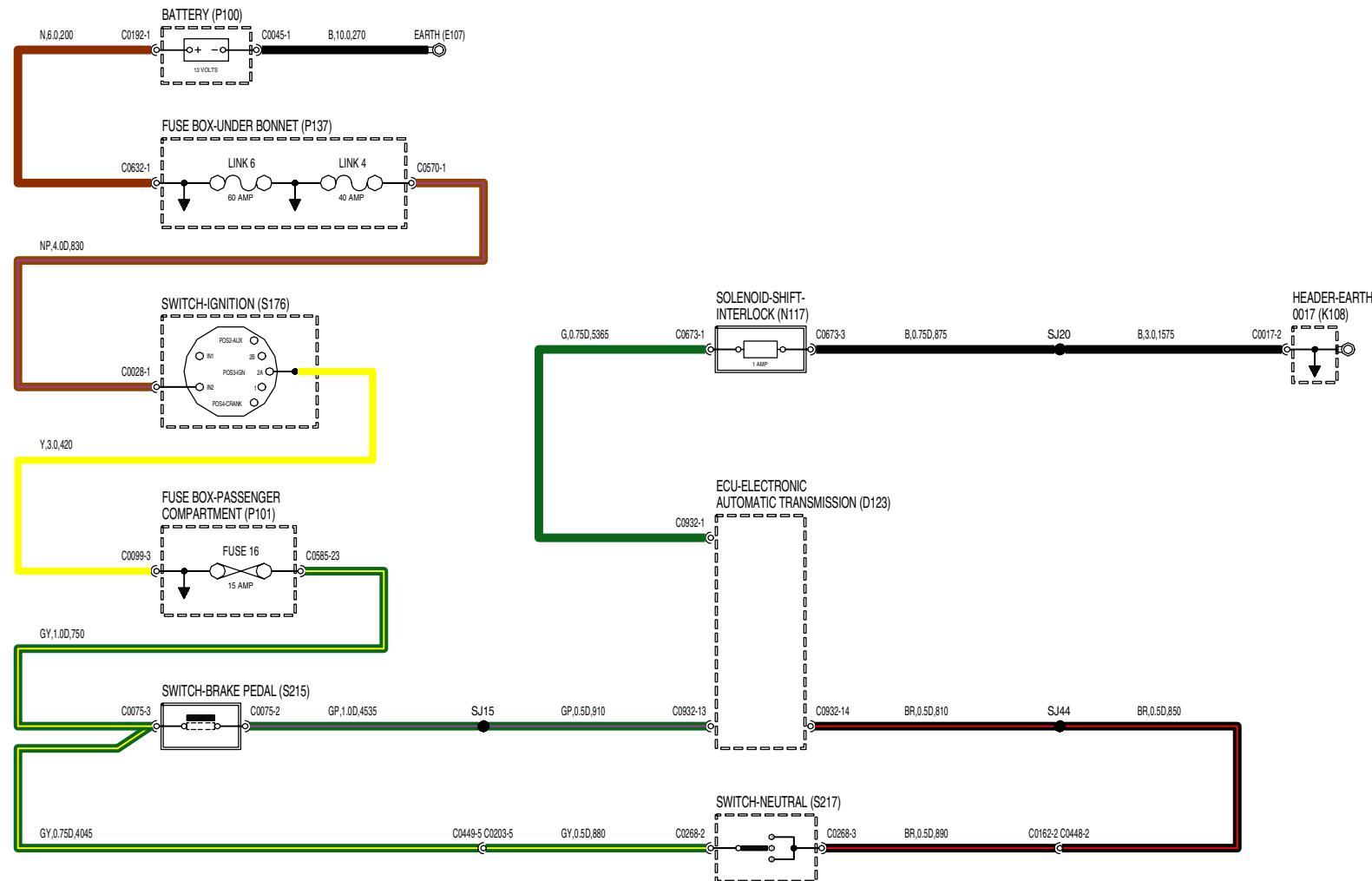
ENGINE MANAGEMENT

MEMS 3 with Em-CVT

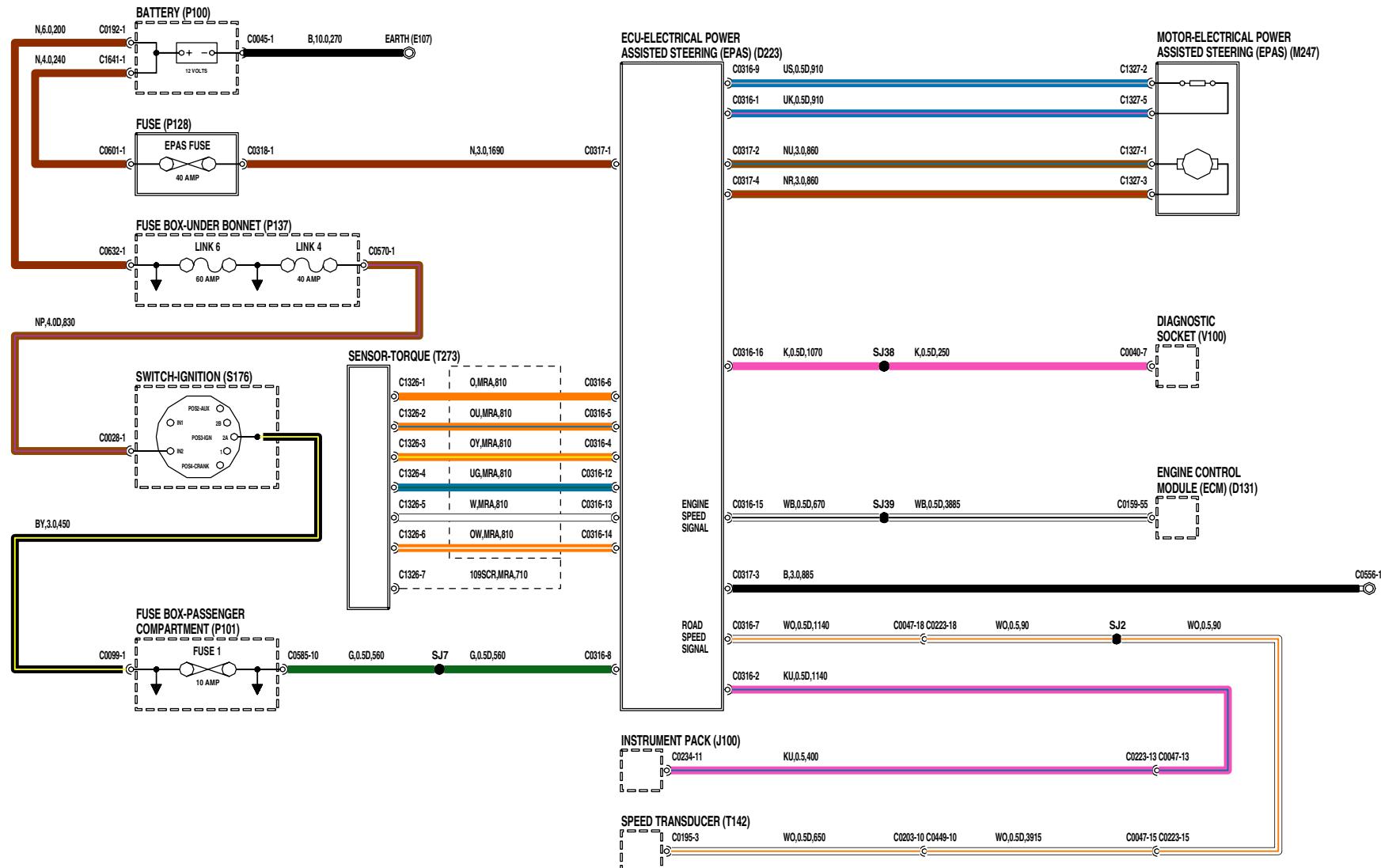


VWR119370-4af4

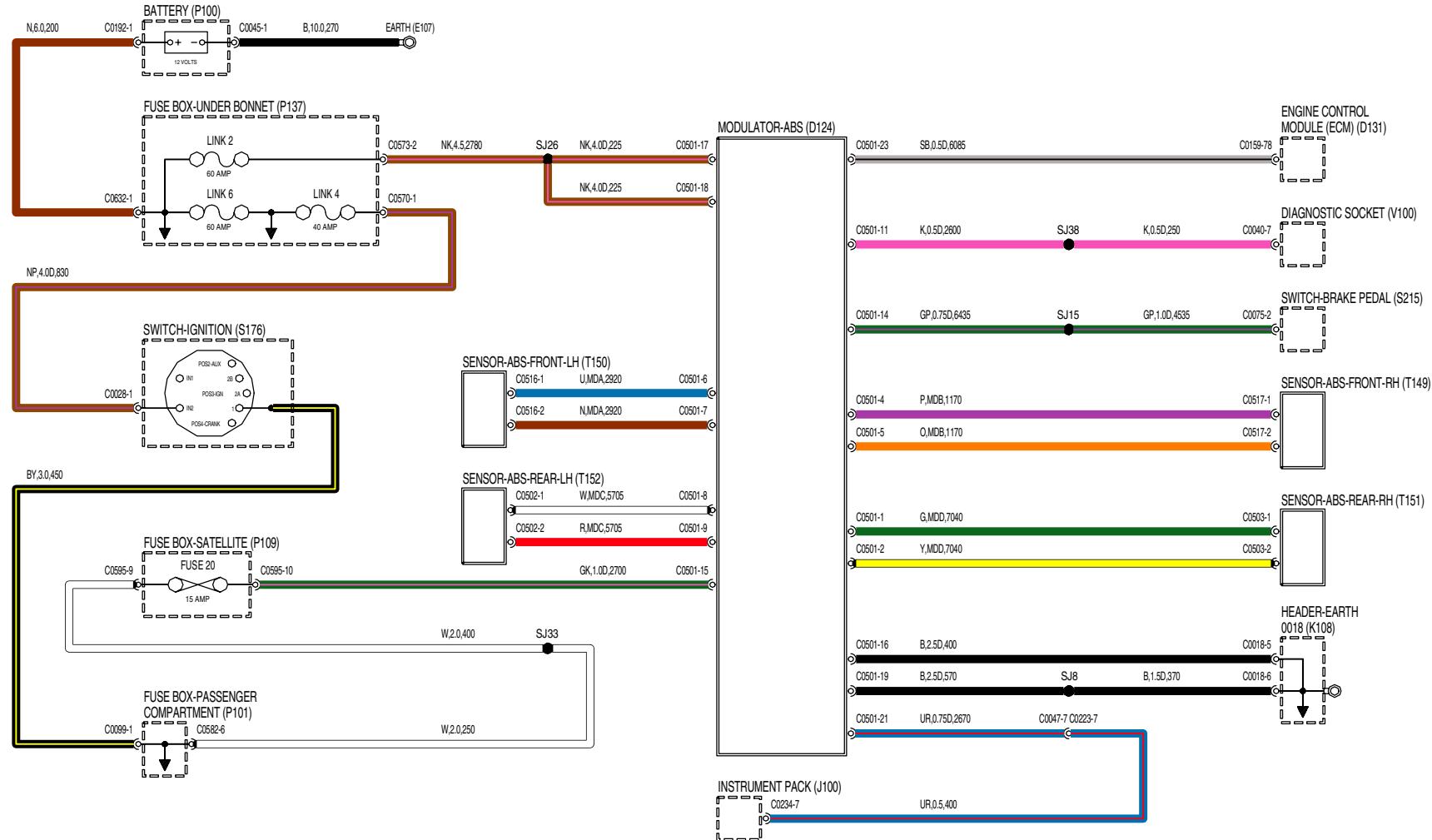
SHIFT INTERLOCK



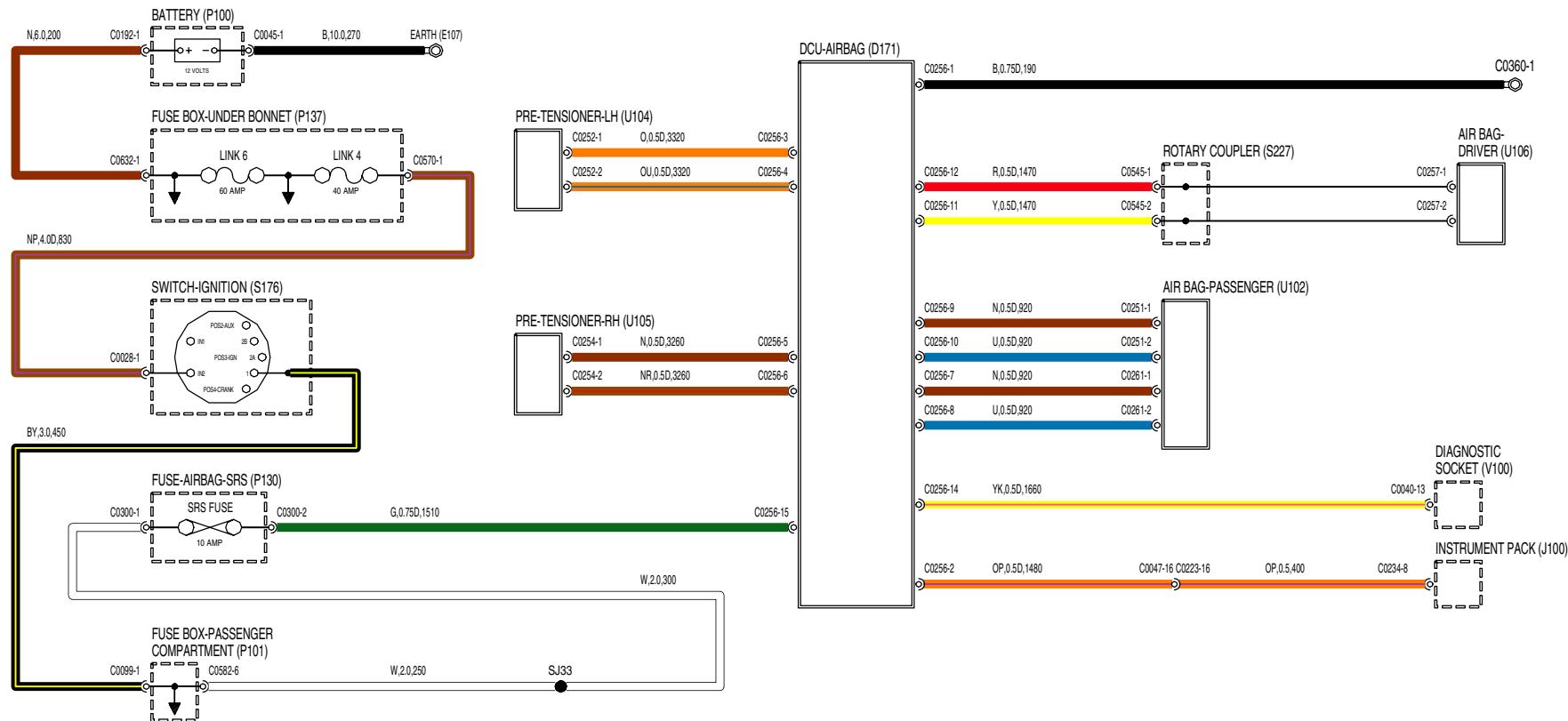
ELECTRIC POWER ASSISTED STEERING (EPAS)



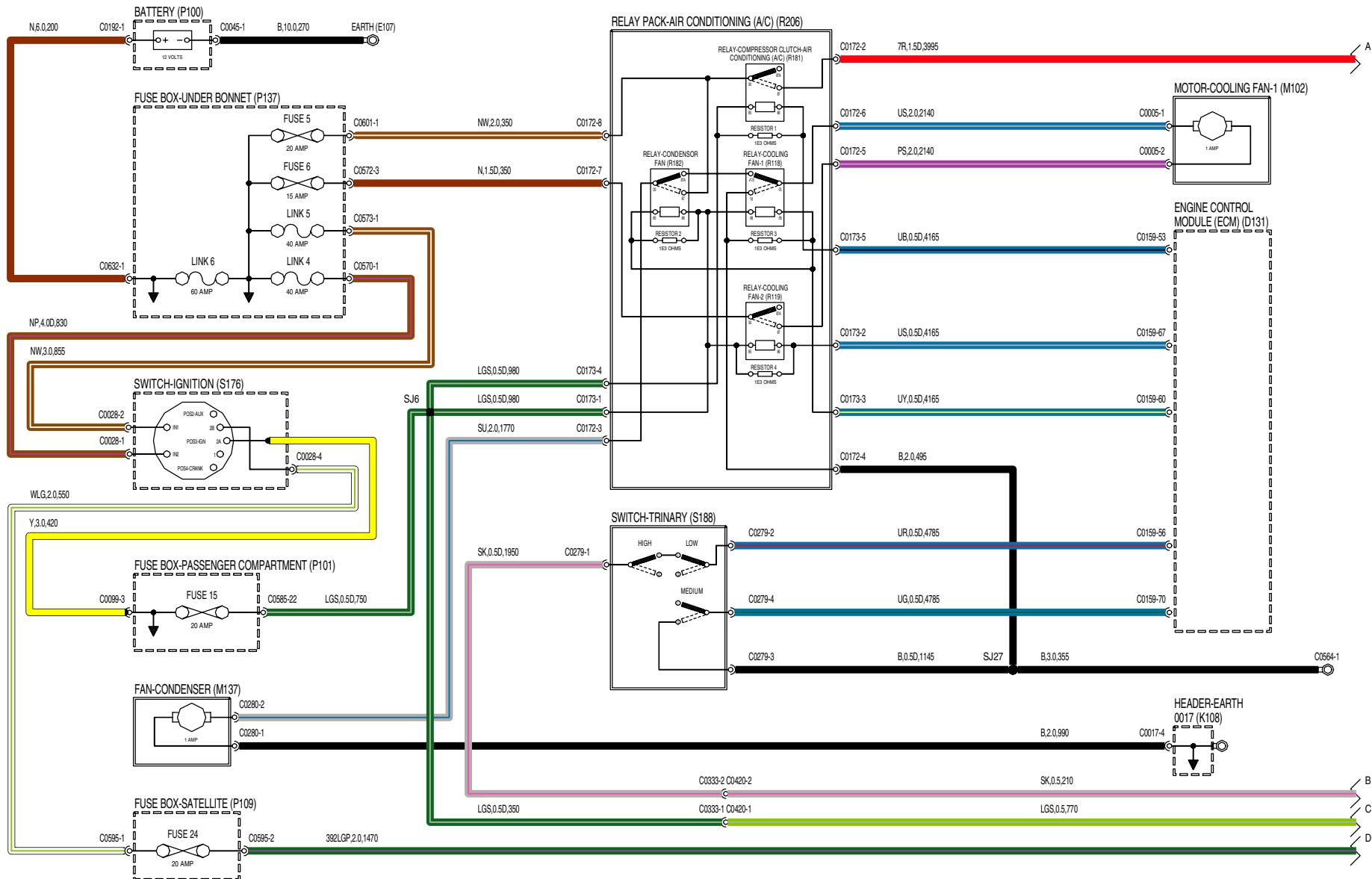
ANTI-LOCK BRAKING SYSTEM (ABS)



SUPPLEMENTARY RESTRAINT SYSTEM (SRS)

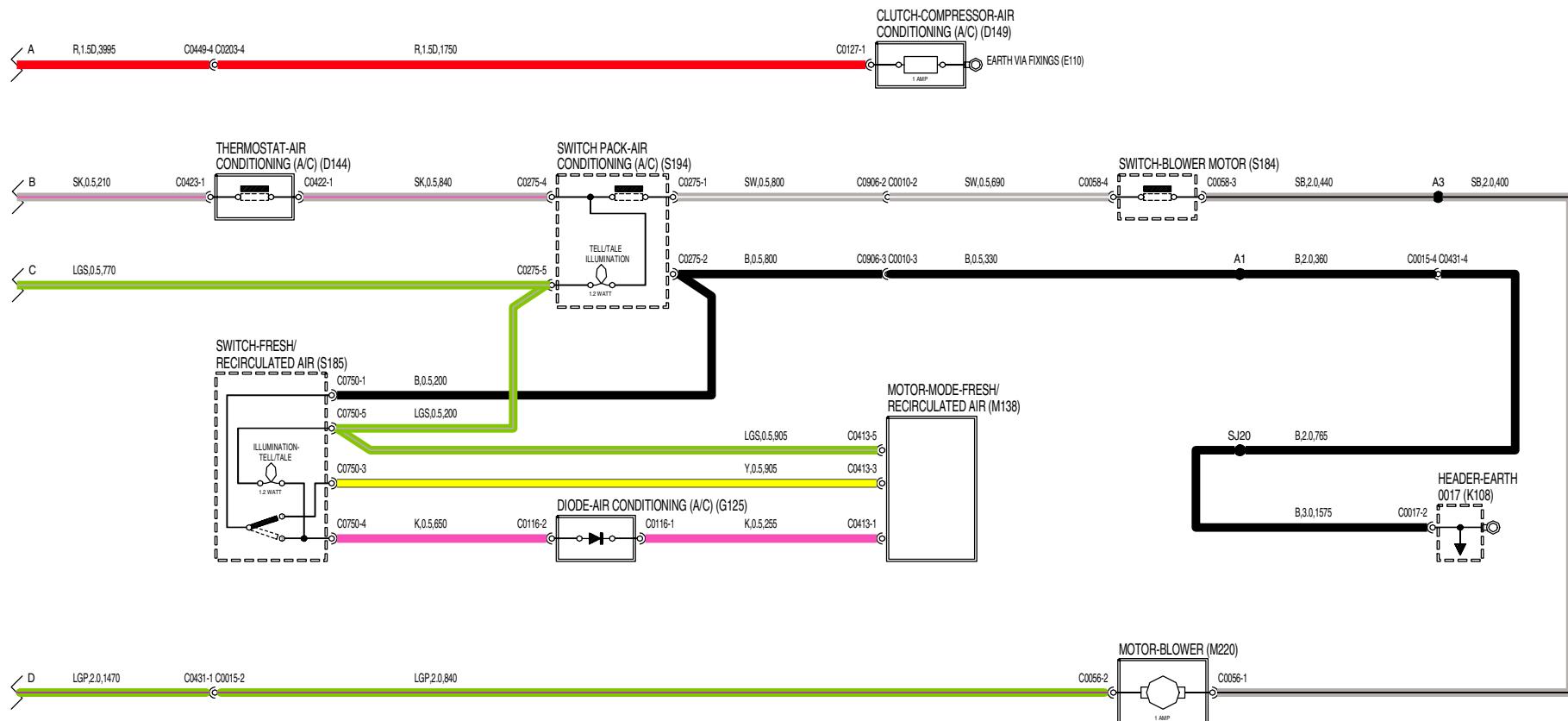


AIR CONDITIONING (AC)

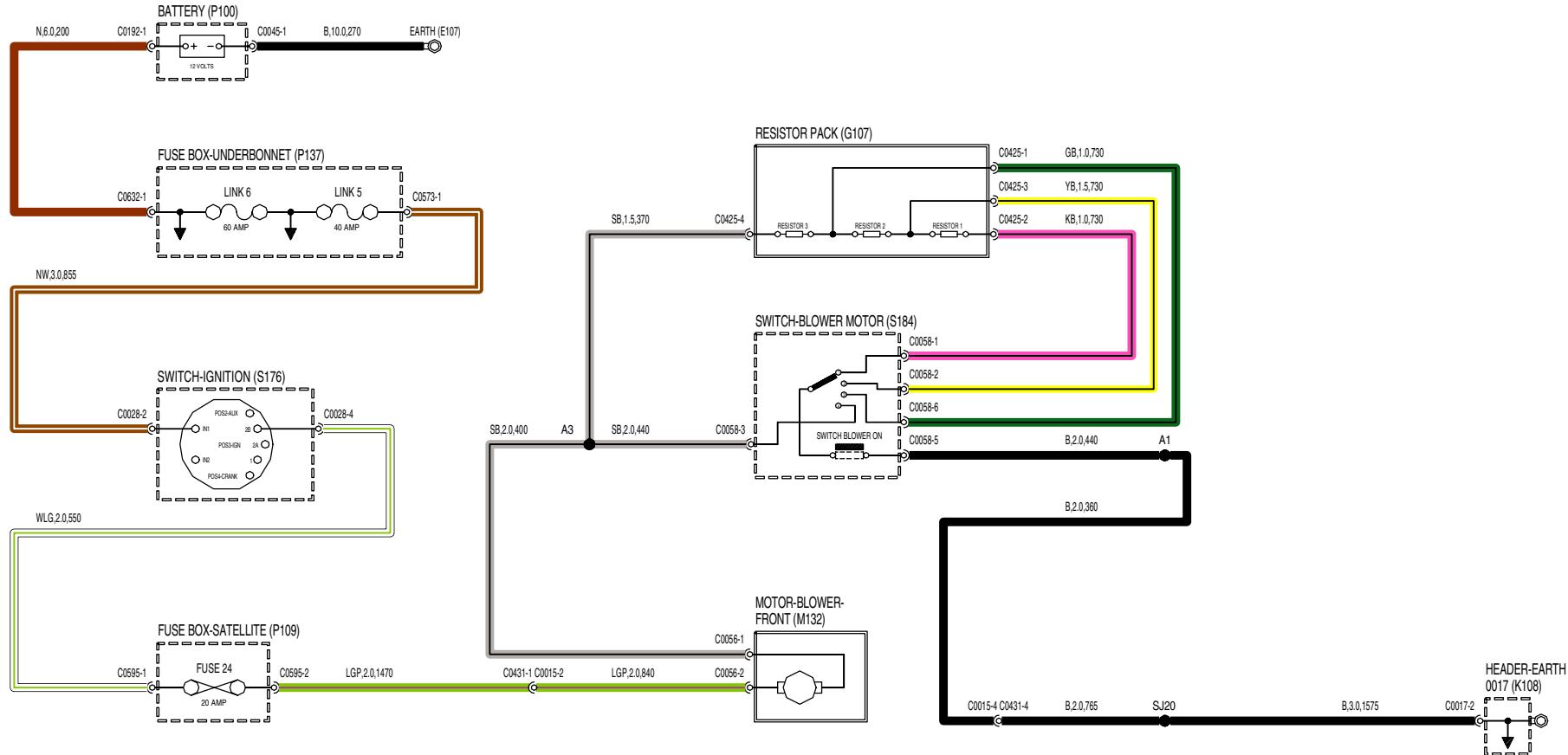


VWR119170-1af2

AIR CONDITIONING (AC)



HEATER BLOWER

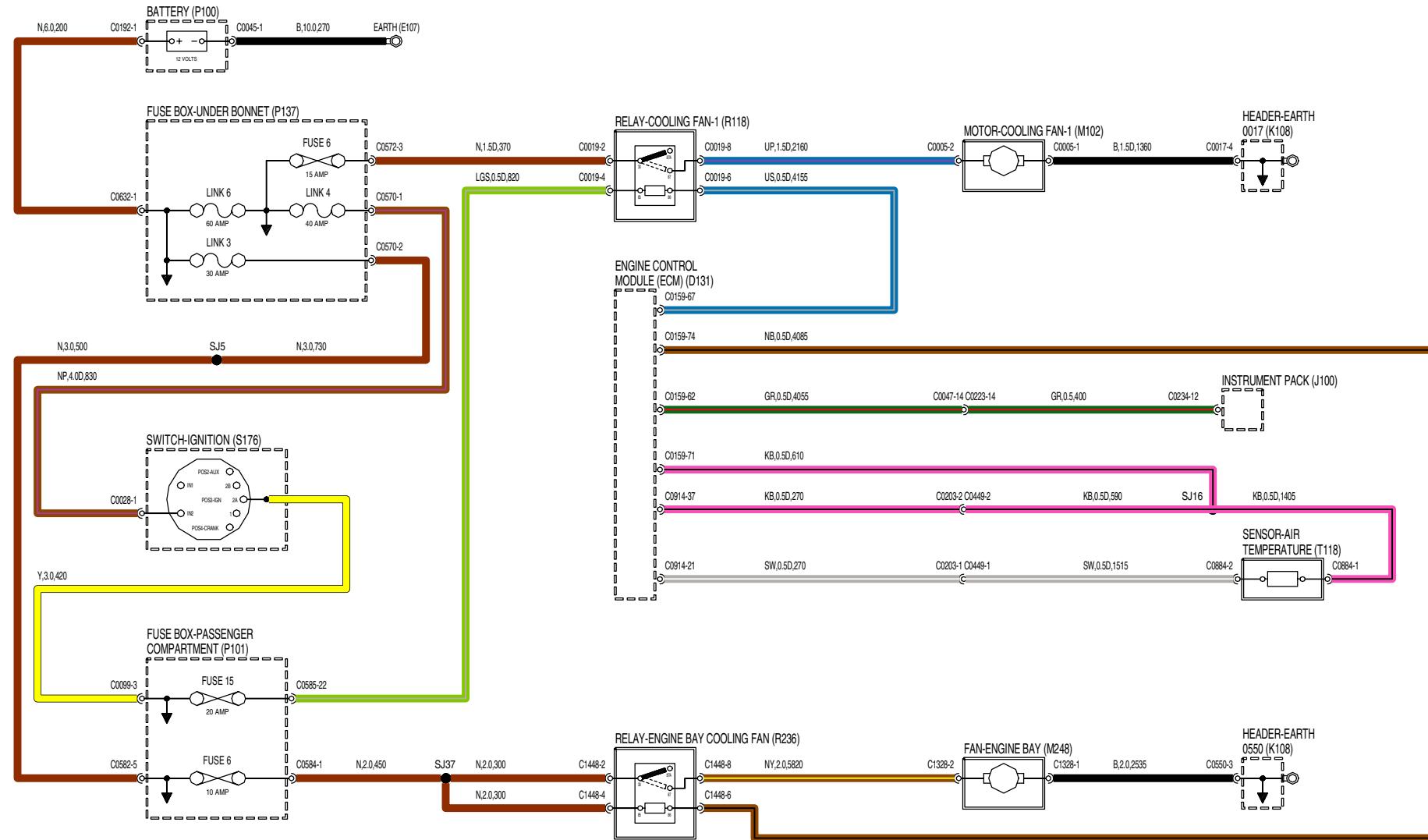


VWR119550-1af1

MGF 2001 Model Year (LHD)

39.1

COOLING FANS

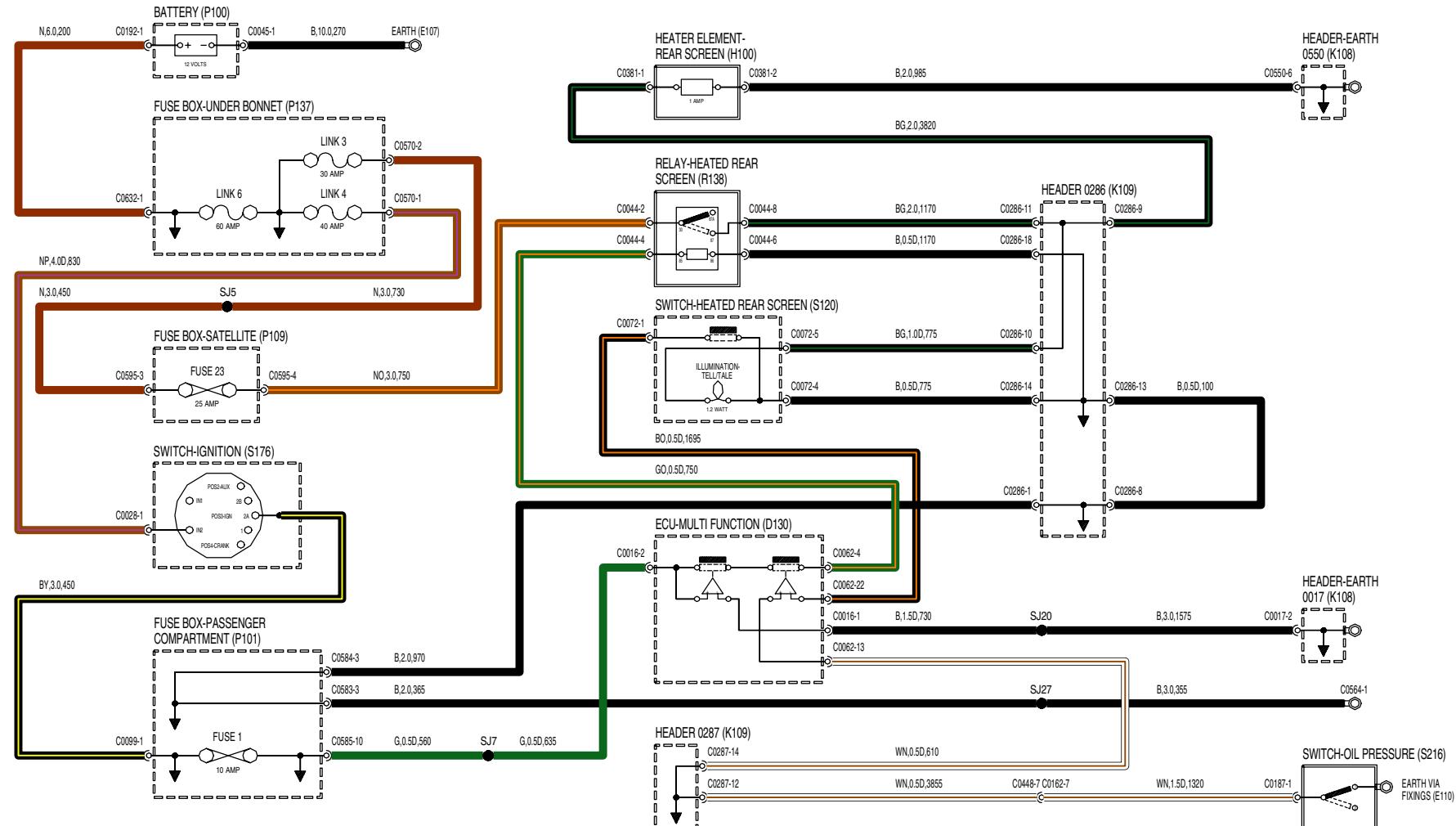


VWR119290-10f1

MGF 2001 Model Year (LHD)

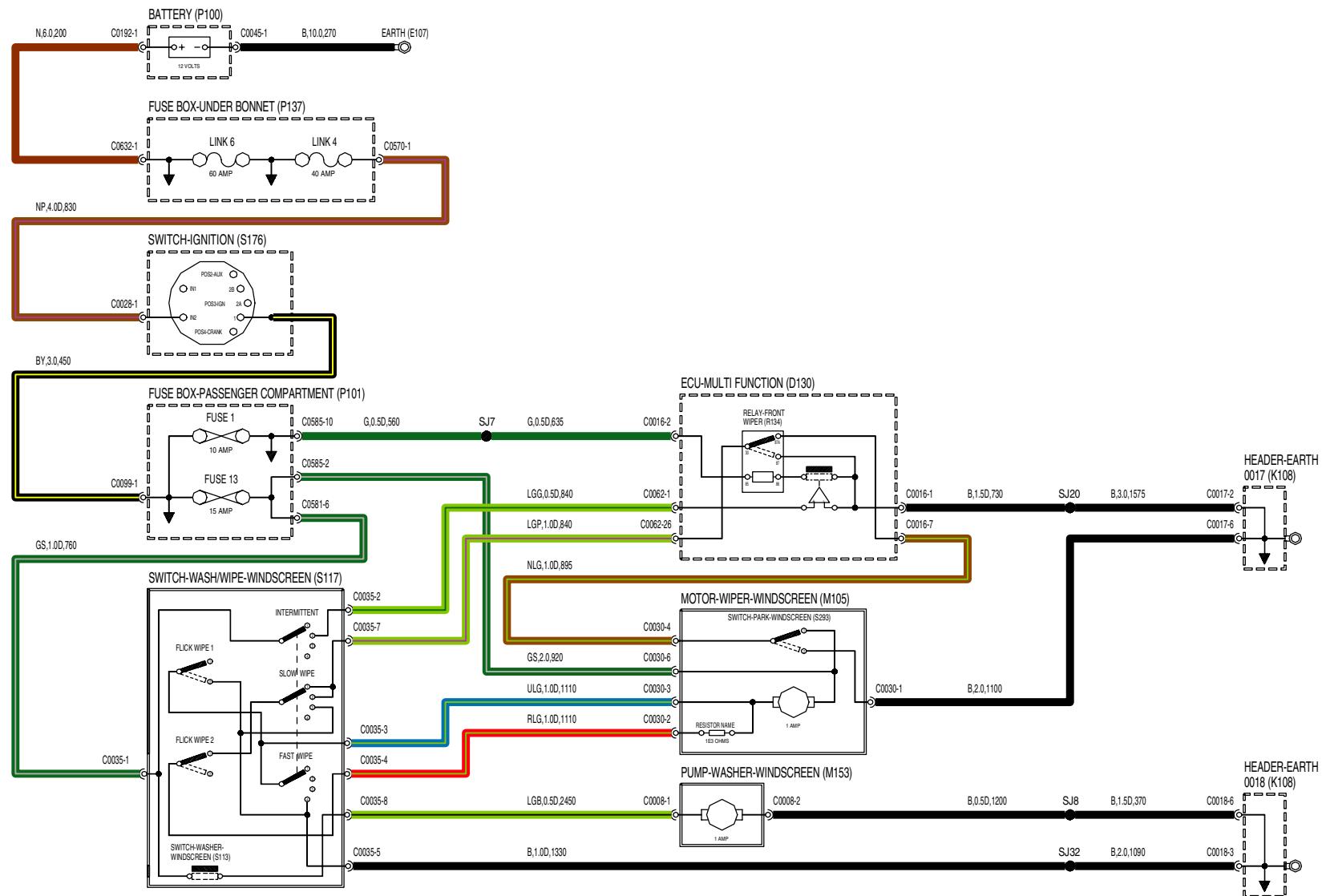
39.2

HEATED REAR SCREEN



VWR119530-1af1

WIPERS AND WASHERS

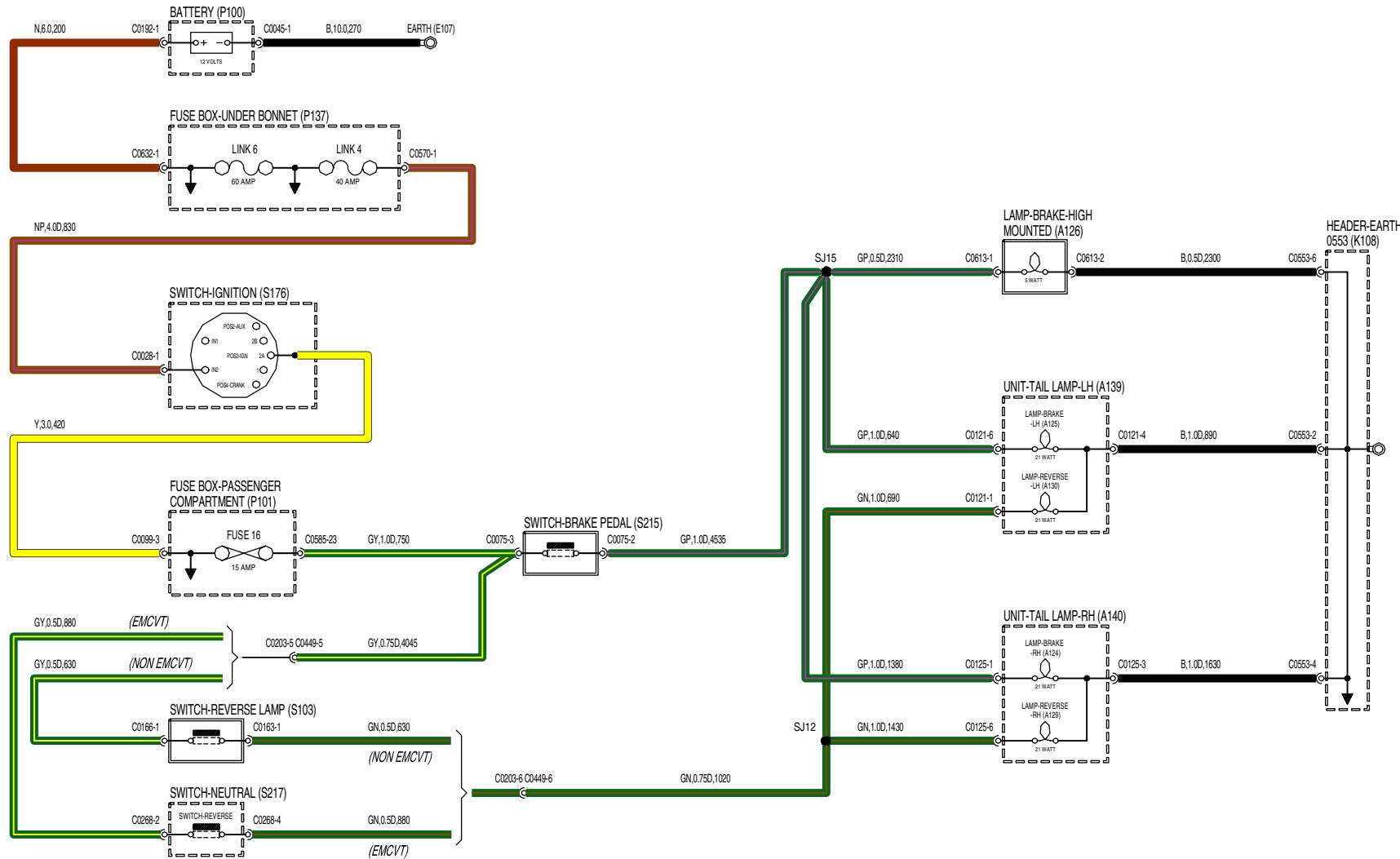


VWR11987-1af1

MGF 2001 Model Year (LHD)

42.1

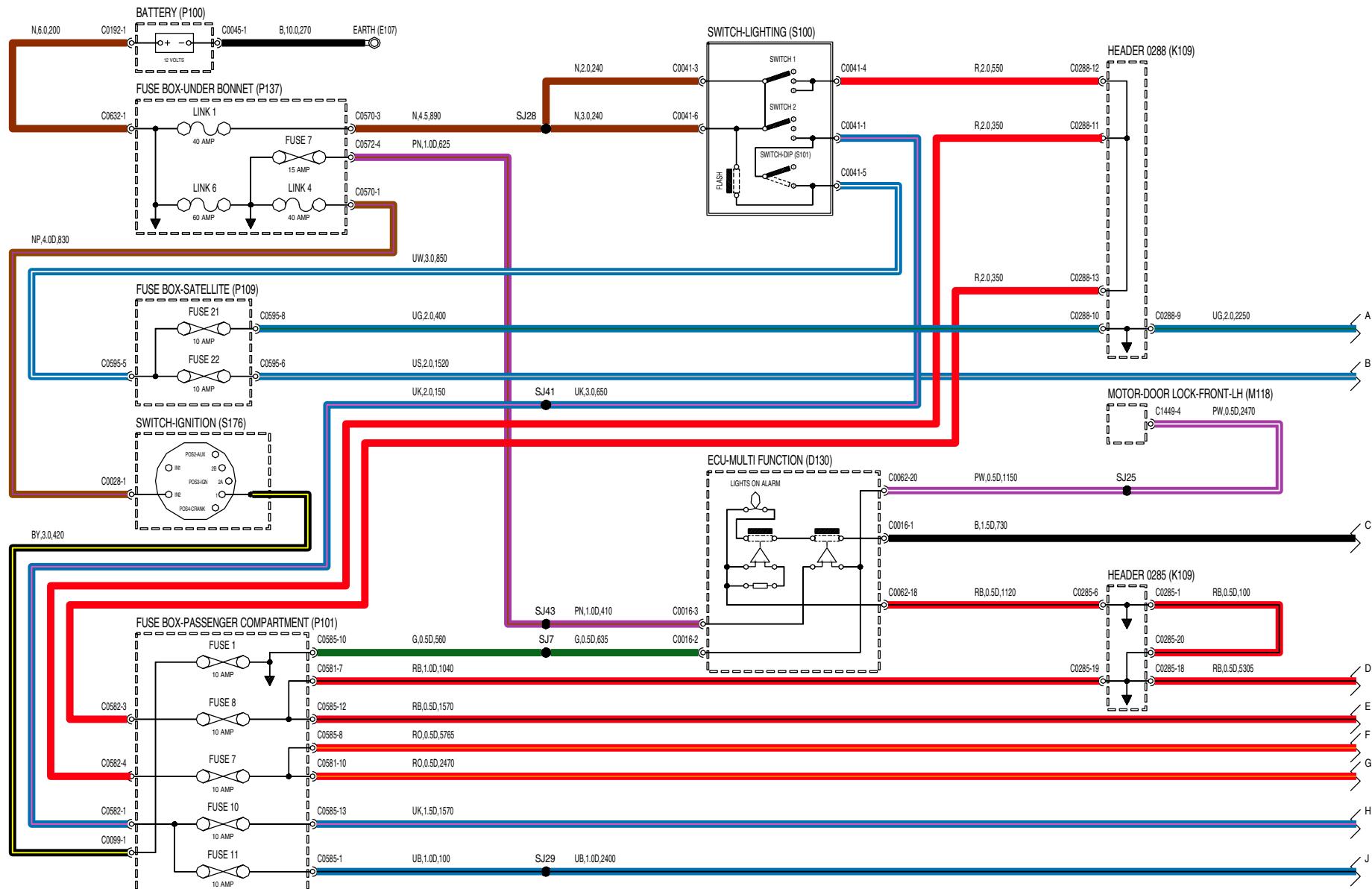
EXTERIOR LAMPS BRAKES AND REVERSE LAMPS



VWR119210-1af1

EXTERIOR LAMPS

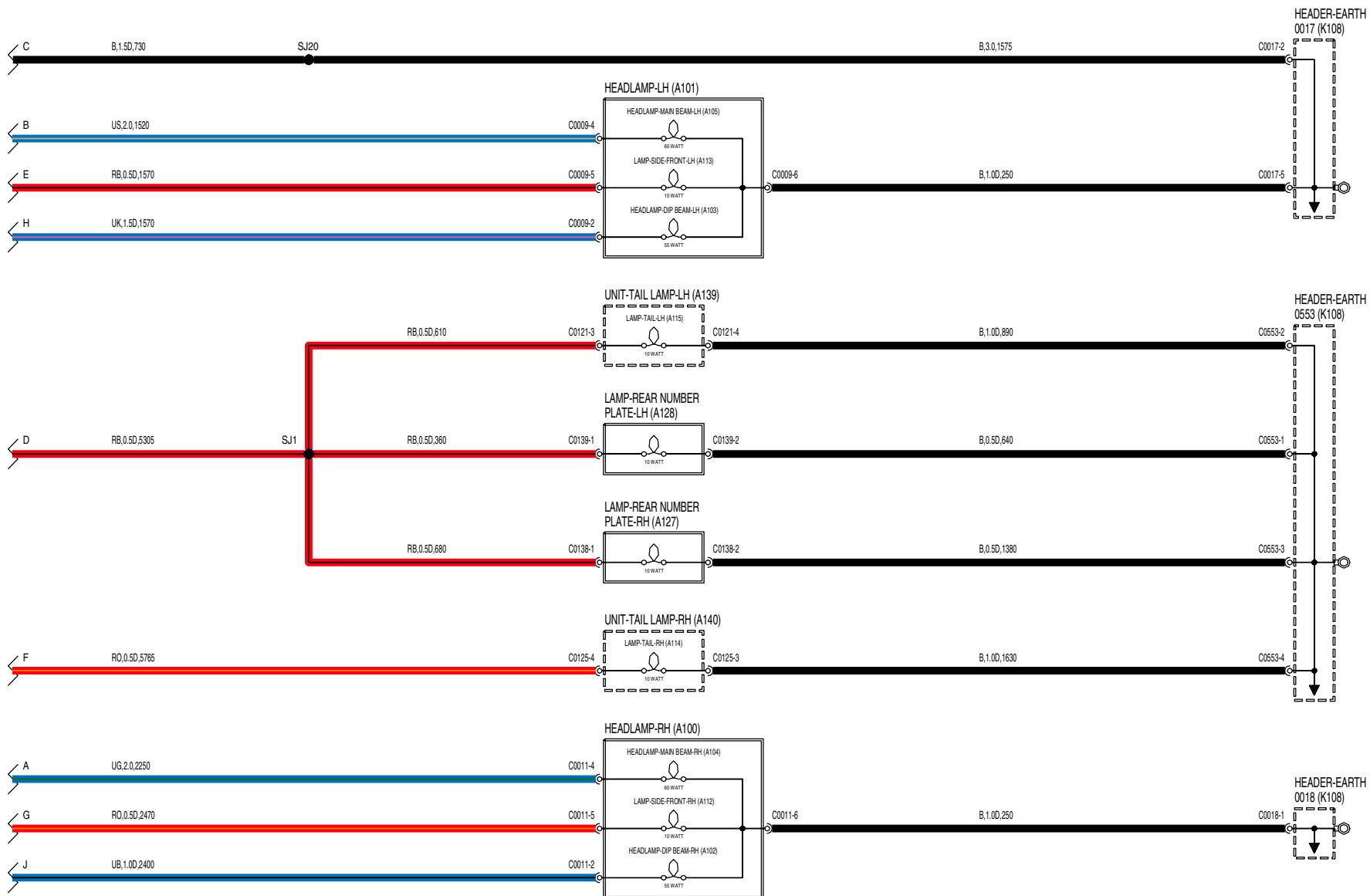
HEAD, SIDE AND TAIL LAMPS



VWR119490-1af2

EXTERIOR LAMPS

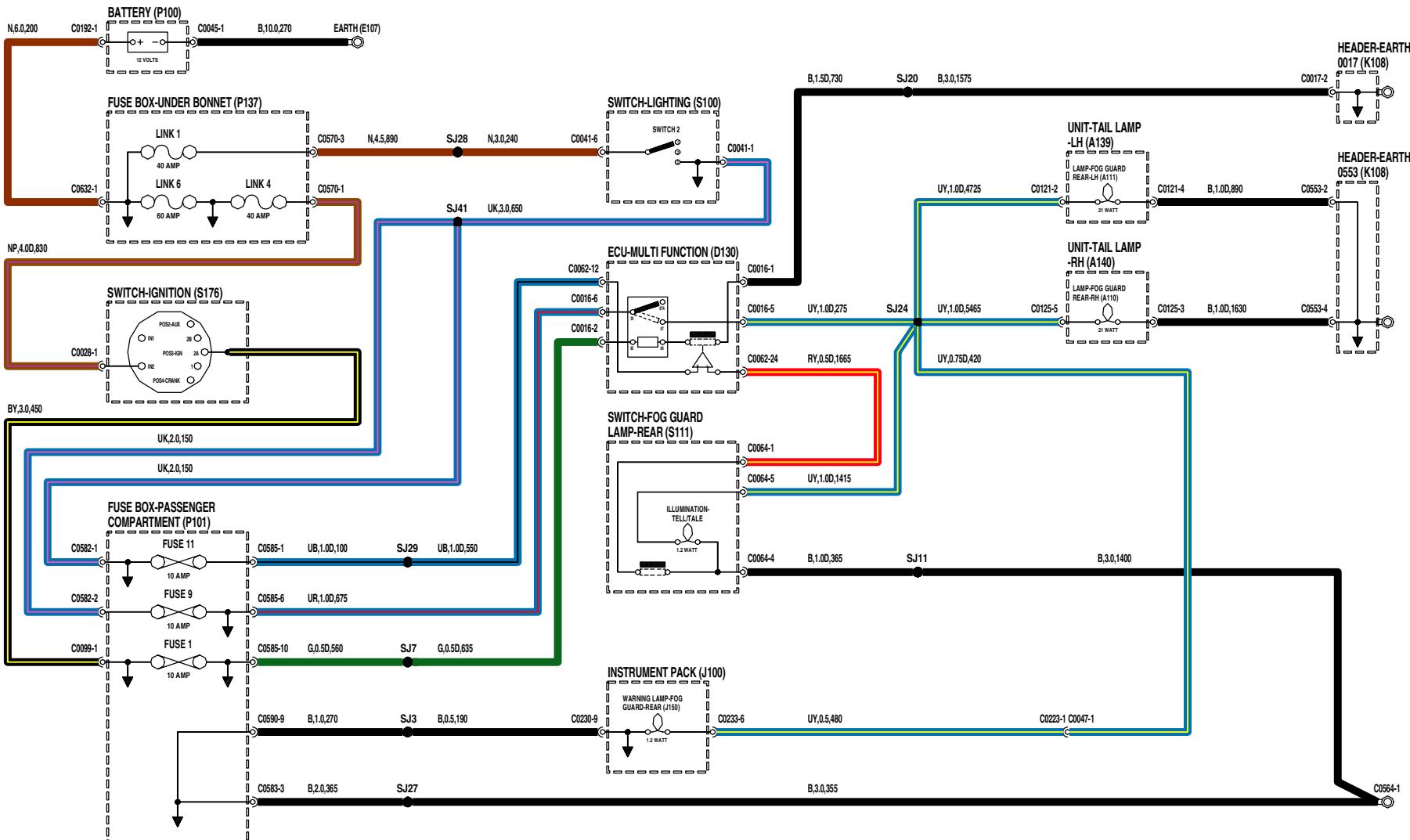
HEAD, SIDE AND TAIL LAMPS



VWR119490-2n2

EXTERIOR LAMPS

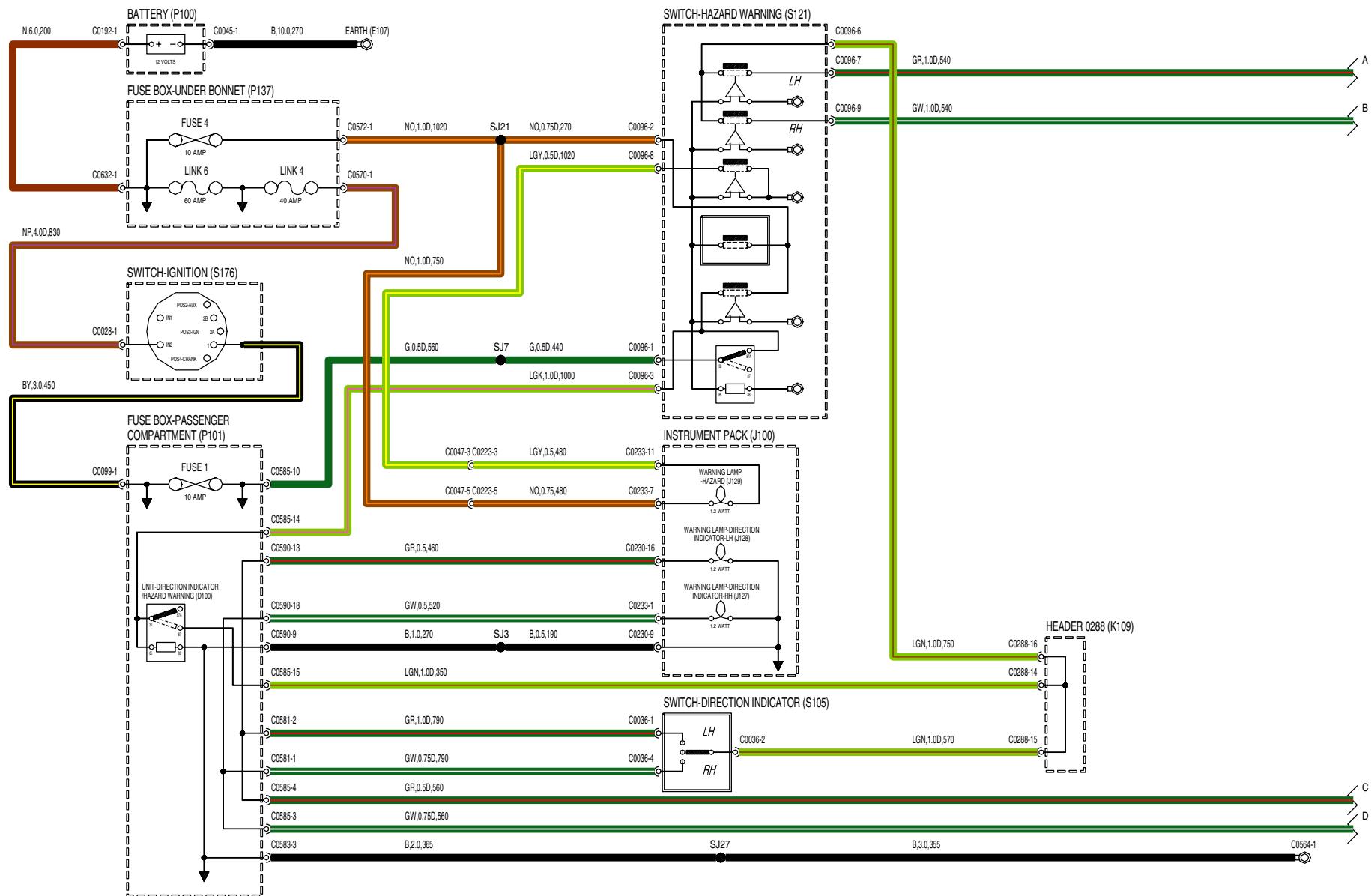
REAR FOG LAMPS



VWR119450-10f1

EXTERIOR LAMPS

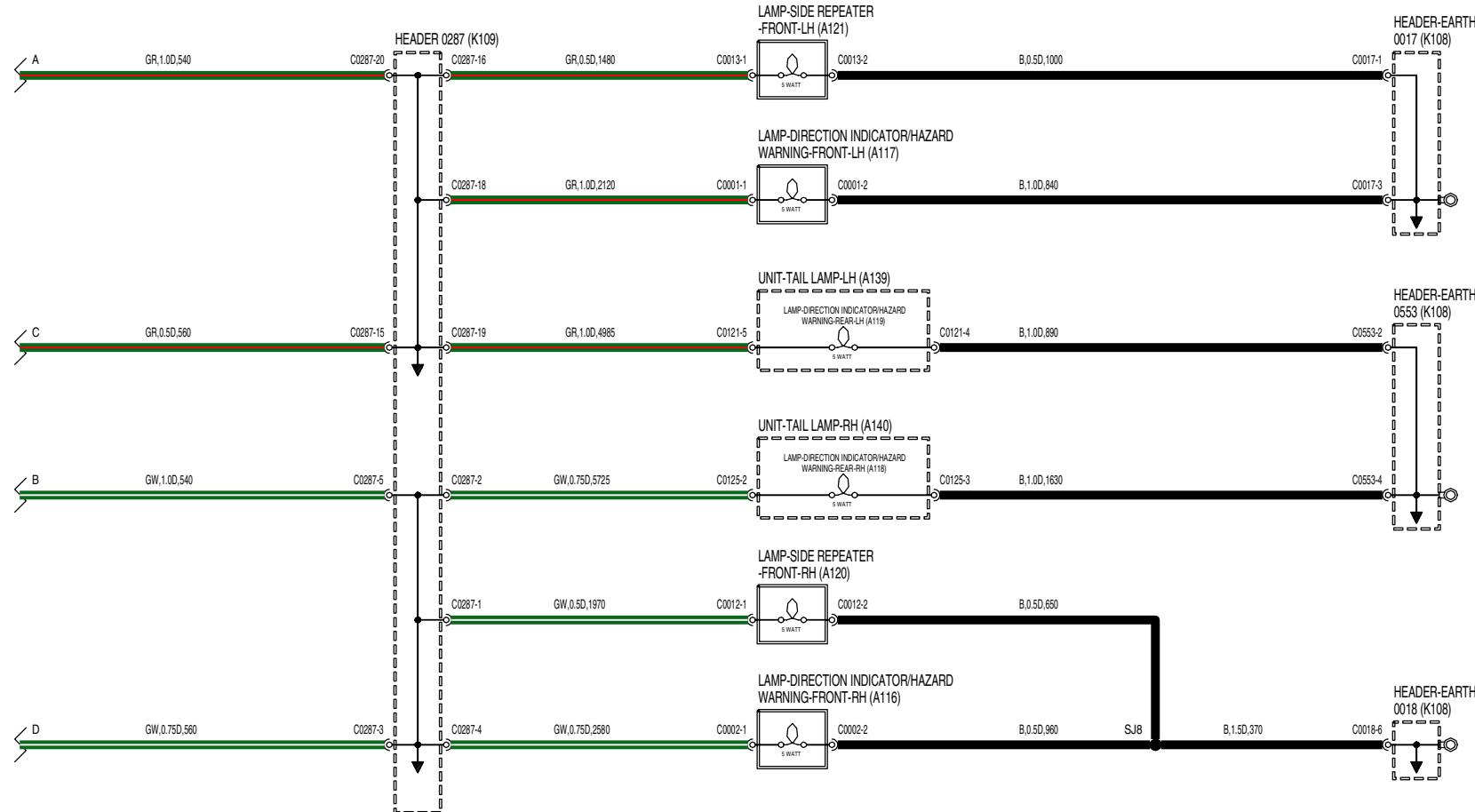
DIRECTION INDICATOR/HAZARD WARNING LAMPS



VWR119610-1af2

EXTERIOR LAMPS

DIRECTION INDICATOR/HAZARD WARNING LAMPS

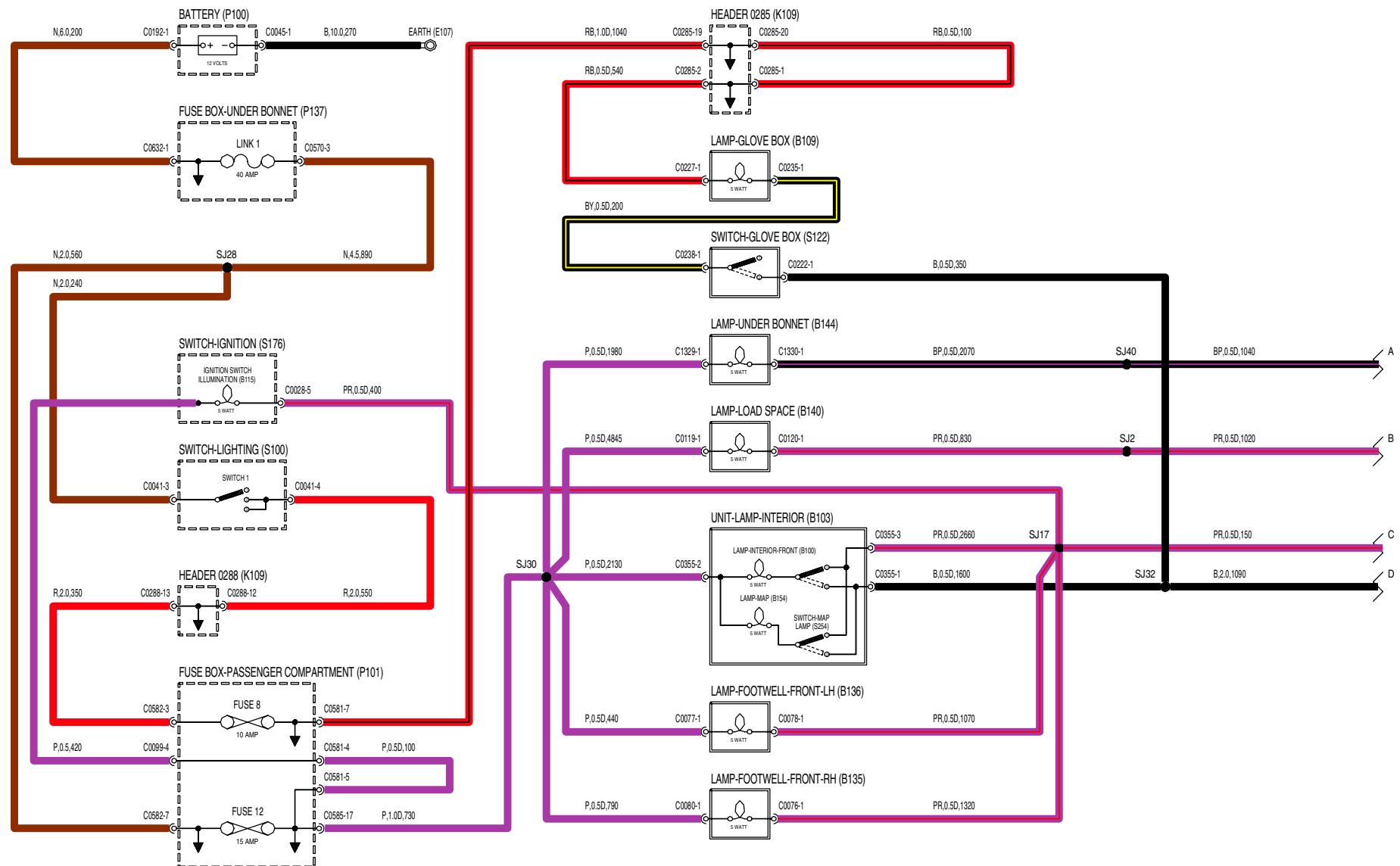


VWR119610-2nf2

MGF 2001 Model Year (LHD)

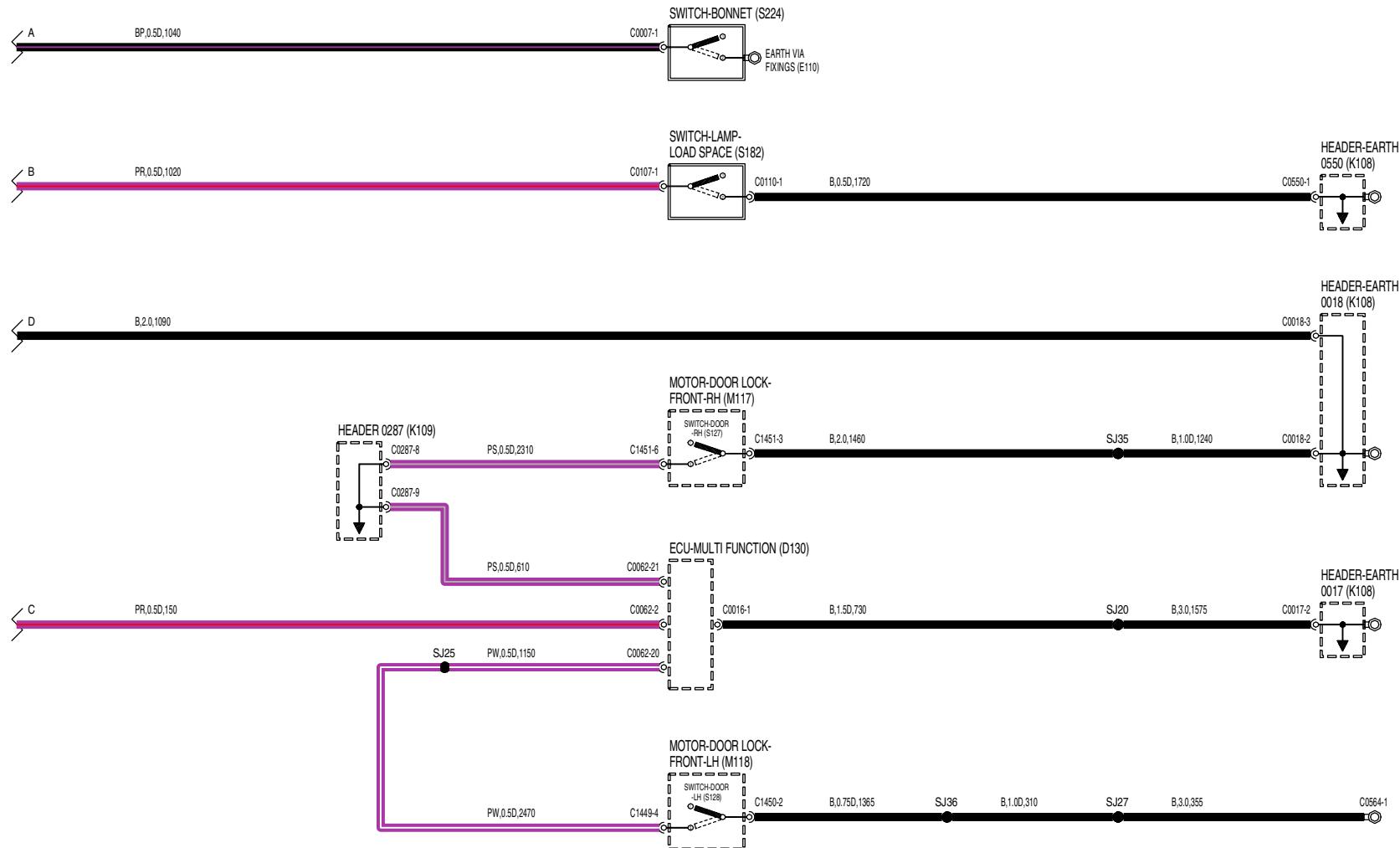
43.6

INTERIOR LAMPS



VWR119710-1af2

INTERIOR LAMPS

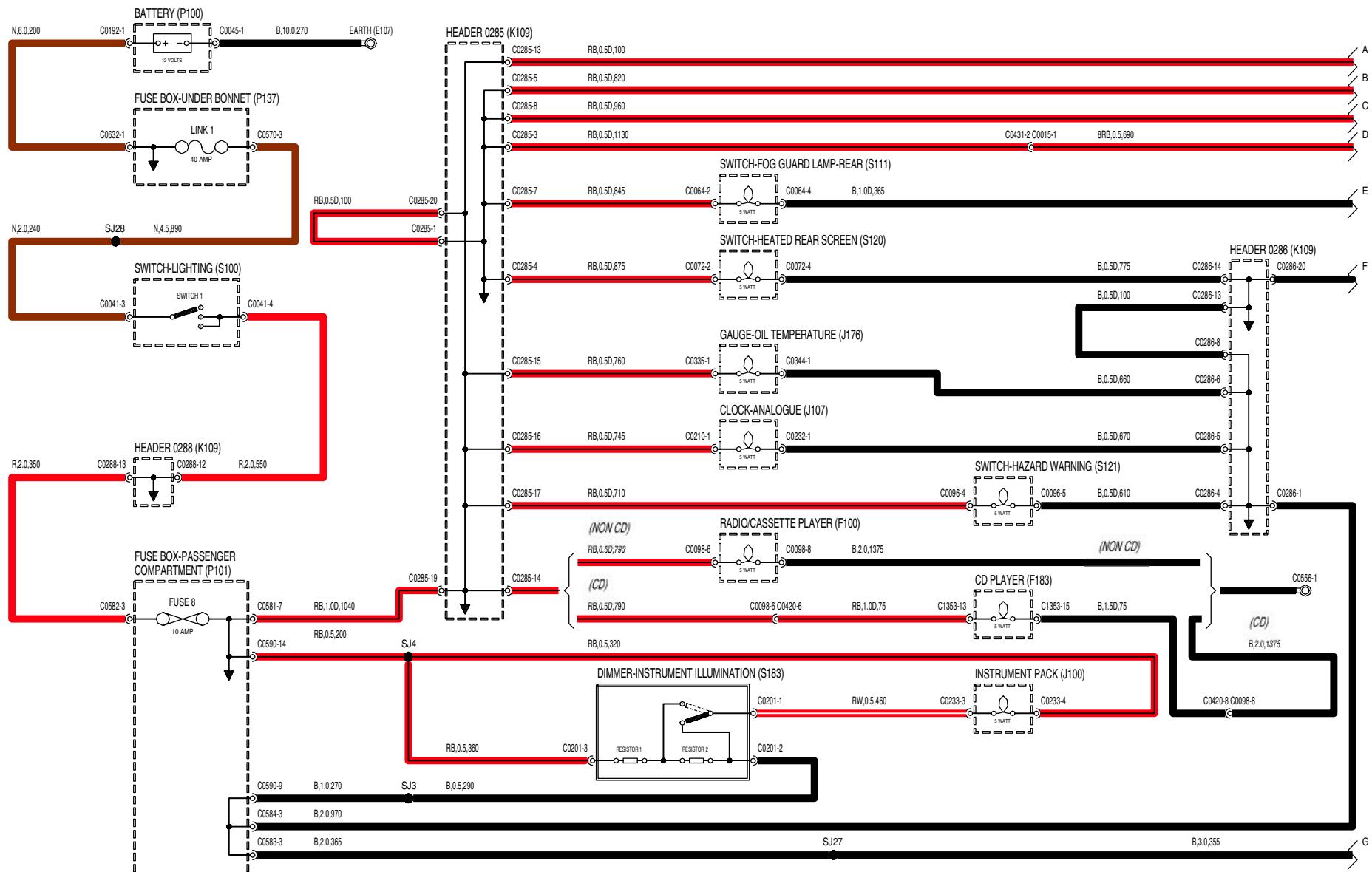


VWR119710-2nf2

MGF 2001 Model Year (LHD)

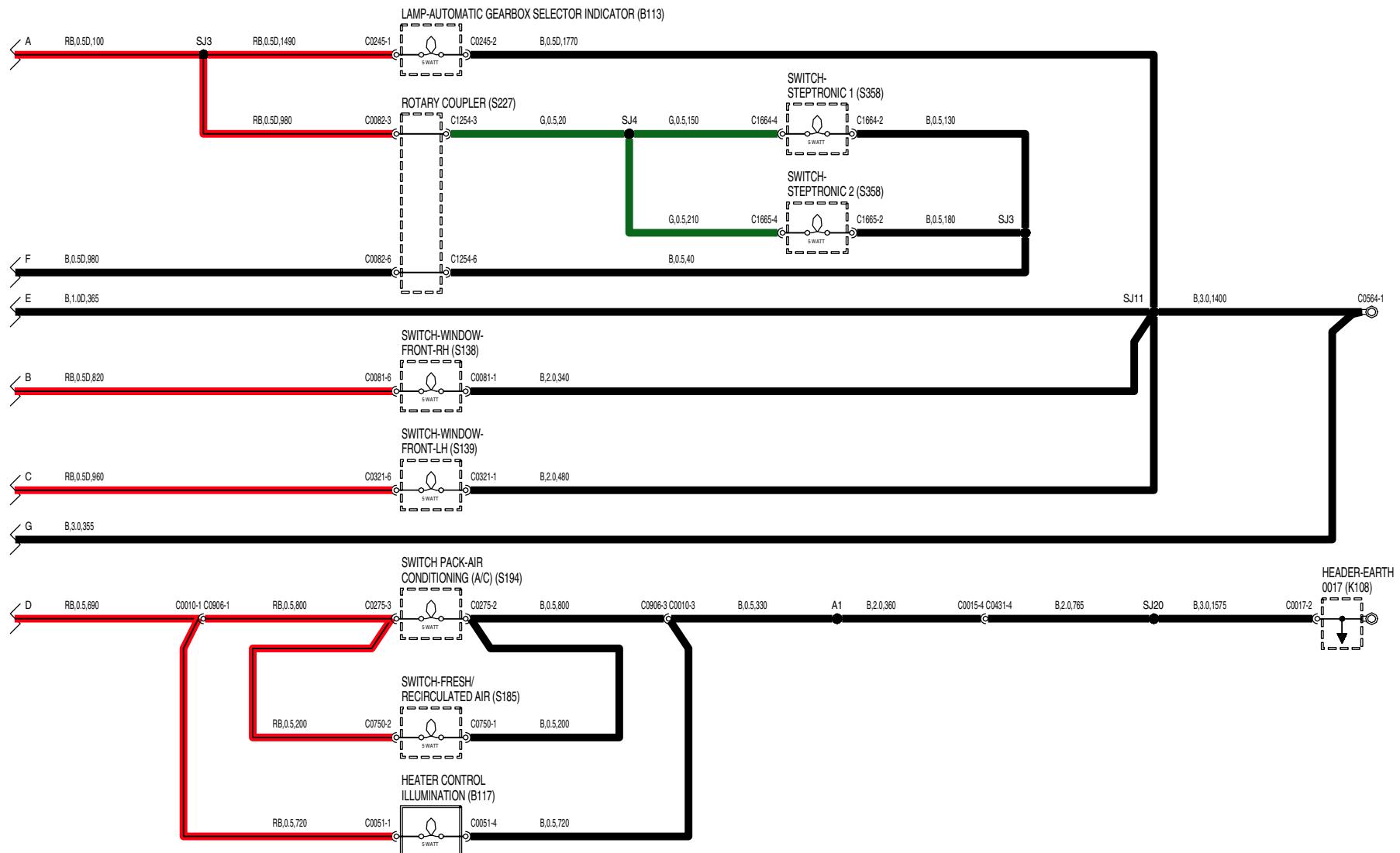
44.2

INTERIOR ILLUMINATION



VWR119650-1af2

INTERIOR ILLUMINATION

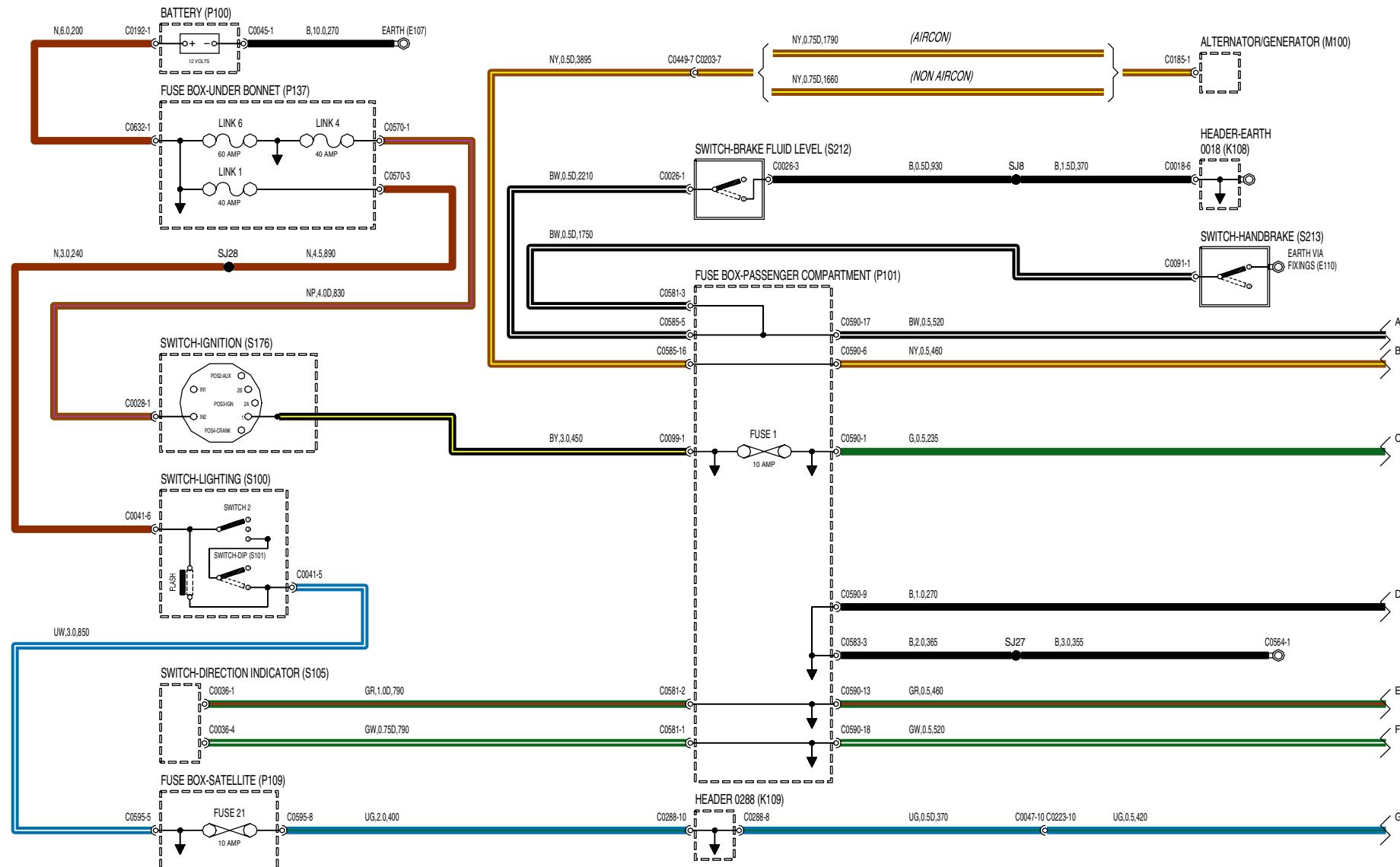


VWR119650-2nF2

MGF 2001 Model Year (LHD)

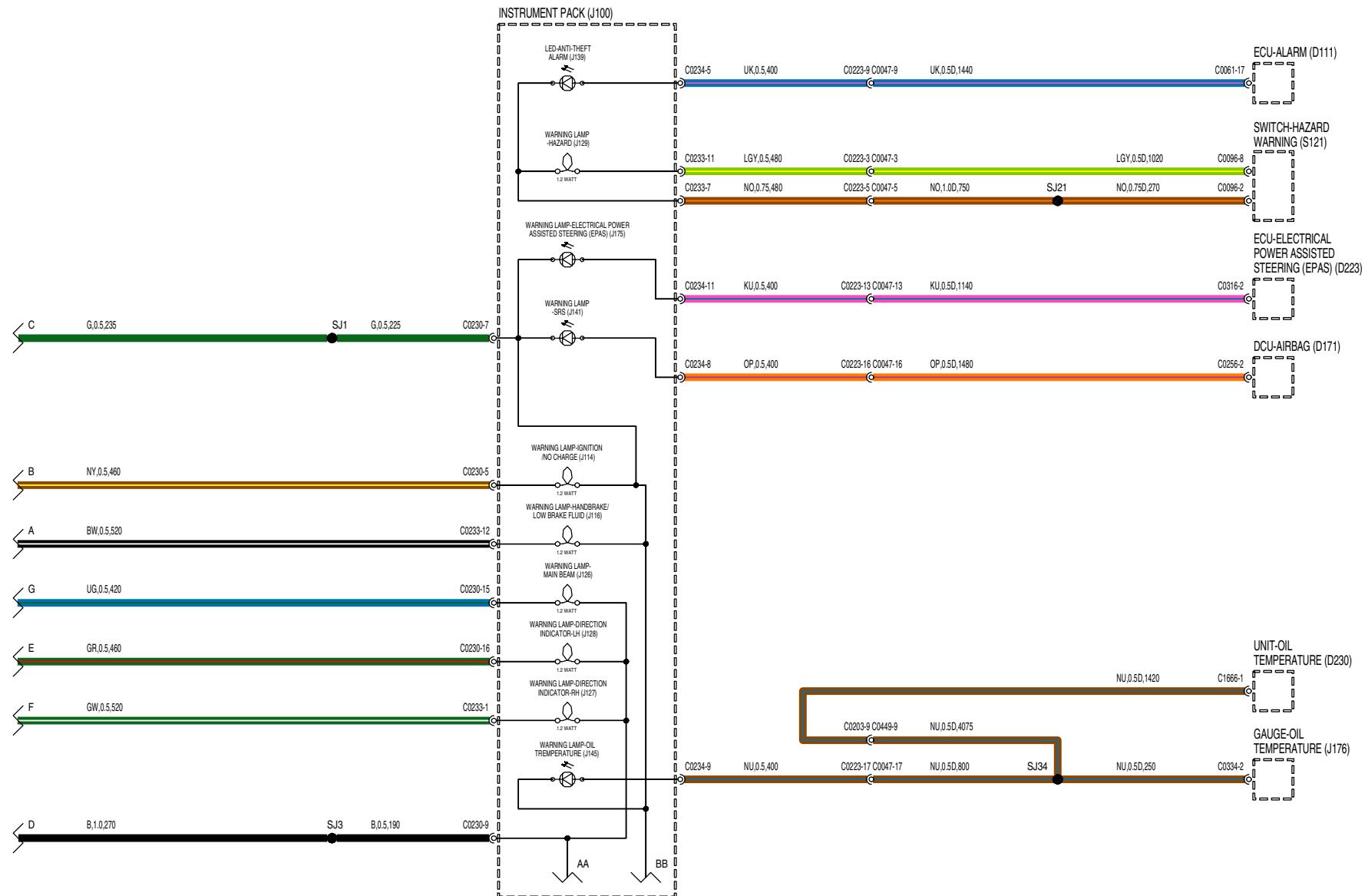
46.2

INSTRUMENTS



VWR119630-1af4

INSTRUMENTS

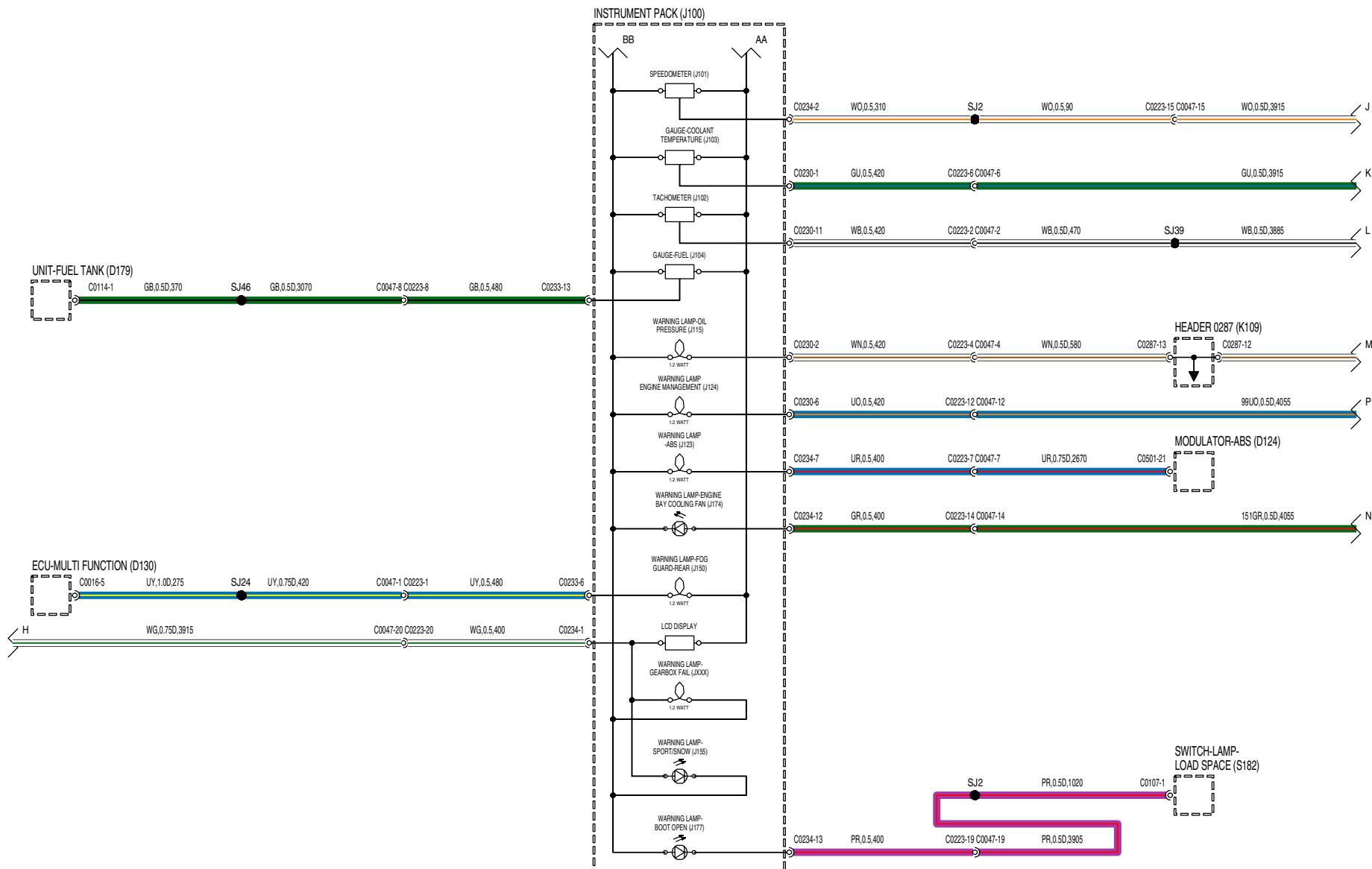


VWR119630-2a4

MGF 2001 Model Year (LHD)

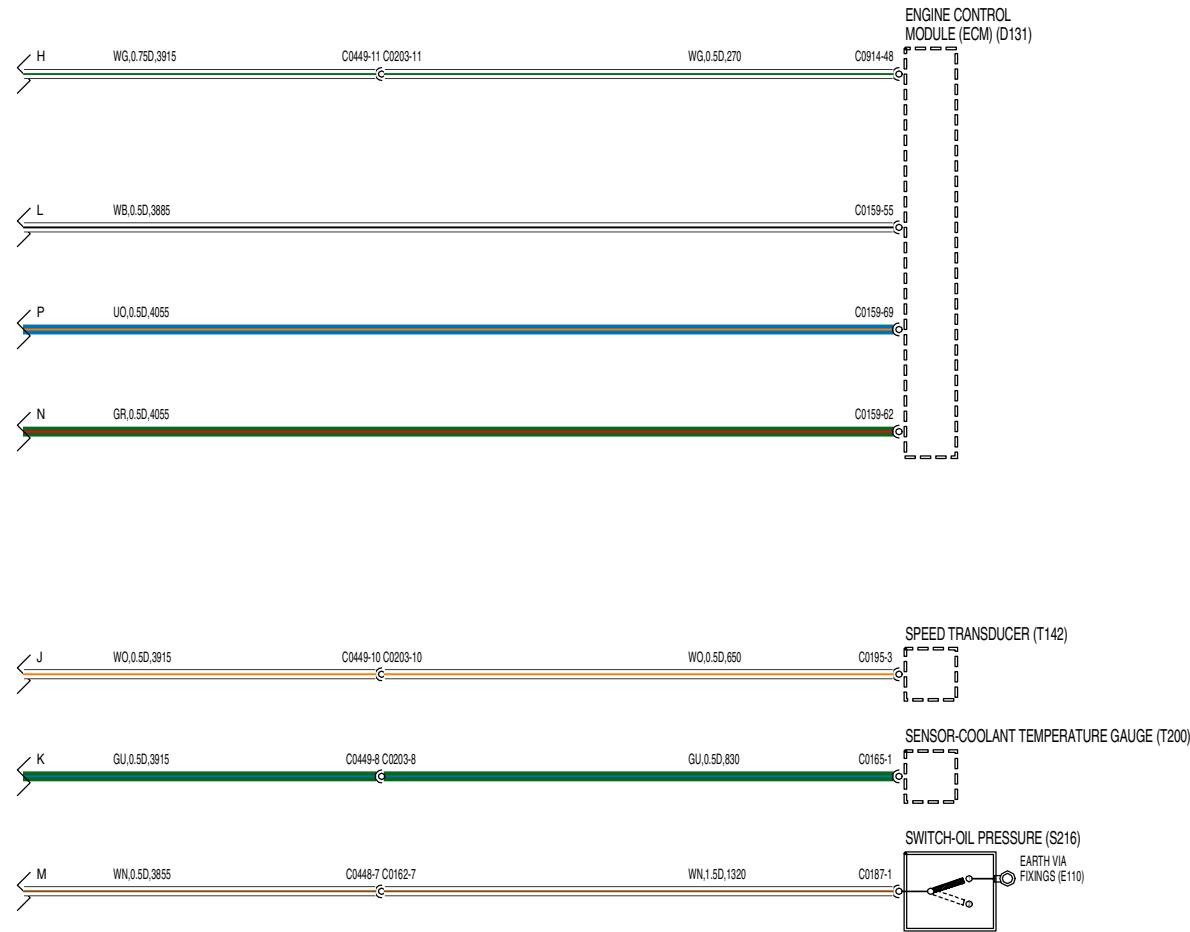
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INSTRUMENTS

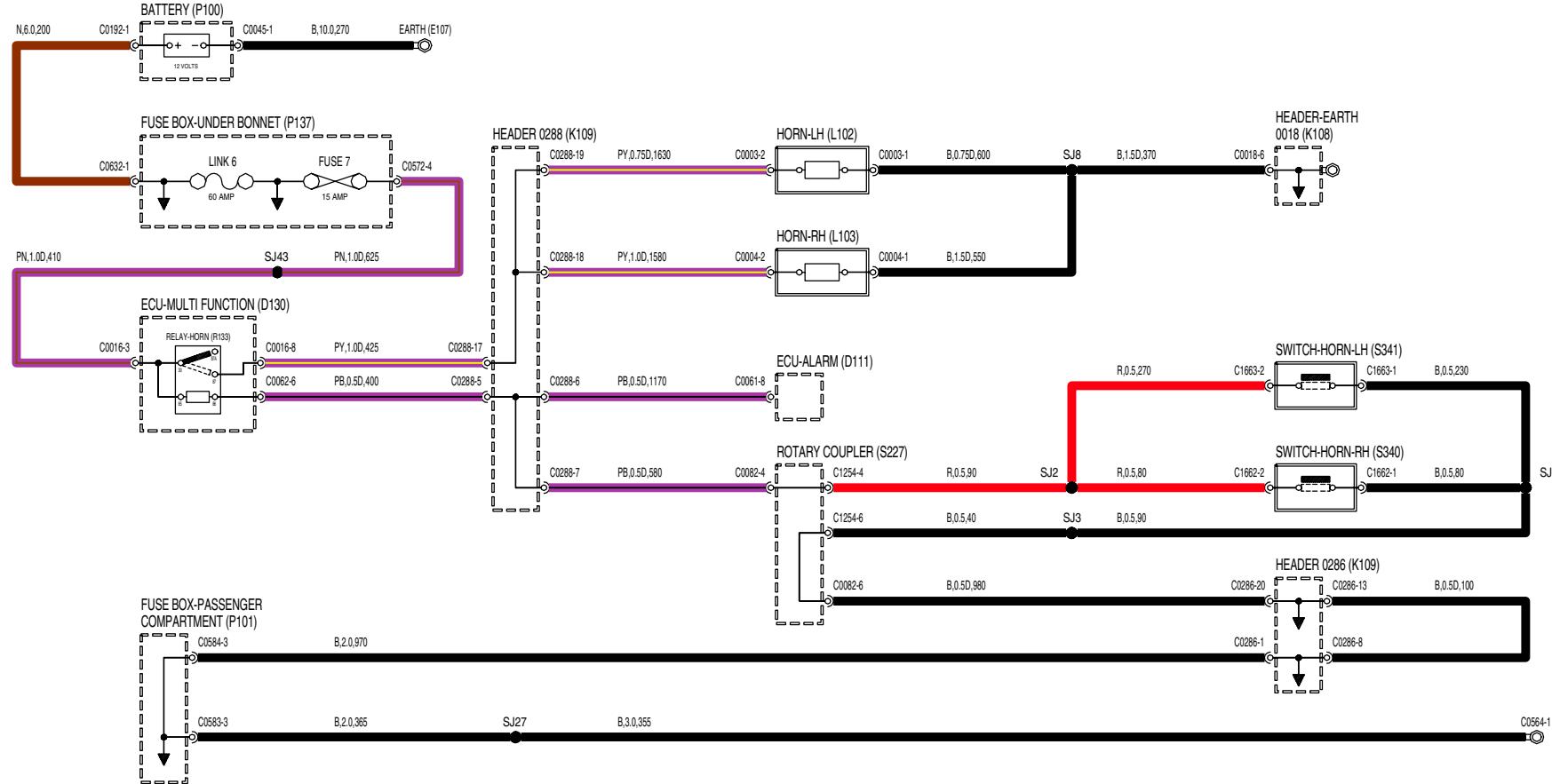


VWR119630-3c4

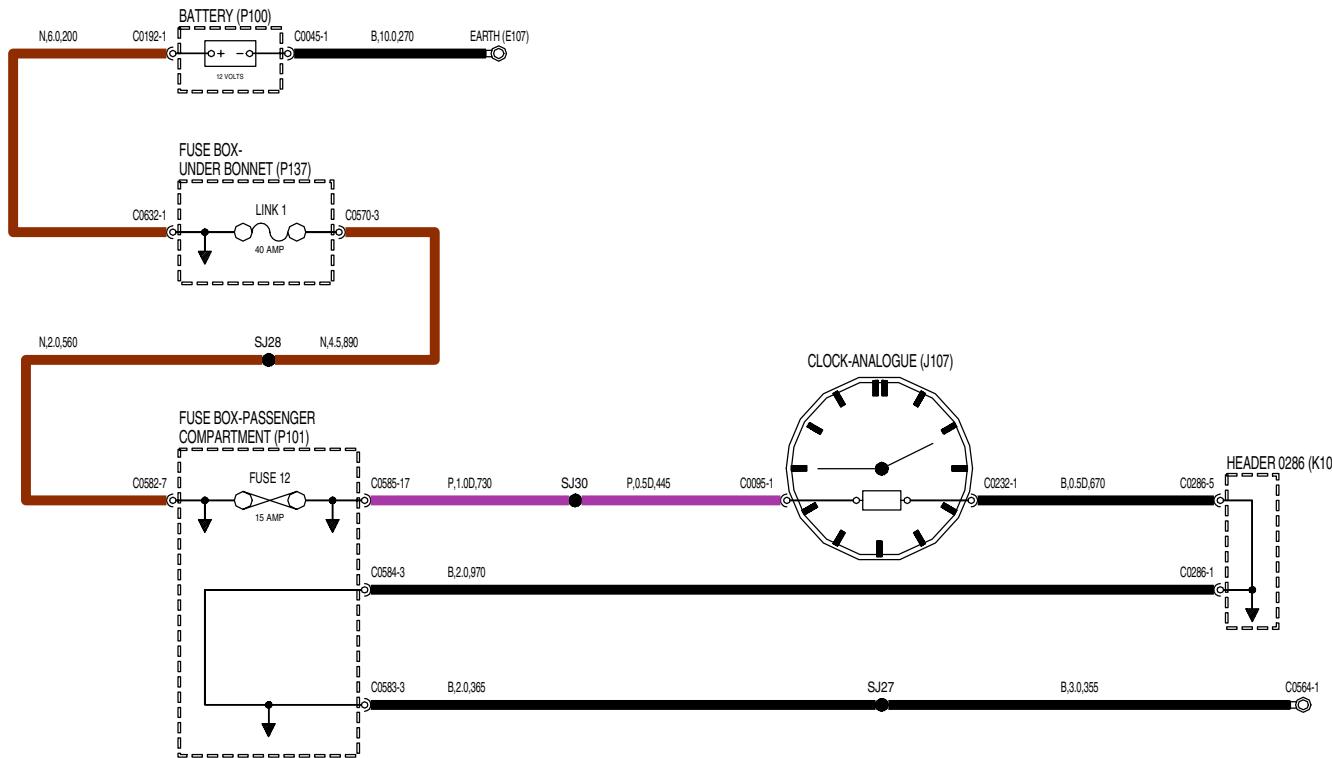
INSTRUMENTS



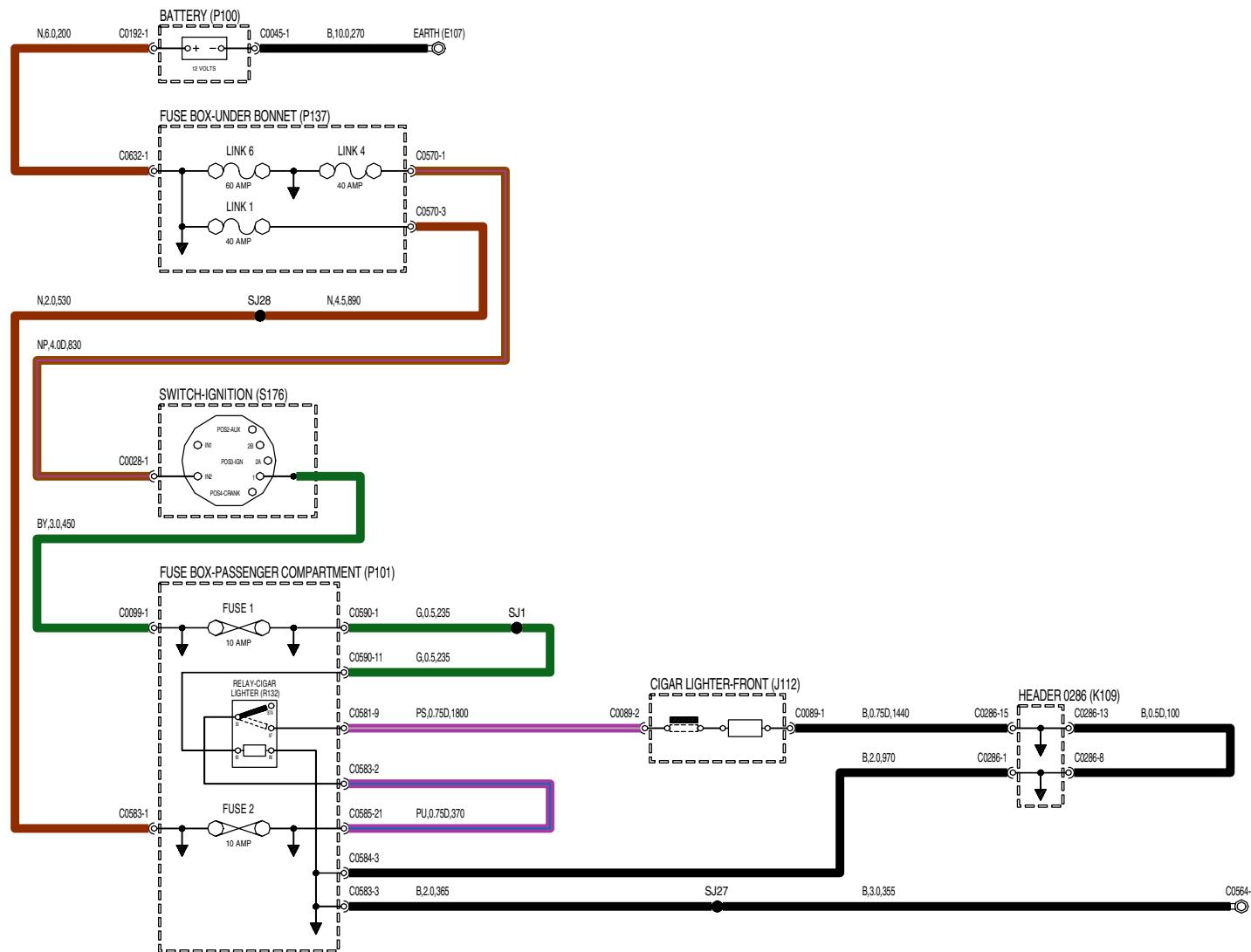
HORNS



CLOCK



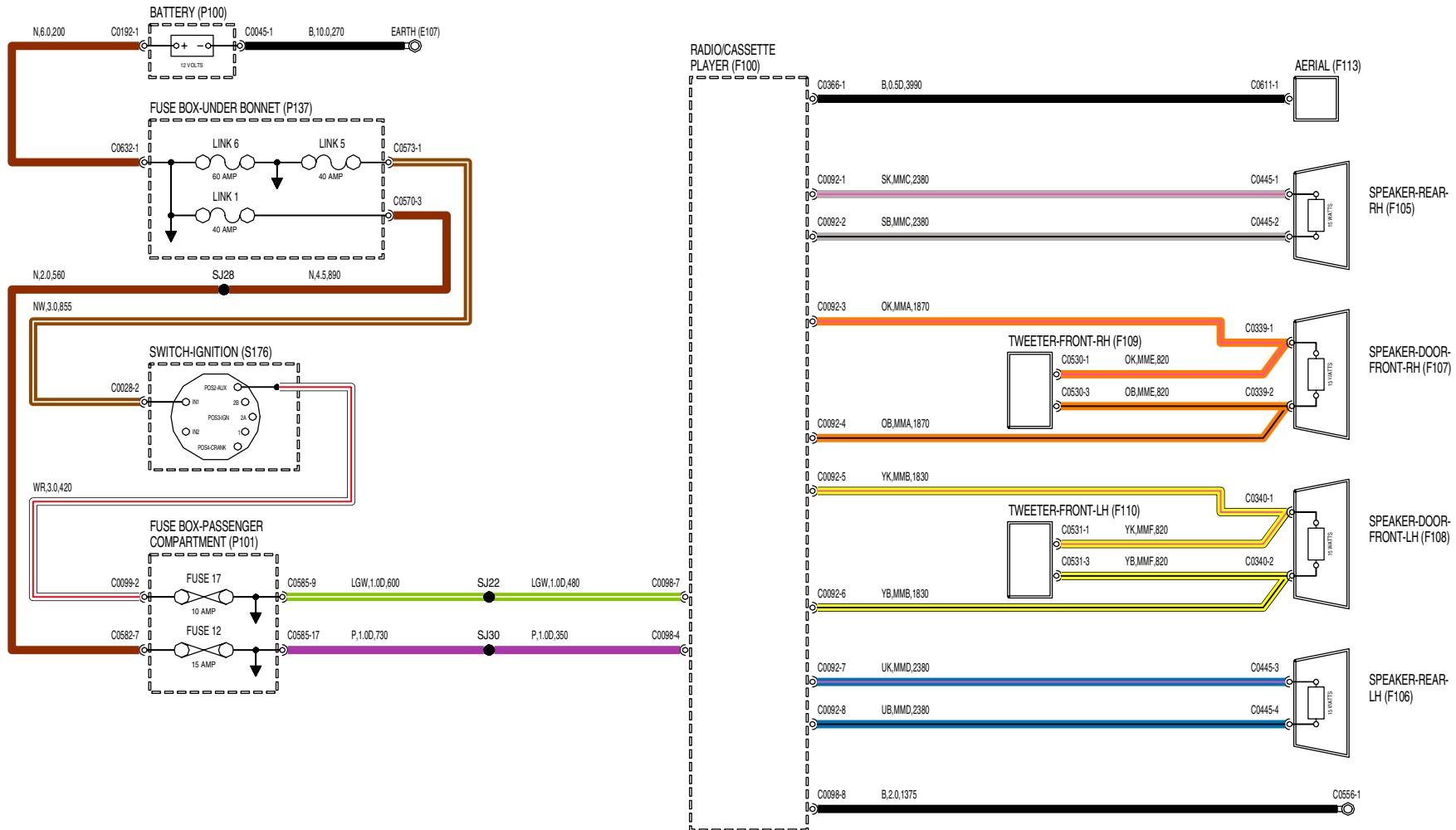
CIGAR LIGHTER



VWR119250-1af1

AUDIO SYSTEM

RADIO/CASSETTE PLAYER



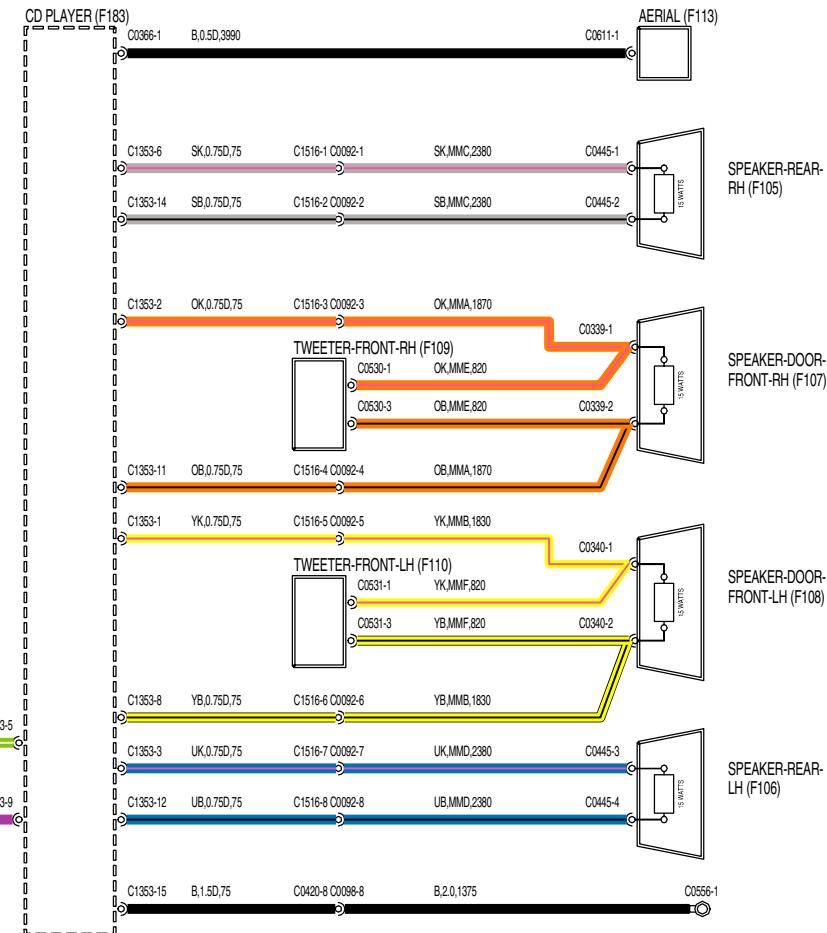
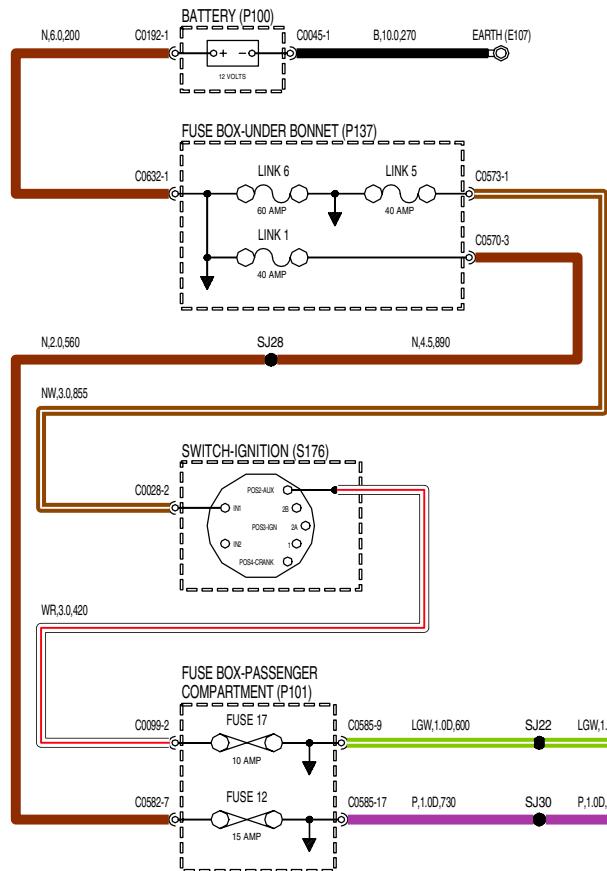
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MGF 2001 Model Year (LHD)

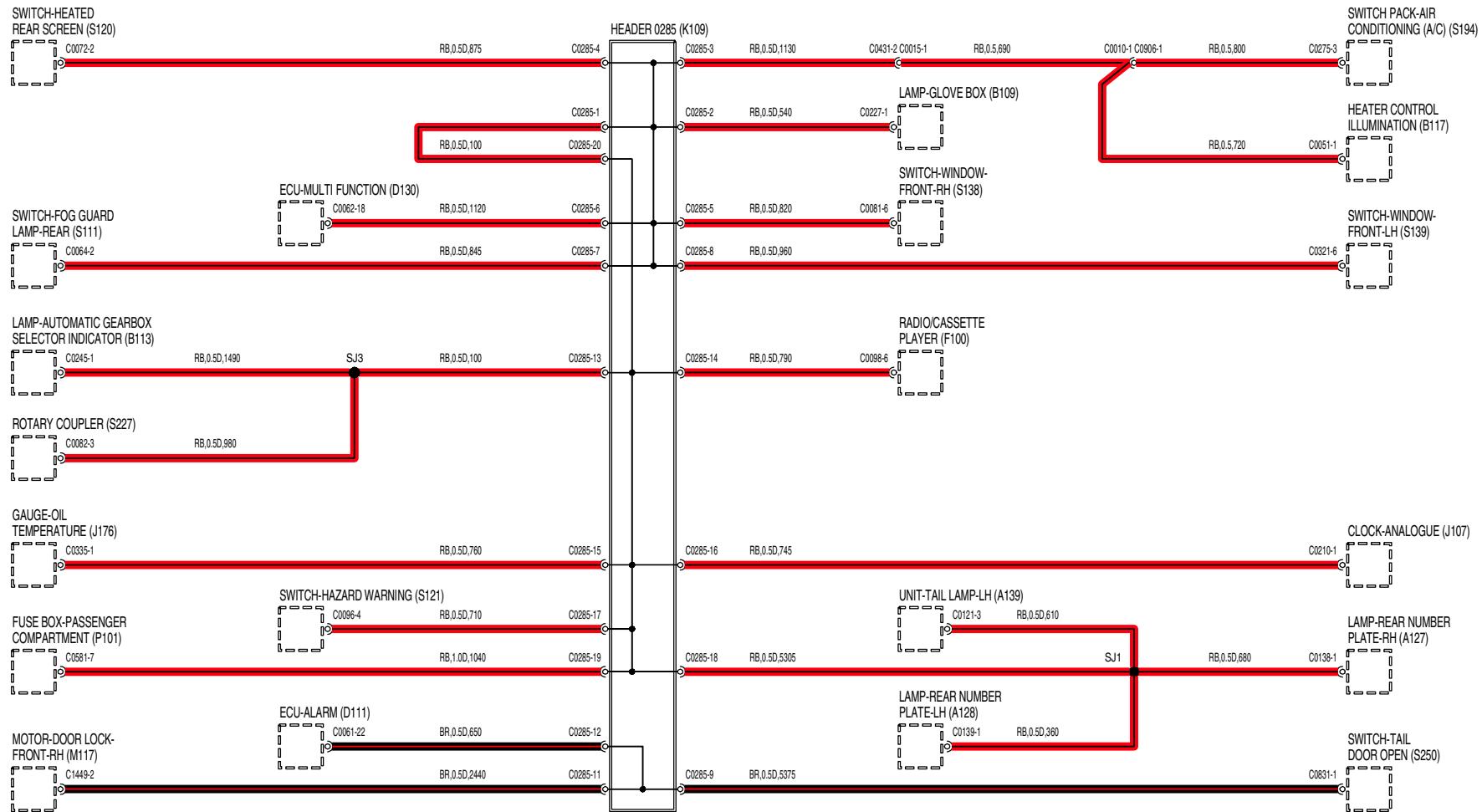
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AUDIO SYSTEMS

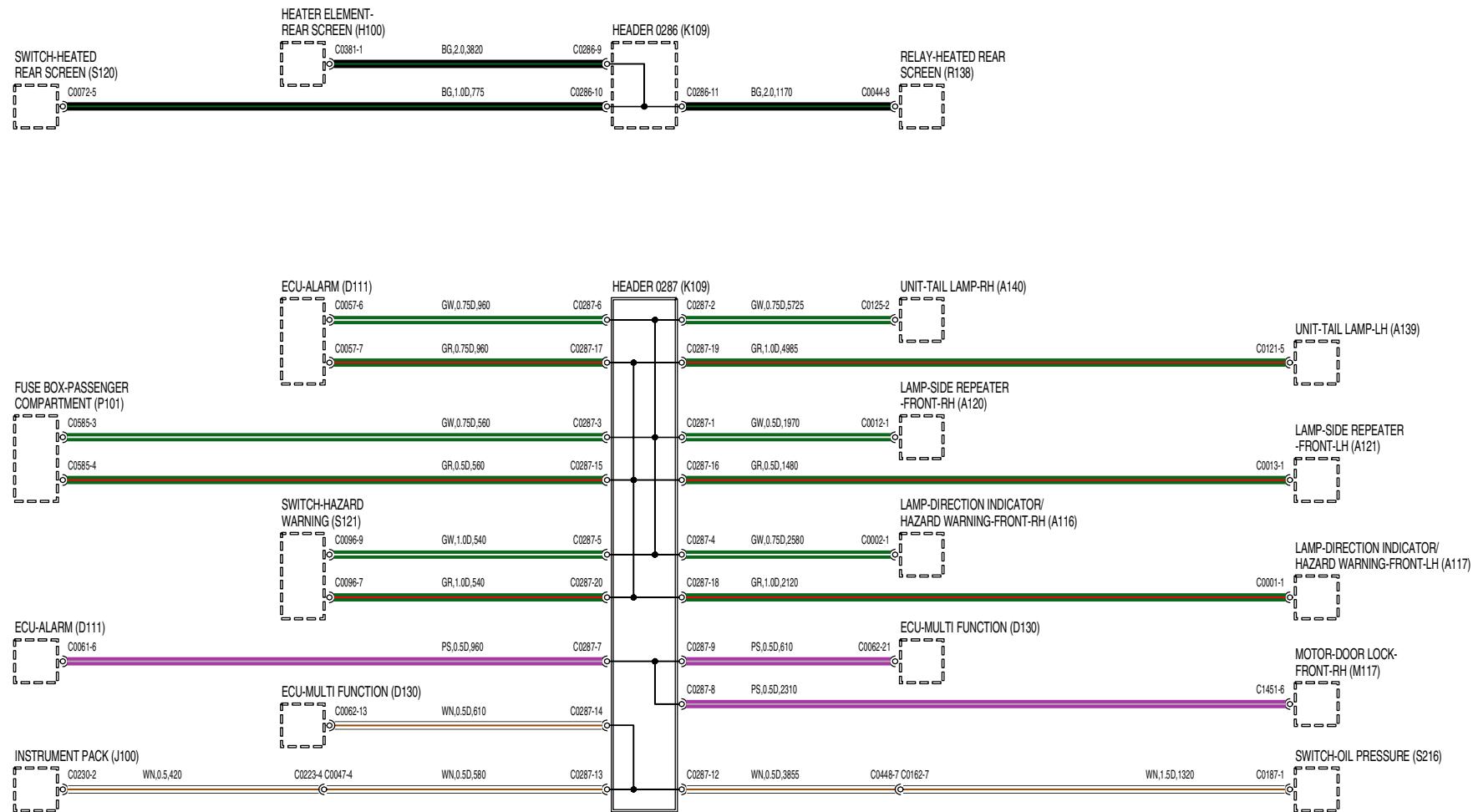
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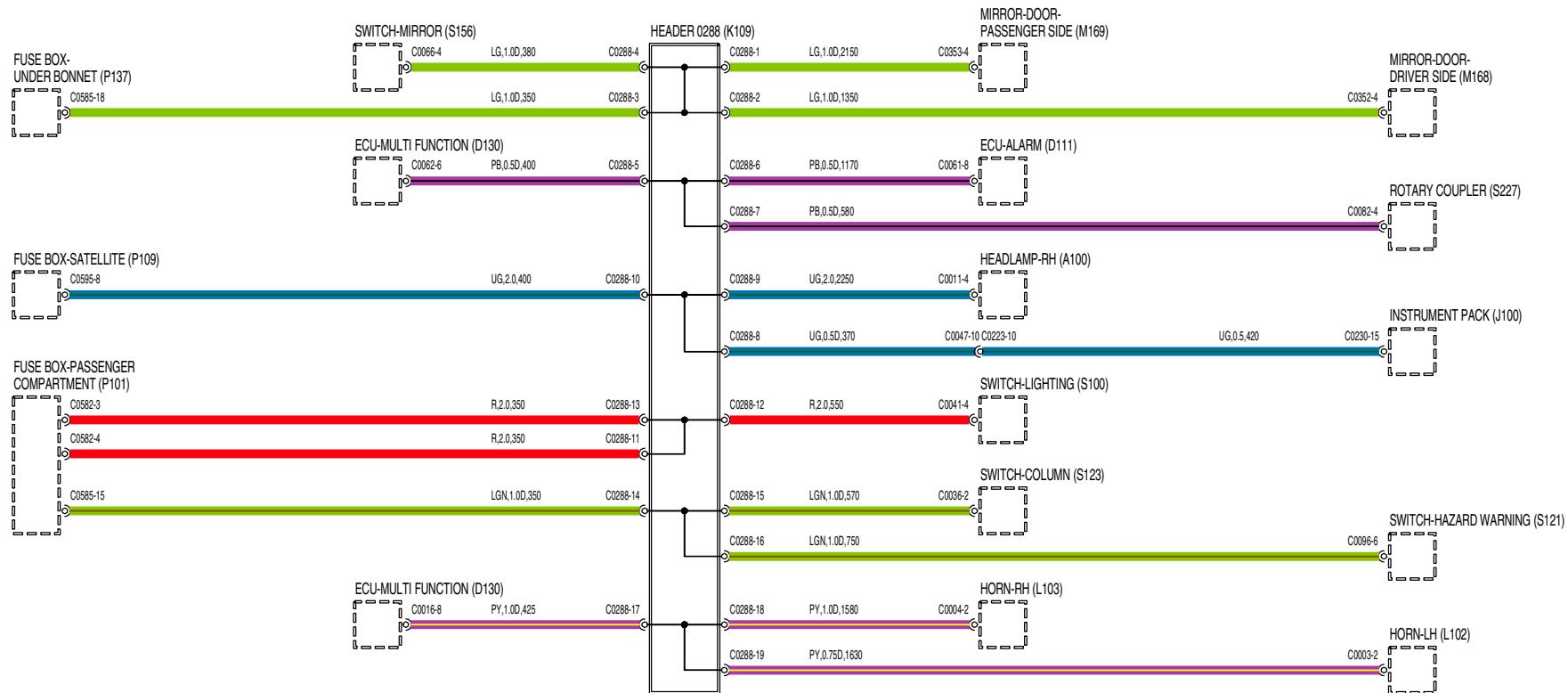
HEADER JOINTS



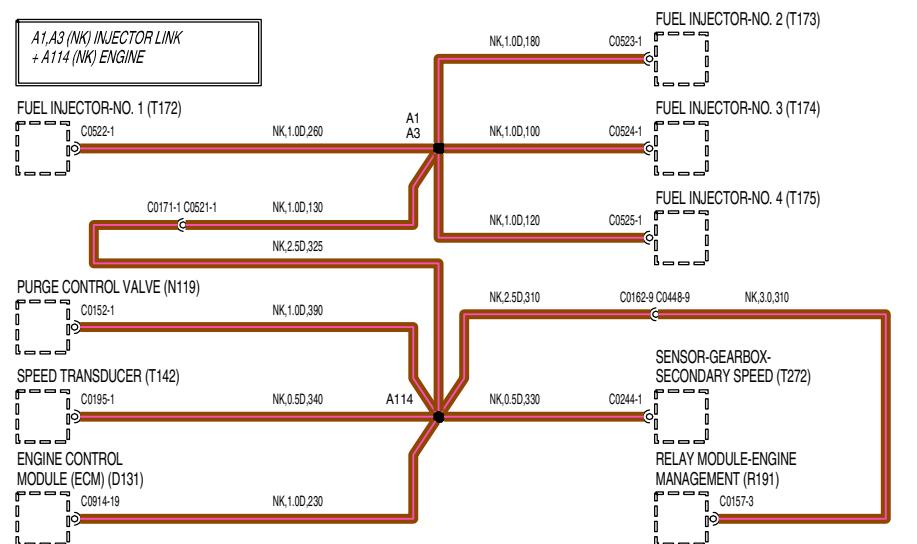
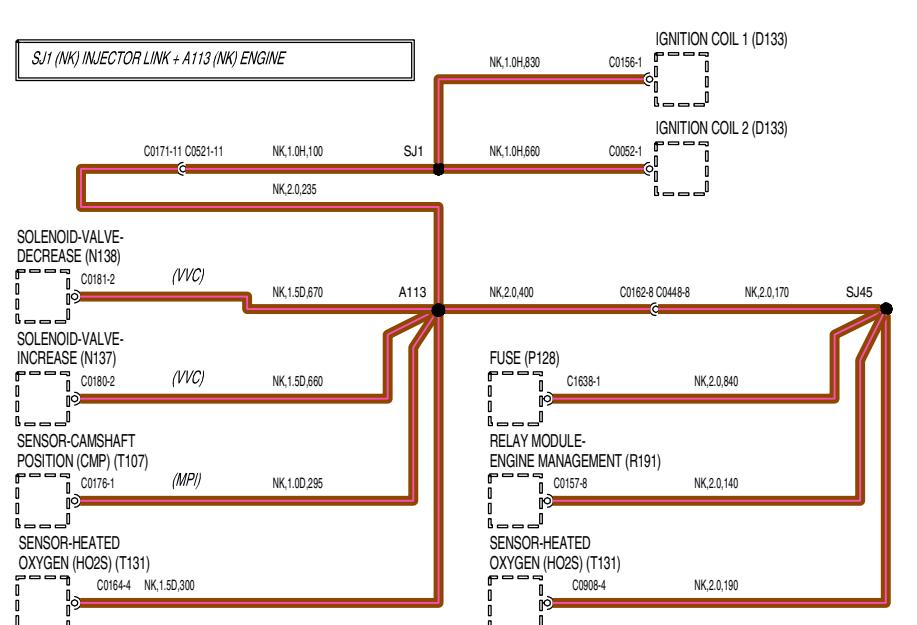
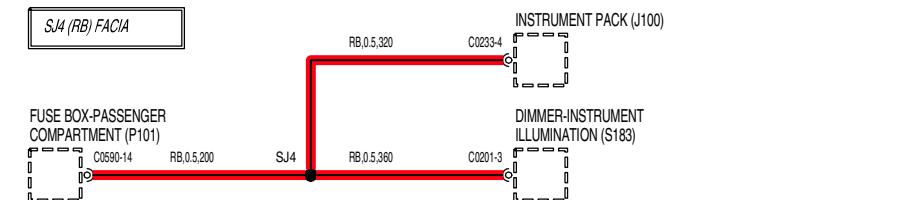
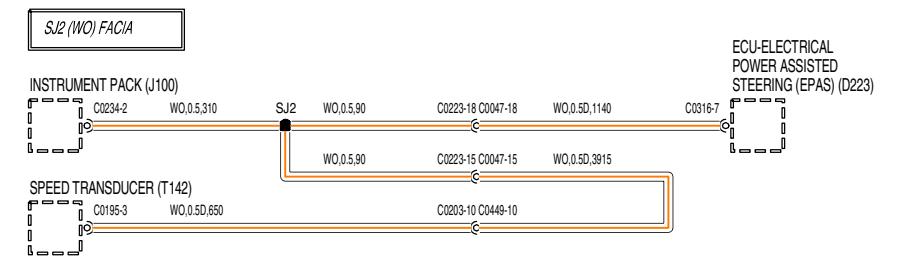
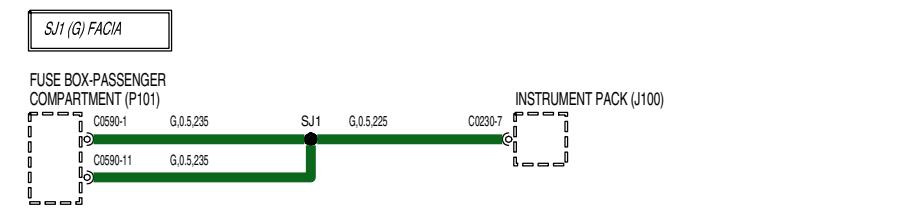
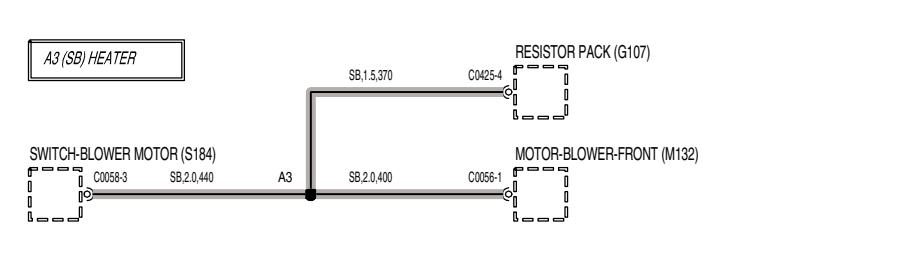
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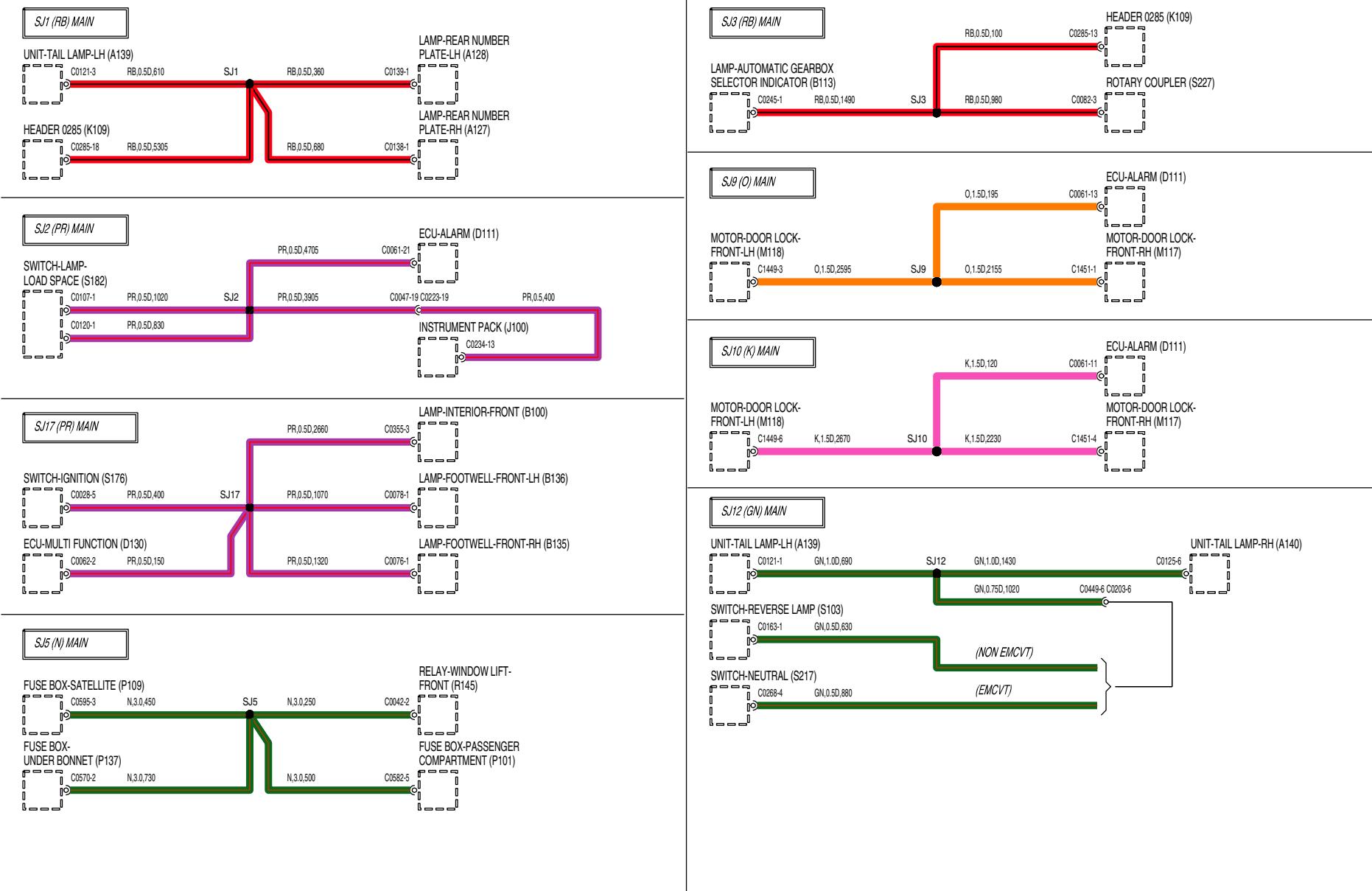
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SPLICES AND CENTRE TAPS

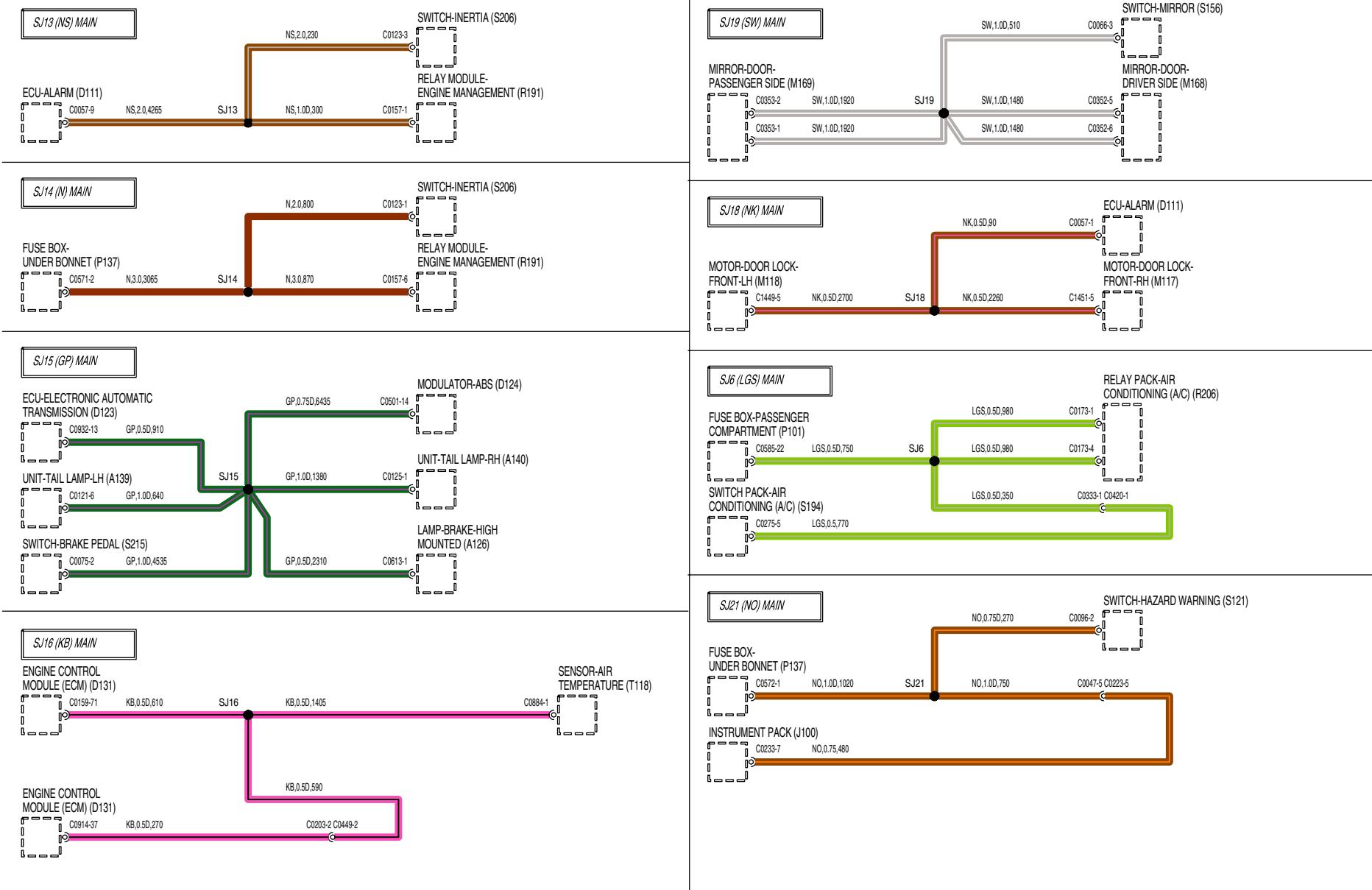


SPLICES AND CENTRE TAPS



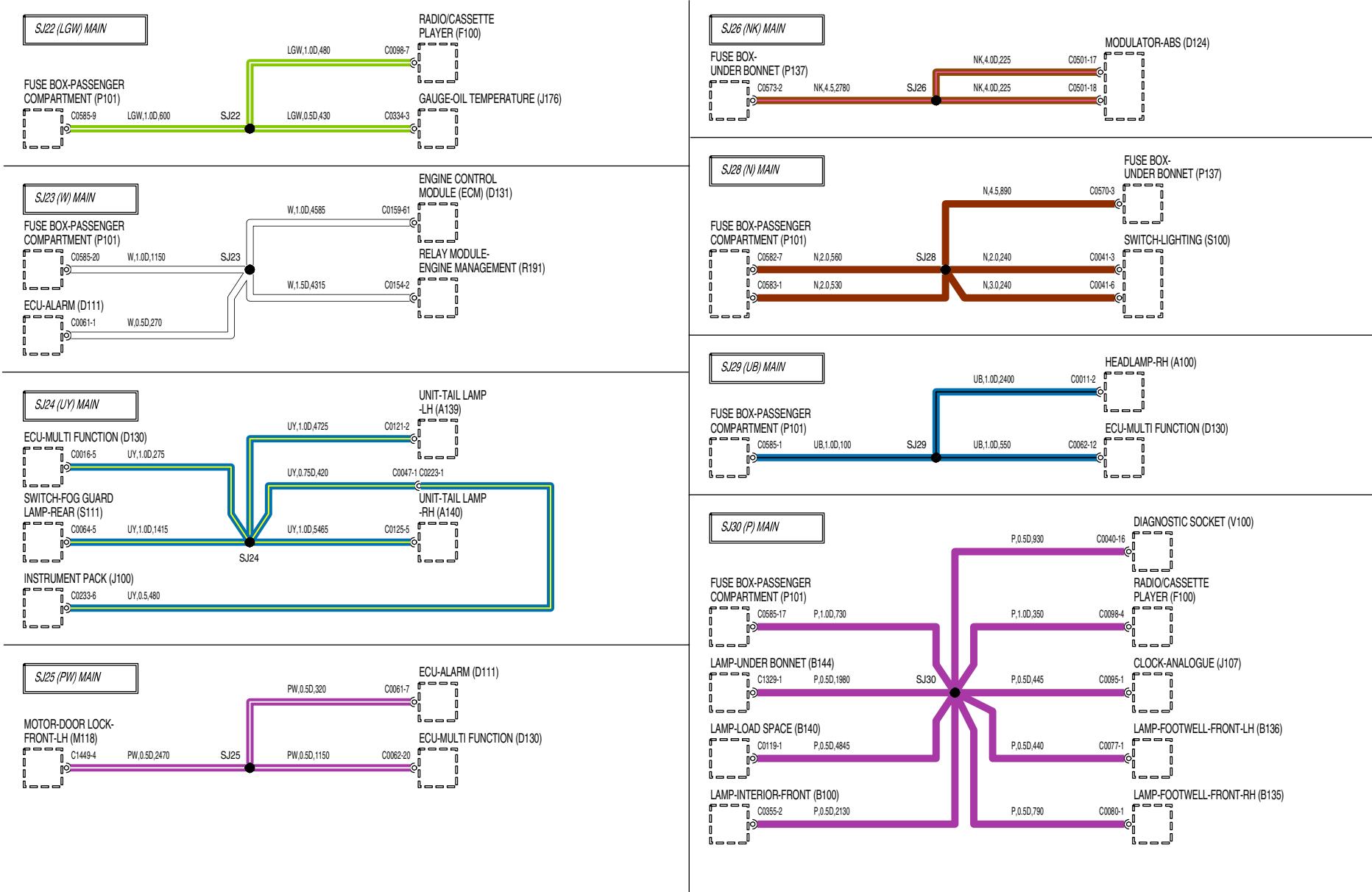
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SPLICES AND CENTRE TAPS



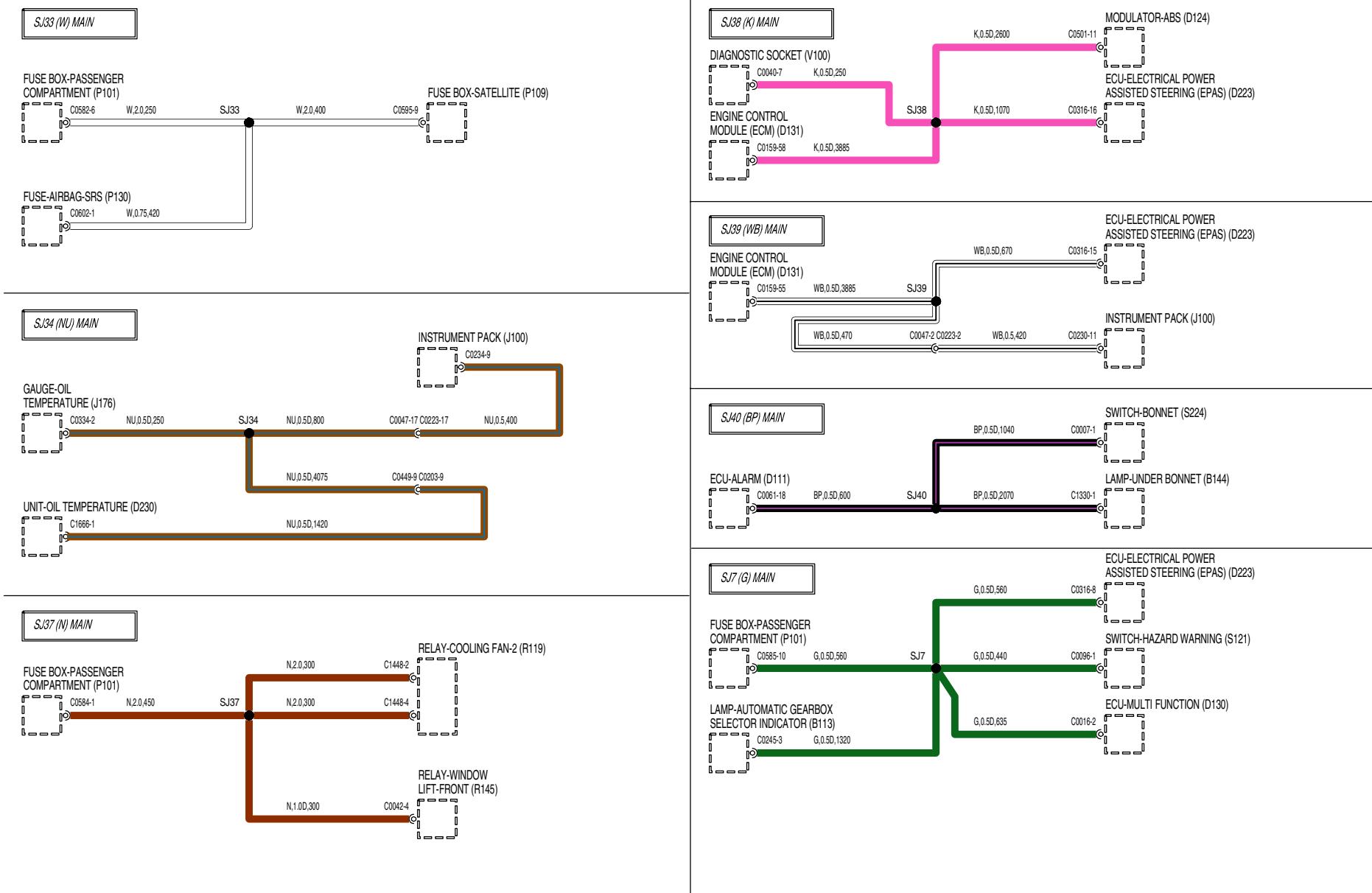
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SPLICES AND CENTRE TAPS



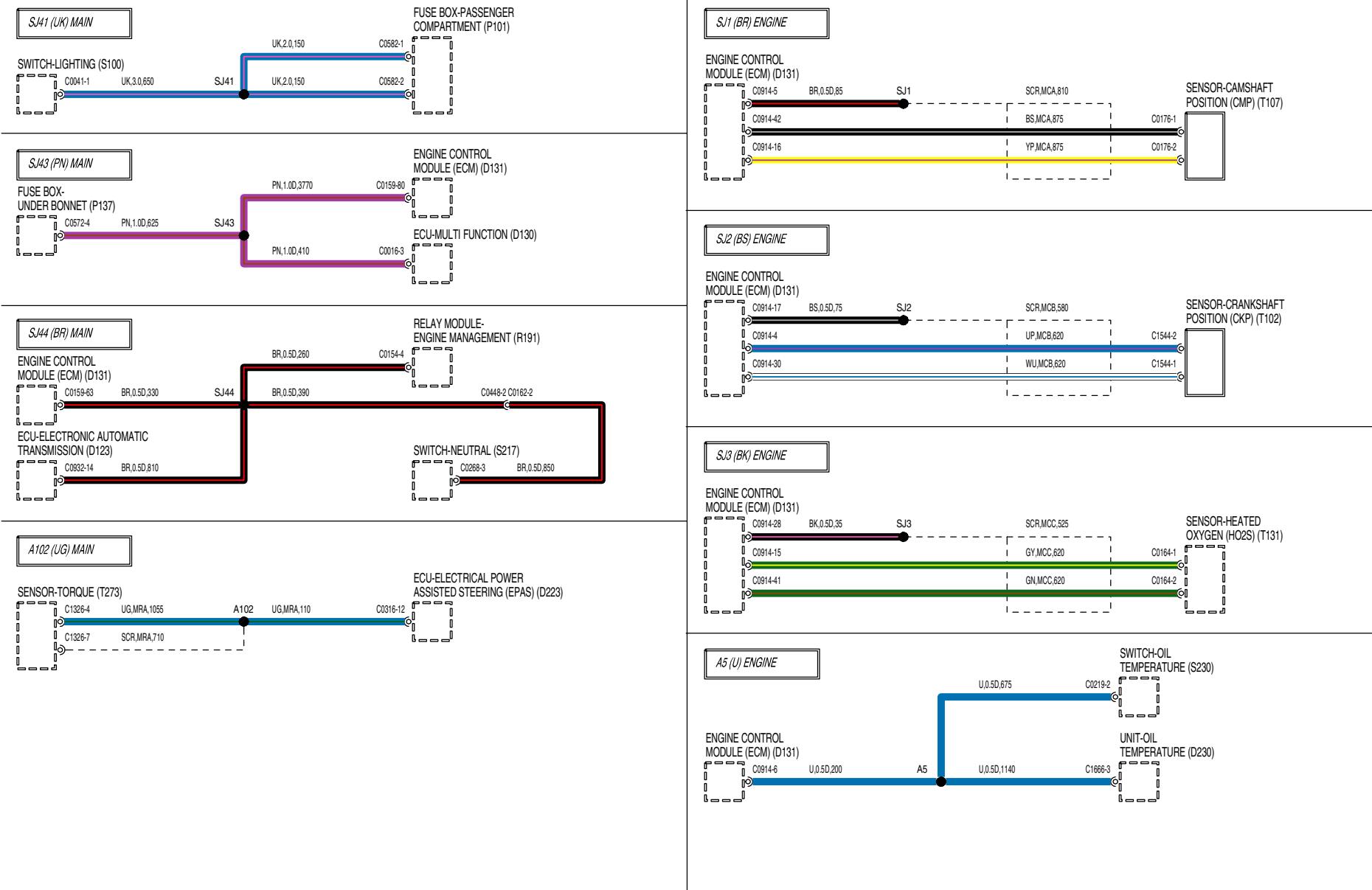
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SPLICES AND CENTRE TAPS



VWR119810-50f6

SPLICES AND CENTRE TAPS



VWR119810-6af6