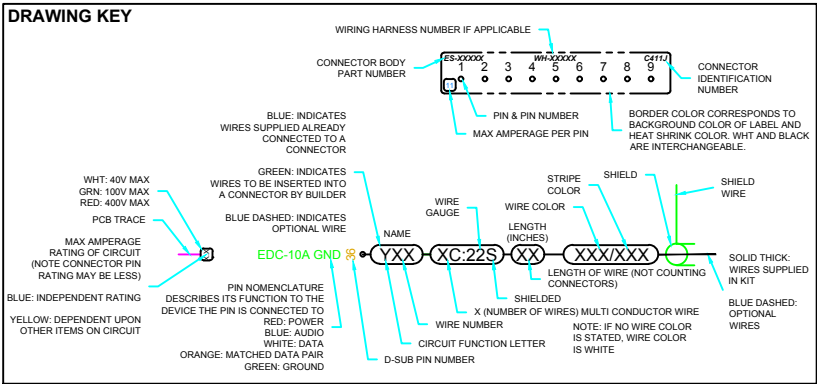


CIRCUIT LETTER FUNCTION	
LETTER	CIRCUITS
C	CONTROL SURFACE
D	INSTRUMENT
E	ENGINE INSTRUMENT
F	FLIGHT INSTRUMENTS
H	HEATING VENTILATING
J	IGNITION
K	ENGINE CONTROL
L	LIGHTING
P	POWER CONTROL
Q	FUEL
R	RADIO
RZ	HEADPHONE
T	SPECIAL ELECTRONIC
TC	RADIO CONTROL
TD	AIRBORNE ANNOUNCING
TP	BEACON
TQ	TRANSMITOR RECEIVER
W	WARNING EMERGENCY



GARMIN GTN 650Xi INTERNAL PRESETS

AIRINC 429 CONFIGURATION

- AIRINC 429 IN 1	LOW	EFIS FORMAT 2
- AIRINC 429 IN 2	LOW	OFF
- AIRINC 429 OUT 1	LOW	GARMIN 429
- AIRINC 429 OUT 2	LOW	OFF
- SDI		LNAV 1

RS-232 CONFIGURATION (CHANNEL, INPUT, OUTPUT)

- RS-232 1	MAPMX FORMAT 2	MAPMX FORMAT 2
- RS-232 2	OFF	ADS-B+ FORMAT 1
- RS-232 3	OFF	OFF
- RS-232 4	CONNECT FORMAT 2	CONNEXT FORMAT 2

MAIN SYSTEM CONFIGURATION

- AIRFRAME TYPE	FIXED-WING
- AIR/GROUND THRESHOLD	30KT
- AIR/GROUND DISCRETE	ACTIVE FOR AIRBORNE
- GPS ANT. HEIGHT ABOVE GND	4FT
- GPS SELECT	AUTO
- HEADING SRC INPUT	CONNECTED
- RADIO ALTIMETER INPUT	NOT CONNECTED
- ALTITUDE SRC INPUT	CONNECTED
- ENHANCED LIGHTING MODE	ENABLED
- CROSSFILL STATUS ALERT	DISABLED
- SYSTEM ID	GTN 1
- DATABASE SYNC	PILOT CONTROL
- AIRSPACE LABELS	ENABLED
- CHECKLIST PAGE TITLE	CHECKLIST
- ENHANCED LIGHTING MODE	ENABLED

COM CONFIGURATION

- COM RADIO	ENABLED
- COM SQUELCH MODE	BASIC
- COM RX SQUELCH	0%
- MIC 1 GAIN	+12DB
- SIDETONE SOURCE	EXTERNAL
- SIDETONE VOLUME	+26DB

VOR/LOC/GS CONFIGURATION

- NAV RADIO	ENABLED
- AIRINC 429 CONFIGURATION	TX LOW SDI VOR/ILS 1

DISCRETE INPUTS

- J1001-36	REMOTE GO AROUND
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ENHANCED LIGHTING

SOURCE SETTINGS

- DISPLAY SOURCE	LIGHTING BUS 1
- KEYS SOURCE	LIGHTING BUS 1
- LIGHTING BUS 1	14V DC 1 SEC

DAY MODE OPERATION

DISPLAY

- MINIMUM LEVEL	0.05%
- MAXIMUM LEVEL	100.00%

CONFIGURE CURVE

- VERTEX 1 INPUT LEVEL	1.00%
- VERTEX 1 OUTPUT LEVEL	1.00%
- VERTEX 2 INPUT LEVEL	8.00%
- VERTEX 2 OUTPUT LEVEL	1.00%
- VERTEX 3 INPUT LEVEL	88.00%
- VERTEX 3 OUTPUT LEVEL	100.00%
- VERTEX 4 INPUT LEVEL	99.00%
- VERTEX 4 OUTPUT LEVEL	100.00%

PHOTOCELL OVERRIDE

- PHOTOCELL TRANSITION	10.0%
------------------------	-------

KEYS

- MINIMUM LEVEL	1.00%
- MAXIMUM LEVEL	100.00%

ELECTRICAL SYSTEM BENCH TEST PROCEDURE

Avionics Group

- ___Check PFD & MFD Power On
- ___Install latest software and settings per the readme files (applicable portions) on the Van's Web Site
 - ___Setup Xpndr Hex Code
 - ___Setup AP servos if installed
- ___Check PFD & MFD recognize all LRU's
- ___Check Xpndr will transmit.
- ___Check COM turns on.
- ___Check PFD recognizes COM, and can push frequencies to COM radio
- ___Check Backup Battery Function PFD
- ___If installed check AP Control Head function (knobs function for SkyView as well)

Audio Group

- ___Configure GTN 650Xi in accordance with "GTN 650Xi Internal Presets"

- ___Check Pilot Headset Jack
- ___Check Pilot Mic Jack for Xmit
- ___Check Co-Pilot Headset Jack
- ___Check Co-Pilot Mic Jack for Xmit
- ___If installed check XM music output to headset.

Cockpit Group

NOTE: If customer has selected the pre-wired stick option then use their control sticks

- ___Check Pilot TX Button
- ___Check Pilot Trim Buttons (Both Directions)
 - ___Verify proper trim direction movement on screen indicator and servo with input
- ___Check Co-Pilot TX Button
- ___Check Co-Pilot Trim Buttons (Both Directions)
 - ___Verify proper trim direction movement on screen indicator and servo with input
- ___Check function of AP disconnect switch near throttle.
- ___Check Pilot AP Disconnect Switch
- ___Check Co-Pilot AP Disconnect Switch
- ___Check Pilot COM Freq Swap
- ___Check Co-Pilot Freq Swap
- ___Check Dimmer (Note PCB portion will be checked during AV-60000 Check)
 - ___Turn on all switches. Check that all lighted switches lights turn on and dim. (Ignore wires going to cabin light.)
- ___Check canopy latch switch
- ___Check flap motor function both directions
- ___Check for power output at USB connectors / Power Outlet

Wing Group

- ___Check Stall Warning
- ___Check NAV/Strobe Lights
- ___Check Landing Lights (Both if applicable)
- ___Check Wig Wag Function

iS Engine Group

- ___Check Master Relay Switch grounds out wire going to master relay
- ___Check Key switch connects HIC connector start pins
- ___Check spar pin light comes on when spar pin switches are not grounded.
- ___Check emergency switch provides power to Power X3 connector Pin 3
- ___Check Emergency Li Bat Warn Wire turns on warning in EFIS when grounded. (NOTE Check this error)
- ___Check fuel pump A and B switches for function

ELECTRICAL SYSTEM NOTES

- USE M22759/16 OR M27500 TEUFEL AIRCRAFT WIRE. CONTACT VAN'S ABOUT USING OTHER EQUIV.

- USE MIL-I-23053 HEATSHRINK. CONTACT VAN'S ABOUT USING OTHER EQUIV.

- LABEL THE FLYING LEAD OF EACH WIRE WITH THE TRUNCATED NOMENCLATURE AND WIRE NUMBER.

- CONNECT ALL 20-24 AWG WIRES TO D-SUBS USING ES-SA-1017 SOCKETS OR ES-SA-1018 PINS. PERMISSIBLE TO STRIP 18 AWG WIRE TO FIT ES-SA-1017 SOCKETS OR ES-SA-1018 PINS. ALL CRIMPS TO BE MADE PER MIL-C-22520F (1.2.2) USING A TYPE 1 TOOL.

- USE ONLY NOR-COMP BACKSHELLS ON D-SUB CONNECTORS (WITH THE EXCEPTION OF 50-PIN CONNECTORS)

- HARNESS MUST BE TESTED WITH ALL AVIONICS IN ACCORDANCE WITH THE "ELECTRICAL SYSTEM BENCH TEST PROCEDURE". RESULTS ARE TO BE SUPPLIED TO VAN'S FOR EACH HARNESS.

- CRIMPED MOLEX, TYCO, AND AMP TERMINALS ARE TO BE CRIMPED WITH THE MANUFACTURER'S RECOMMENDED CRIMPING TOOL.

- CRIMPED TERMINALS ARE TO BE INDIVIDUALLY PULL TESTED.

- DO NOT COVER WIRES WITH WIRE NET.

- HARNESSES ARE TO BE BUNDLED WITH LACING CHORD, WITH THE EXCEPTION OF BLUE TIE-WRAPS USED AT BULKHEAD STATIONS.

- ALL 3 CONDUCTOR JACKETED NON-SHIELDED WIRE MAY BE REPLACED WITH TWISTED WIRES OF THE SAME AWG SIZE AND THE SAME WIRE COLOR.

- ADJUST SOLDER SPLICE / RING TERMINAL SIZE AS REQUIRED TO ACCOMMODATE DESIRED WIRE GAUGE(S). MAINTAIN RING TERMINAL STUD/TAB SIZE.



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DRAWN BY: T. DE MAN

TOLERANCES: NONE

(UNLESS OTHERWISE SPECIFIED)

UNITS:

INCHES

SCALE: NONE

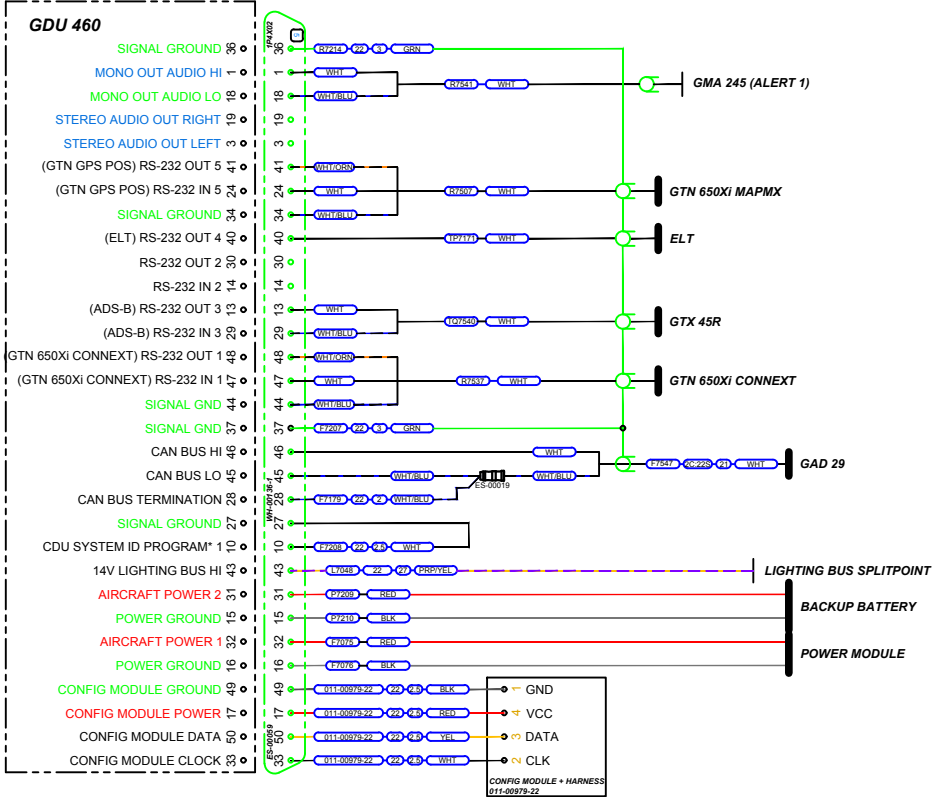
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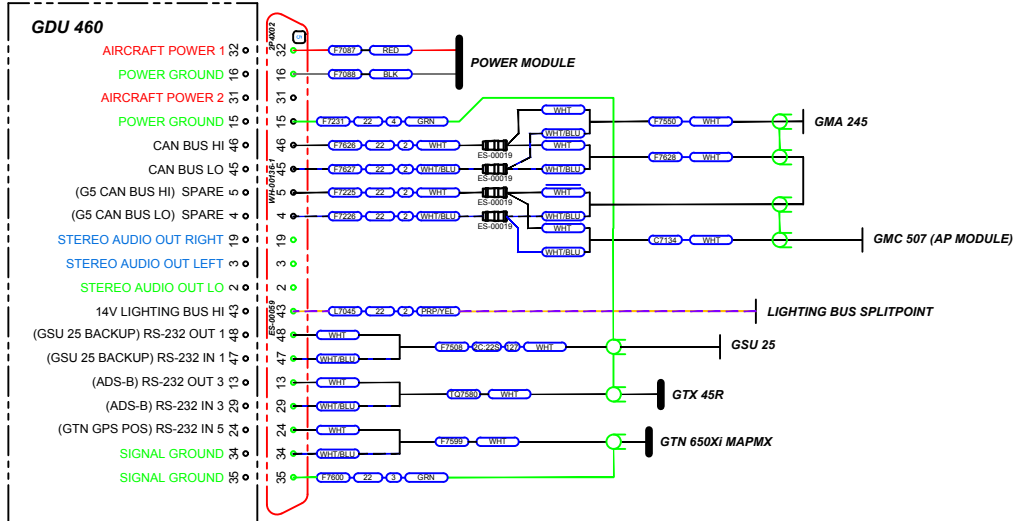
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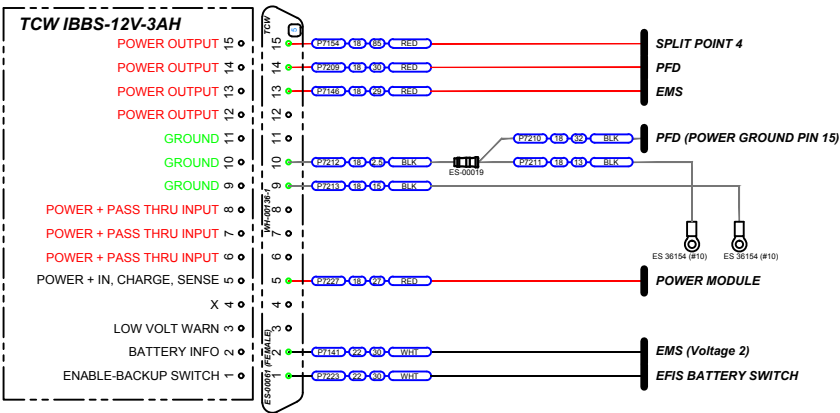
PFD



MFD



EFIS BATTERY



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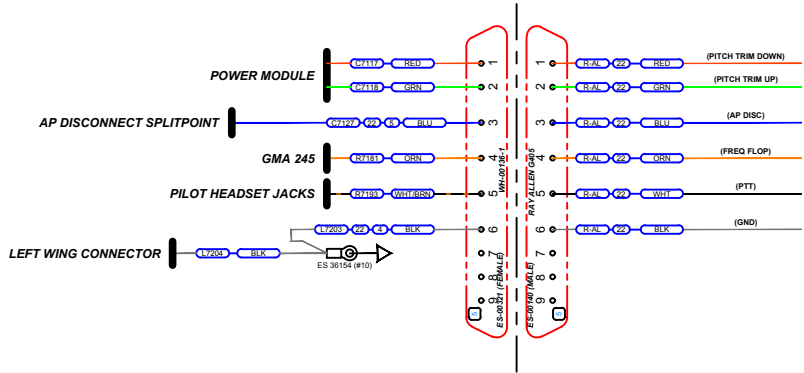
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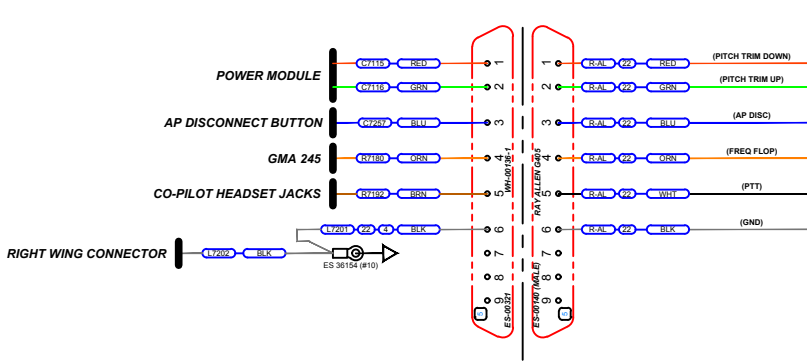
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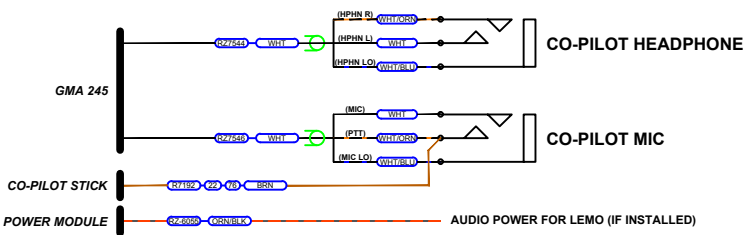
PILOT STICK GRIP



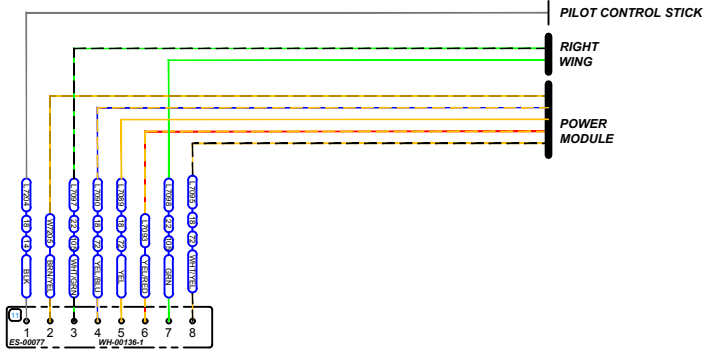
CO-PILOT STICK GRIP



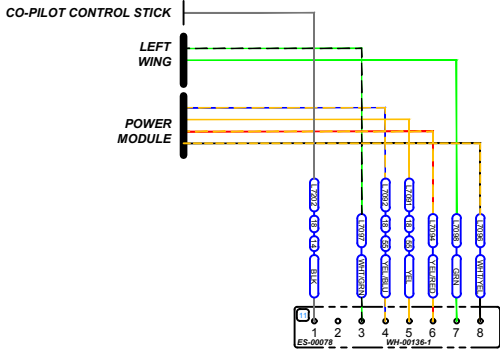
CO-PILOT HEADSET JACKS



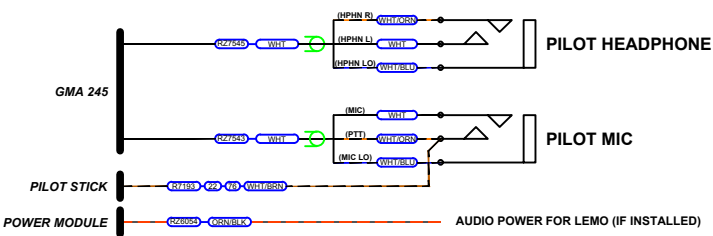
LEFT WING CONNECTOR



RIGHT WING CONNECTOR

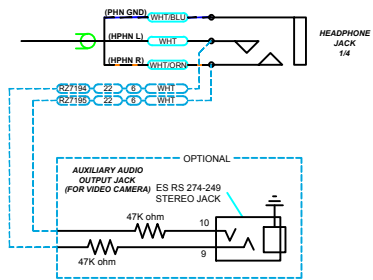


PILOT HEADSET JACKS

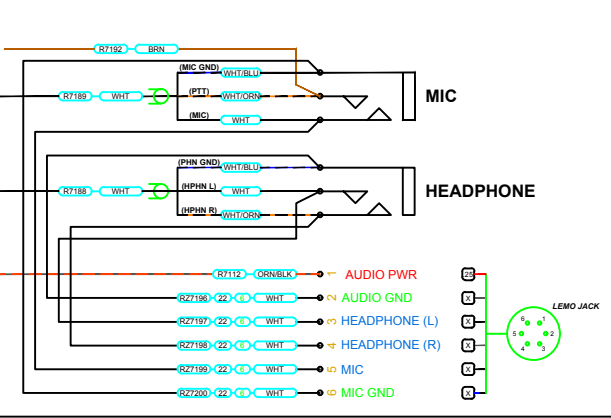


OPTIONAL AUDIO OUTPUT

COMPONENTS NOT INCLUDED WITH HARNESS
INSTALL ON CO-PILOT SIDE OF AIRCRAFT



OPTIONAL LEMO JACK



THESE COMPONENTS NOT INCLUDED IN AVIONICS KIT, NOR PART OF THE
WH-00136-1 . SEE WH-00032 AND WH-00033 RV-12IS WING HARNESS DRAWINGS.

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WH-00136-1 . SEE WH-00032 AND WH-00033 RV-12IS WING HARNESS DRAWINGS.



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INCHES

SCALE: NONE

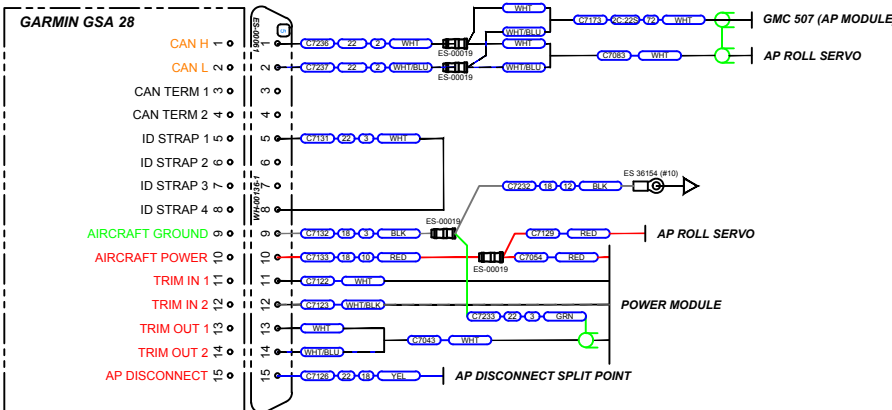
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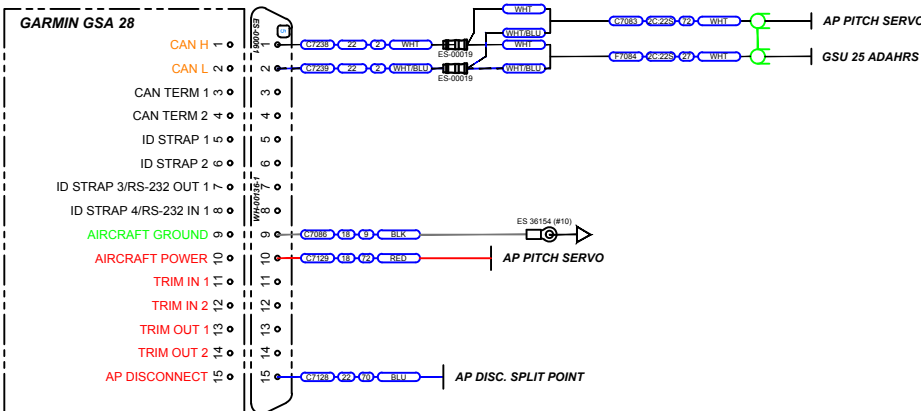
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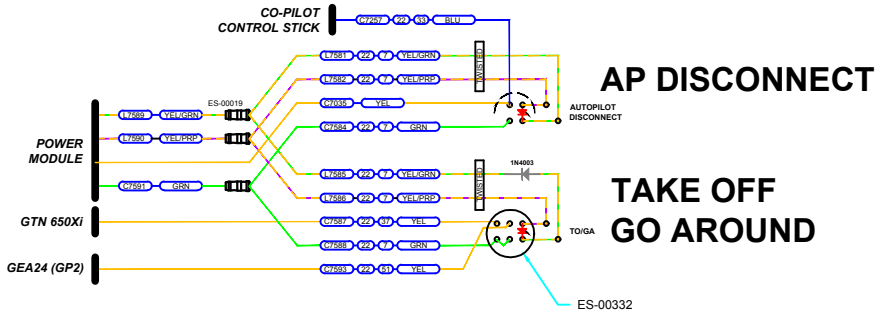
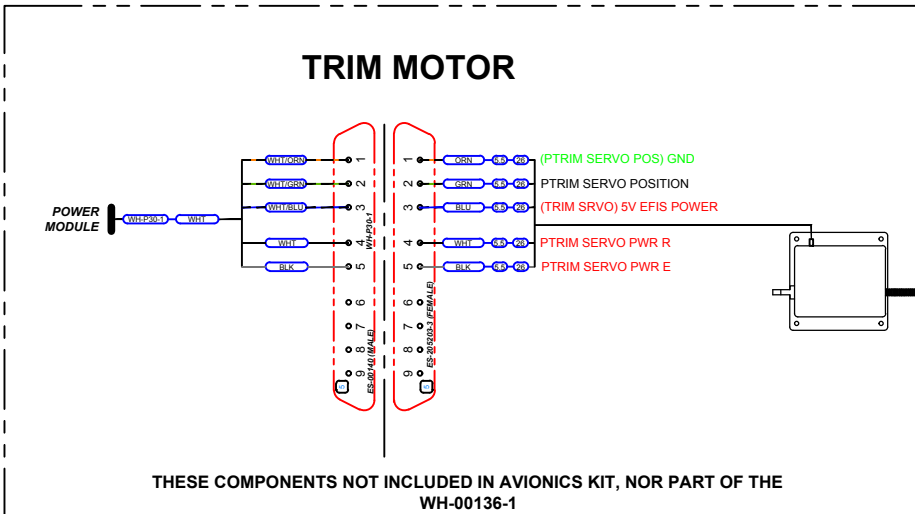
AUTOPILOT PITCH SERVO



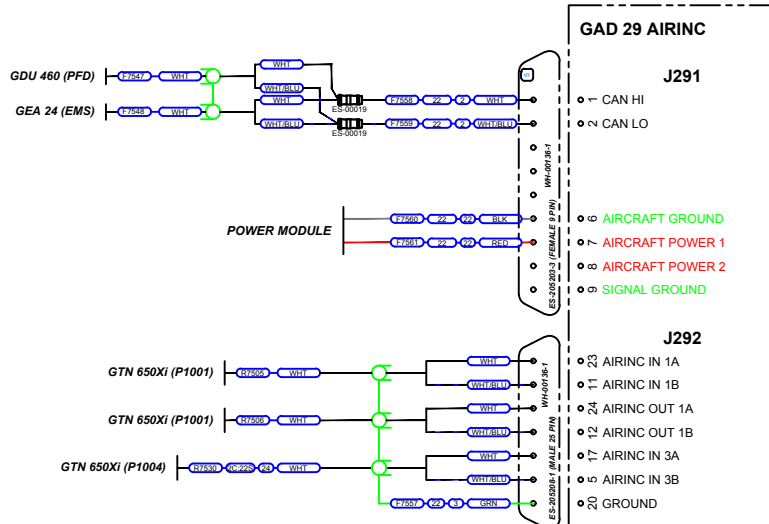
AUTOPILOT ROLL SERVO



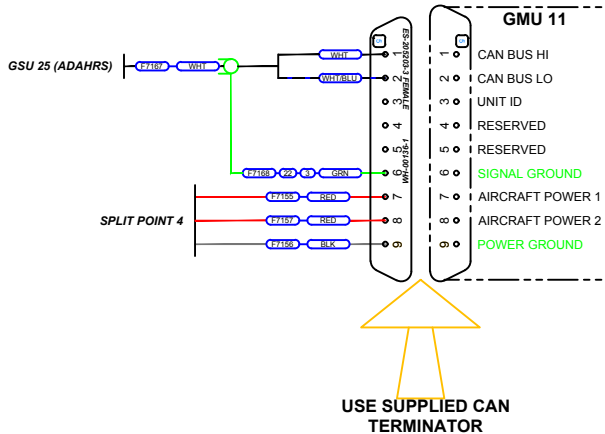
TRIM MOTOR



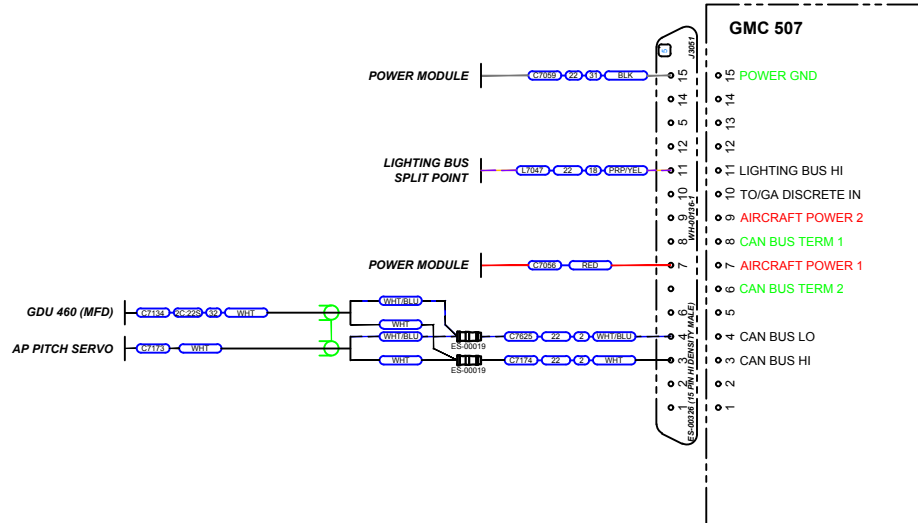
DATA BUS ADAPTER



MAGNETOMETER



AP MODULE



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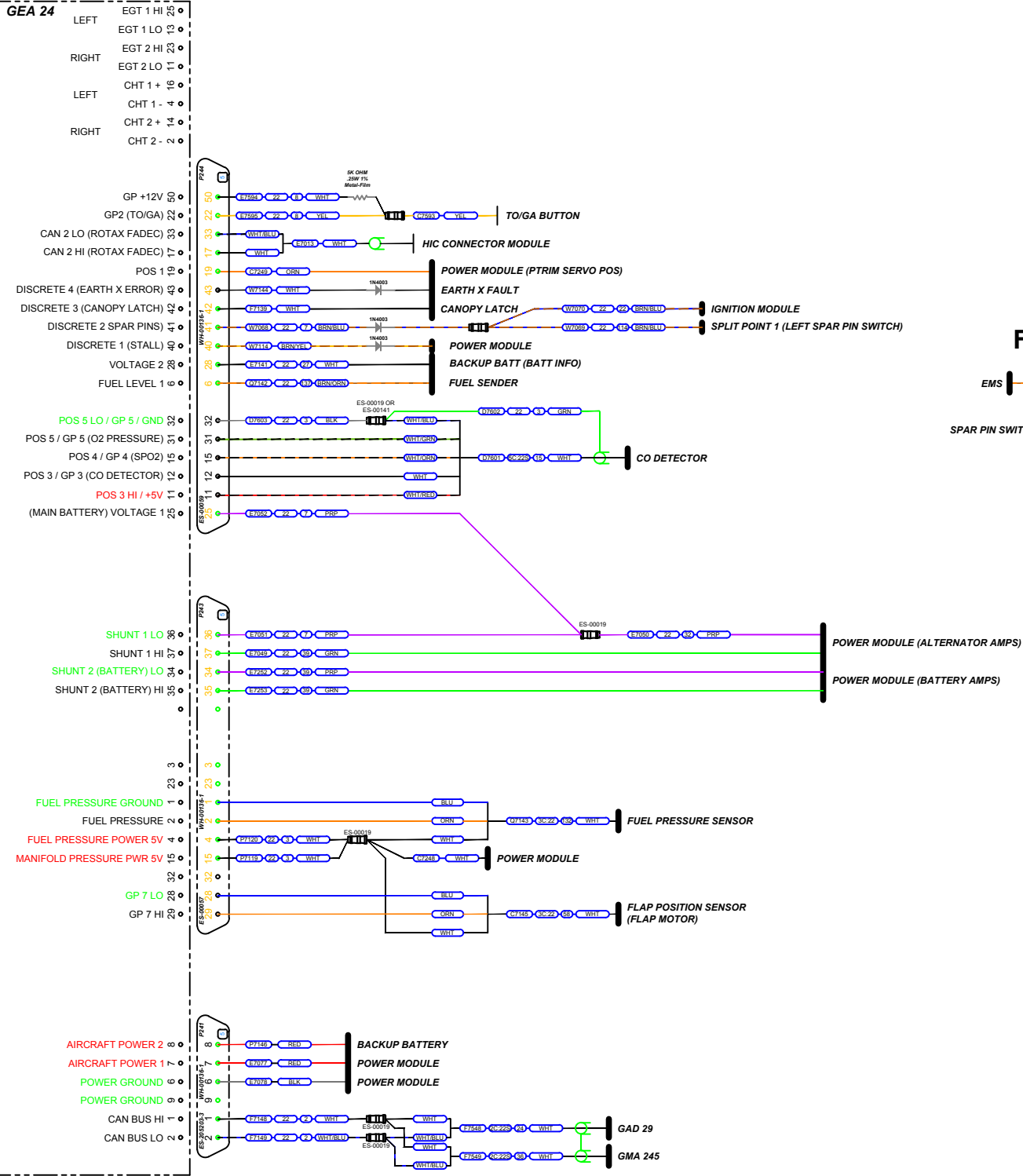
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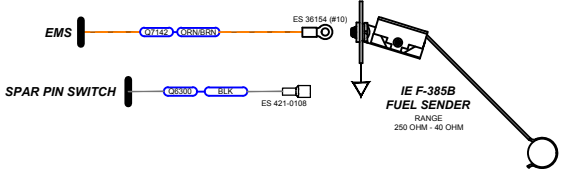
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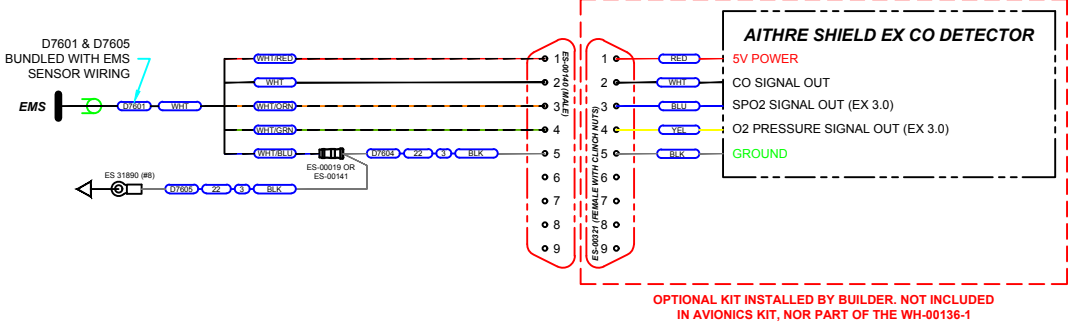
EMS



FUEL SENDER



CO DETECTOR



FUEL PRESSURE SENSOR



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INCHES

SCALE: NONE

WH-00136-3

PAGE: 7 OF 11

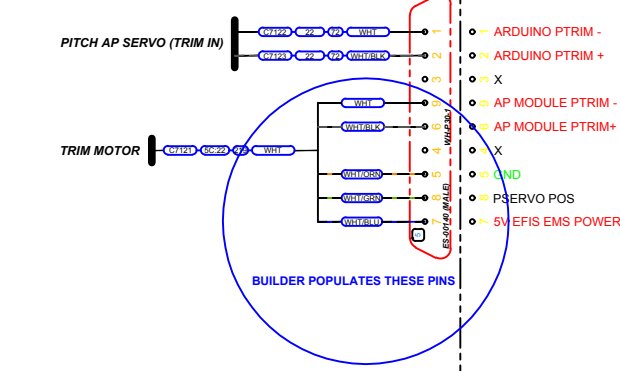
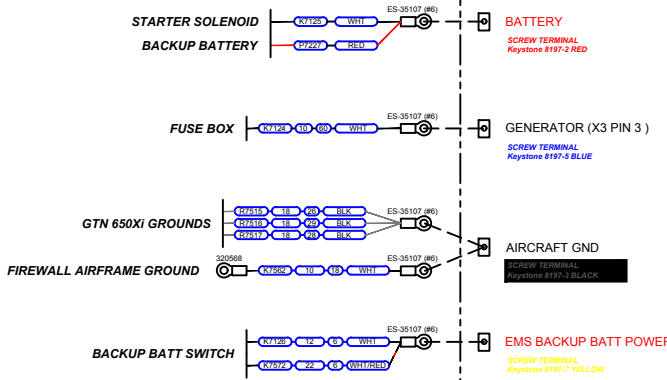
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C-SIZE ORIGINAL

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
R0	SEE PG 1		

AV-60000 POWER MODULE is-ULS PCB V3.4

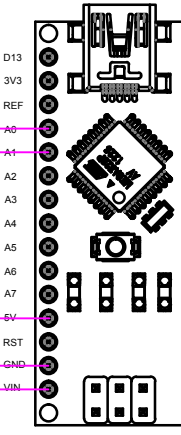
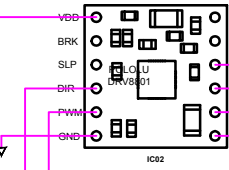
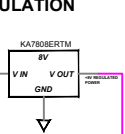
4X SCREW TERMINALS



TRIM, STALL WARNING, DIMMER

ARDUINO NANO
ATMEGA328P
MICRO-CONTROLLER
5V - 16MHz

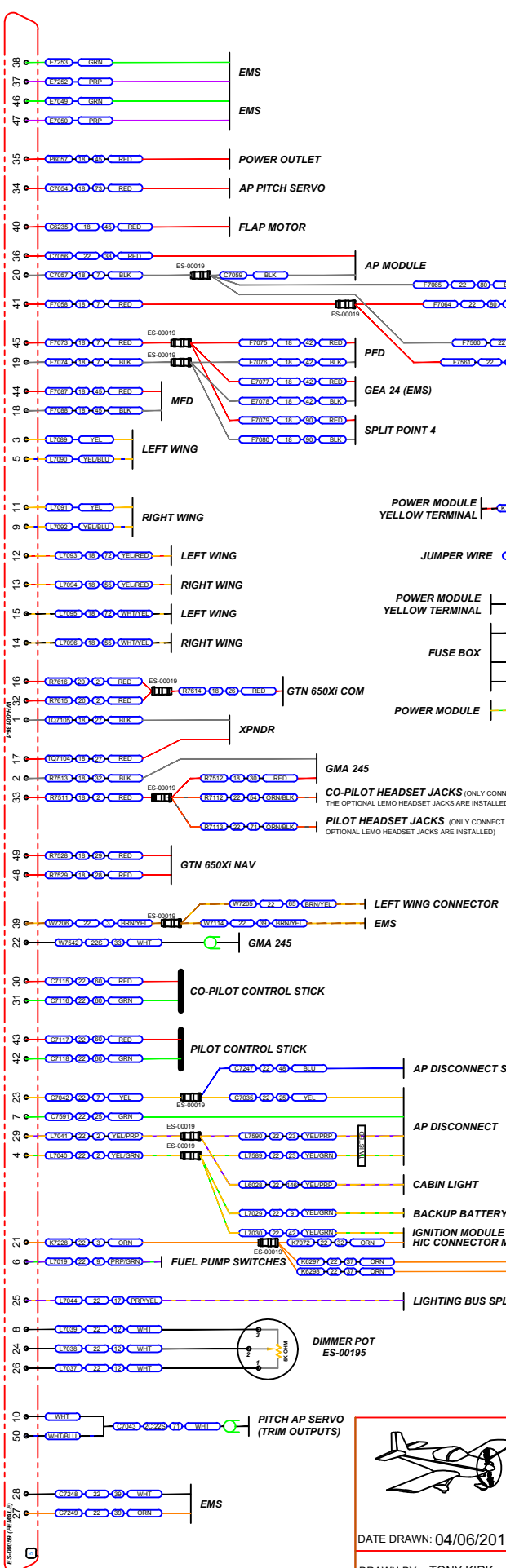
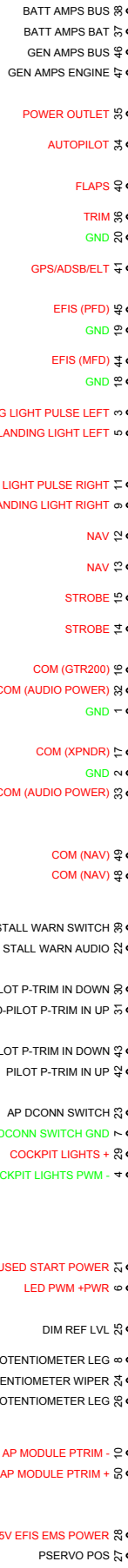
ARDUINO VOLTAGE REGULATION



TRIM SPEED POT
Bourns Inc. 3386F-1-102TLF



50 PIN POWER MODULE



BACKUP BATTERY SWITCH

COVER EXPOSED CONTACTS WITH HEATSHRINK (7 PLACES)

BACKUP BATTERY SWITCH



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UNITS:

INCHES

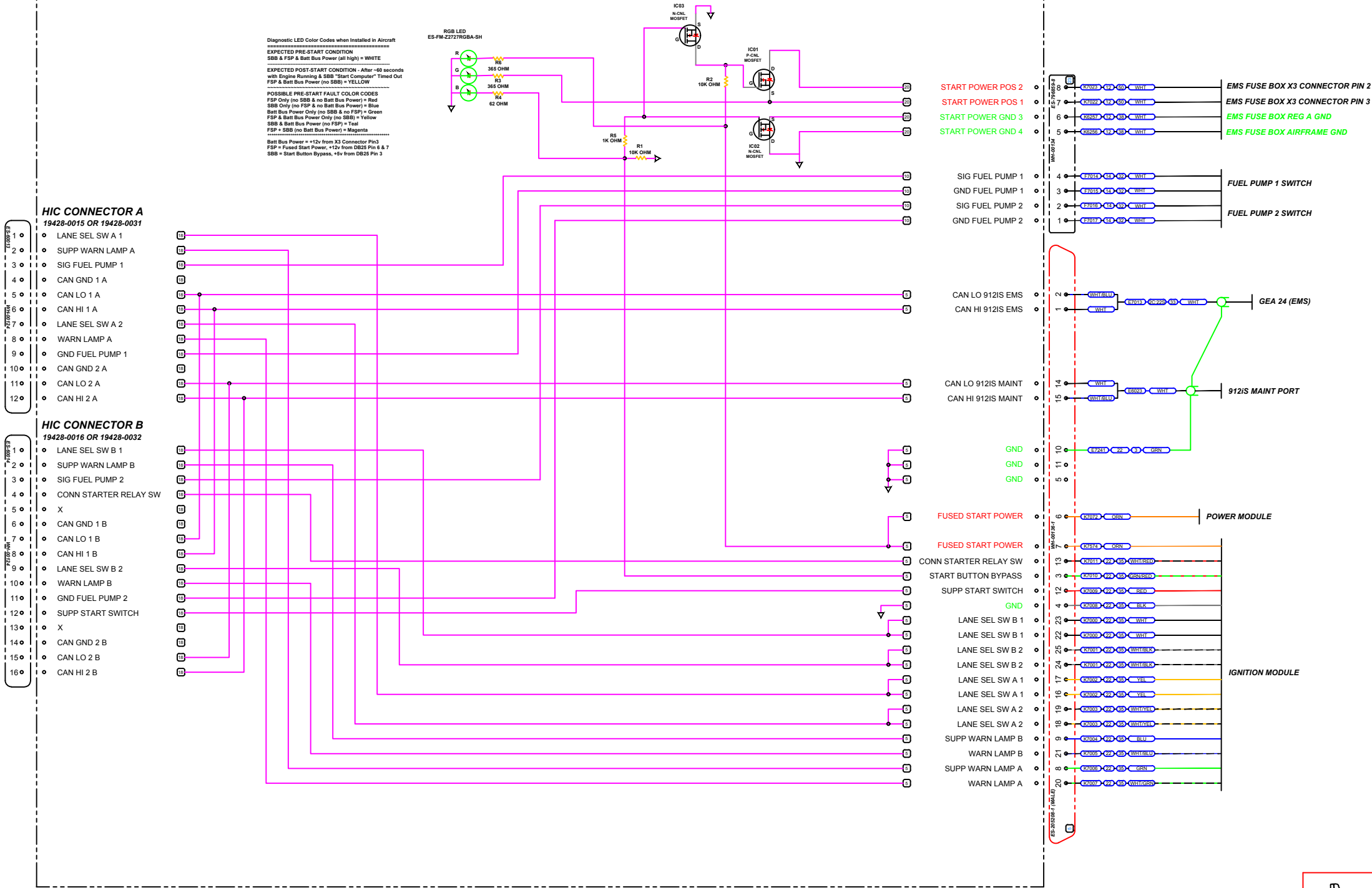
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WH-00136-3

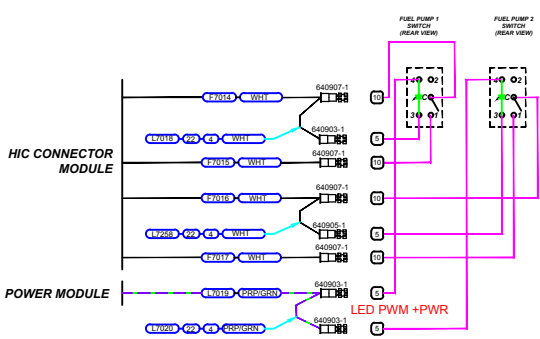
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ES-60009-2 HIC CONNECTOR MODULE iS PCB



FUEL PUMP SWITCHES



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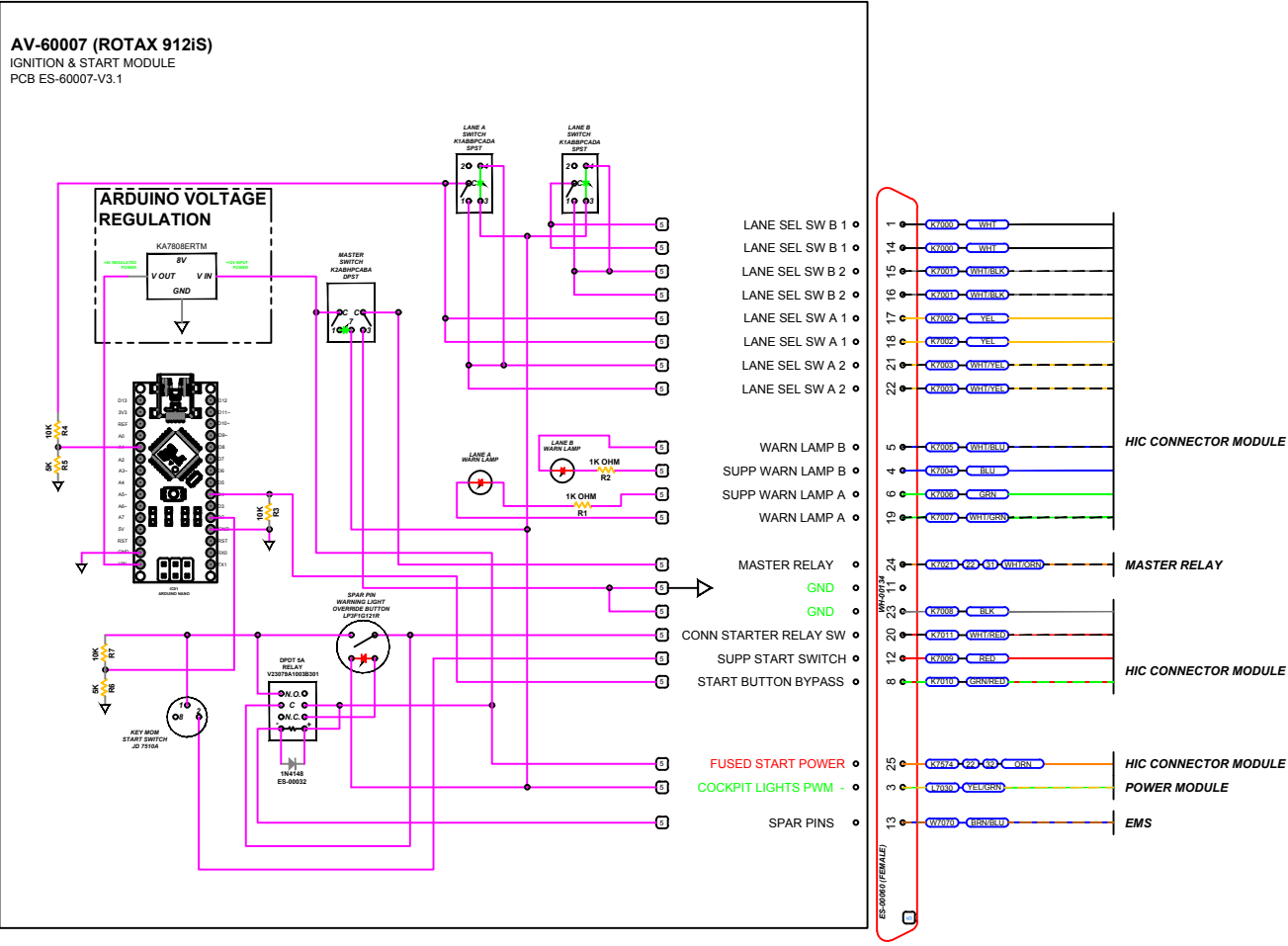
WH-00136-3

SCALE: NONE

PAGE: 9 OF 11

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