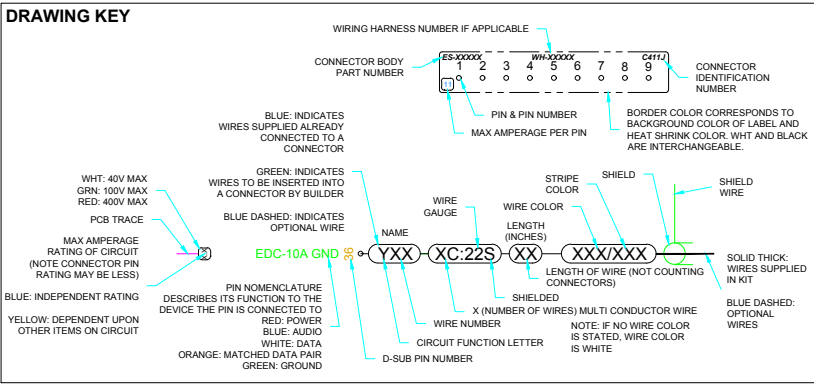


CIRCUIT LETTER FUNCTION	
LETTER	CIRCUITS
C	CONTROL SURFACE
D	INSTRUMENT
E	ENGINE INSTRUMENT
F	FLIGHT INSTRUMENTS
H	HEATING VENTILATING
J	IGNITION
K	ENGINE CONTROL
L	LIGHTING
P	POWER CONTROL
Q	FUEL
R	RADIO
RZ	HEADPHONE
T	SPECIAL ELECTRONIC
TC	RADIO CONTROL
TD	AIRBORNE ANNOUNCING
TP	BEACON
TQ	TRANSMITOR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



ELECTRICAL SYSTEM NOTES

- USE M22759/16 OR M27500 TEFZEL 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-SA01017 SOCKETS OR ES-SA-1018 PINS. ALL CRIMPS TO BE MADE PER MIL-C-22820F (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.

GTR 200B INTERNAL PRESETS

"MENU" BUTTON OPTIONS

- MUSIC VOL 75%
- ICS VOL 80%
- ICS SQLCH AUTO
- COM MUTE ON
- COM MUTE ICS OFF
- ICS MUTE MUSIC OFF
- MUTE LEVEL FULL
- COM 3D ON
- ICS 3D ON
- COCKPIT NOISE NORMAL
- MUSIC BASE BOOST OFF
- MUSIC EQ OFF
- KEY BEEP VOL 50%
- CONTRAST +0

INTERNAL MENU SETTINGS

- SIDETONE 05
- MIC GAIN 05
- RF SQLCH 00
- MON SWAP ON
- INTERCOM ENABLE YES
- RECIEVE OUT GAIN 100%
- AUX 1 SQLCH 30%
- AUX 1 VOL 50%
- AUX 1 MUTE NO
- AUX 2 SQLCH 30%
- AUX 2 VOL 50%
- AUX 2 MUTE NO
- PILOT RT NO

SOFTKEY SETUP

- 1 USER LISTS
- 2 TUNE EMERGENCY

DISCRETE SETUP

- 1 FREQ SWAP
- 2 DISABLED

LIGHTING SOURCE 14V

GTR 200 PRESET NOTES:

- ALL SETTINGS NOT DEFINED BY THIS DRAWING ARE ACCEPTABLE AS CONFIGURED FROM MANUFACTURER.
- THE ABOVE SETTINGS CORRESPOND TO SOFTWARE SYS 2.60.

TRIG TY96 INTERNAL PRESETS

- INTERCOM VOLUME:
- AUX IN VOLUME:
- MUSIC IN VOLUME:
- SIDETONE VOLUME:
- INTERCOM SQLCH:
- MIC 1 GAIN:
- MIC 2 GAIN:
- RADIO SQLCH:

TY96 PRESET NOTES:

- SET FREQUENCY STEP SIZE APPROPRIATE FOR REGION.
- ALL SETTINGS NOT DEFINED BY THIS DRAWING ARE ACCEPTABLE AS CONFIGURED FROM MANUFACTURER.

ELECTRICAL SYSTEM BENCH TEST PROCEDURE

Avionics Group

- ___Check PFD & MFD Power On
- ___SkyView Check PFD and MFD recognize a USB stick
- ___Install latest software and settings per the readme files (applicable portions) on the Van's Web Site
 - ___Setup X Pndr Hex Code
 - ___Setup AP servos if installed
- ___Check PFD & MFD recognize all LRU's
- ___Check X pndr 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 COM radio in accordance with "GTR 200B Internal Presets" or "Trig TY96 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

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
R0	INITIAL RELEASE, ADDED GTX 45R, REMOVED GDL 5XR, REMOVED SPLIT POINT 5, REMOVED GPS 20A	09/28/23	SO



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**ROTAX 912iS G3X
ELECTRICAL SYSTEM**

DATE DRAWN: 06/11/18

DRAWN BY: T. DE MAN

TOLERANCES: NONE

(UNLESS OTHERWISE SPECIFIED)

UNITS:

INCHES

SCALE: NONE

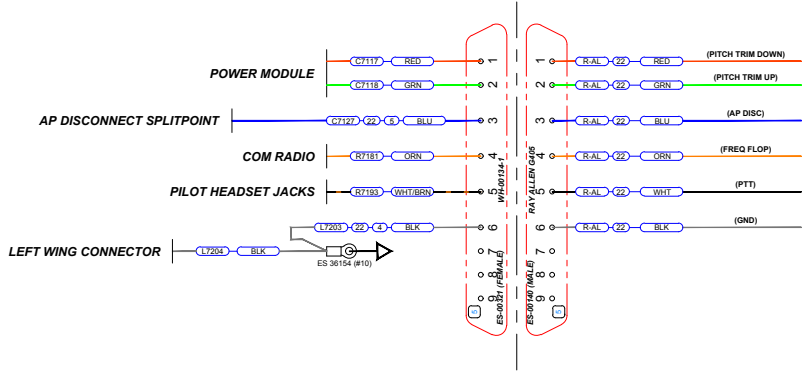
WH-00134-3

PAGE: 1 OF 11

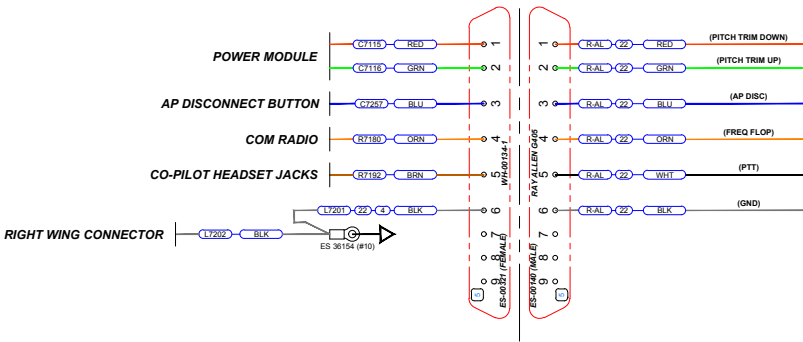
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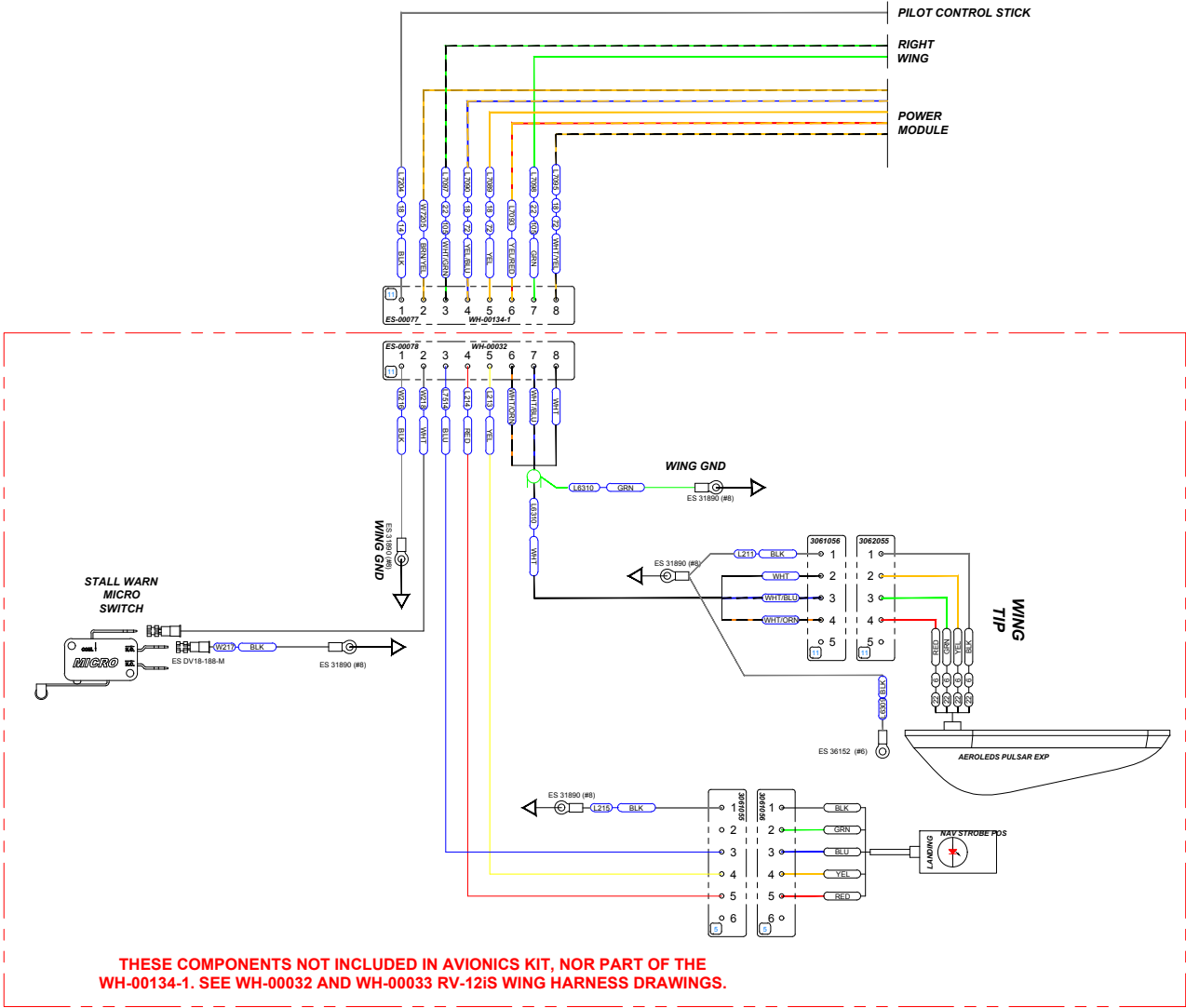
PILOT STICK GRIP



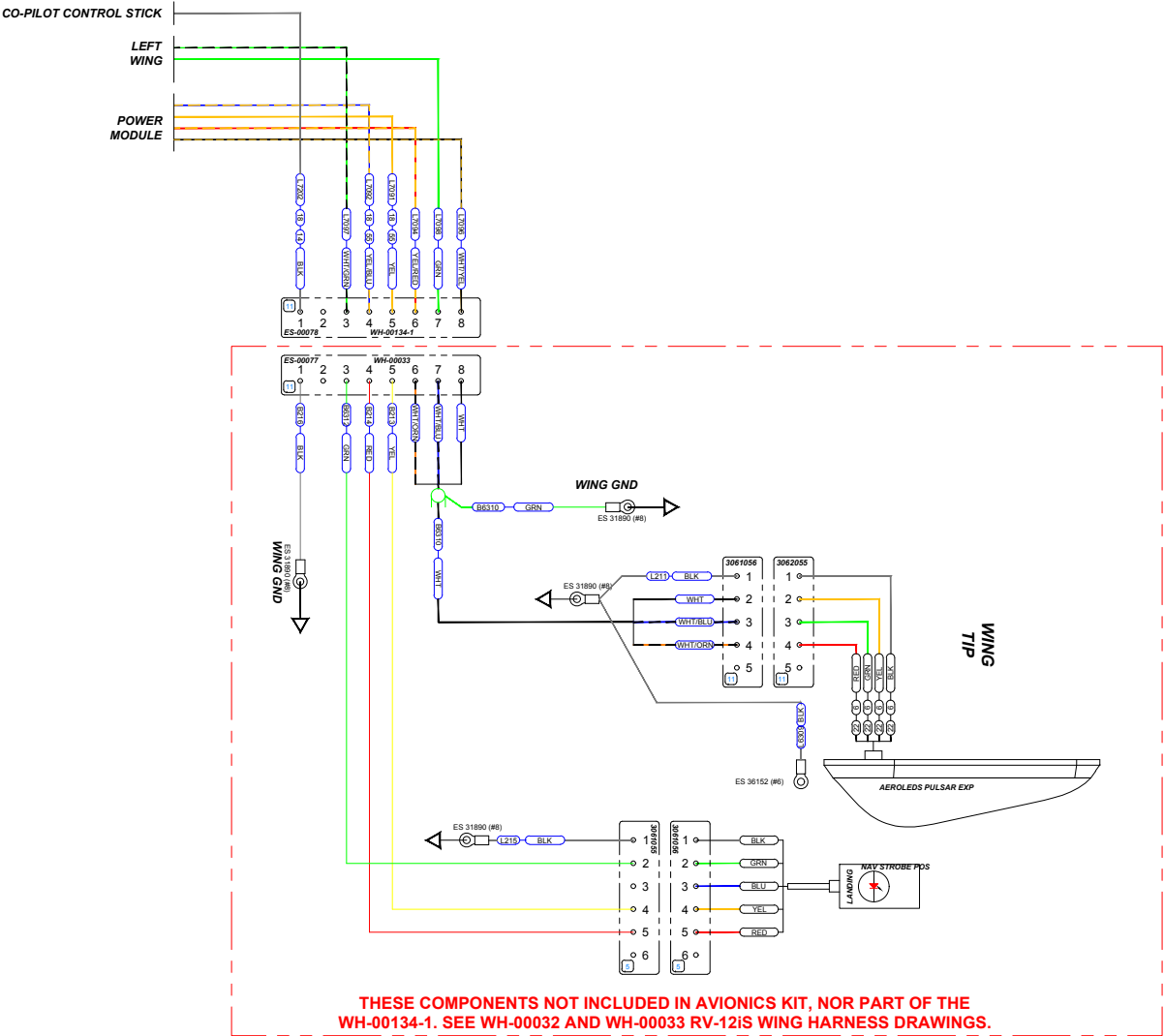
CO-PILOT STICK GRIP



LEFT WING CONNECTOR



RIGHT WING CONNECTOR



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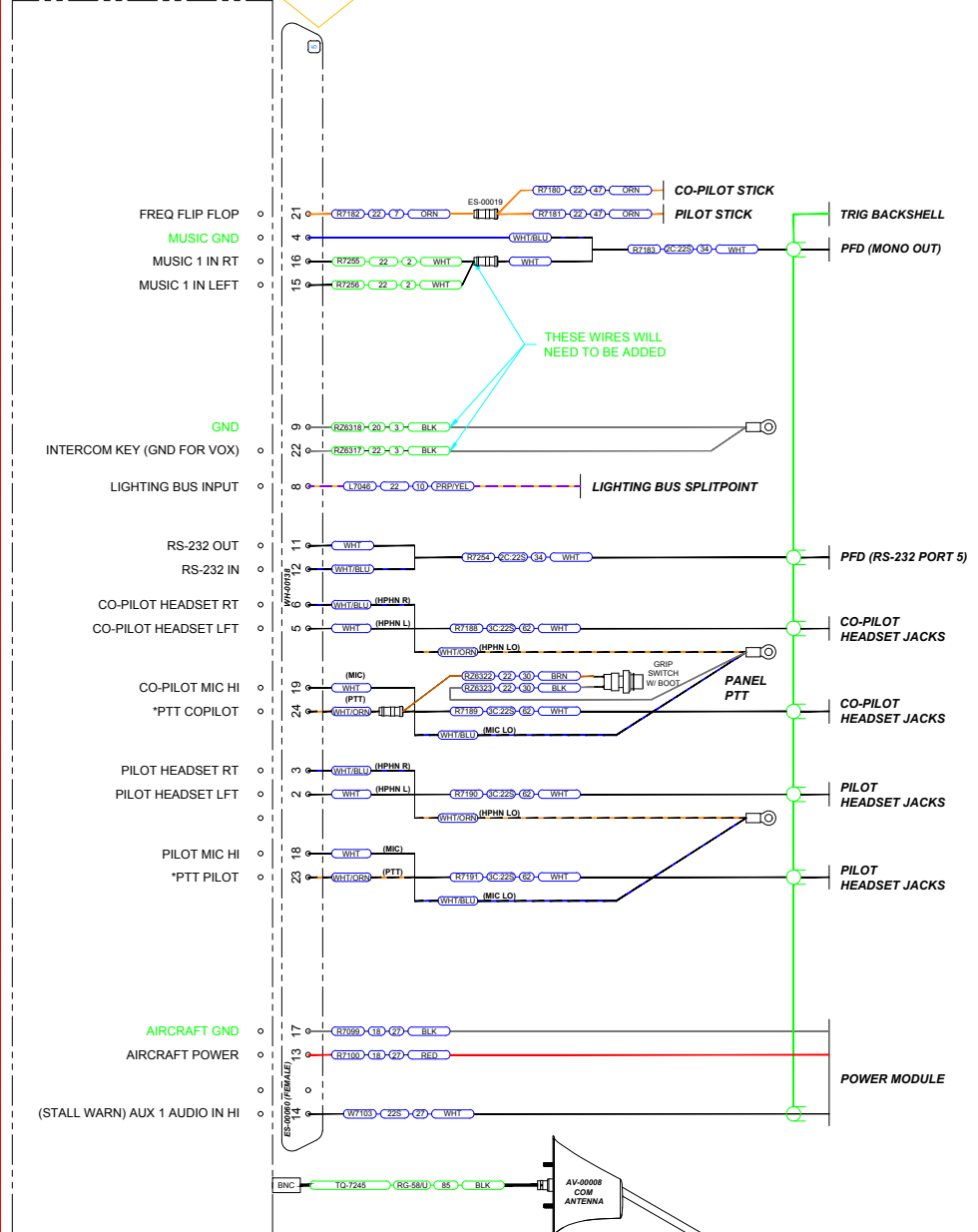
ROTAX 912iS G3X
ELECTRICAL SYSTEM

DATE DRAWN: 6/11/2018	UNITS: INCHES	WH-00134-3
DRAWN BY: T. DE MAN	SCALE: NONE	PAGE: 3 OF 11
TOLERANCES: NONE (UNLESS OTHERWISE SPECIFIED)		
PATH:FILENAME: Q:\Components\Electrical\Wiring Harness\WH-00134\Electrical System 912iS G3X (WH-00134-3).DWG		C-SIZE ORIGINAL

**COM-RADIO -
TRIG TY96**

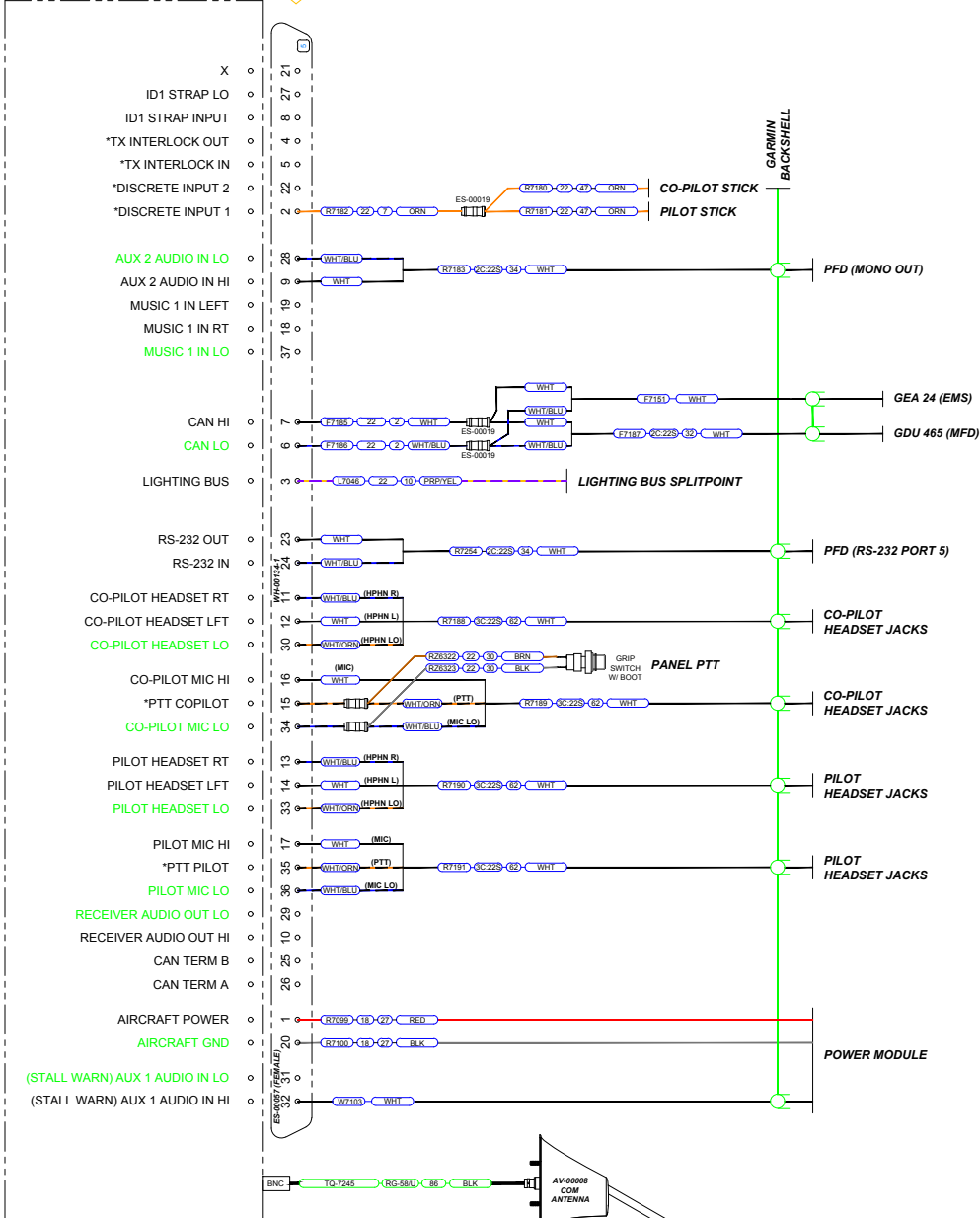
USE TRIG BACKSHELL

1. TRIG TY-96 USED FOR INTERNATIONAL AVIONICS KIT ONLY
2. COVER UNUSED PINS WITH HEAT SHRINK AND SECURE TO HARNESS NEAR TY96 CONNECTOR

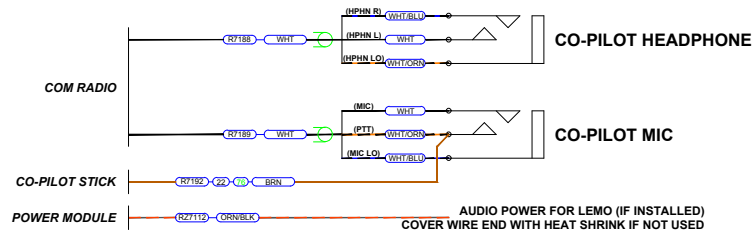


COM RADIO - GTR 200B

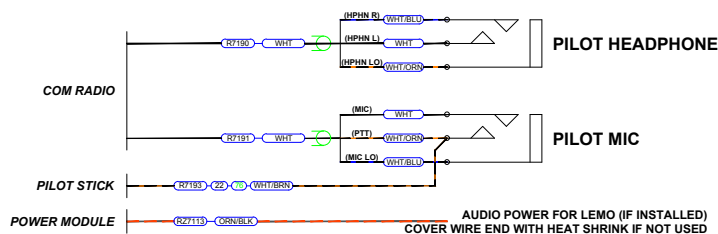
USE GARMIN BACKSHELL



CO-PILOT HEADSET JACKS

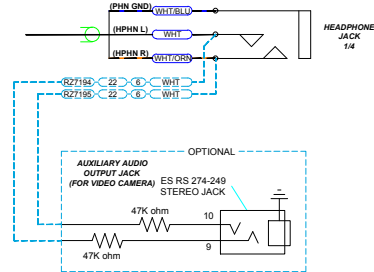


PILOT HEADSET JACKS



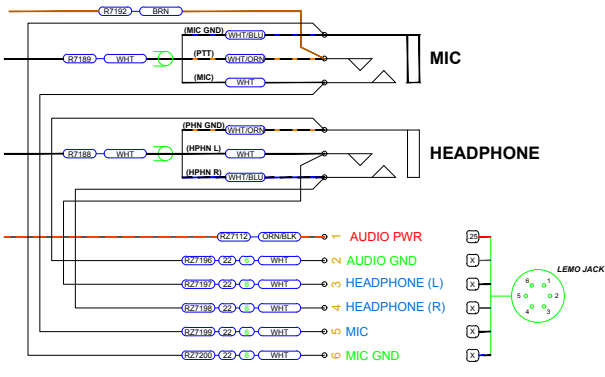
OPTIONAL AUDIO OUTPUT

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



OPTIONAL LEMO JACK

FOR PRODUCTION OF "WH-00134-2 LEMO". ADD JACKS TO BOTH PILOT AND CO-PILOT LOCATIONS. THE LEMO JACK SHOULD BE INSTALLED IN LINE WITH AND 1 INCH BEHIND THE MIC/HEADPHONE JACKS



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14401 NE KEIL RD. NE
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ROTAX 912iS G3X ELECTRICAL SYSTEM

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DRAWN BY: T. DE MAN

TOLERANCES: NONE

(UNLESS OTHERWISE SPECIFIED)

UNITS:

INCHES

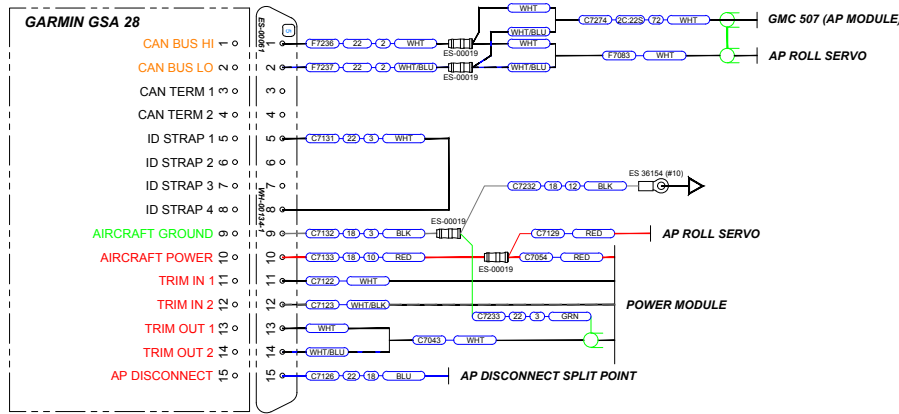
WH-00134-3

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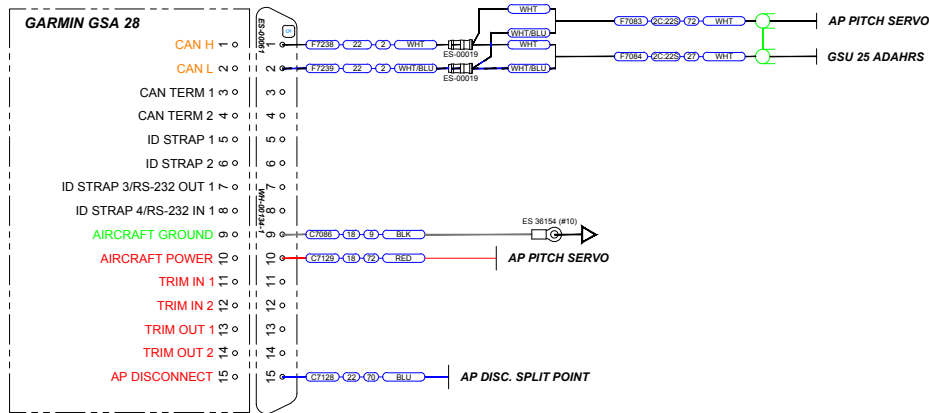
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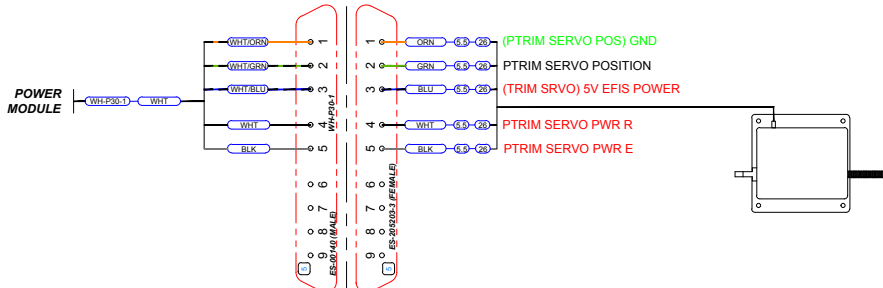
AUTOPILOT PITCH SERVO



AUTOPILOT ROLL SERVO

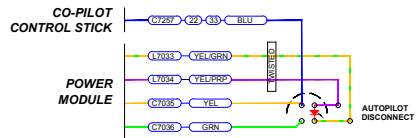


TRIM MOTOR

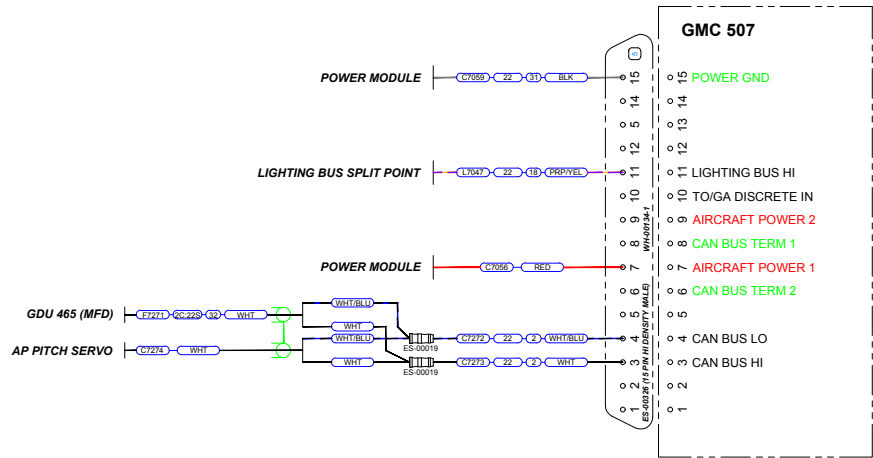


THESE COMPONENTS NOT INCLUDED IN AVIONICS KIT, NOR PART OF THE WH-00136

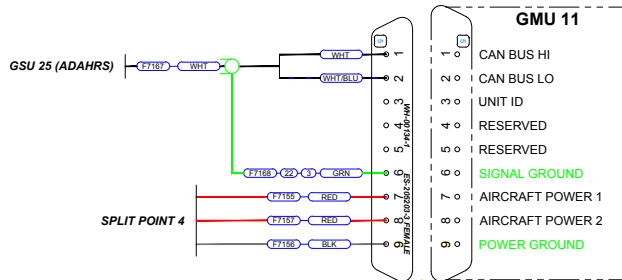
AP DISCONNECT



AP MODULE



MAGNETOMETER



**USE SUPPLIED CAN
TERMINATOR**



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(UNLESS OTHERWISE SPECIFIED)

UNITS:

INCHES

WH-00134-3

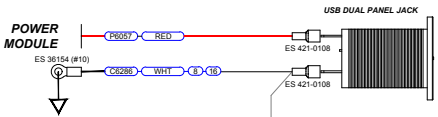
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PAGE: 5 OF 11

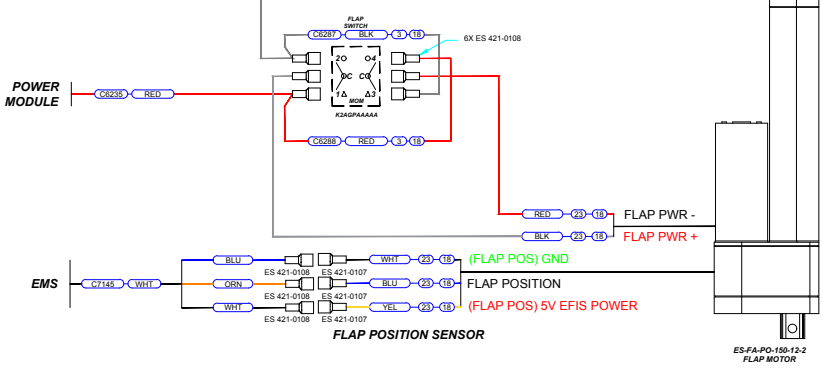
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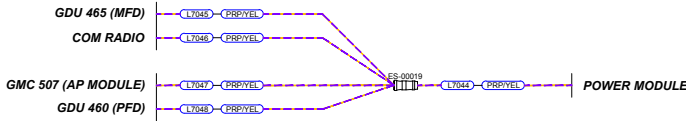
POWER OUTLET



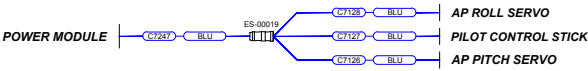
FLAP MOTOR



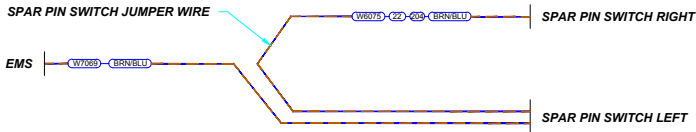
LIGHTING BUS SPLIT



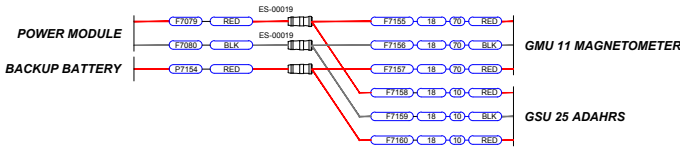
AUTOPILOT DISC. SPLIT POINT



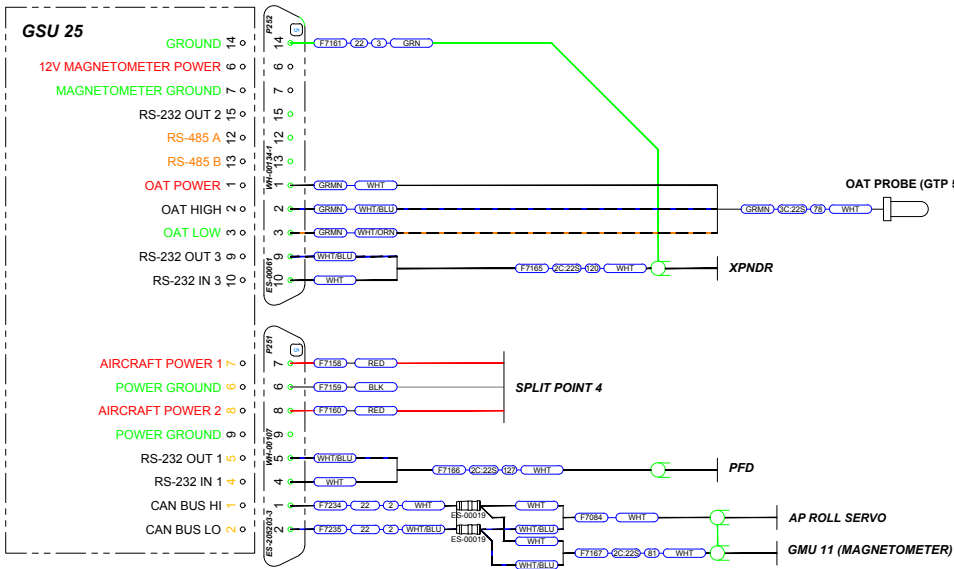
SPLIT POINT 1



SPLIT POINT 4



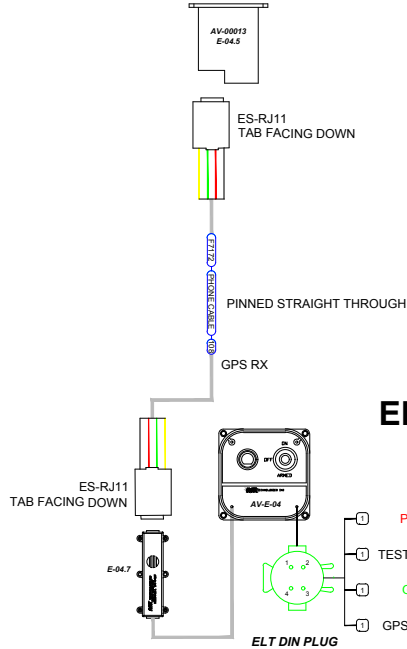
ADAHRS



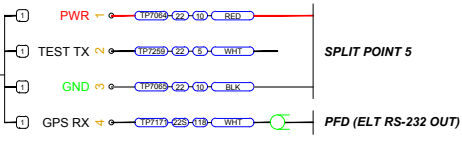
EFIS BATTERY SWITCH



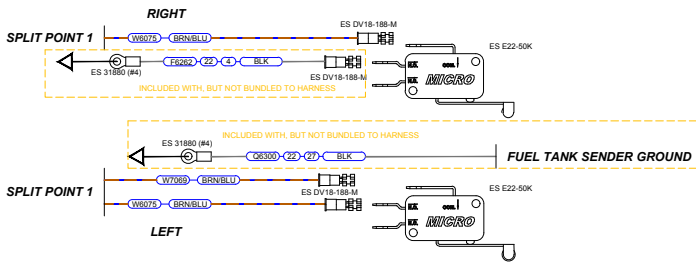
ELT REMOTE



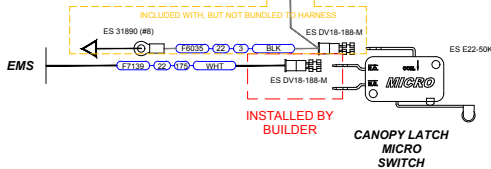
ELT



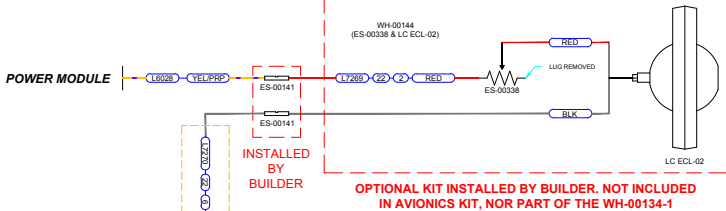
SPAR PIN SWITCHES



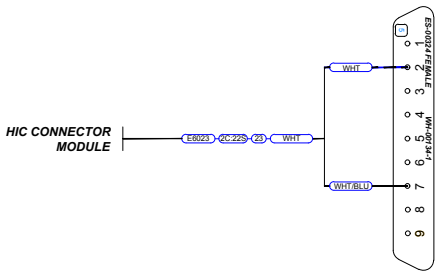
CANOPY SWITCH



CABIN LIGHT & DIMMER



912iS MAINT PORT



VAN'S AIRCRAFT, INC.

14401 NE KEIL RD. NE
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97002 USA

ROTAX 912iS G3X
ELECTRICAL SYSTEM

DATE DRAWN: 6/11/2018

DRAWN BY: T. DE MAN
TOLERANCES: NONE
(UNLESS OTHERWISE SPECIFIED)

INCHES

SCALE: NONE

WH-00134-3

PAGE: 6 OF 11

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C-SIZE ORIGINAL

EMS

GEA 24

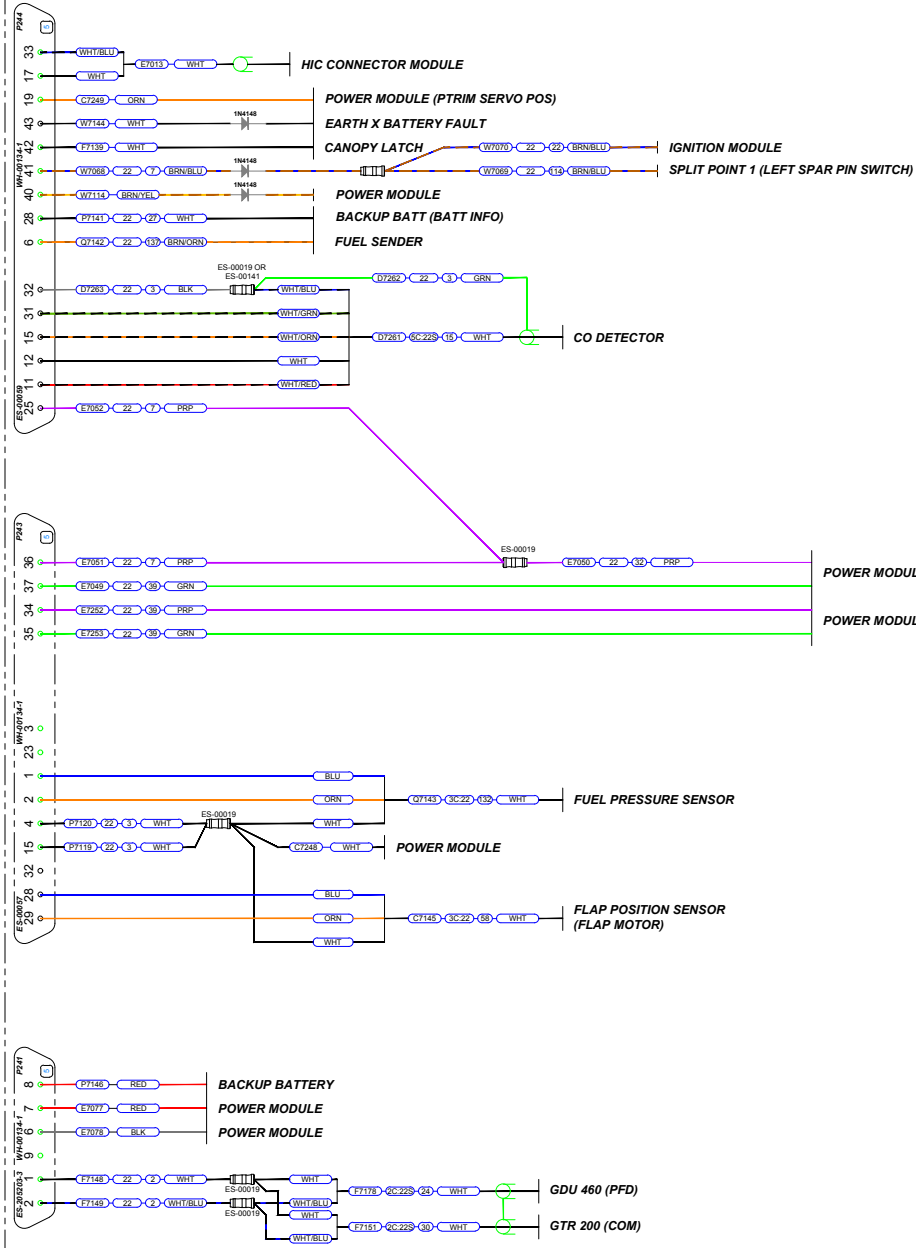
- LEFT
- EGT 1 HI
- EGT 1 LO
- RIGHT
- EGT 2 HI
- EGT 2 LO
- LEFT
- CHT 1 +
- CHT 1 -
- RIGHT
- CHT 2 +
- CHT 2 -

- CAN 2 LO (ROTAX FADEC)
- CAN 2 HI (ROTAX FADEC)
- POS 1
- DISCRETE 4 (EARTH X ERROR)
- DISCRETE 3 (CANOPY LATCH)
- DISCRETE 2 SPAR PINS
- DISCRETE 1 (STALL)
- VOLTAGE 2
- FUEL LEVEL 1
- POS 5 LO / GP 5 / GND
- POS 5 / GP 5 (O2 PRESSURE)
- POS 4 / GP 4 (SPO2)
- POS 3 / GP 3 (CO DETECTOR)
- POS 3 HI / +5V
- (MAIN BATTERY) VOLTAGE 1

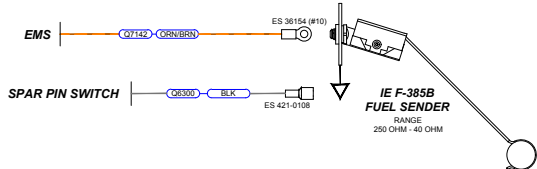
- SHUNT 1 LO
- SHUNT 1 HI
- SHUNT 2 (BATTERY) LO
- SHUNT 2 (BATTERY) HI

- FUEL PRESS TRANSDUCER 12V
- FUEL FLOW (P244 PIN 36)
- FUEL PRESSURE GROUND
- FUEL PRESSURE
- FUEL PRESSURE POWER 5V
- MANIFOLD PRESSURE PWR 5V
- OIL TEMP LO
- GP7 LO
- GP7 HI

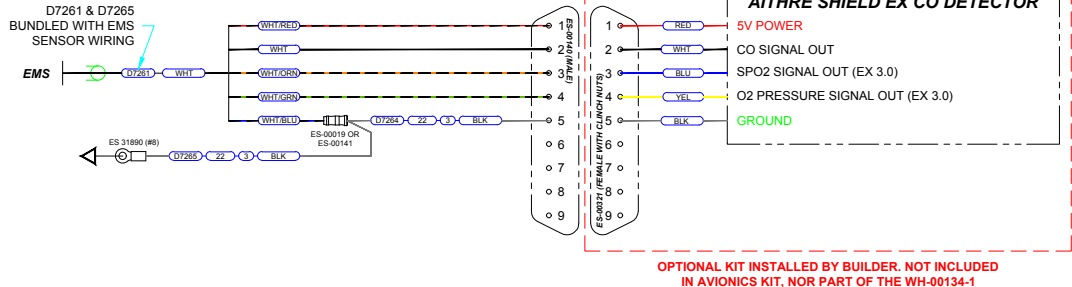
- AIRCRAFT POWER 2
- AIRCRAFT POWER 1
- POWER GROUND
- POWER GROUND
- CAN BUS HI
- CAN BUS LO



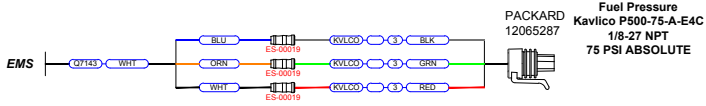
FUEL SENDER



CO DETECTOR



FUEL PRESSURE SENSOR



VAN'S AIRCRAFT, INC.

14401 NE KEIL RD. NE
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97002 USA

ROTAX 912iS G3X
ELECTRICAL SYSTEM

DATE DRAWN: 6/11/2018

DRAWN BY: T. DE MAN

TOLERANCES: NONE

(UNLESS OTHERWISE SPECIFIED)

UNITS:

INCHES

SCALE: NONE

WH-00134-3

PAGE: 7 OF 11

PATH\\FILENAME: Q:\Components\Electrical\Wiring Harness\WH-00134\Electrical System 912iS G3X (WH-00134-3).DWG

C-SIZE ORIGINAL

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

4X SCREW TERMINALS

