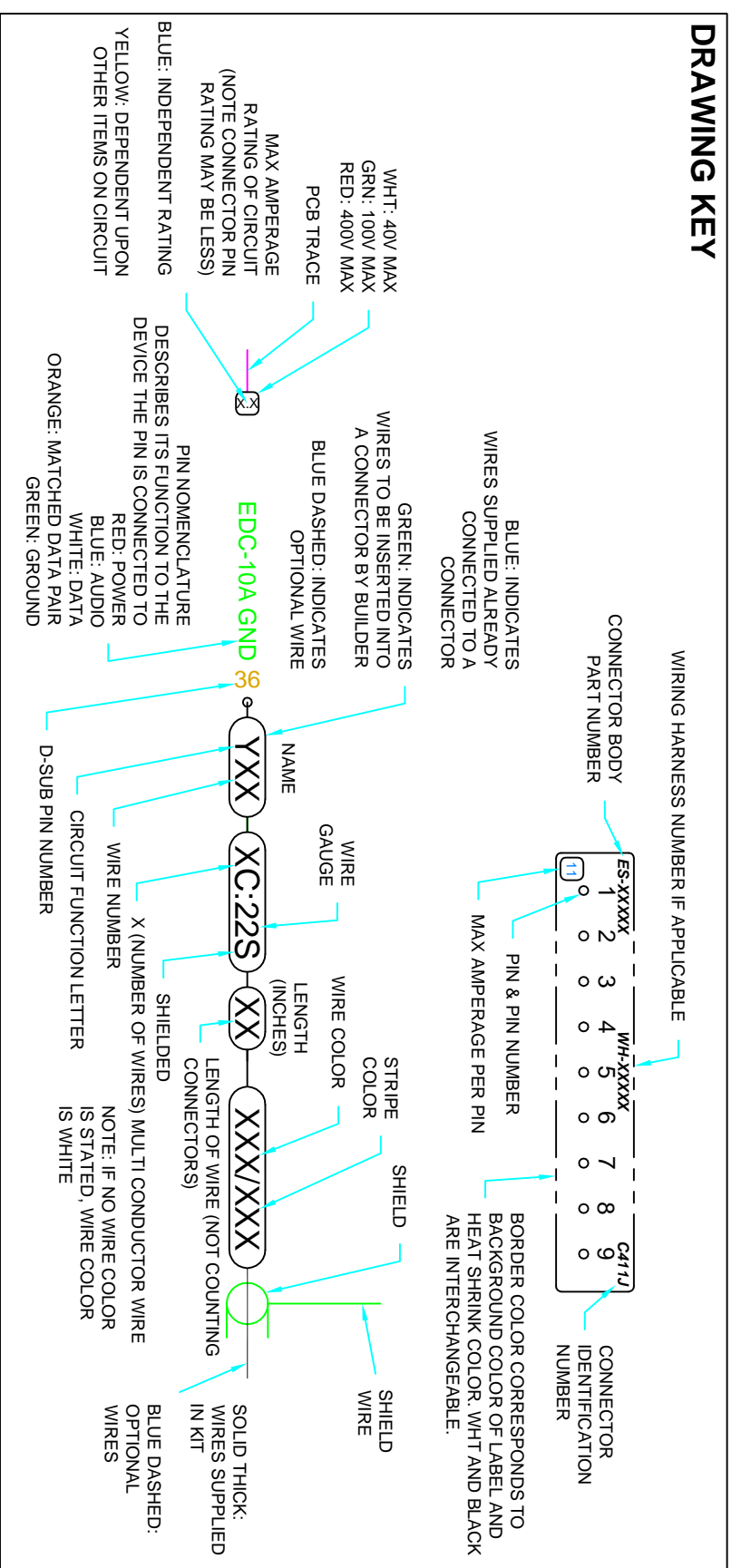


REV	DESCRIPTION	DATE	APPROVED
R0	APPROVED FOR PROD.	10/29/18	TDM
R1	ADDED TEST PROC AND WING WIRES	11/06/18	TDM
R2	ADDED TY96 COM RADIO	12/01/18	TDM
R3	GTR200 UPDT TO 2008, ADDED PTT, AP-DISC C7116 CHANGED TO C7257, GEN B TERM. CHANGED TO ES 35110	01/29/19	TDM
R4	-ROLL SERVO GROUND WIRE EXTENDED FROM SERVO TO WING FOR EHS SWITCH & BACKUP BATT -L7258 (WHT) WAS L7019 (DUPLICATE #)		

LETTER	CIRCUITS	CIRCUIT LETTER FUNCTION
C	CONTROL SURFACE	
D	INSTRUMENT	
E	ENGINE INSTRUMENT	
F	HEATING	
H	HEATING VENTILATING	
J	IGNITION	
K	ENGINE CONTROL	
L	POWER CONTROL	
P	FUEL	
O	RADIO	
R	RADIO	
R2	REDOUGHNE	
T	STATION ELECTRONIC	
TC	RADIO CONTROL	
TD	ARGONNE ANNOUNCING	
TP	BEACON	
TQ	ARGONNE RECEIVER	
W	WARNING EMERGENCY	



**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 AP servos if installed
  - Check PFD & MFD recognize all LRUs
  - 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 (krode function for SkyView as well)

**Audio Group**

- Configure COM radio in accordance with "GTR 2008 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

**Wing Group**

- Check Stall Warning
- Check NAV/Stroke Lights
- Check Landing Lights (Both if applicable)
- Check Wing Vag 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 EHS when grounded. (NOTE Check this error)
- Check fuel pump A and B switches for function

**GTR 2008 INTERNAL PRESETS**

<b>*MENU* BUTTON OPTIONS</b>	
- MUSIC VOL	75%
- CS VOL	80%
- CS SQUCH	AUTO
- COM MUTE	ON
- COM MUTE CS	OFF
- CS MUTE MUSIC	OFF
- TELE LEVEL	TULL
- CONJ	ON
- CS 3D	ON
- COCKPIT NOISE	NORMAL
- MUSIC BASE BOOST	OFF
- MUSIC EQ	OFF
- KEY BEEP VOL	50%
- CONTRAST	40

**INTERNAL MENU SETTINGS**

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

**SOFTKEY SETUP**

- 1	USER LISTS
- 2	TUNE EMERGENCY
- 3	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 SVS 2.60

**TRIG TY96 INTERNAL PRESETS**

INTERCOM VOLUME:	██████████
AUX IN VOLUME:	██████████
MUSIC IN VOLUME:	██████████
SIDETONE VOLUME:	██████████
INTERCOM SQUCH:	██████████
MIC 1 GAIN:	██████████
MIC 2 GAIN:	██████████
RADIO SQUCH:	██████████

**TY96 PRESET NOTES:**

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

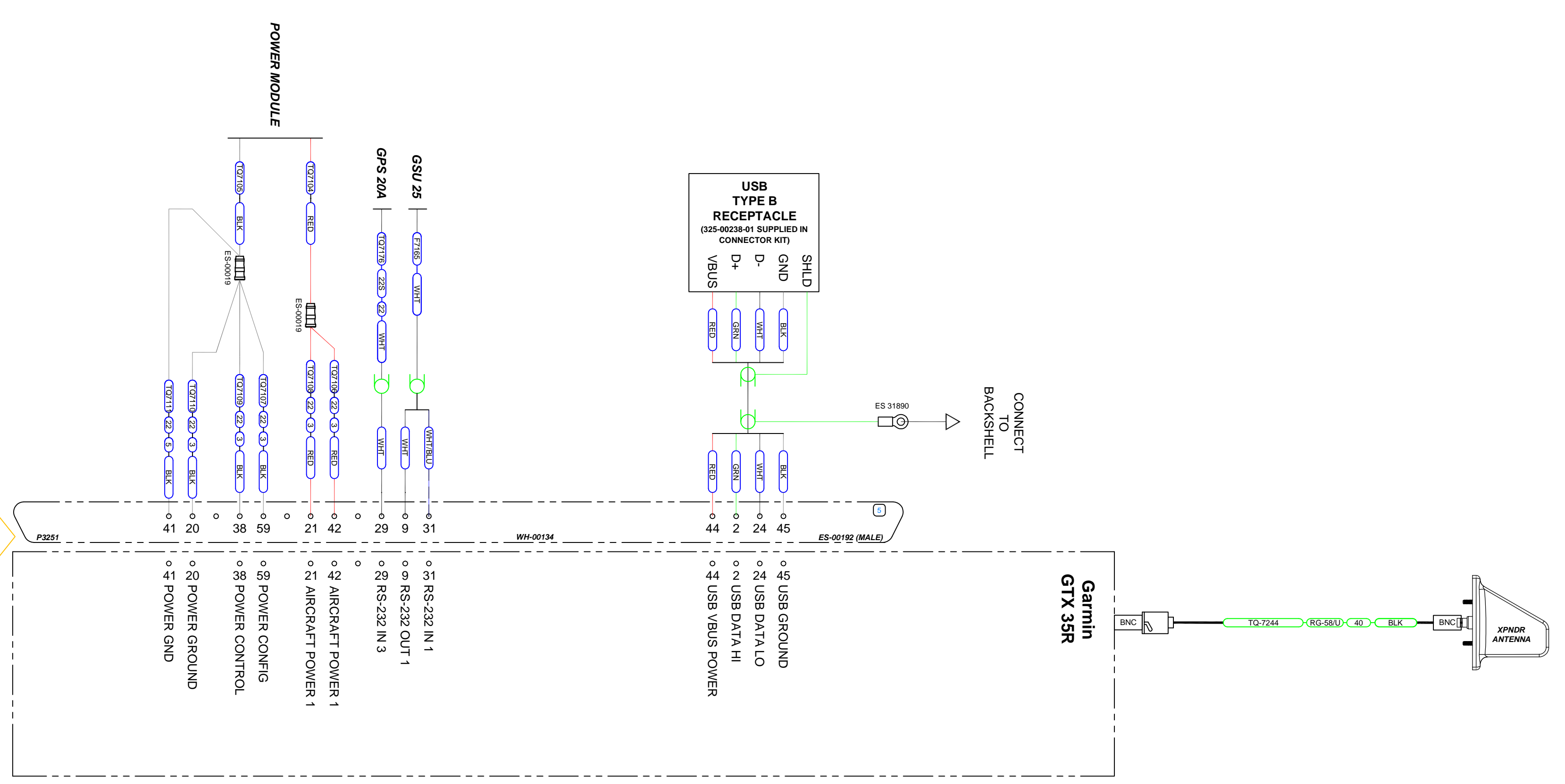
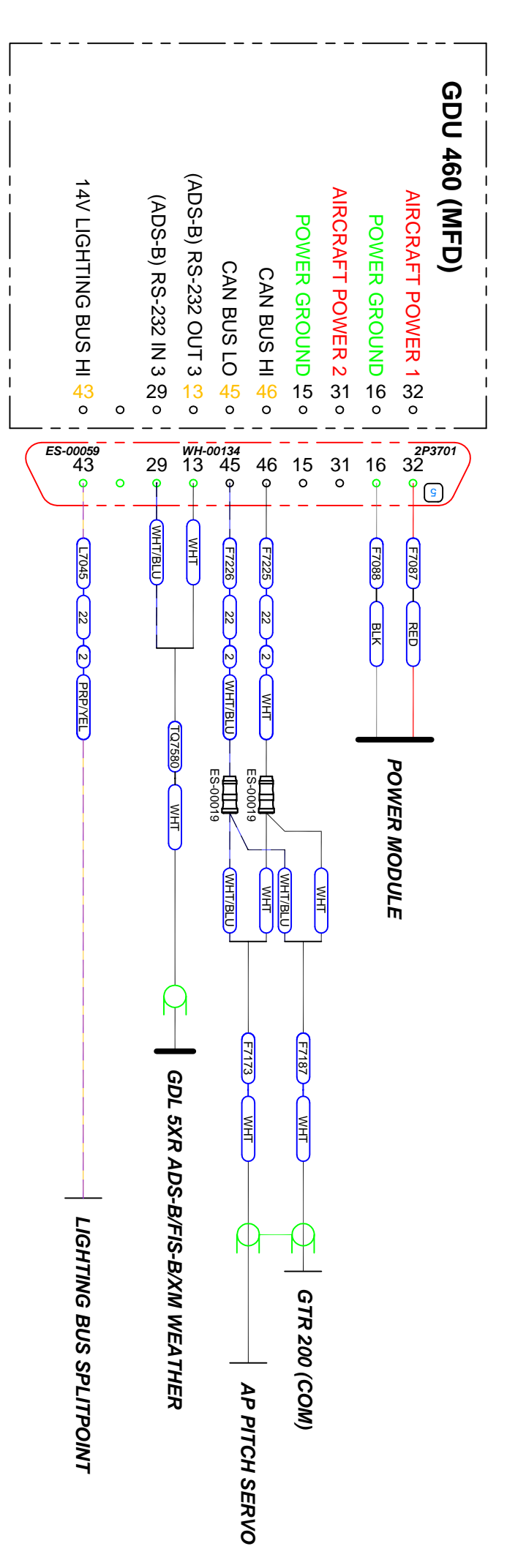
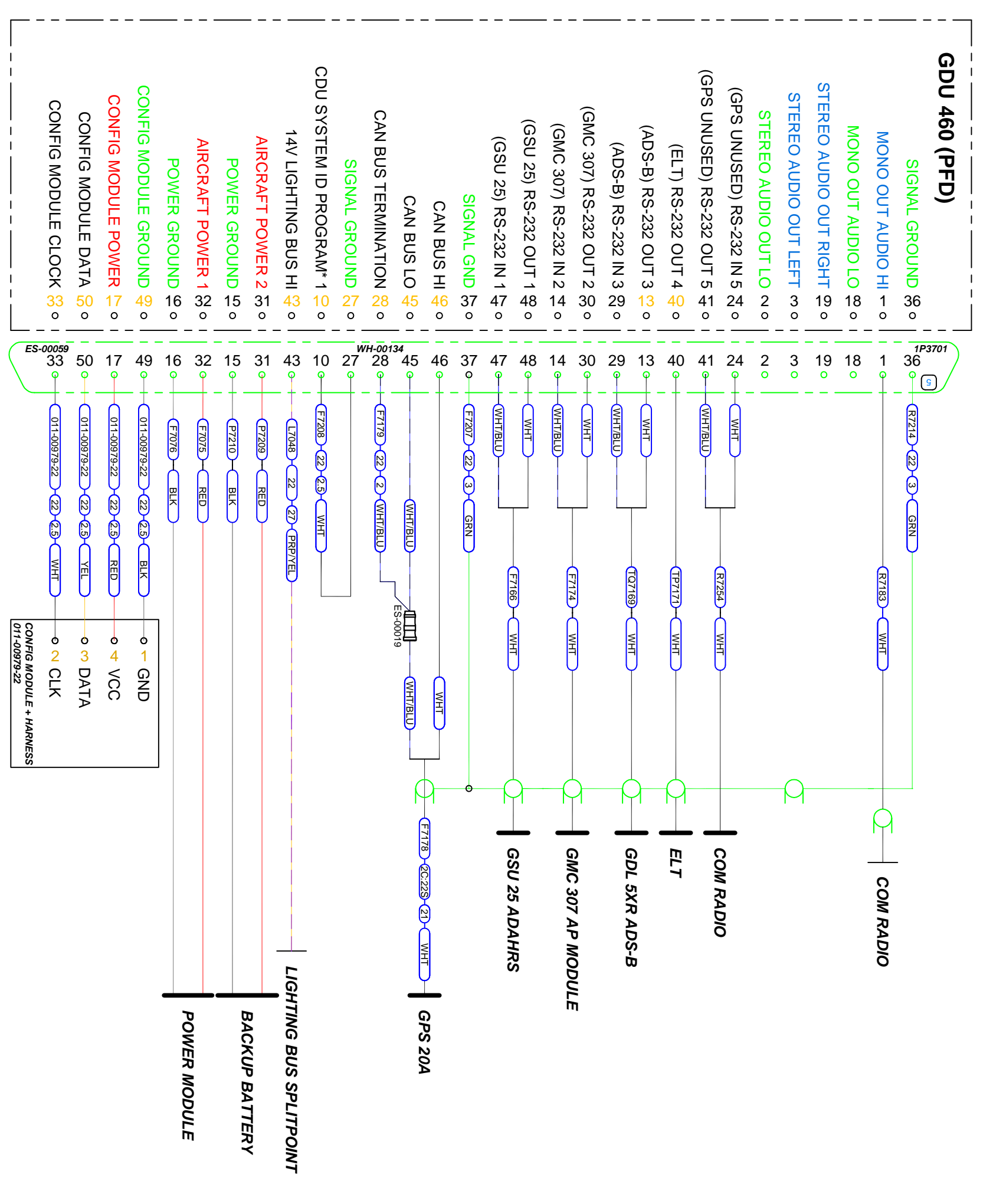
- ELECTRICAL SYSTEM NOTES**
- USE M27279/16 OR M27500 TEFZEL AIRCRAFT WIRE. CONTACT VAN'S ABOUT USING OTHER EQUIV.
  - USE MIL-I-23063 HEATSHRINK. CONTACT VAN'S ABOUT USING OTHER EQUIV.
  - LABEL THE FLYING LEAD OF EACH WIRE WITH THE TRUNCATED NOMENCLATURE AND WIRE NUMBER.
  - CONNECT ALL 20-24 AWG WIRES TO D-SUBS USING ES-SA1017 SOCKETS OR ES-SA-1019 PINS. PERMISSIBLE TO STRIP 18 AWG WIRE TO FIT ES-SA1017 SOCKETS OR ES-SA-1019 PINS. ALL GRIMPS TO BE MADE PER MIL-C-2250F (1,2,2) USING A TYP E TOOL.
  - USE ONLY NOR-COMP BACKSHELLS ON D-SUB CONNECTORS (WITH THE EXCEPTION OF 50-PIN CONNECTORS)
  - HARNESS MUST BE TESTED WITH ALL AVONICS IN ACCORDANCE WITH THE "ELECTRICAL SYSTEM BENCH TEST PROCEDURE". RESULTS ARE TO BE SUPPLIED TO VAN'S FOR EACH HARNESS.
  - CRIMPED MOLEX, TCOO, AND AMP TERMINALS ARE TO BE CRIMPED WITH THE MANUFACTURERS 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.



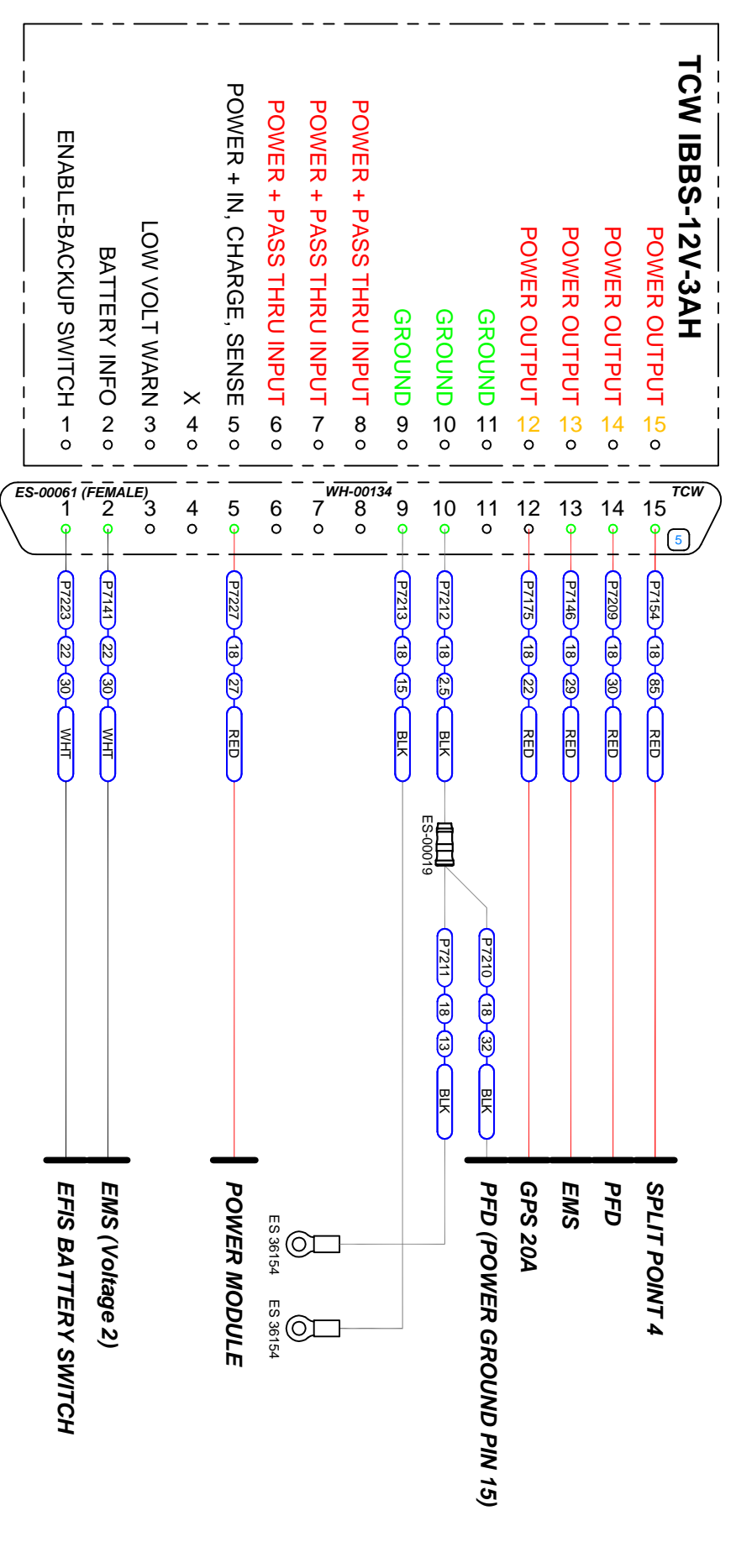
VAN'S AIRCRAFT, INC. 14401 NE KELL RD. NE  
 ALDRICH, OR 97002 USA

**ROTAX 912IS G3X ELECTRICAL SYSTEM**

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DRAWN BY: T. DE MAN	TOLERANCES: NONE	SCALE: NONE	
(UNLESS OTHERWISE SPECIFIED)		PAGE: 1 OF 11	C-SIZE ORIGINAL
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USE GARMIN BACKSHELL



**EFIS BATTERY**

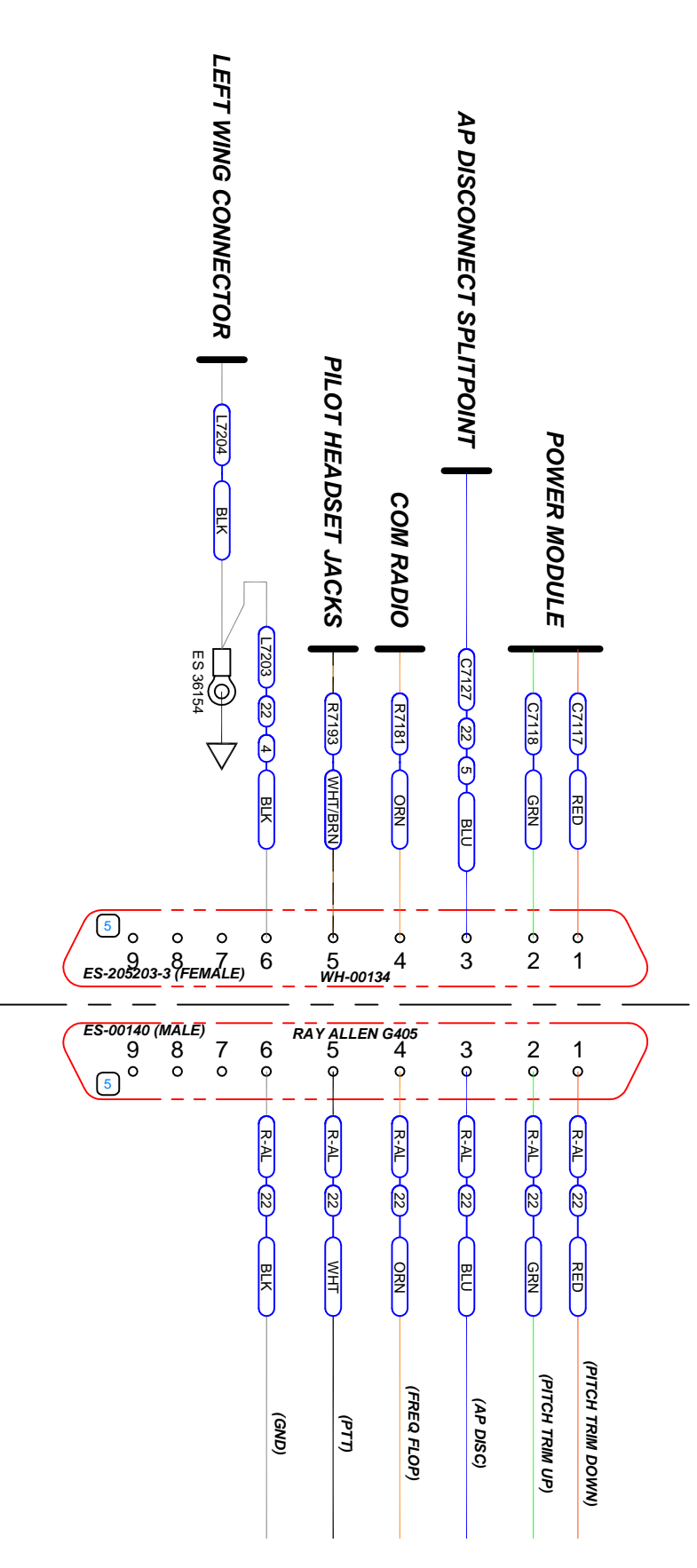


VAN'S AIRCRAFT, INC.  
14401 NE KELLY RD. N.E.  
ASTORIA, OR  
97102 USA

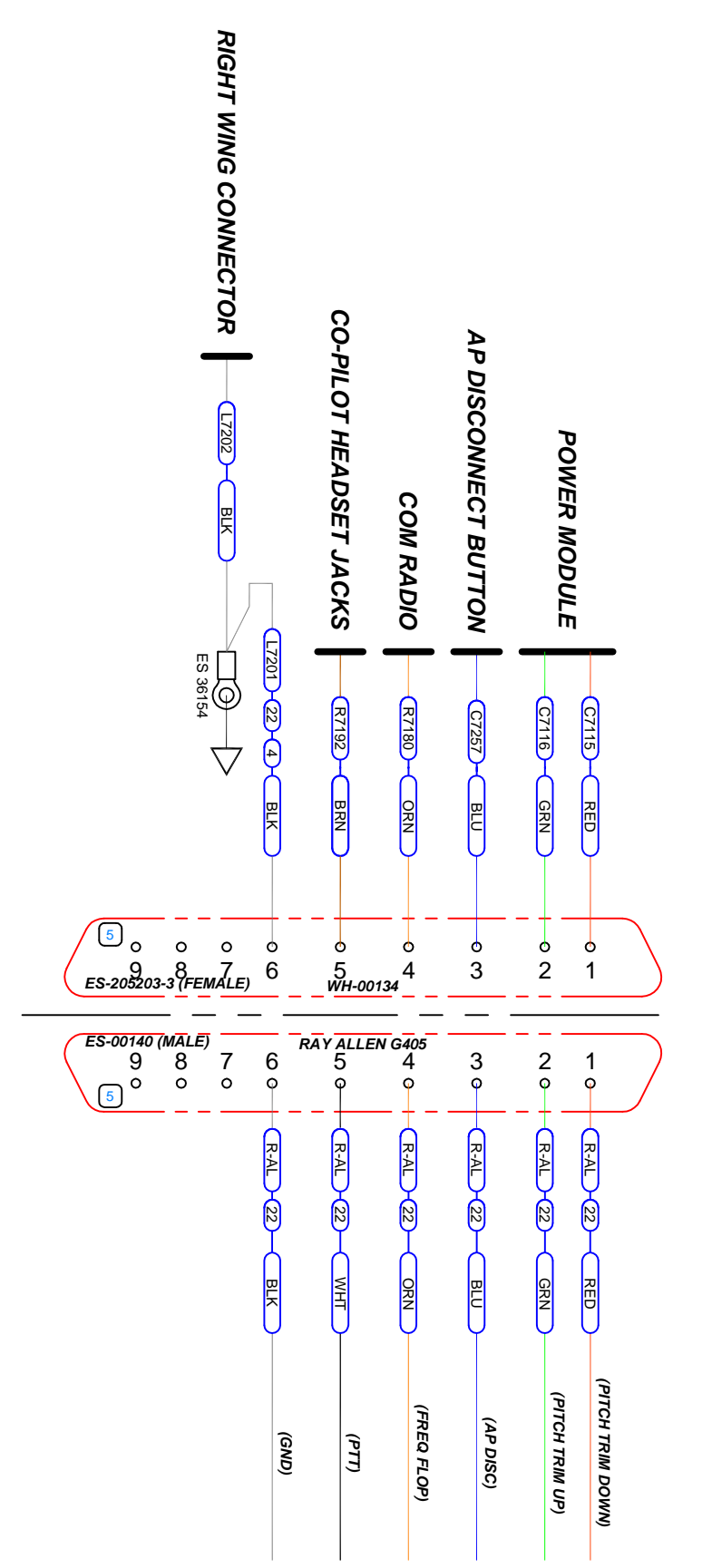
ROTAX 912IS G3X  
ELECTRICAL SYSTEM

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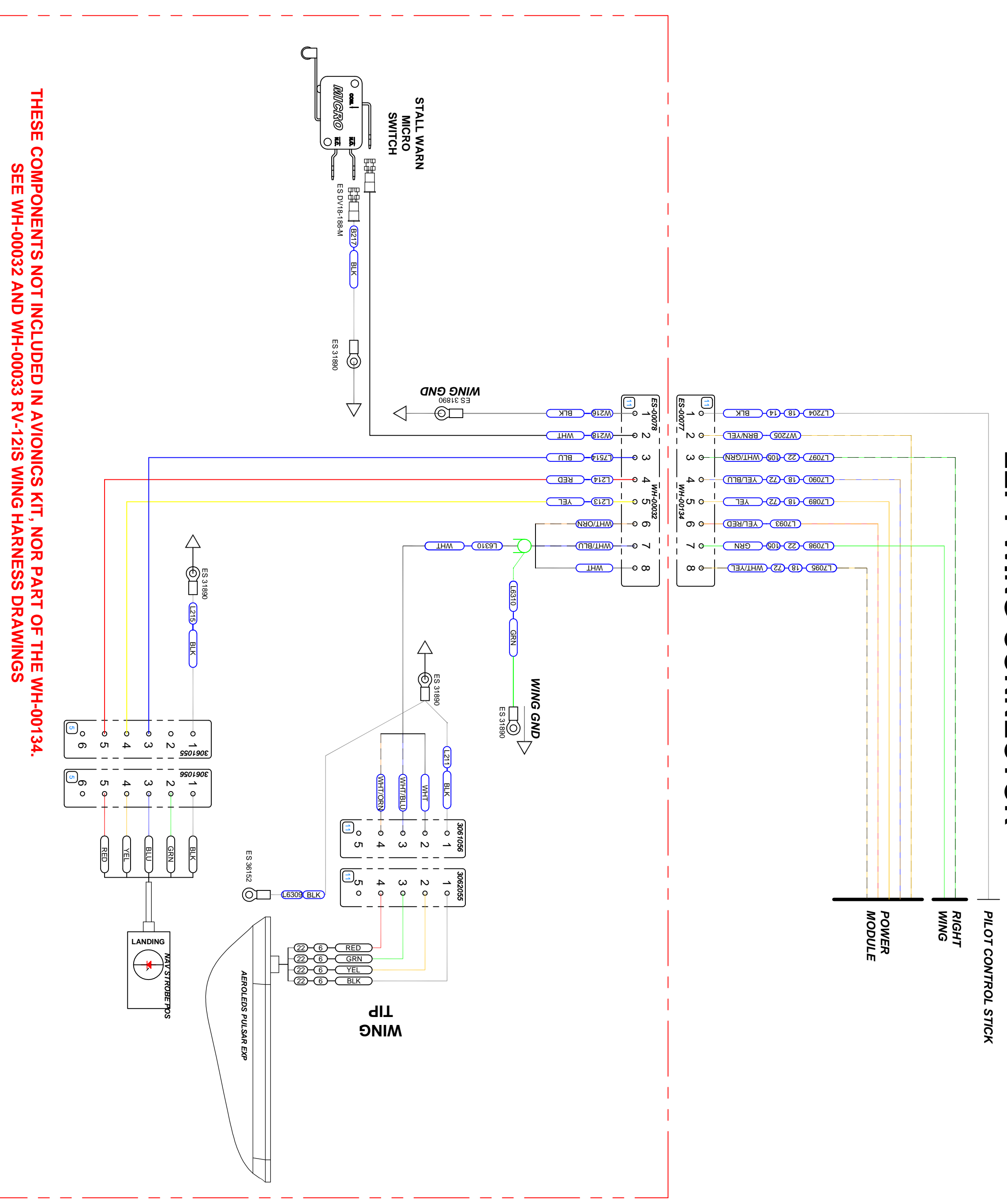
### PILOT STICK GRIP



### CO-PILOT STICK GRIP

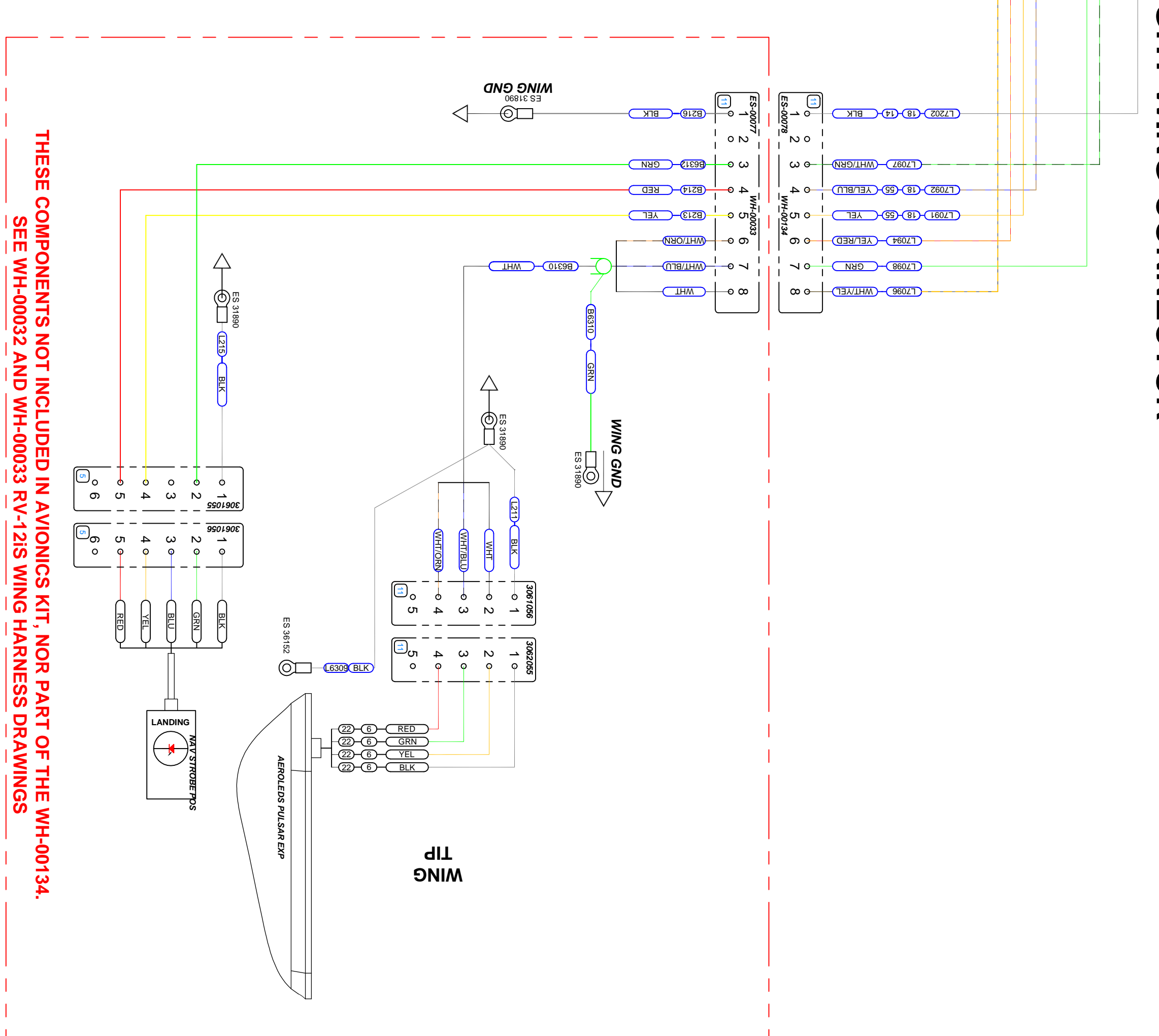


### LEFT WING CONNECTOR



THESE COMPONENTS NOT INCLUDED IN AVIONICS KIT, NOR PART OF THE WH-00134.  
SEE WH-00032 AND WH-00033 RV-12IS WING HARNESS DRAWINGS

### RIGHT WING CONNECTOR



THESE COMPONENTS NOT INCLUDED IN AVIONICS KIT, NOR PART OF THE WH-00134.  
SEE WH-00032 AND WH-00033 RV-12IS WING HARNESS DRAWINGS



VAN'S AIRCRAFT, INC.  
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ALDRICH, OR  
97002 USA

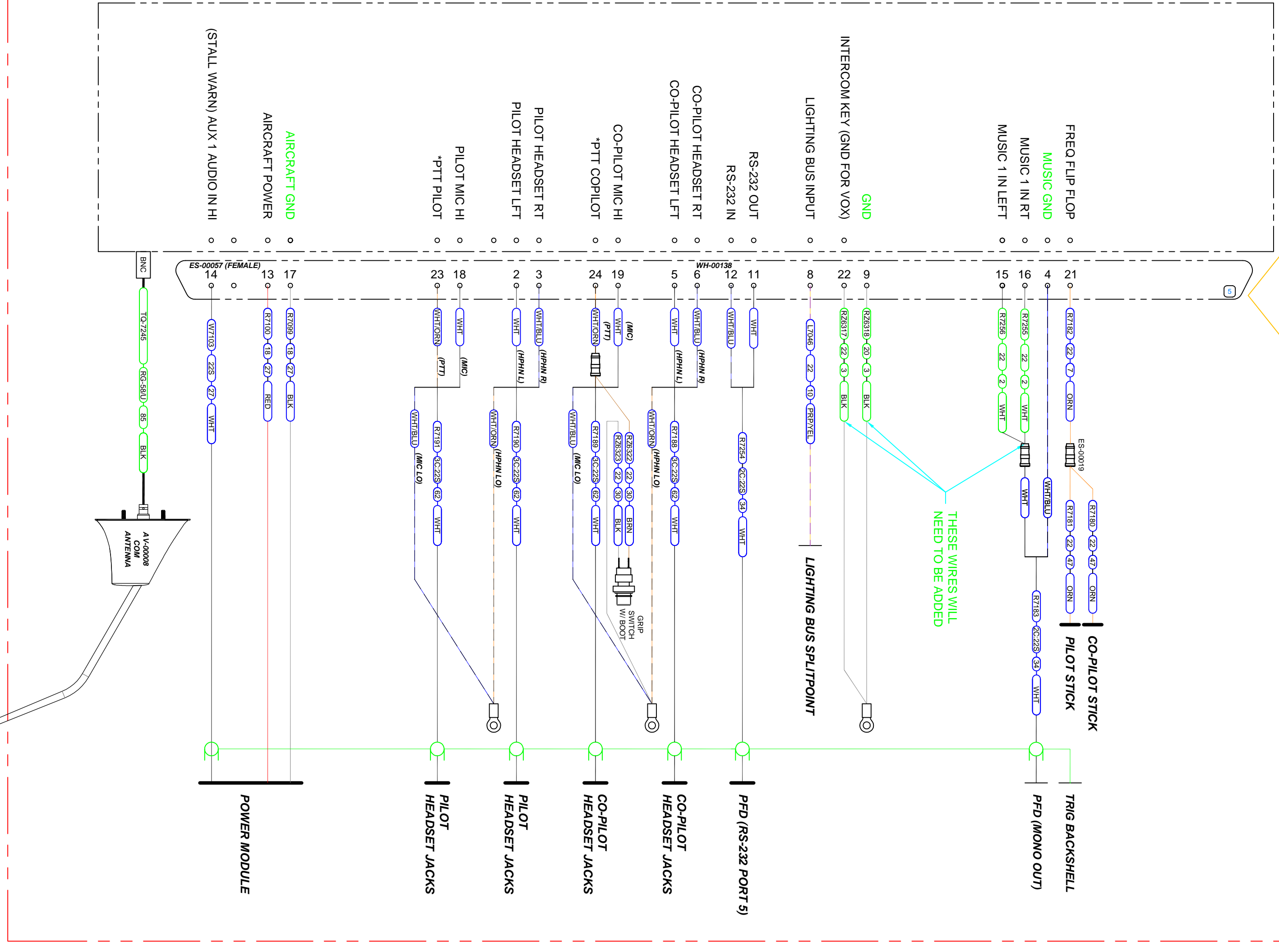
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USE TRIG BACKSHELL

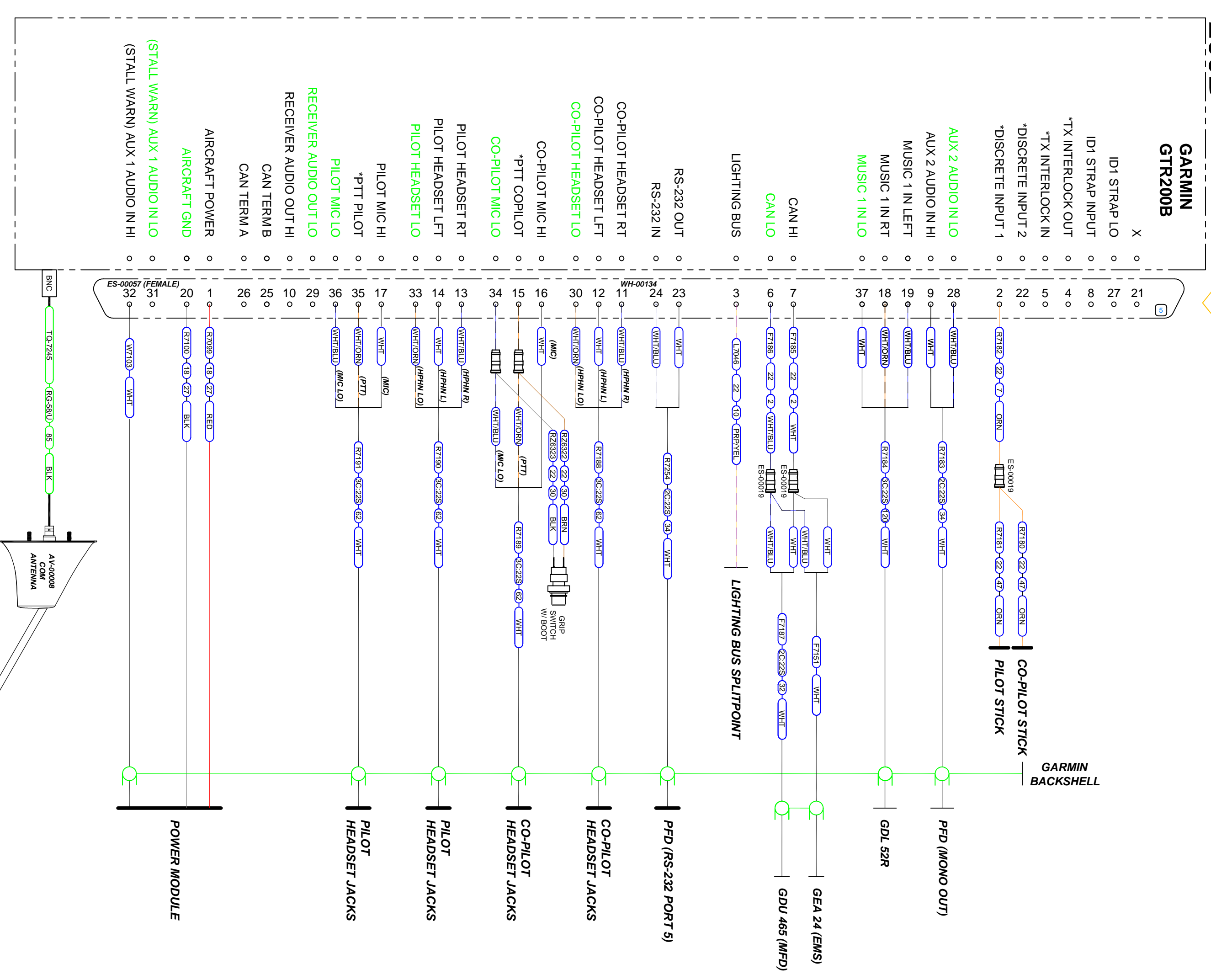
### COM-TRIG TY96

TRIG TY-96 USED FOR INTERNATIONAL AVIONICS KIT ONLY

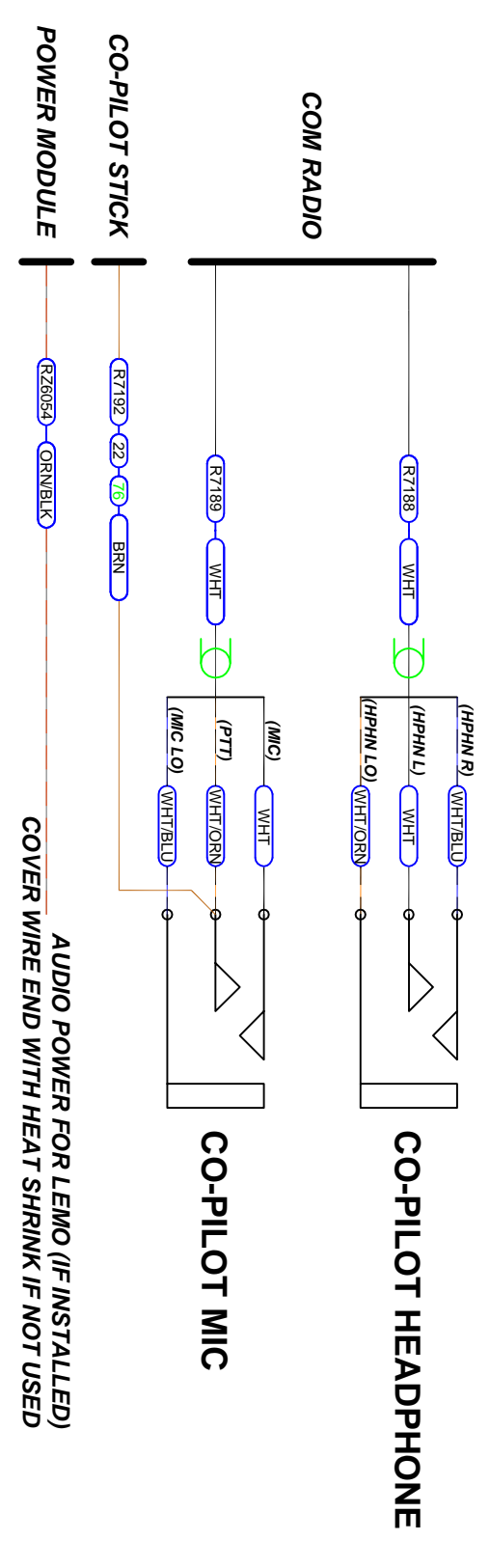


USE GARMIN BACKSHELL

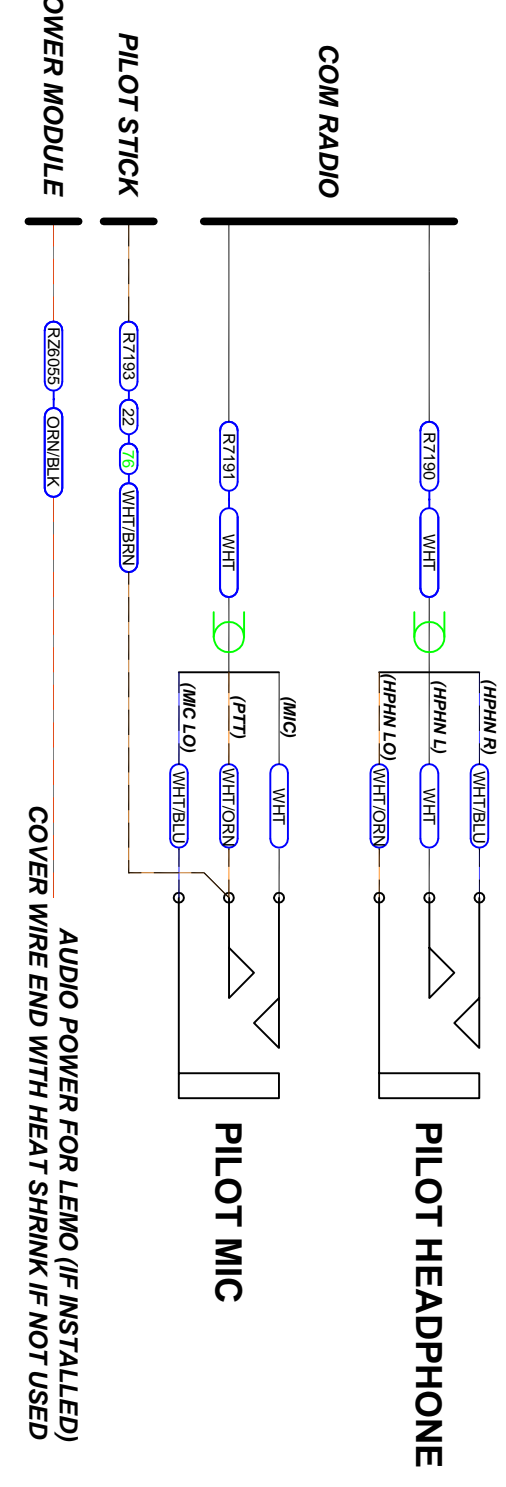
### COM - GTR 200B



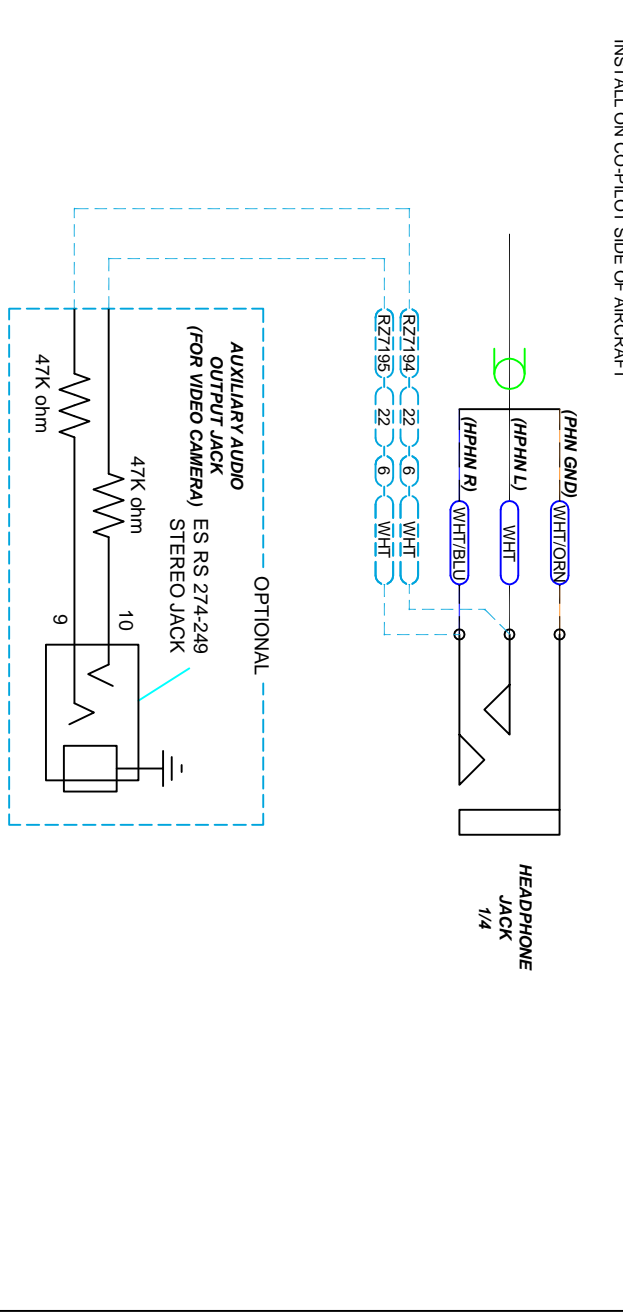
### CO-PILOT HEADSET JACKS



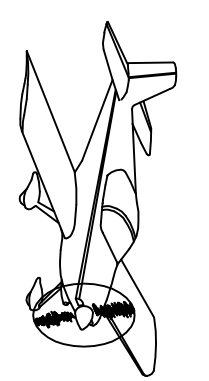
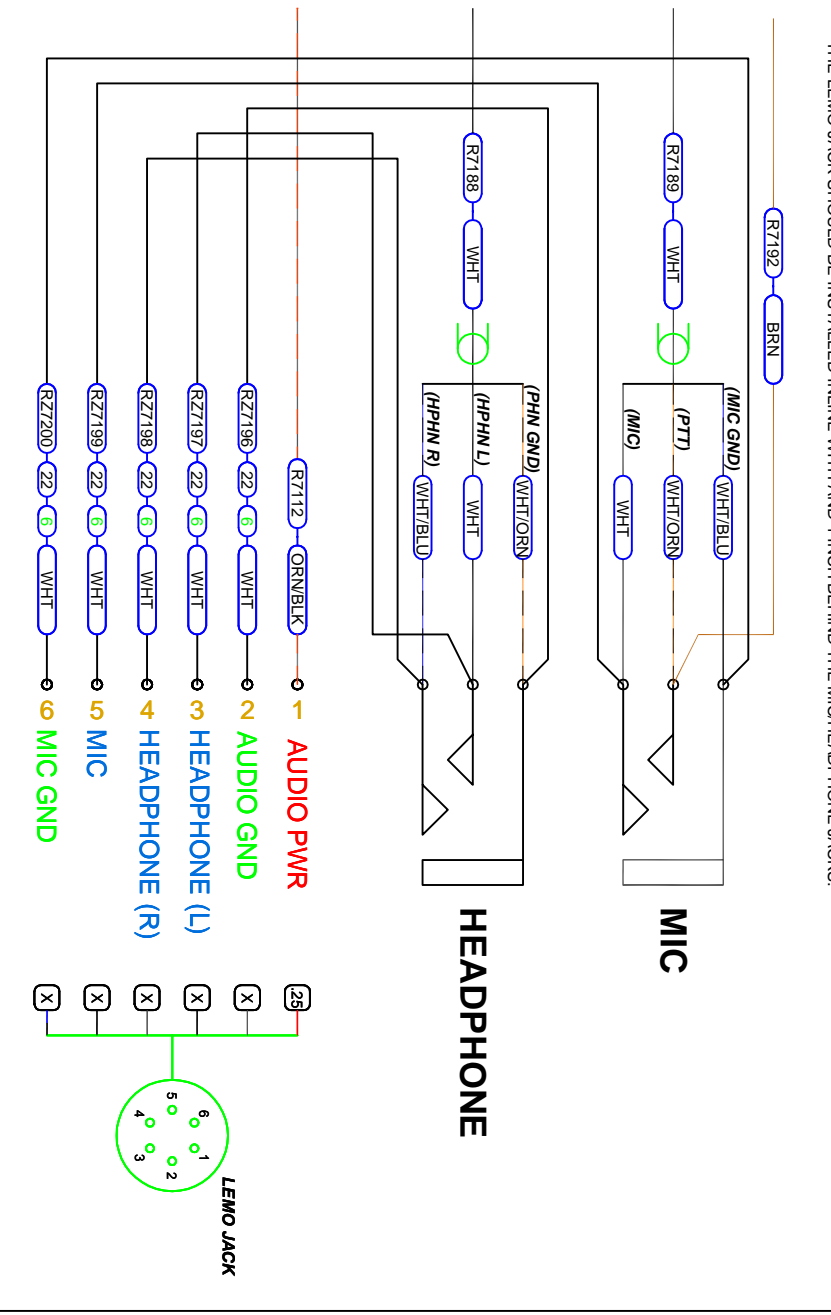
### PILOT HEADSET JACKS



#### OPTIONAL AUDIO OUTPUT



#### OPTIONAL LEMO JACK



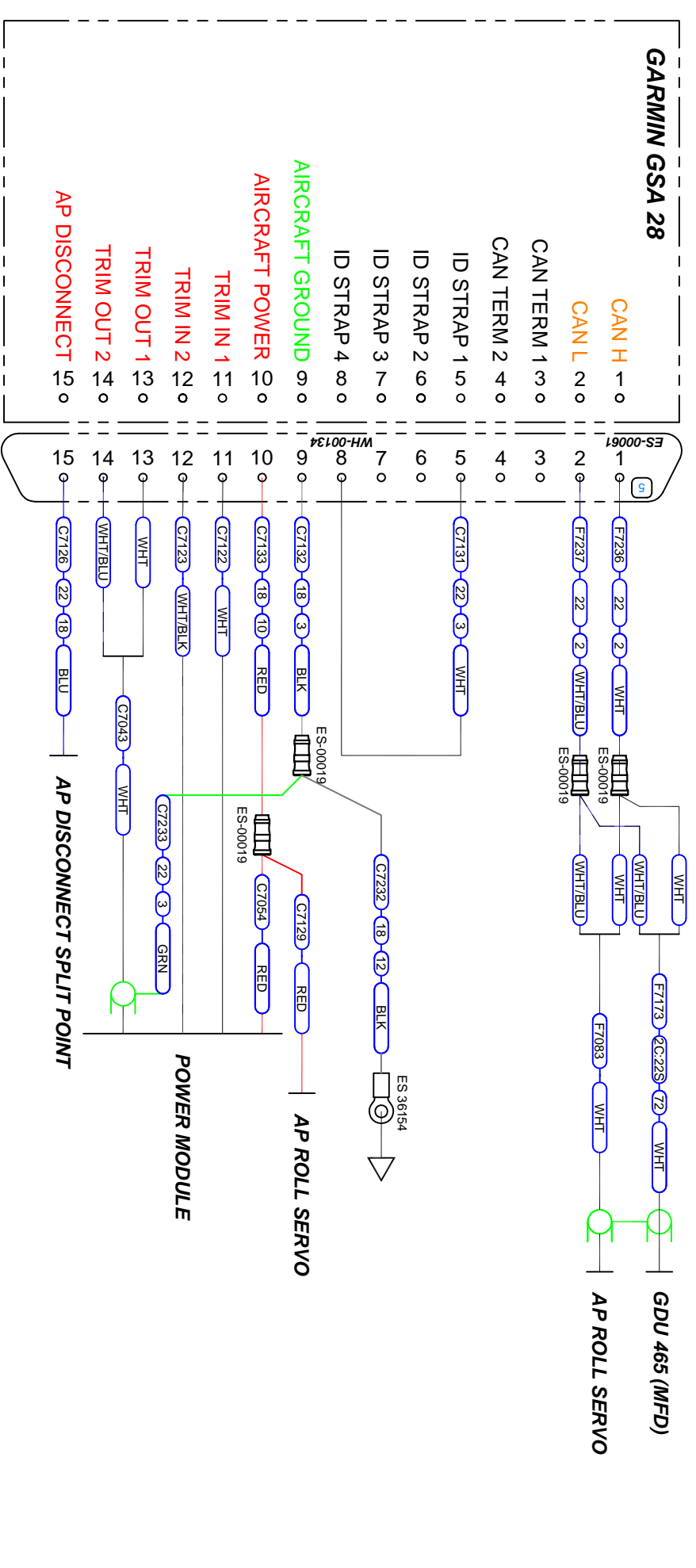
VAN'S AIRCRAFT, INC. 14401 NE KELLY RD. NE  
AURORA, OR 97002 USA

### ROTAX 912IS G3X ELECTRICAL SYSTEM

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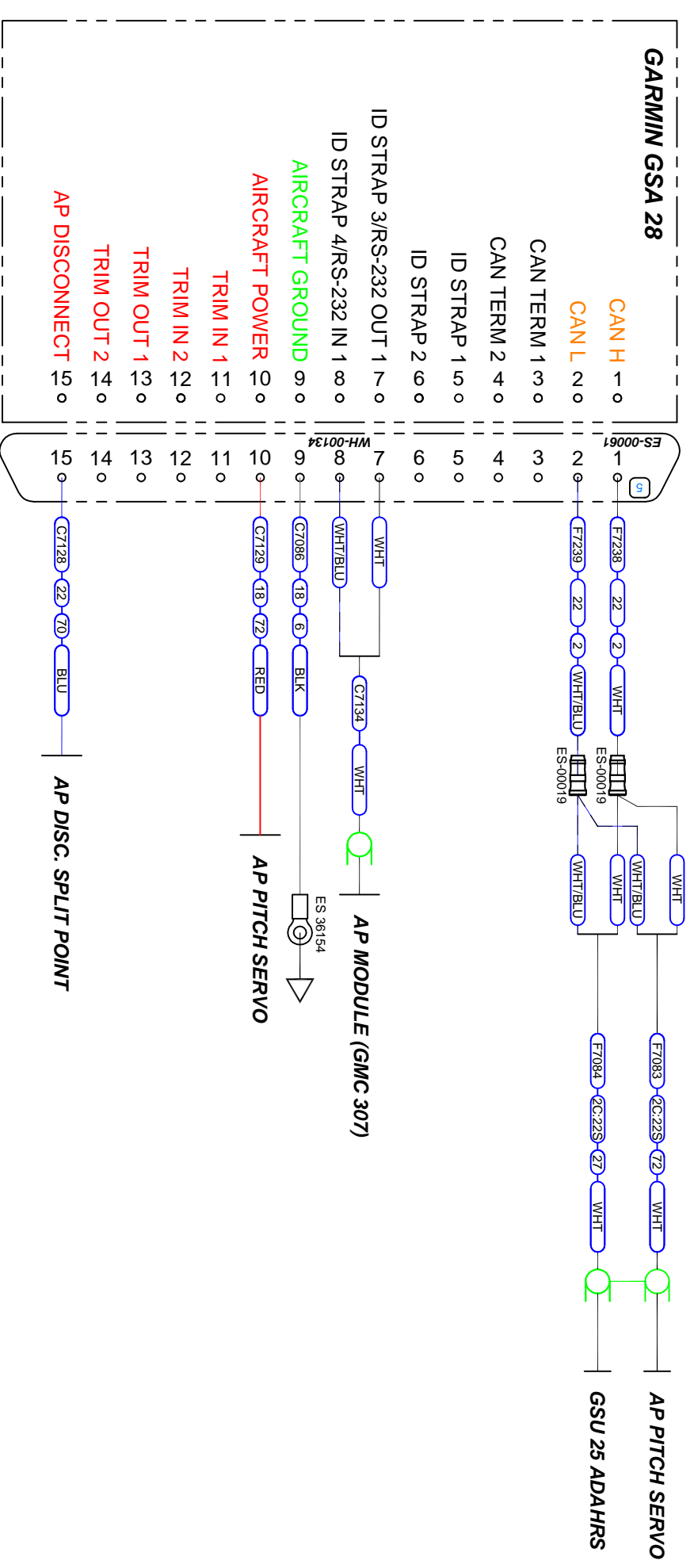
**AUTOPILLOT PITCH SERVO**

GARMIN GSA28

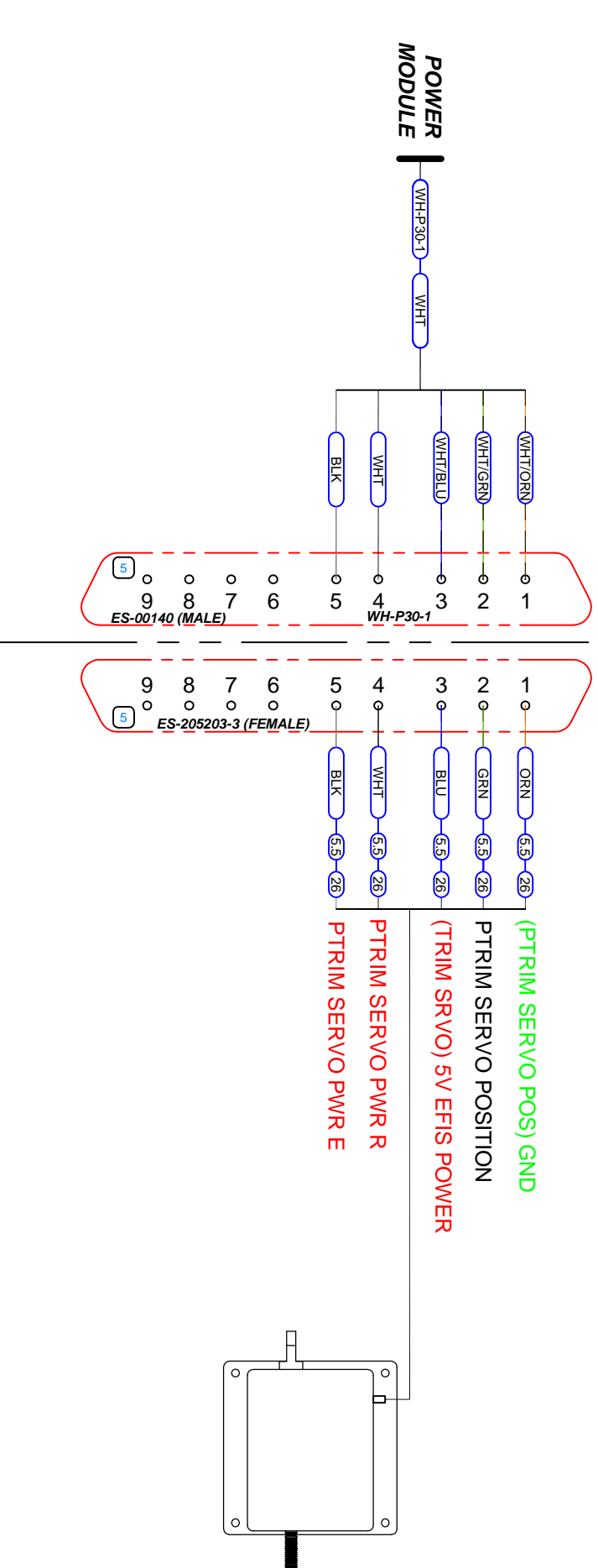


**AUTOPILLOT ROLL SERVO**

GARMIN GSA28

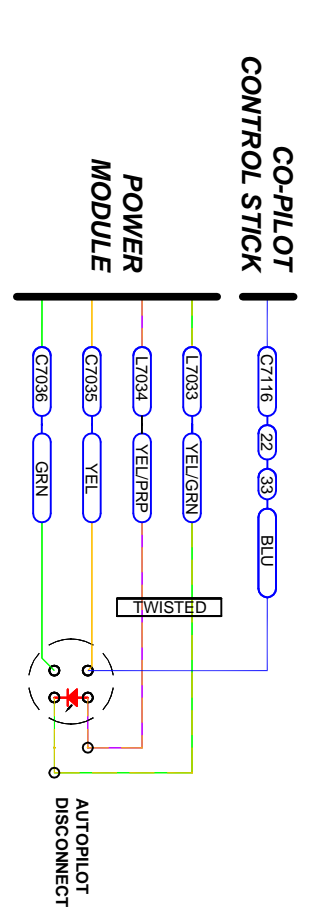


**TRIM MOTOR**

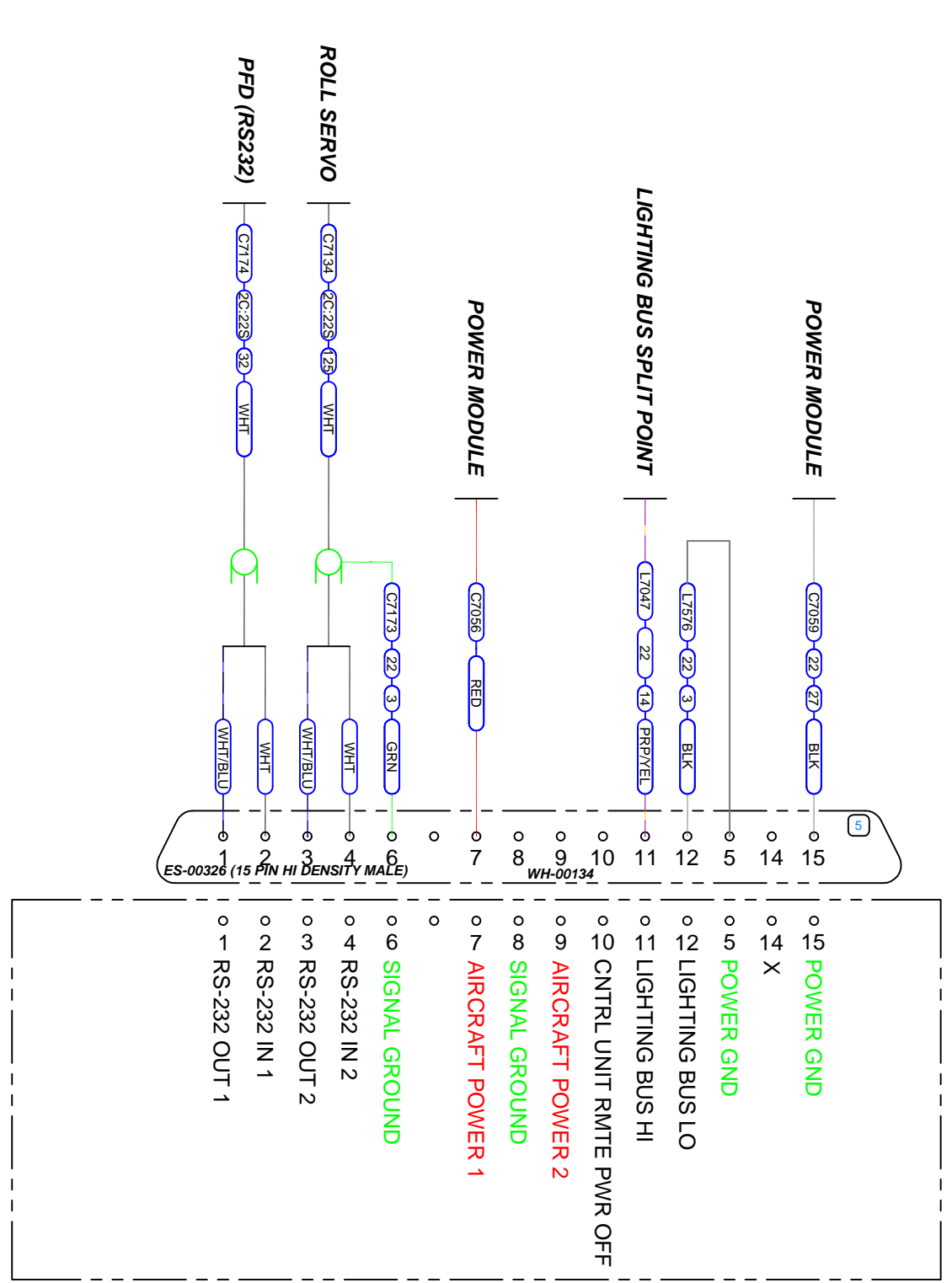


THESE COMPONENTS NOT INCLUDED IN AVIONICS KIT, NOR PART OF THE WH-00136

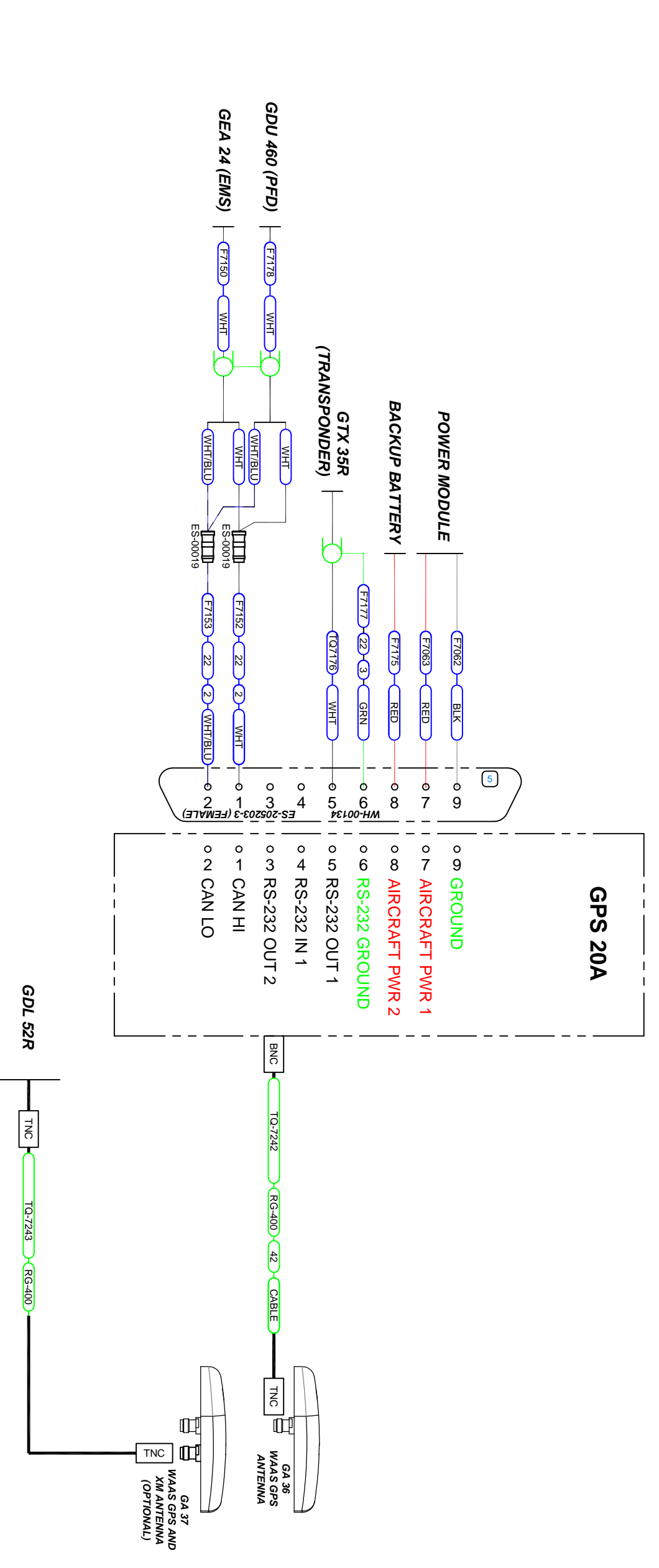
**AP DISCONNECT**



**AP MODULE GMC 307**



USE SUPPLIED CAN TERMINATOR



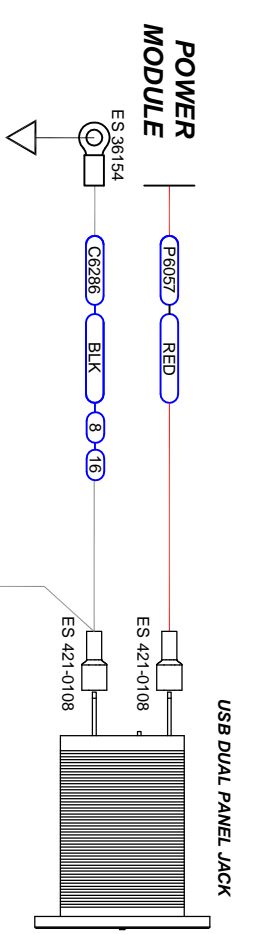
VAN'S AIRCRAFT, INC.  
14401 NE KELL RD. NE  
AURORA, OR  
97002 USA

**ROTAX 912IS G3X ELECTRICAL SYSTEM**

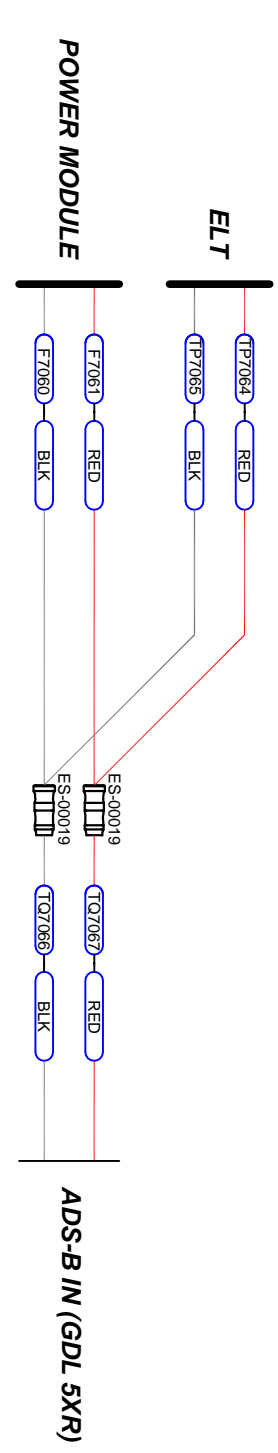
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REV	DESCRIPTION	DATE	APPROVED
R4	SEE PAGE 1		

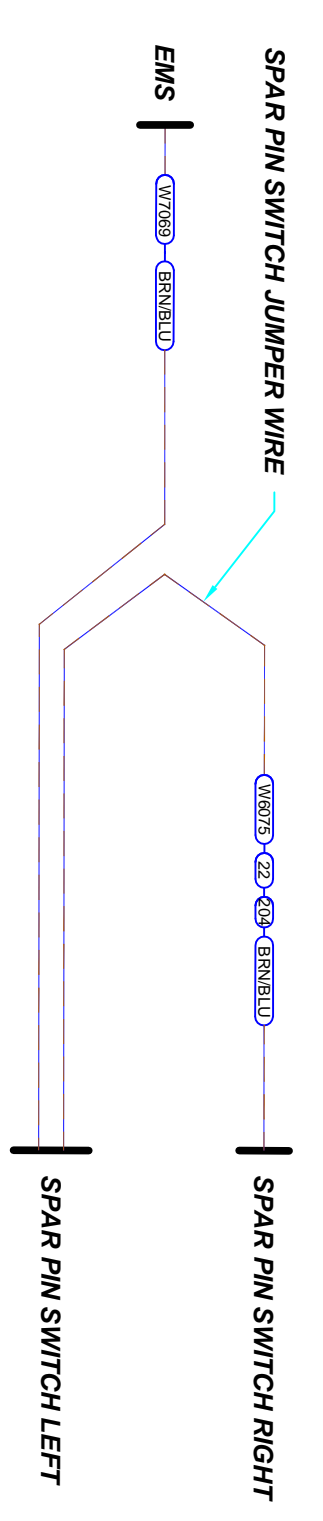
### POWER OUTLET



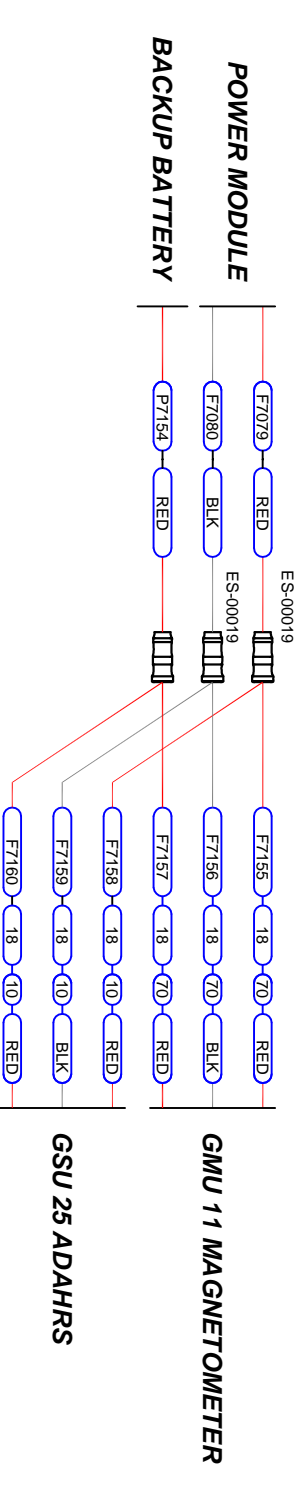
### SPLIT POINT 5



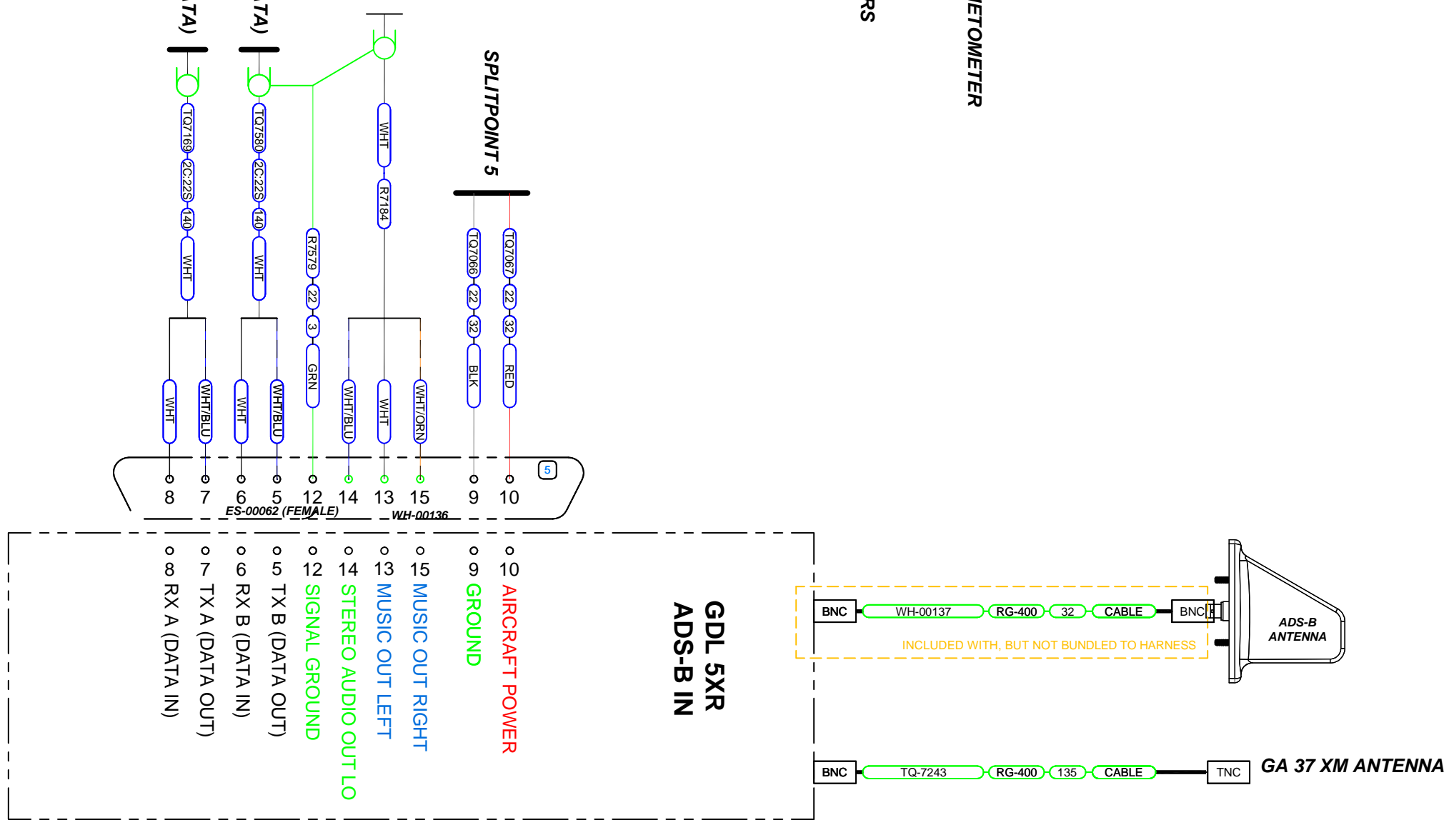
### SPLIT POINT 1



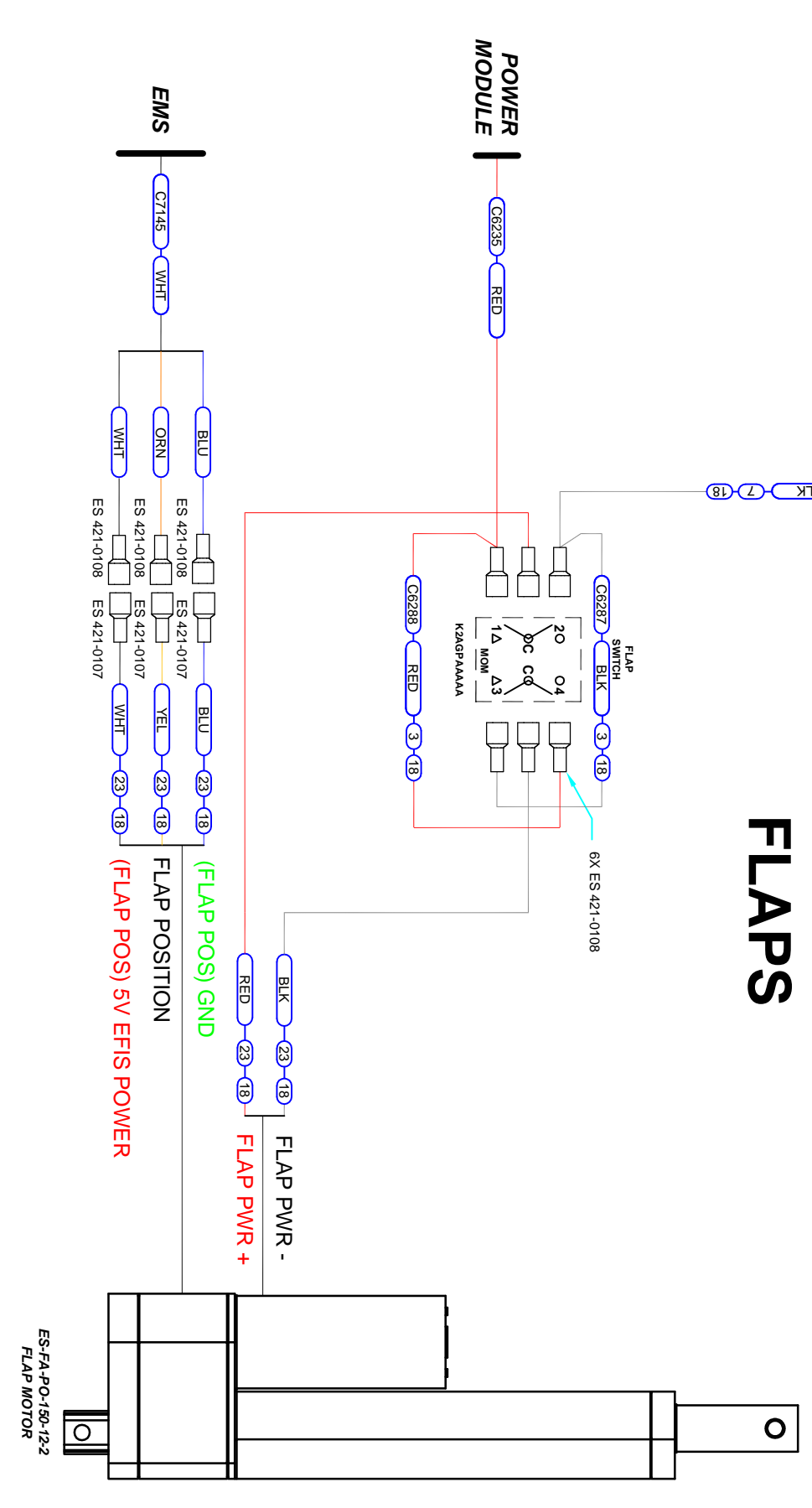
### SPLIT POINT 4



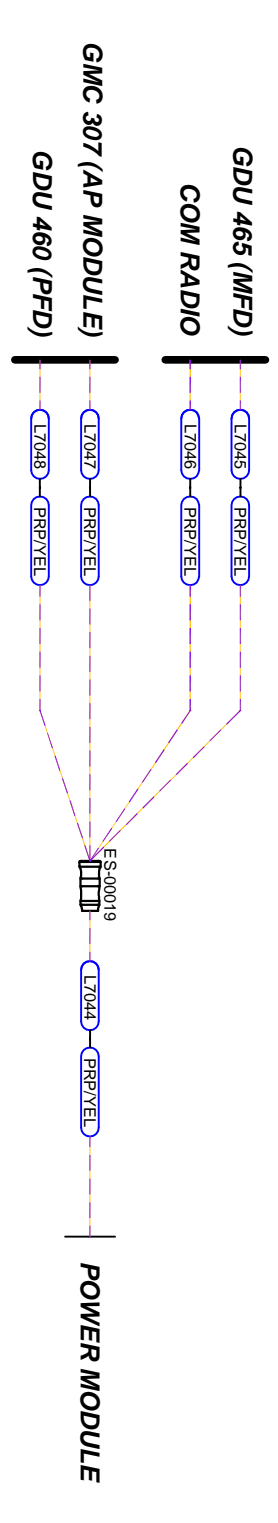
### SPLIT POINT 5



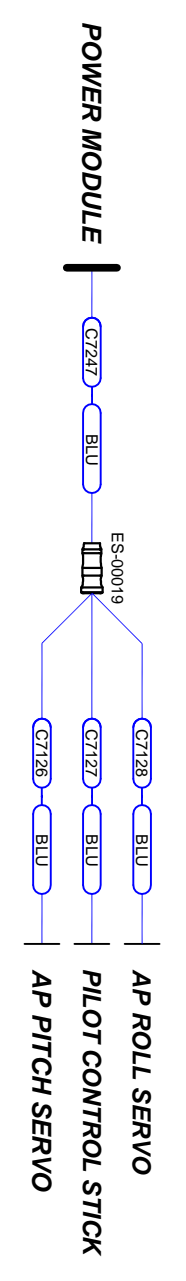
### FLAPS



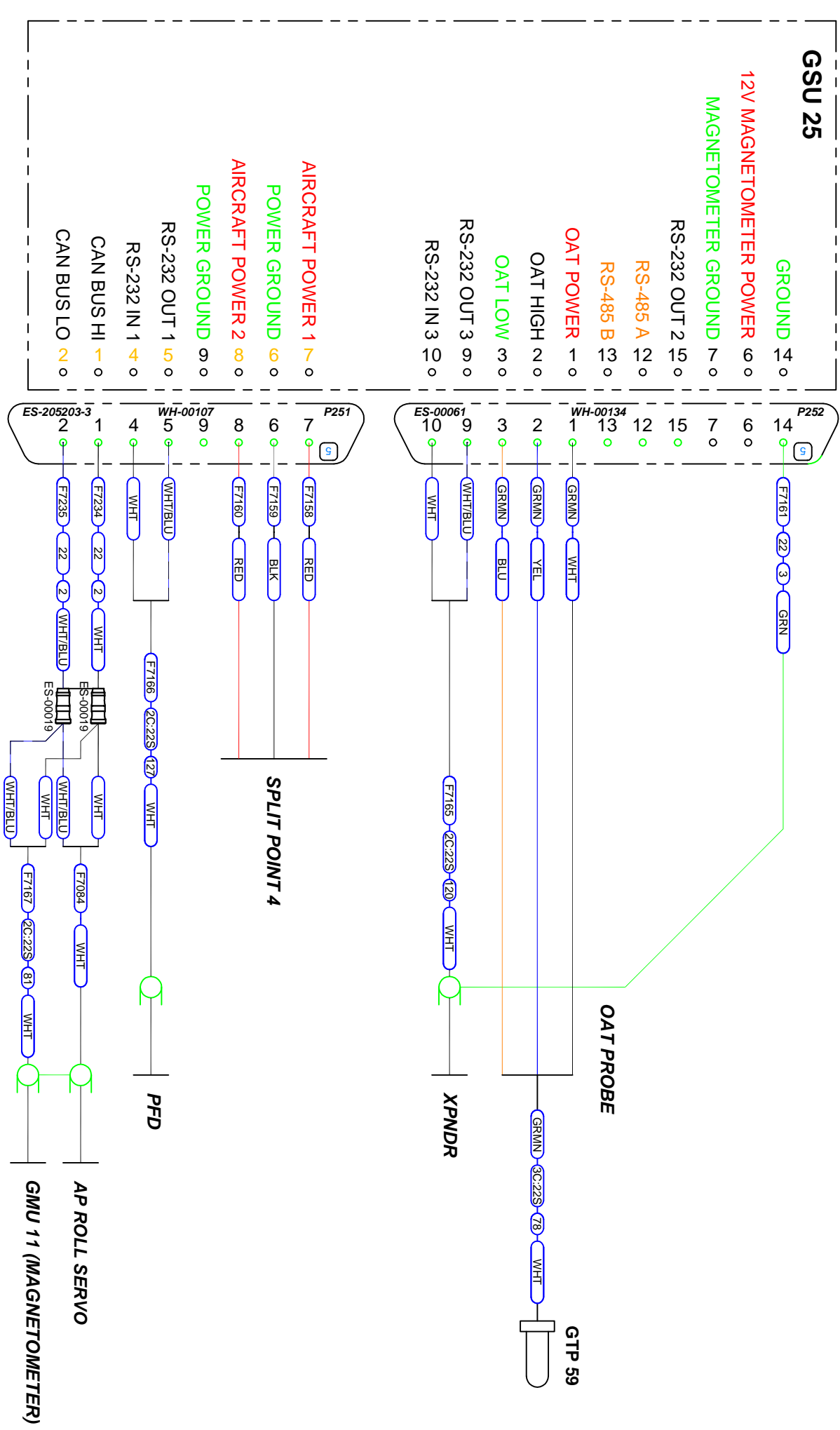
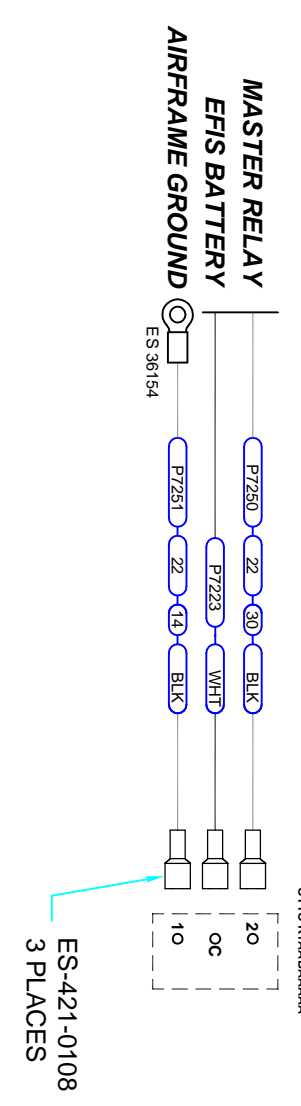
### LIGHTING BUS SPLIT



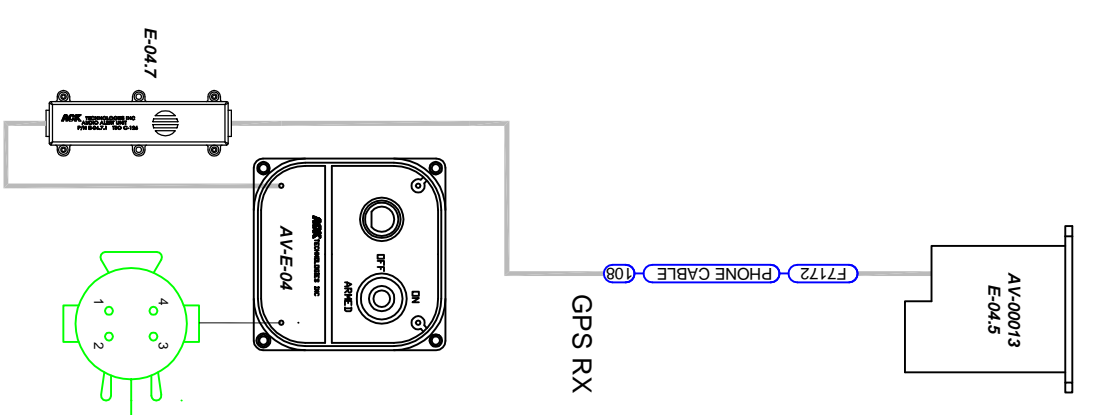
### AUTOPILOT DISC. SPLIT POINT



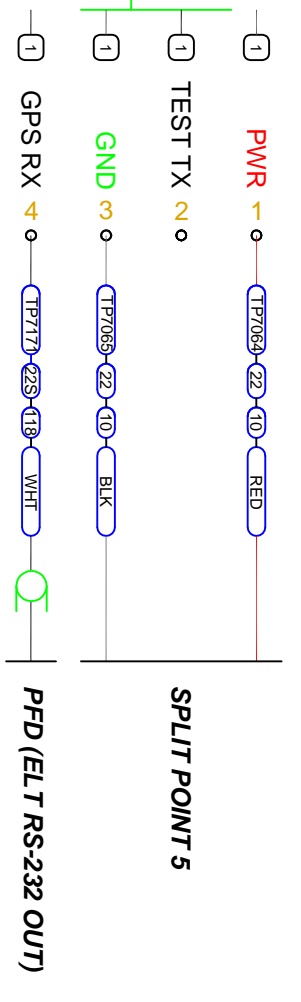
### EFIS BATTERY SWITCH



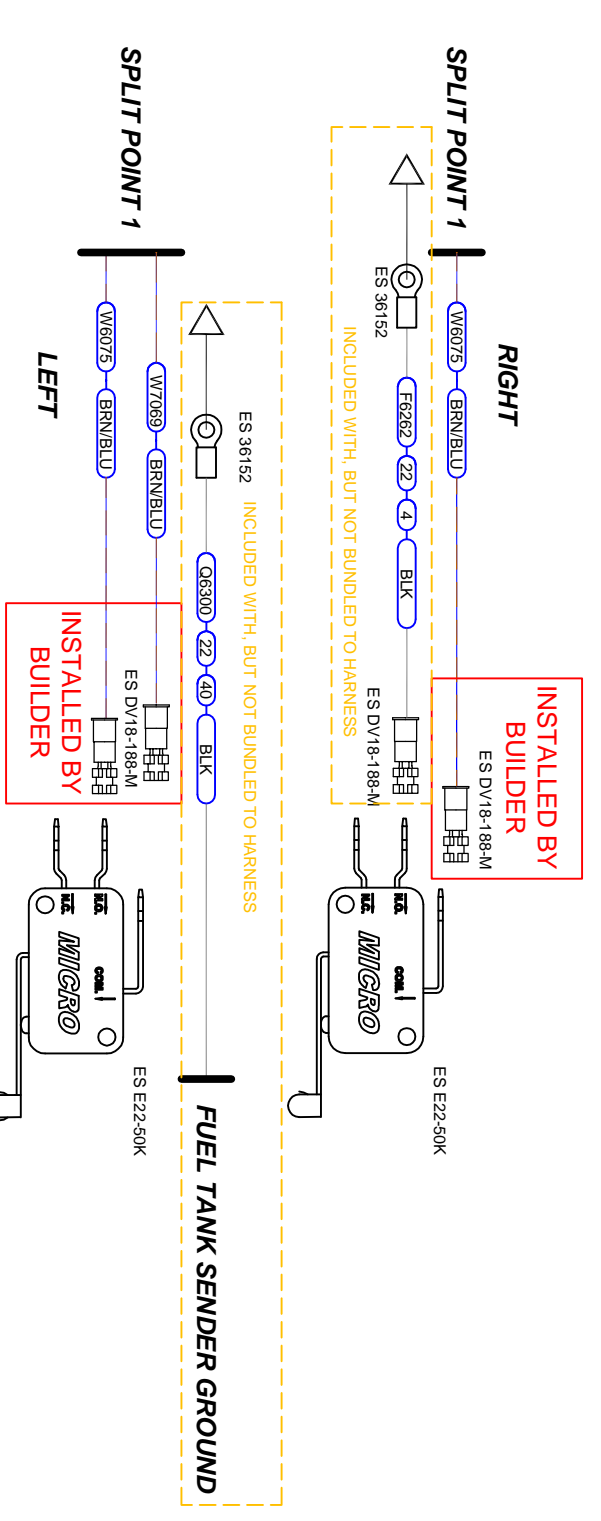
### ELT REMOTE



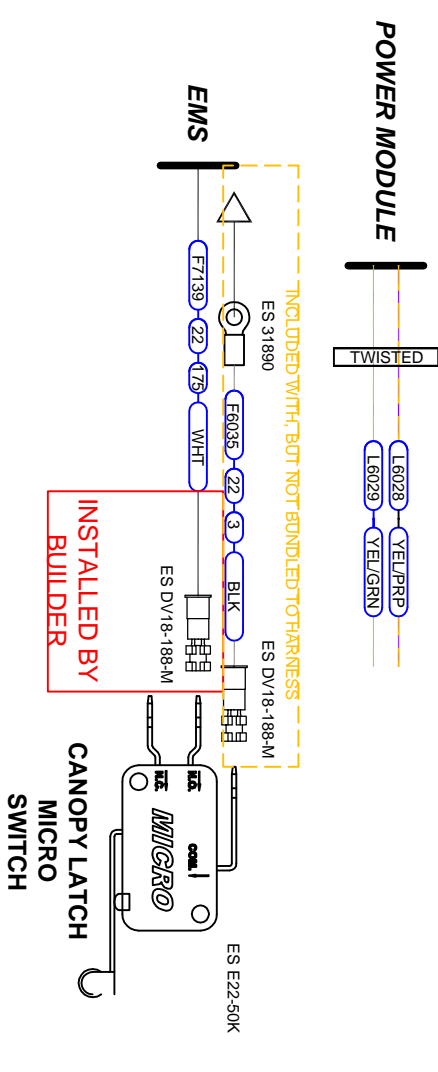
### ELT



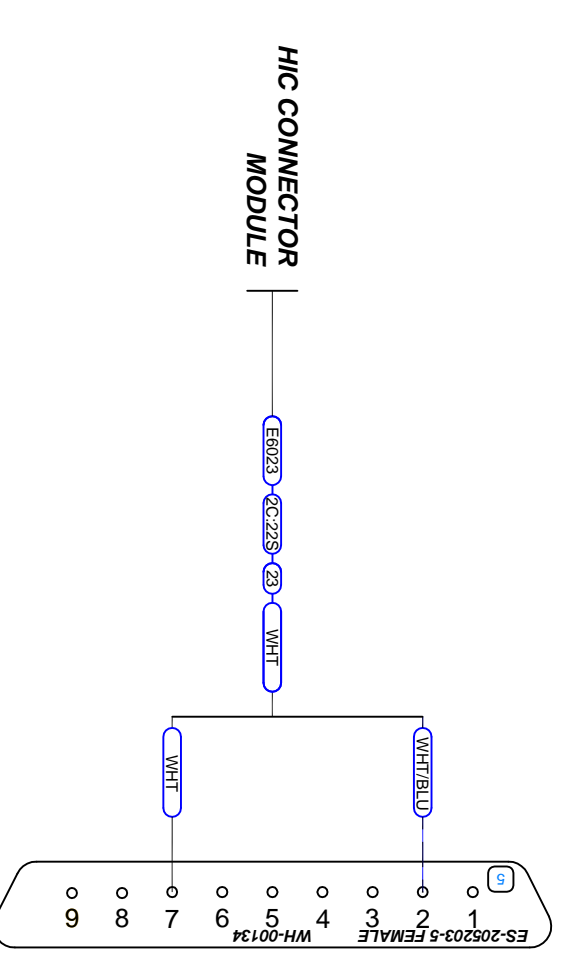
### SPAR PIN SWITCHES



### CANOPY SWITCH / CABIN LIGHT



### 912IS MAINT PORT



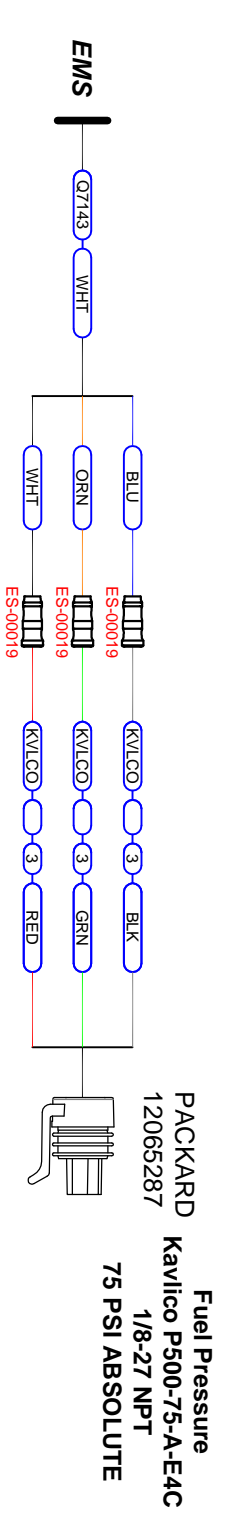
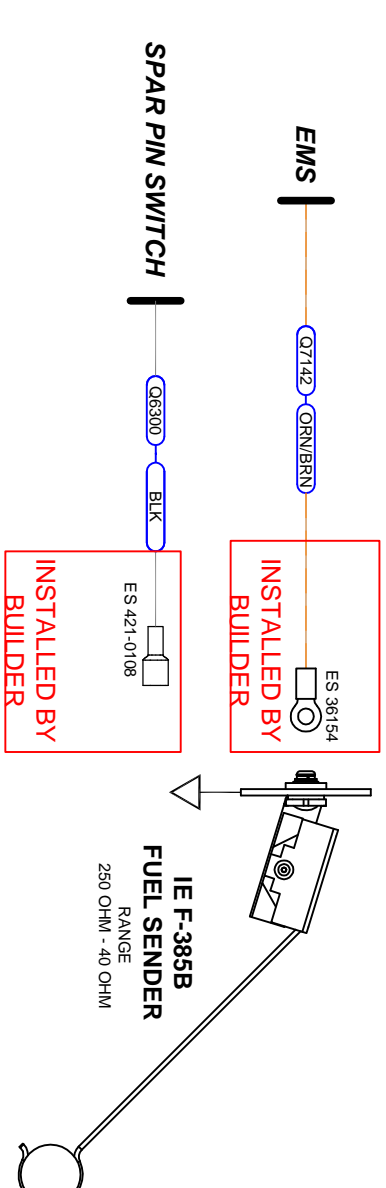
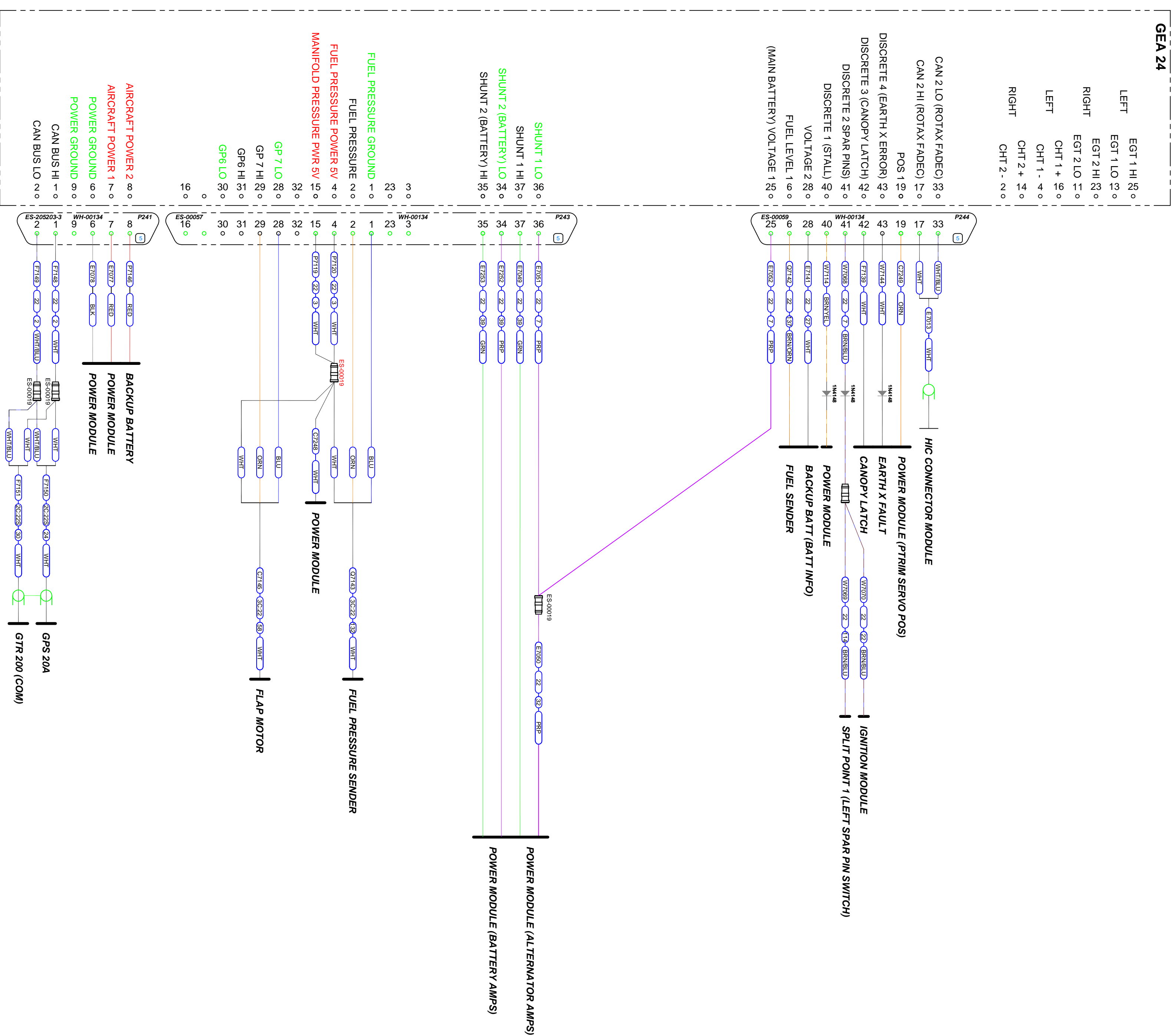
VAN'S AIRCRAFT, INC. 14401 NE KELT RD. N.E. AURORA, OR 97002 USA

ROTAX 912IS G3X ELECTRICAL SYSTEM

DATE DRAWN: 6/11/2018	INCHES	WH-00134
DRAWN BY: T. DE MAN	SCALE: NONE	PAGE: 6 OF 11
TOLERANCES: NONE		
(UNLESS OTHERWISE SPECIFIED)		
PATHFILENAME: Q:\RV-125\System Electrical System 912S G3X (WH-00134).DWG	C-SIZE ORIGINAL	

# EMS

## GEA 24



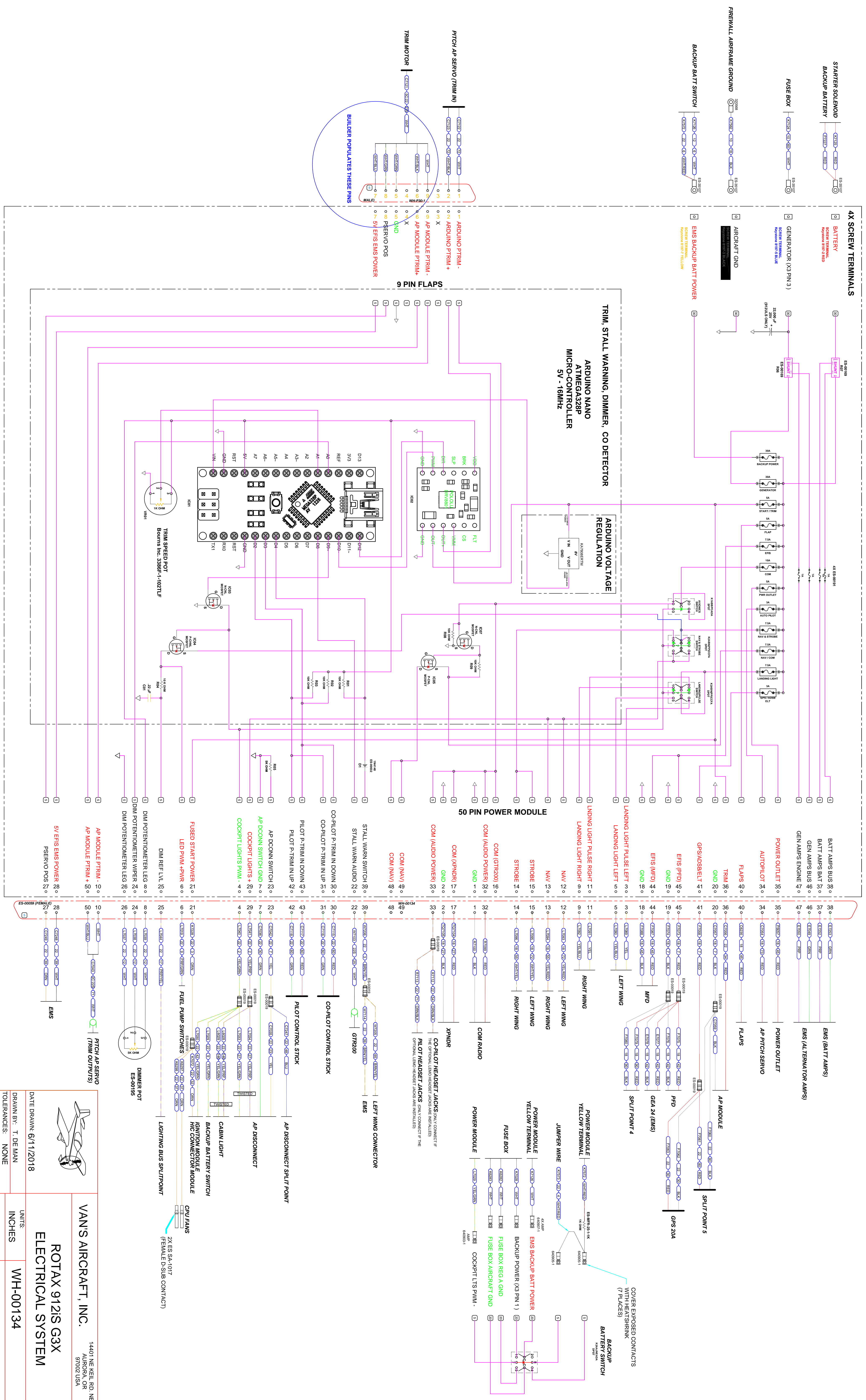
VAN'S AIRCRAFT, INC. 14401 NE KELL RD. NE  
 ALDRICH, OR 97002 USA

### ROTAX 912IS G3X ELECTRICAL SYSTEM

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 DRAWN BY: T. DE MAN  
 TOLERANCES: NONE  
 (UNLESS OTHERWISE SPECIFIED)  
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 PAGE: 7 OF 11

# POWER MODULE IS-ULS PCB V3.4

REV	DESCRIPTION	DATE	APPROVED
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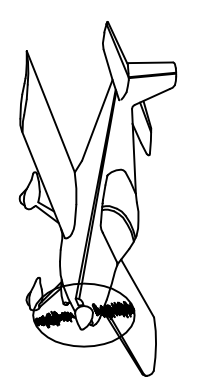
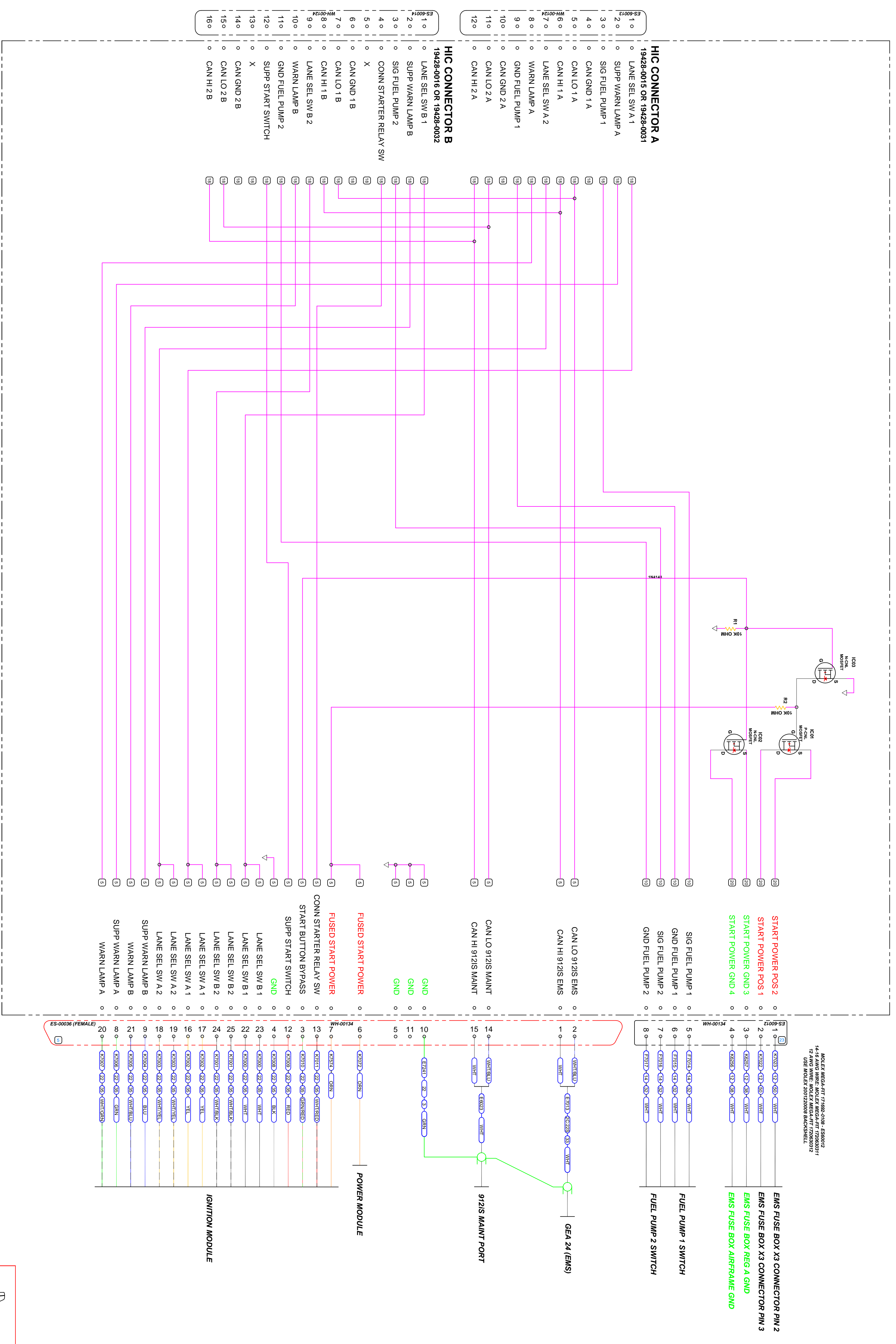


VAN'S AIRCRAFT, INC.  
14401 NE KELL RD. NE  
AURORA, OR  
97002 USA

ROTAX 912IS G3X  
ELECTRICAL SYSTEM

DATE DRAWN: 6/11/2018	UNITS: INCHES	WH-00134
DRAWN BY: T. DE MAN	TOLERANCES: NONE	
(UNLESS OTHERWISE SPECIFIED)	SCALE: NONE	PAGE: 8 OF 11
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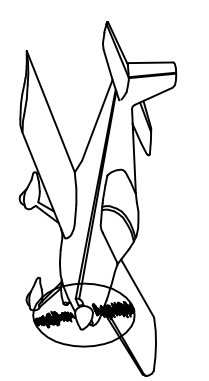
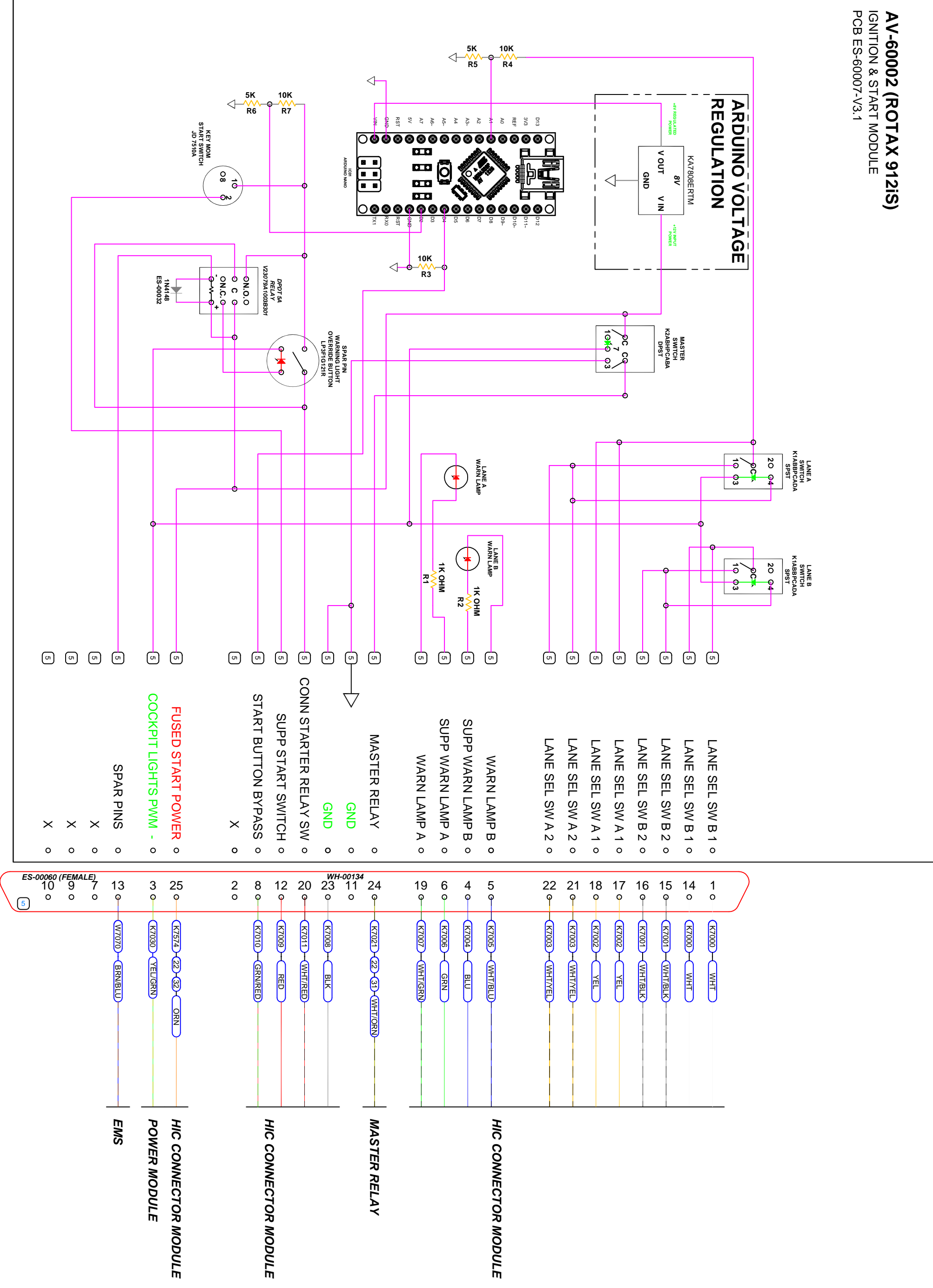
VAN'S AIRCRAFT, INC.  
14401 NE KELL RD. NE  
ALDRICH, OR  
97002 USA

ROTAX 912IS G3X  
ELECTRICAL SYSTEM

DATE DRAWN: 6/11/2018  
DRAWN BY: T. DE MAN  
TOLERANCES: NONE  
(UNLESS OTHERWISE SPECIFIED)  
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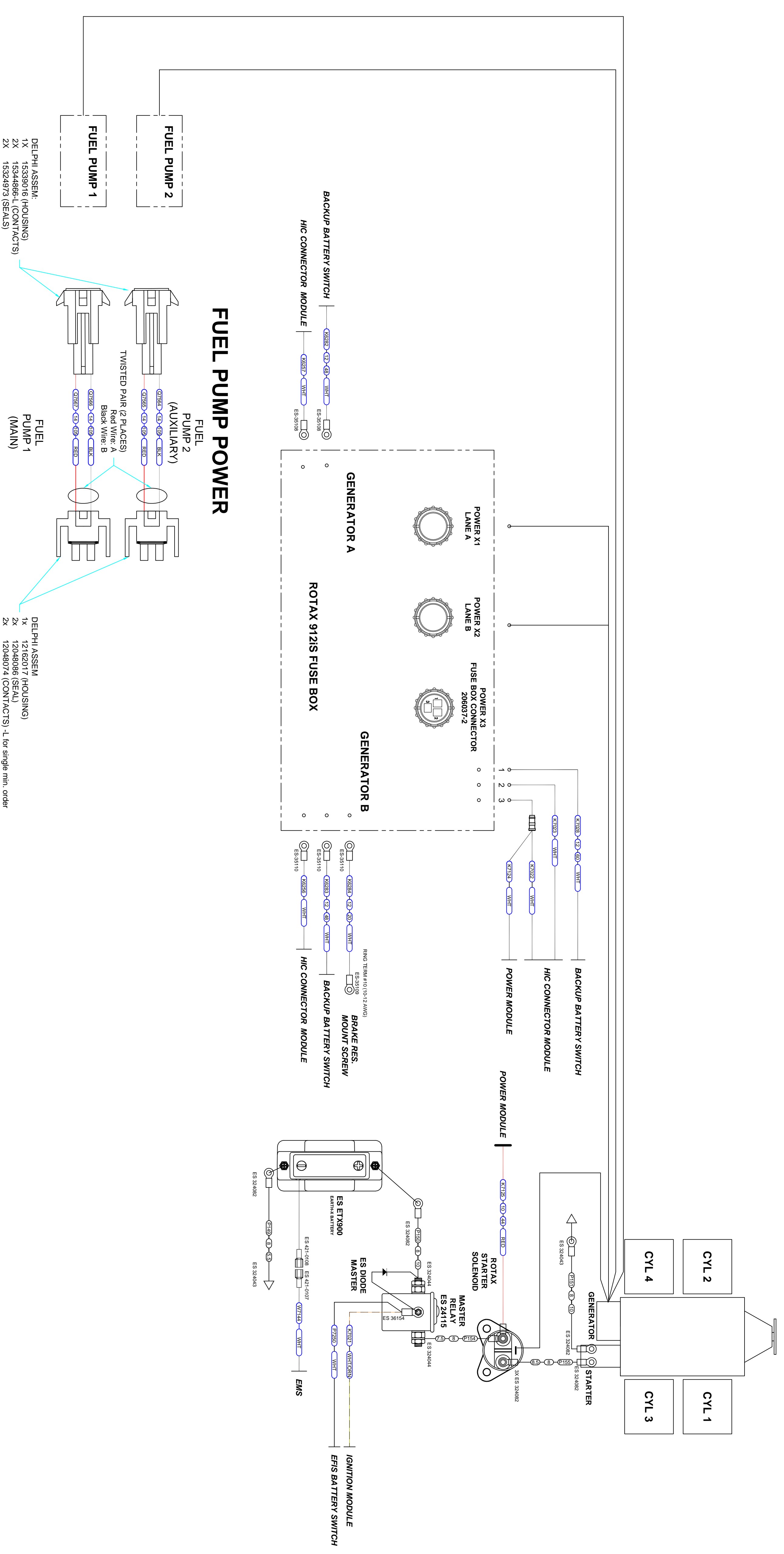
**AV-60002 (ROTAX 912IS)**  
 IGNITION & START MODULE  
 PCB ES-60007-V3.1



VAN'S AIRCRAFT, INC. 14401 NE KELL RD, NE  
 ALDRICH, OR 97002 USA

**ROTAX 912IS G3X  
 ELECTRICAL SYSTEM**

DATE DRAWN: 6/11/2018	UNITS: INCHES	WH-00134
DRAWN BY: T. DE MAN	TOLERANCES: NONE	PAGE: 10 OF 11
(UNLESS OTHERWISE SPECIFIED)	SCALE: NONE	C-SIZE ORIGINAL
PATHFILENAME: Q:\RV-125\System Electrical System 912S G3X (WH-00134).DWG		



VAN'S AIRCRAFT, INC. 14401 NE KELL RD. NE  
AURORA, OR 97002 USA

**ROTAX 912IS G3X  
ELECTRICAL SYSTEM**

DATE DRAWN: 6/11/2018	UNITS: INCHES	WH-00134
DRAWN BY: T. DE MAN	TOLERANCES: NONE	PAGE: 11 OF 11
(UNLESS OTHERWISE SPECIFIED)		
PATHFILENAME: Q:\RV-125\System Electrical System 912S G3X (WH-00134).DWG		
SCALE: NONE		C-SIZE ORIGINAL