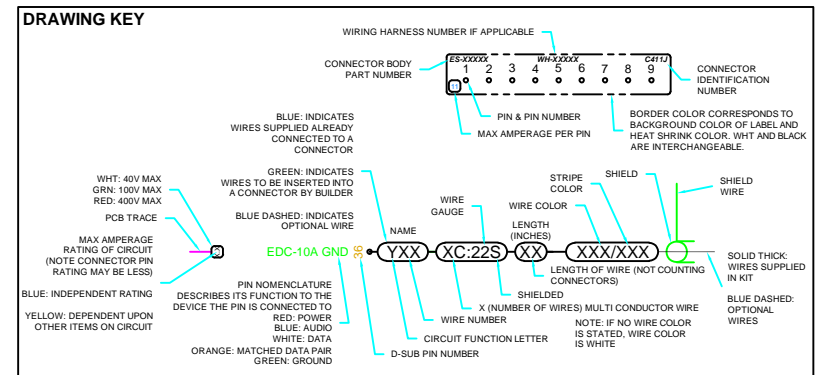


REVISIONS			
REV	DESCRIPTION	DATE	APPROVE
R0	INITIAL RELEASE, GMC 507 WAS GMC 307, MAINT PORT AND STICK GRIPS ES-00324 AND ES-00321 WERE ES-205203-3, LEMO COLORS	08/06/20	BPN
R1	REPLACED P155 WITH P158	10/21/20	SEC

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
TQ	AIRBORNE ANNOUNCING
TP	BEACON
TQ	TRANSMITTER 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-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-WRAPPS 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.

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

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: [Progress bar]
- AUX IN VOLUME: [Progress bar]
- MUSIC IN VOLUME: [Progress bar]
- SIDETONE VOLUME: [Progress bar]
- INTERCOM SQLCH: [Progress bar]
- MIC 1 GAIN: [Progress bar]
- MIC 2 GAIN: [Progress bar]
- RADIO SQLCH: [Progress bar]

TY96 PRESET NOTES:

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



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

ROTAX 912IS G3X ELECTRICAL SYSTEM

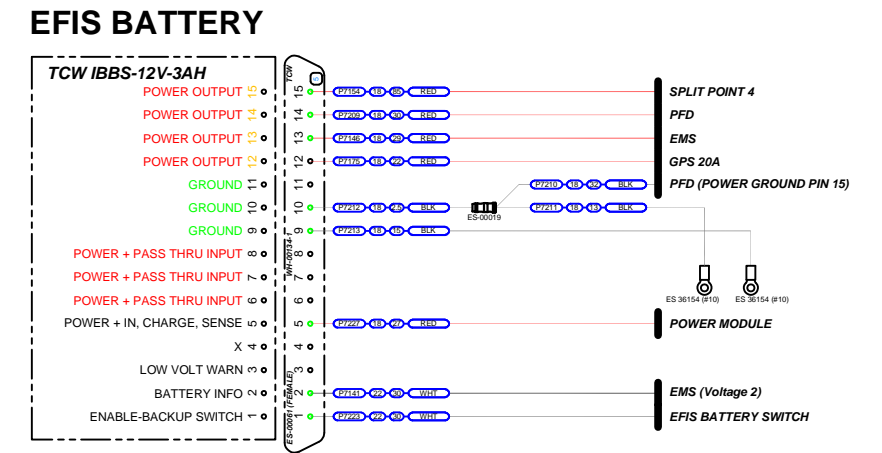
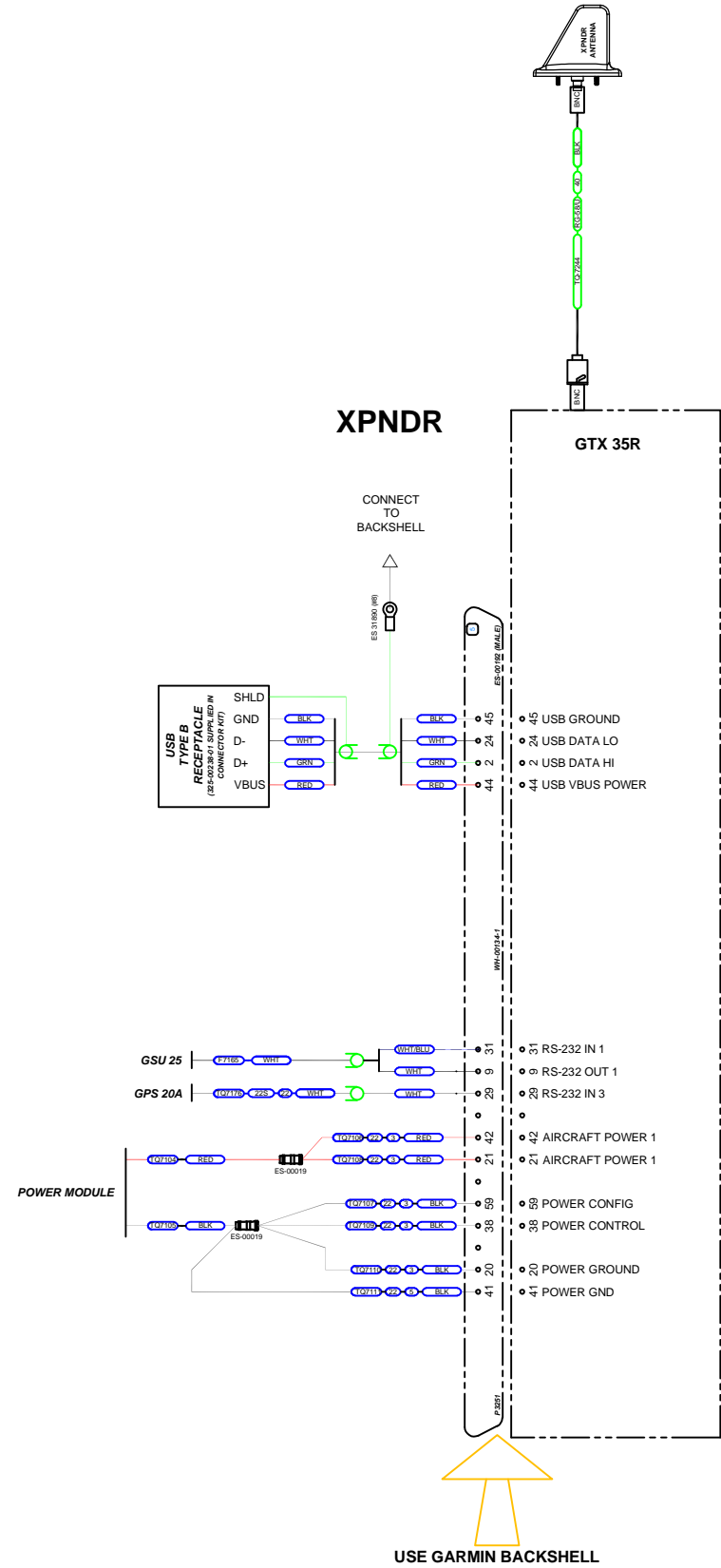
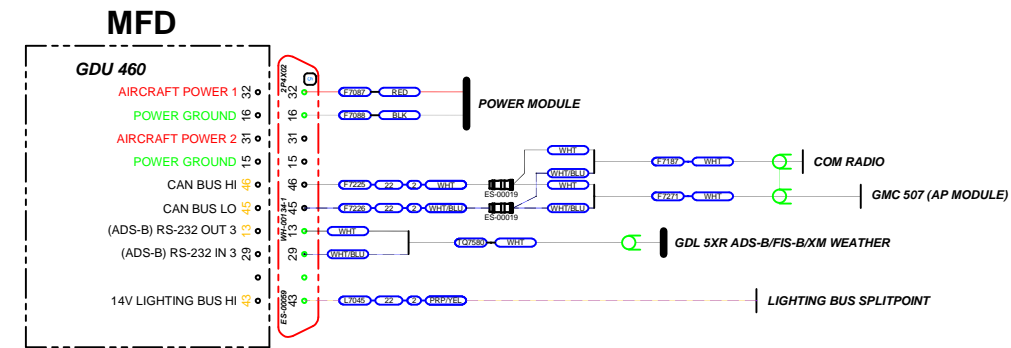
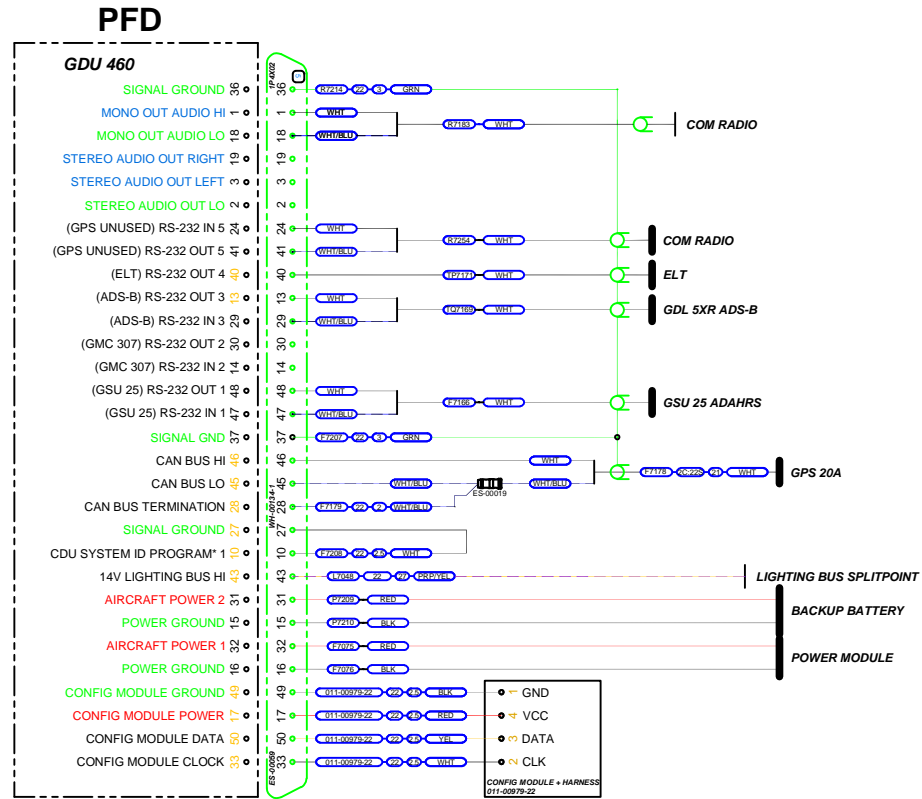
DATE DRAWN: 06/11/18


DRAWN BY: T. DE MAN

TOLERANCES: NONE (UNLESS OTHERWISE SPECIFIED)

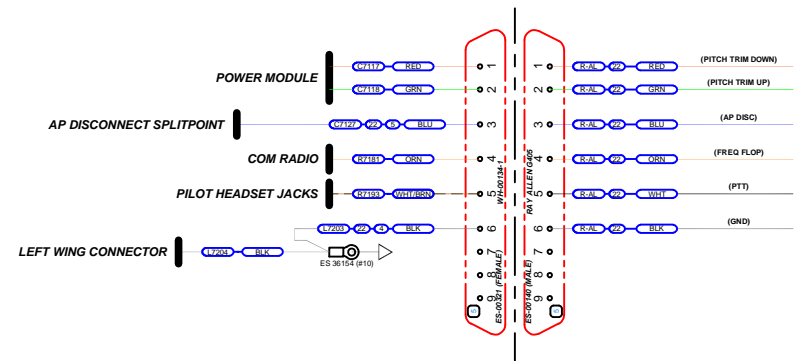
UNITS: INCHES
WH-00134-1

SCALE: NONE PAGE: 1 OF 11

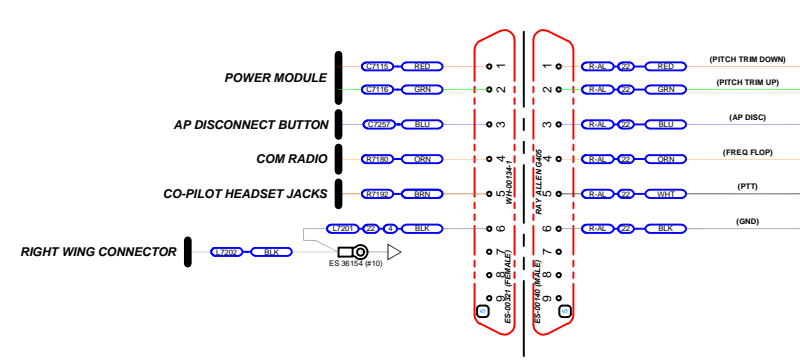


	VAN'S AIRCRAFT, INC. 14401 NE KEIL RD. NI AURORA, OR 97002 USA	
	ROTAX 912IS G3X ELECTRICAL SYSTEM	
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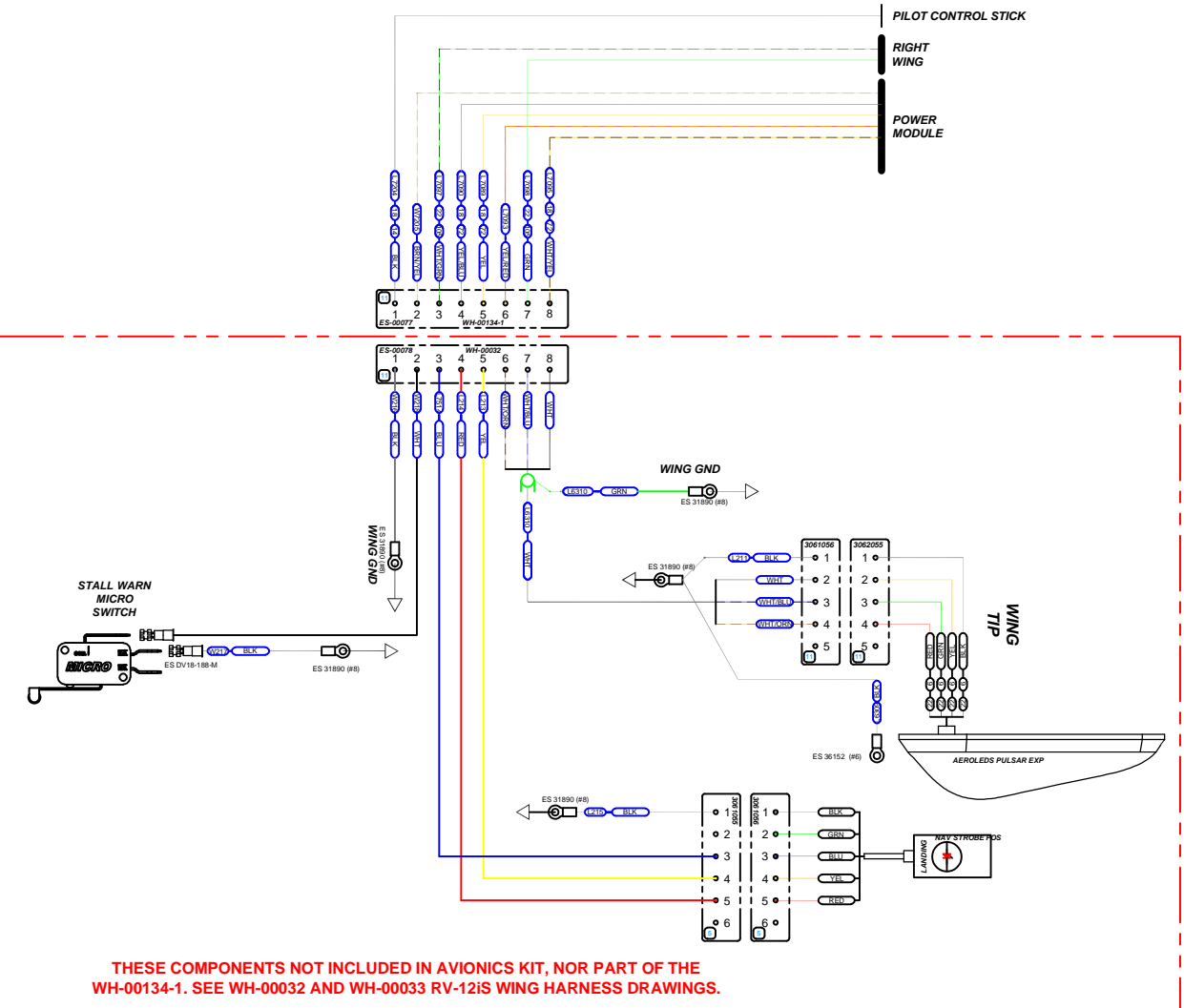
PILOT STICK GRIP



CO-PILOT STICK GRIP

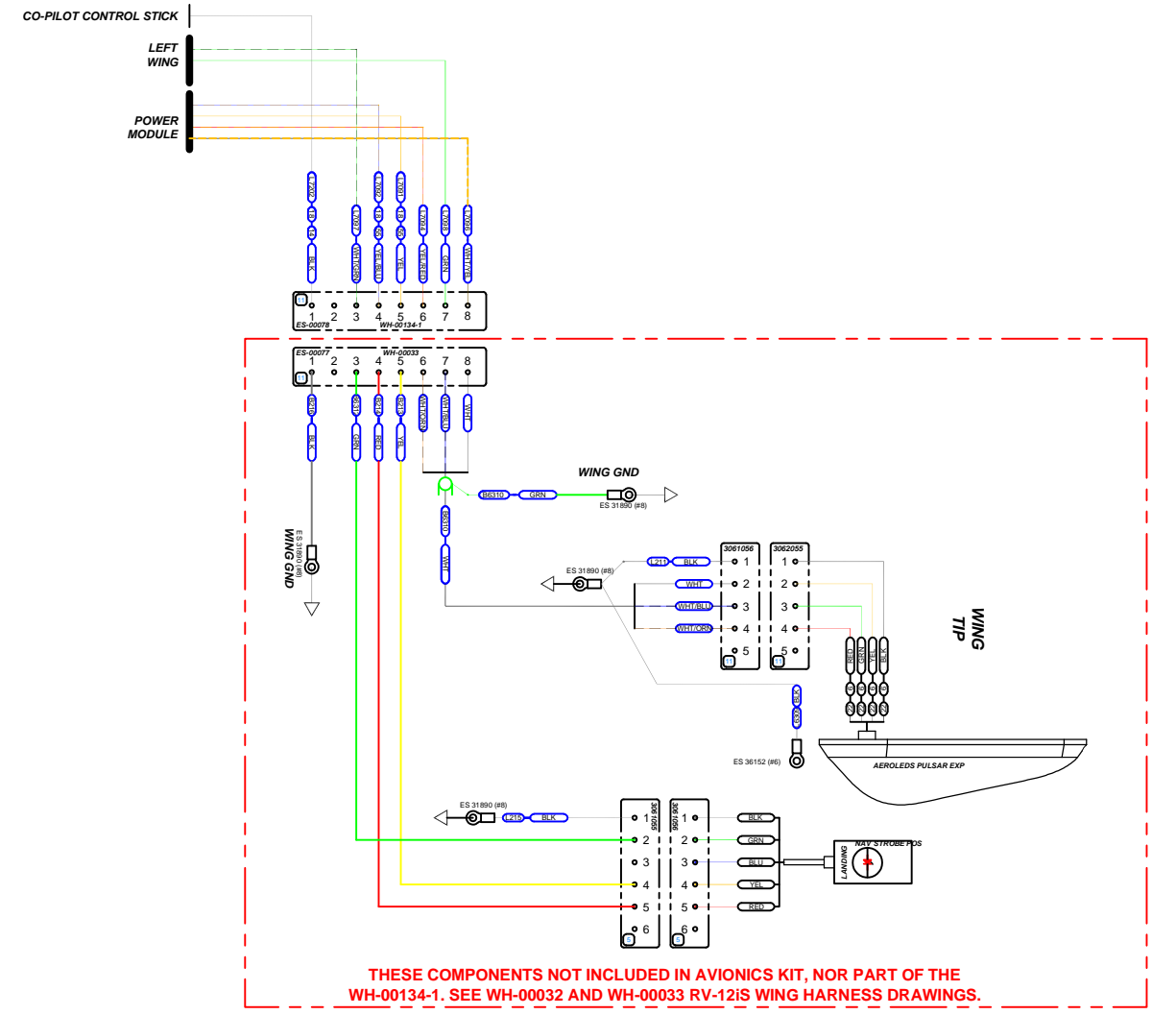


LEFT WING CONNECTOR



THESE COMPONENTS NOT INCLUDED IN AVIONICS KIT, NOR PART OF THE WH-00134-1. 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-00134-1. SEE WH-00032 AND WH-00033 RV-12IS WING HARNESS DRAWINGS.



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

ROTAX 912IS G3X ELECTRICAL SYSTEM

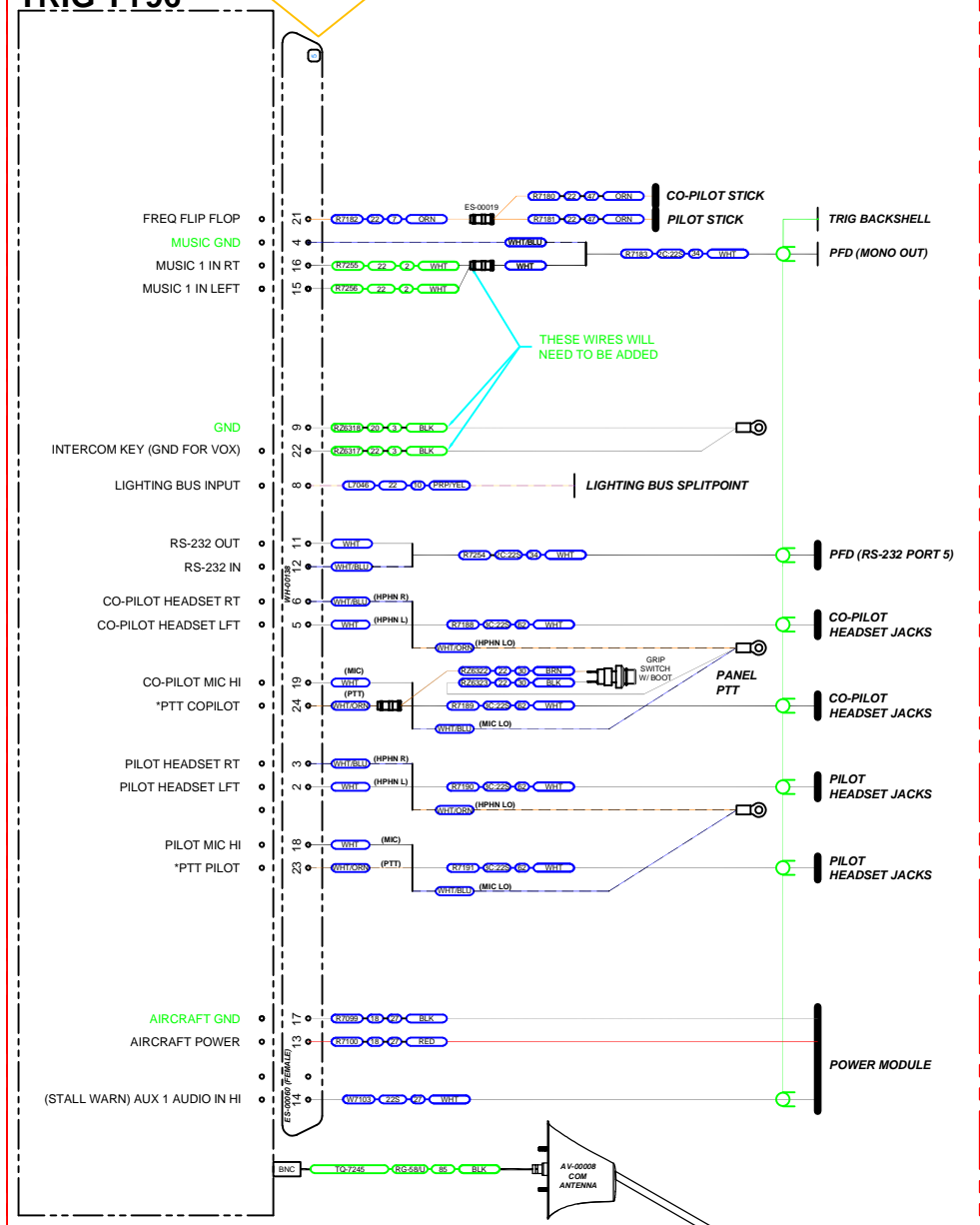
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DRAWN BY: T. DE MAN	SCALE: NONE	PAGE: 3 OF 11
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DATE/REV ENAME: AVIATION ELECTRONIC SYSTEMS (ELECTRONIC SYSTEMS) 2018 02 22 14401 NE KEIL RD, NI AURORA, OR 97002 USA		C-517F ORIGINAL

REVISIONS			
REV	DESCRIPTION	DATE	APPROVE
R1	SEE PAGE 1		

COM-RADIO - TRIG TY96

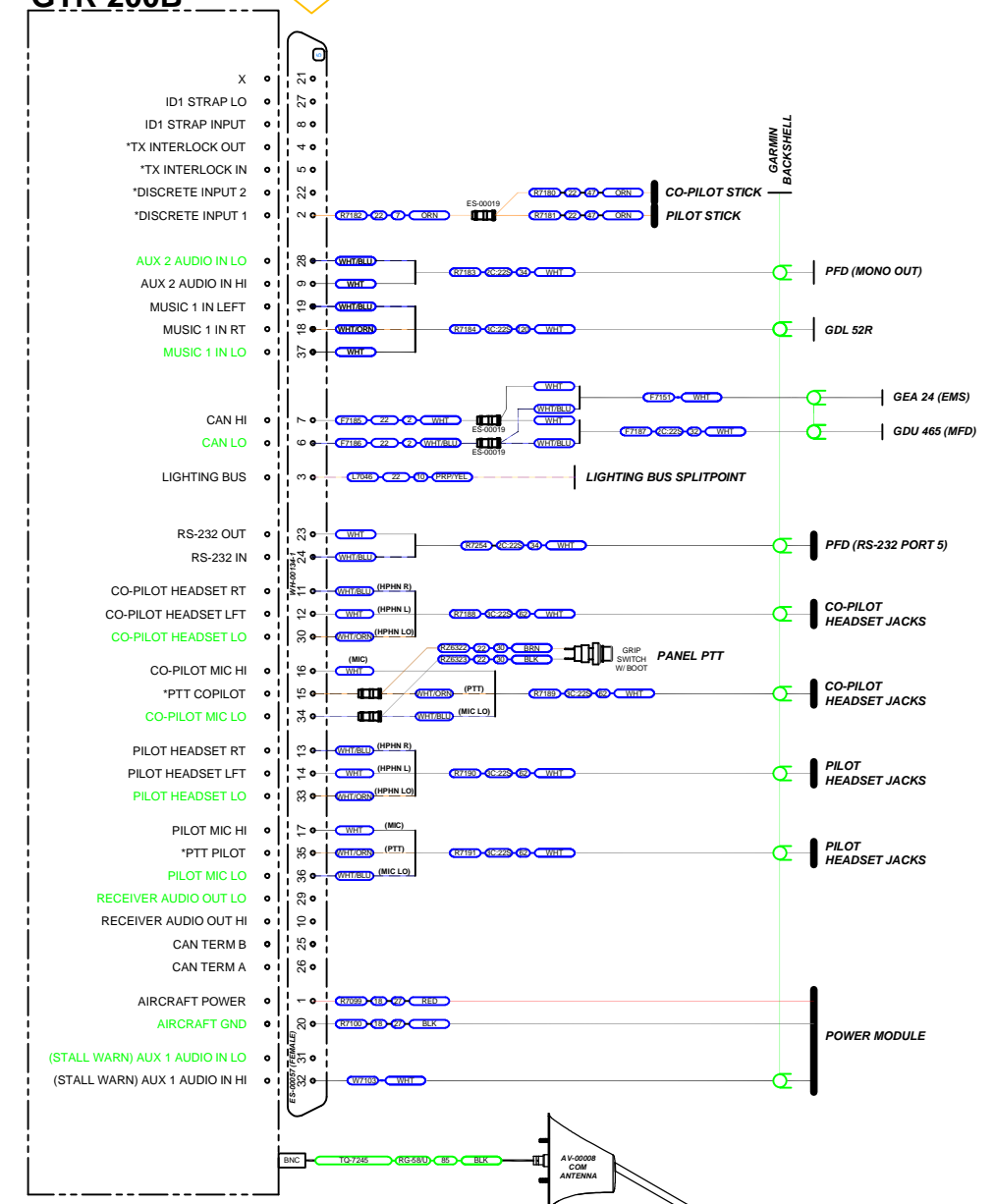
USE TRIG BACKSHELL

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

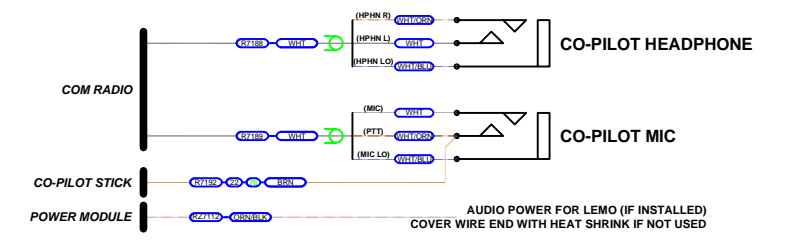


COM RADIO - GTR 200B

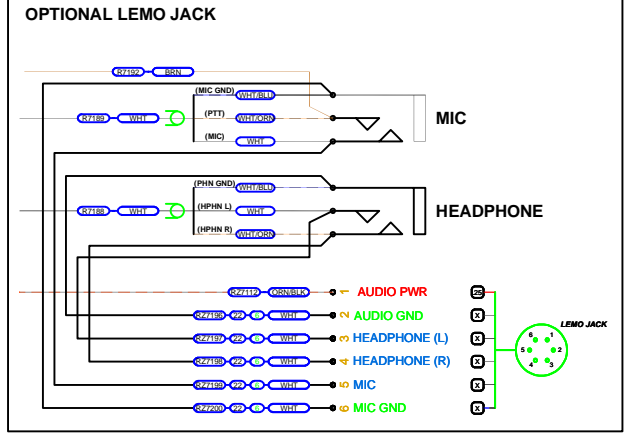
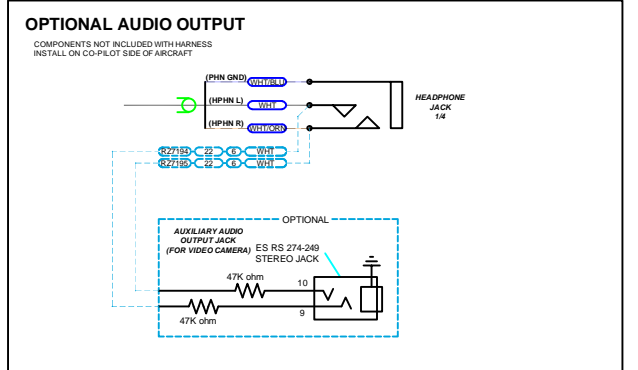
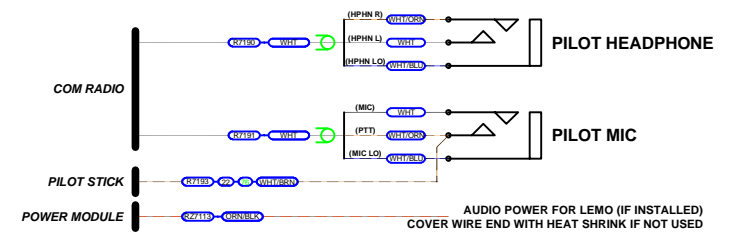
USE GARMIN BACKSHELL




CO-PILOT HEADSET JACKS



PILOT HEADSET JACKS





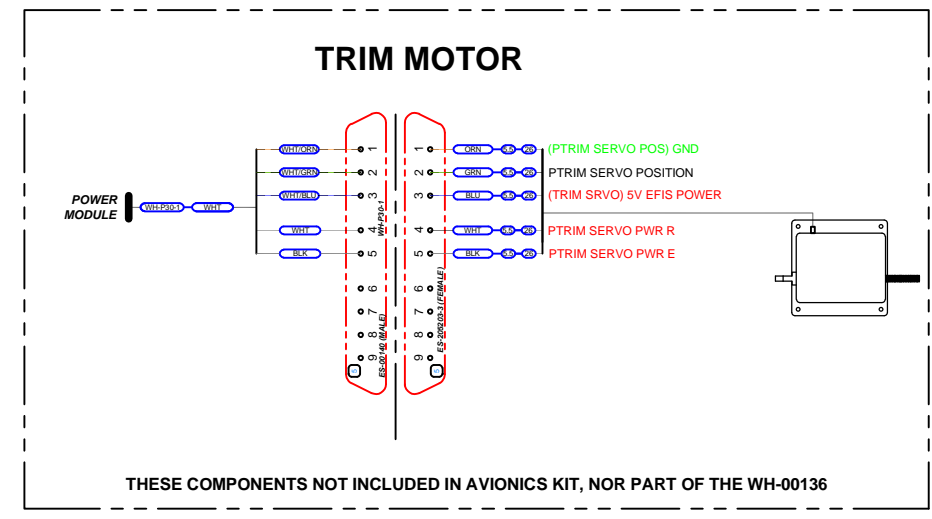
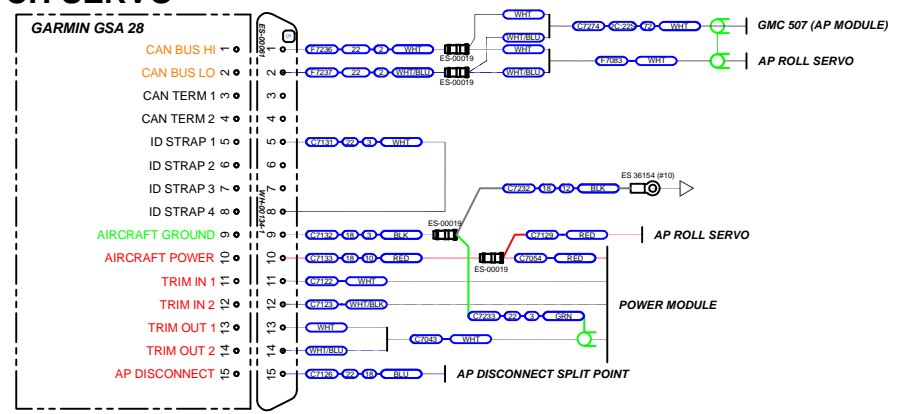
VAN'S AIRCRAFT, INC.

14401 NE KEIL RD. NI
AURORA, OR
97002 USA

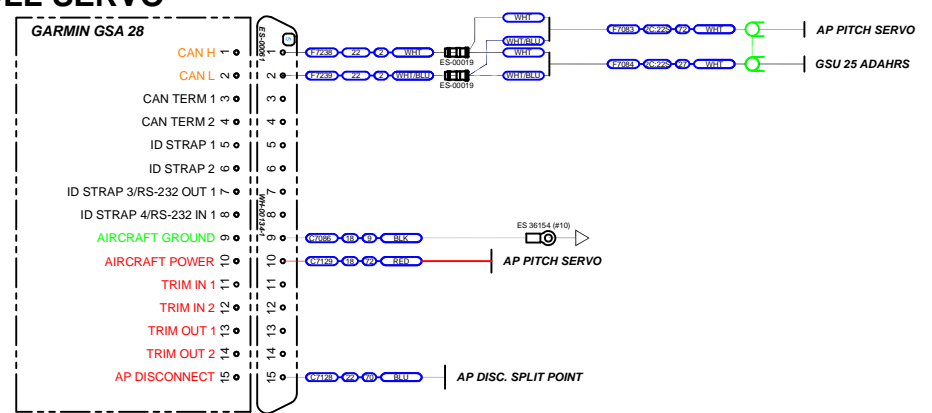
**ROTAX 912IS G3X
ELECTRICAL SYSTEM**

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DRAWN BY: T. DE MAN		SCALE: NONE	
TOLERANCES: NONE (UNLESS OTHERWISE SPECIFIED)		C-S17F ORIGINAL	

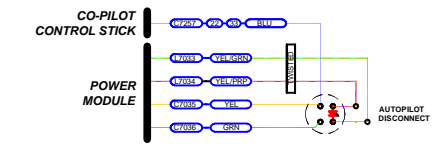
AUTOPILOT PITCH SERVO



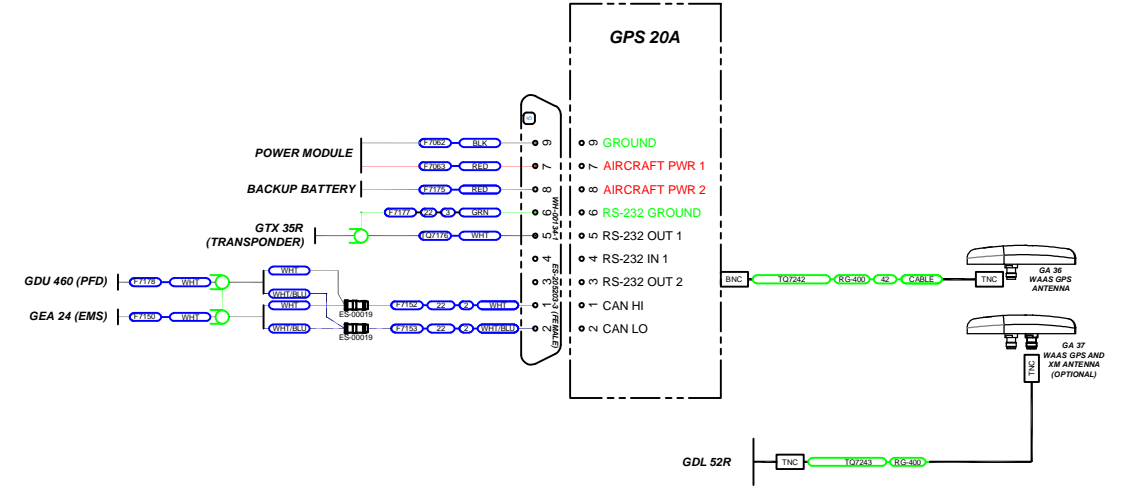
AUTOPILOT ROLL SERVO



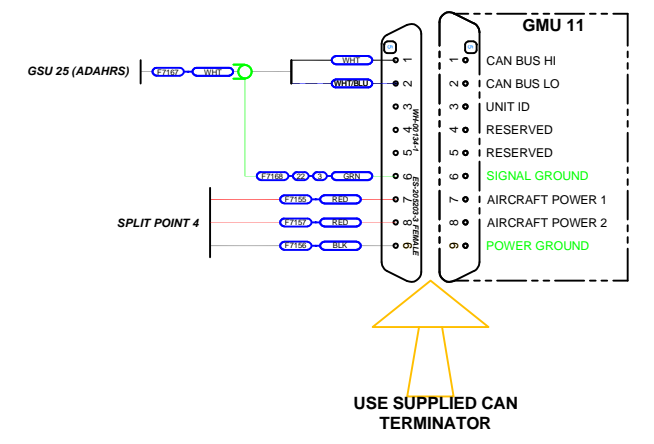
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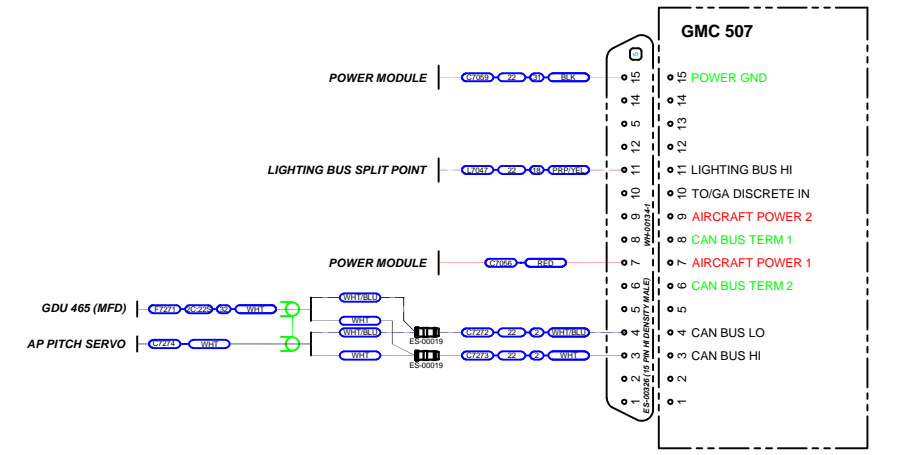
WAAS POSITION




MAGNETOMETER

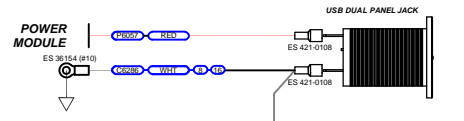


AP MODULE

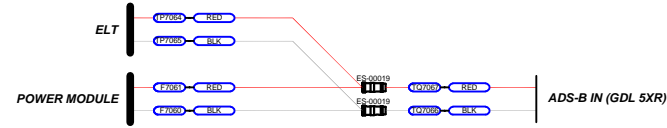


	VAN'S AIRCRAFT, INC.		14401 NE KEIL RD. NI AURORA, OR 97002 USA
	ROTAX 912IS G3X ELECTRICAL SYSTEM		
DATE DRAWN: 6/11/2018 DRAWN BY: T. DE MAN TOLERANCES: NONE (UNLESS OTHERWISE SPECIFIED)	UNITS: INCHES SCALE: NONE	WH-00134-1 PAGE: 5 OF 11	C-S17F ORIGINAL

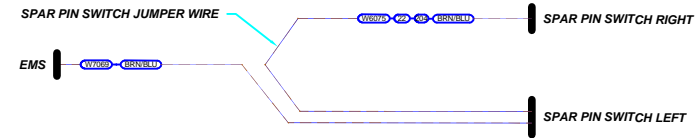
POWER OUTLET



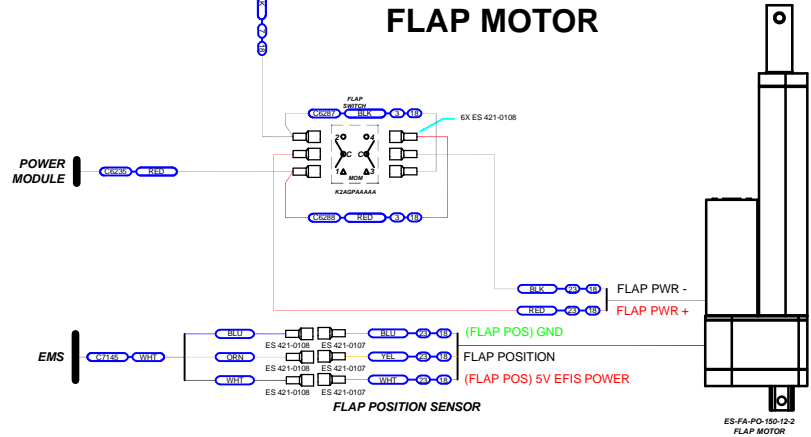
SPLIT POINT 5



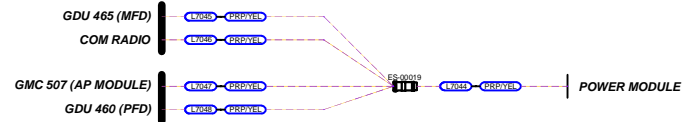
SPLIT POINT 1



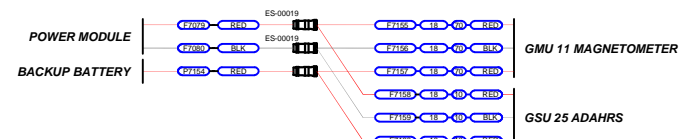
FLAP MOTOR



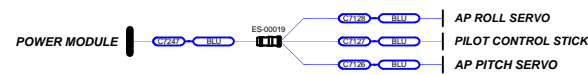
LIGHTING BUS SPLIT



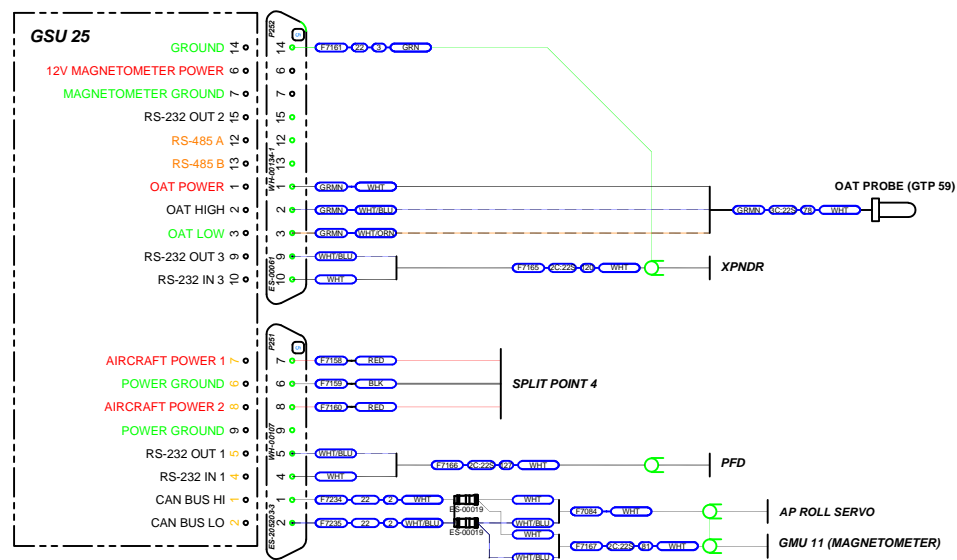
SPLIT POINT 4



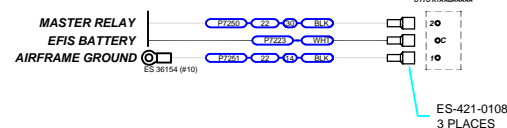
AUTOPILOT DISC. SPLIT POINT



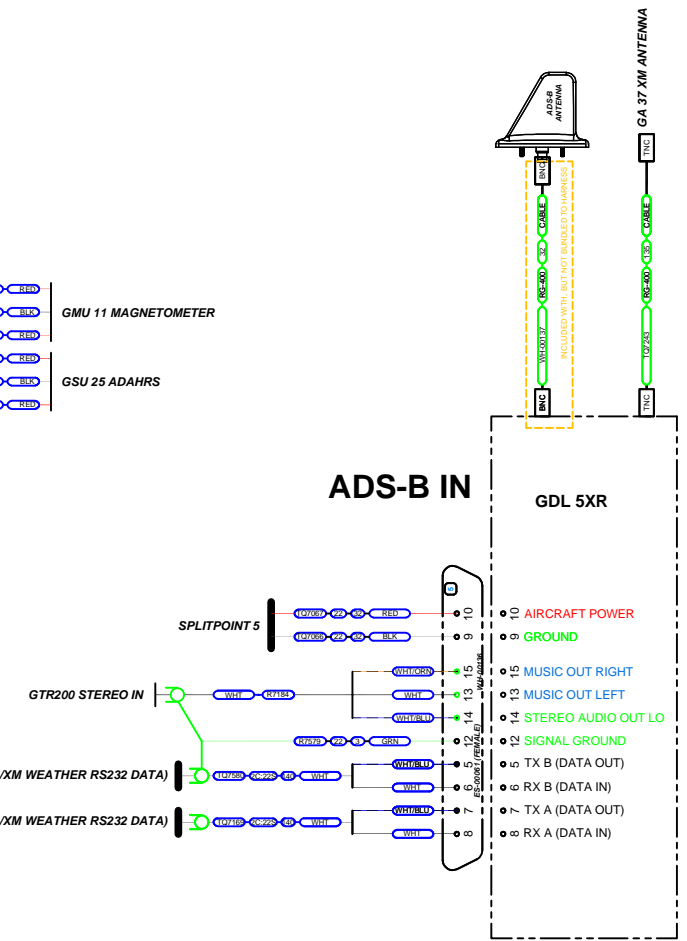
ADHRS



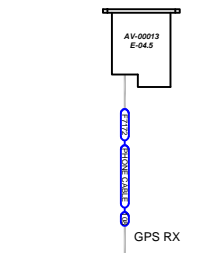
EFIS BATTERY SWITCH



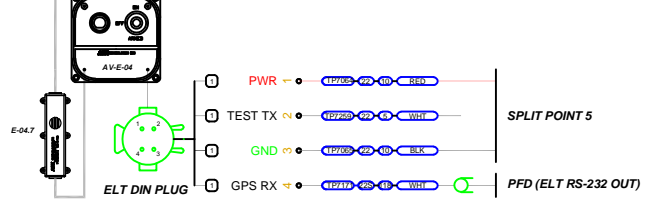
ADS-B IN



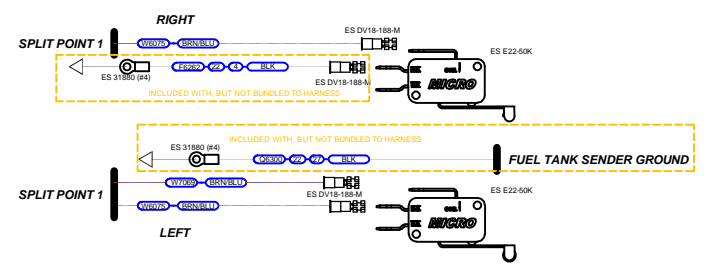
ELT REMOTE



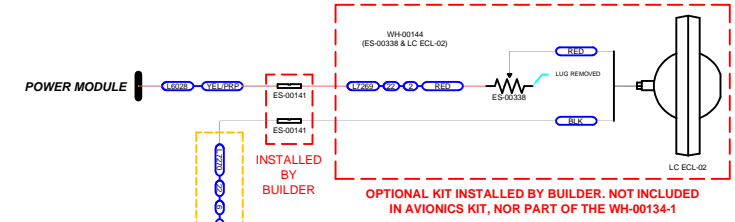
ELT



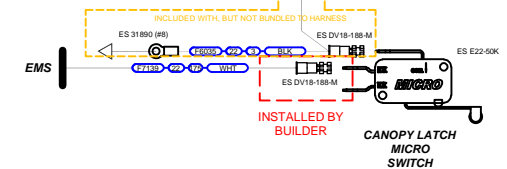
SPAR PIN SWITCHES



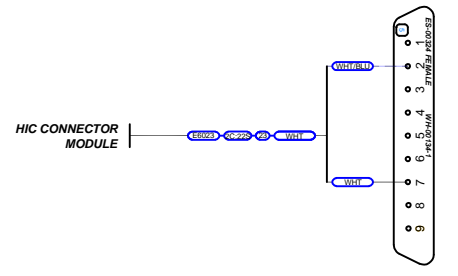
CABIN LIGHT & DIMMER



CANOPY SWITCH



912iS MAINT PORT



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

ROTAX 912iS G3X ELECTRICAL SYSTEM

DATE DRAWN: 6/11/2018

DRAWN BY: T. DE MAN

TOLERANCES: NONE (UNLESS OTHERWISE SPECIFIED)

DATE FILED: ENAMEL: (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)

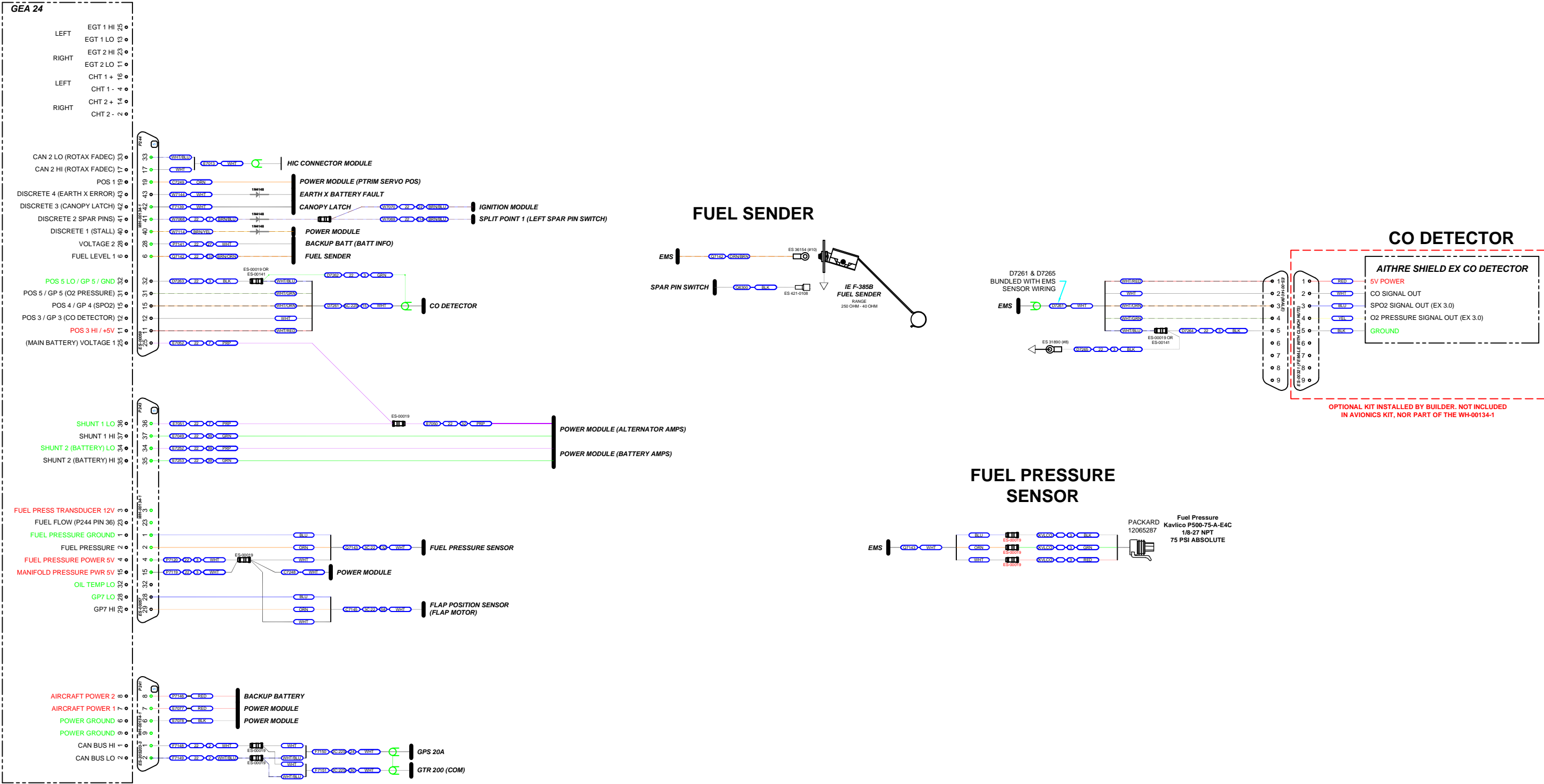
INCHES WH-00134-1

SCALE: NONE PAGE: 6 OF 11


C-317F ORIGINAL

REVISIONS			
REV	DESCRIPTION	DATE	APPROVAL
R1	SEE PAGE 1		

EMS

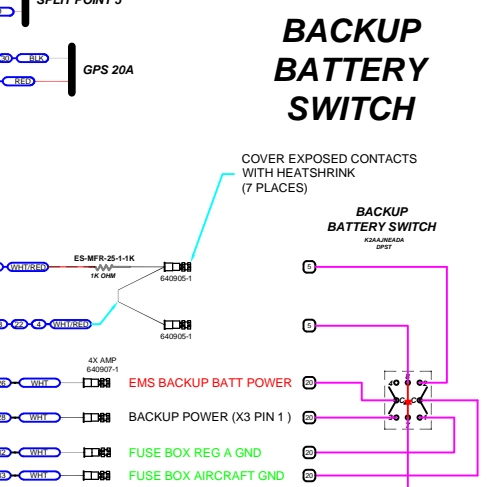
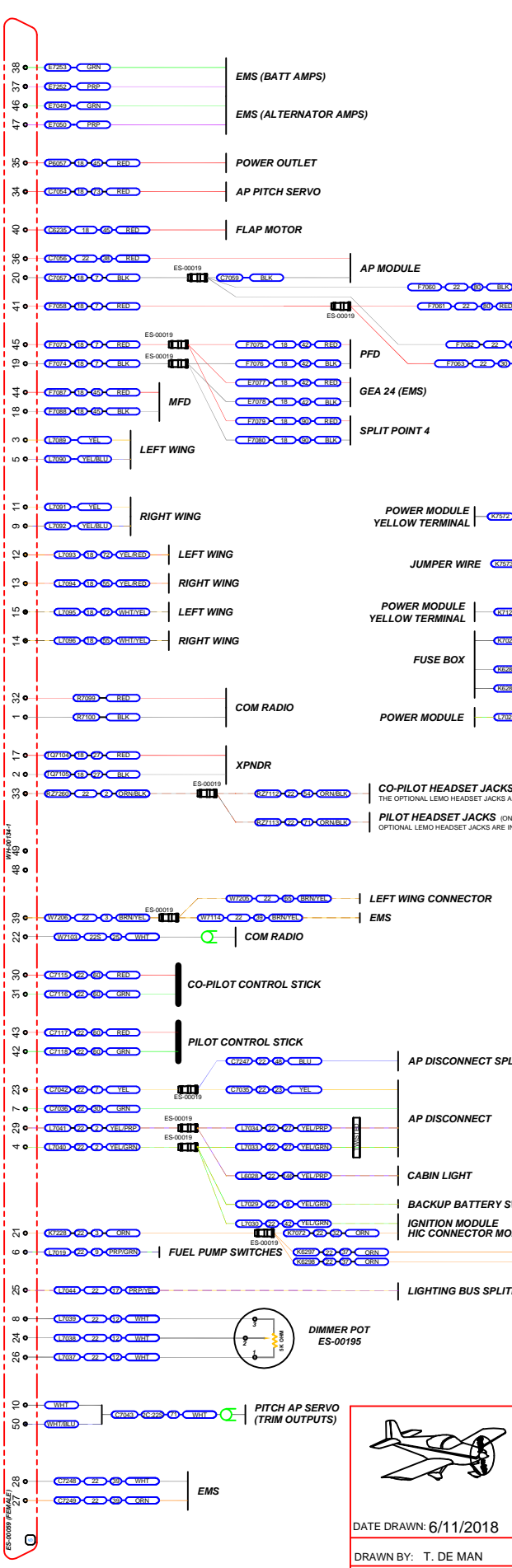
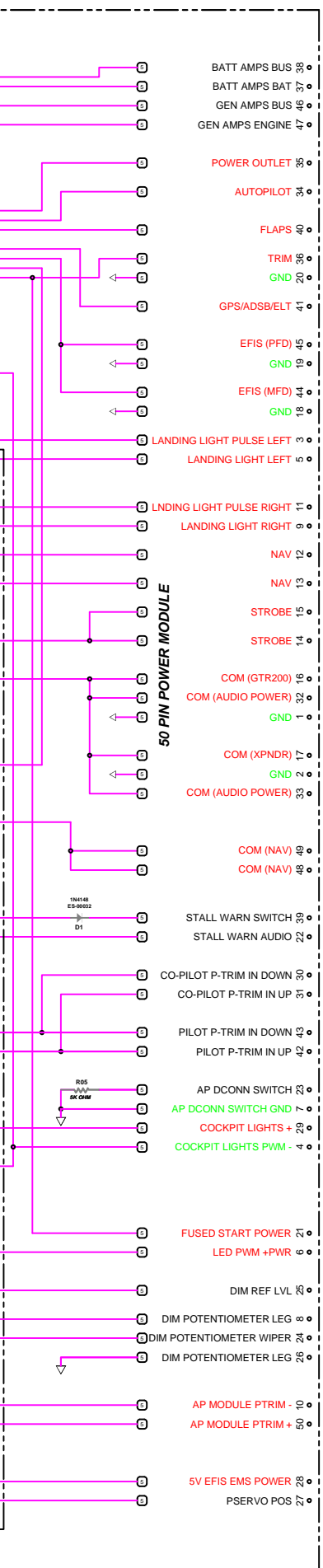
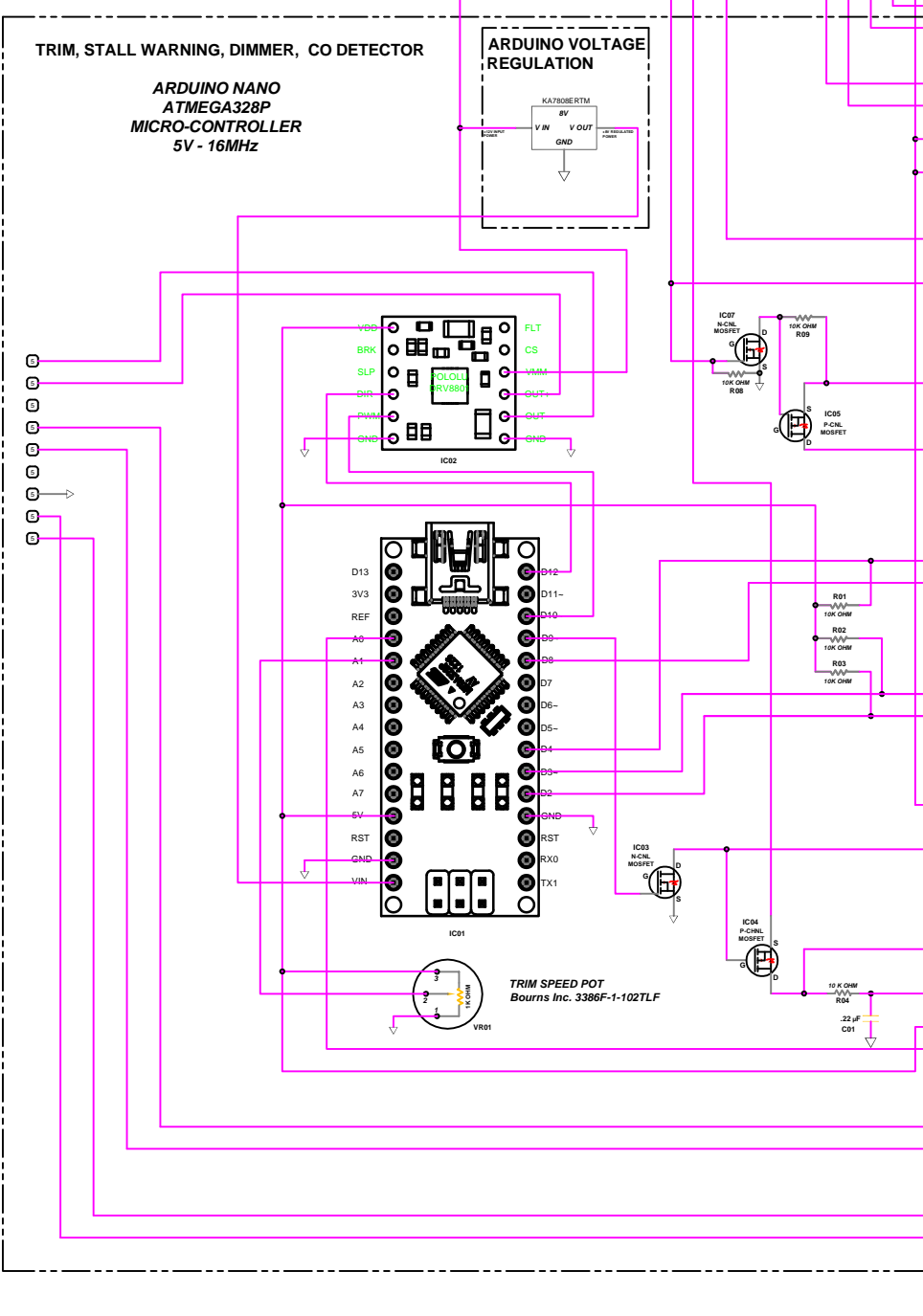
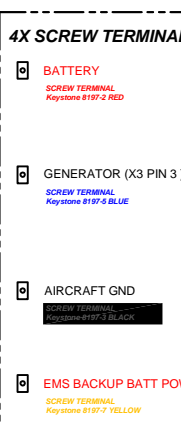
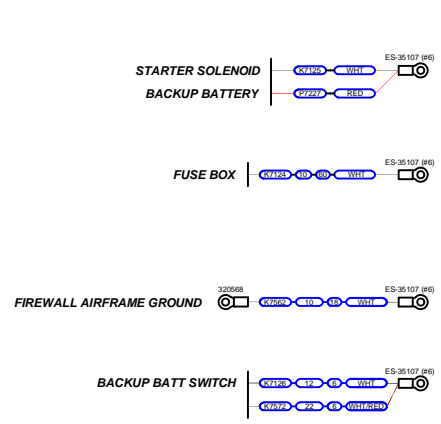
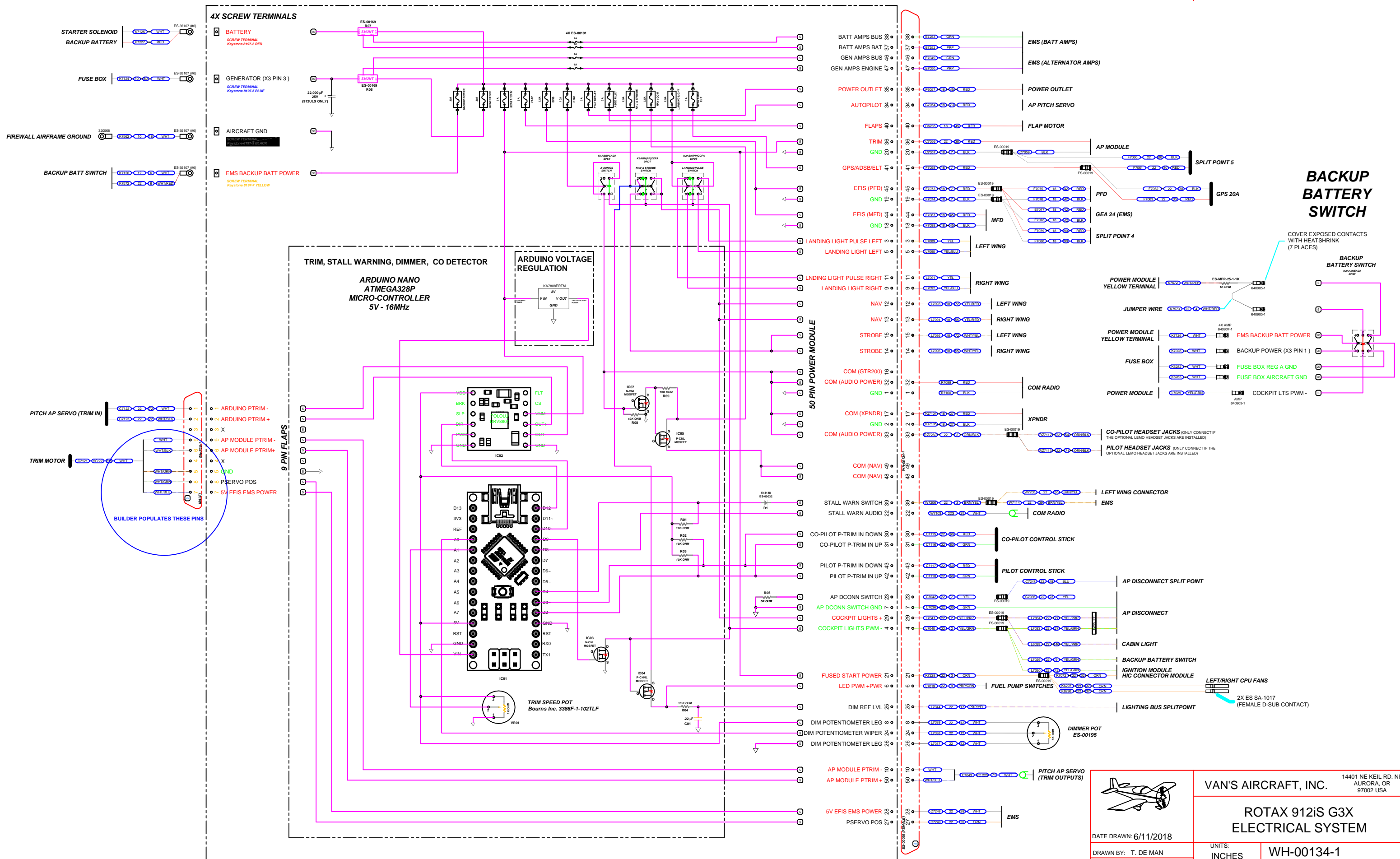


OPTIONAL KIT INSTALLED BY BUILDER. NOT INCLUDED IN AVIONICS KIT, NOR PART OF THE WH-00134-1

	VAN'S AIRCRAFT, INC. 14401 NE KEIL RD. NI AURORA, OR 97002 USA	
	ROTAX 912IS G3X ELECTRICAL SYSTEM	
DATE DRAWN: 6/11/2018	UNITS: INCHES	WH-00134-1
DRAWN BY: T. DE MAN	TOLERANCES: NONE (UNLESS OTHERWISE SPECIFIED)	SCALE: NONE PAGE: 7 OF 11
DATE/REV: ENAME: (BY: 196) (REV: 1) (ELECTRICAL SYSTEM) (ELECTRICAL SYSTEM) (GPS 20A) (GTR 200) (COM)		C-S17F ORIGINAL

POWER MODULE iS-ULS PCB V3.4

REV	DESCRIPTION	DATE	APPROVAL
R1	SEE PAGE 1		



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

ROTAX 912IS G3X ELECTRICAL SYSTEM

DATE DRAWN: 6/11/2018

DRAWN BY: T. DE MAN

TOLERANCES: NONE (UNLESS OTHERWISE SPECIFIED)

DATE/REV ENAME: (REV) 1/20/18

UNITS: INCHES

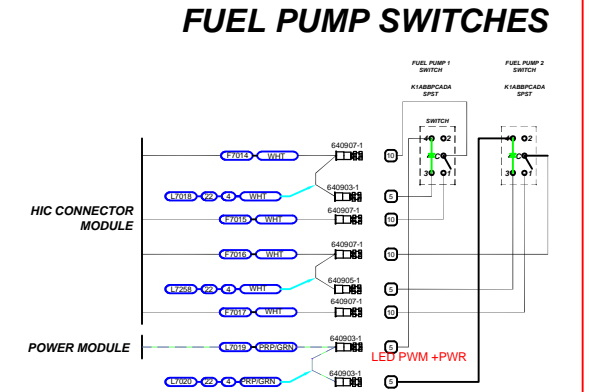
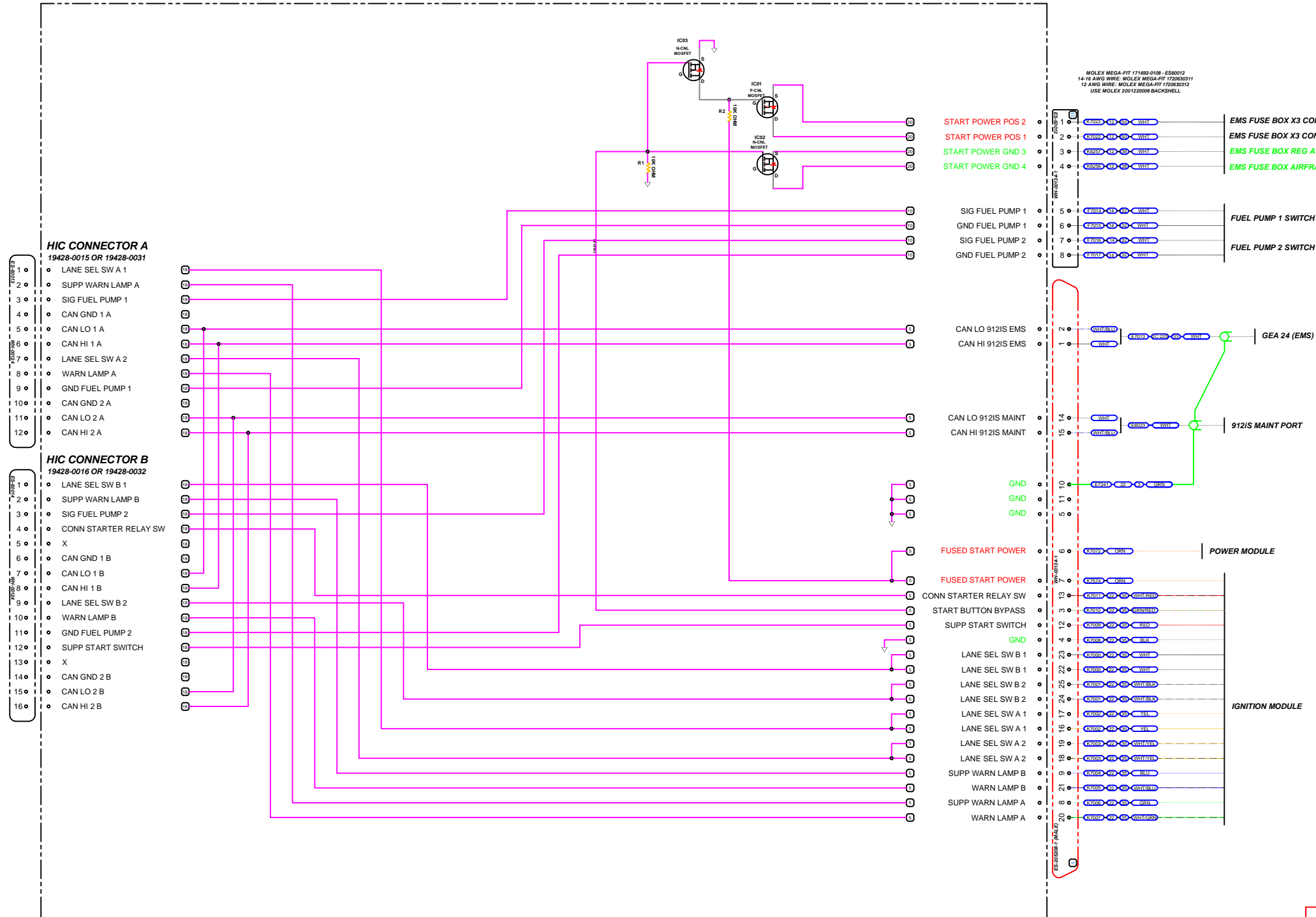
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PAGE: 8 OF 11

C-517F ORIGINAL

HIC CONNECTOR MODULE IS PCB ES-60009

REVISIONS			
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R1	SEE PAGE 1		



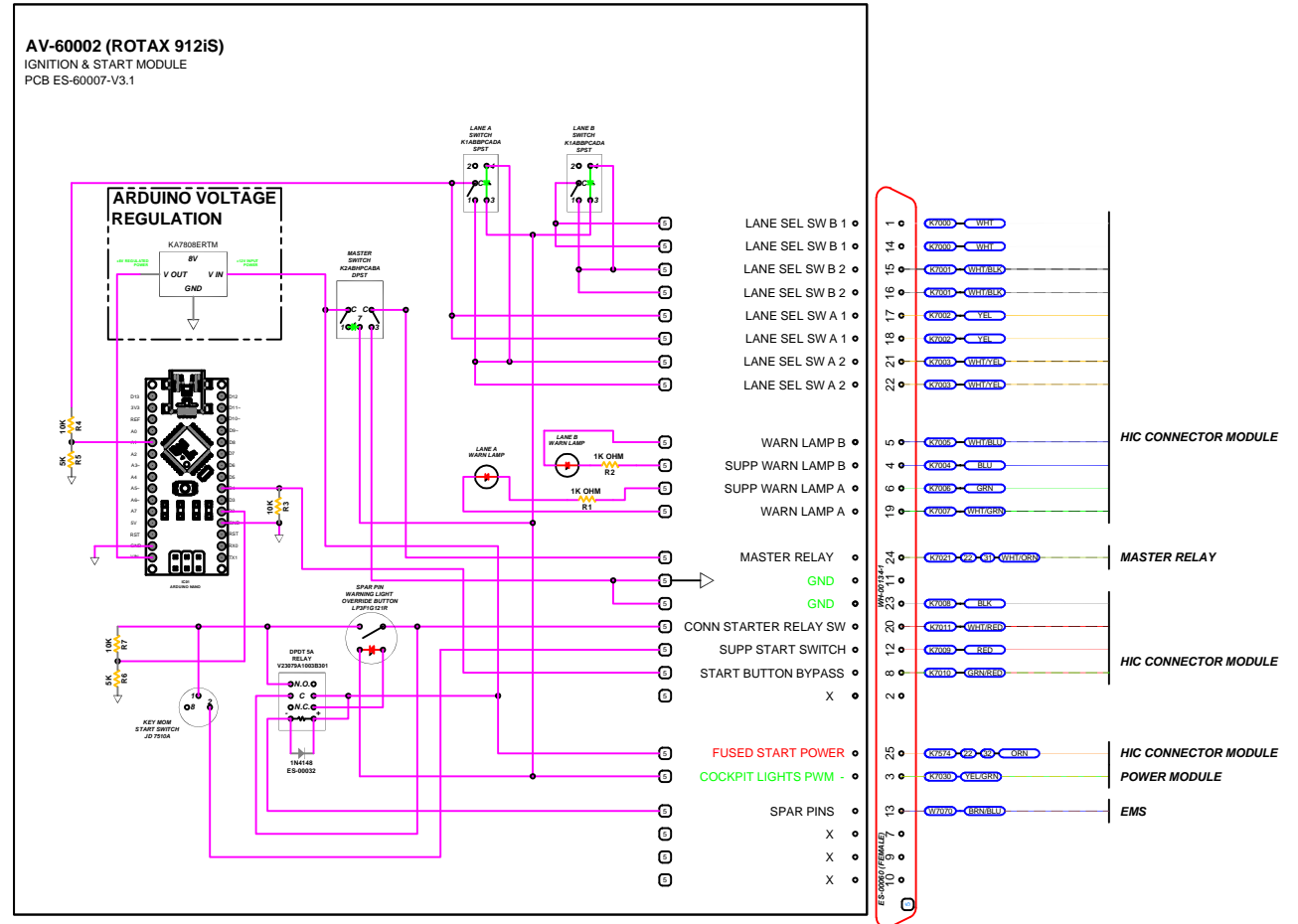



VAN'S AIRCRAFT, INC.

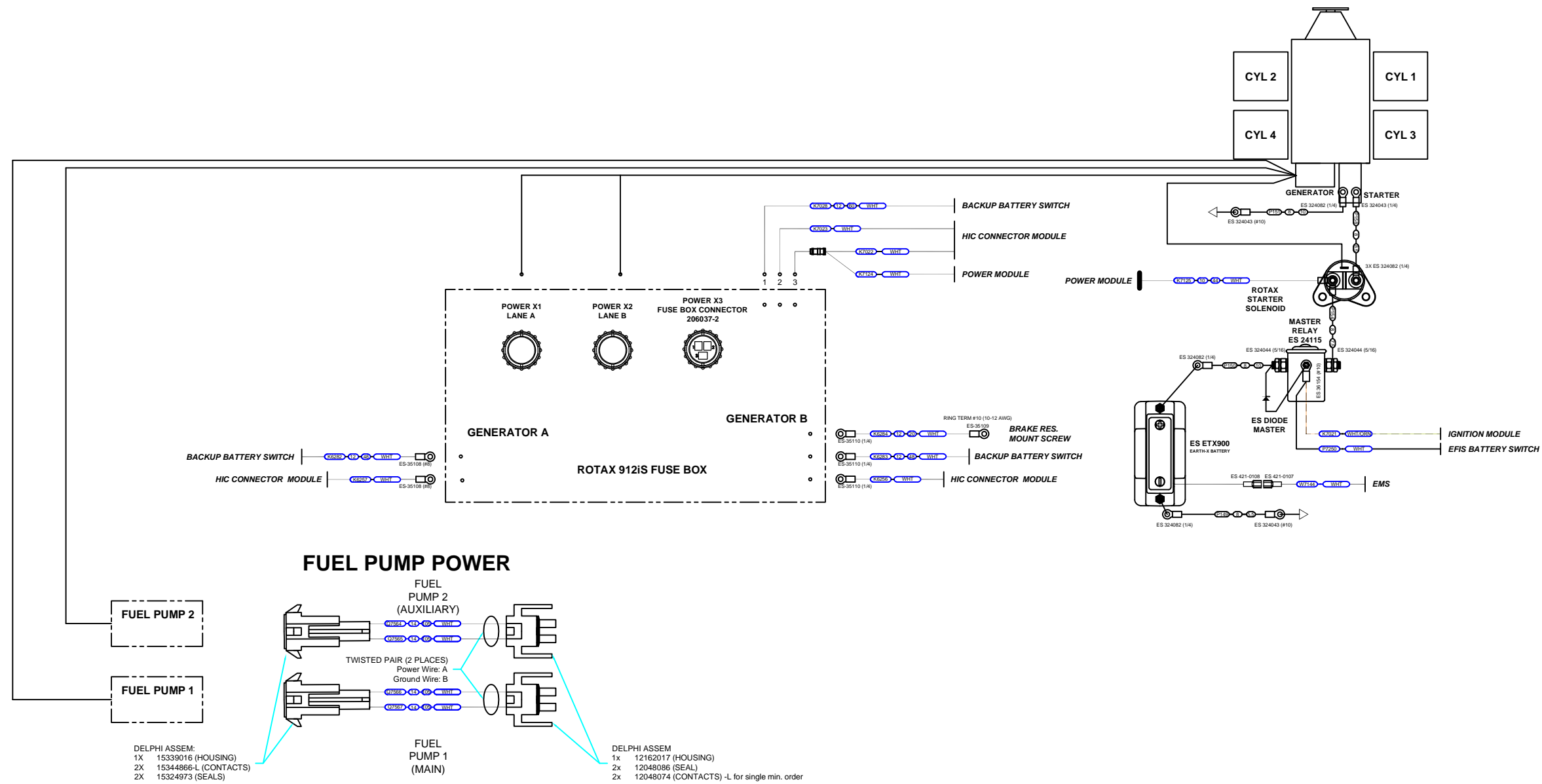
14401 NE KEIL RD. NI
AURORA, OR
97002 USA


ROTAX 912IS G3X ELECTRICAL SYSTEM

DATE DRAWN: 6/11/2018		UNITS: INCHES	WH-00134-1
DRAWN BY: T. DE MAN		SCALE: NONE	
TOLERANCES: NONE (UNLESS OTHERWISE SPECIFIED)		PAGE: 9 OF 11	C-S17F ORIGINAL



	VAN'S AIRCRAFT, INC. 14401 NE KEIL RD. NI AURORA, OR 97002 USA	
	ROTAX 912iS G3X ELECTRICAL SYSTEM	
DATE DRAWN: 6/11/2018	UNITS: INCHES	WH-00134-1
DRAWN BY: T. DE MAN	TOLERANCES: NONE (UNLESS OTHERWISE SPECIFIED)	SCALE: NONE PAGE: 10 OF 11
DATE/REV: ENAME: C:\BY: A:\S:\System (Electrical System) (Electrical System) D:\S:\22V (MALL) 13.11.18		C-S17F ORIGINAL



	VAN'S AIRCRAFT, INC. 14401 NE KEIL RD. NI AURORA, OR 97002 USA	
	ROTAX 912IS G3X ELECTRICAL SYSTEM	
DATE DRAWN: 6/11/2018	UNITS: INCHES	WH-00134-1
DRAWN BY: T. DE MAN	TOLERANCES: NONE	SCALE: NONE
(UNLESS OTHERWISE SPECIFIED)	PAGE: 11 OF 11	C-S17F ORIGINAL