

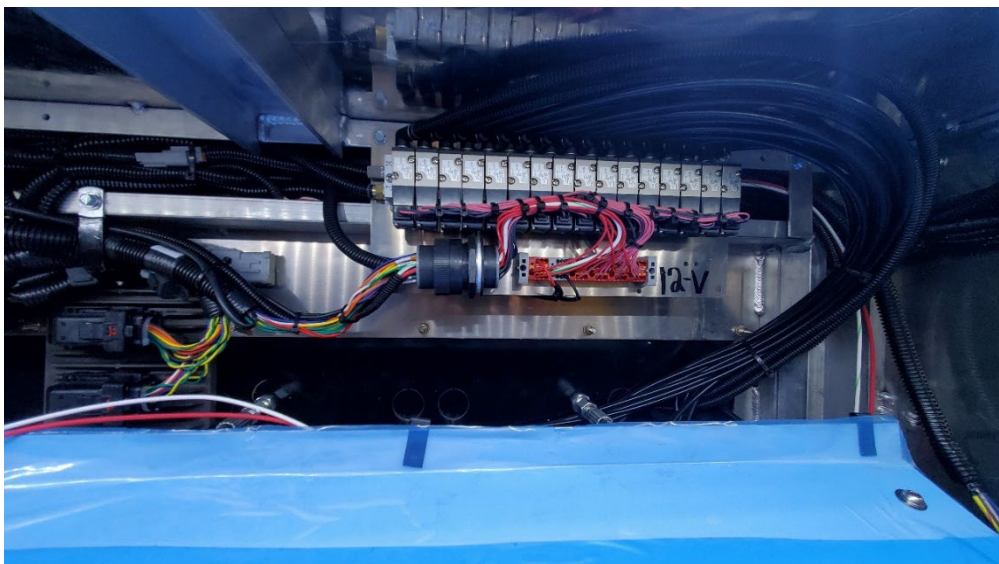
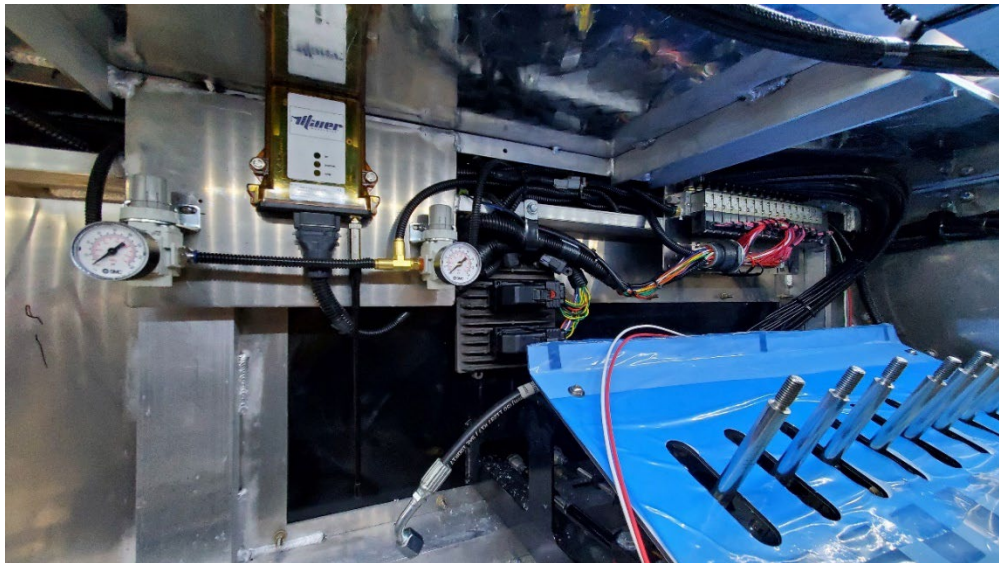
Date	Feb 7, 2023
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SUBJECT: GS System
PURPOSE: Integrated Wrecker – Final Installation & Dressout

GS Flex8 Underlift Remote System: Typical Mounting Location

It will be necessary to mount the GS Flex8 Underlift Remote System components and the airbank in the toolbox. See the typical mounting locations below. Before connecting the harness, see the instructions following this section for installing the airbank mating connector to the underlift remote system harness.

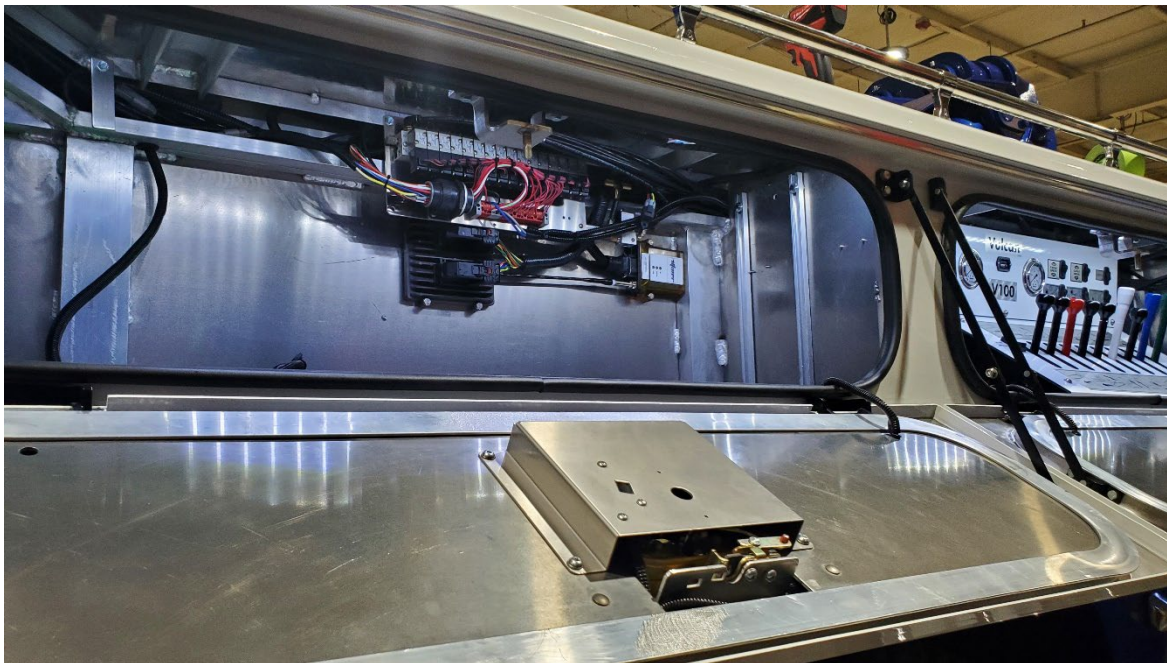
Century - typical



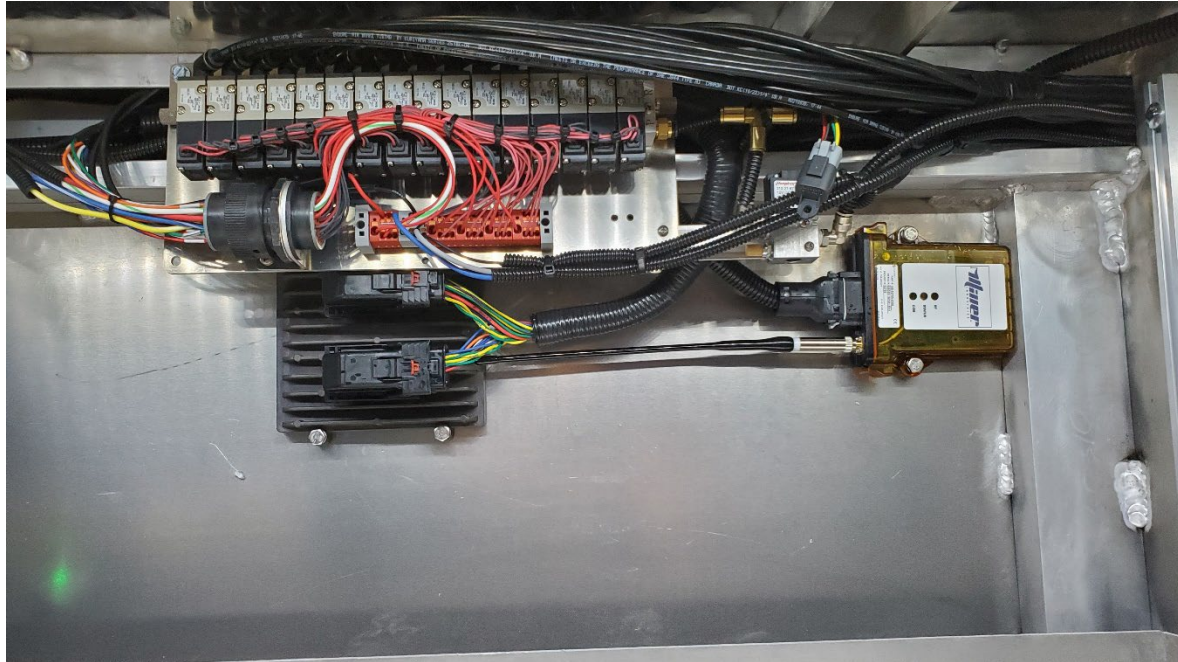
Century (cont'd)



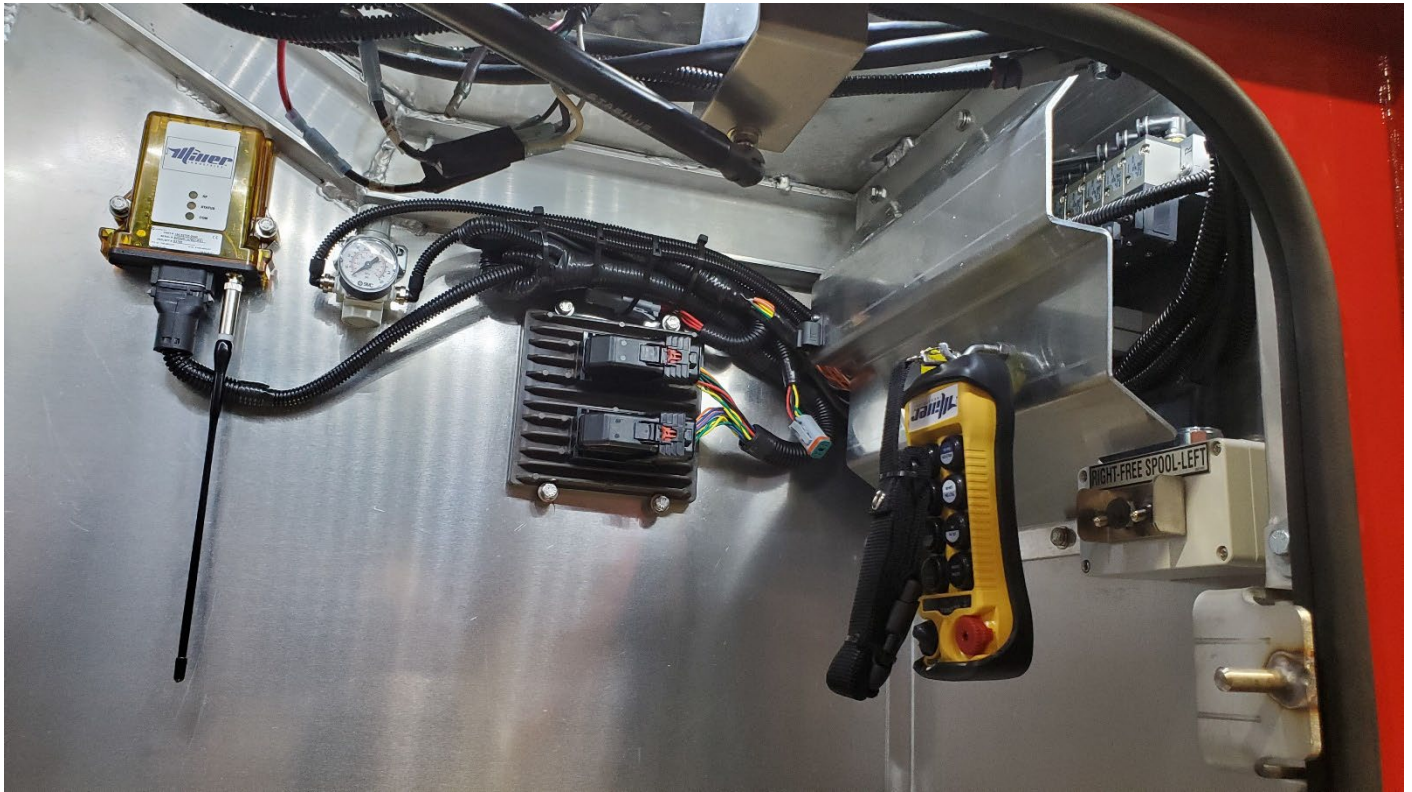
Vulcan - typical



Vulcan (cont'd)

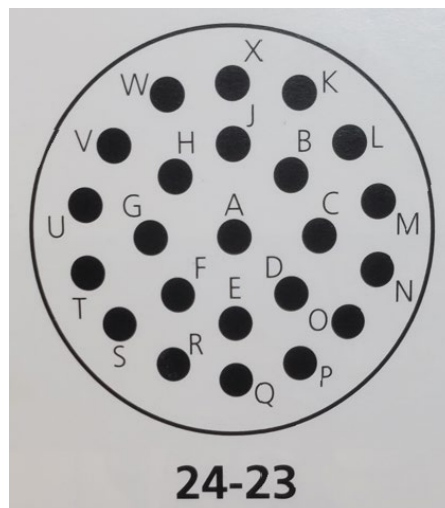


3212 / V30 - typical



Airbank Connections

Remove the round HDP airbank mating connector and observe the cavity labels on the connector (see figure below). Each P3001 wire from the GS Flex8 Underlift Remote harness is labeled with the cavity designation. Insert each wire into the CF-001 connector accordingly. All cavities will be filled.

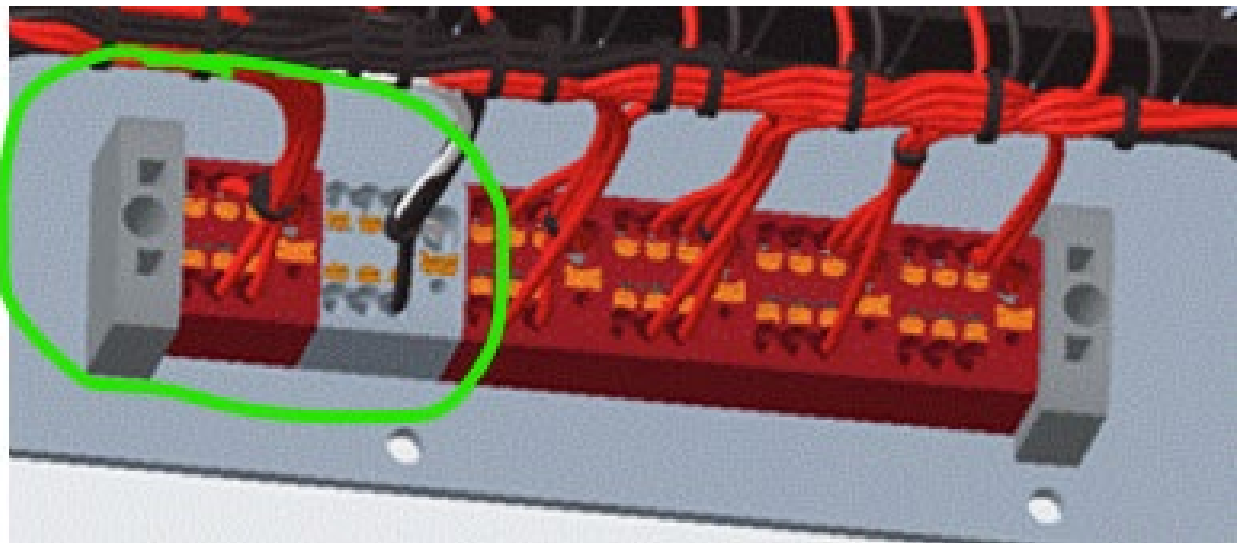


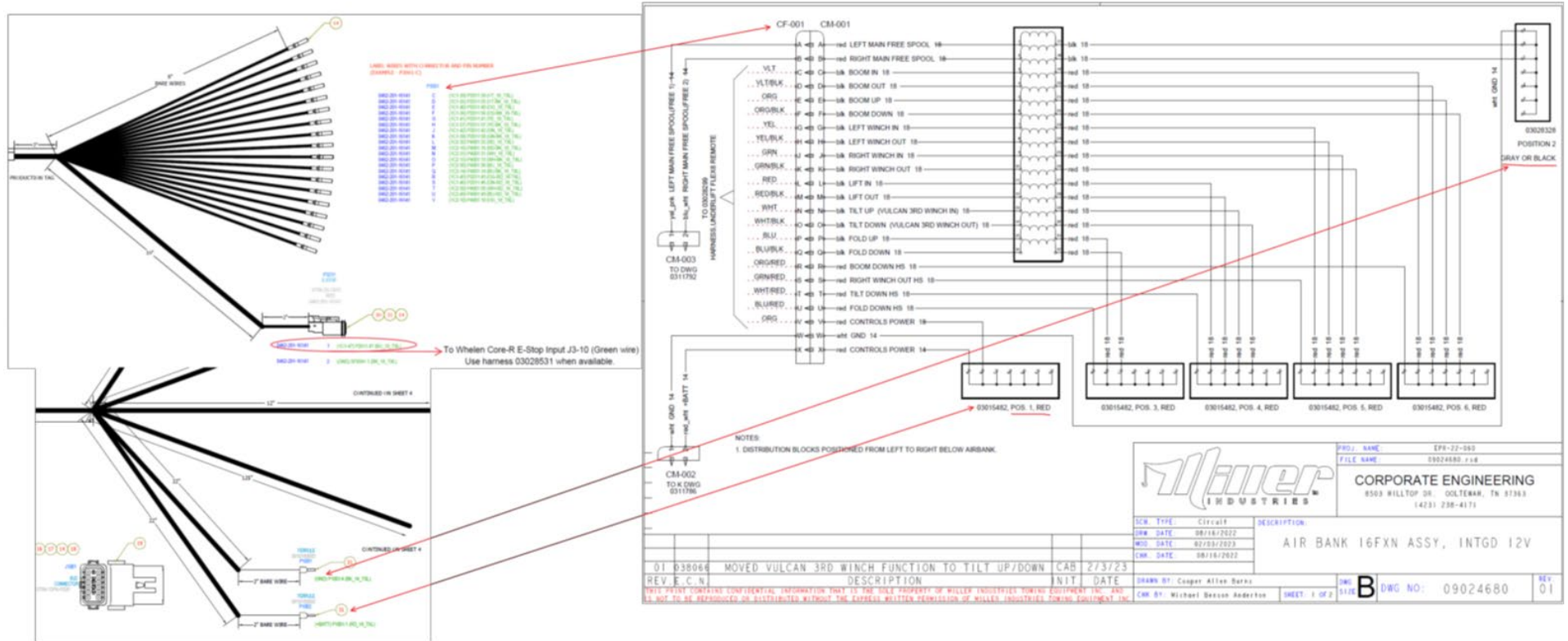
Airbank Connections (cont'd)

The included airbank mating connector has two DT, two position receptacles:

1. One is to connect the Main Freespools to part number **0311792 2SP FREE OUTPUT HARNESS** (Note: cut-off the ring terminals and install a DT06-2S connector).
2. One is to connect Controls Power and Ground to the main toolbox harness, part number **0311786 HARNESS LH TOOLBOX WIRING 2012**, at node K.

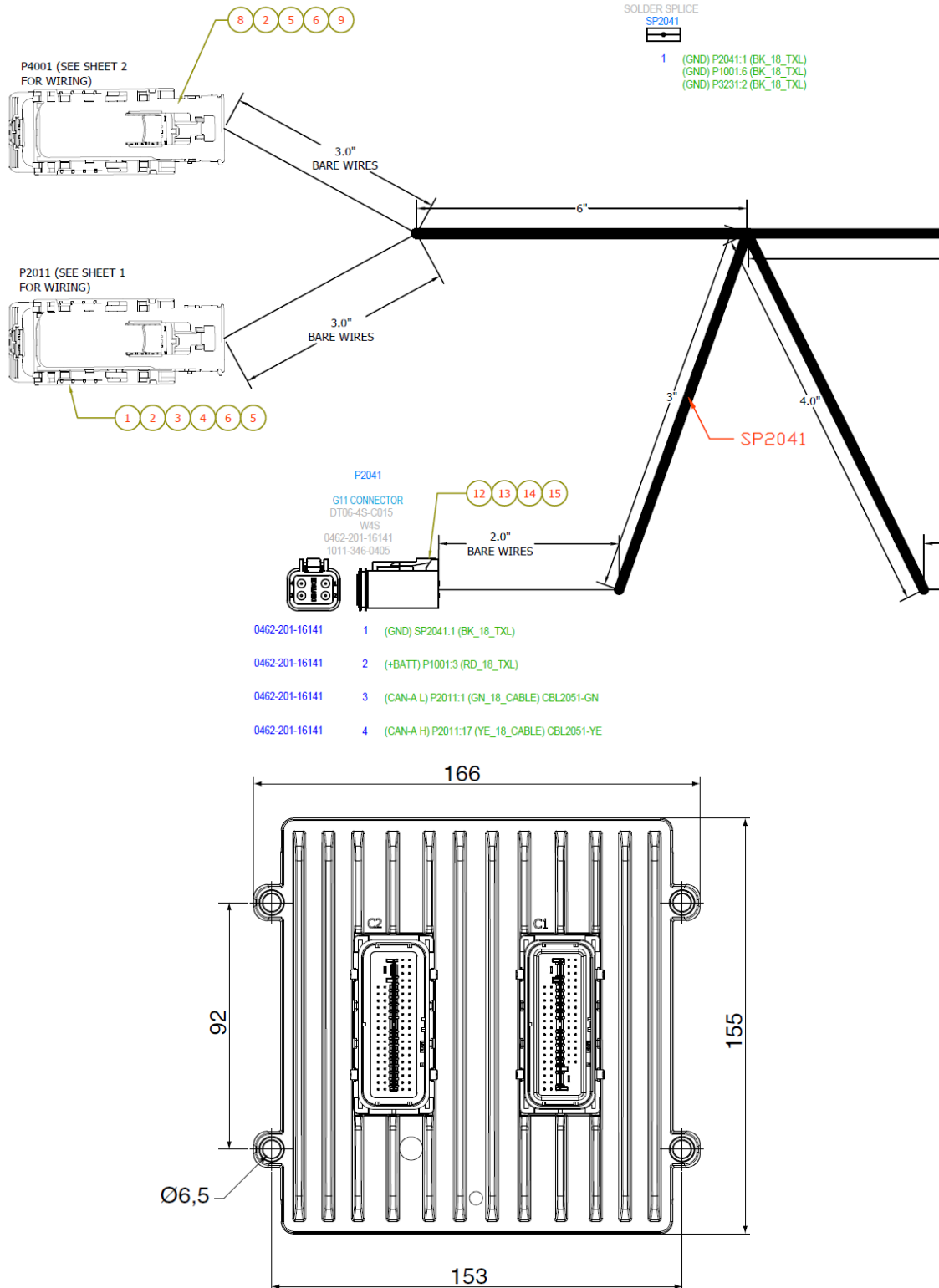
Two additional wires labeled GND and +BATT are terminated with ferrules. These wires bypass the HDP connector and plug directly into the first two terminal blocks indicated on the schematic as 'POS 1, RED' and 'POSITION 2, GRAY OR BLACK.' +BATT should go to the first red block, and GND goes to the gray or black block:





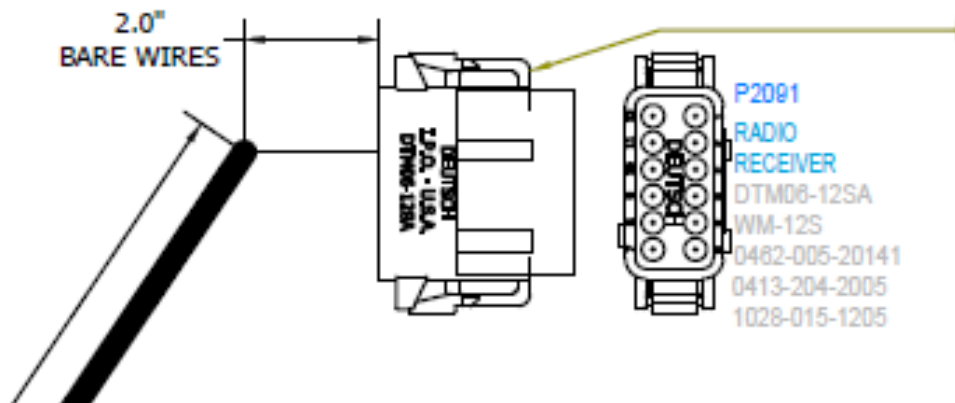
MC43, G11/G12, and Remote Receiver Connections

Connect the P4001 and P2011 connectors to C1 and C2 on the MC43 controller.

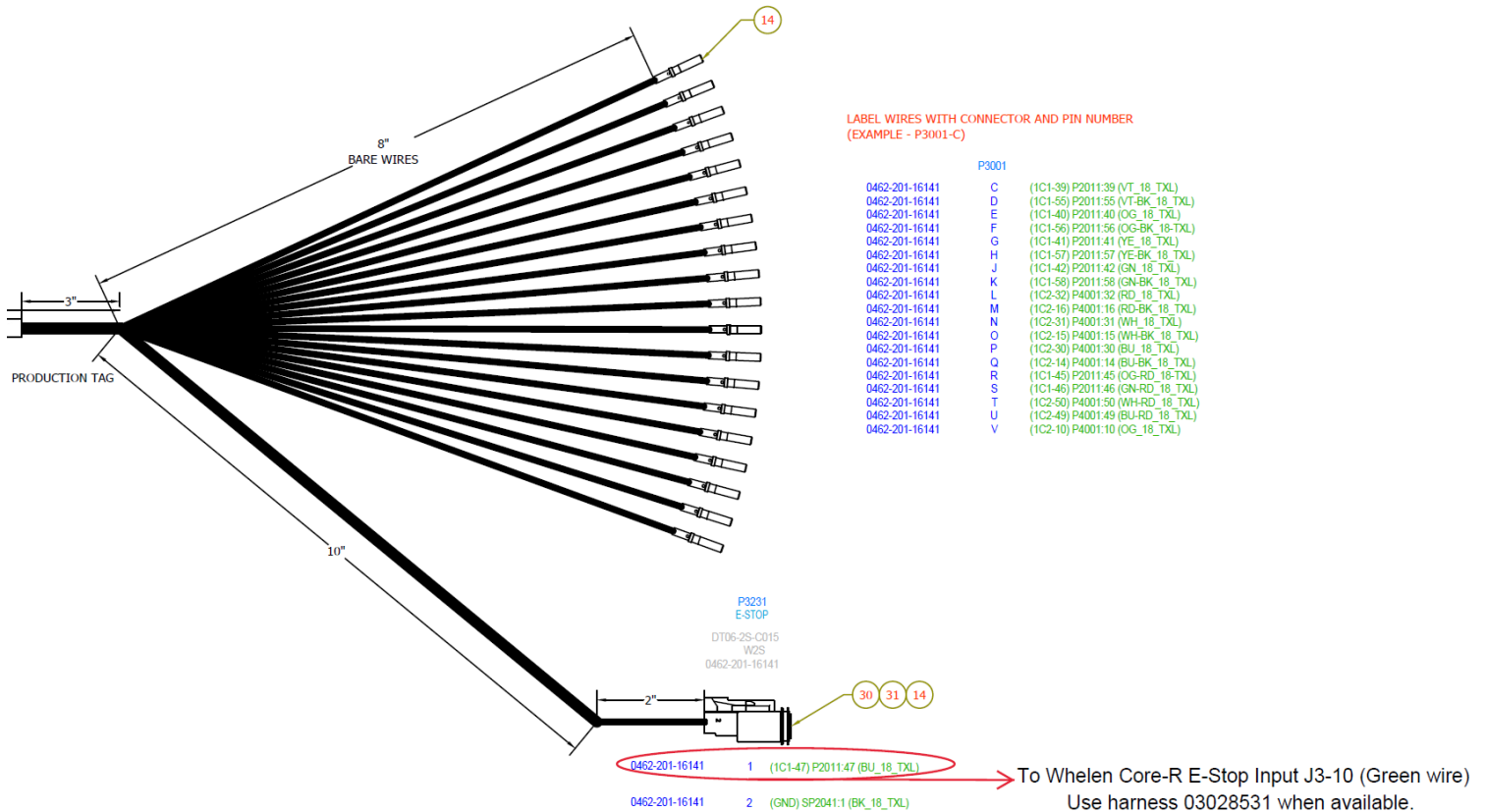


Mount the G11/G12 connector in an easily accessible position, using the dust cap to secure it.

Connect 12 position P2091 connector to the radio receiver.



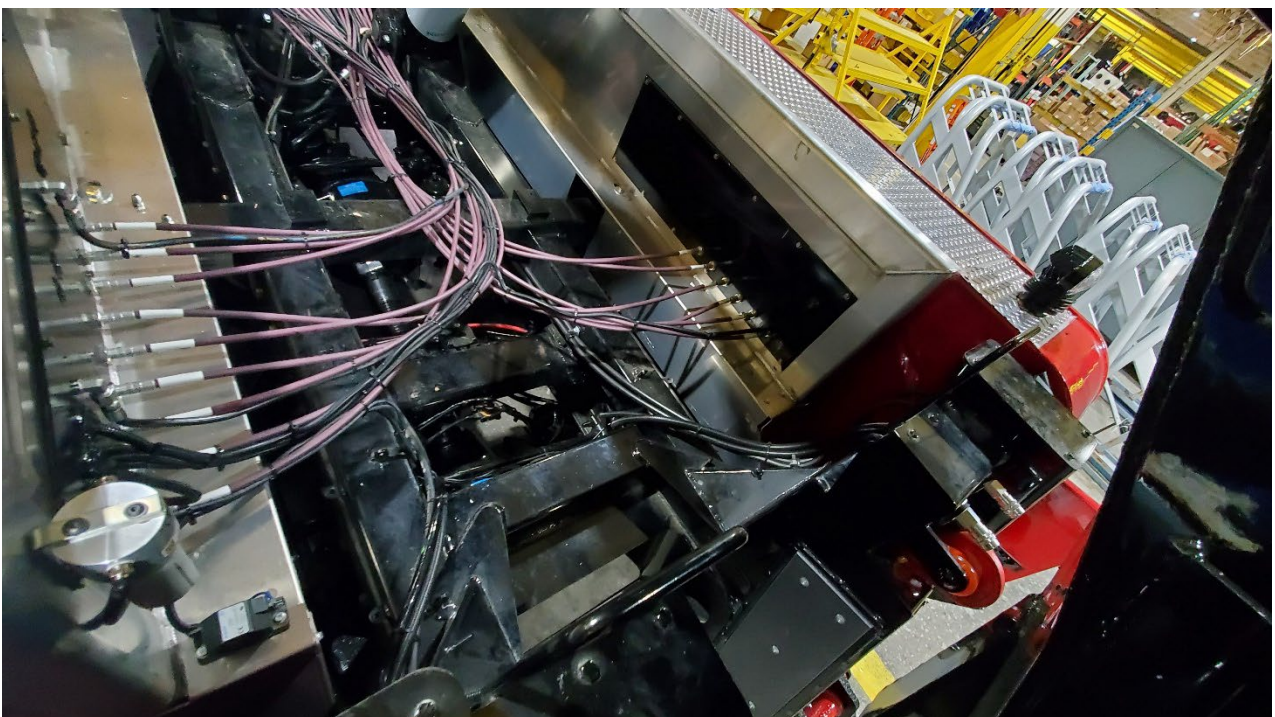
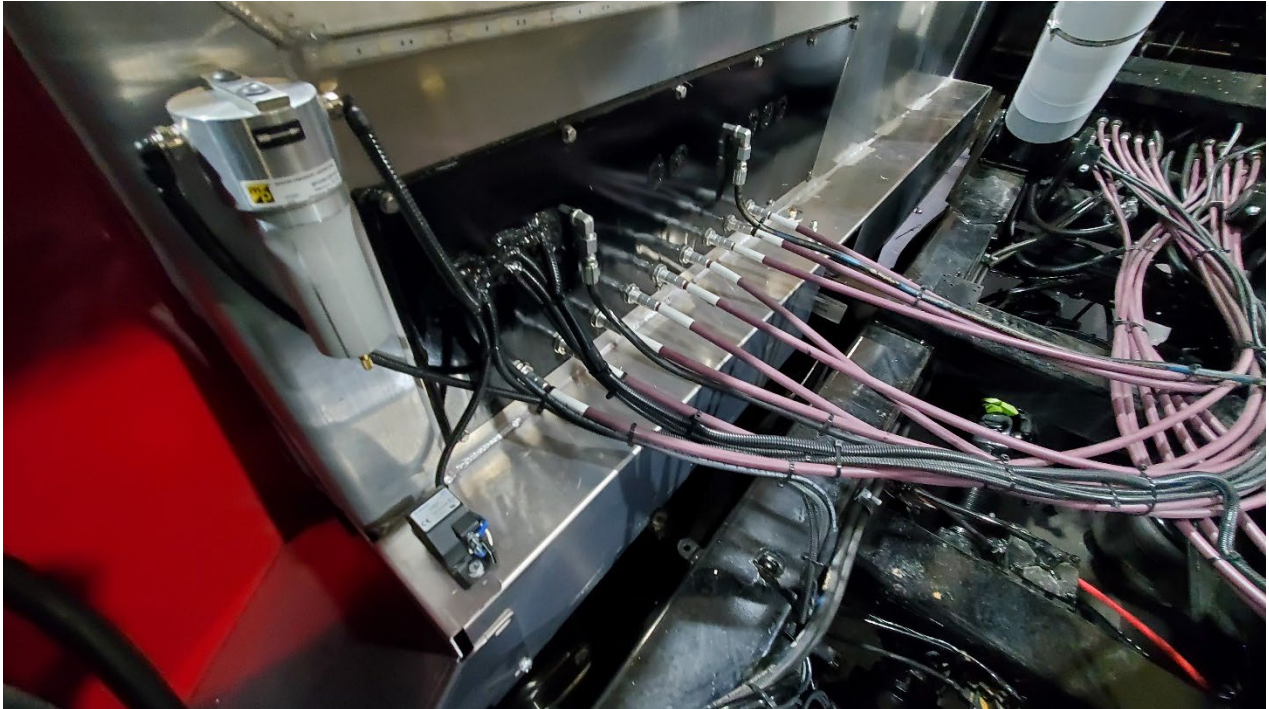
E-STOP Circuit



Integrated Core-R System				
Core R Inputs				
Plug Position	Label	Wire Color	Miller Wire Color	Description
J3-1	Battery	Red (+)	Red	12V-24V Battery +
J3-2	Left Turn	Wht/Brn (+)	Yellow/Green	Chassis body builder
J3-3	Right Turn	Wht/Red (+)	Green/Yellow	Chassis body builder
J3-4	Brake	Wht/Org (+)	Red/Black	Chassis body builder
J3-5	Marker	Brn (+)	Brown	Chassis body builder
J3-6	Ground	Blk	White	Battery Ground
J3-7	Ignition	Red/Wht (+)	Red/Yellow	Ignition Sense Input
J3-8	Reverse	Org (+)	Blue	Chassis body builder
J3-9	Photo Cell	Yel (+)	Violet	Optional
J3-10	E-Stop	Grn (+)	GS Color is BLUE	GS remote E-stop Active High

Underlift Rocker Panel Connections

Route the tailboard underlift rocker panel connection to the proper locations behind the tailboard. The long lead is fed out the back of the toolbox and along the cables to reach the opposite side.



Underlift Rocker Panel Connections (cont'd)

Feed it into the toolbox and then out towards the back behind the tailboard.



If no underlift rocker panels are to be installed, secure the connector using the dust cap above the connector such that moisture cannot collect around the sealed cap.

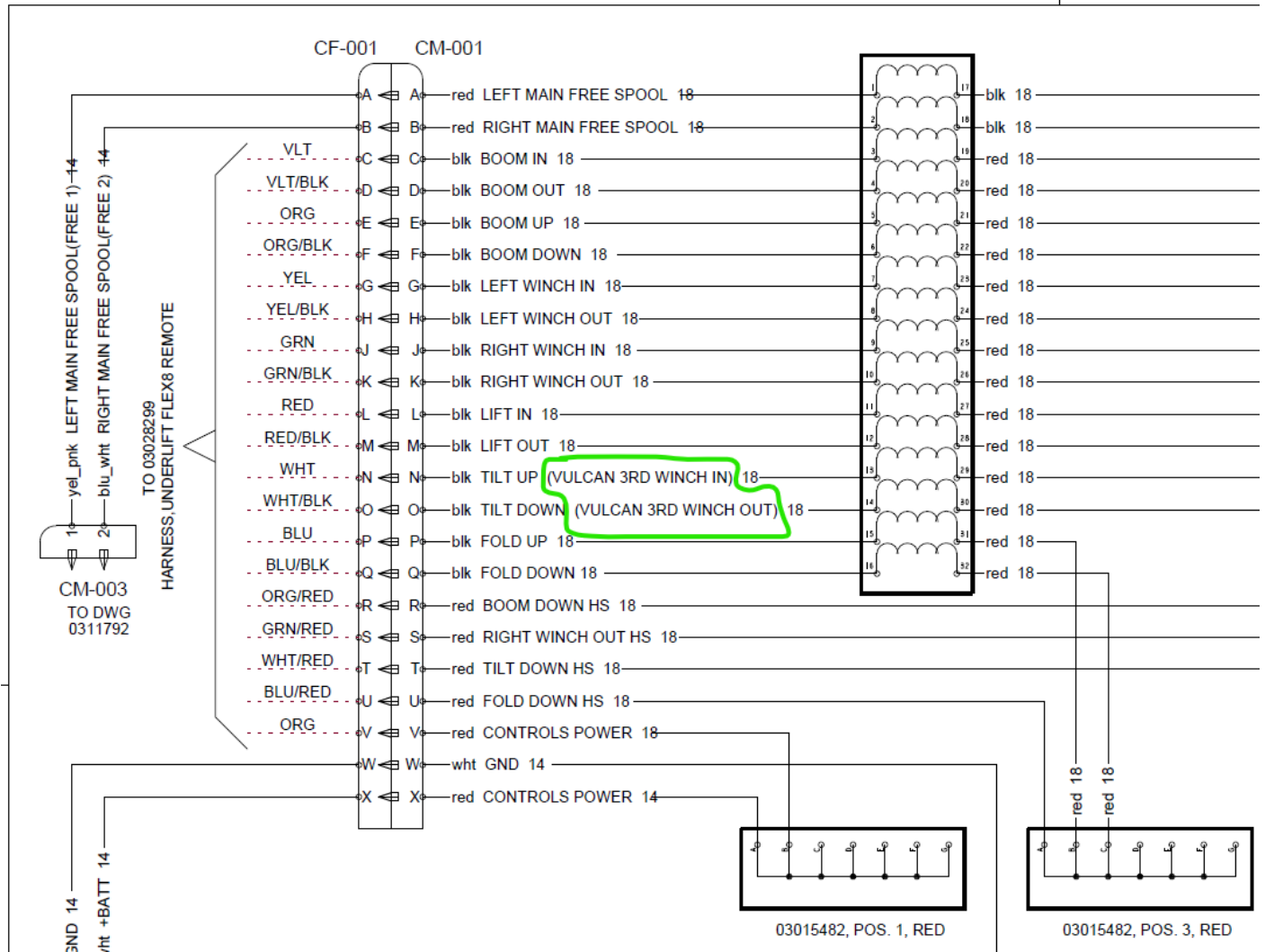
Vulcan Tailboard Modifications

No TILT actuator on the Tailboard. Remove it carefully by prying the actuators. They will pry off without breaking if carefully done.



Install the part number **03013353 ROCKER ACTUATOR, LED** -/- where the TILT was located on the tailboard control.

Vulcan third winch will be controlled with the TILT outputs. It will not be available on the tailboard controls.



Third winch labels for the GS Flex8 remote are:

Miller part number 03029647	DECAL, DRAG IN/OUT, FLEX8	GSGR UNDERLIFT REMOTE DECAL FOR FLEX8 REMOTE: DRAG IN AND DRAG OUT. PLACE OVER [TILT UP/TILT DOWN] FOR VULCAN THIRD WINCH OPTIONS. GSGR P/N 20088054
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MC 43 Controller:

A. LED Indicator

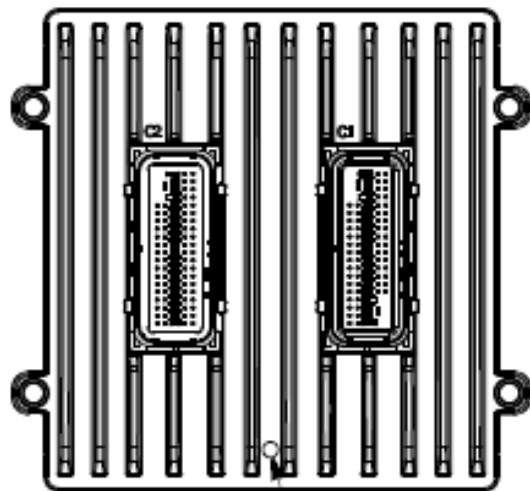
The MC43 controller LED indicator may flash red, indicating an error is present, in normal operating conditions:

Error Code 1:1

1. One red flash, one amber flash indicates an output error.
2. This error is shown because the E-Stop output does not see a load, i.e. a relay coil. This is normal due to the way the MC43 E-Stop output is wired to the Whelen CORE-R input, and no relay is present.

Error Code 3:1







1. Three red flashes, one amber slash indicates a CAN, no contact error.
2. This error is shown if an expected CAN device is not present on the CAN bus. This is normal operation if there are less than two CAN Underlift Rocker Panels present on the tailboard.





















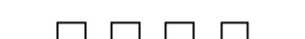







Yellow/ red, status LED

A. LED Indicator (cont'd)

LED indicator showing different MC4x modes

Status		Flash (yellow)	
Normal operation			
Application not loaded			
No application available			
Waiting for restart			
Settings overflow			
Version mismatch			

Error code	Error	Primary Flash (red) Error category	Secondary Flash (yellow) Error description
1:1	Output		
1:2	Input		
1:3	VREF		
1:4	Expansion unit error		
2:1	Power supply		
2:2	Temperature		
3:1	CAN, no contact		
3:2	IdTag error		
3:3	System mismatch		
3:4	CAN error (bus off)		
4:1 ^a	Stopped, critical		
4:2 ^a	Stopped, critical		
4:3 ^a	Stopped, critical		

B. Diagnostics

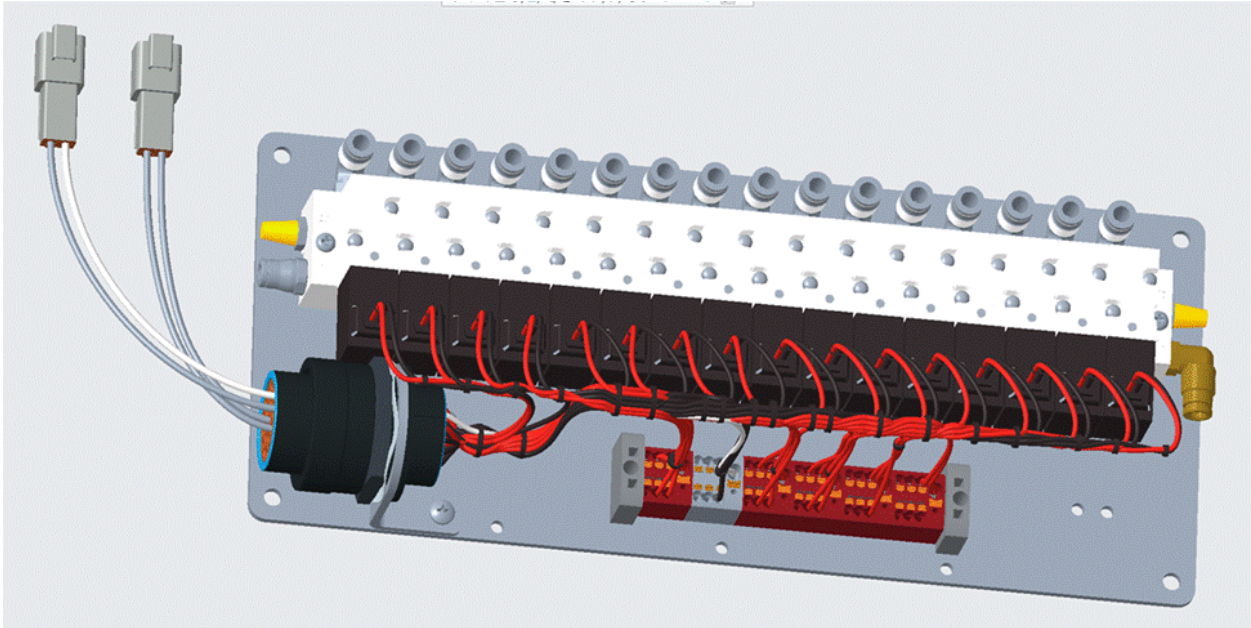
If any underlift remote system functionality does not operate as expected, a G11 or G12 Bluetooth modem can be plugged in to the system harness and used to connect to a Bluetooth enabled cell phone using the IQANgo app.

Miller p/n **03029466 CONTROLLER, BT PARKER IQAN-G12:**



C. Correct Air Bank Assembly

Miller p/n 09024680 AIR BANK 16FXN ASSY, INTGD 12V:

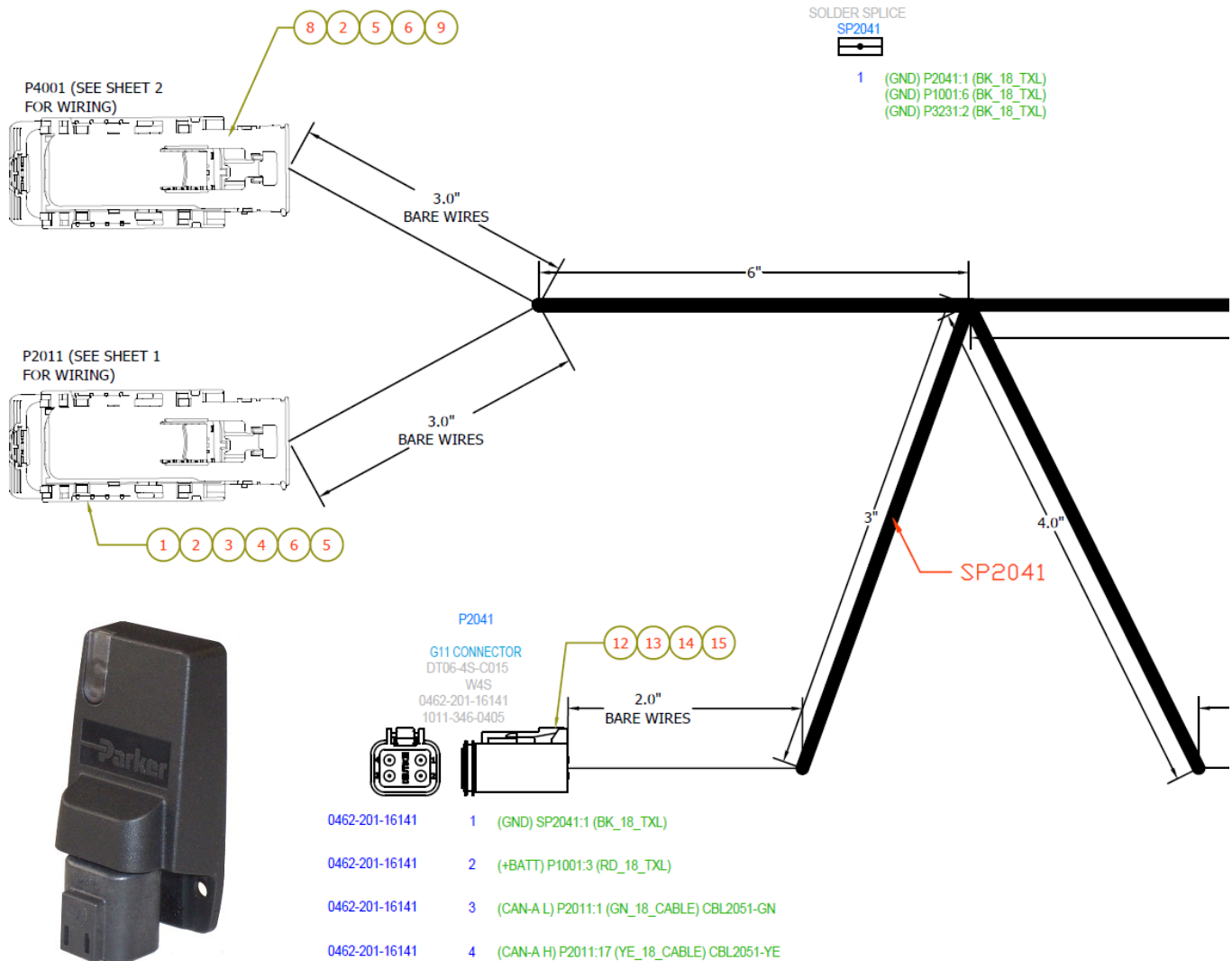


Do not use Miller p/n 0910535 MANIFOLD PKG 16VLV 12VDC W/O HNS:



Contact the Miller parts department or customer service if replacement parts are needed to properly complete the installation.

D. G11/G12 Programming and Diagnostic Connection

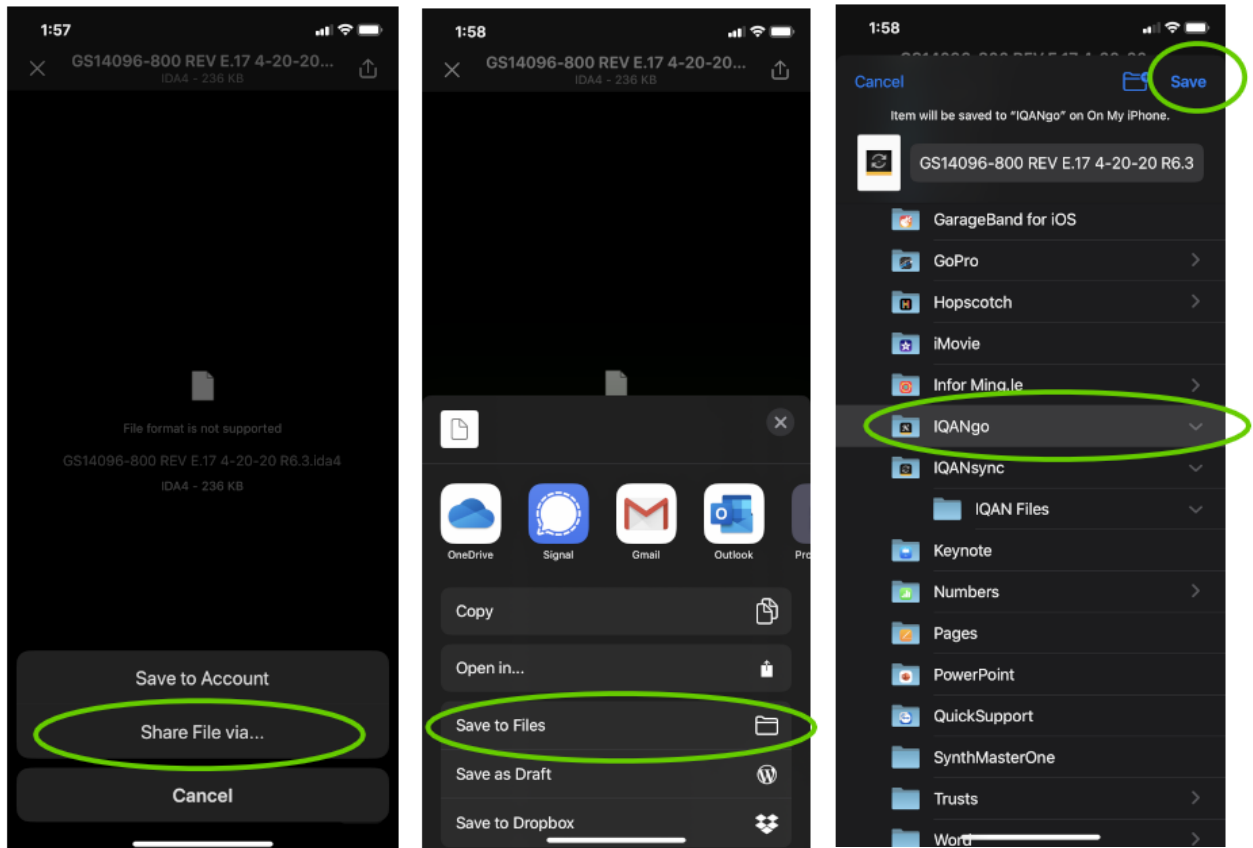


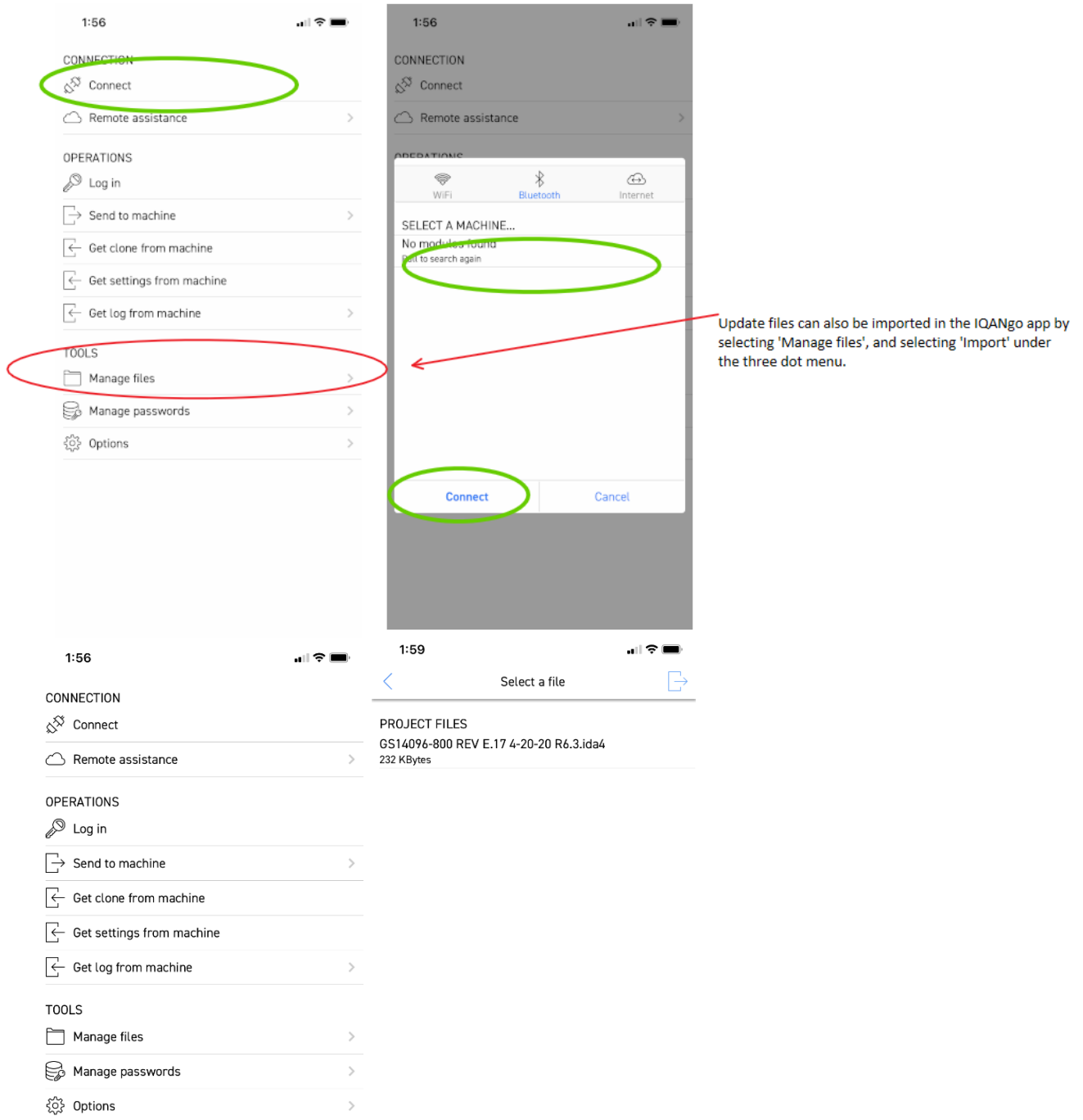
Miller p/n 03029466

E. Underlift Controller Update via IQANgo iPhone

1. Open the email containing the update file attachment.
2. Tap on the attachment.
3. Save to Files.
4. Select the IQANgo folder and tap Save.

5. Ensure your Bluetooth wireless is turned on in the phone settings menu.
6. Open the IQANgo app.
7. Tap Connect.
8. IQANgo will search for the G11 Modem on the truck and list it under "SELECT A MACHINE" when found.
9. Select the listed Machine and tap Connect.
10. From the main IQANgo menu, tap 'Send to Machine'.
11. Select the update save from the email. If multiple files are listed be sure to select the correct revision.
12. Send the file. (note that screen shots may differ depending on the email app and phone used)





F. Tailboard Underlift Rocker Panel Installation

Optional tailboard underlift rocker panels can be installed on either side. Ensure the included rubber boot is on the rocker panel or it will not fit firmly into the plate.

Install the rocker panel into the plate by pressing it into the plate cutout. Connect the lead to the connector run from the Flex8 remote system harness. Attach the plate to the tailboard.

03013328	ROCKER MODULE, CAN, UNDERLIFT
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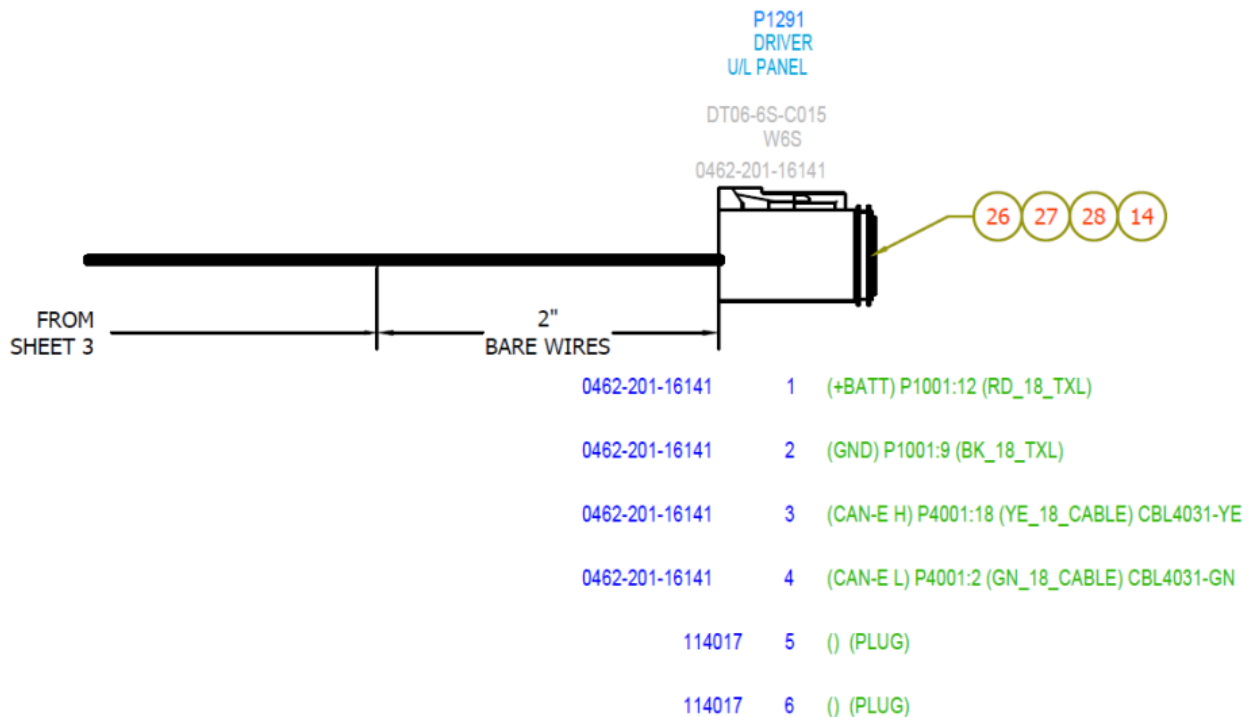
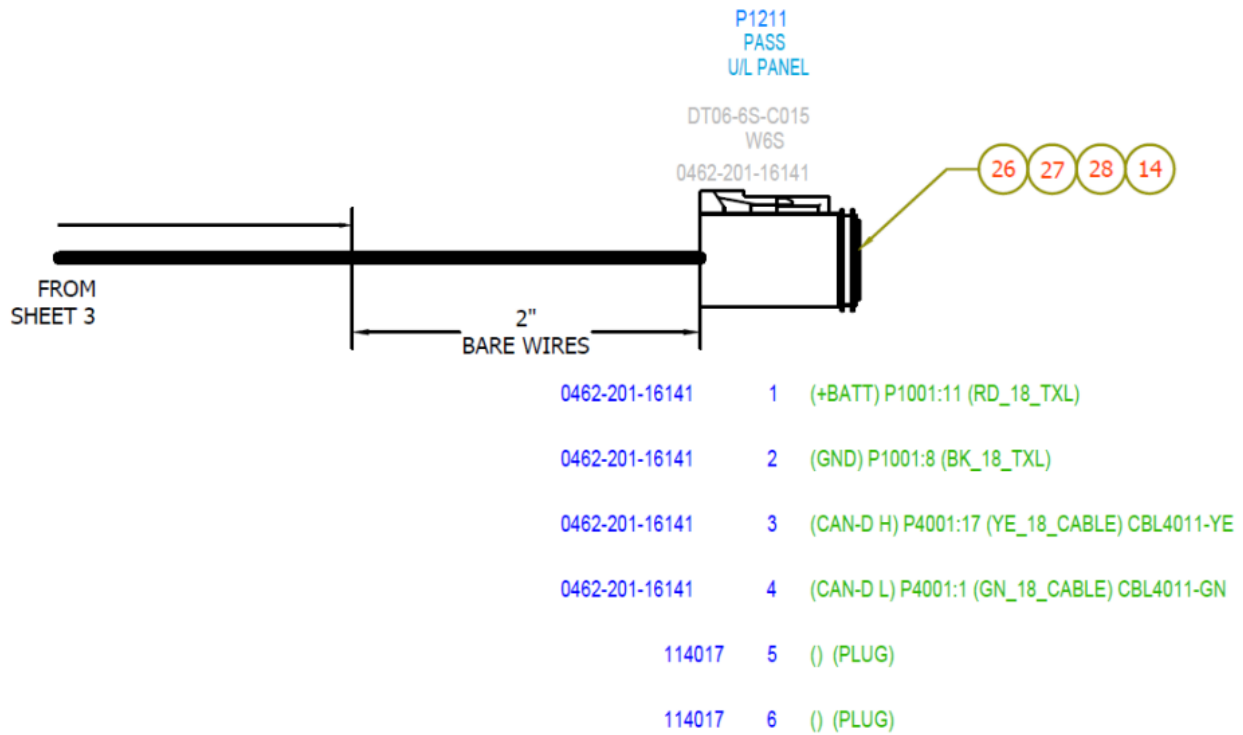
Includes

03013359	ROCKER BOOT, RUBBER, MC0598
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50015594	1 TAILBOARD U/L CAN BUS ROCKER
03013328	ROCKER MODULE, CAN, UNDERLIFT
0313083	DEUTSCH DT CAP 6 PLUG
07021455	PLATE, ROCKER MODULE CAN UL
0719906	PLATE, COVER WITHOUT REMOTE
50015596	2 TAILBOARD U/L CAN BUS ROCKER
03013328	ROCKER MODULE, CAN, UNDERLIFT
07021455	PLATE, ROCKER MODULE CAN UL

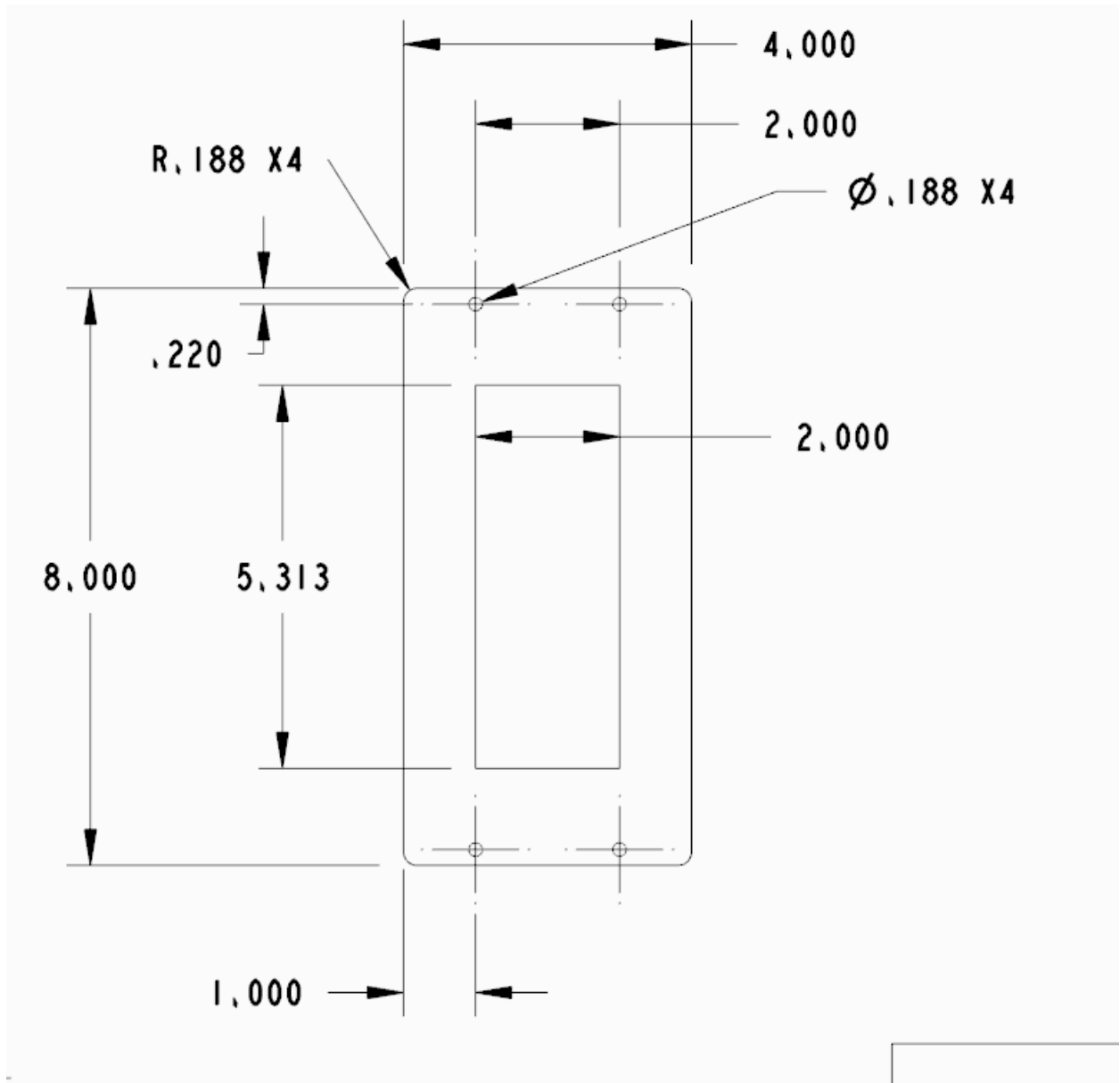


G. Tailboard Underlift Rocker Panel Installation (cont'd)



G. Tailboard Underlift Rocker Panel Installation (cont'd)

07021455 PLATE cutout dimensions



H. GS Flex8 Underlift System Parts List

GS Supplied Parts

Miller P/N	Description	Secondary Description
03028297	KIT,GS FLEX8 UNDERLIFT REMOTE	GSGR FLEX8 UNDERLIFT REMOTE ONLY KIT. P/N GS22080-0600
03025154	KIT, FLEX8 REMOTE/RECEIVER	GSGR FLEX8 INTEGRATED REMOTE/RECEIVER KIT. P/N 20073588
03025152	REMOTE, FLEX8 INTEGRATED	GSGR FLEX8 INTEGRATED REMOTE, BOOM, UNDERLIFT, AND WINCH FUNCTIONS. P/N 20073436
03025153	RECEIVER, FLEX8 INTEGRATED	GSGR FLEX8 INTEGRATED CAN RECEIVER. P/N 20073437
03028870	ANTENNA, GS FLEX PRO 19209962	GSGR MAGNETEK FLEXPRO RECEIVER ANTENNA. GSGR P/N 19209962
03028298	CONTROLLER,MC43, U/L 20086625	PARKER MC43 CONTROL MODULE, GSGR P/N 20086625

Miller Supplied Parts

Miller P/N	Description	Secondary Description
09024680	AIR BANK 16FXN ASSY, INTGD 12V	AIR BANK ASSEMBLY, 16 FUNCTION, 12 VOLTS, FOR INTEGRATED WRECKERS WITH GS FLEX8 UNDERLIFT REMOTE.
03028299	HARNESS,UNDERLIFT FLEX8 REMOTE	GSGR UNDERLIFT REMOTE ONLY HARNESS. GSGR P/N 20086628
03029647	DECAL, DRAG IN/OUT, FLEX8	GSGR UNDERLIFT REMOTE DECAL FOR FLEX8 REMOTE: DRAG IN AND DRAG OUT. PLACE OVER FOLD UP/DOWN FOR VULCAN THIRD WINCH OPTIONS.GSGR P/N 20088054

Optional Parts

50015594	1 TAILBOARD U/L CAN BUS ROCKER
03013328	ROCKER MODULE, CAN, UNDERLIFT
0313083	DEUTSCH DT CAP 6 PLUG
07021455	PLATE, ROCKER MODULE CAN UL
0719906	PLATE, COVER WITHOUT REMOTE
50015596	2 TAILBOARD U/L CAN BUS ROCKER
03013328	ROCKER MODULE, CAN, UNDERLIFT
07021455	PLATE, ROCKER MODULE CAN UL