RELEASED TO PRODUCTION - DATE: 7/23/2020

Rev	Date	ECN	Description
-	01/20/2020	-	Initial Release
A	07/07/2020	14377	Added External Light Notes for OZ-II Configuration

"The Standard of the Industry"

CUES

Document Number:

SF971-INST

Description:

SolidFX Mud Master Kit

Instruction Sheet

Signature CHKR: Ludwig Hupe

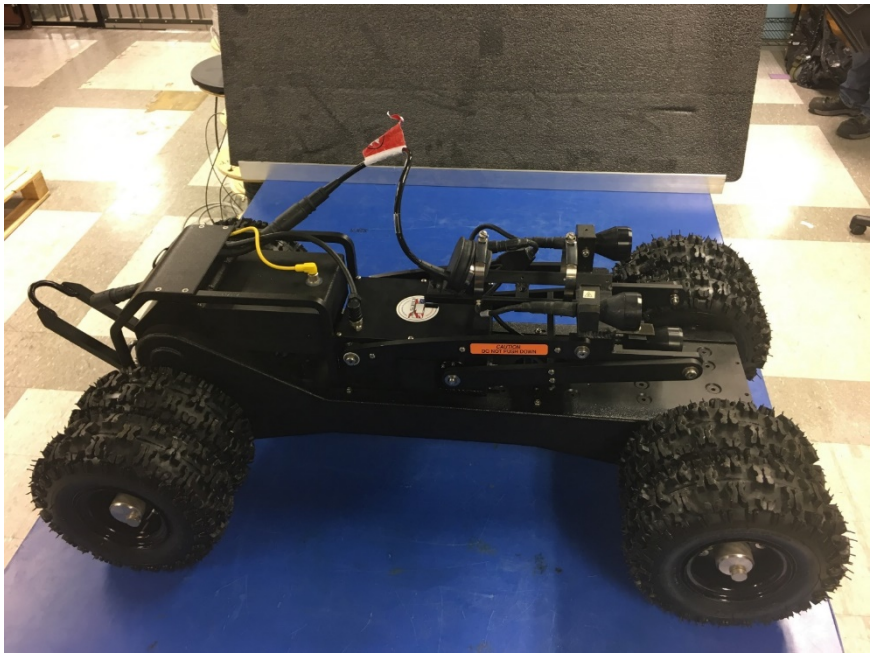
Signature ENGR: Tony Winiewicz

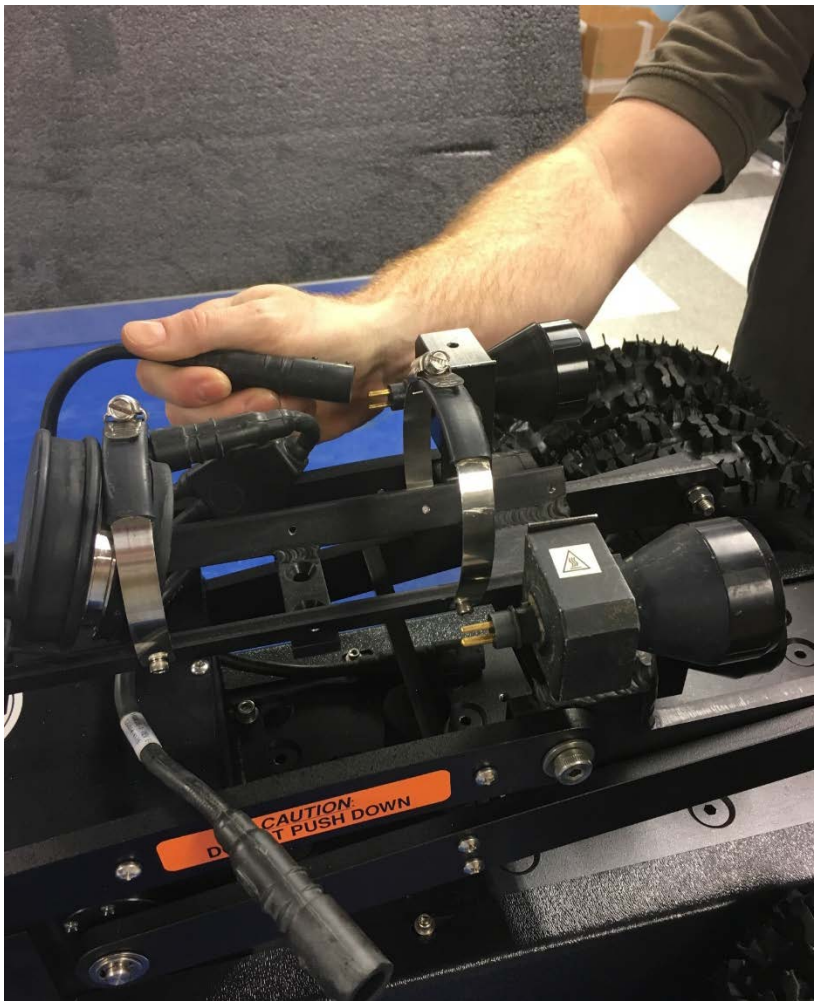
Signature MFG: '/22/20

NOTES – UNLESS OTHERWISE SPECIFIED

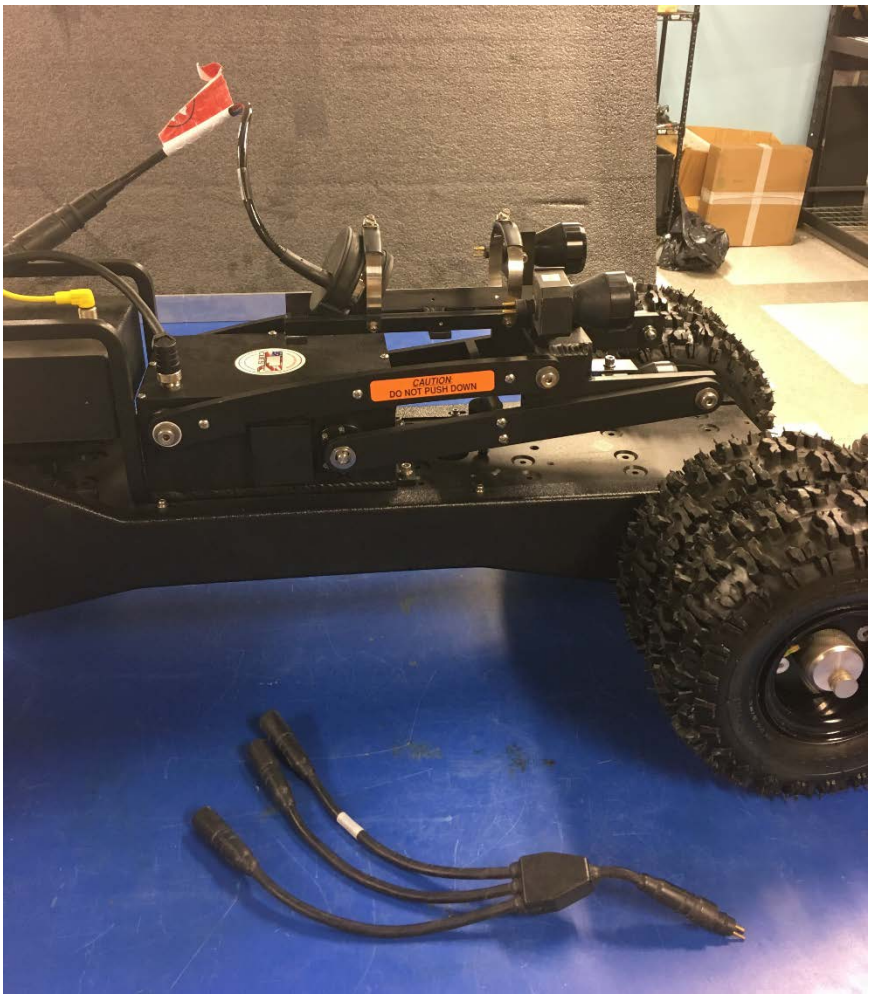
1. Apply blue threadlocker, 440061, to all threaded fasteners (**excluding** cable connectors).
2. Applying DeoxIT Gold to electrical connections is recommended.
3. Mate all threaded connectors as demonstrated in HD956-INST.
4. All sensors with cables that have 12-pin connections will work on any of the four 12 pin receptacles.
5. Dust caps should always be installed on receptacles that are not mated with cables.
6. Cables should be installed such that lift operation does not pinch the cables or put strain on the cables.
7. If running OZ-II
   - Apply dust cap EC431 to the SF394 cable.
   - Mate one end of the Y-eliminator cable to the OZ-II and the other end to the SF615-1 cable routed along the lift arm.
   - A • Only external LEDs lights, Cues PN 750142-15, *CARTRIDGE, LIGHT, HPL 10+, LED, 15° BEAM,* should be used in this configuration.
   - A • For external lights, plug cable P/N 160627 into the y-eliminator cable on the OZ-II. Plug the other ends of the cable into the external lights.
     - Note: If you use external light cable P/N 160626-1 (cable removed in SF971-INST) you must mate a 2-pin dummy plug, P/N 160523, to the unused end of the cable.
   - Unplug the RVC camera connector (8-pin) from the SF387 electronics box, move the dust cap (EC2626) from the OZ-II connector to the RVC connector, and plug the OZ-II connector (8-pin) into the SF387 electronics box.

View of Mud Master

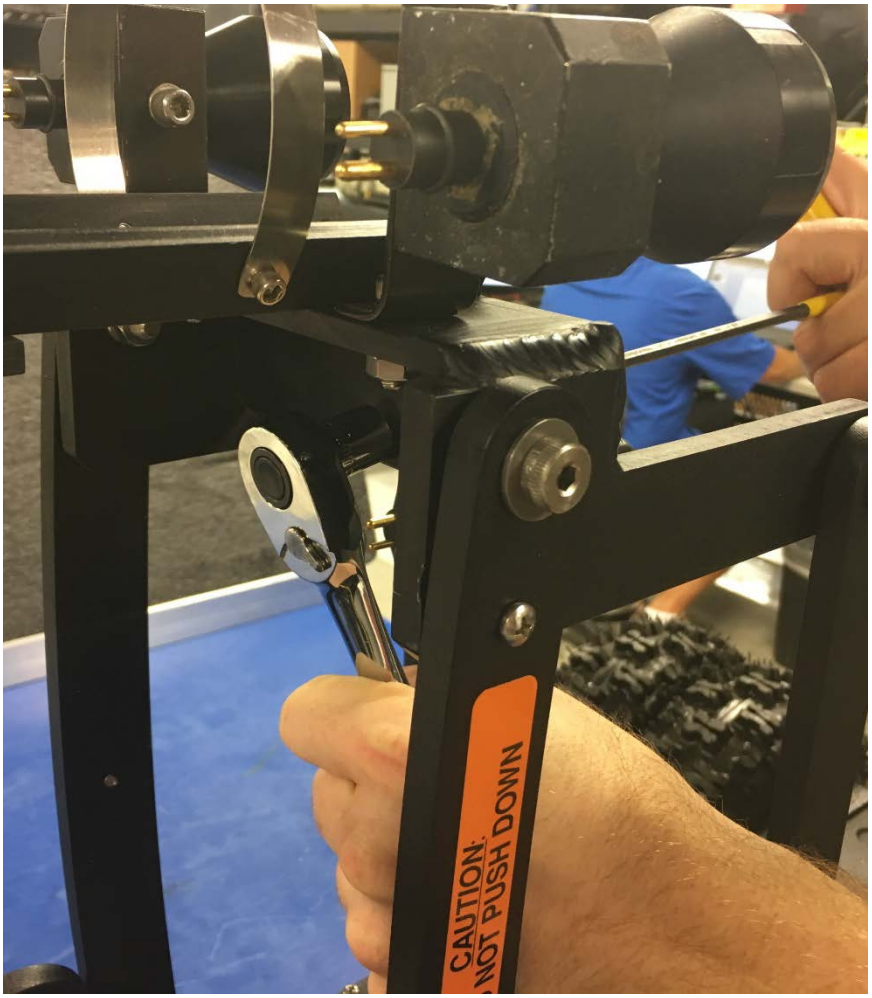




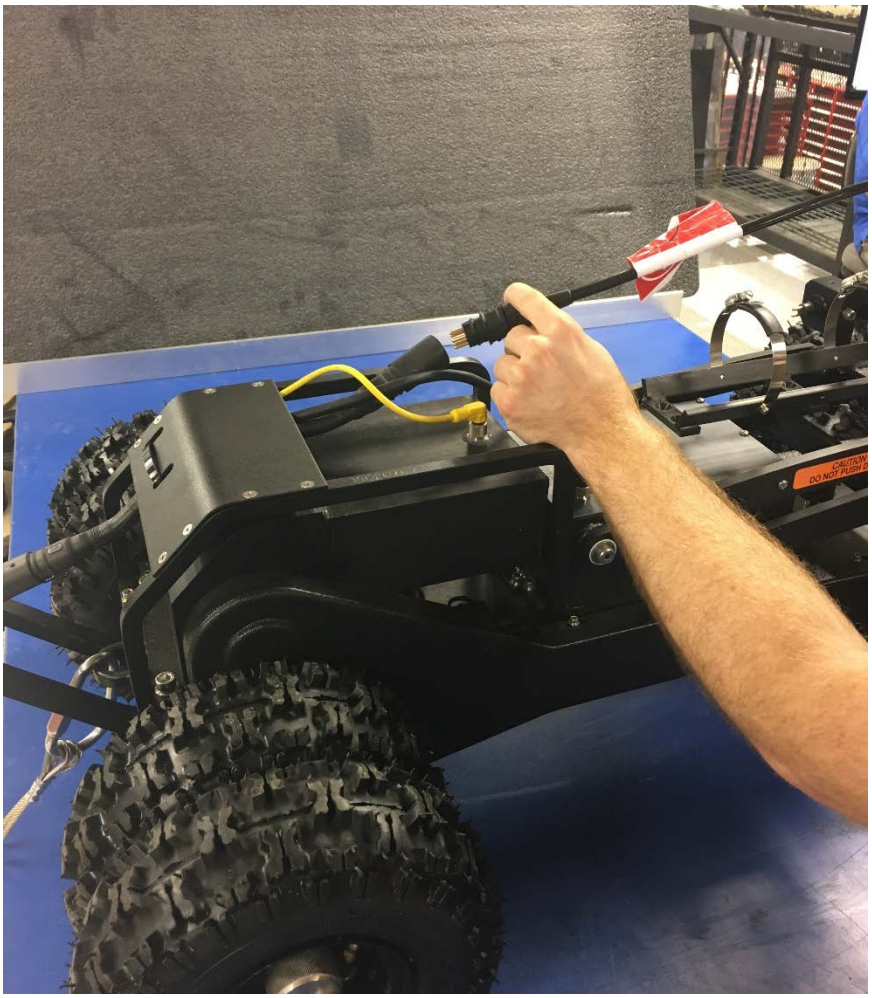
- Unplug all of the lights.



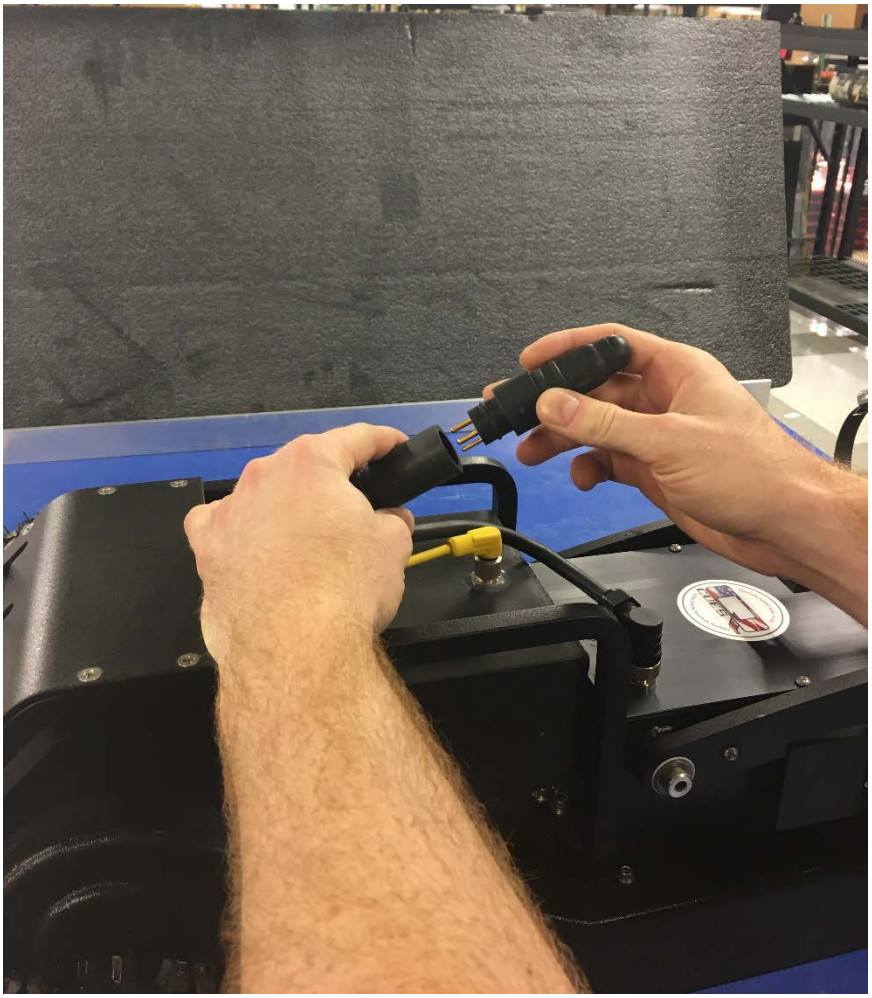
- Remove the external light cable as shown and retain for normal Mud Master configuration.



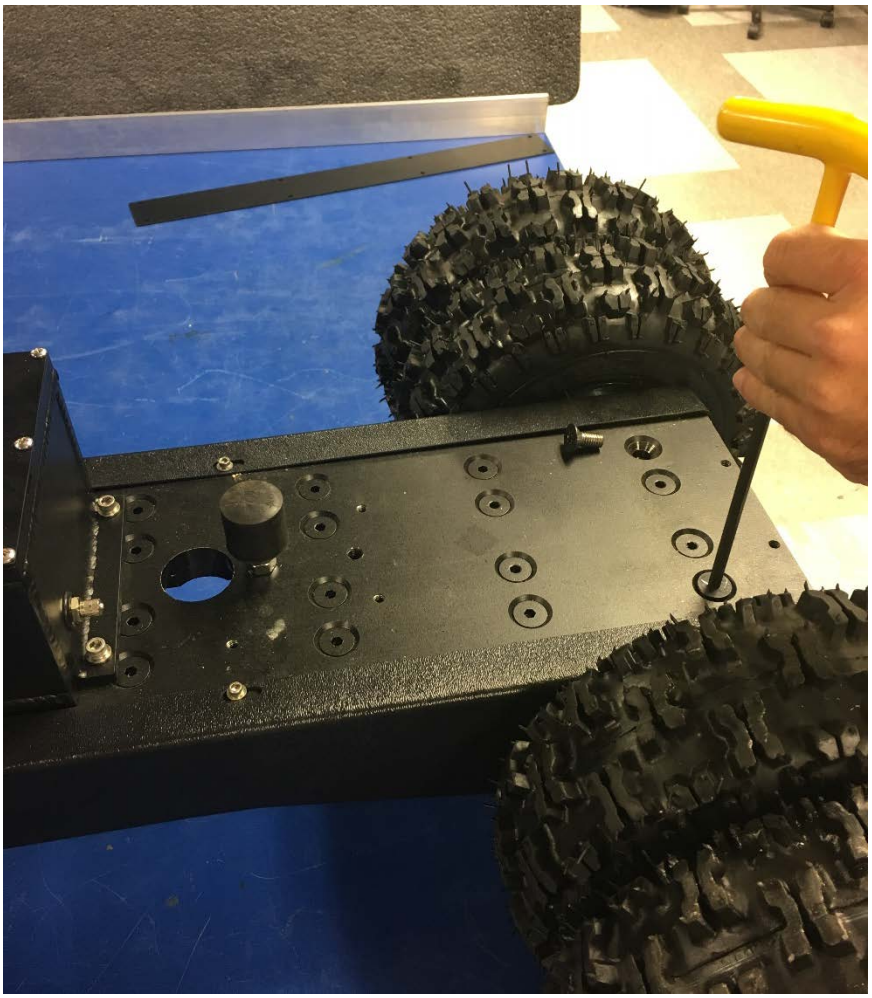
- Remove the bottom light and bracket.
- Note: Use the top two external lights during OZII camera operation but not DUC operation.



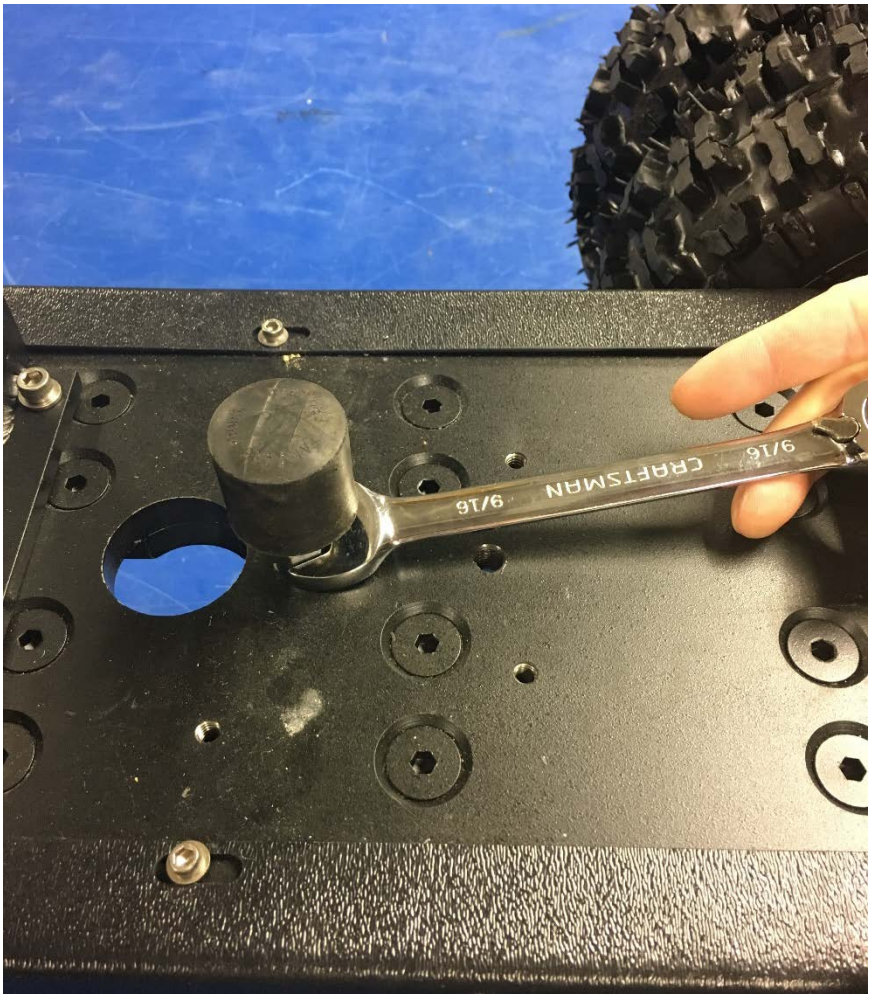
- Remove Y-eliminator. Retain for normal Mud Master configuration.



- Mate 5 pin dummy plug with cable harness as shown.
- Hardware:
  - 1X - 160553

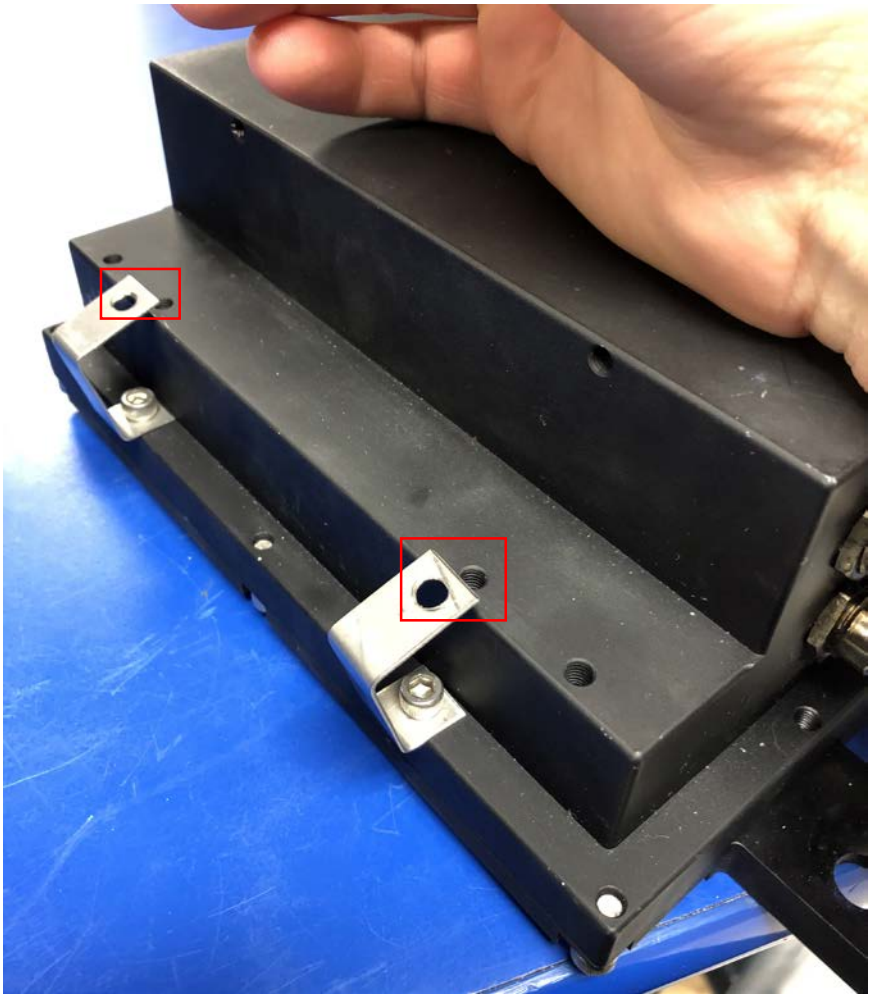


- Remove the 2 screws from the Mud Master as shown.
- These will be replaced with screws supplied with SF387 later in this instruction sheet.



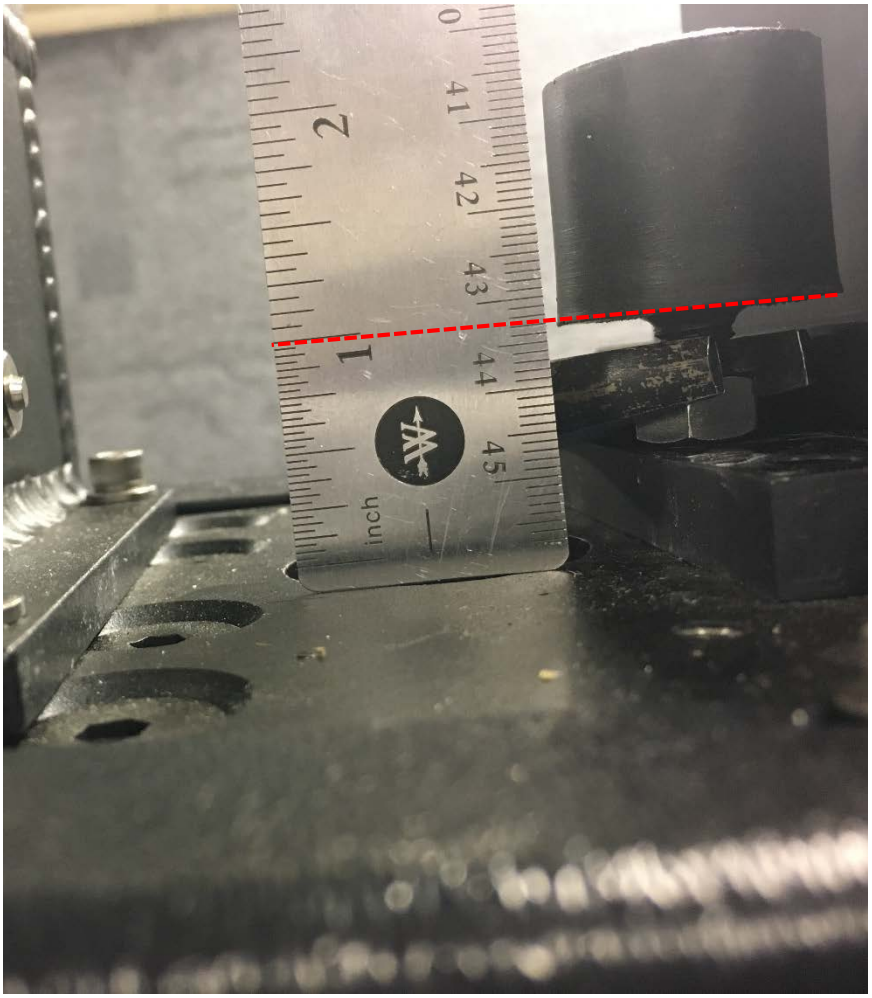
- Remove bumper, nut, and lock washer and retain for future installation.

- Remove the cable guard from SF387.
- Retain hardware for future guard installation.

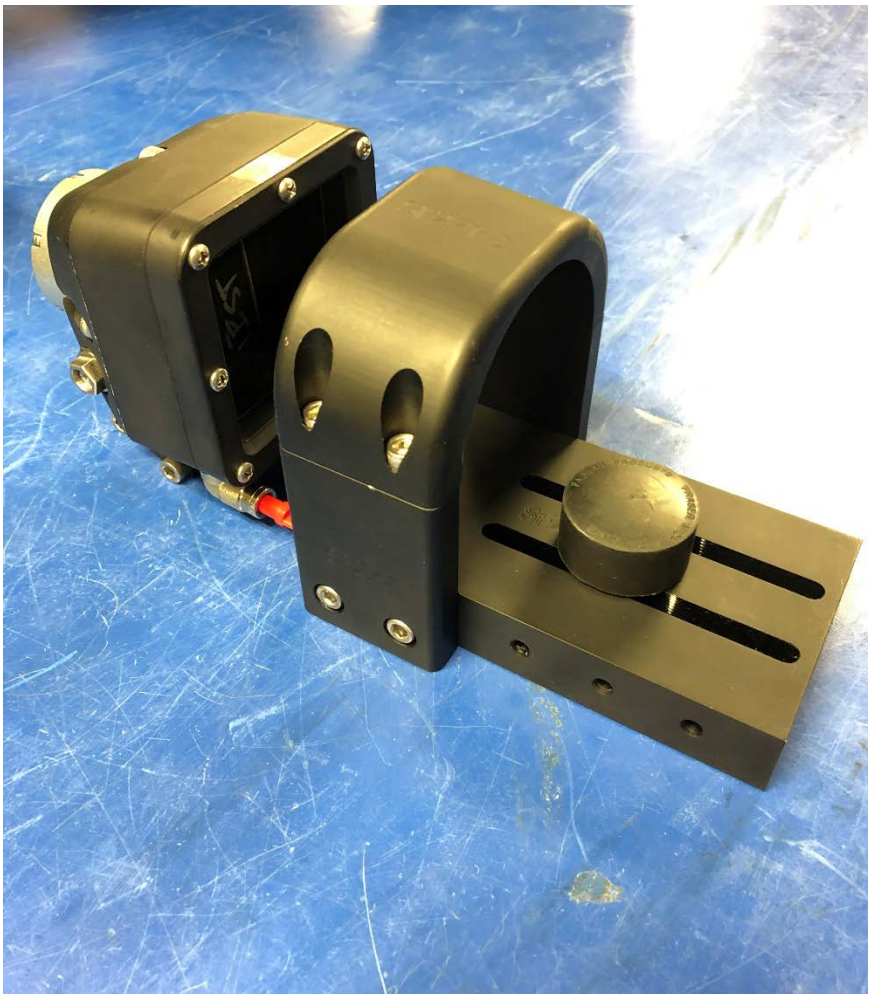


- Remove and retain the top screws from the wire retaining clips on both sides of SF387.
- Loosen bottom screws to allow for easy cable routing.

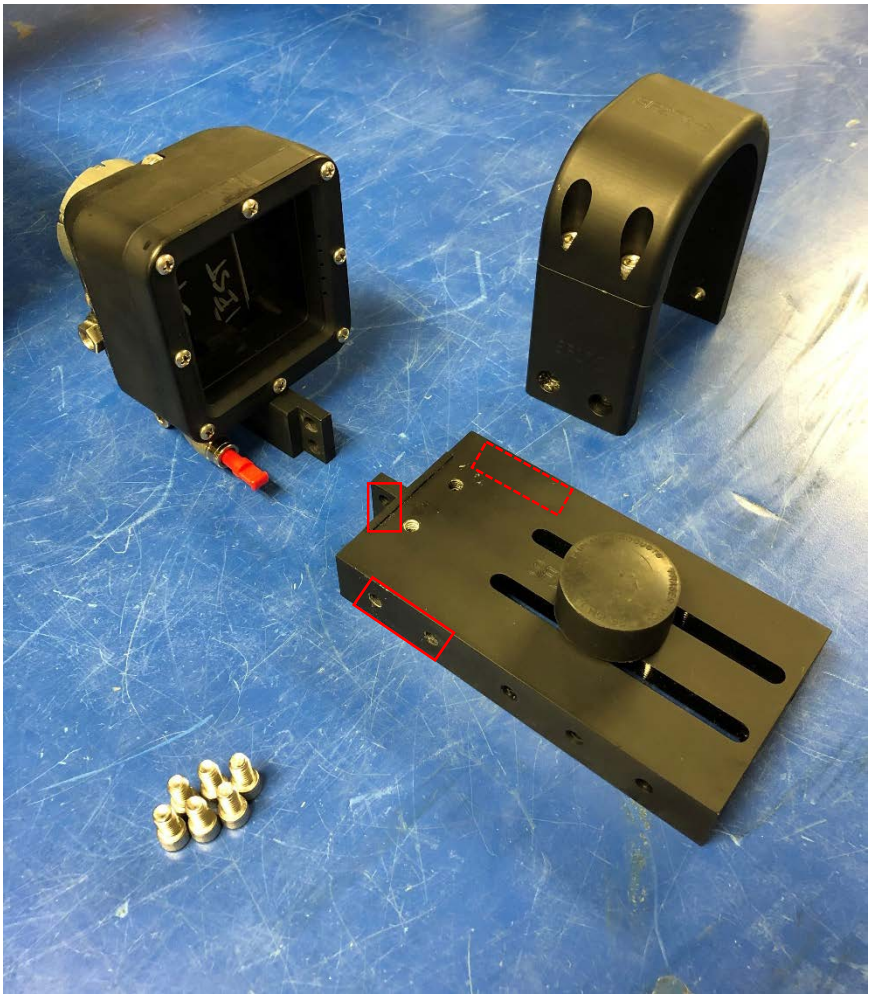
- Install SF387 onto the deck of the Mud Master using the HW4408 screws provided with SF387.



- Note: Threadlocker not necessary if using lock washer.
- Using the previously removed hardware, mount the bumper to the Mud Master deck utilizing the through hole on the back of the SF387. The bottom of bumper should be ≈1” off of the deck.

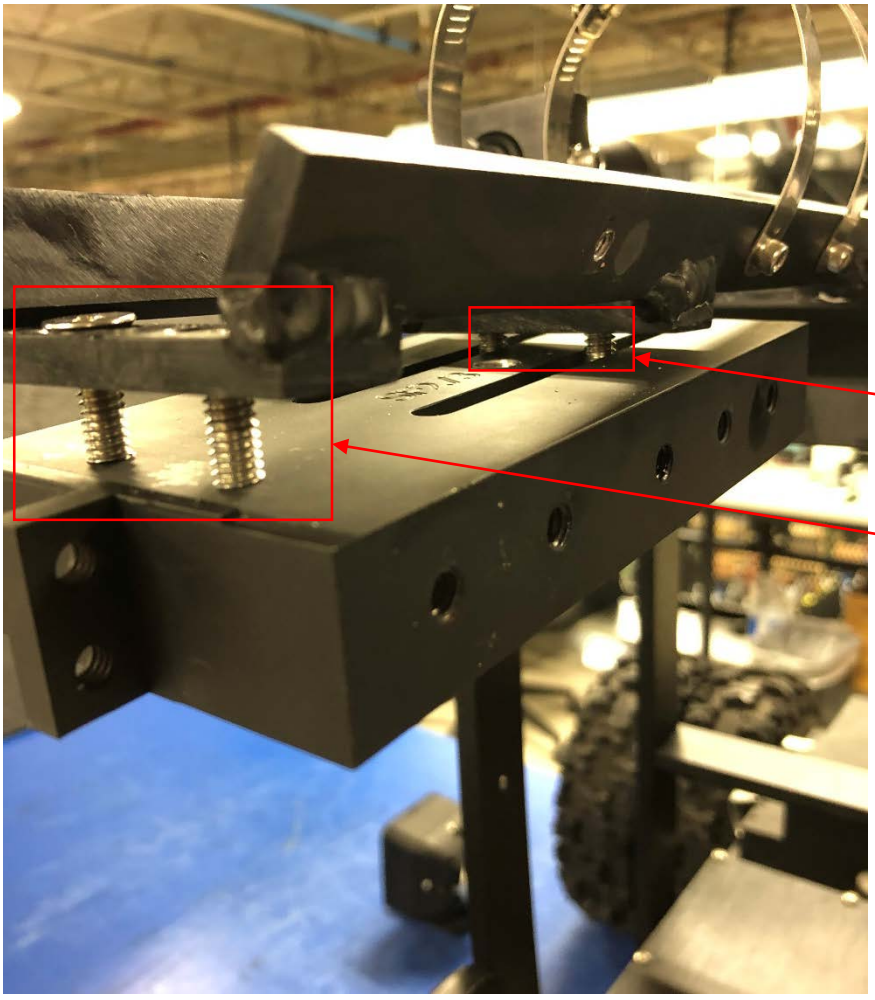


View of SF399 (RVC/LiDAR Guard Assembly)

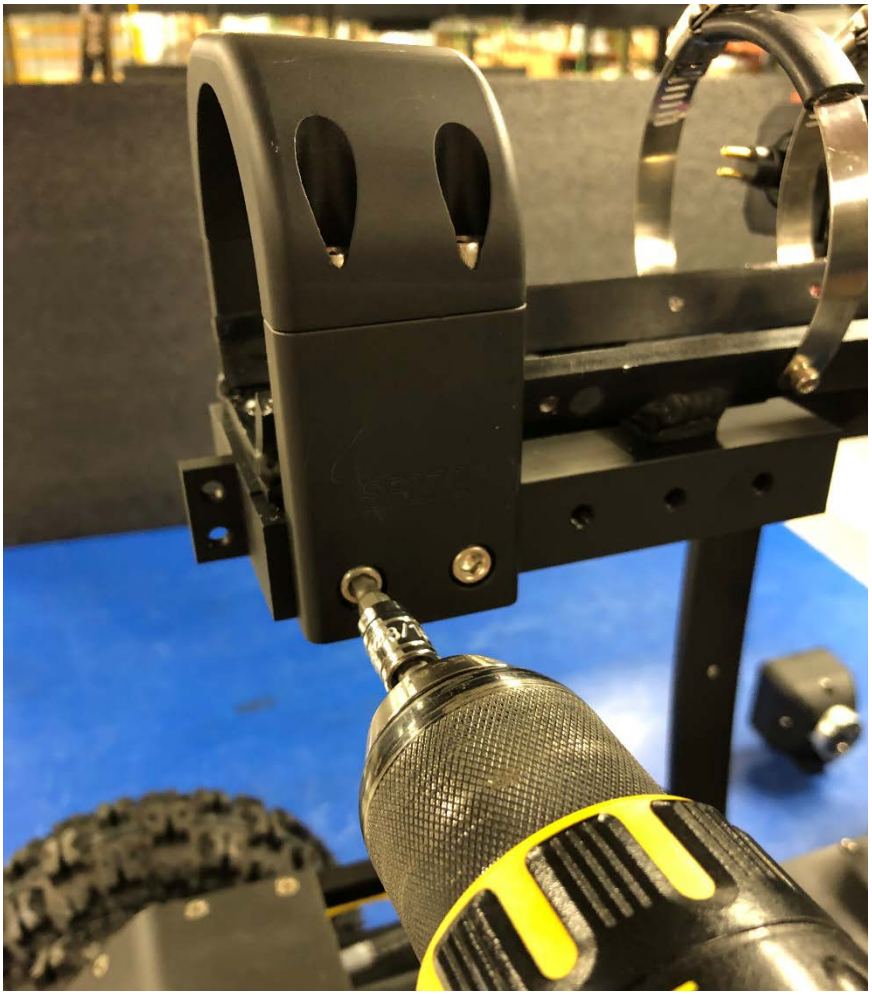


- Remove the 6 screws shown and retain for reassembly.

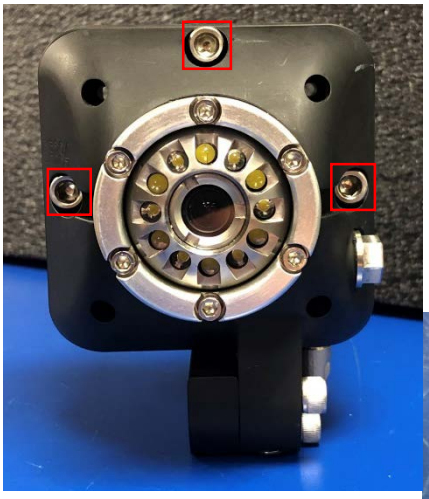
- Move the rear camera clamp 1 position towards the front of the transporter.



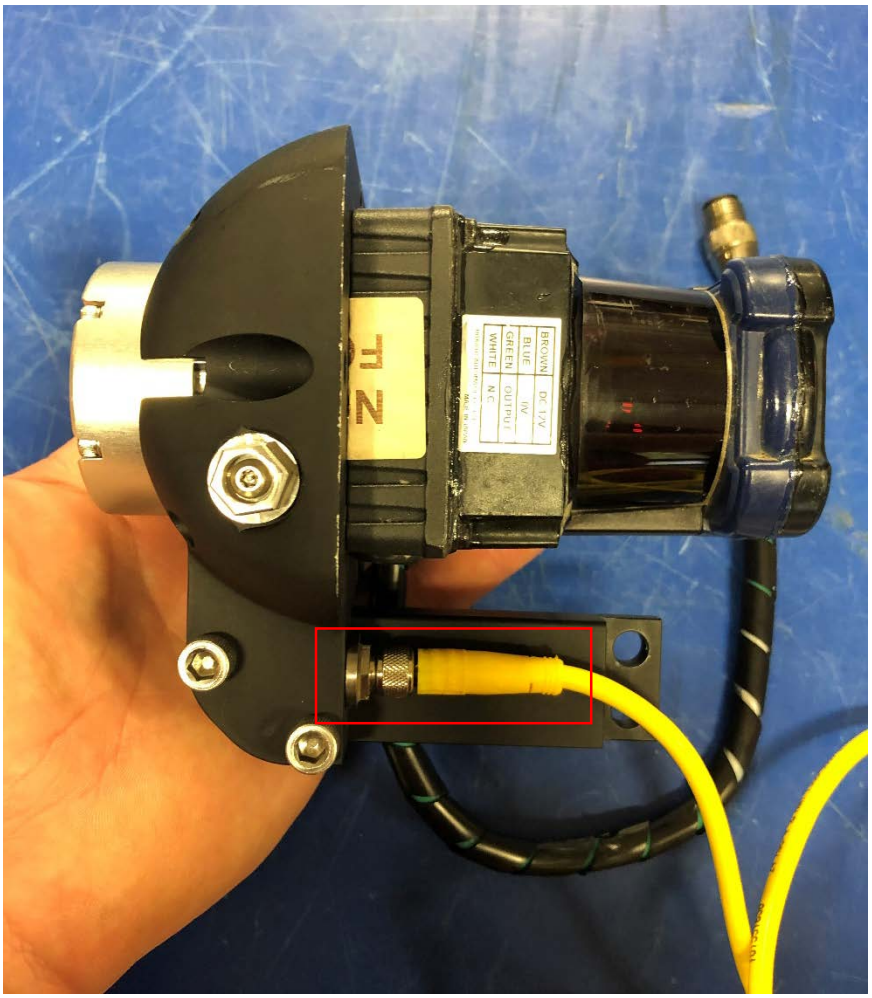
- Attach the rectangular base of SF399 to the lift.
- Hardware(provided with SF399):
  - 2X – HW1281
  - 2X – HW030
  - 2X – 103080
- Note: Round bumper is removed for viewing purposes.



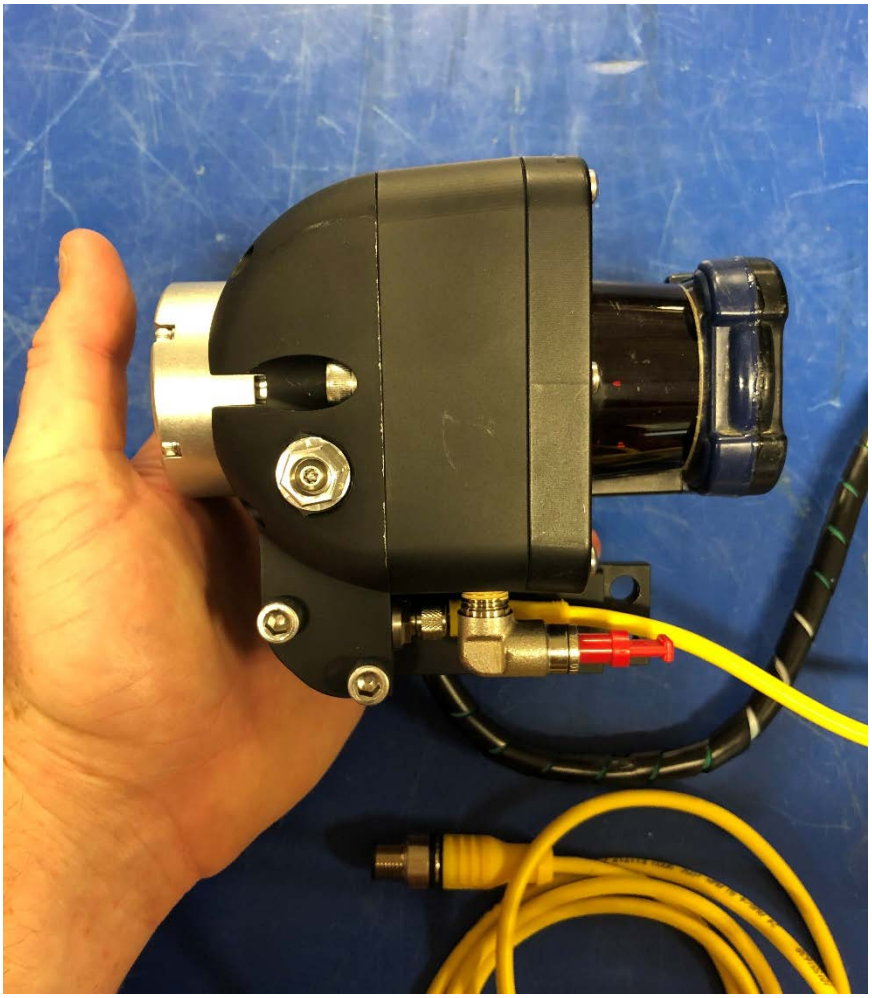
- Attach the LiDAR guard portion of SF399 as shown.
- Hardware:
  - 4X – Screws from SF399 disassembly.



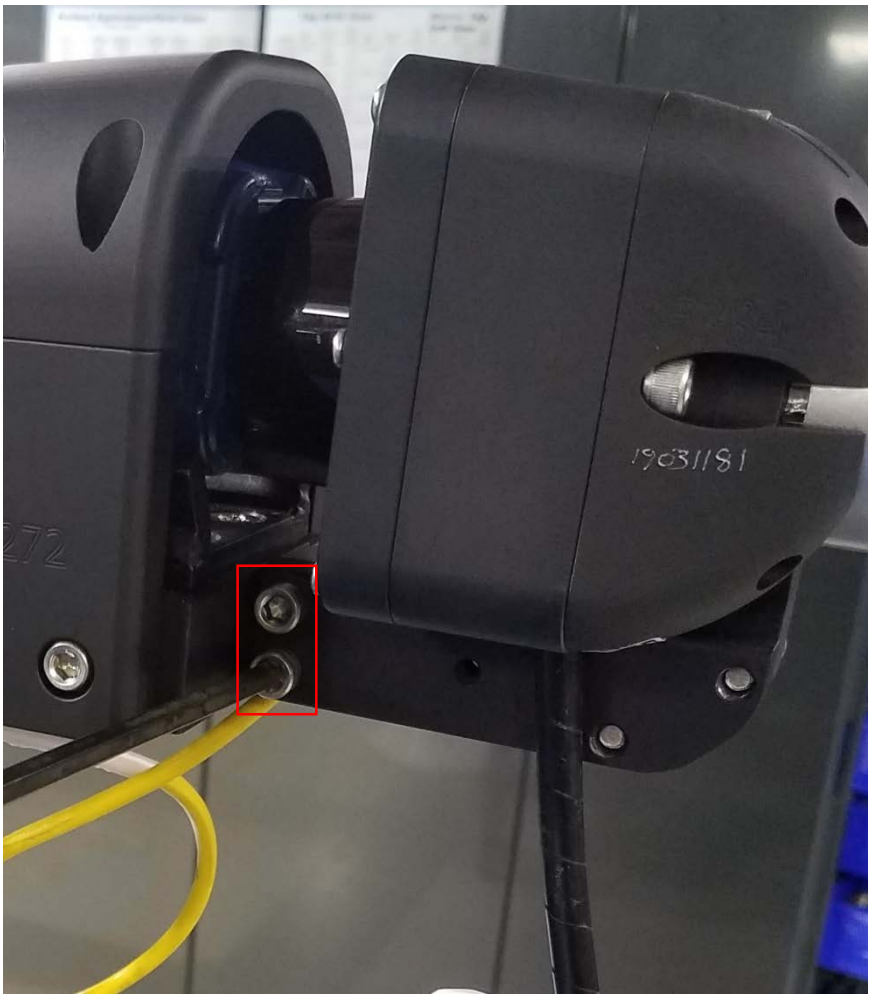
- Remove the blower portion of the RVC by removing the 3 screws shown (left).
- Retain screws for reassembly.
- Attach the LiDAR to the RVC.
- Hardware (provided with SF399):
  - 4X – HW952



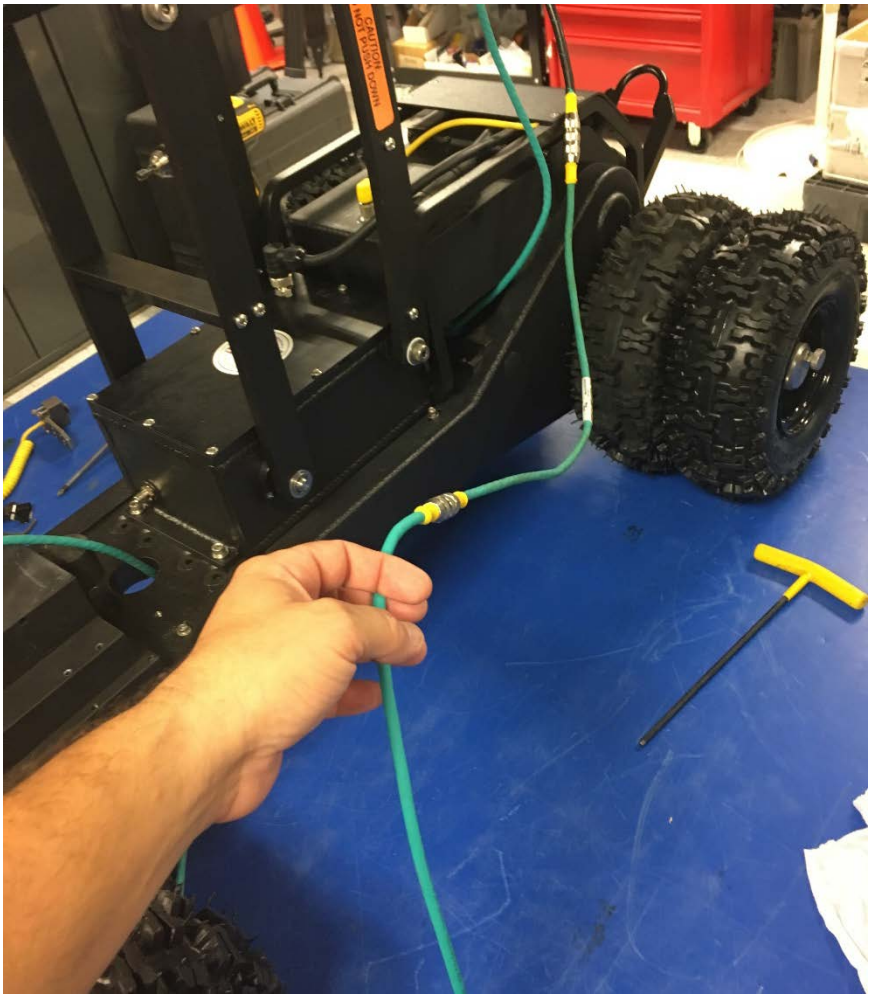
- Remove the dust cap from the receptacle on the RVC.
- Mate the 4 pin end of the SF603-1 cable with the receptacle on the RVC.



- Reattach the blower portion of the SF399 assembly to the RVC using the 3 screws that were previously removed.



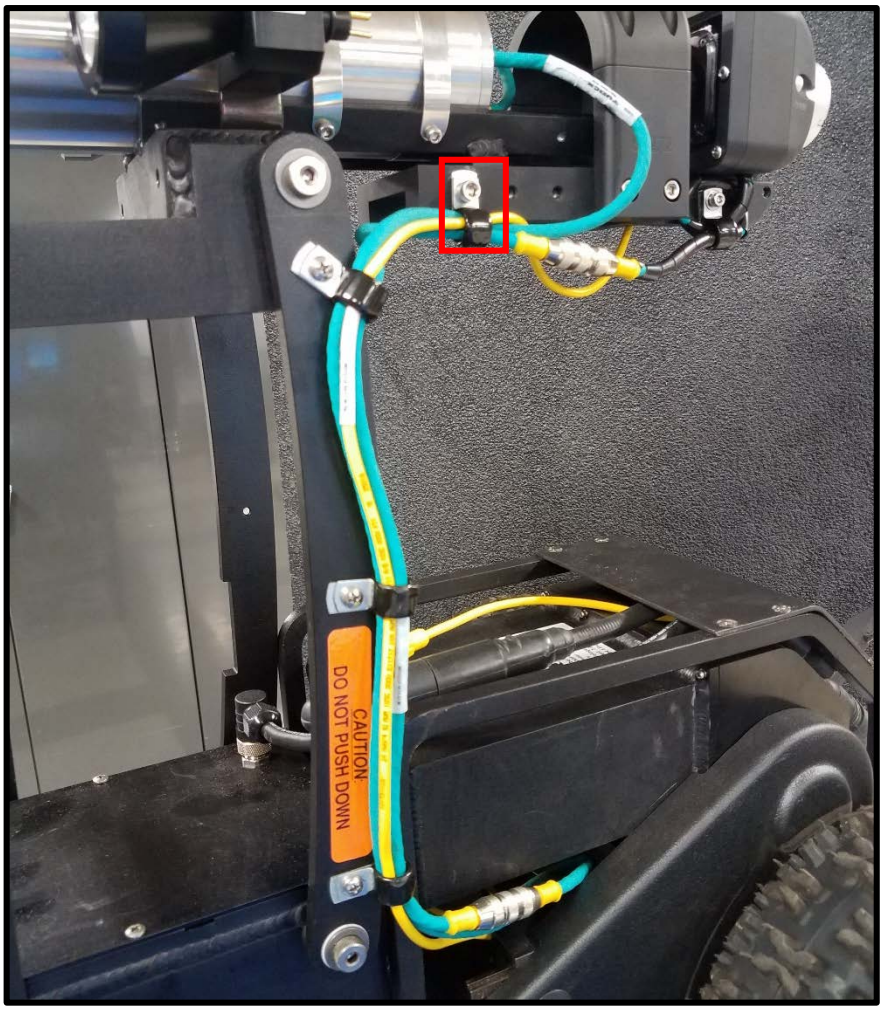
- Mate the RVC/LiDAR portion of SF399 as shown.
- Hardware:
  - Remaining 2 screws from initial disassembly of SF399.



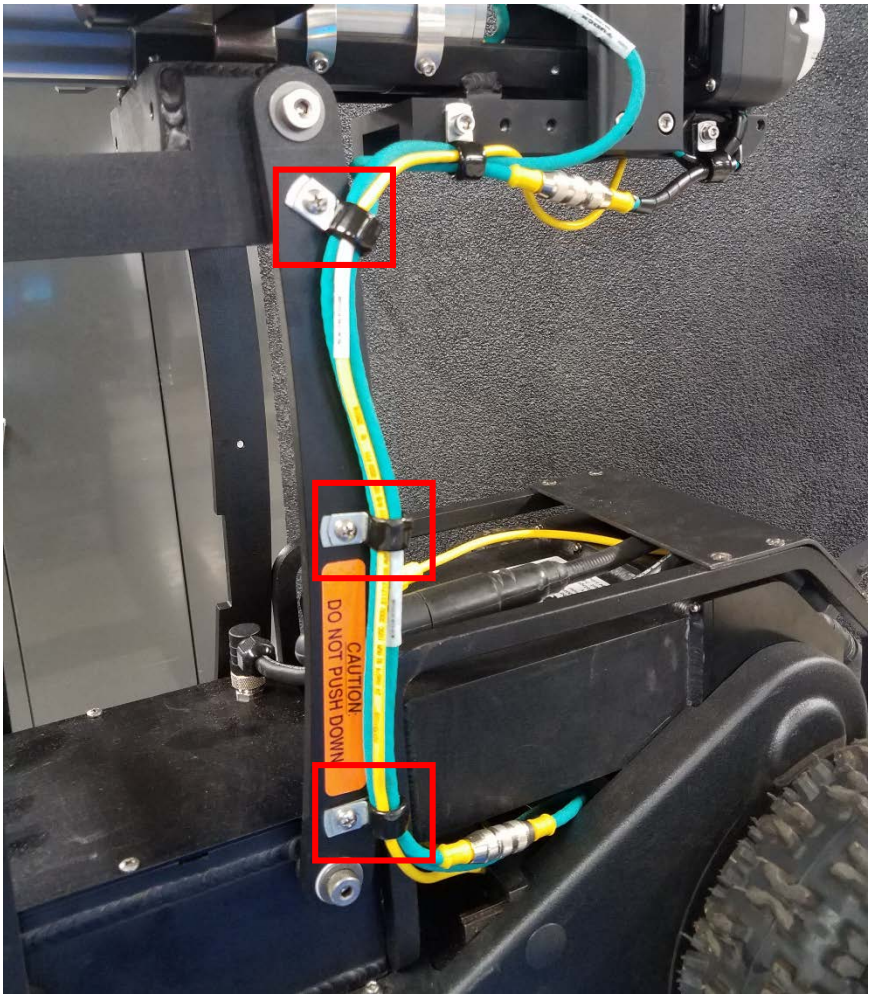
- Attach the SF218 cable to the LiDAR.
- Attach the SF218-1 cable to the SF218.

- Route the LiDAR cable as shown.
- Hardware:
  - 1X – 121104
  - 1X – 100140
  - 1X – 102001

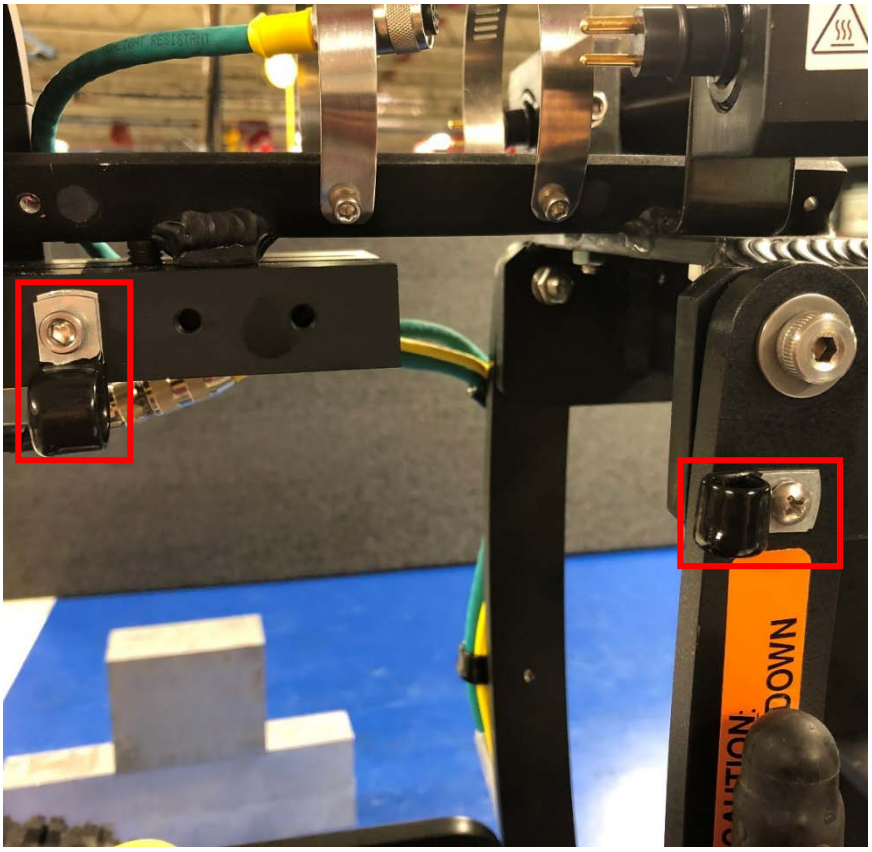
- Reference note for OZ-II camera exception.
- Slide the DUC camera through the clamps until it is stopped by the bumper.
- Note: Bottom DUC skid should be parallel to the mud master chassis.
- Mate the SF394 cable to the receptacle on the back of the DUC.
- Tighten the clamps to secure camera.



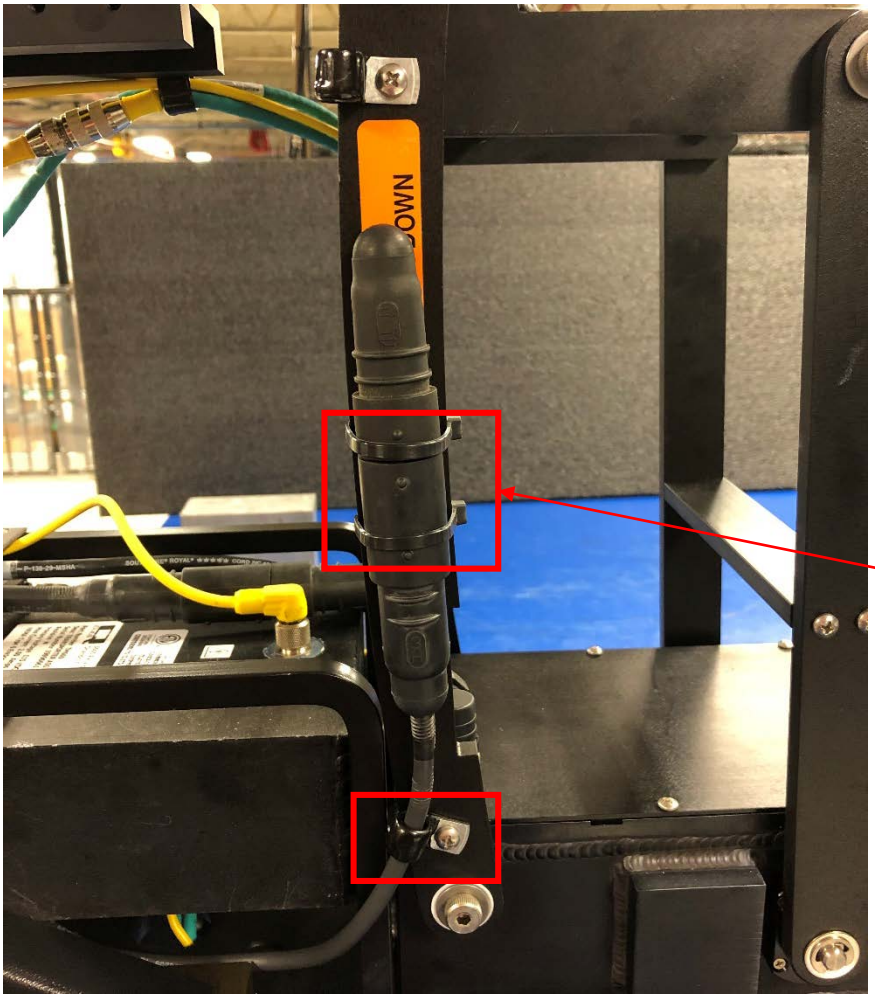
- Secure cables to SF399 base as shown.
- Hardware:
  - 1X – 121104
  - 1X - 101001



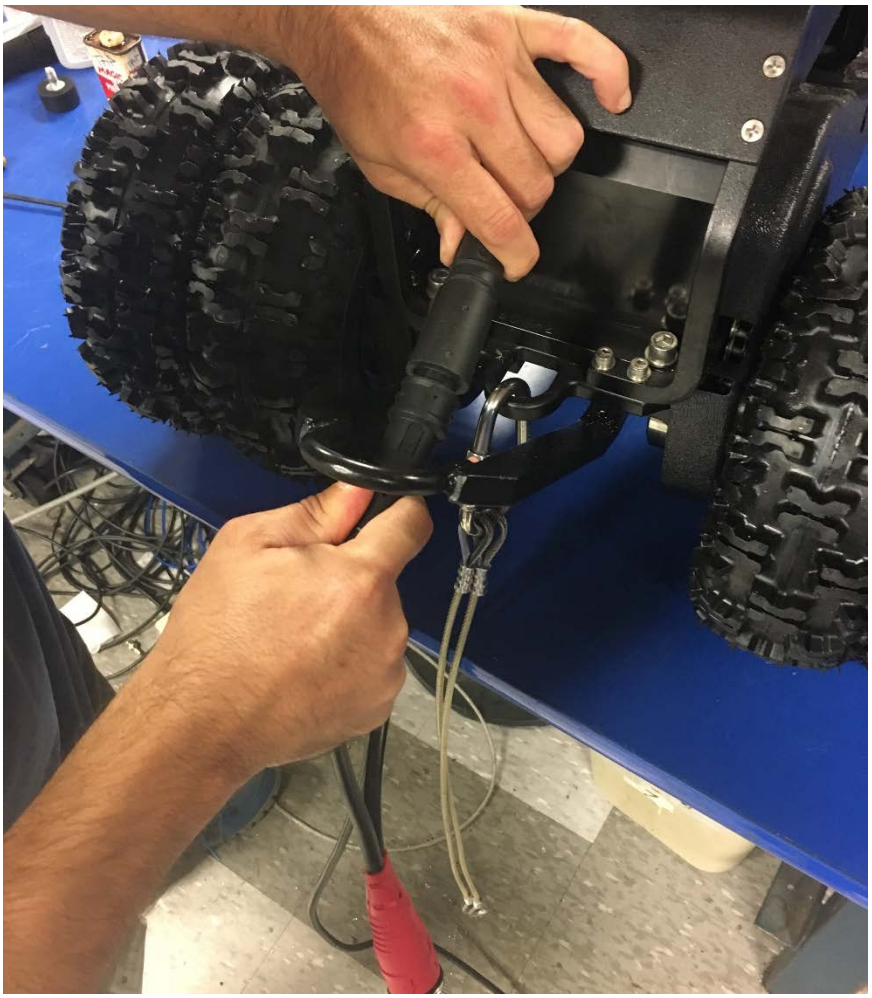
- Route cables along lift arm as shown.
- Hardware:
  - 3X – 121104
    - Use screws on the lift arm.
- Route the cables through the hole in the Mud Master chassis (located under the motor).



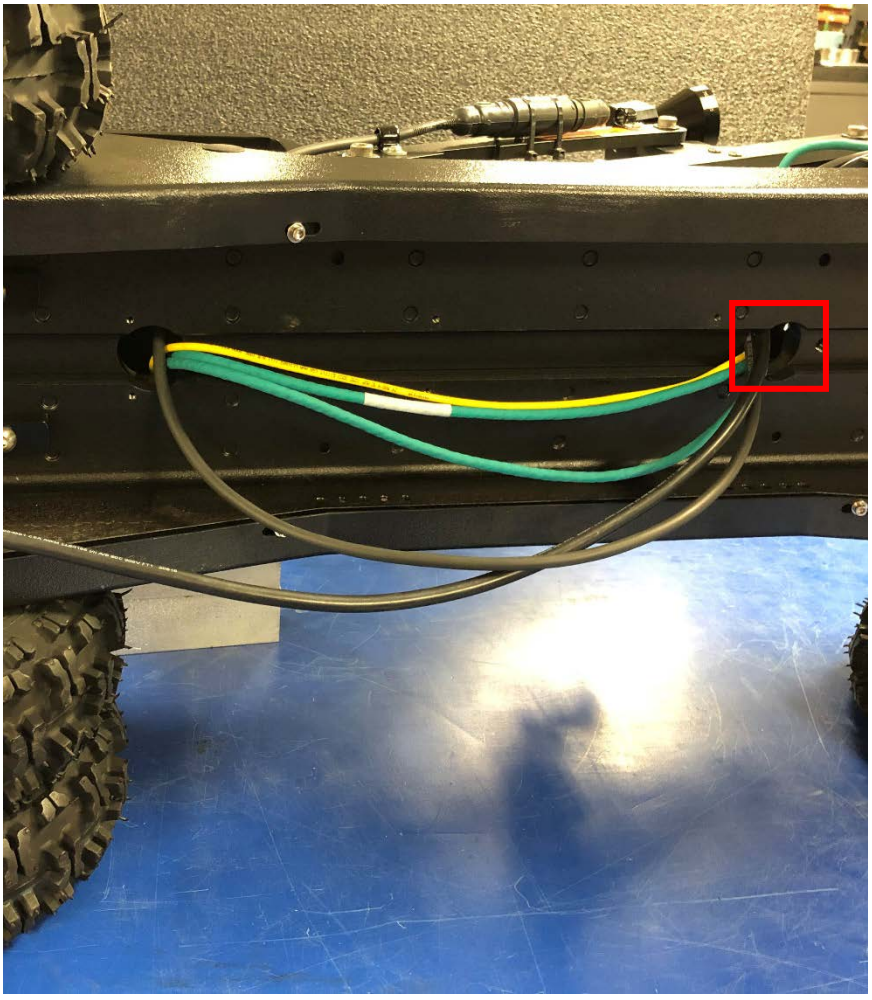
- Install the cable clamps as shown.
- Hardware:
  - 1X – 121104 (left)
  - 1X – 101001
  - 1X – 121106 (right)
    - Use the screw on the lift arm.
- Note: These cable clamps will only be used when running SFX with an OZ-II.



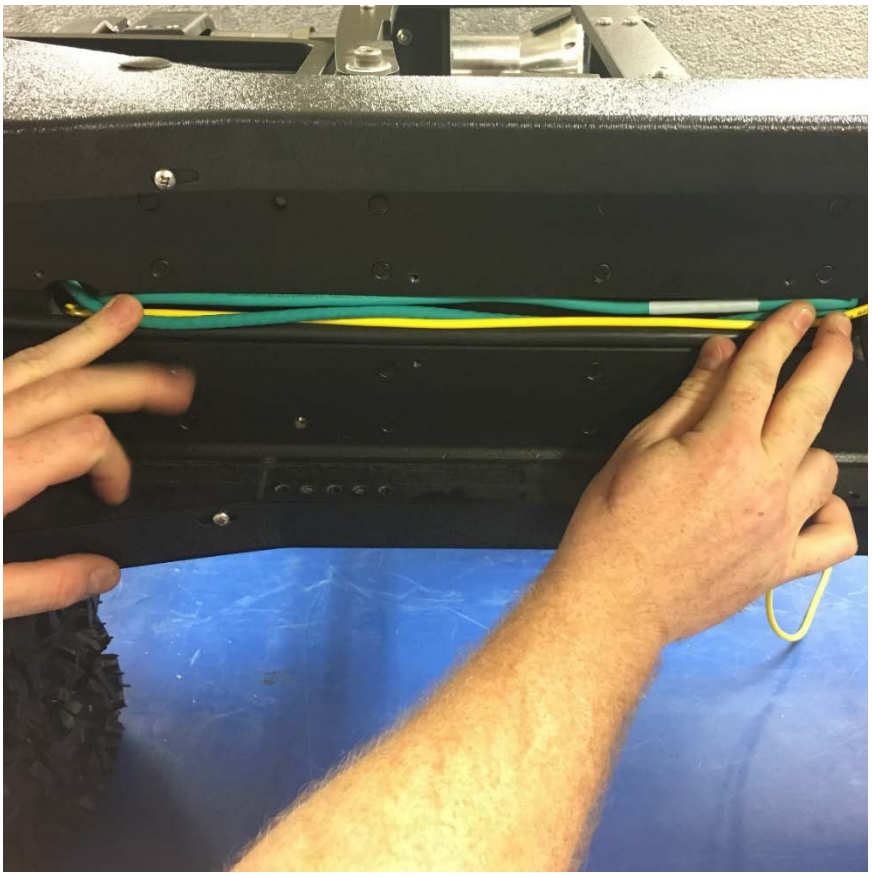
- Mate dummy plug, PN 160553 to cable SF615-1 and route cable along lift arm as shown.
- Hardware:
  - 1X – 121106
    - Use the screw on the lift arm.
  - 2X – 440302
- Route remainder of cable through hole in the mudmaster chassis (located under the motor).



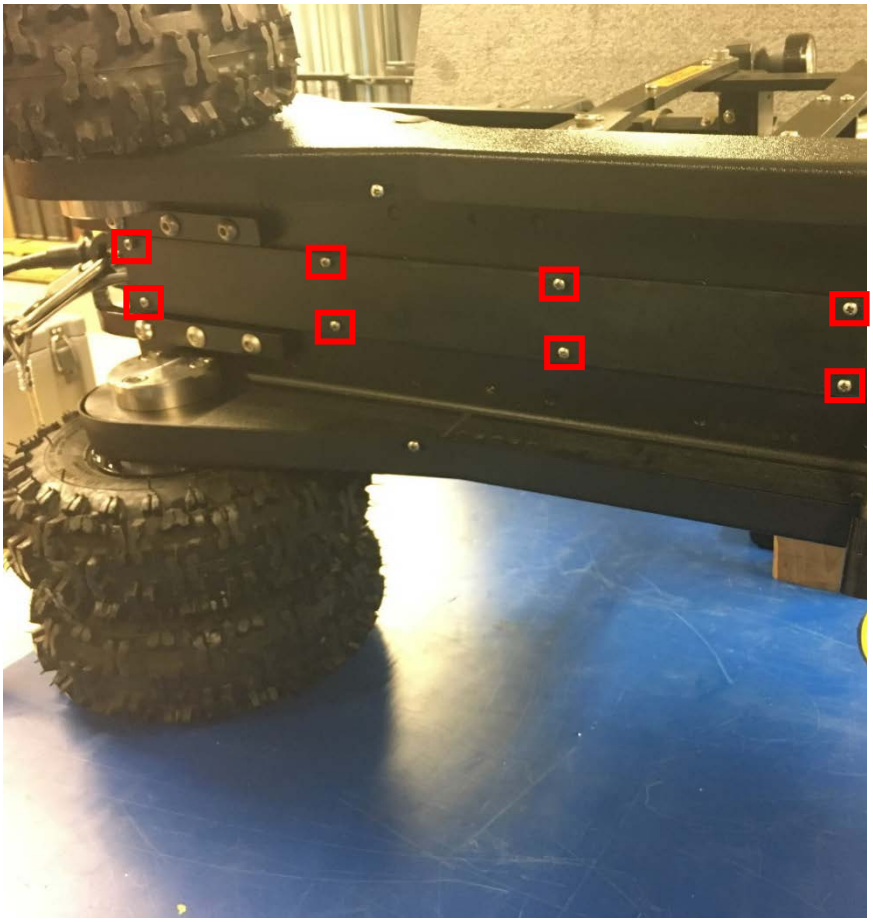
- Install HD346 cable as shown.



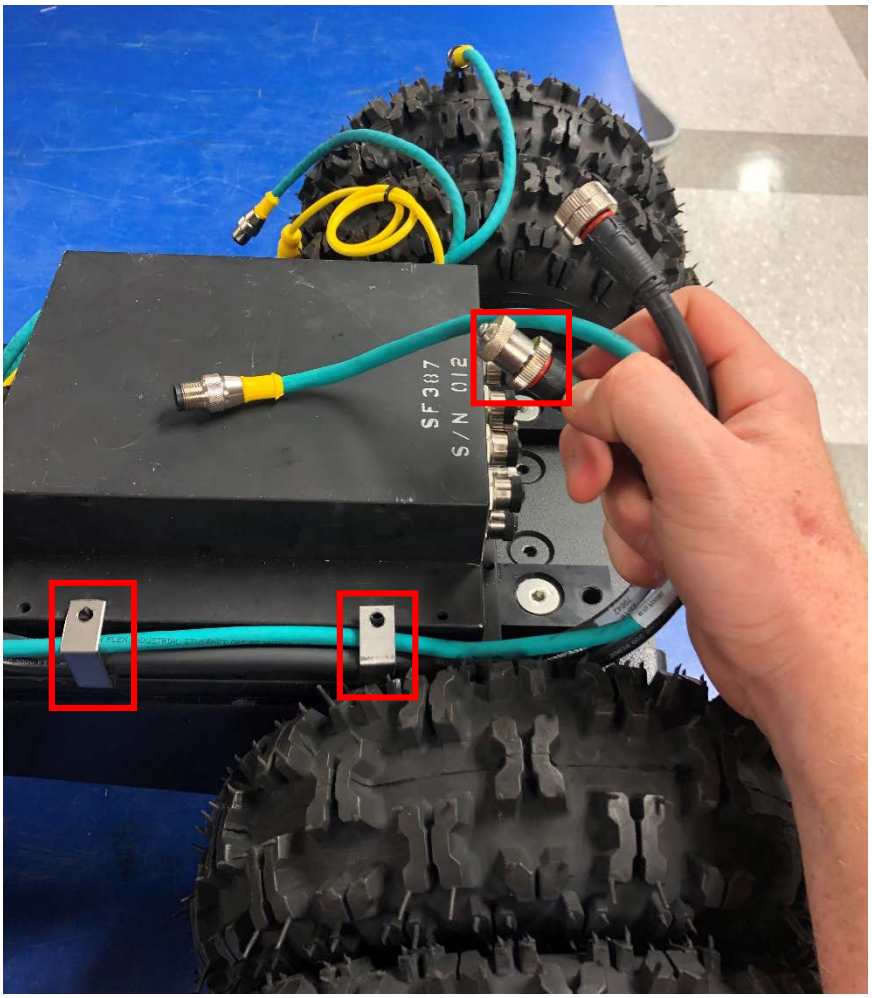
- Route HD346 along with previously routed cables through the hole in the front of the chassis.



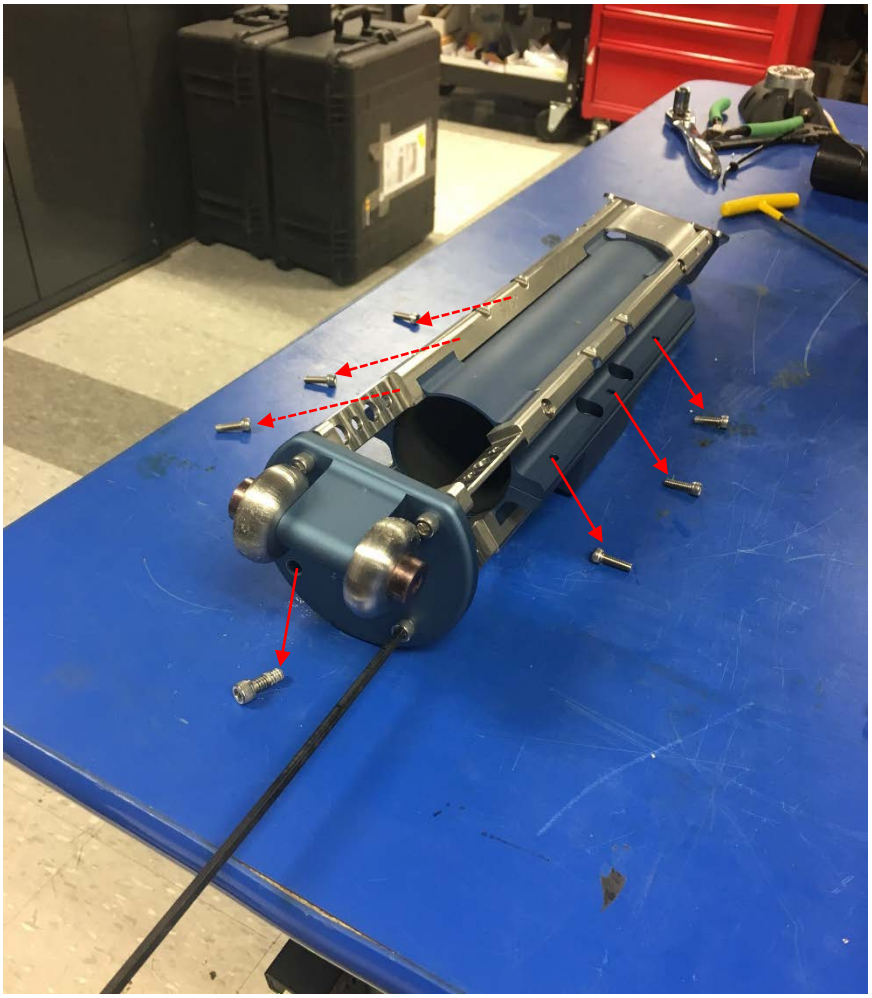
View of cable routing under chassis



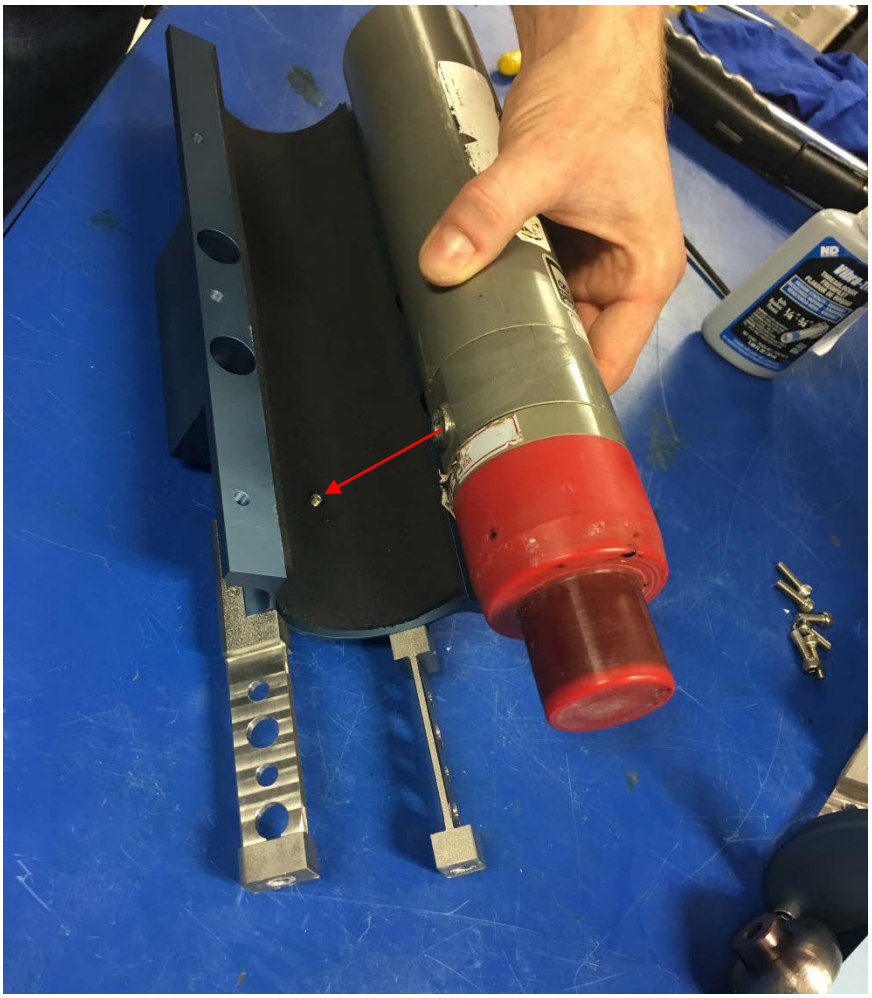
- Do not pinch cables when installing the cable cover.
- Neatly route cables in channel and install SF726 to retain cables.
- Hardware:
  - 8X – 103065



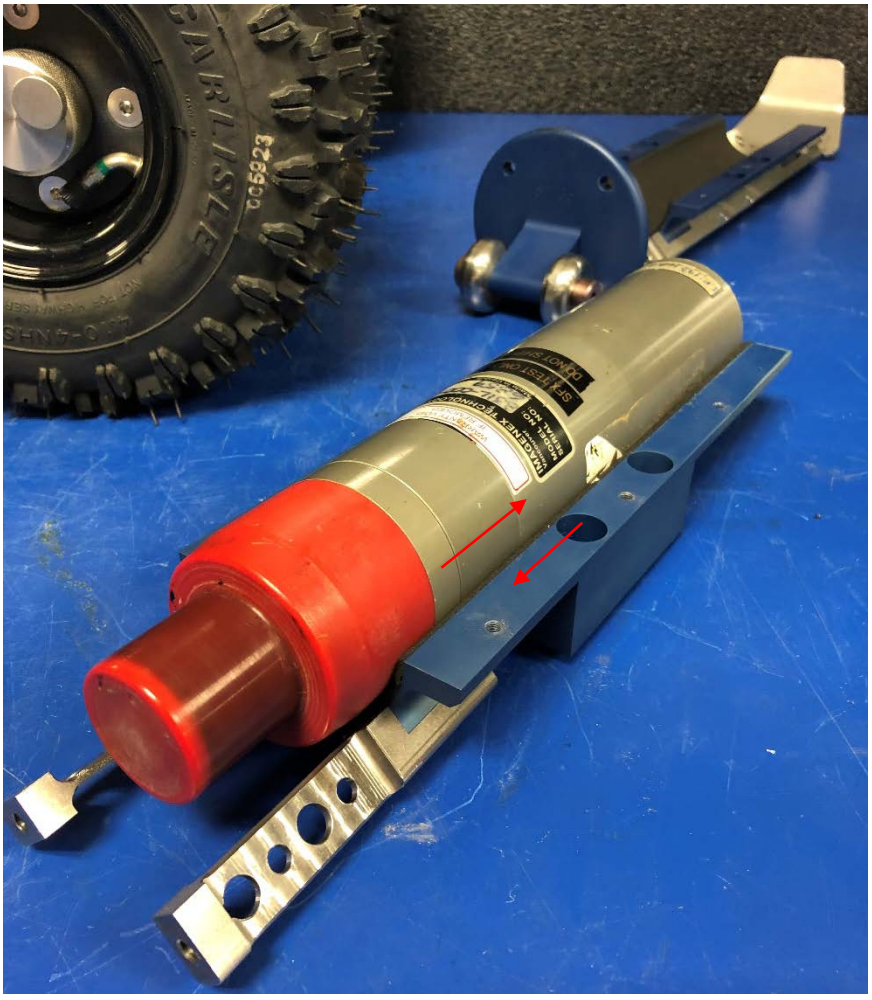
- Route SF369 with HD346 and SF615-1 as shown.
- Mate dust cap to the loose end of SF615-1.
- Hardware:
  - 1X – EC2626
- Install previously removed screws from the wire retaining clips.
- Note: Don't forget to tighten the bottom screw on each wire retaining clip.



- Prepare sonar guard (SF381-1) for sonar installation by removing the screws shown.
- Retain screws for reassembly.

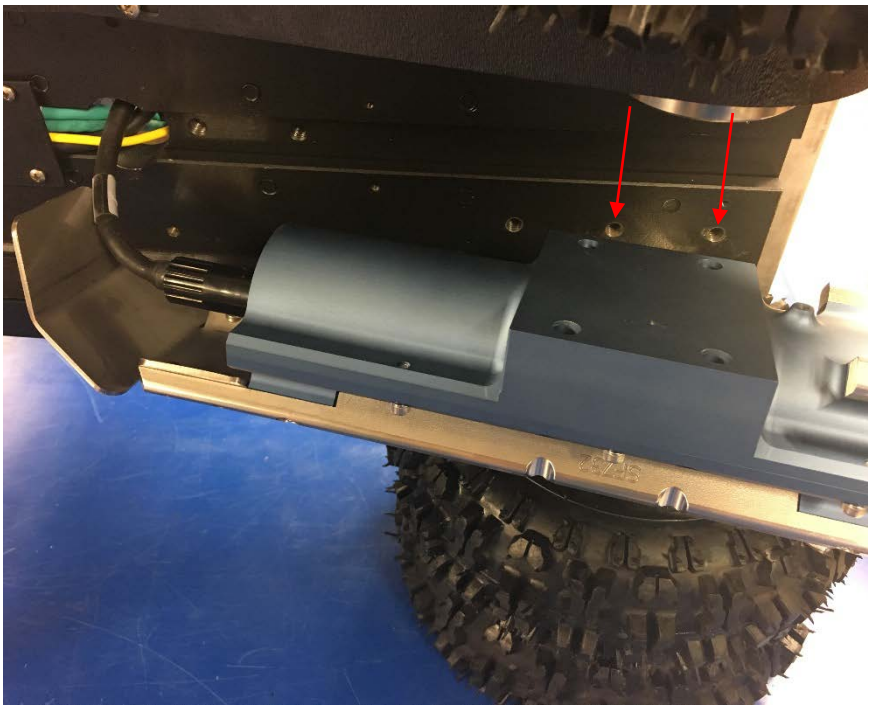


- Place sonar into the top half of the guard and align the pin to the socket.
- Note: Assure the pin is set in the socket on the sonar before reassembly.

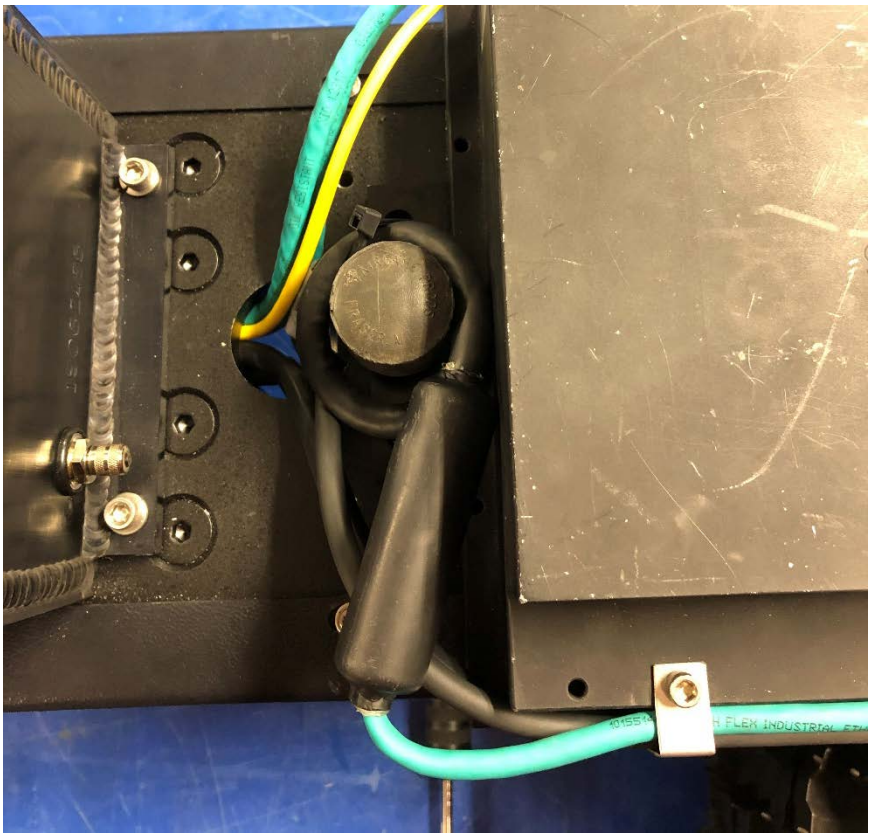


- Verify the sonar has been set properly by trying to slide the sonar and the bottom half of the guard in opposite directions.

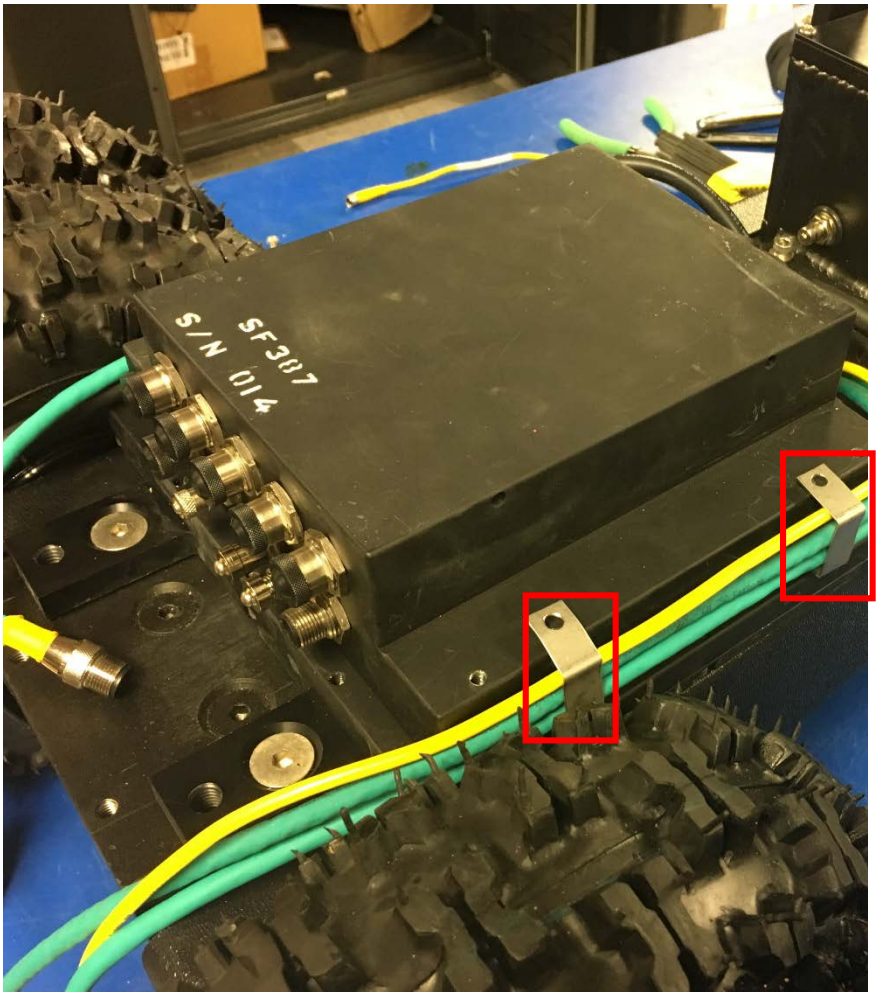
- Reassemble the sonar guard by installing previously removed screws.



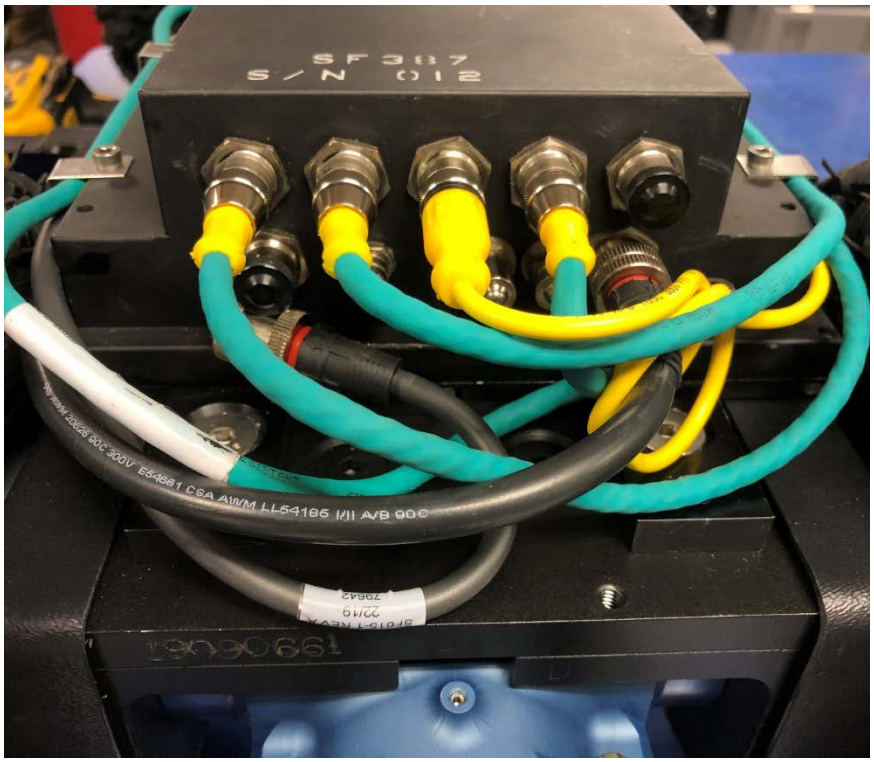
- Plug in SF369 cable and secure connection with threaded sleeve.
- Align the sonar guard with the forward two sets of mounting holes and install.
- Hardware:
  - Four screws provided with SF381-1



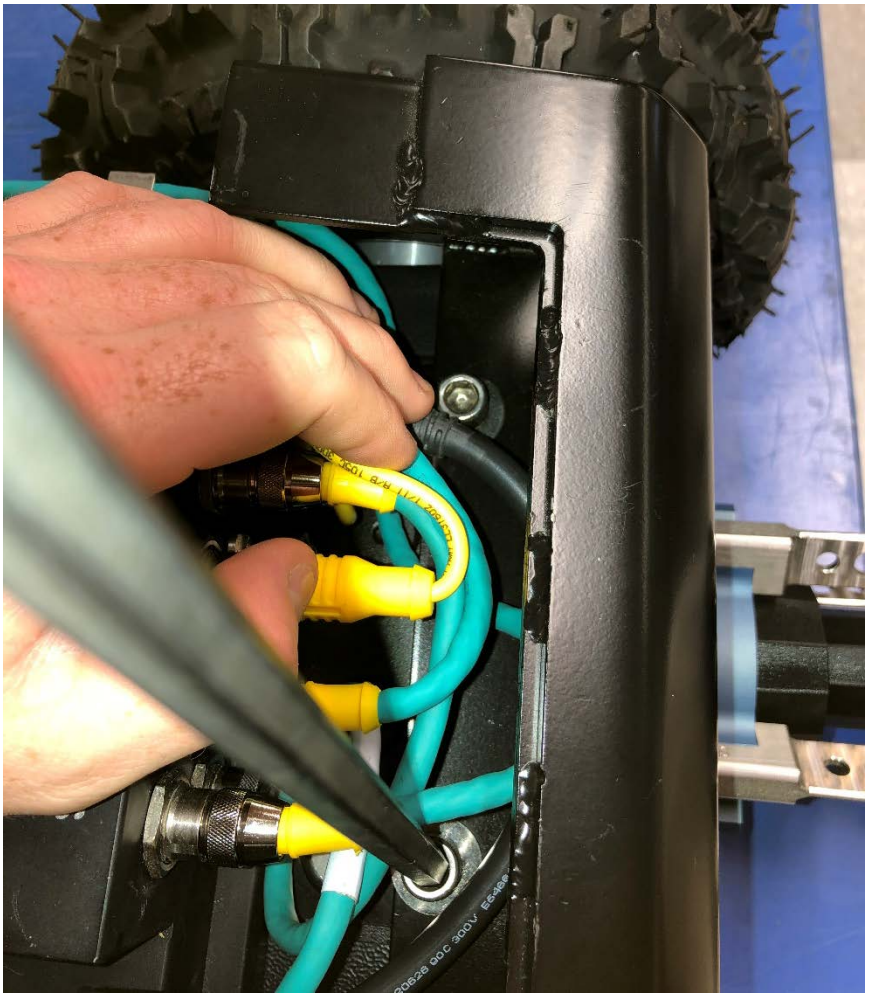
- Wrap excess cable around bumper as shown and secure with a zip tie.
- Hardware:
  - 1X - 440302



- Route the LiDAR, DUC, and RVC cables as shown.
- Install previously removed screws from the wire retaining clips.
- Note: Don’t forget to tighten the bottom screw on each wire retaining clip.



- Reference OZ-II exception.
- Remove dust caps from the receptacles and plug in cables as shown.
- All receptacles not being used should remain capped.



- Reinstall the cable guard with the previously removed hardware as shown.

Views of complete installation/assembly