

Rev	Date	ECN	Description
-	06/07/2021	-	Initial Release
A	12/21/22	14848	Redlined for SF349 Obsolescence



Document Number:

SF973-INST

Description:

SolidFX Mud Master Kit

Instruction Sheet

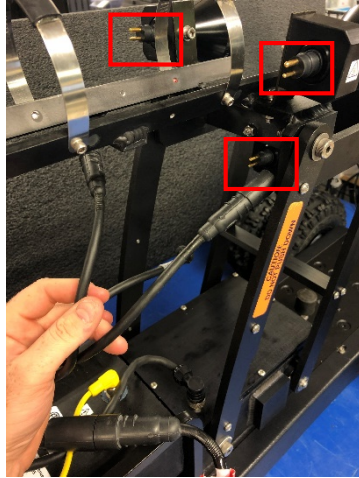
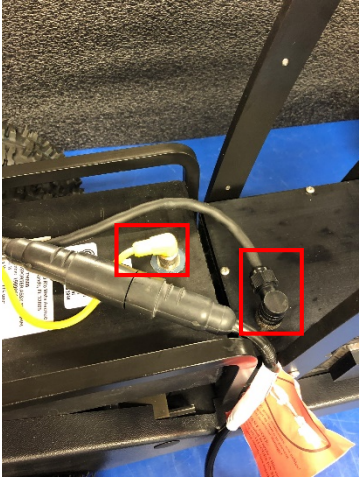
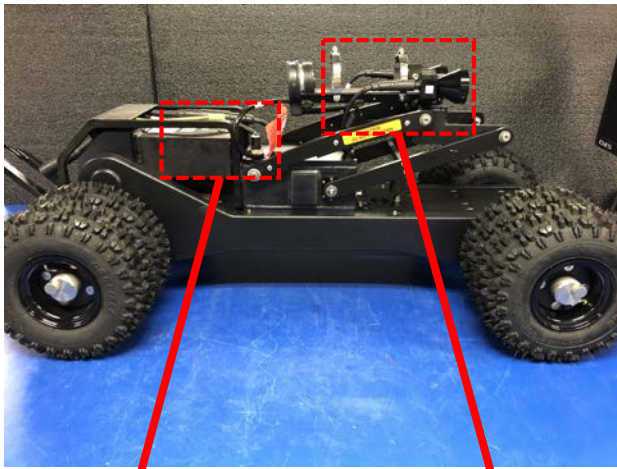
Signature CHKR: *Karla Caraballo*

Signature ENGR: *Josh Freiberg* 01/04/23

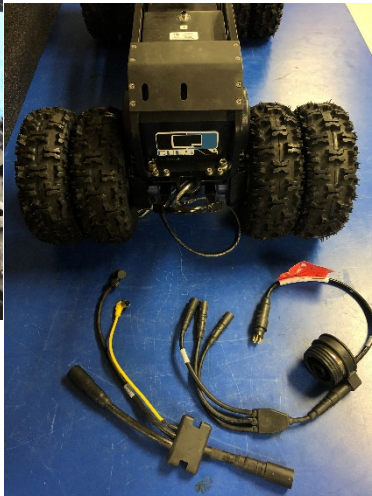
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NOTES – UNLESS OTHERWISE SPECIFIED

1. Applying blue threadlocker (440061) to all threaded fasteners is recommended.
2. Where brown threadsealant (445091) is specified, Teflon tape (440350) may be used as an alternative. Pressurizing the system and leak checking all hoses, PTC fittings, and NPT fittings is recommended.
3. Applying DeoxIT to electrical connections is recommended.
4. Dust caps should be applied to all receptacles that are not in use.
5. When plugging in cables/connectors, make sure to match the notch positions of the cable and receptacle before plugging in. Do not force cables into receptacles. Install connectors by threading them then pushing the connector in. Repeat until connections are snug.



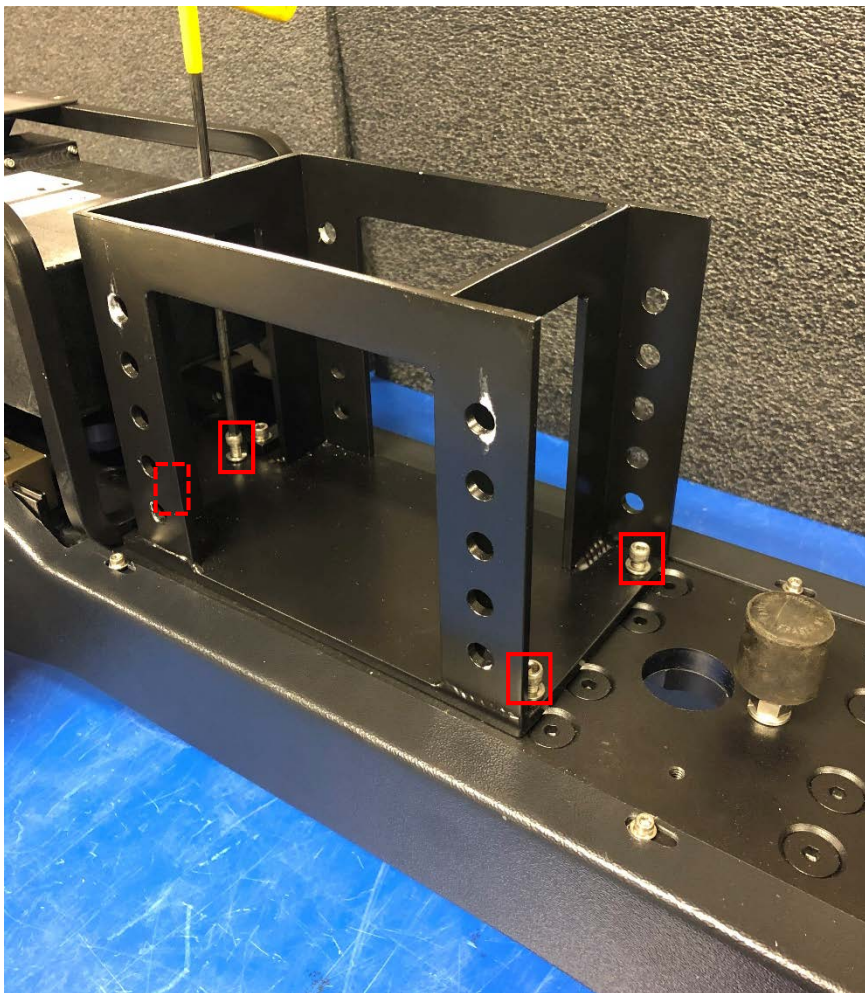
- Unplug the electric lift and the transmission.
- Unplug all of the lights.



- Remove the rear cover and cut the zip tie to remove the TM356 cable.
- Reinstall the rear cover and apply dust caps and dummy plugs to the TM356 cable.
- Hardware:
 - 160553
 - EC431
 - EC3465
 - MS398
- The cables shown will not be needed in this configuration and should be kept for normal Mud Master operation.

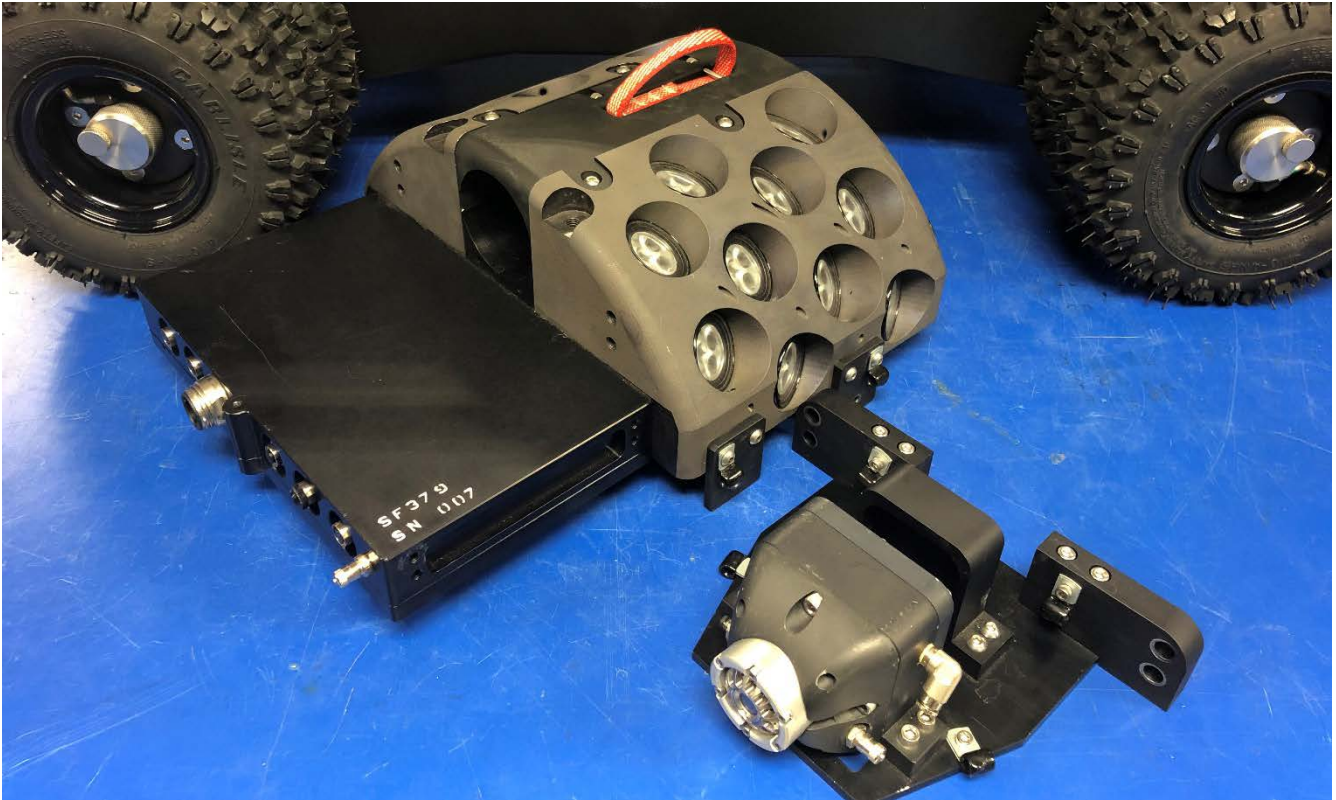


- Remove the electric lift from the Mud Master Chassis.
- The electric lift will not be needed in this configuration. Retain hardware for future installation.



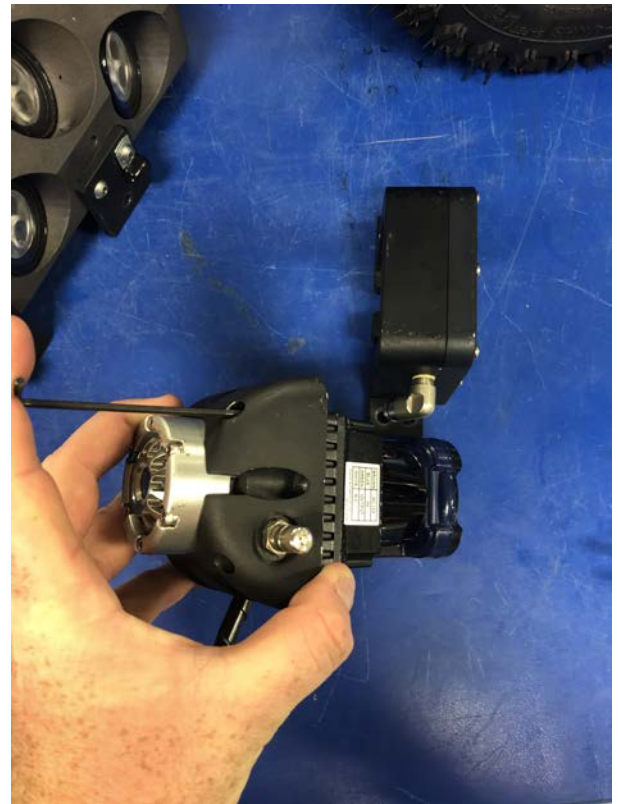
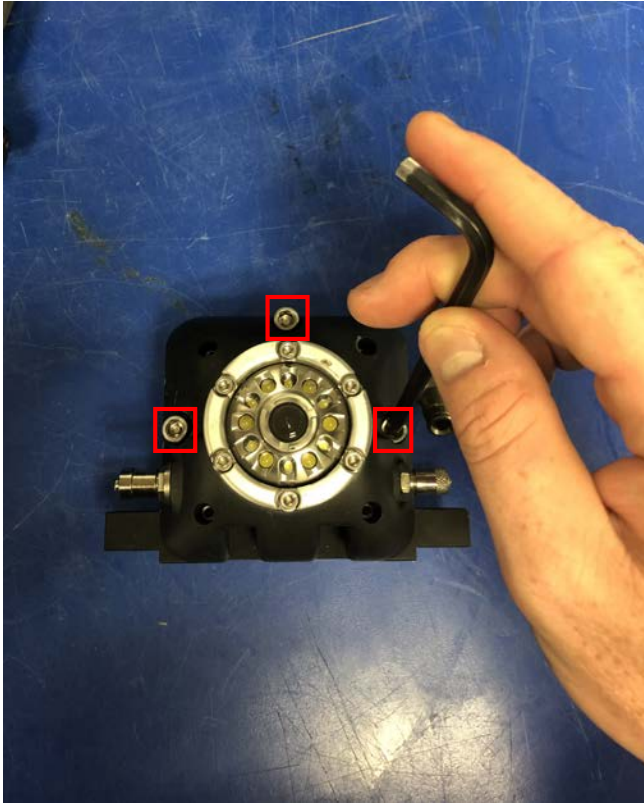
- Install SF750 onto the Mud Master chassis as shown.
- Mounting hardware:
 - 4X – 101022
 - 4x – 101740

- The Rear View Camera (SF385) will now be mounted to the Light Array (SF380). Installation of the LiDAR (SF362) will also be covered.

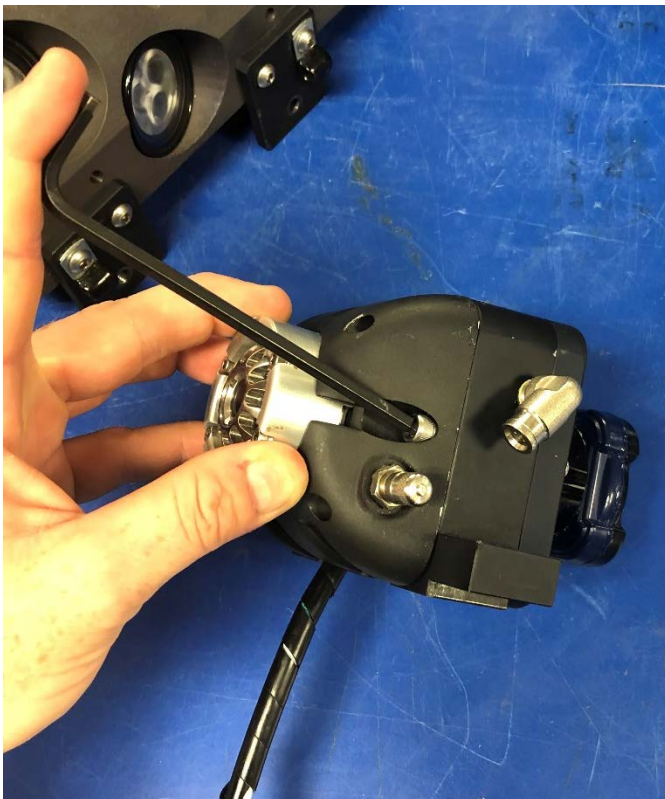


- Remove the two screws shown RVC.
- Repeat for the 2 screws on the other side.
- Set these 4 screws aside for reassembly.
- RVC subassembly should now be removed from the mounting plate.

- Remove the 3 screws shown (left) and set aside for reassembly.
- Install the LiDAR onto the RVC (right) using the four M3 screws provided with the LiDAR. Hardware: 4X – HW952



- Reinstall the intake/blower portion of the assembly using the three screws that were previously removed (left). Install the mounting plate to SF380 using the five screws that were bagged and tagged with SF385 (right).

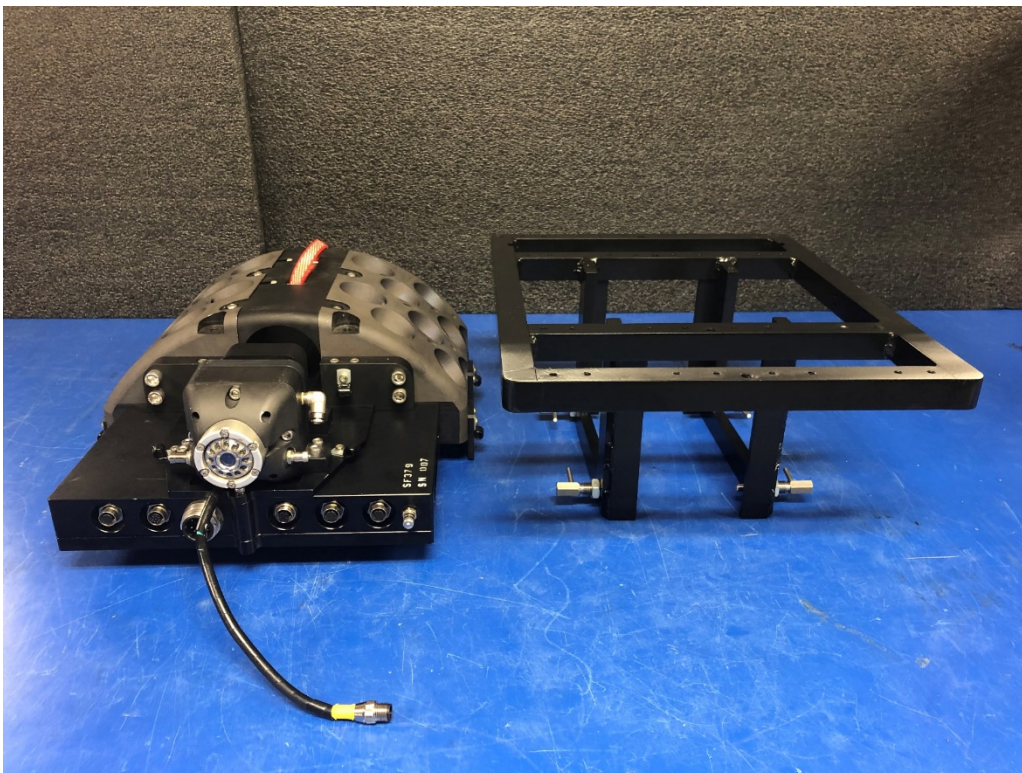


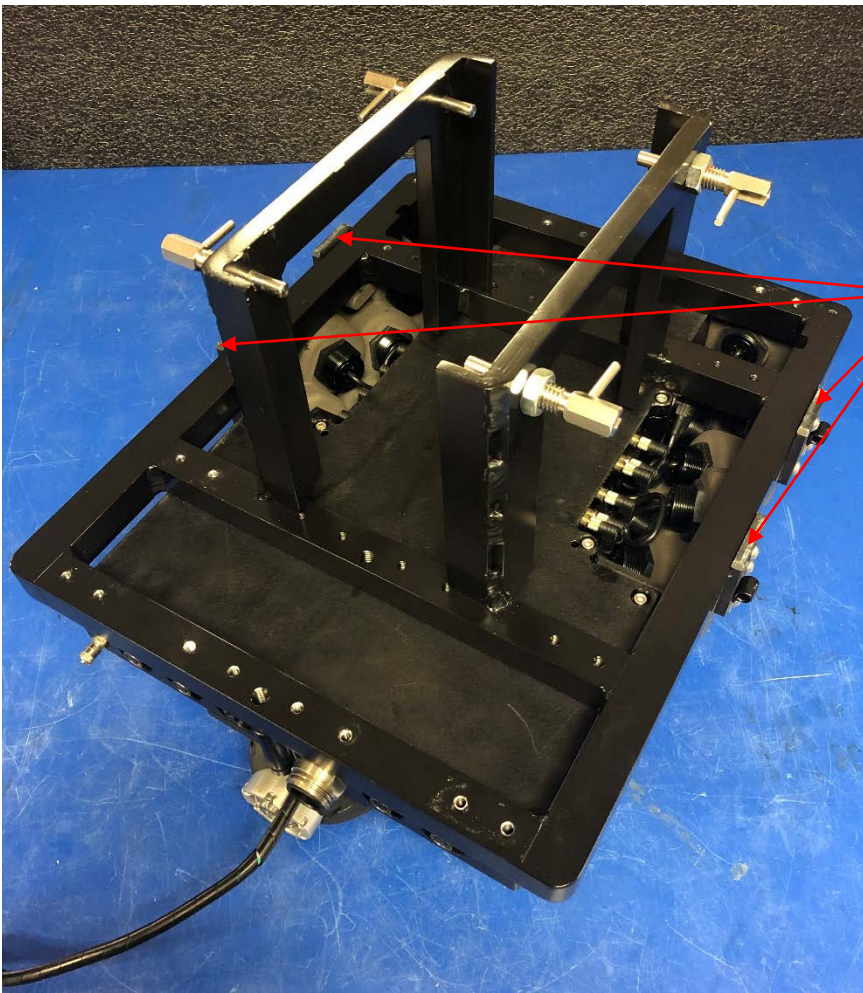


- **Note:** When installing the LiDAR/RVC assembly, make sure to route the LiDAR cable as seen below.
- Reinstall the RVC/blower subassembly to the mounting plate using the 4 screws that were previously removed.



- The light array will now be mounted to the top half of the manual lift (SF749). This will allow for the remaining components to be mounted and cables and tubing to be routed.

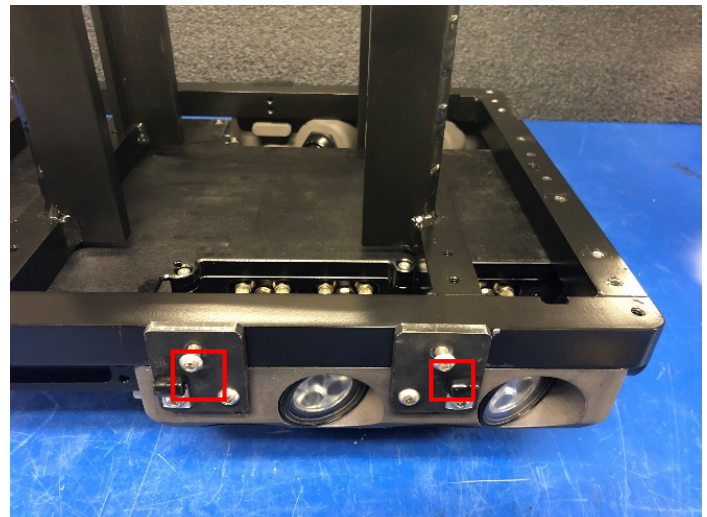
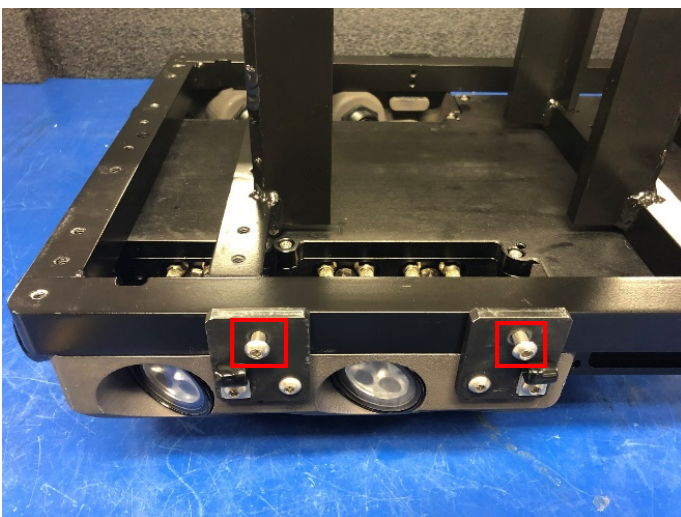




- Flip over both, the SF380 (with SF385 mounted) and SF749.
- Align SF749 as shown.

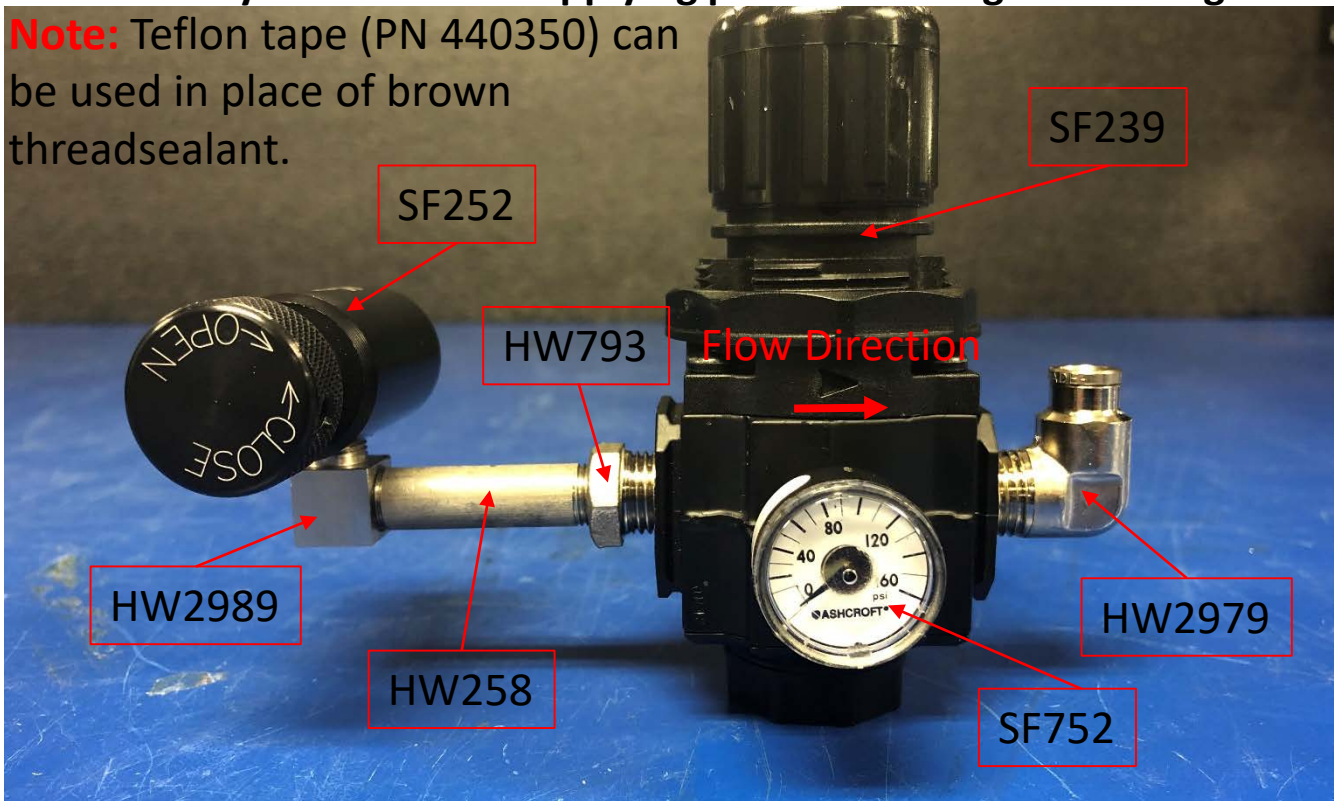
Note: It may be necessary to loosen the mounting tabs on SF380.

- Fix the SF749 to the light array using the four button head screws provided with SF380.

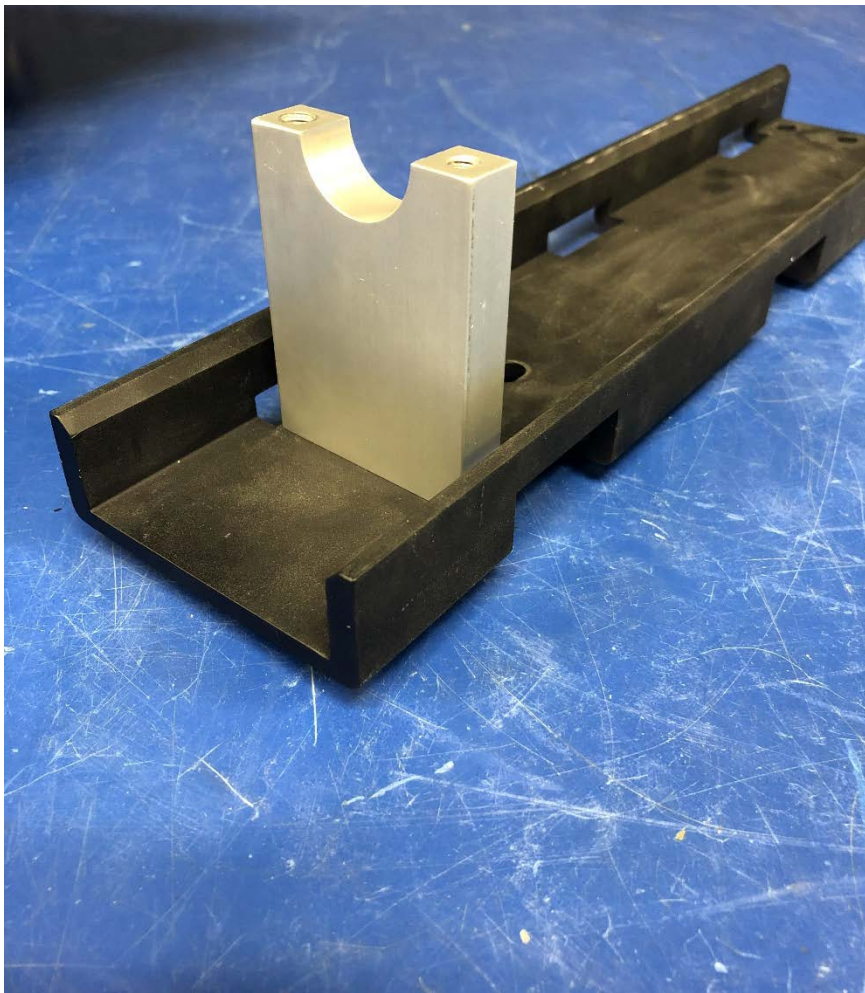


- Assemble the regulator and fittings in the orientation shown below. All fittings should be tightly fastened. Use brown threadsealant (PN 445091) on all mating threads. **Brown threadsealant has a 24 hour cure time and should be fully cured before supplying pressure through the fittings.**

Note: Teflon tape (PN 440350) can be used in place of brown threadsealant.



- Using brown threadsealant, install the set screw provided with SF239 as shown (left).
- Rotate the valve on SF252 counterclockwise until it is all the way "Closed".
- Screw the SF225 pressure tank into SF252.
- Note:** DO NOT open valve until threadsealant has cured.
- Once brown threadsealant has cured, turn valve SF252 clockwise until it is all the way open and set SF239 regulator to 60 psi.

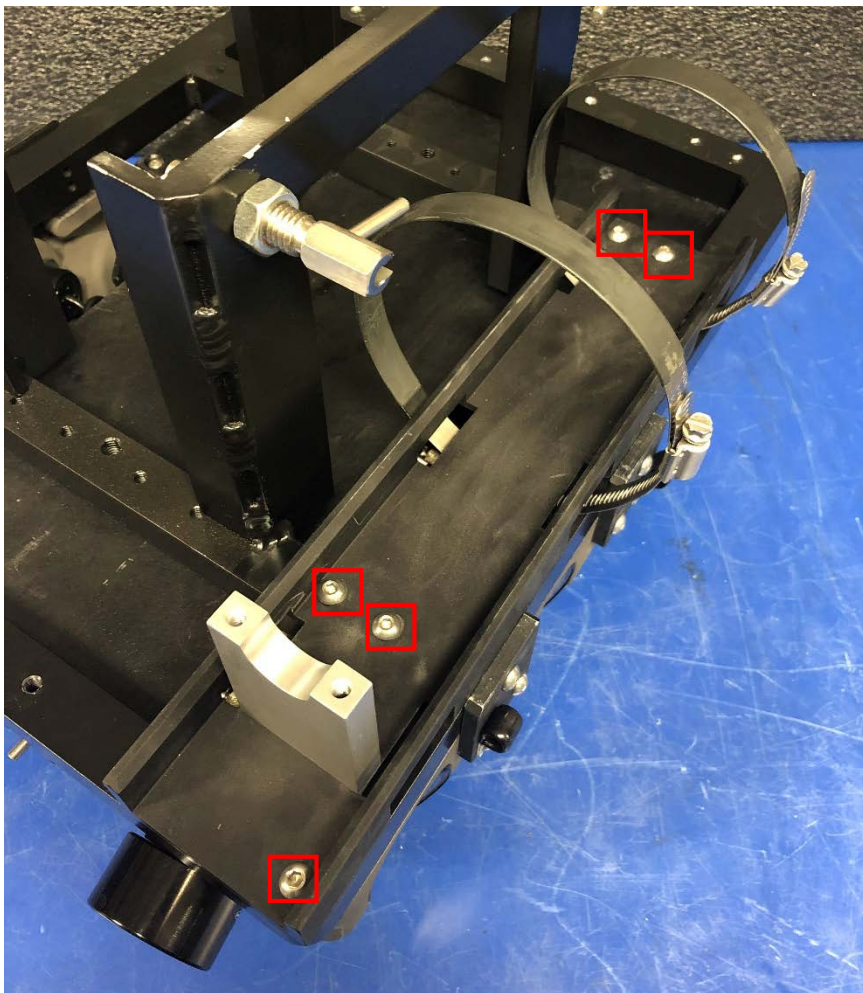
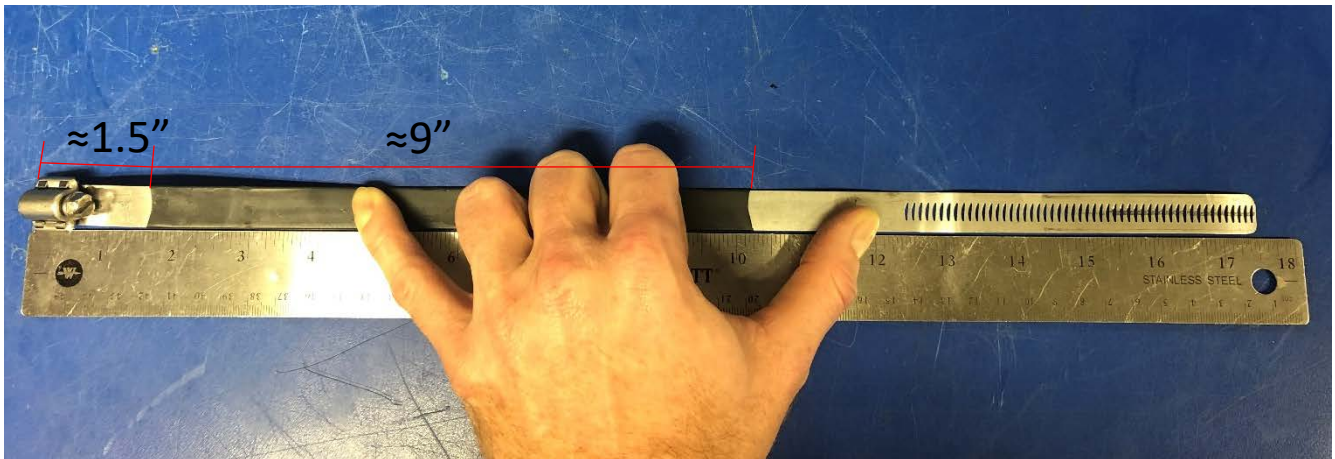


- Note orientation of SF791.
- Next SF251 will be mounted to SF791.

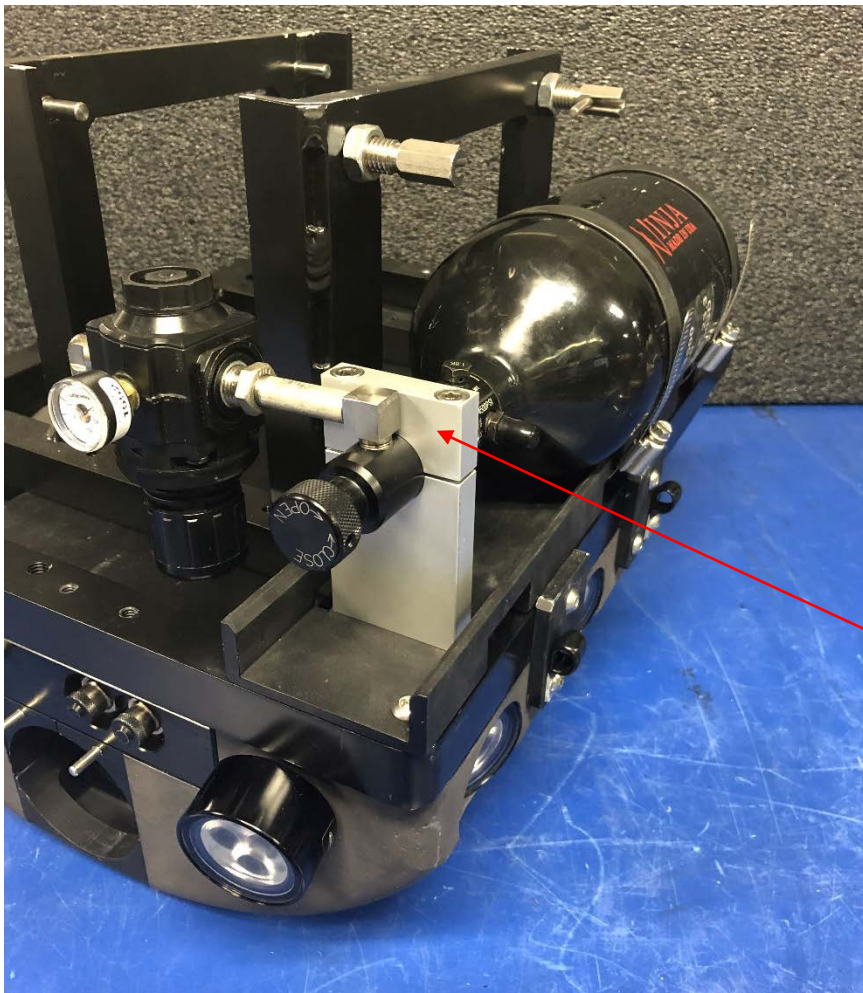


- Mount SF251 to SF791.
- Mounting Hardware:
 - 2X – 101024
 - 2X - 101736

- Cut an HW4077 hose clamp to appx. 18 in. and grind down sharp corners. Cut appx. 9" of heat shrink (PN 712586) and slide to appx. 1.5" from the screw housing. Heat up the tubing to shrink it in place.
- Repeat for the other HW4077 hose clamp.

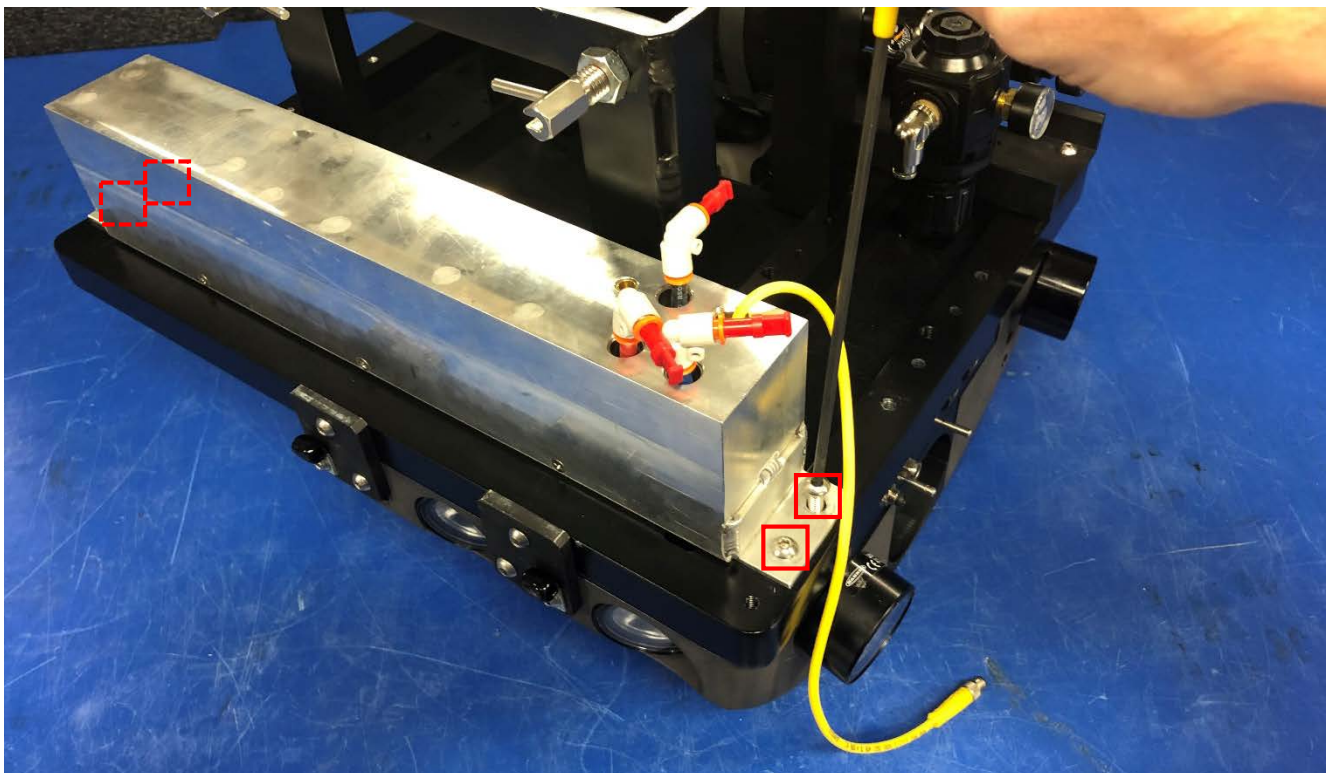


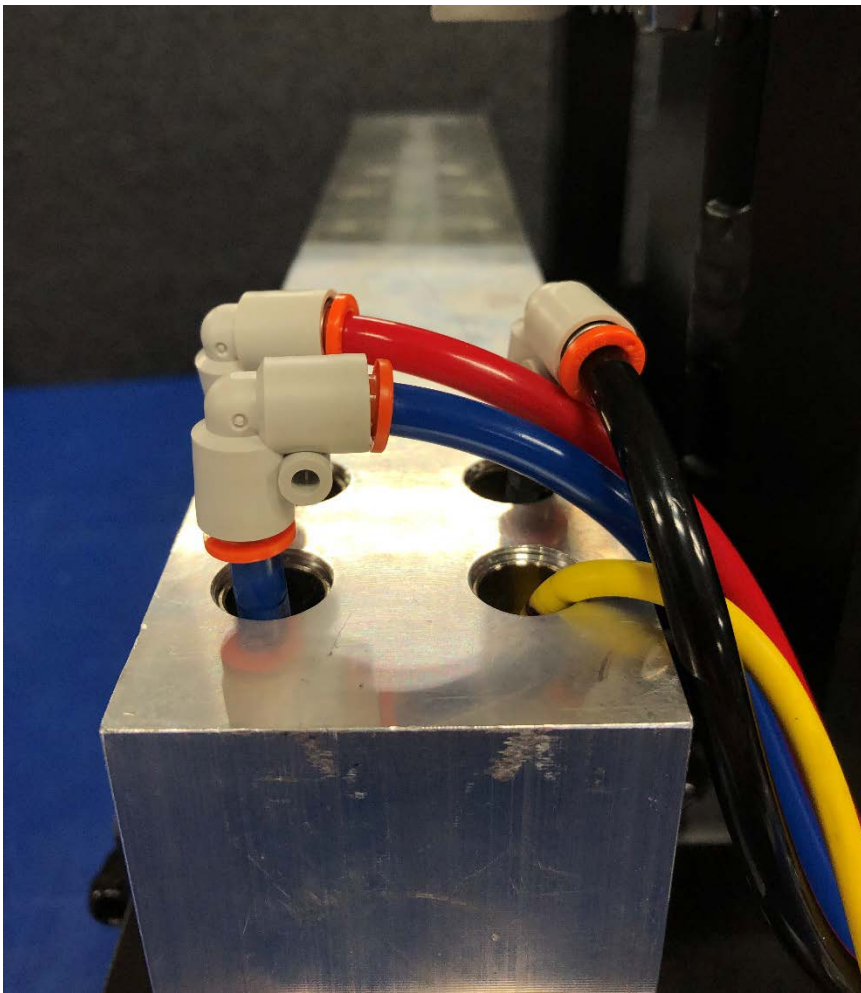
- Note orientation of assembly.
- Thread the two hose clamps and align them in the back two cutouts of the SF791 mounting channel as shown. Secure the mounting channel and hose clamps by installing the screws shown.
- Mounting hardware:
 - 5X – B041270



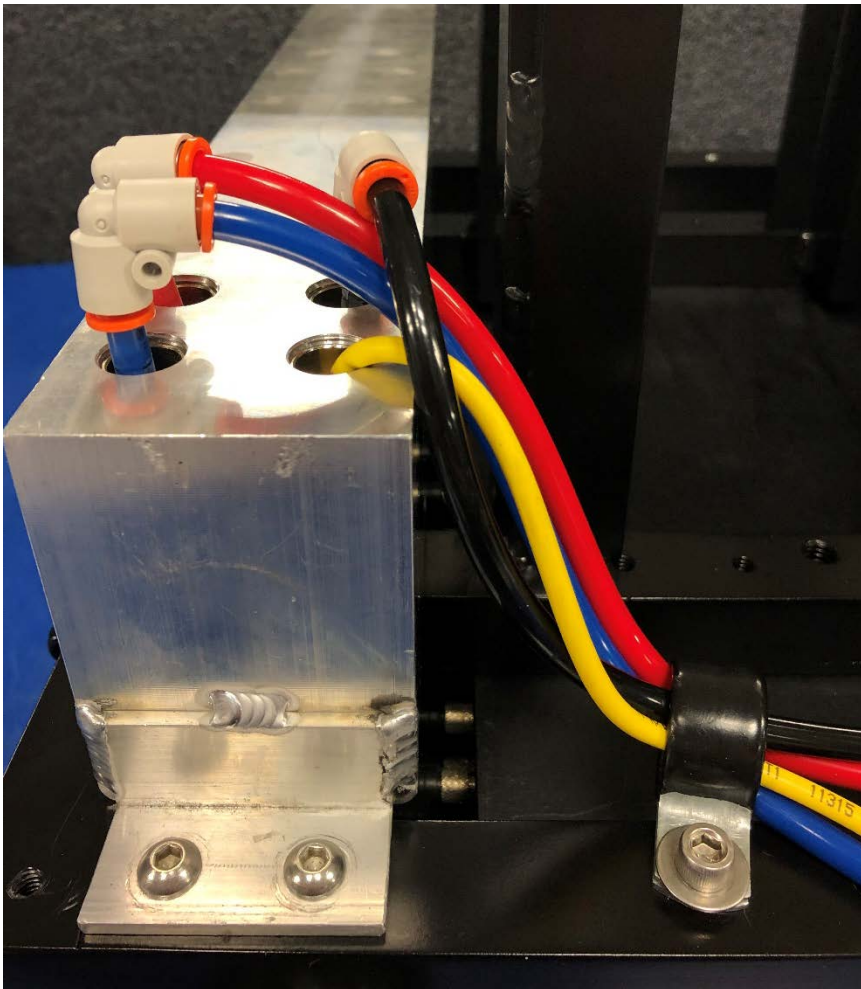
- Insert the regulator/tank assembly through the two hose clamps and orient approximately as shown. Tighten down hose clamps to secure the assembly.
- **NOTE:** SF250 should be securing the valve portion of the regulator tank assembly NOT the neck of the pressure tank.
- Install SF250.
- Mounting Hardware:
 - 2X - 104044

- Orient the SF382 pneumatics controller as shown and secure with four screws.
Hardware: 4X – B041270





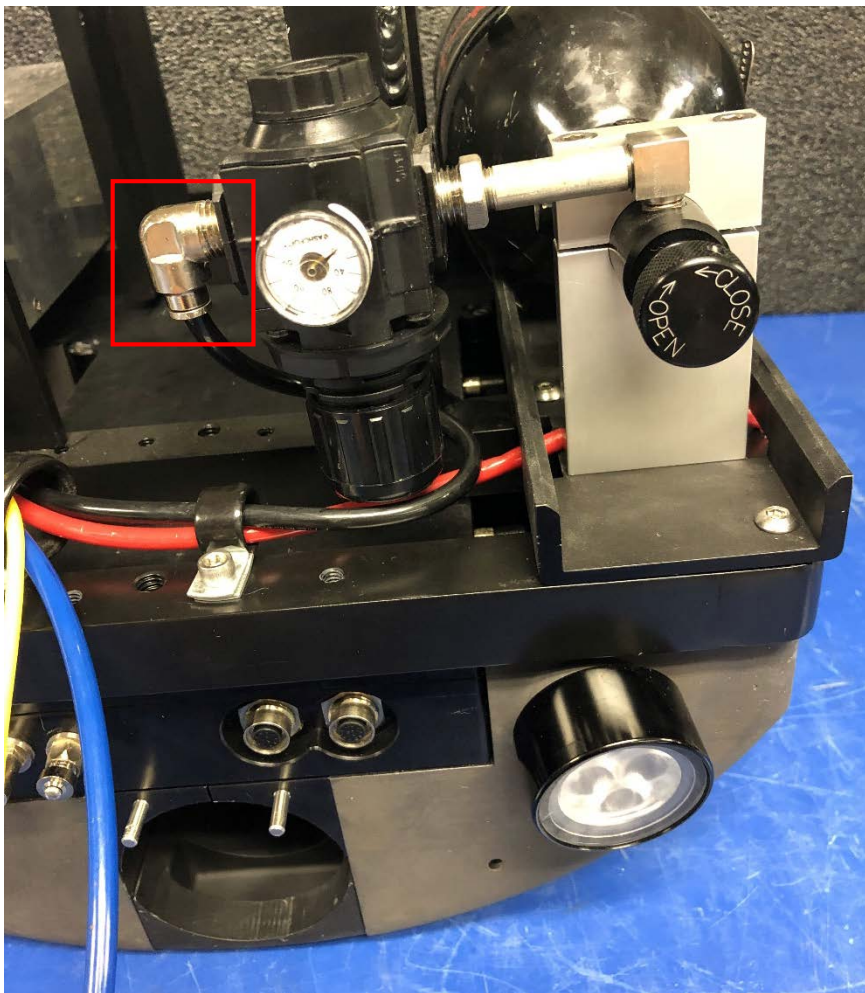
- Remove the stem plugs from 90° Push To Connect (PTC) fittings and retain for future use. These should be installed when the unit isn't being used.
- Insert on end of the black tubing to the 90° PTC fitting that corresponds with the black tubing on the SF382.
- Repeat for the blue and red tubing.
- Make sure all tubing is properly mated with the PTC fittings.



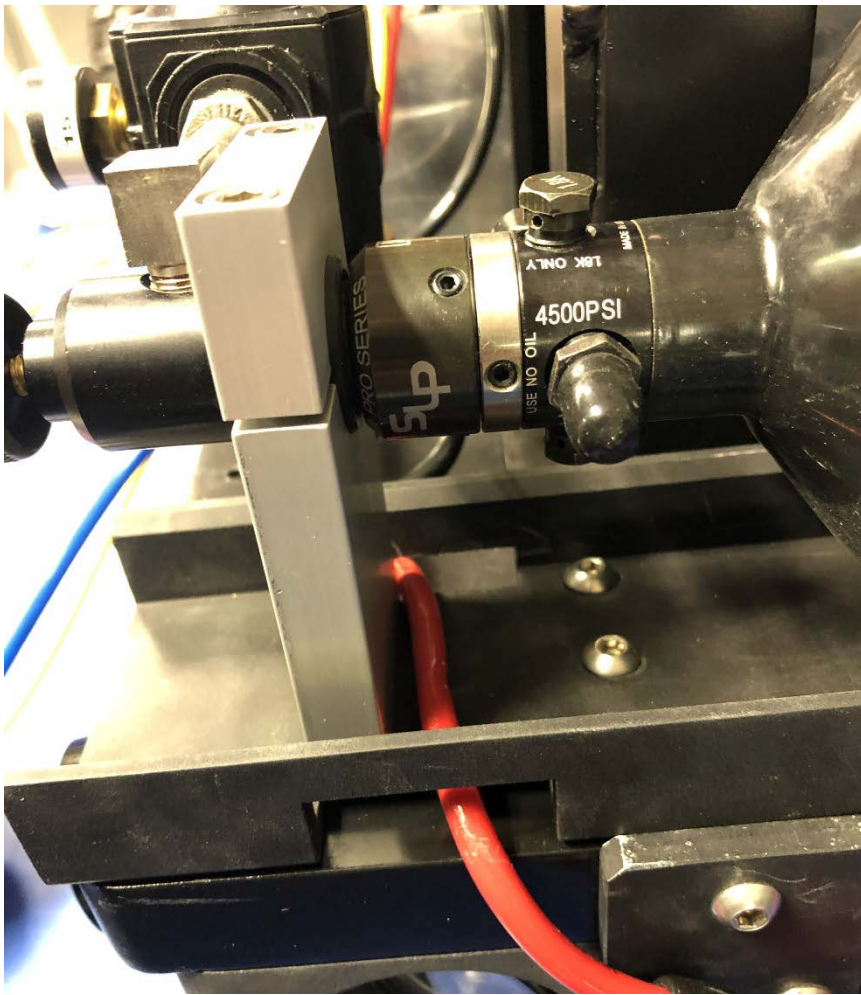
- **Note:** Don't kink/pinch the tubing or cable when routing and securing with hose clamps.
- Route the tubing and the yellow cable through the tubing clamp and secure with washer and screw.
- Hardware:
 - 1X – 121108
 - 1X – 101736
 - 1X – 101001



- Route the black and red tubing through a tubing clamp and secure with a screw.
- Hardware:
 - 1X – 121104
 - 1X – 101001

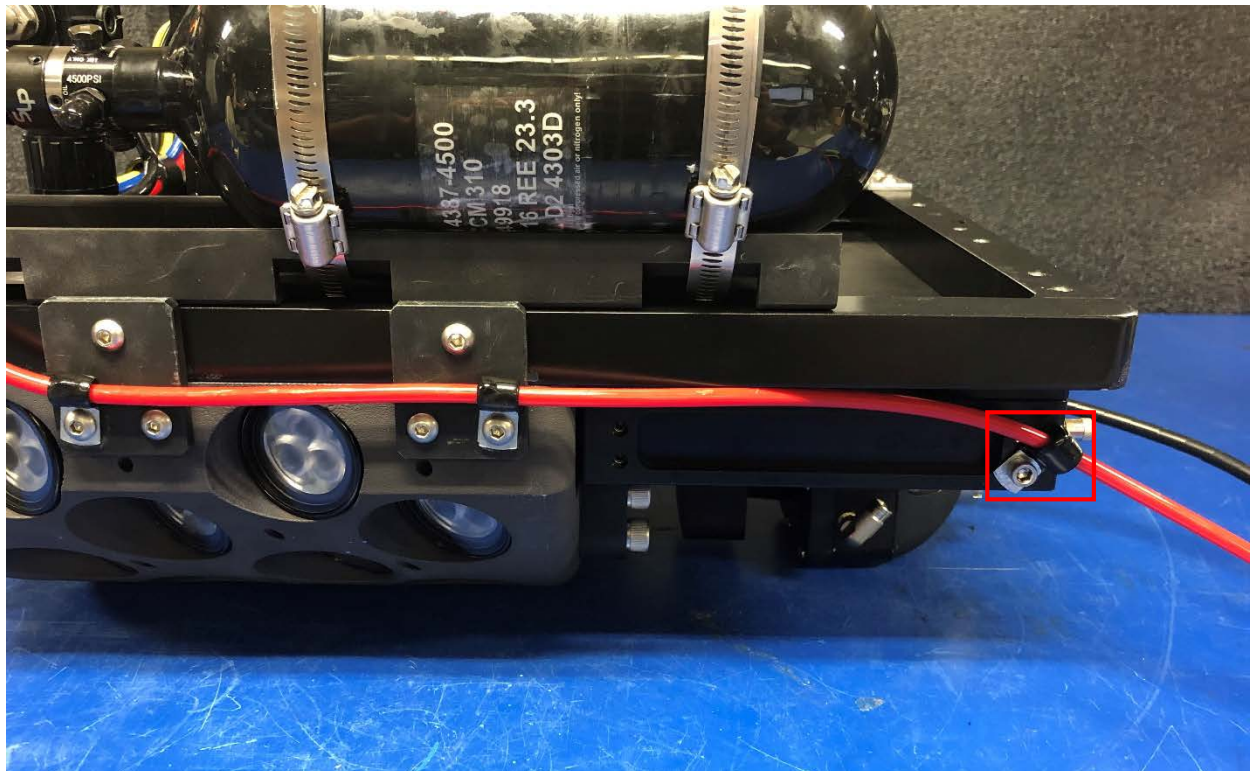


- Route the black tubing around the back side of the regulator.
- Cut the black tubing to an appropriate length for it be plugged into the 90° PTC fitting on the regulator.
- Insert the end of the black tubing into the PTC fitting shown. Make sure the tubing is properly mated.



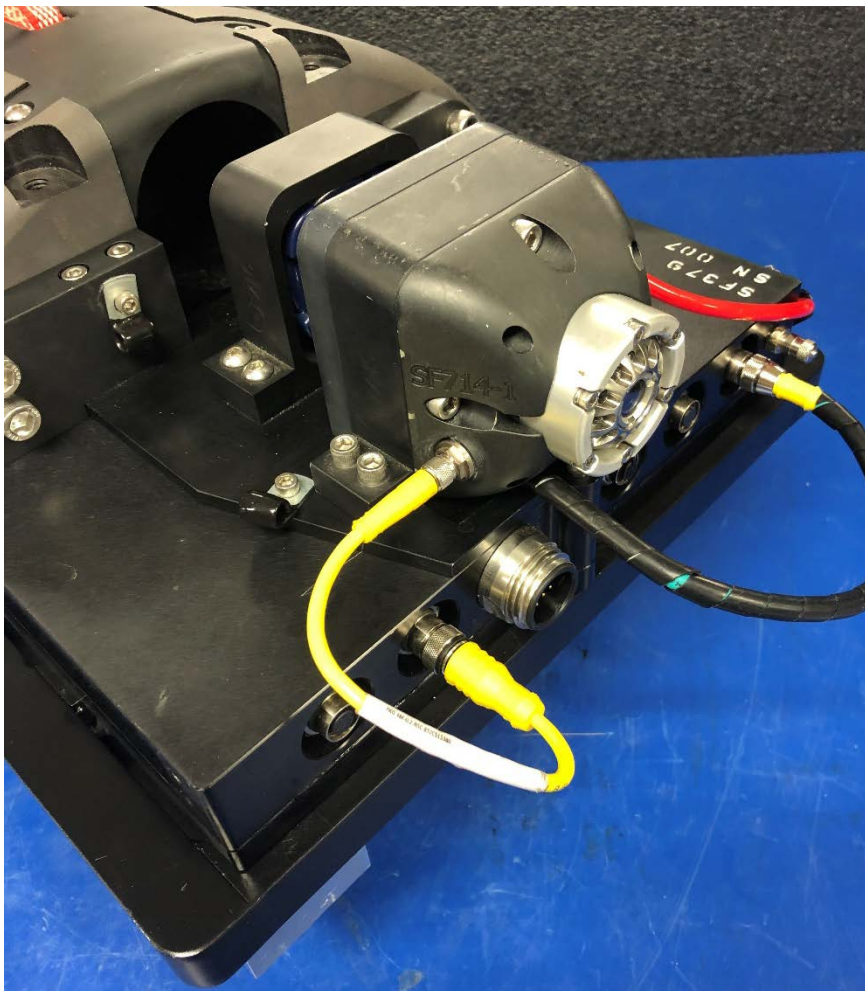
- **Note:** Don't kink/pinch the tubing.
- Route the red tubing through SF791 as shown.

- Route the red tubing through the two tube clamps on the side of SF380. Remove the set screw from the hole shown. Route the tube through a hose clamp and secure. Hardware: 1X – 121106, 1X – 101001.

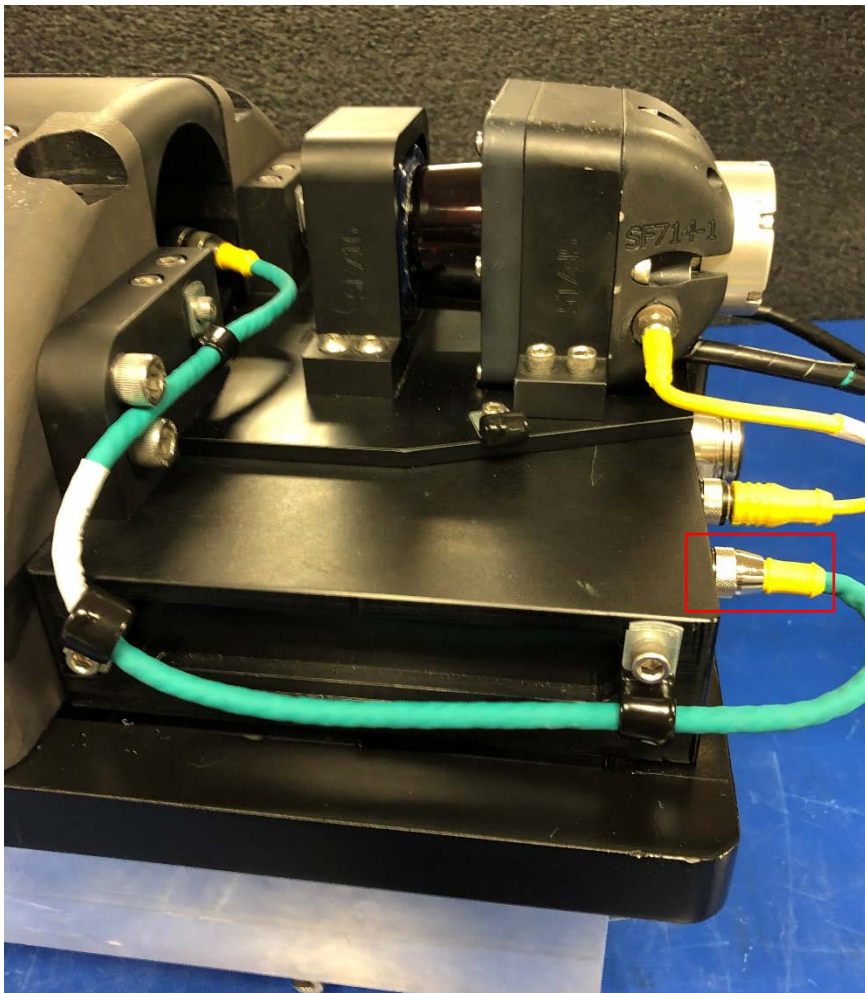




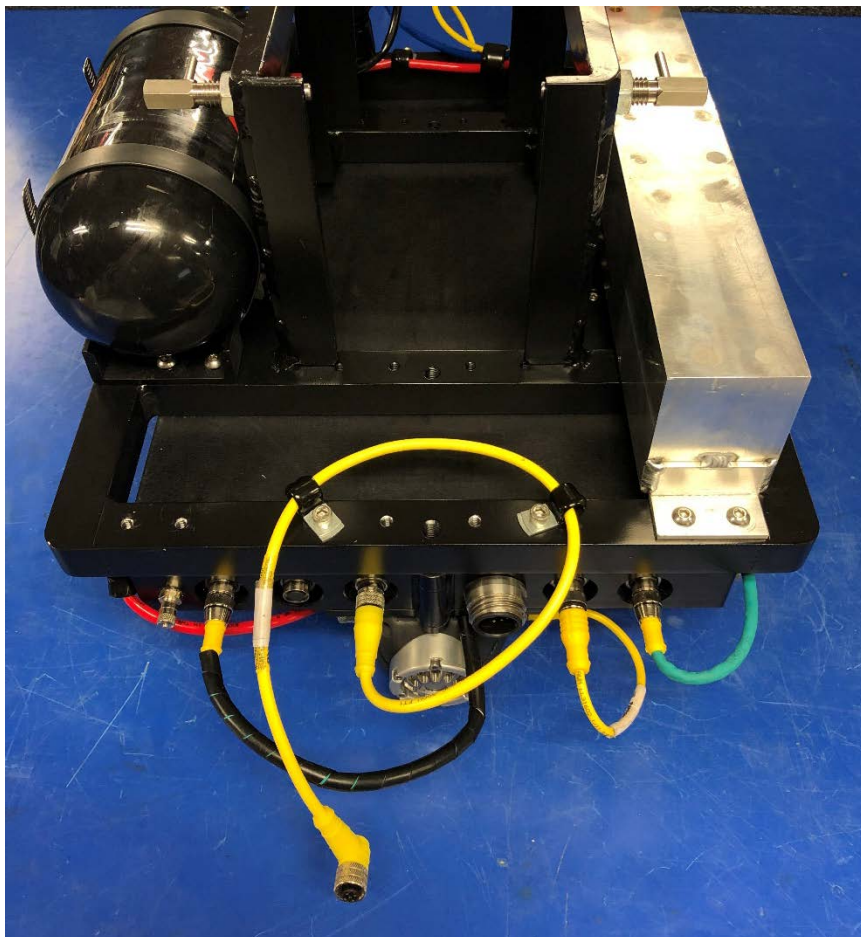
- Cut the red tubing to an appropriate length for it be plugged into the 90° PTC fitting on the regulator.
- Insert the end of the red tubing into the PTC fitting shown. Make sure the tubing is properly mated.



- Plug the LiDAR cable into the 12-pin receptacle shown.
- Remove the dust cap from the RVC and plug in the 4 pin end of the SF603 cable into the camera. Retain dust cap for when the camera is not in use.
- See note 4 on page 2.
- Plug the 8-pin end of the SF603 cable into the 8-pin receptacle.

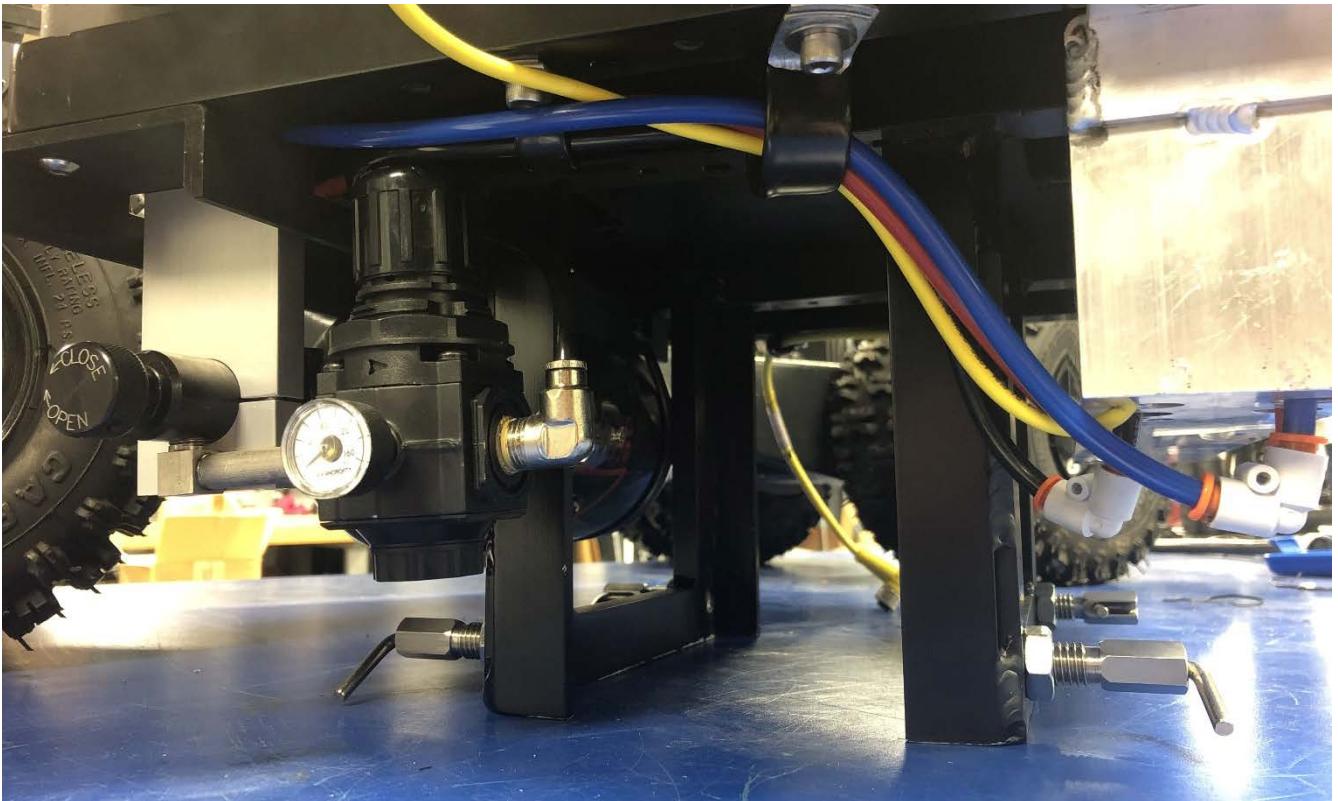


- See note 5 on page 2.
- Plug the SF393 cable into the 12-pin receptacle shown.
- Remove the set screws from the holes shown below.
- Route and secure the cable with hose clamps as shown.
- Hardware:
 - 2X – 121106
 - 2X – 101001

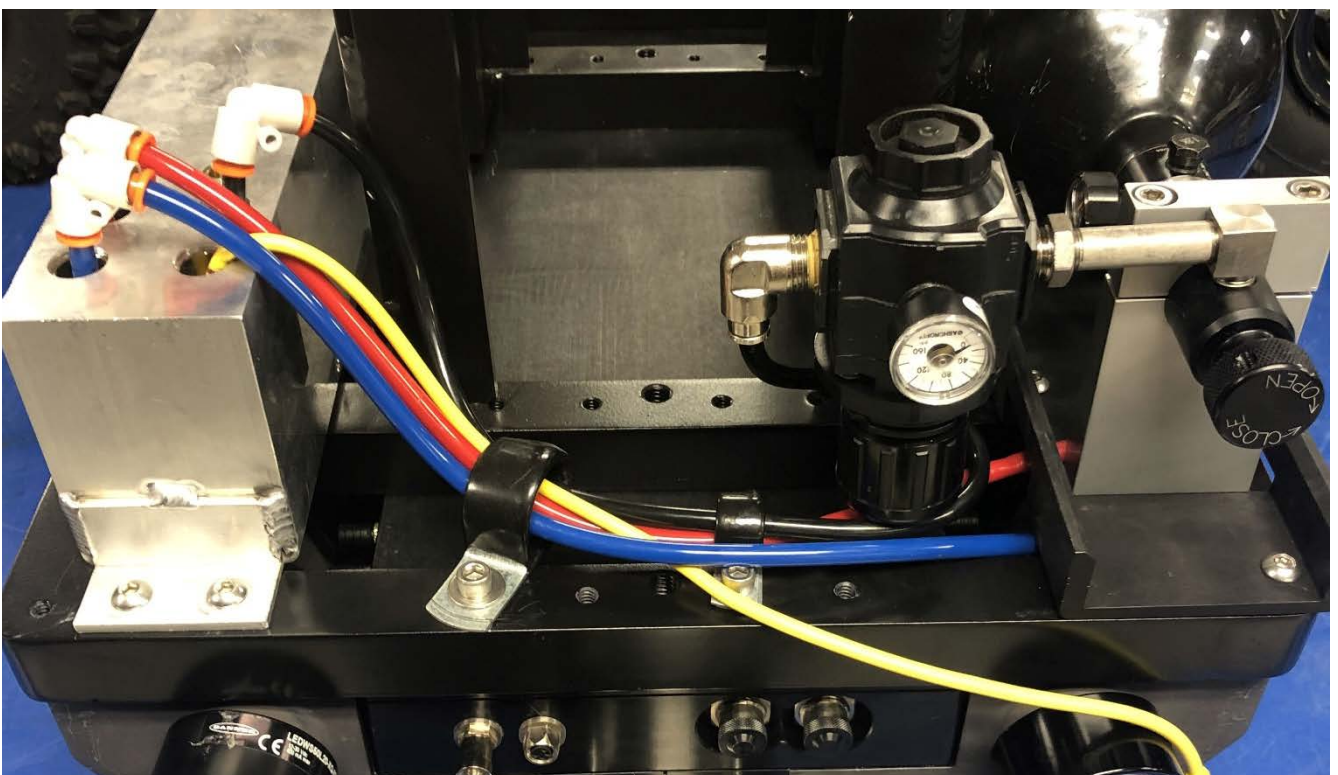


- Plug in one end of the EC1154 cable into the 5-pin receptacle.
- Route the cable as shown.
- Hardware
 - 2X – 121106
 - 2X – 101001

View of Routing for Pneumatic Tubing



View of Routing for Pneumatic Tubing





- Remove the 4 screws shown from the sonar guard (SF381-1). Retain for sonar guard reassembly.
- Repeat the last step for the screws on the other side



- Place sonar into cradle and align pin to socket as shown below.
- **Note:** The sonar should not be able to slide forward or backwards.

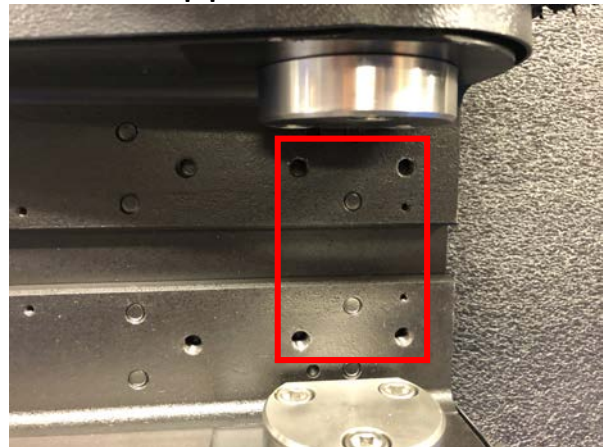




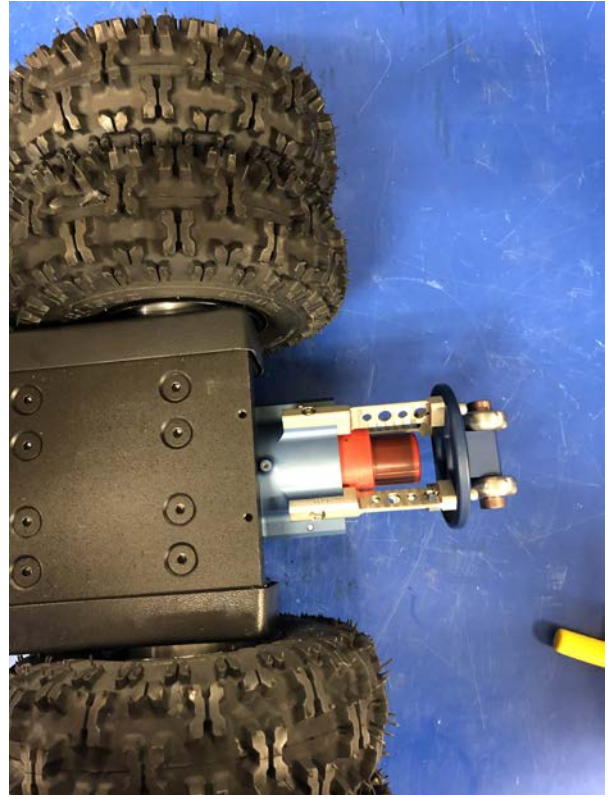
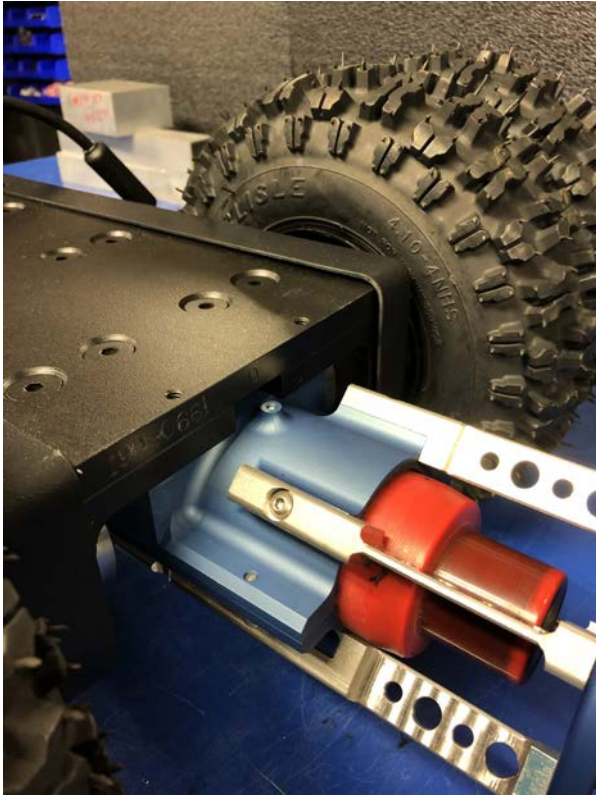
- Plug the 8-pin end of the SF369 cable into the sonar.
- Slide the threaded jacket forward and screw into the sonar.



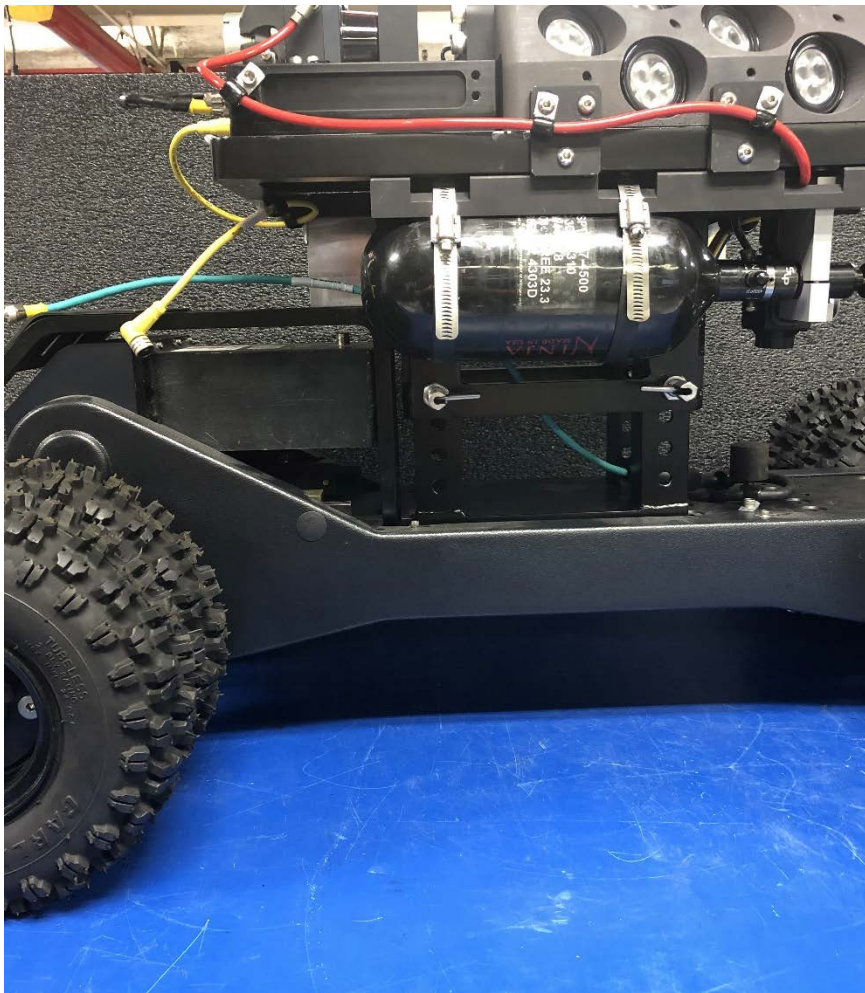
- Route the loose end of the sonar cable through the clearance hole in the chassis (left).
- Mount the sonar guard as shown using the forward 4 mounting holes (below).
- Hardware
 - Supplied with SF381-1



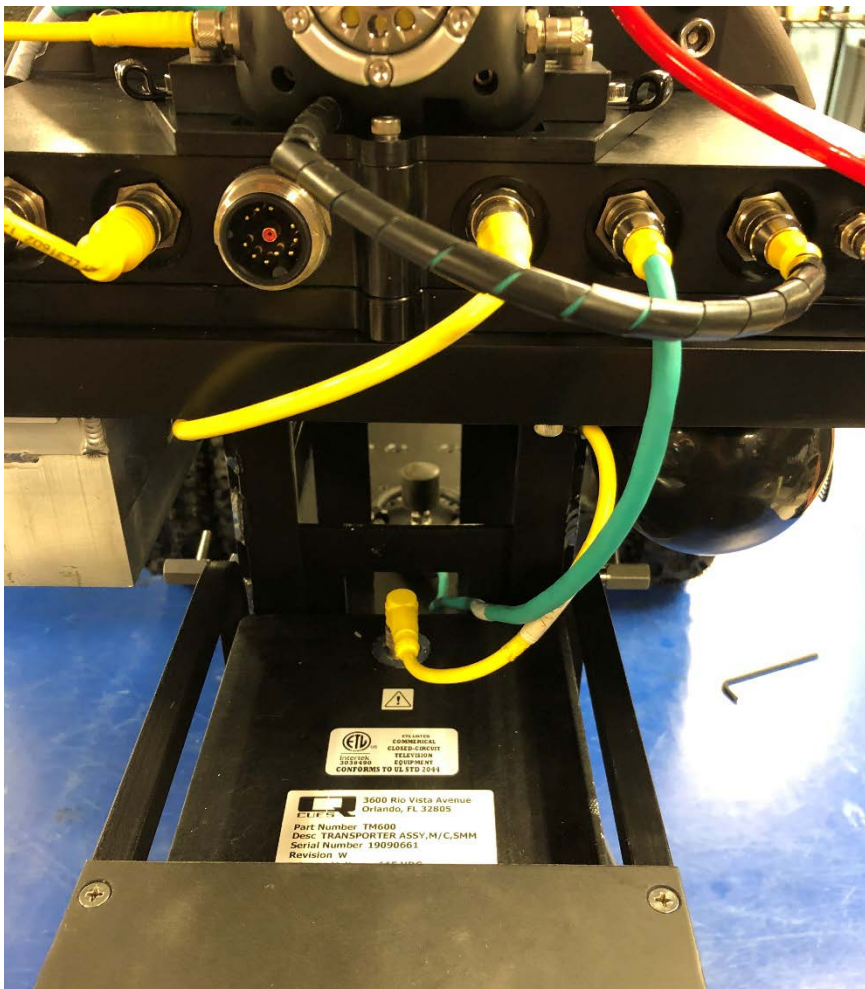
Reference pictures for mounted sonar position.



- Secure the sonar cable as shown.
- Hardware:
 - 2X – 121104
 - 2X – 101001



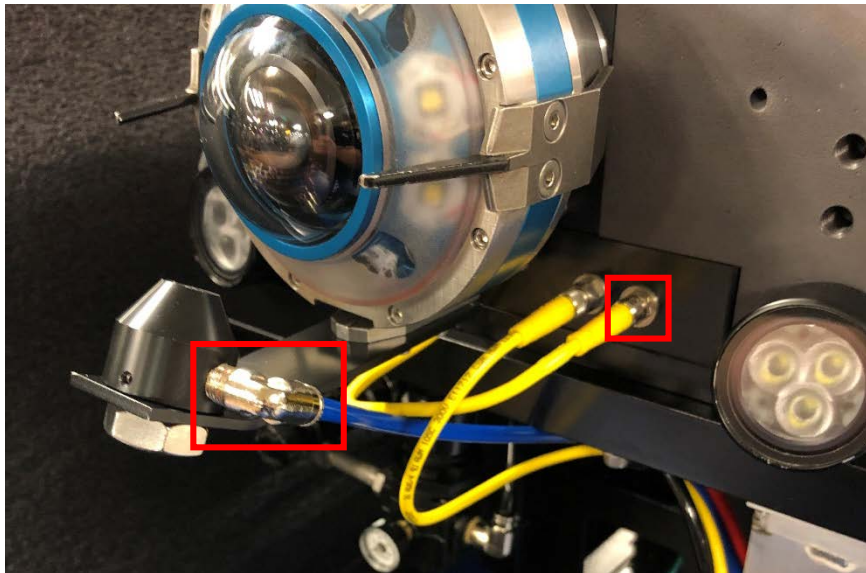
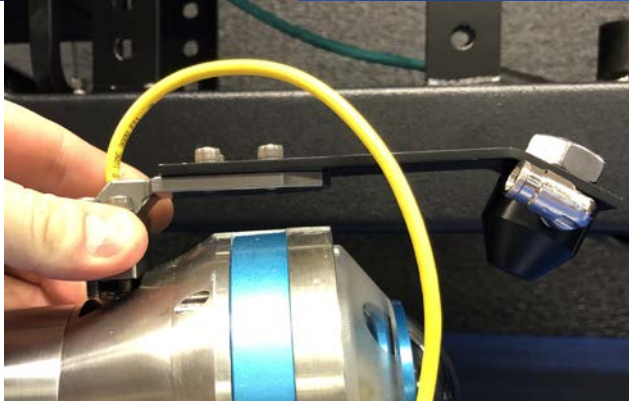
- Mount SF749 in the upmost position on SF750 using the four spring plungers on SF749.
- Route remaining length of sonar cable as shown.



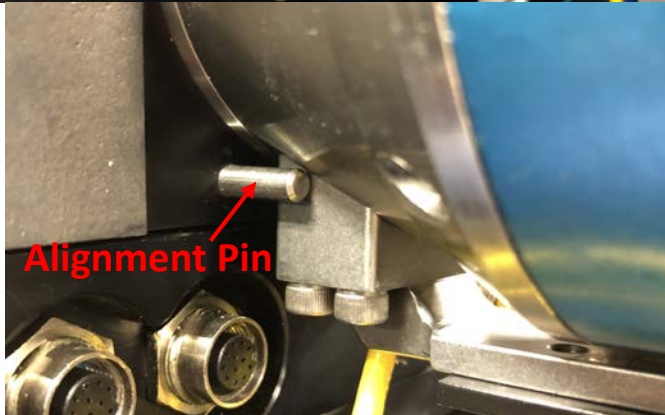
- Plug the 12-pin end of the sonar cable into the 12-pin receptacle shown.
- **Note:** The sonar cable should be routed such that manual lift operation does not damage the cable.
- Plug the other end of the EC1154 cable into the Mud Master transmission.



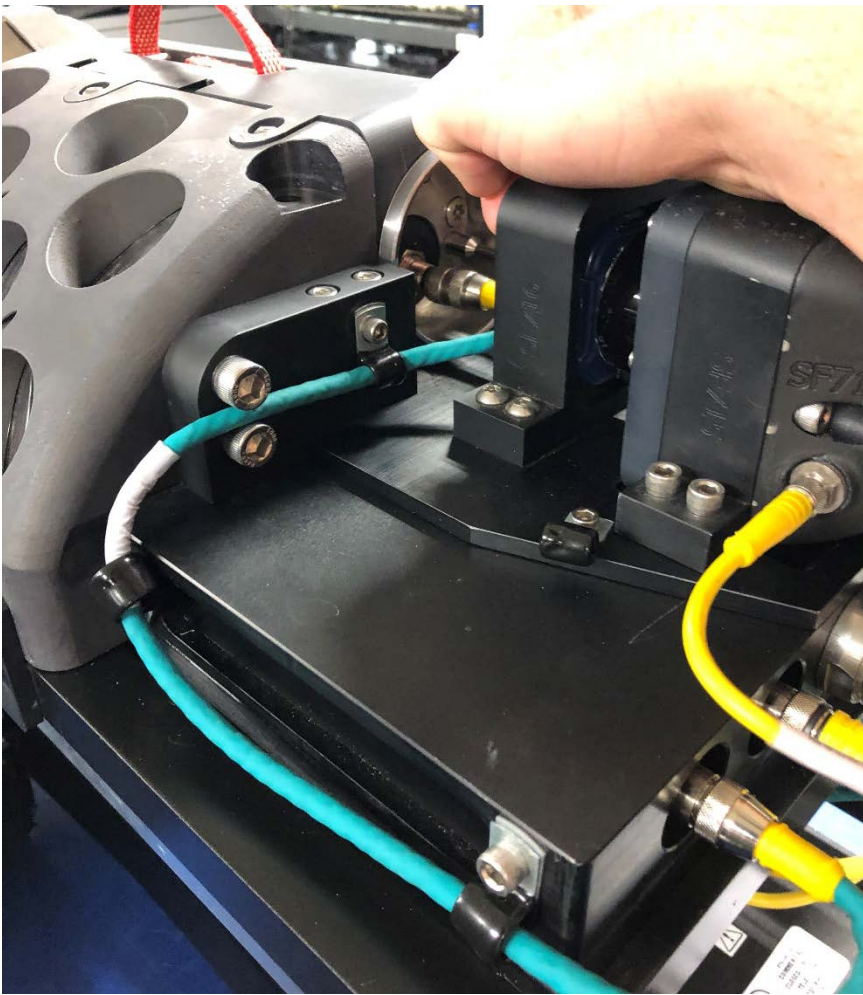
- Install SF396 on to the SF649-1 cable using the hardware that was provided with SF396.
- Replace the bottom fork on the camera with the SF649-1 cable.
- **Note:** Do not force the mounting block down. When aligning the cable connection you should feel the mounting block slide into place.



- Loosen the four screws on the top clamp of SF380, slide the camera into the channel, and tighten the four screws to secure camera.
- Plug the SF649-1 cable into the 4-pin receptacle shown.
- Insert the end of the blue tubing into the PTC fitting shown. Make sure the tubing is properly mated.

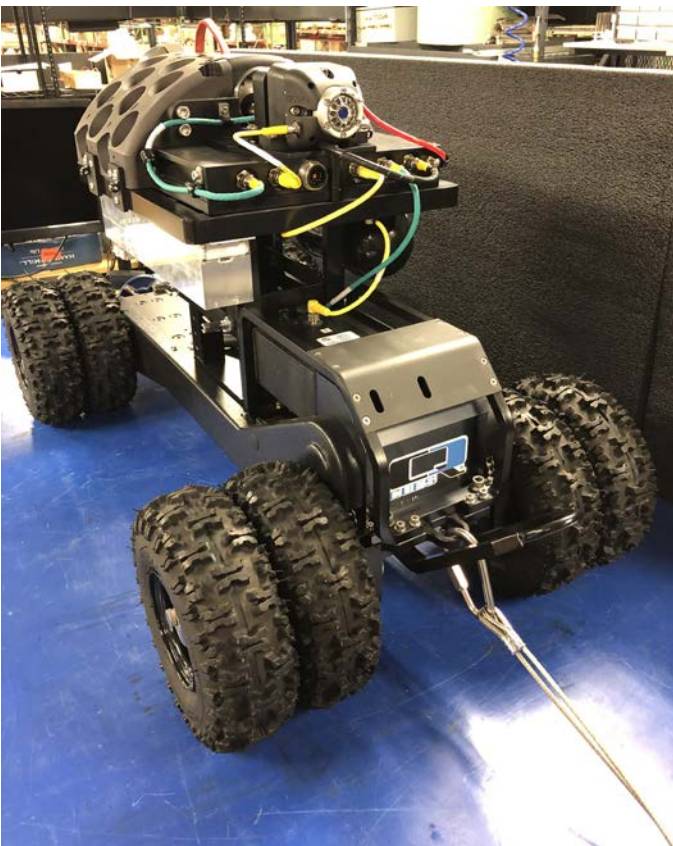
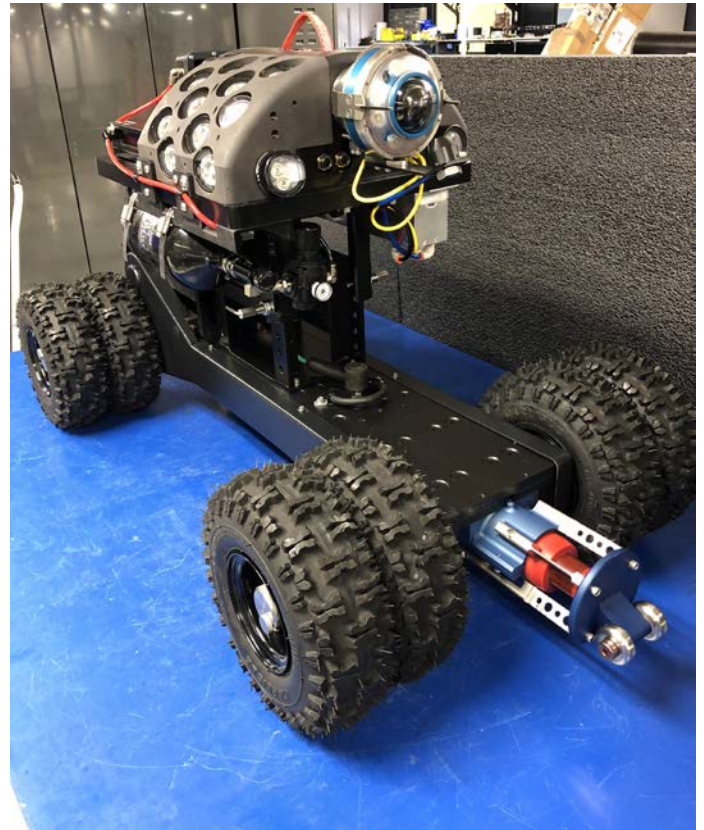


- The mounting block of the SF649-1 cable should sit between the two alignment pins on SF380.

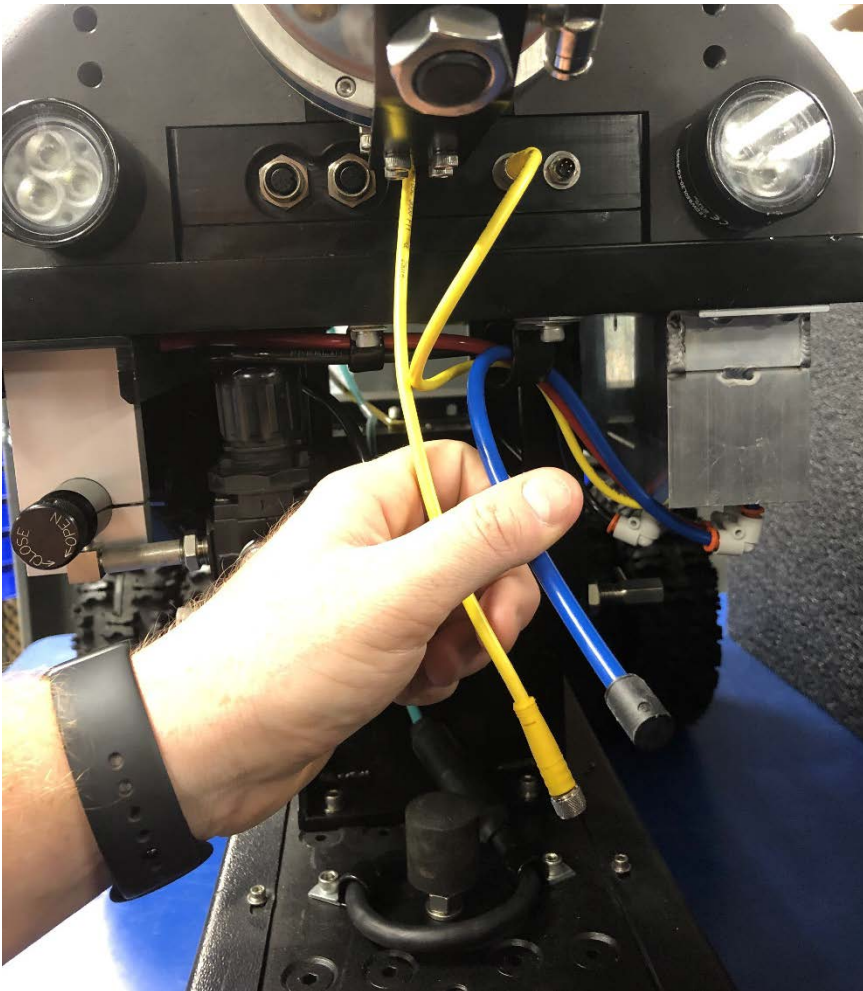


- Plug the 8-pin end of the SF393 cable into the camera.
- Apply dust caps that were provided with SF379 to all unused receptacles.

Views of Complete Assembly

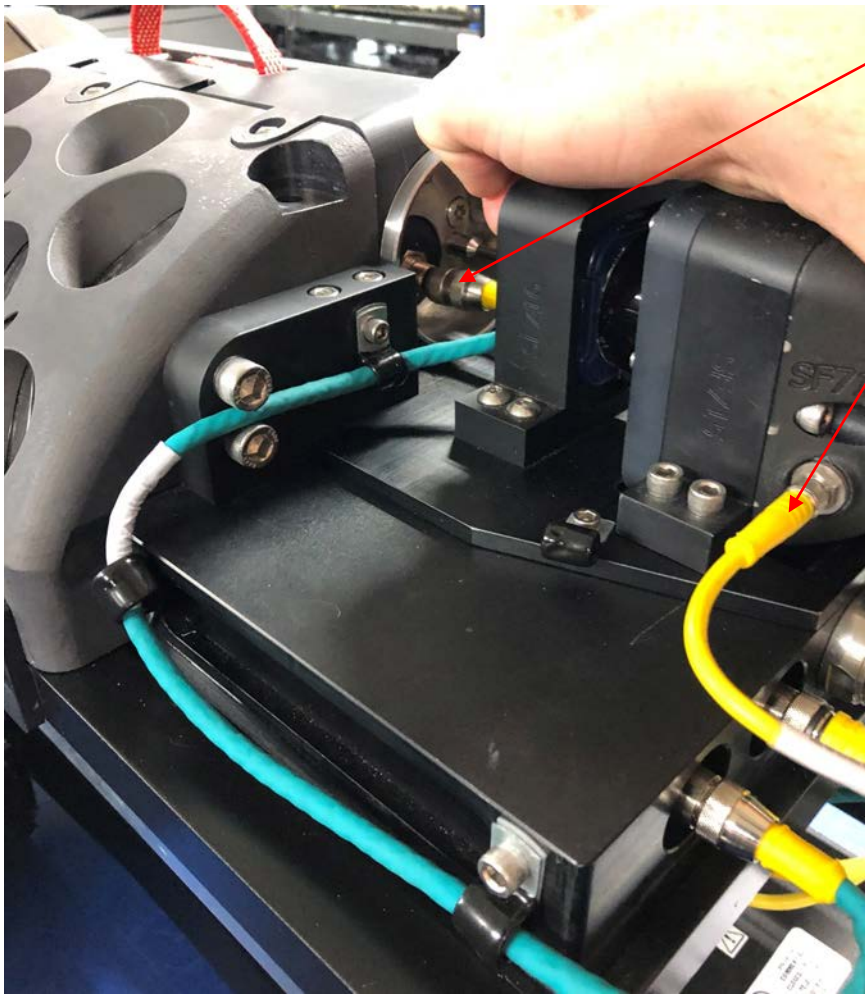


OZ-II Configuration

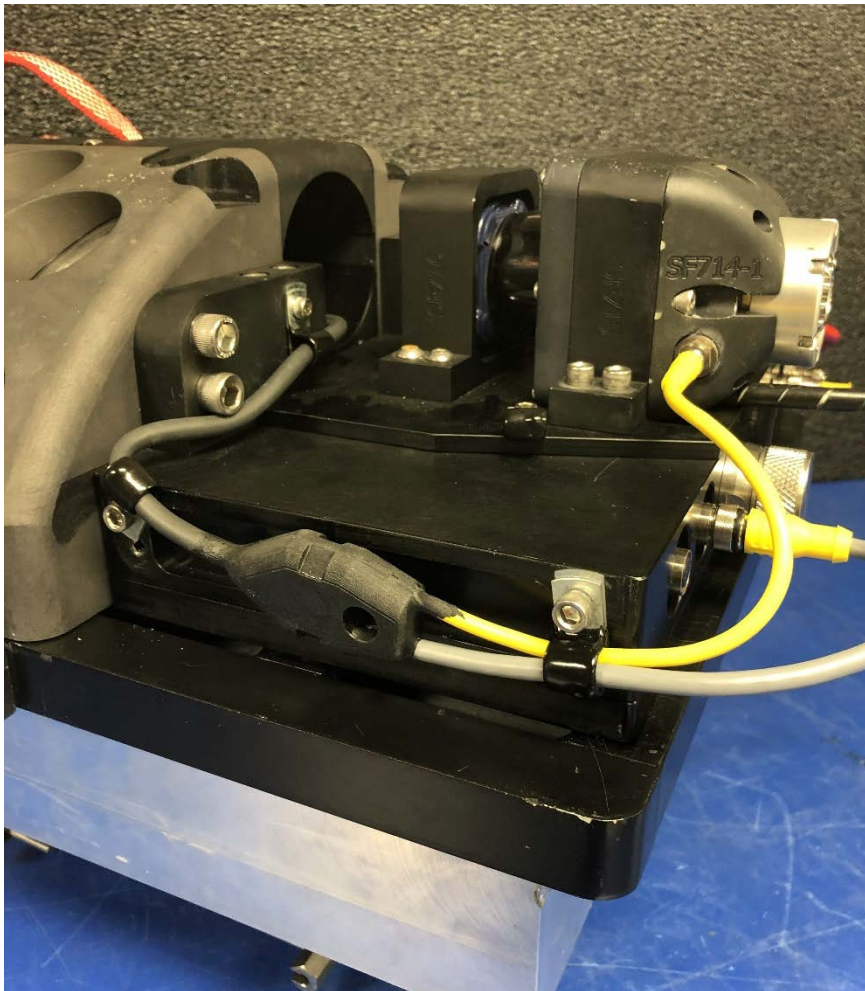


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- Unplug the SF649-1 cable from the electronics box.
- Unplug the blue tubing from the PTC fitting on the front of the DUC.
- Place PTC cap on the end of the blue tubing.
- Hardware:
 - HW4435



- Remove the SF393 cable from the assembly.
- Remove the DUC from the cradle.
- Remove the SF603 cable from the assembly.
- **NOTE:** Leave all hose clamps in their positions for OZ-II cable routing.



- Route the SF618 cable as shown.
- Plug the 8-pin end of the cable into the 8-pin receptacle on the electronics box.
- Plug the 4-pin end of the cable into the RVC.
- Place the OZ camera in the cradle and plug the 5-pin end of the SF618 cable into the camera.
- Tighten the cradle to hold the camera in place.

Views of Complete Assembly

