



INSTRUCTION TO SERVICE

ITS: 6100	
SECTION:	580-05 Wheelchair Ramp
WRITTEN BY:	Dwayne Peters
SUBJECT:	Replace Wheelchair Powerpack

ITS6100

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PROCEDURE:

1. Turn the main battery disconnect switch to the “OFF” position.
2. Manually deploy the Wheelchair ramp.
3. Remove and retain the screws securing the ramp cover to the frame and remove the ramp cover.
4. Locate the powerpack. Figure 2.

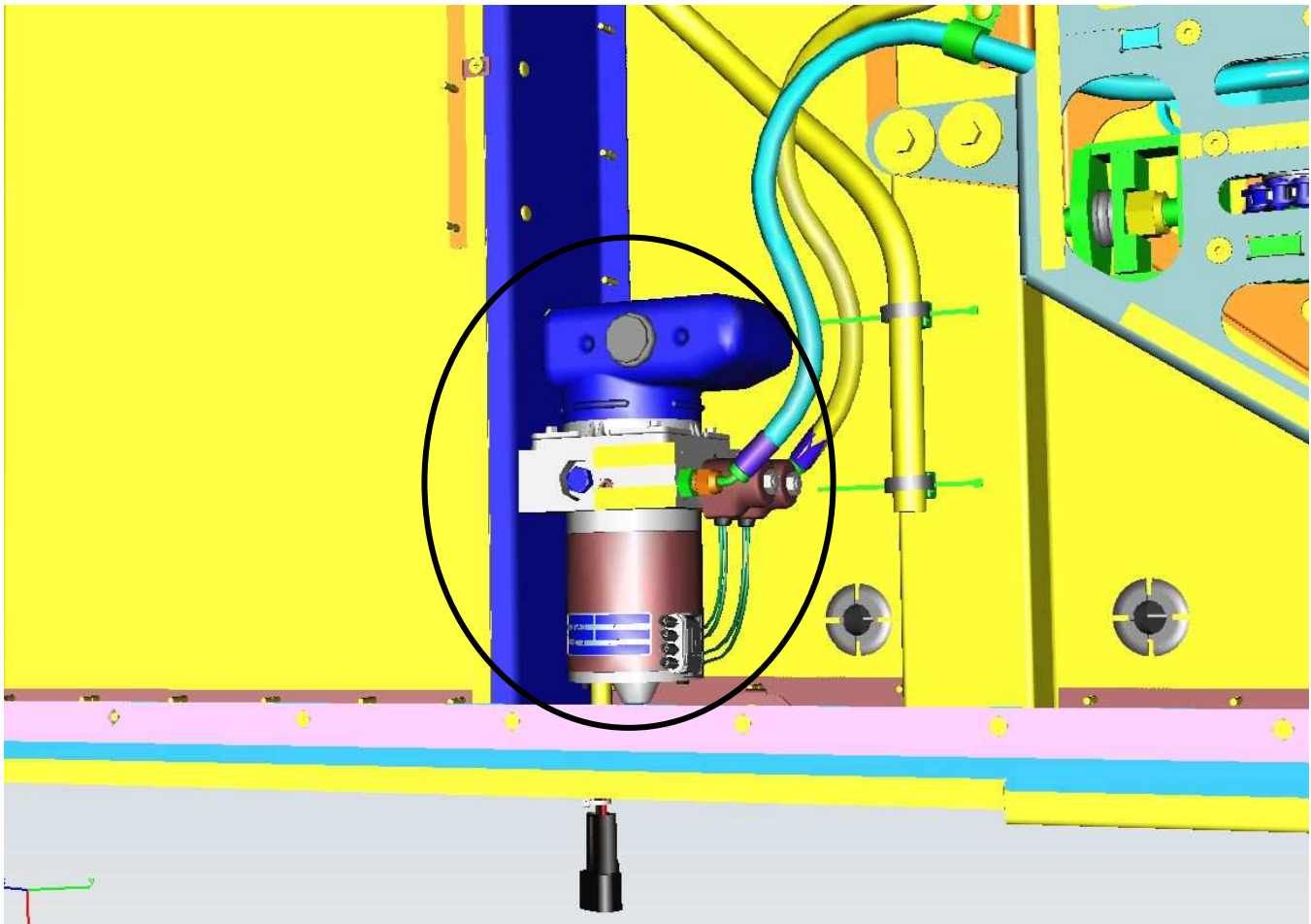


Figure 2: Powerpack

 **NOTE:** *Wiring and hydraulic hoses may be attached with single-use nylon locking straps. Note the location of these straps, and which wires are being bundled together or secured to conduit or frame members, so replacement straps can be properly secured to maintain service integrity.*

5. Remove the powerpack as followed;
 - a. Disconnect the solenoid electrical connector and the motor electrical connector. Figure 3.
 - b. Mark the location of the hydraulic hoses and disconnect the hydraulic hoses and plug the end of the hoses. Figure 3.

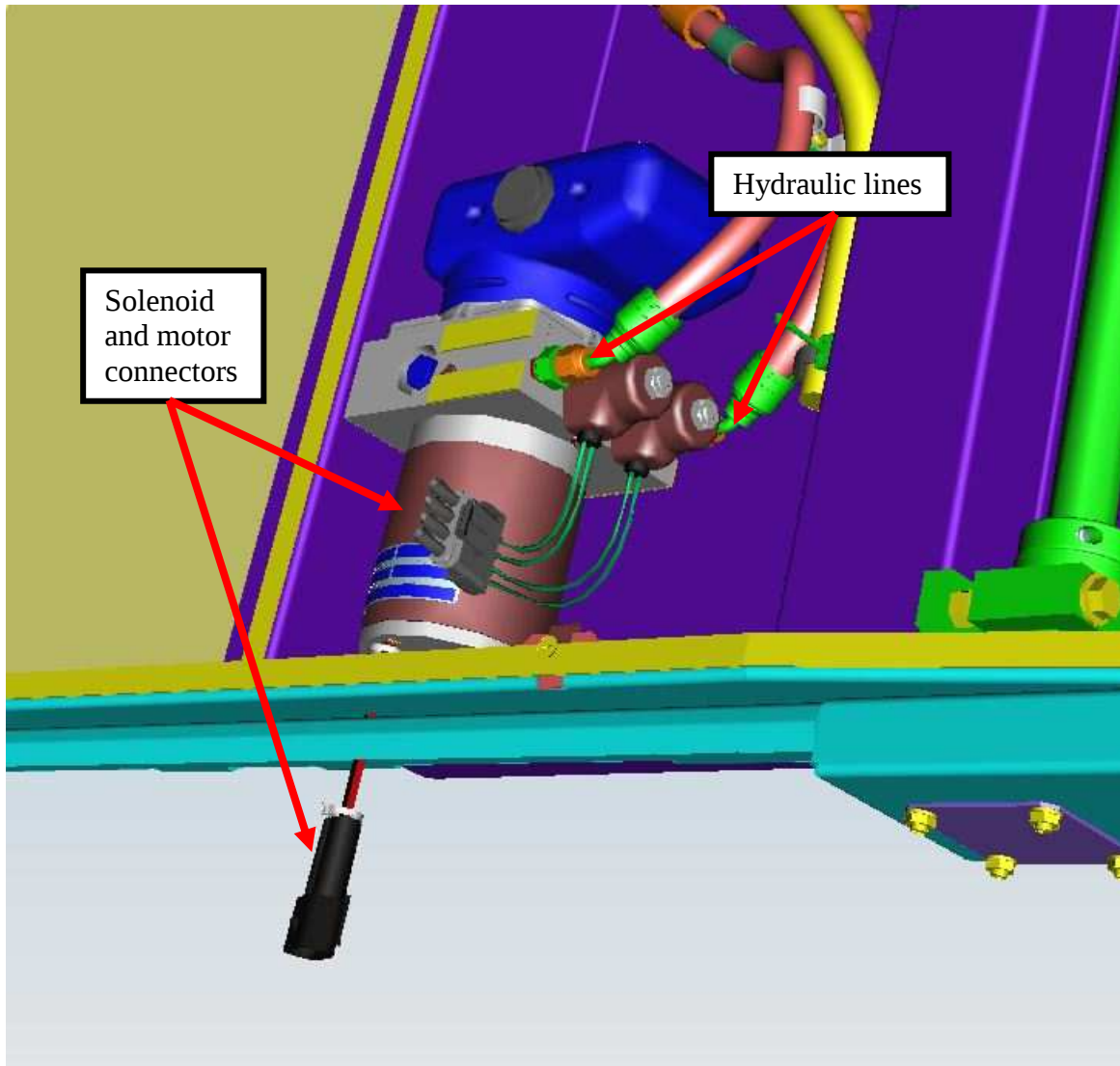


Figure 3: Electric connectors and hydraulic lines

- c. Remove and retain the two ORB fittings and plug the ports. Figure 4.

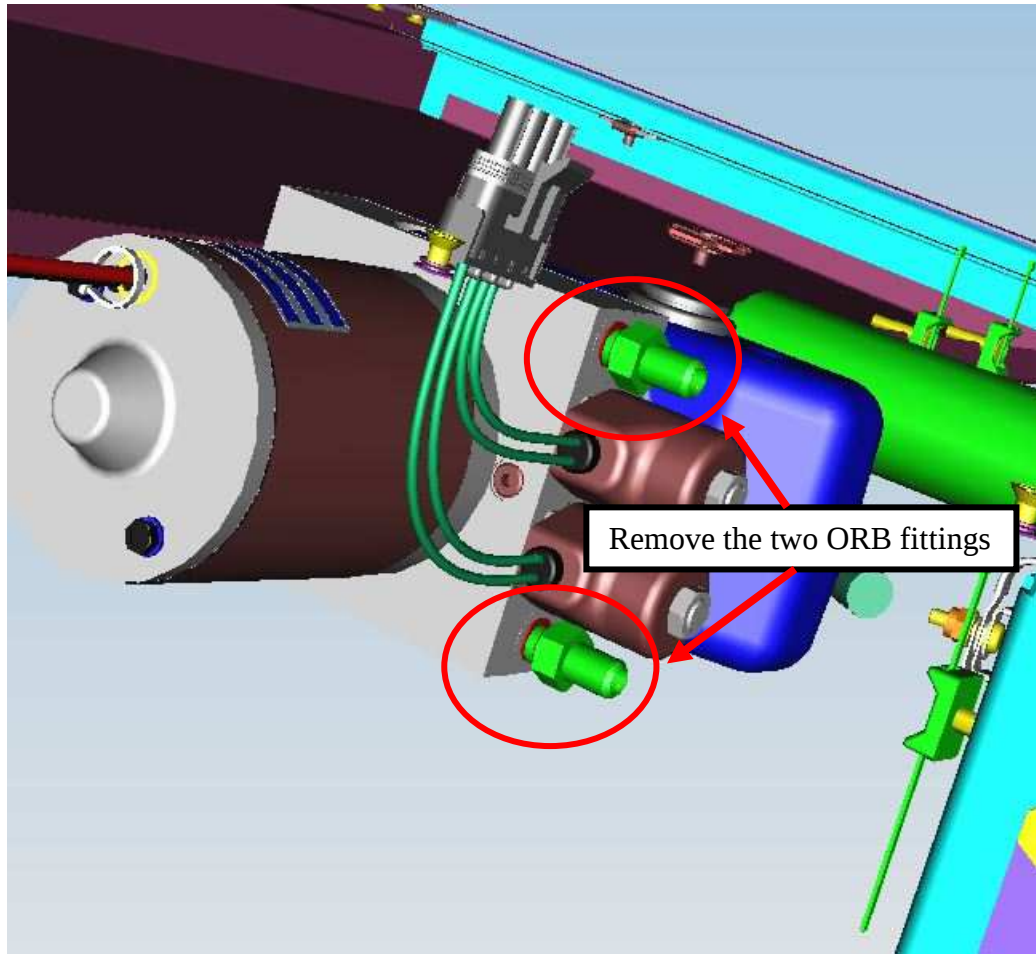


Figure 4: Powerpack ORB hydraulic fittings

- d. Locate and remove and retain the screw and washer securing the powerpack to the frame and remove the powerpack. Figure 5.

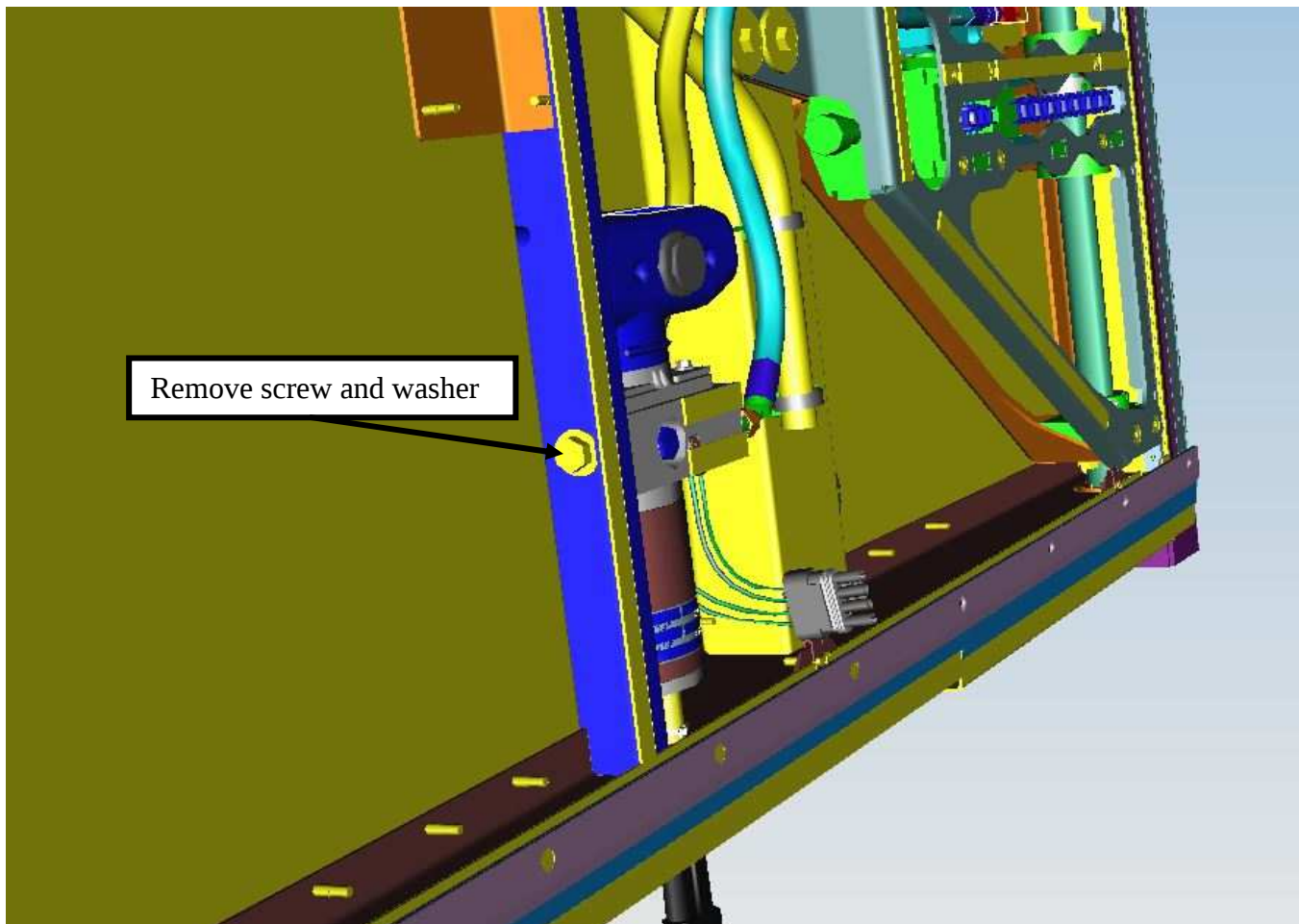


Figure 5: Powerpack retaining screw

6. Install the new powerpack as followed;
 - a. Apply Permastick (NF #5963353) as shown in figure 6 to the surfaces of the powerpack manifold that come in contact with the stainless steel frame.

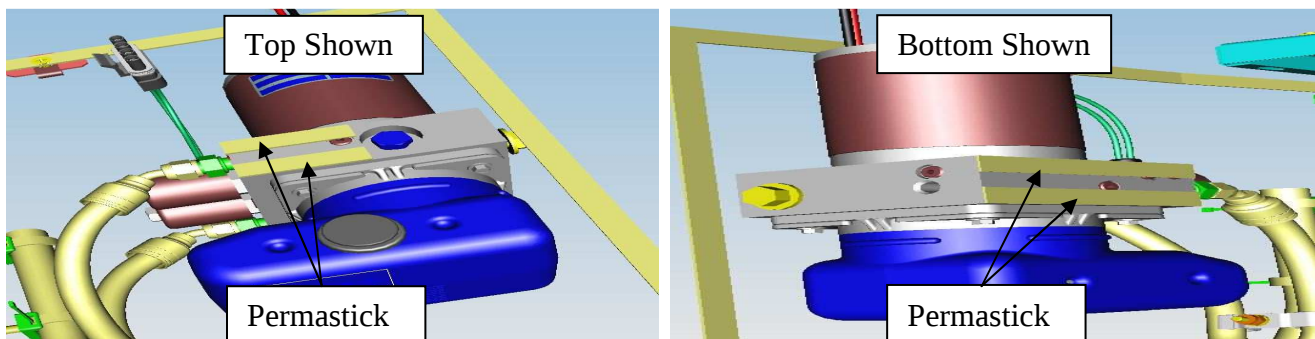


Figure 6: Powerpack with Permastick applied

- b. Install the powerpack and apply Never Seize to screw thread. Install the screw and washer and torque to 23-25 FT-LBS.
 - c. Remove the caps from the ports on the new power pack. Inspect the threads on the two previously removed ORB fittings for damage, sliver, burrs, dirt, or other containments. Lubricate the o rings with fluid compatible with the installation and Install the two ORB fittings and torque to 14-16 FT-LBS.
 - d. Remove the caps from the hoses and attach the hydraulic hoses and torque to 11-12 FT-LBS using a back-up wrench if required on the mating part to prevent twisting or over-torque.
 - e. Connect the solenoid and motor electrical connectors.
 - f. Secure harness bundles and hoses with nylon straps as ensuring they are installed as previously removed.
7. Fill and Bleeding procedure as followed;
- a. Manually deploy the ramp.
 - b. Disconnect the drive link from the pivot link on the ramp plate. Figure 7.

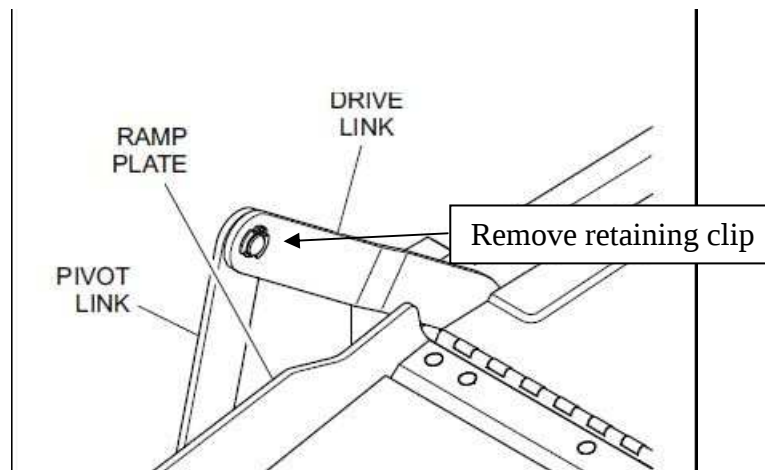


Figure 7: Drive link/Pivot link

⚠ WARNING: The ramp plate will be disconnecting from the driveshaft drive link during the bleeding procedure. Exercise caution when working with the ramp cover removed and ramp plate disconnected

- c. Fill the powerpack reservoir to appropriate level with approved system oil.
- d. Use the drive link to manually return the mechanism to the stowed position. Drive link should be parallel with the bottom cover plate when in the stowed position.
- e. Attach a transparent hose to each of the bleed fittings located at the end of each hydraulic hose. Place the end of the hose in a glass jar filled with approved system oil.
- f. Crack open the bleed fitting on the stow line at the base end of the cylinder. Figure 8.

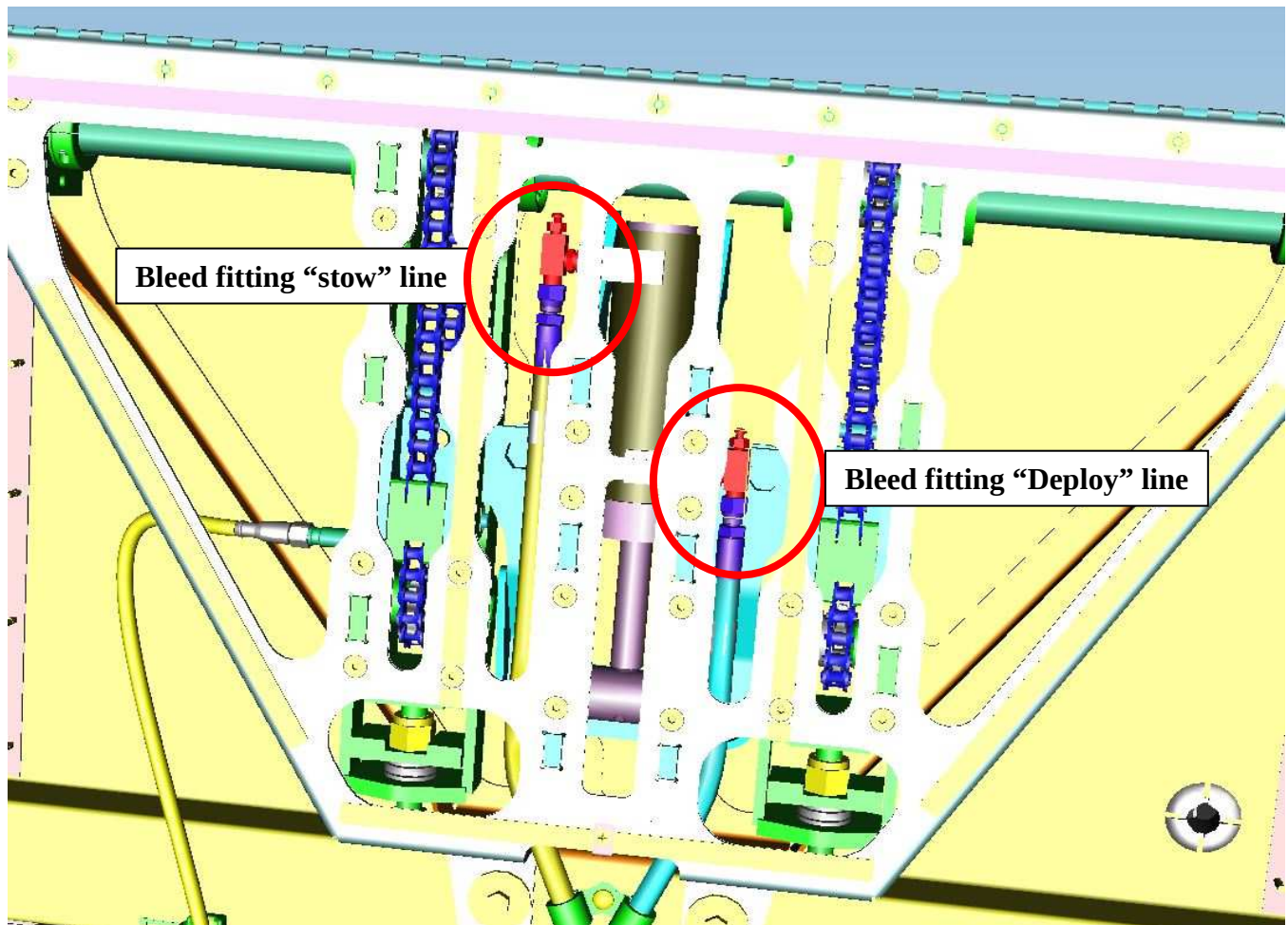


Figure 8: Bleed fittings

g. Turn the main battery disconnect switch to the "ON" position.

⚠ WARNING: DO NOT allow the reservoir to run dry while priming the pump.

- h. Use the ramp DEPLOY switch to "jog" the unit through short deploy strokes. Gradually increase the length of the deploy strokes until a steady stream of fluid flows from the bleed fitting without air bubbles.
 - i. Tighten the bleed fitting on the STOW pressure line at the base end of the cylinder and crack open the bleed fitting on the DEPLOY line at the rod end of the cylinder. Figure 8.
 - j. Use the ramp STOW switch to "jog" the unit through short stow strokes. Gradually increase the length of the stow strokes until a steady stream of fluid flows from the bleed fitting without air bubbles.
 - k. Tighten the bleed fitting on the DEPLOY line at the rod end of the cylinder.
 - l. Reconnect the drive link to the pivot link on the ramp plate.
 - m. Operate the ramp through several deploy/stow cycles.
 - n. Top up the powerpack reservoir to within 1" of the filler cap with approved system oil.
8. Install and secure the ramp cover with the retained screws.



LABOUR ESTIMATE

	Operation	Men	Hours	Labour Time M X HR
1	Remove and replace wheelchair powerpack	1	2.0	2.0

PARTS REQUIRED

Item	Part Number	Description	Qty. per Coach	Units	Notes
1	595404	ASSY-POWERPACK 24 VDC	1	EA	
2	5928660	NEVER SEIZE	.010	EA	
3	5963353	PERMASTICK .5 WD	2	FT	