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 HELIX TECHNOLOGY CORPORATION

Instructions for Replacing the 8500 Compressor Adsorber

Purpose

For use with the 8500 Compressor adsorber kit (CTI-CRYOGENICS Kit No. 8080275K001).

Kit Contents

Item Number	Description	Quantity
1	Adsorber (Part No. 8031189)	1
2	Instruction Sheet (Part No. 8040191)	1

To replace the 8500 Compressor adsorber, proceed as follows:



WARNING

Always disconnect the compressor from its source of electrical power before performing any maintenance.

1. Shut down the compressor.
2. Disconnect the compressor input power cable from its electrical power source and disconnect the water lines.
3. Disconnect the flexlines from the gas-return and gas-supply connectors at the rear of the compressor. Disconnect the self-sealing couplings per Figure 1.
 - a. Use the two wrenches supplied in the Installation and Scheduled Maintenance Tool Kit to avoid loosening the body of the coupling from its adapter. Hold one wrench fast on the coupling half attached to the rear side of the compressor. Use the other wrench to loosen the coupling to the helium supply or return line.

- b. Unscrew the two self-sealing coupling halves quickly to minimize gas leakage.
4. Loosen the four screws that hold the compressor rear panel and remove the panel.
5. Remove the adsorber from the compressor according to Figures 1 and 2. Save all bolts and washers for installing the replacement adsorber.

WARNING



Depressurize the adsorber before disposing of it. To accomplish this, attach the depressurization fitting (included in the installation tool kit) to the coupling half at either end of the adsorber and tighten it slowly.

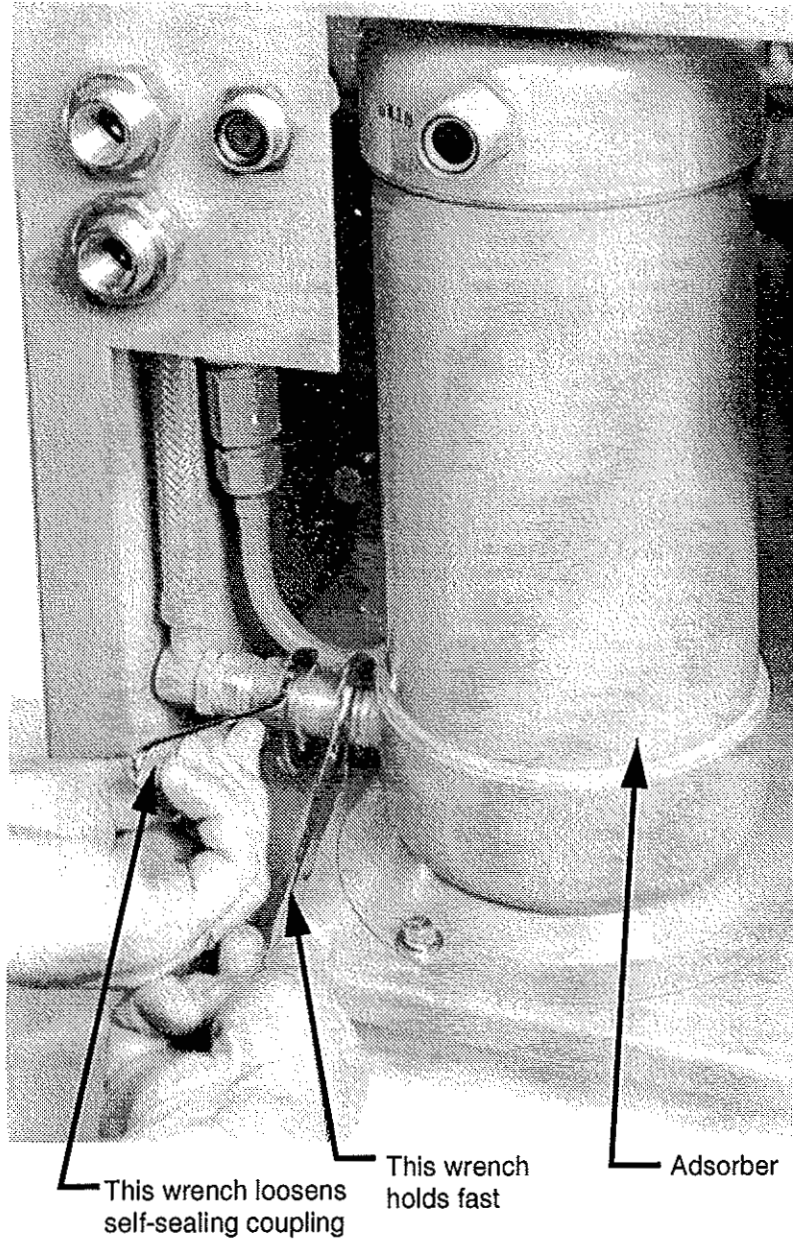
- a. Remove the dust caps from self-sealing coupling halves at each end of the replacement adsorber.
 - b. Install the replacement adsorber by performing the steps in Figure 2 in the reverse order. Use the hardware saved in step 5 above.
7. Connect the adsorber to the compressor internal piping. Refer to Figure 3 and:
 - a. Check the self-sealing connector flat rubber gasket to make sure that it is clean and properly positioned.
 - b. Using the two wrenches supplied in the Installation and Scheduled Maintenance Tool Kit, make the connection quickly to minimize minor gas leakage.

CAUTION

Make sure to hold fast on the left coupling nut while tightening the right coupling nut as shown in Figure 3.

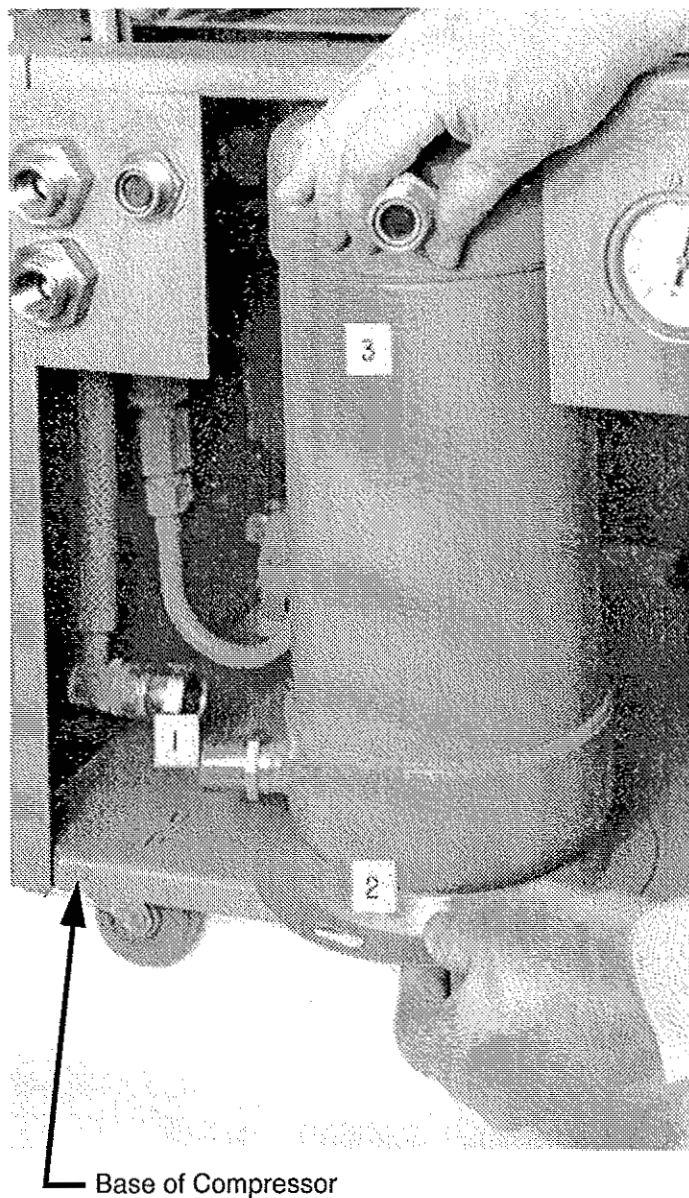
- c. Make the first turns by hand and then firmly seal the connection using the two wrenches until the fittings "bottom." Refer to Figure 4 for proper coupling of the self-sealing connection.
 - d. Write the date that the adsorber was replaced on the Operating Log, and also make a note that the next adsorber replacement is in three years.
8. Replace the panel and secure it by tightening the four screws.
9. Reconnect the flexlines to the gas-return and gas-supply connectors at the rear of the compressor.

10. Ensure that the pressure gauge reads 195-205 psig (1345-1415 kPa). If additional gas pressure is required, follow the instructions in the applicable Cryo-Ton®Cryodyne®Installation, Operation and Servicing Instructions.
11. Reconnect the water lines to the compressor.
12. Reconnect the compressor input power cable to the electrical power source.
13. Write the date that the adsorber was replaced on the Operating Log, and also make a note that the next adsorber replacement is in the three years.



1. Use two wrenches (supplied) to avoid loosening the body of the coupling from its adapter.
2. Unscrew the two self-sealing coupling halves quickly to minimize gas leakage.

Figure 1: Disconnecting the Adsorber Self-Sealing Couplings



1. Disconnect the adsorber-inlet self-sealing coupling. See also Figure 1.
2. Remove the bolts, nuts, and washers that secure the adsorber to the base of the compressor.
3. Carefully slide the adsorber outward until it clears the compressor and remove the adsorber.

Figure 2: Removing the Adsorber from the Compressor

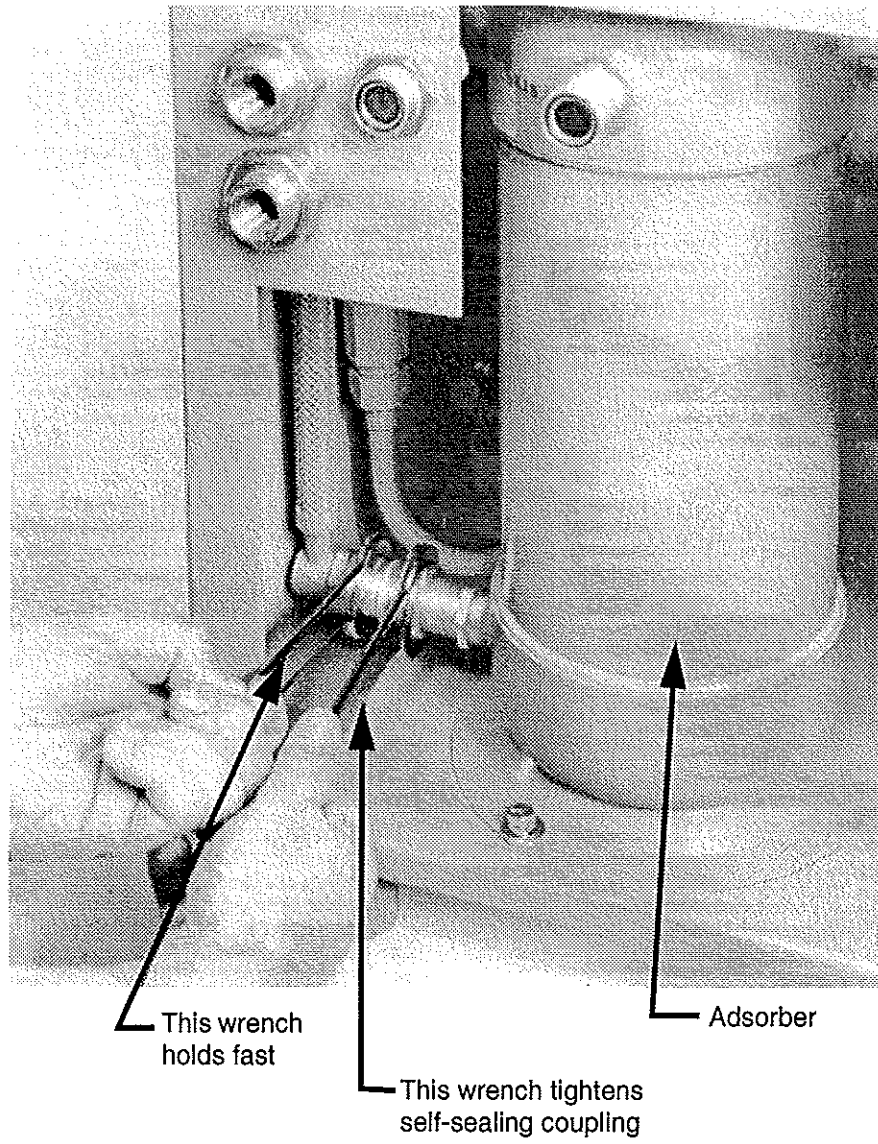


Figure 3: Connecting Self-Sealing Couplings

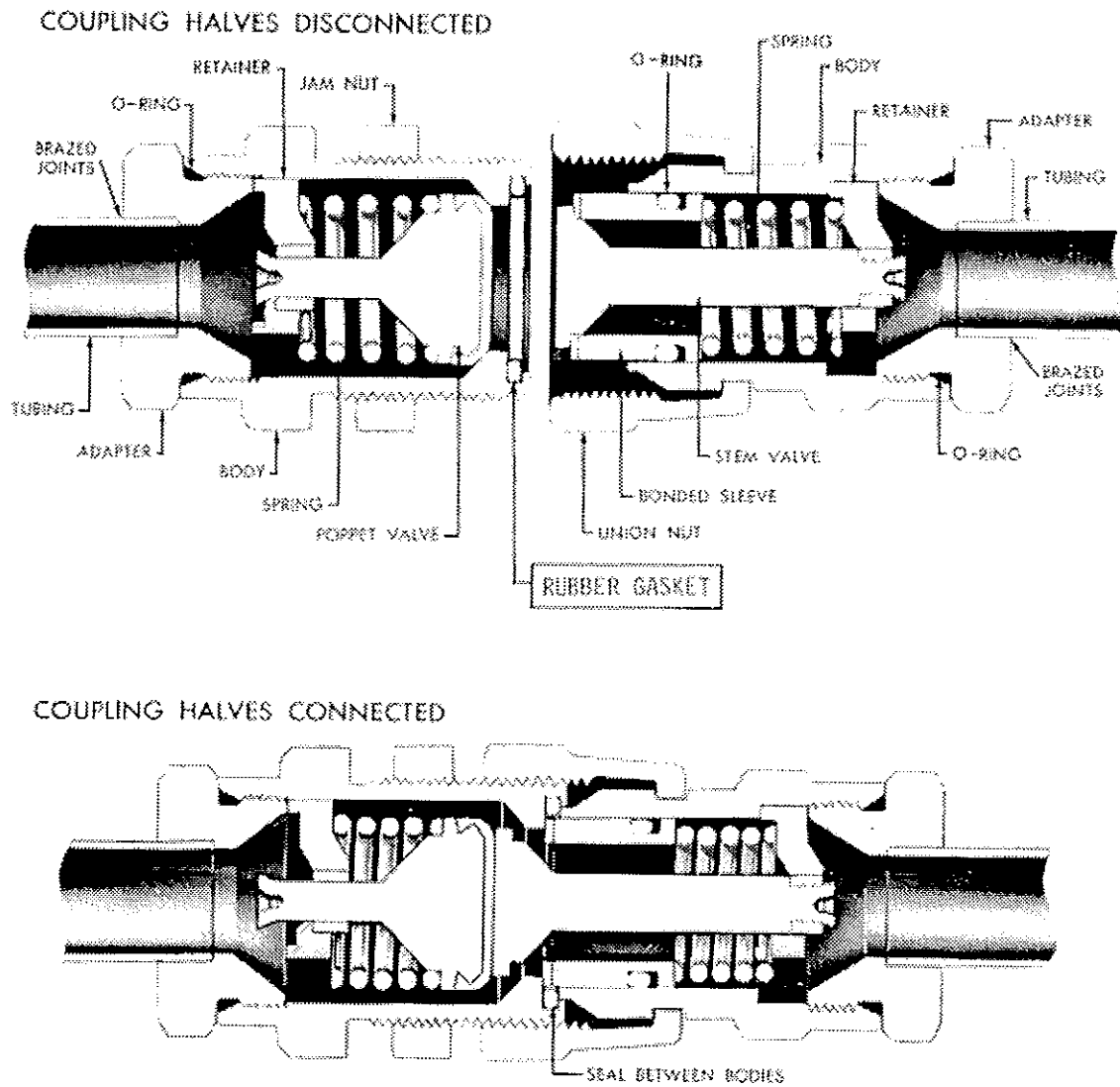


Figure 4: View of Disconnected and Connected Self-Sealing Couplings

Cryocompressor 8500

CTI Cryogenics: Sales and Support 800-447-5007

Absorber: p/n 8080275K001 cost: \$450.00 (6/95)

Shelf life of at least 6 months. Service life of 3 years regardless of the number of cryopumps supported by the compressor.

Manifold: p/n 8080250K003 cost: \$325.00 (6/95)