

Carrier

A United Technologies Company

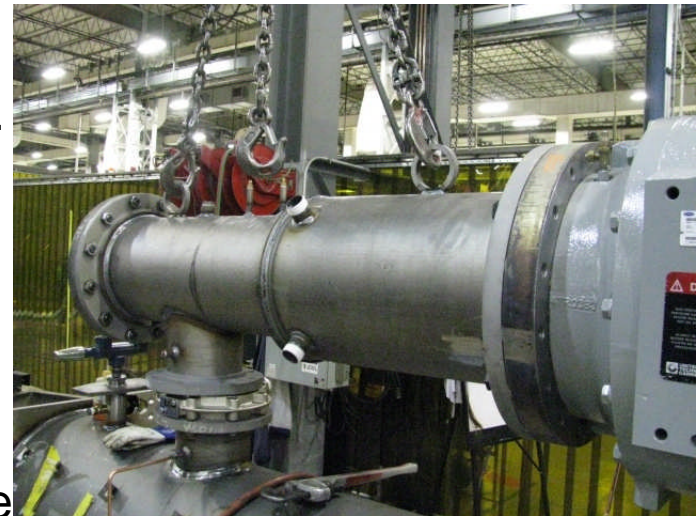
23XR V Muffler Core Replacement Kit



Safety is Rule #1 (follow all the local and state safety regulations)

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1. Make sure you wear all the required safety gears before removal of the muffler.
2. 23XRV muffler & discharge pipe (all frames) weighs ~ 750 lbs; make sure the crane capacity is at least 1,000 lbs or more!
3. Transfer the entire R-134a charge onto a clean holding tank.
4. Make sure all the straps and chains are securely fastened to lugs before proceeding to next step.
5. Undo the flanges' bolts on the both ends (compressor and discharge pipe ends).
6. Lift the muffler and discharge pipe assembly (by utilizing the lifting lugs) onto the ground level.
7. Cover condenser inlet and compressor discharge opening while the Polypropylene core assembly replacement is taking place.
8. Make sure you collect all unfastened hardware in a container.

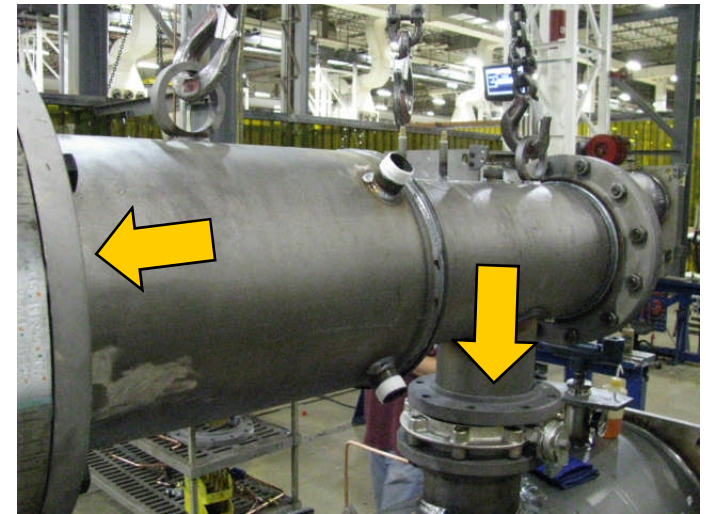
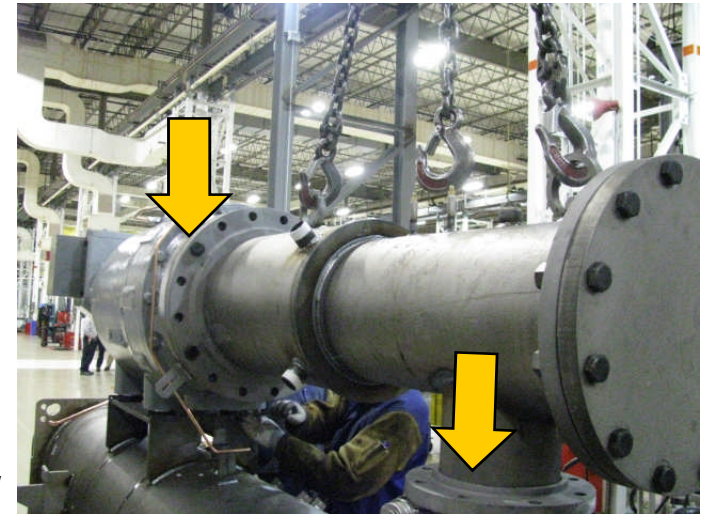
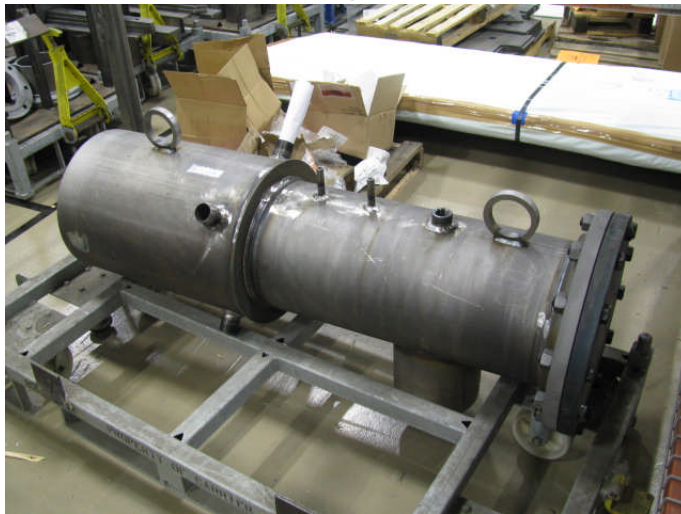


Note: All the replacement repair work must be done by a trained & certified Refrigeration technician(s). A qualified MIG welder may also required for a segment of this replacement.

Welding the New Flanges onto the Discharge Assembly

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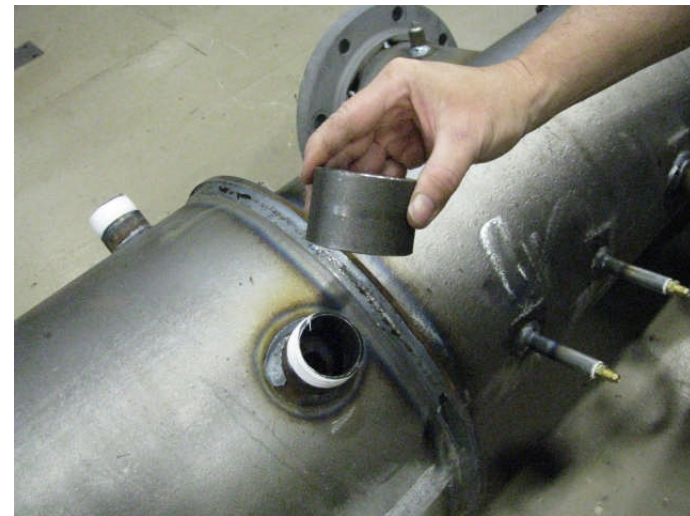
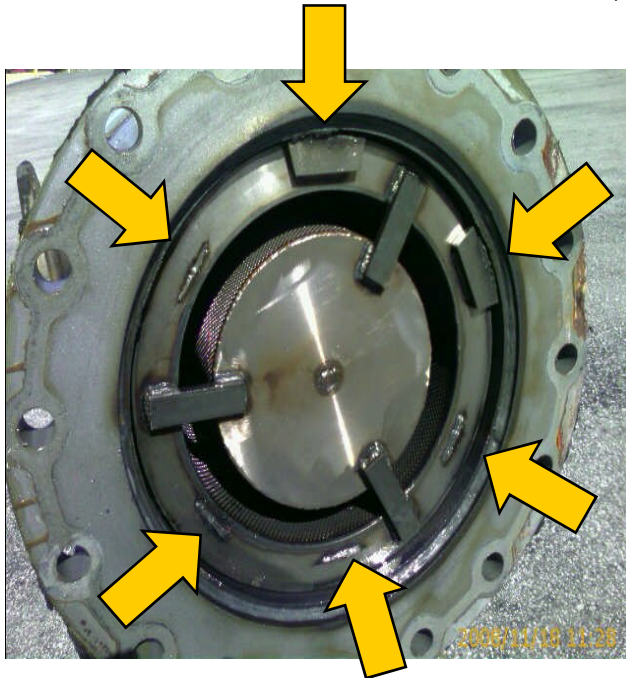
1. Skip this page if you are repairing the existing muffler assembly!
2. Align loose flanges to the compressor and heat exchanger using 4 bolts in each flange.
3. Hoist the discharge assembly and insert it into both flanges. Level the assembly.
4. Tack weld the flanges to the discharge assembly using four 1/2 inch tacks to hold the flanges in place.
5. Remove the bolts from the flanges and remove the discharge assembly for welding.
6. Weld a 1/4" fillet weld inside and out on both flanges. Allow weld to cool before proceeding with muffler installation.



Removing the Tabs and Hardware

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1. As shown in the figure, while the muffler & discharge pipe assembly is laying on the ground level, grind off all the existing 6 connecting tabs one by one (4" O.D., 3/32" thick Wafer-wheel @ ~ 19,000 RPM was used for this demo).



2. After removing the caps, unfasten the 4 bolts (see the figure on right hand side).
3. Remove the damaged core and discard it according to the local disposing codes (in some cases, this core may need to be returned to the factory for further analysis).

Inserting the New Core into the Muffler Housing

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- While the muffler housing is standing in the vertical position, lower the Polypropylene core (23XR54009401) into the muffler housing gradually by releasing hoist's tension in a downward direction.

Final Adjustment and Tighten the Core in Place

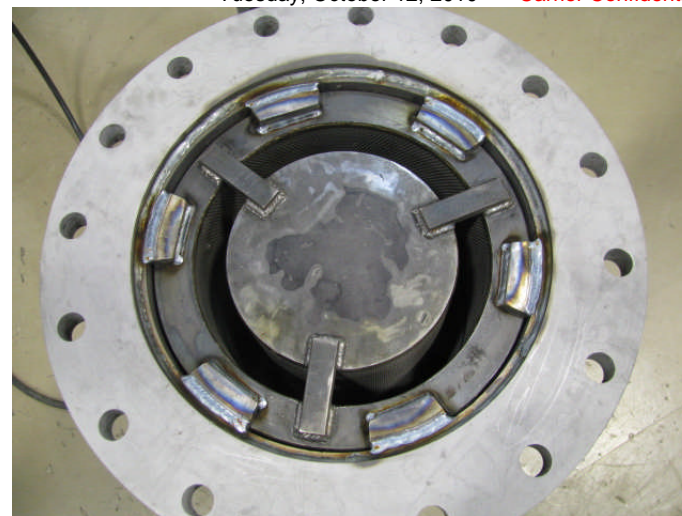
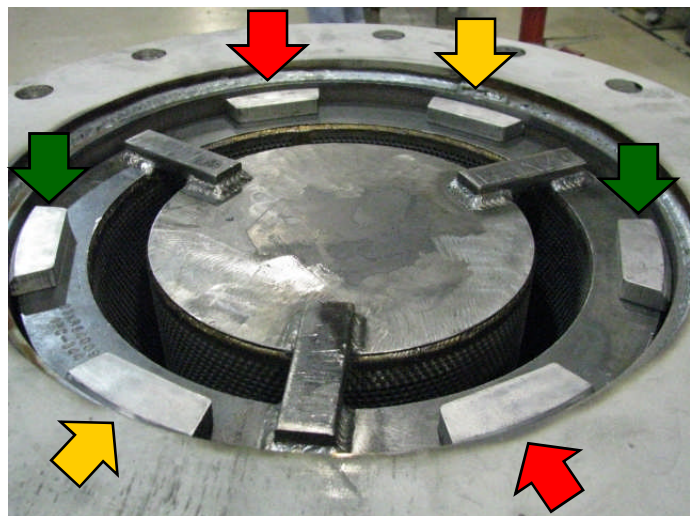
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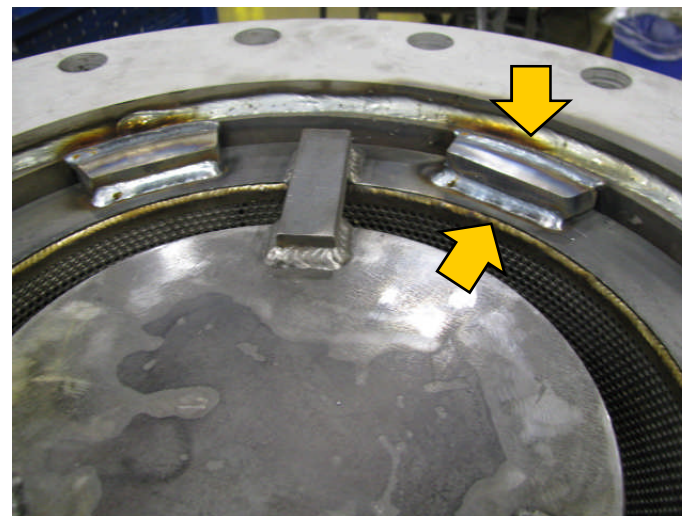
- While it is supported, lower or lift the core up and down until all the (4) holes are aligned with their designated tapped blocks.
- Insert the bolts (AA44AA294) and washers (AU04AQ301) at each given holes and turn it clockwise 1 to 1-1/2 turns.
- You **may** repeat turning the bolts clockwise and counter-clockwise a few times until the core is centrally located (you may use 3 fine-tipped screw drivers for shimming). At this point, you may have turned the bolts at least 5 turns clockwise (wait for the final fastening and torquing until the next step is done).

Welding the 6 Tabs onto the Muffler Housing

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- As shown, lay the 6 tabs (23XR55013801) as equally-spaced as possible, the beveled end of each tab should be facing the inner shell. **Tack-weld** 6 tabs in a criss-cross pattern.
- Using the portable MIG welder, weld one pass of .045" diameter @ 155 to 200 A @ 20 to 26 V @ 12 to 15 IPM speed. The Argon/CO2 ratio should be 90/10 @ the flow rate of 25 to 35 CFH per tab ([for the complete welding details, see the attached welding procedure](#)).



Closing the 4 Caps

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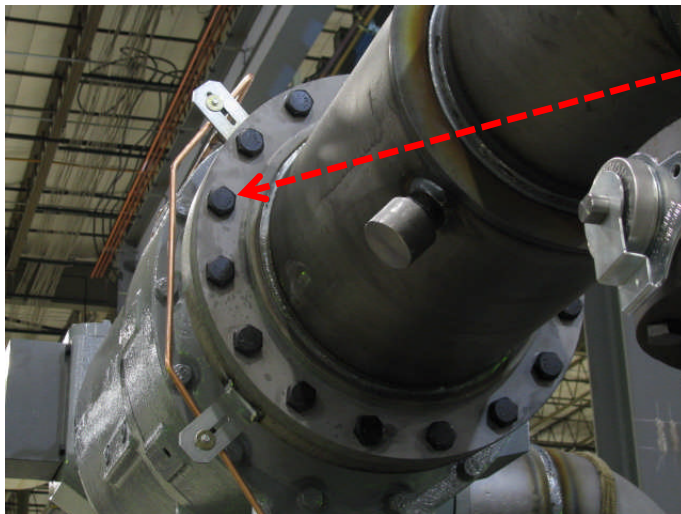
- Once all the 6 tabs are **fully welded**, apply sufficient amount of Loctite # 55441 to each bolt. Torque each bolt in the range of 53 to 75 ft/lb.
- After torquing all the 4 bolts, apply thread tape LA CO # 44071 or similar before closing all the 4 caps.



Final Steps

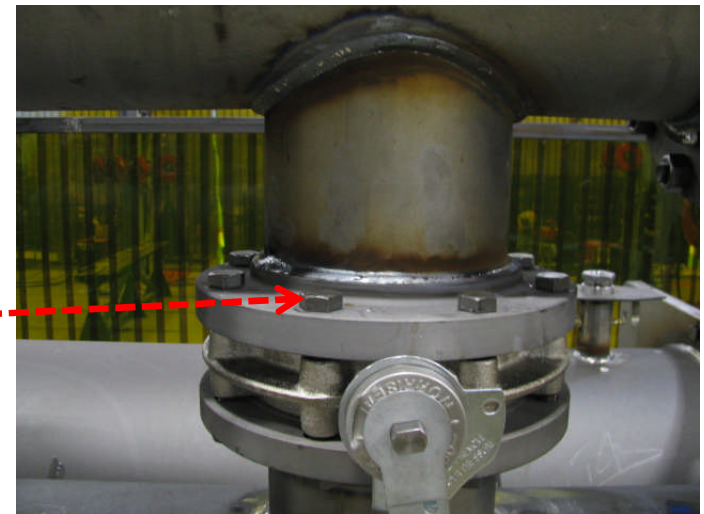
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- Lift the muffler assembly with its new core and align it with the compressor and condenser mating flanges. Make sure compressor gasket (19Q14-3251) and discharge one (17FA241-1052) are inserted before closing the ends.
- Torque as shown.
- Open all the valve(s), evacuate & recharge the unit as per standard refrigeration procedures.



Torque compressor bolts @ 275 to 325 ft/lb.

Torque discharge bolts @ 175 to 200 ft/lb.



“Core Replacement” Part #s

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Quantity	Part #	Description
1	23XR54009401	Polypropylene Core
6	23XR55013801	Tab
4	AA44AA294	Inlet Muffler Bolt
1	CT99QN951	Gasket (12” Nitrile)
1	17FA241-1052	Discharge Flange Gasket
4	AU044Q301	Washer for Inlet Muffler Bolt
4	CA38EA351	Inlet Muffler Nipple