

Repair Process for Nordyne Micro-Channel Aluminum Coil

Repair Kit

Parts & tools required for repairing aluminum coils:

- Fluxed aluminum brazing rod, provided with the kit (Figure 1)
- Stainless Steel Brush provided with the kit (Figure 1)
- MAPP gas torch (Figure 2)



Figure 1. Steel Brush & Brazing Rod



Figure 2. MAPP Gas Torch



Figure 3. Damaged Micro-Channel Example

ABOUT THE REPAIR PROCESS

This process is designed to repair only outdoor condenser aluminum coils used in Nordyne products. Our Micro-Channel coil system is capable of withstanding considerable impact. If the coil is compromised in any way, this simple repair process only takes a few minutes to repair the damage. The procedure is similar to the tube and fin process with the exception of the lower heat requirement. Preferred means to repair Micro-channel aluminum coil is the MAPP gas torch. Using an acetylene torch to braze is also possible but not recommended as the hotter flame could melt the aluminum and thus ruin the coil. A propane torch will also work but will require the heat to be applied for a longer time in order to get the repair done.

PREPARATION

1. Disconnect the power to the unit.
2. Verify the leak by pressurizing the system through an AC service gauge set using industry standard practices for checking leaks in the HVAC system.
3. Depressurize the system of any gas by using industry standard methods.

REPAIRING THE LEAK

1. If the leak is located in the coil fin area as shown in Figure 3, remove small amount of fin stock with needle nose pliers. See Figure 4.

NOTE: The removal of small amount of fin stock will not degrade the performance of the Micro-Channel system and is necessary for proper cleaning of the repair area.

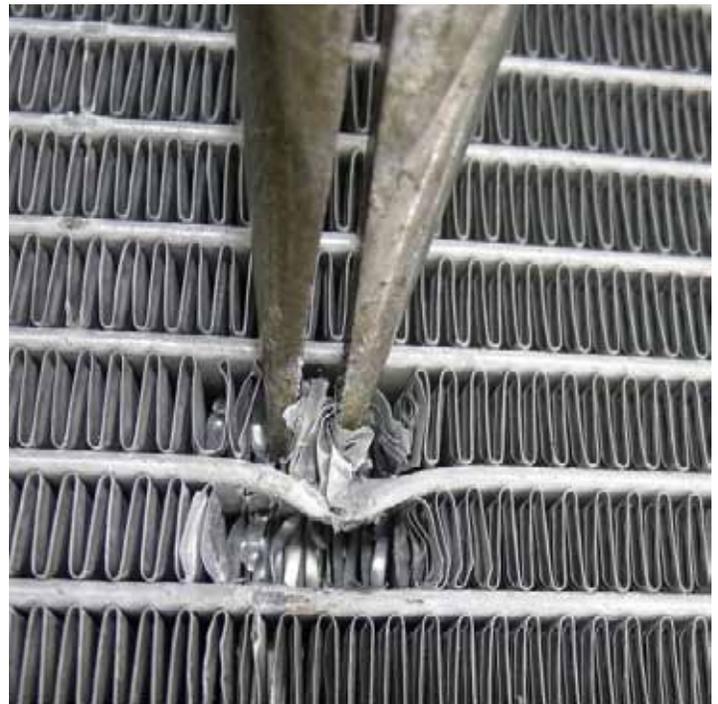


Figure 4. Micro-Channel Damage Removal

2. After the fins have been removed, clean the area with a stainless steel brush in preparation for brazing as shown in Figure 5.
3. Using MAPP gas torch and fluxed aluminum brazing rod, apply heat directly to the damaged spot on the coil and continuously test apply the brazing rod till the brazing rod melts evenly onto the damaged area. See Figure 6.

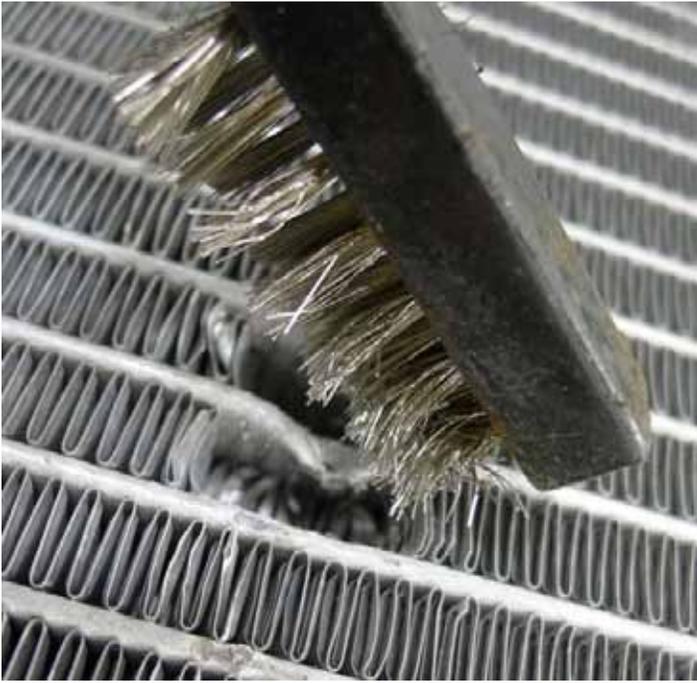


Figure 5. Micro-Channel Preparation

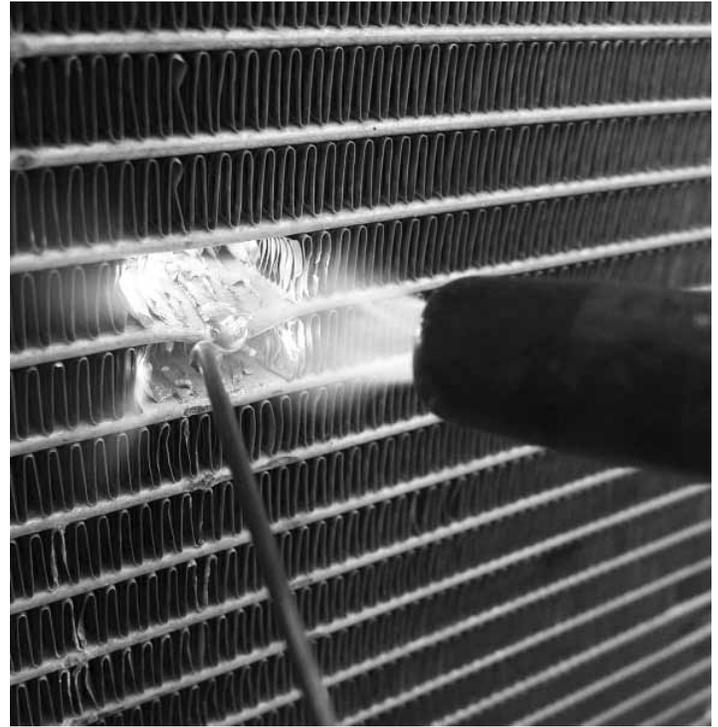


Figure 6. Brazing the Leak

4. When the aluminum repair is complete, replace filter drier.
5. Check the system for leaks. Pressurize the system with nitrogen and apply a soap and water solution to the repair area.

IMPORTANT! If bubbling is observed, the repair is not adequate.

6. Evacuate the system of moisture and non-condensables. The suggested range of evacuation is 250 - 500 microns.
7. Charge the system with refrigerant. Please refer to the unit installation instructions for charging instructions.
8. With the unit back in operation, verify the pressures and temperature for proper operation.

