



June 30, 2006

FIELD SERVICE BULLETIN

TO: Operators of MacBone C Series and S Series air conditioners
SUBJECT: Loss of cooling due to refrigerant loss
MORE INFO: Call MacBone Technical Support @ 888-MACBONE

BACKGROUND: MacBone builds and test runs every air conditioning unit here at the factory for at least one hour to confirm that all specifications are met prior to shipment. We have received comments from the field reporting a/c units not having refrigerant. We assure you that each MacBone unit leaves the factory fully charged with R134 A, and should run properly for many years without needing more refrigerant.

FINDINGS: Upon inspection of several MacBone air conditioners that were returned to us for diagnosis, we found either too much refrigerant or not enough refrigerant. Thanks to the helpful feedback from you in the field, we have discovered the following: the air conditioners are being connected incorrectly to the hydraulic lines! This improper connection to the hydraulics will turn the MacBone air conditioner **BACKWARDS.**

Yes, it runs, and yes, it still blows air. However, the reverse rotation prevents the proper amount of air to be pulled through the condenser coil, which causes high head pressure on the a/c compressor. This high head pressure opens the relief valve on the compressor which in turn causes the system to lose most of its refrigerant.

SOLUTION: Verify proper connection to the hydraulic system as follows:

1. Verify the line that returns to the tank
2. Verify that the case drain returns to the tank
3. Verify pressure line
4. Connect the pressure line as follows:
C SERIES MODELS – THIS IS THE LOWER CONNECTION
S SERIES MODELS – THIS IS THE TOP CONNECTION
5. Connect the return line as follows:
C SERIES MODELS – THIS IS THE TOP CONNECTION THAT IS MARKED OR STAMPED
“RETURN” ON THE MOTOR.
S SERIES MODELS – THIS IS THE BOTTOM CONNECTION
6. Connect the case drain – ALL C & S SERIES MODELS – CENTER CONNECTION
7. Confirm that all hydraulic connections are secure.
8. With the compressor toggle switch off, (down position) and the blue handle speed control in the vertical position, start the oil flow.
9. Slowly rotate blue handle towards the horizontal position. Observe the rotation of the condenser fan. From the control end, looking at the fan, it should be turning clockwise.
10. Continue to move the blue handle to the horizontal position and verify that air flow is moving through the condenser coil, from the outside, through the filter, into the MacBone unit.
11. Replace the weather cover on the MacBone unit and screw it down with the thumb screws.
12. Turn on the cooling toggle switch and enjoy a cool cab.

IMPORTANT! **REVERSE ROTATION IS NOT COVERED UNDER WARRANTY.**
Please verify air flow through the condenser. It should have enough suction to hold your notepad to the outside of the condenser filter.

GOOD NEWS: **ALL MACBONE UNITS ARE NOW TAGGED FOR PROPER CONNECTION!**