



**01-018C
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M501 INSTALLATION INSTRUCTIONS FOR M200AH

I. PURPOSE:

A systematic guide to be used when installing the M501 external converter into your M200AH NO_x analyzer.

II. TOOLS:

7/16" wrench
9/16" wrench
Flat tipped screwdriver
Phillips tipped screwdriver
Diagonal cutters

III. PARTS:

KIT000135 M501 installation KIT

III. PROCEDURE:

1. Turn off the analyzer, remove power, and remove the cover from the analyzer.
2. Once the converter is sufficiently cool, remove the converter from the instrument. Use extra care when taking this apart, use two wrenches on the valve so that you remove the tube and do not disassemble the valve.

WARNING: THE CONVERTER IN THE M200AH OPERATES AT A TEMPERATURE OF 700°C. THIS IS EXTREMELY HOT AND WILL CAUSE BURNS IF THE CONVERTER IS TOUCHED WHEN HOT.

3. Remove the two tubes from the KIT that are labeled "TO" and "FROM" on one end and "TOP VALVE" and "ELBOW FITTING" on the other end.
4. Install (into the rear panel) the two bulkhead fittings into the holes in the middle of the rear panel that are marked "to converter" and "from converter" (see diagram, Page 3).
5. Lay down the rear panel so that you have room to work in the instrument.
6. Lay the two tubes into the instrument and connect the tube that says "TOP VALVE" to the top of that valve. Connect the other tube that says "ELBOW FITTING" to the fitting that is at the base of the manifold to the 90 Deg fitting.

NOTE: Use caution when you are connecting to the valves. Use two wrenches when you tighten the fitting on top of the valve so that you don't over tighten the fitting on the top of the valve and create a leak in the valve.

7. Run the tubes to the rear panel of the instrument and connect the tube that says "TO" the fitting that says "to converter".
8. Connect the fitting that says "FROM" to the fitting on the rear panel that says "from converter"
9. Install the O₃ killer (provided in the kit) into the instrument, so that the connections come out the front of the box and secure it into the instrument with the screws that go through the bottom of the instrument.

10. Connect the heater to the connector on the bracket to the left of the valves, which the old hi-con heater was connected to. Connect the TC to the connector on the status temp card that the old TC was connected to.
11. Fold up the rear panel on the back of the instrument and tighten the screws.
12. Remove the two tubes from the kit that say "to converter" and "from converter" on one side and "to analyzer" and "from analyzer" on the other side. (See diagram on page 4).
13. Connect the "to converter" and "from converter" to the fittings on the rear of the instrument.
14. Connect the "to analyzer" and "from analyzer" to the fittings on the rear of the m501 converter. If you want to change the tubing lengths, you can make them shorter but not longer. If you make them longer, you are going to have to increase the NO_x_DWELL time (see step 17 below), to a longer period. The NO_x DWELL of 6 seconds works for the length of tubing that we send to you if you increase this tubing length to you might see some strange readings for NO₂ value.
15. Leak check the instrument. Do not continue until you are sure that the instrument is not leaking.
16. Turn on the m501 converter and allow it to come up to temperature.
17. Turn on the m200ah. Once the instrument boots up and goes through its startup sequence, push "setup-more-vars-929-enter-next" until you come to "NO_x_DWELL", press "edit" and change this to 6 and push "enter".
18. Push "next" until you come to "NO_DWELL" push "edit" and change this to 4 and push "enter".
19. Push "next" until you come to "CONV_TYPE", push "edit", and change this to "O₃klr" and push "enter".
20. Exit back out to the sample menu. Turn off instrument. Wait 3 minutes and turn back on.
21. Allow the instrument and converter to warm up. The O₃ KLR(change to killer or destructor-don't know what klr means) ought to come up to 200° C, calibrate as normal.



