



AGMSZ IR Bench Replacement Kit 3015-4492

Instruction 3015-4719

Rev. 0 – February 2006

Scope

These instructions describe how to replace the IR bench in the AGMSZ Ammonia Gas Monitor Single Zone shown in Figure 1.

It is assumed that the user is familiar with the operation of the AGMSZ. If necessary, refer to Instruction 3015-4286 for detailed operation and maintenance information.

Items Required:

- Replacement IR Optical Bench Kit 3015-4492:
 - IR Bench Assembly 3015-4282
 - Cable Ties (Qty. 2) 3015-2835
 - Instruction Sheet 3015-4719
- Medium Phillips Head Screwdriver
- Small Flat Blade Screwdriver
- Wire Cutter (for removing cable ties)

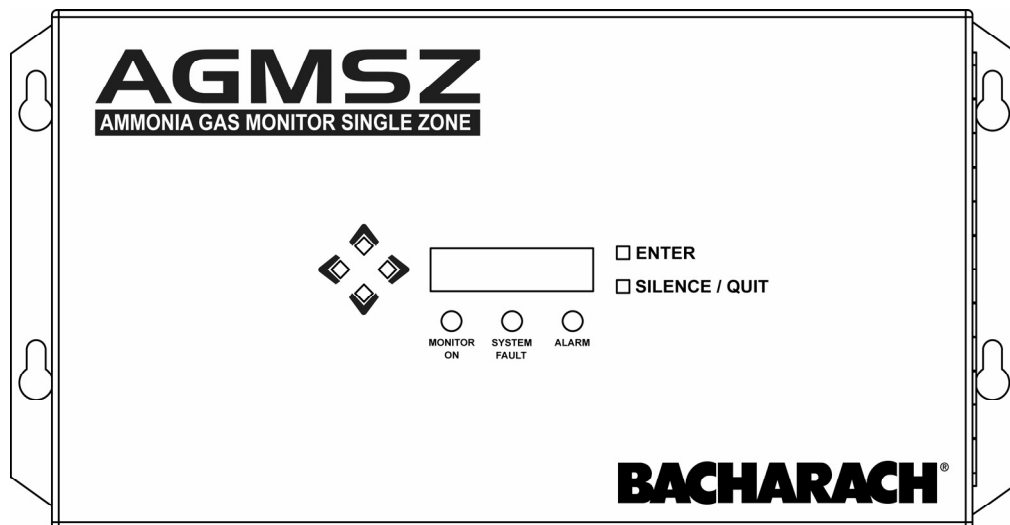


Figure 1. AGMSZ
Ammonia Gas Monitor Single Zone

Removing the IR Bench

1. Find the AGMSZ and switch OFF its AC circuit breaker. Observe that the monitor's front panel green MONITOR ON indicator should be OFF.
2. Use a Phillips screwdriver to remove the monitor's two door screws, and then open the door.
3. Take time to familiarize yourself with the internal components of the AGMSZ shown in Figure 2.

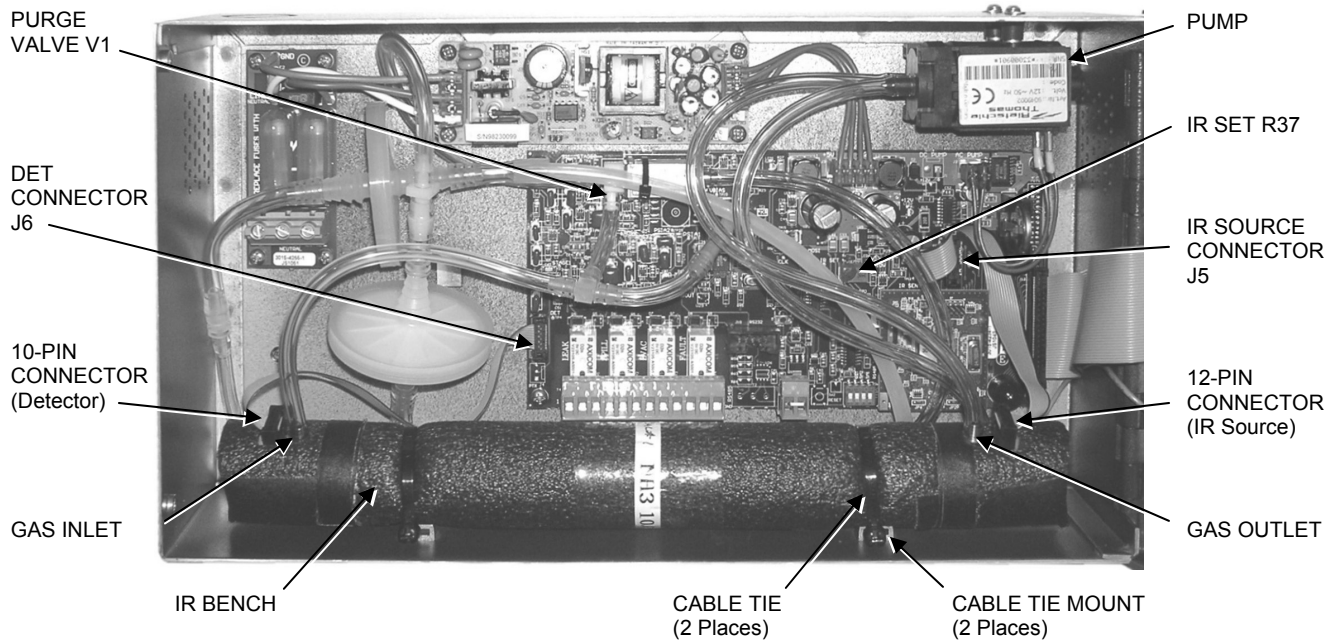


Figure 2. AGMSZ Components

4. Refer to Figure 2 and perform the following to remove the old IR bench:
 - a. Pull the 10-pin and 12-pin electrical connectors from their sockets on the IR bench. Note that these connectors may have been secured in place for shipping purposes with either hot-glue or cable ties. As necessary, either pry the hot-glue from each connector, or cut off the cable ties.
 - b. Pull the tubing from the gas-inlet and gas-outlet fittings on the IR bench.
 - c. Using wire cutters, cut the two cable ties that secure the IR bench to the enclosure, and then remove the bench.

Installing the New IR Bench

5. Perform the following to install the new IR bench:
 - a. Remove protective caps from the gas-inlet and gas-outlet fittings on the new IR bench.
 - b. Position the new bench inside the AGMSZ enclosure so that the end with the 12-pin electrical connector (IR Source) is located on the *right*, and that the gas fittings are facing upwards.
 - c. Using the two cable ties supplied in the kit, secure the bench to the cable-tie mounts on the side wall of the enclosure. Cut off any cable-tie excess.
 - d. Connect tubing from pump to the IR bench gas-outlet fitting, and connect tubing from purge valve V1 to the IR bench gas-inlet fitting.
 - e. Plug the 12-conductor ribbon cable from IR SOURCE connector J5 on the main board into the 12-pin IR bench connector.
 - f. Plug the 10-conductor ribbon cable from DET connector J6 on the main board into the 10-pin IR bench connector.

6. Check to ensure that the new IR bench is properly secured, and that all tubing and electrical connectors are tight.
7. Turn ON the AGMSZ's AC circuit breaker.
8. Allow the monitor to warm-up for at least ½ hour before proceeding.

Adjusting the IR Bench Voltage

9. Enter the monitor's set-up mode and display the IR bench voltage adjustment screen as follows:

- a. With the monitor in its MEASURE mode, use the Keypad buttons to place the arrow (>) on the display next to the CAL function.

```
SILENCE  ZONETMP
SQUELCH >CAL
```

- b. Press the Right-Arrow and ENTER buttons at the *same time* to display the revision screen.

```
REV  M  D  Y
%.xx at HH:MM:SS
```

- c. Press the QUIT button to display the set-up screen.

- d. With the arrow (>) next to the DIGIPOT function, press the ENTER button to display the IR bench voltage adjustment screen.

```
>DIGIPOT  MODEL
P CAL      IR
```

10. While observing the IR VOLT reading, use the Up- and Down-Arrow buttons to obtain a reading of 4.200 ±0.100 volts. Note that the DIGIPOT value may vary from what is shown in the display on the right.

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DIGIPOT=193
IR VOLT=4.200
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If the voltage is too high and cannot be adjusted down to 4.2 volts as described above, then perform Step 11; otherwise, skip to Step 12.

11. Perform the following *only* if the IR bench voltage cannot be adjusted to within the desired voltage range as described in Step 10:
 - a. While observing the DIGIPOT reading, use the Up- and Down-Arrow buttons to obtain a reading of 220.
 - b. While observing the IR VOLT reading, use a small blade screwdriver to adjust IR SET potentiometer R37 (see Figure 2) for a reading of 4.200 ±0.100 volts.
12. Press the ENTER button, and then press the QUIT button *twice* to exit the monitor's set-up mode.
13. Upon exiting the set-up mode a purge cycle will be performed; after which, the monitor will automatically return to its MEASURE mode.
14. Close and secure the enclosure door using the screws removed in Step 2.
15. The monitor can now be placed back into service.



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