Field Installation Instructions

INSTALLATION MUST BE PERFORMED BY QUALIFIED SUN SERVICE PERSONNEL ONLY

The **MGA-9000 is** shipped as a fully assembled unit, with the exception of the keyboard and accessories.

PARTS LIST

QUAN.	PART NO.	DESCRIPTION	QUAN.	PART NO.	DESCRIPTION
2	2161-0023	Lead Hanger	1	0124-0105-01	Hook, 4"
1	3988-0230-01	Exhaust Hose, Long	2	0131-0024	Regulator
1	3988-0231-01	Exhaust Hose, Short	1	0144-0010-01	Rubber Strap
1	6004-0262-05	Trigger Lead, Short	4	0301-0944-01	Filter, 75 Micron
1	6004-0462	Volt/Ohm Lead	4	0301-0945-01	Filter, 8 Micron
1	6004-0566-01	Tach Lead (Blue)	2	0403-1541-08	Screws, 10-32x1/2"
1	6005-0181-01	Quad 4 Nissan Adapt	1	0424-0804-01	Velcro loop
1	6005-0184-01	BMW Adapter	1	0424-0804-02	Velcro Hook
1	6005-0184-02	Acura Adapter	2	0528-0995	Printer Ribbon
1	7009-1700	Adapter Kit	1	0528-0994-01	Printer Paper
2	7009-1869	Exhaust Probe Assy.	1	0552-0990-01	Keyboard, 101 key
1	7009-1929	Trigger Pickup, Blk	1	0552-0993-01	Keyboard Protector
1	7009-2017-01	Anti-Dilution Probe	1	0552-0104-01	Dos 6.22 package
1	7009-2035-01	Hose, Restrictor	2	0647-0069	Brass Fitting
1	7009-2035-02	Hose, Restrictor	1	0682-1041-01	Label, Keyboard
8"	8200-0100-01	Tubing (8")	6	1374-0110-01	Black Plastic Plug
1	0718-0103	Clamp Assy.	1	6004-0606-01	Cable assy.
2	0403-1411-08	Screws	1	4053-0019-01	Rubber Gasket
1	7009-2223-01	Nissan 300ZX adapt.	1	0552-0071-01	Bar Code Reader
1	0552-0072-01	1.44 Floppy Disk	1	7009-2058-01	Holster
			1	0119-0359-01	Literature Kit
			2	0758-0200-01	Hose Caps

REQUIRED TOOLS

Service Box   Nut Drivers   Service Keys
Low Scale bottle   Mid Scale bottle   Flow Gauge

INSTALLATION

1. Cut the Straps, and remove the top of the carton, top packing, and carton sides.

2. Slide the MGA-9000 and carton base off of the pallet, and split the corners of the base carton.

3. Lean the MGA-9000 so that one half of the foam base can be removed.

4. Lean the MGA-9000 so the other half of the foam base can be removed.

5. Open the Computer Drawer and ensure the boards are seated properly in each backplane. Visually inspect all connectors, making sure they are all properly connected.

   NOTE: Connector *P720* is *normally not connected* and is used *for* the *PC Floppy option.*

6. Using the Service Box, plug P424 into J424 on the System Interface Board.

7. Remove P412 from the Systems Storage Board and plug the Service Box in its place. Then reconnect P412 from hard drive into the T-Connector on the Service Box. Hang the Service Box on the side of the computer drawer.

8. Check for proper AC and GROUND connections before turning the unit on.

9. Remove the keyboard from its box and plug the connector into the keyboard jack on the front of the tester. Attach the keyboard label to the keyboard.

10. Plug the tester into an A/C outlet. Push in the Circuit Breaker/Switch on the rear of the computer drawer to turn on unit.

11. Place the Operate/Standby switch into the operate position.

12. Load Software using the Service Box. On new units this procedure is completely automatic and needs no operator assistance.

13. Verify that the accessories listed on the first page are all present on the bottom shelf of the MGA-9000.

14. Attach protective skin to keyboard, secure by peeling off backing exposing adhesive.

15. In order to mount the velcro, turn keyboard upside down. Peel off backing on hook side of velcro and attach to keyboard. Attach mating velcro (soft side) to the hook side. Remove backing exposing adhesive, Place keyboard in its proper position and press firmly.

16. Remove all tape from the Lower printer and remove the carriage cover to gain access to the print head. *Ensure* that the printer ribbon cartridge is installed properly and remove the plastic stop that secures the print head.

17. Repeat step 16 for the Upper Printer.

18. Load a package of printer paper into the lower printer.

19. Insert the 6 black plastic plugs (1374-0110-01) into the six holes, just above casters, on the base of the tester.

20. Using the two 10-32x1/2" screws (0403-1541-08) install the two hangers into the slots on the rear of the computer drawer.

21. Mount 4" round hook (0124-0105-01) to the bottom shelf in the rear of the tester. This is used to attach the rubber strap and secure the gas bottles to the shelf.

22. Modem Option: Place the clamp (0718-0103) around the telephone cable. Mount clamp with hanger screw. Position clamp so if disconnected from unit it will not hang closer then 18" from the floor. (See bulletin #663)

23. Remove Bar Code Reader holster (7009-2058-01) from packing material.

24. Mount holster to left-hand side of tester between the two grey panels using hardware included (0403-1411-08).

25. Connect Bar Code Scanner cable to serial port B on back of unit. *Secure* with two screws attached.

26. Connect rubber gasket (4053-0019-01) around head of Bar Code Scanner.

27. Connect the Tach Lead (6004-0566-01), Volt/Ohm Lead (6004-0462), Leak Check Adapter (7009-1700), Drain hose for Aspirator (8200-0100-01), and Exhaust Hose (3988-0230-01) to their perspective connections.

28. Cut the Drain Hose length just enough so it does not reach the Exhaust port outlet.

29. Attach the Exhaust probes (7009-1869) to the two Exhaust Hoses (3988-0230-01) & (3988-0231-01), and place the short hose in the storage shelf in the rear, along with all the Tach Pickups, Anti-Dilution Probe, Filters, Printer Ribbon, and the DOS 6.22 Package.

30. Attach the regulators to the two gas bottles, and attach the two brass fittings to the regulators.

31. Attach the hose, with label, to the proper tanks.
    (7009-2035-01) = Low CAl Port / 7009-2035-02 = Mid Cal Port)

32. At this time, the software should be loaded as indicated on the Screen. Power the MGA-9000 down using the Circuit Breaker on the back panel and remove the Service Box.

33. Reconnect cables that were disconnected in steps 6 and 7 (P-424 & P-412). Press the Circuit Breaker/Switch to power up the MGA-9000. The MGA will perform systems test and prompt you for the Service access code. Enter it.

34. From the Service Menu, select "Manual Calibration". Select "Cal Port 1" and press "Enter".

35. With the IR Pump "ON", connect the Flow Meter to the Exhaust port, and record the flow rate.

36. **Press** "Enter", **select** "Cal Port 2", and press "Enter". Record the Flow rate again.

37. Disconnect the Flow Gauge from the exhaust port and connect it to the Low Scale bottle. Turn the **gas** on and **adjust** the Regulator to match the flow of Cal Port 1 as recorded in step 34. Turn off the gas.

38. Disconnect the Flow Gauge from the Low Scale bottle and connect it to the Zero Gas Tank. Turn the **gas** on and adjust the Regulator to match the **flow** Of **Cal** Port 2, as recorded in **step 35.** Turn off the **gas and** disconnect the Flow Meter.

39. Place the gas bottles in the bottom of the cabinet, strapping them down with the Rubber Strap. Connect the Low Scale Gas Hose to Cal Port 1, and Zero Gas Hose to Cal Port 2.

40. From the Service Menu, select "Set Time and Date". Follow the prompts on this page to enter the correct time and Date, including Daylight Savings Time or Standard Time.
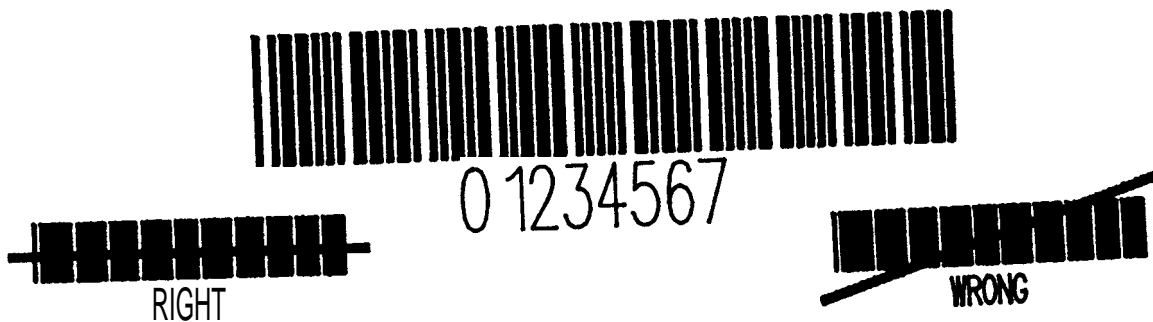
<div align="center">***INSTALLATION COMPLETE***</div>

CHECK-OUT PROCEDURE:

NOTE: *DO **NOT** HOLD BAR CODE READER Perpendicular? (90 Degrees) TO CODE.*
BEST USED AT 45 DEGREE ANGLE AND POINTED AT CENTER.

CAUTION: USE *OF* **CONTROLS, ADJUSTMENTS, OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS INVISIBLE LIGHT EXPOSURE**

1. With unit on, aim Scanner at sample (Figure 2) and press the trigger. Scanner should have read the symbol when:
A. You hear the beep.
B. Decode LED turns *green* and laser turns off. If nothing happens see service manual.

2. From the "Station Menu", Perform "Gas Calibration".

3. From the "Station Menu", Perform "Leak Check".

4. All other parameters are to be left Blank and the unit **is** to remain in LOCKOUT until the State Representative can come and certify the site.

RIGHT

0 1234567

WRONG

Figure #1   **Figure** #2   **Figure** #3

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* SET UP COMPLETE *

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