



**SUN ELECTRIC CORPORATION**

**Model:** MRC-450  
MRC-450-3  
MRC-450-6  
MRC-450-GR

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# Installation Instructions

**INSTALLATION MUST BE PERFORMED  
BY  
QUALIFIED SUN PERSONNEL ONLY**

## INSTALLATION OVERVIEW: \_\_\_\_\_

The Installation Procedures listed are for the MRC-450, (-3) (-6) & (GR). The unit is shipped as a fully assembled unit, with the exception of the items listed in the Parts & Accessories per tester.

**PLEASE READ THESE INSTRUCTIONS COMPLETELY BEFORE SETTING UP UNIT.**



## **CAUTION!**

THIS UNIT MUST BE PLUGGED IN TO A PROPER AC OUTLET FOR UNIT TO OPERATE CORRECTLY. REFER TO UNIT ID PLATE LOCATED ON BACK OF UNIT. EXTENSION CORDS ARE NOT RECOMMENDED, BUT IF AN EXTENSION CORD MUST BE USED, USE A CORD THAT IS LESS THAN 50 FEET WITH A 16 AWG, OR ABOVE 50 FEET AND LESS THAN 100 WITH A 14 AWG.



## **WARNING!**

USE STANDARD REFRIGERANT HANDLING SAFETY PROCEDURES WHEN PERFORMING INSTALLATION

ALWAYS WEAR SAFETY GOGGLES, DON'T SPILL OR TOUCH LIQUID REFRIGERANT, AVOID FLAMES, AND EXCESSIVE HEAT. USE ONLY IN WELL VENTILATED AREA.

## REQUIRED TOOLS: \_\_\_\_\_

- ù 7" Crescent
- ù Screw driver (Flat Blade and Phillips)
- ù Safety Goggles (0001-5005)
- ù Refrigerant Oil (Mineral)

**PARTS & ACCESSORIES LIST FOR:** \_\_\_\_\_

PART NUMBER	DESCRIPTION	MRC-450	(-3)	(-6)	(-GR)
0119-0337-01	Literature Kit	-	1	-	-
0119-0349-01	Literature Kit	-	-	-	1
0119-0361-01	Literature Kit	-	-	1	-
0119-0363-01	Literature Kit	1	-	-	-
*0400-0036	Washer, Flat, #10	-	-	-	2
*0403-1541-08	Screw, 10-32 x 1/2 HXSMS	-	-	-	1
*0403-1541-16	Screw, Mach 10-32 x 1	-	-	-	1
0647-0287-09	Adapter, R-134a, High Service	1	1	1	1
0647-0287-10	Adapter, R-134a, Low Service	1	1	1	1
0671-1018-02	Desiccant Bag	10	10	10	10
0692-1834-01	SEL 1403C Questionnaire	1	1	1	1
0692-2304-01	Installation Instruction	1	1	1	1
*0692-2253-01	Tank Band Installation Instructions	1	1	1	1
0693-2013-01	Video	1			
*0710-0032	Tinneman	-	-	-	2
3988-0278-01	Hose Assembly, Yellow, 36", Utility	1	1	1	1
4211-0001-01	Envelope, Clear	1	1	1	1
6001-0197-01	AC Power Cord	1	-	1	-
6001-0200-01	AC Power Cord	-	1	-	1
6004-0760-01	Cable, Recovery Tank	1	1	1	1
6004-0777-01	Cable Assembly, Temperature Probe	1	1	1	1
7009-2331-03	Recovery Tank Assembly	1	1	-	1
7009-2418-01	Inline Filter	1	1	1	1
*7012-1568-01	Band, 30lb. Tank	-	-	-	1
ARG04040	O-Ring Repair Kit (For Vehicle Adapter)	1	1	1	1
EAH0001C01A	Blue Hose Assembly, 96"	1	1	1	1
EAH0001C02A	Red Hose Assembly, 96"	1	1	1	1

\* Part of the Tank Band Kit

**UNPACKING UNIT AND ACCESSORIES:** \_\_\_\_\_

1. Cut Straps, and remove top of the carton, top packing, and carton sides.
2. Slide the unit and carton base off the pallet, and split the corners of the base carton.
3. Lean the unit so that one half of the cardboard base can be removed.
4. Lean the unit so the other half of the cardboard base can be removed.
5. Inventory all items using the parts list and inspect for damage. Place the four adapters, Desiccant bags, and the Cap Plugs in the Storage Compartment on the rear of the unit.
6. Place the Literature Kit (0119-0337-01 or 0119-0349-01 or 0119-0361-01 or 0119-0363-010), that includes the User's manual, and O-Ring Kit (ARG04040) in the Storage Compartment in back of unit.
7. Remove the packing material from under the scale by slightly lifting scale plate and sliding cardboard blocks toward the sides of the unit until blocks are clear. Use a wrench to remove the four nuts that secure the scale for shipping.
8. Remove the User's Manual from the Literature Kit, and place the remainder of the Literature Kit (0119-0337-01 or 0119-0349-01 or 0119-0361-01 or 0119-0363-01) in the Storage Compartment on top of unit.

**UNPACKING UNIT AND ACCESSORIES: (cont)**

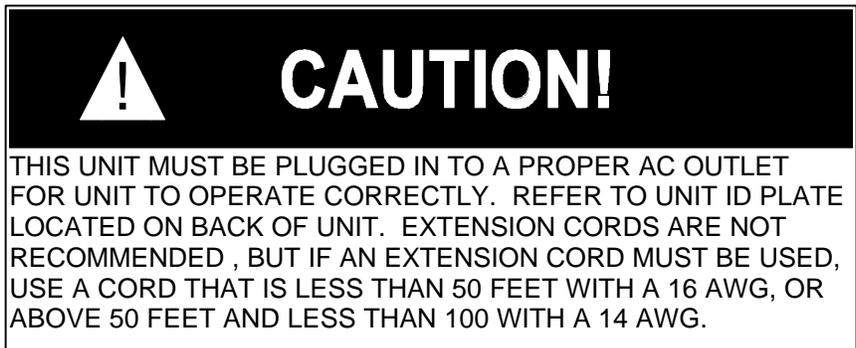
BE SURE TO REVIEW THE USER'S MANUAL WITH THE CUSTOMER DURING TRAINING. Then before installing the User's Manual Envelope, ask where the customer would like the envelope installed. For the MRC-450 only, there is also a Video Tape (0693-2013-01) supplied and can be viewed at the customer's convenience.

9. Peel the backing from the User's Manual Envelope (4211-0001-01) and apply the envelope, with the open end on top, to either side of the unit or in the location designated by the customer.
10. Place the User's Manual in the Envelope.

**PARTS AND ACCESSORIES SETUP:** \_\_\_\_\_

1. Remove black cap from LOW port on rear of tester.
2. Attach the Temperature Probe Assembly (6004-0777-01) to the four pin connector located below the pump compartment. Place the probe tip next to the recovery tank temperature sensor, located on the right Velcro strap that holds the tank in place.
3. Remove the Recovery Tank Assembly (7009-2331-03) from box. Remove cardboard wrap from around tank. (MRC-450-6) Obtain Recovery tank from customer.
4. Open both hand valves on recovery tank to relieve the compressed air charge.

**POWER UP, CALIBRATION / PARAMETER SETUP:** \_\_\_\_\_



1. Plug the unit into proper A.C. outlet and turn on the Main Power Switch on the rear of the unit. Make sure none of the hoses are lying on the scale.
2. Press the **<POWER ON/OFF>** on the front panel. The unit will go through the power up sequence and then display zero. Wait for 2 beeps indicating scale is stable.

**NOTE:** *IF DISPLAY IS OTHER THEN ZERO, REMOVE RECOVERY TANK FROM THE BOX AND PLACE RECOVERY TANK ON SCALE. ATTACH FLOAT CABLE. WAIT FOR 2 BEEPS, CALIBRATE AND THEN REMOVE TANK.*

3. Press **<TEMP>**. If the left display shows a temperature, go to next step. If it displays "----", the temperature probe is not installed correctly, is defective, or there is a problem with the unit. Correct the problem before proceeding.
4. **OIL** the seals and attach the YELLOW Utility hose (3988-0278-01) to the LOW port on the back panel. Connect the other end to the Blue valve on the recovery tank, finger tight.
5. Press **<AUTO SEQUENCE>** on the Front panel. Observe that the "VACUUM TIME" and "AUTO SEQUENCE" LED is on.

**POWER UP, CALIBRATION / PARAMETER SETUP: (cont)**

6. Press **<UP>** twice. The number ten should appear in the right LCD.
7. Press **<HOLD/ENTER/RESTART>** five (5) times. The evacuation procedure will start and run for ten minutes. The LCD should indicate at least 27 IN/HG, 700mmHG, 90 Bar, or 900 mbar. When the unit beeps twice, the procedure is finished and the "COMPLETED LED" is on.
8. Close the BLUE tank valve. Disconnect the yellow utility hose and store in glove box.
9. Remove black cap from HIGH port on rear of tester.
10. **CALIBRATION:** Press and hold **<HOLD/ENTER/RESTART>** until "CAL" is displayed.
11. Press **<RECLAIM ONLY>**, observe that the "IN PROGRESS" LED is flashing and the "HOLD" LED is on.
12. Press **<HOLD/ENTER/RESTART>**. Unit will enter a 3 minute delay for stabilization. If pressure is measured, the unit will Recover that pressure and then go into a 3 minute delay. After the 3 minute delay the right display will show the temperature of the Recovery Tank Temperature Sensor.
13. If temperature matches ambient, press **<HOLD/ENTER/RESTART>** again. If not press **<UP>** or **<DOWN>** keys to adjust. The unit will sound one long beep and the "COMPLETED LED" will be on. The temperature probe may be removed from the Recovery Tank Sensor.
14. Programming of the Default Settings can be accessed by pressing and holding both the **<UP>** and **<DOWN>** arrows at the same time for 5 seconds. Select desired default setting by pressing the **<UP>** and **<DOWN>** arrows individually and pressing **<ENTER>** to program. R134a should be displayed for refrigerant type, if not see service manual for correct Dip switch settings.

**PREPARING UNITS HOSES AND SCALE:** \_\_\_\_\_

1. **OIL** o-rings on two Inline Particle Filters (7009-2418-01) Install one filter on each of the high and low side fittings on rear panel.
2. **OIL** the seals in the RED Hose Assembly (EAH0001C02A) and attach to the Inline Particle Filter (7009-2418-01) on the HIGH side fitting.
3. **OIL** the seals in the BLUE Hose Assembly (EAH0001C01A) and attach to the Inline Particle Filter (7009-2418-01) on the LOW fitting.
4. **OIL** the seal and attach the HIGH side R-134a vehicle adapter (0647-0287-09) to the red hose assembly.
5. **OIL** the seal and attach the LOW side vehicle adapter (0647-0287-10) to the BLUE Hose Assembly.
6. **OIL** the seals and install Inline Particle Filter (7009-2418-01) on Low side fitting on Recovery Tank Assembly. **OIL** seal on the Blue Hose in the Scale Compartment and connect to the Low side Inline Particle Filter (BLUE).
7. **OIL** seals on the Red Hose in the Scale Compartment and connect to the fitting with the RED Tank Valve on the Recovery Tank Assembly.
8. Set the Tank GENTLY on the Scale and secure it to the Right side of the Scale as viewed from the rear using the Velcro strap (CONFIRM TANK DEPRESSED SWITCH). Wait for 2 beeps indicating the scale is stable.

**PREPARING UNITS HOSES AND SCALE: (cont)**

9. Connect the Recovery Tank Cable Assembly (6004-0760-01) to the Tank and the "Tank Sensor" fitting on the underside of the pump compartment.
10. Open the Red and Blue valves on the Recovery Tank.

**NOTE:** *HEATER BLANKET IS EXTREMELY HOT!*

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SAFETY PROCEDURES WHEN PERFORMING INSTALLATION

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11. For the MRC-450-6 and -GR, obtain the Virgin Tank from the Customer. Loosen hardware on the heater blanket, adjust heater blanket and tank switch to match the height of the virgin tank being installed. Retighten hardware.
12. Oil o-ring in the inline filter (7009-2418) and attach to the virgin tank fitting and connect the Blue Hose in the Scale Compartment to the inline filter. Open the Tank Valve.
13. Set the virgin tank GENTLY on the Scale and secure it with the heater blanket straps (CONFIRM TANK DEPRESSED SWITCH). Wait for 2 beeps indicating scale is stable.
14. Complete the questionnaire (0692-1834-01) and mail it to Sun Electric Corp.
15. Install Tank Band using instructions (0692-2253-01) if required.

**INSTALLATION COMPLETE**

**REMEMBER TO OIL O-RINGS AND SEALS  
WHEN ATTACHING HOSES OR FITTINGS**