

# RHS<sup>®</sup> 980

## Operation Manual



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## **CONGRATULATIONS**

**You have purchased one of the finest Recovery, Recycling and Charging Machines certified to SAE Standard J2788!**

**Fill out and return the Warranty Card within 90 days to activate warranty and free lifetime technical support.**

# NOTES

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## OVERVIEW OF THE RHS980 AND HOW TO OPERATE IT

The RHS980 is designed for intuitive operation with menu driven prompts on the display.

However, a few minutes spent reviewing the contents of this operation manual will enable the technician to understand and optimize the use of the RHS980 to provide customers with a professional A/C service.

The display shows data such as weight and prompts the technician for input using the alpha-numeric keypad and various navigation buttons.

The RHS980 can be used to perform a fully automatic A/C service. The technician will be prompted for entry of data such as charge amount and given options such as vacuum leak test. Once the necessary data has been entered, the RHS980 will automatically perform the complete A/C service and alert the technician for interaction or that the service is complete.

The RHS980 can also be used to perform individual functions such as recycle, vacuum or charge. The keypad has dedicated buttons (AUTOMATIC, RECYCLE, VACUUM and CHARGE) to allow the technician to jump directly to any one of these functions.

Units of measure displayed can be changed at any time by repeatedly pressing the **U/M** key.

A setup routine can be used to select options, set default values, check calibration and manage refrigerant and oil.

**IMPORTANT** – review the Startup & Safe Operation statements on the following page before operating the RHS980. Failure to do so may cause personal injury or cause the RHS980 to malfunction.

The Automatic Mode of operation is explained in the following pages. The screen which will be displayed for each step is shown on the left. A description of the RHS980 operation is shown to the right of each screen.

### ► **VERY IMPORTANT – MACHINE SHUTDOWN** ◀

The new SAE Standard J2788 dictates that the filter must be changed at set intervals to ensure that recycled refrigerant is pure.

The RHS980 has one filter which must be changed after recycling every 150 lbs. of refrigerant.

The technician will be alerted when the filter life is at 100 lbs. This allows time to order a replacement filter kit (P/N 360-82133-00).

When the filter has purified 150 lbs. of refrigerant, **the RHS980 will shut down** and not perform any function.

A new filter must be installed to re-activate the RHS980 controller.

Fill out and return the Warranty Registration to activate the RHS980 warranty and free lifetime technical support. This can also be done by calling RTI Technologies and providing information to one of the Technical Support Technicians.

**Call 800-468-2321**

## **STARTUP & SAFE OPERATION**

- Do not use a damaged unit. Check for shipping damage and place a claim with carrier if damage is discovered.
- Return the Warranty Card to activate technical support service and warranty coverage.
- The RHS980 should be operated by certified personnel only.
- The RHS980 should not be operated or serviced by any person who has not read all the contents of this manual.
- This manual describes normal operation and maintenance for the RHS980. Failure to read and comply with these instructions or any one of the limitations noted herein can result in serious injury and/or property damage. The instructions should not be interpreted to anticipate every possible contingency.
- It is the responsibility of the owner/user to operate the RHS980 in accordance with all laws and specifications which may apply.
- Recover, recycle, and charge only R134a.
- Avoid breathing refrigerant or lubricant vapor. Exposure may irritate eyes, nose and throat. Ventilate work area if accidental system discharge occurs.
- Wear safety glasses and protective gloves. Refrigerant has a very low boiling point and can cause frostbite.
- Follow the RHS980 operating procedures sequentially to avoid prematurely disconnecting hoses or opening valves which may release refrigerant to the atmosphere.
- Do not expose the RHS980 to moisture or operate in wet areas.
- Use the RHS980 in locations with ventilation that provides at least four air changes per hour.
- Service hoses must be constructed of the proper materials and should be of minimal length. Hoses must have shutoff devices at the connection point to the A/C to minimize the introduction of air into the RHS980 and the release of refrigerant when being disconnected.
- Avoid using an extension cord with the RHS980. If necessary use a good condition, three wire grounded, #14 AWG or larger extension cord of the shortest possible length.
- Disconnect power before performing any maintenance or service on the RHS980.
- Do not connect the RHS980 to the liquid side of any A/C with a capacity greater than 4 lbs. Refrigerant in A/C Systems having larger capacities must be recovered from the vapor side only.
- 

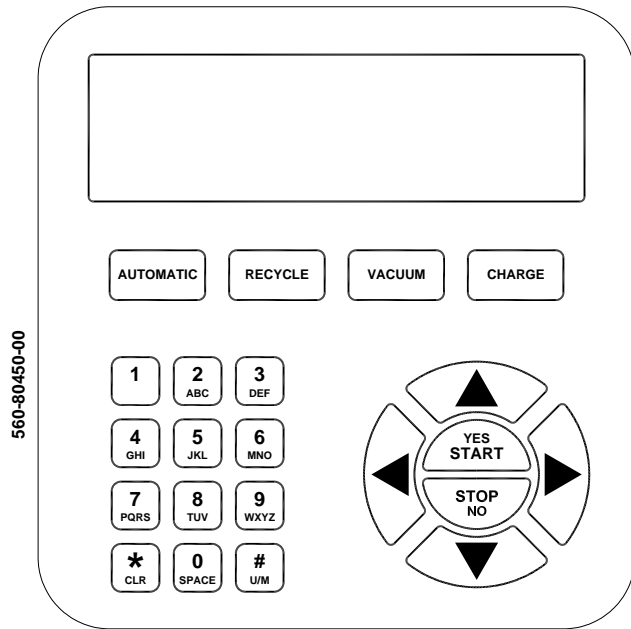
## **SPECIAL CONSIDERATIONS WITH R134a**

R134a has been shown to be nonflammable at ambient temperature and atmospheric pressure. However, tests under controlled conditions have indicated that at pressures above atmospheric and with air concentrations greater than 60 percent by volume, R134a can form combustible mixtures.

While it is recognized that an ignition source is also required for combustion to occur, the presence of combustible mixtures is a potentially dangerous situation and should be avoided.

Under no circumstances should any equipment be pressure tested or leak tested with air and R134a mixtures. Do not use compressed air for leak detection in R134a systems.

# CONTROL PANEL



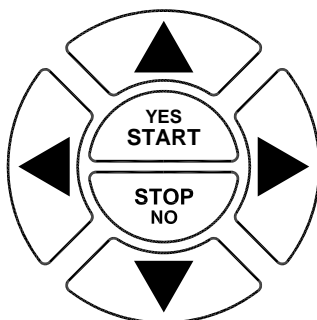
Pressing any one of these four buttons causes the RHS980 to jump to the respective procedure.



The alpha-numeric keypad is used to enter data when prompted on the LCD screen.

**Note:**

The # key also has U/M printed on it. Pressing this key will toggle the units of measure displayed on the LCD screen.



Pressing any one of the arrow keys will move the point of data entry on the LCD screen in the respective direction.

Also, some screens will give options to select. The arrow keys make it possible to select the desired input.

The START and STOP buttons are used to start or stop procedures as prompted on the LCD screen.

# FIRST TIME USE

The first time a new RHS980 is turned on it will automatically perform a routine where the language is selected. The language can be changed later if desired in the Setup Mode.

The RHS980 will arrive without any refrigerant. It will be necessary to put new refrigerant into the internal charge cylinder before any other sequences can be run. The amount of refrigerant which must be transferred is factory set at 18 lbs. Connect the short yellow hose on the rear of the RHS980 to a new 30 lb. cylinder of refrigerant. Open the cylinder valve, turn the cylinder up-side-down and place it on the platform. Secure with web belt.

Plug the power cord into an appropriate power source. Avoid using an extension cord. If necessary, use a good condition, three wire grounded, #14 AWG or larger extension cord of the shortest possible length.

|  |  |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |
|--|--|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|
|  |  |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |
|  |  | R | T | I |  | T | E | C | H | N | O | L | O | G | I | E | S |  |  |  |  |  |  |
|  |  |   |   |   |  | R | H | S | 9 | 8 | 0 |   |   |   |   |   |   |  |  |  |  |  |  |
|  |  |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |

Press the Power Switch to turn on the RHS980.

The screen shown to the left will be displayed and a buzzer will sound.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| S | E | L | E | C | T | L | A | N | G | U | A | G | E |   |   |   |   |   |   |  |  |  |
| ▶ | E | N | G | L | I | S | H |   |   | E | S | P | A | Ñ | O | L |   |   |   |  |  |  |
|   | F | R | A | N | Ç | A | I | S |   | D | E | U | T | C | H |   |   |   |   |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | ▲ | , | ▼ |  |  |  |

Press ▲ or ▼ key to scroll the displayed arrow to the desired language. Press **START** key.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| W | E | I | G | H | T | = |   | # | # | . | # | L | B |   |   |   |   |   |   |  |  |  |
| A | U | T | O | M | A | T | I | C |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   | S | T | A | R | T | ? |  |  |  |

The screen shown to the left will be displayed. Press the ▼ key to scroll to the next screen.

|   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| W | E | I | G | H | T | = |  | # | # | . | # | L | B |   |   |   |   |   |   |  |  |  |
| R | E | C | Y | C | L | E |  |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|   |   |   |   |   |   |   |  |   |   |   |   |   |   | S | T | A | R | T | ? |  |  |  |

Press ▼ key.

|   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| W | E | I | G | H | T | = |  | # | # | . | # | L | B |   |   |   |   |   |   |  |  |  |
| V | A | C | U | U | M |   |  |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|   |   |   |   |   |   |   |  |   |   |   |   |   |   | S | T | A | R | T | ? |  |  |  |

Press ▼ key.

|   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| W | E | I | G | H | T | = |  | # | # | . | # | L | B |   |   |   |   |   |   |  |  |  |
| C | H | A | R | G | E |   |  |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|   |   |   |   |   |   |   |  |   |   |   |   |   |   | S | T | A | R | T | ? |  |  |  |

Press ▼ key.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| W | E | I | G | H | T | = |   | # | # | . | # | L | B |   |   |   |   |   |   |  |  |  |
| F | I | L | L | C | Y | L | I | N | D | E | R |   |   |   |   |   |   |   |   |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   | S | T | A | R | T | ? |  |  |  |

Press **START** key.

|   |   |   |   |   |   |   |   |   |   |   |   |  |  |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|--|--|--|
| C | O | N | N | E | C | T | H | O | S | E | S |  |  |   |   |   |   |   |   |  |  |  |
| O | P | E | N | V | A | L | V | E | S |   |   |  |  |   |   |   |   |   |   |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |  |  | S | T | A | R | T | ? |  |  |  |

This is a reminder that the cylinder of new refrigerant must be connected to the yellow hose on the rear of the RHS980. Press **START** key.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| F | I | L | L | C | Y | L | I | N | P | R | O | C | E | S | S |  |
| A | M | T | F | I | L | L | E | D | # | # | . | # | # | K | G |  |
| S | T | O | P | T | O | E | N | D |   |   |   |   |   |   |   |  |

Refrigerant will be transferred from the cylinder on the rear platform into the internal charge cylinder of the RHS980.

The amount transferred will be displayed.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| F | I | L | L | C | Y | L | I | N | P | R | O | C | E | S | S |  |
| T | I | M | E | L | E | F | T | # | # | . | # | # |   |   |   |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |

The Fill Cylinder procedure is complete when approximately 18 lbs. of refrigerant has been transferred. The Setup procedure allows changing the value and is covered elsewhere in this manual.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| F | I | L | L | C | Y | L | C | O | M | P | L | E | T | E |   |  |
| A | M | T | F | I | L | L | E | D | # | # | . | # | # | K | G |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |

## REFRIGERANT BLENDS

The RHS980 is designed to recover, recycle and charge R134a. Take extreme precaution to ensure that other refrigerants are not recovered into the RHS980.

A refrigerant identifier is recommended for evaluating refrigerant in the A/C system to be serviced.

Recovering other refrigerants will contaminate the refrigerant in the RHS980 charge cylinder.

## LEAK SEALERS

Many sealants and leak stop chemicals are being injected into A/C systems. These may cause serious damage to the RHS980 if they are in the refrigerant recovered being recycled.

Detection devices are available to check for the presence of these chemicals and are highly recommended to protect the RHS980.

**The RHS980 may be damaged which could void the warranty.**

Call RTI for more information about solutions for detection of refrigerant blends and leak sealers.





## SETUP

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W | E | I | G | H | T | = | # | # | . | # | # | K | G |   |   |   |   |
| A | U | T | O | M | A | T | I | C |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   | S | T | A | R | T | ? |

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W | E | I | G | H | T | = | # | # | . | # | # | K | G |   |   |   |   |
| S | E | T | U | P |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   | S | T | A | R | T | ? |

## SELECTABLE OPTIONS

|   |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|
| S | E | L | E | C | T | A | B | L | E |  | O | P | T | I | O | N | S |   |   |   |
|   |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |  |   | C | O | N | T | I | N | U | E | ? |

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| S | E | L | E | C | T |   | L | A | N | G | U | A | G | E |   |   |   |  |
| ▶ | E | N | G | L | I | S | H |   |   | E | S | P | A | N | O | L |   |  |
|   | F | R | A | N | Ç | A | I | S |   | D | E | U | T | C | H |   |   |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | ▲ | ▼ |  |

|   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|
| T | E | C | H | A | L | E | R | T |  | I | N | S | T | A | L | L | E | D | ? |
| ▶ | Y | E | S |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |
|   | N | O |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   | ▲ |
|   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   | ▼ |

|   |   |   |   |   |   |  |   |   |  |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|--|---|---|--|---|---|---|---|---|---|---|---|---|---|
| R | E | F | R | I | G |  | I | D |  | I | N | S | T | A | L | L | E | D | ? |
| ▶ | Y | E | S |   |   |  |   |   |  |   |   |   |   |   |   |   |   |   |   |
|   | N | O |   |   |   |  |   |   |  |   |   |   |   |   |   |   |   |   | ▲ |
|   |   |   |   |   |   |  |   |   |  |   |   |   |   |   |   |   |   |   | ▼ |

|   |   |   |   |   |   |  |   |   |  |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|--|---|---|--|---|---|---|---|---|---|---|---|---|---|
| A | C |   | C | A | P |  | D | B |  | I | N | S | T | A | L | L | E | D | ? |
| ▶ | Y | E | S |   |   |  |   |   |  |   |   |   |   |   |   |   |   |   |   |
|   | N | O |   |   |   |  |   |   |  |   |   |   |   |   |   |   |   |   | ▲ |
|   |   |   |   |   |   |  |   |   |  |   |   |   |   |   |   |   |   |   | ▼ |

The setup procedure provides a means of setting options for various operation functions of the RHS980. The initial screen displayed after turning on power will be as shown to the left.

Press the ▼ key to scroll through screens until the setup screen shown to the left is displayed. Press the **START** key.

The first screen will be for SELECTABLE OPTIONS. Press the ▼ key to scroll through other setup screens: DEFAULT VALUES, MAINTENANCE OPTIONS and TOTAL CAPACITIES. These four setup procedures are described below. Press **START** key.

The first option is to select the language which be used to display screens.

Press ▲ or ▼ key to scroll the displayed arrow to the desired language. Press **START** key.

This enables the RHS980 to interact with TechAlert. Visit the RTI web-site for more information on this RTI accessory which can be installed on the RHS980. Press the ▲ or ▼ key to scroll to YES or NO. Press **START** key.

This enables the RHS980 to interact with the RTI Refrigerant Identifier. Visit the RTI web-site for more information on this RTI accessory which can be installed on the RHS980. Press the ▲ or ▼ key to scroll to YES or NO. Press **START** key.

This enables the RHS980 to interact with the RTI Refrigerant Capacity Database. Visit the RTI web-site for more information on this RTI accessory which can be installed on the RHS980. Press the ▲ or ▼ key to scroll to YES or NO. Press **START** key.



|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| C | A | L | I | B | R | A | T | I | O | N | R | E | J | E | C | T | E | D |   |  |
| R | E | C | A | L | I | B | R | A | T | E | U | N | I | T | O | R |   |   |   |  |
| C | A | L | L | F | O | R | S | E | R | V | I | C | E |   |   |   |   |   |   |  |
|   |   |   |   |   |   |   |   |   |   |   | C | O | N | T | I | N | U | E | ? |  |

This screen will display if the weight scale is not in calibration. Perform the Calibration Procedure. Press **START** key.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| P | E | R | F | O | R | M | C | A | L | I | B | R | A | T | I | O | N |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| S | E | L | E | C | T | Y | E | S | O | R | N | O |   |   |   |   |   |  |  |

Press **YES** key if a calibration is required. Otherwise, press **NO** key.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | O | N | N | E | C | T | C | Y | L | I | N | D | E | R | T | O |   |   |   |
| H | I | G | H | S | I | D | E | H | O | S | E | A | N | D |   |   |   |   |   |
| O | P | E | N | V | A | L | V | E |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   | C | O | N | T | I | N | U | E | ? |

If **YES** key was pressed, this screen will display. Connect the red high side hose of the RHS980 to the vapor port of a refillable DOT cylinder. Open the valve on the cylinder. Press **START** key. Refrigerant will be transferred from the RHS980 internal cylinder into the externally connected DOT cylinder.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | H | A | R | G | E | I | N | P | R | O | C | E | S |   |   |   |   |   |   |
| A | M | T | C | H | G | = | # | # | . | # | # | K | G |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   | C | O | N | T | I | N | U | E | ? |

This screen will display an increasing amount as refrigerant is transferred to the DOT cylinder. Press **START** key when the amount does not increase any more.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | A | L | I | B | R | A | T | I | O | N | M | I | N |   |   |   |   |   |   |
| W | E | I | G | H | T | O | N |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   | C | O | N | T | I | N | U | E | ? |

This screen indicates the weight scale is reading a minimum weight since the charge cylinder is empty. Press **START** key.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | A | L | I | B | R | A | T | I | O | N | M | A | X |   |   |   |   |   |   |
| W | E | I | G | H | T | O | N |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   | C | O | N | T | I | N | U | E | ? |

This screen prompts for maximum weight. Place the calibration weights on top of the RHS980 charge cylinder. The weight scale will now read a maximum weight. Press **START** key. Call RTI to order weights.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | A | L | I | B | R | A | T | I | O | N | C | O | M | P | L | E | T | E |   |
| R | E | M | O | V | E | W | E | I | G | H | T |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|   |   |   |   |   |   |   |   |   |   |   | C | O | N | T | I | N | U | E | ? |

The weight scale is now calibrated. Remove the calibration weights. Press **START** key.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| P | E | R | F | O | R | M | I | N | P | U | T | / | O | U | T | P | U | T |  |
| D | I | A | G | N | O | S | T | I | C | S | ? |   |   |   |   |   |   |   |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| S | E | L | E | C | T | Y | E | S | O | R | N | O |   |   |   |   |   |   |  |

Inputs and outputs of devices in the RHS980 can be checked for diagnostic purposes. Press **YES** key.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| U | S | E |   | ▲ | ▼ | T | O | C | H | A | N | G | E |   |   |   |   |  |
| S | E | L | E | C | T | E | D | O | U | T | P | U | T |   |   |   |   |  |
| S | T | A | R | T | T | O | G | G | L | E | S | O | N | & | O | F | F |  |
| S | T | O | P | T | O | E | N | D |   |   |   |   |   |   |   |   |   |  |

Press **▲** or **▼** key to select various outputs. The output identification number will display on the screen. For a selected output, press the **START** key to toggle it on and off. Press **STOP** key to advance to next screen.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| U | S | E |   | ▲ | ▼ | T | O | C | H | A | N | G | E |   |   |   |   |  |
| S | E | L | E | C | T | E | D | I | N | P | U | T |   |   |   |   |   |  |
| S | T | A | R | T | T | O | G | G | L | E | S | O | N | & | O | F | F |  |
| S | T | O | P | T | O | E | N | D |   |   |   |   |   |   |   |   |   |  |

Press **▲** or **▼** key to select various inputs. The input identification number will display on the screen. For a selected input, press the **START** key to toggle it on and off and display units. Press **STOP** key to advance to next screen.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| P | E | R | F | O | R | M | C | O | M | B | O | F | I | L | T | E | R |  |  |
| R | E | P | L | A | C | E | M | E | N | T | ? |   |   |   |   |   |   |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |
| S | E | L | E | C | T | Y | E | S | O | R | N | O |   |   |   |   |   |  |  |

The RHS980 combo filter must be replaced after every 150 lbs. of refrigerant has been recovered from A/C systems. Press YES to start the procedure to change the combo filter. This filter can be accessed by removing the literature pocket on the left side of the RHS980. Press **YES** key.

|   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|
| C | H | E | C | K | I | N | G |   |   |  |  |  |  |  |  |  |  |  |  |
| P | R | E | S | S | U | R | E | S |   |  |  |  |  |  |  |  |  |  |  |
|   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |
| P | L | E | A | S | E | W | A | I | T |  |  |  |  |  |  |  |  |  |  |

Internal pressure of the combo filter will be checked. If pressure is detected a buzzer will sound and the display will indicate the need to go to recycle mode to eliminate the pressure.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| R | E | M | O | V | E | A | N | D | R | E | P | L | A | C | E |   |   |   |  |
| C | O | M | B | O | F | I | L | T | E | R |   |   |   |   |   |   |   |   |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|   |   |   |   |   |   |   |   |   |   | C | O | N | T | I | N | U | E | ? |  |

This screen will display if pressure was not detected. Replace the combo filter. Note the serial number on the new combo filter label as it may not be visible when installed. Press **START** key.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| E | N | T | E | R | F | I | L | T | E | R | S | E | R | I | A | L |  |  |  |
| N | U | M | B | E | R |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
| # | # | # | # | # | # |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |

Enter the new six digit combo filter serial number. Press **START** key.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|
| P | E | R | F | O | R | M | V | A | C | U | U | M | P | U | M | P |  |  |  |
| O | I | L | R | E | P | L | A | C | E | M | E | N | T |   |   |   |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |
| S | E | L | E | C | T | Y | E | S | O | R | N | O |   |   |   |   |  |  |  |

The RHS980 records the hours of vacuum pump use and prompts after every 10 hours that the oil should be changed. Press **YES** key to replace the vacuum pump oil.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| R | E | F | E | R | T | O | M | A | N | U | A | L | F | O | R |   |   |   |  |
| C | O | M | P | L | E | T | E | I | N | S | T | R | U | C | T | I | O | N |  |
| F | O | R | V | A | C | O | I | L | C | H | A | N | G | E |   |   |   |   |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |

Refer to Page 13 for complete instructions for the vacuum pump oil change procedure. Press **START** key when oil has been changed.

**TOTAL CAPACITIES**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|
| T | O | T | A | L | C | A | P | A | C | I | T | I | E | S |  |  |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |

The RHS980 records data which can be used for shop management of the equipment and refrigerant usage. Press **START** key.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|
| C | O | M | B | O | F | I | L | T | E | R | L | I | F | E |  |  |  |  |  |
| R | E | M | A | I | N | I | N | G | # | # | # | L | B | S |  |  |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |

The RHS980 combo filter must be replaced after every 150 lbs. of refrigerant has been recovered from A/C systems. An alert will display when the filter life is at 100 lbs. The RHS980 will shut down when the filter life is at 150 lbs. A new filter must be installed and a serial number entered to re-start the RHS980. Press **START** key to go to next screen.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|
| T | O | T | A | L | R | E | F | R | I | G | E | R | A | N | T |  |  |  |  |
| R | E | C | Y | C | L | E | D | # | # | # | # | K | G |   |   |  |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |

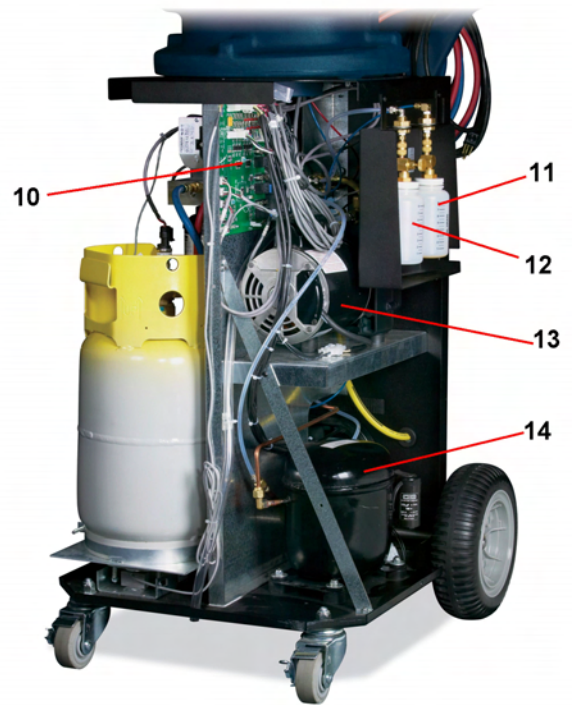
The RHS980 records the total refrigerant which has been recycled. That total is displayed on this screen. Press **START** key to go to next screen.

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|
| T | O | T | A | L | R | E | F | R | I | G | E | R | A | N | T |  |  |  |  |
| C | H | A | R | G | E | D | # | # | # | # | K | G |   |   |   |  |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |

The RHS980 records the total refrigerant which has been charged. That total is displayed on this screen. Press **START** key to go to next screen.



# PARTS IDENTIFICATION



- 1 Manifold Assembly
- 2 In-line Filters
- 3 Service Hoses
- 4 New Refrigerant (not included)
- 5 Condenser Fan
- 6 Control Power Supply
- 7 Combo Filter
- 8 Charge Cylinder
- 9 Load Cell

- 10 Control Board
- 11 Oil Bottle (Used)
- 12 Oil Bottle (New)
- 13 Vacuum Pump
- 14 Compressor
- 15 High Pressure Gauge
- 16 Low Pressure Gauge
- 17 Display & Keypad
- 18 Power Switch





**TechALERT® Remote**  
(front view shown actual size)

- Made from hi-strength composite material
- Impact and chemical resistant housing
- Ergonomically shaped and lightweight for ease-of-handling and use
- Four easy-to-see LED's
  - Each LED can be synchronized to a specific RTI machine
  - Intuitive LED illumination codes provide alert status
  - LED's brightly illuminate either red or green for excellent readability
  - LED's are sealed for long life
- Sealed activation button
- Internal wireless synchronization sensor



**TechALERT® Remote**  
(rear view shown actual size)

- Integrated clip for secure shirt pocket placement
- Battery compartment
  - Easily removed cover
  - Two (2) AAA batteries required to power remote, batteries included

It just makes sense—the key to increased productivity is to keep technicians and their machines continually performing **value-added work**. Service techs that are constantly checking machine status are busy—but this type of busy does nothing to generate profits.

**TechALERT® Base**  
(front view shown actual size with docking remote)

- Conveniently mounts to compatible RTI service machines
- Made from hi-strength composite material
- Impact and chemical resistant housing
- Storage pocket holds one remote
- LED indicator for synchronization process
- Sealed control button
- Internal wireless synchronization sensor



**Specifications**

|                         |   |
|-------------------------|---|
| Electrical              | 3.0 V, requires (2) AAA batteries for power; batteries included.  |
| Operating Range         | Up to 250 feet nominally from base unit (Certain conditions may increase or decrease distance accordingly.) |
| Battery Operating Life  | 30 days typical (certain conditions may increase or decrease life accordingly)                              |
| Low Battery Indicator   | Included, LED alert signal  |
| Remote Dimensions       | 5.5 in x 1.0 in x 0.8 in<br>(14.0 cm x 2.5 cm x 2.0 cm) (L x W x D)   |
| Remote Weight           | 3.0 ounces (batteries included)   |
| Shipping Box Dimensions | 10.75 in x 7.5 in x 3.5 in (L x W x D)  |
| Shipping Weight         | 2.0 lb (box and components)   |

Complete TechALERT® System (Includes one [1] Base for RHS@980 and one [1] Universal Remote, AAA batteries included)

495-80000-00

TechALERT® Base only for RHS@980

495-80002-00

TechALERT® Universal Remote only (AAA batteries included )

495-80001-00