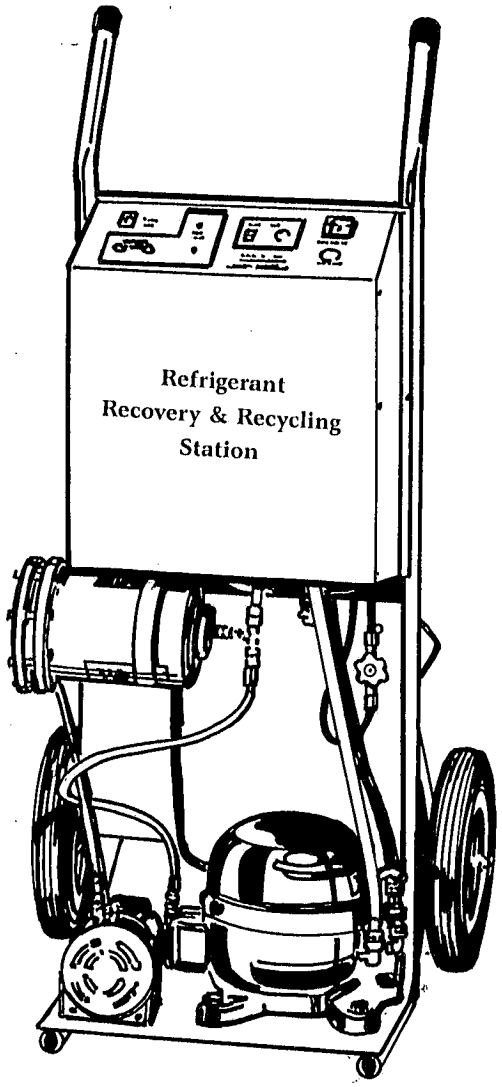


Refrigerant Recovery & Recycling Station Operating Instructions

The Refrigerant Recovery and Recycling system is easy to operate and to service, designed with operator safety in mind.

The unit has a single fitting for connection to your manifold or charging station. One switch initiates the recovery cycle and a vacuum switch automatically terminates this cycle. A convenient, refillable storage container is provided. A weight-sensitive limit switch prevents overfilling the tank while a high pressure switch will terminate the cycle if excessive system pressure occurs.

Recovered refrigerant can be recycled through the Refrigerant Recovery/Recycling Station.

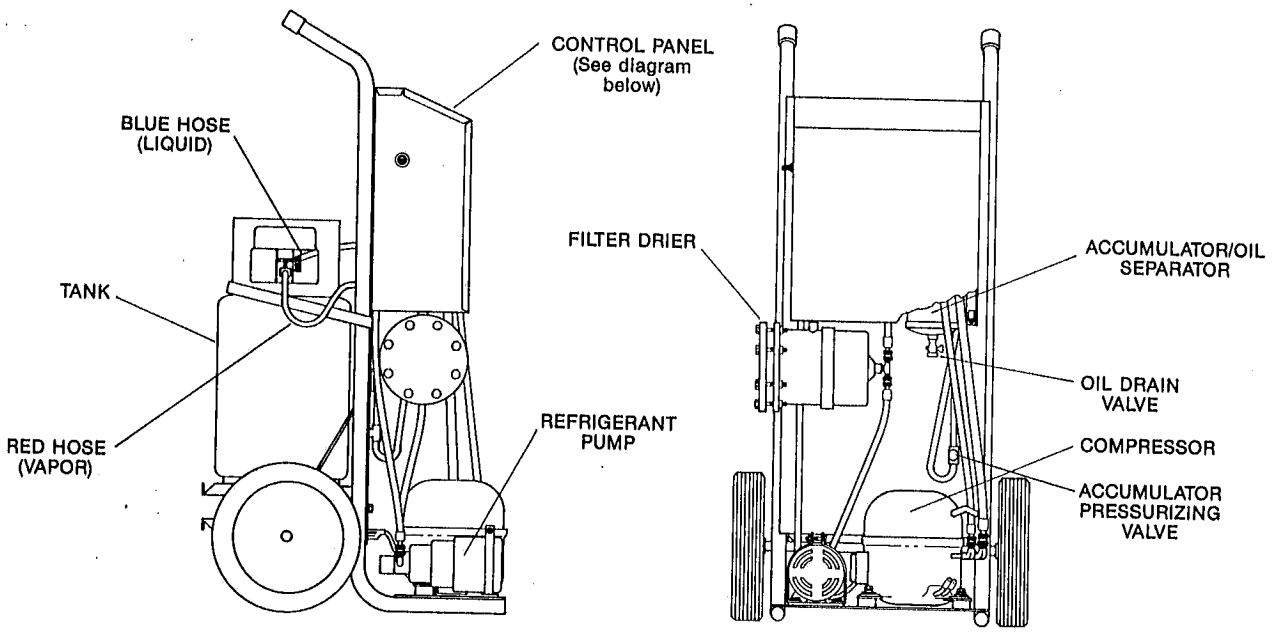
The unit features a single switch cycle start and utilizes a liquid pump to circulate refrigerant past a replaceable core filter drier. A differential pressure gauge and a color changing moisture indicator help determine when the recycling process is complete.

CFCs become worldwide environmental concern...

Regulations are being enacted to restrict production and sale of CFCs. The Recovery and Recycling Station is developed as a simple, economical means to recover and recycle used refrigerants rather than releasing them to the atmosphere.

STATION SET UP

Recovery and Recycling Unit



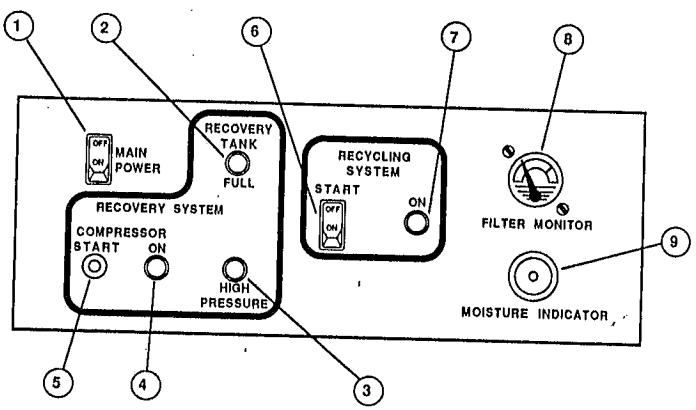
FILTER DRIER INSTALLATION

1. Remove the screws holding the filter cap to the shell. Inside you will find a plastic bag with five each bolts and nuts, a filter drier core bracket (attached to the cap), and a piece of cardboard separating the bracket and the filter cap.
2. Discard the cardboard and install the filter drier core following the instructions on pages 5 & 6, steps 7 through 14.

CAUTION: USE ONLY AUTHORIZED FILTER DRIER CORES. Use of any other cores could give unsatisfactory results and will void the warranty.

CONTROL PANEL

1. **Main Power Switch**—supplies electrical power to control panel
2. **Recovery Tank Full Light**—comes on when recovery tank is full
3. **High Pressure Light**—comes on when system pressure is above 375 psi
4. **Compressor On Light**—comes on when compressor is energized
5. **Compressor Start Switch**—energizes compressor
6. **Recycling System Start Switch**—energizes recycling pump
7. **Recycling System On Light**—comes on when recycling system is energized
8. **Filter Monitor**—tells when filter is plugged
9. **Moisture Indicator**—tells if refrigerant is wet or dry, and when filter core needs replacing



RECOVERY TANK INSTALLATION

1. The recovery tank is supplied with 10-15 psi of dry nitrogen to keep it clean and dry during shipment. Bleed this pressure from the tank before attaching the tank to the station by opening either valve.
2. Place the tank on the scale platform at the rear of the station. Place the bottom lip of the tank around the outside diameter of the stand-off welded to the platform. This will center the tank automatically. Loosely fasten the strap around the tank in order to prevent the tank from tipping over.
3. Attach the red hose from the back of the station to a vacuum pump. Attach the blue hose from the back of the station to the "Liquid" port of the tank.
4. Open the "Liquid" valve on the tank. Turn on the vacuum pump. Pull a vacuum on the tank and station for approximately 10 minutes to remove all unwanted air from the tank and from the station.
5. After a vacuum has been pulled, turn off the vacuum pump and disconnect the hose from the vacuum pump. Attach the red hose to the "Vapor" port on the tank and open the "Vapor" valve.

WARNING: USE AUTHORIZED REFILLABLE REFRIGERANT TANKS ONLY. Use of other tanks could cause personal injury and void warranty.

REFRIGERANT RECOVERY

1. Attach a manifold gauge set to the A/C system and attach the center hose of the manifold to the inlet of the station.
2. Open both valves of the manifold gauge set and purge air from the center hose at the manifold. Make certain the refrigerant tank "Vapor" valve and the "Liquid" valve are open.
3. Plug the station into a suitable AC power outlet and turn on the "Main Power" switch.
4. Depress the "Compressor Start" switch. The amber "Compressor On" light will come on and the compressor will start.

   The compressor will shut off automatically when recovery is complete.
5. To drain the accumulator of A/C system oil, open the "Accumulator Pressurizing" valve long enough to allow some compressor discharge pressure back into the accumulator. Open the oil drain valve slowly and drain the accumulator. Do not allow the accumulator to completely depressurize. When the oil stops draining, close the oil drain valve.
6. Although refrigerant can be filtered and recycled at any time, we recommend recycling when the tank is full for greatest efficiency. We supply two tanks so you can fill one, recycle it and then use it for charging systems while you fill the second tank.

   When the recovery tank is full, the "Trip Switch" at the bottom of the weight platform will de-energize the compressor and the "Tank Full" light will come on. Close all valves, remove the tank from the platform, and replace with another refillable tank.

WARNING: USE ONLY AUTHORIZED REFILLABLE REFRIGERANT TANKS. Use of other tanks could cause personal injury and void warranty.

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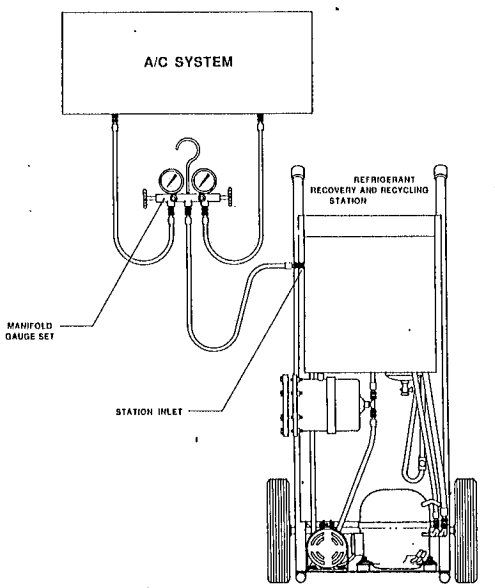

IMPORTANT: Add 4 oz. of 150 VIS. refrigeration oil to the compressor after every 25 jobs or when necessary. Disconnect the black ⅜" suction hose from the compressor and attach a separate charging hose to the suction port. Pour the required amount of oil in a container and place the open end of the hose in the container. Start the compressor. When all the oil has been sucked into the compressor, turn off the compressor. Remove the separate hose and re-attach the suction hose to the suction port of the compressor.

REFRIGERANT RECYCLING

1. Open the vent on the recovery tank for 5-10 seconds before running refrigerant through the recycling station. This will allow any trapped air inside the tank to be removed before introducing recycled refrigerant into an A/C system.
2. Make certain both valves on the recovery tank are open.

Note: For greatest efficiency, we recommend recycling full tanks of refrigerant.

3. Turn the "Recycle Start" switch to on. The amber "Recycle On" light will come on and the refrigerant pump will start.
4. Refrigerant will be seen going through the moisture indicator at start up. If there is a sufficient supply of refrigerant, the bubbles will clear after a few seconds. When the bubbles clear from the "Moisture Indicator", the refrigerant pump is operating at maximum efficiency.
5. Allow the station to operate until the dot in the center of the moisture indicator turns green. Always run the recycling system a minimum of 30 minutes. If the moisture indicator starts out yellow, it could take as long as two hours to turn green, depending on the moisture content of the refrigerant.

Guidelines for replacing the filter drier core:

•For proper contaminant removal, we recommend replacing the filter drier core after recycling a *maximum* of 300 pounds of refrigerant.

•If the moisture indicator does not change to green after two hours of filtering time, the filter drier core is probably saturated with moisture and should be changed.

•If the filter drier core becomes clogged with particulates, the filter monitor needle will register in the red zone; this also means the filter core should be changed.

Note: If any of the recovered refrigerant being recycled is from a system with a hermetic motor burnout, run the recycling system for a minimum of 24 hours. Check the A/C system oil from the accumulator with an acid test kit to determine the acid quantity of the oil.

FILTER DRIER CORE REPLACEMENT

Guidelines for replacing the filter drier core:

•For proper contaminant removal, we recommend replacing the filter drier core after recycling a *maximum* of 300 pounds of refrigerant.

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Instructions

1. Close the 'Liquid' valve on the tank.
2. Attach the blue hose to the recovery inlet of the station.
3. Start the compressor and recover all refrigerant remaining in the station into the storage tank. The compressor will automatically shut off when recovery is complete.
4. Remove the screws holding the filter cap to the shell. The filter drier core and bracket are attached to the filter cap.
5. Remove the tie rods from the filter cap and remove the filter drier core from the brackets.
6. Clean all internal parts.
7. Remove the filter drier core from the sealed can. Do not remove the filter from the can until you are ready to install it in the system.

CONTINUED ON NEXT PAGE.....

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1. Open the vent on the recovery tank for 5-10 seconds before running refrigerant through the recycling station. This will allow any trapped air inside the tank to be removed before introducing recycled refrigerant into an A/C system.
2. Make certain both valves on the recovery tank are open.

Note: For greatest efficiency, we recommend recycling full tanks of refrigerant.

3. Turn the "Recycle Start" switch to on. The amber "Recycle On" light will come on and the refrigerant pump will start.
4. Refrigerant will be seen going through the moisture indicator at start up. If there is a sufficient supply of refrigerant, the bubbles will clear after a few seconds. When the bubbles clear from the "Moisture Indicator", the refrigerant pump is operating at maximum efficiency.
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6. Clean all internal parts.
7. Remove the filter drier core from the sealed can. Do not remove the filter from the can until you are ready to install it in the system.

CONTINUED ON NEXT PAGE.....

FILTER DRIER CORE REPLACEMENT (CONTINUED)

8. If the filter cap gasket is damaged, replace it. Replacement gaskets are included with each filter drier core.
9. Center the spring on the filter cap and place the upper bracket on the spring with the center boss of the bracket fitting into the coil and the edges of the plate facing up.
10. Position the filter drier core on the upper bracket. Position the screened lower bracket on the filter drier core and install the tie rods. Tighten the tie rods until they stop.
11. Install the filter drier core assembly into the filter drier shell. Replace the screws and tighten them evenly until they are wrench-tight. Tighten screws in a star pattern.
12. When the core has been replaced and the filter drier reassembled, attach the blue hose to the vacuum pump and start the vacuum pump. Run the pump for approximately 10 minutes to remove unwanted air.
13. Turn off the vacuum pump and disconnect the hose.
14. Reattach the blue hose to the 'Liquid' port of the tank and open the 'Liquid' valve on the tank. You are now ready to continue recycling with your station: see *Refrigerant Recycling* on page 5.

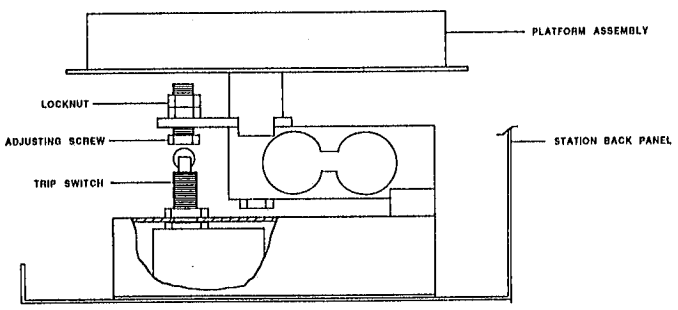
WARNING: Steps 2 and 3 are critical to avoid possible hazardous release of refrigerant.

CAUTION: USE ONLY AUTHORIZED FILTER DRIER CORES. Use of any other cores could give unsatisfactory results and will void the warranty.

WEIGHT PLATFORM CALIBRATION

The weight platform should be checked for accuracy at least once a month. This calibration will assure that the compressor will shut off when the tank is full.

1. Place a known 45 lb. weight centered on the platform. The switch should just trip or be very close to tripping with this amount of weight.
2. If the switch is tripped, the mechanism is in calibration. If the switch does not trip, place a 2 lb. weight on top of the 45 lb. weight. This weight should definitely trip the switch. If the switch is tripped, the mechanism is in calibration. If the switch did not trip, the mechanism must be recalibrated.
3. To recalibrate, remove the 2 lb. weight and loosen the lock nut of the trip screw. Turn the trip screw until the switch just trips. Remove the 45 lb. weight.
4. To check, replace the 45 lb. weight on the platform and repeat step No. 2. Repeat step No. 3 as required. Tighten lock nut of the trip screw when recalibration is complete.



TRIP SWITCH MECHANISM

OPERATING HINTS

1. When using the recovery station in conjunction with a charging station, attach the center port hose of the manifold to the inlet port of the recovery/recycling station. Then follow the normal operating procedures for the recovery/recycling station.
2. When using this recovery/recycling station in conjunction with an automatic charging station, attach the exhaust hose to the inlet of the recovery/recycling station. On automatic A/C service stations, a hole has been added at the rear of the cabinet for convenient access to the exhaust hose. On older style stations, you must open the front doors of the cabinet to reach the exhaust hose.

   After attaching the exhaust hose to the recovery/recycling station, depress the "Main Power" switch on the automatic charging station. Then depress the "Exhaust" switch. Then follow the normal operating procedures for the recovery/recycling station.

TROUBLESHOOTING GUIDE

SYMPTOM	CAUSE	CURE
High pressure light comes on and compressor stops	• Valve at tank is closed • Tank is completely full of refrigerant	• Open valve • Remove and replace tank • Check weight platform calibration or consult factory
Compressor continues operation after 17 in. vacuum has been reached	• Faulty vacuum switch	• Replace switch
Compressor starts but does not run	• High compressor temperature • Faulty thermal overload • Faulty compressor • Compressor oil quantity low	• Allow compressor to cool down • Consult factory • Remove and replace compressor • Fill compressor with fresh oil
Dot in center of moisture indicator does not change color	• Wet filter drier core • Faulty moisture indicator	• Remove and replace filter drier core • Remove and replace moisture indicator
Compressor does not pull system to the 17 in. vacuum level	• Compressor oil quantity low • Leak in system • Faulty compressor	• Fill compressor with fresh refrigeration oil • Repair leak • Remove and replace compressor
Refrigerant does not circulate	• Liquid valve on tank closed • Vapor valve on tank closed • Pump decoupled • Faulty refrigerant pump	• Open valve • Open valve • Turn pump off then restart • Remove and replace pump

REPLACEMENT PARTS

Component	110 V. Part No.	220/240 V. Part No.
Tank	17105	17105
Red Light	17106	17136
Amber Light	17107	17137
Red Hose	17108	17108
Blue Hose	17109	17109
Compressor	17110	17134
Compressor Start Switch	17111	17138
Check Valve	17112	17112
Limit Switch	17114	17141
Refrigerant Pump	17115	17139
Moisture Indicator	17120	17120
Filter Monitor	17125	17125
Filter Drier Core	17130	17130
Oil Drain Valve	40477	40477
Main Power Switch	40994	17135

Our 30-pound reusable refrigerant tank, part no. 17105, is the only tank you should use with your recovery/recycling stations. The overfill limitation mechanism has been calibrated specifically for this tank and the valving is set up specifically for use with our recovery/recycling station. The 30-pound tank, which meets DOT specification 4BW, will also work with charging stations you already own and with any other charging station utilizing a 30-pound tank.

The filter drier on our stations has been designed to trap moisture, acid and particulates. Naturally, this means the filter core must be changed as needed to assure adequate moisture and contaminant removal from used refrigerant. It is essential for proper filtration that you use only our filter drier cores, part no. 17130. We suggest you keep several filter cores on hand so you will always be able to change filter cores and complete any recycling job that is in progress.

General Warranty

This product is warranted to be free from defects in material and workmanship under normal use and service for a period of one year after the sale of the product. Exceptions to this policy will be individually identified. Sole obligation under this Warranty shall be to repair or replace any defective product or parts thereof, which are returned to Seller's factory, transportation charges pre-paid within the period mentioned above, and which upon examination are provided to Seller's satisfaction to be defective. The Warranty shall not apply to any product or part which has been subject to misuse, negligence or accident. The Seller shall not be responsible for any special or consequential damages and the Warranty as set forth is in lieu of all other warranties either expressed or implied. However, Seller makes no warranty of merchantability in respect to any products for any particular purpose other than that stated in this literature and any applicable manufacturer's shop or service manuals referred to therein, including any subsequent service bulletins.

For assistance in servicing or using your Recovery and/or Recycling Station, call this toll-free Service Line, 1-800-822-5561. In Ohio, call 419-485-5561.