



Mastercool® Inc.
"World Class Quality"

69362 OPERATING INSTRUCTIONS SPARK FREE TWIN TURBO REFRIGERANT RECOVERY MACHINE

SAFETY INFORMATION! READ CAREFULLY BEFORE USING RECOVERY SYSTEM!

CAUTION! This equipment should only be operated by
certified personnel.

SAFETY SUMMARY

The following safety information is provided as guidelines to help you operate your new system under the safest possible conditions. Any equipment that uses chemicals can be potentially dangerous to use when safety or safe handling instructions are not followed. The following safety instructions are to provide the user with the information necessary for safe use and operation. Please read and retain these instructions for the continued safe use of your service system.



SAFETY INFORMATION

Customers respect the tools with which they work. They know that the tools represent years of constantly improved designs and developments. The customer also knows that tools are dangerous if misused or abused. To reduce risk of discomfort, illness, or even death, read, understand, and follow the following safety instructions. In addition, make certain that anyone using this equipment understands and follows these safety instructions as well.

READ ALL SAFETY INFORMATION CAREFULLY before attempting to install, operate, or service this equipment. Failure to comply with these instructions could result in personal injury and/or property damage.

RETAIN THE FOLLOWING SAFETY INFORMATION FOR FUTURE REFERENCE.

Published standards on safety are available and are listed at the end of this section under **ADDITIONAL SAFETY INFORMATION**.

The National Electrical Code, Occupational Safety and Health Act regulations, local industrial codes and local inspection requirements also provide a basis for equipment installation, use, and service.

The following safety alert symbols identify important safety messages in this manual. When you see one of the symbols shown here, be alert to the possibility of personal injury and carefully read the message that follows.

Recovery tank contains liquid refrigerant under high pressure. Never over fill recovery tank. Tanks should be filled to a maximum of 80% of capacity only. Use only DOT approved tanks for refrigerant recovery.

An over filled tank can explode causing serious injury or death.

ELECTRICAL SHOCK HAZARDS



- Make sure system is electrically connected to a properly grounded power source.
- To reduce the risk of electric shock, unplug from the outlet before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.
- Do not operate the machine with a damaged cord or plug — replace the cord or plug immediately if damaged. To reduce the risk of damage to electric plug and cord, disconnect recovery machine by pulling on the plug rather than the cord.

An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and electric shock. If extension cord must be used, make sure:

- a. That pins on plug of extension cord are the same number, size, and shape as those on machine recovery plug.
- b. That extension cord is properly wired and in good electrical condition; and
- c. That the wire size is large enough for the length of cord as specified below:

Length of cord in feet:	25	50	100	150
AWG size of cord:	16	12	10	8

MOTION HAZARDS

- Engine parts that are in motion and unexpected movement of a vehicle can injure or kill. When working near moving engine parts, wear snug fit clothing and keep hands and fingers away from moving parts.



Keep hoses and tools clear of moving parts. Always stay clear of moving engine parts. Hoses and tools can be thrown through the air if not kept clear of moving engine parts.

- The unexpected movement of a vehicle can injure or kill. When working on vehicles always set the parking brake and lock the wheels.

FUME HAZARDS



- FUMES, GASES, AND VAPORS CAN CAUSE DISCOMFORT, ILLNESS, AND DEATH! To reduce the risk of discomfort, illness, or death, read, understand, and follow the following safety instructions. In addition, make certain that anyone that uses the equipment understands and follows these safety instructions as well.
- Avoid breathing A/C refrigerant and lubricant vapor mist. Exposure may irritate eyes, nose, and throat.
- To remove refrigerant from the A/C system, use certified service equipment. Additional health and safety information may be obtained from refrigerant and lubricant manufacturers.
- Always perform vehicle service in a properly ventilated area. Never run an engine without proper ventilation for its exhaust.
- Stop the recycling process if you develop momentary eye, nose, or throat irritation as this indicates inadequate ventilation. Stop work and take necessary steps to improve ventilation in the work area.

HEAT/FREEZING HAZARDS



- When under pressure, refrigerants become liquid. When accidentally released from the liquid state they evaporate and become gaseous. As they evaporate, they can freeze tissue very rapidly. When these gases are breathed in, the lungs can be seriously damaged. If sufficient quantities are taken into the lungs, death can result. If you believe you have exposed your lungs to released refrigerant, seek immediate medical assistance.
- Refrigerants can cause frostbite and severe burns to exposed skin. Refrigerants are under pressure and can be forcibly sprayed in all directions if carelessly handled. Avoid contact with refrigerants and always wear protective gloves and make certain other exposed skin is properly covered.
- Refrigerants can also severely injure or cause permanent blindness to unprotected eyes. Refrigerants are under pressure and can be forcibly sprayed in all directions if carelessly handled. **AVOID CONTACT WITH REFRIGERANTS AND ALWAYS WEAR SAFETY GOGGLES.**

EXPLOSION/FLAME HAZARDS



- Check hose gaskets for damage that could cause leaks before each use.
- For general safety reasons, at the end of the working day or in between services (when services do not immediately follow), make sure all valves on hoses and tanks are closed.
- Do not use this Recovery System in the vicinity of spilled or open containers of flammable substances (gasoline, solvents, etc.).
- Do not pressure test system with air. Some mixtures of air and refrigerant can be combustible or explosive.
- This recovery system is not to be used with any type of flammable gas.

ADDITIONAL SAFETY INFORMATION

For additional information concerning safety, refer to the following standards.

ANSI Standard Z87.1 — SAFE PRACTICE FOR OCCUPATION AND EDUCATIONAL EYE AND FACE PROTECTION - obtainable from the American National Standards Institute, 11 West 42nd St., New York, NY 10036, Telephone (212) 642-4900, Fax (212) 398-0023 - www.ansi.org

CAUTION: This equipment should be used in locations with mechanical ventilation that provides at least four air changes per hour or the equipment should be located at least 18 inches (457 mm) above the floor," or the equivalent.

CAUTION: Do not pressure test or leak test refrigerant service equipment and/or vehicle air conditioning systems with compressed air. Some mixtures of air and refrigerant have been shown to be combustible at elevated pressures. These mixtures, if ignited, may cause injury or property damage. Additional health and safety information may be obtained from refrigerant manufacturers.

Attention: Technicians using this equipment must be certified under EPA Section 609 (Environmental Protection Agency).

CAUTION: This equipment should be serviced by authorized personnel only to maintain flammability rating.

WARNING: There is the possibility of refrigerant and equipment contamination from hydrocarbons or leak sealants in the refrigerant container or the mobile A/C system being serviced or refrigerant container.

NOTE: Use only new refrigerant oil to replace the amount removed during the recycling process. Used oil should

be discarded per applicable federal, state, and local requirements.

The manufacturer shall not be responsible for any additional costs associated with a product failure including, but not limited to, loss of work time, loss of refrigerant, cross contamination of refrigerant, and unauthorized shipping and/or labor charges.

IMPORTANT: R1234yf systems have special fittings (per SAE specifications) to avoid cross-contamination with R134a systems. DO NOT adapt your unit for a different refrigerant — system failure will result.

PERIODICALLY INSPECT AND MAINTAIN REFRIGERANT HOSES AND SEALS TO ENSURE THAT HOSES AND SEALS PREVENT THE ADDITION OF EXCESS AIR, DUE TO LEAKS, DURING THE RECOVERY PROCESS, WHICH WOULD INCREASE THE NCG LEVEL IN THE RECOVERED REFRIGERANT AND COULD MAKE AN EXPLOSIVE MIXTURE WITH HYDROCARBON REFRIGERANTS.

All hoses used for interconnecting system should have shut off valves (manual or automatic) on both ends. Treat all hoses and connections with caution. Hoses or connections will contain liquid refrigerant or gas under pressure. Connect and disconnect fittings with caution.

The Recovery System includes a fine screen filter at the inlet port. Screen should be checked often or whenever contamination prevents proper operation of recovery system.

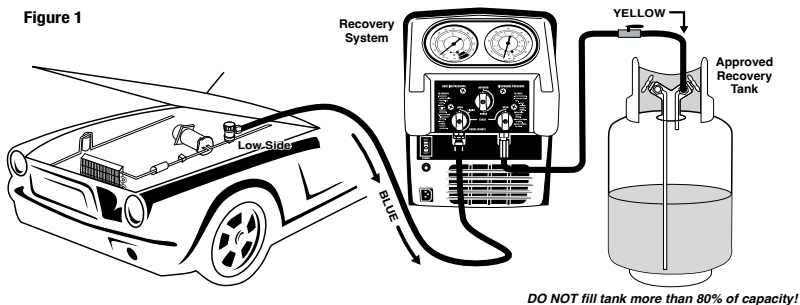
SPECIFICATIONS:

- Rated Voltage: 120 V
- Output: 1/2 HP
- Frequency: 60 HZ
- Class: A
- Full Load Amperage: 7.6A
- Continuous Duty
- Locked Rotor Amperage: 25.2 A
- Design Pressure: 400 psi outlet, 175 psi inlet

OPERATING GUIDE FOR DIRECT VAPOR OR LIQUID RECOVERY

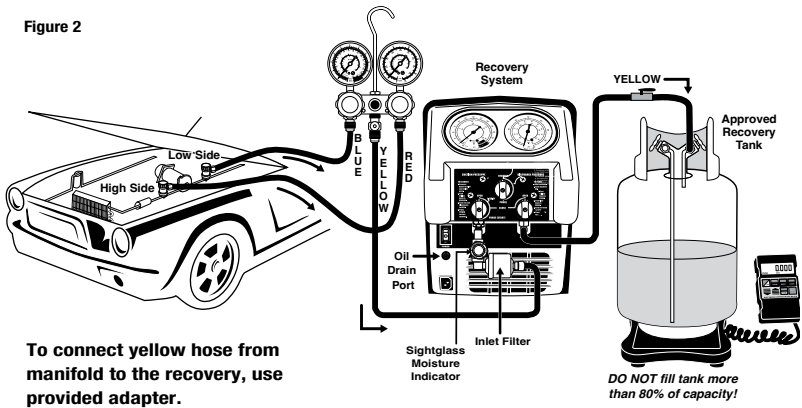
Note A: Connect blue hose (with coupler) to inlet filter. When Recovery Machine is in use, always keep hose and coupler assembled to inlet filter. When hose is removed from filter, use protective cap to seal inlet filter.

Note B: Connect yellow hose to recovery machine outlet and the valve end of hose to the recovery tank (low side (blue.))



1. Make sure on-off switch is off, "O" pushed in. Connect system to grounded power connection.
2. Turn INLET (blue color) valve to CLOSE position.
3. Turn center valve (yellow color) to RECOVER position.
4. Turn OUTLET (red color) valve to OPEN position.
5. Connect blue hose from low side system connection to inlet port filter connection.
6. Connect yellow hose from outlet port of recovery machine to vapor (gas) connection on recovery tank.
7. Open the vapor valve on the recovery tank.
8. Turn INLET valve on Recovery System to OPEN.
9. Turn on Recovery System (push power switch "I"). Start recovery system.
10. Observe operation of system. In rare instances "slugging" may be apparent (loud compressor noise or high vibration). If this condition is apparent turn inlet valve to LIQUID position. System can be run with this setting continuously. It is suggested that operator periodically turn inlet valve to OPEN position and check for proper operation of system.
11. When the inlet pressure is 15" Hg or more, the recovery is done. Proceed to purge the Recovery System.
12. Make sure the Recovery system is off. Turn the inlet and outlet valves to CLOSE.
13. Close the valve on the tank and remove the hoses.

Figure 2



RECOVERY SYSTEM PURGE

1. Turn off power switch. Turn inlet valve to PURGE position.
2. Turn center valve to PURGE position. Make sure outlet valve is in OPEN position. Start System.
3. Purge may take a few minutes as some liquid refrigerant may be in the Recovery System. The liquid must become vapor, which may require some time. Allow the system to run until the low side gauge reads approximately 10–14 inHg.

NOTE: Unit contains compressor for recovery. For deeper vacuum use a vacuum pump.

4. Shut OFF Recovery System. If System is to be used with the same refrigerant next operation, shut outlet valve and disconnect outlet hose. If venting of system is required, disconnect outlet hose to relieve residual pressure.
5. The inlet port has a fine screen filter. Remove inlet nut and clean screen filter after every use. A clean filter is very important for the proper operation of the System. Replace filter dryer whenever plugged or contaminated.

TO DRAIN RECOVERED OIL

CAUTION! Do not cap the open bottle neck! The neck must remain open to vent pressure.

NOTE: The oil separator capacity is approximately 1.5 oz which can cover 8–10 normal recoveries. However, some systems deposit more oil in the separator due to high pressure or excessive oil in the system. It is recommended to drain oil after each use of the recovery machine.

1. Check pressure on recovery machine inlet pressure gauge. Pressure must be below 10 PSI (.7 Bar), but above 2 PSI (.1 Bar).
2. Insert short yellow hose into the “plastic bottle with two openings” which is supplied. Carefully attach the short yellow hose to the oil drain fitting on the recovery machine. As hose is tightened on fitting, oil will flow into container. (Hose is equipped with a depressor which will open core valve in oil drain fitting).
3. When oil has drained completely, disconnect the hose from the system. Unscrew the cap/hose from the bottle and dispose of the oil into an environmentally approved container.

MAINTENANCE REQUIREMENTS

1. Replace filter if sight glass indicator is red/orange in color. The color change may be green/blue for dry condition when refrigerant is passing through and red/orange for wet condition.
2. Replace filter after recovering refrigerant from a known contaminated system.
3. Replace filter if excessive pressure drop is indicated. Difference of pressure gauge reading before and after filter.

RECOMMENDED PARTS

Product	Part #
Replacement Filter Dryer	69500-DR
Float Switch Cable	6533-01-A
Low Side R1234yf Coupler	83934



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