

Additional users operating manual

For use with A2L Refrigerants
e.g. R32, 1234yf, 143a, 1234ze



This additional manual is valid for the following
Promax Refrigerant Recovery Units:

**MiniMax-E; RG 5410A-E,
RG 3000-E, RG 6-E**

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ALL PROMAX REFRIGERANT RECOVERY UNITS

For use with A2L Refrigerants

Subject: Promax Refrigerant Recovery Units

Dear Customer,

We herewith inform you, that:

The Promax Refrigerant Recovery Units, truly universal machines capable of recovering CFC, HCFC, HFC and class A2L refrigerants.

On top of the legendary Promax build quality; it features a proven compressor for the fastest refrigerant recovery and it is possible to safely recover class A2L refrigerants such as R32 and R1234yf when operated by properly trained personnel in accordance with acknowledged safety practices and below Notes are respected.

PLEASE NOTE:

That if used for recovery of Class A2L refrigerants such as R32, 1234yf, 1234ze or R143a, the unit must **ONLY** be operated by authorized personnel with proper and specific training in the use and handling of these refrigerants.

The unit is **NOT** for use in hazardous/explosive environments.

It **MUST** be ensured prior to use that the operating environment is **FREE** of hazardous concentrations of gases/vapors/dusts and/or fibers.

The **USE** of an appropriate combustible gas leak detector (e.g. TIF 8900) or measuring device to ensure the safety of the working environment is mandatory before operating the Promax Refrigerant Recovery units.

The **USER** must follow this additional Promax A2L manual instructions which are available through your supplier or can be obtained upon request.

If not: do not use this equipment in combination with A2L refrigerants.

THE SAFE WAY IS THE ONLY WAY

This equipment must only be operated by authorized personnel with proper and specific training in the use and handling of A2L refrigerants.

NOTE! If you are not a qualified refrigerant service technician, do not use this equipment

1. The technician should always wear goggles and gloves when working on refrigeration systems.
2. Be sure that any room where you are working is thoroughly ventilated.
3. It **MUST** be ensured prior to use that the operating environment is **FREE** of hazardous concentrations of gases/vapors/dusts and/or fibers.
4. The **USE** of an appropriate combustible gas leak detector or measuring device to ensure the safety of the working environment is mandatory before operating the Promax Refrigerant Recovery units
5. Always think before acting. Familiarity breeds carelessness and carelessness can be harmful to your health or, worse, result in death.
6. Read the Material Safety Data Sheets (MSDS) on all compounds with which you are likely to come in contact. Read MSDS on refrigerant and refrigerant oil. Obtain MSDS sheets from your A2L refrigerant supplier.
7. Never use oxygen when testing for leaks. Any oil in contact with oxygen under pressure will form an explosive mixture.
8. Refrigerant systems are generally electrically driven and controlled. Be sure to disconnect the refrigeration unit from the power source before servicing it.
9. Always store refrigerant containers in a cool, dry place.
10. Always open service and cylinder valves slowly. This allows quick control of the flow of gasses if there is any danger. Once it is determined that there is no danger, the valves may be opened fully.
11. Do not mix refrigerant in a system, a tank or anywhere else. Each type of refrigerant must have its own tank, filters, etc.
12. If moisture enters the refrigerant system, it is likely to cause considerable damage. Keep everything connected with the refrigeration system thoroughly dry and clean.
13. To reduce the risk of fire, avoid the use of extension cords as they may overheat. If you must use an extension cord it should be a minimum of 14 AWG and not longer than 8m (25'). The extension cord must be rolled out completely. This equipment should be used in locations with mechanical ventilation providing at least four air changes per hour, or the equipment should be located at least 45cm (18") above the floor. Do not use this equipment in the vicinity of spilled or open containers of gasoline or any other flammable liquid.

IMPORTANT GENERAL INFORMATION

Before operating the Promax Refrigerant Recovery unit, read the following:

1. Always isolate large amounts of refrigerant and close off valves after use so if a leak should develop anywhere in the system the refrigerant does not escape.
2. Storage cylinders sometimes have valves that are not properly seated when manufactured. Keeping caps on these valves will guard against refrigerant leakage.
3. Always operate the unit on a flat level surface.
4. Your Promax has one internal pressure shut off switch. If the pressure inside the system should go above 38,5 bar (550 psi), the system will automatically shut itself off.

CAUTION

The 38,5 bar (550 psi) switch does not prevent tank overflow. If your system shuts off on high pressure and is connected to your tank, you may have overfilled your tank and created a very dangerous situation! Take immediate measures to relieve any high pressure and/or tank overflow.

5. WARNING! Never overfill storage tanks. Overfilling may cause tanks to explode.
6. A scale must be used to avoid overfilling the storage tank.
7. Tanks and filters should be designated for one refrigerant only. Before using a tank previously used for another refrigerant, completely empty the tank, evacuate it, purge the tank using dry nitrogen, and re-evacuate it.
8. Special care should be taken when recovering from a burned-out system. Use two high acid capacity filters, in series. Alco type EK-162-F or Sporlan type C-162-F are recommended.
9. Always empty refrigerant from the unit into a storage tank; see Self Purge/Auto Evacuate procedure. Liquid refrigerant left in the condenser may expand, causing damage to components.

**The Vacuum Low pressure switch must always be in OFF position while unit is used.
Applies only to a Promax RG 5410A-E or RG 6-E.**

OPERATING YOUR PROMAX

MiniMax-E; RG 5410A-E, RG 3000-E, RG 6-E

It **MUST** be ensured prior to use that the operating environment is **FREE** of hazardous concentrations of gases/vapors/dusts and/or fibers

Get yourself familiar with the operation of the front panel of your Promax Recovery Unit.

You will find these instructions in the original manual which is supplied with the product.

You can find these instructions in section:

III OPERATIONAL PROCEDURES

BEFORE connecting your unit to a system containing a Class A2L refrigerant it must be ensured that the recovery unit is empty of **ANY** refrigerant. **ONLY** an empty unit should be connected. Make certain that 0 or negative pressure is shown on both blue and red gauges before proceeding with use!!.

OPERATING YOUR PROMAX

READ THIS ENTIRE SECTION BEFORE ATTEMPTING TO CONNECT OR USE YOUR RECOVERY MACHINE. ENSURE THAT YOU FULLY UNDERSTAND THE ACTIONS AND THEIR ORDER BEFORE BEGINNING THE PROCESS!!

Procedure for Normal System Recovery

Make certain that 0 or negative pressure is shown on both blue and red gauges before proceeding with use!!

1. Inspect the PROMAX unit thoroughly to ensure that it is in good operating condition.
2. Ensure that both the Inlet and Outlet valves on the front panel are closed.
3. Make sure the Recover/Purge valve is set on Recover. Applies only to a Promax MiniMax-E, RG 5410A-E or RG 6-E.
4. Make sure all connections are correct and tight.
5. Slowly open the liquid port of the recovery cylinder (always open valves slowly to check hoses and connections for leaks) and ensure that there are no leaks detectable.
6. Ensure that the Vacuum Low pressure switch is in OFF position AND remains OFF while unit is used. Applies only to a Promax RG 5410A-E or RG 6-E.
7. Connect your Promax to main power supply.
8. Switch the main power switch to the ON position. You should hear the fan running. Note: Allow the fan to run for 60 seconds.
9. Press the compressor start switch. This “momentary” switch will start the compressor.
10. Open the Outlet port of the PROMAX unit.
11. Open the liquid port on the manifold gauge set; opening the liquid port will remove the liquid from the system first, greatly reducing the recovery time (after the liquid has been removed, open the manifold vapor port to finish evacuating the system).

OPERATING YOUR PROMAX

12. Slowly open the input port on the PROMAX unit.

- a) If the compressor starts to knock, slowly throttle back the input valve until the knocking stops.
- b) If the input valve was throttled back, it should be fully opened once the liquid has been removed from the system (the manifold vapour port should also be opened at this time).

CAUTION

When pumping liquid, do not allow the Promax unit to operate with the input valve too far open, causing the compressor to knock. Doing so may stall the compressor.

13. Run until minimum EPA or locally required vacuum is achieved.

- a) Close the manifold vapor and liquid ports.
- b) Close the Promax unit input port.
- c) Leave the unit switched on and running.

14. Always purge the Promax unit after recovery is complete as noted below – DO NOT switch off the unit.

Failure to purge the remaining A2L refrigerant from the Promax unit could result in:

- a) A hazardous environment after use of this equipment and causes a hazardous environment on the next use of this equipment.
- b) The acidic degradation of internal components, ultimately causing premature failure of the unit.

PURGING YOUR PROMAX

These instructions do not apply to model RG3000 unit as it does not include a purge feature; nevertheless, the unit must be purged of any A2L refrigerant that remains inside after recovery is complete.

Procedure for Purging Remaining Refrigerant from the PROMAX unit

Continuing from step 13. C

See left

1. Turn the Recover/Purge valve (black) slowly from the Recovery to the Purge position.
2. Run until a vacuum of at least -0,3 Bar is achieved.
3. Close the ports on the recovery tank and the Outlet valve on the unit.
4. Turn the unit OFF.
5. Return the Recover/Purge valve to the Recover position.
6. Disconnect and store all hoses.
7. Replace the in-line filter on your Promax after every time excessive contaminant is encountered.
8. Make sure that the Promax unit has no remaining A2L refrigerant. This is very important especially at the next use.

If not: do not use this equipment in combination with A2L refrigerants.

Bosch Automotive Service Solutions GmbH declines all responsibilities or claims when Promax units are used improperly or not according all recommended/mentioned guidelines.



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