

AIR CONDITIONING PRODUCTS GROUP

CONSIDERATIONS WHEN BUYING EQUIPMENT

This means swapping capital for equipment so it is of the utmost importance that you get trained properly first, you can then select the correct equipment that suits you and know the options available. This will depend on whether you are considering carrying out work at your premises or mobile.

Yes, we have all done it including us. So why not let us guide you in the right direction and let our costly mistakes not become yours!

RECOVERY UNITS

Should be simple to operate and ideally have the ability to add a cleaning module (should the machine not have a cleaning process as standard) to allow for re-use of refrigerant especially as the price of R134a is escalating. They should also have 2 hoses with ball valves, this is of great importance to eliminate the introduction of air into your recovery machine / cylinder. Option of 110V or 250V may also be a consideration.

VACUUM PUMPS

For vehicles a huge pump is not required. It is a fallacy that you will pull a quicker better vacuum `the larger the pump`. The main consideration is the pump is a two stage pump and 110V or 250V may also be a consideration.

ALL IN ONE UNITS (RECOVERY RECYCLE & RE-CHARGE MACHINES)

These are for workshop use only and can be semi-automatic or fully automatic.

Many have complex controls and a machine with simple easy to follow instructions should be sought.

Their usefulness is that all the equipment is in one place but should any part of the machine go wrong then, as a whole, the machine will not operate.

Therefore it is essential you acquire a machine that you can service your self or have a reasonably priced contract to keep maintained and kept in good working order.

A common complaint is the cost of a service once you have owned the machine for a year!

Another consideration is back up and reliability. Suppliers will make all sorts of claims to get a sale. Check the facts out first.

Manufacturers tell you to suck the oil / dye after you have vacuumed the system for 20-40 minutes. If you do this you will have just put moisture back into the system. Pag oil is very hygroscopic (absorbs moisture) so it is madness to use this sequence. The whole purpose of vacuuming an A/C system is to lower the pressure within the system so that any moisture and non-condensable's can be boiled off.

If you have an all in one machine then you have two options.

Vacuum system for a while, then suck the oil/dye in and restart the vacuuming process, this wastes time.

Alternatively you can introduce the dye, then oil into the system via the low service port connector (or high) before commencing with vacuum sequence.

We can supply oil and dye introduction kits at very reasonable prices. Please look at page 16

Finally most mention a vacuum leak test! It is impossible to produce a perfect vacuum and if we could then the pressure in reverse would be 1 bar (14.505 PSI) approximately. The low side can and will run at 2 bar (30 PSI) and the high side will run at anything up to high pressure cut off switch setting approximately 27 bar (400 PSI) so this is hardly a good leak testing method. The only method of leak testing a system is an OXYGEN FREE NITROGEN pressure test. Never use air/oxygen an explosion can occur!

To sum up

You need a machine that is uncomplicated, easy to use; oil and dye are introduced into the A/C system not the machine, easy access to vacuum pump and simple to service.

The Machines we supply are cost effective, reliable and you can service them your self.

We offer machines at 2 levels:

EUROMAXX Semi Automatic see Page 14

EUROMAXX Fully Automatic see Page 15

PROTECTING EQUIPMENT

Filters are now available to prevent sealants entering your equipment and refrigerant cylinders. An all in one machine will need 2 filters. Although the cost of these filters is high this should be taken in context with the cost of repairing or replacing the equipment should they become contaminated. See page 9

OYGEN FREE NITROGEN (OFN)

This is the only method of pressure leak testing a system and should be where possible connected to both high and low service port connectors through manifold gauges. **THEY SHOULD NOT BE CONNECTED TO THE LOW ONLY AND NEVER USE THE REGULATOR GAUGE TO DETERMINE ANY PRESSURE DROP.** Their pressure scale is totally inadequate for measuring a pressure drop. Preferably a digital gauge should be used to measure any drop in the system pressure. We also advise you vacuum the system before introducing OFN to avoid fluctuations in pressure due to the air contracting and expanding with temperature changes. See page 24

ELECTRONIC LEAK DETECTORS

This is a complex issue. Our recommendation is a quality cold cathode leak detector for summer and winter work. Most heated diode detectors will not operate at low temperatures so it is important to check the temperature range it will work at for the detector you are considering. Remember you will get what you have paid for! See page 26

REFRIGERANT IDENTIFIER

These should be used to make sure the refrigerant you are going to remove from a system is what it should be. Failure to identify the refrigerant will mean contamination of your all in one machine or refrigerant cylinder and with the price of R134a escalating; these are becoming an invaluable piece of equipment. They are also an excellent diagnostic tool as they show if air is present in the system. See page 27

FITTING A NEW OR RECONDITIONED COMPRESSOR

What follows is just a brief account of some of the issues when carrying out a compressor change. For a more detailed account please book a course.

THE RECEIVER DRIER OR ACCUMULATOR MUST BE CHANGED AS WELL AS THE EXPANSION VALVE OR THE EXPANSION TUBE. FAILURE TO DO SO WILL RESULT IN COMPRESSOR DAMAGE. CHANGING THESE ITEMS ALONG WITH FLUSHING THE SYSTEM WILL ENSURE TROUBLE FREE INSTALLATION OF THE COMPRESSOR.

We are constantly hearing of several compressors being fitted to the same vehicle, one after the other! This is due to lack of training.

We also recommend you fit a compressor guard filter to protect the compressor from particles entering and damaging the compressor. This will protect your profit in the job and your reputation. See page 8

ALLOY PIPE AND HOSE EQUIPMENT

There is a vast array of equipment, fittings and adapters which makes replacing or repairing pipes easy and a very high profit area of vehicle air conditioning service and repair. This can create additional income and is more convenient for the customer and repairer. See pages 37-45

All this and much more can be learnt on our VACSAR training course.

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