

Refrigerant Oil Adding



CAUTION:

Always decant fresh oil from a sealed container and do not leave oil exposed to the atmosphere. PAG oil is very hygroscopic (absorbs water) and will rapidly attract atmospheric moisture. PAG oil must NEVER be mixed with mineral based oils. Do not re-use oil following a recovery cycle, dispose of it safely.

1. The amount of oil drawn out during a recovery procedure will be dependent on the state of the system and the rate of recovery. The quantity will be approximately 30 to 40 ml.; this may vary, and the figure is given only for guidance. The oil separator vessel in the recovery equipment must be clean and empty at the start of the process, so that the quantity of oil which is drawn out may be accurately measured. **NOTE:**

The equipment manufacturer's instructions must be followed when adding oil directly into an original, or new unit, owing to rectification work to the existing compressor, or the need to fit a new compressor.

Oil may be added to the system either via the recovery, recycle and recharge station or by using a proprietary oil injector. Alternatively, if the compressor has been removed from the vehicle, the oil may be added directly to the compressor.

Original Compressor

1. From an existing compressor, drain the oil into a measuring cylinder and record the amount. Flush the unit out with fresh oil and drain thoroughly. Replenish the compressor with the same amount of oil that was originally drained out and immediately plug all orifices ready for refitting to the vehicle.

New Compressor

1. Drain and discard the transit lubricating oil from the new compressor before it is fitted. To avoid over-filling the system, an allowance must be made for the quantity of oil found in the original compressor and the quantity deposited in the recovery equipment oil separator from the charge recovery operation. Typical example:

- Drained from original compressor - 50 ml.
- Recovered from oil separator - 40 ml.
- Quantity to be put in new compressor - $50 + 40 = 90$ ml.

2. The difference between the combined total quantity of recovered and drained oil and the nominal capacity of the system (180 ml.), is due to the quantity of oil remaining in components such as the condenser, receiver drier or evaporator. This oil is not normally recoverable. The same procedure may be followed if a problem has occurred due to oil leakage, as the amount of oil lost is generally small. If the recovery process has not been necessary, because refrigerant has also been lost, then only the quantity drained from the original compressor needs to be replaced.

System Components

1. Should a major component such as condenser, receiver drier or evaporator be renewed, then an adjustment to the system oil content must be made. This may be carried out in the same way as the examples for the compressor, except for the fact that trapped oil within any of these components cannot normally be recovered. An extra quantity of oil should be added, in addition to that recovered from the recovery station separator, as follows:

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- Condenser - Add 40 ml.
- Evaporator - Add 40 ml.
- Receiver drier - No addition.