

# **HYDROCARBON REFRIGERANTS**

## **RECOMMENDED WORKSAFE & HANDLING PRACTICES**

### **AUTOMOTIVE AIR CONDITIONING AND REFRIGERATION**

To be observed in conjunction with the "Code of Practice-Design & Service of Motor Vehicle Air Conditioning, October 29<sup>th</sup> 1991." Issued under the auspices of the Automotive Air Conditioning Registration Board (Vic).

- Accreditation for CFC handling is a prerequisite under the Environmental Protection Act 1970. Industrial Waste Management Act (IW1B)
- Hydrocarbon refrigerants are flammable; therefore all safety and handling aspects as defined in Australian Standards and in workplace health and safety regulation should be observed at all times.
- As with all non CFC refrigerants, a system charged with hydrocarbon refrigerant gas must be clearly labelled, showing the type of refrigerant used, the standard warning for flammable substances, (a red diamond bearing the warning "flammable gas 2"), and a warning not to tamper with the system due to the existence of high pressure gas.
- On completion of service to a system, the service agent should fix a label in a position of prominence, where it is not likely to be damaged by ambient conditions, showing all relevant service details, in order to assist the next repairer, or to inform the owner of the vehicle. These durable, self-adhesive labels are supplied with all HyChill Refrigerants.
- Hydrocarbon refrigerants are to be charged in liquid form, NOT as vapour.
- Storage of hydrocarbon refrigerants should conform to Australian Standard AS1596 and all other relevant state codes.
- Care should be taken to avoid overcharging the systems, as this will lead to reduced performance. The hydrocarbon refrigerant charge should not exceed 40% of the known CFC or HFC charge by weight. As with all non-CFC refrigerants, charging accurately by weight is strongly recommended. Where necessary, charge to 30 psi suction back pressure.
- Refrigerant Pipework: Any flexible or metal hoses, fittings, components or connections which have sustained damage or show visible signs of deterioration, shall be replaced with new parts which comply with current standards or industry practice.
- Where a non metal liquid pipe passes through an occupied space, precautions to prevent accidental discharge of liquid refrigerant into that space should be taken. For example:
  - (a) The flexible hose should, if possible be replaced with metal pipe, **Or**
  - (b) The flexible hose should be sheathed in a reinforced flexible hose with an internal diameter at least 3mm greater than the outside diameter of the liquid hose it covers, be attached firmly to the metal ferrule at the end of the flexible hose, and cover that hose to at least 50mm outside the occupied area, **Or**
  - (c) Any other innovative solutions, which may at any future time be ratified by the Federal Office of Road Safety, or recommended by them as acceptable.
- Hydrocarbon refrigerants may be used for flushing, cleaning or purging systems providing any waste gas is not permitted to accumulate and create a flammable mixture in an enclosed space. Naked flames or smoking are not permitted in any area where flammable gases or liquids are stored or used.