

A mandatory registration scheme for UK refrigerant handlers

Air Conditioning and Refrigeration Industry Board

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A report produced on behalf of the ACRIB steering group proposing the structure and operation of a mandatory registration scheme for refrigerant handlers in the United Kingdom.

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Executive summary

A refrigerant handler registration scheme for the UK has been designed to meet current and expected future legal requirements to demonstrate competence of those handling refrigerants. Its structure has been considered by representatives of many different parts of the industries involved. Details of the proposed structure are given in this report.

The primary aim of the scheme is to minimise emissions of environmentally harmful substances, but the scheme should also form the basis for national monitoring of the use and emissions of fluids, to meet the requirements of legislation arising from the Montreal and Kyoto Protocols.

All people handling refrigerants will need to be certified as competent and will need to be employed by (or themselves be) businesses registered within a scheme managed by an overall Board. It is intended that the Board would operate on a consensus basis. Those involved in activities that are, in the view of the Board, regulated to a greater extent than is required for this purpose and have appropriate competences will not need additional certification, but their businesses will need to register.

People involved only in activities such as the transport of refrigeration equipment or containers of refrigerant will not be considered to be refrigerant handlers.

The sale of equipment containing refrigerant, and the sale of refrigerant put into equipment during installation or maintenance by a certified employee of a registered business, will be permitted. Otherwise, it will be illegal to sell or otherwise transfer the ownership of refrigerant other than to registered businesses. There will not be any restriction on the third-party transport of refrigerant in containers on behalf of registered businesses. It will be illegal to handle refrigerants unless competent so to do.

The scheme will be organised on a sectoral basis, the precise competence requirements varying between sectors as appropriate. These requirements will have to be approved by the Board, which will be industry led but with government involvement. The Board will determine definition of the scope of sectors, based on recommendations from within the industry sectors.

Competence certification and business registration will be managed by such organisations as are approved by the Board for that purpose. No more than one registration organisation per sector is envisaged. The refrigerants covered will be

those with a global warming potential of more than 15, in other words, all ozone depleting refrigerants plus HFCs. Within some sectors there may be requirements to demonstrate competence in recognising and handling other refrigerants including flammable and high pressure fluids. The scope of the scheme will be limited to the use of refrigerant fluids as refrigerants and will not include other applications of the same fluids.

The UK Government has committed to bringing in a scheme in legislation, which is hoped to be in place by the end of 2003. There will be a transitional period to phase in the certification and registration requirements.

Outlines of the proposed scheme will be submitted to Government by ACRIB in early 2003, following stakeholder consultation. It must be emphasised that the final form of the scheme is dependent on future legislation, so the scheme detailed here has the status of a proposal, yet to be approved.

1. Introduction

A refrigerant handler registration scheme for the UK has been designed to meet current and expected future legal requirements to demonstrate competence of those handling refrigerants. Its structure has been considered by representatives of many different parts of the industries involved. Details are given in this report.

The primary aim of the scheme is to minimise emissions of environmentally harmful substances, but the scheme should also form the basis for national monitoring of the use and emissions of fluids, to meet the requirements of legislation arising from the Montreal and Kyoto Protocols.

The background to this proposed scheme is fully described in the report, "Options for a mandatory registration scheme for UK refrigerant handlers", issued by ACRIB in December 2001. That report (the "Options" report) considered some options; the present report outlines the proposed scheme.

The proposals have been prepared by an ACRIB working group, assisted by sector sub-groups representing the following industry sectors:

- 1) Commercial/industrial refrigeration and air conditioning
- 2) Motor cabin air conditioning
- 3) Domestic appliance servicing
- 4) Manufacturers

This report was discussed in draft by industry stakeholders at a meeting in London on 9th December 2002.

Since the publication of the "Options" report, work has continued in the EC on a proposal for legislation to minimise fluorinated gas emissions. It has been stated that: *The European Parliament "Welcomes the Commission's intention to submit a proposal for a framework directive on fluorinated gases which aims to reduce emissions across all sectors through the containment and monitoring of such gases and by restricting marketing and use for some applications; considers the forthcoming reductions in emissions of fluorinated gases and improved monitoring as a cost-effective and environmentally efficient measure."* It is expected that the European Commission will have fluorinated gas legislation ready for consideration by the EU Parliament and Council of Ministers by Spring 2003.

As far as can be determined, there is nothing in the proposals in this report which will be in conflict with the requirements of the expected European legislation.

2. Structure

It is intended that all people handling refrigerants will need to be certified as competent and will need to be employed by (or themselves be) businesses registered within a scheme managed by an overall Board. In this context, "businesses" will include sole traders. It is intended that the Board would operate on a consensus basis.

The scheme will be organised on a sectoral basis, the precise competence requirements varying between sectors as appropriate. These requirements will have to be approved by the Board, which will be industry led but with government involvement. The Board will determine definition of the scope of sectors, based on recommendations from within the industry sectors.

Competence certification and business registration will be managed by such organisations as are approved by the Board for that purpose. No more than one registration organisation per sector is envisaged.

There will therefore be a structure as follows:

- The Board, responsible to Government and Industry for the proper running of the scheme.
- Sector committees, responsible to the Board for recommending the approval of sector registration organisations for the registration of businesses within their sector.
- Sector registration organisations.
- Competence certification organisations, approved by the Board as able to issue certificates of individual competence relating to a sector or sectors. Certificates will be required for refrigerant handling employees of businesses wishing to register.

The Board will comprise two representatives from trade associations (not individual businesses) representing each industry sector, plus government representatives, plus a secretariat. Industry sector alternates may be appointed, and the Board may co-opt other members, whose status would need to be agreed. The Board will in due course be chaired by industry representatives from each sector in turn, but may initially appoint an independent Chairman. It is envisaged that Board members will be remunerated by their employing organisations, not by the scheme.

The legal status of the Board will be such as is necessary for the Board to meet its responsibilities, including the possibility of denial of or removal of registration of businesses.

The Board secretariat is seen as having only a small commitment, which may be met by the Chairman's organisation, but this may increase if there is a substantial future reporting requirement. In that case, it could be appropriate for the secretariat to be provided by government. Whilst the scheme is being set up, it will require additional support.

The sector registration organisations will be approved by the Board with regard to recommendations from sector committees formed within the sectors. The sector committees may choose to put these appointments out to tender. The registration organisations will be funded by registration fees. These organisations will maintain registers in a form to be agreed (probably on a selectively searchable web-site). They will alert the sector committees to alleged infringements of the scheme and will assist in investigation and appeals processes. They will agree with the sector committees the competence requirements for their sector, and will monitor the performance of certification organisations. They will provide registrants with evidence of registration

in a form suitable to allow refrigerant purchasing. The sector committees will submit to the Board for approval, details of their recommendations, including competence requirements and monitoring arrangements,.

The competence certification organisations will be commercial organisations such as City & Guilds, operating in a commercially competitive manner. They may or may not be linked with training organisations.

It is envisaged that the scheme will have a simple logo, for use by registered businesses and their certified handlers only.

3. Scope

The scheme will be limited to those actually handling refrigerants by breaking in to refrigerant circuits or decanting from refrigerant containers. People involved only in activities such as the transport of refrigeration equipment or containers of refrigerant will not be considered to be refrigerant handlers. It would not be acceptable for uncertified junior operatives to handle refrigerant under the supervision of a certified supervisor, other than for closely supervised training purposes. Those involved in activities that are, in the view of the Board, regulated to a greater extent than is required for this purpose and have appropriate competences will not need additional certification, but their businesses will need to register. Examples of this category could include those in refrigerant and chemical manufacturing plant, and reclaim waste handlers.

The refrigerants covered will be those with a global warming potential of more than 15, in other words, all ozone depleting refrigerants plus HFCs. Within some sectors there may be requirements to demonstrate competence in recognising and handling other refrigerants including flammable and high pressure fluids. The scope of the scheme will be limited to the use of refrigerant fluids as refrigerants and will not include other applications of the same fluids.

The sale of equipment containing refrigerant, and the sale of refrigerant put into equipment during installation or maintenance by a certified employee of a registered business, will be permitted. Sales of equipment containing refrigerant to intermediate third parties who do not themselves handle refrigerant will be allowed as long as the purchaser has certified to the seller that the equipment will only be sold to registered businesses or to businesses giving a like undertaking. Otherwise, it will be illegal to sell or otherwise transfer the ownership of refrigerant other than to registered businesses. There will not be any restriction on the third-party transport of refrigerant in containers on behalf of registered businesses. It will be illegal to handle refrigerants unless competent so to do. It will also be illegal for a business to use a non-registered business for refrigerant handling work

The issue of monitoring the disposal and sourcing of equipment purchased directly from outside the UK will need consideration.

4. Sector scheme

Each sector will be responsible for and have control of its own costs and charges to registrants. Each sector will have its own qualification structure. This can include differing competency requirements, for example requiring competence in handling HCs in those sectors in which these are likely to be met.

Within each of sectors 1-3, it may be appropriate for some equipment manufacturers to be registered within the sector rather than in sector 4, depending on the nature of their operations. Sector committees will agree such arrangements with businesses as appropriate.

The sectors are:

1) Commercial/industrial refrigeration and air conditioning

This sector includes the widest range of different applications, including general commercial refrigeration and air conditioning, transport refrigeration (of cargo spaces), and any items not found in the other sectors. It also includes air conditioning in railway coaches.

2) Motor cabin air conditioning

This includes the service and non-manufacturer installation of temperature control equipment used for cooling occupants, such as for use in the cabins of cars, vans, trucks, buses, coaches, motor homes, agricultural vehicles, and heavy plant (e.g. earth movers, diggers).

3) Domestic appliance servicing

This sector is defined by the technology used, rather than the application. There will be some overlap with sub-sector 1), as there is some overlap in work activities of some people involved in these sectors. The refrigeration systems to be covered by this sector will be stand-alone fully manufactured systems with hermetic circuits using capillary refrigerant flow control and with a charge not exceeding 3kg.

4) Manufacturers

This sector includes manufacturers (especially of refrigeration and air conditioning appliances and equipment, and motor vehicles), refrigerant manufacturing, refrigerant packing, and large chemical manufacturing plant. It is largely characterised by premises in which there are already more than adequate safeguards and no further certification is required, though businesses will need to register.

A business will only be allowed to operate in a sector in which it is registered. There will be nothing to prevent individuals from being certified as competent in more than one sector, or to prevent businesses from registering in more than one sector.

The recovery of refrigerant will be incorporated into each sector scheme, but destruction of appliances and equipment no longer containing refrigerant will be outside the scope of the scheme.

5. Qualifications and Competencies for Personnel

Some sectors want this restricted to environmental requirements, but some see health and safety issues as necessarily included. There is scope for this within separate sector requirements. In areas which are already well regulated, there should be no additional health and safety requirements. There will be a need to define base competence requirements for all sectors. Good progress has been made in listing possible competence requirements within the sectors. DASA has submitted criteria for the personal competence of domestic appliance service engineers. These harmonise with the industry's National Vocational Qualifications and meet the Common Criteria in the Options Report.

The Board will need to approve sector committee recommendations as to if, or how often, recertification will be required in each sector.

Individuals may, if they choose, be competent for work in more than one sector. A person working in the domestic sector could work on commercial applications of

equipment within the technical definition of the domestic sector, but would need additional competence certification in the commercial sector to work on other commercial equipment. In the latter case, the employer would need to be registered in both sectors.

Competence certification will be based on knowledge and performance assessments, not merely on attendance at training courses, though the assessments could also be offered as part of a training course.

It is likely that some larger businesses and organisations will wish to become assessors of their own staff, by having certification and verification from a certifying body under the appropriate sector recognised scheme.

A level of mutual recognition of competence certification between EU Member States will be needed, to allow businesses to operate in other Member States.

6. Business Requirements

The scheme requires registration of businesses. Businesses within the scope of the scheme shall comply with the following criteria:

- The refrigerant handling equipment possessed by the business is suitable.
- The records of refrigerant handling maintained by the business are adequate to allow traceability of supply and disposal of refrigerant and recording of refrigerant use.
- The refrigerant handlers employed by the business are certified as competent.
- The records of competence maintained by the business are adequate.

It has been suggested that it should be illegal to have refrigerant handling work done by unregistered businesses. (*Sentence deleted, now covered in section 3*)

Whether larger businesses will need a single registration or separate registration of individual branches/outlets will be determined based on the methods of record keeping – the registration unit will need to be able to confirm that all refrigerant handlers are certified as competent.

7. Policing and Enforcement

This is very dependent on legislation to limit sales of refrigerant to registered businesses only. There should also be legislation against refrigerant handling being carried out by non-registered businesses. These, combined with a procedure for raising complaints with the Board, should be sufficient to ensure widespread compliance. The potential prosecution mechanism will need to be defined by Government.

8. Support Administration

There will be a small need for secretarial support for the Board, as discussed in section 2 above. There will be potential reporting needs. The extent to which Government might meet these needs consideration

In individual sectors, sector registration organisations will be responsible for maintaining records of business registration. The mechanism to be used for the manufacturing sector needs further consideration.

9. Costs

Suggested costs have been put forward in sectors 1 and 2. These do not include set up costs which it is generally felt should be met by Government. There will be a considerable amount of initial work to be done by the Board, which may need to be contracted out. There will be a need for widespread publicity to the industry and to the public, which it is assumed will be done by Government. In particular, Government assistance will be required in publicity to end users of their responsibilities and the implications of non-compliance.

Once the scheme is in place, there will be registration costs. The MCAC sector has obtained an estimate of cost of £34 per registrant per annum, based on a paper registration and a large number of registrants (20,000). The existing REFCOM scheme costs £250 initially and £200 on renewal, which includes inspection visits and limited individual certification of refrigerant handlers. There are also costs of training, though this should be part of a responsible business's budget in any case. Further analysis is required.

10. Implementation

Considerable progress has been made in identifying requirements, but some details still need clarification and co-ordination.

There is agreement that any scheme will require two to three years for full implementation. It is understood that Government hopes to have legislation in place in 2003. It would be practicable to deem those already certified in existing voluntary schemes acceptable in this scheme initially.

11. Acknowledgements

The production of this report would not have been possible without the considerable efforts of members of sector groups and working groups, and in particular of their Chairmen. Their efforts, and their willingness to consider compromises where necessary, are much appreciated.

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