

the manufacturer provide methods and instructions that accomplish connections and clearing within 15 minutes. Any special equipment required for clearing, other than a vacuum pump or manifold gauge, must be provided by the manufacturer along with the recovery or recycling equipment, and the clearing procedure cannot rely upon a storage cylinder below the saturated pressure of the refrigerant. In setting up these constraints, ARI recognized that procedures requiring exotic equipment or excessive time are less likely to be followed than procedures that are simple and fast.

Another source of potential emissions is oil draining. Refrigerant oils are designed to mix well with refrigerants so that they flow easily within the refrigeration system. A drawback to this characteristic is that significant quantities of refrigerant can remain entrained in oil that is withdrawn from appliances. Because several system contaminants tend to concentrate in the oil, many recycling and recovery machines include an oil separator that must be periodically emptied. To ensure that oil draining does not result in excessive refrigerant emissions, the ARI Standard 740–1995 procedure measures the mass of refrigerant that is released from oil after its removal from the recovery or recycling equipment. As noted above, the sum of the masses of this refrigerant, the refrigerant emitted during condenser clearing, and the refrigerant emitted during noncondensables purging cannot exceed 3% of the mass of refrigerant processed by the equipment.

One commenter stated that while the 3% limit was appropriate for recycling equipment, it was too loose a standard for recovery only equipment, which does not purge noncondensables and therefore does not lose any refrigerant during this process. The commenter requested a 1% limit instead of 3%. EPA does not conclude that establishment of a 1% limit is warranted at this time; therefore, EPA is today establishing in appendix B2 a 3% limit for both recovery equipment and recycling equipment. In the future, however, EPA may consider lowering this limit for recovery equipment.

The third source of emissions addressed by ARI Standard 740–1995 is external hose assemblies. Although ARI 740–1993 includes a permeability limit for internal hoses of 5.8 g/cm²/yr, it does not include such a limit for external hoses. ARI Standard 740–1995 establishes a limit of 3.9 g/cm²/yr at 48.8°C (120°F) for all hose assemblies, to be tested under the conditions of UL

1963. EPA received no comments opposing this limit and is therefore incorporating it into appendix B2.

5. Durability Testing

As discussed in the NPRM, EPA does not believe that it would be useful to require long-term durability testing of recovery and recycling equipment. Factors militating against such a requirement include: (1) EPA does not believe that equipment durability has any effect on refrigerant emissions; (2) durability issues likely will be adequately addressed by free market forces; (3) equipment durability is not likely to be a concern due to technological advances in recovery technology; (4) notwithstanding factor (3), recovery equipment that is likely to experience durability problems is likely to be identified by ARI 740–1995; and (5) requiring durability testing would not be cost-effective, when compared to the relative benefits versus the substantial increased testing costs that would result. EPA received two comments opposing durability testing (61 FR 7869). One commenter “vigorously oppose[d]” durability testing. No commenters supported it. For the reasons discussed in the proposal, EPA is not requiring durability testing of recovery and recycling equipment.

6. Clarification of Labeling Requirements for Recovery/Recycling Equipment

EPA is clarifying that manufacturers of refrigerant recovery and recycling equipment must label their equipment in accordance with § 82.158(h) in addition to the labeling requirements established under section 11 of both Appendices B1 and B2 (based upon section 11 of the ARI Standard 740–1993 and 1995, respectively).

The EPA labeling requirement was promulgated as a part of the May 14, 1993, final rule, (58 FR 28682). The labeling requirement states that manufacturers and importers of recovery and recycling equipment certified under 40 CFR 82.158(b) and (d) must place a label on each piece of equipment stating the following: *This Equipment Has Been Certified by [Approved Equipment Testing Organization] to Meet EPA's Minimum Requirements For Recycling or Recovery Equipment Intended For Use With [Appropriate Category of Appliance].*⁵ The label shall also show the date of manufacture and the serial number (if

⁵ Appropriate category of appliance is considered as low-, high-, and/or very high-pressure appliances as defined at § 82.152.

applicable) of the equipment. The label shall be affixed in a readily visible or accessible location, be made of a material expected to last the lifetime of the equipment, present required information in a manner so that it is likely to remain legible for the lifetime of the equipment, and be affixed in such a manner that it cannot be removed from the equipment without damage to the label.

Since 1993, EPA has adopted into appendix B, and now Appendices B1 and B2, the requirements of ARI Standard 740 (58 FR 28686). Section 11 of the standard, “Marking and Nameplate Data,” specifies that the nameplate shall display the manufacturer's name, model designation, type of equipment, designated refrigerants, capacities and electrical characteristics where applicable. Section 11.2 -Data for Designated Refrigerants, states that for each refrigerant designated, the manufacturer shall include liquid recovery rate, vapor recovery rate, high temperature vapor recovery rate, final recovery vacuum, recycle flow rate, residual trapped refrigerant, and the quantity of refrigerant recycled as applicable.

EPA is clarifying that since the Agency has adopted the ARI Standard 740–1995 into appendix B2 and the ARI Standard 740–1993 into appendix B1, that the nameplate data of section 11 of Appendices B1 and B2 are also required. EPA reiterates that this is not a new requirement, and places emphasis on the labeling requirement by editing section 11 of both Appendices B1 and B2 to reference the labeling requirement at § 82.158(h). Adherence to only the nameplate data requirements of the ARI Standard 740 does not satisfy the labeling requirement of § 82.158(h) or section 11 of Appendices B1 and B2. Furthermore, the Agency is clarifying that the nameplate data and the labeling requirements established at § 82.158(h) are both the responsibilities of the importer or manufacturer of the equipment and not that of the equipment testing organization. Failure of the manufacturer to abide by these requirements is considered a violation of the prohibitions established at 40 CFR 82.154(c).

7. Effective Date of New Standards and Grandfathering of Equipment

EPA did not propose an effective date for the new equipment certification standard. However, several commenters pointed out that equipment testing organizations will require a significant amount of time to finish testing equipment to the new standard.