Commission Regulation (EC) No 1516/2007 of 19 December 2007 establishing, pursuant to Regulation (EC) No 842/2006 of the European Parliament and of the Council, standard leakage checking requirements for stationary refrigeration, air conditioning and heat pump equipment containing certain fluorinated greenhouse gases (Text with EEA relevance)

COMMISSION REGULATION (EC) No 1516/2007

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(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Regulation (EC) No 842/2006 of the European Parliament and of the Council of 17 May 2006 on certain fluorinated greenhouse gases[(1)], and in particular Article 3(7) thereof,

Whereas:

(1) Pursuant to Regulation (EC) No 842/2006, records for refrigeration, air conditioning and heat pump equipment shall contain certain information. In order to ensure the effective implementation of Regulation (EC) No 842/2006, it is appropriate to provide for further information to be indicated in the equipment records.

(2) Information on the fluorinated greenhouse gas charge should be included in the equipment records. Where the fluorinated greenhouse gas charge is unknown, the operator of the equipment concerned should ensure that certified personnel determine that charge in order to facilitate the leakage checking.

(3) Before the leakage check is carried out, certified personnel should carefully go through the information contained in the equipment records to determine any previous issues and consult previous reports.

(4) In order to ensure an efficient leakage control, the leakage checks should focus on those parts of the equipment which are most likely to leak.

(5) Leakage checks should be carried out using direct or indirect measuring methods. Direct measuring methods identify leakage by the use of detection devices which can determine whether the fluorinated greenhouse gas charge is escaping from the system. Indirect measuring methods are based on the identification of abnormal performance in the system and on the analysis of relevant parameters.

(6) Indirect measuring methods should be applied in cases where the leakage develops very slowly and where the equipment is placed in a well ventilated environment making

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it difficult to detect fluorinated greenhouse gases escaping from the system in the air. Direct measuring methods are necessary to identify the exact location of the leakage. The decision on the measuring method to be used should be taken by certified personnel who have the necessary training and experience to determine the most appropriate measuring method on a case by case basis.

(7) Where there is a presumption of a leakage it should be followed up by a check to identify and to repair it.

(8) In order to ensure the safety of the system repaired, the follow-up check provided for in Regulation (EC) No 842/2006 should focus on the parts of the system where leakage has been detected and on the adjacent parts.

(9) Defective installation of new systems constitutes a significant risk of leakage. Therefore, newly installed systems should be checked for leakage immediately after they have been put into service.

(10) The measures provided for in this Regulation are in accordance with the opinion of the Committee established by Article 18(1) of Regulation (EC) No 2037/2000 of the European Parliament and of the Council[(2)],

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter and scope

This Regulation establishes, pursuant to Regulation (EC) No 842/2006, the standard leakage checking requirements for working and temporarily out of operation stationary refrigeration, air conditioning and heat pump equipment containing 3 kg or more of fluorinated greenhouse gases.

This Regulation shall not apply to equipment with hermetically sealed systems, which are labelled as such and contain less than 6 kg of fluorinated greenhouse gases.

Article 2

Equipment records

1 The operator shall indicate his name, postal address and telephone number in the records referred to in Article 3(6) of Regulation (EC) No 842/2006, hereinafter ‘equipment records’.

2 The fluorinated greenhouse gas charge for the refrigeration, air conditioning or heat pump equipment shall be indicated in the equipment records.

3 Where the fluorinated greenhouse gas charge for refrigeration, air conditioning or heat pump equipment is not indicated in the manufacturer’s technical specifications or on the label of that system, the operator shall ensure that it is determined by certified personnel.

4 Where the cause of the leakage has been identified, it shall be indicated in the equipment records.

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Article 3

Checking equipment records

1 Before carrying out leakage checks, certified personnel shall check the equipment records.

2 Special attention shall be paid to relevant information on any repeating issues and problem areas.

Article 4

Systematic checks

The following parts of the refrigeration, air conditioning or heat pump equipment shall be systematically checked:

1. joints;

2. valves including stems;

3. seals, including seals on replaceable driers and filters;

4. parts of the system subject to vibration;

5. connections to safety or operational devices.

Article 5

Choice of measuring method

1 Certified personnel shall apply a direct measuring method as specified in Article 6 or an indirect measuring method as specified in Article 7 when carrying out a leakage check in relation to refrigeration, air conditioning or heat pump equipment.

2 Direct measuring methods may always be applied.

3 Indirect measuring methods shall only be applied where the parameters of the equipment to be analysed, referred to in Article 7(1), give reliable information on the fluorinated greenhouse gas charge indicated in the records of the equipment and the likelihood of leakage.

Article 6

Direct measuring methods

1 To identify leakage, certified personnel shall use one or more of the following direct measuring methods:

a check of circuits and components representing a risk of leakage with gas detection devices adapted to the refrigerant in the system;

b application of ultraviolet (UV) detection fluid or suitable dye in the circuit;

c proprietary bubble solutions/soapsuds.

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2 Gas detection devices referred to in paragraph 1(a) shall be checked every 12 months to ensure their proper functioning. The sensitivity of portable gas detection devices shall be at least five grams per year.

3 The application of UV detection fluid or suitable dye in the refrigeration circuit shall only be undertaken if the manufacturer of the equipment has approved that such detection methods are technically possible. The method shall only be undertaken by personnel certified to undertake activities which entail breaking into the refrigeration circuit containing fluorinated greenhouse gases.

4 Where the methods specified in paragraph 1 of this Article do not identify a leakage and the parts referred to in Article 4 show no sign of leakage, and the certified personnel deems that there is a leak, he shall inspect other parts of the equipment.

5 Prior to pressure testing with Oxygen-Free-Nitrogen (OFN) or another suitable pressure testing gas to check for leakage, fluorinated greenhouse gases shall be recovered from the whole system by personnel certified to recover fluorinated greenhouse gases from the specific type of equipment.

Article 7

Indirect measuring methods

1 To identify a leakage, certified personnel shall carry out a visual and manual check of the equipment and analyse one or more of the following parameters:

a pressure;
b temperature;
c compressor current;
d liquid levels;
e recharge volume.

2 Any presumption of fluorinated greenhouse gas leakage shall be followed by an examination for leakage using a direct method as specified in Article 6.

3 One or more of the following situations shall constitute a presumption of leakage:

a a fixed leakage detection system indicates leakage;
b the equipment produces abnormal noises or vibration or ice formation or insufficient cooling capacity;
c indications of corrosion, oil leaks and component or material damage at possible leakage points;
d indications of leakage from sight glasses or level indicators or other visual aids;
e indications of damage in safety switches, pressure switches, gauges and sensor connections;
f deviations from normal operational conditions indicated by the parameters analysed, including readings from real time electronic systems;
g other signs indicating refrigerant charge loss.