

TECHNICAL REPORT

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TR 11340

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1994-07-01

Rubber and rubber products — Hydraulic hose assemblies — External leakage classification for hydraulic systems

*Caoutchouc et produits en caoutchouc — Flexibles hydrauliques —
Classification des fuites externes des installations hydrauliques*



Reference number
ISO/TR 11340:1994(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The main task of technical committees is to prepare International Standards, but in exceptional circumstances a technical committee may propose the publication of a Technical Report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;
- type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/TR 11340, which is a Technical Report of type 3, was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Hoses (rubber and plastics)*.

The reasons why this document has been published as a type 3 Technical Report are given in the introduction.

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Introduction

The subject of an external leakage classification for hydraulic hoses was approved as a new work item in ISO/TC 45/SC 1 "Rubber and rubber products — Hoses (rubber and plastics)" in September 1990. Earlier, at its 1989 meeting, WG 3 "Hydraulic hoses" of ISO/TC 45/SC 1 had indicated that such work did not, of itself, form the basis of a standard, but would act as useful guidance if published as a Type 3 Technical Report.

A committee draft was issued for study and ballot in ISO/TC 45/SC 1 in March 1991. This received 14 votes of approval with no disapproval votes. Comments were discussed at the 1991 meeting of ISO/TC 45/SC 1/WG 3, where it was agreed that a text with minor modifications should be issued for ballot for approval to publish as a Technical Report. (Resolution 2212, document 45 N 5968.)

The draft Technical Report was issued for ballot in ISO/TC 45/SC 1 in July 1992. It received 17 votes of approval with no disapproval votes and at the 1992 meeting of ISO/TC 45/SC 1/WG 3 it was agreed that it should be published as a Technical Report. (Resolution 2286-7, document 45 N 6027.)

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Rubber and rubber products — Hydraulic hose assemblies — External leakage classification for hydraulic systems

1 Scope

This Technical Report establishes a uniform guide for defining the degree of external leakage on a hydraulic system. The choice of classification is intended to be by visual means rather than with the aid of instruments. It describes the leakage state at the observed time, considering that the state may change over a period of time.

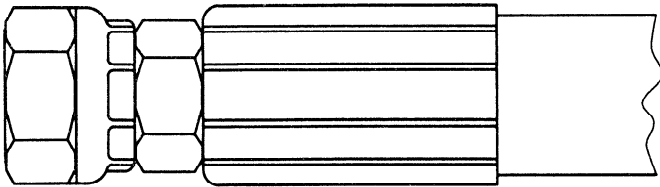
2 Classification

The classification is given in table 1 and illustrated in figure 1.

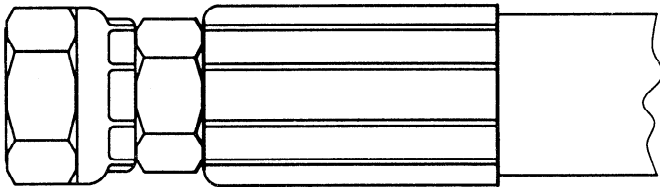
Table 1 — Leakage classification

Class	Description
0	No indication of moisture
1	Non-recurring fluid
2	Recurring fluid that does not result in the formation of a droplet
3	Recurring fluid that results in the formation of a non-falling droplet
4	Recurring fluid where a droplet forms and falls
5	Recurring fluid where the frequency of droplets makes a measurable stream

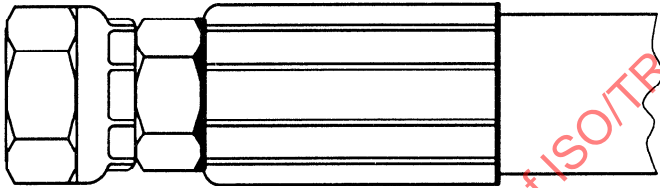
Class 0



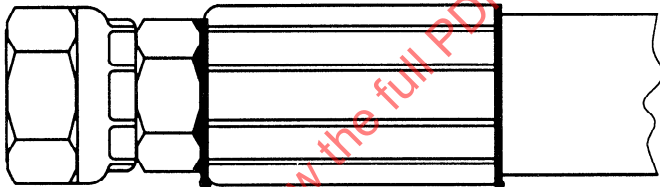
Class 1



Class 2



Class 3



Class 4



Class 5

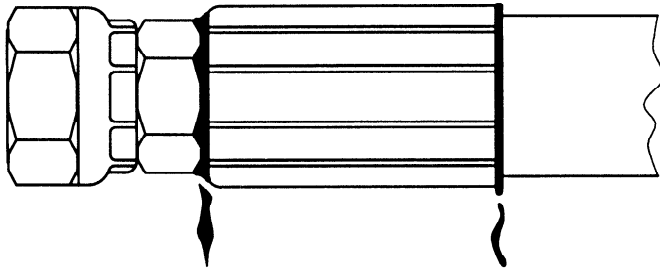


Figure 1 — Leakage classification