External Leakage Classifications for Hydraulic Systems—SAE J1176

SAE Recommended Practice
Approved April 1977

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EXTERNAL LEAKAGE CLASSIFICATIONS FOR HYDRAULIC SYSTEMS—SAE J1176

SAE Recommended Practice

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Rationale statement available.

1. Purpose—Establish a uniform guide for defining the degree of external leakage on a hydraulic system. The leakage classifications include dusty and dust-free conditions. 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. Dust-Free Classifications

2.1 Class 0—No indications of moisture.

2.2 Class 1—Nonrecurring fluid.

2.3 Class 2—Recurring fluid that does not result in the formation of a droplet.

2.4 Class 3—Recurring fluid that results in the formation of a non-falling droplet.

2.5 Class 4—Recurring fluid where a droplet forms and falls.

2.6 Class 5—Recurring fluid where the frequency of droplets makes a measurable stream.

3. Dusty Classifications

3.1 Class 0D—No indications of moisture.

3.2 Class 1D—Dry collection which does not propagate.

3.3 Class 2D—Moist thin layer (under 3 mm) of dust.

3.4 Class 3D—Moist thick layer (over 3 mm) of dust with wetness near the sealing member.

3.5 Class 4D—Recurring fluid forms on vertical surfaces, dripping occurs at bottom of surfaces or pools of oil collect on the top of horizontal surfaces.

3.6 Class 5D—Recurring fluid where the frequency of droplets makes a measurable stream.