

SUBJECTIVE RATING SCALE FOR VEHICLE HANDLING

- 1. Scope**—This SAE Recommended Practice establishes a rating scale for subjective evaluation of vehicle handling. The scale is applicable for the evaluation of specific vehicle handling properties in specific maneuvers on the proving grounds and highways. The validity of the evaluation is restricted to the individual handling disciplines defined by these maneuvers and to the particular combination of conditions of the vehicle (e.g., equipment, degree of maintenance) and of the environment (e.g., road, weather).

This document is intended as a guide toward standard practice and is subject to change to keep pace with experience and technical advances.

- 2. References**—There are no referenced publications specified herein.
- 3. Subjective Rating Scale**—The subjective rating scale shown in Figure 1 provides a means by which evaluators are able to assign numerical values to their subjective judgments about vehicle handling performance. The scale is unipolar and continuous with ten scalar points. Every second point is associated with an adjective to aid in the rating process. These adjectives have been selected to provide the best combination of linearity and common acceptance.

The highest rating, a "10," corresponds to ideal vehicle performance, free of any possible deficiencies and is included as a high level anchor point. The lowest rating, a "1," corresponds to totally deficient performance, and is also included for use as an anchor point. Handling performance of a vehicle with a rating between 5 and 10 is considered desirable, and performance of a vehicle with a rating between 1 and 5 is undesirable. A rating of 5 corresponds to borderline performance.

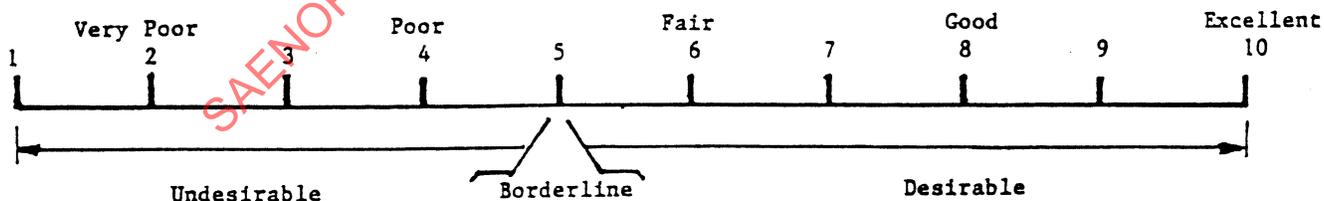


FIGURE 1—SUBJECTIVE RATING SCALE

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4. **Use of the Subjective Rating Scale**—This scale can be used for the subjective evaluation of any type of vehicle by employing evaluation criteria corresponding to the vehicle class. Since handling criteria will vary with vehicle type and mission (sports cars versus commercial vehicles, for example), an appropriate evaluation reference frame should be considered and established prior to the evaluation.

Vehicle ratings obtained through use of this scale are best made by a jury consisting of a small group of expert evaluators who are familiar with the needs and expectations of the relevant driver segment. Jury evaluation provides a more dependable measure of average vehicle rating than is possible using a single evaluator and, at the same time, provides a useful estimate of evaluator variability. Ratings may be influenced by the conditions of the evaluation as well as by the composition of the jury. The ratings will be compatible only for vehicles of the same class evaluated under the same conditions by the same jury.

Evaluation conditions include the following factors: maneuvers or tasks (lane change, straight-ahead driving, entry and exit from a curve, acceleration in a curve, etc.); road geometry (curves, camber, change in elevation, etc.); road surface (coefficient of friction, bumps, potholes, grooves, etc.); vehicle operating conditions (speed, load, etc.); and environmental conditions (wind, fog, snow, ice, etc.).

PREPARED BY THE SAE VEHICLE DYNAMICS FORUM COMMITTEE

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