Test Procedure for Parking Stability of Motorcycles —SAE J1101

SAE Recommended Practice
Approved October 1978

THIS IS A PREPRINT WHICH IS SUBJECT TO REVISIONS AND CORRECTIONS. THE FINAL VERSION WILL APPEAR IN THE 1980 EDITION OF THE SAE HANDBOOK.

Society of Automotive Engineers, Inc.
400 COMMONWEALTH DRIVE, WARRENDALE, PA. 15096

LAND SEA AIR SPACE

PREPRINT

TEST PROCEDURE FOR PARKING STABILITY OF MOTORCYCLES—SAE J1101

SAE Recommended Practice

Report of Motorcycle Committee approved October 1978.

1. Purpose—This SAE Recommended Practice is intended to establish guidelines for the parking stability test procedure of motorcycles.

2. Scope—This recommended practice applies to any two-wheeled motorcycle intended for highway use.

3. Definitions

3.1 Side Stand—Retractable device used for parking motorcycle by leaning it to one side.

3.2 Center Stand—Retractable device used for parking motorcycle in a near vertical position.

3.3 Parking Surface—Calculated surface of side or center stand depression in a horizontal surface.

3.4 Maximum Pressure—Pressure exerted on the parking surface—per contact area—of the side or center stand when motorcycle is parked on a horizontal plane.

3.5 Tip Over Angle—The angular degree at which the motorcycle loses its state of stability by tilting the parking surface (platform) out of its horizontal plane.

3.6 Roll Off Angle—The angular degree at which the motorcycle rolls off the centerstand by tilting the parking surface (platform) out of its horizontal plane.

3.7 Side Stand—A side stand shall be manually retractable by the rider or automatically retractable and fold rearward and upward upon contacting the ground when the motorcycle is moving forward.

3.8 Center Stand—A center stand shall be manually retractable by the rider or automatically retractable and shall fold rearward and upward upon contacting the ground when the motorcycle is moving forward.

4. Procedure

4.1 Vehicle with standard equipment in operating condition (curb weight).

4.2 Steering head unlocked—the front fork shall be free to move in any position.

4.3 The motorcycle shall be parked on a platform. The platform shall be tilted out of its horizontal plane, thus determining the tip over angle of the motorcycle.

4.4 The performance value of the tip over angle shall be established by the average of three measurements.

4.5 The maximum pressure shall be calculated by the maximum force on the stand contact divided by the projected area of that contact when forced to penetrate an inelastic solid to a depth of 2 mm. This calculation shall consider the vehicle geometry and stand contact area existing in the point of maximum pressure.

5. References—Additional information can be obtained from: SAE Information Report J1248, Performance Requirements for Parking Stability of Motorcycles (October, 1978).