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SURFACE VEHICLE RECOMMENDED PRACTICE

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Automatic Transmission Functions—Terminology

RATIONALE

This document has been revised for improved clarification and terminology updates to current nomenclature.

1. SCOPE

The following is a list of the most common terminology used in describing automatic transmission functions.

2. REFERENCES

There are no referenced publications specified herein.

3. DEFINITIONS

3.1 Friction Launch

The use of a friction driving member in launching a vehicle from a standing position.

3.2 Fluid Launch

The use of a hydrodynamic or hydrostatic drive unit in launching a vehicle from a standing position.

3.3 Converter Clutch Engagement

The transition from hydrodynamic to mechanical drive normally accomplished through the application of a friction element.

3.4 Shift

A control system actuated change in the functioning of the torque transmitting drive (this could be a gear train, a hydrodynamic or hydrostatic drive unit, electrical or friction drive mechanism, and so forth) which results in a change in torque ratio and speed ratio.

3.5 Upshift

A shift which results in a decrease in torque ratio and an increase in speed ratio.

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3.6 Downshift

A shift which results in an increase in torque ratio and a decrease in speed ratio.

3.7 Power Shift

A shift which occurs without interruption of drive.

3.8 Torque Break or Torque Interrupt Shift

A shift which occurs while the drive is interrupted.

3.9 Overlap Shift

A shift during which the torque transmitting elements of more than one driving ratio are engaged simultaneously for a short interval.

3.10 Underlap Shift

A shift during which the releasing clutch slips due to the torque transmitted being higher than the clutch torque capacity for a short interval before the applying element can hold the transmitted torque.

3.11 Freewheel or Non-Synchronous Shift

A torque shift in which a one-way clutch is involved as an element of one of the drive ratios from which or to which a shift is made.

3.12 Manual Shift

A shift which results from the action of the manually operated part of the control system.

3.13 Automatic Shift

A shift which results from the action of the automatically operating part of the control system.

3.14 Inhibited Shift

A shift which is automatically prevented under certain predetermined conditions of operation.

3.15 Backout Shift

An upshift which occurs with a reduction in throttle opening with vehicle in motion.

3.16 Coastdown Shift

A downshift which occurs with closed throttle and vehicle decelerating.

3.17 Part Throttle Shift

A shift which is obtained at a throttle position short of full throttle.

3.18 Wide Open Throttle Shift

A shift which is obtained at maximum throttle position.