## ELECTRONIC STABILITY CONTROL

March 2007 Status Report on Comments to NHTSA's Proposed Rule and Next Steps for WP.29

## What were the Proposed Requirements?

#### Performance Tests

- Vehicle must execute a lane change maneuver at 50 mph (80 kph) without spin-out (losing friction in the rear wheels).
- Vehicle must steer back into the desired lane at a specified time in the maneuver (responsiveness criterion).

#### Equipment definition

- The specification of equipment ensures vehicles will not plow out (lose friction at the front wheels) in severe maneuvers.
- All ESC systems offered on 2007 vehicles offered for sale in the US meet this definition which is based on an SAE practice.
- No current test by anyone to assess plow-out.

# What were the Proposed Requirements? (Cont'd)

- Scope was <u>all</u> Passenger Cars, Multipurpose Passenger Vehicles, Trucks, and Buses with a GVWR of 4,536 Kilograms(10,000 pounds) or less.
  - Voluntary Installations up to 2006 model year have focused on SUVs and luxury passenger cars.
- Proposed Phase-In:
  - 30% in 2009 Model Year (9/1/2008)
  - 60% in 2010 Model Year (9/1/2009)
  - 90% in 2011 Model Year (9/1/2010)
  - All Vehicles by 2012 Model Year (9/1/2011)

# What Were the Estimated Costs and Benefits for NPRM?

- Information shows 71% of MY 2011 vehicles will be voluntarily equipped with ESC, so this rule is responsible for the costs and benefits of the 29% that wouldn't be voluntarily equipped.
- Benefits
  - 1,536 − 2,211 prevented deaths annually
- Costs
  - \$985 M for the fleet
    - Consumer Cost of ABS \$368/Unit
    - Consumer Cost of ESC on top of ABS \$111/Unit

## Comments – Vehicle Manufacturers

- 7 comments
- All are fine with ESC mandate and technical performance requirements for vehicles and ESC systems
- Nearly 100 pages of comments on compliance details like color of ESC lights, conditions when lights activate, etc.

### Comments – OEM Suppliers

- 6 comments 4 actively support the proposal as written
- 2 suppliers commented that technologies other than ESC can function similarly to ESC (e.g., active steering, torque vectoring yaw control, etc.), but are not recognized by the rule as acceptable alternatives to ESC
  - This ESC rule may stifle development of these even more advanced technologies
- Observation: Must choose between moving forward with proven life-saving technology of ESC now or waiting 5 to 10 years to see if alternative technologies can be developed to be equally effective.

#### -Comments – Consumer Advocacy Groups

- 3 commenters (Public Citizen, Advocates, and Consumers Union) generally thought rule did not go far enough
- The proposal only requires minimum current ESC systems, not even state-of-theart current ESC systems – should be forcing technology to even higher levels
- Observation: These systems are the ones that have shown the life saving benefits in the real world

### Comments – Consumer Advocacy Groups (Cont'd)

 Proposal only addresses understeer by a definition, NHTSA is required to establish a performance test for understeer

#### Response:

- Agree that performance test is goal
- Agree that understeer intervention is needed to achieve full benefit of ESC
- o But...

### -Comments – Consumer Advocacy Groups (Cont'd)

- There is NO current understeer performance test
  - Dry pavement tests are repeatable, but has effect of requiring understeer intervention when it is not needed for real world safety
  - Slippery pavement test has the effect of requiring understeer intervention when it is appropriate, but the test conditions are not repeatable
- Again must choose between moving forward with proven life-saving technology of ESC now or waiting for years to see if understeer performance test can be developed

# Comments – Insurance Institute for Highway Safety

 Strongly support the proposal, but ask for a more aggressive phase-in schedule to get the life-saving benefits to the public more quickly

#### Comments – Aftermarket Vehicle Modifiers

- 5 modifier groups (SEMA, NADA, NMEDA, TIA, and AAIAA) commented that proposed rule could prevent vehicle modifications (because ESC would not function properly after modification)
  - Asked for Small Business impact assessment
  - Suggested mandating "adaptive learning" for ESC, so that it would reprogram itself to recognize the changes in vehicle performance

#### -Comments – Aftermarket Vehicle Modifiers (Cont'd)

- Observations: Comments provided no data on how many of their modifications pose potential problems,
  - Millions of current vehicles have ESC, NHTSA has no indication of problems

# Summary/Next Steps in the United States

- ESC is the most important safety technology we've seen in a long time
- This rule's requirements will save thousands of lives a year on the roads in the United States over and above the thousands that will be saved by voluntary installations of this technology
- Issues raised in comments are policy judgments, not technical concerns
- NHTSA will publish its final rule on ESC very soon and would like to use as a basis for the GTR discussion.

### Next Steps for WP.29

- Agreed to begin work on GTR for ESC in November 2006
- WP.29/AC.3 should authorize an informal working group under GRRF to prepare a draft GTR on ESC. U.S. will sponsor and chair.
  - If AC.3 agrees to the group, the US will contact all of the GRRF experts to see who wants to participate in this working group and schedule the first meeting this summer
- Target is to complete work at GRRF by its October 2008 meeting and vote on GTR at March 2009 session of AC3.