

119<sup>TH</sup> CONGRESS  
1<sup>ST</sup> SESSION

To require the National Highway Traffic Safety Administration to establish guidelines for advanced driver assistance systems calibration, modifications, and tolerances, and for other purposes.

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IN THE HOUSE OF REPRESENTATIVES

Mrs. HARSHBARGER (for herself, Mr. Obernolte, Mr. Vasquez, and Mrs. Torres) introduced the following bill; which was referred to the Committee on Energy & Commerce.

**A BILL**

To require the National Highway Traffic Safety Administration to establish guidelines for advanced driver assistance systems calibration, modifications, and tolerances, and for other purposes.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

3       **SECTION 1. SHORT TITLE.**

4       This Act may be cited as the “ADAS Functionality  
5       and Integrity Act”.

1    **SEC. 2. ADAS MODIFICATION RANGES AND TOLERANCES**

2                    **GUIDELINES.**

3            (a) GUIDELINES FOR ADAS.—Not later than 24  
4 months after the date of the enactment of this Act, the  
5 Secretary of Transportation, acting through the Adminis-  
6 trator of the National Highway Traffic Safety Administra-  
7 tion, in consultation with manufacturers of passenger  
8 motor vehicles and equipment, standard settings organiza-  
9 tions, the independent automotive aftermarket, and deal-  
10 ers, shall develop and publish guidelines to ensure ADAS  
11 and vehicle dynamic systems installed in any passenger  
12 motor vehicle, for a model year on and after 2028 main-  
13 tains functionality when a passenger motor vehicle is  
14 modified or customized that include the following:

15            (1) Allowable modification ranges and toler-  
16 ances, including physical parameters impacting  
17 ADAS and vehicle dynamic systems functionality, in-  
18 cluding ride height, wheel and tire dimensions, over-  
19 all static geometry, physical displacement param-  
20 eters, and sensor and camera function.

21            (2) A process for manufacturers to provide ve-  
22 hicle tolerance and system sensitivity information  
23 relevant to modification and calibration to owners  
24 and the Administrator within 30 days after the re-  
25 lease of a passenger motor vehicle.

1           (3) Quantifiable tolerance thresholds for  
2       changes in vertical and lateral displacement, in all  
3       axes, necessary to maintain proper ADAS  
4       functionality.

5           (4) Proper calibration procedures of ADAS and  
6       other vehicle dynamic systems following repair,  
7       modification, or component replacement.

8           (5) Confirmatory test protocols and perform-  
9       ance validation metrics that allow owners, service  
10      providers, and independent repair facilities to verify  
11      the operational integrity of ADAS after calibration.

12      (b) CONTRACTING AUTHORITY.—The Administrator  
13      may contract with independent laboratories and vehicle  
14      testing facilities to carry out any testing that may be re-  
15      quired to develop the guidelines under subsection (a).

16      (c) REQUIREMENT TO USE EMPIRICAL DATA.—Any  
17      determination made by the Administrator in issuing the  
18      guidelines required pursuant to subsection (a) shall be  
19      based on empirical data derived from dynamic testing,  
20      independent research, and public data sources.

21      (d) USE OF NCAP METHODOLOGIES.—The guide-  
22      lines described in subsection (a)(4) shall reference or ex-  
23      pand upon methodologies established by the United States  
24      New Car Assessment Program, including—

1           (1) a standardized scoring scale to evaluate the  
2           effectiveness of calibration (such as good, fair, and  
3           poor); and

4           (2) transparent validation criteria that can be  
5           applied across vehicle platforms and assessed over  
6           the lifecycle of the vehicle.

7           (e) ENFORCEMENT.—A manufacturer of a passenger  
8           motor vehicle or equipment that does not meet the guide-  
9           lines issued pursuant to this section is subject to the civil  
10          penalties described under section 30165(a) of title 49,  
11          United States Code.

12       **SEC. 3. ADAS MODIFICATION RANGES AND TOLERANCES**  
13               **STUDY.**

14          (a) STUDY REQUIRED.—Not later than 12 months  
15          after the date of the enactment of this Act, the Secretary  
16          of Transportation, acting through the Administrator of  
17          the National Highway Traffic Safety Administration, shall  
18          complete a study and submit to Congress a report that  
19          assesses the safety needs, feasibility, capability, and cost  
20          to the National Highway Traffic Safety Administration to  
21          develop and maintain industry guidelines to support the  
22          functionality of ADAS and vehicle dynamic systems in-  
23          stalled in passenger motor vehicles for a model year on  
24          and after 2028 after a passenger motor vehicle is modified

1 or customized. The study shall consider the development  
2 of industry guidelines relating to the following:

3 (1) Vehicle tolerance and system sensitivity in-  
4 formation relevant to calibration following modifica-  
5 tion.

6 (2) Allowable modification ranges and toler-  
7 ances for passenger motor vehicles, including phys-  
8 ical parameters that impact ADAS and vehicle dy-  
9 namic systems functionality, including ride height,  
10 wheel and tire dimensions, overall static geometry,  
11 physical displacement parameters, and sensor and  
12 camera function.

13 (3) Quantifiable tolerance thresholds for  
14 changes in vertical, longitudinal, and lateral dis-  
15 placement, in all axes, necessary to maintain proper  
16 ADAS functionality.

17 (4) Proper calibration procedures of ADAS and  
18 other vehicle dynamic systems following repair,  
19 modification, or component replacement.

20 (5) Confirmatory test protocols and perform-  
21 ance validation metrics that allow owners, service  
22 providers, and independent repair facilities to verify  
23 the operational integrity of ADAS after calibration.

24 (b) STAKEHOLDER OUTREACH.—In carrying out the  
25 study required under subsection (a), the Administrator

1 shall consult with manufacturers of passenger motor vehi-  
2 cles and equipment, standard setting organizations, the  
3 independent automotive aftermarket, and dealers.

4 **SEC. 4. DEFINITIONS.**

5 In this Act:

6 (1) ADMINISTRATOR.—The term “Adminis-  
7 trator” means the Administrator of the National  
8 Highway Traffic Safety Administration.

9 (2) ADVANCED DRIVER ASSISTANCE SYSTEMS;  
10 ADAS.—The term “advanced driver assistance sys-  
11 tem” or “ADAS” means a passenger motor vehicle  
12 equipped with a Level 0, Level 1 or Level 2 system.

13 (3) DEALER; MANUFACTURER.—The terms  
14 “dealer” and “manufacturer” have the meaning  
15 given those terms in section 30102 of title 49,  
16 United States Code.

17 (4) CONFIRMATORY TEST.—The term “confirm-  
18 atory test” means a standardized post-calibration ve-  
19 hicle test designed to validate system performance.

20 (5) INDEPENDENT AUTOMOTIVE  
21 AFTERMARKET.—The term “independent automotive  
22 aftermarket” means any party or entity not author-  
23 ized by a passenger motor vehicle manufacturer or  
24 affiliated service provider.

1           (6) LEVEL 0; LEVEL 1; LEVEL 2.—The terms  
2           “Level 0”, “Level 1”, and “Level 2” have the mean-  
3           ing given those terms in the April 2021 edition of  
4           the J3016 recommended practice of SAE Inter-  
5           national, “Taxonomy and Definitions for Terms Re-  
6           lated to Driving Automation Systems for On-Road  
7           Motor Vehicles”, or any subsequent edition of J3016  
8           adopted by the Secretary.

9           (7) MOTOR VEHICLE.—The term “motor vehi-  
10          cle” has the meaning given that term in section  
11          32101 of title 49, United States Code.

12          (8) OWNER.—The term “owner” has the mean-  
13          ing given that term in section 30106(d)(2) of title  
14          49, United States Code.

15          (9) PASSENGER MOTOR VEHICLE.—The term  
16          “passenger motor vehicle” has the meaning given  
17          that term in section 32101 of title 49, United States  
18          Code, including a motor vehicle with a gross vehicle  
19          weight rating of less than 10,000 pounds.

20          (10) SECRETARY.—The term “Secretary”  
21          means the Secretary of Transportation.

22          (11) VEHICLE DYNAMIC SYSTEM.—The term  
23          “vehicle dynamic system” means ADAS and any re-  
24          lated or integrated systems affecting the stability,  
25          control, or motion of the vehicle.