



United States Department of Transportation
National Highway Traffic Safety
Administration

VEHICLE INSPECTION (CAPI)

Form Approved O.M.B. No. 2127-0626
Expiration Date: XXXX

Tire Pressure Monitoring System –
Outage Rates and Repair Costs

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Formatting conventions:

Questionnaire item

///PROGRAMMING LOGIC///

Explanatory notes

Programmer Notes:

- *All variables are assumed to be numeric*
- *For SELECT ALL THAT APPLY items, create a series of variables with **_1**, **_2**, etc. appended to original variable name to indicate selection status of each response option*
- *For OTHER: SPECIFY items, create a new variable (length \$ 256) with **_OTHER** appended to original variable name to hold open-end text*

Disposition Definitions:

- *61 = Completed inspection*

MODULE INSPECTION: IF DRIVER IS PARTICIPATING AND MODELYEAR≥2004





///**Generate MASTERID and communicate to driver interviewer for syncing**///

TPMSTAPE Has an attempt been made to cover up any indicator lights on the dash (e.g., with tape)?
 1. YES
 2. NO

///**TURN IGNITION FROM LOCK (0) TO ON (II) POSITION AND PAUSE 5 SECONDS**///

TPMSON Select all TPMS-related indicator lights or readouts visibly illuminated on the dash (allowing for minor stylistic variations or differences in wording):
 [SELECT ALL THAT APPLY FROM GRAPHICAL GRID]

///**VALIDATE: SELECTION OF “NONE VISIBLE” MEANS NO OTHER OPTIONS ARE SELECTED**///







1. 	2. 
3. 	4. 
5. WORDS ON DIGITAL READOUT: “CHECK {LEFT FRONT} TIRE PRESSURE”	6. WORDS ON DIGITAL READOUT: “TIRE PRESSURE TOO LOW”
7. WORDS ON DIGITAL READOUT: “TPMS SYSTEM MALFUNCTION”	
8. OTHER: SPECIFY	9. NONE VISIBLE

WARN1 Are ANY indicator lights (other than TPMS indicators) illuminated in ON (II) position?
 1. YES
 2. NO
 98. DON'T KNOW

///**TURN IGNITION FROM ON (II) TO START (III) POSITION AND PAUSE 5 SECONDS**///

TPMSSTART Select all TPMS-related indicator lights or readouts visibly illuminated on the dash (allowing for minor stylistic variations or differences in wording):
 [SELECT ALL THAT APPLY FROM GRAPHICAL GRID]

///**VALIDATE: SELECTION OF “NONE VISIBLE” MEANS NO OTHER OPTIONS ARE SELECTED**///

1.  SOLID	2.  FLASHING
3.  SOLID	4.  FLASHING
5. 	6. 
7. WORDS ON DIGITAL READOUT: "CHECK {LEFT FRONT} TIRE PRESSURE"	8. WORDS ON DIGITAL READOUT: "TIRE PRESSURE TOO LOW"
9. WORDS ON DIGITAL READOUT: "TPMS SYSTEM MALFUNCTION"	
10. OTHER: SPECIFY	11. NONE VISIBLE

WARN2

Are any other indicator lights (other than TPMS indicators) illuminated in START (III) position?

1. YES
2. NO
98. DON'T KNOW

- IF TPMSON NE 9 AND TPMSSTART IN 2,4,9 THEN TPMSMALF=1; indicator(s) working @ ON, system malfunction @ START
- ELSE IF TPMSON NE 9 AND TPMSSTART IN 1,3,5,6,7,8 THEN TPMSMALF=2; indicator(s) working @ ON, low pressure only @ START
- ELSE IF TPMSON=9 AND TPMSSTART=11 THEN TPMSMALF=3; no TPMS indicator(s) @ ON, no TPMS indicator(s) @ START
- ELSE IF TPMSON NE 9 AND TPMSSTART=11 THEN TPMSMALF=4; indicator(s) @ ON, no indicator(s) @ START
- ELSE TPMSMALF=5; status unclear, screen out

OBSERVER: Before proceeding with observation, communicate TPMS indicator status (TPMSMALF=1,2,3,4,5) to interviewer verbally or using pre-determined hand signal, and await interviewer code match confirmation.

ODOMETER **Odometer reading**
/RANGE 1-1,000,000/

EMAG **Does the vehicle contain visible equipment that could cause electromagnetic interference (e.g., radar detector)?**
1. YES
2. NO

///**LOOP: X = {LF, LR, RR, RF}**///
 STEMCON_X **What is the condition of the valve stem on the X tire?**

1. GOOD
2. POOR (E.G., CRACKED OR CORRODED)
3. NO VALVE STEM VISIBLE

///**ASK IF STEMCON_X = 1,2, Not missing valve stem on X tire**///
 STEMMAT_X **Of what material is the valve stem on the X tire made?**

1. RUBBER OR PLASTIC
2. METAL
3. OTHER MATERIAL

CAPCON_X **What is the condition of the valve cap on the X tire?**

1. GOOD
2. POOR (E.G., CRACKED OR CORRODED)
3. NO VALVE CAP VISIBLE

///**ASK IF CAPCON_X = 1,2, Not missing valve cap on X tire**///
 CAPMAT_X **Of what material is the valve cap on the X tire made?**

1. RUBBER OR PLASTIC
2. METAL
3. OTHER MATERIAL

///**END LOOP**///

SPARE **Does the vehicle appear to have one or more spare tires (mini- or full-size) or non-matching wheels installed?**
1. YES
2. NO

///**SET DISPO = 61, Completed inspection**///

END MODULE INSPECTION

MODULE NON-RESPONSE: ALL VEHICLES APPROACHED

///**Set MASTERID to contain site ID and timestamp to enable linking with Driver Interview**///
///

DATE [INTERNAL]

TIME [INTERNAL]

SITENUM [INTERNAL]

BODY_OBS **Body type of vehicle**
1. SUV
2. AUTO (INCLUDES SEDAN/WAGON/HATCHBACK)
3. VAN (INCLUDES TRADITIONAL AND MINIVANS)
4. LIGHT TRUCK

MAKE_OBS **Make of vehicle**
1. BMW
2. BUICK
3. CADILLAC
4. CHEVROLET
5. CHRYSLER
6. DODGE
7. FORD
8. GMC
9. HONDA
10. HYUNDAI
11. JEEP
12. KIA
13. LEXUS
14. MAZDA
15. MERCEDES
16. NISSAN
17. RAM
18. SUBARU
19. TOYOTA
20. VOLKSWAGEN
21. OTHER: SPECIFY
98. DON'T KNOW

LANG_OBS **Language spoken**
1. ENGLISH
2. SPANISH
3. OTHER
98. DON'T KNOW

- AGE_OBS** **Age of driver**
 1. YOUNG ADULT (Up to 25)
 2. ADULT (25-69)
 3. SENIOR (70 and over)
 98. DON'T KNOW
- SEX_OBS** **Sex of driver**
 1. MALE
 2. FEMALE
 98. DON'T KNOW
- OCCUPAD** **Number of ADULT occupants (if ages are unclear, count all as adult)**
 /RANGE 1-10/
 98. DON'T KNOW
- OCCUPCH** **Number of CHILD occupants (if ages are unclear, count all as adult)**
 /RANGE 1-10/
 98. DON'T KNOW
- DAMG_OBS** **Is there damage to the vehicle?**
 1. NONE VISIBLE (ALLOWING FOR PAINT SCRAPES, WINDOW ISSUES, WIPER ISSUES)
 2. MINOR (E.G., DENTED FENDERS/BODY PANELS)
 3. MAJOR (E.G., MAJOR DAMAGE TO HOOD, FRONT END, REAR END, DOORS THAT WOULD MAKE PARTS OF VEHICLE UNUSABLE)
 98. DON'T KNOW
- HITCH** **Is the vehicle equipped with a rear hitch?**
 1. YES
 2. NO
 98. DON'T KNOW
- ELEC_OBS** **Is the car a hybrid or electric?**
 1. YES
 2. NO
 98. DON'T KNOW
- FUEL_OBS** **Fuel type purchased**
 1. DIESEL
 2. REGULAR (GENERALLY 87 OCTANE)
 3. MID-GRADE (GENERALLY 89 OCTANE)
 4. PREMIUM (GENERALLY 91 OCTANE)
 5. OTHER
 98. DON'T KNOW
- PAY** **Where was payment for fuel made?**
 1. AT PUMP
 2. IN STORE

98. DON'T KNOW

END MODULE NON-RESPONSE