

**SUPPORTING STATEMENT  
FOR  
JUSTIFICATION OF COMPLIANCE LABELING OF  
RETROREFLECTIVE MATERIALS FOR HEAVY TRAILER CONSPICUITY  
49 CFR SECTION 571.108  
OMB Control Number 2127-0569**

ABSTRACT<sup>1</sup>

This information collection is mandatory under 49 CFR 571.108 for manufacturers of retroreflective sheeting. This collection involves disclosure by requiring manufacturers of retroreflective sheeting to permanently mark the letters “DOT-C2”, DOT-C3”, or “DOT-C4” at least 3mm high at regular intervals on retroreflective sheeting material having adequate performance for certifications and identification purposes. This is an as-needed collection that manufacturers comply with labeling retroreflective sheeting as being compliant with NHTSA’s performance requirements. Manufacturers of trailers and truck tractors that are required to apply retroreflective sheeting to their vehicles use the information on the label as an assurance that the sheeting complies with the standard, and the Federal Motor Carrier Safety Administration (FMCSA) uses the information to ensure compliance with in-service requirements for regulated vehicle operators.

Federal Motor Vehicle Safety Standard (FMVSS) No. 108, “Lamps, reflective devices, and associated equipment” specifies requirements for vehicle lighting for the purposes of reducing crashes and the injuries and deaths resulting from crashes by providing adequate roadway illumination, improved vehicle conspicuity, and appropriate information transmission through signal lamps, in both day, night, and other conditions of reduced visibility. To provide effective trailer conspicuity, FMVSS No. 108 requires the permanent marking of the letters “DOT-C2”, DOT-C3”, or “DOT-C4” at least 3 mm high at regular intervals on retroreflective sheeting material having adequate performance for certifications and identification purposes.

The manufacturers of new truck tractors and trailers are required to certify that their products are equipped with retroreflective material complying with the requirements of the standard. FMCSA enforces this and other standards through roadside inspections of trucks. There is no practical field test for the performance requirements, and labeling is the only objective way of distinguishing trailer conspicuity grade material from lower performance material. Without labeling, FMCSA would not be able to enforce the performance requirements of the standard and the compliance testing of new tractors and trailers would be complicated. Labeling is also important to small trailer manufacturers, which might not have the capability to test the tape and therefore could rely on the certification provided by the retroreflective sheeting manufacturer to help them certify compliance. Because wider stripes or material of lower brightness also can provide the minimum safety performance, the marking system serves the additional role of

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<sup>1</sup> The Abstract must include the following information: (1) whether responding to the collection is mandatory, voluntary, or required to obtain or retain a benefit; (2) a description of the entities who must respond; (3) whether the collection is reporting (indicate if a survey), recordkeeping, and/or disclosure; (4) the frequency of the collection (e.g., bi-annual, annual, monthly, weekly, as needed); (5) a description of the information that would be reported, maintained in records, or disclosed; (6) a description of who would receive the information; (7) the purpose of the collection; and (8) if a revision, a description of the revision and the change in burden.

identifying the minimum stripe width required for retroreflective conspicuity of the particular material.

Since the last notice, the estimated number of respondents, burden hours and costs were revised. The number of respondents was revised from six respondents to three, based on the number of identified manufacturers of retroreflective tape. The total burden hours were revised from one hour to three hours based on the number of respondents and required reporting tasks. The labor cost associated with the burden hours was also revised to \$102.57. The total annual cost burden was revised from \$1,000 to \$4,000 based on the number of trailers and truck tractors registered in the United States and updated maintenance and materials costs.

## JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary. Identify any legal and administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute or regulation mandating or authorizing the collection of information.

The National Traffic and Motor Vehicle Act, authorizes the Secretary of Transportation (NHTSA by delegation), at 49 U.S.C. 30111, to issue Federal Motor Vehicle Safety Standards (FMVSS) that set performance standards for motor vehicles and items of motor vehicle equipment. Further, the Secretary (NHTSA by delegation) is authorized, at 49 U.S.C. 30117, to require manufacturers to provide information to first purchasers of motor vehicles or items of motor vehicle equipment related to performance and safety in printed materials that are attached to or accompany the motor vehicle or item of motor vehicle equipment.

Using this authority, the agency issued the initial FMVSS No. 108, "Lamps, reflective devices, and associated equipment," specifying requirements for vehicle lighting for the purposes of reducing crashes and the injuries and deaths resulting from crashes by providing adequate roadway illumination, improved vehicle conspicuity, appropriate information transmission through signal lamps, in both day, night, and other conditions of reduced visibility. Research indicates that the number of crashes in which tractor and tractor-trailer combination vehicles are struck in the rear and sides of the trailers would be reduced by about 15 percent if retroreflective material having certain essential properties is used to mark the trailers. The standard increases the conspicuity of large trailers at night through the use of retroreflective material and FMVSS No. 108 requires the permanent marking of the inscription "DOT-C2", "DOT-C3" or "DOT-C4" at least 3 mm high at regular intervals on retroreflective sheeting material having adequate performance to provide effective trailer conspicuity.

The high reflective brightness of the material and its ability to reflect light that strikes it at an angle are special properties required by the safety standard. The high brightness is required because the material must be effective even when it is dirty. One of the principal goals of the standard is to prevent crashes in which the side of the trailer is blocking the road and it is not otherwise sufficiently visible at night to fast traffic. Frequently, the side of the trailer is not perpendicular to approaching traffic and the conspicuity material must reflect light that strikes it

at an angle in order to be effective. There exist many types of retroreflective material similar in appearance to the required material but lacking in its requisite properties.

The manufacturers of new trailers are required to certify that their products are equipped with retroreflective material complying with the requirements of the standard. The FMCSA enforces this and other standards through roadside inspections of trucks. There is no practical field test for the performance requirements, and labeling is the only objective way of distinguishing truck conspicuity grade material from lower performance material. Without labeling, FMCSA would not be able to enforce the performance requirements of the standard, and the compliance testing of new trailers would be complicated. Labeling is also important to small trailer manufacturers because it may help them to certify compliance, as they might not have the capability to test the tape and ensure compliance with conspicuity requirements in FMVSS No. 108.

The marking system serves the additional role of identifying the minimum stripe width required for the retroreflective brightness of the particular material. Also, the difference between the brightness grades of suitable retroreflective conspicuity material is not obvious from inspection, so the marking system is necessary for trailer manufacturers and repair shops to assure compliance and for FMCSA to inspect trailers in use.

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

The agency uses the permanent labeling to identify retroreflective material having the minimum properties required for effective conspicuity of trailers at night. The information is also used by the FMCSA during compliance inspections. The FMCSA would not be able to determine whether trailers are properly equipped during roadside inspections without labeling.

Permanent labeling on the retroreflective tape aids trailer owners and repair shops in choosing the correct repair materials for damaged trailers. Without the labeling requirement, the use of cheaper and more common reflective materials, which are ineffective for the application, is expected. Small trailer manufacturers also take advantage of the labeling requirements in certifying compliance of their products.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also, describe any consideration of using information technology to reduce burden.

The agency has not considered other methods of obtaining the information since this safety information needs to be public and readily available. The collected information is in the form of labeling on the retroreflective tape and is performed by automated equipment incorporated in the production process. The means required are the most expedient and convenient form for the user and the information supplier. There is no information submitted to the agency regarding this collection of information.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

This information collection is unique because there are no other labeling requirements for manufacturers of conspicuity tape.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

The agency could only identify three manufacturers of conspicuity grade retroreflective materials, none of which is a small business. However, the printing or molding of certification labels on a material that undergoes other printing and molding processes in its manufacture is such a slight burden that it would not be an element discouraging small businesses from the market. Accordingly, there are no alternatives to those proposed to reduce the anticipated burden.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

49 U.S.C. §§ 30111, 30112, and 30117 authorize the issuance of Federal Motor Vehicle Safety Standards and the collection of data that supports their implementation. FMVSS No. 108, specifies requirements for vehicle lighting for the purposes of reducing crashes and injuries and deaths resulting from crashes by providing adequate roadway illumination, improved vehicle conspicuity, and appropriate information transmission through signal lamps, in day, night, and conditions of reduced visibility. All retroreflective material manufactured for trailer conspicuity must be labeled to facilitate FMCSA roadside inspections. This allows for easy identification of non-compliant, unlabeled material not adequate for vehicle conspicuity. Without the labeling requirement, some vehicle operators may opt to use conspicuity tape that is not certified as meeting the retroreflective performance requirements of FMVSS No. 108.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- requiring respondents to report information to the agency more often than quarterly;
- requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;
- requiring respondents to submit more than an original and two copies of any document;
- requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;
- in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;
- requiring the use of a statistical data classification that has not been reviewed and approved by OMB;

- that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or
- requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.

None of the special circumstances described above apply to these data collections.

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden. Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported. Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years - even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

The Federal Register notice soliciting public comments was published on July 7, 2020 (85 FR 40735). There were no public comments received regarding this collection of information. NHTSA also reached out to one manufacturer of conspicuity tape which confirmed that they are using the print method and that this is an automated process imbedded into the manufacturing process and requires minimal operator intervention. A 30-day notice was published on July 21, 2021 (86 FR 38528).

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

No payment or gift will be provided to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy. If the collection requires a systems of records notice (SORN) or privacy impact assessment (PIA), those should be cited and described here.

No assurance of confidentiality is involved. The subject information collection is concerned with labeling new retroreflective tape and is intended to inform the public of the satisfactory safety performance of the product. Also, NHTSA is neither collecting nor maintaining confidential information under this collection.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.

The labeling information it is not of a sensitive nature or commonly considered private, and it is intended for public consumption. Therefore, no justification statements are necessary.

12. Provide estimates of the hour burden of the collection of information on the respondents and estimates of the annualized labor cost to respondents associated with that hour burden.

The compliance symbol labeling program imposes only a minor hour burden. The application of symbols is performed by automated equipment incorporated in the production process of the retroreflective sheeting method.

As stated in the answer to Question 5, the agency was able to identify three manufacturers of conspicuity grade retroreflective materials. Since NHTSA expects the respondents to be retroreflective tape manufacturers, the total number of respondents is three. NHTSA estimates that there are approximately 190 million labels affixed to conspicuity tape per year, for an average of 63.3 million labels, or responses, per respondent. NHTSA's method for estimating the number of labels, or responses, is described in question 13. The estimated required hour burden is one hour and is based on a maximum time required to log the production of the printing presses, which is a highly-automated process. The average estimated labor cost associated with the information collection is \$34.19 per hour.<sup>2</sup> Thus, the total burden hours is estimated to be 3 hours and the total labor cost associated with the burden hours is \$102.57 for all respondents.

Annual Burden for Reporting:

Number of respondents.....	3
Number of responses per respondent.....	66.3 mil
Total burden hours each respondent.....	1
Total burden hours all respondents.....	3
Total number of responses .....	190 mil
Labor cost associated with each burden hour.....	\$34.19
Total labor cost associated with burden hours.....	\$102.57
(3 Respondents x 1 hour x \$34.19 = \$102.57)	

Number of Respondents	Number of Responses	Annual Burden Hours	Average Wage	Total labor Cost
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<sup>2</sup> The hourly wage is estimated to be \$23.93 per hour. National Industry-Specific Occupational Employment and Wage Estimates NAICS 336100 - Motor Vehicle Manufacturing, May 2019, [https://www.bls.gov/oes/current/naics4\\_336100.htm#51-0000](https://www.bls.gov/oes/current/naics4_336100.htm#51-0000), last accessed December 1, 2020. The Bureau of Labor Statistics estimates that wages represent 70 percent of total compensation to private industry workers, on average. Bureau of Labor Statistics (2020). Employer Costs for Employee Compensation for private industry workers by occupational and industry group, June 2020, <https://www.bls.gov/news.release/eccec.t04.htm>, last accessed December 1, 2020. Therefore, NHTSA estimates the total hourly compensation cost to be \$34.19.

3	66.3 mil	1	\$34.19	\$34.19
<b>Total</b>	<b>190 mil</b>	<b>3</b>	<b>\$102.57</b>	<b>\$102.57</b>

13. Provide an estimate for the total annual cost burden to respondents or record keepers resulting from the collection of information. (Do not include the cost of any hour burden already reflected on the burden worksheet).

The initial cost to the respondents was based on estimates supplied by the respondents of the cost of supplying or modifying printing rollers to apply the label. The cost to manufacturers of extending the label requirement is the maintenance and amortization of printing rollers and the additional dye or ink consumed. The labels are to be placed at intervals varying between 150 mm and 300 mm on rolls of retroreflective conspicuity tape. The labels are printed during the normal course of steady flow manufacturing operations without a direct time penalty.

Two methods of printing the label are in use. One method uses the same roller that applies the dye to the red segments of the material pattern. The roller is resurfaced annually using a computerized etching technique. The label was incorporated in the software to drive the roller resurfacing in 1993, and there is no additional cost to continue the printing of the label. In fact, costs would be incurred to discontinue the label.

The second method uses a separate roller and dye to apply the label. The manufacturer using this technique reported that the rollers have been in service for five years without detectable wear and predicted a service life of at least fifteen years. Four rollers costing about \$2,500 each are used for a total of \$10,000. If all three manufacturers chose to use this method, a total of 12 rollers would be used for a total cost of \$30,000. A straight-line depreciation of the rollers over 15 years (\$30,000 divided by 15 years) equals \$2,000 per year. The total cost of the dye required is derived from the number of labels required to be printed yearly and the dye required for each label. According to the latest data available from the Federal Highway Administration (FHWA) there are approximately 11.7 million trailers and 2.7 million truck tractors registered in the U.S.<sup>3</sup> Typical commercial trailers vary in length from about 28 ft. to 53 ft. so a typical trailer requires between approximately 41 ft. and 76 ft. of retroreflective tape, or an average of about 60 ft. A truck tractor requires about 4 ft. of retroreflective tape to satisfy the conspicuity requirements. Since on average the label is applied approximately every 9 in. (225 mm) and an average 60 ft. of retroreflective tape is required for trailers and 4 ft. for truck tractors, the total number of labels applied on retroreflective tape is about 80 for a trailer and about 6 for a truck tractor. A survey of the specifications of retroreflective tape available on the market shows that the warranty for such tape is 5 years or more. Based on the number of trailers and tractor trucks registered, and considering the lifespan (based on the manufacturer's warranty) of the retroreflective tape, one fifth of all trailers and truck tractors will require replacing the retroreflective tape every year, or approximately 2.34 million trailers and 0.54 million truck tractors.<sup>4</sup> The total number of labels

<sup>3</sup> Trailer and Semitrailer Registrations – 2012, January 2014, <https://www.fhwa.dot.gov/policyinformation/statistics/2012/mv11.cfm>, last accessed December 1, 2020. Truck and Truck-Tractor Registrations – 2018, December 2019, <https://www.fhwa.dot.gov/policyinformation/statistics/2018/mv9.cfm>, last accessed December 1, 2020.

<sup>4</sup> Since a new trailer or truck tractor will require installation of new retroreflective tape, and replacement retroreflective tape, every five years in the same manner as an in-service trailer or truck tractor will require

printed annually is about 190 million (2.34 million trailers x 80 labels + 0.54 million truck tractors x 6 labels). At \$40 per gallon of dye and using about 0.001 milliliters of dye per label, the total cost of dye to print all the labels is \$2,000 (190 million labels x \$40 /gal x 0.001 ml x 0.000264172 ml/gal). With the yearly cost to replace the rollers of \$2,000 and an annual allowance of \$2,000 for dye, the annual total industry cost of maintaining the label is about \$4,000.

Estimated annual cost burden:

Additional cost of maintaining printing rollers with added label.....\$ 0  
 Annual cost of separate printing rollers for label (where used).....\$ 2,000  
 Annual cost of additional dye or ink.....\$ 2,000  
 Total annual respondent cost.....\$ 4,000

Number of Rollers	Cost of Each Roller	Total Cost Rollers	Depreciation over 15 Years	Total Annual Labels	Annual Additional Dye Allowance	Est. Total Annual Cost to Maintain Label
12	\$2,500	\$30,000	\$2,000	190 million	\$2,000	<b>\$4,000</b>

14. Provide estimates of annualized costs to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information.

There is no cost to the Federal Government incurred by the labeling requirement. Manufacturers of the retroreflective material certify the compliance of the product by self-application of the label, and there is no exchange of correspondence, tabulation of data or response necessary from the agency.

15. Explain the reasons for any program changes or adjustments reported on the burden worksheet.

The estimated number of respondents, burden hours and costs were revised. The number of respondents was revised from six respondents to three, based on the number of identified manufacturers of retroreflective tape. The total burden hours were revised from one hour to three hours based on the number of respondents and required reporting tasks (described in question 12). The total annual cost burden was revised from \$1,000 to \$4,000 and the number of responses from 10 mil. to 190 mil. based on the number of trailers and truck tractors registered in the U.S. and updated maintenance and materials costs (described in question 13).

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time

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replacement tape every five years, using the number of registered, in service, trailers and truck tractors as the basis of the estimated required length of tape accounts for new trailers and truck tractors entering service. Also, by using the number of registered trailers and truck tractors as the basis of the estimate ensures that the estimate does not include the retired trailers and truck tractors which do not require replacement of the retroreflective tape.



schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

This collection of information only involves public disclosure. NHTSA does not collect any information and, therefore, will not be compiling any information for publication.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

We request approval not to include the expiration date for OMB approval because the information is in the form of labeling on retroreflective sheeting material for vehicle conspicuity. If the expiration date for OMB approval were required to be printed in 49 CFR Part 509, which lists all OMB control numbers for NHTSA's information collection requirements, it would necessitate several amendments to the CFR each year, because the more than 30 information collection approvals expire at random intervals rather than as a group. Also, the CFR is published about 6 months after the latest amendment and would usually be printed showing incorrectly expired approval dates for information collections extended during that period.

18. Explain each exception to the topics of the certification statement identified in "Certification for Paperwork Reduction Act Submissions."

The only exception is for the exemption for marking the expiration date as explained in Question 17 above.