

# **Initial Decision Report**

**Regarding**

**EA08-020: BMW Mini Cooper S Exhaust Pipe Tips**

U.S. Department of Transportation  
National Highway Traffic Safety Administration  
Office of Enforcement  
Office of Defects Investigation

November 2008

---

# Table of Contents

|   | <b>Page</b> |
|---|-------------|
| <b>I. BACKGROUND</b> .....                              | 1           |
| <b>II. DESCRIPTION OF MINI COOPER VEHICLES</b> .....    | 2           |
| A. General Description .....                            | 2           |
| B. Description of Mini Cooper S Exhaust Pipe Tips ..... | 3           |
| C. Description of Mini Cooper Exhaust Pipe Tips .....   | 3           |
| D. Description of Mini Convertible .....                | 4           |
| E. Mini Cooper S Exhaust Tip Modification .....         | 5           |
| <b>III. FIELD DATA ANALYSIS</b> .....                   | 5           |
| A. BMW Mini Cooper S and Cooper .....                   | 5           |
| i. Complaints .....                                     | 5           |
| ii. Warranty Claims .....                               | 7           |
| iii. Injuries .....                                     | 7           |
| B. Peer Vehicles .....                                  | 7           |
| i. ODI Complaint Data .....                             | 7           |
| ii. Early Warning Reporting Data .....                  | 8           |
| C. Agency Analysis .....                                | 8           |
| <b>IV. EXHAUST SYSTEM SAFETY RECALLS</b>                |             |
| A. AN 11-YEAR HISTORY .....                             | 9           |
| <b>V. BMW'S POSITION AND NHTSA'S RESPONSE</b> .....     | 10          |
| <b>VI. INITIAL FINDINGS</b> .....                       | 12          |

## I. BACKGROUND

On August 29, 2008, the National Highway Traffic Safety Administration's (NHTSA) Office of Defects Investigation (ODI) opened Engineering Analysis (EA) 08-020 to investigate an alleged safety-related defect concerning burn injuries related to Model Year (MY) 2007 and 2008 Mini Cooper S vehicles (herein referred to as subject vehicles) manufactured by BMW of North America, LLC. (BMW).

During this investigation, ODI also collected and reviewed information on other MY Mini Cooper S vehicles (i.e., 2002 through 2006), as well as the 2002 through 2008 Mini Cooper vehicles (herein referred to as Cooper). Table 1 below shows the vehicle production data by model and model year. The issue being investigated does not appear to be relevant to convertible model vehicles and, therefore, they are excluded from this table.

| <b>Table 1. BMW Mini Hardtop Vehicle Production Data</b> |        |        |        |        |        |        |       |        |
|--|--------|--------|--------|--------|--------|--------|-------|--------|
| Model Year   | 2002   | 2003   | 2004   | 2005   | 2006   | 2007   | 2008* | Total  |
| Cooper S   | 7,069  | 15,051 | 15,017 | 18,437 | 20,843 | 16,904 | 3,258 | 96,615 |
| Cooper   | 10,322 | 18,320 | 16,339 | 15,382 | 17,539 | 14,873 | 3,200 | 96,425 |

\*Approximate number of vehicles built as of July 7, 2008 (response date PE08-031).

ODI and BMW have received numerous complaints on the subject vehicles indicating that leg burns occur as people are accessing the rear cargo area shortly after the vehicle has been driven. As reflected by the complaints, people removing items from the cargo area naturally place their legs at the rear of the vehicle. People are burned as they inadvertently contact either of the two hot exhaust tips that are located at the center rear of the vehicle.

As explained in this document, NHTSA has tentatively concluded that there is a design defect in the exhaust pipe tips of the subject vehicles within the meaning of the National Traffic and Motor Vehicle Safety Act, as amended. Prior to the redesign of the Mini Cooper S vehicles for MY 2007, there were relatively few instances of burns from the exhaust pipe tips. However, after the redesign, which incorporated much larger exhaust pipe tips that protruded further beyond the rear bumper cover than the previous design, the reports of burns increased dramatically. The redesign coincided with a marked (ten-fold) increase in reports, and burns directly attributable to this design change are occurring with significant frequency. Thus far there have been 39 complaints on the subject vehicles, which equates to a rate of 193 per 100,000 vehicles. Conversely, prior to the design change there were only three reports in the five prior model years, which equates to a rate of 3.9 per 100,000 vehicles.

BMW has acknowledged that the larger exhaust tips and their placement on the subject vehicles are causing burn injuries, and has implemented a design change to the tips to

recess them so as to be set back from the lower edge of the rear bumper. This modification was incorporated into mid-year production on approximately July 1, 2008, of the MY 2008 subject vehicles. Also, BMW has initiated a service action and has sent a letter to subject vehicle owners, stating: "...Mini has decided to conduct a service action on these vehicles, and we have shortened the tailpipe extension to help reduce the chances of inadvertent contact with the leg." BMW's service information bulletin states, "Due to production assembly tolerances combined with thermal expansion, the tailpipe chrome tips may extend beyond the rear bumper edge. Contacting the hot tailpipe tips may cause burns on the exposed parts of shins and/or calves."

On the basis of the information collected during this investigation, NHTSA has tentatively concluded that the defect in the subject vehicles is related to motor vehicle safety. Not only is the frequency of the defect high, its consequences are significant. The subject vehicles built prior to the MY 2008 production modification of the exhaust pipe tips pose a significant risk of burn injuries to persons accessing the rear cargo area via the hatchback. The injuries generally are second-degree burns. Second-degree burns are characterized by bright red and blotchy skin with blistering, and such burns usually look wet because of the loss of fluid through the damaged skin. Further, second-degree burns are more serious than first-degree burns because a deeper layer of skin is burned. Thus, such burns can more easily become infected and often are very painful, in some cases requiring professional medical treatment. It is unreasonable for people who engage in the routine activity of standing near or against the back of a vehicle with the hatch up to access the rear cargo area to sustain such significant burns due to a design defect in the vehicle's exhaust system. Accordingly, the agency has tentatively concluded that these exhaust pipe tips pose an unreasonable risk of injury to the public.

On October 10, 2008, ODI requested that BMW initiate a safety recall, in accordance with 49 U.S.C. § 30118-30120, to notify all owners, purchasers, and dealers of the problem and to provide a free remedy for each of the subject vehicles. In its October 27, 2008 letter, BMW declined to conduct the safety recall. Although BMW instituted a Service Campaign concerning this issue in September 2008, a Service Campaign is not sufficient to address the safety risks presented by the exhaust pipe tips on the subject vehicles. A safety recall would assure that vehicle owners have proper notice of the safety risks along with a free remedy, thus presenting the greatest opportunity for preventing a significant risk of any further burn injuries.

As a result of the investigation conducted by ODI, and in connection with this report, NHTSA is making an Initial Decision that a defect related to motor vehicle safety exists in the subject vehicles. This Initial Decision Report provides the basis for that decision.

## II. DESCRIPTION MINI COOPER VEHICLES

### A. General Description

The BMW Mini hardtop is a 3-door hatchback vehicle. The rear tailgate (hatch) is hinged at the top and lifts up to allow access to the rear cargo area. It has been in production since MY 2002 and is available in both the Cooper and Cooper S trim levels. As shown in Table 2, the Cooper comes equipped with a normally aspirated engine, while the Cooper S, depending on MY, is equipped with a supercharged or turbocharged engine. A convertible Mini was introduced in MY 2005 and is available in both Cooper and Cooper S trims. The Mini hardtop was redesigned for MY 2007 and both the Cooper and Cooper S were assigned a new engineering code, R 56.

| R Code | Model          | MY        | Engine | Aspiration   |
|--------|----------------|-----------|--------|--------------|
| R 50   | Cooper         | 2002-2006 | 1.4L   | Normal       |
| R 53   | Cooper S       | 2002-2006 | 1.6L   | Supercharged |
| R 56   | Cooper         | 2007-2008 | 1.6L   | Normal       |
| R 56   | Cooper S       | 2007-2008 | 1.6L   | Turbocharged |
| R 52   | Cooper S Conv. | 2005-2008 | 1.6L   | Turbocharged |
| R 52   | Cooper Conv.   | 2005-2008 | 1.6L   | Normal       |

### B. Description of Mini Cooper S Exhaust Pipe Tips

The two exhaust pipe tips of the Cooper S exit the underside of the vehicle at the center of the vehicle and extend beyond the vertical rear plane of the rear valance (bumper cover). In the MY 2007 redesign of these vehicles, as shown in the photos 2 (MY 2006) & 3 (MY 2007) below, the exhaust pipe tips for MY 2007-2008 (R56) subject vehicles were enlarged and protrude further to the rear of the vehicles. Also note that the shape of the rear bumper cover was changed to accommodate the larger exhaust pipe tips.



Photo 2. MY 2006 Mini Cooper S (R53)



Photo 3. MY 2007 Mini Cooper S (R56)

### C. Description of Mini Cooper Exhaust Pipe Tips

As shown in photo 4 below, the Cooper, unlike the Cooper S, has a single exhaust pipe tip that exits the underside of the vehicle from the passenger's side and also extends beyond the vertical rear plane of the rear bumper cover. As shown in Table 2, Mini Cooper vehicles in MY 2002-2006 are designated with the engineering code R50.



Photo 4. Mini Cooper (R 50)

### D. Description of Mini Convertible

The Mini convertible, shown in photo 6 below, was introduced in MY 2005 and is also available in both the Cooper and Cooper S trims. The convertible model does not have a hatchback, as the available space is taken up when the convertible top is in the down position. The rear storage compartment (trunk) is accessed through a door that folds down and out. There are no known reports of burn injuries from the exhaust pipe tips on convertible models. As shown in Table 2, Mini Cooper and Cooper S convertible vehicles in MY 2005-2008 are designated with the engineering code R52.



Photo 6. Mini Cooper S Conv. (R 52)

## E. Description of Mini Cooper S Exhaust Tip Modification

To address the issue that the larger exhaust pipe tips, and their placement in the subject vehicles, are causing burn injuries to consumers, BMW implemented a design change to the tips to recess them so as to be set back from the lower edge of the rear bumper cover. This modification was incorporated into mid-year production (July 2008) of MY 2008 subject vehicles.

Two months later, in September 2008, BMW initiated a service action to replace the production exhaust pipe tips with modified tips on all subject vehicles built before the 2008 production modification. BMW sent letters to owners<sup>1</sup> of the subject vehicles, stating: "...Mini has decided to conduct a service action on these vehicles, and we have shortened the tailpipe extension to help reduce the chances of inadvertent contact with the leg." BMW's service information bulletin (dealer notice)<sup>2</sup> states, "Due to production assembly tolerances combined with thermal expansion, the tailpipe chrome tips may extend beyond the rear bumper edge. Contacting the hot tailpipe tips may cause burns on the exposed parts of shins and/or calves."

## III. FIELD DATA ANALYSIS

### A. BMW Mini Cooper S and Cooper

#### i. Complaints

ODI collected and reviewed complaint data on BMW Mini vehicles for the MY 2002 through MY 2008. Table 3 below shows the total number and rate of complaints reported to NHTSA and BMW through September 19, 2008, that relate to the alleged defect for all Mini Cooper S vehicles by MY and engineering code. Note that the number of reports is low for MY 2002-2006 (R53) Cooper S vehicles. Then, coinciding with the redesign for MY 2007, the number of reports increased dramatically for MY 2007-2008 (R56) subject vehicles.

| MY                              | R53   |        |        |        |        | R56    |        |
|---------------------------------|-------|--------|--------|--------|--------|--------|--------|
|                                 | 2002  | 2003   | 2004   | 2005   | 2006   | 2007   | 2008   |
| No. of Complaints               | 2     | 0      | 1      | 0      | 0      | 31     | 8      |
| Veh. Production                 | 7,069 | 15,051 | 15,017 | 18,473 | 20,843 | 16,904 | 3,258* |
| Complaints per 100,000 vehicles | 28.3  | 0      | 6.6    | 0      | 0      | 183.4  | 245.5  |

\* Approximate number of vehicles built as of July 7, 2008 (response date PE08-031).

<sup>1</sup> See attached sample letter.

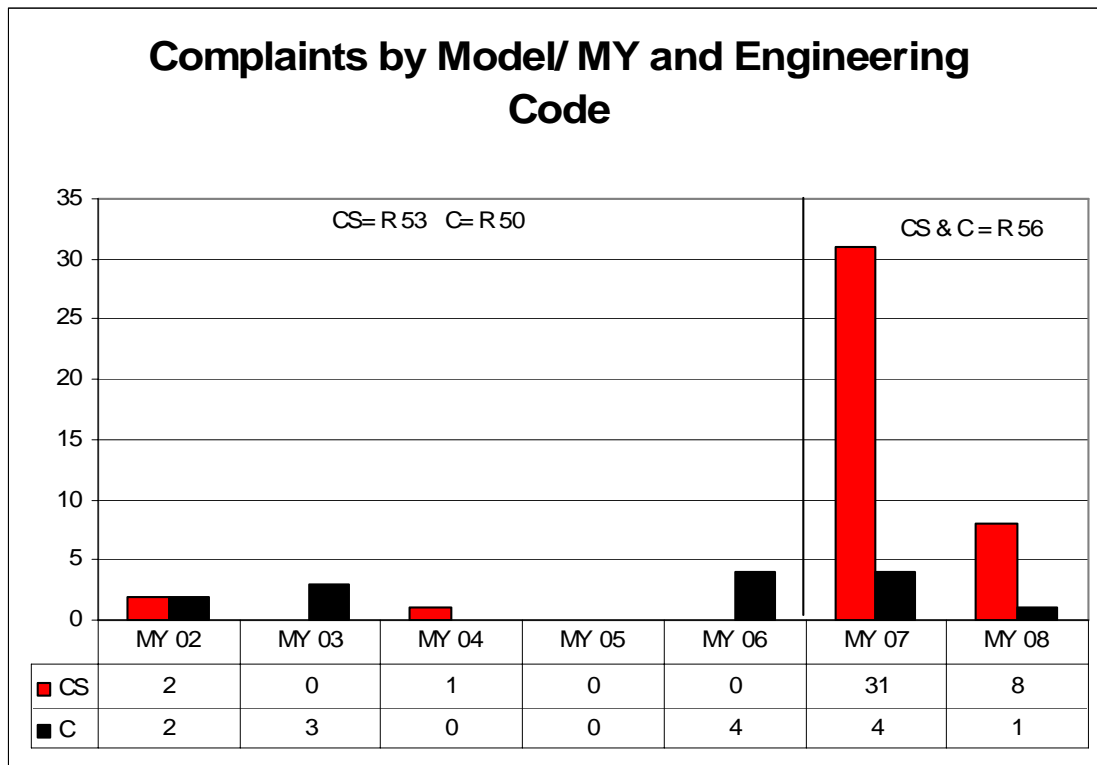
<sup>2</sup> See attached service information bulletin M18 01 08 (Service Action R56 Cooper S Replacement of Tail Pipe Extensions).

Table 4 below shows the total number and rate of complaints reported to NHTSA and BMW that relate to the alleged defect for Cooper vehicles, by model year and engineering code. When comparing Table 4 to Table 3, note that although the number of reports for MY 2002-2006 Mini Cooper (R50) is slightly higher than MY 2002-2006 Mini Cooper S (R53), there is no dramatic increase for MY 2007-2008 and the reports remain relatively low. Figure 1, below, graphs the report data from Tables 3 and 4.

| <b>Table 4. Cooper Complaints by MY and Engineering Code</b> |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|
| MY   | R50    |        |        |        |        | R56    |        |
|  | 2002   | 2003   | 2004   | 2005   | 2006   | 2007   | 2008   |
| No. of Complaints  | 2      | 3      | 0      | 0      | 4      | 4      | 1      |
| Veh. Production  | 10,322 | 18,320 | 16,339 | 15,382 | 17,539 | 14,873 | 3,200* |
| Complaints per 100,000 vehicles                              | 19.3   | 16.3   | 0      | 0      | 22.8   | 26.8   | 31.2   |

\* Approximate number of vehicles built as of July 7, 2008 (response date PE08-031).

**Figure 1. Complaint Data by Model/MY and Engineering Code**



Note: CS = Cooper S, and C = Cooper



## **ii. Warranty Claims**

BMW reported one warranty claim on a 2007 MY Cooper vehicle. There were no warranty claims for Cooper S vehicles.

## **iii. Injuries**

The complainants reported receiving burn injuries as they were retrieving items from the rear cargo area of their vehicles. Some of the complainants reported multiple incidents of burns, or that other persons helping to unload their vehicles were burned. Two (2) of the complainants reported that their child was burned, a seven year old and a ten year old. As noted above there are 39 (31+8) reports and these address 48 injuries. Photos 8 & 9 below are examples of the burn injuries.



Photo 8. Exhaust Tip Burn Injury



Photo 9. Exhaust Tip Burn Injury

## **B. Peer Vehicles**

### **i. ODI Complaint Data**

Table 5, on page 8, provides a summary of the ODI complaint data for all reports received from January 1, 2007, through October 23, 2008, on all light vehicles by make, model, and model years, where the component code was “Engine and Engine Cooling:Exhaust System:Manifold/Header/Muffler/Tailpipe,” and the narrative description included “ %Burn%.” The data search revealed a total of 19 reports. BMW Mini vehicles accounted for 16 of the reports (85%), and the subject vehicles accounted for 11 of the reports (59%).

| <b>Table 5. ODI Complaint Data</b> |           |                   |                |                         |                  |
|------------------------------------|-----------|-------------------|----------------|-------------------------|------------------|
| <b>Make/Model</b>                  | <b>MY</b> | <b>Population</b> | <b>Reports</b> | <b>Report Rate/100k</b> | <b>% Reports</b> |
| Mini Cooper S                      | 2002      | 7,069             | 2              | 28                      | 11               |
|                                    | 2007      | 16,904            | 9              | 53                      | 48               |
|                                    | 2008      | 3,285*            | 2              | 61                      | 11               |
| Mini Cooper                        | 2006      | 17,539            | 1              | 6                       | 5                |
|                                    | 2007      | 14,873            | 1              | 7                       | 5                |
|                                    | 2008      | 3,200*            | 1              | 31                      | 5                |
| Toyota Scion                       | 2006      | 93,163            | 1              | 1                       | 5                |
| Cadillac SRX                       | 2004      | 31,208            | 1              | 3                       | 5                |
| Dodge G. Caravan                   | 2007      | 127,713           | 1              | .8                      | 5                |

\* Approximate number of vehicles built as of July 7, 2008 (response date PE08-031).

## **ii. Early Warning Reporting Data**

ODI also conducted a study utilizing Early Warning Information submitted to the agency by vehicle manufacturers pursuant to the Tread Act.<sup>3</sup> For this study, ODI's Early Warning Division conducted two document content searches of all light vehicle Early Warning Information Field Reports from the first quarter of 2004 through the second quarter of 2008.<sup>4</sup> The first search looked for documents that contained the words "tail" and "pipe" and "burn," and the second search looked for documents that contained the words "exhaust" and "burn" and "leg." These searches revealed six (6) documents that are relevant to the general subject matter of this investigation, i.e., contact burns associated with the exhaust tailpipe. This study found that there are no other defect trends related to this issue for any other light vehicle manufacturer.

## **C. Agency Analysis**

ODI and BMW have received numerous complaints indicating that leg burns occur as people are accessing the rear cargo area shortly after the vehicle has been driven. As reflected by the complaints, people removing items from the rear cargo area naturally place their legs at the rear of the vehicle. People are burned as they inadvertently contact either of the two hot exhaust pipe tips while accessing the rear cargo area. Photographic evidence accompanying many of these complaints shows that the burn injuries are significant, causing blistered skin or scarring, and often in a half-moon shape pattern, matching the approximately 2¾-inch diameter of the exhaust pipe tips.

As discussed above, the agency has tentatively concluded that there is a design defect in the exhaust pipe tips of the subject vehicles within the meaning of the National Traffic and Motor Vehicle Safety Act, as amended. Also, the agency has tentatively concluded

<sup>3</sup> See CFR 49, Part 579 Subpart C – Reporting of Early Warning Information § 579.21.

<sup>4</sup> This data consists of over 700,000 field reports.

that the defect in the MY2007-2008 Mini Cooper S subject vehicles is related to motor vehicle safety.

#### IV. EXHAUST SYSTEM SAFETY RECALLS

##### A. An 11- Year History

ODI conducted a review of all safety recalls performed over the past eleven (11) years involving the exhaust system. The NHTSA recall database was searched for all recalls between January 1, 1998, and November 4, 2008, with the component code “Engine and Engine Cooling:Exhaust System:Manifold/Header/Muffler/Tailpipe.” This search returned 28 safety recalls<sup>5</sup> related to the exhaust system on eight (8) different vehicle types. The safety issues related to these recalls included, contact burns, fire related issues, muffler/tailpipe separation, carbon monoxide intrusion, and brake line failure. Table 5, below, provides a summary of the data by vehicle type and recall issue.

| Table 6. Eleven Year Exhaust System Recall History |              |              |                   |                |            |       |
|--|--------------|--------------|-------------------|----------------|------------|-------|
| Vehicle Type                                       | Contact Burn | Fire Related | Muffler Separates | C.O. Intrusion | Brake Line | Total |
| Motor Cycle  | 3            |              | 5                 |                |            | 8     |
| Light Duty   | 1            | 2            | 1                 |                | 1          | 5     |
| Medium Duty  |              |              | 1                 |                |            | 1     |
| Heavy Truck  |              | 1            | 1                 |                |            | 2     |
| Motor Home   |              | 2            | 1                 | 1              |            | 4     |
| Utility  |              | 1            | 1                 |                |            | 2     |
| Transit Bus  |              | 4            |                   |                |            | 4     |
| Trailers   |              |              |                   | 2              |            | 2     |
| Total  | 4            | 10           | 10                | 3              | 1          | 28    |

#### V. BMW’S POSITION AND NHTSA’S RESPONSE

In its October 27, 2008, letter, in response to ODI’s October 10, 2008, recall request letter, BMW states that it does not believe that a safety recall to address the defect in the design of the exhaust tips in the subject vehicles is warranted. The following is a summary of the main points of BMW’s position, followed by NHTSA’s response.

1. BMW initiated a Service Campaign, in the interest of customer satisfaction, on September 29, 2008, to advise all affected owners of the subject vehicles “...that free shorter tailpipes...”<sup>6</sup> are now available. BMW states that the database they used to

<sup>5</sup> 08V-443, 08V-038, 07V-535, 07V-486, 07V-326, 07V-303, 07V296, 06V-110, 06V-089, 06V-021, 06V-008, 05V-464, 05V-421, 05V-412, 05V-341, 05V-123, 04V-543, 04V-063, 04E-054, 03V-387, 03V-178, 03V-165, 03V-084, 01V-094, 00V-334, 00V-086, 00E-038, and 98V-254

<sup>6</sup> ODI notes that the new exhaust pipe tips are not shorter, but rather, have been redesigned to allow them to be recessed so as not to extend beyond the rear bumper cover.

send notification letters to owners regarding this campaign is the “identical” database used to send safety recall letters. BMW further states that their completion rates over the last four (4) years for service campaigns of comparable size to this issue are comparable to completion rates for safety recalls. Therefore, BMW argues, regardless of the manner-safety recall versus service campaign-there will be no difference in the number or rates of vehicles receiving the redesigned tailpipe tips.

NHTSA: BMW’s comparison of completion rates for safety recalls and completion rates for service campaigns is irrelevant and has no merit with regard to BMW’s statutory obligation to provide notice that MY 2007 and most MY 2008 Cooper S vehicles contain a defect that is related to motor vehicle safety. The risk of burn injuries caused by the exhaust pipe tips on the subject vehicles is high, and the burns are significant, very painful, and in some cases can lead to permanent scarring. NHTSA believes a service campaign is not appropriate, and a safety recall in accordance with 49 U.S.C. §§ 30118-30120 is required. Also, this will assure that vehicle owners have the proper statutory notice of the safety risks, provide proper reporting to the agency, and provide owners an impetus to ensure all vehicles are remedied.

2. BMW states that the center-mounted exhaust tailpipe design of the subject vehicles is not unique. The company notes that there are other makes and models of vehicles with a similar design in which the tailpipes thermally expand or protrude past the edge of the rear bumper after being driven. BMW points to three vehicles (the Dodge Viper, Porsche Cayman, and Ford Flex) as examples of vehicles on which it claims tailpipe burns have occurred. BMW also notes that NHTSA did not conduct a peer review of any other vehicle makes with this design. Further, BMW states that if NHTSA makes a determination that center-mounted exhaust tailpipes are “inherently defective,” then other manufacturers of vehicles with this design should be included in NHTSA’s recall request. BMW also states that if NHTSA “feels strongly” about the center-mounted design, then a formal rulemaking process should be initiated, rather than a single request to recall the subject vehicles.

NHTSA: NHTSA is aware that some other vehicles have center-mounted exhaust tailpipes. However, this investigation was not prompted simply by the center-mounted exhaust tailpipe design. Rather, the agency opened the investigation based on the trend of consumer complaints of burns caused by a newly designed (R 56 Mini Cooper S) vehicle. The agency conducted a study of the ODI database regarding exhaust system complaints. The agency found no other similar defect or injury trends present for other vehicles. NHTSA found no complaints of burns on the three vehicles cited by BMW as examples of vehicles whose users have experienced tailpipe burns. Likewise, a search of the EWR field reports for light vehicles did not reveal any other trends on any other vehicle manufacturer. Due to the absence of data indicating any potential defect trend in other vehicles, even those with somewhat similar tailpipe designs, NHTSA had no reason to solicit information from other manufacturers as part of a review of peer vehicles.

The issue of a defect in design in the subject vehicles does not simply involve center-mounted exhaust tailpipes alone. The Cooper S vehicle is a hatchback vehicle. On these vehicles, there is a combination of relevant factors: the location of the center-mounted exhaust pipe tips; the degree to which those tips protrude rearward beyond the bumper cover; and the need to access the cargo area at the point where the tips protrude. The all-too-common result is that people inadvertently contact the tips while removing cargo or placing it in the cargo area. All of the complainants reported that they were engaged in the routine activity of standing near or against the back of the vehicle with the hatch up to remove items from the rear cargo area.

Lastly, in light of the facts, it is BMW's statutory obligation to conduct a recall. BMW may not condition or limit its obligation merely because it prefers that NHTSA investigate other manufacturers' vehicles or conduct a rulemaking. Of course, if NHTSA does obtain reliable information indicating a similar risk of serious burns caused by the exhaust systems of other vehicles, it would investigate.

3. BMW states that tailpipe burns are common in the United States and the world on various types of motor vehicles ("motorcycles, motor-homes, etc.") and "...this issue is not unique to the tailpipe design of the Mini Cooper S." BMW further makes the statement, "By their very nature, tailpipes get hot," and that such a warning is provided in their owner's manual to this effect.

NHTSA: NHTSA does not agree with BMW on the frequency of exhaust tailpipe contact burns as it relates to passenger cars. As indicated in Table 5, above, in the period January 1, 2007, through October 23, 2008, NHTSA received a total of only three complaints of exhaust pipe burns on light vehicles other than the Cooper and Cooper S. Our recall and investigative experience suggest that leg burns from exhaust pipes are a rare occurrence, not a common one. The 11-year recall study mentioned above shows that out of the 28 recalls involving the exhaust system, only four (4) related to contact burns and only one (1) of those was related to a passenger car. The passenger car recall (98V-254) was prompted by ODI's investigation PE98-043, and involved inadvertent contact of the hot tailpipe extension. ODI has not conducted any investigations relating to this issue in the ten (10) years since that investigation was closed in October 1998. To the extent that BMW points to motorcycles as vehicles that may cause exhaust pipe burns, NHTSA notes that three of these recalls concerned motorcycles. This recall history demonstrates that other manufacturers are complying with their statutory duty to conduct a recall where their exhaust pipe systems are causing burns.

NHTSA does not accept BMW's defense of a warning in an owner's manual. There is no such defense in 49 U.S.C. § 30118. As evidenced by the number of reported burn injuries, the statement in the owner's manual clearly is not

sufficient in adequately reducing the risk of burns to the legs caused by this defect. Moreover, persons loading or unloading the vehicle are not limited to the vehicle owner/operator who may have read the manual, and in some instances are young persons helping to load or unload the vehicle.

4. BMW notes that two (2) previous recalls<sup>7</sup> it conducted relating to burns pertained to failures of vehicle components, not vehicle design. BMW further states that "...those instances posed a specific risk related to motor vehicle safety, since a burn might occur during vehicle operation, and potentially negatively affected vehicle controllability."

NHTSA: This information does not negate the need for a recall here. Motor vehicle safety recalls are not and should not be limited to issues that relate only to vehicle operation. Title 49 U.S. Code § 30102(a)(8) defines "motor vehicle safety" to include "nonoperational safety of a motor vehicle."

## **VI. INITIAL FINDINGS**

BMW of North America, LLC (BMW) was and is a manufacturer of the Mini Cooper and the Mini Cooper S.

The Mini Cooper and the Mini Cooper S were and are motor vehicles within the meaning of 49 U.S.C. § 30102(a)(6).

The Mini Cooper and the Mini Cooper S vehicles are hatch back vehicles.

There is one exhaust pipe tip on MY 2002 – MY 2008 Mini Cooper vehicles. The exhaust pipe tip is on the right side at the rear of the vehicles.

There are two exhaust pipe tips on MY 2002 – MY 2008 Mini Cooper S vehicles. The exhaust pipe tips are in the center, at the rear of the vehicles.

For MY 2007, the Mini Cooper S vehicles were redesigned. As part of the redesign for MY 2007, the exhaust pipe tips were enlarged. Also, as part of the redesign, the exhaust tips extend further rearward than in previous designs. As a result of the redesign, the exhaust pipe tips extend beyond the vertical rear plane of the bumper cover to such an extent and are so situated that they burn the legs of people who are performing completely foreseeable tasks at the rear of the vehicle.

In the course of removing items from or placing items in the rear cargo area of a MY 2007 or [early] MY 2008 Mini Cooper S through the hatch back, persons naturally place one or both legs at the rear of the vehicle. At times, people are burned as one of their legs inadvertently contacts either of the two hot exhaust pipe tips of the Mini Cooper S vehicle.

---

<sup>7</sup> 04V-575, Electrical Seat Heater, and 93V-015, Heater Core Rupture

BMW received numerous reports that the exhaust pipe tips on MY 2007 to early MY 2008 Mini Cooper S vehicle burned the legs of people.

In response to the reports of burned legs, BMW redesigned the exhaust pipe tips of the Mini Cooper S and incorporated the change into production in or about July of 2008. As redesigned, the exhaust pipe tips do not extend as far rearward as designed for MY 2007 and early MY 2008.

There have been a significant number of burns to the legs of individuals by the exhaust pipe tips on MY 2007 Mini Cooper S vehicles and on MY 2008 Mini Cooper vehicles produced before or about July of 2008.

The rate of burns per 100,000 vehicles produced caused by exhaust pipe tips on MY 2007 and early 2008 Mini Cooper S vehicles is significant and is significantly higher than the rate of burns caused by exhaust tips on MY 2006 and earlier Mini Cooper S vehicles. No other passenger cars have exhaust pipe tips that are causing burn injuries at a significant rate.

MY 2007 and early MY 2008 Mini Cooper S vehicles contain a defect within the meaning of 49 U.S.C. §§ 30102(a)(2) and 30118-30120. The defect is in the exhaust pipe tips, which protrude beyond the rear bumper cover to such an extent and are so situated that they burn the legs of people who are performing completely foreseeable tasks at the rear of the vehicle.

Many of the burns caused by the exhaust pipe tips on the MY 2007 and early MY 2008 Mini Cooper S vehicles are second degree burns. These burns are severe.

The defect in the MY 2007 and early MY 2008 Mini Cooper S vehicles is related to motor vehicle safety. The exhaust pipe tips in these vehicles present an unreasonable risk of injury.

The defect in the MY 2007 and early MY 2008 Mini Cooper S vehicles is related to motor vehicle safety and should be remedied by a safety recall conducted pursuant to 49 U.S.C. § 30118-30120.