HOGAN & HARTSON

Hogan & Hartson LLP Columbia Square 555 Thirteenth Street, NW Washington, DC 20004 +1.202.637.5600 Tel +1.202.637.5910 Fax

www.hhlaw.com

June 21, 2007

Patrick M. Raher Partner (202) 637-5682 PMRaher@hhlaw.com

Via Hand-Delivery

Richard Boyd, Chief Medium and Heavy Duty Vehicle Division Office of Defects Investigation National Highway Traffic Safety Administration 1200 New Jersey Avenue, SE West Building Washington, DC 20590

> PE07-021 – Front Suspension Coil Springs on 1996-1999 Model Year Mercedes-Benz E-Class Vehicles

Dear Mr. Boyd:

Re:

This letter is submitted on behalf of DaimlerChrysler AG and Mercedes-Benz USA, LLC (collectively "Mercedes-Benz") to the National Highway Traffic Safety Administration ("NHTSA" or "Agency") in response to the Office of Defects Investigation's April 24, 2007 request for information relating to the Agency's preliminary evaluation of the front coil spring suspension of 1996-1999 model year Mercedes E-Class vehicles.

Overview of Issue

Before answering the Agency's specific questions, this section provides an overview of the issues.

<u>Failure Mechanism</u>: As discussed in more detail below, the potential for rust on the welded connection between the spring retention cap and the inside of the front fenders of the subject vehicles was identified in 2001. Certain aggressive salts and road deicing compounds used in certain regions have the potential to weaken or partially dissolve the poly-vinyl chloride (PVC) sealant used to cover the weld seam and keep water out of the joint between the spring

Mr. Richard Boyd June 21, 2007 Page 2

cap and fender well. Small breaches in the seal can allow water to intrude and collect in the weld connection area, leading to corrosion over time. In severe cases, the welded cap flanges could weaken enough to bend upward under the pressure of the spring. In more severe cases, one of the cap flanges could crack and break which would cause further expansion of the spring. In the most severe cases, after additional corrosion occurs, both the front and rear cap flanges could fail, which would allow the top end of the spring to become loose within the fender well. Although the potential for accelerated corrosion does exist in these vehicles, the overall warranty and goodwill claims rate for the subject vehicles is only 0.41%, and the warranty rate for loss of springs from such vehicles is only 0.02%. 1/

<u>Driver Warning</u>: The most severe failure modes noted above are rare because the earlier stages of the failure creates a series of progressive driver warnings that trigger inspection and repair. First, the earliest stages of corrosion cause visible discoloration along the weld of the spring cap that is easily spotted by repair technicians during tire rotations, brake pad replacements, and other routine maintenance. The maintenance instructions included in response to question #8 below include the standard corrosion inspections that are associated with that routine service. The fact that standard inspection procedures are generally effective is supported by the fact that several NHTSA VOQ complaints indicate that the corroded spring caps were initially brought to the owner's attention by the owner's mechanic during routine maintenance, or were found by the owners themselves during the early stages of corrosion.2/

The next phase of failure is even more obvious. Initial bending of the cap, as well as a loss of a single cap tab, will cause a slight lowering of the front corner of the vehicle. While this lowering has no impact on drivability, owners notice this and seek service for the condition. The failure process is gradual and progressive. Service records indicate that the time between the initial corrosion and a deflected cap is typically four years or more. There are eleven spot welds that attach the spring cap to the fender well. The design strength and placement of these welds results in serial weld release over a long period of time. One spot weld on each tab and on the cap ring is sufficient to hold the cap in place with no deflection, and complete failure of all four spot welds on one of the tabs is required to initiate initial bending of the cap. When the cap is deflected upwards, the inner contact surface of the cap becomes angled and the spring tends to bow outwards towards the adjacent shock absorber. Contact between the spring and shock

Mercedes-Benz's warranty data presented in response to questions 2, 3, and 4 captures both vehicles repaired under the 4 year/50,000 mile warranty and vehicles repaired at no charge or reduced charge under Mercedes-Benz's goodwill policy on a case-by-case basis.

^{2/} For example, ODI #10157449 states that the "car was in for routine 90K maintenance and mechanic found cracked spring perch assembly." ODI #10162595 states that the "mechanic called to recommend I not drive the car until the left front spring cap was replaced." ODI #10152053 states that "an inspection related to routine maintenance" discovered the issue. In many cases, the corrosion is apparent to the customer as well. ODI #10138106 states that the corroded cap "was discovered by customer while he was changing his tires." ODI #10184179 indicates corrosion was discovered when the customer "changed tires."

Mr. Richard Boyd June 21, 2007 Page 3

absorber creates a metal-on-metal scraping noise that alerts owners of the need of an inspection and fix. Finally, if the initial noise is ignored, the later stages of failure results in the second of the two cap retention tabs breaking loose from the fender well. Once both tabs fail, in the worst case there will be a loose spring rattling inside of the fender, as it comes into contact with the fender, shock absorber, and control arms, thereby creating additional notice of the need for a repair. Since the corrosion process is extremely complex and lengthy, it is highly unlikely for both tabs to fail simultaneously and, therefore, the vast majority of repairs results from visual inspection and the noise from a single flange failure. Service records indicate that the time between the first and second cap tab failure is typically more than three years.

<u>Safety Consequences:</u> Even in the most severe instances of failure, where a driver has ignored all warnings of a bent or broken spring cap, a lowered front end, and a loose spring, the safety consequences of this condition are minimal. The loss of spring pressure results in no material impact on vehicle handling and performance. The spring in the subject vehicles provides only a fraction of the vehicle's overall suspension force. The suspension force is generated by a combination of the spring (40%), the rubber bearings in the A-arm (30%), and the anti roll-bar and the shock absorber (30% combined). Similarly, the rubber bushings in the shock absorber assembly insure that even where the vehicle "bottoms out" without a spring, there is still adequate clearance between the tire and the wheel well for all driving maneuvers. In other words, even where the piston of the shock absorber is completely compressed, it is impossible for the tire to make contact with the wheel well or otherwise impair the rotation of the tire. The potential for the wheel to contact the underside of the fender or wheel well is addressed by the design of the vehicle, which prevents this from occurring under all conditions.

The only performance consequence of a lost spring is that the front corner of the vehicle lowers noticeably, and the range of motion in the suspension is reduced accordingly. There is no material impact on steering or braking performance. Due to the design of the front axle, the steering function of the subject vehicles is independent from the suspension/ride comfort system. Mercedes-Benz has road tested vehicles without a front spring, and confirmed full vehicle function and control over all driving modes. Vehicle testing has included simulating the sudden and unexpected complete loss of spring pressure while driving, to test driver reaction. This testing has also included the following maneuvers without a front spring: high speed turns, emergency braking, double lane change, high speed slalom, and rough road performance. This testing confirmed that an untrained driver had no problems maintaining vehicle control over all driving conditions, and that the steering force and maneuverability of the vehicle are unchanged. Video of the tests is included with this letter.

We also note that for the one case of alleged compromised steering resulting from a lost spring which NHTSA brought to our attention, ODI #10192300, Mercedes-Benz has not identified any evidence of compromised handling. The Customer Assistance Center received a complaint for the VIN associated with this NHTSA complaint, and in the customer complaint no

mention was made of any steering or other handling issues. Moreover, the repair records for this VIN indicate that the customer reported the vehicle's front suspension dropped and that it was making noise, but there is no record of any handling or steering allegations, nor is there any record of repairs made to the steering mechanism, the tire or the rim. Thus, Mercedes-Benz continues to believe, as its testing has demonstrated, that there is no material impact on steering or handling from lost springs.

Similarly, the risk to motor vehicle safety posed by the springs dropping onto the highway is also minimal. In fact, Mercedes-Benz is not aware of any case, anywhere in the world, where an accident, injury, or any kind of reported property damage was caused by the loss of a spring from the subject vehicles. In order for a spring to become completely loose within the fender well, the spring cap must pass through each of the progressive stages of corrosion and deformation discussed above. Each stage is associated with a number of driver warnings. Most customers who experience this condition get their vehicles fixed long before the spring is completely loose within the fender well. Even for the few owners who do not get their vehicles repaired in advance of complete failure of the spring cap, in spite of the warning signals, loss of the spring onto the road, even after the spring is completely separated from the cap, is highly unlikely. In these cases, the spring is typically retained within the fender well due to the geometry of the fender well, and the location of the other suspension components. Specifically, the shock absorber, fender, anti-roll bar, axle journal, and A-arm tend to retain the spring in the well.

Further mitigating the potential for a road hazard safety impact is the fact that the cap welds are more likely to experience final failure when the front wheels are turned while the vehicle is stationary, such as during parking maneuvers. During slow or stationary turning inputs, the spring caps are subjected to relatively high spring forces compared to straight-line driving, or a standstill condition, which creates a greater likelihood of failure at those times. An analysis of the NHTSA complaints is consistent with this. Of those 41 complaints, 21, or 51%, indicated failure during maneuvers of less than 10 mph, and 7 indicated a failure during standstill.

There have been 172,781 subject vehicles produced for the U.S. Of the 706 warranty claims potentially related to this condition in subject vehicles, only 29 included dealer descriptions which indicate that a spring fell out of the vehicle. This is 0.017% of the subject vehicle production. Customer Assistance Center claims also indicate that the latest stage of failure is extremely rare. Mercedes-Benz's Customer Assistance Center has received approximately 563 complaints relating to the font suspension in the subject vehicles. Of these 563 complaints, only 39, or .02% of the total vehicle population, stated that the spring fell off of the vehicle. Of the 41 complaints received by NHTSA, 14 alleged that the spring fell off of the vehicle. Combining all allegations of lost springs, including the 14 from NHTSA and the 39

Mr. Richard Boyd June 21, 2007 Page 5

from Mercedes-Benz, the total number of allegations represent 0.03% of the subject vehicle population.3/

Based on the extremely low incidence rate noted above, the fact that the warranty rates for this condition are generally declining, the fact that there are significant driver warnings over an extended period of years preceding the later failure stages, and the fact that Mercedes-Benz is not aware of any accidents or injuries related to springs falling off of the subject vehicles worldwide, the Company does not believe that the loss of springs constitutes an unreasonable risk to motor vehicle safety.

The responses to NHTSA's requests numbered 1-14 are provided below following a restatement of the Agency's original requests.

Request No. 1:

Provide a table that identifies the <u>total number</u> of subject vehicles that Mercedes-Benz has manufactured for sale or lease in the United States by (a) model (b) model year; and (c) the state in which the vehicle was originally sold or registered.

Response to Request No. 1:

Please see Attachment 1, which is a table identifying the number of subject vehicles manufactured by Mercedes-Benz for sale or lease in the United States by model, model year and state sold or registered.

Request No. 2:

Reports of Front Suspension Support Separation, Fracture, Distortion and/or Displacement - State by (a) model (b) model year; and (c) the state in which the vehicle was originally sold or registered, the number of each of the following, whether or not confirmed, received by Mercedes-Benz, or of which Mercedes-Benz is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:

^{3/} Of the NHTSA complaints for which VINs were provided, one was identified as being a duplicate of a complaint received by Mercedes-Benz. Therefore, that complaint was only counted once in determining the percentage of the total vehicle population for which ejected spring allegations were made. In addition, we note the possibility that there may be additional duplicates between allegations received by NHTSA for which VINs are unknown and those received by Mercedes-Benz.

- a) Consumer complaints, including those from fleet operators;
- b) Field reports, including dealer field reports;
- c) Reports involving an injury or a fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;
- d) Property damage claims;
- e) Third-party arbitration proceedings where Mercedes-Benz is or was a party to the arbitration; and,
- f) Lawsuits, both pending and closed, in which Mercedes-Benz is or was a party.
- g) Warranty claims, whether or not reimbursed, including requests for special policy adjustment, extended warranty, and/or other similar consumer considerations such as "good will" and/or any and all other reimbursement request programs.

For subparts "a" through "d" and "g," state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple reports of the same incident are to be counted separately (i.e., a consumer complaint and a field report involving the same incident are to be counted as a field report and a consumer complaint, etc.).

In addition, for items "c" through "f," provide a summary description of the alleged problem and causal and contributing factors and Mercedes-Benz' assessment of the problem, with a summary of the significant underlying facts and evidence.

For items "e" and "f," identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

Response to Request No. 2:

a) Mercedes-Benz has identified 563 consumer complaints in which one of the following terms appeared which could relate to the subject condition: spring perch, strut tower, spring corrosion, spring cap, and/or spring seat. Many but not all of these complaints could relate to the alleged defect in the subject vehicles.

Mr. Richard Boyd June 21, 2007 Page 7

- b) Mercedes-Benz has identified 8 field reports which could relate to the alleged defect in the subject vehicles.
- c) Mercedes-Benz has not received any reports involving injury or fatality relating to the alleged defect in the subject vehicles.
- d) Mercedes-Benz has not received any property damage claims relating to the alleged defect in the subject vehicles.
- e) Mercedes-Benz has not been a party to any arbitration proceedings relating to the alleged defect in the subject vehicles.
- f) Mercedes-Benz is not a party to any ongoing lawsuits relating to the alleged defect in the subject vehicles. Mercedes-Benz has identified one dealer repair file which included a copy of a small claims court judgment of dismissal dated 4/3/07 for both parties' failure to appear; Patricia A. Feeney v. MBUSA/Smith Motor Sales, docket no. 200718SC000168, Lawrence (MA) district court. No other details are provided regarding the lawsuit.
- g) Please see Attachment 2, which is a table with the requested information regarding the 706 warranty or goodwill claims made which could relate to the alleged defect in the subject vehicles. Please note that the state information provided is the state in which the warranty claim was made, rather than the state in which the vehicle was originally sold or registered.

Request No. 3:

Reports of Dropped or Ejected Front Suspension Coil Springs - State by (a) model (b) model year; and (c) the state in which the vehicle was originally sold or registered, whether or not confirmed, the number of each of the following, received by Mercedes-Benz, or of which Mercedes-Benz is otherwise aware, which relate to, or may relate to, reports in which the front suspension coil spring has been completely separated from its mounted position and dropped or ejected completely from the vehicle whether traveling or parked due to the alleged defect in the subject vehicles;

- a) Consumer complaints, including those from fleet operators;
- b) Field reports, including dealer field reports;
- c) Reports involving an injury or a fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;
- d) Property damage claims;
- e) Third-party arbitration proceedings where Mercedes-Benz is or was a party to the arbitration; and,
- f) Lawsuits, both pending and closed, in which Mercedes-Benz is or was a party.
- g) Warranty claims, whether or not reimbursed, including requests for special policy adjustment, extended warranty, and/or other similar consumer considerations such as "good will" and/or any and all other reimbursement request programs.

For subparts "a" through "d" and "g," state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple reports of the same incident are to be counted separately (i.e., a consumer complaint and a field report involving the same incident are to be counted as a field report and a consumer complaint, etc.).

In addition, for items "c" through "f," provide a summary description of the alleged problem and causal and contributing factors and Mercedes-Benz' assessment of the problem, with a summary of the significant underlying facts and evidence.

For items "e" and "f," identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other

document initiating the action was filed.

Response to Request No. 3:

- a) Mercedes-Benz has identified 39 consumer complaints which include text alleging that the front suspension coil spring has been separated from its mounted position and dropped completely from the vehicle. Attachment 3 provides the requested information for these complaints.
- b) Mercedes-Benz has not identified any field reports relating to reports in which the front suspension coil spring has been completely separated from its mounted position and dropped from the vehicle.
- c) Mercedes-Benz has not received any reports involving injury or fatality relating to reports in which the front suspension coil spring has been completely separated from its mounted position and dropped from the vehicle due to the alleged defect in the subject vehicles.
- d) Mercedes-Benz has not received any property damage claims relating to reports in which the front suspension coil spring has been completely separated from its mounted position and dropped from the vehicle due to the alleged defect in the subject vehicles.
- e) Mercedes-Benz has not been a party to any arbitration proceedings relating to reports in which the front suspension coil spring has been completely separated from its mounted position and dropped from the vehicle due to the alleged defect in the subject vehicles.
- f) Mercedes-Benz is not a party to any ongoing lawsuits relating to reports in which the front suspension coil spring has been completely separated from its mounted position and dropped from the vehicle due to the alleged defect in the subject vehicles. One dealer repair file includes a copy of a small claims court judgment of dismissal dated 4/3/07 for both parties' failure to appear; Patricia A. Feeney v. MBUSA/Smith Motor Sales, docket no. 200718SC000168, Lawrence (MA) district court. No other details are provided regarding the lawsuit. The NHTSA VOQ for this vehicle indicates that the spring was dropped.
- g) In order to identify warranty claims data for the subject vehicles relating to the alleged defect, Mercedes-Benz searched its warranty data using the damage codes set forth in the response to Request #5. A review of the dealer text from these warranty complaints indicates that 29 of these claims referenced the loss of the spring from the vehicle. The requested information for these claims is provided in Attachment 4. Please note that the state information provided is the state in which the warranty claim was made, rather than the state in which the vehicle was originally sold or registered.

Request No. 4:

Reports of Compromised Handling / Vehicle Control -State by model and model year, the number of each of the following, whether or not confirmed, received by Mercedes-Benz, or of which Mercedes-Benz is otherwise aware, which relate to, or may relate to, reports in which owners have reported experiencing compromised vehicle handling and/or control associated with the alleged defect in the subject vehicles:

- a) Consumer complaints, including those from fleet operators;
- b) Field reports, including dealer field reports;
- c) Reports involving an injury or a fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;
- d) Property damage claims;
- e) Third-party arbitration proceedings where Mercedes-Benz is or was a party to the arbitration; and,
- f) Lawsuits, both pending and closed, in which Mercedes-Benz is or was a party.
- g) Warranty claims, whether or not reimbursed, including requests for special policy adjustment, extended warranty, and/or other similar consumer considerations such as "good will" and/or any and all other reimbursement request programs.

For subparts "a" through "d" and "g," state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple reports of the same incident are to be counted separately (i.e., a consumer complaint and a field report involving the same incident are to be counted as a field report and a consumer complaint, etc.).

In addition, for items "c" through "f," provide a summary description of the alleged problem and causal and contributing factors and Mercedes-Benz' assessment of the problem, with a summary of the significant underlying facts and evidence.

For items "e" and "f," identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

Mr. Richard Boyd June 21, 2007 Page 11

Response to Request No. 4:

- a) Mercedes-Benz has identified 9 consumer complaints in which the consumer alleged that they experienced compromised vehicle handling associated with the alleged defect in the subject vehicles. Attachment 5 provides the requested information for these complaints.
- b) Mercedes-Benz has not identified any field reports relating to reports in which owners have reported experiencing compromised vehicle handling associated with the alleged defect in the subject vehicles.
- c) Mercedes-Benz has not received any reports involving injury or fatality relating to reports in which owners have reported experiencing compromised vehicle handling associated with the alleged defect in the subject vehicles.
- d) Mercedes-Benz has not received any property damage claims relating to reports in which owners have reported experiencing compromised vehicle handling associated with the alleged defect in the subject vehicles.
- e) Mercedes-Benz has not been a party to any arbitration proceedings relating to reports in which owners have reported experiencing compromised vehicle handling associated with the alleged defect in the subject vehicles.
- f) Mercedes-Benz has not been a party to any lawsuits relating to reports in which owners have reported experiencing compromised vehicle handling associated with the alleged defect in the subject vehicles.
- g) In order to identify warranty claims data for the subject vehicles relating to the alleged defect, Mercedes-Benz searched its warranty data using the damage codes referenced in the response to request # 5. A review of the dealer text from these claims indicates that no claims alleged compromised vehicle handling or control associated with the alleged defect in the subject vehicles.

Request No. 5:

Describe in detail the search criteria used by Mercedes-Benz to identify the claims identified in response to Request Nos. 2, 3, and 4, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles.

Response to Request No. 5:

In order to identify warranty claims data for the subject vehicles relating to the alleged defect, Mercedes-Benz searched its warranty data using the following damage codes:

62035 - Mount, shock absorber/suspension strut 62-035-07 cracked 62-035-47 corroded/oxidized 62-035-DA rusted through 62-035-DC slight corrosion 62-035-DD severe corrosion

62A35 – Bearing bracket, shock absorber/suspension strut left

62-A35-07 cracked

62-A35-47 corroded/oxidized

62-A35-DA rusted through

62-A35-DC slight corrosion

62-A35-DD severe corrosion

62N35 - Bearing bracket, shock absorber/suspension strut right

62-N35-07 cracked

62-N35-47 corroded/oxidized

62-N35-DA rusted through

62-N35-DC slight corrosion

62-N35-DD severe corrosion

In order to identify consumer complaints and field reports relating to the alleged defect in the subject vehicles, Mercedes-Benz performed searches of its databases using the following text search criteria: spring perch, strut tower, spring corrosion, spring cap and spring seat.

In order to identify property damage, legal proceedings or reports involving injury or fatality relating to the alleged defect in the subject vehicles, Mercedes-Benz's Product Analysis Department conducted a search in eCounsel, the Company's legal database, for incidents involving E-Class suspension systems.

<u>Request No. 6</u>: Describe (a) the normal warranty coverage terms and (b) the terms, guidelines, and/or criteria pertaining to all extended warranty, customer satisfaction and/or "goodwill" programs that Mercedes-Benz provided for the subject vehicles / subject components.

Mr. Richard Boyd June 21, 2007 Page 13

Response to Request No. 6:

- (a) The normal warranty coverage period in the United States and Canada is four years/50,000 miles.
- (b) As is the case with unexpected field conditions, Mercedes-Benz provides "goodwill" coverage following the normal warranty period on a case-by-case basis.

Request No. 7:

Front Suspension Spring and Spring Support Drawing Request -Provide engineering drawings of (a) the right and left front suspension coil spring(s) and (2) the right and left upper suspension (cup-shaped) support(s) installed in the subject vehicles.

Provide an estimate of the weight of each front suspension coil spring and its nominal spring rate (lbs/inch or metric equivalent units).

Response to Request No. 7:

Engineering drawings of the springs and the spring mounting are provided in Confidential Attachment 6.

The average weight of the springs is 3.2 kg.

The weight of the spring support (A2106260119) is 0.294 kg.

The weight of the repair panel end plate/spring plate (A210626 -2367, -2467) is 1.577 kg.

The nominal spring rate for the springs is as follows:

Spring model 210 USA

Pertnumber	number of windings	mm Vijubominuq	springrate IN mr	n) coefficient max.	push pressurs (N mm²)
A 210 321 13 04	8,4	78.480	63,9	1,2154	1.012
A 210 321 14 04	8,5	78.480	71,7	1,2233	1.038
A 210 321 15 04	8,8	78.480	79,8	1,2326	1.073
A 210 321 22 04	7,9	78.480	88	1,2315	954
A 210 321 29 04	8,7	78.480	57,5	1,2113	1.031
A 210 321 30 04	8,8	78.480	64,5	1,2190	1.057
A 210 321 31 04	9,1	78.480	71,8	1,2280	1.092

Request No. 8:

<u>Preventive Maintenance and Containment</u> - Summarize and provide copies of relevant documents that describe Mercedes-Benz' maintenance requirements for the front suspension system, including, but not limited to, recommended inspection and/or replacement protocols and frequency, accept-reject criteria for continued use of components, and/or other maintenance recommendations, guidelines, and/or instructions intended to detect and assess corrosion, fatigue, or other degradation and/or deterioration of the front suspension support system.

Response to Request No. 8:

In the context of standardized checks of all Mercedes-Benz vehicles, the whole underbody and all devices, including the chassis suspension, are inspected for rust and corrosion during routine service. Please see Attachment 7 for Mercedes-Benz maintenance documents which include chassis and suspension rust inspection.

Request No. 9:

Describe each standard and/or optional design, system or methods that Mercedes has evaluated and/or adopted for either original equipment or aftermarket installations that are intended to prevent the front suspension spring from separating, dropping, and/or being ejected from the vehicle if and when the front suspension support and retention system is fractured, separated, bent, corroded, fatigued, and/or deteriorated or degraded.

Response to Request No. 9:

Mercedes-Benz has not adopted any measures intended to prevent the front suspension spring from separating, dropping, and/or being ejected from the vehicle if and when the front suspension support and retention system is fractured, separated, bent, corroded, fatigued, and/or deteriorated or degraded. The root cause of corrosion caused by overly aggressive road de-icing compounds was eliminated due to two changes that were made to the manufacturing process during the 2002 model year change-over. First, gaps in the seal that is applied over the weld seam were introduced on the lower area of the spring cap to improve water drainage. Second, an additional bonding agent was added to chemically adhere the spring cap to the fender well, in addition to the mechanical connection provided by the spot welds. The presence of the bonding

Mr. Richard Boyd June 21, 2007 Page 15

agent between the spot welded parts and its chemical adhesion to both surfaces further protects against water accumulating between the spring cap and fender.

Request No. 10:

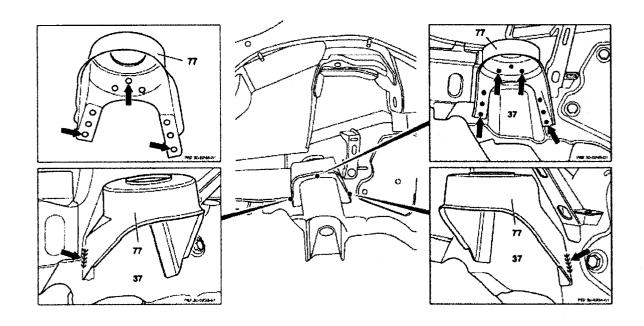
Similarities and Differences to other Mercedes-Benz vehicle models - Briefly identify and describe the significant dimensional and property characteristics of the front suspension support systems for each vehicle model that Mercedes Benz manufactured in model years 1996 - 1999 including but not limited to, the material and dimensional specifications, including thickness, of the upper spring support cap, the attachment welds including the number and location of the attachment welds for the upper spring support, fillet size and length of the attachment welds, applied plating, coatings, etc. intended to provide corrosion protection, an estimation of the range (maximum to minimum) of the applied spring forces on the upper spring support bracket, etc.

Response to Request No. 10:

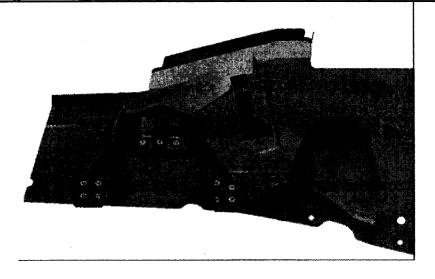
During the subject model years, the model series 124, 129, 170, 202, and 208 used spring mountings that were designed following the same general design principal as the model 210 (E-Class), however the material specifications, and the method of mounting the spring cap to the fender well were substantially different between the subject vehicles and these other models. First, the material thickness of the spring cap on these other models was greater than on the subject vehicles. The thickness of the spring cap on the model 170, 202, and 208 was 1.25 mm, and the thickness on the model 124 and 129 was 1.5mm. Second, the attachment flange for the spring cap on the 124, 129, 170, 202 and 208 turns inward under the spring cap, whereas the flange on the 210 turns outwards. The two pictures below depict the inward oriented welding flanges. The inward turned flange places the flange under the spring cap and allows for a more consistent application of sealant on these vehicles. Thus, the inward flange design reduces the potential for water intrusion and reduces the potential for retention of such water. In addition, the method of attachment is also different: the 124, 129, 170, 202 and 208 use a different pattern of spot welds than the 210. Finally, these models also use two MAG fillet welds on the outside lower edges of the cap in addition to the spot welds (see bold arrows in bottom set of pictures below). The subject vehicles did not use any MAG fillet welds, only spot welds. The model series 140 had a separate spring/damper mounting, but the spring plate was not separate and was integral with the longitudinal frame member.

Design Drawings of Springs and Spring Mounting for Models 124, 129, 170, 202 and 208

Mr. Richard Boyd June 21, 2007 Page 16



Design Drawings of Springs and Spring Mounting for Subject vehicles



Request No. 11:

Replacement Parts Sales and Instructions -List the original equipment and all current and interim replacement part numbers that identify all (a) front suspension coil spring support(s) and (b) all front suspension coil spring(s) that Mercedes-Benz has sold, or offered for sale since 1996, that were intended for aftermarket installation in the subject vehicles.

For each of the part numbers identified, describe the significant differences / changes between the component identified by its respective part number and its antecedent component.

Using their designated part number identification, provide a summary of the quantity of components that Mercedes-Benz has sold by part number, by state and by year of sale.

Response to Request No. 11:

Please see Attachment 8, which is a spreadsheet listing replacement parts for front suspension coil springs and supports. In addition, Attachment 9 provides sales information by part number, state and year. Please note that there are both left and right front coil springs on the subject vehicles, so that the number of replacement spring parts sold does not necessarily reflect the number of vehicles impacted.

Request No. 12:

Chronology - Provide a chronology and describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions"), including, but not limited to, pre-productions tests, that relate to, or may relate to, the alleged defect in vehicles identified in response to Request No. 1 that have been conducted, are being conducted, are planned, or are being planned by, or for, Mercedes-Benz, its suppliers, customers, dealers, and/or its representatives or agents since Mercedes-Benz first became aware of the issue to the present date.

For each such action, provide the following information:

- (a) Action title or identifier:
- (b) The actual or planned start date;

- (c) The actual or expected end date;
- (d) Brief summary of the subject and objective of the action;
- (e) Engineering group(s)/supplier(s) responsible for planning and for conducting the action; and
- (f) A summary of the actions, assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations and/or conclusions resulting from the action.

Response to Request No. 12:

In 2003, NHTSA contacted Mercedes-Benz regarding the front coil spring suspension of 1996-1999 model year Mercedes E-Class vehicles. In response, Mercedes-Benz provided information regarding performance and handling associated with the loss of the front coil spring in the subject vehicles, including information concerning the road testing of vehicles without a front spring, as noted in the overview section above. Following discussions with NHTSA on this subject, it was concluded that there was no material adverse impact on vehicle handling or performance. Attachment 10 is a video presentation of vehicle testing conducted in 2003.

Also, between 1993 and 1995, prior to introduction of the subject vehicles, six Mercedes-Benz vehicles were subjected to corrosion testing and experienced no corrosion. In addition, between 1994 and 1998 three vehicles underwent additional corrosion endurance testing. None of these vehicles exhibited any signs of corrosion on the spring mounting.

Request No. 13:

Notices -Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that Mercedes-Benz has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that Mercedes-Benz is planning to issue within the next 120 days.

Response to Request No. 13:

MBUSA has not issued any such documents related to the alleged defect in subject vehicles, and has no plans to issue any such documents in the next 120 days.

Request No. 14:

<u>Manufacturer's Assessment</u>-Furnish Mercedes-Benz' assessment of the front suspension spring support separation and front spring ejection in the subject vehicles, including:

- (a) The failure mechanism(s) / typical sequence of events that ultimately lead to the fracture or separation of the support from the vehicle chassis;
- (b) The risk to motor vehicle safety posed the fracture or separation of the suspension spring support from the vehicle body/chassis;
- (c) The risk to motor vehicle safety posed by the dropping and/or ejection of the front coil spring following the fracture or separation of the suspension spring support from the vehicle chassis including a discussion of the estimated frequency that the spring may be completely separated from the vehicle. (Provide the basis for the frequency estimate provided.)
- (d) What warnings, if any, would be provided to (1) the operator; (2) pedestrians; and/or (3) nearby motorists that would indicate the alleged defect had occurred or was about to occur.
- (e) An assessment of the estimated efficacy of requiring owners have a regular inspection of the front suspension to assess its integrity;
- (f) An assessment of the estimated efficacy of installing a containment system in the subject vehicles that would retain the front suspension coil spring in the vehicle in the event that a complete or partial collapse of the front suspension support system occurs.

Response to Request No. 14:

Responses to questions 14(a)-(d) are provided in the "Overview of Issue" set forth on pages 1-5 of this response. With respect to Request 14(e), Mercedes-Benz recommends in its vehicle materials that all vehicle owners have regular inspection and maintenance of their vehicles for corrosion, especially older vehicles such as the subject vehicles. Regular inspection would identify any corrosion concerns, including this corrosion issue, well before failure. However, owners who currently do not inspect and maintain their vehicles properly, and who ignore the symptoms and warnings of the subject condition over long periods of time, are

Mr. Richard Boyd June 21, 2007 Page 20

unlikely to be responsive to such common sense suggestions, and Mercedes-Benz has no means of "requiring" vehicle owners to take better care of their vehicles. With respect to question 14(f), Mercedes-Benz has not assessed any secondary containment systems and believes that the best method of prevention for the subject condition, and any other type of vehicle corrosion, is an adequate and regular routine of vehicle inspections and maintenance.

Please feel free to contact me if you have any questions concerning this submission.

WDC - 003540/001425 - 2533648 v7