U.S. Department of Transportation

National Highway Traffic Safety Administration

Memorandum

Subject: Control Plan for the Defect Investigation Process

Date: OCT 13 1988

From: Michael B. Brownlee, Director
Office of Defects Investigation

Reply to Attn of: NEF-12whr

To: All ODI Personnel

The attached document is to be used by the Office of Defects Investigation (ODI) engineers and investigators as a guide for conducting all levels of safety defect investigations. As a general rule, you should adhere to the procedures and control requirements it contains. However, exceptions will be allowed when deemed appropriate for specific investigations.

In formulating our plans and goals, whether long or short term, the purpose of ODI should be kept in mind. That purpose is to help reduce traffic accidents, injuries, and deaths, through the identification and correction of safety-related defects. In order to carry out that task, you are encouraged to develop innovative techniques and methods so that investigations can be conducted quickly, efficiently, and objectively. Only then can we adequately serve the public and still be fair to the manufacturers. It is requested that you become thoroughly familiar with the requirements of this guide to help assure program efficiency, accuracy, responsibility and accountability.

Please make sure that your computer programs are updated to conform to the various changes which have been made in the Attachments.

Attachments

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CONTROL PLAN

FOR THE

DEFECT INVESTIGATION PROCESS

OCTOBER 1988

Office of Defects Investigation
National Highway Traffic Safety Administration

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I. INTRODUCTION

The purpose of the Office of Defects Investigation (ODI) defect investigative process is to develop the information necessary to carry out the requirements of the National Traffic and Motor Vehicle Safety Act of 1966 as amended (the Act). By using the investigative process described in this document, defects that present an unreasonable risk to motor vehicle safety can be identified. The process encompasses all aspects of investigative activity including collecting, analyzing, and evaluating all information necessary to determine whether a safety-related defect exists in a motor vehicle or item of equipment.

The process is normally conducted in three phases.

Phase I. Preliminary Evaluation (PE): The primary purpose of the PE phase is to quickly screen problems that are alleged to be associated with safety-related defects. This screening is intended to quickly discriminate between problems which are isolated in nature, do not represent a safety-related defect, or do not indicate an emerging defect trend, versus problems which could be safety-related defects.

Phase II. Engineering Analysis (EA): The goal of the EA is to determine the character and scope of the problem and to collect enough evidence to influence the manufacturer to conduct a voluntary recall where appropriate. The EA builds on information collected during the PE and supplements it with inspections, tests, surveys, and additional information from the manufacturer and/or suppliers. At this intermediate stage it is decided whether further effort is required, and if so, failure modes are identified and plans for additional work devised. The EA is normally opened as the result of PE action or a petition, but can also be initiated without going through these preliminary stages if there is other strong evidence of a potential safety-related defect.

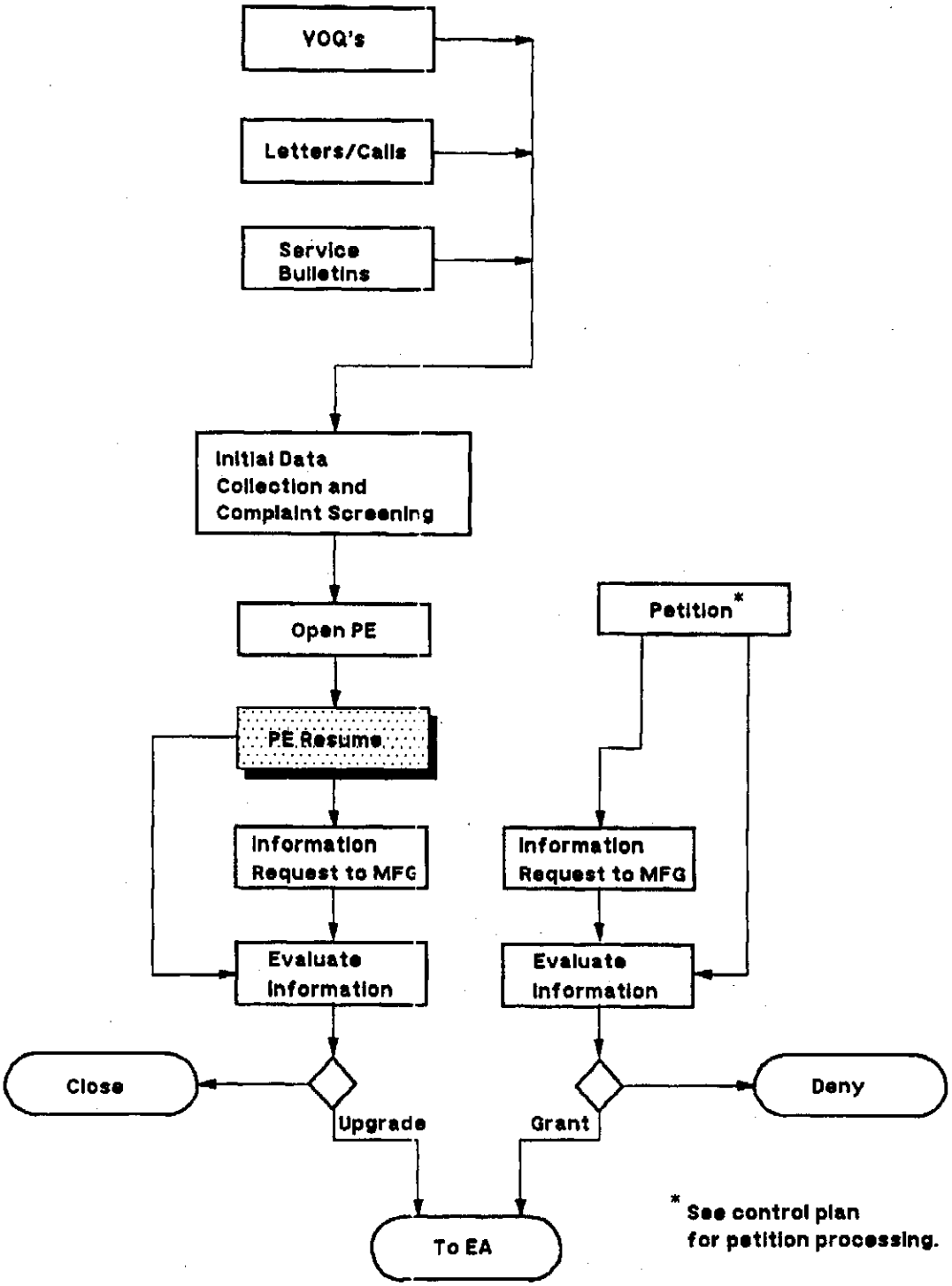
Phase III. Formal Investigation (Case): Upon completing the EA phase, if the evidence justifies a formal investigation, the manufacturer is requested in writing to conduct a voluntary recall. If no recall occurs, and the evidence continues to justify a recall, the matter is presented to a Defect Review Panel with a recommendation that a Case be opened. Investigative work during this Case phase involves gathering enough information to support a decision to either close the Case or to make an Initial Defect Determination. The work should be sufficiently thorough to support subsequent litigation. If the Case results in a Final Determination of a safety-related defect, the manufacturer is ordered to conduct a recall in accordance with 49 CFR Part 573.

This Control Plan describes the methods used by ODI for conducting investigations. In following these procedures, staff members must recognize their primary responsibility to manage investigations and to maintain complete files at all times. Information and evidence must be gathered and documented such that, if necessary, it could be used in subsequent litigation with the manufacturer. It is the engineer's or investigator's responsibility to see that the investigation is performed in a timely manner and that all of the pertinent issues are presented.

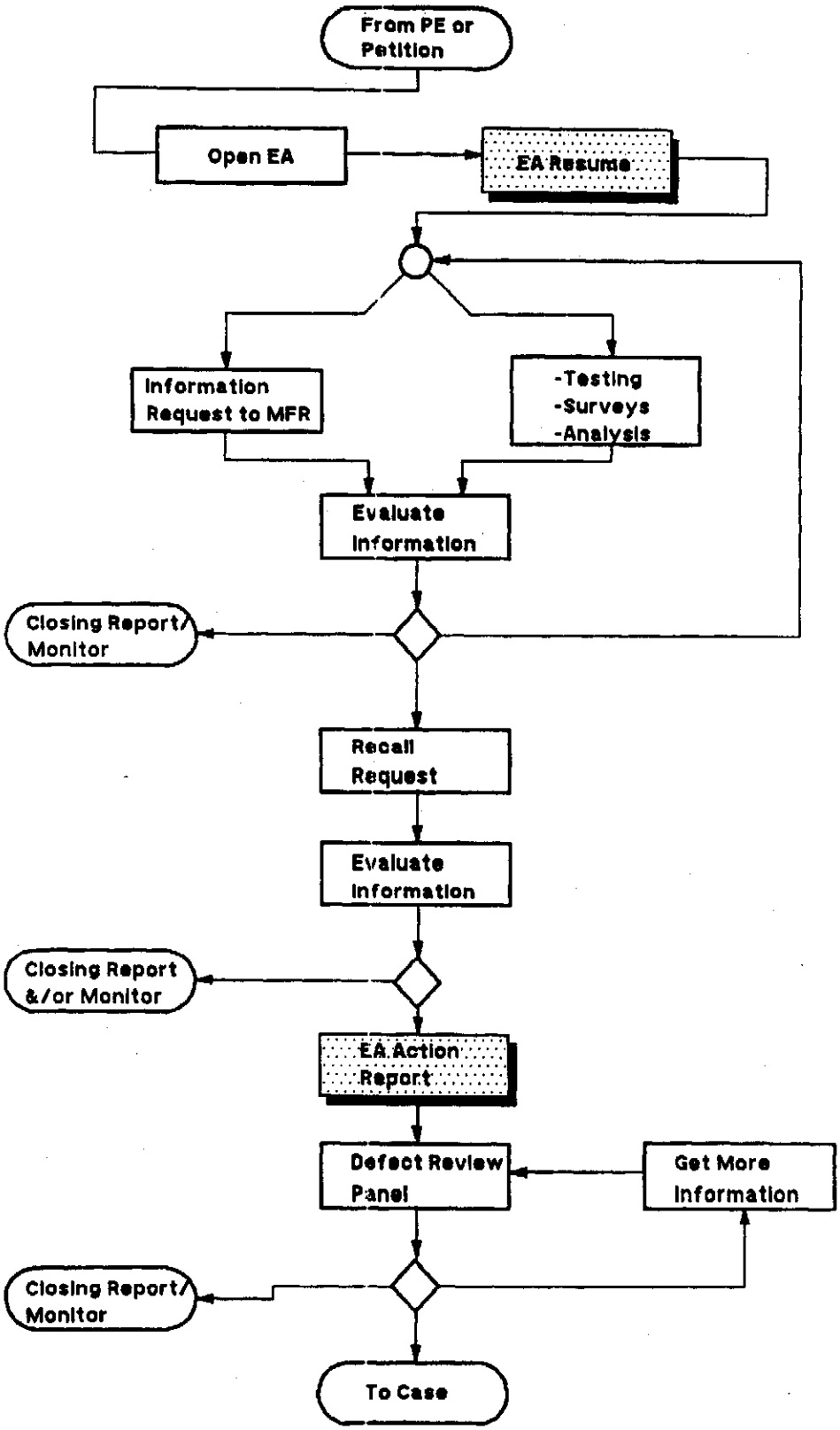
These procedures and controls provide a set of "standard practices" which are to be followed by ODI staff engineers and investigators; however, modifications may be allowed when circumstances warrant different procedures, provided that they are consistent with the Safety Act, agency regulations, and orders. Investigators are encouraged to be innovative in their approach to the investigation by omitting procedures that are not applicable or by introducing new steps and procedures, both after discussion with appropriate supervision. Investigators are expected to use initiative, imagination, and aggressiveness in fulfilling their responsibilities in completing the investigation within the shortest possible time frame.

Assignment of an investigator to an investigation is made by the appropriate Branch Chief within the Defects Evaluation Division in consultation with the Division Chief and Office Director as appropriate. Factors taken into account include technical and professional background, previous experience with similar investigations, workload, and familiarity with the particular system involved.

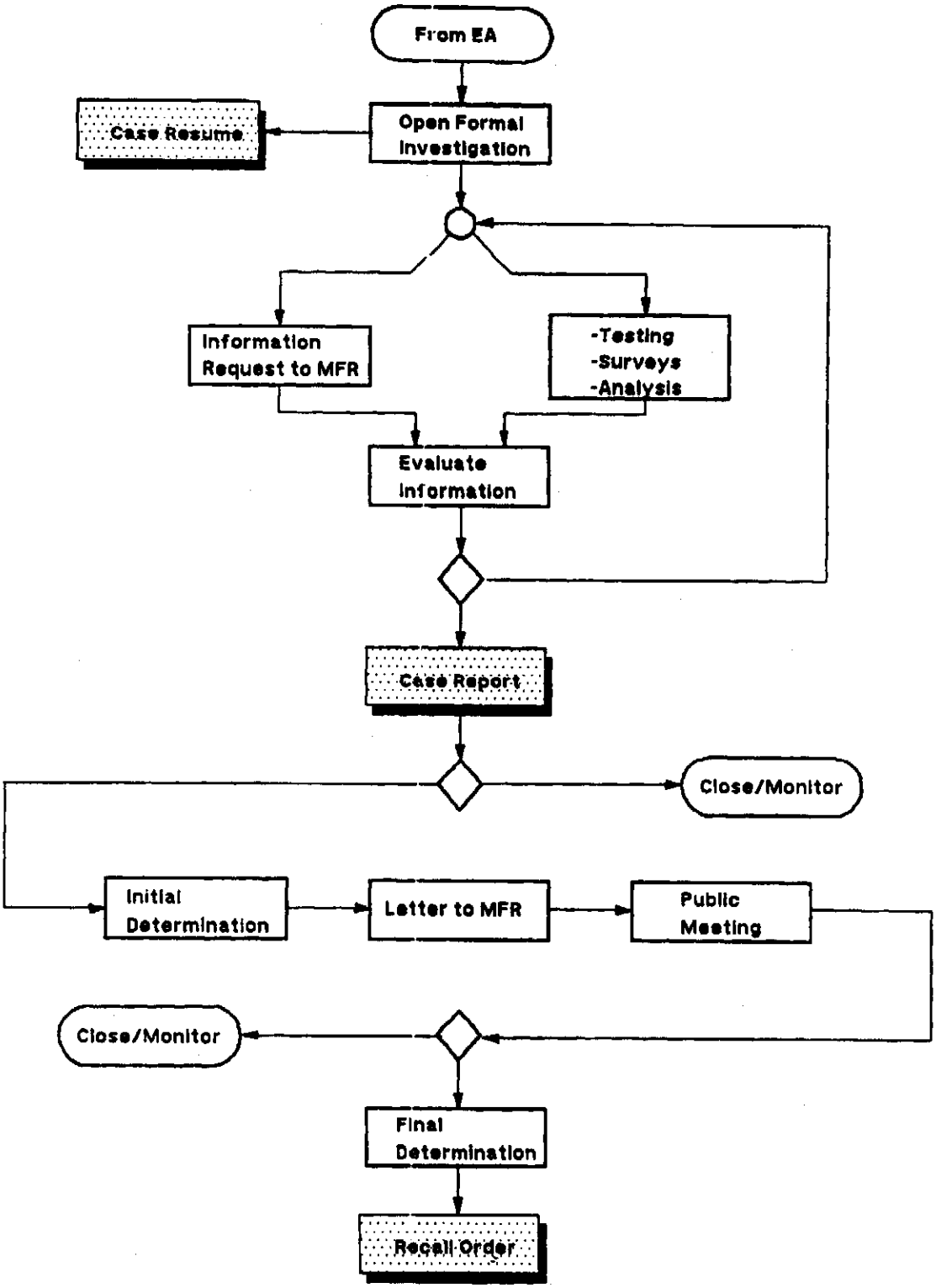
Charts A, B, and C outline the key elements of the investigative process and illustrate the major products. A recall can result from these efforts at any point during this process.



A. Investigative Process--Work Flow (PE/Petition)



B. Investigative Process--Work Flow (EA)



C. Investigative Process Work Flow (Case to Final Determination)

II. PROCEDURES

This section describes the procedures to be used in conducting each phase of the investigative process.

A. INITIAL DATA COLLECTION

The investigative process starts with the compilation of consumer complaint reports and other information concerning potential safety problems. The main source of this information is the Vehicle Owner's Questionnaire (VOQ)*, which is distributed as a result of calls to the agency's Auto Safety Hotline or from other contacts and returned to the agency for processing. In addition to the VOQ reports, ODI receives Congressional correspondence; letters and phone calls directly from the public or consumer groups; and information from state and local governments, other Federal Agencies, and the Canadian Ministry of Transport. This information is constantly reviewed so that potential safety-related defects can be quickly identified and existing investigations updated.

Additional sources of information routinely reviewed are manufacturers' Technical Service Bulletins (TSB). The TSB is a means of formal communication from the manufacturer to its dealers. Each manufacturer is required by 49 CFR Part 573.8 to furnish NHTSA with a copy of all notices, bulletins, and other communications sent to dealers regarding any defect in the manufacturer's vehicles or items of equipment irrespective of whether such defects are considered safety-related. These documents are reviewed and those that appear to indicate a potential safety-related defect are considered for further action by the agency.

After all available information on an alleged problem has been gathered and analyzed by the Complaint Screening Staff, the issue is presented to ODI management and those matters which appear to have the most substance are chosen for further attention. When action is appropriate, a PE is opened. Information requests to a manufacturer, based on TSB's and/or consumer complaints, are made as part of a PE, which is assigned a PE number and conducted in accordance with PE guidelines.

As a result of the agency's experience and engineering judgment, and in light of judicial decisions, the agency may choose not to expend resources to investigate certain kinds of reported problems. These are matters that may be aggravating to owners but usually have minimal safety-related implications. Some examples include:

1. Routine engine or transmission malfunctions which provide ample warning of failure through noise, vibration, fluid leakage, etc.;

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* HS Form 350

2. Nonstructural body panel rust; and

3. Routine maintenance-related problems such as tire wear, vibration, premature brake pad wear, disc brake rotor warpage, etc.

However, depending upon the circumstances, any failure or malfunction which might represent an unreasonable risk to motor vehicle safety is subject to investigation.

B. PRELIMINARY EVALUATION (PE)

The PE is usually the first step taken by ODI in reaction to information concerning a potential defect. A PE is opened when the possibility exists that a design, material, or manufacturing defect may pose an unreasonable risk to motor vehicle safety. The relatively low volume of consumer complaints (when compared to the millions of vehicles on the highway) does not usually justify making a decision exclusively on complaint rate analysis at this early stage. The safety consequences of the potential defect must also be considered. Normally, some combination of two essential ingredients, frequency and severity, is needed to initiate investigative action, although in some cases, a PE will be opened to supplement the complaint screening process when ODI's information (taken alone) is inconclusive.

Specifically, a PE may be opened when any of the following occurs:

1. A number of complaints of the same problem (especially on a late model vehicle) are received within a short period of time.

2. A single report is received indicating severe safety consequences with a strong likelihood that other similar failures will occur; for example, instrument panels that shatter in a crash.

3. The number of complaints currently being received about a general problem and the number already existing in the data base are judged to be significant. For example, "My brakes failed" or "My headlights went out."

4. A few complaints of a unique or specific nature are received. For example, "The left front brake hose rubbed on a bracket causing all the brake fluid to leak out" or "My headlights failed because relay XYZ burned-out."

5. Reports are received from the Canadian Ministry of Transport concerning a problem that is likely to show up in the United States at some later time. For example, a corrosion problem discovered in the maritime provinces where severe environmental conditions exist.

6. The review of a TSB reveals a problem which appears to have safety-related implications.

When a PE is opened, an ODI Resume (Attachment A) is prepared by the engineer or investigator. The PE usually involves a letter to the manufacturer (Attachment B) containing a brief description of the basis for the PE and a request for information concerning vehicle population, complaints, accidents, injuries, fatalities, and lawsuits received by the manufacturer. Additional questions may be asked concerning a TSB, warranty data, production changes, and other information when appropriate. Questions are usually held to the minimum necessary to determine whether to upgrade to an EA. Copies of relevant consumer complaints received by ODI, which support the basis for the request, are also enclosed for review by the manufacturer. The manufacturer is notified by phone that a PE has been opened and that an information request is being prepared. Based on the analysis of the manufacturer's response, and all other available information, the PE may then be: (1) closed, (2) continued to seek clarification of information in the first response, or (3) upgraded to an EA. If all items in the letter to the manufacturer are answered and no safety defect trend appears to exist, the PE Resume is updated to reflect the latest information and the PE is closed.

During the PE process if the manufacturer conducts a voluntary recall which is consistent with the vehicle population and the problem identified, the PE is closed. If a recall does not occur or questions remain, the PE Resume is updated in preparation for opening an EA. If all items in the letter from the manufacturer are answered, no questions remain, and no safety defect trend appears to exist, the PE resume is updated to reflect the latest information and the PE is closed. Normally, the average duration of a PE should be about 4 months.

C. ENGINEERING ANALYSIS (EA)

When a PE suggests the possibility of a defect and the manufacturer does not initiate a recall, or if more information is needed to make a determination, an EA is opened. An EA may be opened without conducting a PE if available information suggests strong evidence of a possible safety-related defect. An EA is also opened when a petition for a safety defect investigation is granted. At this time some or all of the following actions may be taken as described below:

1. An ODI Resume (Attachment A) is prepared by the engineer or investigator. The manufacturer is usually notified by phone that the matter has been advanced to the EA level and that an additional information request may be forthcoming.

2. Owners who have reported the problem to ODI may be contacted to better identify the scope and nature of the matter under study. Contractors or staff personnel may be used for these owner interviews or special surveys involving the subject vehicles as appropriate.

3. An EA information request (Attachment C), with copies of additional consumer complaints, is sent to the manufacturer. This request may ask for clarification of previous responses; updated information regarding consumer complaints, lawsuits, and sales figures; warranty experience; the submittal of engineering drawings, design, production, assembly or

material changes, or modification history; manufacturer's test results; and more detailed, technical questions pertaining to the alleged problem and its causes. The manufacturer's assessment of the problem is usually requested at this time.

4. The ODI databases are searched for additional consumer complaints; manufacturer bulletins; previous ODI investigative files including PE's, EA's, petitions, and Cases; and pertinent recalls (both for the subject vehicle manufacturer and peer vehicle manufacturers).

5. Accident data (FARS, CARDfile, etc.) may be requested from NHTSA's National Center for Statistics and Analysis (NCSA), and a literature search may be requested from NHTSA's Technical Reference Division (TRD).

6. A test program may be conducted to simulate the failure, identify the defect, and/or determine the safety-related consequences. If the required testing appears to be within the capability of NHTSA's Ohio Engineering Test Facility (ETF), it is assigned there. The advantages in directing test programs to ETF are the time savings in initiating the project, the simplicity of paper work, and the ease with which programs can be redirected as additional test experience is gained (no contract modifications). When the testing cannot be performed at ETF, and if a basic ordering agreement (BOA) contract with test laboratories exists, it is used if possible. Otherwise, a contractor will be selected using general contracting procedures. For testing to be conducted at ETF, a memorandum requesting and describing the testing is prepared. For testing to be conducted at contracted laboratories, a procurement request is prepared.

7. If the alleged problem involves the design or manufacture of a specific component or assembly, information requests may be sent to the supplier(s) of the part(s). Similarly, an information request may be sent to other vehicle manufacturers using the alleged defective component(s) on assemblies built by the component manufacturer under investigation. A short, specific information request on the subject component or assembly may also be sent to peer group vehicle manufacturers to document their experience concerning the alleged problem.

After the information gathering phase is completed, it is analyzed to determine the extent and severity of the alleged problem. The engineer or investigator may consider such factors as:

1. Failure history and projections based on part sales, mileage, time-to-failure, and vehicle population.

2. Safety-related implications, including cause of failure, failure modes, risk (in terms of frequency and severity), and what warning there may be.

3. The engineering relationship or correlation between design, material, or manufacturing changes with the failure history.

4. The effect of vehicle characteristics (including engine type, transmission type, air conditioning, power steering, cruise control, power brakes, body style, etc.) and manufacturing information such as assembly plant and VIN sequence.

5. Contributing and causal factors, such as environmental conditions including road surface treatment (salt), heat, cold, and altitude, geographical locations, maintenance, vehicle usage, etc.

6. Comparison with peer groups. How does this problem compare to other similar vehicles and/or components, to previous ODI investigations, and recalls by other manufacturers?

7. Type of failure. Is it a purely performance-related matter where no failed part has been discovered? Can vehicle population and the suspect component be defined? Do objective performance standards exist? Does testing show a substandard system performance when compared to peer groups?

After the information has been analyzed, the engineer or investigator should have enough insight into the problem to allow an evaluation of safety consequences with a recommendation for action. A report is then drafted by the engineer or investigator and one of three recommendations is made: (1) close, (2) leave open to monitor for emerging trends or to collect additional information, or (3) send a recall request letter. Normally the average duration of an EA should be about 18 months.

If, after consultation with supervision, it has been decided to close an EA then an Engineering Analysis Closing Report (following the form and content of Attachment D) and a transmittal memo (Attachment E) are prepared. The report is a public document and therefore contains no judgments, opinions, or recommendations. The transmittal memorandum may contain judgments, opinions, and recommendations, and it is classified for "Official Use Only."

The recommendations in the transmittal memo should be consistent with and drawn from the conclusions that are made. The conclusions must be consistent and logical with respect to the observations and facts from which they are drawn. The conclusions should include a statement as to the cause, scope, and risk to motor vehicle safety of the alleged defect.

If, during the EA process, a manufacturer initiates a voluntary recall which is consistent with the vehicle population and the problem identified, the EA may be closed with an abbreviated EA closing report pertaining to the important facts concerning the recall.

If, after management review, it has been decided that the investigation may be upgraded to a Case, a Recall Request Letter (Attachment G) is drafted. This letter states the reasons ODI believes there may be a safety-related

defect and informally requests the manufacturer to conduct a voluntary recall campaign. The manufacturer is provided an opportunity to submit any additional pertinent information if it decides not to conduct a recall. After careful study of the manufacturer's response to the recall request, a final decision is made on whether to present the matter to the Defect Review Panel.

D. DEFECT REVIEW PANEL

The Defect Review Panel is composed of representatives from the offices of the Administrator, Chief Counsel (OCC), and ODI. Representatives from Public and Consumer Affairs also attend for informational purposes. Prior to the meeting, a draft copy of the Engineering Analysis Action Report (Attachment F) is provided to each of the panel members. The briefing to the Defect Review Panel must include a clear presentation of all relevant facts. This may include:

1. A detailed description of the problem, including a description of the alleged defect, its causes, symptoms, warnings, and consequences.

2. A comprehensive description of the component involved, including its function, where it is located, and its relationship to the alleged defect.

3. Actual components, sketches, photographs, models, etc., to illustrate the alleged defect.

4. The history of failure reports by date of incident and by source (ODI, manufacturer, consumer groups, etc.).

5. Vehicle population versus parts sales or warranty claims (where appropriate).

6. Test results.

7. Design or manufacturing changes including a description of the effect on the failure rate and (if available) test performance.

8. Service bulletins and other manufacturer/dealer communications.

9. Peer group analyses comparing failure or complaint rates of the subject vehicles with other vehicle groups based on make, model, model year, and other considerations (component or system design, vendor, manufacturing dates, etc.).

10. Manufacturer's analysis of the risk to motor vehicle safety of the alleged defect.

11. ODI's opinion of the risk to motor vehicle safety.

12. Possible corrective actions.

13. Previous pertinent safety recall campaigns by the manufacturer and others.

14. Statement of the manufacturer's reasons for not conducting a voluntary recall in response to the Recall Request Letter and ODI's analysis and rebuttal of the manufacturer's reasons.

15. Past examples of a similar nature and their success or failure.

Following the briefing, the Panel decides whether the matter should be the subject of a formal Defect Investigation, continued as an EA for additional analysis, or closed. If the Panel decides that the matter merits a formal investigation, a Case is immediately opened.

E. FORMAL DEFECT INVESTIGATION (Case)

When the continuing study of the problem during the EA phase fails to produce a voluntary recall by the manufacturer, and the Defects Review Panel concludes that the matter merits additional effort, it is elevated to the status of a formal Defect Investigation.

Formal Defect Investigations expand on the information gathered during the PE and EA phases. Generally, the time span for conducting a formal investigation should not exceed 1 year. When extensive test programs are involved or when the evidence is not conclusive, it may be necessary to extend this time period. The formal defects investigation process leads to either a voluntary recall, termination, or an Initial Determination of safety defect.

During the investigation the following actions are taken as appropriate:

1. At the outset, a meeting should be held between ODI and OCC to identify those items of evidence which need to be gathered or strengthened in order to complete the case in both a timely and efficient manner. The investigator prepares a plan of action for the conduct of the investigation. This is discussed at the meeting with OCC. It includes consideration of all steps foreseen as necessary to yield information leading to either a voluntary manufacturer's recall, termination of the investigation, or an Initial Determination. It may be appropriate to modify this plan during the course of the investigation. However, major deviations should be discussed with appropriate supervision and OCC. A Case Resume is also prepared following the format shown in Attachment H.

2. The manufacturer is advised of the opening of a Formal Defect Investigation by phone. A confirming letter is also sent to the manufacturer enclosing a copy of the Case Resume.

3. A public announcement of the opening of a Formal Defect Investigation is issued by the Office of Public and Consumer Affairs. A draft of this announcement is prepared by the case engineer or investigator. This announcement may include a copy of the Case Resume and it may be sent to the media, consumer interest groups, and others advising them of the alleged defect and soliciting additional information. Experience has shown during previous investigations that the public can provide extensive, significant information once advised of problem details.

4. Monthly Case Briefs are prepared following the format shown in Attachment I.

5. An information request is sent to the manufacturer which includes copies of any previously untransmitted consumer reports. This request may ask for clarification of previous manufacturer responses; updated information regarding consumer complaints, accidents, and lawsuits; sales and warranty figures; and the submittal of engineering drawings; design, production, assembly, or material modification history as well as manufacturer test results to the extent not covered during the EA process. New questions may be posed in areas not previously covered during the EA effort.

6. Owner surveys may be conducted covering representative vehicle populations consisting of both subject vehicles and peer group vehicles. The resulting data analysis may provide a measure of the scope and seriousness of the problem. These may be accomplished by either using contractors for which contracts exist or by using general contracting procedures.

7. In-depth interviews may be conducted with owners of affected vehicles for additional insight as to modes and consequences of failure. Contacts may be made with survivors, relatives, or other knowledgeable parties pertaining to fatal accidents. These interviews and contacts may be made by the engineer, investigator, or by authorized contractors.

8. Existing test programs may be continued and additional test programs may be initiated to further define causal and contributory factors and their possible effect on safety.

9. ODI files are searched for new manufacturer bulletins issued since the EA was closed and a Case opened.

10. Updated accident data may be requested from the agency's National Center for Statistics and Analysis and relevant literature may be requested from TRD.

11. Updated information may be solicited from the Canadian Ministry of Transport.

After the results of the above actions have been completed, the data must be analyzed to provide conclusive evidence concerning the existence, nature, extent and severity of the alleged defect. The investigation considers the following as appropriate:

1 Public contributions. Did the public announcement produce significant consumer contributions to help establish the scope and severity of the problem?

2. Owner surveys. Does analysis of the survey results yield insight as to the scope and gravity of the problem?

3. Manufacturer information. Did the manufacturer submit significant additional information which further refines or augments previously acquired data?

4. Owner interviews. Did the owner interviews provide clarification of the nature and extent of the problem?

5. Comparison with similar previous investigations. How does the information concerning this alleged defect compare with that gained in other investigations or recalls?

6. Does the accumulated information now provide a greater or lesser indication of the presence of a defect which may suitably be the subject of an Initial Determination?

Analysis of available information is an ongoing effort throughout the investigation. At any juncture in the above process, one or more engineering meetings with the manufacturer may be held by ODI for presentation and discussion of material bearing on the subject problem.

After the combined data have been analyzed and evaluated, the investigator should have sufficient insight into the problem to be able to recommend one of two courses of action: (1) terminate the investigation or (2) proceed with an Initial Determination of defect. All factual information, correspondence, evidence, and other documentation used to reach a decision must be included in the case file, with exception of the engineer or investigator's working papers and notes.

In the event that the manufacturer conducts a voluntary recall of the subject vehicles and it is determined by the agency that the parameters of the recall are consistent with the subject vehicle population and the problem identified in the investigation, the case is closed. A memorandum written by the investigator enters into the record a copy of the manufacturer's notification and remedy documents. Further investigative action is suspended.

If the manufacturer does not elect to conduct a voluntary recall and when it has been determined by the investigator and appropriate supervision that the investigation should be either closed or be made the subject of an Initial Determination of a defect, a Case report is drafted detailing the results of the investigation. The investigator is responsible for preparing the Case report and a briefing. The report is started upon a decision by ODI management, based upon a recommendation by the engineer, that the Case should be closed or that a recommendation for an Initial Determination should be made to the Administrator. The format for the report is described in Attachment J. The format lends itself to a factual, orderly presentation of the information obtained during all phases of the investigation.

After the report has been reviewed and approved by the Division Chief and the Office Director it is forwarded in draft form to OCC with a transmittal memo containing conclusions and recommendations for action. This transmittal is classified "For Official Use Only." Comments from OCC shall be discussed with representatives of that office and changes made to the report, as appropriate, in a timely manner.

After the report has been forwarded to OCC and upon request from that office for a briefing, the engineer shall prepare a briefing using the same format as the Case report. It is revised as necessary based on comments to the Case report.

F. INITIAL DETERMINATION OF A SAFETY DEFECT*

The following procedure is to be followed for an Initial Determination:

1. The investigative file is compiled, the Case report is completed by the engineer or investigator, and a cover memorandum is prepared with the investigator's recommendation.

2. After a thorough review of all facts and analyses, and in coordination with the Chief Counsel, the Initial Determination is made by the Associate Administrator for Enforcement.

* Also see 49 CFR Part 554.

3. The manufacturer is notified of the determination in a letter which makes available all information on which the decision is based. The letter advises the manufacturer of its right to present data, views, and arguments to establish that there is no defect or that the alleged defect does not affect motor vehicle safety. The letter also specifies the time and place of a public meeting for the presentation of arguments and sets a date by which written comments must be submitted. Submission of all information, whether at a public meeting or in written form, is normally scheduled about 30 working days after the Initial Determination. The deadline for submission of information can be extended by the Administrator.

4. Public notice of an Initial Determination is made in a Federal Register Notice that:

   a. Identifies the motor vehicle or item of equipment and its manufacturer;

   b. Summarizes the information upon which the determination is based;

   c. Gives the location of all information available for public examination; and

   d. States the time and place of a public meeting and the deadline for written submissions in which the manufacturer and interested persons may present data, views, and arguments respecting the determination.

5. A transcript of the public meeting is kept and exhibits may be offered. There is no cross-examination of witnesses.

G. FINAL DETERMINATION*

If the matter under investigation is still unresolved after the Initial Determination procedures are completed, a Final Determination may be made by the NHTSA Administrator.

The Administrator bases the final decision on the completed investigative file and the data, views, and arguments submitted at the public meeting. If the Administrator determines that a safety-related defect exists, the manufacturer is ordered to furnish the notification specified in the Act and to remedy the defect.

If the Administrator does not determine that a safety-related defect exists, the investigation is closed and the manufacturer is notified.

A statement of the reasons for each decision appears in the completed public file.

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* Also see 49 CFR Part 554.

III. CONTROL REQUIREMENTS

A. REVIEW AND APPROVAL AUTHORITY

Reviews and approvals required for actions occurring during the investigative process are as shown below.

ACTION	Engineer or Staff	Branch Chief	Division Chief	Office Director	OCC	AA/ ENF	Administrator
Initial Data Search	X						
Open/Close Preliminary Evaluation	R	C	C	A			
Open/Close Engineering Analysis	R	C	C	A		C*	
Recall Request Letter	R	C	C	A		C	
Convene Defect Review Panel	R	C	C	A		C	
Open/Close Formal Investigation	R	C	C	A	C	C	
Initial Determination	R	C	C	C	C	A	
Final Determination	R	C	C	C	C	C	A

X - Initiate/Perform

R - Recommend

C - Review/Concur

A - Approve/Sign

* Close only

B. DOCUMENTATION CONTROL

1. PE File Maintenance

Two files are maintained for each PE, a public file, and a complete working file. The public files are maintained by the Defect Identification Division (DID) and the working file by the designated engineer or investigator. The public file contains copies of the PE opening resume, Information Request Letter(s) to the manufacturer, the manufacturer's response(s), and pertinent TSB's and consumer reports received by the agency. DID microfiches the public file and assures that TRD is provided with all current public information. The public file documents are provided to DID by the Defect Evaluation Division. These files are verified by the engineer or investigator for completeness, order, and purging of "Official Use Only" or confidential material each time they are processed for microfiche, requested by TRD, or required due to a Freedom of Information Act (FOIA) request. The engineer or investigator must keep the original of each relevant document in the working file. This original or "master" file should be preserved in the condition it was received. It should not be marked-up, annotated, or separated. When a PE is closed, a final PE Resume (Attachment A) is prepared and placed in both the public and working files. The PE closing resume reflects information from the manufacturer and the reason for closing. If the PE results in a recall, the resume will also include the date of the manufacturer's recall notification to ODI, the number of vehicles recalled, and NHTSA's assigned recall number. A copy of the recall information received from the manufacturer is placed in both files. When closed and no longer needed, the engineer or investigator assures that the working PE file is complete and forwards it to DID for permanent storage.

2. EA file Maintenance

When a PE is upgraded to an EA, an EA public file and a working file are prepared. The EA public file contains a copy of the EA opening resume (which is essentially the same document as the PE closing resume), the EA information request(s) to the manufacturer, the manufacturer's response(s), and pertinent consumer reports received by ODI after opening the EA. DID microfiches the public file and assures that TRD is provided with all current public information. The public file documents are provided to DID by the Defect Evaluation Division. The designated EA engineer or investigator is responsible for initially transmitting all relevant documents collected prior to opening the EA to DID. After the EA is opened, DID will add new relevant public documents to the file. The EA engineer or investigator incorporates the PE working file, or the informal petition file, into the new EA working file in accordance with Attachment K and maintains the working file. The engineer or investigator is also responsible for checking the content of the public file for completeness, order, and the elimination of "Official Use Only" or confidential material each time it is microfiched, requested by TRD, or required due to a FOIA request.

The engineer or investigator must keep the original of each relevant document in the working file. This original or "master" file should be preserved in the condition it was received. It should not be marked-up, annotated, or separated. Another file of Xerox copies of the original documents may be maintained for use as desired. If the amount of material collected becomes large, and there is the likelihood that it may be upgraded to a Case, the engineer/investigator should maintain a list of the documents and reports in order to be prepared to generate a case file index if the EA is upgraded.

If the EA results in a manufacturer initiated recall, the EA resume is updated to reflect the date of the notification to ODI, the number of vehicles recalled, and the NHTSA recall number. A copy of the recall documents, the closed EA resume, and an EA closing report are placed in the public and working files. When closed or no longer needed, the engineer or investigator transfers the working file to DID for permanent storage after first assuring that the working file is set up in accordance with Attachment K.

When an EA is closed because no safety-related defect was detected, and/or when further commitment of resources to determine whether such a trend may exist does not appear to be warranted, a copy of the EA closing report (Attachment D) is placed in both the public and working files and the working file is stored as described above.

When the possibility exists that an EA may be upgraded to a Case, a draft EA Action Report (Attachment F) is prepared and placed in the working file. If an EA is upgraded to a Case, the EA engineer or investigator is responsible for preparing a list of documents and reports received during the PE and EA phases and providing this list to DID as the first entry in the formal investigation file index. This list will be a complete accounting of all documents including public availability status; i.e., official or public. In some instances, DID will create a formal index of these items. Also, DID may incorporate consumer complaints received by ODI into the Case file index. The approved final EA Action Report is also placed in the Case file maintained by DID. The EA working file documents are integrated into the working Case file used by the engineer or investigator.

3. Case File Maintenance

DID maintains indexed files for formal defect investigations. There are two master files, public and official. The public file contains no confidential material or internal memorandum expressing staff opinions or recommendations. Additionally, test results, survey results, and other specialized investigative actions are not placed in the public file until the Case is closed or an Initial Defect Determination made. The official master file contains original documents while the public file contains duplicates. Material generated or received during the investigation is submitted on a regular basis by the Case engineer or investigator to DID for inclusion in the files.

These files are initially made up of the EA file material. Such material may include consumer reports of problems (VOQ's, letters, telephone contact reports), Fatal Accident Reporting System reports, National Accident Sampling System reports, police accident reports, newspaper and magazine articles, NHTSA news releases, all records of substantive contacts with the manufacturer, all records of substantive contact with other NHTSA offices, all IR letters and responses, TSB, shop manual excerpts, test requests and reports, survey or interview requests and reports, parts or part tags, EA Action Report and any other document pertinent to the investigation.

The Case engineer maintains a working file arranged in any manner which is convenient. It contains copies of the material described above plus working documents, memorandum, and other pertinent materials bearing on the Case.

4. Confidentiality

During the PE and EA phases, material for which confidentiality is requested by a manufacturer is prominently marked "For Official Use Only" and placed in the working file. At the formal investigation level, a copy is kept in both the official central master file and in the engineer's or investigator's working file. Confidential material is never placed in the public file. In the event the confidential material is received directly by the engineer or investigator, a copy of the material is sent to OCC by transmittal memo for determination. Classification action is ordinarily taken by OCC upon receipt of the material from the manufacturer. If some of this material is determined not to be confidential, the letter from OCC to the manufacturer is attached to the declassified information and placed in the appropriate public file. The material is also stamped "Reclassified Public."

Other investigative file documents that are withheld from the public file during any investigation include (1) NHTSA sponsored test reports/results, (2) owner interview reports, and (3) internal memorandums and reports. Events which can trigger OCC review of these documents and their release (all or portions) to the public include (1) a FOIA request, (2) Initial Defect Determination, and (3) investigation closing.

5. Document Review and Timing Guidelines

Document review and timing guidelines are shown on Figure 1. Any major deviations from the procedures or schedules in this plan shall be approved by the Division Chief or Office Director.

Figure 1
Document Review and Timing Guidelines

SUBJECT	DOCUMENT REVIEW/ACTION						TIME			REMARKS
	ENGR OR STAFF	BRCH CHF	DIV CHF	OFF DIR	OCC	ASSOC ADMIN	DAYS	WKS	MOS	
INITIAL DATA SCREENING	I									Continuous Activity
PRELIMINARY EVALUATION										
Opening Resume	I	C	C	A				2		After Decision
Notify MFG		I					2			After Opening
Information Request	I	C	C	A				2		After Opening
File Entries	I							1		After Generation/Receipt
Analysis of MFG Response	I								2	After Receipt
Closing/Upgrade Resume	I	C	C	A				2		After Decision
ENGINEERING ANALYSIS										
EA Resume	I	C	C	A				2		After Decision
Notify MFG		I					2			After Opening
Information Request	I	C	C	A				2		After Opening
File Entries	I							1		After Generation/Receipt
Test/Procurement Req.	I	C	C	A					1	After Decision
Analysis of MFG Response	I								2	After Receipt
EA Closing Report	I	C	C	A		C				
Recall Request	I	C	C	A		C		2		After Decision
Draft EA Action Report	I	C	C	A		C			1	After Decision
Defect Review Panel (DRP)	I	C	C	A	C	C		2		After Report Approval
DRP Meeting Memo		I	C	A				1		After DRP Meeting
EA Action Report	I	C	C	A				2		After Decision
Transfer File to Case File	I	A	C	C				2		After Case Opening
CASE										
Notify MFG		I					2			After Opening
Press Release (draft)	I	C	C	C	C	A		1		After Opening
Case Resume	I	C	C	A				1		After Opening
Case Opening Letter	I	C	C	A				1		After Opening
Case Brief	I	C	C	A				2		After Opening
Plan of Action	I	C	C	A	C			3		After Opening
Information Request	I	C	C	A				as req'd		
File Entries	I							1		After Generation/Receipt
Test/Procurement Req.	I	C	C	A					1	After Decision
Analysis of MFG Response	I								2	After Receipt
Case Report (draft)	I	C	C	A	C	C			2	After Decision
Case Report (final)	I	C	C	A	C	C		3		After Review
Initial Det. Letter	I	C	C	C	C	A		2		After Decision
Public Meeting Notice	I	C	C	C	C	A			1	After Init'l Det.

I=INITIATE/PERFORM; C=REVIEW/CONCUR; A=APPROVE/SIGN

C. INFORMATION REQUEST RESPONSE TIMES

Generally domestic manufacturers are allowed 20 to 25 working days after receipt to respond to a normal PE information request letter. Since EA and Case requests involve more, and often more complicated, questions, 30 working days is usually stipulated. Foreign manufacturers are normally allowed up to 10 extra working days to respond due to logistical and translation problems. If a manufacturer finds that it cannot respond within the allotted time with all the requested information, it can request an extension no later than 5 working days prior to the due date. When circumstances prevent meeting the required delivery schedule for the entire submission, the manufacturer is expected to provide on-time delivery for that portion of the response which is complete. The manufacturer is warned that by failing to adhere to these guidelines, it may be subject to civil penalties.

If several ODI requests are being handled by the same manufacturer simultaneously and/or a particularly complex request is sent, additional time can be stipulated at the discretion of the Office Director.

ATTACHMENT A
6/7/88

ODI RESUME

INVESTIGATION: ____-___ DATE {OPENED / CLOSED / UPGRADED} : _____

SUBJECT : _____

PROMPTED BY : _____

ENGINEER : _____

MFG : _____

MODEL(S) : _____

_____

MODEL YR : _____

SYNOPSIS : _____

_____

_____

VEHICLE POPULATION: _____

FAILURE REPORT SUMMARY

BASIS:	ODI	MANUFACTURER	TOTAL
COMPLAINTS:	____	____	____
ACCIDENTS :	____	____	____
INJ ACCID :	____	____	____
# INJURIED:	____	____	____
FAT ACCID :	____	____	____
# FATALS :	____	____	____
OTHER :	____	____	____

DESCRIPTION OF OTHER: _____

ACTION: _____

BRCH CHF _____ DIV CHF _____ OFC DIR _____

_____ _____ _____

DATE DATE DATE

SUMMARY: _____

_____

_____

_____

ATTACHMENT B
4/06/88

PE INFORMATION REQUEST

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

_____
_____
_____
_____

NEF-12____
PE__-___

Dear _____:

The National Highway Traffic Safety Administration (NHTSA) conducts investigations of potential safety defects in motor vehicles and equipment. This function is performed under the authority of Sections 112 and 152 of the National Traffic and Motor Vehicle Safety Act (the Act), which provides for safety defect notification and recall campaigns by manufacturers to reduce accidents, injuries, and deaths.

(To be used for small manufacturers who are unfamiliar with ODI)

This office has received ___ reports of alleged _____ failure in _____ vehicles. A copy of each of these reports is enclosed for your information. For purposes of this information request, the following terms are defined unless otherwise described:

- o Subject vehicles: all 19__ through 19__ model _____ vehicles with _____.
- o _____: all the personnel and files of the _____ including all field personnel.
- o _____ assemblies: _____.
- o Alleged defect: shall refer to _____.

In order for my staff to evaluate the alleged defect, certain information is required. Pursuant to Sections 108 and 112 of the Act, please provide numbered responses to the following items. Please repeat each item verbatim before the response. If you cannot answer any specific question, please state the reason.

1. Furnish the total number of the _____ model vehicles equipped with _____, _____ has sold in the United States by make, model, and model year.

2. Furnish the number and copies of all owner complaints, field reports, service and technical bulletins, studies, surveys, or investigations from all sources, either received or authorized by _____, or of which _____ is aware, pertaining to the alleged defect. This should include information pertaining to the reports included with this letter. Separate the number and copies of owner complaints from other sources.

3. Identify and describe all accidents, subrogation claims, or lawsuits known to _____ pertaining to the alleged defect (where _____ is or was a defendant or codefendant). Provide _____'s analysis of each item, clearly identifying the vehicle (model year and VIN), the vehicle owner, and any injuries or property damage which may have occurred.

4. Identify and describe all significant modifications or changes that could relate to the alleged defect in the manufacture, design, or material composition of the _____ used in the subject vehicles from _____ to date. The following information must be included for each modification or change:

   a. the reason for the modification or change;
   b. a description of the modification or change;
   c. the approximate calendar date on which the modification or change was incorporated into production; and
   d. state whether the modified or changed components could be interchanged with earlier production components.

5. Furnish the number of warranty claims related to the alleged defect on the subject vehicles by model/model year, model series code, calendar month, and problem code. Each problem claim code must be identified.

6. Furnish the number of the following components or assemblies sold for use on the subject vehicles from _____, 19__, to date, by model/model year application, component name, part number (both service and engineering), supplier (name, address, and model year of application), and calendar month:

   a. _____;
   b. _____;
   c. _____;
   d. _____; and
   e. _____.

It is important that _____ respond to this letter on time. This letter is being sent pursuant to Section 112 of the Act, which authorizes this agency to conduct any investigation which may be necessary to enforce Title I of the Act. Your failure to respond promptly and fully to this letter may be construed as a violation of Section 108(a)(1)(B) of the Act.

Your written response, in triplicate, referencing the identification codes in the upper right hand corner of page 1 of this letter, must be submitted to this office within __ working days from your receipt of this letter. If you find that you cannot respond within the allotted time, with all the requested information, you must request an extension from the Director, Office of Defects Investigation, no later than 5 working days prior to the due date. A telephone request for an extension may be made to the Director at (202) 366-2850, but it must be confirmed in writing.

If any portion of your response is considered confidential information, include all such material in a separate enclosure marked confidential. In addition, you must submit a copy of all such confidential material directly to the Chief Counsel of NHTSA and comply with all other requirements of 49 CFR Part 512, Confidential Business Information.

If you have any technical questions concerning this matter, please contact Mr. _____ of my staff at (202) 366-_____.

Sincerely,

Michael B. Brownlee, Director
Office of Defects Investigation
Enforcement

(INFORMATION BELOW TO BE FILLED IN BY SECRETARY)
Enclosure

NHTSA:NEF:ODI
NEF-12_:_____: :6- : / /
cc:
NEF-01
NEF-10
NEF-112 Scott
NEF-12 Subject/Chron
Document _____

ATTACHMENT C
4/06/88

EA INFORMATION REQUEST

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

_____
_____
_____
_____

NEF-12___
EA__-___

Dear_____:

This letter is to advise you that the Preliminary Evaluation (PE__-__) pertaining to alleged _____ on certain 19__ to 19__ _____ vehicles has been upgraded to an Engineering Analysis (EA__-___) and to request additional information.

Enclosed for your information are copies of __ additional reports we have received.

For purposes of this information request, the following terms are defined unless otherwise described:

- Subject vehicles: all 19__ through 19__ model _____ vehicles with _____.
- _____: all the personnel and files of the _____ including all field personnel.
- _____: assemblies _____ _____.
- Alleged defect: shall refer to _____ _____.

In order for my staff to evaluate the alleged defect, certain information is required. Pursuant to Sections 108 and 112 of the National Traffic and Motor Vehicle Safety Act (the Act), please provide numbered responses to the following items. Please repeat each item verbatim before the response. If any information has been provided to this office in response to a previous information request on this matter, that information need not be resubmitted. All other information must be submitted as requested. The submitted information is to include, but not be limited to, all written reports or documents; transcriptions, notes, or other documentation of oral communications; and information contained on electronic storage media. If you cannot answer any specific question, please state the reason.

1. Furnish the number of 19__ to 19__ model subject vehicles sold by_____in the U.S. by make, model, and model year.

2. Furnish the number and copies of all owner reports or consumer complaints received by_____, or of which _____ is otherwise aware, pertaining to the alleged defect with the _____ assemblies on the subject vehicles. Furnish all reports or complaints whether or not _____ has verified each report.

3. Furnish the number and copies of all other reports, complaints, surveys, or investigations from all sources either received or authorized by _____, or of which _____ is otherwise aware, pertaining to the alleged defect with the _____ assemblies on the subject vehicles. Furnish all reports whether or not _____ has verified each report, including all correspondence, notes, memoranda, and other records pertaining or relating to the performance of the _____ assemblies (or components thereof) on the subject vehicles.

4. Identify and describe each accident or subrogation claim (including the names, addresses, and telephone numbers of the owner/occupants involved) of which _____ is aware on the subject vehicles and which may have occurred due to circumstances, conditions, or problems caused by the alleged defect with the _____. Provide _____'s analysis of each accident clearly identifying the vehicle (model year and VIN), the accident date, and all injuries or property damage which may have occurred. Furnish all reports whether or not _____ has verified each report.

5. Identify all lawsuits, both pending and closed, by title, location and docket number in which _____ is or was a defendant (or codefendant) pertaining to, at least in part, the _____ assemblies (or components thereof) on the subject vehicles. Provide a brief synopsis of each case, including _____'s analysis of the incident, the identification of the vehicle (model series, model year, and VIN), the date of the incident which was the basis for the lawsuit, the date the lawsuit was filed, and the vehicle owner's name, address, and telephone number. Identify all parties involved in the lawsuit.

6. Furnish the number of warranty claims related to the alleged defect on the subject vehicles by model/model year, model series code, calendar month, and problem code from _____, 19__, to date. Each problem claim code must be identified.

7. Furnish the number of the following components or assemblies sold for use on the subject vehicles from _____, 19__, to date by model/model year application, component, part number (both service and engineering), supplier (name, address, and model year of application), and calendar month:

a. _____;
b. _____;
c. _____;
d. _____; and
e. _____.

8. If any of the components identified in item 7 are sold (or have been sold) as part of a kit or package, identify the number of such kits or packages sold by part number (both for the kit/package and the components included), vehicle application, and calendar year of sale from _____, 19__, to date.

9. Identify and describe all changes or modifications in the design, manufacture, attachment, or composition of the components listed in item 7 which relates to the alleged defect. The description should include, but not be limited to, the following items for each change or modification:

   a. the reason for the change or modification;
   b. description of the change or modification;
   c. the calendar date on which the change or modification was incorporated into production; and
   d. describe whether the changed or modified component can be used as a replacement part for unchanged or unmodified components.

10. Furnish engineering specification drawings of the following components identified in item 7 and used on the subject vehicles.

    a. _____;
    b. _____; and
    c. _____.

11. Furnish the production sequence number of the VIN by calendar month for each assembly plant producing a subject vehicle for model year 19__ through 19__.

12. Furnish copies of all correspondence between _____ and the suppliers of the _____ (and components thereof) pertaining to design, manufacturing, performance, durability, quality, testing, or modification of the _____ on the subject vehicles. If any communications on this subject were oral or were conducted electronically, provide a written transcript or summary of each such communication and include a statement that identifies the participants and the date of the communication. It is not necessary to reconstruct transcripts of oral communications.

13. Furnish a copy of all tests and analyses which were or may have been used in developing components involved in the alleged defect and which could relate in any way to this current investigation.

14. Identify the parties involved and describe any and all tests and analyses at (1) contractors, (2) suppliers, or (3) other entities pertaining to the alleged defect. Furnish copies of all reports, notes, tables, graphs, or similar documents which were developed for each. Identify when each activity was initiated and concluded or whether it is still ongoing.

15. Identify whether _____ ever considered alternative _____ assemblies or the attachment of the _____ to the subject vehicle. Include in the identification of each alternative component (or method) the following:

    a. when each alternative component was first proposed;
    b. a description of the alternative component; and
    c. the disposition of the alternative component (i.e., whether the alternative component was approved, disapproved, or still undergoing evaluation) and the reason(s) for the disposition other than economic reasons.

16. Furnish _____'s opinion of the alleged defect in the subject vehicles. Please include an assessment of the following:

    a. the causal or contributory factors which may result in the alleged defect;
    b. the failure mode;
    c. the risk to motor vehicle safety created by the alleged defect; and
    d. any warning of the alleged defect.

17. Furnish a copy of all documents not specifically requested which _____ believes are relevant or were used in formulating its assessment of the alleged defect.

18. Furnish any new information of which _____ is aware concerning any report, document, or information which may have been previously provided by _____. Also, furnish any additional information of which _____ is aware concerning the reports provided by the National Highway Traffic Safety Administration (NHTSA) on this matter.

It is important that _____ respond to this letter on time. This letter is being sent pursuant to Section 112 of the the Act, which authorizes this agency to conduct any investigation which may be necessary to enforce Title I of the Act. Your failure to respond promptly and fully to this letter may be construed as a violation of Section 108(a)(1)(B) of the Act.

Your written response, in triplicate, referencing the identification codes in the upper right hand corner of page 1 of this letter, must be submitted to this office within 30 working days from your receipt of this letter. If you find that you cannot respond within the allotted time with all the requested information, you must request an extension from the Director, Office of Defects Investigation, no later than 5 working days prior to the due date for your response. A telephone request for an extension may be made to the Director at (202) 366-2850, but it must be confirmed in writing. On-time delivery of partial submissions should be made when circumstances prevent meeting the required delivery schedule.

If any portion of your response is considered confidential information, include all such material in a separate enclosure marked confidential. In addition, you must submit a copy of all such confidential material directly to the Chief Counsel of the National Highway Traffic Safety Administration and comply with all other requirements of 49 CFR Part 512, Confidential Business Information.

If you have any technical questions concerning this matter, please contact Mr. _____ of my staff at (202) 366-____.

Sincerely,

Michael B. Brownlee, Director
Office of Defects Investigation
Enforcement

(INFORMATION BELOW TO BE FILLED IN BY SECRETARY)
Enclosure(s):

NHTSA:NEF:ODI
NEF-12_:_____:___:6-____:__/__/__
cc:
NEF-01
NEF-10
NEF-112 Scott
NEF-12 Subject/Chron
Document _____

ENGINEERING ANALYSIS CLOSING REPORT

SUBJECT:

EA No.: Date Opened: Date Closed:

BASIS:

THE ALLEGED DEFECT:

DESCRIPTION OF COMPONENT OR VEHICLE SYSTEM:

CORRESPONDENCE:

NHTSA to Mfg.	Mfg. to NHTSA	Mfg. to NHTSA Supplement	Date Requested	Date OCC Response	Confidentiality Items Confidential

STATUS

PROBLEM EXPERIENCE:	EA Opened		EA Closed	
Reports	ODI	MFG	ODI	MFG
Owner				
Field				
Lawsuits				
Property Damage Accidents				
Injury Accidents/ Injuries				
Fatal Accidents/ Fatalities				
Unknown Accidents				

VEHICLE POPULATION:

WARRANTY:

SERVICE BULLETINS:

PART SALES:

DESIGN, MATERIAL, AND/OR PRODUCTION MODIFICATIONS:

TESTING: Contractor:

Date of Test Request: Date Report Received:

Description:

Results:

ADDITIONAL INFORMATION:

WARNING SYMPTOMS:

CONTRIBUTING FACTORS:

FAILURE/MALFUNCTION MODES:

MANUFACTURER'S EVALUATION OF THE ALLEGED DEFECT:

REASON FOR CLOSING:

_____ _____
Safety Defects Engineer Date

I Concur:

_____ _____
Chief, Engineering and Test Branch Date

_____ _____
Chief, Defect Evaluation Division Date

_____ _____
Director, Office of Defects Investigation Date

U.S. Department of Transportation
National Highway Traffic Safety Administration

Memorandum

ATTACHMENT E

EA TRANSMITTAL MEMORANDUM

Subject: Alleged_____
_____, EA89-0___

Date:

From: Safety Defects Engineer

Reply to Attn. of:

To:

Division Chief

Thru: Branch Chief

SYNOPSIS: (Provide a one paragraph history starting with the PE and working through the EA)

CONCLUSIONS:

BASIS FOR UPGRADING TO A CASE OR CLOSING: It is recommended that this analysis be _____ because:

(Since this is not a public document, you may express opinions, predictions, reservations, recommend rulemaking action, recommend closing or upgrading to a Case, etc.)

#

SAFETY BELTS SAVE LIVES

ATTACHMENT F
4/5/88

ENGINEERING ANALYSIS ACTION REPORT

SUBJECT:

BASIS:

The basis identifies the information which influenced the initiation of the analysis. It includes the number of reports at initiation and the date the Engineering Analysis (EA) was assigned a number. If it started as a Preliminary Evaluation (PE), that date and the PE number are also included.

THE ALLEGED DEFECT AND POTENTIAL SAFETY-RELATED CONSEQUENCES:

This section includes the alleged failure mode, descriptions of any warnings, and the probable safety consequences to the motoring public.

DESCRIPTION OF COMPONENT OR VEHICLE SYSTEM:

This section is expanded when either the vehicle or component is not general knowledge. It should be presumed that some readers will have a limited automotive background, and the description should be prepared accordingly. This description includes a discussion of the operation and function of the system involved and the associated components. A picture or diagram showing the part and its location should be part of this section.

PROBLEM EXPERIENCE:

Reports of failures or malfunctions from:

1. Office of Defects Investigation (ODI) consumer files, phone calls, National Highway Traffic Safety Administration (NHTSA) initiated surveys, etc.

2. The manufacturer -- including owner and field service reports.

3. Accidents, injuries, and fatalities from ODI files, manufacturer files, accident reports, and lawsuits.

4. Composite summary of complaints, accidents, injuries, and fatalities.

TECHNICAL INFORMATION:

All pertinent technical data is detailed in this section. This will normally include, but is not limited to, the following:

1. Vehicles involved and the associated vehicle population figures.

2. Information in response to written requests for Technical Service Bulletins, quality control and design changes, product improvements, warranty claims, parts sales, and company investigations.

3. The manufacturer's analysis of the alleged defect and evaluation of the risk to motor vehicle safety.

4. Test results forwarded by the manufacturer.

5. NHTSA test results.

6. Photographs of failed components.

7. In-house record checks:

   a. Service manuals
   b. Technical Service Bulletins
   c. Recall files
   d. Similar EA's and Cases
   e. National Center for Statistics and Analysis data
   f. Office of Vehicle Safety Compliance Test Reports and Compliance Information Requests
   g. Technical Reference Division data

ENGINEERING ANALYSIS:

This section provides an engineering assessment of the facts gathered under "Problem Experience" and "Technical Information." In addition, it includes where applicable:

1. Comparison with peer groups, including other EA's and Cases concerning the same problem but different manufacturers, makes, or models.

2. Failure projections based on parts sales and warranty data, mileage, and time-to-failure.

3. Appropriate analyses based on factors such as: vehicle characteristics, including engines, transmissions, air conditioning, cruise control; manufacturing data such as assembly plants and VIN sequence; other equipment on the vehicles; weather; other environmental effects; geographical location; and other variables.

4. The engineering relationship or correlation between design or production changes and the reported failures.

5. Technical surveys.

6. Safety and nonsafety related implications, including cause of failure, failure modes, risk, and warning.

OBSERVATIONS

Based on the above information, observations concerning the alleged defect are prepared. In developing these observations, the following questions should be addressed:

- Is it a defect? If so, is it related to a design, material, manufacturing, or an assembly deficiency?
- Does it appear to be a significant risk to motor vehicle safety?
- What are the warning signs?
- Is it an "infant mortality" problem?
- Will it continue to occur?
- Can the defect be identified?
- Is it a purely performance related matter? Do objective performance standards exist?
- What influences the occurrence of the defect (environment, usage, maintenance, operator error, etc.)?
- Is there a known remedy?

CONCLUSIONS AND RECOMMENDATIONS:

These do not appear in this document, but are placed in the EA Transmittal Memorandum (see Attachment E).

_____ Date _____
Safety Defects Engineer

I concur:

_____ Date _____
Chief, Engineering and Test Branch

_____ _____
Chief, Defect Evaluation Division Date

_____ _____
Director, Office of Defects Investigation Date

ATTACHMENT G
4/4/88

SAMPLE RECALL REQUEST LETTER

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

(Manufacturer)

NEF-12___
EA89-____

Dear Mr. :

Alleged _____failures in certain _____vehicles have been under investigation by the National Highway Traffic Safety Administration (NHTSA) since_____. During that period, we have reviewed owner complaints and your reply to our inquiry, conducted tests, inspected several failed _____ in the subject vehicles, and interviewed several subject vehicle owners concerning the _____failure. We believe that the information now available indicates that _____should initiate a voluntary recall of these vehicles to correct the _____ problem.

We are aware of 128 owner reports alleging _____failure on the subject vehicles, 4,028 warranty claims, and the sale of 2,700 _____ and 2,491 _____pertaining to the _____in the subject vehicles.

The number of failed _____ in the subject vehicles has been increasing due to the time related characteristic of metal fatigue type failures. You have received 61 reports during the first 9 months in 1987, 53 reports in 1986, and 13 reports in the last 7 months of 1985; this office has received 16 reports in the last 10 months. There is no reason to believe that these _____failures will not continue to occur in the future.

Available information indicates that (DESCRIBE FAILURE MODE AND SAFETY-RELATED CONSEQUENCES IN DETAIL).

_____ is aware of these failure modes and has taken some actions to correct the problem. For example,_____ issued a Technical Service Bulletin, Number_____, Title_____ dated _____, in which the above two failure modes and repair parts and procedures are described. Additionally, _____ proposed a Service Recall as stated

in its letter of _____, that ". . . _____ has determined that positive field corrective action is necessary for customer satisfaction purposes. We will in the near future notify owners of this condition and of a warranty extension to 7 years or 70,000 miles for its correction. Repairs will be performed as described in the Technical Service Bulletin."

A review of owner complaint reports revealed that among the 128 owner complaints, 7 reported accidents involving 4 injuries, 39 indicated _____ occurred while driving, 11 mentioned loss of vehicle control resulting from _____, and 15 indicated that _____
_____.

Inspection of several subject vehicles equipped with the failed _____ _____shows that is is highly likely that _____ (state safety-related consequences) _____.

The information received by this office demonstrates that there is a continuing risk of _____ involving the subject_____ _____vehicles. We request that you initiate a voluntary safety recall concerning this matter.

If _____ determines not to undertake the requested recall action, state the reasons for this decision in detail and furnish any additional analysis of the problem to this office. If _____ fails to provide substantive new information or fails to initiate a voluntary safety recall, I may recommend that a formal defect investigation be opened. This often includes issuance of a press release describing the alleged defect and the reasons for the investigation.

Our recommendation to conduct a safety recall does not reflect a formal conclusion by the agency with respect to the evidence. Also our recommendation should not be confused with initial or final determinations of a safety defect pursuant to 15 U.S.C. 1412 or recall orders that are issued by the agency after a final determination of a safety defect.

It is important that _____ respond to this letter on time. This letter is being sent pursuant to Section 112 of the National Traffic and Motor Vehicle Safety Act (the Act) (15 U.S.C. 1401), which authorizes this agency to conduct any investigation which may be necessary to enforce Title I of the Act. Failure to respond promptly and fully to this letter may be construed as a violation of Section 108(a)(1)(B) of the Act (15 U.S.C. 1397(a)(1)(B)).

Your written response, in triplicate, referencing the identification codes in the upper right hand corner of page 1 of this letter, must be submitted to this office within 10 working days from your receipt of this letter.

If you have questions regarding safety recall procedures, please contact Mr. James Murray of my staff at (202) 366-5226. If you have any technical questions, please contact _____ at (202) 366-_____.

Sincerely,

Michael B. Brownlee, Director
Office of Defects Investigation
Enforcement

NHTSA:NEF:ODI
NEF-12:__:65201:04/06/88
cc:
NEF-01
NEF-10
NEF-11 Scott
NEF-12 Subject/Chron
Document _____

CASE RESUME

SUBJECT: Alleged Failure of Dual Rear Wheel Retention System used on 1975-1984 Ford E-350 and F-350 Trucks and Vans ODI Case No. C85-10

BASIS FOR INVESTIGATION:

This case was opened on September 30, 1985, based on information which includes at least 1,686 failures involving the dual rear wheel retention system used on 1975 through 1984 standard and Domestic Special Order (DSO) Ford E-350/F-350 trucks and vans. These reports include 212 property damage accidents, 76 injuries, and 1 fatality. This investigation was initiated to determine whether the problem constitutes a safety-related defect within the meaning of the National Traffic and Motor Vehicle Safety Act of 1966.

DESCRIPTION AND FUNCTION:

Subject vehicles are equipped with dual rear wheels, i.e., two wheels and tires mounted side-by-side on each end of the rear axle. Rear wheels are identical and are held in place by eight 90 degree cone wheel nuts. The wheel bolt holes are alternately flared inward and outward to mate the wheel surfaces together before mounting. Subject vehicles use 9/16-inch studs and nuts except for so-called DSO vehicles which used 5/8-inch studs and nuts.

VEHICLE POPULATION: 456,500

THE ALLEGED PROBLEM:

Problem Mode: The problem involves loose or missing stud nuts and broken wheel studs which can result in disengagement of a set of dual rear wheels. Disengagement of the dual rear wheels may cause the affected side of the vehicle to drop onto the brake drum with accompanying loss of vehicle control. The separated wheel and tire assemblies become free projectiles traveling at about the speed of the vehicle before separate.

Problem Symptoms: There is no known warning of impending separation of the wheel and tire. It is possible that missing and loose stud nuts or broken wheel studs may be observed or detected before any final separation.

ATTACHMENT I
3/20/88

(FOR OFFICIAL USE ONLY)

CASE BRIEF

ODI CASE NO.: C89-0- Status as of:

CASE OPENED:

SUBJECT VEHICLES:

ALLEGED PROBLEM:

VEHICLE POPULATION:

FAILURE SUMMARY:

As of	No. of Reports	Accidents			
		Prop. dam.	Injuries	No. Injuries	Fatal
10/28/85	xx	xx	xx	xx	x
1/13/86	xx	xx	xx	xx	x

MAJOR ACTIONS AND STATUS:

- o Owner Survey:
  Target Completion Date: March 1, 1986
- o Vehicle Tests:
  Project completed: July 1985
- o Other Actions as appropriate
- o Manufacturer Actions/Positions:

ACTIVITIES SINCE LAST UPDATE:

Attachment J
8/3/88

Investigative Report

ODI Case No.

ALLEGED _____, 19__-19__ _____

MANUFACTURED BY _____ CORPORATION

Date

Office of Defects Investigation

Enforcement

National Highway Traffic Safety Administration

TABLE OF CONTENTS (sample)

I. Background

Basis for Investigation:

The basis identifies the information which influenced the opening of the investigation. It includes the number of reports, accidents, injuries, and fatalities. It also includes a short statement of the objectives of the investigation, including . . . "The investigation was initiated to determine whether the alleged (defect) constitutes a safety-related defect within the meaning of the National Traffic and Motor Vehicle Safety Act, as amended.

Description and Function:

This section should include a discussion of the operation and function of the system involved and the associated components. If it is not a common part, a picture or diagram describing what the problem involves should be part of this section.

Alleged Defect:

This section includes the alleged failure mode, description of any warnings, and the probable safety consequences to the public.

II. Vehicle Population

This section should present the vehicle production and vehicles on the road information broken down by model, model year, etc., as appropriate for the case.

III. Owner Reports

A summary of owner reports is presented in this section including reports of accidents, injuries, and fatalities. The summary should describe the types of relevant problems encompassed in the complaints. The presentation should be broken down by appropriate categories. The categories should include ODI, manufacturer, and total reports (duplicates eliminated). Any unique features of the reports received by the manufacturer and forwarded to NHTSA are described along with their relevancy to the case.

An analysis of the total failure reports should also be described in this section. The meaning of failure report distribution trends should be described as well as the meaning of changes in the type of problem reported. The impact of any service or manufacturing action by the manufacturer should be described.

In general, it is the purpose of this section to describe all information relevant to the case that can be obtained from the failure reports.

IV. Technical Data

This section should used to present all technical and factually relevant information gathered, or developed during, the investigation. Data such as part sales, warranty claims, manufacturer test reports, etc., are described in this section highlighting the information of particular relevancy to the case. As the data is presented, any pertinent analyses or observations are made along with it (topic-by-topic, section-by-section, etc.). Data to be included and examples of analyses that can be made are given below:

Examples of Data

A. Production and Design Changes:

Production changes made by the manufacturer are described in this section with emphasis on the changes relevant to the case.

B. Field Modifications:

Modifications authorized by the manufacturer and made in the field are described along with their relevancy to the case.

C. Manufacturer Service Campaigns:

If the manufacturer has performed any related service campaigns, they are described in this section and their relevancy to the case explained.

D. Manufacturer Evaluation of the Hazard:

The response by the manufacturer to questions about the safety hazard posed by the alleged defect is described in this section.

E. ODI Owner Surveys:

The purpose and results of any surveys of owners of affected vehicles are described along with observations relevant to the case.

F. ODI Owner Interviews:

The results of owner interviews are described along with observations relevant to the case.

G. ODI Tests:

The purpose, design, and results of ODI test programs are described along with observations relevant to the case.

Examples of Analyses

A. Comparison with peer groups, including EA's and other cases concerning the same problem but different manufacturers, makes, or models.

B. Analysis of parts sales and warranty data, mileage, and time-to-failure.

C. Appropriate analyses based on factors such as: vehicle characteristics including engines, transmissions, air conditioning; manufacturing data such as assembly plants, VIN sequence numbers; other equipment on the vehicles; weather; other environmental effects; geographical location; and other variables.

D. The engineering relationship or correlation between design and production changes and the reported failures.

IV. Other

This section is reserved for the presentation of other relevant information bearing upon the investigation, but which was not gathered or developed as part of the investigation. For example, if this case were on alleged rear brake lockup (non X-car), a short discussion of pertinent information on the status of the X-car case may be appropriate.

VI. Observations

This section provides a capsulized summary of all of the factual information, both gathered or developed through analysis, presented in the case.

ATTACHMENT K

ENGINEERING ANALYSIS WORKING FILE STRUCTURE

All Engineering Analysis (EA) files should be set up in the following manner. The standardization described not only makes it easier for the engineer to locate the desired information quickly, but also allows the supervisor to locate information when the engineer is not available. All the EA working files are kept in numerical order by EA number in the engineer's office file cabinet so they can be easily located. The individual files should be located as described below.

SECTION 1. OFFICIAL CORRESPONDENCE

The purpose of Section I is to maintain a documented file of all correspondence between the agency and the manufacturer concerning the alleged defect. This includes all ODI telecons and letters to the manufacturer, as well as pertinent letters and telecons from other NHTSA offices (OVSC and OCC) and the manufacturer.

The ODI letter to the manufacturer and its' reply should be filed together followed by the second query with the second reply, etc. Returned certified mail receipt cards are attached to the respective ODI letter (grid copy).

SECTION II: ODI REPORTS

This section includes reports which serve to document an alleged defect involving the subject vehicles. Hotline reports, letters, telephone call records and other consumer reports received directly by NHTSA (not through the manufacturer) are arranged, either chronologically or alphabetically, and clipped together. Also included are other pertinent informational items such as: Multi-Disciplinary Accident Investigation (MDAI) reports, police accident reports, newspaper and magazine stories, etc. These documents follow the consumer report file.

SECTION III: TECHNICAL INFORMATION

Technical information includes all documents relevant to the alleged defect or the subject vehicles, which were not received directly from the manufacturer (Section 1) or do not pertain to a specific incident (Section II). This section includes all technical information, studies, and analyses developed by the engineer as part of the EA. The following items are filed here:

A. Applicable Technical Service Bulletins and excerpts from the shop service manuals illustrating the area of concern;
B. Test reports generated as a result of ODI initiated testing;
C. Surveys and/or interview reports initiated by ODI;
D. Identified parts or parts tags;
E. Inter-office memoranda (NCSA, TRD, OVSC, etc.);
F. Information from Canada's Ministry of Transport and other memoranda;
G. NCSA Data (FARS, CARDFile);
H. NHTSA Press Releases; and
I. Peer group information and analysis.

SECTION IV. WORKING DOCUMENTS

This is an informal section that contains all pertinent information needed to write the EA report such as copies of portions of the manufacturer's response, charts, graphs, computer printouts, copies of Technical Service Bulletins and Service Manual pages, analyses, notes, etc.

Material for which the manufacturer requests confidentiality must be kept in this section. The material is kept in separate envelopes prominently marked "Confidential." If the material is determined not to be confidential, the letter from OCC to the manufacturer explaining the determination will be attached to the declassified information, and one copy placed in the public file. The other copy is transferred from Section IV of the working file to Section I with a copy of the determination letter attached.

This section also contains the EA Resume (Attachment A), the EA Closing or Action Report (Attachment D or F), and the EA Transmittal Memorandum (Attachment E).