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# Technical and Summary Report <br> National Parts Return Program <br> June 1977 <br> Final Report 

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## PREFACE

This final report describes the operation and maintenance of the National Parts Return Program by Kappa Systems, Inc. (KSI) for the U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA), Motor Vehicles Programs, Office of Defects Investigation (ODI). The work described was performed during the period July 1, 1976, through June 30, 1977, under contract (DOT HS-6-01433).

Contract activities have been carried out under the Washington Operations Division, directed by Mr. W. R. T. Oakes, Jr. Program management responsibilities have been carried out by Mr. Bruce E. Beddow.

Program support activities have been provided by Ms. Jonni Peizer, Ms. Lori Mennella, and Mr. Eric Vogel. Consultants promoting new regional enrollment campaigns were provided by EQUIFAX Services, a unit of F:QUIFAX, INC., of McLean, Virginia.

KSI gratefully acknowledges the support of Mr. Robert Hellmuth, Chief of the Engineering Analysis Division of the ODI and the guidance provided by Mr. Gary Woodford of the same ODI Division. Mr. Woodford acted as the NHTSA Contract Technical Manager during the entire contract period.

This contract covers the first year of an original contract (executed in July 1976) containing two option years that can be executed by the government. There have been no modifications to this contract during this period.

The final report has been prepared in accordance with DOT Order 1700.18B, "Acquisition, Publication and Dissemination of DOT Scientific and Technical Reports" and DOT-TST-75-97, "Standards of DOT Scientific and Technical Reports."

## DEFINITIONS

ACTIVE SHOP, Active Participant, Contributing Shop Participant: a PRP member who has contributed parts or information during the current contract year. Previously, active shop/participant.

COMPONENT IDENTIFICATION CODE: eight-digit code which identifies the specific component, sub-assembly, assembly and/or system for each part, piece, or information or complaint record in the ODI Data Information System.

FLYER: a separate sheet included in some 1975-1976 newsletters which requested specific parts. Printed on colored stock usually in the form of a typical "Wanted" poster.

INACTIVE SHOPS, Inactive Members: a shop that has not contributed parts during the contract year.
"INFORMATION ONLY": PRP record for which no part was submitted. Often parts are not available and/or are repaired. "Information Only" inputs are classified as either submitted from a member or from another source, i.e., vehicle owner.

LEVEL OF PARTICIPATION, Level of Activity: the ratio of active shops to the total number of program enrollees expressed in percentage, i.e., on June 30, 1977, the total number of active shops out of a total membership of 1,878 was 247.

NEW PROGRAM ENROLLEES, New Enrollees, New Enlisted Shop: shops recently enrolled in the PRP.

ODI DATA INFORMATION SYSTEM (DIS): computerized data retrieval system operated for the Office of Defects Investigation. System includes failure data from Vehicle Owners, Manufacturer Technical Service Bulletins, Recall Campaign Part 573 Defect Reports, Engineering analysis and survey data, and data collected through the PRP.

ODI/DIS RECORD NUMBER: unique number assigned to record for assignment and retrieval from ODI/DIS files. There are several series of these, but most common are those beginning with "O" for Vehicle Owner Letters, "H" for Hotlines/PACS, and "P" for Parts Return Program.

PARTS: either components, sub-assemblies, assemblies or systems, in this case, found in automobiles. Term used to include information when counted as a part.

PART NUMBER: a unique ODI/DIS number assigned to a part or piece of information. In some cases, the part number is assigned to related parts, i.e., those that are a part of a larger assembly that failed or where the primary failure in one part caused a secondary failure in another.
"PART SURVEY": several requests made to PRP members for specific kinds of parts, regardless of their failure mode. Scored brake drums are an example.

PRIEVIOUSLY ACTIVE SHOP/PARTICIPANT: a PRP member who contributed parts during the previous contract year (s) but has not submitted parts during the current contract year.

PROGRAM ENROLLEES/MEMBERS: both active and inactive shops currently enrolled in the PRP. The total PRP membership.

RECORDS: ODI/DIS file description of parts received through the PRP. Usually stated in group of five to six punched cards (out of a possible eight).

SHOP IDENTIFICATION NUMBER: shop ID number, an eight-digit number. The first five digits are the PRP member's zip code and the last three represent a unique sequential number within the member's state.

The Parts Return Program (PRP) has completed its sixth year of operation successfully . The PRP involves the voluntary submittal of failed automotive components to a NHTSA contractor (Kappa Systems, Inc.) by independent automotive repair shops. As well as contributing data and evidence to specific defect investigations, the PRP is a fairly good source of "real world" input into the defect identification process. Over the years, the PRP has increased in scope and objectives although its basic purpose of assisting the National Highway Traffic Safety Administration in uncovering and identifying potential safety-related automotive defects remains intact. This final report addresses only the latest year of operation (July 1, 1976, through June 30, 1977). During the program year, the PRP received its greatest public exposure, including a formal review of its effectiveness, by the National Motor Vehicle Safety Advisory Council. The increased public exposure and program effectiveness determination by the Advisory Council have been helpful in maintaining successful PRP operations.

During the first part of this new program year, we concentrated on finalizing our approach to shops who had been long-time PRP members but had never actively participated. As a result, many shops were deleted from the program. At the same time, we initiated new approaches for shop recruitment and motivation. Some of the results of the approaches for shop recruitment, such as direct mail canvassing, were disappointing, although certain refinements to these methods may prove satisfactory. Of those shops enlisted in the PRP by direct mail, a high percentage have become active contributors. However, most of our program motivational techniques, i.e., a news release from the NHTSA describing the function and mission of the PRP, proved very successful. Likewise, the release of PRP descriptive articles in at least eight publications, and the "Consumer Reporter" television series aired in Minneapolis, Minnesota, proved very successful in producing new shop enrollments.

Several new PRP operational definitions have been established. Some of these definitions differ from our operational procedures of last year, however,
we feel that these new definitions more adequately describe the current operational requirements. These program definitions precede this section.

In terms of program success, the PRP received 1,408 failed automotive parts over the course of this program year. Compared to last year's number (942), this represents a $49 \%$ increase in the part count for the year. We achieved this high part count with an average of approximately 1,778 total program members. We do not anticipate that the part count will increase in the following years at this same high rate, although it is possible if many of the existing nonparticipating members are dropped from the program and new replacements are added.

The objectives of the PRP, as stated in the Statement of Work, are 1) to maintain the current number of enlisted repair shops enrolled in the PRP, and 2) to increase the current number of participating shops from those enlisted in the PRP. The measure of program status at any point in time is the "level of activity" (see definitions). This ratio is variable in that a deletion of inactive shops and their subsequent replacement with a greater number of new shops immediately has the effect of lowering the level of activity ratio. On the other hand, a good measure of overall program performance is the total number of active program participants for the year. This year there were 249 active shops. These shops contributed all 1,408 parts received by the PRP (a yield of 5.64 failed parts per shop).

This statistic is interesting in that it identifies certain program operational characteristics. One of these characteristics is that the program is supported by repetitive shops. Once a shop becomes active, it tends to act in a repetitive way. Last year, 232 shops contributed 942 failed parts, which is a yield of 4.06 failed parts per shop. The difference in yield per shop of 1.85 parts between the two years had more impact on the net increase of 463 parts this year than did the increase of 17 active participants (249-232 = 17). We like to interpret the two objectives, to maintain the current number of enlisted repair shops and to increase the current number of partici-
pating shops from those enlisted in the program, together and not singly. The overall program objective is really a mix of these individual objectives, specifically, to maintain the right number of enrolled shops that provide the right number of failed parts.

Another measure of program success is the qualitative input received during the course of the program year. Qualitative inputs include 1) the receipt of failed parts that support ongoing defect investigations, 2) the receipt of failed parts that indicate the need for new investigations, and 3) the receipt of "Information Only" inputs that can be related to existing or potential open investigations. Parts and information received during the year have included inputs relating to 17 formal defect investigations, six of which resulted in recall campaigns and numerous engineering analyses. Some of these inputs resulted in opening new investigations, such as alleged safety-related failures of certain Ford Motor Company flex-fans. In addition, credit was given to the PRP for obtaining early and reliable information on the Tru-Spoke Wheel problems, which resulted ultimately in a recall campaign by the manufacturer.

In summary, based upon the evaluation factors used to measure program performance, the PRP has completed a very successful year.

## PROGRAM COMPONENTS

### 1.0 General

The PRP involves the voluntary submittal of failed automotive components by independent repair shops. The components are submitted to a representative (KSI) of the NHTSA's Office of Defects Investigation. As well as contributing data and evidence to specific defect investigations, the PRP is a fairly good source of "real world" input into the defect identification process. ${ }^{1}$

During the course of the year ending June 30, 1977, KSI's objective has been to improve both the quality and quantity of the data received through the PRP in support of these goals.

### 1.1 Parts Processing and Identification

During the period July 1976 through June 30, 1977, 1, 408 automotive components were received through the PRP. Figure 1-1 represents an overview of both cumulative and monthly activity during the reporting period. These components were submitted by 249 shops, an average of 5.6 components per shop. On the average, 117 components were received from 41.2 shops each month.

Each failed part received is assigned a record number (PRP number) that identifies it as an input from the PRP. If two or more identical or related parts are received from the same vehicle, each will be assigned the same PRP number. ${ }^{2}$ However, information pertaining to each additional part is entered on a corresponding analysis code continuation sheet. Customarily, the number of parts received during the contract period exceeds the number of assigned PRP record numbers.
1 National Motor Vehicle Safety Advisory Council, Report to W. T. Coleman, Secretary of Transportation, on the safety-defect recall campaign procedures, November 15, 1976.
2
For example, if a worn wheel bearing and a broken spindle are removed from a vehicle and submitted, each is counted as a part, but is assigned the same record number. See Infra 3.2.1

Figure 1-1

PARTS RECEIVED, MONTHLY AND CUMULATIVE ACTIVITY

1.1.1 "Information Only" Inputs

In addition to failed parts, the PRP solicits and receives information from garages on safety-related defects. In some instances, the physical parts are not available or are repaired. In any case, the shops are encouraged to report the alleged defect to the PRP. The information is identified by assigning a specific series of PRP numbers. ${ }^{3}$ All information received from members, regardless of whether this information is from a physical part, from a written document, or from a telephone call, is entered into the Vehicle Owner Letter File of the ODI automated Data Information System (DIS) and is handled in the same manner as parts.

Information is also received by telephone. Members may call KSI to report alleged defect information, or as in some cases, additional defects may be uncovered when we contact a shop. Information received by telephone is recorded on a Telephone Contact Report that has been designed to elicit all relevant data. ${ }^{4}$

During the contract period, 134 "Information Only" inputs were received. Shops are urged to report all potentially safety-related defects, even if parts are not available. The purpose of this effort is to develop a more comprehensive set of data on the types of failures occurring in vehicles in use. Through the use of this feature, the PRP also collects data on failures occurring in vehicles under warranty that are reportedly returned to the dealer for repair. Information received through these methods is summarized by the type of component and model year of the vehicle (Figure 1-2).

Specific information is sometimes requested in the PRP monthly newsletter. If, as in the case of tires, the part is too large to return by mail and not necessary to support investigatory work, the information relative to the component and failure mode will be requested. Usually shops are asked to complete a failed part tag with component and vehicle data, then either mail the tag or include it in the next shipment of parts.

See Infra 3.2.1
4
See Infra 3.1.2; 3.2.1
"INFORMATION ONLY" INPUT MATRLX


Figure 1-2

Often a shop will write us describing a problem encountered on several vehicles, or will describe a problem to us that they have been unable to correct. Some members have provided information on defective after-market parts and equipment.

In addition to written correspondence, the PRP has received photographs provided by some shops, when a description of the problem is insufficient or the defect does not involve a returnable part. The photographs are forwarded to the Office of Defects Investigation along with a failed part data sheet and any accompanying correspondence. One photograph provided by a shop was used in an issue of the PRP News (vol. 2, \#7, January 1977). This and other examples are contained in Section 4.

It is encouraging that a shop employee or owner would take time to write a letter. The telephone calls and written correspondence received over this contract period indicate a continued active interest in the PRP on the part of its members.

### 1.2 New PRP Operational Approaches

To improve the quality and timeliness of the data processed through the PRP and to assist other offices of the NHTSA, four new programs were developed and implemented during the reporting period.

### 1.2.1 "Parts Survey"

In July 1976, the PRP News included a flyer requesting shops to submit worn or grooved brake drums, regardless of the cause of wear. The parts were needed for a NHTSA research program that was directed toward determining what effect, if any, scored drums and rotors have on vehicle safety. This was the first "Parts Survey" conducted and it is still operating. The plan was successful in terms of the number of parts received, with a total of 63 brake parts submitted by the end of the contract period. One problem encountered in the plan was that many parts did not fit in the mailbags and had to be mailed separately or shipped
via parcel service. Written correspondence received by the PRP from several shops indicated that parts were not returned because either they did not fit in the bag or the Post Office would not accept the bag. In some cases, special shipping arrangements were made using private carriers.

The second "Parts Survey" involved tire failures. Shops were requested to send information on tire failures, in particular, on the Firestone "Steel Belt" radial 500 . In addition to vehicle data, the shops were asked to include the tire size and serial number, a description of the defect, and the result. During this contract year, 20 failures were reported.

The PRP provided the Office of Statistics and Analysis, Accident Investigations Division, with selected failed parts to use in a training program for investigators. Thirteen parts and a set of slides were loaned covering several kinds of failures.

### 1.2.2 Data Collection - New Model Vehicles

A study of the parts received by the PRP during the first six months of operation revealed that only $10.2 \%$ were for vehicles two years old or younger (1975 through 1977 models). The largest group of parts received were for 1973 model year vehicles, and over $50 \%$ of the parts received were for vehicles manufactured from 1971 through 1974.

Based on this accounting of parts received, several procedures were implemented to improve the quality of the limited newer model data and to collect additional parts and information if possible. The PRP News was instrumental in this plan, with articles on failures occurring in newer vehicles and requests for further data, even if parts were not available. Anticipating that shops would be aware of some failures on new cars that had been repaired under the manufacturer's original warranty, requests for information on safety-related defects in new cars were included in the publication.

The procedures were successful in two ways. First, the number of parts from newer model vehicles increased slightly. Figure 1-3 compares the percentage of the parts submitted for each model year (1966 through 1977 and 1960 through 1965) to the total number of parts received during the first half of the contract period (July 1, 1976, through December 13, 1976) and during the second half of the contract year (December 14, 1976, through June 30, 1977). As the graph indicates, a slightly larger percentage of the parts received during the second six-month period were from newer models.

Second, the procedures had an impact on the number of parts returned from older models (1968 to 1971). For both six-month periods, there is a marked decrease in parts received between the model years 1973 and 1972. During the first six-month period, the percentages of parts returned for 1970, 1971, and 1972 model years are about equal at roughly $12 \%$. However, during the second six-month period, there is a steady decline from $11.7 \%$ in 1972 to $8.3 \%$ in 1970. In the 1969 model year, the percentage of parts returned during the first period, from July 1, 1976, to December 13, 1976, drops sharply again to $7.3 \%$, while the second period, from December 14, 1976, to June 30, 1977, maintains a steady decline to 6\%. The two periods even out again in 1967 at about $3.5 \%$ and remain close to this figure for the 1966 model year and for 1965 through 1960 model years.

Cumulatively, $13.6 \%$ of the parts received during the contract year were from vehicles of model years 1975 through 1977. As was the case during the first six months of the contract year, the largest number of parts returned are from 1973 model year vehicles (Table 1-1).

### 1.2.3 Supplemental Data

A procedure to follow up on reported failures in newer model cars was developed and eventually expanded to cover failures where accidents were indicated or pertinent data was missing. Guidelines requiring a follow-up call to shops submitting parts from current year or one-year-old vehicles (for this report, 1977 and 1976) to obtain all missing data have been implemented. A reporting form has been
Figure 1-3
Percentage of Total Parts Received For Model Years 1966 through 1977 and 1960 through 1965



## Table 1-1

# PARTS AND INFORMATION RECEIVED FROM JULY 1, 1976, THROUGH JUNE 30, 1977, BY MODEL YEAR OF VEHICLE AND BY RECORD NUMBER ${ }^{1}$ 

ModelYear

Number as of
December 13, 1976

Cumulative number as of June 30, 1977
1977 4

$$
1976
$$4

$$
16
$$

1975 ..... 34 ..... 9347
197460
1973 ..... 178140
1972 ..... 59 ..... 125
1971 ..... 61 ..... 117
1970 ..... 59 ..... 105
1969 ..... 36 ..... 70
1968 ..... 30 ..... 52
1967 ..... 24 ..... 47
1966 ..... 16 ..... 38
1965-1960 ..... 18TOTAL$490^{2}$41

$$
1,057^{2}
$$

${ }^{1}$ Does not include subsequent parts for records with more than one component for parts returned in pairs, i.e., shock absorbers.
${ }^{2}$ Does not include records with unknown model years or for model years prior to 1960 .
developed to record the supplementary data, which at this time is obtained by telephone contacts. In the course of completing the reporting form, contributing shops ure usked questions regarding the cause and result of the failure and regarding ossible similar occurrences in other vehicles. Vehicle owner data, including the telephone number, is requested and the shop is asked if the owner may be contacted.

Vehicle owners are not contacted routinely. If pertinent data is still missing after contacting the shop, the owner will be contacted if the shop owner or manager's permission is obtained, however, it is rarely necessary.

### 1.3 Failed Parts Summary

During the period July 1, 1976, to June 30, 1977, 1, 408 allegedly failed parts and "Information Only" inputs were received and processed through the PRP. The PRP contributed parts and/or information that related to 17 formal defect investigations and numerous engineering analyses.

The PRP solicits safety-related defective parts that are bent, cracked, broken, torn, loose, leaking, inoperative or malfunctioning, improperly manufactured or installed, or have otherwise failed for reasons not associated with owner abuse or normal wear characteristics, unless the damages are premature. The initial determination of whether the defect is safety-related or not is left up to the discretion of the shop, however, they are frequently reminded that any items that are questionable should be forwarded to the PRP. Restrictions on the types of parts or failure mode might prevent the return of other safety-related defective components rather than improve the quality of the parts returned. Therefore, our efforts have been directed towards educating shops on examples of safety-related defects.

5
Infra 4.1.3
1.3.1 Parts Supporting Current Investigations - Summary

As of June 1977, some parts were determined to be of specific interest to the NHTSA and were considered to support ongoing investigations. Table 1-2 provides a summary of these investigations.

### 1.3.2 Parts Supporting Recall Campaigns - Summary

In addition to the ongoing investigatory work conducted by the NHTSA, several cases were closed with the initiation of manufacturer recall campaigns in which the PRP played a significant role. In fact, one investigation resulting in a recall campaign was opened as a result of a part submitted through the PRP. These cases are summarized in Table 1-3.

### 1.3.3 Number of Parts by Component Classification and Type - Summary

A summary of the percentage of failed parts by major component assembly areas appears in Figure 1-4.

Table 1-2
PARTS SUPPORTING CURRENT INVESTIGATION

| Case <br> No. | Component Dosoription/ Possible Problems/Status | Vehicles |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Years | M ${ }_{\text {dg }}(8)$ | Make(s) | Model(9) |
| C4-09 | Brake Proportioning Valve, rear wheel lockup rear wheel lockup <br> Open | 1987-1972 | CHRYSLER | Dodge, Plymouth | Darts, Vallants |
| C4-17 | Steering Tie Rod separation of ball from socket Open | 1971-1972 | GM | Chevrolet <br> GM | Series C, P, G-10 <br> Trucks <br> Series C, P, G-1500 'rucks |
| C4-18 | Engine Mounts secondary effects from shearing of ergine mounts Open | $\begin{aligned} & 1965-1969 \\ & 1965-1970 \end{aligned}$ | FORD | Ford <br> Mercury <br> Ford, Mercury | Falrlane, Ranchero Montego <br> Falcon, Comet |
| C4-28 | Rack and Pinlon Steering alleged steering difficulty or loss of steering control Open | 1971-1972 | FORD | Ford | all Pintos |
| C4-29 | Non-Metallic Fast Idle Cam breakage curses throttle jamming in open position Open | 1968-1974 | FORD | all | all with 4-barrel carburetors |
| C4-44 | Carburetor Float <br> alleged carburetor flooding due to float saturation Open | 1965-1972 | GM | all | all with Rochester carburetors |
| 161 | Power Brake Vacuum Check Valve no power assist with fallure in Lltigation | 1965-1971 | GM, CHRYSLER, AMC, FORD | all |  |
| 258.5 | Engine Mounts secondary effects from shearing of engine mounts Recalled | 1985-1969 | GM | Cadillac, Olds., Buick, Pontiac | Wildcat, Electra, Cadillac except Eldorado |
| C2-53 | Dual Brake Master Cylinder fallure of cylinder due to corrosion Open | $\begin{aligned} & 1967 \text { and } \\ & \text { later } \end{aligned}$ | FORD | all |  |
| C3-18 | Steering Wheel breakage at hub Closed | 1968-1970 | GM | Chevrolet | Impala |
| C3-29 | Windshield Wiper Arm Shaft and Motor arm detaches from drive shaft, motor falls due to underpower in Litigation | 1971-1973 | FORD | Mercury | Capr1 |
| C5-07 | Timing Gear and Chain fallure of timing gear and chain Open | 1966-1972 | GM | Pontiac | all equipped with V8 engines |
| $\begin{gathered} \text { EA6- } \\ 023 \end{gathered}$ | Wire Spoke Wheel possibility center disc can break Recalled |  | Wheel <br> Specialtles <br> Co. | Tru-Spoke | all on vehicles over 5, 000 GVW |
| $\begin{aligned} & \text { FMVSS } \\ & 109 \end{aligned}$ | Steel Belt Radial Tire, tread <br> high speed test fallure, possible distortion or separation in tread area Recalled |  | Firestone | Steel Belt Radlal | Radial 500, HR78 X 14 \& HR78-15, tubeless, load range B , with 5-rib tread design |
| C7-11 | Fuel System alleged fuel system integrity problems Open | 1974 | v.w. | Porsche | Porache with 914 engine |
| C7-21 | Power Brake Booster booster failure Open | 1971-1977 | GM | Chevrolet, Pontiac, Buick Cadillac, Olds., GMC Trucks | all |
| C7-24 | Flex Fan fan blade breakage | 1970-1977 | FORD | Ford <br> Mercury | passenger cars and Hght trucks |

Table 1-3
PARTS SUPPORTING RECALL CAMPAIGN

| Recall Campn. No. | Vehicle Year Make/Model | Component Description/ Possible Problem |
| :---: | :---: | :---: |
| 76V-120 | 1965-67 Buick Wildcats and <br> Electra 225's <br> 1970 Cadillacs (except Eldorados) <br> with cruise controls | engine mount <br> possible throttle jamming |
| $76 \mathrm{~V}-160$ | 1965-66 Chevrolets <br> 1966 Buicks <br> (all with Rochester carburetors) | carburetor fuel inlet plug could work loose causing fuell to be pumped on engine |
| 76E-020 | Wheel Specialties Co., Tru-Spoke Wheels all equipped on vehicles over 5,000 GVW | wire wheel possibility wheel could become structurally unsound on vehicles over 5,000 GVW |
| 76T-006 | Firestone Tire and Rubber Co. Steel Belt Radial '500' HR 78 x 14 and HR $78 \times 15$, tubeless, load range $B$ with 5 -rib tread design | tire tread/belt <br> failure of FMVSS 109 high speed test, possible distortion or separation in tread area |
| 77V-097 | 1972 Ford, Lincoln, Mercury, Montegos, Torinos, and Rancheros equipped with air conditioning and either a 302,351 , or 400 cid engine | seven-blade flex fan possibility fan blades can break off |
| $77 \mathrm{~V}-125$ | 1976-77 Ford, certain Fords and Mercurys <br> 1977 Lincolns with 400 cid engines | five-blade flex fans can break off |

## TYPES OF FAILED PARTS RECEIVED

JULY 1, 1976, THROUGH JUNE 30, 1977

## Major Assembly Classification

Brakes - Hydraulic System ..... 26.4
Engine ..... 14.6
Suspension - Independent Front ..... 8.8
Steer Linkage ..... 8.3
Tighting \& Communications, Switch, Button, or Ring ..... 5.4
Fuel Systems ..... 3.7
Electrical System Ignition ..... 3.3
Engine Cooling System ..... 2.6
Fuel Carburetion ..... 2.4
Exhaust/Crankcase Emission Control Devices ..... 1.8
Power Train - Driveline ..... 1.8
Heater, Defroster, Defogger - Water ..... 1.7
Exhaust System ..... 1.6
Tires ..... 1.4
Steering Gear Box ..... 1.4
Alternator - Regulator - Starter ..... 1.2
Power Train - Clutch Assembly ..... 1.2
Steering - Power Assist ..... 1.2
Suspension - Single Axle Rear ..... 1.2
Suspension - I Beam Solid Front .....  9
Power Train, Automatic Transmission .....  9
Steering Wheel and Column .....  9
Throttle Linkages and Control .....  9
Rack and Pinion Steering Gear .....  8
Structure, Frame, Members, and Body .....  7
Power Train - Transmission .....  7
Wheels ..... 7
Communications - Horn Assembly .....  3
Parking - Emergency Brake, Mechanical .....  3
Visual Systems - Windshield Wipers and Washer .....  3
Fuel Injection System .....  2
Equipment .....  2
Lighting \& Communications, General or Unknown Component .....  2
Suspension - Twin I Beam Solid Front .....  1
Electrical System - Battery ..... $<.1$
Electrical System - Fuse and Fuse Receptical ..... $<.1$
Interior Instruments and Instrument Panel ..... $<.1$
Interior Systems - Active Restraints ..... <. 1
Lamp or Socket ..... <. 1
Suspension ..... <. 1
Visual Systems - Glass ..... $<.1$

The failed parts received during this contract period covered 153 separate and distinct motor vehicle component areas. These major areas, as defined by the component classification coding manual of the ODI/DIS, are contained in Table 1-4 on the following pages with a detailed description of the components and the quantity of each.
1.3.4. Detailed Records in the ODI Data Information System by Component Classification

The Vehicle Owner Letter File of the ODI/DIS ${ }^{6}$ contains 1,177 detailed records from the PRP representing a total of 1,408 separate failed parts or information inputs. These records depict the identification of the part; a description of the failure; and identification of the make/model, model year, and mileage of the vehicle involved. Also included in this record is an identification of the shop that sent the part, the unique PRP number, identification of multiple component failures, the date the part was received by the PRP, and a location number (bin number) where the part can be found in our storage facility .

[^0]
## FAILED PARTS SUMMARY

| Major Assembly Classification | Component Classification | Description Qu | Quantity <br> Received |
| :---: | :---: | :---: | :---: |
| 01100000 |  | Steering Wheel \& Column | 1 |
|  | 01110 | Wheel-handlebar | 1 |
|  | 01150 | Steering Column Shaft Upper | 2 |
|  | 01160 | Column Coupling | 9 |
|  |  | TOTAL | 13 |
| 01200000 |  | Steering Gear Box | 1 |
|  | 01210 | Manual steering gear | 7 |
|  | 01220 | Power steering gear | 10 |
|  | 01230 | Unknown type steering gear box | box 2 |
|  |  | TOTAL | 20 |
| 01300000 |  | Steering Power Assist | 2 |
|  | 01310 | Pump | 3 |
|  | 01330 | Hose-fluid | 12 |
|  |  | TOTAL | 17 |
| 01400000 |  | Steering Gear Rack \& Pinion | 1 |
|  | 01410 | Lower flexible pinion shaft | 1 |
|  | 01420 | Pinion shaft | 2 |
|  | 01430 | Steering gear-rack |  |
|  |  | TOTAL | 12 |
| 01500000 |  | Steering Linkages |  |
|  | 01510 | Arm pitman | 4 |
|  | 01520 | Link, drag-connection | 3 |
|  | 01530 | Arm, idler \& attachment | 43 |
|  | 01550 | Tie-rod, inner | 4 |
|  | 01560 | Tie-rod, end | 44 |
|  | 01570 | Sleeve, tie-rod-adjustable | 9 |
|  | 01580 | Knuckle-spindle-arm | 8 |
|  | 01590 | Steering linkages-other | 2 |
|  |  | TOTAL | 117 |
| 02000000 |  | Suspension |  |
| 02100000 |  | Suspension-Independent-Front | t 2 |
|  | 02110 | Attaching mechanisms | 10 |



| Major Assembly Classification | Component Classification | Description | Quantity <br> Received |
| :---: | :---: | :---: | :---: |
|  | 03270 | Shoe disc brake system | 90 |
|  | 03280 | Brake warning switch | 1 |
|  |  | TOTAL | 372 |
| 04100000 |  | Parking-Emergency Brake-M | echanical |
|  | 04110 | Lever setting mechanism | 5 |
|  |  | TOTAL | 5 |
| 05100000 |  | Engine |  |
|  | 05110 | Engine mounts | 129 |
|  | 05130 | Engine puiley, crankshaft | 4 |
|  | 05140 | Engine flywheel | 24 |
|  | 05150 | Engine, other parts | 49 |
|  |  | TOTAL | 206 |
| 05200000 |  | Engine Cooling System |  |
|  | 05210 | Radiator | 1 |
|  | 05220 | Hoses | 2 |
|  | 05230 | Pump, water | 15 |
|  | 05240 | Fan | 10 |
|  | 05270 | Cooling system-other parts | 10 |
|  |  | TOTAL | 38 |
| 06100000 |  | Fuel Systems |  |
|  | 06110 | Fuel tank assembly | 24 |
|  | 06120 | Fuel emission control | 1 |
|  | 06130 | Fuel lines, fittings \& pump | 27 |
|  | 06140 | Fuel system-other parts | 1 |
|  |  | TOTAL | 53 |
| 06200000 |  | Fuel Carburetion |  |
|  | 06210 | Carburetor-unknown type | 8 |
|  | 06220 | Carburetor-single | 7 |
|  | 06230 | Carburetor-double | 11 |
|  | 06240 | Carburetor-four barrel | 7 |
|  | 06250 | Carburetor-other parts | 2 |
|  |  | TOTAL | 35 |
| 06300000 |  | Fuel Injection System |  |
|  | 06310 | Fuel injection-unknown type | 2 |

Shoe disc brake system90Brake warning switch372
Lever setting mechanism ..... 5EngineEngine mounts4
Engine flywheel ..... 24
Engine, other parts206
ng stemHoses2
Pump, water10
Cooling system-other parts ..... 10
Fuel tank assembly ..... 24Fuel lines, fittings \& pump27
Fuel system-other parts ..... 153Fuel CarburetionCarburetor-unknown type7
Carburetor-double
7
Carburetor-other parts ..... 2352

Component Classification

06320

06400000
06430

06500000
06510 06530

06600000
06610
06620
06640
06650

07100000
07120
07130
07140
07150
07180

07200000

07300000

Fuel injection-electrical2
TOTAL ..... 4
Throttle Linkages \& Control ..... 1
Accelerator, flexible ..... 12
TOTAL ..... 13
Exhaust/Crankcase Emission Control Devices ..... 18
Air pump ..... 3
Check valve ..... 5
TOTAL ..... 26
Exhaust System ..... 1
Manifold-engine ..... 12
Pipe-exhaust ..... 7
Tail pipe ..... 2
Catalytic converter system ..... 1
TOTAL ..... 23
Power Train Clutch Assembly ..... 7
Linkage, flexible ..... 5
Linkage, rigid ..... 1
Cross shaft pivot ..... 2
Throw-out release lever ..... 1
Clutch driven plate ..... 1
TOTAL ..... 17
Power Train Transmission ..... 1
3-speed ..... 1
4-speed ..... 2
Unknown type ..... 6
TOTAL ..... 10
Power Train Transmission Automatic ..... 11
Column shift, lever \& linkage ..... 1

Major Assembly Classification

Component Classification

07330

07400000

08100000
08120

08200000
08210
08220
08230
08240

08400000

08500000

09000000
08510
08520
08530
08540
08550
08430

09010

Floor shift, lever \& linkage1
TOTAL ..... 13

Power Train Drive Line Universal joint9
Differential unit ..... 4
Axle assembly ..... 12
Other part ..... 1
TOTAL ..... 26
Electrical System Battery ..... 1
TOTAL ..... 1
Alternator, Regulator, Starter
Alternator-generator ..... 4
Regulator ..... 3
Starter ..... 8
Other part ..... 2
TOTAL ..... 17
Electrical System - Fuse \& Fuse RecepticalFuse Receptical1
TOTAL ..... 1Electrical System - IgnitionIgnition switch6
Switch, neutral start ..... 5
Wiring, primary and secondary ..... 13
Electronic control unit ..... 4
Other part ..... 19
TOTAL ..... 47
Lighting \& Communications Systems General or unknown component ..... 3
TOTAL ..... 3

## Major Assembly

 ClassificationComponent Classification

Description
Quantity Received

09100000

09200000

09500000

10100000

10300000

11000000

12200000

12400000

13100000
13110
13140
Switch-Button-Ring ..... 77
TOTAL ..... 77
Lamp or Socket ..... 1
TOTAL ..... 1
Communications - Horn Assembly Horn assembly, button, ring ..... 3
Horn ..... 2
TOTAL ..... 5
Visual Systems - Glass Windshield ..... 1
TOTAL ..... 1
Visual Systems- Windshield Wiper \& Washer Windshield Wiper ..... 5
TOTAL ..... 5
Heater, Defroster, Defogger andVentilation
Water-heater, defroster, defogger ..... 10
Air conditioner ..... 15
TOTAL ..... 25
Interior Systems - Active Restraints,Seats \& Shoulder Belts \& Belt AnchorSeat belts, lap front1
TOTAL ..... 1
Interior Instruments \& Instrument Panel Speedometer-odometer ..... 1
TOTAL ..... 1
Structure - Frame, Members \& BodyStructure - frame, members7
Shields - protectors, lines, tubing ..... 1

Major Assembly Classification

Component Classification

13150
13170

15000000
15300
15500
15900

Body ID - markings, label1

Structure, frame, members \& Body - Truck2
TOTAL ..... 11

Equipment Speed control1
JacksOtherTOTAL3
GRAND TOTAL PARTS RECEIVED ..... 1,408

The following pages comprise a cumulative report of all parts and information received by the PRP from July 1, 1976, through June 30, 1977. The records in this report are grouped by component classification, i.e., steering, suspension, brakes, etc.

PARTS RETUKN PEUGRAM

1 JULY 76 THRU 3 U JUNE 77


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FAULI HAZ．
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U1110JJV STEERING WHEEL－HANDLEBAR U U 0312 IMPALA
PLASTIC YORTIUN OF WHEEL IS CRACKED TO CENTER METAL HUB．HHEEL IS ALSO
 V115OJÚ STEEFING COLUMN SHAET－UPPER
Sl

| 50020 | P 02143 A | 761213 | 61150000 | STEERING COLUKN SHAFT－UPPER 71000301 FORD DIVISION <br> FLEXIBLE PORTION OF STEERING |
| :---: | :---: | :---: | :---: | :---: |
| $50 \cup 16$ | P02052 A | 761021 | 011605 Ju | STEERING COLUMN COUPLING 67110202 TRIUMPH DIVISION KUEBEK PORTION OF COUPLING SERIES OF SMALL CEACKS．LOSS |
| 30025 | P01662 D | 760712 | 0116 Uuvo | STEERING CULUMN COUPLING 72000303 MERCURY <br> STEERING SHAFT COHPOSITE U－J |
| 10032 | P 32674 A | 770519 | 01160000 | STEERING COLUAN COUPLING $\begin{aligned} & 72000103 \text { MERCUKY } \\ & 47 \cup E B-3 B 763 \text { A-A: ELEXIBLE } \end{aligned}$ |
| 50023 | P02116 A | 761129 | j110uJuv | STEERING COLUMN COUPLING <br> 73000.303 MERCUKY <br> FUBBER INSLLATOK AT COUPLI NG <br> LAUSE EXCESS．PLAY IN STEEKI |
| 30007 | 901859 A | $76090 \checkmark$ | v1160Ju | STEEKING COLUEN COUYLING |

GUM\&JaENI COMPONENI NAME


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700 UUUUS CHEVKOLET $O O O U \quad$ CHEVBOLEI HUE BROKE FROM CENTEA．HUB SVLINES A
METEK ON BUTH SIDES OP CROSS PIECE． い1100」うこ j1110jjv

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071850
$\square$ $\omega$
03 b 0100 TRIUMEH
NG SEPARATED FROM NETAL．RUBBEK POKTION HAS
LOSS OF STEEKIMG．EINDIAG E LOCKOUR 1110201 AUSTIN DIVISION
SPLINES ON COLUMN BOTTOM END 61150000 STEERING COLUNAN SHAFT－UPPER
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760920
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10025 $\begin{array}{ccc}\text { PRP } & \text { I } & \text { DATE } \\ \text { NUMBEA } & \text { D } & \text { RECEIVED }\end{array}$ P02588 A $7704 \angle 7$

P 01663 A

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30025
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50023

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CUMKULATIVE PARTS RECEIVED FY 77 1 JULY 76 THRU 30 JUNE 77 COMPUlvENT COMPONENT NAME＇
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CODE CAT
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K．ADL＇L 1ANUAL STEERING GEAR BOX 03
COMPONENT NAME＇
MANUFACTURER HAKE－MODEL
TコロON－Зy 8 H
75000407 CHEVKOLET TRUCK DV 5603 P 30
WOKM GEAR，HOUSING E PITHAN SHAFT ELTURNED．HOUSING－CRACKED IN 2 ．WEAG
ON HACES OF BOTH GEAR G HOUSING．PITMAN SHAFT HACE SHOHS HEAR KARKS．
MANUAL STEERING SHAFT－LOWER WORM 03
WORM GEAKS IN GOOD CONDITION－COLLAK AT WORM GEAB BEARING CHIPPEL APPARENTLY FROM LOOSE SMALL METAL PIECE IN BOX－4MD
P02496 A 770407 0122UJJU POHEE STEERING GEAR BOX
72 VOO 405 PONTIAC
COVER PLATE IS CKA
AKOUND FITTING HOLE－WILL NOT STEER

SEAL IS CEACKED AND DISTORTED－SOME DAMAGE FBOA REMOVAL－LEAKED
5


POWER STEERING GEAR BOX
76000404 OLDSMOBILE
GROOVE EOF SNAE RING AT END OF STEER．BOX IS CGACKED 100 DEG AKOUND


VERY FINE CRACK－1＂LONG IN CASING NEAR SEAM ON MOUNTING SIDE－LEAKS WHEN INPUT SHAFT ROTATED．
POWER STEERING GEAR BUX
72000405 PONTIAC





PAETS KETUKN PROGKAM
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SOGTED GY COMDONENT，MODEL ADL YK
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COMLONENT NAME
HANUFACTURER HAKE－HODEL
KACK SHOhS SOME NEAR．RESULT OF BAD BEANING E
P82683 A 7706 U1 V143UJUU STEERING GEAR，KACK
74000303 MERCURY

3 LLLんLtu GEAR，KACK
72000303 MERCURY

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\varepsilon \text { EXCESSIVE PLAY IN STEERING }
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CONTINUED USAGE.

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& \cup 101 \text { CAPRI } 2000 \\
& \text { TO INSUFFICIENT THREAD CONTACT AREA CR IHPROPEE }
\end{aligned}
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$\begin{array}{lrrr}72000303 & 0102 \text { CAPRCURY } & 0600 \\ \text { LEET SIDE KUBBER STEERING RACK MOUNT IS SPIIT ACROSS }\end{array}$
WIDTH． BOLTS BACK OUT DUE TO INSUFFICIENT THREAD CONTACT AREA OR IMPROPER
TORQUE－VIBRATION \＆EXCESSIVE PLAY IN STEERING
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\begin{aligned}
& \text { STEERING GEAR, RACK } \\
& 00 \text { OOO } 03 \text { MERCURY }
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CONTACT AREA - VIBRATION \& EXCESSIVE SIEERING

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& \text { BOLTS BACK OUT OF EACK MOUNT EETAINEK DUE TO IN } \\
& \text { CONTACT AREA - VTBRATION \& EXCESSIVE STEERTNG }
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\text { U } 14 \text { SUDUV STEERING GEAR, RACK }
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GOLTS BACK OUT DUE
 SNYOI 工AЭT ©\＆VH NO
STEEKING GEAR，RACK
73159 FIAT DIVISION PLAY．PART WAS BEPAIRED
STEEKING GEAK，RACK


67 UU0403 CHEVROLET
\＃ 3948391 ：BALL STUD
\＃ $39 \cup 8391$ ：BALI STUD WORN AND LOOSE


PARTS KETUKN PKOGRAM

> OFFICE OF DEFECTS INVESTIGATION 1 JULY 76 THRU 30 JUNE 77 PRP I DATE COHPONLNT CONPONENT NAME
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STEERING LINKAGES－ARM，IDLER AND ATTACHAENT
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SPEING LUADED KIT USED TO ABSOKB BALL STUD SOCKET SPEING LUADED KIT USED T
SOCKET LOOSE AND WORN SOC゙KET LOOSE AND WORN

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OU OOOGOJ UNKNOWN OOOU UNKNORN
SPHING LOADED KIT USED TO ABSOKB BALI STUD SOCKET
SUCKET LOOSE AND WORN SUCKET LOOSE AND WORN

〕 $1530 J 0 \cup$ SteERING LINKAGES－AKM，IDLER and attachment
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IDLER ARM／ERAKE BRACKET BUSHING IS SEIZED－STEERING HUSHING IS $H O B N-$
IDLER ARM／ERAKE BRACKET BUSHING IS SEIZE
SEIZED IDLER ARM TO GRACKET FROM FRAME
STEERING LINKAGES－AKM，IDLER AND ATTACHMENT
72000301 FORD DIVISION
7000 FORD DIVISION
$\begin{array}{lll}72000301 & \text { FORD DIVISION } & 0000 \text { FORD DIVISION } \\ \text { IDLER AKM FROZEN AT ARM／BKAKET BUSHING－TRANSFEBS GEEATEF } \\ \text { BRACKET CAUSING FRAME TO BEEAK AI BRACKET HOUNT }\end{array}$
BRACKET CAUSING FRAME TO BHEAK AI BRACKET HOUNT
21
ARM SEPAKATED FROM BRACKET．NO EVIDENCE OF LUBE AT BUSHING，THOUGH EGUIP
WITH GREASE FITTING．GREASE RETAINER BOOT IS INTACT
34
BUSHING EXCESSIVELY WORN BETWEEN IULER ARA AND BEACKET CAUSING DIFFI－
CULTY IN STEERING CONTROL

72000302 LINCOL N

示

$\begin{array}{llll}68000301 \text { FOKD DIVISION } & \text { U300 LTD } \\ \text { EXCESSIVE YLAY AT BRACKET／IDLER ARM BUSHING }\end{array}$
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NUMBER
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10007 P02491 A 770406
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CUMMULATIVE PARTS RECEIVED FY 77
1 JULY 76 THRU 30 JUNE 77
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J1530UUU STEERING LINKAGES-ARM, IDLER AND ATTACHAENT
72000301 FORD DIVISION 0300 LTD
IDLER ARM BUSHING AT BK
STEEKING LINKAGES-ARM, IDLER AND ATTACHMENT
73000301 FORD DIVISION 0300 LTD
IDLER ARM SEIZED IN BEACKET. BKACKET RIPPED FRCM FRAME.

LOOSE AT BUSHING BETHEEN IDLER ARM \& FRAME BEACKET-EXCESSIVE PLAY-ARM has grease fitting
PO2287 A $7701 \angle 4 \quad 015$ youvu Steering Linkages-arm, IDLER and attachment 34
69000301 FORD DIVISION LTD CNTRY SQUIRE 0307 LTE BUSHING bUSHING at steering Linkage shows some hear
STEERING LINKAGES-ARM, IDLER AND ATTACHMENT

IDLEA ARM FROZER AT ARM/BGACKET BUSHING-TRANSFERS GREATER FOKCE TO bracket causing prame to break at bracket hount
STEEHING LINKAGES-AKM, IDLER AND ATTACHHENT 03 B
65 000403 CHEVROLET $\quad$ OHOM FRAME BRACKET. NO EVIDENCE OF LUBHICATION AT PIVOT POINT
STEERING LINKAGES-ARM, IDLER ANL ATTACHAENT
66000403 CHEVROLET
6612 IMPALA 34
EXCESS. hear at arm/frame bhacket bushing, loose. Steer. linkage joint IS mORN.
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u 153 úju
01530000
$76081 \angle$
beiven
P02370 A 770210

## P82481 A 770331

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& \text { COMPONENT NAME } \\
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1530 \text { UUU STEERING LINKAGES-ARM, IDLER ANU ATTACHAENT }
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1 JULY 76 THEU 30 JUNE 77
FRAME AT MOUNTING BOLTS
FRAME AT GOUNTLNG BOLIS

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\begin{aligned}
& \text { STEERING LINKAGES-AKM, IULER AND ATTACHHENI } \\
& 71 \text { OOO } 3 \mathrm{~J} 1 \text { FORD DIVISION } \\
& \text { FC9AA- } 3355-8 \text { 2: IDLER ARH/ERACKET BUSHING EROZE TORE OUT PRAME AT } \\
& \text { MOUNTING LINKAGE END BUSHING SLIGHTLY HORN }
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& 72000301 \text { EORD DIVISION } \\
& \text { BUSHING AT IDLER ARA E B }
\end{aligned}
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\begin{aligned}
& \text { STEERING LINKAGES-ARM, IDLEK AND ATTACHHENT } \\
& 73000301 \text { FORD DIVISION }
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\begin{aligned}
& \text { BUSHING BEINEEN ID } \\
& \text { BREAK AROUND NUTS. }
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PAKTS RETUKN PnOG』AM

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\begin{aligned}
& \text { STEERING LINKAGES-ARA.IDLER AND ATTACHMENT } \\
& 72000301 \text { EORD DIVISION } \\
& 7231 \text { GALAXIE } 500
\end{aligned}
$$

BUSHING IS HORN AT IDLER AEM/BRACKET CCNNECTION
IDLEK ARM /FRAHE BRACKET BUSHING SEIZED - STEEEING

$$
\begin{aligned}
& \text { STEEKING LINKAGES-ARM, IDLER AND ATTACGMENT } \\
& 74 \text { OOO JOJ MEKCURY } \\
& \text { HISHTNG AT STEEK }
\end{aligned}
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\text { BUSHING AT STEEK. LINK. END OF AKM IS HORN. ADD'L ID-8 } 6
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014607007
$0146 \cup 7007$
$0146070 \cup 7$
$064110 \cup 116$
00274 ovo 4
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$77 / 07 / \angle 9 \quad$ PAGL JU14
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34
SPRING LOADED KIT USED TO ABSOKE BALL STUD SOCKET PLAY－BALL STUD
SOCKET LOOSE AND WOKN
STEERING LINKAGES－TIE KOD，END 44

BALL STUD SOCKET ACTION IS RUUGH－NO EVIDENCE OF RECENT LUBRICATION
KUST IS PRESENT－SHIMMY DEVELOPED IN FRCNT END \＆ELAY IN STEERING
STEEKING LINKAGES－TIE ROD，END 34
EXCESSIVE PLAY AT BALL STUD SOCKET－EXCESSIVE WEAR E RUST－NO EVIDENCE
STEEHING LINKAGES－TIE ROD．END 44
$\begin{array}{ll}6 甘 000203 \text { PLYMOUTH } \\ \text { SAME AS A } & 0000 \text { PLYMOUTH }\end{array}$
STEERING LINKAGES－TIE ROD，END
68000203 PLYHOUTH
GAld STUD SOCKET ACTIUN IS ROUGH／NOISY－SOME LUEAICATION PRESENT
$\because 100$ CUTLASS
71160101 SUBARU DIVISION 0100 SUBARU
BALL SLUL ACTION LOOSE－GAEASE BOOT CEACKED
74110201 AUSTIN DIVISION 0101 AUSTIN MARINA
74110201 AUSTIN DIVISION
SEPARATIUN OF BALL SIUD SOCKET FRON LACK OF LUEKICATION－SEALED TYPE
WITH NU GHEASE FITTING（GT）
rorcacto
STEERING LINKAGES－TIE KOD，END
69000404 OLDSMOBILE
BALL STUD SOCKET SEPARATION
U1560UUU STEERING LINKAGES－TIE ROD，END


## PAKTS EETURN PNOGRAH


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 75000403 CHEVROLET
090 VEGA
OUTER BOLT POSITIONED SO INTEFFERES HITH LOHER CONTROL ARM TO CAUSE LOCK－UP STEEKING
PO2094 A $76112 \angle 0150$ UUUU STEERING LINKAGESTTIE KOD，END
66000301 EORD DIVISION 34
3 STEERING LINKAGES－TIE KOD，END
71000102 JEEP DIV
EXCESSIVE FLAY AT BALL STUL SOCKET－NO LUBRICATICN BVIDENT－SHIMMY
P02202 A 761217 U156UUUU STEEEING LINKAGES－TIE KOD，EMD 34

END O
SWAY
21 BALL STUD SEPARATED FROM SOCKET－NO EVIDENCE OF LUBRICAIION IN SOCKET－ TIE ROD EUUIPPED WITH GREASE FITTING－NCISE WHEN BACKING UP STEERING LINKAGES－TiZ̈ いU上，Lฟ
75000305 FORD TRUCK DLV 5101 F100

P82795 A 7706 U

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U15OUUUU STEERING LINKAGES-TIE ROD, END

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& \text { BENT AT THREADED PORTION }
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01 \text { JOUUUU STEERING LINKAGES-TIE ROD, END }
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TO CAUSE STEERING LOCK-UP

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\text { O } 15 \text { טUÚU STEERING LINKAGES-TIE ROD, END }
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MAKEーMODELL


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\begin{aligned}
& 73000403 \text { CHEVROLET } \\
& \text { OUTER TIE KOD HOLT POSITIONED SO IT INTEREERES }
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& \text { YANUFACTUFEK }
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& \text { STEERING LINKAGES-TIE RUD,END } \\
& 72000305 \text { FORD TRUCK DIV }
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& \text { STEERING LINKAGES-TIE RUD,END } \\
& 72000305 \text { FORD TRUCK DIV }
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SLEEVE IS BENT－MARKS ON SLEEVE SHOW
IGPACT－FAILED IN SHARP BIGHT U－TURN


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STEERING LINKAGES－SLEEVE゙，TIE ROD－ADJUSTABL
76000301 FOKD DIVISION NAKE－KODEL

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STEERIMG LINKAGES－SLEEVE，TIE KOD－ADJUSTABL
76000202 DODGE 0800 ASPEN
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$\begin{array}{lll}157 \text { UUUU STEERING LINKAGES－SLEEVE，TIE ROD－ADJUSTABL } & 090 \\ & 73000403 \text { CHEVROLET } & 090 \\ \text { BROKEN AT TIE ROD BASE }\end{array}$
75000301 FORD DIVISION
0157 UUJU STEERING LINKAGES－SLEEVE，TIE ROD－ADJUSTABL
75000301 FORD DIVISION
SHOP CLAIMS THREADS ARE HORN
GRANADA
U1570UOU STEERING LINKAGES－SLEEVE，TIE ROD－ADJUSTABL
PARATN．
76000404 OLDSMOBILE 0100 CUTLASS $\quad$ OR OUTER WHEEL BEAEING PROZE ON SPINDLE－DAMAGED SPINDLE SURPACE－BOUGH－ID：329353L16 D
STEEKING LINKAGES－KNUCKL－S PINDL－ARM
69603081 CH BRADSHA CO
$\mathrm{P} 02625 \mathrm{~B} \quad 7705 \mathrm{u} 9$
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75000204 DODGE TRUCK DIV 5304 B300
CAUSED BY EXCESS．PINE THREADS IN TIE－EOD．
STEERING LINKAGES－KNUCKL－SEINDL－ARM
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LNNER BEARING UNEVEN WEAR ON OUTER BEARING RACE LOC INDICATIONS OF HEAT BUILD－UP SHOP CLAIUS SPINDLE IS BENT
STEERING LINKAGES－KNUCKL－SEINDL－ARM
LAIMS BEARING OVERHEATED \＆FROZE TO SPINDLE－SPINDLE IS BROKEN IN TWO
AI OUTER WHEEL BEARING LOCATION－ID：348177LH

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NOISNZdSnS anocnozo
VEHICLE W／O EQUIPMENT WAS OVERLOADED．SHOP WAS

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\text { U15ロUUUU STEERING LINKAGES-KNUCKL-SFINDL-ARM } \\
75000403 \text { CHEVROLET } & 7200 \quad \text { CHEVELLE }
\end{array}
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\begin{aligned}
& \text { STEERING LINKAGES-KNUCKL-SEINDL-AEM } \\
& 73000401 \text { BUICK }
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& \text { UILD-UP } \\
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& \text { COHEOHENT NAMI } \\
& \text { MANUFACTUREE }
\end{aligned}
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CUNPONENT COHEOHENT NAME

MAKE-MODEL

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\begin{aligned}
& \text { SUSPENSION INDEPENDENT.PHONT } \\
& 76 \text { 160 } 201 \text { HONUA DIVISION } 102 \text { CVCC HAGON } \\
& \text { PULLS TO RIGHT WHEN ACCELEGATING-EXCESSIVE TIRE HEAK }
\end{aligned}
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0211 \text { UUU SUSPN INDP.FT. ATTACHING HECHANISHS } \\
70 \text { UOO } 202 \text { DODGE } & \\
& 0100 \text { CHAILFNGEEA }
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TORSION BAR IS EHOKEN "SPLIT IN HALF" SHOP CLAIMS

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\text { GEADE } 7 \text { BOLT OKOKE ACHOSS DIAGETEK }(7 / 16 \text { INCH) AT BASE OF THEEADS }
$$

P४1726 A 760730 V $110 \cup 0 \cup$ SUSPN INDP.FT. ATTACHING MECHANISMS

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\begin{aligned}
& 76160601 \text { TOYOTA DIVISION } \\
& \text { STRUT ROD BROKE AS A RESULT OF } \\
& \text { DRIYEN THROUGH FIREWALL INTO P }
\end{aligned}
$$

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\begin{aligned}
& \text { SUSPN. INDP.FT. ATTACH. MEC } \\
& 75160601 \text { TOYOTA DIVISION } \\
& \text { STHUT KOD BROKE AS A RESU }
\end{aligned}
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\begin{aligned}
& \text { SUSPN. INDP.FT. ATTACH. MECHANISMS-STRUT ROD } \\
& 69000101 \text { AMERICAN MOTOKS DV UBOO RE }
\end{aligned}
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\begin{aligned}
& \text { G9 OOO } 101 \text { AMERICAN MOTOKS DV } \\
& \text { KEAR STHUT ROD BROKE AT } 1 \text { END } 1 / 4 \text { FKOM WUSHING }
\end{aligned}
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\begin{aligned}
& \text { KEAR STKUT ROD EROKE AT } 1 \text { END } 1 / 4 \text { FKOM } \\
& \text { SIIOĂ SOME WEAK E LIGHT RUST ON ROD-KEAR }
\end{aligned}
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\begin{aligned}
& \text { SUSEN. INDP.FT. ATTACH.MECH.-SPKING.COIL } \\
& 76000402 \text { CADILLAC }
\end{aligned}
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\begin{aligned}
& 76000402 \text { CADILLAC } \\
& \text { COIL SPKING IS BROKEN ON } 2 \text { ND COIL. SHOE }
\end{aligned}
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\text { FAULI HAZ. } \\
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& \text { CADILLAC CALIAS } \\
& \text { CLAIMS FLAK IN BET }
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\begin{aligned}
& 74000204 \text { DODGE TRUCK DIV } 5101 \text { D } 100 \text { SHPT,UTLNE } \\
& \text { COIL SHRING BKOKE AT } \angle \text { PLACES IN LAST COIL. BKEAK TOWARL END IS CLDEK } \\
& \text { THAN OTHEK, } 16 U \text { DEG. AROUND CIHC. SERING IS SLIGHLIY KUSTY. }
\end{aligned}
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\text { HILLAGE } \\
\text { AT FAILUKE }
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BKLAK SUSEA．INUP．FT．ATTACH．MECH．－SPRING，COIL
75000407 CHEVROLET TRUCK DV 5400 CHEVY YAN SERIES
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SUSEN．INDP．FT．SHOCK ABSOREER
74 UOO 301 EOKD DIVISION
SHOCK ACTION WEAK LEAKING ELUID ADD＇L ID－MOTORCRAFT
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SUSPM，INDP．FT，ATTACH．MECH．－SPEING，COIL
75000305 FORD TRUCK DIV $\quad 5109$ F 150
75 FORD TRUCK DIV 5109 F 150
SPRING $\triangle R O K E ~ A I ~ 3 R D ~ C O I L ~ F R O M ~ L A K G E ~ E N D . ~ S P R I N ~$ IION：NOIICED DUR
COIL SPRNG BRK AT ANGLE ACRS DIAMETER CF
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$\begin{array}{lllll}\text { SUSEN．INDP．FT．SHOCK ABSORBEE } & & \\ 72 \text { COO2G3 HLYHOUTH } & & \\ \text { SHOP CLAIMS ROAD HOP UNSTABLE WILL NOT STAY ALIGNED TOP MOUMTING }\end{array}$ STUD BROKEN POSSIBLY DURING KEMOVAL
$\begin{array}{llll}\text { SUSPN．INDE．FT．SHOCK ABSOREEK } & & \\ 72000203 \text { PLYMOUTH } & 0403 \text { FURY III }\end{array}$
$0 \angle 120000$
STUD BROKEN POSSIBLY DURING REMOVAL
NOT STAY ALIGNED TOP HOUNTING
$\angle 1 \angle 0$ vuv
$0<1 \angle 0 J 0 \cup$ SUSEN．INUP．ET．SHOCK
44 SHOCK ACTION IS FAIR．SHOP CLAIMS EXCESS．TIEE WEAR AND GOAD HUK． MOUNTING STUD IS BROKEA，POSS．DUEIAG REMOVAL．
RARTS EETURN PHOGRA
OFFICE OF DEPECTS INVESTIGAIION
CUMMULATIVE PARTS RECEIVED FY 77
1 JULY 76 THRU 30 JUNE 77 COMHUNENT COLIPONENR NAME MAKE－MODEL
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PARTS FETUKN PROGRAM

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BALL STUD SOCKET SEPARATION

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\text { GALL STUD SOCKET SEPARATION }
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02132 \text { UUU SUSPN. INDP. FT. CTRL ARH UNK TYR-BALL JCINT }
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FITTING. BUSHINGS ON ARE ARE IN GOOD CCNDITION

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\begin{aligned}
& \text { BALL STUD SOCKET EXHIBITS LACK OF LUBE. JOINT } \\
& \text { FITTING. BUSHINGS ON ARG ARE IN GOOD CCNDITION }
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SUSKN.INDP.FT. CONTROL ARB, UPPER
$77 / 07 / 29 \quad$ PAGE $v 0<5$
SOBTEL OY LOHECNENT，MODEL，MDL YG
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POINT，ONE SIDE EKOKEN，OTHER
CSD EAILUBE．BALL JNTS－GOOD
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101 CADILLAC DE VILLE

BALL JOINT ACTION ROUGH－HOUSING IS SCORED

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UL132UUU SUSPN.INDP.FT. CTKL AKA UNK TYP-BALL JOINT

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CUMPONENT NAHE
HAKE-MODEL
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& \text { SUSPN. INDF. ET CONTEOL ARH-LOHER } \\
& 0000 U 403 \text { CHEVEOLET }
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0000 U 403 \text { CHEVEOLET } & 0200 \text { CHEVELLE } \\
\text { BALL JOINT INTACT,ACTION GOOD. SOME } W E A R ~ O N ~ B U S H I N G . R E C E S S E D ~ A R E A ~ E C R ~
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COIL SPKING CORRODED AND RUSTED

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\begin{aligned}
& 00 \text { OUO } 403 \text { CHEVROLET } \\
& \text { EALL JOINT RIPPED OUT OF LOWER CONTHOL ARM-BENLING OUTER PORTION SURR- }
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\text { SUSEN. INDP.PT. CONTROL ARM-LOMER } 03
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P02570 A $7704180 \angle 1500 \cup J$ SUSPN．INDP．PT．CONTROL ABA－LOHER
SUSPN．INDP．FT．CONTROL ABH－LOHER
OO OOU 301 EORD DIVISION
BALL JCINT ACTION STIFF－BUSHING WORN－ARM BROKEN AROUNI BUSHING HOLE
P82111 A $77011 J$ U215UUUU SUSPN．INDP．FT．CONTROL ARM－LOHEE 11

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\begin{aligned}
& \text { SUSPN. INDP. ET. CONTROL ARM-LOHER } \\
& 72 \text { OOOZO YLYMOUTH } \\
& \text { CONTROL ARE IS TOHN AT INNER BUSHING LOCATION }
\end{aligned}
$$

TNDP FT CONTROL ARM－LOWER
66000301 FORD DIVISIONSUSPN．INDE．FT．CTRL ARM，LOHER－BALL
SUSPN．INDP．FT．CONTROL ARM－LOWER

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\begin{aligned}
& \text { LOWER CTL. ARH BROKE AT BALL JOINT MOUNT. PRESS FIT } \\
& \text { PROZEN. SUSPECT EXCESS. STEESS CAUSED ANM TO BEEAK. }
\end{aligned}
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TROL ARM－LOWER
SORIEL OY COMPCNEMI, BOUEL, BDL YK

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SOETEL BY COMPONEAT, MODEL, MLL YE
70000302 LINCOLN BASE OF THEEADED YORTION．BALL STUD AND SOCKET ACIION
SUSPN．INDP．FT．CTRL ARM，LOWER－BALL JOINT PRP I DATE COMPUNENT YR COHPONLNT NAME

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& \text { GAULT HAZ. KILEAGE } \\
& \text { CODE CAT. AT FAILUKE }
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$\begin{array}{ll}00040 & -21.9037 \\ 075000 & 098106082\end{array}$


FITTING
EXCESSIVE YLAY AT BALL STUL SOCKET．BALL E SCKT ARE LIGBTLY RUSTED．NU

07 OCO 301 FORD DIVISION 0313 GALAXIE 500
BALL STUD BROKEN AT BASE OF THREADS
LACK OF LUBE IS EVIDENT．
LNIOC TTYg－yan OT＇Wy甘 T\＆
BALL JOINT STUD BROKE AT BASE ON THREADS．JOINT HAS EXCESS．PLAY
RESULTED IN LCSS OF STEER．CONTROL E SUSP．COLIARSE．
SUSPA．INDP．FT．CTRL ABK，LOWEF－BALL JOINT
69000402 CADILLAC
1 MOUNTING EAR GROK
EOSOLL $\quad$ ¢ 19 OOd

> SUSPN. INDP. PT, CTRL ARM, LOWER-BALL JOINT 70000403 CHEVHOIET
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SUSEN．INDP．FT．CTEL ARE，LOWER－BALL JOINT
70 OOO 303 AEKCURY
BALL JOINT STUD BROKE AT BASE OF THREAEED BORTION．SOCKET HOUSING IS
DAMAGED E DENTED，RESTRICTING MOVEMENT OF BALL STUD．
$\begin{array}{llll}\text { SUSPN．INDR．FT．CTRL ARM，LOWER－BALL JOINT } \\ 65000202 ~ D O D G E ~ & 0500 \text { DART }\end{array}$

MAKE－MODEL


PAATS EETURN PEUGRAG
OFLICE OF DEFECTS INVESTIGATION
CUMMULATIVE PABTS RECEIVED RY 77 1 JULY 76 THRU 30 JUNE 77 COMFUNLNT COMEONENT NAHE
$\frac{2}{3}$
MANUFACTUKER MAKE－MODEL

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$57 / L C / L L$
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SORTED BY CUAECNENT，HODEL，HLZ YE
SHUE
WUABEE
$\checkmark 7570104 \angle$
FAULI－大iAC．BILEAGE
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03
SPINDLE BROKE AT OUTER BEARING LOCATICN－EVIDE KCE OF HEAT MARKS AT
EDGE OF BREAK－SPINDLE SHOWS SIGNS OF BEING VEBY HOT
U $16 \cup 0 U \cup$ SUSPN．INDP．FT．SPINDLE－KNUCKLE，STEERING 12 CALIPER BOOT HOLE ELONGATED WEAR EXHIBITED AT BALL JOINTETIZ ROD END
CONNECTIONS．BEARING SURPACES APPEAR NOBMAL
SUSPN．INDP．ET．SPINDIE－KNUCKLE，STEERING 03
74000403 CHEVROLEI
SPINDLE BROKE AT OUTER BEARING RACE $\mathbf{~} \mathbf{1 5} 515 \mathrm{HH}$ ，WHEEL FELL OFF．RACE FROZEN
SPINDLE GROKE AT OUTER BEARING RACE－ 15 MPH，WHEEL FELL OFF．RACE FROZEN
ON SPNDL END．HACE NORN－HEATED．NO YRICR NOISE ACCOKDING TO OWNEE．
SUSPN．INDP．FT．SPINDLE－KNUCKLE，STEERING 03
65000301 FORD DIVISION 0500 MUSTANG
SPINDLE BROKE AT BASE 1／8＂FROA INNER HEEEL BEAGING．BREAK IS ACROSS CIR

SUSYN．INDP．FT．SPINDLE－KNUCKLE，STEERING
75000203
SPINDLE BROKE AT OUTER BEARING LOCATICN AT BASE OF THREADS INNEB BBNG
SPINDLE BROKE AT OUTER BEARING LOCATICN AT BASE OF THREADS
KACE PROZE ON SPINDLE EVIDENCE OF EXCESS HEAT DISCOLORATION
nncogl 70
pu1808 A 760819
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U $\angle 10000 V$ SUSFN．INDE．FT．SPINDLE－KNUCKLE，STEERING
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$0 \angle 170 J \cup 0$ SUSPN．INDP．ET．－BEARING WHEEL
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U 77 JUUU SUSFN．INDP．FT．－HEARING HHELL
GEARING 101 CCADILLAC DE VILLE
EACRACKED，ROLLERS HORN－BROKEN BEARING PEODUCEL BEARING
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OFPICE OF DEFECIS INVESTIGA

1 JULY 76 THRU 30 JUNE 77

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\begin{array}{cccccc}
\text { PRP } & \text { I } & \text { DATE } & \text { COMPUALNT } & & \text { COMPONENT NAME } \\
\text { NUMBER } & \text { D FECEIVED } & \text { CLASS } & \text { YR } & \text { MANUFACTUKER }
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MAKE-MODEL

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& \text { SISPN. SGI AXL K-LEAF SPEING-U-HOLT } \\
& 74 \text { OUO } 301 \text { EORD DIVISION } \\
& \text { GRADE B BOLTS } 5 / 16 \text { USS } 13 / 4-I N \text { LONG SEVERLY RUSTED }
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& \text { COMPOLENT } \\
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75000401 BUICK 0500 LA SABAE
BUSHING ON ONE SIDE DETEBIORATED FROM FUEL LEAK, CAUSING EEAG END

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& \text { COMPONENT NAME } \\
& \text { HANUFACTURER MAKE-MODEL }
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PARTS EETURN PHUGEAE
OFFICE OF DEFECTS INVESTIGATION
CUMMULATIVE PARTS RECEIVEU FY 77
1 JULY 76 THRU 30 JUNE 77
PO1858 A $7609 U 8 \quad \cup \angle 4 \angle U U U U ~ S U S P M$.SGI AXL R-CONTROL AKM
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SUETED BY CUMPCAENT, HOUEL, KDL IK


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$\cup 36 v 370<3$

> OFEICE OF DEFECTS INVESTIGAIION
CUMMULATIVE RARTS RECEIVED FY 77 1 JULY 70 THRU 30 JUNE 77


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OWNEG CLAIMS TIRE HAS SLOW LEAK．SHOP CLHS NO VISIBLE BUNCTUKES OR
74000404 OLDSMOBILE
OWNER CLAIMS TIRE HAS SLOW LEAK．SHOP CLUS NO VISI TIRES
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p82258 C
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4 WEK CLAIMS TIRE HAS SLOW LEAK．SHOE CLHS NO VISIBL
SERARATION，LEAK NCT FOUND．
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75000301 FORD UIVISION 0700 THUNDEFBIRD
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\text { CUMMULATIVE HARTS RECEIVED FY } 77 \\
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COMPUNENT COMPONENT NAME

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& 74000404 \text { OLDSMOBILE } \\
& \text { LARGE BULGE IN CENTEN OY TEEAD }
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& 74000301 \text { FORD DIVISION } \\
& \text { BAD BREAK IN CENTER OF TREAD }
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\text { OFFICE OF DEFECIS INVESTIGATION } \\
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1 JULY 76 THRU 30 JUNE 77 COMLUNENT COMPONENT NANE

U3LJUUUU BRKS．HYDKAULIC－MSTh CYL
MAKE－MODEL
 $28 \quad$ C EXTEKNAL AUPEARANCE OP MASTEK CYL．NUGMAL－SUSPECT INTEFNAL HALFUNCIION． LEAKAGE

OO 000200 CHRYSLER MOTOR CO $V 000$ CHRYSLER MOTOE CO
SUSPECT LEAKAGE IN BORE AT CUPS－TAG NOT BEALAELE．
BKKS.HYDKAULIC-MSTE CYL

BKKS．HYDKAULIC－MSTE CYL
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BENDIX－EXTERNAL APPEARANCE NORMAL－SUSPECT INTERNAL HALFUNCTIUN／LEAKAGE
BKKS．HYDKAULIC－MSTE CYL
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BENDIX－EXTERNAL APPEARANCE NORMAL－SUSPECT INTERNAL HALFUNCTIUN／LEAKAGE


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## צRKS．HYDRAULIC－MSTR CYL


BRKS．HYDRAULIC－MSTR CYL
NO VISABLE SIGNS OF FAILURE．
ERKS．HYDRAULIC－MSTR CYL
00 OOO $20 J$ CHRYSLER MOTOK CO
NO VISABLE SIGNS OF FAILURE．
MALFUNCT
8
NO EXTERNAL DEFECTS，SUSPECT INTERNAL MALFUNCTION．TAG NOT KEADABLE
BRKS．HYDHAULIL－MSTR CYL
00 OGUOOO UNKNOWN
BRKS．HYDKAULIC－HSTK CYL
OO OOOOOU UNKNOWN
NO EXTEFNAL DEFECTS－SUSP
ERKS．HYDKAULIC－HSTK CYL
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NO EXTEGNAL DEFECTS－SUSP
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CUMMULATIVE RAETS RECEIVEO FY 77
1 JULY 76 THKU 30 JUNE 77 $\begin{array}{ll}\text { COMDONELT NABE } & \\ \text { MANUFACTURER } & \text { MAKE－MODEL }\end{array}$ CCDE CAT．
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MAKE－MODEL $\quad$ FAULT．
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EXTERNAL APPEARANCE OF MASTER CYLINDEB NORMAL
FUNCTION．OCCASIONAL COMELETE LOSS OF ERAKES．
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71 UJJ403 CHEVROLET 0306 BELAIG
EXCESSIVE USE OF FLUID－SUSPECT LEAKAGE
PU2345 A 770207 U3210UUU BRKS．HYDRAULIC－MSTR CYL
U323000 B BRKS．HYDRAULIC－MSTR CYL
M／CYLINDER RUSTED IN BORE
P01915 A $7609 \angle 20 \leq 23$ UUVU BRKS．HYDRAULIC－ASTR CYL
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$03230 \cup 0 \cup \cup$ BRKS．HYDRAULIC－MSTR CYL
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75140501 VOLKSWAGEN DIVISN
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EUSHED HARD BRAKES WOULD WCRK
४RKS．HYDス̃AULI－MSTス CYL
74140501 VOLKSHAGEN DIV
74140501 VOLKSWAGEN DIVISA H WITH HAND BRAKE
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ELUID LEAKED INTO
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1 JULY 76 THRU 3 U JUNE 77
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EXTERNAL AYPEARANCE IS NOREAL. SUSPECT INTERNAL BALFUNCTICN, POSS.LEAK

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\begin{aligned}
& 69000301 \text { FORD DIVISION } 070 J \text { THUNDEREIAD } \\
& \text { EXTERNAL AYPEARANCE IS NORHAL, SUSPECT INTERNAL } B A L F U N C T I C N, ~ P O S S . L E A K ~
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& \text { ERKS. HYDFAULIC-NSTR CYL } \\
& 76000405 \text { PONTIAC }
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\text { FLUID LEAKED INTO BOOSTER FROM REAK OF MASTER CYLINDEG-MORAINE } 547 C 408
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EXTEGNAL APPEARANCE NOKMAL, SUSPELT

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SORIEL BY COLECNENT，MODEL，HDL IG

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$=10$ UUSHED HARD BRAKES WOULD WORK NO WARNING ADD＇L ID－1774 $40<914.101<$


U3230UU $\because$ ERKS．HYDRAULIC－NSTA CYL

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\begin{array}{lll}
\text { COAPUAENI } & & \text { COMPONENT NAME } \\
\text { CHASS } & \text { YK } & \text { HANUFACTUREK }
\end{array}
$$

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75140501 VOLKSWAGEN DIVISN 0600 RABEIT
SHOP CLAIMS NOEHAL PEDAL PKESSURE DID NOT ENGAGE ERAKES WEEN DRIVEA
PUSHED HARD BEAKES WOULD HOKK NO WARNING ADD＇I ID－ 1774.402 S4691911D



P02727 A 770607

 SHOP CLAIAS NOKMAL PEDAL PEESSURE DID NOT ENGAGE BKAKES HHEN DKIVIK PUSHED HAKD BRAKES WOULD WORK NO WARNING ADD＇I ID 1774．02：941：3001E

BENDIX－PEDAL GOES TO FLUOK WHEN HOLDING BKAKE ON－SUSPECT LEAKAGE

10017
10017

BRKS. HYDHAULIC-MSTK CYL

PO2574 A $7704 \angle 1$ U3 $210 \cup 00$ BKKS．HYDEAULIC－MSTR CYL

NUMBER
10317

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\text { P01764 A } 760811 \text { Uy230UUU BKKS.HYDRAULIC-MSTR CYL }
$$

$\because 0$
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MASTER CYL．SUSPECT INTEGNAI MALPUACTION－EROB－
NO PEDAL PhESSURE FROH
AbLy LEAKAGE AT CUES
BRKS．HYDRAULICCHSTA CYL$370<76$
PARTS EETURN HEOGKAM
 1 JULY 76 THRU 30 JUNE 77

PAKTS EETURN PKOG』AN
OFFICE OF DEPECTS INVESTIGAIION 1 JULY 76 刁HFU 30 JUNE 77
$77 / 07 / 29$ EAGe JuJ 3

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\begin{aligned}
& \text { SEAL ON EEAKWARD } \\
& \text { EAKAGE }
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\begin{aligned}
& \text { * } 23099 / \# 23002: 1 \text { SEAL ON FORWAKU PISTON SPLIT, } 1 \text { SEAL O } \\
& \text { RISION SHOHS WEAK ON SEALING SURFACE - SUSPECT LEAKAGE }
\end{aligned}
$$

U3Z33UUV BRKS.HYDKAULIC-MSTF CYL. PISTUNS-CUPS-SEKNG

# CLAIHS SEALS ARE HARD－SUSFECT LEAKAGE AT SEALS 

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\begin{aligned}
& \text { BRKS. HYDRAULIC-HSTH CYL.PISTONS-CUPS-SPRNG } \\
& 70 \text { OOO 2OI CHRYSLER DIV } \\
& \text { M/CYL. RRIMARY \& SECONDARY PISTUN CUPS ANE DISTCRIED. SOME KUST ON }
\end{aligned}
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632330 \cup \cup \text { BRKS.HYDRAULIC-世STH CYL.PISTONS-CUPS-SPRNG } 28 \text { C }
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\begin{aligned}
& \text { M/CYL. RRIMARY ¿ SECONDARY PISTUN CUPS ANE DISTCRIED. SOME KUST ON } \\
& \text { SPGINGS. SHOP CLAIMS CAUSED BRAKE FAILURE. POSS. CONTAHINATED FLUIU }
\end{aligned}
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& \text { P02560 A } 7704 \cup 4
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$$ 1 JULY 76 THEU 30 JUNE 77

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\text { BRKS.HYDEAULIC-HSTR CYL.PISTONS-CUPS-SERNG } 28
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\text { P02373 A } 770215 \text { U32 } 140 U \cup \text { BRKS.HYDRAOLIC-KSTR CYL.OTHER } 33
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\begin{aligned}
& \text { LFND. RYDGAULIC-IINES, METALLIC } \\
& 68000203 \text { PLYMOUTG }
\end{aligned}
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BHKS.HYDRAULIC-LINES, METALLIC
SUKIED BY COMPCNENI, MODEL, KOL XE
020000
071961

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\begin{aligned}
& \text { BRKS.HYDRADIIC-HSTR CYI. OTHER } \\
& 71000406 \text { GMC TRUCK DIV }
\end{aligned}
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\begin{aligned}
& 71 \text { OOU406 GMC TRUCK DIV } \\
& \text { SHOE CLAIMS BRAKES SUDUENLY LOCKED UP-NO VISIBLE EXTERNAL DEEECTS- }
\end{aligned}
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## 10011

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COMPONENT NAME
MANUFACTURER
740 OCO 302 LINCOLN
FRAME. CHAFFED
TAG AZ-85004002
$0324100 \cup$ BRKS.HYDRAULIC-LINBS, HETALLIC

## 03241000 brks.hydfaulic-lines, Metallic

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LINES $5111 \mathrm{~F} 250 \quad 03$ 03241000 BRKS. HyDRAULIC-LINES, METALLIC
LINE RUSTED OfF AT FITTING
P02103 A $761129032410 \cup U$ ERKS. HYDRAULIC-LINES, METALLIC

P02038 A $7610 \angle 203241000$ BRKS.HYDRAULIC-LINES,METALLIC 32 C



P02074 A 761115
P02489 A 770408
p02218 A 761228 NUMBER D RECEIVED date COKPUNENT
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03241000 BRKS.HYDKAULIC-LINES,METALLIC
H FROB deg. AROUND CIRC. AI FRABE
hoSE. NO tag SENT WITH PABT.

BRKS. HYDHAULIC-LINES-HOSE, NON-HETALLIC
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U $3242 U \cup \cup$ BRKS. HYDRAULIC-LINES-HOSR, NON-METALLIC
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PARIS EETUEN PGUGKAM
OFFICE OF DEFECTS INVESTIGATION
CUMMLATIVE PARTS RECEIVED FY 77 CUMMULATIVE PARTS RECEIVED FY 77
1 JULY 76 THRU 30 JUNE 77
LOMECNENT, MODEL, MDL YK
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AKOUND $1 / 8^{\prime \prime}$
$X I N G$. 0000 CHRYSLEK HOTOR CO LENGTH P01851 A $760904032420 J O$ BRKS.HYDRAULIC-LINES-HOSE, NON-METALLIC 70000203 PLYMOUTH
$08 C$

FRAME END CRACK AT F
RY PIIABLE
95
023075
$11 \ldots 20$
059408
 O8 B 800A- HOSE IS CRACKED NEAR MIDDLE SHOE CLAIMS FLEX HOSE $\varepsilon$ CLAAP SUP-
PORT TOO CLOSE TO BACKING PLATE

BRKS.HYDKAULIC-LINES-HOSE, NON-NETALLIC O 08 00000000 UNKNOWN

SEKIES OF SHALL CRACKS VISIBLE GITH FLEXING, CRACKS AT ENDS OF HOSE E OTHER RLACES. TAG NOT READABLE.

01676 A $76071203242 U J U$ BRKS.HYDRAULIC-LINES-HOSE, NON-METALLIC OO C OSE IS CRACKED 360 DEG AROUND CIEC. $3 / 8$
AND EITTINGS SIMILAR TO 70 DODGE DART.
CONFUOENT
COMPONENT NANE
MAIUFACTURER
TOSE IS SPLIL IA R
TAG NOT EEADAELE.
RKK. HYDRAULIC-LIN
0000000 UNKINCWN OUOO UNKNOWN
tiOSE IS SPLII IN RUDBEE 270 DEG. AROUAD CIRC. AT
BRKS.HYDLAULI
00 UOOOOO UNKNOHN OUN OUOO UNKNOWN
$0324200 v$
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P01932 B 760927
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\text { P02675 A } 770516
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COMPONENT COMPONENT NAHE

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\begin{aligned}
& \text { OFFICE OF DEFECTS INVESTIGATION } \\
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\end{aligned}
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\begin{gathered}
\text { CUMBULATIVE EABTS RECEIVED E } \\
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& \text { COMPONENT NAHE } \\
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& \text { BRKS.HYDRAULIC-LINES } \\
& 73000403 \text { CHEVROLET } \\
& \$ J 401-A V-1 / 8: \text { HOSE }
\end{aligned}
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\begin{aligned}
& 73000403 \text { CHEVROLET } \\
& \text { FJ } 401-A V-1 / 8: \text { HOSE POSITIONED TOO CLOSE }
\end{aligned}
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\begin{aligned}
& \text { THROUGH SLEEVE AND HEAB UIDDLE OF HOSE } \\
& \text { THOL }
\end{aligned}
$$

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69110206 \mathrm{HG} \text { DIVISION }
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$77 / 07 / 29$


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0324200 \text { B BRKS.HYDRAULIC-LINES-HOSE, NON-METALLIC }
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\begin{aligned}
& 75000403 \text { CHEVROLET } \\
& \text { TAILPIPE WORE A HOLB IN THE ERAKE HOSE }
\end{aligned}
$$

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\begin{aligned}
& 66000402 \text { CADILLAC } \\
& \text { HOSE IS SPLIT } 360 \text { DEGREES AROUND AT OAE END SERIBS OP CRACKS THRUOUT }
\end{aligned}
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\text { P02573 B } 77041903242000 \text { BRKS.HYDRAULIC-LIAES-HOSE, NON-HETALLIC }
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CENTRAL PORTION OF LINE HAD BEEN RUBBING- HORN TO CORD

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OFFICE OF DEFECTS IHVESTIGATION
CUMHULATIVE PAETS RECEIVED PY 77 1 JULY 76 THEU 30 JUNE 77

## COAEUNENT COMEONENT NAME <br> HANUFACTUREK


5SOn JワVd 62／LO／LL
HLOOWXId EOZOOC OL
0124200 U EHKS．HYDRAULIC－LINES－HOSE，NON－METALLIC
HOSE CRACKED 360 DEG AROUND CIRC．AT HHEEL END，
END．SERIES OF SMALLER CEACKS AT FRAME EAD．
Q02411 A 770309 U32420UU BRKS．HYDRAULIC－LINES－HCSE，NON－METALLIC
044110013
012603050
075701042
046619005
042053
043176
011090
034300
乙E JITTVLAW－NON・ヨSOH－SオNIT－JITO甘YOXH•SYY
72000404 OLDSMOBILE 4400 TORONADO ID：1／8－8396
03242000 BRKS．HYDRAULIC－LINES－HOSE，NON－GETALLIC 32 HOSE IS CRACKED AT BOTH ENDS．ONE END IS HRAPRED UITH ELECTBIC TAPE，
EXPOSED END IS CRACKED 300 DEG．AROUND CIRC． $3 / 8^{\prime \prime}$ FROM FITTING．

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PARTS BETUKN PKOGRAM
OFFICE OF DEFECTS INVESTIGATION
CUMNULATIVE PARTS RECEIVED EY 77 CUMMULATIVE PARTS RECEIVED FY 7
1 JULY 76 thru 30 JUNE 77
SOBTED BY COMPGNENT, MODEL, MDL Ye
77/07/29
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SHUP
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$\begin{array}{ll}\sim & \text { N } \\ \sim & \stackrel{\infty}{N} \\ N & \text { N }\end{array}$ FAULT HAZ.
FAULI CAT.
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hose has series of Cracks-most predominant at ends-loss of beakes thru LEAKAGE
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\begin{aligned}
& \text { BRKS.HYDRAULIC-LINES-HOSE, NON-METALLIC } \\
& 71 \text { OOO } 303 \text { MERCURY } \\
& \text { HOSE IS CRACKED IN RUBBEB AT HHEEL END MOHTEGO }
\end{aligned}
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032420 U \cup \text { BRKS.HYDRAULIC-LINES-HOSE, NON-METALLIC }
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\begin{aligned}
& \text { COMPONENI NAME } \\
& \text { MANUFACTUKEK KAKL-KODEL }
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\begin{aligned}
& \text { BRKS.HYDHAULIC-LINES-HUSE, NON-METALLIC } \\
& 73000202 \text { DOLGE } \\
& \text { HOSE CHACKED } 360 \text { DEG. AKOUND CIRC } 3 / 8 \text { TO }
\end{aligned}
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\text { O } 5 \text { \&4 UUV BRKS.HYDRAULIC-LINES-HUSE, NON-METALLIC }
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\begin{aligned}
& \text { BRAKE HOSE SPLI } \\
& \text { NOT AVAILABLE. }
\end{aligned}
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\begin{aligned}
& \text { \% } 12024 \mathrm{H} \\
& \text { FITTING }
\end{aligned}
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PAETS HETUKN PROGRAH 1 JULY 76 THEU 30 JUNE 77

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\begin{aligned}
& \text { GRKS.HYURAULIC-LINES-HOSE, NON-METALLIC } \\
& 73000101 \text { AMERICAN MOTORS DV OSO SOS HORNET } \\
& \text { BRAKE HOSE SPLIT. HOSE MAY BE TOO SHORT CAUSING } \\
& \text { NOT AYAILABLE. }
\end{aligned}
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03 \angle 42 U 0 \cup \text { bRKS.HYDKAULIC-LINES-HOSE, NON-METALLIC }
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\begin{aligned}
& 0590 \text { DABT } \\
& 3 / 8 \text { IN EROM }
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\text { HOSE CRACKED } 360 \text { DEG. AKOUND CIRC } 3 / 6 \text { TO }
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WHEEL FITTING.

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\begin{aligned}
& \text { U344 LUUV BKKS.HYDRAULIC-LINES-HOSE, NON-METALLIC } \\
& 73000202 \text { DODGE } 0500 \text { DART } \\
& \text { BRAKE HOSE HAS SEVERAL CRACKS AROUND CIRCUMFERENCE: \#AO208 } 20
\end{aligned}
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EITTING

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\begin{aligned}
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& 5011-C 12024 H-S A E ~ J 1401: ~ H O S E ~ C K A C K E C ~ \\
& \text { ITTING }
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\text { DART SWINGER } \\
\text { DEGREES AROUND }
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& \text { UUMMULATIVE PAETS EECEIVED FY } 77
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U601 VALIANT LUSTEF


P01089 A $7607 J U \quad \cup 2420 \checkmark U$ GKKS．HYDRAULIC－LINES－HOSE，NON－METALLIC
0601 VALIANT DUSTER


1090 HLOOWXTd 502000 ह：
BRAKE HOSE IS SPLIT 180 DEG AROUND LIIRC．
$N O=G Y-1 / 8-5011-A O 211211$
LEKS．HYDKAULIC－LINES－HOSE，NON－METALLIC
73000203 YLYMOUTH 3601 VALIANT DUSTER

03
$\stackrel{\sim}{=}$
U6O1 VALIANT DUSTEK
HOSE IS SPLIT THKU RUBEEE 360 LEGREES AKOUND AT 1 LND NEAK FITTING ID： $1 / 8-50111316043 \mathrm{H}-\mathrm{SAE}-\mathrm{J} 1401$
BRKS．HYDRAULIC－IINES－HOSE，NON－METALLIC
73000203 RLYMOUTH 0601
SAME AS A－1／8－5011－012J43H－SAL－J140
03242000
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GEKS．HYDHAULIC－LINLS－HOSE，NON－METALLIC
73 UUU 203 YLY\＆UUTH U60

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$79609 L$
$76073 v$

$\forall 88910 \mathrm{~d}$
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202446 A 770321

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UFFICE OF DEFECTS INVESTIGATION
CUMULATIVE EARTS KECEIVEL FY 77 1 JULY 76 LHKU 30 JUNE 77

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\begin{array}{lll}
\text { GOMkUNSNi: } & & \text { COAEONENT NAiME } \\
\text { CLASS } & \text { YK } & \text { MABUFAUTULEK }
\end{array}
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\text { IAK } \overline{\mathrm{c}}-M O D E \mathrm{i}
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100 \text { DEG. AKOUND NEAK MIDPOINT \#MIL-H-137 }
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GKKS. IIYDRAULIC-LINES-HOSE゙, NON-NETALLIC

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\begin{aligned}
& \text { UKKS. IIYDRAULIC-LINES-HOSE, NON-NETALLIC } \\
& 63000405 \text { GONTIAC } \\
& \text { HOSE IS CRACKED IN } 2 \text { PLACES } 18 \mathrm{C} \text { CATALINA }
\end{aligned}
$$

SOGIED CY LOKECNENT，HVUZL，KIL Y亡

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\begin{aligned}
& \text { HOSE IS CRACKED IN } 2 \text { PLACES 18U DEG AT ERAKE END } 1 / 16 \text { E } 1 / 4 \text { INCH FEOM } \\
& \text { FITTING-HOSE IS CKACKED } 345 \text { DEG AT WHEEL CYLINEEG ENE }
\end{aligned}
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$$
\begin{aligned}
& \text { HOSE IS CKACKLD } 34 S \text { DEG. AEOUND CIRCUNFERENCE AT WHELL CYLINDEK ENL, } \\
& 180 \text { DEG. AKOUNU FKAME END } 1 / 4 \text { INCH FKCM FITIINGS }
\end{aligned}
$$



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HOSE IS CKACKEDD 180 DEG．AHOUND CIKL． $3 / 8$ IN．FECM FRAME FIITING のヘロフカプ ？

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7＊4 II！甘さ エหา コロロラ
 20 EXTEENAL APPEARANCE EXCELLENT，SHUP CLAIMS HOSE BLOCKED FIUID，LOCKED
GEAKES ON LFT．FKONT．ADD＇L ID $75-1 / 8 \mathrm{HL}$（WEATHE HHEAD）

JSL4 ¿UVJ $\begin{array}{ccc}\text { PRP } & I & \text { DATE } \\ \text { NUNBER } & \text { D RECEIVED }\end{array}$

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 71000202 DODGE 0610 ACHACL EOLAKA BRKS．HYDKAULIC－LINES－HOSE，NON－HETALLIC
bO UJU4 JS PONTLAC
U6 12 TEMEEST

BRAKE HOSE BROKE APPROX．G＂FHOM WHEEL CYL．FITRING．TAG NUT FEADAELE

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\begin{aligned}
& 48 \\
& \begin{array}{l}
66000301 \text { EOKD DIVISION } 0700 \text { THUNDEREIED } \\
\therefore U S E \text { IS SPLIT } 36 \text { LLG. AROUND } 3 / 0 \text { FROM METAL EITTINGS AT BOTH ENDS O } \\
100 \text { DEG. AKOUND NEAK MIDPOINT MIL-H-137 }
\end{array}
\end{aligned}
$$

$\begin{aligned} & 08 \text { OOO } 202 \text { NODGE } \\ & \text { HOSE CEACKED IN }\end{aligned}$

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\begin{aligned}
& \begin{array}{l}
\text { OKKS. HYDKAULIC-IINES-HOSE, NON-MEIALLIC } \\
\text { O甘 OOO } 202 \text { NODGE } 10 \text { NONACC EOLAKA }
\end{array}
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? HOSE IS LEAKING．
BRKS．HYDKAULIL－LINES－HOSE，NON－METALLIC
67 OUOLUO GMC TRUCK DIV 5601 C $150 \cup$
HOSE HAS SEKIES OF CRACKS THROUGHOUT CUTER LAYEK
CIRC． $1 / 16^{\prime \prime}$ FECM EKANE FITIING．
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MANUEACIUKEK
MAKE－MODEL
BRKS．HYUKAULIC－LINES－HOSE，NON－MEIALLIC
$7300 J 2 U 4$ DODGE IRUCK OIV
HOSE IS SELIT THEOUGH OUTEK FUBBEK LAYEE
SHOP CLAIMS HUSE STRETCHED BLOCKING FIUI
8RKS．HYDRAULIC－LINES－HOSE，NON－HETALLIC
$\boxed{300}$
IN SE SHOP CLATMS HOSE STRETCHED BLOCKING FLUID FLOW जOnOULN
CLASS
$\begin{array}{ccc}\text { PRP } & \text { I } & \text { DAIE } \\ \text { NUMBEK } & \text { D } & \text { FECEIVED }\end{array}$ P02303 E 770131

67 JUU4UG GMC IKUCK LIV 5001 C 1500
HOSE HAS SERIES OF CRACKS IHROUGHOUF CUTER LAY HOSE SPLIT 17 V DEG．ABOUT CIKC． $1 / 4^{H /}$ EROM FITTING。



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P02113 A 76113 u
P0187d A 700916 HOSE IS LEAKING．
32
CLAIMS
BRKS．HYDRAULIC－DIFEERENTIAL－PROEORTION．VLV
75000402 CADILLAC 0101 CADILLAC DE VILLE
VAIVE IS NULSY－ERKATIC PERFORGANCE．EXETERNAL APEEAKANCE IS NOEMAL－ SUSPECT INTEFNAL NALFUNCTICN．
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\begin{aligned}
& \text { BRKS.HYULAULIC-DIFEEKENTIAL-PROPURTION.VLV } \\
& 75000203 \text { PLYMOUTE } 0401 \text { FURYI } \\
& \text { SUSPECT INTEENAL MALFUNCTICA - TAG NOT BEADAELE }
\end{aligned}
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PAGTS EETURN EAUGKAK
OFFICE OF DEFECTS INVESTIGATION $\quad 77 / 07 / 29$ PAGC UJOY

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RARTS FÉIUKN PHOGKAK OFEICE OF DEFECTS INVESTIGATION 1 JULY 70 THRU 3 Uे JUNE 77

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\begin{array}{lll}
\text { LUAKUNENT } & & \text { COMPONENT NAME } \\
\text { LLASS } & \text { YR MANUFACTUGER }
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77 / 57 / 29
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\begin{aligned}
& \text { URKS.HYDR-SHOE AND DRUH SYSTEM-DRUM } \\
& 72000203 \text { PLYHOUTH }
\end{aligned}
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\begin{aligned}
& 72000203 \text { PLYHOUTH } 0601 \text { VALIANT DUSTER } \\
& \text { HU IS BEOKEN OUT OF ASSELELY-CHACK EXTENOS ALCNG INAEF CIKCUMFEREKCE }
\end{aligned}
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BRK LINING CONTACT AKEA EXCESSIVELY WCKN, GROOVEL. INDICATIONS DEGON
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\begin{aligned}
& \text { BKKS.HYDK-SHCE AND DRUM SYSTEM-DRUPi } \\
& \text { O8 OOO2O3 PLYMUUTH } \\
& \text { BKAKE CRUM IS } 9 \text { IN. DIAHETER- FACING }
\end{aligned}
$$

BRKS.HYDK-SHOE AND DRUA SYSTEM-DFUM
IAKE-MODEL
OO 140501 VOLKSHAGEN DIVISN VOLKSFAGEN UNKNOWN
ZXCESSIVELY SCORED ON SHOE CONTACT FACE．SHOE LININGS AKE WCRN．

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60 \text { OOJ } 4,7 \text { CHEVKOLET LhULK DV } 5200 \text { EL CAMINO }
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\begin{aligned}
& \text { UGOO VALIANT } \\
& \text { BKAKE CRUM IS } 9 \text { IN. DIAMETER- FACING IS SCORED WITH } 2 \text { GÑOOVES CAUSEU }
\end{aligned}
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STHRTE NORMAL WEAR FIUM LINING UKUM CCNTACT THO MILEAGE TCO LOW
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CUMMULAIIVE EARTS RECEIVED FY 77
1 , JULY 76 THEU 30 JUNE 77

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\begin{aligned}
& \text { COMEONENI NAME } \\
& \text { MANUFACTUGEK }
\end{aligned}
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O3205UUU URKS.HYDR-SHOE AND JKUM SYSTEM-OTHEK
POSS. CHAFFING CAUSED EREAK FROH APPEAFANCE. TENSION IS GOOL.
HOOK IS BROKEN OFE KED BRAKE SHOL KETUEN SPRING AT ANCHOK I IN

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\text { PU2529 A } 7704 \cup 1 \text { USL71UUU BIKS HYLFAULICB-DISCCCALIEEE }
$$

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\begin{aligned}
& 59110203 \text { JAGUAR DIVISION } 0100 \text { JAGUAH } \\
& \text { CLAIMS KUST IN BOKE- DUST EVIDENT IN CALIPER-EAAKE FAIIUKE }
\end{aligned}
$$

PO2383 A $7702 \angle L$ U3271UUU BRKS HYDRAULIC-DISC-CALIEEE


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1 JULY 76 THRU 30 JUNE 77
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\begin{aligned}
& 72 \text { UOO } 103 \text { MEELUKY } \\
& \text { INEOARD PAD WORN TO RIVETS-LINING BROKEN-OUTEK PAD HAS CKACKED LINING- } \\
& \text { CALIPEK FROZE CAUSED BY BUST }
\end{aligned}
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& \text { LRKS HYDHAULIC- DISC-PADS AND SHOES } \\
& 72 \text { OUJ } 303 \text { MEKCU Y Y } \\
& \text { INGOARE EAD IS WOKN TO AETAL-NO LINING REMAINING }
\end{aligned}
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\begin{aligned}
& \text { YADS INSTALLED OA WORN KOTORS. YADS ARE WORN WITH KIDGE - CRACKS }
\end{aligned}
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& \text { CORPONENT NAME } \\
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COGPONENT NAME

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\begin{aligned}
& \text { INBOARE EAD IS WOKN TO NETAL-NO LIHING REIAINI } \\
& \text { AT ANGIE-SHOP CLAIMS CAUSEL BY BUSTED CALIEEB }
\end{aligned}
$$

AT ANGIE-SHOP CLAIMS CAUSEL BY BUSTED CALIEEG

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\begin{aligned}
& \text { PADS INSTALLED OA WORN KOTORS. YADS ARE WORN WITH KIDGE - CRACKS } \\
& \text { VISIELE AT RIVE'T HOLES. }
\end{aligned}
$$

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01272 \cup \cup J \text { BRKS HYDEAULIC-DISC-PADS AND SHOES }
$$

BRKS HYDRAULIC-DISL-PADS AMD SHOES

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\begin{aligned}
& 72 \text { OOO OOS PLYMOUTH } \\
& \text { OKAKE FADS HALF WOK }
\end{aligned}
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MAKE-MOUEL

EKKS HYDRAULIC－DISC－PAUS AND SHOES O3 C

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\begin{gathered}
0300 \quad 1 \angle 4 \\
\text { LINING HORN IN? }
\end{gathered}
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\begin{aligned}
& \text { BRKS HYDRAULIC-DISL-PADS AND SHOES } \\
& 73000403 \text { CHEVKOLET } \\
& 0300 \text { BELAIG }
\end{aligned}
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DEKS HYDRAULIC－UISC－PAUS AND SHOES
73000403 CHEVROLET

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\begin{aligned}
& 73000403 \text { CHEVKOLEI } \\
& \text { BRAKE LINING CAME OFF ONE EAD AT RIVCIS }
\end{aligned}
$$

FURY III
METAL ON ONE 0050

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\begin{aligned}
& 74150301 \text { FLAT DIVISION } \\
& 1 \text { OF } 4 \text { PADS EXCESSIVELX }
\end{aligned}
$$ PAD．ONE ENE HORN TO KIVET，UTHEF HAS 3／8＂LINING LEFT．



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\text { Pú2399 в } 770215
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BAITS EETURN EROGIAH
OFFICE OF DLFECIS INVESTIGATION 1 JULY 76 THRU 30 JUNE 77

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\text { CUMCUNLAI } & & \text { COAPUNEAS NAKD } \\
\text { LLADS } & \text { YE } & \text { MANUFACTUEEK }
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$716060 J$ TOYOTA HOTR CO LTD JOOO TOYOTA HOTA CO LTD
HUTOF SEVERELY RUSTED．PAD CONTACE AKEA HEAVILY GROOVED
しUの「ごULNI
しLAつS
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FACE SHOWS NORHAL WEAK．INNEA EEAHING EACL IS SLIGHTLY SCORED
BKKS HYDRAULIC－DISC－ROTOR－DISC HUO
$7 J$ UOO 405 EONTIAC
INSIDE FACL OF KOTOK EXCESSIVELY SCOKEL，WORN BEYONL LIMATS．OUTER EACE
SHOWS NOEMAL WEAR．INNER BEARING RACE IS SLIGHTLY SCOREE．
WKKS HYDKAUIIC－DISC－ROTUR－DISC HUB

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\begin{aligned}
& 73140301 \text { BMW DIVISION } 10 J \text { SMW } 2002.2 J O L \\
& \text { INNER FACE OF FOTUR SCORED FRON PADS, SHOP CLAIMS. }
\end{aligned}
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\begin{aligned}
& 73000303 \text { MERCUKY } \quad 0102 \text { CAPRI } 2600 \\
& \text { ROTOR IS RUSTEU-SUEFACE WHEKE PADS NAKE CONTACT HORN AHAY-NU EXCESSIVE }
\end{aligned}
$$

SCOEING OR GROOVES-GOTOR GAS HETAL FLAKING OFF OF IT. NO COULING EINS

$$
\begin{aligned}
& \text { BRKS HYDRAULIC-DISC-ROIOR-DISC HUB } \\
& 73 \text { OOO } 303 \text { NERCUKY } \\
& 73 \\
& \text { ROTOR IS RUSTED-SURFACE WHERE PADS MAKE CONTACT WORN AWAY-NO EXCESSIVE } \\
& \text { SCOKING OR GKOOVES-ROIOE HAS LIETAL FLAKING OEF CF IT.NC CQOLING FIGS }
\end{aligned}
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\begin{aligned}
& \text { SCOKING OR GKOOVES-ROIOR HAS LiヒTAL FLAKING OEF CF IT.NC COOLING EINS } \\
& \text { GKKS HYDKAULIC-DISC-ROTOR-DISC HUB }
\end{aligned}
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\begin{aligned}
& \text { BHKS HYUKAULIC-DISC-ROTOR-DISC HUB } \\
& 69000405 \text { PONTIAC } \\
& \text { FOTCK IS SCORED ON BOTH FACES AS IF FKCM HORN EADS. }
\end{aligned}
$$

GOOD.
BRKS HYDRAULIC-DISC- KOTOK-DISC HUB
CRACKED. BOTH FACES OF ROTCR SCOKED.
BRKS HYDKAULIC-DISC-ROIOE-DISC HUB
EEARING KACES ARE

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\begin{aligned}
& 70 \text { OOJ } 403 \text { CHEVROLET } \\
& \text { RECESS FOR OUTER BEARING KACE WORN- RACE FITS LCOSELY. RACE WAS ERCKEN }
\end{aligned}
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PARTS BEIUKN PKOGAAE
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\text { ЧLASS } & \text { YH MANUFACIURER } & \text { MAKE-MODEL }
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INSIDE BEAKE PAD CCNTACI AREA OF ROTCF WORN EXCESSIVELY THIN CEACKING
AT EDGES，EXCDSS．GROOVED，OUTEK AREA LIGHTLY SCOBED．RUSIY G ELAKING
ERKS HYDRAULIC－DISC－ROTOR－DISC HUD 50
72000303 MERCUKY 100 COUGAE
ROTOF FACING IS SCUFED AND BKOKEN $1 / 2$ INCH SECTION ON INSIDE－SHCE
ROTOK FACING IS SCUFED AND BKOKEN $11 / 2$ INCH SECT
CLAIKS CALIPER FROZE DUE IC RUST－KOTOF IS RUSTED
BKKS HYDKAULIC－UISC－ROTOR－EISC HUB
72000303 危EKUッY
72030 COUGAE
INAER EACE OF KOTOK SCOEEDEWORN VERY THIN－SHOP CLAIMS CAUSED BY HUSTEL
FROZEN CALIPER－ROTOK IS RUSTED
$\cup 3 \angle 730 \cup$ URKS HYDKAULIC－DISC－ROTOK－DISC HUB
73 OOO 402 CADILLAC $\quad 0300$ ELDCRALC
OUTEOAFD FACING OF HOTOK GROOVED \＆EXCESSIVELY HORN
OFEICE OF DLFECTS INVESTIGATIOA
LUAGULTIVE PAKTS KELEIVEN FY 77
1 JULY 7 THEU $3 J$ JUN』 $77^{\circ}$
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 CUMMULATIVE PARCS KECEIVED FY 77
COMEONENT NAME
GAKE-MODEL
METAL CONTACT. INNER SURFACE ONLY SIIGHTLY GROOVEDELESS HORN

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\begin{aligned}
& \text { DRKS HYDKAULIC-DISC-ROTOK-DISC HUB } \\
& 67 \text { OOO2V } 3 \text { KLYHOUTH } \\
& \text { ROTOR-ARAKE PAD CONTACT SHEFACF RADIY GROOUFD BS }
\end{aligned}
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ROTOR-ERAKE PAD CONTACT SUKFACE BADLY GROOVED AS IF FKOM METAL TO

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& \text { HILLAGL } \\
& \text { KI FAILUKE }
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049380 LRKS HYDEAULIC-DISC-ROTOR-DISC HUB
71 OOU JUS MERCURY
INAEK FACE OF ROTOK SCOKED EXCES. WOAN FROM PAD RIVETS. BEAEING RACES
ARE GOOD BRKS HYDFAULIC-DISC-ROTOK-DISC HUB
72 OUU $2 U 3$ RLYMOUTH
INNEK FACE OF ROTOR EXCESSIVELY SCORED.EXCESSIVEIY HORK. OUTER FACE

INNEK FACE OF ROTOR EXCESSIVELY SCORED,EXCESSIVELY HORN. OUTER FACE


LKKS HYDEAULIC-LISC-FUTOR-DISC HUD
$7200 U 402$ CMDILLAC
7200 CADIIIAC UNKNOWN

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$\stackrel{3}{4}$
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FACE
BED. BEARING RACES と OUIEK
BRAKING SURFACE IS FLAKING.

## 03273 UUU BRKS HYDRAULIC-DISC-EOTO\&-DISC HUB

INNER EACE OF ROTOK IS GEOOVED.
vj<73vuv
PO164 A 760902
P02220 A $7612 \angle V$
P01936 A 760926
PJ1873 A
700910

P0231J \&
$7702 v 7$
OEKS HYDKAULIC-UISC-ROTOR-IISC HUB
73 GUO $3 \dot{1} 1$ FOKD DIVISION

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050. mustang

LINER FACE OF ROTUK EXCESSIVELY SCOKED. BEARING B
LEKS HYDKAULIC-DISC-ROTOR-LISC HUb
73 GOO JU1 FORD DIVISION VSOO MUSIANG
INNEK FACE OF YOLOK LXCESSIVELY SCOKED, $\angle$ CONCENT


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SOGILD bY COMECNENT，HODDL，MUL YK
MILEんGE
ALEALLUNE
054106 EAULT CODE 50 71 GOU GOJ MONTEGO
KUTOK EACINGS EXCESS－WORN FKOM YADS．INNSR FALE CUL WIIH 2 NEEP
GROOVES．OUTER FACE IS VESY THIN．ADDOL I．D．C－6U26．

 ソ 327 JuU $\checkmark$ BKKS HYDKAULIC－DISC－ROTOK－DISC HUB $7100 \cup 303$ 万ERCUEY
 BRKS HYURAULIC－DISC－ROTOE－DISC BUB 75 OGO 301 FCRD UIVISIOK 500 MUSTANG
OUTER FACE OF KOTOR SEVEFELY SCOEED－EEARING EACES OKAY （
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67 UOO 101 AMEKICAN MOTOKS LV OBOU REBEL
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| UUMMULATIVE PARTS $Һ E C E I V E D ~ F Y ~$ | 1 JULY 76 THRU 3u JUNE 77

CUMFODGNT NAME

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Uら11 UUUV ENGINE MOUNTS
70000403 CHEVHOLET ID－GOLD NUT．
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CODE CAT. AT FAILURC ALLEAGE
352704 CODE CAT. 37 C SHOP CIMS NOISY. FLYHHEEL CFACKED OUTSIDE HUB, WEAK AT CKANKSHAFT LOLI
HOLES. BALANCING HOLES SHOH EOOK FINISH. CUMPUNENT NAYE


ENGINE ELYWHEEL
69000404 ULDSMOELLE 0100 CUTLASS
ENGINE FLYWHEEL
69000404 ULDSMOELLE 0100 CUTLASS
BALANCE WEIGHT CAME OFF FLYWHEEL - WELD BROKE


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73 UOU4U3 LHEVROLET V900 VEGA
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70000407 CHEVROLET TRUCK LV
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SLIGHT WEAR．BEARING SURFACE SHOHS LIGHT RUST．
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$00 ~ 00 J 305$ EORD TRUCK DIV $6203 \quad \mathrm{~B}-700$
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ENGINE－TIMING GEAR \＆CHAIN
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0000 PLYMOUTH
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SURTLI BY CUMECNENT,MODEL, AUL YEex end thkoug To Toormed

PO2013 A $7610<0$

760801
$7610<7$ P01625 A P02030 A

50011

$$
\begin{aligned}
& \text { U51510UU ENGINE - TIMING GEAK \& CHAIN } \\
& 07000401 \text { BUICK }
\end{aligned}
$$

$$
\text { US } 1510 U \text { ENGINE - TIMING GEAR } \varepsilon \text { CHAIN }
$$

$$
\begin{aligned}
& \text { TIMING GELT HAS NUMEROUS CKACKS ACROSS WIDTH ON OUTEE SUAFACS NONE } \\
& \text { EXTEND THKUGH TO TUOTHED EOKTIUN OF EELT. REELACED DURING VALVE JCB }
\end{aligned}
$$

EMGINE - TIMING GEAR E CHAIN

$$
\begin{aligned}
& 70000301 \text { FOKD DIVISIOA } \\
& \text { PLASTIC COATING ON GEAK IS CEACKED ON EDGE. PLASTIC ON }
\end{aligned}
$$

Plastic coatinu on geak is ckacked on edge. plastic on
METAL
CHIP

$$
079842
$$

$$
052168
$$

$$
\begin{aligned}
& \text { P02013 B } 7610 \angle 0
\end{aligned}
$$

c H I
ENGINE - TIPIING GEAK $\mathcal{C}$
71 OOO
TESTH FORD TRUCK DIV
AnCLGISA

| EIN <br> NUMEEK | PAP <br> NUMBEK | DAIL |
| :--- | :---: | :---: |
| RECEIVEU |  |  | 761047 $\infty$

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BAKTS HETUEN FEOGKAB UFFICE OF UEFECTS INVESHIGATION 1 JULY 76 THKU 30 JUNE 77
COMPONEN? NAKE


30916
19025 BIN
NUMBER

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50030
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$$
\mathrm{P} 02190 \mathrm{~A} \quad 770103
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\text { FO2541 A } 770412
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\text { us } 23 \text { ũus }
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$$
\begin{aligned}
& \text { ENGINE COULING SYSTEM-PUMP.WATEK } \\
& 70 \text { OUO } 403 \text { CHEVROLET } \\
& \text { BEAKING \& SEAL OF PUMP HAVE FAILED. SHAET IS LCOSE. } \\
& \text { LEAKING AT SHAFT. PUMP MADE LY AIKLEX }
\end{aligned}
$$

$$
\begin{aligned}
& \text { ENGINE COOLING SYSIEM-PUHF, WATEB } \\
& 7510045 U \text { DATSUN TGUCK DIV }
\end{aligned}
$$

BEARING LOCATION. -SHOP STATES-ALI
¿NGINE COOLING SYSTZM-PUMP.WATEK

$$
\begin{aligned}
& \text { LH } 140301 \text { BMG DIVISION } \\
& 74 \text { OTER PIIMP HFARTNG HOFN OUT SHAFT }
\end{aligned}
$$

$$
\begin{aligned}
& \text { WATER PUNP BEARING WOKN OUT, S } \\
& \text { ADD'L ID }-2.2 \operatorname{SICU~} A 74 \mathrm{BMN}
\end{aligned}
$$

$$
\begin{aligned}
& \text { ENGINE COULING SYSTEN-PUMP } \\
& 70160401 \text { DATSUN DIVISIUN }
\end{aligned}
$$

ENGINE COULING SYSTEN-PUMP, WATER
CENTER HUE OF WATEK VUIE PULLEY IS CKACKED/BROKEN- CVEAHEAIS

059710





$\begin{array}{ll}73000301 \text { KORD DIVLSIUN } & \text { UOO LTD } \\ 1 \text { OL } 7 \text { BLADE HETAL FLEX FAN EROKE WEAKLY HAKALLEL TO RADIUS．BKLAK IS }\end{array}$

$$
\text { ENGINE COOLING SYSTEH-FAN } 21
$$

$$
\begin{aligned}
& 71 \text { OOU301 FORD DIVISIUN } \\
& 5 \text { BLADE METAL FLEX FAN DAMAGED RAD. } 3 / 4 \text { GF OLAXIE } 50 J \\
& \hline
\end{aligned}
$$

$$
\begin{aligned}
& 5 \text { ELADE METAL FLEX FAN DAMAGED RAD. } 3 / 4 \text { OF } 1 \text { BLADE MISSING, SEPAKATEL } \\
& \text { ALONG BLAUE SUPPORT } 2^{\prime \prime} \text { FROH HUB END. ADD'L ID- } 3462139.24054 \text { (ELALE) }
\end{aligned}
$$

$$
\begin{aligned}
& \text { ALUNG GLAUL SUPPORT 2" FROA HUB END. ADDOL ID- } 3462139.24054 \text { (BLALE) } \\
& \text { ENGINE COOLING SYSTEM-F゙AN }
\end{aligned}
$$

$$
\begin{aligned}
& 70000402 \text { CADILIAC } 500 \text { CADIIIAC UNKNCWN } \\
& \text { UNE ELADE UF } 5 \text { BLALE METAL FLEX FAN IS SPLIT. SPLIT EXIENCS FEOR OUTER }
\end{aligned}
$$

$$
\begin{array}{ll}
\text { ONL ELADE UF } 5 \text { BLADE METAL FLEX FAN IS SPLIT. SPLIT EXIENES YKOR OU' } \\
\text { END OF BLD. TC CENTER, SUPPORTS NOT DANAGED. SELIT CAUSED VIGKATION }
\end{array}
$$

$$
\begin{aligned}
& \text { ENGINE COULING SYSTEH-FAN } \\
& 73 \text { OOU2O3 PLYMOUTH } \\
& 1 \text { HLADE BROKE OFF UF HETAL FLEX EAN. BREAK EXTENDS ALNG LENGTH OF ELL }
\end{aligned}
$$

$$
\begin{aligned}
& 1 \text { BLADE BROKE OFF UF METAL FLEX EAN. BREAK EXTENDS ALAG LENGTH OF ELL } \\
& 2 / 3 \text { OF BLADE MISSING. BUT INTACT AT KIVETS. ADDI ID } 24654 \text { A } 73 \text { E } 15 / 188
\end{aligned}
$$

$$
\text { ENGINE COOLING SYSNEM-FAN } 55
$$

$$
1100 \text { FORD UNKNOWN } 55
$$

$$
\begin{aligned}
& \text { ONE BLADE OF } 5 \text { BLADE METAL FLEX EAN IS SPLIT. ELADE IS SPLIT AI OUIER } \\
& \text { END TO MORE THAN } 1 / 2 \text { WAY THRU BLADE NEAB SUPPORT. SUPPORT NOT DAMAGED }
\end{aligned}
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\begin{aligned}
& \text { T IN } 1 \\
& \text { U7 } \\
& \text { ECIION }
\end{aligned}
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EARTS WLIUKN YKOGRAM
UFEICE OE DEEECTS INVESTIGATION
UMALLATIVE PANTS RECEIVEW FY 77 1 JULY 76 THRU 30 JUNE 77

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\begin{aligned}
& \text { COLPUKEAT NAKE } \\
& \text { BALUFACTUREK }
\end{aligned}
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053404006
$77 / 07 / 49 \quad$ ェ́nui j11 $32 C$

DWIICH UEL TANK ASSEMBLY－PIPE，FILLER－NECK 32

| 73 | 150301 FIAT DIVISION $0400 \quad 128$ |
| :--- | :--- |
| $H O S E$ | 0. |

HOSE HAS SERIES OF CEACKS IN RUBBER，LEAKS FUEI．HOSE IS MOT RUEBEB／
CLOTH SANDHITCH TYPE OPTEN OSED FOR CARRYING EUEL．
FUEL TANK ASSEMBLY－TANK 32
74 （PORTION）RUST EVIDENT CN INSIDE SURFACE．
SHOP SUSPECTS INSUFFICIENT PLATING．
FUEL TANK ASSEMBLY－GAUGE，FUEL 44
FUBL TANK ASSZABLY－GAUGE，FUEL
69000201 CHEYSLER DIV
IAREGULAR
IS SMOOTH
P01899 A 760919 U61140UJ FUEL TANK ASSEMBLY－GAUGE，FUEL
44
SENDING UNIT ASSY．IS INTACT．FLOAT IS DENIED EUT NO HOLES AKE AEEAGNI
ACTION OF FLOAT ARIG IS GD．SUSPECT MISADJUSTUEAT AT ELEC．CONTACI．
44
73000403 CHEVECLET 0312 IMPALA $1 / 4$ TANK NOVE $1 / 4$ ISTBLE DEFECTS－SUSPECT
PROBLEM IN TANK EESISTOR UNIT－ELECTRICAL SHOET

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40003
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40003
HAKE-MODEL

CAULT ERZ ．
COLE CAT．

| 40003 |
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P02602 A 7705 Ú vo114UJU FUEL TANK ASSEMBLY－GAUGE，FUEI
72000202 DODGE 0600 MONACO
YLOAT APPEARS INTACT－FUEL GAUGE HOES NOT WORK
OU OOOOOU UNKNOWN OU UNKNOHN
DIRT ON PORTION OF HESH SCREEN．STALIIAG CCNDIIICN
O115UUU FUEL TANK ASSE円BLY－ATTACHMEN＇S

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Cnncllan hlzoLl v geદzod

$77 / 07 / 29 \quad$ PAGE J11
PAKIS EETUKN PKOGNAB
OFPICE OF DEFECTS INVESTIGATION
CUGGLATIVE GARTS RECEIVED F
1 JULY 76 IHRU 30 JUNE 77
CULPUNEA" COMPONENT NATE
MAKE－MODEL
FUEL TANK ASSEMBLY－ATTACHMENTS
OO OOOCOU UNKNOHN OOOO UNKNOhN
DIKT ON POETION OF AESH SCREEN．STALLING CONDITION
¿61150uv $\begin{array}{ccc}\text { PGP } & \text { I } & \text { DATE } \\ \text { NUMBER } & \text { D RECEIVEL }\end{array}$

BIN
NUNBER
50039
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50339
PO2326 A 770214 OO11SUUV FUEL TANK ASSEMBLY－ATTACHEENTS
OO OOOOOU UNKNOWN
DIRT ON POAIION OF $\because E S E$ SCKEEN．STALLING CONDITION
FUEL TANK ASSEMBLY－ATTACHMENTS OU 00000 J UNKNOWN
DIRT ON PORTION OF ION．
COSDIT
$\begin{array}{llll}\text { FUEL ITANK ASSEKBLY－ATTACHMENTS } & & 4 \\ \text { OU OOOOOO UNKNOWN } & 400 \text { UNKNOYN }\end{array}$
DIRT ON POETION OF MESE SCEEEN．STALIIAG CONDITION
NO 115 UUU FUEL TANK ASSEMBLY－ATTACHMENTS
68 NOLDED KUBBER TANK VENT HOSE IS SULIT AT＂T＂
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73000301 FOK̃ DIVISION
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FUEL EMISSION CONTROL－VALVE
00000204 DODGE TRUCK DIV

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FUE PUNE WENT ON SUDDENLY SPKA
DIAPHRAM RUPTURED－SERVICE TRUCK
FUEL LINES，METALLIC
69000201 CHEYSLER DIV
5／16－INCH METAL FUEL LINE IS KUSTED－EINHOLES $氏 L E A K S ~$
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ITCIOL ぞ OSTVOd
$P 02503 \mathrm{~A}$
$P 02427 \mathrm{~A}$
P02431 A
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PAETS HETUKN PROGKAM

1 JULY 76 THRU 30 JUNE 77
SORTEE BY CUMFCNENT, MODEL, KIDL YR

HAZ．
CAT． FAULT CODE 00 0314 IMPALA CUSTA CPE AETAL FUEL LINE LIGITLY RUSTED－LIHE WAS CUT EY FRAME WHEN SUSPEMSION BO＇ITOMED OUT
COMPUNENT NAME
MAKE－HODEL FUEL LINES，MEIALLIC 32

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\begin{gathered}
\text { MILEAGE } \\
\text { AT IAILUGE }
\end{gathered}
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\begin{gathered}
\text { CUNIULATIVE PARTS RECEIVED } \\
1 \text { JULY } 76 \text { THRU } 30 \text { JUNE } 77
\end{gathered}
$$

CONPONENT WAME

$$
\begin{aligned}
& \text { FUEL PUKP } \\
& \text { O8 } 000403 \text { CHEVKOLET } \\
& \text { UIAPHRAM ACTIUN IS w }
\end{aligned}
$$

$$
\begin{aligned}
& \text { UIAPHRAM ACTIUN IS WEA } \\
& \text { SPRAYED GAS ON EXHAUST }
\end{aligned}
$$

SORTEE BY COMECNENT，MODEL，MDL YK

$$
\begin{aligned}
& \text { FUEL PUMP } \\
& 70 \text { UOO } 203 \text { PLYMOUTH } \\
& \text { GAS LEAKING FEOM TOP OF PUMP. SUSEECT LIAPHRAM IS CRACKEL. ADDUL IL. - } \\
& \text { CARTER O-1994. }
\end{aligned}
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COUE CAT． COUE 32 －

J JHdVつ OCEO
SAYS THAT PUMP RUNNING．

conck SHOP CLAIUS PUMP HAS EXTERNAL LEAK © NO VACUUM PRESSURE，SUSPECT CEACK
IN DIAPGFAGM．IKTEXNAL DEFECT．ADD＇L IU－MADE IN CANADA

$$
\begin{aligned}
& \text { FUEL PUKP LEAKS. ON EXHAUST MANIFOLD. EVIDENCE CF GAS ARCUND LEVER } \\
& \text { GASKET. SUSPECT HUPTURED DIAPHRAGH. }
\end{aligned}
$$

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$j 98036050$
TzCOM- تy yw
U6136UUU FUEL PUMP

$$
\begin{aligned}
& 76 \quad 000203 \text { PLYMOUTH } \\
& \text { ID: }: 4027585,6774,2535,0-1994-\text { PUMP LEAKED GAS INTO CRANKCASE-SUSPECT }
\end{aligned}
$$

OOB 13 UUVO FUEL PUMP
$4078.74 \mathrm{TF} 935 \mathrm{U}^{\mathrm{L}} \mathrm{BA}$
06140000 FUEL SYSTEM OTHER EARTS

$$
\begin{aligned}
& \text { FUEL SYSTEN OTHER EARTS } \\
& \text { 67 OOOLGO HUICK } \\
& \text { GHOOVE hOAN ON FUEL PUKE DHIVE CAM. GEOOVE IS CN PUMP ARM KIDING SUR- }
\end{aligned}
$$

HALE．EXERNDS 3

$$
\begin{aligned}
& \text { GHOOVE hOKN ON FLEL PUKE DHIVE CAM. GEOOVE IS CN PU } \\
& \text { FACE, EXIENDS } 135 \text { DEG. AROUND CIKC. E IS } 1 / 8 " \text { LEEP. }
\end{aligned}
$$

FLCAT MATERIAL IS SATURATED WITH GAS - CAUSES CAEB TO FLOOD

$$
\begin{aligned}
& \text { CAKUURETUK, UNKOWN TYPE-CTHER PART } \\
& \text { JO OOO } 400 \text { GENEFAL IOTORS CO }
\end{aligned}
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76000203 \text { PLYMOUTH }
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\begin{aligned}
& 770214 \text { U6L1JOUU CAKEURETOK, UNKOWN TYPE-OTHER PART } \\
& \text { ancri>9n } \\
& \text { カーてOLL }
\end{aligned}
$$

OFFICE OF DEPECTS INVESTIGALIU：
CUMEULATIVE PARTS RECEIVEU FY 77 1 JULY 76 THRU 3O JUNE 77
30011
HANUFACIUKEK
LARTS EETUEN PROGKAH COLPUNLN＇CUMPONENT NAME
BAD DIAPLKAM-NO DATA TAG W/PARE
MAKE－HODEL

$$
\begin{aligned}
& \text { CARBURETOR UNKOWN TYPE-OTHEK PAEI } \\
& \text { UU OOOJOU UNKNOWN } \\
& \text { CAFB FUEL INLET HEPAIR FITTING LEAKS-IS PIUG TYEE } \\
& \text { CONNECTION IN WHICH EXPANDED BUBEER PECVIDES SEAL }
\end{aligned}
$$

$$
\begin{aligned}
& \text { CAKEURETOR, UNKOWN TYEE-CTHER PART } \\
& 0 O \text { UJUOUO UNKNOWN }
\end{aligned}
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\begin{array}{ccc}
\text { PRE } & \text { I } & \text { DATE } \\
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\end{array}
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CONNECTION IN WHICH EXPANDED EUBEEK PECVIDES SEAL
CARBURETOR，UNKOWN TYPE－OTHEK PART
70 UOO $4 U 3$ CHEVKOLET
SOAKED WITK FUEL，FLOAT IS COAPOSIT
SOAKED WITK FUEL，FLOAT IS COMPOSITION ©ATERIAL TYPE．
P01756 A $700 \measuredangle 1 \mathrm{U}$ U $62130 \cup \cup$ CARBURETOR，UNKOWN TYPE－CTHEK PART
$u 63513001$
098036050
054911007
098036056
040533002
voos 1u uve
$52 / L C / L L$
 CARBURETOR，UNKOWN TYPE－CTHEK PART
69 OOO 903 MEKCURY
PLASTIC CARE．FAST IDLE CAM BROKE AT IINKAGE HOIE CAUSING GAS LINKAGE
TO STICK．
PO2483 A
－
30013



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0621300 \mathrm{v}
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ANUFACIUKEK
nncELTOn LFEOLL $\forall$ E8力てCd
74110206 KG DIVISION

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NACELTOn LFEOLL \＆E8カZCd

71000305 FOKD TRUCK LIV 5111 F 250
PUAP GASKET LEAKS．RUBHER DIAPHRAGH BEITTLE．PART IS WCRN－OUT．
NOAFLT90

50014
10008

[^4]voL SJuvu
CAKEUHETOR，UNKOWN TYPE－CTHER PART
71000407 CHEVHOLET TRUCK LV 5700 KICK UP MODELS
COEPOSITION MATERIAL FLOAT IS SOAKED HITH FUEL CAUSING EL
CAEEURETUR，SINGLE

 －

73160401 DATSUN DIVISION 102 DATSUN 2402
EOWER VALVE CAUSES LARGE AHOUNT OF FUEI TO PASS THROUGH CAKB．
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P02041 A －

P02521 A
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MAKE－MODEL

OFFICE OF DEFECZS INVESTIGAIION CUMMULATIVE EAETS RECEIVEU
1 JULY 76 THKU 30 JUNE 77

CUMPULLEML COMPONENT NAİE
MANUFACIUREK
CAITUEETOR，DOUBLE－OTHEK EAET 130200 CHARGEK
73000202 DUDGE
GASKETS \＆ACCELE SEAT HEAK AND INCOKAECI FLOAI SETTING

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0 UU CLOY，DETLRIOZ̃ATEE
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GUACE OF ALUM．
GR PORT BLOCKED
U4OO MAVEELCK
MADE OF ALUM．ALLCY，DETEKIORAIED AT
EGR POKT BLOCKED WITH DEPOSIIS．
CAKEUBETUR DOUBLE－OTUEK PAFT
74 USOJ MONTEGO
EGR CARB PLATE IS BUKNT THFU BY EXHAUST GAS－POFT IS CLOGGED W／DEPOSITS
PU2382 A $7702 \angle 2$ UOL33UUU CAFBURETOR，DOUELE－OTHER PART $2 G \quad$ C
COMPOSITE ELOAT MATERIAL SATURATED WITH GAS－FLOAT SINKS CAUSING FICCD
32
 72000403 CHEVROLET


NIFOLL $\forall$ ROHZCA

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PAETS EETURN EGOGRAM
vir -nys
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PARTS EETURN PROGKAM
OFFICE UF DEFECTS INVESTIGAIIUN
CUMMULATIVE PARTS EIECEIVED EY 77
1 JULY 76 THRU 30 JUNב 77
COAPUMLNT CONPUNENT NAME
CILEAGz
AT FAILUK

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\begin{gathered}
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\text { AUMEE } \\
\text { US8 } 1<6073
\end{gathered}
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AVEEICK
LEAK．ELACK DEEOSII＇S IN CHANC
HEFFIELD PAKT
XHAUST／CFANK LASE EMISSICN CONTGOL DEVICES
$30 U O J U 3$ MERCUKY
USO NERCUKY－MARUUIS AT CHENNEL－SOURCE OF VACUUM LEAK．IG \＃\＃VEGASBGAC SHEFEELI
$\begin{array}{ll}\text { EXHAUST／LEANKCASE EMISSICN CONIROL DEVICES } \\ 74000303 \text { MEHCURY } & \text { U } 407 \text { MERCUEY－MARUUIS }\end{array}$ EGR SPACER PLATE IS LADEN $H /$ DEPOSITS．PLATE CCRRODED THRU CA TOP $\&$ SIDE．ADD＇L ID－D $3 V$ SA588AC FORD
XHAUST／CKANKCASE EMISSION CONTROL UEVICES
ALUN．EGK PLATE BURNED THRU，CSD．VACUUM $730003 \cup 1$ FORD DIVISION
ALUN．EGK PLATE BURNED I
POKT IS NOI CLOGGED．PLAT


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UKAUSI／CネANKCASE EMISSION CCNTROL DEVICES 32
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\end{aligned}
$$ PU2L15 B 7012L0 770447 $7701 \angle v$ 202170 A

202273 A
P02613 A
P02237 A
P02476 A
EXHAUSI/CKANKCASE EMISSION CONTRGL UEVICES

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10.226
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\begin{aligned}
& \text { CONPUNENT NAM } \\
& \text { MMUEACTUKEK }
\end{aligned}
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HAKE-MUDEL

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\begin{aligned}
& \text { EXAAUS } 74 \text { COU } 2 U 2 \text { DODGE } \\
& 74 \text { UOOO MONACC }
\end{aligned}
$$


EGE CHANNELS IN VALVE NOT BLOCKED SUSEECI VALVE DIAPBAAM MAY EE SELII
ADD＇L ID－BIL O34（FOAD）
ennnngan 9090LL
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PAETS EETURN PROGHAM
OFFICE OF DËFECTS INVESTIGAIION
CUMNUATIVE EABTS KECEIVED FY 77
1 JULY 7O THRU 30 JUNE 77
PAETS EETURN PROGHAM
OFFICE OF DËFECTS INVESTIGAIION
CUMNUATIVE EABTS KECEIVED FY 77
1 JULY 7O THRU 30 JUNE 77
PAETS EETURN PROGHAM
OFFICE OF DËFECTS INVESTIGAIION
CUMNUATIVE EABTS KECEIVED FY 77
1 JULY 7O THRU 30 JUNE 77

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CLAIMS

EGR VALVE KANIFOLD PART IU NO－D3AE－GE753AD－2
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P020ن் A 751103
P02274
770124 SHOP CLAIMS BAD EXHAUST LEAK．EXTEスNAL APPEABANCE OF VALVE
ADD＇L ID－FORD D $3 A E-Y D 475-L A$
74000303 KERCUKY 0407 MERCUEY－MAECUIS
EXHST／CRINACSE EHISSION CNTEL－CHECK VALVE
76 OOU204 DODGE TRUCK DIV 50.1 B1 VAN COMPACT
VALVE IS BKOKEN，DOES AOT SEAT COEKECTIY．SHUP CLAIMS CAUSEL＂SEVEAE
EKKATIC ENGINE STALL－OUT＂
37
$37 \quad \mathrm{C}$
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H BROKEN－
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EXHAUSE MANIFULD IS ERUKEN AT DUAL CENTER PORTS，NEAK PIPE CUNAECTICN．
DEPOSITS IMSIDE GANIFOLD AGE LIGHTER AT PIEE HCOKUE
EXHAUSI SYSシミiースんい\＆FULD，ENGINE

LOOS
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P02671 A $77051 Y$ UOOUVOOJ EXHAUST SYSTEH
0406 ELECTEA LIMITEL
SUSPECT LEAKAGE AT VALVE SHAET
ISN甘HXZ SNIVT）
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770511
EXHAUST SYSTEM－MANIFOLD，ENGINE
75 U O 206 CHEVEILE MALIEU
MANIFOLD IS BROKEN AT $\# 5$ PORT－SUPPORT BAR AND MANIFOLL
ULACK LEPOSITS INSIDE MANIFOLD PONT
EXHAUST SYSTEM－AANIEOLD，ENGINE
$7400 U 402$ CLADILLAC 300 ELDCKAEC
MXHAUST HANIFOLD IS CKACKEL IN TWO USTGEEN CENTLE
DEPOSITS IN MANIEULK．MANIFULD IS FROMV－8 ZNGINE
X\｜AUD
Uy OOO4U3 CHEVROLET USOLDENGINE 312 IMPALA
n
PAKTS FETURN PROGKAM
MILEんGこ
AT FAILUKニ


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1 \text { JULY } 76 \text { THRU } 30 \mathrm{JUNE} 77
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FAUIT, HAL.
CODE CAI.

SOFTED HY COHECNENT，MODEL，KDL fK MILEAGZ
AT EAILUKZ
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73 OOO 403 CHEVROLES 80 J MONE CAKLO
INNER NALL OF DOUBLE WALL PIPE COLLAPSED LACK OE POWER
COKとU． $\operatorname{COHT}$ COKOMEN工 NAME
COKPOMEM工 NAME
vOOL NUUU EXIAAUST SYSTEM－IIPĖ，EXHAUSI＇
74000403 CHEVKOLET
INNER WALL OF DOUELE
INNER WALL OE COLD WATER FEOM
VOOLUUUU ミXHAUSA SYSTEM－PIPE， INWEF WALL
U66 2UJUU EXHAUST SYSTEM-PIPE, EXHAUST

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& \text { FAUIT HAL. } \\
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 EXHAUST SYSTEM－PIPE，EXHAUST
70000301 FORD DIVISION
10.200 uv EXCESSIVELY EUSTED．
XHAUST SYSTEM－PIPE， EXHAUSI
73 UUO4OO GIAC TRUCK DIV
BACK PRESSURE $\mathcal{E}$ POWER LOSS
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SIGaON dO YSId 0095 $\begin{array}{ccc}\text { PRE } & \text { I DATE } \\ \text { NUMEER } & \text { D EECLIVEU }\end{array}$ P02093 A 701122 $\rightarrow 7119 L \quad \forall \quad 26020 \mathrm{~d}$

FJ2784 A 770624
E01970 A 7610 U5 － 761220
p02219 A

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POWEN TKAIN CLUTCH ASM－LINKAGE，RIGID
67 OOO 701 FORD DIVISION
PEDAL EIVOT SHAET IS EXCESS．WORN，GRCCVED ON LFT SIDE．SUPRORT ASSY．

v713uvuv
$72 \cup 004 \dot{3} 3$ CHEVKULET
CLUTCH CAbLE IS FRAYED AND BKOKEN AT BCTH ENES
へのヘローL゙ロ
$\begin{array}{ccc}\text { PRP } & \text { I } & \text { DÅL } \\ \text { NUABES } & \text { KECEIVED } & \\ \text {［02751 A } & 770617\end{array}$
P025J9 A 770404
P025J9 A 770404
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POWER TEAIN CLUTCH ASM－LINKAGE，FLEXIBLE
74 COU $3 J 1$ FOAD DIVISIUN $06 J 3$ PINTO WAGON
CLUTCH CAGLE ACTIUN STIFF IMPEDED BY LCOSE PLASTIC INSIDE HUUSING
CLUTCH SIIPPED NOISEY ODOR
PUKER TKAIA CLUTCH ASM－LINKAGE，FLEXIBIE O 3
FAULI．HAC
CODE CAT
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Pu2148 A


CLUTCH PIVOT BALL FASTENED TO FENDEE WELL AND EENDER WELL AEEA CRACKEL AND EULLED OUT－LOSS OF CIUTCH
POWER TRAIN CLUTCH ASM－CROSSHAFT，PIVOT 03
II وN甘LSOW hOS？NOISIAIG QYOA LCEOSO HL
BOLT BEOKE AT BASE－CAUSED CLUTCH TO EE ENGAGED
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PWK TRN CLUTCH ASH－LEVEL，RELEASE，THEOH－OUT
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05000203 ELYMUUTK
BEREING DETEKIOEATE
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CLAIMS
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NO PART SENT．SHOP KEPORTS PLATES．


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& \text { PW TRN TRNS. }- \text { UNK. TYP-LVK \& LNKG,COL. SHIFS } \\
& 73000305 \text { FUKD TRUCK DLV }
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YIN HOLE SECURING SHIFT LEVER IS BROKEM FRCM HOUSING

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& \text { GEAKING WOFN CAUSING HARD SHIFTING \& VIBRATION- EALL TYUE- INNER HACE } \\
& \text { LIGGT SCORED }
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\text { FITAL SHIFT HU8 IS CRACKED LENGTHWISL } 2100 & 1 / 2 * A T ~ S H I E T ~ T U B E ~ C Y L . ~ H O U S I N G ~
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OFFICE ÓF DEFECCTS INVESTIGA OFFICE OF DEFECTS INVESTIGATIUN
CUMMULATIVE PARTS RECEIVED FY 77
1 JULY 76 THEU 30 JUNE 77
$\begin{array}{lll}\text { LULFUNENT } & & \text { COMPONENT NAME } \\ \text { LLASS MANUEACTUEER } & \text { YR }\end{array}$

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U7JUUVU POWER TKAIN TKANSMISSION,AUTOMATIC 53
CABLE ACTION IS ROUGH- HANGS UP UN CASING
BKASS TÄANS OLL COOLER ELEH
NATION WITH COLLING HATER.

000004 J 0 GENEHAL MOTORS CO NAIION WIIN COLLING NATER.
EOWEG TKAIA TRANSKISSION AUTOHATIC
75000403 CHEVKOLET
SPKING BROKE, CUT THRU CCVER. SPRAYED TRANSHISSICN FLUID ON LATALYIIC
CONVLRIEK CAUSING SMALL FIEE
73 UOU4U3 CKEVKOLER 100 CAMARO
CABLEACIOM CASING
TUEING 74000405 PONIIAC 0200 GRAND $14 R I X$

POWEK TRAIN THANSMISSION, AUTOHAIIC 28
CENTUEY
75000401 JUICK 0300
TRANS. CASE CKACKED. CAUSING FAILURĖ.
0730 uvuv
U73UUUUU POWEE TEAIN TRANSMISSION, AUTOMATIC

POWER TBAIN TRANSMISSION AUTOMATIC
U 400 CORONET
0400 CURONET
POHER TEAIN THANSMISSION, AUTOMATIC
$7 S$ OUO2UZ DODGE
SERVO EISTUN IS CRACKED AT CENTEG
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POWEK TMAIA TKAKSKISSIUN，AUTUKAIIC
$00000301 \overline{F U K D ~ D I V I S I O N ~}$
CATAL．CONVERTER PLACED TOC CLOSE IO
POWER TEAIN TKANSMISSION，AUTOMATIC
LINES WERE CLIPPED IOGETHEK AT BEACKEI－RUBEING ICGETHEG WCEE HOLE IN HETAL 5／16－INCH LINES－OIL LEAKING ON EXHAUSI PIFE
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BRACKET．HOULD NOT LET TRANS．ENGAGE EAZK．CAR WCUID START IN FEVEESE

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TKANSMISSION BEOKE AT BASE
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PHR TRN DEIVELINE UNIV．JI．－STANDAKD
U－JOINT ROUGH ל NOISY．BEARINGS IN ONE JOUGNAI EXCESS HORN－LUBE HAD
HARDENED BUT NOT IN OTHE 3 3．JUINT IS FKOK SHALLER CHRYS．DEIVE TKAIN
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BALI BEARING EACE ON CV JOINI BROKEH－2 BALL BEARINGS HISSING－WELL LUEL
BELIEVE OUTEE CV OF FEONT HHEEL LRIVE AXLE
PWR IRN DRIVELINE UNIV．JT．－UNKNOFN TYEE
71 UOU 301 FOKD DIVISION
71500 NUSTANG
BEARING FAILURE－OWNER CLAIAS THIS IS ORIGINAL U－JOINT－ONE CUP $1 S$
WRONG SIZE
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PWE TRN DEIVELINE－DIFFENTIAL UNIT
73000203 PLYMOUTH
KINION SHAFT BKOKE SNAPFED GEAEX \＆BEARINGS IN GOOD COND EINION
PWE TRN DEIVELINE－DIFFENTIAL UNIT
73000203 PLYMOUTH
KINION SHAFT BKOKE SNAPFED GEAEX \＆BEARINGS IN GOOD COND EINION SEAL DAMAGED ADDL ID 71172 MS 2922 HELIXFORM

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PWR TRN DRIVELINE－DIFFENTIAL UNIT
71000301 YUKO DIVISION 0 UOU MUSTANG 1 S
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PWF TRN DRIVELINE－DIFFENTIAL UNIT SNGI SPD
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UFFICE OF DEFECTS INVESTIGAIION
CUMULATIVE PAFTS RECEIVED FY 77
$\begin{aligned} & 1 \text { JULY } 70 \text { IHEU } 30 \text { JUNE } 77\end{aligned}$
UFFICE OF DEFECTS INVESTIGAIION
CUMULATIVE PAFTS RECEIVED FY 77
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& 74140501 \text { VOLKSWAGEN DIVISN }
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P02717 A 77ÚGU2 v821UUUU ELLECTEICAL SYSTLM ALTERNATOR－GENERATOR

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ELECTRICAL SYSTEM－RECEPTICLE，FUSE
74 OOU $4 U 7$ CHEVROLET TKUCK DV 5702 C2O
SEVERAL WIRES OF HAIN HARNESS MELTED FBOM SHOBT．THERE IS A COPPER
SLUG IN FUSE PANEL．LEADS TO T／S SWITH AMONG BUKNT WITRES．
LECTRICAL SYSTEM－IGNITION～SWITCH 1410
ENGINE WOULD STAET PREMATUEELY－SWITCH IS NORMAI IN EXTEENAL APPEARANCE SUSPECT INTERNAL SHORT－IE：DIAB－11572－AA
ELECT．SYS．－ALTRNTR，KGULTR，STRTR－CTHEE EART 41
ALT．BELI EROKE，CAUSED ENGINE NLSS－EIEE FROM LOW VOLTAGL，OVELHEAIEL
CONVERTER，EALJING UNDEG R／F SEAI CAUGHT FIRE．AMMETER NO ALT．LIGET
ACIION OF SEALED FRONT ALTEKNATUK BEABLHG IS ZOUGH－WOUIL HEAT UP
CAUSING TO BURN－\＃5203NSL
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& \text { ELEUTRICAL SYSTEM SIAKTER RELAY } \\
& 69000204 \text { DODGE TRUCK DIV }
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P02v1jA $7611 u j$
PO2188 A 761219
P62188 A
P02494 A $7704 \cup 7$
$\because 1979$ A $7610 \cup 5$
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P02428 A 770317

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$\begin{array}{llll}\text { ELLECTRICAL SYSTEH－IGNITION－SHITCH } & & \\ 73 \text { OUU } 301 \text { FORD DIVISION } & 2800 \text { LID } & \end{array}$
\＃ 1. TERNINAL IS LOOSE．SHALL PORTION OF BLACK PIASTIC HOUSING IS BEOK－
EN．AND SMALL POETIOG OF METAL HUUSING IS BROKEN．EART ID B $3 A B-11572-A 1 A$
上LECTRICAL SYSTEM－IGNITION－SWITCH 44
CLAIMS IGNITION SWITCH ACTION HAFD－SLCh TO NAKE CONTACT－曹OUY6ZD $3 G 2$
14
COFHODED YELLOH IGNITION SWITCH WIEE HEAT UP $\&$ ARCS TO KILL ENGINE
ELECTRICAL SYSREM－IGNITION－SHITCH
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## ELECTKICAL SYSTEM－IGNITION－SWITCH

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（1）$\quad \pi$ Һ9 JUU\＆U1 CHRYSLER DIV
WIRES ARE NOT BRITTLE．NO VISIBLE DEFECT APPEABANCE．SUSPECT VULTAGE
LEAK．POOK WET WEATHER PERFORMANCE

ELEC．SYS．IGNITION－WIRING，PRIHARY E SECCND．
$\begin{array}{llll}\text { ELEC．SYS．IGNITION－WIRING，PRIHARY E SECCND．} & \text { C } 4 \\ 7300 J \angle O 2 \text { DODGE } & \text { U2OJ CHAFGER } & \\ \text { WIEES ARE NOT BRITTLE．OIL COVERING ON SOME WIRES．SUME WIRES SHOW SUB－}\end{array}$ JECTION TO HEAT．WIEE ENDS ARE IN GOCD CONDITICN

ELEC．SYS．IGNITION－WIFINOG，PKIMAKY \＆SECCND．
74 UOO 203 PLYMOUTH
SILICON WIKE SET－ELECTRONIC SUPPRESSION－CLAIES EOOR PENFCEMANCE WEI
ELEC．SYS．IGNITION－WIKING，PEIMAKY \＆SECOND． 44
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ƠS30UUU ELEC．SYS．IGNITION－WIRING，PHIMARY \＆SECCND．
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UO530UUU ELEC．SYS．IGNITION－WIRING，PEINARY \＆$\triangle E C O N D$ ．
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ELEC．SYS．IGNITION－WIKING．PRIMARY © SECOND． 44
WIKES ARE PLIALLE．END CONTACTS AEPEAF GOOD．SHOP CLAIMS HILL NOT STKT
WHEN WET，SKIES HMEN RUNNING．ADDL．IC．H 30－71 CM
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$7100 J 401$ BUICK
$\begin{array}{lllll}71 \text { OOJ } 401 \text { BUICK } & & \text { SOO SKYLAEK } \\ \text { WIRE SET IS BAITTLE．TERMINALS AEE CLEAN．SUSPECT WIRES EECAME CONTA－} \\ \text { MINATEE W／MOISTURE．SHOP LLMS CAE SHIPS／SIALLS／HARD TO START WHEN WEI }\end{array}$
ELEC．SYS．IGNITION－WIRING，PEIMARY と SECOND．
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\end{aligned}
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SORTEE LY COKECNEAE，KOODEL，HOL YE


PAAIS FETUEN EROGKAN
 1 JULY 70 THKU 3U JUAE 77
COKECNENT，HODEL，HOL YF MILEAGE AT EんLLUKE FAULE．HAZ． FAULA．
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\text { IS WORN. ADD'L ID }-945 \mathrm{D} 1 \mathrm{E}
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\begin{aligned}
& 5400 \text { VANDUFA SERIES } \\
& 75 \text { OOOLU6 GMC TRUCK DIV } \\
& \text { SPARK GROUNDS THRU CENTEF OF PLASTIC BOTOR BODY. CYL. CON }
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\text { ELEC.SYS.IGNITION-OTHEF PART } 44
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67 OLOLMS NO KEAR SIGNALS－SHITCH IS INTACT．NU EAFE WIGES OB MELTED
CORTIONS－SUSPECT POSSIBLE POOR CONTACI
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GNRL OK UNK COHP－TURN SIGNAL LIGHTS
70000305 FOAD TRUCK EIV 5100 F SEKIES（LIGHT）
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OUNEK STATES AC SPARK PLUGS GIVE UNSATISEACTORY PEREORMANCE E WILL NOT
LLEC.SYS.IGNITION-OIHER PART
LAST IN CHEVY TRUCK. NO PABTS - NO OTHER INFO.


GNRL OR UNK COMP－TURN SIGNAL LIGHTS 71000301 FORD DIVISION 0800 TORING 18 D MOLELS
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GNRL OR UNK COMR－TURN SIGNAL LIGHTS
67 OCO 401 UUICK BUICK
onnossen
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GNRL OR UNK COMP－TURN SIGNAL LIGHTS
LAST IN CHEVY TRUCK．NO PABTS－NO OTHER INFO． 77041 ＜ 0901000 P02488 A

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& \text { OFFICE UF DEFECTS INVESTIGATION } \\
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CUM IULAIIVE FAKTS KECEIVED FY 77
1 JULY 76 THKU 30 JUNE 77
vOAFUNLNT Yh
SWCH-BUTTON-RING-HIGH/LOW EEAM DIMKEK ITD
70003301 FORD DIVISION U300
SHITCH \&USTED FROM MOISTU
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SWCH-BUTTON-HING-HCAD LIGHTS

ACTION UF SWITCH SEAMS IRREGULAR，GIVE LITTLE FESISTANCE WHEN TUEGEV
UN．CONTACTS APPEAR CLEAN E SECUEE．ELASTIC NOT MELTED OK GROKEN
UN．CONTACTS APPEAR CLEAN E SECUEE．ELASTIC NOT MELTED OK GROKEN

## SWCH－BUTTON－RING－HEAD LIGHTS

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P02204 A 701217
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SHCH－BUTTON－RING－HEAD LIGHTS
70 OUO 301 FORD DIVISION
70 OUO 301 FORD DIVISION
70 OUO 301 FORD DIVISION 1300 LTD
SHUP CIAIMS LIGHTS FLASH ON E OFF．SWITCH IS INTACT TEHHINALS CLEAN．
SUSECT POOF CONNECTION AT HARNESS UK SHORT．ID－C AUTOIITE．
SWCH－BUTTON－RING－HEAL LIGHIS
71 UOO 201 C゙HRYSLER DIV
SWITCH ALPEARS INTACT．HABNESS PLUG IS MELTED AT＂HH TEFMINAL．SHOE

SWCH－BUTTON－EING－HEAD LIGHTS 14
$710002 U 1$ CHRYSLER DIV 5500 NEWQORT $\quad$ SHOP CLAIMS SWITCH
CONTACTS COOK GOOD，NO NELTED PORTION ON SWLTCK．
CUTS LIGFTS OFF．ADD＇L ID 3488167
SWCH－BUTTON－RING－HEAD LIGHIS
28
LIOHT SWIICH IS BROKEN APAHT．SHOY CLAIMS NO DASH LIGHTS－SHORT．PHOE．
FOOK CONTACT．
$2 n-N$－ULIGM－RING－HEAD LIGHIS
70000305 FOED TRUCK DIV
70000305 FOED TRUCK DIV $\quad 0300$ FGD TEK AND VN UNK
SHOE CLAIAS HEADLIGHTS FLASH ON E OFF．TERMINALS AKE CLEAN，SWIICH
INTACT．SUSPECT FOOR CONTACT W／HARNESS OR SHOET．ID－AA MCTOACGAFT
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72160601 TUYOTA UIVISION U100 TOYOTA CELICA
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$\begin{array}{ll}\text { FAULI } \\ \text { CAZ } \\ \text { CAD } & \text { CAT．}\end{array}$ 28 － IA UNANGE／BLUE
L ILCSAA 13341 LSAD－MELTEN AKEA AROUND COMTACT W／SWITCH BODY．ADUL IL C5AA 13341－G SWCH－BUTTUN－GING－TURN SIGNAL LIGHTS 28 NO TURN SIGLALS．EIVOTING SWITCH CONTACL FLATE IS LOOSE．MAKING ECCH
CONTACT WIVH BASE VLATE SHCH－BUTTON－EING－TURN SIGNAL LIGHTS LV 7400102 LINCOLN CONTINENTAL SUSEELT POOL CON CLATMS NO NEAR SWITCH IS IN GUOD COND．SUSEECT POOK CONNLCTION．SHOF
SIGNALS．ADD＇L I．D． $13 B 302-B C ~ S X C ~$ SWCH－BUTTON－RING－RURN SIGNAL LIGHI
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& \text { COHPONENT NAME } \\
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COMEUNENT COHPONENT NAME
UglluUUU SWCH-BUTTON-RING-TURN SI FARTS FETURN ERUGKAM

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\begin{array}{cc}
\text { SY110UUJ } & \text { SWCh-BUTTUN-AING-TOEN SIGNAL LIGHTS } \\
72 \text { COU } 301 \text { FORD DIVISION }
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\begin{aligned}
& 72 \text { COU } 301 \text { FOFD DIVISION } \\
& \text { SWITCH IS INTACT, CONNE } \\
& \text { PLUG. SHOP CLAS. NO BEA }
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NAKE-MODEL

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\begin{aligned}
& \text { D. NO LEFT BEAR } \\
& \text { ID. } 13530 \angle-A C B \text { BP }
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\begin{aligned}
& \text { SWCH-BUTTON-RING-TURN SIGNAL LIGHTS } \\
& 67 \text { OUO403 CHEVROLET }
\end{aligned}
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\begin{aligned}
& \text { SHOP CLAIMS NO SIGNAL LIGHIS HITH BRAKE LIGHTS ON. ONE HIRE, BLACK } \\
& \text { WITH WHITE, PARTIALLY STRIPEED OF INSULATION. NO OTHER VISIBLE DEFEG }
\end{aligned}
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\begin{aligned}
& 73000403 \text { CHEVROLET } \\
& \text { SHOP CLAIMS NO BRAKE LIGHTS. NO VISIBLE DEFECTS. SUSPECI ELECTRICAL }
\end{aligned}
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$$SHOAT OR POOR CONIACT．

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& \text { UIEE } \\
& \text { IN SWITCH OR AI } \\
& \text { (FORD) }
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0313 & \text { GALAXIE } 500 & \\
\text { ND. NO LEFT \&EAR BRAKE ON SIGNAL LTS }
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\text { CONTACTS } \mathcal{G I R E S ~ A P P E A R ~ I N ~ G O O D ~ C O N D . ~ N O ~ L E F T ~ B E A R ~ B R A K E ~ O K ~ S I G N A L ~ L T S ~}
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& 0313 \text { GALAXIE } 500 \\
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& \text { ONE WHITE HIFE IS EROKEN IN TWO. POSS. CAUSE OF NO ERAKE IIGHIS. OIHER } \\
& \text { WIRES E PLASTIC HOUSING APEEAR INTACT. ADD'L I.D. - } 19 O I U 1 G 7 O
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SWCH－BUTTON－RING－TURN SIGNAL LIGHTS

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SWCH-BUTMON-RING-TURN SIGNAL LIGHTS

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& \text { ARD LIGHTS SHITCH IS JAMMED. NU }
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& \text { SWCH-BUTION-GING-TURN SIGNAL LIGHTS } \\
& 69000203 \text { PLYMOUTH }
\end{aligned}
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\begin{aligned}
& \text { SWIICH IS IN GOOD COND. SUSPECT POUK CCNNECTIOA. SHOP CLAIKS NO ERAKE } \\
& \text { LIGHTS. }
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SWCH-BUTTON-RING-TURN SIGNAL LIGHTS 28
SHOP CLAIMS LOOSE CONNECTIONS SIGNAL LIGHTS DID NOT WORK ONE WIRE
0911000 SWCH-BUTTUN-RING-TURN SIGNAL LIGHTS 14
$A C T$.
28
505 HONTEGO 1 X
CCNNEC. SHOP CLAIMS NO SIGNALS
BZ

ALL CONNECTIONS APPEAR GOOL, WIEES LOCK GOOD. SUSPECT PCCR CUR
TUFN SIGNALS WORKED INTERMITENTLY. ADE'L I.D. $13 E 302-C E S X B T L$
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SKCh-button-RING-TURN SIGNAL LIGHTS
Claims no bhake lights - one white wibe slightiy melted at terkinal
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COMPUNENT NAHE

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ShCH－HUTAON－EIAG－TUEA SIGNAL LIGHIS
GO JJO405 PUNTIAC
NO EKAKE LIGHTS．INSULATION UN WHITE \＆GREEN WIEES IS EAGTIALLY MELIED
OVER－HEAIED CONDITION，EIECTRICAL SHOEI．
SWCH－BUTTON－RING－TUKN SIGNAL LIGHTS
GAKE-MODEL

09 OJU202 DOUGE 00 MCNACC EOLARA
NO VISIELE DEFECTS．SUSHECT INTERNAL SHOKI OF EOCK CONA．NO LELT TURN SIGNAL E NU BEAAKE LIGHTS．ADD＇L I．D．－ 190100919
$\begin{array}{lll}\text { SWCH－BUTTON－RING－TUKN SIGNAL LIGHTS } \\ 67 \text { UOU } 301 \text { FOKD DIVISION } & 0700 \text { THUNDEEHIED }\end{array}$
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NO VISIBLE LEFLCTS．SUSKECI INTEKNAL SHORT OE FOOK CONA．NO LEFT TURN
SIGNAL OA ORAKE LIGHTS．ADLL I．D．YARKS－L SXB IC
SWCH－BUTTON－RING－TUKN SIGNAL LIGHTS
$7400 J$ SU1
NU TURN SIGNALS．SUSPECT PCOK CONNECTICW．WIRE EXPOSED IN YEILOW LEAE
TO HOKN．ADD＇L I．D．BB $302-A F S X C$
SWCH－GUTAON－RING－IUEN SIGNAL LIGHTS
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SHCH－BUTTON－RING－TUKN SIGNAL LIGHTS
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SWCH－BUTTON－RING－TURN SIGNAL LIGHTS
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COHMUNICATIONS－HORN ASSEMGLY－BUTTON－RING
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44 LER LEAKS EVIDENT AROUND HOSE COLNECIIONS．SHOE CLAIMS CAK OVERHEATS HEAT AT HEATEF．HOSE BOAT PAKTIALIX BLOCKED BY DIKR IA COUL．SYE．

73 OOO UU2 DODGE U611 POLAHA
HEATER COLE SHOWS EVIDENCE OF LEAKAGE IA CORE
WATEE－HIR，DFRSTH，DFGGR－HEATEK COKE，WHTER
75000404 ULDSMOBILE
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HATER－HTK，DFRSTR，DFGGR－HEATEF CORE，WATEK
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## Section 2

## PROGRAM MEMBERSHIP

## 2. 0 General

The successful operation of the Parts Return Program depends upon the voluntary submittal of defective parts and information from approximately 2,000 independent automotive repair garages enrolled in the program. Of the 2,000 program members, 249 have contributed a part or information during this contract period. Of these contributing shops, 157 returned parts during the previous contract year (a $63 \%$ repetitive shop rate).

Enlisting a shop in the PRP is relatively easy and requires little effort on the part of the enrollee. Acquiring parts or information from the membership is much more difficult. At the beginning of the contract period, 2,075 shops were enrolled in the PRP. Of this number, approximately 1,100 had been in the program for a year or more and during that time had never contributed a part. Our plan for this contract period was to identify those shops that might conceivably return a part, and remove the "deadwood" from the program, beginning with the oldest shop members. Upon conclusion of this deletion cycle, we would replace the deleted shops with new, hopefully more enthusiastic PRP members.

The ratio of active contributors to the total number of enrollees is expressed as the level of participation. An active shop or participant is a PRP member that has contributed a part or information during the current contract period. Expressions of participation, i.e., level of participation or number of active shops, apply only to activity during the current contract period unless stated otherwise. Thus, the level of activity at the outset of the reporting period was zero. Comparative figures from the previous contract period are not available.

In October 1976, the method of monitoring progress using the current total enrollment versus the number of active shops (level of participation) was changed
significantly. Prior to the change, the number of active shops was equal to the number of contributing participants during the previous contract period, plus the number of new active shops acquired during the current contract period. The figure reflected a period of activity of at least 12 months (the previous contract period), plus any activity during the time elapsed under the current contract. The method was changed to produce a figure reflecting only activity occurring during the current contract. Thus, the effects of the previous year were eliminated from the current level of participation and each contract year starts at "zero." A shop would be considered "first time active" when the first part was received during the current year. The total number of active shops (contributing shops) for this contract year is 249 . The level of activity (total enrolled versus total active) is $13.15 \%$.

At the time this method of establishing the level of participation was initiated, the number of active shops was 105 and the level of activity was $6.20 \%$. During the remaining eight months of the contract, an additional 144 shops became active and the level of participation was increased by $6.95 \%$.

In addition to monitoring the number of active contributors, we felt that determining how many of the active shops had sent in parts for the first time would be beneficial in determining the effects of follow-up and enrollment campaigns.

Ninety-two shops sent in their first parts during the current contract period. Fifty-one shops became active as a result of six follow-up campaigns involving a total of 789 shops. Of these 51 participants, 14 shops had never sent in parts prior to the follow-up campaigns.

The national level of participation is monitored to determine the overall program status. To identify potential problem areas and to help ensure a relatively even distribution of enrollees a more detailed examination is necessary. Toward this end, we have identified ten PRP Regions based on the first character of the
zip code for each PRP shop. ${ }^{1}$ Figure 2-1 depicts the ten regions, and for each region, the number of active participants, the number of shops enrolled, and the level of participation as of June 30, 1977. These figures are one measure of program success from the standpoint of shop participation. Figure 2-2 details the monthly activity of participating shops by area. Figure 2-3 shows the monthly total of enrollees by area.

### 2.1 New Shop Enrollment

We look upon new shop enrollment as an ongoing process necessary to bring potential contributors into the PRP and as one method of increasing the overall level of activity. Shops that are least likely to contribute are removed from the PRP and are replaced with new shops on a continual basis. A total of 746 shops were enrolled during the contract period. Of these, $9.4 \%$ (28) have become active as of June $30,1977$.

### 2.1.1 Enlistments-Methodology

Historically, enlistments have been conducted by a PRP regional representative by telephone. Potential shops are located using local telephone directories and are then called to determine their willingness to participate. Each regional representative is sent a separate list of existing active and inactive PRP enrollees in his region. This procedure eliminates the possibility of contacting a shop already enrolled in the program. In most cases, the regional representative is instructed to telephone shops on the inactive list as a follow-up procedure.

For new shops, the regional representative describes briefly the operation of the program and what is required of the participants. If the shop agrees to participate, the representative then completes the shop questionnaire and returns it to KSI's Arlington office. Using this approach, 121 shops were enlisted in the PRP, 56 in November 1976, and 65 in April 1977. Five of these new enlistments became active during the contract period.
${ }^{1}$ The exception is the state of New Jersey, which is part of Region 1, but has zip code Region 0.

Figure 2-1

## TOTALS BY REGION

|  | Total <br> Enrolled | Total <br> Active | Total <br> Percent |
| :--- | :--- | :--- | :---: |
| Total for Region 0 | 163 | 21 | 12.88 |
| Total for Region 1 | 274 | 41 | 14.96 |
| Total for Region 2 | 204 | 17 | 8.33 |
| Total for Region 3 | 126 | 13 | 10.31 |
| Total for Region 4 | 171 | 20 | 11.69 |
| Total for Region 5 | 190 | 28 | 14.73 |
| Total for Region 6 | 198 | 21 | 10.60 |
| Total for Region 7 | 132 | 17 | 12.87 |
| Total for Region 8 | 242 | 23 | 9.50 |
| Total for Region 9 | 178 | 46 | 25.84 |
| Total for All Regions | 1,878 | 247 |  |

Figure 2-2


Regional Totals
Not Available

Figure 2-3


To enlist new members into the PRP from geographic areas not conveniently situated in close proximity to our regional representatives, we utilized the services provided by a subcontractor. The subcontractor we selected was EQUIFAX, who could potentially provide some 5,000 full-time field representatives in over 1,000 locations throughout the country.

Initially, EQUIFAX completed 200 telephone contacts; 100 in Phoenix, $A Z$, and 100 in Chicago, IL. Fifty-one shops in Arizona and 62 shops in Illinois were enlisted into the PRP. This is an average of $56 \%$ enlistments. When these campaigns were completed, EQUIFAX made an additional 100 contacts in Atlanta, GA, resulting in 63 shop enlistments into the PRP. EQUIFAX's rate of enlistment ( $60 \%$ ) is comparable to campaigns conducted by KSI representatives this year and in our previous contract year. Three shops enrolled by EQUIFAX have become active during the remaining four months of the contract period.

Another approach used to acquire enlistments in areas not covered by regional representatives was to invite shops to participate by direct mail solicitations. Potential shops were identified using local yellow pages, and these were sent introductory letters, a copy of the NHTSA press release regarding the PRP, and a pre-paid postcard to indicate their interest in participating in the program.

Table 2-1 details the cities covered and the responses received through the "Direct Mail" approach.

Table 2-1

| City | Total Sent | Positive <br> Received | Returned Undeliverable | Negative <br> Received | Total Responses Received |
| :---: | :---: | :---: | :---: | :---: | :---: |
| New Orleans, LA | 48 | 3 | 7 | 0 | 10 |
| Minneapolis, MN | 40 | 4 | 4 | 0 | 8 |
| Mobile, AL | 29 | 1 | 5 | 0 | 6 |
| Birmingham, AL | 29 | 0 | 2 | 1 | 3 |
| Atlanta, GA | 39 | 0 | 8 | 1 | 9 |
| Las Vegas, NV | 39 | 2 | 6 | 0 | 8 |
| TOTAL | 224 | 10 | 32 | 2 | 44 |

Of a total of 224 direct mailings in six cities, the PRP has enrolled ten shops, received 32 pieces of returned mail, and has been sent one negative letter and one reference. The positive response rate is $5 \%$. However, four shops have become active out of the ten enrolled. This $40 \%$ level of participation looks very good and we will be investigating this approach further.

One other method of enlisting new shops using this "blind" approach was used with some success. Several automotive related organizations were contacted by KSI with the hope that articles in association newsletters could be published. The articles would describe the PRP goals and the benefits of being a program participant. Five organizations agreed to include descriptive information on the PRP in their publications and to provide their members with KSI's name and address for further information. (Two articles were published at the end of the previous contract year, but requests were received during this reporting period.)

Four articles appeared in trade and association papers as a result of a 1977 DOT Press Release. (Others may have been published as well; we are currently aware of only these four.) These articles have brought ten actively participating shops into the PRP. Although this number of shops does not appear to be significant, it should be kept in mind that this approach has had the same effect (in terms of active contributors) as all the enrollment campaigns conducted during the contract year combined. In other words, these articles have brought the same number of active shops (10) into the PRP as would contacting 700 potential contributors by mail or telephone. (The total number of shops enrolled in this program year was 722. Twelve of these became active.) The articles are discussed further in Section 5.2.

Seven active contributors have joined the PRP, apparently as a direct result of the DOT Press Release. In addition, six inquiries and one enlistment were directed to the program as a result of an evening news feature on the PRP in Minneapolis, Minnesota. ${ }^{2}$ These results are summarized in Table 2-2.

See Infra 5.3

Table 2-2

## ENROLLMENT FY 77

## Contacts Enrolled Active Date Method

| Region 0 | 105 | 56 | 4 | Nov. 76 | KSI Rep. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Region 3 | 100 | 63 | 1 | May 77 | EQUIFAX |
| Region 3 | 97 | 1 | 0 | Feb. 77 | Direct Mail |
| Region 5 | 40 | 4 | 1 | Feb. 77 | Direct Mail |
| Region 5 | 93 | 65 | 1 | Apr. 77 | KSI Rep. |
| Region 6 | 100 | 62 | 0 | Mar. 77 | EQUIFAX |
| Region 7 | 48 | 3 | 1 | Feb. 77 | Direct Mail |
| Region 8 | 100 | 51 | 2 | Mar. 77 | EQUIFAX |
| Region 8 | 39 | 2 | $\underline{2}$ | Feb. 77 | Direct Mail |
| Totals | 722 | 309 | 12 |  |  |
| Other Sources | 24 | 18 | 16 |  |  |
| Grand Total | 746 | 327 | 28 |  |  |

Since many shops agree to enlist in the program but few shops actually participate, we felt that establishing new criteria for enlistment might prevent us from enrolling shops that would not be likely to contribute parts. It was decided that during the Connecticut enrollment campaign, we would stipulate that shops must return a part within 30 days of receipt of the "Shop Kit" ${ }^{3}$ to continue participation in the program.

About $10 \%$ of those contacted indicated that they could not comply with this requirement, i.e., the business was too small or they did not perform repairs relevant to PRP inquiries. Aside from this, it appears that the requirement had no effect on the number of shops that became active or on the amount of time between enlistment and delivery of the first part. Since the requirement had no effect, it was dropped from subsequent enrollment campaigns.

### 2.2 Shop Follow-Up Campaigns

During the first six months of the contract period, our efforts have been directed toward increasing the number of active participants among the inactive enrollees. This was felt to be more cost-effective than enrolling new members. Most of the inactive membership on July 1, 1976, had been enrolled in the PRP for more than 12 months. Approximately 400 shops that had been enlisted during the previous contract year had been inactive for a period of less than one year. During the contract period, 789 existing PRP member shops were contacted directly by mail.

### 2.2.1 Follow-Up Campaign Results

Three hundred twenty-one shops in mixed regions that were enrolled prior to July 1, 1975, and had never contributed parts were contacted. One campaign was sent to 74 shops in mixed regions that had previously been active, but had not

3
See Infra 3.2.4
submitted parts since July 1, 1975. Another campaign was sent to 144 shops that were active during the 1975-76 contract year, but had not contributed parts during the current contract year .

The response from shops that had never sent in parts was very poor (a total of 24 or $7.4 \%$ responded positively, three of whom sent in parts. Seven negative responses were received). Based on these results, it was determined that contacting the remaining inactive membership would not be cost-effective.

The campaign to previously active shops that had not contributed parts since July 1, 1975, yielded much better results. A total of 74 shops were contacted in October of 1976 and 22 responses were received. Twenty-five percent of the shops contacted responded positively; five sent in parts. In addition, three shops asked to be removed from the program.

The response from shops that had been active during the previous contract year (1975-76), but had not submitted parts since July 1, 1976, was excellent. Of the 144 shops contacted, 70 (or nearly $50 \%$ ) responded. Thirtyfive postcards, 32 parts, two requests to be deleted, and one piece of returned mail were received.

The remaining 250 shops contacted were inactive shops that had been enrolled in March and April of 1976. Of the 108 shops contacted in Region 8, the number of positive responses was 20 , including six returned parts, or a response rate of $18.5 \%$. Six negative responses were received, bringing the total response rate to $24.1 \%$ or 26 . One hundred thirty-three shops in Region 1 and nine shops in Region 9 were contacted with the following results: nine positive postcards and five parts were received for a positive response rate of $9.8 \%$. Eight negative responses and pieces of return mail were received for a total response rate of $15.5 \%$.

These follow-up campaigns to 789 shops have brought an additional 51 parts into the PRP and have specifically identified 27 shops that will not return parts. The results are detailed in Table 2-3. A total of 411 program enrollees that either did not respond to these campaigns or requested to be removed were deleted from the

## Table 2-3

FOLLOW-UP CAMPAIGN RESULTS AS OF JUNE 30, 1977

| Fotal ( ${ }^{\text {andicterd }}$ | Ponitive hesponser | 1)arts | Negative Responses | Total Responses |
| :---: | :---: | :---: | :---: | :---: |
| $\because 21$ <br> Mixed regions enrolled prior to 7/ $1 / 75$, never contributed parts | 21 positcards | 3 | 7 | :31 |
| 108 <br> Region 8-inactive shops enrolled in March and April of 76 | 14 postcards | 6 | 6 | 26 |
| 74 <br> Mixed region, previously active, inactive since 7/1/75 | 14 postcards | 5 | 3 | 22 |
| 144 <br> Mixed region, previously active, inactive since $7 / 1 / 76$ | 35 posteards | 32 | 3 | 70 |
| 133 <br> legion 1-inactive shops enrolled in March and April of 76 | 8 postcards | 5 | 7 | 20 |
| !) <br> Regrion 9-inactive <br> shop: enrolled in March 1976 | 1 posteard | 0 | 1 | 2 |

program. An additional 111 inactive shops enrolled prior to July 1, 1973, were deleted, bringing the total deletions resulting from the follow-up campaigns to 522 for the contract year.

Based on our experience during the first half of this contract, there appears to be little justification for maintaining old inactive shops in the program. Experience has shown that a shop that has been enrolled in the program for more than a year and has never submitted a part cannot realistically be expected to do so in the future, even if a follow-up contact is made. Since those shops that were enrolled within the last 12 months have been or are being contacted, there would be little benefit in pursuing the remaining inactive members.

### 2.2.2 Follow-Up Campaign Methodology

During the follow-up campaign to 133 inactive shops in Regions 1 and 8, we conducted an experiment to determine what effect, if any, the text of the follow-up letter had on the rate of response. Eighty shops were sent letters identical to those used in follow-up campaigns during the previous contract period. The balance (53 shops) received a revised letter that requested a part or response within 30 days. ${ }^{4}$ This letter was identical to the one used in Region 8. Table 2-4 outlines the responses for both the old style letters and the revised form letter.

Table 2-4

| Total Number <br> Contacted | Positive Post- <br> card Responses | Negative Post- <br> card Responses | Number of <br> Parts Rec. |
| :---: | :--- | :--- | :--- | | Total |
| :---: |
| Response |

Region 1

| Old Style Letter | 80 | 5 | 5 | 1 | 11 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| New Style Letter | $\underline{53}$ | $-\frac{7}{2}$ | $\underline{2}$ | $\underline{1}$ | $\frac{1}{10}$ |
| Total | 133 | 12 | 2 | 21 |  |

Region 8
New Style Letter 108
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Copies of letters are contained in monthly progress reports. See Infra 3.2.4

The results indicate that the revised letter may result in more postcard responses, but no additional parts can be expected. The parts received from Region 8 apparently were the result of some other factor since there is no correlation to the number of parts returned by Region 1. Possibly this is a function of geographic location.

During the contract period, we have strived to remove those shops enrolled in the program that have never returned parts and cannot reasonably be expected to do so in the future. These shops are replaced with new shops that are more likely to contribute to the PRP.

### 2.3 Discontinuance Criteria

Our past experience (evidenced by our follow-up campaign to old inactive shops) indicates that a shop that has been enrolled in the program for one year or more and has not submitted parts is not likely to participate in the future. A followup campaign will bring some contributions to the program and other shops will indicate continued interest. The longer a shop has been enrolled without becoming active, the less likely it is to ever submit a part. We have found that there is no benefit in maintaining inactive shops in the program when they have been enrolled for more than two years, and that little benefit can be gained from conducting followup campaigns to these members. Members that fall into this category are subject to discontinuance. One hundred and eleven PRP shops enrolled prior to July 1, 1973, meeting these criteria were removed from the program during the contract period.

Nonresponding inactive shops enrolled for more than one year that have been sent follow-up letters are also subject to discontinuance. Our experience indicates that if a shop will not indicate its interest on a pre-paid postcard, it cannot be expected to return parts either. As a result of follow-up campaigns, nonresponding shops, shops for which undeliverable mail was returned, and shops that requested to be deleted (a small percentage of the total), amounting to 411 program єnrollees, were removed from the PRP.

Inactive shops are deleted when undeliverable mail is returned. An attempt is made to locate an active shop when mail is returned before the participant is removed from the program. Sixteen members, including two active shops, were removed from the program when mail (i.e., newsletters) was returned. The total number of shops deleted during the year was 538 (111 old inactive members, plus 411 in follow-up campaigns, plus 16 for returned mail).

### 2.3.1 Mailbag Recovery

Deleted shops that show a current inventory of mailbags receive a postcard (depicted below) requesting the shop to return all government property. One hundred forty-seven deleted shops with KSI mailbags were identified and received the request. The mailbags had been in the shops' possession for an average of one year. Twenty-eight mailbags were returned. This is a satisfactory response (19\%) considering that the recipients would not return parts.

YOUR SHOP IS BEING REPLACED AS A MEMBER OF THE PRP. YOU MAY STILL HAVE GOVERNMENT PROPERTY IN YOUR POSSESSION. IF SO, PLACE IN THE MAIL TODAYMAILBAGS ARE PRE-ADDRESSED AND POSTAGE PAID.

THANK YOU FOR YOUR COOPERATION
U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION PARTS RETURN PROGRAM C/O KAPPA SYSTEMS, INC.
2.4 Summary of Number of Parts Received from each Contributing Shop A summary of the number of parts received from each contributing shop is included in Table 2-5 on the next page.

CITY \& STATE

Other Sources 26
Unknown
Great Barrington, Ma. 73
Harry's Auto Service
Worcester Vocational High School
Wakefield Brake Company
Cambridge Brake Service
Sparky's Auto Service Center
Nash Road Motors, Inc.
Palmer's Spring Company
Front End Service
Babei's Service
Henniker Automotive
Winslow's Mobil Station
Bothel's Garage
Ben-Sal Auto Service Center, Inc.
Technical Careers Institute
Main Street Chevron
Clark's Sunoco Service Station
Kurze's Gulf Service
Fairview Service Station
Country Auto
Dun Roamin Garage
Abbott's Garage
Lincoln Technical Institute
Brake-O-Rama, Inc.
Semperit of America, Inc.
Midas Muffler
Beacon Auto Body
Crane Auto Repair
W. J. Krean \& Son

System Brake Service
VINS Motor Service
A Safeway Brake \& Muffler Shop
A. Ruth's Garage

Bud Jones Service
Bob Mason Sunoco Service Center
Art Dell's Garage
Artie's Service Station
New York Auto Repair \& Alignment
Jay Service Station
Longbard's Exxon Station
John's Body Shop
Kolesnik's Service Station
Broughton Motor Sales
Schmidt Garage
Youngwood Exxon

Worcester, Ma. 4
Wakefield, Ma. 7
Cambridge, Ma. 10
New Bedford, Ma. 4
New Bedford, Ma. 6
Providence, R.I. 2
Manchester, N.H. 2
Manchester, N.H. l
Henniker, N.H. 2
Gorham, Me. 2
Cape Elizabeth, Me. 7
Hartford, Ct. 1
Milford, Ct. 2
Newton, Ct. 3
West Haven, Ct. 3
Kent, Ct. 1
Lakeside, Ct. l
Washington Depot, Ct. 2
Danbury, Ct. 3
S. Norwalk, Ct. 4

Union, N.J. 3
Lodi, N.J. 1
Northvale, N.J. 1
Pennsauken, N.J. 1
Pennsauken, N.J. 1
Bricktown, N.J. 7
Toms River, N.J. 1
Perth Amboy, N.J. 2
Brooklyn, N.Y. 16
Albany, N.Y. 10
Colonie, N.Y. 7
Delmar, N.Y. 1
East Greenbush, N.Y. I
Rensillar, N.Y. 4
La Grangeville, N.Y. 1
Poughkeepsie, N.Y. 15
Jay, Vt. 1
Poughkeepsie, N.Y. 22
Binghamton, N.Y. 5
Rochester, N.Y. 48
Monongahela, Pa. 1
Pittsburgh, Pa. 12
Youngwood, Pa. 2

Table 2-5 (cont'd)

Central City Garage
Rite-Way Garage
Woody's Garage
Fletcher Motors
D\&Z Atlantic
Belmont's Garage
Bernie's Alignment \& Diagnostic
Earl R. Lambert's Mobil Service
Gordie's Auto Service
Cottman Transmission Center
DeJoseph Brothers
Boro Line Auto Service
Farrell's Sunoco
Basile's Exxon
Sassaman \& Burden Auto Service
Cochran Equipment Company
Bert's Arco Station
Frank's Sunoco
W\&S Service, Inc.
Universal Imports
Afro-Engineering
Kings Park Exxon
B\&G Auto Service
Mike's Service Center, Inc.
J. A. Payne Alignment Service

Smith Auto Service, Inc.
P\&R Automotive Service
Bill's Texaco Service
Auto Brake Corporation
Garlick's Garage
Certified Truck \& Auto Service
Gross' Union 76 Servicenter
Musten Auto Service
Jack Stoltz's Garage
Southside Garage
Superior Wheel Alignment \& Brake Service
John W. Coble Tire Company Imports Limited
Red Ivey's Automotive Service
Hagan Service Center
Wayne Terrell's Garage
Beckton Auto Repair
Chuck's Super Service
Albert's Garage
Auto Safety Service, Inc.
Automotive Maintenance, Inc.
Sunray Oil \& Gas
Harrisburg, Pa. ..... 3
Harrisburg, Pa. ..... 5
Montoursville, Pa. ..... 33
Ambler, Pa. ..... 4
Cornwells Heights, Pa. ..... 7
Langhorne, Pa. ..... 1
Newton Square, Pa. ..... 4
Downington, Pa. ..... 6
West Chester, Pa. ..... 6
Bridgeport, Pa。 ..... 1
Bridgeport, Pa. ..... 3
King of Prussia, Pa. ..... 1
Fairview Village, Pa. ..... 9
Fairview Village, Pa. ..... 1
Temple, Pa. ..... 6
Middleton, De. ..... 11
Wilmington, De. ..... 7
Talleyville, De. ..... 4
Wilmington, De. ..... 4
Rockville, Md. ..... 16
Falls Church, Va. ..... 6
W. Springfield, Va. ..... 1
Arlington, Va. ..... 1
Winchester, Va. ..... 1
West Point, Va. ..... 1
Richmond, Va. ..... 1
Norfolk, Va. ..... 1
Norfolk, Va. ..... 1
Norfolk, Va. ..... 61
Roanoke, Va. ..... 1
Salem, Va. ..... 1
Salem, Va. ..... 1
Winston-Salem, N.C. ..... 5
Winston-Salem, N.C. ..... 4
Winston-Salem, N.C. ..... 2
Charlotte, N.C. ..... 1
Decatur, Ga. ..... 1
Marietta, Ga. ..... 4
Atlanta, Ga. ..... 1
Gainesville, Ga. ..... 22
Macon, Ga. ..... 2
Savannah, Ga. ..... 3
Orlando, Fl. ..... 2
N. Miami Beach, Fl. ..... 1
Oakland Park, Fl. ..... 5
Sarasota, Fl. ..... 4
Tampa, Fl. ..... 3

Automotive Parts Center
Ine's Automotive Maintenance
Big Brake Safety Service
A. C. Brake Company, Inc.

Lexington Brake
Heatherdown's Automotive Service
Evan's Brake \& Tire Service
Chester Body \& Repair Company
Akron Wheel Alignment
Doyle's Service
May's Auto Service
Bob's Automotive
Wayne \& LaMarr's Garage
Glen Perry Garage
Safety First Alignment \& Brake Bob's Service Station
Auto Inn Garage
Fisher's Brake Service
Master Tire Company
Black's Auto Service
Wade's All Car Service
Paul \& John's Friendly Service
DeKorver Brothers Auto Supply
Des Moines Area Community College
Yearian's Tire, Inc.
K\&S Wheel Alignment
Herfel 66 Service
Frerich's Garage
Tommy's Auto Repair
Feld Garage, Inc.
Ed \& Wally's, Inc.
Hessefort Service
Central Park Service Station
Roy's Service Station
Bluemond Automotive Service
Park Auto Service
Clemens' Auto Repair
Beloit Frame \& Axle Company
Day-Nite Auto Station
Roehl's Bee Line Brake \& Alignment Joe's Auto Service
Statewide Insurance Investigators
Ade \& Bob's Muffler \& Brake Center Earl's Service Center
Foreign Auto Service Center
Frenz's Brake Service, Inc. Richfield Wheel Alignment
Larry Gaicia's Service Station

Greenville, Al.2

Montgomery, Al. 2
Gulfport, Ms. 1
Louisville, Ky. 2
Lexington, Ky.
6
Toledo, Oh.
1
Cleveland, Oh. 5
Cleveland, Oh. l
Akron, Oh.
Massillon, Oh. 2
Mansfield, Oh. 4
Fairborn, Oh. 1
Brownsburg, In. I
Indianapolis, In. 1
Indianapolis, In. 2
Hammond, In. 6
South Bend, In. 6
Muncie, In. l
Evansville, In. 4
Detroit, Mi. 1
Lansing, Mi. 4
Grand Rapids, Mi. 1
Wyoming, Mi. 16
Ankeny, Ia. 2
West De Moines, Ia. 2
Waterloo, Ia. 2
Sioux City, Ia. 1
Sioux City, Ia. 1
Sioux City, Ia. 32
Kenosha, Wi. : 4
Kenosha, Wi. 1
Kenosha, Wi. 5
Kenosha, Wi. 2
Kenosha, Wi. 3
Wauwatosa, Wi. 1
Racine, Wi. 19
Racine, Wi. 10
Beloit, Wi. 5
Kaukauna, Wi. 13
Appleton, Wi. 6
Appleton, Wi. 36
Appleton, Wi. 1
St. Paul, Mn. 3
Minneapolis, Mn. 1
Minneapolis, Mn. 5
Minneapolis, Mn. 3
Minneapolis, Mn. 7
Duluth, Mn. 3

Table 2-5 (cont'd)

Dave Mc Millen's Auto

Repair Service
Katon's Garage
Doc's Auto Clinic
Hutt \& Stiles
Brake-O-Mat
AA Auto \& Truck Service, Inc.
J. Gartner Auto Service

Stoner's Triangle Auto Service
Art's Auto Repair
Dick Jordan's Standard Service Station
Niebling Auto Repair, Inc. Dutch's Auto Repair
Curran's Automotive Service
Atwell Auto Repair
McLain's Auto Repair
Adam's Motor Service
Troostwood Garage
Steele Automotive Service
Casey's Sport Car Service
Tim's Import Sales and Service
K\&B Brake \& Wheel Service, Inc. Capital Automotive
Auto Hospital
Lincoln Safety Service Company
Clearview Car Care Center
General Brake Service
J\&G Auto Clinic
Fuselier's Auto Service
Chester's Garage
Mooney's Wheel Alignment \& Brake Service
Bourland's Wheel Alignment \& Brake Service
Irving Radiator \& Auto Center
Fifth Street Automotive Service
Bob Chester's Auto Service
Tom's Southside Alignment \& Repair
C\&S Brake Service
Tommy's Automotive
Pearson's Garage
B\&N Axle Service
Abilene Pit Stop, Inc.
Hills Automotive Clinic
Alpine Automotive Service
Pritz Foreign Cars of Colorado
Alley Performance Center
Valley Hi Mobil
Duluth, Min. ..... 3
Lead, S. D. ..... 1
Grand Forks, N. D. ..... 1
Skokie, II. ..... 2
Evanston, II. ..... 4
Chicago, II. ..... 3
Chicago, Il. ..... 13
Rockford, 11. ..... 4
Arnold, Mo. ..... 3
Clayton, Mo. ..... 17
St. Louis, Mo. ..... 3
St. Louis, Mo. ..... 8
St. Louis, Mo. ..... 2
St. Louis, Mo. ..... 1
St. Louis, Mo. ..... 7
St. Charles, Mo. ..... 12
Kansas City, Mo. ..... 9
Topeka, Ks. ..... 1
Wichita, Ks. ..... 2
Hutchinson, Ks. ..... 2
Omaha, Nb. ..... 2
Lincoln, Nb. ..... 3
Lincoln, Nb. ..... 38
Lincoln, Nb. ..... 1
Metaire, La. ..... 2
New Orleans, La. ..... 6
Lake Charles, La. ..... 3
Lake Charles, La. ..... 4
Pine Bluff, Az. ..... 2
Oklahoma City, Ok. ..... 1
Irving, Tx. ..... 1
Irving, Tx. ..... 1
Tyler, Tx. ..... 3
Arlington, Tx. ..... 3
Arlington, Tx. ..... 3
Fort Worth, Tx. ..... 2
San Angelo, Tx. ..... 2
Port Arthur, Tx. ..... 2
Austin, Tx. ..... 1
Abilene, Tx. ..... 1
Abilene, Tx. ..... 4
Lakewood, Co. ..... 8
Colorado Springs, Co. ..... 5
Colorado Springs, Co. ..... 1
Cuiorado Springs, Co. ..... 2

Chevron Station
Hurley Super Scrvicc Station Bud's Garage
Mr. IBrake \#9
Joe Blaylock's Repair
Hi Way Union 76
John's Garage
Dom's Bumper to Bumper Service
Ray's Auto Clinic
Mr. Brake
S\&D Tire Auto Center
Terry Motor Company
Dave Kyle's Garagc
Texaco Servicc Station
Dave Clark Automotivc Service
Duncan's Auto Repair
Scottsdale Automotive Specialist
Skinner's Automotive Service
Wheel Alignment \& Brake Service
Desert Hill's Phillips 66
Richard's Automotive Service
Isc Automotive Service
Maurice's Automotive
Leonard's Service
L. A. City Unified School District

J\&J Mufflers, Inc.
Samo Wheel \& Brake Service
Automotive Specialties
A\&F Alignment
Castoe's Auto Service
Werk Brothers Garage
Kallen's Garage
Vanowen Brake \& Wheel
Hamner Automotive \& Transmission
A.T.S.

Beeline Aligning Service
Jerry Hall Tire Service
Miller's Automotive
Dix and Drum Brake Center
Performance Engineering
Midas Muffler Shop
Selma Radiator \& Auto Shop
Mr. Tom Pitre, Instructor
Automotive City Service Center
Tony's Auto Repair
Dana Mcyer Forcign Car Scrvice
Big Brake of Stockton
Duanc's 'Iunc-up Clinic
Colorado Springs, Co. ..... 1
Pueblo, Co. ..... 6
Pueblo, Co. ..... l
Pocatcllo, Id. ..... 2
Emmett, Id. ..... 4
Marsing, Id. ..... 2
Nampa, Id. ..... 7
Payette, Id. ..... 1
Orem, Ut. ..... 1
Salt Lake City, Ut. ..... 4
Salt Lake City, Ut. ..... 8
Beaver, Ut. ..... 6
Phoenix, Az. ..... 3
Phocnix, Az. ..... l
Phoenix, Az. ..... 1
Phoenix, Az. ..... 2
Scottsdale, Az. ..... 1
Albuquerque, N. M. ..... 7
Las Vegas, Nv. ..... 7
Las Vegas, Nv. ..... l
Los Angeles, Ca. ..... 4
Hollywood, Ca. ..... 80
Hollywood, Ca. ..... 1
Los Angeles, Ca. ..... 1
Los Angeles, Ca. ..... 4
Inglewood, Ca. ..... ]
Santa Monica, Ca. ..... 4
Paramount, Ca. ..... 3
Long Beach, Ca. ..... 1
Tuyunga, Ca. ..... 2
Pasadena, Ca. ..... 3
Van Nuys, Ca. ..... 2
N. Hollywood, Ca. ..... 4
Corona, Ca. ..... 3
San Diego, Ca。 ..... 3
Pacific Beach, Ca. ..... 1
Costa Mesa, Ca. ..... 6
Fullerton, Ca. ..... 11
Santa Ana, Ca. ..... 2
Santa Barbara, Ca ..... 2
Bakersfield, Ca. ..... 2
Selma, Ca. ..... 1
Los Altos, Ca. ..... 6
San Francisco, Ca. ..... 15
San Francisco, Ca. ..... 2
Albany, Ca. ..... 1
Stockton, Ca. ..... 1
Manteca, Ca. ..... 7

Table 2-5 (cont'd)

SHOP NAME

Harold's Auto Service
Mr. Brake \#ll
Stop \& Go Brake \& Wheel Service
Webb \& Andersen
Meade \& Greenlee Garage
Chuck \& Wayne's Garage
B. G. Tanzer's Auto Rebuild Suburban Automotive Clyde's Chevron Service Gus Cooper's Shell Service Sports Car Service King Co. Brake Service Foster's Service Corporation Doyle Automotive Service Sharp's Automotive Norm's Auto Repair Mayer Auto Service L. A. D. Auto Electric

CITY \& STATE
Santa Rosa, Ca ..... 3 ..... 3
Sacramento, Ca. ..... 1
Portland, Or. ..... 10
Salem, Or. ..... 1
Salem, Or. ..... 1
Eugene, Or. ..... 1
Bellevue, Wa. ..... 2
Lynnwood, Wa. ..... 8
Mercer Island, Wa. ..... 2
Seattle, Wa. ..... 4
Seattle, Wa. ..... 2
Seattle, Wa. ..... 9
Seattle, Wa. ..... 2
Seattle, Wa. ..... 35
Seattle, Wa. ..... 1
Arlington, Wa. ..... 4
Marysville, Wa ..... ]
Spokane, Wa. ..... 4.3

[^5]24

PARTS RETURNED



8
)

## Section 3

## OPERATIONS AND PROCEDURES

### 3.1 PRP Operations

The objective of the PRP is to obtain safety-related defective parts from independent automotive repair facilities on a voluntary basis. Towards this end, KSI is required to perform the following tasks:

- strive to increase the percentage of participating shops among those enlisted in the PRP
- enlist new shops, as necessary, and discontinue contact with those shops previously enlisted that cannot be motivated to become or remain active participants
- for each newly enrolled (inactive) shop, provide one self-addressed canvas mailbag and five component identification tags and covers
- for each active participant, maintain an inventory of three selfaddressed mailbags and five component identification tags with protective covers for each bag
- attempt to recover any government-furnished property from discontinued shops
- provide PRP member shops with a current copy of the NHTSA Defect Investigatory Cases Report, as issued
- acknowledge by letter the receipt of each part to the contributing shop
- supply each active participant with two current certificates of participation
- instruct shops in the completion of component identification tags and the types of components/failures in which the PRP is interested
- make provisions for shops to telephone the contractor toll-free
- prepare the draft of the PRP News for delivery to the NHTSA for production
- assist the NHTSA in the selection of criteria for awarding "Certificates of Participation" to deserving participants
- assure that parts returned can be identified with the contributing shops
- complete an analysis code sheet (HS-10 Form) and failed data sheet for parts and information received
- retain and store all automotive parts as they are received, and forward to the NHTSA parts that may be of interest, upon request - maintain an inventory capability to ensure the identification and location of returned parts


### 3.1.1 Shop ID File Description

All PRP members are entered into the automated Shop ID File. The Shop ID File is on a disk pack (direct access storage device) provided through our inhouse mini-computer (Datapoint 2200). The file consists of certain major data elements, which are:

- shop name, address, and zip code
- point of contact, usually the manager or owner
- shop ID number
- telephone number
- status (active or inactive)
- certificate year - the contract year end for which an active shop last received a certificate of participation
- current shop mailbag inventory

Several ouiput reports have been designed to operate off the data stored in the Shop ID File. These reports include a listing of participants including all recorded data sorted alphabetically by state and then numerically by shop ID number for either inactive shops, active participants, or both; a mailing label format including shop, contact name, and address only; and selections of shops by zip code. This file is also used to produce a "Totals by Region" report detailing the number of PRP members and active shops, as well as the level of participation for each region.

The reports produced from the Shop ID File are used to monitor and document certain items such as mailbag inventory, shop participation, certificate recipients, and to maintain a current mailing list at the NHTSA for distribution of the monthly newsletter.

The development of the existing shop identification number scheme was predicated on our desire to associate the individual shop number with the specific PRP region where the shop is located. These ten PRP regions correspond to the ten zip code regions with one exception. The zip code or PRP region is identified by the first character of the zip code. The exception is the state of New Jersey, which is part of PRP Region 1 although its zip code region is 0. Similarly, we were interested in identifying the state and local geographic area of the shops that were represented in the second two characters of the zip code. For this reason, we elected to use a unique shop ID number of eight characters, the first five being the zip code, and the last three, a numeric sequence number for the particular state. The three sequential numbers identify the unique record of a shop within its state and from other shops located in the same city. A log is maintained identifying the highest sequential number that has been assigned for each state.

PRP mailbags used to return failed parts to the PRP are assigned unique sequential numbers. The mailbag number is entered on the shop's record and remains there until the mailbag is returned or the shop record is deleted. When a mailbag is returned and sent to another shop, the number is removed from the original record and entered on the record for the recipient shop.

The Shop ID File is updated monthly and changes (additions, deletions) are supplied to the NHTSA for updating their mailing list. Output reports (shop list by state and Totals by Region) are produced monthly; mailing labels are produced as required for distribution of the Defects Investigatory Cases Reports, etc. The shop list is a working document and all relevant data is recorded manually until the automated file is updated and a new list is produced.

Numerous form letters have been prepared during the contract period (for follow-up campaigns, etc.) and copies are contained in our monthly progress reports. Certain material items, however, require some elaboration in this report. These items are those necessary to record and transcribe failure data (failed part component identification tag, failed data sheet, HS-10 Forms, and telephone contact report) and the Certificate of Participation. Copies of these and other materials are contained in Attachment A to this report.

The failed part component identification tags are used by the shop to record failure and descriptive information for the part and the vehicle at the time the part is returned to the PRP. Shops are supplied with plastic protective covers for these tags to avoid obliteration by liquids or dirt from the failed part. No changes were made to these tags during the contract year.

The failed data sheets are used by KSI analysts to record and expand pertinent information on the failed part. Photographs and related correspondence are attached to these documents. Although no major changes to this document were made, the format was rearranged to correspond with the revised HS-10 Form. In addition, an indicator was placed on the descriptive section to identify "Information Only" inputs and their source.

The HS-10 Form used to describe data for computer file entry underwent considerable revision at the outset of the contract. The data gathered through the PRP is entered and stored in the ODI Data Information System (DIS) Vehicle Owner Letter File (see Systems Description and Operations Manual (DIS), October 1, 1975). The ODI/DIS underwent a major redesign in early 1977 and consequently the PRP portion of the Vehicle Owner File was completely reformatted. An HS-10 Form is completed for every failed data sheet.

To record data reported by telephone by the participating shops or other interested parties, a telephone contact report was developed. The requirement to
systematically enter all information, whether or not a part was received, was initiated at the outset of this year. However, this form was not necessary until routine followup contacts to shops submitting parts from new and one-year-old vehicles began in March 1977. At that time, it was felt that a document was necessary that would prompt the caller to obtain all pertinent data on these parts. The telephone contact report serves both purposes, it records information reported by shops on initial contacts and it records information when a follow-up contact is made. The form is then attached to the failed data sheets for review by KSI and the NHTSA.

Each shop that contributes at least one failed part receives two framed Certificates of Participation. Since these certificates are the only visible reward to a shop for its time and effort, we believe the document should be of exceptional professional quality. Furthermore, the certificate should be different from year to year and designed so that it is both eye-catching and appealing. The certificate for 1976-77 is significantly different from the previous year and is printed in two colors (brown and red) on tan parchment. The shop name is handlettered in black.

### 3.1.3 Monthly Reports

Current project status is recorded in a letter-type monthly Progress Report . The report is deliverable by the tenth of the month following the reporting period and provides the following information:

- accomplishments made during the reporting period
- funds committed during the reporting period
- what is planned for accomplishment during the next reporting period
- items of timely interest including results, trends, etc.
- problems or delays experienced and recommended solutions
- specific action required by the ODI to alleviate a problem
- summaries of parts received, including failed data sheets and attachments

Copies of delivered progress reports are retained by the Office of Defects Investigation and the Office of Contracts and Procurement within the NHTSA.

An automated report listing all parts and information received during a monthly reporting period sorted by component identification code is delivered to the NHTSA along with the progress report. Present capabilities provide that these monthly reports (or a selection of more than one month) can be sorted by PRP number or by unique shop code number as well. ${ }^{1}$

The mailing list maintained by the NHTSA for distribution of the PRP News is monitored by KSI through verification of returned mail and telephone calls to assure that new enrollees are receiving the newsletter. Updates to the NHTSA mailing list are provided monthly and include new additions, deletions, and changes to name or address. These updates are derived from the monthly transaction sheets produced when the automated PRP Shop ID File is updated.

A newsletter draft is designed and prepared and then delivered to the NHTSA on the first of the month following the reporting period. Unlike previous years, the NHTSA now conducts all layout, typeset, printing, and distribution tasks. Although a specific production schedule was developed, the PRP News, in general, is distributed about two months after the draft is delivered. ${ }^{2}$

### 3.1.4 Administrator's Award

Upon the conclusion of each contract year, those shops that significantly contributed to the successful operation of the PRP either in a quantitative or a qualitative fashion are singled out of all the other PRP members for special recognition. The actual award is an attractive framed Certificate of Appreciation personally signed by the NHTSA Administrator.
${ }^{1}$ See Infra 3.2.3
${ }^{2}$ Sce Infra 4.3 for production schedule; Section 4 for the new sletter in general

In 1975, we nominated six shops for receipt of this award, and in 1976, we nominated 11 shops. The nominations for 1977 have not been finalized as of the release of this report. We expect, however, that the number of nominations will be at least as many as last year and in all likelihood there will be a few additions.

The Administrator's Award signifies NHTSA's personal recognition of those shops providing support and assistance in furthering safety on our highways. We have a very positive reaction to this award and recommend its continuance.
3.2 PRP Procedures
3.2.1 Processing Parts and Information

All parts and "Information Only" inputs to the PRP follow a specific procedure from the time of their receipt to the time they are put into permanent storage. ^s mailbags, letters, and phone calls are received at KSI's office, a notation is made on the appropriate shop record in the shop list. Any changes to name, address, or status (active or inactive) are recorded also. Mailbags and correspondence are recorded on a daily log sheet. In the case of a mailbag, the mailbag number, shop ID number from a part ID tag, and the date received are recorded. Using the shop ID number, the participant is located on the shop list and the remaining information is added to the daily log. All available information or correspondence is recorded in the log; any missing information is obtained from the shop list. The mailbag is marked with the date received and removed to the storage bin assignment. Correspondence and telephone calls are normally processed in the office except for PRP unique record number assignment.

Once removed to the storage facility, the parts are assigned PRP record numbers from a parts log. The log also shows the month received and the physical storage location for each part. The numbering scheme has been revised so that not only can records in the ODI/DIS be identified with the PRP as the source, but "Information Only" inputs can be differentiated from actual part records. Further, the "Information Only" records are separated into two groups. These groups represent information obtained either from a shop or from another source.

PRP record numbers are six-character numbers beginning with P (as opposed to other characters, i.e., H or O for Hotlines or Owner Letters) so that they may be differentiated from other records in the ODI/DIS. The next character indicates the type of PRP records. The specific values of the second character position are as follows:

- 0 indicates that an actual component has been received. (If the contributor is unknown, the shop ID number field will be zero filled.)
- 8 indicates the record is an "Information Only" input received from a participating shop.
- 9 indicates the record is an "Information Only" input received through the PRP, but from a source other than a shop, i.e., a vehicle owner. Very few records fall into this category but the differentiation between a record from an unknown source and a record from another source is necessary.

Parts that relate to the same failure are assigned the same PRP record number. Parts removed from the same vehicle at the same time that are not related to a single failure occurrence are assigned different record numbers. For example, if a frozen front disc brake caliper and a corresponding worn brake pad set were removed from a vehicle at the same time a leaking rear brake line was removed, they would be coded as follows:

- The frozen front disc brake caliper would be assigned a PRP record number.
- The corresponding pad set would be coded as a subsequent part using the same PRP record number.
- The leaking rear brake line, which does not have any obvious correlation to the frozen front caliper, would be assigned a different PRP number.
- The PRP numbers are recorded on the failed part component ID tag and the failed data sheet. Bin numbers are assigned randomly on a "space available" basis, except that parts with the same PRP number are stored in the same bin.

After the component has been assigned a PRP number, a failed data sheet s completed. The failed data sheet is basically self-explanatory, as shown in ittachment A. A manual is necessary to complete the vehicle code, component lassification, and failure codes. The remaining information, except for failure lescription, is transcribed from the failed part ID tag or from the part itself. The failure description area is used to record observations made by KSI analysts.

The failed data sheets are returned to the KSI office for review (see 3.2.2), completion of any missing information, and data transcription. Using a coding manual and the PRP coding instructions (Attachment B) the information on the failed data sheet is transcribed to a Vehicle Owner Letter Coding Sheet (HS-10 Form). After verification, the HS-10 Form is used to produce a punched card deck. The deck is then verified and processed through an Edit/Update computer program prior to entry to the ODI/DIS vehicle owner letter file. Records passing the data edits are placed on the file. "Information Only" and telephone inputs are processed in a similar manner .

### 3.2.2 Supplementary Data

Failed Data Sheets are reviewed prior to transcription, to determine if a follow-up contact is necessary or desirable. Parts that meet one or more of the following Supplementary Data requirements are subject to a follow-up call to the contributing shop to obtain missing or additional information:

- part was removed from a new or one-year-old model vehicle (in this case, 1977 or 1976)
- part may be related to a collision occurrence, or an accident or fire is indicated
- personal injury is indicated
- part is of particular interest for a newsletter article
- the part is of particular interest to the ODI
- significant information is missing and there is an indication that the data may still be available

Once the supplementary data has been obtained and recorded on a telephone contact sheet, the record is transcribed on an HS-10 Form and then follows the existing procedure.
3.2.3 Monthly Automated Report

After the records have been processed and entered on the ODI/DIS letter file, a monthly automated report is produced.

A monthly retrieval of these records from the information system in a format approved by the NHTSA CTM produces a detailed report of the failed parts for the month. Present capabilities provide that these monthly reports can be sorted by PRP number, by unique shop code number, or by component classification code. In other words, we can sort these reports to provide any of the following information:

- a listing by sequential PRP numbers (a historical record)
- a listing grouping all of the records from the same shop together this information tells us how many parts have been received from any one shop, state, or region
- A listing grouping all of the records of identical components - this information tells us how many identical parts we have received

A copy of this report is contained in Attachment C. Note that this report is by component classification code.
3.2.4 Processing New Shops

The PRP has a specific procedure for processing new shops. Each new shop is assigned a record number for the computer file and a shop identification number for correspondence purposes. After an initial contact sheet is filled out (see Attachment A), the shop data is transcribed for the PRP Shop ID File. A shop kit is also sent to each new shop: a PRP shop kit letter, copies of the recent newsletter, a copy of the Defects Investigatory Report, one numbered mailbag, five numbered tags and their plastic protective covers, a typical failed parts list,
and a "Wanted" poster requesting failed parts (Attachment D). Shops are automatically deleted from the program if they express no interest in the program or if they discontinue business operations.
3.2.5 The PRP Shop ID File Update Procedure

The PRP Shop ID File is updated using a punched card deck. This deck includes all program deletions, additions, and modifications to existing records. Coding instructions and data entry format may be found in Attachment E. After each update is run, a transaction sheet is produced showing the records affected by the update. The transaction sheet also identifies errors and totals the number of additions, deletions, and modifications.

After the monthly update is completed, a PRP shop list sorted in order alphabetically by state and shop ID number is produced from the file. The listing for each shop includes the owner's or manager's name, the shop name and identification number, and the address (street, city, state, area code, zip code, and phone number). Active shops can be identified on the computerized printout by an "A" on the third line after the telephone number. The certificate year of participation, such as "77," follows. The current mailbag inventory is listed by bag number after the shop ID number. The shop list is used to identify incoming mailbags, to obtain shop addresses, and to determine subjects for follow-up campaigns .

The new shop list is verified against the shop list from the previous month. If found acceptable, a "Totals by Region" report is produced. The "Totals by Region" report is used to monitor the number of enrolled and active shops for each region and overall. The report also shows the regional and national levels of participation.

## Section 4

## THE PRP NEWS

### 4.0 General

Each month, the PRP News is distributed to PRP members. KSI delivers the draft of the PRP News to the NHTSA, who is responsible for its final preparation. During the contract year, all final copy preparation, printing, and distribution tasks were performed by DOT (see DOT order number 171-1). The format was reduced to four pages rather than the previous six. KSI is responsible for developing the draft articles and supplying any necessary photographs and updates to the NHTSA shop mailing list. The PRP News contains articles on significant parts received, current NHTSA news, and current program status. This document is the PRP program's principal means of communication with PRP shops and is designed to stimulate their participation as well as to keep them informed. KSI has been successful in maintaining an "information feed-back loop" using the newsletter by publishing information, comments, and so forth, passed in by participants.

### 4.1 Specific Objectives

The newsletter is designed to augment and reinforce several facets of shop participation. These objectives are discussed in the following paragraphs.

### 4.1.1 Maintaining Interest

The most important factor in newsletter development is creating interesting reading material. Maintaining shop interest in the PRP News, and therefore, the program itself, is the primary objective of the publication. We believe several types
of articles are particularly effective in accomplishing this. These are articles that relay information useful in conducting normal shop operations, such as service tips and information relayed by shops, attributing the tips to the contributing shop. One section of the newsletter, "Items of Interest," is devoted to these types of articles. Using this section, we have developed a "readers' forum" where comments and problems reported by participants are published. Shops will often write or call with additional information or more comments on features previously published. Service information, particularly on newer models, is of special interest to most shops and is a good tool to maintain readership. Some participants have made requests that more of this information be included.

### 4.1.2 Increasing Participation

Increasing participation in the PRP using the newsletter depends on the PRP's success in maintaining readership. Articles on failed parts are intended to bring more parts into the program, but the articles must also stress that these parts are needed by the NHTSA and that the shop is making a valuable contribution. Attribution to the contributing shop is critical, since non-contributing members can see that other shops are providing valuable information. The newsletter must also stress that returning parts is voluntary and does not require a large investment of their valuable time. This reinforces positive feelings on the part of the shops, while showing that submitting parts does not require much additional work.

Finally, the newsletter should provide some inspiration - an idea that causes a potential contributor to review the types of repairs performed with possible safety-related defects in mind. The inspiration should cause shops to look at the potential a defective part has of creating a hazardous situation, rather than looking at what has actually occurred. We feel certain that safety-related failed parts are overlooked because the defect did not create a problem even though the potential for serious consequences existed.

Our concern during the sixth year of operation (and in the previous year as well) has been to educate members in these areas: PRP objectives and operations, what a safety-related defect is, what parts are needed for the program, and what the PRP accomplishes for the NHTSA and for highway safety. The newsletter is the principal tool for accomplishing this task. We maintain that, knowing what the PRP objectives are and what a safety-related defect is, a shop will make a more valuable contribution than if shops were only asked to contribute specific components. Knowing what role they play in highway safety, PRP shops are apt to take a more active interest in the program. The newsletter is developed with these themes in mind. We feel that this approach has improved the quality of the parts received. We have noted that fewer inconsequential items have been submitted than in previous years.

### 4.1.4 Obtaining "Information Only" Input

During the current contract period, more emphasis has been placed than in previous years on obtaining information on failures where parts are not available. The logic behind this effort is that as an "early warning system," the information obtained through the PRP may be as valuable as the part itself. Further, the fact that a part is not available should not prevent shops from reporting safety-related defects they encounter. The additional expertise that most shop employees possess in identifying defects and failure modes makes these reports at least as valuable as information received by vehicle owners, and in most cases, far more useful. ${ }^{1}$
${ }^{1}$ See Supra 1.2.1.

### 4.1.5 Focusing on Newer Models

The PRP News has been the most valuable tool in obtaining more parts and information on newer model year vehicles. By featuring articles on new model vehicles and emphasizing the need for more information, we have used the newsletter to obtain more data on failures for later model vehicles. ${ }^{2}$ Some members have requested that KSI include articles and service information on new cars more often.
4.1.6. Information on NHTSA Activities

Program enrollees are kept up-to-date on current NHTSA and DOT activities thrcugh the newsletter. We believe that publishing information on investigations and research program results is necessary so that the readers can better understand how the NHTSA carries out its responsibilities as mandated by Congress in the Highway and Traffic Safety Acts of 1966. Although, as a rule, the PRP does not receive tangible benefits, i.e., returned parts, as a result of articles of this nature, we believe enrollees are interested in what is accomplished by the PRPs' and other sources' data collections.

### 4.2 Newsletter Matrix

As an aid in the development of each newsletter, we prepared a series of matrices that depict previously published newsletter articles. (See Table 4-1.) Each matrix identifies first, a specific automotive system, e.g., brakes, steering and then identifies the specific article published by vehicle model year, specific sub-assembly or component, and manufacturer. Finally, the entry on the matrix is recorded by date of publication.
${ }^{2}$ See Supra 1.3.3.

This aid facilitates the newsletter design in that we have a ready reference of previously published articles. The information is valuable in preventing duplication and in initiating follow-up articles.

### 4.3 Newsletter Production Schedule

A requirement that the Department of Transportation prepare and distribute the PRP News was included in the current contract. Final preparation of the newsletter by NHTSA staff caused a one-month delay in the distribution schedule at the beginning of the contract period. The current schedule requires KSI to deliver a draft copy of the newsletter on the first of the month for distribution on the first of the following month. Early preparation of the draft copy made it necessary for KSI to establish a cut-off date of the twentieth of each month for which the newsletter is reporting. This schedule is satisfactory as long as the newsletter is released on time.

Experience has shown that late distribution of the newsletter has an adverse effect on the number of "first time active" participants. Fewer newly enlisted shops will become active when the newsletter is not issued routinely. It does not appear that sporadic release of the newsletter has any lasting adverse effects on the monthly part count. The monthly part count depends on continued active support of the program on the part of the membership. However, new participants must be brought into the program to replace those older shops that either lose interest or go out of business. It is important, therefore, to increase the number of active participants as well as to maintain the interest of the shops that support the program. A low number of first time active shops will not have an immediate effect on the monthly part count, rather, the effects will be felt later as older active shops drop out of the program. It is imperative that the routine monthly distribution of the PRP newsletter be maintained.
4.4 Copies of the PRP News - FY 1977

Following this section, we have provided photocopies of the ten published PRP News issues. At the time this report was finalized, the two remaining newsletters had not been issued.
Table 4-1

PRP NEWSLETTER ARTICLES
1972 Tu March 1977

PRP NEWS LETTER ARTICLES
1972 To March 1977

| Date | Vehicle or Equipment Manufacturers |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wonth lear | General Motors | Chrysler | Ford | AMC | Imports | Equipnient |
| 4-72 | ' 66 Olds Vista Cruiser control arm <br> '69 Delta 88- control arm |  | '69 Ford - control arm |  |  |  |
| 7-72 |  |  | '65 Fairlane - rear axle |  |  |  |
| 12-72 |  |  | '71 Ford Sedan <br> '71 Country Squire $\}$ axle |  |  |  |
| 3-73 |  |  | '71 LTD - coil spring |  |  |  |
| 10-73 | '71 Monte Carlo ball '69 Lemans $\}$ joint |  | '71 LTD - ball joints |  |  |  |
| 1-74 |  |  | '64 Comet - control arms <br> '69 Fairlane - control arm <br> '60 Falcon - control arm <br> '71 Rancero - control arm |  |  |  |
| 12-74 |  |  |  |  | Datsun 510 - transverse |  |
| 6-75 |  |  |  |  | 172 Spitfire - verticle lin |  |
| 4-76 | '66-'71 Lt. Trks. - control arm C3-34 | , |  |  |  |  |
| 7-76 |  |  | '74 E100-axle |  |  |  |
| 1-77 |  |  |  |  | '75 VW Rabbit - control '75 Spitfice - axle (2) | arm |
| 2-77 |  |  | '71-7 Caprl (C4-10) - stabilizer bar |  |  |  |

PRP NEWSLETTER ARTICLES
1972 To March 1977


| Iquipment |
| :---: |
| Trraspuke Wheels recalled |


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| :--- | :--- | :--- |
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Tru-muke Wheels recan Fiwurone 500's recall Gungran tread - $\qquad$
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CONT.

| Date | Vchicle or Fquipment Manufacturers |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Month/Year | Gencrat Motors | Chirysler | Ford | AMC |  |
| 2-72 | '69 Buick/'70 Olds vacuum booster check valve '62 Cadillac - brake line | $\begin{aligned} & \text { '70 Plymouth - master } \\ & \text { cylinder } \end{aligned}$ | School Bus - brake line <br> '67 Ford - booster <br> '68 Ford - shoe |  |  |
| 1-72 | '71 Cutlass - brake line |  | '71 Fairlane/' 70 Torino/ '69 Mercury - master cylinders <br> '67 Ford - brake line <br> '68 Cougar ~ brake hose |  |  |
| 4-74 |  |  | '70 Mustang - wheel cylinder |  |  |
| 7-72 | '71 Catalina - callper piston <br> '67 LeSabre/'65 Tempest <br> '70 Olds 98 - Vacuum booster valve | ${ }^{1} 70$ Charger - caliper piston | ${ }^{\prime} 70$ Squire - caliper pistor |  |  |
| 10-72 | '71 Olds Delta 88/'65 Skylark SW - brake line |  |  |  |  |
| 12-72 | '69 Chevy - brake relining Vega - caliper | '70 Coronet SW - brake lock - up '71 Coronet Custom brakes sticking |  |  |  |
| 5-73 | $\begin{aligned} & \text { '69 Ambulance - brake } \\ & \text { drum (2) } \end{aligned}$ |  |  |  |  |
| 10-73 | '65 SS - bent brake shoe |  |  |  |  |
| 11-73 |  |  | '72 Pinto - brake disc rotor |  |  |
| 1-74 | '73 Cadillac - brake line |  |  |  |  |


| Dite | Vehicle or Equipment Manufacturers |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mmentrent | General Motors | Chrysler | Ford | AMC | Imports | sablment |
| 4－74 | 173 Impala－brake booster |  |  |  |  |  |
| 8－74 |  |  | ＇67 Continental－brake tub | ng |  |  |
| 9－75 |  |  | ＇70 Falcon－master cyl． |  |  |  |
| 11－75 |  |  |  |  | Renault 10－brake valve |  |
| 2－76 |  |  |  | ＇74－175 Miatador recall－ boosters（76－0021） |  |  |
| 4－76 |  |  |  |  |  | Brah ミ mex too short |
| 5－76 |  |  |  |  | Datsun－brakes pull |  |
| 6－76 |  |  | ＇74 Torino－brake pedal |  |  |  |
| 7－76 | ＇ 70 Chevelle Mallbu－ master cylinder |  |  |  |  |  |
| 8－76 | － |  | ＇67 Mustang－brake pedal |  | 171－＇72 Datsun 510－break fluid leak | Brakミローコ pressure リン1： |
| 10－76 |  |  | ＇74 Elite－brake caliper |  |  |  |
| 12－76 | ＇73 3／4 Ton－brake hose |  | ＇67／＇69 Mustangs－pedal bracket |  |  | Brais ：cums \＆rotors Sehinlie urake line <br>  |
| 1－77 |  |  | ＇75 Continental－rear brake line |  |  |  |
| 2－77 | ＇71－＇72 Cadillac－Brake hpse | ． |  |  |  |  |

PIRP NEWSLETTER ARTICLES
1972 To March 1977

PRP NEWSLETTER ARTICIES
1972 To March 1977
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| Date | Vehicle or Equipment Manufacturers |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Month/Year | General Motors | Chrysler | Ford | AMC | Imports | rupment |
| 2-72 | '71 Vega - Radiator Fan | '69 Chrysler - engine mount | $\begin{aligned} & \text { '69 Mercury }\} \begin{array}{l} \text { engine } \\ \text { mount } \end{array} \text { '70 Ford } \end{aligned}$ |  |  |  |
| 2-76 |  |  |  |  |  |  |
| 3-73 |  | '71 Dart - engine fire |  |  |  |  |
| 10-73 |  | '68 Barracuda - englne mount |  |  |  |  |
| 11-73 |  |  | '69 Thunderbird - fast idle cam |  |  |  |
| 1-74 |  |  | $\left.\begin{array}{l} \text { '72 Mercury } \\ \text { '72 Custom } \\ \text { '71 Mustang } \end{array}\right\} \text { Radiator Fai }$ |  |  |  |
| 12-75 |  | . | '65-'70 Falrlane, Falcon Comet, Ranchero, Montes engine mounts |  |  |  |
| 7-76 | '65-7 Wildcats/Electra/ Cadillac - engine mounts | 70 |  |  |  |  |
| 2-77 | '65-'75 Chevy - Water pump |  |  |  |  | - |
| 3-77 | ```'66-'72 Pontlac - timing gear``` | . |  |  |  |  |
|  |  |  |  |  |  | , |

4-14
PRP NEWSLETTER ARTICLES 1972 To March 1977
Vehicle or Equipment Manufacturers
AMC
Ford


PRP NEWSLETTER ARTICLES
1972 To March 1977

PRP NEWSLETTER ARTICLES
1972 To March 1977

prp nelvsletter amthelas
1972 To March 1977


4-18
LIGhting Equipment

| Date | Vehicle or Equipment Manufacturers |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alonth/Year | General Motors | Chrysler | Ford | AMC | imports | Equipment |
| 10-73 | '67 Cadillac- turn signal '71 Chevy-taillight (2) |  |  |  |  |  |
| $\begin{array}{r} 12-76 \\ 1-77 \end{array}$ |  |  |  | '75 Matador- turn signal | '73 Triumph G-6 - headlight switch | . |

1972 To March 1977

PRP NEWSLETTER ARTICLES
VENTILATION


Vehicle or Equipment Manufacturers
C4-07 cases- hood latch -frame
Equipment

Chrysler
General Motor
Month/Sear





## CASE OF THE MONTH

## Defective Windshield Wipers on 1971-197:3 Mercury Capris

On December :30, 1! !\% . the National IIirhway
 the Ford Motor ('mupany to recall an sotimated Ha, (h) Capri antomotiles becane of al safety-rehaterl defowt in the windshield wiper's of those vehicles. Informationg gathered during at defect investigation had shown at temedener for the wiper anm ame bate to fly off the pioot ascombly withont warming. The defert was traced to $1971 \mathrm{an} \mid 1972$
 $19 \%$
The defert involves the wiper pivot shaft assembly (see photo) which extemels thomph the wimblield cowl pand, and drises the wiper arm


Defertive winkhield wiprer found on 1971-197:3 Mereury ('apris atutomohiles.
and hade aceross the windshicld. 'The end of the pirot shaft alowe the windshicld eow is splinerd. or sermaterd, and press fitterl into the bore of the
 piren shaft also is stakerl. 'Tlowe wer arm and bate assembly lits onto the am drive. When failne he separation of the wiper limkage ocoms, the arm and bathe assembly often flies ofl completely as the arm drive separates from the pivot shaft. denotinge failure of the interference fit, The pirot shaft splines minally show exithere of severe weat when this thee of fathere oeroms.

The rans have not been reealled to date as the
 cral (ourts. We are still atctively recking there failed parts for study: One wiper piont acombly bass been sulmitted ly 'Timis luport salem amb Service inllutchinson, Kansis. If any of om PantReturn Program participants know of or encomer oh her ('apri wiper failures. plase let us know. Just place the failed parts in one of your return mailhages and somd them to bls. Thanks!

## (GM TO RECAILL AND PAY CIVII, PENAITY

The Federal Govermant and Gemeral Motor: (orp). hate exttled a suit concerning a posibla throtle jamming problem resulting from engine mome fathre in certain (i, blasenger cars.

Under terms of the settlement. and with the consent of the C.s. District Court for the District of Colmmbia, (imeral Motors hats agreed to recall mondel yeat: 1 !gi. and 1967 Buiclk Wildeats and
 with crnise control (except Eldorados). There are 209.562 vehicles involved.

The frovermment said that these vehicles. are sub)ject to engine mount failhire which may result in sulden throttle jamming ank loss of vehicle control. thus creating an meanomatle risk of areident. injurs. or death. For owners who respond to the

[^6]GM Recalls ( ('onlimual from pata 1 )
remall motiees, (iememal Motors will comect, free of rharge, this hazarloms comblition. Genemal Motors also will pity the erovernment a civil peralty of s!is, (10)
laterember of 1 !! fl, the admimistrator of the

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 to eompl! with the order. 'the govermment then filal ant aramat the complany and (ixll sumer the Erovermant. contesting the onder to issale defeet motifucations.
 shops that smbmitterl failed engino momets and information relaterl to this wase.

## ITEMS OF INTEIREST


 condition he experienced in his 19 万I A Andi model fonds. 'The battery, which is lowated moler wat seat, was manarel in exeress of sixtern wolts. 'This comblion was reportedly ratused bey atatly voltace rexalator whirly allowerl the altermator to over chatere the hattery. The hattery acial heiled

 reponted that both he amel his wifa sullerod in mitation of the mose amel thoat as at result of therec


 of a 19 T. F Ford Efon wan which hat 11,500 mikes on it. The left axde tober reportedly separated from the reentar section of the axle as a result of an insuflieient weld. Once the comblition was diasmoed. the whicle was taken to a Ford dealer. Mr. ('heater reperted that the service manager at. tha deaterehip lats seen appoximately lo rehicles in the past far with smilar falhares. Howerer, the majorit! of these vehieles were reportedly the Fowd Eilite mondel.
Mr. Chester alon reporter that he fimbes that most failerl (i.ll altomatoms equipperd with internal fermbator: ham aither a fanley voltage rexnlator or a bmmed ont isolation dionte (ere April 1 !) 6 ( newstetter). II be beloves that these fatures may be catused by oror capacity chabriner, such as
rumbing an engine while usiber jumper cables. of a failing battery which will cance a constant over-charge mate.

- 'The PRP' has received a master celinder that Was removed from a 1970 Chevelle Malibu. which hatd trage miles on it. 'The master eylinder repented!y falded when the bakes were applied at a sperel of : ? m miles per homs. 'The lailare rembleal in atwo (alr eollision. Nr: John Il.

 that. the brakes hatel beron raceked on the mome ing of the areident and were lomat to lo in goot

 ('ost. of repairs to the ereoted vehicle was mot known at the fime the mastor (erlimere was sul)mitterl.
- Mr. John Gartmer of .J. G:AR'V゙ER . IC'IO SERVICE, Chicago Ihlmois. reports that many of his customers who nse Jrinosal. Firectone. Goodyear. B. F. Goolrich, and Gencral brand stecl radial tires have hat tire failure as a result of bly separation.


 frame (driveres side). 'The (hiver reperterby weigherl appoximately 1 (60) poumts.


## I)OT TO OPEN NEW TEST FACILITY

'listing of motor vohiches and motor velicela "fuipment for possible safery deferts is wheduled to lowin this fall at an now engincoring tos facility

 fration has begom stafling the facility. locaterd at the ()hio 'ramsportation Researeh Conter near Eiast Libretr.
'The initial staff of 11 , which inchmes mumeres. terhmicians and relobal support. will be engaged in checking testing equipment and preparinger operating proxelures. The enginerering test facility plans to adde for its stafl lator this feat and maximmon stafl maty reach ate. In addition to lea-ing the bulding spare the govermment will hate ancees to ofther exeellent facilitios at the Ohio 'rameportat tion Researel Center, including a $71 / 2$-mile hirhsperd track, a 2,50 (o) font skid pad with apporaches
 amd a high acerleration (rash simmator.

While the work performed at the ensinerring test facility minarily will involve testing of motor rohicles amd moton velicele egnipment for possible safety deferets, other work, such ats compliance test ing, also will be performed as time permits.

## OUTSTANDING SHOPS

Our outstanding shops are those shops that have sent into the PRP at least one part during the current month．A shop that sends in parts in consecutive months is identified by a mmber in parenthesis lefore the name．This number identifies the consechetive months the shop has sent in a part．New shops that have just become active in the PRP are ildentified with an asterisk before their name．During July 1906 ，nine shops berame adice participants in the PRI．Fome shops late sent in faited parts in consecutive months．

## REGION 0


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 Providuller，lthodre lsland

## REGION 1

BII，S゙CHMH）T＂S（iARA（2E
Etna，I＇ennsylvania
＊bOD MASON SUNOCO SEIRVICE（BFATERL

CIAANE AUTO IREIAIR
Briclifown，Nrow Jorsery









Wilmilotom，Julawiar

## REGION 2


Norfoll，Virginia

## REGION 4






## REGION 5

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lable Sontls Jonkota

## REGION 6


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J．（iARTNER AUTO SLilVICH
Chicago，Illinois

## REGION 7

BOI；CIIESTER＇S AUTO SERVICL
Arlington，Texas

## REGION 8




## REGION 9


lixllevirw，W＇ashington
 Loatla，Washlation
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## QEGION 9A

 ＇Tujunga，Califomia
KAIIJN゙ダ（IARAGE
V：』ル N゙いys，California

las Angrales，（＇ilifomial

fasardalas，（：aliforma
 who fon think might wath to help ont in this I＇rogran．Hense send their mane and address to me．Thanks．

## TELEPHONE CALLS

If you have any problems regarding this promam．are in need of additional mailhags，tarss etce，have any



 Attention：Brace E．Beddow．

CURRENT PRP PARTICIPATION
The , faph below identifies the tatal number of active shops within each regian for last year onl. Twiu hundred farty nine shops contributed parts lost year. In addirian, nine shops On our oclive team and sent in a port, bringing the tolal number of active shops to In undied fifty-five.


STATES

| ( CT | DE | DC | AL | IN | IA | IL | AR | AZ | AK |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ME | NJ | MD | FL | KY | MN | KS | LA | CO | CA |
| MA | NY | NC | CA | Ml | MT | MO | OK | 10 | HI |
| NH | PA | SC | MS | OH | ND | NE | TX | NV | OR |
| RI |  | VA | TN |  | SD |  |  | NM | WA |
| VT |  | WV |  |  | W] |  |  | UT |  |
| PR |  |  |  |  |  |  |  | WY |  |
| ( VI |  |  |  |  |  |  |  |  |  |

## National I'arts Return l'rogram

## Description and Function

- The Plll imolves the volmatary sub)mittal by independent repair shops of failed antomotive rompenents. Components are summitted to a mperemtative (Kappa systems. Ince) of the National Itighway Trallir Salety Administration (NHTSA).
- The purpose of the PRI' is to gather information on there romponents to help the NIITSA identify the existence of safecty-related, mamblactming defects in dowign, materials, constrontion, or performane of motor vehaclo equipment. Vhater the anthority of the Nia-
 Aet of 1 gexis, and Amendments to the
 mambiatures to comduct saldety defed notification campaigns when it has been determined that a delect relating to motor rehicle safety exists.
- The information uhtained from these parts is also valuable in preparing Federal motor vehicle safety stamdards.
Your shop can help. The parts that you send in will wite vital infomation that camot be obtained in any other way.


## U.S. DEPARTMENT OF TRANSPORTATION

 NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION WASHINGTON, D.C. 20590
## OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, $\$ 300$

POSTAGE AND FEES PAID NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION DOT 517


1): DFPAHIMFNI OF TRANSPOHTAIIDN O NATIONAL HIGHWAY IBAIIIC SAFETY AUMIRIVIUATION

## BRAKE PEDAL SUIPPORT BRACKETT

The PRI' has receiverl a hake perdal support bracket from (iUS COOPER SERKICES, INC., seattle, Washington. This part, whel attaches to the firewall amd dash support, was remored from a 1967 Ford Mustang with a mileage of 62.000 . The vehicle was expipperd with power brakes and an antonatic transmission.
The bushing which suppoits the brake perdat swing shaft on the right side of this bracket is elongated and split (see figure 1). The hole in the bracket then which the bushing fits is also efongated, approximately $3 / 8$ of an inch. and the bracket has a light coating of rist. Reportedly, the failed bishing can prevent the brake pedal from returning, possibly resulting in hake lock-up, of cause enomgh resistance to require excessive effort to ap)ply the hazkes.
Mr. 'Tom Yomor, the service mamarer at (idS (OOPPR SERVICES, IN('. staten Hat he has sed three other ford vehiches with similar failares. If yom shoul enombters surl a failure, we would lilie to hear from yom.

## RESEARCH ON DUJRABILITY OF BRAKE Flumb pressure walkning sistems

The brake, fluid pressure loss, warning systens in dual hydraulically braked vehicles may be expected to deteriorate with time. Eventatly the system may not operate when a leak or rupture occurs in one of the two brake fluid circuits. The NII'SAS is currently supporting researel to determine the durability of such systens and their mondes. of fatures.

A warning system consists of an illuminated "haake" diaplay sign in the veliceless instrmment pancl, a special switel, and a proportioning valse. The switch is operated by differential presture on the endse of a slidinge rocl. When the brake peetal is pressed and one of the brake lines is open. the rod will be foreed to move. It is clesigued to proside caln operation of the wwitch which operate the lorake warning light (see figure e).
(Continued on paxa $\because$ )

Figure 1

## ITEMS OF INTEREST

The NHTSA recently sponsored some work involving the inspertion of brake flaid pressure wamintr systems in used passenger cars. Fifty-three 1968-1073 (ars of different domestic and foreign moxlels were eximined by the Antomobile Chab of
 the lowase presture wroning light failed to come onk, when the presswe was reliesed in one of the two brake limes and the brakes were applied. In five it tonk two of three brake applications before the switeln would operate. In another eat, the wire to the switell was not commeded.

In four others there were defertive or missingr lierll assembly parts. 'The switch eontact in one propertioning value harl a tomerh blark insulating conting that preventorl it from makiner contact.

Follow-up work is being conducted by the $\Lambda$ (s) (o) examine 200 more passentrer cars for fanlty brake pressme waminer systems. 'The results of What stmely my indicate the need to inspect, and replace or repair such warniner systems at specified times or mileage.

You as participating repairs shops in the NHTSA larts Refmon Progxam ean provide additional data on these pressure waminer systems. Please send as any failed proportioning values that you ancomenter.


Figure 2
Combination brake warning switch and proportioning valve assembly (sectional)

- Mr. Johm Chmmins of UNIVERSAL MMPORTS, INC. in Rockville, Md., reports that lirelli tives which are supplied as original equipment on De'Tomaso Pantera's have been diecontimued. Ifowever, aceording to Mr. ('mmmins, the 2:3.). 60 VR 15 for the rear axle and size $\geq 10 x$ (i) YR 15 for the fromt are comparable. Aloo, (iondyear Arriva style tires which are supplied as orginal empipment on other Panteras may still be ordered from (inorlyear stores. Mr. ('ummins also re-
 with original equipment tires and wheres, on when the dire seraped the fenter when tuming. The wherls are reportedly of a new design this yeare, which may be cansing the interference. The PRP' wonld like to know if your shop hass encomentered similar emolitions on whicles.
- As reported in the June issue of the PRI' NewsIefter, Mr. Julins Meisner of l3R.DN(ll MOTOO PART'S in Albany, New lork, reported having difliculty with the braking system on his 19 it Ford Gran Torino. Mr. Daniel T. Wal\% of LINCOLN SAFETY SERVICE CO... in Lincoln. Nehraska, has suggested that because of the length of time the car was in storage, the seals in the master cylinder may have been affected. The front hake circuit may be bypassing intermally (ansing the abmomal pertal travel. No fluid lows or leakage may be detected. Wir have pamed this information along to Mr. Meisner.
- Mr. Tom I'itre, an antomohile merhanies instructor and a member of the Califormia Comeil for Adult. Edueation, reports repaining a 19 -1 and a 1:96 Datsun model m10. The clutel slave and master eylinders were leaking past the dust loot and into the passenger compartment of cach we hicle. Mr. Pitre has also repaired a 19? ( Datsim belo for the same condition. Reportellys the master and slave eylinders leak as a resuld of corrosion, causing loss of fluid and chatel operat tion. Slave cylinder rebulid kits are also hard to find according to Mr. Pitre.
- TOMMIY'S AUTO REPAIR in Sioux City, Iowa has sent the PRP six air conditioning thermal limiter fuses removed from General Motors vehicles. Reportedly, when the s.2.6.5 fuse disrupts the current, the fan motor continues to operate and only the compressor stops. . According to the shop, 75\% of the limiters lom out from small malfmetion while the air conditimingr system is still intact. TOMDIM's AUTO REPAIR indicates that the limiters should have a higher temperature tolerance or else standard fuses should be used.


## OUTSTANDING SHOPS

Onr outstanding shops are those shops that have sent into the PRP at least one patt during the curvent month．A shop that sends in parts in consecutive months is identified by a momber in parenthesis before the name．This nmmber ichentifes the consecutive months the shop has sent in a part．New shops that have just
 became active participants in the PRI＇．Fonr shops have sent in failed parts in eomserotive months．

## REGION 0



Hartfocth，（ommertiont

## REGION 1


Jagramgeville，Now Vork

Albans，N‘w Jork
BEIRT＂S AIRCO S＇TATION
Wllmingron，Inclaw：
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1roughkerpsics，Now Vork
NEW YOIRK AI：＇の IREJAJIR


＊W．J．KIREAN ANI SON


## REGION 2


Norfolk，VIrapiuia





rackille，Maryland

## REGION 3


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Montinomery，Alabinma

## REGION 4

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 l．ansiug，Miehitantu

REGION 5


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Sionス（\％ity，Iowa
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ALIG：NMENTV
Mimmerpolis，Mimmenta


Aןpleton，Winヶomsitn

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## REGION 6



Clayton，Dissomai
（2）J．（iARTNLE ATVO SEINVICI： Chicosion，Illinois

I．INCOLふ SAFFTV NEJRTICE（O． Iincoln，Nebraskia



## REGION 7



Irvinq，＇Texas
 A．ND l：l：

Olkaloma City，Oklahoma

REGION 8
 Aじ「OKRIDIIR salt Ladic City，L＇taH TEIRIS NIOTOI CO． lientrer，l＇tah

## REGION 9

 （ WONT： Sam Francisen，（＇ullifornial
 Stocktor，（＇：ulifornia

 Alhany，（＂alifornial
心ばっでICは ぶnnta Monic：a，（＇allfornia
＊MIR＇TOM I＇ITMR
l．os Allos，（＇aliformis
 North Ifollywond，（：aliforniat

Nore：We need more participating shops．If you know of an idependent antomotive repair facility in yom area who jou think might want to help out in this Program，please somd their mame and address to ms．Thanks．

## TELEPHONE CALLS

If you haw any problems regarding this program，are in need of additional mailhags，tags，ete．．have any fuestions which ned answers or would like to pass on comments，please call us collect．Place your call to
 available Mondily throngh Friday from $8: 30$ atm．to $5: 50 \mathrm{p}$ p．m．If you have a contribution or surgestion for
 Attention：Bruce E．Beddow．

CURRENT PRP PARTICIPATION
the groph below identifies the number of oelive shops within eoch Region. Seventeen shops have joined our offive teom ond sent in o port. Keep up the good work. We still need mony more shops on our oclive leam ond o lol more ports.
(As of 31 August 1976)


National Parts Return Progran

## Description and Function

- 'The I'RP' incolses the roluntary mital by independent repair shops failed antomotion components. (c) ponents are submitted to a reprexem tive (Kappa Syatems. Rnc.) of National Itighway Traflic safety. ministration (NlITSA).
- The purpose of the PRP is to grat information on these components help the NIITSA identify the exite of safety-related. mamfacturing defe in design, materials, comstruction, performance of moter rehicle equ ment. Under the ant hority of the? tional Traffic and Motor Yehicle safo Act of 1966 and Amemburnts io t

 notification cannatigns when it has be determined that a defert belatinar motom whicle salfuty exiats.
- The information abtained foom the pats is also valuble in proprine Fe cral motor vehicle sateets stamdaris. Your shop can help. 'The parts the yom send in will give rital informath that camot be olotained in any oth waty.

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $\$ 300$


U: DEPAHIMF IJT UH IRANBPORTATION O NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Vol. 2, No. 3
September, 1976

## LEAKING HOSES

'The PRI' has received wo fuel tank filler homes
 (abliforiata The hoses were removed from at 19 ed Fiat model $12 t$ with (6,2sis mites and at 197: Fiat model 128 with 27.001 miles. The fitler hose shown (figme 1) was remover from the 197 ? model wehicle. Note the cataking of the mblate near the top of the hose which reportedty mesulted in fuel leakage. The top of this hose has been expanded stightly to ithastrate the extent of the deterionation. The other howe, removed from the 19 ge Fiat, owhibits the same kind of deterionation. If your shop enemmem this type of failmer, the PRI womblike to hear from yom.

## GM ORDEIRED TO IRECALL AND PAY PENALTY

In a simuificant decision, a federal distriet court
 civil penalty to the Vhited states for refume a federal erovernment order to motily owners of a


In the ming handed down on daly ex, 1976 ,
 the listrid of ('ohmbita. ordered (ioneral Notoms
 beramse of a fire hatand calused by fanlty cathmetor plugn.

An investigation ( (ase no. 1:2) conchuldel by the Sational Itighway Trathe Safety. Administ ration in

 cathmetors and manfactured before Mand ex, 1966.

When (ial refusert the govermment or order to isme defect notifications to the owners of the ephicles. the fecteral safety agency sured the anto mamefacturer in Jamary 197. At the time litigation was initiated, the NII'SAS estimated there were 3ib, 000 whicles mamfactured that contained the possible defert. Gad told the eomert there are an estimated
 famener still on the highwit.

The gencomonent romphaint has allewed that an ahminum phas in the carbmetor bocl! conth work loose from vibration and fuel presure. fallinger gamoline to be pumped divectly onto the engine and rrating a high probability of fire and an mereasonahle risk of acridents, deaths, and injures. The NHISAS said it hat repoets of more than 1,000
 rwhicles.

The ervil pernalty was the harest ower assessed agranst an antomolvile mandacture in the 10 -year history of the safety aterey.
(Contimual on mage


Soperial thanks to those Parts Rotmen Program shops that smbnitted components and information related to this rase．






 «imer Joly I，1！97．！．










 forlay．
 silcores．

Vorll lrul！pomes。
K゙ィ口クロ Systrons，lus． 1501 Wilson lionlowial
 Tele．（ $60 ; 3$ ） $527-150)$

## ITEMS OF INTEREST

－In a sperial publie advisorv，the NIITSi．said it is rearefuating its investimation of the was tank
 Fino，500，and 7ing．This invesigation，which harl been smapenterl for seme time．has beon reatetivated beramse of a mamber of reerent reports indiatinge
 may result in fore leakare and the possibility of the aras beiner ignited．

All motoreyele owners who have experiened wasoline leakage or fires date to dishoterment of their gras tank filler eaps．or who have emeometered other problems assoriated with the tras tank or filler emp were reguested to report the detaile of the incident．＇The NH＇TS． ing of streh comblitions on all motorevele makrs and moslels．

Ropents should indieate the make mondel／ear of the rexle；the type of prohlem emenmerert： whether ansoline leakage wis insolved ande if so whether a fire resulted：and whether the prohlem resulted in an acoblent involving personal injury or property damage．
－The chart below ilhastates the types of compo－ nents received dmoing the fwelve month period

 promis．

| l＇hiels 心ystrm |  |
| :---: | :---: |
| limakinir Sisterns ．－ | $\underline{2.15}$ |
|  | 20.3 |
| Storring | 14.0 |
|  | 13.3 |
| Sosinersion，Wherels alld＇Tiores | 13.0 |
| EAectric：al systoms，Lifhting amd Commmonations | $\text { _... - } 10.8$ |
| Other | － 4.4 |

－We want to remind our members of the impor－ tance of submitting components on a timely basis． We note that in some instancere components hatse not been sumatted to the Plil＇mat in mathe after heing removed from the vehicle．This can make it diflienlt to obtain necessaly follow in informat tion from the velicele owner，as well as the in－ volved shop．If an inadequate smpply of mathags is a factor，please let us know．

## OUTSTANDING SHOPS

Our ontstanding shops are those shops that have sent into the PIRP at least one part．during the current nontli．A shop that sends in parts in conseentive months is identified by a mumber in parenthesis before the mame．This number incntifies the consecutive months the shop has sent in at part．New shops that have just



## REGION O

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## REGION 1

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Ransillat，Niow Vork






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Montoursvills，l＇romsylvaluia

REGION 2
（3）AT＂I（）IBlidKた sllol＇ Norfolk，L＇irginia
 Horliville，Marviand

## REGION 4


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 Mansficlel，Ohio

## REGION 5

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## REGION 6




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## REGION 7

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## REGION 8

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MK．l：li．Mださ
salt lakr（’its，T゚tall

## REGION 9






## REGION 9A










Note：We need more participating shops．If yon kow of an innopendent repar facility in your ara who yon think might want to help ont this progran．please seme their name and addees to us．Thanks．

## TELEPHONE CALLS




 the PRP Vews，please send it to Kappa Systems，Inc．， 1.001 Wilson Lonlevard，Arlington，Virginia 2,220 ， Attention：Bruce L．Beddow．

## CURRENT PRP PARTICIPATION

Tha groph below identifies the number of octive shops within eoch Region. Two Hundred Sevnnty five shops hove joined our octive leam ond sent in o port. Keep up the good work. We still need mony more shops on our octive ream ond a lot more ports.
(As of September 1976)

STATES $\left\{\begin{array}{llllllllll}\text { CT } & \text { DE } & \text { DC } & \text { AL } & \text { IN } & \text { IA } & \text { IL } & \text { AR } & \text { AZ } & \text { AK } \\ \text { ME } & \text { NJ } & \text { MD } & \text { FL } & \text { KY } & \text { MN } & \text { KS } & \text { CA } & \text { CO } & \text { CA } \\ \text { MA } & \text { NY } & \text { NC } & \text { GA } & \text { MI } & \text { MT } & \text { MO } & \text { OK } & \text { ID } & \text { HI } \\ \text { NH } & \text { PA } & \text { SC } & \text { MS } & \text { OH } & \text { ND } & \text { NE } & \text { TX } & \text { NV } & \text { OR } \\ \text { RI } & & \text { VA } & \text { TN } & & \text { SD } & & & \text { NM } & \text { WA } \\ \text { VT } & & \text { WV } & & & \text { WI } & & & \text { UT } & \\ \text { PR } & & & & & & & & \text { WY } & \\ \text { VI } & & & & & & & & & \end{array}\right.$

## National Parts Return Program

## Description and Function

- The PRI' involves the volmintary sub mittal by independent repair shopso failed automotive components. Com ponents are submitted to a weperonta tive (Kappat Systems, Luce) of the Natiomal Highway Tratlic satoty Ad ministration (NIJTSi).
- 'The pmopose of the JRP' is to grathe information on these components tio help the NHTSSA identify the existenc of safety-related, manufacturing defect in design, materials, construction, o performance of motor vehicle equip ment. Under the authority of the Na tional Traflic and Motor Vehicle safety Act of 19066 , and Amemdments to the Aet of 195., the NIITSA (an require mamufadurers to wonduct sat fety defee notification campaigns when it has been determined that a defeet relating ${ }^{4}$ motor whicle safety exists.
- The infomation ohtamed from them pats is also valuahle in preparing ferd real motor vehielde safety stimbards.
Your shop ran help. The parts that you semd in will give vital information that camot be obtained in any other way.

U.S. DEPARTMENT OF TRANSPORTATION National highway traffic safety administration WASHINGTON, D.C. 20590<br>OFFICIAL BUSINESS<br>PENALTY FOR PRIVATE USE, $\$ 300$



## parts <br> return program



US DHPARTMFNT OF TRANSPORTATION NATIOMAI. HIGHWAY TRAFFIC SAFETY ADAMIISTRATION

## COUR'T UPHOLDS RECALL OF 1968 \& 1969 MUSTANGS AND COUGARS

Whatial sumpert for the safety defere reeall of

 the U.S. Distriwt (ome for the Distrim of Commbiat.
 arainat the Ford Motor ('o. mow than a year aco ly the Natiomal Jlighway Trallic Salely Mhmins tration. The agemey detemined that a safety defeed existed in the seat back pivet pin backeds of hoth fromt seats of the vehieles involverl. Fathere
 of the front anat lacke, resillting in loss of wedicle
 inq (o NHT心.
 an musemamber risk to the pultie, was rejecter by


 fatalitios in fle funtre.
 alleded rams shows a reoded of some collisions and
 said, and many cases of lons of comtrol for perionts
 miles per hour.

Fonds own twamony romerderl that al least 11 ,ook sumberat failume were reported daring the initial wammary periorls for the cars, and that the
 The mandartmer alos hat not comtended that the pivor pin batkets were mot combinming to fail or would not fail in the future.
Forel indicated that complying with the order womld cost several millions of dollats. but it was not know! whather the mandacture will appeal the Distriat (ombt ruling.

## ELEVEN SHOPS TO RECEIVE AWARD

bleven shop have been soleded to rereive a
 Aminiatator of the National Dighway Trallic sately Adminituation for their ontatanding participation in the Pats. Retmen Progran (PRI'). This is the thind year for which shops have been solected to receive the certificate. Shops were se-
leated this year adording to the momber of failed. saldelyetated antomotive romponents which earla

 award this yearame

Norfoll, Viminia
AITOM HOSADTA!
Limende, Nomansia

(ircemville, sonth (arolinat
MERT"か ARCO STATION
Wimminton, Demanaro
 (Itsistom, Missomri

Sialla, Wiashindoll



Hallyworl, ('alifornia

hownexar, Xiow fork




 like to exteme one congratnlations. 'Thank you low your chorts daring tre yan.

U.S. DEPARTMENT OF TRANSPORTATION

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

## Certificate of Appreciation

Mrowded to
Auto Brake Compantion
FOR DEDICATED EFFORT̄ TO IMPROVE AUTOMOTIVE SAFETY THROUGH OUTSTANDING COOPERATION IN THE

PARTS RETURN PROGRAM
FOR THE YEARS -5.76

## ('()I,'S'S AND ARIROWS RECALLED BY (IIIRYSI.EIR

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## ('RACKEI) ('ALIPER HOUSING

'The J'lil' has remiver a dise bake raliper form



dimedy atome the loxalion of the imer pat. 'The $21 / 2$ inch longe erack extemsk feom the hole in the erenter of the homsing to the mentside edere and rembphetrely themerh the metal.
'The bralie rotor was also betmerl (Figure 3 )







 for nee in the XIITS. tret pogram. 'Tle Plal'

 are needed.


## National I'arts Return Program Description and Function

- 'Ther IRRI' imoolves the vohmeary shbmital of failed antomotive romponents beg indepmolent repatir shops. (ompoments atorembition for a

 (NITLA)


 ferts in motor vohioles amd motor rehicle ergnipment. Uniler thar anthority of the National


 when it has been dermmined that a defore repating formon whicle saldy exists. 'Ther informat tion ohtatued from these parts is alow ralaable in preparing Ferloral motor vohiche saldey standaris.
- Voun shop ran help. 'The parts that your somd in will give vital information that camot be ohataned in any other way.


## TELEPHONE CALLS

If !








 IB.Allow.
OUTETANDING SHOPS
Our outstanding shops are those shops that have sent into the PRF at lease one part during the current month. The number in parenthests betore a sheys name itentifies the nomber that have just become active in the lend are ubentitied with all asterisk before their name. During October 1976 , tive shaps became new active



## ITEMS OF INTEREST

w 'The l'R1' hats recoibed several eomments from shops statime that the only failed parts they have resefeed are those that we have covered in the newslofter or failmes of which the PRP is abready aware. We wond like to take this oportminty to saty hat wo are intorested in any atotomotive parts which exhinit a safoty-related fofere in fexign, materials, wonstruction, or jerformance, and particulaty, those which support an ongroiner ‥H'TSA imostigation of an allecred
 ('amest [R"pont, which is mailed to I'RJ' mombers perioxlically. Iists these open insestigations. It your shop umexts a eopy, drop as a line and we will mail yon ome. Il you are in dombt as to Whollad at pat is salloty related, semel it in and - will reather He guestion here.

- 'The owner oll": I! ote Ilarley-Davidson model FLII Eilectra-(alide has reperted that the wind sereen lowke ofle completely on two oceasions while he Was driving on an interstato highway. 'The P'lel' Wonkl like to hear fiom yomr shop if yon know of a smalar fathme.
- JOIIN゙S l’(OI)Y SlI()] in lBinghamton, New Vonk roports finding a lafis bobick and a 1900 ('herofor where the chassis sible fatme bal was split near a rear wher honsing. 'This reportedyy
cansed exeessive movement of the rear asbe assembly and resulted in the lowerning of the drive shaft.
- AUTO liosirl'tis in Lincoln, Nobraka, reports separing a 1976 Cadillac ambulence where the power stering pmons was monnted $1 \underline{2}$, inch from the exhanst manifold, camsing exerese heat bmikd-mp in the pmop and hoses. The -hop also reports finding a 197 and a 1976 superior ambulance mannfactured on a Cadillace chasis. where the rear smspension was orer-loaded and condd allow the fuel tank to drate on the pasement. In Jume, 1976, 1!91-76 model superion ambulances and funcral car bodies moment on (sadilace chassis were recalled. The recall was for the possibility that tho fuct-tank hanger st rap testraning backets may fail when ondjowt 10, an masmal loading comdition. (acemrence of the combition comble result in lows of the lind tank and resnlt in a fire. 'Two sumblomedente oxemped at the time of the reall.
- In response to an ltem of Interest in the Anguet issue of the PRP News, Mr. Pritzlewitz of PRITZAS FOREIGN (CIRA, Colorado Aminss. Colorado, reports that the Datsun owner: manual calls for a cluteh fluid replacement every six months. Mr. Pritalewit\% states that the ehutech sleeve and master cylinders will leak at the eratmoness his mationamer is performed.
U.S. DEPARTMENT OF TRANSPORTATION

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION WASHINGTON, D.C. 20590

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $\$ 300$

POSTAGE AND FEES PAID NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION DOT 517


US DFPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

## POWER STEERING HOSE FAILS

Tho high pressure power stering hose that is shown was sent in by WNSLOWH MOBILAE STATION in (iorham, Mame. The hose was removed from a 1975 SuC Homet sportabout with a milenge of 35,070 . As indicated in the photograph, a two inch section of the mbler surface on the hose has rancked and fallen off. This reportedly resulted in a loss of power stering. 'The NIITSA has received two other similar reports involving 197. AMC: IIornets. In those two cases engine compartment fires were reported as a result of hose deterioration and power steering fluid leakage. The NIITSiA is analyzing the reports. If your shop knows of similar failures, the PRI' would like to hear from you.


Figure 1

## STEERING COLUMN FAILS

The photngraph below shows a steering colmm. lower shaft assembly that was removed from a 1971 Forrl Pinto. Vehicle mileage was 61.17 t. The asscmbly was rent to the RRI by ROEIIL $\therefore$ IBEF LINE BRAKE and ALIGNMEXT in Appletom. Wisconsin. The flexible portion of the shaft consists of twined metal wire covered ly a rubber boot. In the area shown on the photograph some of the wire strands are umbeled and broken. The
failure reportedly resulted in complete loss of steering. There is no evidence of rust or corrowion. If your shop knows of any smilar fuilures, the PIRP would like to henr from you.


Figure 2

## AUTO RAMI'S FAILEI NH'I'SA TESTS

Vehicle owners, mechunics and anto sorvice personnel were warned in a federnl Consmmer P'rotection Balletin recently that certuin models of portalble auto ramps-ividely used to smpert motor rehicles chming repair and mantenance operationsmay collapse if used in aceordance with their manufacturers' weight eapacity ratings.
The National Itighway Traffic Safety Ahministration (NI'TSAS) tested 11 auto ramp molels which represented the prodnets of six different manufacturers. NIITsA identified four of these models whicla collapsed moder their rated cuparities.
All fom ramp models failed the first of four tests conducted by the NIITSA on all of the models selected for testing. With a pair of selected ramps aligned in parallel on a level surface, the ramps failed to support a velicle of axle weight matching
the model's rated capacity, when the vehicle was slowly driven on and off the ramps, 10 times.
Failing this test were the following models: Petersen Industries, Inc. ramp models of 30-2225 and 30-2010, rated at 5,000 pounds per pair and 4,000 pounds per pair, respectively; and Mark Fore-Vatco's models $\mathrm{CR}-1$ and $\mathrm{R}-75$, rated respectively at. 7,000 and 6,500 pounds per ramp-pair.
Owners and nsers of these auto ramps should know that Petersen Industries has redesigned its ramps to provide a carrying capacity equal to their rated capacitics mader all conditions of NIITSA's test procedures, and has establishod a proper mating for carlier ramp moxtels. New rating labels will be sent to all owners of both models eiterl, upon written reepuest. The revised caparities for moxdels $30-2225$ and $30-2010$ are 4,500 and 3,5000 pomads. per pair, respectively.
Mark Fome-Vateo has re-rated its models ( $\mathrm{FR}-1$ and $\mathrm{d}-$ - 5 and will provide to all owners requesting theni, new rating labels. The new ratings will indiwate the above models may sately be need, in pairs, to support front or rear axle loads of velhickes with a gross weight not exceeding $\boldsymbol{T}, 000$ pounds muld 6,50 pomands, respertively. Since new rating labels will be supplied for both models, owners shambla be sure to specify the Mark Fore-Vateo model owned.
New labels for Petereen ramps may be requested from Pelersen Indistries, Inc., 400 Wheeler Avenue, Fredonia, Wis., 53021. New Mark Fore labels are available by writing to Mark Fore-Vateo Indhistries, 10:) Brookline Avenue, Boston, Mass., (22215.

NHITSA has atso warned that reports of failures have been received from users of hears, Rochnck ramp model 1230, but that the model has not been manufactured for two years and was not suljected to federal testing. A Scars ramp model 12:32, which is nearly identical except for the addition of two horizontal hraces, has passed NIITSA testing, howsere. Inquiry with respect to model 1230 is contimuing with the manufacturer-Kar Rite Cor-poration-to determine whether or not this disconfinued model was defective as manufactured.
Mamenfeners (l) not always make clear whether the rated ramp capacity, as printed on ramp cartons. or paste-on stickers, refers to a singre ramp, a pair of ramps, to a single axle weight or to gross vehicle weight. The user shoukd always assme that ramp ratinges refer to ramp pairs, and should take special care to note whether the rating refers to axle weight or gross welicle weight. When in doult. assume the rating refers to gross vehicle weight.

NIITSA offers the following rules for safe nese of portable antoramps:

1. Know the load to be smpported and the ramps. capacity. DO NOT OVERLOAD.
2. Use auto ramps only in pairs.
3. Use only on level paved surfaces; avoid glazei surfaces.
4. Position ramps parallel to vehicle's direction spaced so vehicle tires will travel the center ot both ramp channels.
5. Keep bystanders clear of ramps when drivins on or off of ramps.
6. Drive on or off ramps slowly.
7. While vehicle is iositioned on ramps for servich or repair, thansmission shonk he in "lank" gea and the parking brakes set.
8. Wheels remaining on pavement shombla be becker against any movement, forward of hambard.

We are interested in hearing from ramp owner: or users who may have experienced an anto ram failure, collapse, etc: Such reports shombld inchuch the identity of the ramp mannfacturer, ramp mode number, type of vehicle involved, date of ramp purchase, and the consequences of the failure.

## POWER STEERING GEAR CRACKS

BE:ACON AUTO BODY in Pommankion, Nev Jersey sent in the power sterning gear that is shown The gear was removed from a $197($ ( Ondsmolil Delta Royals with mileage of 7,413 . As indicater in the photograph, the end of the gear housing i cracked. The crack extencls abont $1 / 3$ of the wa: aromed the gear housing circumfereme The one plate and snap ring are also shown. The vehich reportedly struck in pole after the owner made sharp right turn to avolid a hieyclist. There is m evidence of external damage to the gear homsing.


Figure 3

## TELEPHONE CALLS

If sou have any prohlems regardhig this prograth, ar in werel of additlonal mallhags, tats, rote, have any ques


 Fribaty from $8: 30$ n.m. to $5: 30$ pron. Likewise, if you havi a contribution or suggestion for the I'ILD News, please senc it to Kappa Systems, Inc., 1501 Whson Boulevard, Arlington Virginia 22209, Attention: Bruce E. Beddow.

## ITEMS OF INTEREST

- 'The l'lRl' is interested in obtaininge speceifie information on failed, rebnilt antomotive parts. Items sumb as lorake master cylinders, wheel cylinders, and shoes that are improperly rebuilt and trive mastisfatcory performane are of partic-
 ponemts atw asked to mall of write lo the lelkl and doerribe the failater B6e sure to inclate the mame and address of the eompmay which relmitt the eomponemt, as well wis the eomponent mileate at. the time ol failure.
- 'The Nintional Ilighway 'I'ratlice Siafety Administrmbon (NIIJSA) has proopsed a chmore in the reguinwomes of coment federal vohicle-in-nse insperetion standards. 'The proposed amemdmont wonld anthorize the wse of resilient spacers in the spumge of m m momobile to ratee it to the hoighte neressimy to phiss state inspection.
Most sumtes which colry ont motor vehicle inspection progranms utilize forderal safoty standurds. These stamburls rerquire owners to install new spurines, mather than spacers, when the old siprings are matble to maintain the vehicle at the proper height. It has boon estimmed that the cost of new spring is considerably more than the cost of nsing spring spacors.
- 'Rhe NlITSi amomered it is comducting an in-
 (lial" tires. It said it was melvising owners of Whe ratial tires to inspere them immertiately lor uny simes of treat sepuration, of for any bondres or of her inrernamities in the tire's confinmation. Tires exhibiting such evidence should no longel be use:l.

The NIITSA said that withdrawal of a suit arraints Finestome in the case of the hats ply tires does not in any way affect the ongoing investiration of the "Firestone 500 siteel Belt ratial tire."
()wners who hate experiened radial tire damate or fabue, or who have ohereme impulation in the tiress contigumation are asked to provide a full description of the problem. 'Tlac! shmide ako provide the mamatambers name tion size. the I) ()'t identilication momber (which is lowated on the sidewall of the tire), the motel and year of the vehicke, the identity of the vendor of the tire and the cestimated mileage of the susped tires.
 Hlinois hats reported some problens with Figestome bote steel belt radial tires. The whop reports experioncing several cases of trad sparabion at low miteage, and instances where the tive caused velicle sterering to pull to one side.

- Mr. John Clower of JOAN'S (i.LRA(iE in Nampa, Idaho, reports reparing a 1966 Jeep super Wagoneer where the sterering box linoke away from the frame cansing loss of steremg eontrol. Reportedly, a defective frame bracket wed failed shomly after the driver of the rehiche had exited from a freewaly. Sines the bataked weht wats repaired, no pats were arailable. Failme reports of this type, where pats and repaibed or returact for refund or replacemem. (an be just as importmat. If your shop bepairs a safety related defeetive part and cand rethen the items, describe the problem on a mole mand drop it in your next bag of parts.
U.S. DEPARTMENT OF TRANSPORTATION NatIonal highway traffic safery administration WASHINGTON, D.C. 20590

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Vol. 2, No. 6
December 1976

## TIMING LIGHT ERRORS

In their lateot issme of Lets Therle liond serpiere (1976. Issue 4) The American Antomohile Ascociation notes that it may be diflicult to sot the timinger on some Ford models with high enorgy ignition. Some timing lights may give erratic indications when nowed on these velticles.
Caparitive-roupled type lights ate afferted sumb as those that eomeet directly in the spark phere wire. The lights ran be fakely trispered cansius multiple flashes. However, indurtion type lights. can be ued without diflienlty.

Some capacitive type timing lights have a spring loaded "lanp that surromeds the spark phar wire. This type may work satisfactorily if insulation is placed loween the elamp and the wite A piese of vacmum lowe split longthwise will make a groul insulator. Install the hose over the phas wire and place the clamp on the howe This will take ame of the problem in most cases. Sperial thank to the A.S.S for allowing us to pass this information on to omr P'Rl' members.

## TRU-SPOKE WHEELS RECALLED

The March 1906, issue of the lRPD News comtamed an article abont a l'ru-spoke wire whel that hat been returnel to the PRI' by Dl(K JORD.AN" STAND.MRD SERVICL S'LATTON in (layton, Missouri. As indicated in the photograph, the inner dise of the wheel is broken aromed $\%$ of its cirmmfermes. The wher had bern momerd from a 1975 (:adillac Compe De Ville with appoximately 5,000 miles on it. At ahout the same times. the National IIighway Traflic Safety Administration (NITTSA) received some other related inputs concerning Tru-spoke wherls. inchuling information from ABBCO SAFETY CENTERS. Detroit. Michigan.

After dissussions with the NHTSL's Offier of Defects Invertigation, the mamfacturer. Wheel Spectaltion Company, initiated a safety recall campaig involving 3.268 of these wheels for a potential defect. The wheels may becme structurally msound when used on a whicle with a gross weight. of $\tilde{5}, 000$ pounds or more. Wheel specialties is notifying involved owners of this potential defeet and will replace the wheels free of charge.

We are pleased that the PRI' could help in this matter and wond like to convey one sperial thanks (0) DICK JORDAN' STANDARI sEIRICE STATION and ABBCO SAFETY (ENTERS for their assistance.


## 'IURN SIGNAL LEVER FALURE

Fkild (diragey, inc. in Kenosha, Wiseonsin has returned at tum signal lever that was removed from a 19 T. Matador 2 door conpe with a mileage of 11,09 . The lever, which includes a speed control derice (see photo), broke ofl at the sterring colmm. The signal cancelling deviee in the colmun was still in grood condition. Please notify the l'hle if yom are aware of similar fablures.


| WANTED |
| :---: |
| FAILED OR WORN |
| STEERING |
| TIE ROD ENDS |

The I'ard Kefurn l'rogran needs your help in obtaiming failed/wom-ont tie rod ends (ball stud \&
 forme, amd bodere pickup trucks and vans.
'Ghe tio rod ents aro nereded for use in an NIITSA lost. proceram. Make, mondel, year, amb mileare ol the rehicle :me very important, as werl as the relime owneres manc nud :uldress.

## TIERKE'心 ALI, Y()U J) ()

 'T() PART.

- PLACE IN (YANVAS MATL, RAG, THE TIEE (ORD AND PU'Г IN MIIL, JOX. POSTMGE IS PAID.

We need your help. Become an ardise participant in this puthle safety procram toxlay.

## TILANKS!

## FORD RECALLING PINTO, BOBCAT, AND MUSTANG II

Ford Motor Company is recalling latio Pinto, Bobsat, and Mostand IT vohicles eguipporl with


 ber hose comberting the fuel thbe to the eathmeter fucl filter. Such leakage is attributed to a combination of factors inclutinge fuel tubo misalignment. impoper lose clamping, and an chame to a less flexible domble braded hose for 1976 motel year protuction. 'The fuel leakage can result in an underhood fire. As of October 22, 1976, 101 such fires had been reported to Forrl.

Corrective action will be performed at no charere to the velicle owners, and insolves replacement of the existing fuel hose and clampes with a simerle braded howe and epring-type clamps. Finel tube aligmment will also be adjusted where necessary.

The reall came subsequent to the initiation of a fommal dofect insestigation bey the National IHirrtway 'Traffe safety Ammistration concerning the mattor (Case No. ( $7-01$ ).

## PIROI'OSED SIIANDARD TO REDUCE MOTOR VEHICLE THEFTS

A proposed highway safety program stamdard desimed to reduce the theft of motor vehicles has been issued by the National Itighway Traflie Safoty . Irlministration (NIITSA).

Statistics provided by the Federal limreat of Thvestigation indicate that almost 1 million whiclow were stolen in 1974 with a loss estimated at slat billion. Stmelies conducted by the FRBI and the Law Enforement $A$ ssistance Administration show that stolen vehicles are imsolved in accidents at a disproportionate rate. 'l'he common practice of stripping stolen velieles and modifying them for resale has safety consefuences in that such reconstructed vehicles may comeal serions safety problems.

Under the NHITSid proposal, the states wombl have to adopt tithe laws requining adoh pohicle to have a certificate of title lofore it can be rexistered for operation in the state . Dhost all states have atopeded satisfandory tite buws, so that this requite mant would serve for cose the few remaming erals.
 format of title certificates. Nso, sperial tamperproof paper, similar (o that used for mocels. las been developed which should be effective in limiting the comererfeiting of the titling docmment itself.

The NHTSSA also wants to change the curvent title procerlures to make it more diflicult to secure clean titles for stolen vehicles and to provide an opportunity to examine the sadety of recomstructed velieles before allowing them to be re-rearistered for use on the highways. The proposed standard would require the owner of a veliche sold for salvage to submit the title to the state for ramedlation. and woukl apply to all owners.

The proposil would reguire that the Vehicle Trlen-
 a state be reroveded and that a ramederd title or aguisalent dorument be presented before a berenstructed velacle could be titled or rexistered.
('urrently, the NIITLiA has two motor veliele safoly standards designed to deal with theft problems. 'These are stimbard No. 11t, 'Theft Protertion, and Standard No. 115. Vehicle Identifeation Number. The NITTSA is also considering ways to improve both standards.

## TELEPHONE CALLS

If you have ans probhems regardlng this prosernm, are in nered of additional mailhases, tags, ete., havo ally questions which need answers, or would like to pass on comments, please call us collect. Place your call to Ibruce Feddow, Jonni Peizer, or Guy Whiddon at (703) :i2t-tano. We are Eastern Time and are mormally availahle Monday throurth Friday from \& : $30 \mathrm{a} . \mathrm{m}$. to $\mathrm{a}: 30 \mathrm{p} . \mathrm{m}$. Liknwise, if sou have a contribution or suggestion for the Prep News, please send it to Kappa Systems, Inc., 1501 Wilvon Boulevard, Arlington, Virginia 22200, Attention: Bruce $E$. Buddow.

## SCHOOL BUS OPERATORS WARNED OF BRAKE-LINE CORROSION FAILURES

Operators of older shool lmses, particularly those manufactured before 1969, were wamed resently that the broking systems on their whiches may be dangeroms and may fail due to corrosion and mint inger

In at pulbie advisory, the Th.S. Depatment of Transortations National tioghay Trallic Nalous Amministration (NTITS.1) ain that the problom is patimbarly peralon in areas whem salt. chemicals. and athasives are nsed for comtrol of romblay ice
 sue action of these materials which weakens brake mbing.
The NitTsil also wamed that wher pre-1969 buses, frums. and pasemger whider may experience similar problems and adved owners and operators of vehicles which are suljered to such eomensives to (1) make at theromgh inspertion of thein stem bater buhing at least one a year. (e) replace corroted
 to remove wath plash comating comonive.
The gremmuent's wamings ame hased on random sample simvers of soloot bimes romblacted in 18 states. All but one of the surver stafies are located in snow belt arms where roal salts. demicals, and



 conting of lead/tina alloy (torme).

 any single make or model sehool lins; but ma! he
 or mone years to road splash comtatume hater com-
 ant ise comtrol on roadways."
Sume also noter that the prohlan of comerive
 to the Fonited siates. having berel fomm on ahmest of preat of tombs examiued during a mationwide

Among the olecerations rewalting fom lwoth surbeys, are:

- Low carton steel hycdraulic hame mbing meed
 mamufarberd with a protertive cotang of lead: tin alloy (terme). In 19x: the antomotion industry and its brake tubing supplicts chatused their specifications to provide for a thickere exfomal terme ratimg.
- Deppite the protertive amating vehicle opcrated in an embirmment whid inchule iee
 to extermal corrocion of ateel herambic tuhing.
- Velicte operation orer extended periods in such an environment may acmally result in the weakening and failure of brake tulinger mbess preventive measmes are taken.
- Contaminants in hydrantic brake huid conWitmere to internal comersion of bake tobinge, hat with less siguifant reflewt than iow comton salts, chemicals, and abmasimes.
- With repered to conrovion, whider age is a mome significan factor than mileage.
- Trubing failure ran rexult in at catastrophice lase of haking eapability in vechicles ergupperl with single harambe bake systems.
In addition to issuing the pullie adrisory. NHTSA notified apmopriate anthorities in all of the states of its fimlings, and provided surerestions and recommendations $\begin{aligned} & \text { oward control of the problem. }\end{aligned}$

Complete details of the NItTSA survey are comtained in at repmethirh is on publice tike amd may be examined in the NITTSA Terlmiwal Refereme
 ington. D.C. $2(0): 9 \%$.

## CRACKED BRAKE HOSE

Mr. T. (. Dull at beLotT FRLME: INT)
 fromt bake hose which is shown here. 'The lowes

 how rubluer cracked and frayed at the fitting cansinge a brake flum leak. 'The howe separated when the shop remoered it from tha volicle. Ar: Duill wented that seremal $3 / 1$ hon (i.Me trums hate hem repared in his shop for his type of fature.


Our outstanding shops are those shops that have sent into the PRP at least one pirt during the current month. The number in parenthesis before a shop's name identifies the number of consecutive months the shop has sent in a part. New shops that have just become active in the PRP are identified with an asterisk offore their name. During December 1976, seven shops became new active partleipants in the PIRP. Fourteen shops have sent in parts in consecutive months.

## REGION 7

*C \& S BRAKE SERVICE
Fort Worth, Texas
*J \& G AUTO CLINIC
Lake Charles, Lovisiana

## REGION 8

(2)JOHN'S GARAGE

Nampa, Idaho
REGION 9
(3)DOYLE AUTOMOTIVE SERVICE Seattle, Washingtor:
*KINGCO bRaKE SERVICE
Seattle, Washington
L.A.D. ELECTRIC

Spokane, Washington
*SHARP'S AUTOMOTIVE
Seattle, Washington
(2)STOP \& GO BRAKE \& WHEEL Portland, Oregon

REGION 9A
(5)AUTOMOTIVE CITY

San Francisco, California
*BEELINE ALIGNING SERVICE
Pacific Beach, California
(3)ISE AUTOMOTIVE SERVICE

Hollywood, California
KALLEN'S GARAGE
Van Nuys, California
SAMO WHEEL AND bRAKE SERVICE
Santa Monica, California


REGION 6
(4)AUTO HOSPITAL

Lincoln, Nebraska
*BRAKE-O-MAT
Evanston, Illinois

## OUTSTANDING SHOPS



EK JORDAN'S STANDARD
ayton, Missouri
JTT AND STILES
okie, Ililnois
GARTNER'S AUTO SERVICE
vicago, Illinois

## REGION 0

(4)HARRY'S AUTO SERVICE Great Barrington, Massachusetts SPARKY'S AUTO SERVICE CENTER New Bedford, Massachusetts

## REGION 1

(2)D \& $Z$ ATLANTIC

Cornwell Heights, Pennsylvania
GORDIE'S AUTO SERVICE
West Chester, Pennsylvania
(7)LONGBARD'S EXXON STATION

Poughkeepsie, New York
REGION 2
(2)AFRO-ENGINEERING

Falls Church, Virginia
(6)AUTO BRAKE CORP.

Norfolk, Virginia

## REGION 3

(4)HAGAN SERVICE CENTER

Gainesville, Georgia
REGION 4
(2)BOB'S SERVICE STATION

Hammond, Indiana
REGION 5
*BELOIT FRAME AND AXLE
Beloit, Wisconsin
FELD GARAGE
Kenosha, Wisconsin
TOMMY'S AUTO REPAIR
Sioux City, lowa

## VIANUAL STEERING GEAR BOX FAILURE

AUTO BRR, IEE CORP, in Norfolk, Virginia has sent the l'RI' some components that were removed
 odet series 30 Step Van with 21,696 miles. The ecring reportedly failed while the driver was makan furn. No atecident oecoured as a result. fom inspertion, the shop found that the pitman , haft showrl weal marks, bearines were wom, and (h) beall mat for the worm shaft was cracked in two. The pitman shaft, worm shaft, and ball mut are hown here. The shop) states that the possille canse of the failure was lack of lubricant in the gear box. - ITTO DBRIKE CORP. also reports finding several other trucks, primarily Ford models between six monthes and two years okd, with a lack of lubricant the stecring gear box. If your shop encomers simitar combitions on any vehicle make, please let Whe I'Tal' know. 'Thanks.


## Converter flex PLATE FAilure

 Illmon bas retmoned a comerter flex-phate that was removed from a 1903 limick ('emtury station wagon with a mileage of 49.54 . The rehicle was empiperd
 tamsmission. The hath aparently heoke ont of the flex-plate, suldenly, while the rehicle was being driven on the highway. . As shown in the pheter graph, the onter momenge holes of the plate are clongrited and wom. and the hub is hoken a way from the spokes. The part was too large to tit in a I'RIJ mailhas, so the rim has heen ent in two. 'The driver of the car reportedly experienced bose
of drive power as a result of the fallure. The rehicle was allowed to coast to the side of the road and out of thre path of traflic. Sipectiat thanks to J. (xARTNERS' for sending in the patt. If your shop has encomtered a similar failure please bet the PRI' know.


## National Parts Return Program Description and Function

- The PRP involves the voluntary submittal of failed automotive componerts by independent repair strops. ("omponents are submitted to a representative (Kappa systoms, Inc:) of the National Itighwa Tratlic Salety Administration (NHTSA).
- The purpose of the Phe is to gather information on these components to help the NILTS. $\begin{gathered}\text { identify }\end{gathered}$ the existence of safetr-related, mamu faclurine defects in motor wehicless and motor vehicle equiprment. Under the antherity of the Xationat Tratlie and Motow Vehicle salety Let of 1966, as amended, the NITTSA can require mandaturer: to conduct safety dofect notification campatisn when it has been determined that a defect relating to motor vehicle safety exi-ts. 'The information obtained from these palts is also valuable in preparing Federal motor wehicle safoty standards.
- Your shop (an help. The parts that you reat in will give vital information that camot bey oltained in any other way.


## ITEMS OF INTEREST

- 'The PRP is still interested in receivinge sconed brake drums and rotors for use in an NHITSA test program. Tinfortmately, some of the rotors that have been retmened were sederl or genged too deeply (11) $10 \frac{1}{1} \mathrm{in}$.) for test proposes. 'The fest provam meeds drims and rolots which. if

 ing limits. 'Those from foll size and lasury
 intorest. 'There imelate morlets simely as the ('herrolet. Impalar, l'ontiar l'ommeville ()lelsmobilo sis and !s, Buick Lexithre and Vilectan exen, and Cadillar Folertwond. The test proxam is dimeded towame determining what oflect, if any, seoped droms and rotors have our veligele safety
- "Tradlar Siafer *on, L Digest of Activities of the National Highway Trafle sadety Aemonistrat tion" is now available. (opies of this 43 pace





Defeets Investigation, Crash Survivability. Crash Aroidance, and others.

- TOMRMY゙s AU'rO REPMIR in sionx City. Iowa reported that his shop replaced the makie pedal suppert lataked on a 1 getio loorl Mumang with a mileage of approximately Fo,000. The hake pertal on the weliele womld repordedy sti! depressed, beratase the support bracked hishing Which supports the brake perlal swinge shalt was
 beacked. Wass ohatimed, the hoshing on if was alson

 of binding rourlition on a lacis Ford Mastang

This information was recoived in meponee bo the article amd photomaph that appeares in the August, 1976 PRP News, which dewerined a brake pedal support bracked that had been removed from a 1067 Ford Mastang and wats onbmitted


If any of our other I'RI' members ancomber this type of condition, please lot us kinow.




## REAR AXLE BOLTS BREAK

## 












 motiond while the whime was being in-perted for a


 oll.
'Tlu shop remperlly cherks all spitfies for this





 His. romdlition.


## TIE ROD SEI'ARATES

The tie rod shown in the photograph was sul)mitter by AU'NO HOSIPTMA in Lincoln, Ne

 odly. the tie rod sepatated suldenty, as the drive of the whicle was thming into al driveway owe a
 aligumed in servier, but had bern maimained with

 ju:tinge steere. Examination revealded that the



 equipped with greate fittings and appear wh well lubriwated. If yom shop hats seen a similar falare. please let us know.


## REAR BRAKE LINE LEAKG

The metallie bazare lime shown in this phote was
 Arizonal. Thae line was remowed fom a latl Lin-
 owner of the rehicle hatd reporterly complatined of hake flaid loss from the rear reservoir of the master cedimede The master celinder had been meplaced before the leaking line was fombl. Aerodrling to the shop, the steel hame lime. Iocated on the imsite of the frame at the right rear fender well, hat swated the boelt. chating the line in two phares and wentnally wearing a bolde in the line. The shop
states that if the line had been located $1 / 2$ inch lower, mo chating wonld have oceurred. These types of failures, which are often harl to locate, are of interest to the PRP. If your shop finds a condition like this one; please let us know.


## LOWER ('ONTROL AIRM SEPARATES FROM MOUNTING BIRACKETS

Mr. Bill (hisholm of VANOWLN BRAKE © WILEEL, North Hollywood, Califomia has re-
ported a left front control arm failure on a 197.5 VIV Rabbit with 12,071 miles. The shop received the vehicle from a local YW dealer for wedting repairs. The front inner mounting lracket of the left lower control arm had broken out of the frame support area. The hreak ocemred where the hracket had been welded to the frame. The bracket remained attached to the control arm. With the comtrol arm diseromeded in the front, the rear soekettype mounting also separated, leaving the assembly totally mattached io the chassis on the imbord end. The velicle is a front whel drive configuation. and the left front driving axle discomected. This reportedly left the left front wheel free of any ronnection to steering or drive mechanisms with resnlting loss of vehicle control. Itowever, no accident resulted. The photograph and deseripuions that are shown were sent in by the shat sime no parts were available. 'The PRI' womld like to thamk VANOWEN BRAKE \& WTHERL FO His information.
 of from whed hrise sistem. Wellal


 lice - till attarlaed to the lal formt lowir ramton :ath by lhe wixinal wh-



OUTSTANDING SHOPS
Our outstaminh shops are those that have sent into the PRP at least one part duthe the what month. The number in patenthesis before a sheps New shops that have just medole :etive in the rhi are identitiol with an active paticipants in the prob. Dieht shops have sent in parts in eonsecutive rumblhs.


Solem. Vignio A. Parne aicnment

WUnton Solem, Noth Coroira



region 9 waynes carace
2|king co. brake service

I/AUIOMOTIVE CITY
SO Frone sce. Colitono.
-DUANES TUNE UP CLINIC
Manteco. Coliforno
-haroios auto service
Sonto Roso. Colitornio
alise automotive Service
Rolicwood. Colitornio
RICHROS AUTOMOTIVE SERVICE
Los Angeles. Col forn o

- SEIMA RADIATOR \& AUTO SHOP
Selmo Colifonia
Vanowen brake \& Wheel
North hollywood. Col.fornio


## TELEPHONE CALLS










 lacddow.

## ITEMS OF INTEREST

- 'The PRT' has received a Kicystone madr wheel removel from n 1906 Congal: We have been mable to identify the contrimating shop. If you sent in this part, please motify us.
- (Onr Plep members in Minneapolis, Minnesota may have seen a reecent homadeasion on WCO-TV. "hamed A. atout the Parts Retmen l'rogram. 'The consumer interest program, SCENE II, wat mondanst on Jammary 2erd, 1976. As a resintt of the broadeast, we have received several ingniries. We womld like to extend onv thanks io Wr (CO'TV for its time and interest.
- Let's Tralk Rould sereviere the American Antomohile S.ssoriat ion newhetter pmhtisher for emer-
 Issne Number 4) which may be helpful to om PRP members. The idea was summitted to the DAA by Mr. Williant Livingstone of Ontario, ('madra, who won sei, on for the tip. Mr. Livingstome, an abrexeney wowl servere embator, writes:
"dae poblem of drying ignitions man be easily. solved ly msing a 'window defroster'. The
mits are common and are designed to phas into a cigarette lighter socket and defrost ien off" windshiclds. Cut lighter phogend off ant replace with two clamps. This allow- you to (damp onto the bathery teminals of disablen cal and the loot dry air will quickly dry the high tension wires. The members are heritant about spays being nsed on their catsont aterept He dreer and in mos cases yon do mot have to disturb ignition wires. I have climinated all spays from my vehicles med have replaced them with these mits"
Thank you A.L. for allowing us to pass this along to our PRP members.
- The National Ifighway Traffic Safety - Mministration (NITTSA) recoives mmerons requents for information on defeets in motor whicles. In answer to these perguests. the NITTSA publinge ghaterly smmary reports on defoet rampatims
 These summary reports are avalable from the Superintendent of Docmuments, U.今. (iovermment
 establisherl by the superintendent of Docmumente. The latest quaterly iswhe call be obtained for Qabe. Ammal commative colitions of the reportare mblished at the begiminge of each calcmiar year. Last years (mmmative report is currently priced at $\$ 4.66$.
The reports list defect campaigns be mannacforere and give a description of the defect amt the date of company notification to owners. There is also a seetion on motor vehield omipument recall campaigns.


## CASE OF THE MONTH

## Alleged Front Stabilizer Bar Failures in 1971-74 and 1976-77 Model Year Mercury Capris

This case was opened by the National IIighway Traflic safety delministration (NITTSA) on Fel)ruary 4,1977 , based on a petition received from Mr. Stuart F. Fannce in October 1976. The petition alleges that Mr. Faunce's 1902 Mercury C'ani was in an accident as a result of improper design and manufacture of the front stabilizer har. Specifically, Mr. Faunce asserts that the stabilizer bar failed throngh fatigue enlanced by a sharp radins. at the machined ends. IIe also states that the machining marks were not properly polished. Other information received disclosed that the same stabilizer bar was used on 1971 through 1974 and 1976 through 1977 model year Capris.

The front stabilizer bar and the track control arm to which it is attached by a steel sleeve mard rinbler bushing insulator are compencuts of the vehicle suspension system (see acerompanying diagram). Thegether they regulate front whee movements. The control arm requlates lateral movements. The stabilizer lan regulates fore and aft movementand together with the control arm reduces shockloarthige stresses on the steering linkage from road surface irrequatites. Howerer, its principal function is to comater the vehicle temdency to roll or lean in cornering maneusers. The centrifugal foreses reated in turning place a dewnward stres. load on one end of the stabitizer han and an upward stress load on the other end. The stabilizer han resists these loads, therely imperling veliele roll of lean and maintaining relicle side-to-side erfuilitrium.


## Cass of the Mronth-from mage 1

Allegedly, stabilizer bar failure is due to metal fatigue through crack initiation and proparation, with final fracture resultine from overload. The apprent and primary contributing factor to fatione crack initiation is a small radins fillet between the machined shank and the as-formed stabilizer har: Other apparent contributing factors reportedly are metal impurities, environmental attack, and failure to properly finish the shank ends. There are no known prefailure symptoms. Investigation was initiated io determine whether the allesed problem constitutes a potential safety-related defeet within the meaning of the National Traffic and Motor Vehicle Siafety Act of 1906.

If your shop has encountered these kind of failmes, the PRRP would like to hear from you. If yon eannot submit the failed commonent. pleate write or call. Ardditionally, we would like to know what role, if :my, routine towinge, hoisting or lifting operations play in enntributing towary failure. Information conceming your expericence in this aren would be apperdated. TILANKS.

## FLEX-FAN FAILURES

The Niftsa Oflice of Defeets Investigation (ODI) has recejved a number of reports describing failures of flexible blades on the engine cooling funs of varions passenger cars. 1 relatively large momber of the reported failures have been received thomgh the l'arts Retwon l'rogran (IRRJ). Othere someses inchule letters from vehicle owners.

In most rases, the failures reportedly involve dither the racking or separation of one or mone of the flexible bhates on the velicle's cooling fan. The


15853
photograph below illustrates a failed "flex-fan" that is typical of the kind received through the PRP. Among the various reports receiverl. two indicate that blade separation occurred while mechanies were performing engine sepair work on the vehicles. One of these reportelly resulted in an injury to the meehanic. In another instane the velicle owner reports that one of the flexible fan blades on her engine's rooling fan separated and went throusel the hood of her car.
The NHTSA is currently analyzing these reports of "flex-fan" failure. If your shop knows of similar failures, the PIRP' weuld like to hear from yous. We are particularly interested in mey failure that may have resmlted in an aceident or injure. Sperial thanks to those shops that have alrearly submitterd coniponents and information on this sulbject.

## REPORTED FAILURES ON POWER BRAKE BOOSTER VACUUM HOSES

The photo below shows sections of a power hake
 REP.IIR in Bricktown, New Jereey. The shop reports replacing six of seven of these parts on 1971 and 1972 (Cadillace moxlels equipperd with Rochester Quadrajet carburetors. The hose is ronted from the hooster to the back of the carburetor base plate, and supplies the booster with intake manifold rachum for power assist to the brakes. As the photo indicates, the inside of the howe has deteriorated and is partially mollapeed in some areas. Reportedly, the restriction camses fathere of the bake power assist, making the whicle diffientt to stop. The shop believes that the deteriomation on the inside of the herse maty be caused hy fumes entering the bose from the carburetor or from heat in the area where the howe is locetent. Speciat thanks to CRANEX'S for sembling in the part. PRP members who know of this type of failme are asked to contact the PRP, partioularly if an accident lasocenred as a result of the failure.


OUTSTANDING SHOPS


- park auto service

RICHFIELD WHEEL ALIGNMENT
Minneapolis, MN
ROEHL'S bee Lin Appleton, WI
OUTSTANDING SHOPS


$$
\begin{aligned}
& \text { REGION } 5 \\
& \text { (2) BELOIT FRAME \& AXLE } \\
& \text { Beloit, WI } \\
& \text { JOE S AUTO SERVICE }
\end{aligned}
$$

- larry gaida's service station
- region 6
Stoner s triangle auto service
Rockford, IL
REGION B
JOHNS GARAGE
Nompo, tire auto center
* S \& D TIRE AUTO CENTER
- valley hi mobile
Colorado Springs, CO

> REGION 9 FOSTERS SERVICE CORP. Seattle, WA (2) KINGCO BRAKE SERVICE Seotle, WA (2) L.A.D. AUTO ELECTRIC Spokane, WA - MEADE \& GREENLEE GARAGE Golem, OR * SUBURBAN AUTOMOTIVE LYnnwood, WA

> REGION SA HAROLD'S AUTO SERVICE COnto ROSa, CA (2) ISE AUTOMOTIVE SERVICE Hollywood, CA - JERRY HALL TIRE SERVICE C Costa Meso, CA - LOS ANGELES CITY UNIFIED SCHOOL DISTRICT LOS Angeles, CA MAURICE'S AUTOMOTIVE Hollywood, CA MILLERS AUTOMOTIVE Fullerton, CA MR. TOM MITRE, INSTRUCTOR LOS AlTOS, CA

## ITEMS OF INTEREST

- Mr. Tom Pitre, an antomobile mechanies instructor in Los Altos, California, reports that a Goodlyear tire with 5,100 miles failed on a 1976 Dorlare Tiogn II motorhome belongring to his father. 'The tread on the tire reportedly separated in a lonir strip. 'The tire, a 6 ply Cushion Miler IAT, size 8.00x16.5, was one of the original tires on the vehicle when purehaserl.
- Mr. John Clover of JOMN's (x JiraGis in Nampa, Jhaho reports that his shop has been moable to lowate rebnikd kits for water pmons on American-huilt cars, model yoars 1065 theough 1075. Mr. (thover points ont that without the kits, he must purchase rehnilt parts for his enstoners. The shop retmened a pmop removed from a 1070 Chevolet Vera with $2.5,548$ miles.
- General Motors Corp. has recently initiated a new service for their dealers desioned to locate some of the 8.5 million recalled cars bmilt after October 1970 which have never been repaired. Compnterized Recall Identification System (CRIS) utilizes a talking romputer which responds to dealers who call to ask if a car has ever been recalled and not brought in for repair. Under the National Traffic and Motor Vehicle Safety Aet of 1966 , manufacturers are only required to notify owners about a defect onee. Itowever, once a car has fome thromerh several owners, it may be diftionlt for kote. Many ownars never bothore to binge theire ras in for the nereded repairs and othere owner's may move on sell their vehicles. In the last ten yrats, recall orders have been issued for mone than ma million U.S. and foreign whicles, althomegh not all of the vehicles may artmally have the defoet.
- The publication of a new booklet, "Nafe Driving in Winter", was announced recently by the L.S. Department of Tiransportation. This booklet. available withont charge to the motoring public. was prepared by the Department S National ITighway Truftic Safety Arlministrotion (NIITS.1). Also available are two rerently pmblisher fact sherts, "Passengrer (ind Brakes", and "Vrhicle lixhanst systems".
The new pablications are phet of the safery
 with informat ion that will help them (o) maintan their vehbers properly nud operate them sately. despite probtems cansed by weathere and hazadons road conditions.
The winter driving booklet provides adviee on blaming and preparation for driving in wintry weather, provikes shoqestions on items of cold weather equipment that should be carried in the vehicle, describes the special techmiques needed for driving on ice and snow, and provides special preventative maintenance lints to alleviate or eliminate some of the problems caused by cold weather, ice and snow. The fiact sheets dealing with brakes and the rexhanst system proride instructions on recomizing failme symptoms and mantaining these vital systems.
'The poneral publice may obtain simple eopies of abrly of these publications, without raterere by writing to the (imeral sorviers livinion Distribution, National llighway 'lomalio Fafoty


( ) ur l'Ril' mombers may want to pass this information along to their interested chstomers.PENALTY FOR PRIVATE USE


Vol．2，1vo． 9
March 1977

## FORD TO NOTIFY OWNERS OF 1973－1974 VEHICLES

Fored Moton company has amomed that it will bergin motifying owners of 4.4 million 1973 and Lat mokel rats and light trucks that part，of the follution control system in their vehicles may fail． The pooblem involves cars empiped with V－8 en－ gines anel Rexhanst（iass Recirenlation（EGR） cartmetor spacer plates whid may become cor－ roded．Reportedly，the chemicals in kearled gaso－ line may eat away the metal in the part，causing rough illoug and high exhanst noise，and may af－ fect fuel ecomony．The company said that the problem，which is covered under the so，（ono mite emissions system watranty，may or orn in 880 ，（e）of of the vehicles built in the two－year periox．
Ford satil that there is no safely factor incolved． and that it is not recalling the velicles or askinge owners of the cats and trucks to return to their dealers immorliately．The compang is alerting owners berame they may be aligithe for a refund of about，sation if they have alrealy paid for re－ placement of the E（iR catburetor parer plate．

Since July of 1966, the PRI has reeceiverl twelse EdiR carlmotor spacer phates removed from Ford Motor＇ompany proxlucts equiped with 1 wo and fon－tarel canturetors．The parts were remoed from 19 ？${ }^{3}$ and 1974 Ford and Meremy products． with whicle mikeages ranging from 20,000 to 65,000 ． The spacer plate shown，removed from a 1974 Mereury Marquis with 6in．j65 miles，is representa－ tive of the types of components received and shows the typical appeasance of the corrosion and deposits． which wectur：Some contributing shops hase indi－


EGR Spacer Plate
cated concern that the hot exhanst gases in the radmedore area may be a fire hazart．If om mem－ bers know of any resulting engine comparment fives，the PRP＇womld like to hear from you．Spectial thanks to the comtributing shops：IMI．NE：




 Kenosha，Wisconsin．

## FIRESTONE RECALLS STEEL BELTED RADIAL 500

 that the NII＇TSA was rombeting an insertigation insolving Fivestone sted Bolterl Radial one tiro． since then，the Fibestome Tite and Rablace（＇onn－ pany has fasmed a recall involving some of there fires．＇The involved sizes are the HRiTs．at and the
 treal desigu．Dasised on texto romblaterd her the NHISAS．Firestome has determined that the tive fail to conform to Federal Motor Voldide Sidety
 ger＂ars＂．

Tives subjed to the recall were mambartured at a particular pant ower a paticular perion of time and bear the following serial mombers：

## Serial Numbers for Size HR78x1．






－MMOCNROL

 VIMは「パズ02t



## Serial Numbers for Size HR78x1；

 V1）バア゚N．S024


 VINYFNRO24
VDIV＇FNROEt thru 0T4 VIDVINNR10t tIru 154
 げリ゙リ゙「ごち024




 VIDVYFNK10t thru 154

Firestone Recalls-from page 1
When the NIITSA subjected a sample of the tires to an indoor laboratory test procedmre on a test wheel, some tires failed to complete the high speed phase of the test successfully, exhibiting distortion or separation in the tread area. Such a condition could secur on the road, particularly when the tire is smbjected to operatimg ronditions which promote exeessive heat haidd-up, such as underinflation, werloading, or high speed. If a condition of this kind were to oreur during road use, the first indication of a problem would probally loe a distontion in the tread area of the tire, which would result in a readily moticeable velhege viloration. In the event of such an wemurnce. contimed operation at normal speeds conkl result in an air lose, which in turn combld cause a loss of rehicle contion.
Tires carrying any of the serial mumbers identified above will be replacerl, balanced. and mometed by Firestone at ane wharge to the owners if returned within 60 lays of receipt of the owner recall notice. Individuals wemenge tires to their doalers are requested io bring a copse of the recall notiere with them for identification.

## FRONT WHEEL BEARING AND SPINDLE FAILURES REIPORTED

The outer front whee bearing shown in the phots was returned by ROEHLLS BEE LANE MRAKE \& MLIfiNMENT in Appleton, Wisensin. The part was remover from a 1 1:75 Oldsmobile Delta ss with $25,9: 93$ miles. It had leem installed on the left spindle.
The imner race is cracked along a ciremberential line approximately half-way around its circmanerence and $1 / 1^{\prime \prime}$ from the imner ellge of the race. The area betwen the erack and the inner edge is bhe indicating exeressive heat build-up. The area on the other side of the crack, foward the coler edge appeats nomal. The roller ends are worn and the rollers and retaining cage are canted to one side. The rollers appear worn where they contacted the crack on the inner race.

Aconding to ROEIILA the te have been seremal other similar failures on 1975 and 1976 (xeneral Motors mid-size and full-size vehicles. The shop reports reparing an Oldmolite Cutlase and a (adillace and knows of an Oldwomite full-si\% station waron on which the spindle and the dise hub were both danaged beyond repair. According to the shop, the outer bearings appear to have an insufficient amount of grease, however the immer bearings appear well lubricated.


The PRP has also receiverl a right frout whee spinclle (photo) that was remosed from a 190 t ('he voldet Caprice with +1.20 ) miles. The spindle is broken at the onter bearing location and the outer bearing race is frozen on the broken end. The spindle does not have a blue appearance that
(Continiued on page 4)
OUTSTANDING SHOPS

(2) LARRY GAIDA'S SERVICE STATION
Duluth, MN

* ROY'S SERVICE STATION
Kenosho, WI

Minneapolis, MN
$K \&$ W WHEEL ALIGNMENT
Woterloo. IA
Our outstonding shops are thase shops that hove sent into the PRP af least one port

REGION 5 (3) BELOIT FRAME \& AXLE
Beloit, WI * DES MOINES AREA COMMUNITY
COLLEGE
Ankeny, IA
- FRENZ'S BRAKE SERVICE
Minneapolis, MN lust became active in the PRP are identified with on asterisk before therr name. During
March 1977, twenty shops became new active participants in the PRP. Eight shops have
sent in ports in consecutive manths. Goad news-keep up the good work! Woterloo. IA
Our outstonding shops are thase shops that hove sent into the PRP of least one port
during the current month. The number in porentheses before a shop's nome identif.
the number of consecutive months the shop has sent in o part. New shops thot hove
just became octive in the PRP ore identified with on osterisk before therr name. During
March 1977 , wenty shops became new active participants in the PRP. Eight shops have
sent in ports in consecutive manths. Goad news-keep up the good work!


$$
\begin{aligned}
& \text { REGION } 3 \\
& \text { AUTO SAFETY SERVICE INC. } \\
& \text { Oaklond Park, FL } \\
& \text { HAGAN SERVICE CENTER } \\
& \text { Gainesville, GA }
\end{aligned}
$$



Frout Where Frailures Reported-from page 2
might indicate heat build-up. The inner race has wear marks which indicate the same kind of canted bearing travel as that described above, and shows some indication of heat build-up. The inner wheel boaring location on the spindle appears normal. The broken spindle was sent in by ABBOT'Y's GARA(iE in South Norwalk, Connectient. The whop reports that the spinille broke when the vehicle was traveling at about 15 mph , and the front wheel fell off. The owner noticed no musimal noise from the fromt of the ear that might indicate impending failure, other than a creaking sound about two weeks prior to the failure.

Any information or parts which our PRI members have relating to this type of bearing of spindle failure wouk be appreciated. If parts are not available or do not fit the maillogs, jot the information on a failed part tag and enclose the tare in your next shipment.

## ITEMS OF INTEREST

- The PRIJ is still interested in receiving seored brake droms and rotors for uee in an NIITSA test procram. The proyram needs dums and rotors which, if machined ("turned down"), would not. grossly exceed the manufacturen's recommended machining limits. Those from full size and luxnry 1971-76; (iencral Motors cars are of particnlar interest. 'The test program is rivected toward determining what elfect, if any, seored drums and rotors have on vehicle safety.
- The PRP wishes to thank the following shops for the information they provided on the Firestone Steel Belted Radial 500 tires. RICHFIELD WHEEL ALIGNMENT, Nimneapolis. Minn.. VINS MOTOR SERVICE CORPORITION. Brooklyn, N.Y., and J. GARTNER IUTO SERVICE, Chicago, Ill.


## TRIUMPH HEADLIGHT SWITCH FAILURES

The headlight switch shown in the photograph Was sent to the PRI' by MEADE and (XREENLEF: (iARAD(XE in Galem, ()regon. The switeh was removed from a 197 ? Trinmph model Cri-6 with a mileage of 46,970 . Reportedly, the plastic in the switch loroke when the switch was turned on. .Ls a result, neither the headfights or parking lights, would work.
The NIITSA has rereived a number of other similar failure reports involving Trimmph vehicles. If your shop knows of such a failure, that may have presented a safety-related problem, the PRP would like to hear from you.



## ( $\triangle$ SE OF' THE MONTH




This inseratiration was initated by the National

 - were whent wiss infured when struck in the bead

 that at the time of the incitant. Hare where was
 and the individual was standing near the forme While it was being driven ofle atath of ire. 'The



 determine whether the allewed sitherma/where seffatations emstitute a safely defere within the meanimg of the Natiomal Trallir amd Motom Vobiclo safety det of 10 get.

The wheels were mannfixtmoded hy the budd
 blies. The split-design side ring has a "("" shaped (ross section and ineorporates a tool motrh for rase of remmsal. 'Tlae illastration below shows the gemaral dexign of tho where and sille ring maler investigration.

Iresently, it is known that where of this type were inctalled ats origimal optiomal equipment on

## The Duo-Rim \& "C" Section Side Ring


 -hnding some with dual rear wheels. Another report, as yet memeritied. indicates that the same wheels may also have been installed on some Dorlge and International Ilarvester trueks.

If your shop encounters or kinows of any instances of side ringe ceparation on these wheres. We ark that font rejort them to nis immediately. If the eom-
 folephone for sperial shipping inst metions.

## BRAKE HOSE LENG'TH

Remently some flexible brake hoses from the front




 a behiele is in a sharp tam. 'The brate howe in lac photocraph below is from a batio botge halfoton piekap. Note the loxation of the ceack. 'The l'lil' hats receried other smalarly cracked batio howe from bodge light tracks. The majority of these are from vehieles that were from two to fons vear:
 fahlures hate alse bern repoted on (i.ll trucks. Please be on the lookent lor this kime of hake hose fallure.


## ITEMS OF INTEREST

- The PRP operates on the basis of voluntary support from its momber antomotive repair shops ancoses the eonntry. The Plil' meeds more members. Whate we weleome new menbere from all parts of the combly there aro certan areate in which we are partirntarly anxions to conlist more mombers. 'These inclucle the southeastern and mirlale portions of the emmery. We invite onr existing members to assist in the membership drive. Please be on the lookont for other potenfial mombers. If yon know of a thop that might be intaresterl, bot nis know of have them contact Hs as som ats possible. 'Tlanks!
 semeds all its members a list of the comernt sateoty defect investigations bomg eondheted by the National llighway 'raffer Safey Inministration. We encontate our mombers to periow this list and semblas failed parts and information relatert to those investigations. Kerp those parts and information coming.


 flex phate similar to the one deceribed in the Derember issme of the PRI' News (190\% limek ('entury). Mr. Hmoley stated that the failure occurred on a 19 ) ( 0 ) (atillate Ambatance with a

 AUTOMLJT('TRASSALSSION in Priderport. Pennsybamia informed the Plile that his shop has hard to replace a harer momber of flex phates in late mondel Pmicks. The shop now tries to mantain one or two of the flex plates in stock at all times. sipecial thanks to Mr. Hurley and Mr. Elson for providing infomation on this previonsly published PRP news anticle.
- 'The PlRl' is still interested in recerivinge somed brake drums and rotors for nee in an NIITSA test program. 'The program needs drums and rotors which, if machined ("tmoned down"). wonld not wosely exceed the mannfactureros recommended machining limits. Those from full
 of particular interest. 'The test prospant is directed toward determining what eflect. if ans. scored drums and rotors have on vehicle safety.


## THROTTLE CABLE STICKS

The throttle cable shown below was taken fiom a 107. tworloor (bamada, whirh had ateromatated
 (rneme. 'The rable was removed by Dick . Fondants
 Miscomri athl sont to the PRI'. Is shown in the photompaph, the cable is limpert on one emble 'This reportedly ramed the throttle to wiek in the opent frosition when the rehicle was stanter. In addition (0) this cathe. The Plal' weently rerobert two other thentle rables foma whichen involved int sinilat




 Feattle. Wrashingtom. Wre womld like all of one l'RI' members to keep this reported incident in mind in the roming monthes and report to us any similar fallares that are encomerere


## 'IELEPHONE CALLS

[^7]
\[

$$
\begin{aligned}
& \text { REGION } 5 \\
& \text { BLUEMOUND AUTOMOBILE SERVICE } \\
& \text { Wauwatosa, WI } \\
& \text { EARL'S SERVICE CENTER } \\
& \text { Minneapolis, MN } \\
& \text { HESSEFORT SERVICE } \\
& \text { Kenosha, WI }
\end{aligned}
$$
\]

$$
\begin{aligned}
& \text { news-kesp up the grod ws } \\
& \text { REGION } 4 \\
& \text { DEKORNER BROTHERS } \\
& \text { WYoming. MI } \\
& \text { GLEN PERRY GARAGE } \\
& \text { Indionapolis, IN } \\
& \text { WAYNE \& LAMARR GARAES } \\
& \text { Brownsburg, IN }
\end{aligned}
$$

Appleion，WI MENT


REGION 3 REGION
ALBERT S GARAGE
Micm：Bezen，FL Micr：Bezen，FL AUTO：Or VE PARTS CENTER
Greer． －BECR－On AUTO REPAIR
Savernah．GA
（2）HAGAiN SERVICE CENTER
Gainesville，GA
ヨวIA४ヨS OIn甘 S.ヨOR


गヌاコン 6 NOIOヨ
Spokane，WA
＊NORM＇S AUTO REPAIR sports car service $\forall M$＇วHDaS
（2）STOP \＆GO BRAKE \＆WHEEL
POrtland，OR
＊SUBURBAN AUTOMOTIVE
Lynnwood WA
$\forall M$＇роомиид ${ }^{\prime}$
REGION 9A
A \＆F ALIGNME
ED COFFER／ATS
hamner automotive
ise automotive service HERYY HAIL TIRE JERRY HALL TIRE
Costa Mesa，CA

MILLER＇S AUTOMOTIVE
 Posadena，CA

NATIONAL, PARTS RETTTRN PRROCRAM

## Description and Function

- The PRP involves the wohmary sulmital of failed antomotive components by independent repair shops. (omponents are sulmitted to a representative (Kappa Systems, Ine.) of the Satiomal Highway Traflic safety Idministration (NHTSA).
- The pmopere of the PreJ' is to wather infomation on these eommonents to help the NIFTSA identify the existence of safety-related mannfactmon the fects in motor vehicless and motor vehicle equip-
memt. Whater the amthority of the National

 (o) conduct safoty defort monfication campaigns when it has been determined that a defeet relating to moter velicle safoty exists.
The information ohtaned from theo pame is al-o caluable in preparing Federal motor vehiele salety standards.
- Youre shop (an help. The parts that you emed in will give vital information that camnot be ohtained in any otloer way.


## Section 5

## THE PRP - AN OUTSIDE LOOK

### 5.0 General

The Parts Return Program has been the subject of considerable comment during the course of the contract year. Numerous publications have contained articles on the PRP. The primary source of these articles was a NHTSA press release (shown in pages following this section).

The PRP was also the subject of a consumer affairs program produced by the evening news department of WCCO-TV, Minneapolis, Minnesota. The PRP appears to be gaining some notoriety in the industry since several requests for newsletters and mailing lists have been received from associations and manufacturers and their representatives.

Possibly most critical to the future of the PRP are the recent (November 1976) review and recommendations made by the Motor Vehicle Safety Advisory Council, which are contained in the following section.

### 5.1 Review by Motor Vehicle Safety Advisory Council

In a November 1976 letter to Dr. William T. Coleman, the National Notor Vehicle Safety Advisory Council specifically recommended the inclusion of new vehicle dealerships in ODI's existing reporting system. The report stated that the dealer as a key participant in the manufacturer/seller/consumer relationship, could be a major contributor to the defect-recall program. The report further states, "Dealer reports can provide immediate and valuable information on the frequency and type of repairs and/or defect-related conditions observed on late-model cars." Rather than canvass all dealers, the council has suggested that a carefully designed sampling of dealers throughout the country could provide reliable data not currently
included in NHTSA's data sources. ${ }^{1}$ The outcome of this recommendation is to expand the PRP such that it would lead to more representative identification of "real world" safety~related problems. "Such improvements are necessary to guarantee that information used by NHTSA is representative of events as they occur across the U.S."

The Motor Vehicle Safety Advisory Council further suggests contacting high mileage users, such as police and taxi fleets. Since these users may generate in one year as many miles as a private passenger vehicle would accumulate in three to five years, defects information may be obtained on failures that do not occur early in a vehicle's lifetime. To utilize this data source, the application and use of the vehicles comprising the fleet must be considered. KSI concurs with these recommendations. Further discussion of this topic may be found in Section 6.

The council points out the PRP's value saying, "It must be recognized that defects on cars still under warranty are likely to be identified and corrected by the manufacturers. NHTSA is faced with the problem of investigating reported failures in vehicles and equipment already on the road, regardless of warranty status. Thus, the Parts Return Program, though of limited scope, should be continued." ${ }^{2}$

### 5.2 Independent Publications

We are aware of eight publications that carried articles on the PRP during the contract year; three were trade association newsletters, two were subscription trade papers, and three reached a consumer audience. Circulation of these eight publications amounts to nearly one half million. A January issue of DOT News was

1 KSI notes that, like dealers, automotive parts suppliers occupy a significant position in the manufacturer to consumer process. This data source should be explored as well. In fact, a few automotive merchants that market components as well as repair vehicles are currently enrolled in the PRP. See Infra 6. Recommendations.

2 Brian O'Neill, IIHS, National Motor Vehicle Safety Advisory Council.
the source of half of the articles. The others were the result of direct involvement by the PRP (either KSI or ODI) personnel. The articles have brought ten actively contributing shops into the program. Although this number of shops may not seem significant, it should be kept in mind that these participants enrolled of their own accord and are highly motivated. Because they are basically more interested in the PRP (like enrollees from the direct mail campaigns), these participants as a group have a greater potential value than shops enrolled through conventional means.

In addition to the new enrollees, the articles serve to increase public awareness of the PRP. This will be valuable in future enrollment campaigns and in future programs.

The following details the publications and articles we are currently aware of:

> Table 5-1

Publication
Date, Page Circulation

Let's Talk Road Service July 1976 pg. 1

17,600 Assoc. Contractors
Audience: Road Service Contractors, Independent Garages, Gas Stations Distribution: Quarterly
Source of Material: Kappa Systems, Inc.

Automotive Aftermarket News Feb. 1977 pg. $9 \quad 80,000$ Subscription Controlled Audience: Parts jobbers, distributors, manufacturers, etc. Distribution: Monthly
Source of Material: DOT Press Release

The Automotive Independent Feb. 1977 pg .3 5,000 ASC-IGO CaI. Mem.
Audience: Independent Automotive Repair Garages
Distribution: Monthly
Source of Material: Kappa Systems, Inc.

Nationai School Bus Report
March 1977 pg. $7 \quad 2,000$ NSTA Members
Audience: School transportation contractors, offices
Distribution: Monthly
Source of Material: PRP News

NHTSA News
March 1977 pg. $2 \quad 950$ Safety Agency Employees
Audience: NHTSA Staff, some department staff Distribution: Monthly
Source of Material: Office of Defects Investigation
American Motorist April 1977 pg. 13 205,438 AAA Members

Audience: Automotive Owners, Operators
Distribution: Monthly
Source of Material: DOT Press Release

New York Auto Repair News May 1977 pg. 10 11,000 Subscription Controlled Audience: Auto repair facilities (dealers, independents, body repair, etc.) Distribution: Monthly
Source of Material: DOT Press Release

Consumers Research Magazine June 1977 pg. 5
175,000 Subscription Controlled
Audience: Extensive, varies
Distribution: Monthly
Source of Material: DOT Press Release

TOTAL CIRCULATION: 497,000
5.3 Television Coverage on PRP - WCCO-TV News

On January 23, 1977, WCCO-TV in Minneapolis, Minnesota, aired a consumer-oriented report on the evening news about the PRP. ${ }^{1}$ Two requests for

1 The source used for the program was a January 1977 DOT News Release.
further information on the program and four vehicle owner complaint letters were received that could be attributed to the news show. Undoubtedly, considerable benefit can be obtained from the public exposure this type of program provides.

## Section 6

## CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Conclusions

### 6.1.1 PRP News and Maintaining Shop Communications

The monthly PRP News is the single most effective tool employed in the program. In fact, if there is one facet of PRP operations upon which program success is solely dependent, it is the development, preparation, production, and distribution of the PRP News. Although other functions have a critical effect on program success, we believe that given enough time, most problems can be corrected. However, without the newsletter, the program could not survive. The PRP News is the only continuous communications link between the program administrators and member shops, and it is the most effective tool employed to stimulate shop participation.

### 6.1.2 Maintaining Old Inactive Shops in the PRP

It is of little value to maintain shops in the program that have been inactive for over one year. It requires a high utilization of resources to continually add and delete shops from the program for the singular purpose of maintaining a current membership. Enrollment campaigns should be conducted for the purpose of obtaining more active shops in the program, rather than of increasing the total number of member shops. The program receives no material benefit from the inactive members.

### 6.1.3 Follow-Up Shop Contacts

Follow-up campaigns can be beneficial to the PRP by identifying shops that can be expected to submit parts in the future, and by stimulating shops to become active. Little benefit is derived from sending follow-up letters to shops
that have been enrolled for two or more years and have never submitted parts. Follow-up campaigns to shops that have been active in previous years have had the best results. Follow-up contacts to newly enrolled shops should be conducted periodically throughout the first year of enrollment. If a shop does not become an active participant during its first year as a PRP member, the probability of its ever becoming an active participant decreases drastically. The more time that elapses between the time a shop submits its last part (or was enrolled, if no parts have been received), the less likely it is that the shop will respond to the followup contact positively, either by returning a postcard, or more importantly, by sending parts.

### 6.1.4 Direct Mail Enrollments

This initial effort did not appear satisfactory in terms of new enrollments (ten enrollments out of 224 individual pieces of mail sent). However, in analyzing the number of shops who sent in parts from the ten enrolled (four shops), the results are very satisfactory. This method could probably be perfected into a cost-effective approach for shop enrollment.

### 6.1.5 Official NHTSA Public Release Documents

The release of official information from DOT/NHTSA generates a great deal of interest in the program from other sources. A case in point is the January 1977 press release concerning the PRP. As a result of the press release, four articles were printed in various trade and association publications. This interest has resulted in the enrollment of at least ten active shops in the PRP. The number of active shops resulting from the press release is equivalent to the number of active shops we could currently anticipate as new enrollees over a period of three months after completion of an enrollment campaign (s) numbering about 300 enlistments.

### 6.1.6 Failed Part Count

The number of failed parts received this year totaled 1,408. This figure represents a monthly receipt average of 117 parts. The previous year's monthly
average was approximately 79. This year's part count represents a $48 \%$ increase over the previous year. The very successful increase was due in part to the increase in the average number of parts received per shop: 4.06 parts per shop last year and 5.64 parts per shop this year. The number of shops that contributed parts this year is approximate to the number submitting parts during the previous year.

### 6.1.7 New Procedures to Collect Newer Model Data

Procedures to collect information on newer model vehicles were initiated in the last half of the contract year. These procedures, which involved contacting shops directly for added information on new car problems and publishing articles in the PRP News, proved to be successful. Several members have indicated that in the future, they would like to see more information on new model year vehicles in the PRP News. The shops indicated that the information would be helpful in the diagnosis and repair of vehicles they service.

### 6.1.8 New Shop Enrollment by a Sub-Contractor

The utilization of a sub-contractor who could provide a substantial existing field force proved very beneficial in new shop enrollment campaigns. Our subcontractor, EQUIFAX, provided 300 contacts and enrolled 176 PRP members, an enrollment rate of $59 \%$. As of the date of this report, $2 \%$ had become active. KSI contacted the remaining 422 shops for the 1976-77 year, resulting in 131 shop enrollments, a $31 \%$ enlistment rate. However, by excluding the direct mail enrollments, which are not really comparable, we find that our KSI enlistment rate is $61 \%$, which is similar to EQUIFAX's. Moreover, the number of new active shops from the KSI enrollees was $4 \%$, which is somewhat better than EQUIFAX's percentage of active shops.

### 6.2 Recommendations

### 6.2.1 PRP News Production Approaches

The current development, layout/graphics, reproduction, and distribution cycle of the PRP News is becoming quite lengthy. Other operating procedures
should be considered for this preparation cycle that would focus on expediting timely distribution.

These revised procedures could include preparing articles in advance to ensure available newsletter material on short notice. This material could be made available to the NHTSA CTM or even to the NHTSA Publications Department.

One possible drawback to this procedure, however, would be the loss of certain current events features in the newsletter. Our philosophy in newsletter development over the past two years has been to focus on subject material that is current, i.e., case material, communications from shops, etc. We feel, however, that the distribution of a newsletter on a timely schedule is more important than the currency of the information it contains.

### 6.2.2 Creating More Shop Incentives

Most of the shops who sent in failed parts during the contract year did so because of the PRP newsletter, or as a result of information received from other sources, or because of our follow-up campaigns. It is safe to say that each one of these shops is genuinely interested in the safety aspects of the PRP. Of the remaining 1,551 shops in the program who did not contribute, we can also accurately state that a large percentage of these shops must also support increased safety on the highways. Evidently, whatever incentives are available in the program, they succeed in motivating only a small proportion of the total membership to return failed parts.

New incentives must be made available to increase the level of participation. Certain new incentive programs could be implemented. For example, NHTSA-originat correspondence directed at the shops might be beneficial in maintaining currently active shops in the program. This type of correspondence might include letters to shops that contributed significant parts, such as those supporting investigations resulting in recalls.

Another proven success has been the press release issued by the NHTSA. In addition to bringing more active shops into the program, the increased public
exposure could be a significant factor in future enrollment campaigns. The practicality of distributing NHTSA press releases directly to PRP shops should be looked into. The development of more numerous rewards to active shops should be investigated. These might include PRP logos that would be printed on decals or provided to shops for use on company stationary, or clipboards/ folios, which would be used by shops to retain PRP newsletters and other documentation received from the PRP. Finally, ideas to create more continuous recognition of participating shops, such as prepuring a directory of active contributors, should be developed.

### 6.2.3 Increasing the Quality of Failed Parts Received

More emphasis needs to be placed on educating and motivating shops to submit parts that are both safety-related and possibly defective. The PRP does not want to discourage shops from sending in parts, but the program should stress the difference between safety-related versus not safety-related defects, and potentially defective versus worn out or misused parts.

Two approaches to improve the quality of returned parts have been used in the past with some degree of success. These were the reproduction of a poster highlighting definite safety-related and defective components and the use of onepage printed requests for specific parts. Both of these approaches should be used again.

The plans implemented during the second half of the contract period to procure more parts from late model vehicles should be expanded. One procedure not used as yet would be to review manufacturer technical service bulletins for information that might be useful to shops. Diagnostic and repair information might alert members to potential problems in newer automobiles. These service tips might be incorporated into a regular feature in the PRP News.

### 6.2.4 Other Potential PRP Contributors

The PRP should continue to investigate utilizing all possible contributors to the PRP and should not be limited to only independent automotive repair shops.

### 6.2.5 New Shop Follow-Up Campaigns

New shop follow-up contacts are needed as soon as 30 days after enrollment. These contacts should be by telephone. The purpose of the call is to determine 1) if the shop completely understands the operation and purpose of the program, and 2) to see if the shop has received our shop kit in the mail. Once the contact is made, the PRP staff member can request that the shop expedite returning parts to the program and review with the shop the types of parts and malfunctions the program is interested in.

### 6.2.6 New Shop Enrollments by a Sub-Contractor

The use of a sub-contractor to make the initial contacts and enlistment of new shops proved to be a viable approach to recruitment. This proved especially true in areas we could not cover with existing staff members. We recommend that this approach be used again.

### 6.2.7 NHTSA Mailing List Audits

To ensure the accuracy of the NHTSA mailing list, periodic checks of the addresses should be performed. The frequency of these checks should not be less than once each quarter.


# PARTS RETURN PROGRAM FAILED PART DATA SHEET 

BIN NO.
SHOP ID NO.

PRY NO. P $\qquad$ DATE RECEIVED $\qquad$

OWNER IDENTIFICATION

Vehicle Owner: $\qquad$ Telephone: 1 ) $\qquad$

Street Address: $\qquad$

City: $\qquad$ State: $\qquad$ Zip: $\qquad$
vehicle data

Manufacturer: American Motors $\qquad$ Chrysler Motors $\qquad$ Ford Motors $\qquad$ General Motors $\qquad$

Other: $\qquad$

Additional Model Information (If Any) $\qquad$

Make: $\qquad$ Model: $\qquad$

Year: 19
Mileage: $\qquad$ VEHICLE CODE: $\square$

COMPONENT DATA

Component Classification: $\qquad$

Component Description: $\qquad$


Component Mileage: $\qquad$ Date Removed $\qquad$
I.D. Marks: $\qquad$
$\square$ NO PART RECEIVED
FAILURE DESCRIPTION
$\square$ information from shop


PRP NO. P

SHOP DATA

Part(s) Returned By:
SHOP CODE NO.
CITY
STATE
ZIP

COMMENTS FROM SHOP
-
(ATTACH LETTERS)

PHOTOGRAPHS
VEHICLE OWNER'S ANALYSIS CODING SHEET U.S. DEPARTMENT OF TRANSPORTATION



 $-2$



 $\rightarrow$ $086 \angle 8 L 4 \angle 9 L 5$

 $\square$
$>$ $086 \angle 8 \angle L \angle 9 \angle S \angle 力 L E L Z L L \angle 0 \angle 6989 \angle 99959+9$ $|||||\mid$ $\vec{\square}$ 57677787980
 $\begin{array}{ll} \\ \\ 4 \\ 4 \\ 4 & \infty \\ <\end{array}$

U.S. DEPARTMENT OF TRANSPORTATION National highway traffic safety administration OFFICE OF OEFECTS INVESTIGATION

$\because$


 263646566677686970
UNUSED


| $\begin{array}{c}\text { PRP } \\ \text { PART } \\ \text { OCATION }\end{array}$ |
| :---: | :---: |
| UNUSED |$||||\mid$

$\qquad$

## VEHICLE OWNER'S ANALYSIS CODING

 CONTINUATION SheET VEHICLEINFORMATION - VEHICLE INEORMATION
## $\square$

完

$\qquad$
$\qquad$ Initial Contact Date $\qquad$

Follow-up Contact if follow-up contact, complete form prior to calling

SHOP NAME $\qquad$ CONTACT NAME $\qquad$
SHOP LOCATION $\qquad$ PHONE \# (_) collect? execunet?

## VEHICLE DATA

MANUFACTURER $\qquad$
Primary
Second Stage
MAKE $\qquad$ MODEL $\qquad$
SERIES/CLASS $\qquad$ MODEL YEAR $\qquad$ BODY STYLE $\qquad$
VEH. ID \# (VIN) $\qquad$ NEW/USED $\qquad$
VEH. MILEAGE $\qquad$ PERSONAL/COMMERCIAL USE $\qquad$

EQUIPMENT
Complete as Appropriate


## LIGHT TRUCKS/MPV'S ONLY

$\qquad$ OPT. G.V.W. $\qquad$ CAMPER?
_ 4 WHEEL DRIVE?

MEDIUM \& HEAVY TRUCKS ONLY
__TRANS.
DEISEL/GAS
WHEEL BASE
$\qquad$
— OF AXLES
\# OF DRIVE AXLES

## COMPONENT DATA

COMPONENT DESCRIPTION
COMPONENT LOCATION (L/R, F/R) $\qquad$ DATE REMOVED $\qquad$
ORIGINAL OR REPLACEMENT ( $\mathrm{O} / \mathrm{R}$ ) $\qquad$ If replacement, complete remainder of section, els $\epsilon$ skip to next section.

DATE OF FIRST FAILURE $\qquad$ NUMBER OF OCCURANCES $\qquad$ COMPONENT MILEAGE (most recent failed part) $\qquad$ DATE INSTALLED $\qquad$ PURCHASED AT $\qquad$ O.E.M.? $\qquad$ If after-market

NAME OF PART MANUFACTURER $\qquad$

FAILURE DATA

PRIMARY CAUSE OF FAILURE $\qquad$

OTHER CAUSES $\qquad$

RESULT OF FAILURE $\qquad$
___ VEHICLE IN MOTION? $\qquad$ FIRE?

LOSS OF CONTROL? (partial) (total)
ACCIDENT? If yes please describe type and how accident occurred $\qquad$
$\qquad$
\# of Injuries $\qquad$ \# of fatalities
$\$$ property damage

HOW WAS FAILURE DIAGNOSED? SYMPTOMS $\qquad$

HAS SHOP SEEN SIMILAR FAILURES ON OTHER VEHICLES? IF YES, START NEW REPORT

## VEHICLE OWNER DATA

NAME $\qquad$ PHONE \# ( ) $\qquad$

STREET ADDRESS

CITY
STATE $\qquad$ ZIP. $\qquad$

MAY WE CALL OWNER? $\qquad$

## COMMENTS

Certiticate of Participation This is to certify that

IS ACTIVELY PARTICIPATING TO IMPROVE MOTOR VEHICLE SAFETY THROUGH COOPERATION IN THE

NATIONAL PARTS RETURN PROGRAM FOR THE YEARS 1976-1977


U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

## PARTS RETURN PROGRAM

REPLY TO:

U.S. Department of Transportation c/o KAPPA Systems, Inc.
$\$ 501$ Wilson Blvd.
Arlington, Va. 22209
(703) 527-4500

Date $\qquad$

SHOP QUESTIONNAIRE
Shop Name $\qquad$
Address $\qquad$
City \& State $\qquad$ Zip Code $\qquad$
Phone No. Area Code $\qquad$
Owner or Manager $\qquad$
Number of Bays or Stalls $\qquad$
Brake Repair: Yes $\qquad$ No $\qquad$
Other systems which are repaired here: Steering $\qquad$ Suspension $\qquad$
Towing Service: Yes $\qquad$ No $\qquad$
Other Comments: $\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Region \# $\qquad$ Signed: $\qquad$

pare $\qquad$

MONTH OF

## PARTS RETURN PROGRAV CODING INSTRUCTIONS

Card Type 1 (only one card type 1 per record) required card in record group.
Columns
1-6 Six-character PRP Part Number/first character is P; second character is 0 if record represents a part, 8 if record represents information only, which was provided by a program participant, or 9 if record represents information only, which was provided by a source other than a program participant. Last four characters must be numeric. Required entry.

7-30 Owner's name, (last name, first name)/if name is not given enter "resident." Start first name in column 19, if last name does not overlap. Alpha characters. Required entry.

31-69 Owner's Address
31-52 Owner's street address/enter vehicle owner's street address if known. If unknown, leave blank. Alpha/numeric field.

53-62 Owner's city/enter vehicle owner's city if known. If unknown, leave blank, abbreviste if necessary. Alpha field.

63-64 Owner's state/enter owner's state of residence if given. If not specified, enter 00. Use code tables (state). Alpha/ numeric field. Required entry.

65-69 Owner's zip code/enter owner's zip code if known, if unknown leave blank. Numeric field.

70-75 Letter date/if letter is source, enter letter date, if none is given, enter date of failure. If date of failure is unknown, enter date received. If part is source, enter date of failure, if unknown, enter date part was received. (year/month/day) numeric field. Required entry.

Unused.
77-78 Unusable.
79
Card type/enter a "1" for card type 1. Required entry. Action/transaction code $\mathrm{A}=a \mathrm{dd}, \mathrm{D}=\mathrm{delete}, \mathrm{M}=\mathrm{modify}$.

Card Type 2 (only one card type 2 per record) required card in record group.

Columns
1-6

7-42
43-48
49-54

55-60

61-69

70-71
72-76
77-78
79
80

## Description/Explanation

Six-character PRP Part Number/duplicate number used in card type 1. Required entry.

Control information/not used for PRP.
PACS/HLCR Number - not used for PRP.
Date part received/enter the date part is received from shop (year/month/date). Numeric field. Required entry for PRP.

PRP reference number/used for conversion only. Sixcharacter ODI number with a leading 0 . Numeric field.

Shop code number/enter 8-character shop code from the failed data sheet. Right justified, numeric field. Required entry for PRP.

Source code/enter PR for PRP. Alpha field. Required entry .
Unused.
Unusable (internal record sequence).
Card type/enter "2" for card type 2. Required entry.
Action/transaction code $\mathrm{A}=\mathrm{add}, \mathrm{D}=$ delete, $\mathrm{M}=$ modify .

Card Type 3 (up to 26 alpha characters for card type may be used per record) required card in record group.

## Columns

## Description/Explanation

1-6

7-71 Vehicle Information $7-16 \mathrm{Mfg} . / \mathrm{div} . /$ series/class code/enter unique code found in Manufacturer's table. Numeric field. Required entry.

7-18 Year/enter vehicle model year. If unknown, enter 00. Numeric field. Required entry.

19-20 Vehicle category/enter unique vehicle category code found in vehicle category table. Left justify. Alpha or numeric field. Required entry.

## Card Type 3-Continued

Columns

51-53 HP/enter vehicle unique horsepower if given, otherwise leave blank. Numeric field, left justify.

Number of cylinders/enter the number of cylinders in engine if given, otherwise leave blank. Numeric field.

Carburetor/enter the number of barrels the carburetor has if given, otherwise leave blank. Numeric field.

56 Power brakes/enter "Y" for yes if the vehicle has power brakes, otherwise leave blank. Alpha field.

Power steering/enter "Y" for yes if the vehicle has power steering, otherwise leave blank. Alpha field.

Automatic transmission/enter "Y" for yes if vehicle has automatic transmission, otherwise leave blank. Alpha field.

AC/enter "Y" for yes if the vehicle has air conditioning, otherwise leave blank. Alpha field.

Speed control/enter "Y" for yes if the vehicle has speed control, otherwise leave blank. Alpha field.

Purchase date/enter date vehicle purchased if given (year/ month/day). If month and year are given, assume day as first day of month, if date is not given, leave blank. Numeric field.

New or used - N/U/enter "N" or "U" respectively if given, otherwise leave blank. Alpha field.

Columns
68

69-71
$72-76$

77

78

79
80

Description/Explanation
Two-stage vehicles/enter "Y" for yes if vehicle is manufactured in two or more stages, otherwise leave blank. Alpha ficld.

Wheel base/enter wheel base in inches if given, otherwise leave blank. Left justify, numeric field.

CID/enter vehicle engine cubic inch displacement if given, otherwise leave blank. Numeric field.

Vehicle identifier/enter an "A" for first vehicle. Subsequent vehicles are assigned unique PRP numbers. Required entry.

Component identifier/enter an "A" for first component. Subsequent parts or complaints do not require an additional card type three. Required entry.

Card type/enter " 3 " for card type 3. Required entry.
Action/transaction code $A=a d d, D=d e l e t e, M=m o d i f y$.

Card Type 4-card required only when "Y" is entered in column 68 of Card Type 3.

Columns
Description/Explanation
1-6

7-57 For vehicles manufactured in two or more stages $7-16 \mathrm{Mfg} . / \mathrm{div} . /$ series/class code/enter unique code found in Manufacturer's Tables. Numeric field. Required when vehicle is manufactured in two or more stages.

17-18 Year/enter vehicle model year. If unknown, enter 00. Numeric field. Required when vehicle is manufactured in two or more stages.

19-20 Vehicle category/enter vehicle categories code from Vehicle Category Table. Left justify. Alpha or numeric field. Required when vehicle is manufactured in two or more stages.

21-22 Body style/enter body style code from Body Style Table. Left justify. Alpha or numeric field. Required when vehicle is manufactured in two or more stages.

Columns

77-78 Internal Record Sequence
77 Vehicle identification/enter "A" for first vehicle in record. Only one card type 4 per PRP number is used. Subsequent vehicles are assigned unique PRP numbers. Subsequent components do not require an additional card type 4. Alpha field. Required entry when card type 4 is used.

78 Component identifier/enter " A " for the first failed component of the vehicle. Subsequent components do not require an additional card type 4. Only one vehicle is assigned a PRP number, alpha field. Required entry when card type 4 is used.

79 Card type/enter "4" for card type 4. Numeric field, required entry when card type 4 is used.

80
Action/transaction code $A=a d d, D=d e l e t e, M=$ modify.

Card Type 5 - (up to 26 alpha characters for card type may be used per record). Required card in record group. Only components that are related to the same incident of failure are coded under one PRP number. Unrelated components are assigned unique PRP numbers even if they are removed from the same car on the same date.

## Columns

## Description/Explanation

1-6 Six-character PRP number/duplicate number used in card type 1. Required entry.

## Columns

15-16
$17-20$

21

22-27 Mileage at failure/enter the mileage of the component at the time of failure if given. If component mileage is unknown, enter vehicle mileage. If no mileage is given, leave blank. Right justify and zero fill to left. Numeric or blank field.

28-33 Date of first failure/enter the date the first failure occurred (year/month/day). If not given, enter the date of letter. If letter date is not given, enter date part received. Numeric field. Required entry.

34-35 Occurrences/enter the number of separate occasions the failure has occurred. If not given, enter 01. Right justify, zero fill to left. Numeric field. Required entry.

Hazard category/enter applicable hazard category code from Hazard Category Table. Alpha field. Required entry.

Accident/enter " $Y$ " if there was an accident, otherwise leave blank. Alpha or blank field.

## Description/Explanation

38-45

Accident Parameters, use only when "Y" appears in column 37 card type 5 .
38 Type accident/enter type of accident. "F"=frontal collision, "S"=side collision, "R"=rear-end collision, and "N"=non-collision accident. Enter "U" if type of accident is unknown. Required entry if "Y" appears in column 37.

39-40 Injuries/enter number of injured resulting from accident, enter 00 if unknown. Right justify, zero fill to left. Numeric field. Required field if "Y" appears in column 37.

41-42 Fatalities/enter number of fatalities resulting from accident, enter 00 if unknown. Right justify, zero fill to left. Numeric field. Required field if "Y" appears in column 37.

43 Property damage/enter code for amount of damage to vehicle resulting from accident if given, otherwise leave blank. Alpha or blank field.
$\mathrm{L}=$ light damage (up to $\$ 100$ )
$\mathrm{M}=\mathrm{medium}$ damage ( $\$ 100$ to $\$ 500$ )
$\mathrm{H}=$ heavy damage (over $\$ 500$ )
44 Environmental conditions/enter appropriate code from table on next page for environmental conditions when accident took place. Alpha/numeric or blank field.

45 Driving conditions/enter appropriate code from table on next page for speed and type of road where accident took place. Alpha/numeric or blank field.

Failure type/"p"=primary failure - not caused by the failure of another component, "S"=secondary failure - result of a failure of another component. Leave blank if unknown. Alpha or blank field.

Motion/enter "Y" if car was in motion when failure occurred, " $N$ " if not in motion, and "U" for unknown. Alpha field, required entry.

Fire/enter "Y" if a fire occurred at the time of the failure, "N" for no fire, and "U" for unknown. Alphe field, required entry.

Loss control/enter " $T$ " if driver lost control of vehicle, " $P$ " if partial loss of control occurred, and "U" if unknown. Alpha field, required entry.

## Card Type 5 - Continued

64 Original or replacement equipment ( $O / R$ )/enter " $O$ " for

Columns
50-53

54-63

65-69

70-73

77

78

79
80

## Description/Explanation

FMVSS/enter any applicable Federal Motor Vehicle Safety Standard or Regulation Part Number from FMVSS Table. FMVSS number is right justified, column 50 is blank. For Regulation Part Number, use "P" in column 50. Alpha/ numeric blank/numeric or blank field.

Part ID number/enter the part ID number (s) if given, from failed data sheet. If none is given, leave blank. If additional space is required, use comment section, card type 7 or 8 . Left justify. original or " $R$ " for replacement part. Alpha or blank field.

PRP bin number/enter the bin number the part is stored in from failed data sheet.

Part location/use when part is removed from bin. Alpha/numeric or blank field. "DOT1"=ODI office, "DOT2"=ODI storage, "DOT3"=ODI testing, "INVI"=KSI storage, "DISP"=disposed.

Unused.
Vehicle identifier/enter "A" for first vehicle in record. Subsequent vehicles are assigned unique PRP numbers. Required entry .

Component identifier/enter " A " for the first failed component, "B" for second related component, "C" for the third related component, and so on ( $\mathrm{D}-\mathrm{Z}$ ). Alpha field, required entry.

Card type/enter " 5 " for card type 5. Required entry.
Action/transaction code $\mathrm{A}=\mathrm{add}, \mathrm{D}=$ delete, $\mathrm{M}=$ modify.

Card Type 5 - Continued
Column 34 - Environmental Conditions

| WEATHER | DAY | NIGHT | DAWN OR DUSK (TWILIGHT) | $\begin{gathered} \text { UNKNOWN } \\ \text { TIME } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Clear | A | K | S | 2 |
| Light Rain | C | L | T | 3 |
| Heavy Rain | D | M | U | 4 |
| Fog | E | N | V | 5 |
| Snow | F | 0 | W | 6 |
| Sleet | G | P | X | 7 |
| Other Weather | H | Q | Y | 8 |
| Unknown Weather | I | R | Z | 9 |

Column 55 - Driving Conditions

| VEHICLE SPEED WHEN FAILURE OCCURRED | $\begin{aligned} & \text { STREET OR } \\ & \text { ROAD } \end{aligned}$ | HIGHWAY | FREEWAY | UNKNOWN |
| :---: | :---: | :---: | :---: | :---: |
| 0 MPH (Stopped) | B | K | S | 2 |
| 1-20 MPH | C | L | T | 3 |
| 21-40 MPH | D | M | U | 4 |
| 41-60 MPH | E | N | V | 5 |
| Over 60 MPH | F | 0 | W | 6 |
| Unknown Speed | G | P | X | 7 |

Card Type 6 (up to 26 alpha characters for card type may be used per record).

Columns
1-6

7-46

## Description/Explanation

Six-character PRP number/duplicate number used in card type 1. Required entry.

Tire Information
7-9 Manufacturer/enter tire manufacturer code from Tire Mfg. Table. New tire mfg. codes have two characters - left justified whereas retread mfg . have three characters. If tire mfg. plant is unknown, use first code given for that specific fire mfg . in the Tire Mfg. Table. If Column $27=2$, 4, or 6, then Columns 7-9 should contain three Alpha characters or blanks.

10-12 Brand/enter brand code from Tire Brand Table. Alpha field.
13-20 Size/enter tire size - left justify. Leave blank if unknown. Alpha, numeric, or blank field.
NOTE: Do not include decimal point or dash.
21-22 Name/enter tire name code from Tire Name Table. Leave blank if unknown. Alpha field.

23 Unused.
24-26 Construction/enter three-character tire construction code from the following tables. Code every character that is known. Alpha field.
24 First character: "T"=Tube type, "L"=Tubeless
25 Second character: "B"=Bias (Street and Road), "R"=Radial
(Street and Road), "E"=Belted Bias (Street and Road), "I"=Bias (Deep Tread, Winter), "A"=Radial (Deep Tread, Winter), "S"= Belted Bias (Deep Tread, Winter).
26 Third character: "B"=Blackwall, "W"=Any other than Blackwall.
Examples of Construction Codes Follow:
For: Street and Road Type
TBW Tube Type, Bias Ply, Whitewall
TRB Tube Type, Radial Ply, Blackwall
LBB Tubeless, Bias Ply, Blackwall
LEW Tubeless, Belted Bias Ply, Blackwall
LRB Tubeless, Radial Ply, Blackwall

## Columns Description/Explanation

For: Mud and Snow (Deep Tread)
TIB Tube Type, Bias Ply, Blackwall
TAW Tube Type, Radial Ply, Whitewall
LIW Tubeless, Bias Piy, Whitewall
LSB Tubeless, Belted Bias Ply, Blackwall
If unknown, leave blank.
27 Tire Type/enter tire type code, numeric character.

TIRE TYPE
Normal
Snow Tire
Studded

## NEW

1
3
5

RETREAD

## 2

4
6

## REGROOVE

## 7

## 8

28 Cord/enter cord material code, if unknown leave blank. Numeric character.

```
Nylon=1 Rayon=2 Polyester=3 Fiberglass=4 DP-01=5
Nygen=6 Steel=7 Other=9
```

29 Belt/enter belt material code, if unknown leave blank. Numeric character.

```
Nylon=1 Rayon=2 Polyester=3 Fiberglass=4 DP-01=5
Nygen=6 Steel=7 Other=9
```

30-31 Ply TR/enter number of plies under the tread (add sidewall). Right justify. Numeric field.

32-33 Ply side/enter number of plies in sidewall only. Numeric field.

34 Load range/enter alpha designation, i.e., A, B, C, etc., if given. Alpha character.

35-46 Tire ID number/enter tire identification number if provided. Left justify. The first two (new tires) or three characters (retread) should also be recorded in Columns 7-9. Alpha/numeric field. Give explanation about Tire ID and mfg's. code.

## Columns

47-51 Investigation/case, audit or survey number/alpha/numeric field.
47 Enter "C" for investigation/case, "A" for audit or "S" for survey.

48 Enter last character of year, i.e., 75-5.
49-51 Enter case, audit or survey sequence number. Right justify, zero fill to left.

64-76 Unused.
77-78 Internal Record Sequence 77 Vehicle identifier/enter "A" for first vehicle. Subsequent vehicles are assigned unique PRP numbers. Required entry if card type 6 is used.

78 Component identifier/enter " A " for first component, "B" for second, "C" for third, and so on. Up to 26 alpha characters may be used per record. Required entry if card type 6 is used.

79 Card type/enter "6" for card type 6. Required entry if card type 6 is used.

80
Action/transaction code $A=a d d, D=d e l e t e, M=$ modify . Required entry if card type 6 is used.

Card Type 7 - required card in record group.
Card Type 8-optional - identical format to card type 7 (only two cards allowed per each component on vehicle).

1-6 Six-character PRP number/duplicate number used in card type 1. Required entry.

7-76 Comments/enter free text analyst notes from failed data sheet describing component.

77-78 Intemal Records Sequence 77 Vehicle identifier/enter "A" for first vehicle. Subsequent vehicles are assigned unique PRP numbers. Required entry.

78 Component identifier/enter "A" for first component, "B" for second, and so on. Up to 26 alpha characters. Required entry .

79 Card type/enter "7" for card type 7. Required entry.

## Columns

80

Description/Explanation Enter " 8 " for card type 8. Required entry if card type 8 is used.

Action/transaction code $\mathrm{A}=\mathrm{add}, \mathrm{D}=$ delete, $\mathrm{M}=$ modify. Required entry.

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PAGE 6010



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U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

PARTS RETURN PROGRAM
U.S. Department of Transportation c/o KAPPA Systems, Inc.
1501 Wilson Blva.
Arlington, Va. 22209
(703) 527-4500

## Dear Sir:

We take this opportunity to welcome you to our National Parts Return Program team. We believe this program to be a valuable tool in uncovering potential safety related defects in motor vehicles. Your contributions of failed defective parts can help promote automotive safety.

We have enclosed with this letter your "Shop Kit" which includes the following:

1. One pre-addressed and postage free failed part mailbag.
2. Five (5) failed part identification tags and their protective covers.
3. A recent Defect Investigatory Cases Report.
4. One page bulletins requesting failed parts.
5. A current PRP Newsletter.

The procedure to follow in sending a suspect failed part is as follows. Once the part has been removed from the vehicle, record the name and address of the owner on the reverse side of the failed part identification tag. When this task has been completed, fill out the front of the tag identifying the part completely. Please record the results of your visual inspection of the part and your analysis of the problem under failure description.

Prior to attaching the failed part tags to the part, place the tag in its protective cover and seal the cover. This will prevent grease and oil from the part ruining the recorded information. The bag is then ready for mailing.

We hope you will be sending us your first part in the next 30 days as the PRP needs active supporters. Shops which do not send parts may be asked to drop out of the program so that another can take their place. As soon as we receive your first mailbag with a failed part, we will send you a framed "Certificate of Participation" highlighting your shop as an active participant in supporting safety on our highways. We request that you will display this framed certificate where your customers may view it.

Very truly yours,

Bruce E. Beddow<br>Program Manager

Enclosures
BEB/dlf

DEPARTMENT OF TRANSPORTATION

WASHINGTON,<br>D.C. 20590

$\frac{\text { FOR RELEASE TUESDAY }}{\text { Apri1 } 19,1977}$
NHTSA -- 26-77 (BMA)
Tel. (202) 426-0670

DEFECT INVESTIGATORY CASES REPORT

A report listing all defect investigations, surveys and recall campaign audits in progress as of Jan. 31, 1977, was issued today by the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA).

The federal safety agency report lists 54 active investigations, including six in which an initial or final defect determination has been made. Of the latter, NHTSA findings have been disputed by manufacturers in three cases and these are currently in litigation.

The report also lists 40 surveys and recall campaign audits in progress, including six audits newly opened during January, 1977.

NHTSA's regular report series is issued to provide motorists, as well as the motor vehicle industry, with a complete account of federal defect investigation activity, while at the same time providing defectrelated information in the interest of highway safety.

Interested persons with information bearing on current investigations are invited to write to: The Office of Consumer Services, U.S. Department of Transportation, National Highway Traffic Safety Administration, 400 Seventh St., SW, Washington, D.C. 20590.

Reports should indicate the make, model, year and serial number (VIN) of the vehicle, and all pertinent facts relating to the failure. Persons wishing to review summaries of the NHTSA's findings in terminated cases, or in the public file for suspended cases, may do so in technical reference room 5108 of the NHTSA at the above address.

## PLEASE NOTE:

These reports are furnished to the Consumer Product Information Center, Pueblo, Colorado for distribution in single copies free upon written request. Since the Information Center lacks means to maintain individual monthly "subscription listing" for automatic mail-out, persons wishing to receive copies must request them each month from the above address.

## TOLL FREE "HOTLINE" REMINDER:

Persons wishing to report automobile safety-related defects, request vehicle information or obtain information on activities of the National Highway Traffic Safety Administration may use the NHTSA Auto Safety Hotline, direct to the Washington headquarters office.

> This number is $(800) 424-9393$
> Washington, D.C. residents may call $426-0123$

Case Number:
Manufacturer:
Make:
Mode1:
Year(s):
Possible Problems:

Conclusions:

190
All Manufacturers
Al 1
Travel Trailers
1965-1970
Failure of Axles, Wheels and Tires, due to the overloading of the suspension system.

1. All investigatory action for the 20 subcases comprising Case No. 190 is complete.
2. With the exception of subcase 190.009 , all subcases have been closed and can be found in the NHTSA public files under their respective 190. numbers.
3. An initial determination of defect related to motor vehicle safety has been made for subcase No. 190.009 involving certain Monitor travel trailer models manufactured by the Wickes Corporation. Further action in this subcase will continue as Case No. 190.009.
190.016

Redman Mobile Homes, Incorporated
Kenskill Travel Trailers
Al 1
1965-1974
Failure of Axles, Wheels and Tires, due to the overloading of the suspension system.

Because of the cargo capacity of these travel trailers and because of the paucity of suspension system failure reports, the agency has decided to close this case. Before doing so, however, DOT issued a news release reminding owners of the cargo capacity of these trailers and the hazards of overloading them.

Reporting Period: January 31, 1977

RECALL CAMPAIGN AUDITS
OPENED THIS REPORTING PERIOD

Case Number:
Manufacturer:
Make:
Model:
Year(s):
Possible Problems:

Case Number:
Manufacturer:
Make:
Model:
Year(s):
Possible Problems:

Case Number:
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A7-04
International Harvester
IHC
C.0. and Conventional Transtar \& Glider Kits

1976
Steering Clamp Bolt failure due to insufficient torque. Recall Campaign Number 76-0143.

A7-05
Coachmen Industries
Coachmen
Certain Presidential, Statesman \& VIP Model
Class A Motorhomes.
September 1, 1974 thru August 28, 1976
Failure of Gasoline Tank Support System. Recall Campaign Number 76-0146.

A7-06
Ford Motor Company
Econoline
$E-100, E-150, E-250 \& E-350$
1976
Steering Gear Attachment Failure. Recall Campaign Number 76-0165.

| Case Number: | A7-07 |
| :---: | :---: |
| Manufacturer: | Argosy Manufacturing Company |
| Make: | Argosy Trailers |
| Model: | Serial Numbers 2206V1757 thru 26T6V2540 |
| Year(s): | 1976 |
| Possible Problems: | Failure of Furnace Exhaust Vent Adaptor. Recall Campaign Number 76-0167. |
| Case Number: | A7-08 |
| Manufacturer: | Ford Motor Company |
| Make: | Ford |
| Model: | Pinto, Bobcat \& Mustang II |
| Year(s): | 1976 |
| Possible Problems: | Failure of Fuel Hose. Recall Campaign Number 76-0170. |
| Case Number: | A7-09 |
| Manufacturer: | AM General Corporation |
| Make: | Transit Coach |
| Mode1: | A11 Models |
| Year(s): | 1973-1976 |
| Possible Problems: | Steering Prop Shaft Yoke Pinch Bolt Failure. Recall Campaign Number 76-0188. |

```
Case Number.
Make:
Model:
Year(s):
Possible Problems:
```

Case Number:
Manufacturer:
Make:
Model:
Year(s):
Possible Problems:
Case Number:
Manufacturer:
Make:
Model:
Year(s):

Possible Problems:

A7-07
Argosy Manufacturing Company
Argosy Trailers
Serial Numbers 22D6V1757 thru 26T6V2540 1976

Failure of Furnace Exhaust Vent Adaptor. Recall Campaign Number 76-0167.

A7-08
Ford Motor Company
Ford
Pinto, Bobcat \& Mustang II
1976
Failure of Fuel Hose. Recall Campaign Number 76-0170.

Steering Prop Shaft Yoke Pinch Bolt Failure. Recall Campaign Number 76-0188.

| INVESTIGATIONS |  |  |  |  | Report for <br> Month Ending: January 31, 1977 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Those cases listed hereon are the subjects of current safety-related investigations being conduc accordance with NHTSA responsibilities under provisions of the National Traffic and Motor Vehic Act of 1966. When an investigation is begun, it should not be assumed that a defect exists; onl safety-related problem has been reported with sufficient indication of its existence to justify investigation. The aim of the formal investigation is to establish whether a vehicle defect is the problem, and, if so, how it happens, and how it may be remedied. The NHTSA will make public conclusions upon completion of each investigation. In line with the foregoing, the NHTSA solicit your contribution to highway safety. the public pertinent information relating to the cases listed. By submitting such information, |  |  |  |  |  |
| $\begin{gathered} \text { CASE } \\ \text { NO. } \end{gathered}$ | MANUFACTURER/MAKE | MODEL | YEAR | COMPONENT | POSSIBLE PROBLEMS |
| 128 | Ford | F-250 | 1968-1969 | $16 \times 5.5$ Two Piece Wheel | Lock Ring Gutter Failure |
| 282 | Ford | Ford Mercury | 1965-1974 | $15 \times 5$-inch Single Piece Wheel | Alleged Wheel Rim Failure |
| C2-32 | General Motors | GMC 1/2-Ton Pickups | 1960-1970 | $\begin{aligned} & 15 \times 5.5 \text {-inch } \\ & \text { Single Piece Wheel } \end{aligned}$ | Alleged Wheel Rim Failure |
| C2-53 | Ford | All | $\begin{aligned} & 1967 \text { and } \\ & \text { hater } \end{aligned}$ | Dual Brake Master Cylinders | Failure of Cylinder Due to Corrosion |
| C2-60 | Volkswagen | All | Pre-1963 | Heater | Engine Fume Intrusion into Passenger Compartment |


| I. INV | ESTIGATIONS |  |  |  | Month Ending: January 31, 1977 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { CASE } \\ & \text { NO. } \end{aligned}$ | MANUFACTURER/MAKE | MODEL | YEAR | COMPONENT | POSSIBLE PROBLEMS |
| C 2-61 | Ford | Ford, Mercury | 1969-1971 | $15 \times 6.5$ Single Piece Wheel | Disc Failure |
| C 3-02 | Honda | CB750, CB 500 СВ 450 (K3 \& K 4 ) | All | Gas Tank Filler Cap | Becomes Dislodged Allowing Gas to be Ignited |
| C 3-03 | Chrysler | All ' ${ }^{\text {C' }}$ Body | 1969-1973 | Bulkhead Electrical Connector | Becomes Disconnected |
| C 3-27 | General Motors | Chevrolet Vega | 1971-1973 | Steering Relay Rod | Alleged Lockup of the Steering Relay Rod by Foreign Objects |
| C 3-34 | General Motors | Light Duty Trucks | 1966-1971 | Rear Axle Control Arm | Alleged Rear Axle Control Arm Failures |
| C 3-35 | International Harvester | Travelall 1110, 4x4 | 1972-1973 | Steering Arm Ball | Alleged Steering Instability Upon Hard or Panic Brake Use |
| C 3-43 | General Motors | Cadillac Eldorado \& Oldsmobile | 1967-1973 | Front Wheel Mounting Bolts | Alleged Failure of Front Wheel Mounting Bolts |
| C 4-07 | Ford | Ford \& Mercury | 1970-1971 | Hood Latch | Failure of Latch Mechanism |
| C 4-08 | International Harvester | 1600, 1700 and 1800 Series Loadstar Chassis | 1972-1973 | Rear Axle U-Bolts/ Nuts | Alleged Low Torque of Rear Axle U-Bolts/Nuts |

CURRENT INVESTIGATIONS OF ALLEGED SAFETY RELATED DEFECTS

| I. INVESTIGATIONS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { CASE } \\ & \text { NO. } \end{aligned}$ | MANUFACTURER /MAKE | MODEL | YEAR | COMPONENT | POSSIBLE PROBLEMS |
| C 4-09 | Chrysler | Dodge Darts and Plymouth Valiants | 1967-1972 | Brake Proportioning Valve | Rear Wheel Lockup |
| C4-10 | Winnebago | D24 Motorhome | 1970-1971 | Front End Suspension | Alleged Front End Suspension Overload |
| C 4-11 | Action Industries, Inc. | 24 and 25-Foot Motorhome | 1971 | Front End Suspension | Alleqed Unsatisfactory Performance of the Front End Suspension Components |
| C 4-12 | Champion Home Builders | 24-Foot Motorhome | 1971 | Front End Suspension | Alleged Inadequate Front End Suspension System |
| C 4-13 | Boise Cascade | Lifetime Premier 23-Foot Motorhome | 1969-1971 | Front End Suspension | Alleged Inadequate Front End Suspension System |
| C $4-14$ | PRF Industries | Travco 220 Motorhome | 1970 | Front End Suspension | Alleged Inadequate Front End Suspension System |
| C 4-15 | General Motors | Cadillac | 1969-1970 | Air Conditioner Blower Relay | Failure May Cause Over loading of Electrical Harness |
| C 4-17 | General Motors | Chevrolet Series C, P. G-10 Trucks and GMC Series C, P \& G-1500 Trucks | 1971-1972 | Steering Tie Rod | Separation of Ball From Socket |

DEPARTMENTOF TAANSPORTATION
NATIONA-WIG-HAY -RAFFIこ SAFETY AOMINIS-RA-ION
CURRENT INVESTIGATIONS OF ALLEGED SAFETY RELATED DEFECTS

CURRENT INVESTIGATIONS OF ALLEGED SAFETY RELATED DEFECTS
I. INVESTIGATIONS

| I. INV | ESTIGATIONS | Report for Month Endi |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { CASE } \\ \text { NO. } \end{gathered}$ | MANUFACTURER/MAKE | MODEL | Y'EAR | COMPONENT | POSSIBLE PROBLEMS |
| C 4-35 | Nissan | Datsun 510 | 1968-1971 | Transverse Link | Alleged Transverse Link Failure |
| C 4-44 | General Motors | All With Rochester Carburetors | 1965-1972 | Carburetor Float | Alleged Carburetor Flooding Due to Float Saturation |
| C 4-46 | Western Auto | Wizard A-5030 | Various | Auto Jack Stand | Failure of Meet Load Rating |
| C 4-52 | International Harvester | Scout II Travelall and Pickup | 1970-1973 | Brake Lining | Alleged Erratic Service Brake Operation or Performance |
| C 4-53 | General Motors | Chevelle | 1965-1969 | Engine Mounts | Alleged Engine Mount Failure |
| C4-59 | Volkswagen | VW Type 3 prior to August 1971; Porsche 914 1.8, 1.7 and 2.0 Liter Engine; VW Type 4, 1. 7 Liter Engine | 1970-1972 | Bosch Fuel Injector | Alleged Electronic Fuel Injector Leakage |
| C 5-01 | General Motors | Chevrolet Corvettes | 1964-1974 | Rear Wheel Bearing | Failure of Rear Wheel Bearings |
| C 5-03 | International Harvester | Travelalls and Pickups | 1974 | Battery Cable | Alleged Shorting of the Positive Battery Cable |




| I. INV | ESTIGATIONS |  |  |  | Report for <br> Month Ending: January 31, 1977 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { CASE } \\ & \text { NO. } \end{aligned}$ | MANUFACTURER/MAKE | MODEL | YEAR | COMPONENT | POSSIBLE PROBLEMS |
| C5-04 | Ceat S. P. A. | $\begin{aligned} & \text { Mercurio } 10.00 \mathrm{x} \\ & 20 / 22,14 \text {-ply } \\ & \text { (Load Range G) } \\ & \text { Steel Belted Radial } \end{aligned}$ | Various | Tire | Failure in Bead Area |
| C 5-07 | General Motors | Pontiac:all V8 Equipped Engines | 1966-1972 | Timing Gear and Chain | Failure of Timing Gear and Chain |
| C5-08 | Toyota Motor Sales | Corolla and Carina Vehiclesequipped with 1600cc Engine | 1971-1973 | Throttle | Alleged Throttle Sticking |
| C5-09 | Kar-Rite | Jack Stand Model 1052, Rated at 4,000 Pounds | All | Jack Stand | Alleged Unsatisfactory Performance |
| C 5-25 | Volvo | Volvo | 1973 | Front Bumper Bracket | Failure of Front Bumper Support Bracket |
| C 5-26 | Ford | Mercury Capri | 1971-1973 | Seat Failures | Failure in Reclining Mechanism Allowing Seat to Rotate Rearwards wich Could Result in Loss of Control |
| C 5-32 | Fruhling Products Incorporated | Fruhling SAF-TRELEASE Motorcycle Helmet Chin Strap | All | Helmet Strap Fastner | Motorcycle Helmet Strap May be Prone to Opening While in Use |

CURRENT INVESTIGATIONS OF ALLEGED SAFETY RELATED DEFECTS

| INVESTIGATIONS |  |  |  |  | Report for <br> Month Ending: January 31, 1977 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { CASE } \\ & \text { NO. } \end{aligned}$ | MANUFACTURER/MAKE | MODEL | YEAR | COMPONENT | POSSIBLE PROBLEMS |
| C6-19 | Alsport, Inc. | Tri-Sport, SL Series | 1974 | Chassis, Drive Train and Brake | Alleged Failure of Chassis Drive Train and Brake |
| C6-22 | American Motors Corporation | Pacer | 1975 | Power Steering Gear | Alleged Leakage of Rack and Pinion Seal Resulting in Possible Loss of Steering Control |
| C6-31 | Ford | $\begin{aligned} & F-250 \text { and } F-350 \\ & \text { Series Trucks } \end{aligned}$ | 1972-1974 | Budd Duo-Rim \& "C" Section Side Ring | Alleged Explosive Separation of "C" Section Side Ring From Budd Duo-Rim Wheels |

CURRENT INVESTIGATIONS OF ALLEGED SAFETY RELATED DEFECTS

| INVESTIGATIONS IN LITIGATION, INITIAL DETERMINATION AND/OR SUSPENSION |  |  |  |  | Report for <br> Month Ending: January 31, 1977 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { CASE } \\ \text { NO. } \\ \hline \end{gathered}$ | MANUFACTURER/MAKE | MODEL | YEAR | COSPONENT | POSSIBLE PROBLEMS |
| 140 | Ford <br> (FINAL DEFECT <br> DETERMINATION <br> MADE 8-12-75, <br> IN LITIGATION) | Mustang and Cougar | 1968-1969 | Seat Back Pivot Arm | Inboard Pivot Failures |
| 161 | GM, CHRYSLER, AMC and FORD (INITIAL DEFECT DETERMINATION MADE 5-16-75) | All | 1965-1971 | Power Brake Vaccum | No Power Assist With Failure |
| $190$ | Monitor Coach (INITIAL DEFECT DETERMINATION MADE 12-1-76) | All Travel Trailers | 1965-1970 | Suspension System | Overloading of Suspension |
| 287 | Ford <br> (INITIAL DEFECT <br> DETERMINATION <br> MADE 12-17-76) | Galaxie | 1968-1970 | Front Wheel Spindle | Fatigue Crack in Heel Area |
| C 3-11 | General Motors (IN LITIGATION 2-13-74) | Cadillac | 1959-1960 | Steering Pitman Arm | Fatigue Failure Causing Loss of Vehicle Control |
| C 3-29 | Ford <br> (FINAL DEFECT <br> DETERMINATION <br> MADE 12-30-75, <br> IN LITIGATION) | Mercury Capri | 1971-1973 | Windshield Wiper Arm Shaft and Motor | Arm Detaches from Drive Shaft Motor Failure Due to Under power |


CURRENT INVESTIGATIONS OF ALLEGED SAFETY RELATED DEFECTS

| III. SURVEYS AND AUDITS |  |  |  |  | Report for <br> Month Ending: <br> January 31, 1977 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { CASE } \\ & \text { NO. } \end{aligned}$ | MANUFACTURER/MAKE | MODEL | YEAR | COMPONENT | POSSIBLE PROBLEMS |
| A 5-06 | Mack Trucks | $\begin{aligned} & \text { CF, MB, R, RD } \\ & \text { and TU } \end{aligned}$ | 1974 | Front Axle | Recall \#74-0001 |
| A 5-15 | Ford | Torino, T-Bird, Montego, Cougar, Ranchero and Continental Mark IV | 1974 | Speed Control | Recall \#74-0011 |
| A6-03 | International Harvester | Transtar II | 1974 | Incorrect Routing of Air Lines | Recall \#74-0220 |
| A6-04 | General Motors | Cadillac; all except Eldorado | 1973-1974 | Steering Idler Arm Assembly | Recall \#74-0202 |
| A6-05 | Bluebird Body | School Bus, Ford | 1974 | Tubing and Fittings to Rear Brake Chamber | Recall \#74-0209 |
| A6-11 | International Harvester | Loadstar and Cargostar | 1975 | Routing of Air Supply Lines/Valves to Avoid Frame Contact and Subsequent Damage | Recall \#75-0191 |
| A 6-12 | Nissan Motors | Datsun FL-510 | 1971-1975 | Alleged Gasoline Leak | Recall \#75-0181 |

CURRENT INVESTIGATIONS OF ALLEGED SAFETY RELATED DEFECTS

CURRENT INVESTIGATIONS OF ALLEGED SAFETY RELATED DEFECTS
Report for

CURRENT INVESTIGATIONS OF ALLEGED SAFETY RELATED DEFECTS

| III. SU | RVEYS AND AUDITS |  |  |  | Month Ending: January 31, 1977 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { CASE } \\ & \text { NO. } \end{aligned}$ | MANUFACTURER/MAKE | MODEL | YEAR | COMPONENT | POSSIBLE PROBLEMS |
| A6-34 | Mercedes Benz | All Models | 1976 | Cruise Control Cable Sticking | Recall \#76-0027 |
| A6-35 | Chrysler Corp. | Cordoba and Dodge Charger | 1975 | Cruise Control Lost Motion Link Going Over Center and Jamming | Recall \#76-0008 |
| A 7-02 | White Motor Corp. | Autocar | $\begin{aligned} & 10-1-73 \\ & \text { thru } \\ & 2-30-76 \end{aligned}$ | Steering Arm Failure | Recall \#76-0073 |
| A 7-03 | Fiat Motor Co. | Lancia Beta Coupe and Sedan | 1975-1976 | Brake Line Assembly | Recall \#76-0071 |
| A 7-04 | International <br> Harvester | C.O. and Conventional Transtar \& Glider Kits | 1976 | Steering Clamp Bolt Failure due to insufficient torque | Recall \#76-0143 |
| A 7-05 | Coachmen Industries | Certain Presidential, Statesman \& V.'I. P. Model Class A Motorhomes | $\begin{aligned} & 9-1-74 \\ & \text { thru } \\ & 8-28-76 \end{aligned}$ | Failure of Gasoline Tank Support System | Recall \#76-0146 |
| A 7-06 | Ford Motor Co. | $\begin{aligned} & \text { Econoline } \\ & E-100, E-150, \\ & E-250 \& E-350 \end{aligned}$ | 1976 | Steering Gear Attachment | Recall \#76-0165 |

CURRENT INVESTIGATIONS OF ALLEGED SAFETY RELATED DEFECTS

| IIL. SURVEYS AND AUDITS |  |  |  |  | Report for <br> Month Ending: January 31, 1977 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { CASE } \\ & \text { NO. } \end{aligned}$ | MANUFACTURER / MAKE | MODEL | YEAR | COMPONENT | POSSIBLE PROBLEMS |
| A 7-07 | Argosy Manufacturing Company | Argosy Trailers <br> 22 D6V1757 thru <br> 26T6V2540 <br> (serial numbers) | 1976 | Furnace Exhaust Vent Adaptor | Recall \#76-0167 |
| A7-08 | Ford Motor Co. | Pinto, Bobcat \& Mustang II | 1976 | Fuel Hose | Recall \#76-0170 |
| A7-09 | AM General Corp. | Transi Coach All Models | 1973-1976 | Steering Prop Shaft Yoke Pinch Bolt | Recall \#76-0188 |

Failed Part Ta Form approved
Car/Truck Manufacturer: Chrysler
American Motor $\square$ Ford $\square$ GM $\square$ Other Make Model
Year Made 19 $\qquad$ Mileage
Date Removed $\qquad$ /___by initials
Part Description
Failure Description

Print Vehicle Owner's Name \& Address on Back
 $\mathrm{Si}^{3}$ ' 1

PARTS RETURN PROCRAM REPLY TO:
U.S. Department of Transportation c/o KAPPA Systems. Inc.
1501 Wilson E3lved.
Artington, Va. 22209
(703) 52.7-4500

SOME TYPICAL IAP:TS OF INTEREST

Bent Items: |  | Backing plates |
| :--- | :--- |
|  | Brake shoes |
|  | Brake pedals or linkage |
|  | Suspension "A" frames |
|  | Brake springs |
|  | Ball joint assemblies |
|  |  |
| Cracked or Broken: | Wheel cylinder |
|  | Brake drum |
|  | Brake (disc.) rotor |
|  | Welds on brake shoes |
|  | Power brake check valves |
|  | Pitman arms (hub splines) |
|  | IdIer amm |
|  | Coil springs |
|  | Brake springs |

Worn by Rubbing or Loose and leaking:

Halfunctioning:

Faulty Mounting:
Brake hoses or lines
Power steering hoses or lines
Power brake hoses or lines
Brake Master cylinder
Power Steering pump
Backing Plates
Power Steering pump

Etc. Etc. Etc.


THE U.S. DEPARTMENT OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION PARTS RETURN PROGRAM

NEEDS YOUR HELP IN RETURNING FAILED AUTOMOTIVE PARTS THAT ARE NOT THE RESULT OF AN ACCIDENT OR NORMAL WEAR.

## HERE'S ALL YOU DO:

- fill out data tag and attach to part.
- place in canvas mail bag, tie the cord and put in mail box. postage is paid.

We need more parts. We need you. become an active PARTICIPANT IN THIS PUBLIC SAFETY PROGRAM TODAY.

THANKS!
If YOU HAVE ANY QUESTIONS, CALL COLLECT:
U.S. DEPT. OF TRANSPORTATION
c/o KAPPA SYSTEMS, INC.
1501 WILSON BLVD.

We hope you will return your mailbags soon with failed parts. The PARTS RETURN PROGRAM needs your active support. Let us hear from you soon!


PARTS RETURN PROGRAM
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
c/o KAPPA Systems, Inc
1501 Wilson Blvd
Arlington. Va 22209
DOT CONTRACT NO. DOT-HS-6. 01433

## SHOP DD FILE

## OPERATIONAL PROCEDURES

Action Codes: Indicates the status of the data to be entered on file, (Column 80 on Cards 1, 2, or 3).

Add (A) - An addition is made only once for each shop when the record is initially placed on file. All three cards must be completed and grouped together in order or the transaction cannot be completed. Once a record has been placed on the file, no other "addition" can be made for that record number.

Modify (M) - Modify means that the existing shop record is being changed to reflect new or different data. When " $M$ " is used as a transaction code, the information that is on the record is not removed; instead, the new information is written "on top" of the existing data. Thus, it is not necessary to re-enter any information on the record if it is acceptable, since no existing data is deleted as long as those spaces are leff blank on the modify card. Data that must be removed from the record may be erased by placing asterisks in the appropriate spaces. Only the card being modified is used in the transaction.

Delete (D) - Only an entire shop record can be deleted from the file. Once a record is deleted, no further information can be added; all the information for that particular record is erased. To delete a shop, only the record number and a " D " on the first card is necessary. The record number can then be reused. A shop should be deleted if (a) it indicates "no interest" on correspondence; (b) shop has never contributed a part, has been enrolled for over one year, and has not responded to a current follow-up campaign within the specified time period; (c) shop returns all current supplies; (d) mail is returned (addressee unknown, out of business, unable to forward, refused, forwarding order expired, etc.); or (e) shop specifically requests to be removed from the program.

Active Listing: To change a shop's status from inactive to active, place an "A" in Column 72 of the third card, and follow the modification procedure. Also, to indicate the certificate year, place the last two digits of the contract year end in Columns 75 and 76 of the third card. To deactivate, use asterisks and modify. The record will automatically shift to the proper listing; no deleting is necessary. Active shops should not be deleted, only de-activated, unless mail is returned and we cannot contact by phone, or if the shop specifically requests to be removed.

Record Numbers: Must be used in order or it will cause errors in the Totals by Region report. Old numbers may be reused.

Operations: Changes are made by computer monthly. After coding sheets have been keypunched, cards must be arranged by record number, with additions, modifications, and deletions in separate stacks to be submitted. After transaction sheet print-out has been obtained, it should be proofed for errors.

## SHOP ID FILE

DATA TRANSCRIPTION INSTRUCTIONS

| $\frac{\text { Card } 1}{\text { Column }}$ | Description/Explanation |
| :---: | :---: |
| 1-6 | Unique Record Number (Required Entry, Right Justify). |
| 7-22 | First Name and Initial. |
| 23-38 | Last Name. |
| 39-78 | Bag Numbers. |
| 79 | Card Number/=1 (Required Entry). |
| 80 | Action Code (Required Entry: "A"=add, "M"=modify, " $D "=$ delete). |
| Card 2 |  |
| 1-6 | Unique Record Number (Required Entry, same as Card 1). |
| 7-38 | Shop Name. |
| 39-47 | Unique Shop Number (Eight Digits - Right Justify). |
| 48-78 | Bag Numbers. |
| 79 | Card Number $/ 2=$ (Required Entry $)$. |
| 80 | Action Code (Required Entry: "A"=add or " $\mathrm{M}^{\prime \prime}=$ modify ) . |
| Card 3 |  |
| 1-6 | Unique Record Number (Required Entry, same as Card 1). |
| 7-38 | Address: Number and Street. |
| 39-54 | City (Left Justify). |
| 55-56 | State (Required Entry, use code tables (state)). |
| 57-61 | Zip Code (Required Entry). |

Column
62-64
65-71
72
75-76
79
80

Description/Explanation
Area Code
Telephone Number
"A" if Active Participant - Blank if inactive.
Year of last certificate.
Card Number/=3 (Required Entry).
Action Code (Required Entry: "A"=add or "M"=modify).



[^0]:    6
    See Supra 1.1

[^1]:    33

[^2]:    $0981<6073$

[^3]:    - Picks.

[^4]:    CAHBUGETUR，SINGLE－OTHEF PAFT

[^5]:    

[^6]:    (Continued in paze 2)

[^7]:     med of additional mailbig, tige, wte, hate any questions, or woudd like to pass on comments, please call colloct.
    
    
    
    

    If som have a rontribuion or suggestion for the leri NEWS, phase seld it to Kaph sistoms, Ime, 1501 Wilsim
     Berddow:

