Safety Defect and Noncompliance Report Guide for Vehicles

PART 573 Defect and Noncompliance Report[1]

On April 12, 2004, Sutphen Corporation**[MFR] determined that (a defect which relates to motor vehicle safety)(a noncompliance with Federal Motor Vehicle Safety Standard No. 121) exists in the motor vehicles listed below, and is furnishing notification to the National Highway Traffic Safety Administration in accordance with 49 CFR Part 573 Defect and Noncompliance Reports.**

2004 JUN -7 A 11:18

OFFICE OF DEFECTS INVESTIGATION

Date this report was prepared: 5/13/04

Furnish the manufacturer's identification code for this recall (if applicable): N/A

04V-277
(13 pages)

1. Identify the full corporate name of the fabricating manufacturer of the recalled vehicle(s). If the recalled vehicle is imported, provide the name and address of the designated agent as prescribed by 49 U.S.C. §30164 (formerly §110(c) of the National Traffic and Motor Vehicle Safety Act).

Sutphen Corporation
7000 Columbus-Marysville Rd
Amlin OH, 43002

Identify the corporate official, by name and title, whom the agency should contact with respect to this recall.
Drew Sutphen - President

Telephone Number: 614-889-1005 **Fax Number:** 614-889-0874

Name and Title of Person who prepared this report.

Mark Snyder - Director of Engineering

Signed: -prepared by
Drew Sutphen

Identifying the Vehicle Models Involved in the Recall

2. Identify the Vehicles Involved in the Recall, for each make and model or applicable vehicle line (provide illustrations or photographs as necessary to describe the vehicle), provide:
Make(s): Sutphen Corporation
Model(s): All Single and Tandem Axle Chassis
Model Years Involved: 1996-2004
Production Dates: Beginning: 1/9/96 **Ending:** 4/12/04
VIN Range: Beginning: 1S9A3KFE1V1003023 **Ending:** 1S9A3JLE141003019
Vehicle Type: Emergency, Fire/Rescue **Bodystyle:** All

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[1] **Each manufacturer must furnish a report, to the Associate Administrator for Enforcement, for each defect or noncompliance which relate to motor vehicle safety.**

This guide is developed from 49 CFR Part 573, "Defect and Noncompliance Reports" and also outlines information currently requested. Any questions please consult the complete Part 573 or contact Mr. George Person at (202) 366-5210.

Descriptive information which characterizes/distinguishes the recalled vehicles from those model vehicles not included in the recall: None that are obvious.

Identify the approximate percentage of the production of all the recalled models manufactured by your company between the inclusive dates of manufacture provided above, that the recalled model population represents. Potentially, 100%

II. Identifying the Recall Population

3. Furnish the total number of vehicles recalled potentially containing the defect or noncompliance.

Model	Year	Number of Vehicles Potentially Involved
All	1996	89
All	1997	73
All	1998	83
All	1999	82
All	2000	75
All	2001	79
All	2002	81
All	2003	33
All	2004	2

Total Number Potentially Affected by the Recall: 597

4. Furnish the approximate percentage of the total number of vehicles estimated to actually contain the defect or noncompliance: Again, potentially 100%

Identify and describe how the recall population was determined--in particular how the recalled models were selected and the basis for the inclusive dates of manufacture:

Sutphen Corporation began the implementation of a newly designed primary and secondary air brake system in the latter part of 1995. The system was developed as a joint effort between manufacturing and engineering. Pursuant to the first full single and tandem axle implementations, the systems were tested in accordance with all applicable standards. From this point, as built schematics were constructed by documenting the proven vehicle instillations. The single axle schematic was completed 1/9/96. Shortly there after, the tandem axle system was completed 1/24/96.

We knew for certain that the first vehicles completed were correct as if they were not, our as built schematics would have depicted the incorrect air line routings. Bearing this in mind we established our starting position as the first vehicle to be delivered after the completion of the first schematic on (1/9/96).

After we determined that there was a potential problem, on or about 4/12/04, we decided that all chassis delivered prior to that date needed to be checked as all current production vehicles were updated prior to delivery.

III. Identifying the Defect or Noncompliance

5. Describe the defect or noncompliance. The description should include address the nature and physical location of the defect or noncompliance. Illustrations should be provided as appropriate.

There is a possibility that (3) air lines running to the chassis E-7 brake treadle valve have, been routed incorrectly.

If this report is for a noncompliance, identify the applicable section of the standard:
FMVSS 121

Describe the cause(s) of the defect or noncompliance condition.
Incorrect plumbing of the E-7 Valve despite proper instillation documentation.

Describe the consequence(s) of the defect or noncompliance condition.
The errant routing would not affect the vehicles ability to stop under normal circumstances. It would only be in the unlikely event of a complete failure of the primary brake system that any true problem would be realized. However, if the primary system would malfunction to the point of complete failure, this improper routing would cause degradation in the vehicles braking performance until such time that the system air pressure dropped below 75 PSI. Once this occurs, the rear spring brakes would be activated just as they would at any time the system air pressure dropped below the specified minimum. If this occurs, it is unlikely the vehicle would attain the stopping distance requirements of FMVSS 121.

Identify any warning which can (a) precede or (b) occur.
In the event of a primary brake system failure, there would be both audible and visual warnings in the driver compartment.

If the defect or noncompliance is in a component or assembly purchased from a supplier, identify the supplier by corporate name and address.

NA

Identify the name and title of the chief executive officer or knowledgeable representative of the supplier:

NA

IV. Identifying the Chronology in Determining the Defect/Noncompliance

If the recall is for a defect, complete item 6, otherwise item 7.

6. With respect to a defect, furnish a chronological summary (including dates) of all the principle events that were the basis for the determination of the defect. The summary should include, but not be limited to, the number of reports, accidents, injuries, fatalities, and warranty claims.

7. With respect to a noncompliance, identify and provide the test results or other data (in chronological order and including dates) on which the noncompliance was determined.

On our about the first week of March 2004, during a bill of material audit of our current single and tandem axle brake assemblies, Sutphen Chassis personnel found what they felt was a discrepancy in the routing of our E-7 valve air lines. In the weeks that followed, it was established that their concern was well founded and that several brake lines were in fact incorrectly routed. An immediate internal investigation was initiated to determine both the effect and scope of our potential situation.

In a matter of days, it was determined that(3) air lines were in fact routed to incorrect ports on our brake systems E-7 valve. The errant routing would not affect the vehicles ability to stop under normal circumstances. It would only be in the unlikely event of a complete failure of the primary brake system that any true problem would be realized. However, if the primary system would malfunction to the point of complete failure, the improper routing would cause the rear brakes, of both the single and tandem axle chassis, to become disabled thus requiring the vehicle to stop using only the front brakes.

I believe it is important to note, that to the best of our knowledge, no such malfunction of a Sutphen primary brake system has ever occurred.

On April 12th, 2004, Sutphen Towers service personal were dispatched to several nearby Fire Departments to ascertain whether or not we had trucks in the field with incorrectly routed brake lines. Unfortunately several vehicles, manufactured between January 9th of 1996 and April 12th of 2004, were found to have the incorrectly routed lines. It was also on this day that we became aware of the fact that we may need to notify the NHTSA of the potential problem as well as our intent to recall approximately 597 vehicles.

At present, we have found that the actual number of vehicles affected was as great as we anticipated. With this, we fully expect all affected vehicles to be inspected and repaired by May 14th, 2004.

V. Identifying the Remedy

8. Furnish a description of the manufacturer's remedy for the defect or noncompliance. Clearly describe the differences between the recall condition and the remedy.

Perform the following test to determine if the repair is needed.

1. Locate the green 3/8" control line on the right side of the E-7 brake treadle valve on a tilt cab or on the left side for a fix cab.
2. Disconnect the green line and remove the plug either above or below where the green line was plumbed
3. Depress the brake pedal and deplete the air in the truck.
4. With a finger in each of the delivery ports, where the green line and plug were removed, start the truck and with the brake pedal depressed, identify which port builds air first.
5. If the lower port, which is D-1 (Delivery 1), builds air first, **this tells you that the supply lines are plumbed correctly.**
   a. Plug the lower D-1 port and connect the green control line to the upper D-2 port.
   b. Perform line 2 through 5 of the following re-test procedure.
6. If the upper port, which is D-2 (Delivery 2), builds air first, **this tells you that the supply lines are reversed and the following repair needs to be performed.**

Repair Procedure

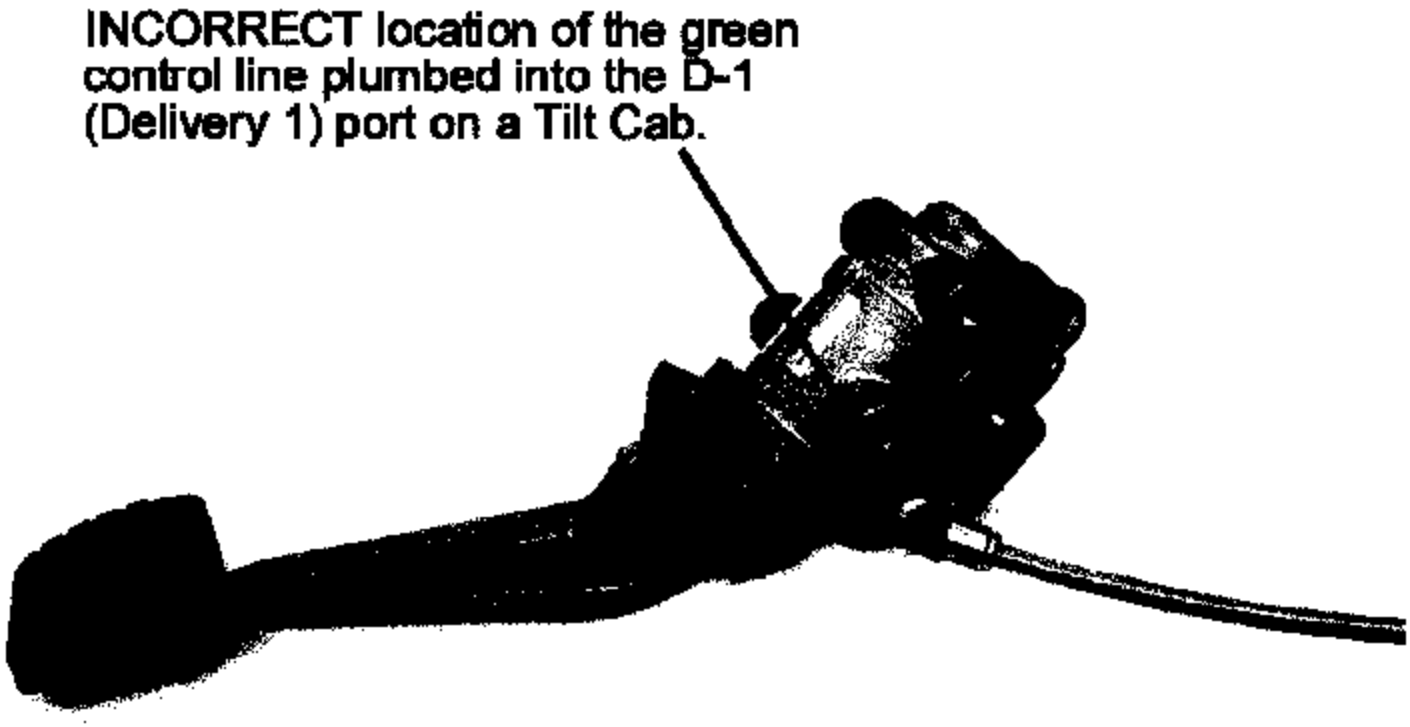
1. At the brake manifold at the front of the skid plate located under the front of the truck, locate the two supply lines
2. When facing the manifold, the two supply lines are the ones farthest to the right, next to the frame rails. Exchange the location of these supply lines. NOTE: On the newer trucks these lines are color-coded. To prevent someone from switching them back, color-code the lines on the other side of the bulkheads using yellow and blue tape. This is extremely important, because if the lines were to be switched back with the control line in the secondary port of the brake treadle valve, the secondary braking would be disabled.
3. Perform steps 1 through 5 of the following re-test procedure.

Re-test to confirm the update works correctly.

1. Perform the first test procedure.
2. With the truck aired up, drain the rear tank reservoir.
3. With the truck chocked, release the park brake.
4. When depressing the brake pedal has someone observe the front and rear brakes.
5. The front service brakes should apply and the rear spring brakes should modulate.

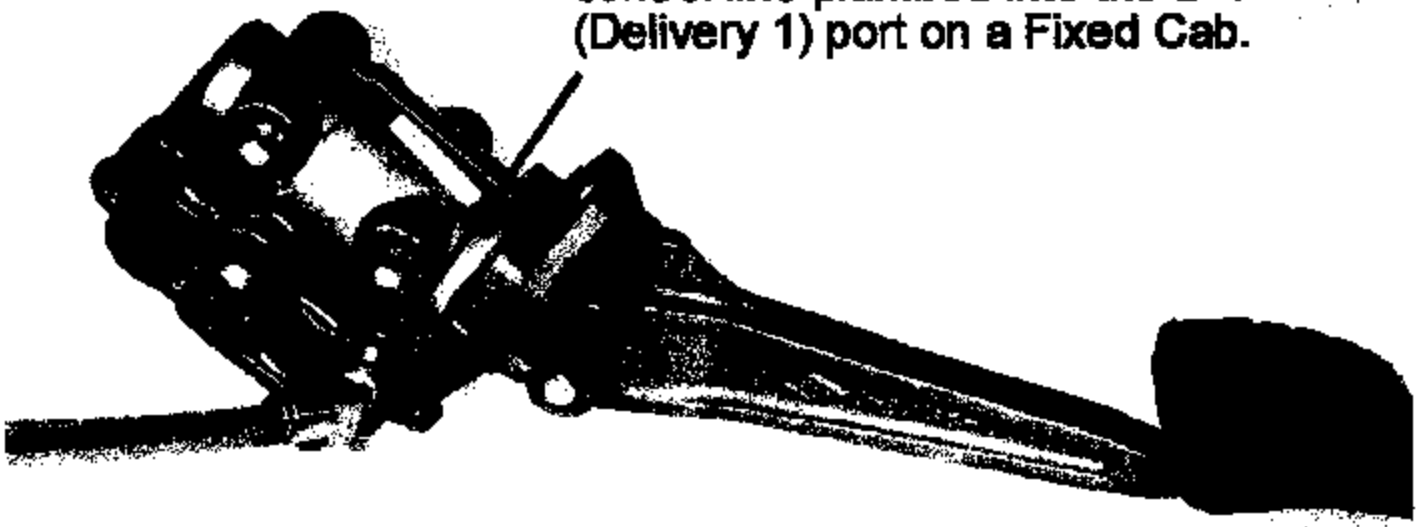
Note, see photos to help you identify the D-1 and D-2 delivery ports on the brake valve.

PIC1



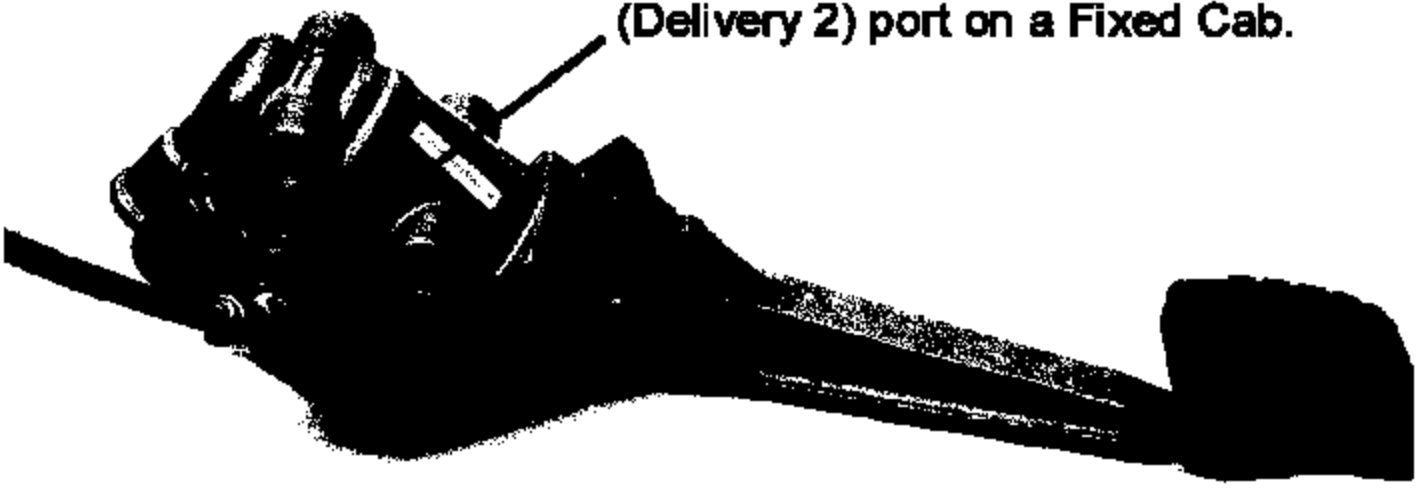
PIC2

INCORRECT location of the green control line plumbed into the D-1 (Delivery 1) port on a Fixed Cab.



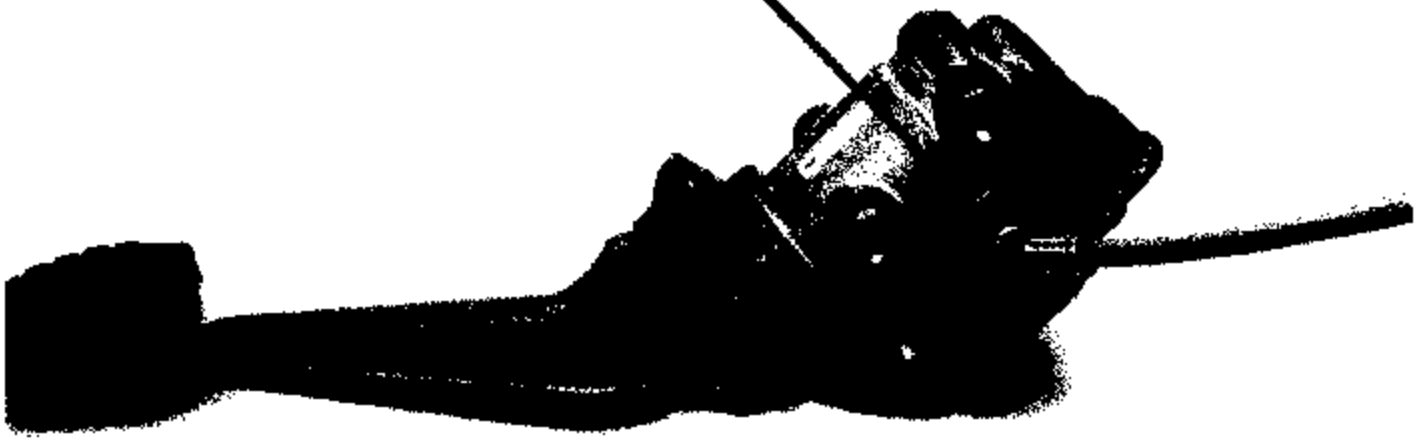
PIC3

CORRECT location of the green control line plumbed into the D-2 (Delivery 2) port on a Fixed Cab.

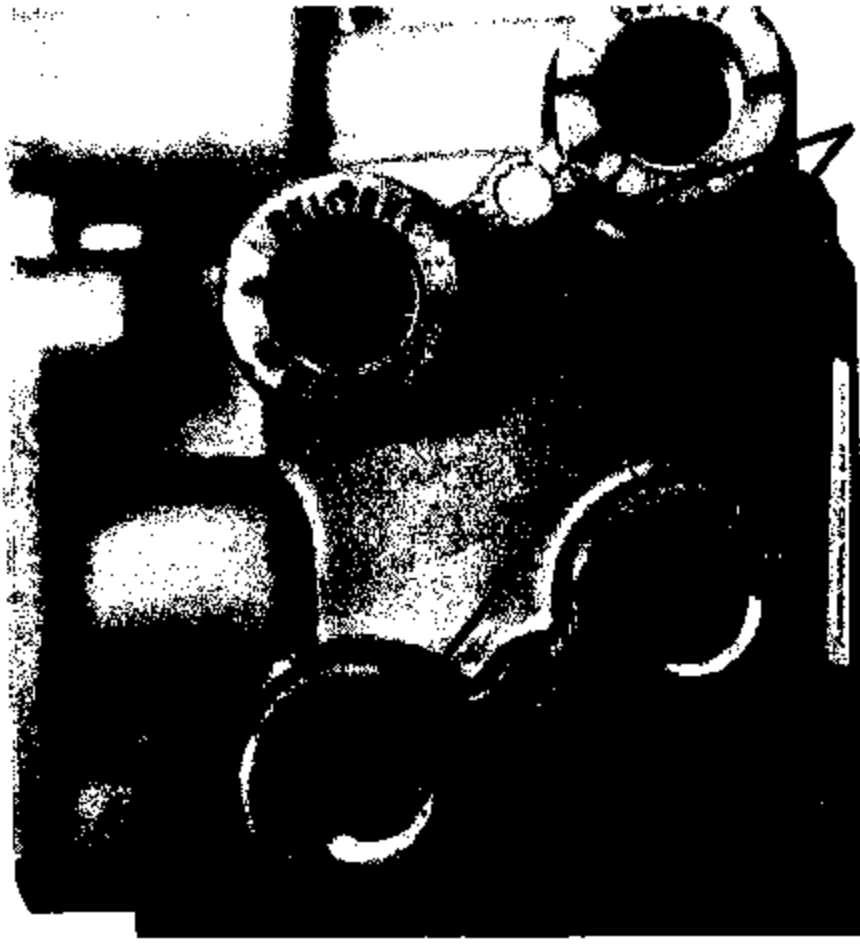


PIC4

CORRECT location of the green control line plumbed into the D-2 (Delivery 2) port on a Tilt Cab.

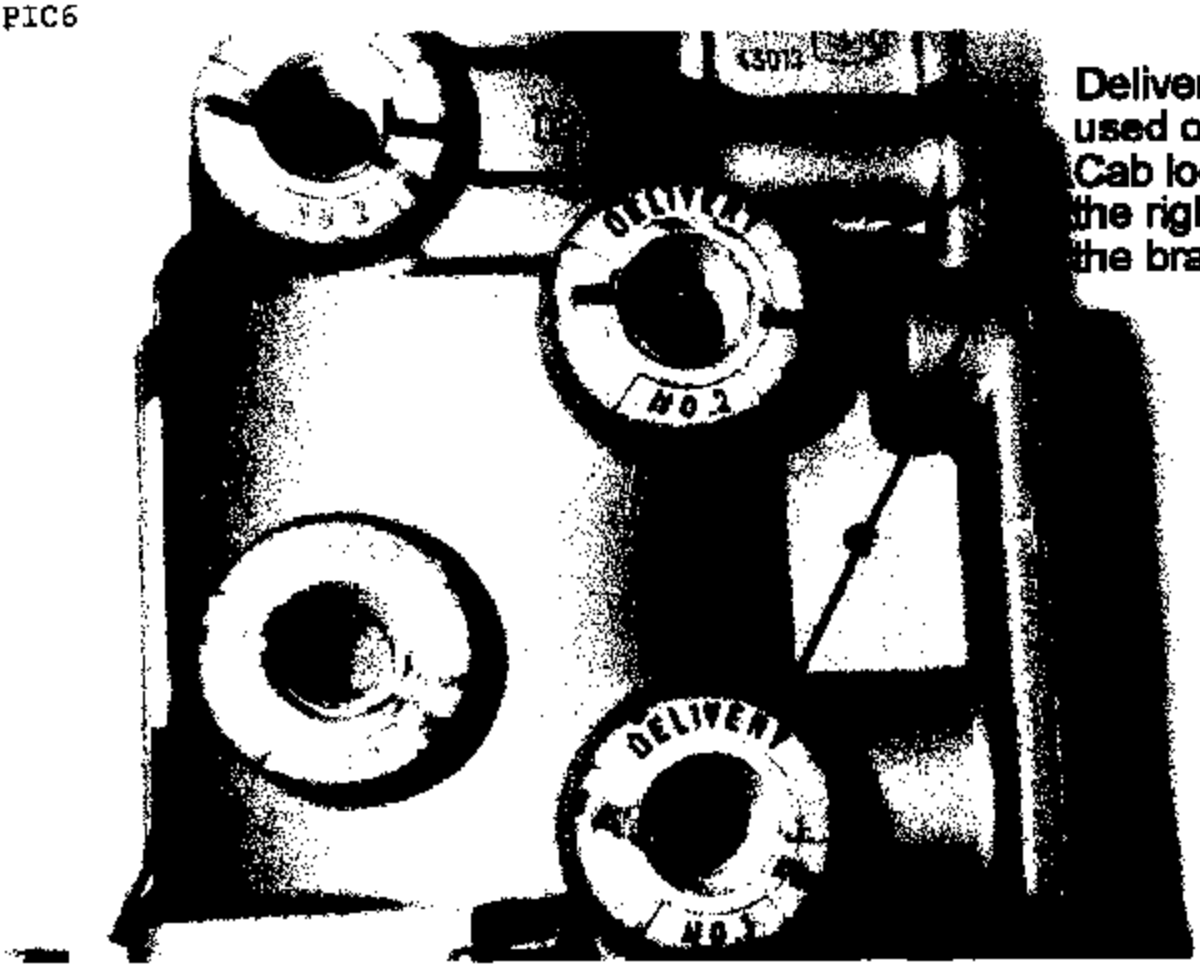


PIC5



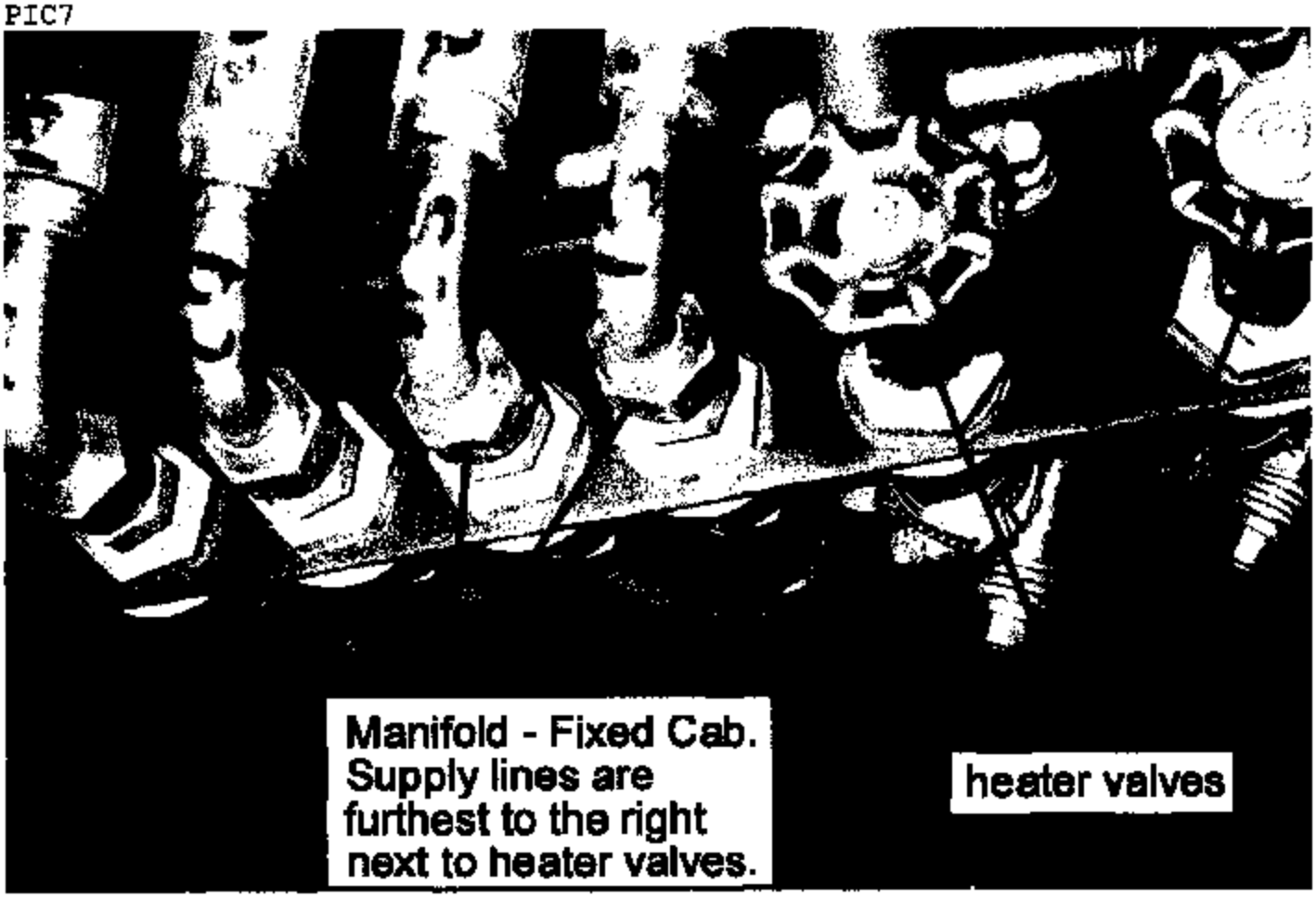
Delivery ports used on a Fixed Cab located on the left side of the brake valve.

PIC6

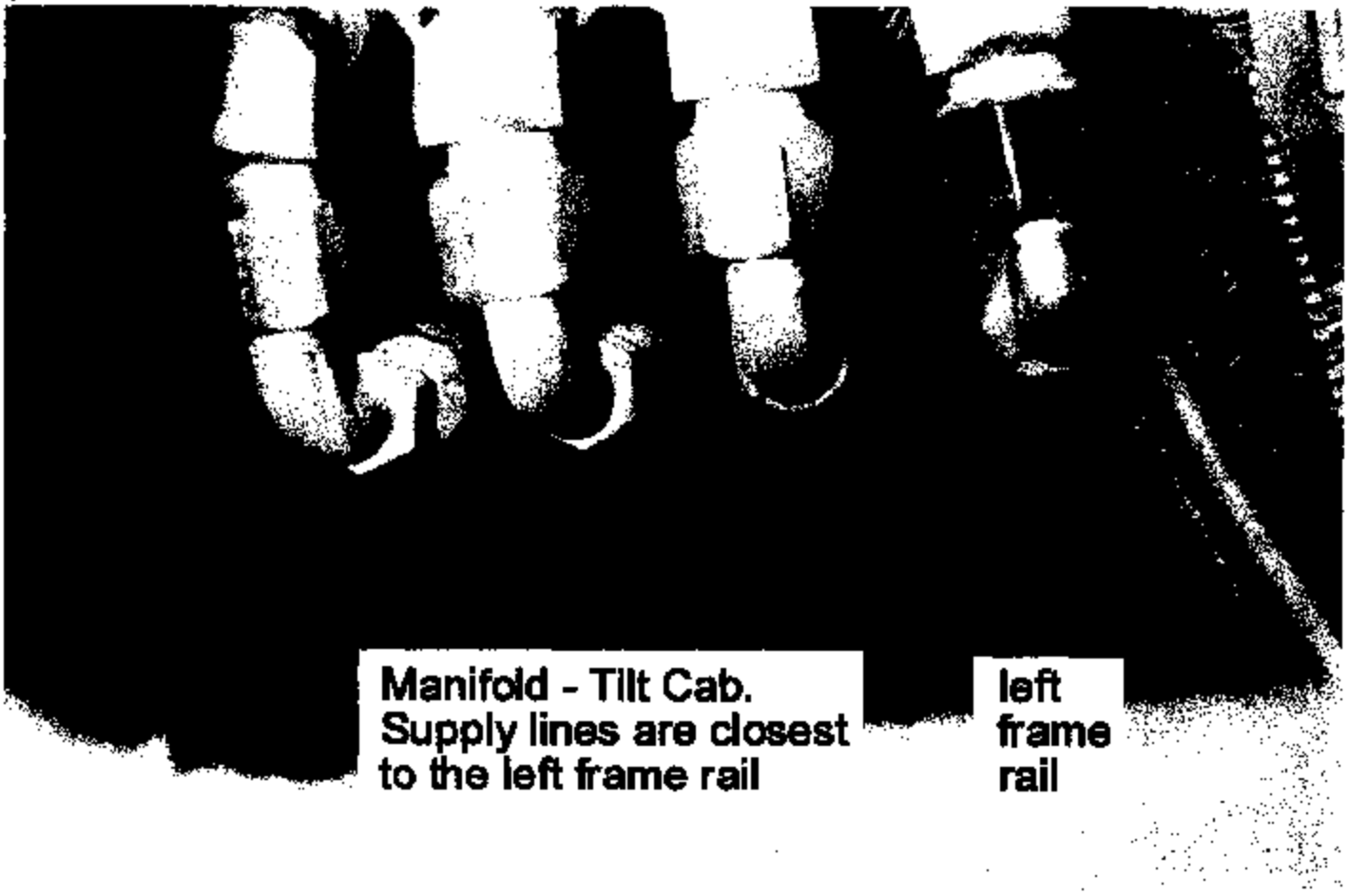


Delivery ports used on a Tilt Cab located on the right side of the brake valve.

PIC7



PIC8



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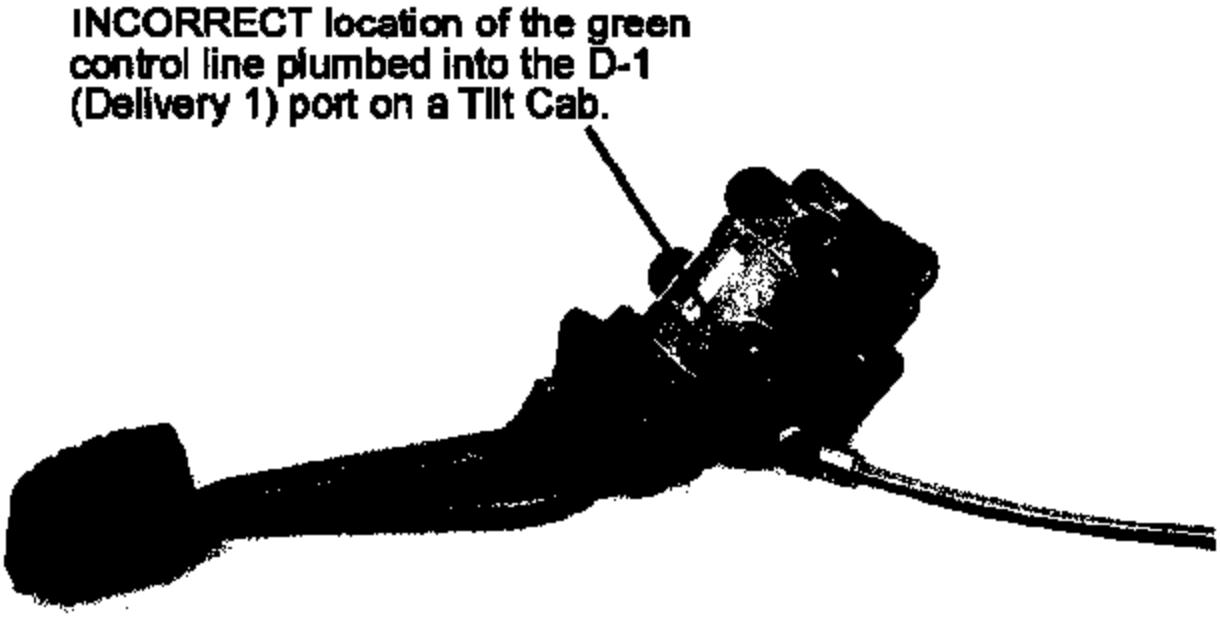
Clearly describe the distinguishing characteristics of the remedy component/assembly versus the recalled component/assembly.

A corrected E-7 Valve control line will be connected to the D2 port whereas a non corrected E-7 would have the control line connected to the D1 port. Reference PIC1 through PIC4 below.

PIC1



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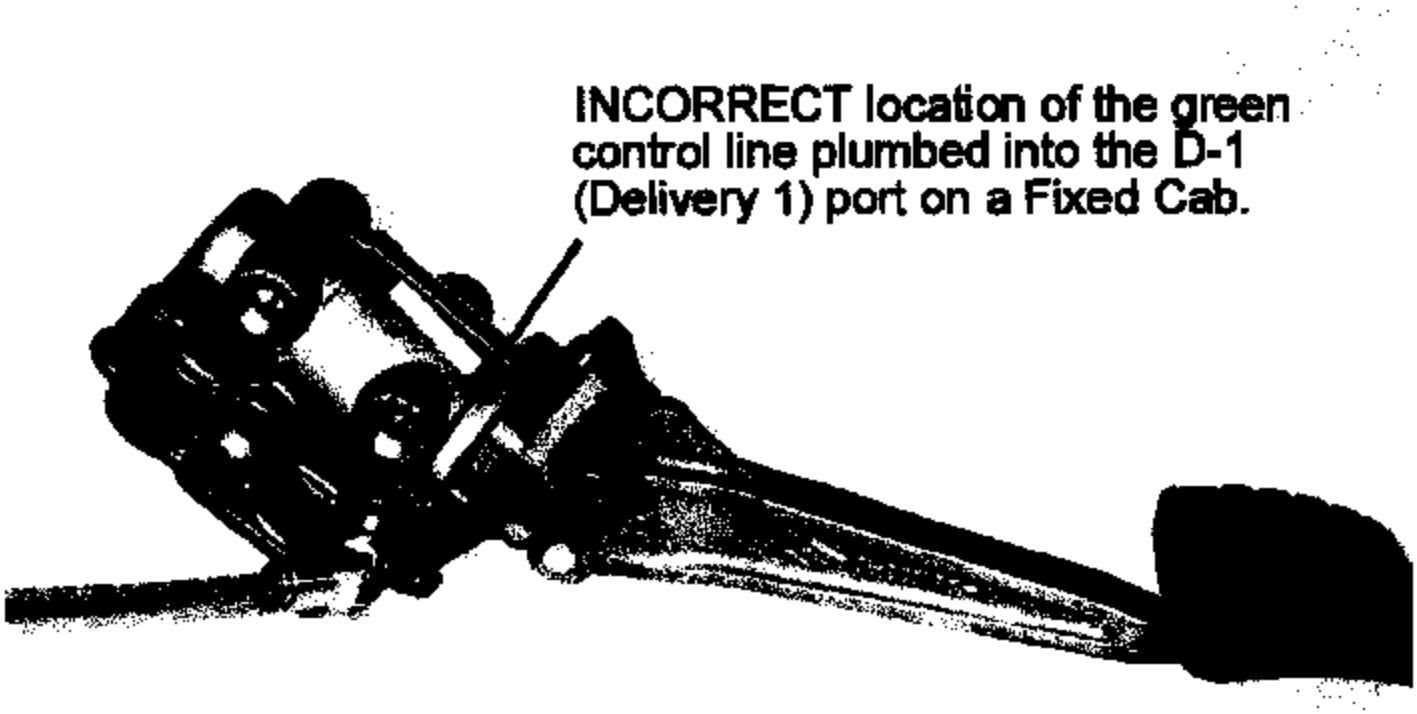
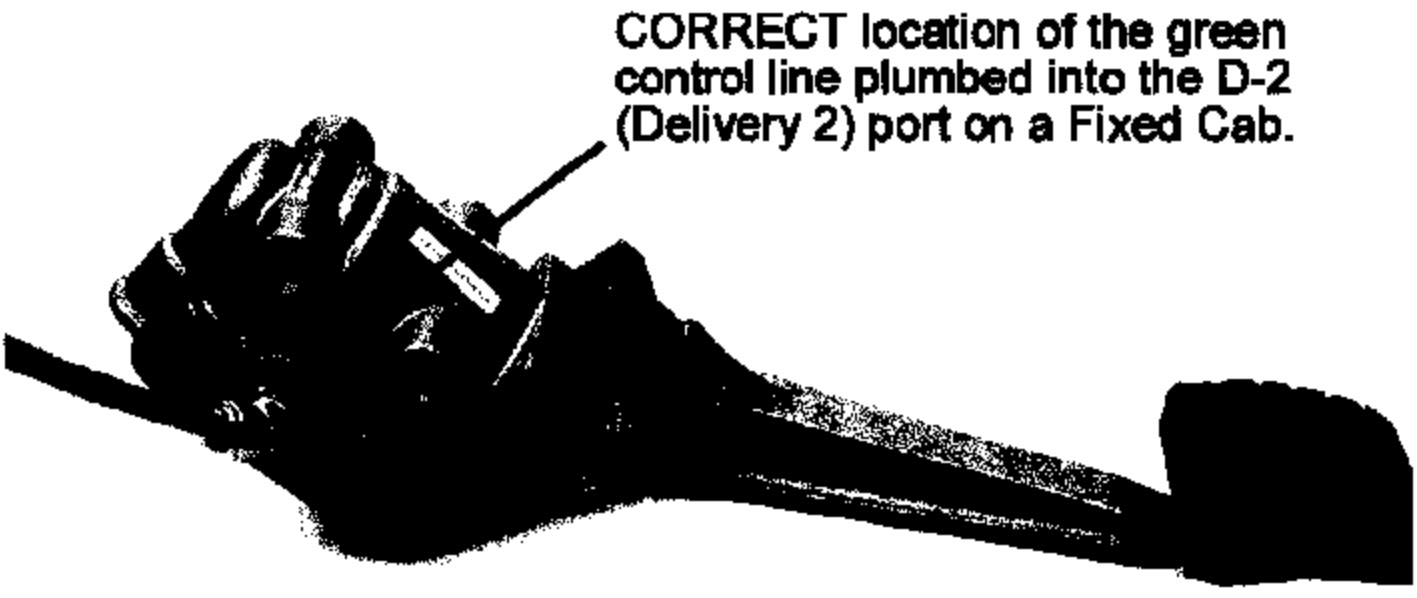
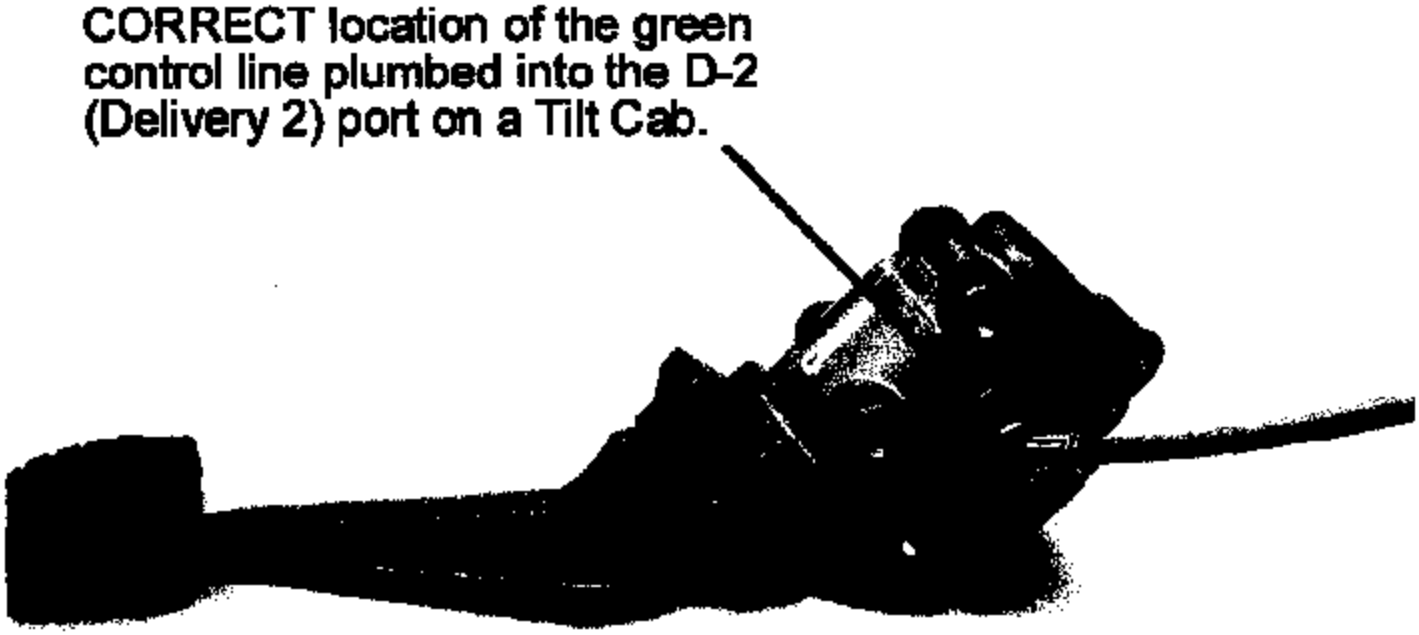
PIC2


INCORRECT location of the green control line plumbed into the D-1 (Delivery 1) port on a Fixed Cab.

PIC3


CORRECT location of the green control line plumbed into the D-2 (Delivery 2) port on a Fixed Cab.

PIC4



Identify and describe how and when the recall condition was corrected in production. If the production remedy was identical to the recall remedy in the field, so state. If the product was discontinued, so state.

All current production chassis were corrected and tested at the chassis facility on or by 4/5/04. Sutphen Corporation, Sutphen Towers and Sutphen NY will implement production changes on all in process vehicles per the instructions from Sutphen Chassis on or by 4/17/04. The production and field remedies and subsequent testing are exactly the same.

VI. Recall Schedule

Furnish a schedule or agenda (with specific dates) for notification to other manufacturers, dealers/retailers, and purchasers. Please, identify any foreseeable problems with implementing the recall.

NA – All affected vehicles have been inspected and repaired as of May 14th, 2004.

VII. Recall Communications

9. Furnish a final copy of all notices, bulletins, and other communications that relate directly to the defect or noncompliance and which are sent to more than one manufacturer, distributor, or purchaser. This includes all communications concerning this recall from the time your company determines the defect or noncompliance condition on, not just the initial notification. A DRAFT copy of the notification documents SHOULD BE submitted to this office by telefax (FAX: 202-366-7882) for review prior to mailing.

Note that these documents are to be submitted separately from those provided in accordance with Part 579.5 requirements.

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