

# HARLEY MURRAY INC.

1754 E. MARIPOSA ROAD  
STOCKTON, CALIFORNIA 95205-7790  
TELEPHONE (209) 466-0266  
FAX (209) 466-0660  
www.murraytrailer.com



RECEIVED  
NHTSA-2

2004 FEB -2

OFFICE OF  
DEFECTS INVESTIGATION

Fax to: Jon White  
(202) 366-7882

**FAXED**  
2/2/04  
JW

Associate Administrator for Safety Assurance (NSA-01)  
National Highway Traffic Safety Administration  
7<sup>th</sup> St., SW  
Washington, DC 20590

January 21, 2004

Subject: PART 573 Defect Report  
Ref: Our Recall AC-1

Dear Sir:

On January 16, 2004, Harley Murray, Inc. decided that a defect which relates to motor vehicle safety exists in the towed vehicles (trailers) listed below, and is hereby furnishing notification to the National Highway Traffic Safety Administration in accordance with 49 CFR Part 573 Defect and Noncompliance Reports.

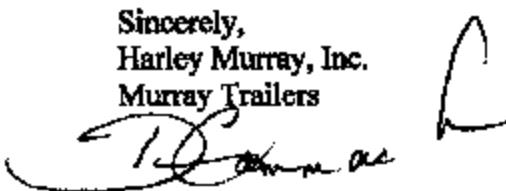
Harley Murray, Inc. the fabricating manufacturer of the vehicle being recalled.

The corporate official whom the agency should contact with respect to this recall is  
Mr. Doug Murray, President.

The preparer of this report is Mr. David Cammack, General Manager

Either of the above can be contacted at 209/466-0266 (Fax 209/466-0550)

Sincerely,  
Harley Murray, Inc.  
Murray Trailers

  
David Cammack  
General Manager

04V-033 ① of ②

**I. Identification of Vehicle Models Involved in the Recall**

Makes: Murray Trailers                      Model Years Involved: 2002 to 2003

Models: All 16-tire trailers as pictured below

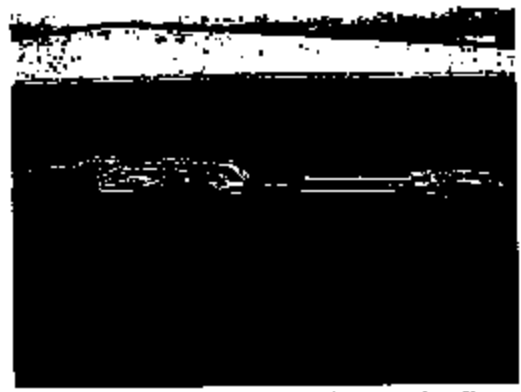
Production Dates: Beginning: (March) 2002 to Ending: (Jan) 2004

VIN Range: Beginning: 1M9H292092A056186 (Trailer 1186)  
to Ending: 1M9G452034A056301 (Trailer 1301)

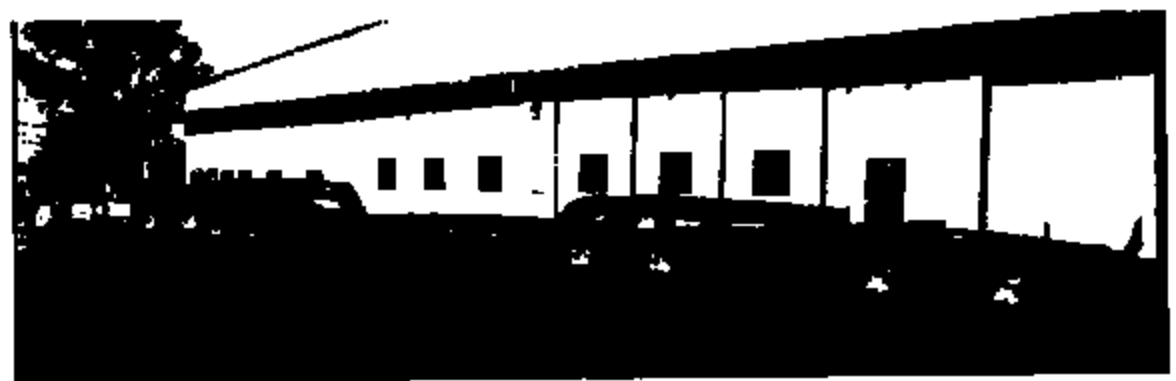
Vehicle Type: 16-tire Trailer              Body style: Lowbed



"The Professional" Model



"Loadmaster" and "Loadmaster Jeep"



"Magnum" Jeep and "M2000" Trailer

Descriptive information which characterizes/distinguishes the recalled vehicles from those model vehicles not included in the recall:

We are a very low-volume manufacturer of lowbed trailers. HMI is able to identify each buyer or current owner of any of the affecter trailers. This recall does NOT involve any of our 8-tire or 3-axle trailers models (EasyLoad, EasyTail, Contractor).



16-tire Models



8-Tire Models

Descriptive information which characterizes/distinguishes the recalled vehicles from those same model vehicles not included in the recall:

In order to be involved, the trailer must be (1) a 16-tire trailer, (2) made in 2002 or 2003 as indicated above by trailer or VIN number, and (3) employ the cast version of "axle hanger" that is the subject of this recall. The indicated models of trailer have been manufactured by this company for decades using a fabricated version of axle hanger that has had no known similar failures. The same models continue to be in production, and we will either returned to the fabricated version of axle hanger or develop a weld-on reinforcement for the cast version.

Viewing the exposed axle hangers, as shown below, can readily identify the involved trailers:

***Fabricated hanger (foreground) vs. Cast***



[Test bar] Axle beam

Center-rib top plate (cast)

No side plate

Side plate on rounded top plate  
opposite ends  
& sides

***Cast hanger in place***

(This is a fabricated hanger. Note the rounded top plate).

The hanger top can easily be seen between the tires from above.



The approximate percentage of Murray Trailers' production represented by the involved models (i.e. between the indicated VIN numbers) is:

99 % of all 16-tire trailers, or

75 % of all trailers we made (all models)

**II. The Recall Population potentially containing the defect :**

## Number of Vehicles by year

<u>Model</u>	<u>Year</u>	<u>Potentially Involved</u>
Professional	2002	33
Loadmaster	2002	10
Loadmaster Jeep	2002	3
Magnum Jeep	2002	1
M2000	2002	1
Suspension	2002	1
<hr/>		
Professional	2003	23
Loadmaster	2003	8
Loadmaster Jeep	2003	6
Magnum Jeep	2003	1
Suspension	2003	3

**Total Number Potentially Affected by the Recall: 90**

**Note: this number is now 89, as one has already been repaired**

All of the above vehicles are believed to actually contain the defect (only the first two or three are in question as of this report). This population has been selected by checking the limited number of production parts lists to determine when the use of the cast version of axle hanger came into production. It is possible that the first few units differed from the parts list as the previous version was phased out. (We can / will call the individual trailer owners and ask them to confirm for us.) The cast version was a physical replacement for the fabricated one.

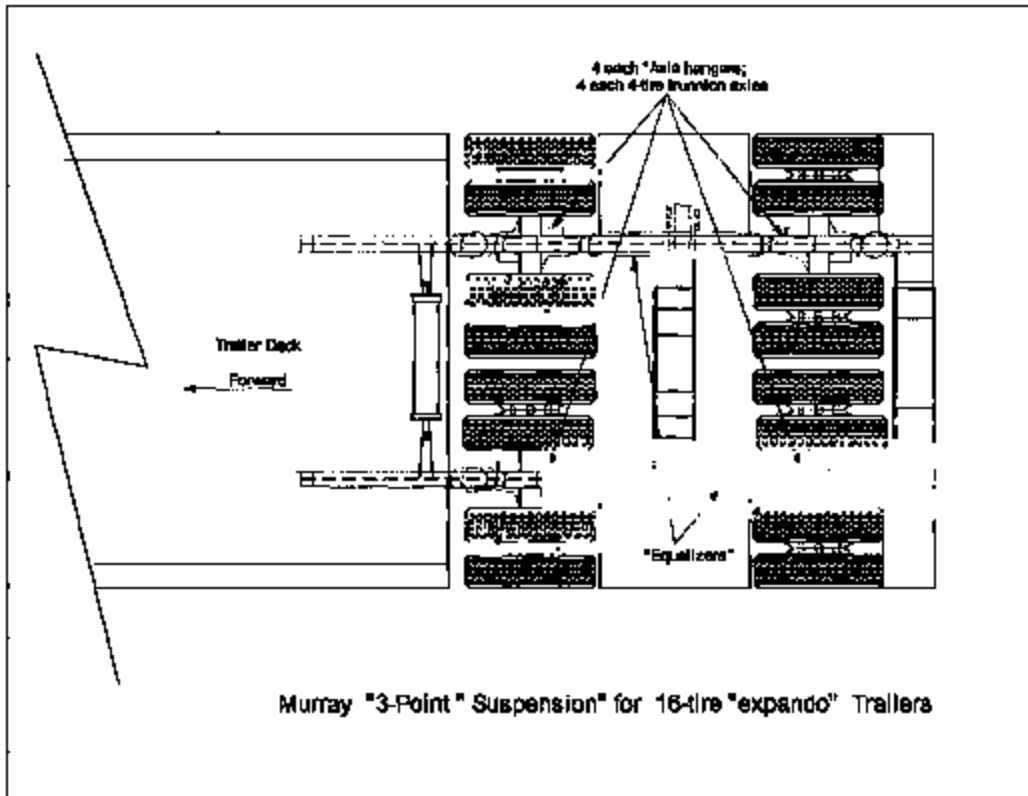
The cast version was used up until this week, when we decided we had a problem and immediately went back to the fabricated version. In-process units were converted. There are 4 "stock" trailers in the yard, unsold, which are not counted above and will not ship without conversion or modification.

**III. Description of the Defect**

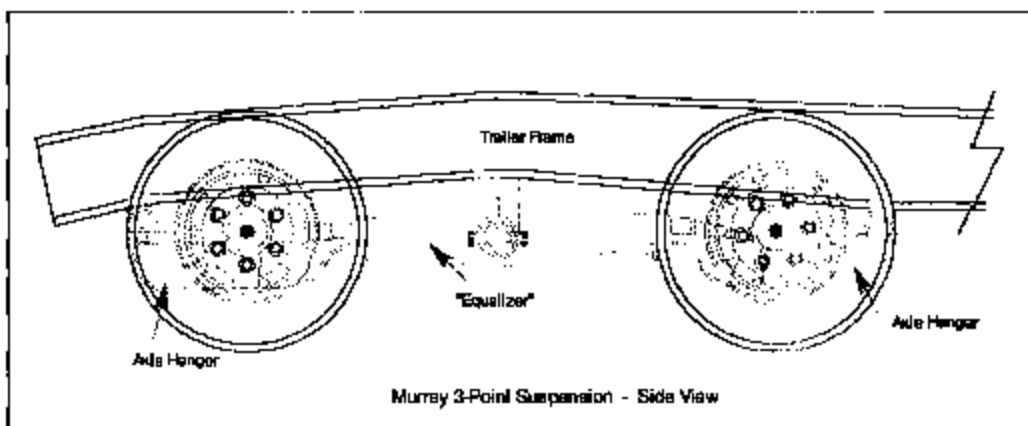
The defect appears to be in the design of a casting that is a suspension component of the Murray 16-tire "3-point suspension" we call an "axle hanger".

The design flaw is probably a combination of material choice and physical shape, and may be exacerbated by foundry practice and welding done to connect the axle hanger and axle beam. Four axle hangers are used in each complete suspension. The axle hangers are used to support the trailer and are installed as indicated in the photo and drawing on the next page.

Axle hangers  
(Trailer upside down)



Murray "3-Point" Suspension" for 16-tire "expando" Trailers

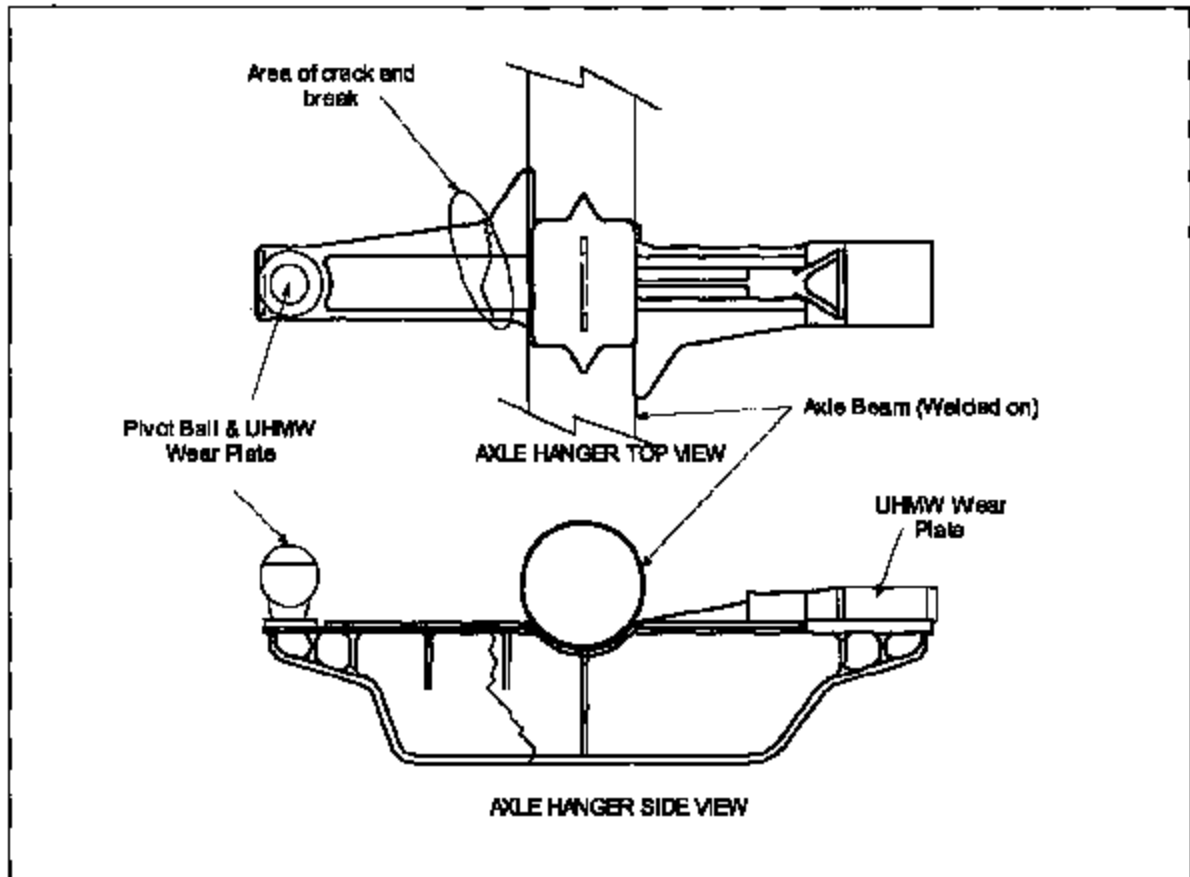


Murray 3-Point Suspension - Side View

Our best estimate of the **cause(s) of the defect** at this time is fatigue of the axle hanger (cast beam) that begins with a trauma to the axle in a sideways manner (such as hitting a curb) that creates a crack as indicated in the sketch below, followed by fatigue during vehicle operation.

**The consequence** of fatiguing this material is a complete break of the axle hanger.

**A warning that may precede breakage:** visible crack in the area indicated below.



This axle hanger casting is purchased from a supplier – a steel foundry – but it is a proprietary design of ours that is not sold to others. See “IV. E” below.

#### **IV. Chronology in Determining the Defect**

- A. To date: No known traffic accidents; no fatalities, no injuries; all warranty.
- B. First hanger break: June, 2003. [Even in hindsight] This break is believed to be an isolated problem unrelated to the others. The break occurred in a different location on the casting and appears to have been caused by poor weld penetration. A modification of welding procedure was implemented at that time.
- C. Second hanger break: November, 2003. This was the first break of the type that now concerns us. Inspection of the break indicated two areas, each about 2” long, that looked as though the trailer had hit a curb or other road hazard. Since we had not seen any other breaks, and because the axle hanger was a front – rather than a rear – axle, it was suspected that the break was more a result of an accident (not “traffic accident”) than simple beam failure.

- D. Third hanger break: December 2003. This second break across the main section of the ball end was very similar to the first main beam break and was also a front axle. Although we were now on alert, this break again showed the pre-existing crack signs and was again thought to have been caused by an accident. These trailers are frequently used off-road in rough conditions.
- E. 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> hanger breaks: January 15, 2004. Three different customers. At this point we know there is a problem. Even if the initial crack is caused by some trauma, it now appears to result in full beam failure after (an unknown length of) time. Samples of axle hangers (original test samples, broken items, and new unused) were taken to a local shop for hardness testing (hardness is related to tensile strength). Results for all were similar and within expected range. Casting purchases were reviewed to determine if all castings could have been from the same lot, but it appears that the castings are from several lots. It is unlikely, therefore, that a materials error in a single lot by the foundry is the cause.

#### **V. Identify the Remedy**

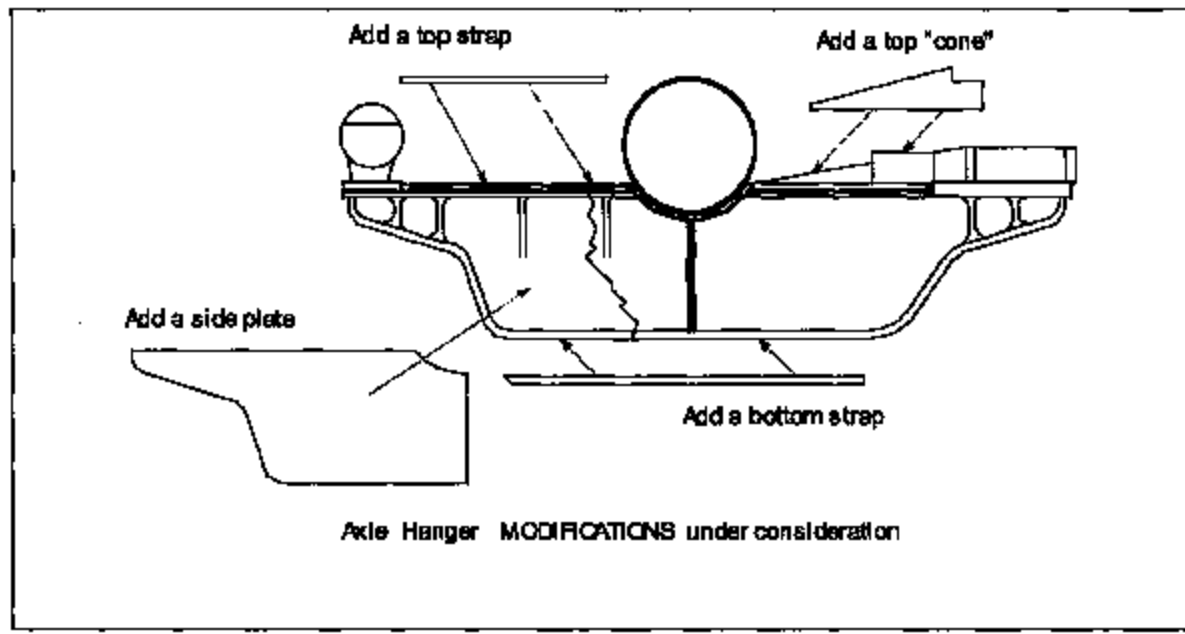
Two possible remedies exist.

- A. The immediate remedy for the defect will be to **replace cast axle hangers with the fabricated version**. The difference between cast and fabricated versions is very easy to see, as shown in previous sketches and photos. The part is large (about 3 ft long). It is exposed and visible between the tires on all models of trailer. The fabricated version is immediately available – made in our shop.

**Production:** We immediately stopped use of the cast version of axle hanger and returned to the previous time-tested fabricated version. We are a low-production facility; the 4-5 trailers in process were held for the change. One of the broken trailers arrived the next day and is repaired by replacement of the hangers as of this writing (i.e. the number of affected vehicles in service is now 89).

- B. We will be conducting tests and consulting with engineers to determine if a modification to the cast axle hanger can quickly become the long-term production and recall remedy.
1. Production modifications to the casting under consideration are (a) heat treatment of the casting before installation, and (b) any of the recall remedies
  2. Recall modifications to the casting to increase load capacity, resistance to impact, and resistance to fatigue by increasing stiffness that are under consideration include:
    - i. Addition, by welding, of a side plate where there is one on the fabricated version but not on the cast version.
    - ii. Addition, by welding, of a bottom strap of the same wrought material used in the fabricated version.
    - iii. Addition, by welding, of a top strap and/or “cone”, of the same wrought material used in the fabricated version.

The **production remedy(s) will be identical** to the recall remedy in the field.



## VI. Our Recall Schedule

- A. Notification to other manufacturers: Two manufacturers represent the 4 suspension sold separately in 2003 and 2003. January.
- B. Notification to dealers: We have only one dealer (in Phoenix). January.
- C. Notification to purchasers: January (assuming no holdup from your review of attached communications)
- D. Effecting repairs: January through October, 2004

Foreseeable problems with implementing the recall include the following:

1. Several customers are 500 to 700 miles away. They may be very reluctant to bring the trailer here for repair. We do not have any other authorized repair facilities (we are a single-facility operation). If we are able to devise a modification approach that keeps the cast version in service, said modification might be accomplished at/ by the dealer in Phoenix for the most distant customers.
2. Equipment hauling is an opportunistic business. Some customers may be very reluctant to interrupt their business by taking their trailer(s) out of service and lose a paying job; this may result in considerable interruption of the repair schedule.

## VII. Recall Communications

Attached please find a copy each of our proposed

- Notice to our direct customers
- Notice to our two suspension customers.
- (Not included: our notice to one dealer)
- (No follow-up notices have yet been drafted)

end

January 28, 2004

**Re: SAFETY RECALL – Murray 16-Tire Trailers  
(16-tire trailers only – not 8-tire)**

Draft

Dear Trailer Owner:

This notice is sent to you in accordance with the requirements of the National Highway Traffic and Motor Vehicle Safety Act.

We have determined that a defect, which relates to vehicle safety, exists in certain 2002 and 2003 16-tire trailers equipped with cast (rather than fabricated) axle hangers and manufactured from March of 2002 to December 2003. If your loaded trailer has struck obstacles or road hazards with sufficient force to start a crack on the axle hanger, it is possible that continued operation of the trailer will fatigue the beam completely, causing breakage of the axle hanger / suspension.

**Your vehicle(s), identified on the attached page, is affected.** For this reason we ask that you arrange for service to correct the condition without delay. The service and required parts as described in this letter will be provided free of charge.

To correct this condition, we will make welding repairs to all axle hangers or replace the axle hangers as we determine necessary to make your trailer(s) safe.

The work will take about three days to complete. However, additional time may be required depending on how other appointments are scheduled and processed.

**What you should do:** Just as you now routinely check your trailer for cracks on the frame, be sure to **check the axle hangers!** You can see this area from above, between the tires. Check both behind and in front of the axles. We have experienced this problem only on the front row, front end (ball end) of the hanger, but we don't know that it can't happen elsewhere. The sketch on the back shows the area where failures have occurred. If you see any cracks in this area, your trailer should be **immediately taken out of service**; chain the axle up for safety, and call us. You will be given priority for repair.

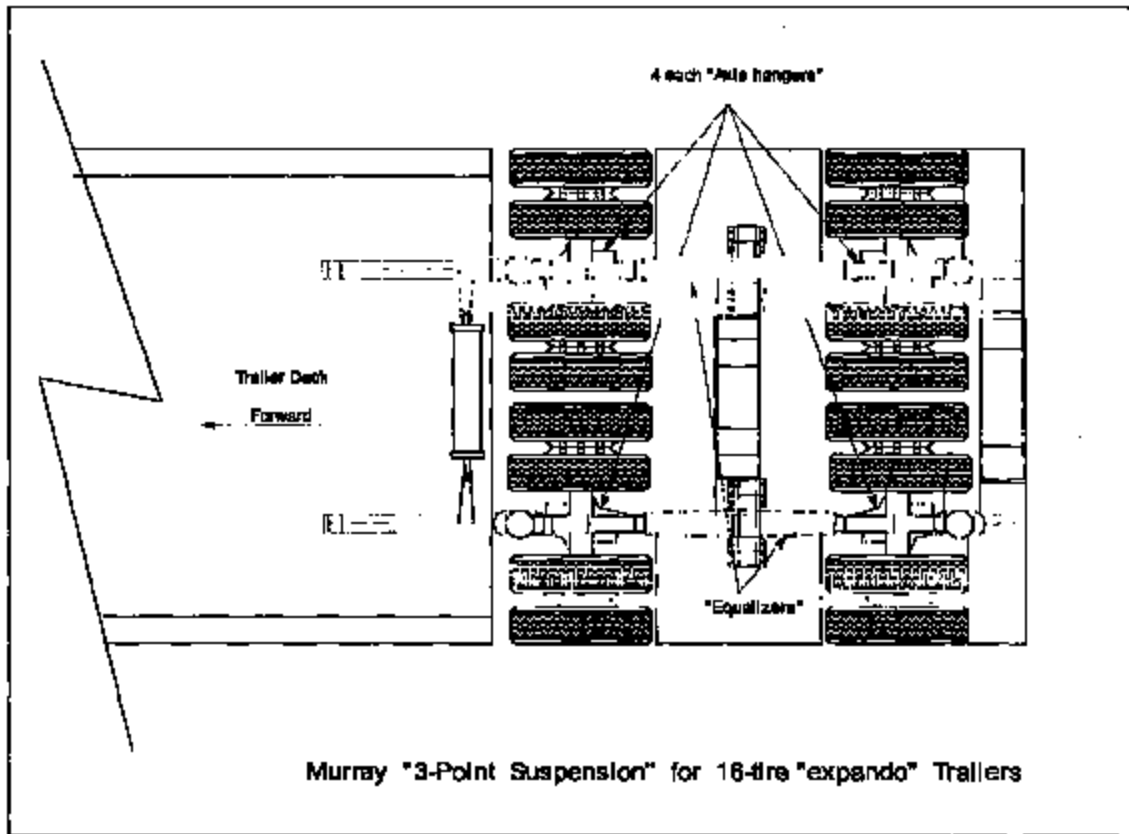
To obtain this free repair, please contact Rudy in customer service at 209/466-0266 for scheduling. We request your patience in understanding that we will attempt to repair the oldest trailers first, and we regret any inconvenience that this action may cause you. However, we are concerned about your safety.

If you feel we are unable to remedy this defect without charge and within a reasonable time, you may submit a written complaint to the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, SW, Washington, DC 20590, or call 1-888-DASH-2-DOT (1-888-327-4236).

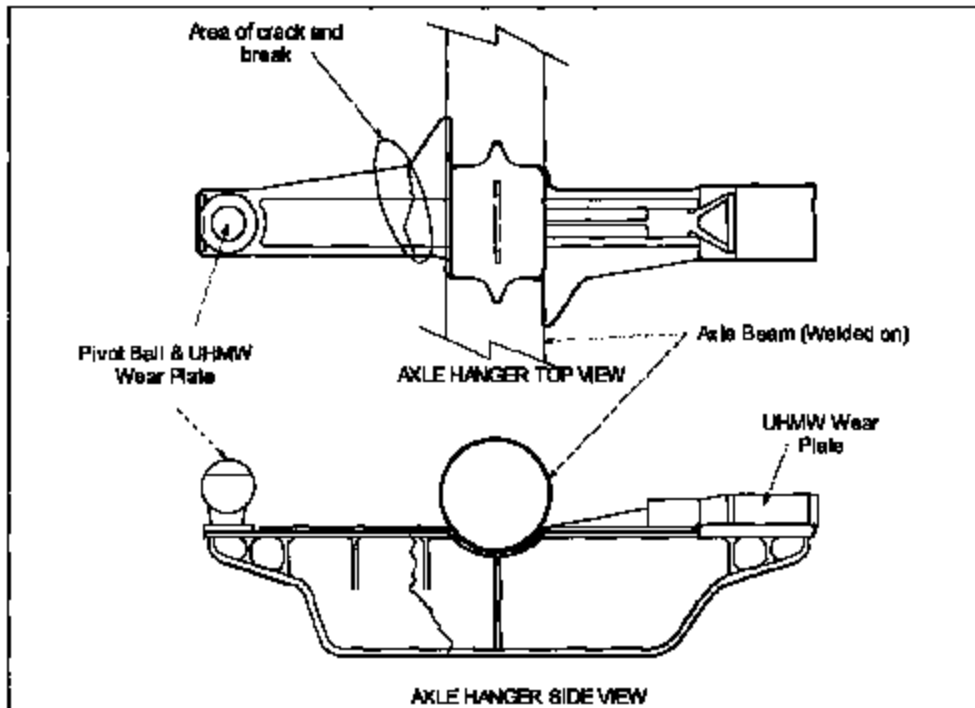
Thank you for attention to this important matter.  
Harley Murray, Inc.

David Cammack  
General Manager

Where is the "axle hanger"??



Where is the problem?



# Draft

Via UPS Overnight Delivery

Murray Suspension Customer  
Somewhere, CA 95205-7790

Dear Youthere,

## IMPORTANT RECALL INFORMATION - RESPOND IMMEDIATELY

This is to inform you of the start of a voluntary safety recall campaign involving all Murray 16-tire / 3-point suspensions shipped between February, 2002 and December, 2003.

### ***Impacted Product:***

This recall includes all 16-tire trailer suspensions manufactured and installed within the dates above. This recall *does not* include any 8-tire suspension you may have purchased, nor does it include any prior shipments.

Impacted suspensions, shipped after February, 2002, can be identified by the physical shape of the top of the axle hangers. It is specifically the cast axle hangers that are impacted, *not* the "equalizer" beam (sometimes referred to as the "walking beam"), and not our older fabricated design of axle hanger.

### ***Problem Description:***

Murray Trailers has determined that a defect in the axle hanger casting design potentially may lead to the risk of a broken suspension after some time in service.

If an axle experiences a significant trauma (striking a curb or other serious road hazard), a crack may be started in the top of the axle hanger. Continued use of the vehicle without repair may lead to fatigue and failure of the suspension, and poses an unreasonable risk to motor vehicle safety.

### ***What We Will Do:***

Harley Murray, Inc. will provide a remedy to vehicle owners without charge. We are working on an interim corrective action as well as a permanent solution to address the defect. We will continue to ship OE orders using our older fabricated design if you need additional product.

### ***What You Need To Do:***

**First and foremost, you should not ship any of your product using the Murray suspension if you still have one on hand.**

**Second, within five (5) days of receipt of this notice, you will need to send a Defect and Noncompliance Report to the National Highway Traffic Safety Administration (NHTSA) for all vehicles sold with an affected Murray 16-tire suspension in the United States, and a similar notification to Transport Canada for any vehicles sold in Canada.**

**Finally, your customers should be notified to check their suspensions for cracks (See xxx below); if they find any, the vehicle should be immediately taken out of service until repaired. In order to do that, we ask that you quickly make a choice as to how you will administer this recall campaign. We realize product recalls may put a strain on an organization's resources and personnel. As such, Harley Murray, Inc. is offering to manage the recall administration - free of charge.**

- ***We will administer this campaign on your behalf if you wish. If you elect this option, please complete and sign the enclosed Campaign Management Election Form indicating your preference and return it to us by Friday, January 30, 2004.*** Next, if you choose to have Harley Murray, Inc. conduct the recall on your behalf, please compile a complete list of impacted customers, including names, addresses, phone and fax numbers and VIN/Customer Unit numbers, returning the completed materials to us by January 30, 2004. This list will be used only for the purpose of this recall and will enable us to begin notifying vehicle owners of this recall effort. Even if you elect this option, you are still required to make the necessary governmental notices.

We highly recommend this approach, as the repair would most easily be accomplished here at our facility. Also, we presume that since your customers purchased these suspensions in order to enter California, that those vehicles are probably here in our state.

- ***Should you choose to manage the recall effort internally, please complete and sign the enclosed Campaign Management Election Form indicating your preference and return it to Harley Murray, Inc. by Friday, January 30, 2004.*** Guidance as to the activities and scope of administering the recall efforts are outlined in the *Safety Recall Compendium*, published by NHTSA and available online at <http://www.nhtsa.dot.gov/cars/rules/standards/recompendium.pdf>.

**For your convenience, the following are enclosed to help you in this recall process:**

- a copy of our January 23rd Defect and Noncompliance Report to NHTSA
- a list of the affected suspensions purchased by your company in the last 2 years
- a Campaign Management Form that you must complete and indicate your preference for recall administration by January 30, 2004
- If you wish the following, please e-mail me and I'll send you:
  - a Microsoft® Word-formatted template for generating the required Defect and Noncompliance Notification to NHTSA and, if necessary, to Transport Canada
  - a Microsoft® Excel-formatted report form for use in compiling your customer contact and VIN information for customers who purchased vehicles or replacement equipment containing one of the impacted ECUs

***If your current parts inventory contains any spare axle hangers (this is unlikely) shipped after February of 2002, please arrange to return them for replacements at no cost.***

We will be in touch with you in the next few days to answer any questions and to provide additional information about the recall effort. We value our business relationship with you, and we appreciate your understanding and cooperation in this matter. In the interim, if you have any questions, please do not hesitate to contact me at 209/466-0266, Monday - Friday, 8:00 a.m. - 4:00 p.m. PST, or email us at [dcammack@murraytrailer.com](mailto:dcammack@murraytrailer.com).

Sincerely,  
Harley Murray, Inc.

David Cammack  
General Manager

*End*