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OFFICE OF DEFECTS
INVESTIGATION

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October 26, 2006

Mr. George Person
National Highway Traffic Safety Administration
Office of Defects Investigation, NVS-211
400 7th Street, S.W.
Washington, DC 20590

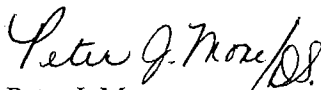
RE: Elgin Road Wizard Street Sweeper

Dear Mr. Person:

On behalf of our client Elgin Sweeper Company, we are submitting by facsimile the PART 573 Defect and Noncompliance Report. We will next week forward by letter hard copies of the materials. Although the Company has no verifiable reports of any injuries due to the mode of failure described in the materials, we advised that it would be prudent to make this report in an expeditious manner. Also, in an exercise of caution and while we were conducting our investigation, we suggested that the Company send to its dealers the safety inspection notification found in the materials with a date of 10/06 and document # 0703117-A. These documents were mailed on 10/09/06.

Please call me with any questions or comments. We look forward as always to work with your agency on this campaign.

Very truly yours,


Peter J. Mone

PJM/dls

Enclosures

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Via E-Mail and Federal Express

06V-415
(22 pages)

Safety Defect and Noncompliance Report Guide for Vehicles
PART 573 Defect and Noncompliance Report

On October 13, 2006, Elgin Sweeper Co. decided that a defect which relates to motor vehicle safety exits 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.

Date this report was prepared: October 20, 2006

Furnish the manufacturer's identification code for this recall (if applicable): _____

1. Identify the full corporate name of the fabricating manufacturer of the vehicle being recalled. If the recalled vehicle is imported, provide the name and mailing address of the designated agent as prescribed by 49 U.S.C. §30164.

Elgin Sweeper Company
1300 W. Bartlett Road
Elgin, Illinois 60120

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

William Byrnes
Director of Service Operations

Telephone Number: 847/622-7069 Fax No.: 847/622-7077

Name and Title of Person who prepared this report.

William Byrnes
Director of Service Operations
Federal Signal, Environmental Products Group

Signed: William Byrnes

Elgin Sweeper PART 573 Defect and Noncompliance Report

I. Identify 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): Wittke **Model Years Involved:** 1999-2004 **Model(s):** Road Wizard

Production Dates: Beginning: 1999 **Ending:** January, 2004

VIN Range: Beginning: WSW99073 **Ending:** WSW03097

Vehicle Type: Street Sweeper **Body style:**

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

All Road Wizard Sweepers manufactured by Wittke Manufacturing and serial numbers beginning with the prefix WSW

Make(s): Elgin **Model Years Involved:** 2005 – 2006 **Model(s):** Road Wizard

Production Dates: Beginning: April, 2005 **Ending:** October, 2006

VIN Range: Beginning: W1001D **Ending:** W1062D

Vehicle Type: Street Sweeper **Body style:**

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

Road Wizard Sweepers manufactured by Elgin Sweeper Co., and serial #'s beginning with the prefix W1001D

Make(s): _____ **Model Years Involved:** _____ **Model(s):**

Production Dates: Beginning: _____ **Ending:** _____

VIN Range: Beginning: _____ **Ending:** _____

Vehicle Type: _____ **Body style:**

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

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. For example, if the recall involved Widgets equipped with certain items of equipment from January 1, 1996 through April 1, 1997, then what was the percentage of the recalled Widgets of all Widgets manufactured during that time period: 100%

II. Identify the Recall Population

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

Model	Year	Number of Vehicles Potentially Involved
Wittke Road Wizard	1999	12
Wittke Road Wizard	2000	34
Wittke Road Wizard	2001	21
Wittke Road Wizard	2002	64
Wittke Road Wizard	2003	28
Wittke Road Wizard	2004	41
Elgin Road Wizard	2005	29
Elgin Road Wizard	2006	34

Total Number Potentially Affected by the Recall **263**

3. Furnish the approximate percentage of the total number of vehicles estimated to actually contain the defect or noncompliance: **100%**

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

Elgin Sweeper Company manufactured the Road Wizard street sweeper beginning with Road Wizard serial number W1001D in April, 2005. Prior to that serial number, the Road Wizard was manufactured by Wittke Products, Elgin's parent company, Federal Signal Corporation, acquired Wittke Products on 9/20/02. With this acquisition, Elgin purchased the assets and liabilities of Wittke Products. Technical analysis using physical testing has indicated that the welds for the components that attach the hopper to the sub-frame may not be sufficient to withstand cracking for the entire life expectancy of the vehicle. Therefore, all road Wizard sweepers manufactured by both Elgin Sweeper and Wittke Products are affected.

Elgin Sweeper PART 573 Defect and Noncompliance Report

Describe the cause(s) of the defect or noncompliance condition.
III. Describe the Defect or Noncompliance

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

The welded hopper tilt (dump) cylinder attachment points, as well as the hopper pivot mounts may crack or separate.

The design of the hopper pivot, and of the tilt cylinder attachment points is inadequate to withstand the maximum potential load exerted on these points during the fully loaded hopper dump cycle.

Describe the consequence(s) of the defect or noncompliance condition.

Failure of any one of these 6 points can cause the hopper dump cycle to be incomplete, or cause the hopper to move from it's designed operating position. There is a remote possibility that, should all six of these points fail in one event, the entire hopper structure could drop from the fully tilted position. If the hopper fails in this manner and it is in the full tilt position (52 degrees), it could fall and cause injury to the operator or personnel near the machine. Elgin Sweeper has not been able to verify any incidents or any injuries due to this mode of failure.

Identify any warning which can (a) precede or (b) occur.

Daily maintenance inspection may reveal cracks or separation in any of the 6 points mentioned above. Visible cracks of the welds will be evident before failure of all 6 weld points.

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

N/A

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

N/A

Elgin Sweeper PART 573 Defect and Noncompliance Report

IV. Provide 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.

During 2005, isolated instances were reported of cracking of the hopper tilt cylinder attachment point welds. They were primarily on early models built by Wittke in Canada prior to acquisition by Federal Signal. The failures were attributed to random cases of improper welding, after an examination of the welding process.

On July 14, 2006 the New Jersey Elgin Dealer, W.E. Timmerman, reported that both main hopper pivots failed on Serial #W1008D, causing the hopper to drop back into it's resting position. This was the first reported failure of this magnitude on an relatively new Elgin built unit, delivered in June of 2005. Elgin Sweeper conducted extensive an extensive technical analysis of the weld process and design of the weld attachment points.

The preliminary evaluation of this failure determined that the welding process and part fit up did not meet Elgin Sweeper strain test standards. On October 13, a letter was sent to Elgin dealers requiring a mandatory inspection of these welds to look for any cracking or separation

As a further step, Strain Gauge (stress) tests were performed which revealed that the actual design of these attachment points, regardless of weld quality, is not adequate to withstand the potential maximum loads that may be exerted on them during the dumping cycle.

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.

V. Identify the Remedy

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

Elgin Sweeper Company's remedy is documented in Elgin's Service Bulletin 0703119-A "Recall – Repair of Road Wizard Hopper System" (attached). An Elgin Sweeper Dealer will repair the defect free of charge. Redesigned pivot and dump weld attachments will be installed on the customer's vehicle. The newly designed pivot attachment is visually different from the original and will distinguish an updated machine from an original design.

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.

The same parts that are being installed on customers' vehicles are being installed on new Road Wizards beginning with serial number W1063D.

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

The difference between the recall condition and the remedy was a potential defective weld as described in Elgin's Service Bulletin 0703117-A "Urgent Safety Inspection Notification – Hopper System" (attached). The redesigned pivot and dump well attachments are stronger and visually different.

VI. Identify the 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.

Initial notification to dealers instructing them to inspect welds **October 9, 2006**

Notification to customers **November 9 through November 16, 2006**

VII. Furnish 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 (including both original and follow-up) 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 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 573.8 requirements.

Documents attached:

- **Initial dealer notification**
- **Second dealer notification**
- **Technical service bulletin**
- **Customer notification**
- **Customer inspection procedure**

November 9, 2006

[Customer Name]
[Customer Address]
[Customer City, St Zip Code]

cc: Elgin Dealer: [Dealer Name]

Re: URGENT SAFETY RECALL – ROAD WIZARD HOPPER SYSTEM

Road Wizard Machine Serial Number: XXXXXXX

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

REASON FOR RECALL

Elgin Sweeper Company has determined that a defect which relates to motor sweeper safety exists in all Wittke and Elgin Road Wizard sweepers. There may be a defect in the hopper pivot hinges or hopper dump cylinder mounts that could result in a structural failure, that could result in death or severe injury to people on or near the vehicle, as well as property damage. All Road Wizard Sweepers manufactured from 1999 through September 2006 by Wittke and Elgin Sweeper must be inspected **daily by the customer for these possible defects**. All Road Wizard sweepers manufactured from 1999 through September, 2006 by Wittke and Elgin Sweeper may have this defect. In remote circumstances, if all six hopper welds fail at the same time, and the hopper is in the tilt position, the hopper could detach from the machine. If this condition occurs, injury to the operator or personnel near the machine could occur.

WHAT WE WILL DO

Elgin Sweeper will repair this defect free of charge. We will install redesigned pivot and dump weld attachments on your sweeper.

WHAT YOU SHOULD DO

Please inspect the six hopper weld attachment locations for your sweeper. The attached directions (0703117-B) outline the inspection locations. If you see any cracks or separation, do not use the sweeper. If no cracks are evident, you may use the sweeper, but you must inspect the weld attachments daily.

Whether or not the welds show cracks, please contact your Elgin dealer as soon as possible to arrange a service date and so the dealer may order the necessary parts for the repair. Instructions for making this correction have been sent to your dealer and the parts are available. It will take approximately three (3) days to complete this repair. Please ask your dealer if you wish to know how much additional time will be needed to schedule and process your vehicle.

Your Elgin dealer is best equipped to obtain parts and provide service to ensure that your sweeper is corrected as promptly as possible. If, however, you take your sweeper to your dealer on the agreed service date, and they do not remedy this condition within six (6) days of that date, we recommend you contact the Elgin customer service by calling 1-877-DIAL EPG (1-877-342-5374).

After contacting your dealer and the Elgin customer service, if you are still not able to have the safety defect remedied without charge and within a reasonable time, you may wish to write 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).
(Washington DC residents use 1-202-366-0123).

We are sorry to cause this inconvenience; however, we have taken this action in the interest of your safety and continued satisfaction with our products.

Sincerely,

Mario Martinez
Service Manager

October 6, 2006

Elgin Dealer: *Mail merge Dealer name*

Re: URGENT SAFETY INSPECTION – ROAD WIZARD HOPPER SYSTEM

RE: Road Wizard Street Sweepers manufactured by Wittke and Elgin Sweeper from 1999 through September 2006. Wittke S/N WSW99073-WSW3097 and Elgin Sweeper S/N W1001D-W1062D

Dear Elgin Sweeper Dealer,

A "Mandatory Inspection Service Bulletin" # 0703117-A has been issued for Road Wizard Street Sweepers. There may be a defect in the hopper pivot hinges or hopper dump cylinder mounts that could result in a structural failure. Personnel near the machine could be injured if this failure occurs. All Road Wizard Sweepers manufactured from 1999 through September 2006 by Wittke and Elgin Sweeper must be inspected **daily by the customer for these possible defects**. You may be contacted by customers for assistance with the inspection. Please show the customer how to perform the inspection if you are asked to provide assistance.

It is imperative that the areas shown in the bulletin be inspected daily before operation for cracks and/or deformation. (See Service Bulletin 0703117-A, attached)

If deformation or cracks are discovered during the inspection, **THE CUSTOMER SHOULD NOT OPERATE OR USE THE VEHICLE.** If a customer reports a problem to you, please call the Elgin Sweeper Service Department immediately at 847-741-5370 or 877-DIAL-EPG (877-324-5374), the 24 hour service number, for additional instructions. If no deformation or cracks are present during the initial inspection, the sweeper may remain in service as long as a pre-operation daily inspection of the areas is performed.

Elgin Sweeper is developing a solution for this issue and will notify you and any customers who may be affected when that solution is available. We anticipate that this process will take approximately 3 weeks. Any units that may be affected will be repaired at no charge to the customer. Customers will be asked to contact you to schedule the repair. You will receive a Recall Bulletin that will provide instructions for making the necessary repairs to the hopper system for any affected Road Wizard sweepers.

We recommend that you locate a qualified welder who will be able to perform repairs to potentially affected vehicles. Welds must be repaired by a welder certified to AWS D1.1-200 and AWS D1.3-89 standards. Certification must include out of position welding (overhead, vertical-up and vertical-down).

Please contact the Elgin Service Department at 847-741-5370 if you have any questions regarding this notice.

Thank you for your support on this upcoming Road Wizard inspection.

Sincerely,

Mario Martinez

Sweeper Products – Service Manager, Elgin Sweeper Company

Attachments:

Road Wizard Inspection Service Bulletin P/N 0703117-A
Elgin Sweeper Safety Section

TO: ALL ROAD WIZARD CUSTOMERS AND ELGIN DEALER SERVICE CENTERS

SUBJECT: URGENT SAFETY INSPECTION NOTIFICATION – HOPPER SYSTEM

Effectivity: Road Wizard Street Sweepers manufactured by Wittke and Elgin Sweeper from 1999 through September 2006. Wittke S/N WSW99073-WSW3097 and Elgin Sweeper S/N W1001D-W1062D

Purpose: A Mandatory Inspection has been issued for Road Wizard Street Sweepers. There may be a defect in the hopper pivot hinges or hopper dump cylinder mounts that could result in a structural failure that could result in death or severe injury to people on or near the vehicle, as well as property damage. All Road Wizard Sweepers manufactured from 1999 through September 2006 by Wittke and Elgin Sweeper must be inspected for these possible defects.

Per this inspection, it is imperative that the areas shown in this bulletin be inspected daily before operation for cracks and/or deformation. Follow the sequence illustrated below to complete the inspection and return the attached form after completing the initial inspection.

NOTE: *if you see any cracks or deformation during the inspection,*
DO NOT OPERATE OR USE THE MACHINE.

*Call the Elgin Sweeper Service Department immediately at
847 – 741 – 5370 or 877 - DIAL EPG (877 – 324 – 5374) the
24 hour service number, for additional instructions.*

If no cracks or deformation are present during the initial inspection, the sweeper may remain in service as long as a pre operation daily inspection of the areas is performed.

Elgin Sweeper is developing a solution for this issue and repair procedures will be following this inspection notice.

Operators and maintenance personnel should frequently review Elgin's website for Technical Tips and Updates regarding the operation and maintenance of Elgin products. (www.elginsweeper.com)



WARNING

FOLLOW THE INSTRUCTIONS OF THIS ELGIN SERVICE BULLETIN TO MAKE NECESSARY INSPECTIONS BEFORE FURTHER OPERATION OF THE AFFECTED ROAD WIZARD SWEEPERS.

OPERATION OF CERTAIN ROAD WIZARD SWEEPERS BEFORE INSPECTING HOPPER PARTS COULD RESULT IN FAILURE OF THE CYLINDER MOUNTS OR HOPPER HINGES, LEADING TO PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.

Procedure:

ALWAYS REFER TO ATTACHED SAFETY SECTION BEFORE STARTING WORK.

NOTE: For Step 1 and Step 2 of the inspection, the empty hopper should be in the fully lowered position resting on the cradle.

Step 1 (Figure 1)- Inspect all welds attaching the rear hopper pivot hinge bushing to the hopper structure.

- Look for cracks or other damage.

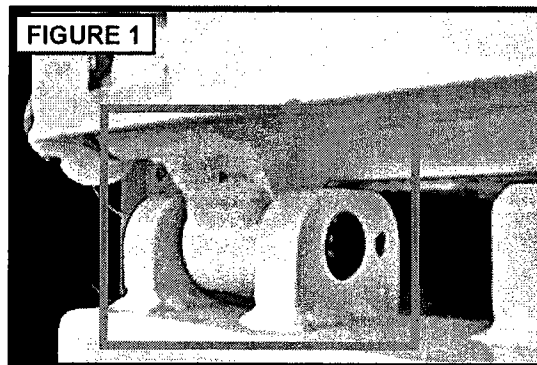


FIGURE 1

Step 2 (Figure 2)- Inspect all welds attaching the front hopper pivot hinge bushing to the hopper structure.

- Look for cracks or other damage.

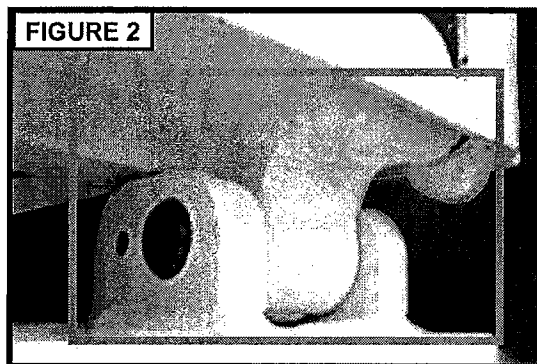


FIGURE 2

NOTE: For Step 3, 4, and 5, raise scissors hoist and install the hoist stop safety support.

Step 3 (Figure 3)- Inspect all welds attaching the front lower dump cylinder mount to the scissors top frame assembly.

- Look for cracks, or other damage.
- Also inspect the welds of the mount assembly. This should include the welds of the box frame to the mounting plate and the cylinder mounting tab to the box frame.

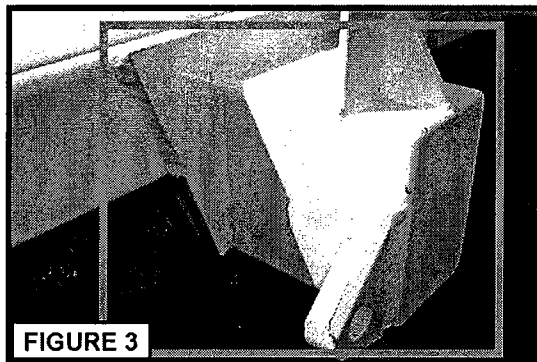


FIGURE 3



WARNING

Maintenance and repairs must be done by authorized personnel only.
Falling Hopper Can cause severe injury or death.
Position safety support before going under hopper.

Step 4 (Figure 4)- Inspect all welds attaching the rear lower dump cylinder mount to the scissors top frame assembly.

- Look for cracks or other damage.

Also inspect the welds of the mount assembly. This should include the welds of the box frame to the mounting plate and the cylinder mounting tab to the box frame.

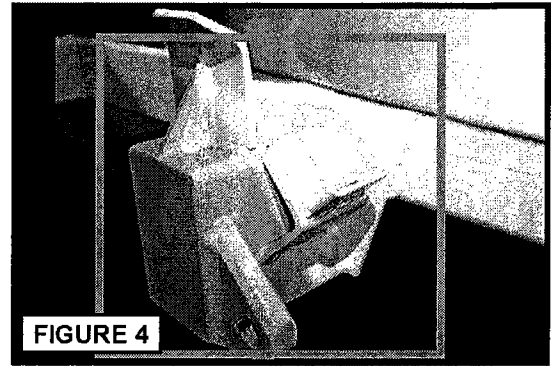


FIGURE 4

Step 5 (Figure 5) – Inspect all welds attaching the front upper cylinder mounting tab to the cylinder mount (front and rear of tab). Early production WITTKE units may have been built without a weld bead on the inner surface attaching the tab to the mount.

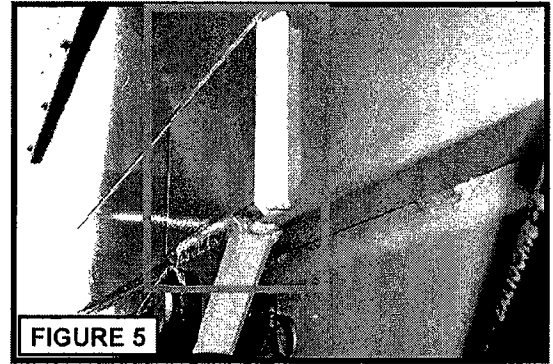


FIGURE 5

Step 6 (Figure 6) - Inspect all welds attaching the rear upper dump cylinder mount to the hopper (both front and rear of tab).

Upper dump cylinder mount (rear mount shown above, front is similar)

(Step 6)

FIGURE 6

Road Wizard Sweepers Hopper Initial Inspection

Machine Serial Number: _____ Customer Unit Number: _____

Machine Hours: _____ Machine Miles: _____

Customer Name: _____

Customer Mailing Address: _____

Customer Email Address: _____

Customer Contact Person: _____

Contact Person Phone: _____

Elgin Dealer Name: _____

Date Work Was Completed: _____

Work Completed By: Elgin Dealer Customer (Circle one)

Sold Machine to: (Name and Address) _____

**NOTE: This form MUST be returned by mail or Fax to:
Elgin Sweeper Company,
1300 W. Bartlett Road, Elgin, IL 60120
FAX: 847-622-7077
Attention: Service Department**

ELGIN Service Bulletin
Sole Source of Parts & Special Operations

INSPECTION RESULTS					
Inspection Steps		No Damage Noted	Cracks Present	Deformation of Structure	Other Damage Present
1	Hopper Hinges (FRONT)				
2	Hopper Hinges (REAR)				
3	Cylinder Lower Mounts Base End (FRONT)				
4	Cylinder Lower Mounts Base End (REAR)				
5	Cylinder Upper Mounts Rod End (FRONT)				
6	Cylinder Upper Mounts Rod End (REAR)				

QUESTIONS?

Contact the Elgin Sweeper Service Department at:
1-847-741-5370 or 1-877-DIAL EPG (1-877-324-5374)

TO: ALL ELGIN DISTRIBUTORS SERVICE AND PARTS MANAGERS

SUBJECT: Recall for Repair of Road Wizard Hopper System

Effectivity: Road Wizard Street Sweepers manufactured by Wittke and Elgin Sweeper from 1999 through September 2006. Wittke S/N WSW99073-WSW3097 and Elgin Sweeper S/N W1001D-W1062D

Purpose: A Recall Repair has been issued for Road Wizard Street Sweepers. There may be a defect in the hopper pivot hinges or hopper dump cylinder mounts that could result in a structural failure. Personnel near the machine could be injured if this failure occurs. All Road Wizard Sweepers manufactured from 1999 through September 2006 by Wittke and Elgin Sweeper must be repaired to eliminate these possible defects. This bulletin describes the procedure for installing FSO Kit 1086604. The kit will repair the welds of the hopper hinges and cylinder mounts on certain Road Wizard sweepers.

Preparation

Elgin dealers will perform the repair of affected sweepers located in their sales territory. Road Wizard customers must contact their Elgin dealer to arrange for the repair. Dealers will provide a qualified welder and the necessary labor to complete the repair. Dealer support functions may include providing suitable work platforms, removal of components, grinding or preparing surfaces, etc.

Repair Procedure

NOTE: *Welds must be made by a Certified Welder qualified to weld to AWS D1.1-2000 and AWS D1.3-89 standards. Certification must include out of position (overhead, vertical-up and vertical-down) for completion of these repairs*

Significant grinding, component removal, and preparation will be required to complete the installation of the FSO kit in addition to the weld repairs.

Weld repairs must be re-painted after any welding has been completed.

Detailed repair instructions and weld drawings will accompany the FSO Kit. Complete all repairs as instructed in the FSO drawings.

IMPORTANT: *Provide adequate protective covering (fire proof blankets, sheet metal, etc.) for the water tank, hopper, cab, and other sweeper components. Hot slag or grinding wheel discharge may damaged surfaces.*

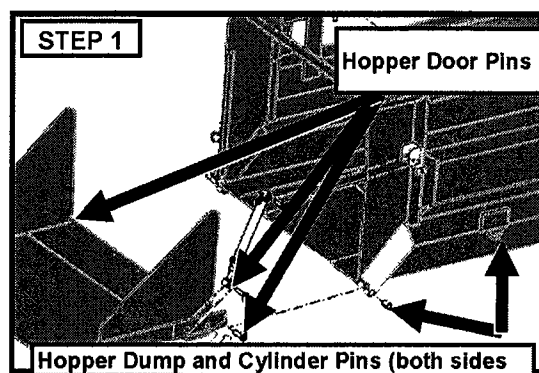
Equipment Required

- Overhead Hoist with sufficient range and capacity to remove and re-install the hopper
- Work platform suitable to provide access to the raised hoist
- 4 or more Weld Spatter Protection Blankets (Similar to Grainger P/N 6NE14)
- Cutting tools (acetylene, air arc, etc) suitable for weld bead removal
- 1" drill or hole-saw
- Side Grinder for clean-up and preparation of previously welded components.
- Welder capable of running E7018 rod in all positions
- Equipment for preparing repaired areas for re-painting (Sanding, sandblast, etc.)
- Paint application equipment for spot painting of the repaired areas
- Usual hand tools for component removal and re-installation

ALWAYS REFER TO ATTACHED SAFETY SECTION BEFORE STARTING WORK.

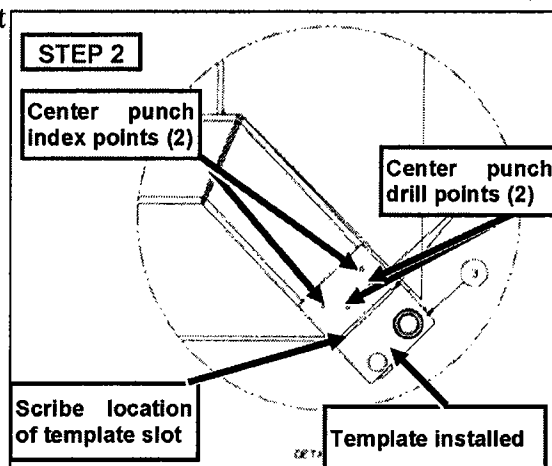
Step 1. Remove Hopper and Hopper Door

- A. Remove the hopper door (remove door pins and cylinder pin)
- B. Remove the hopper from the sweeper (remove dump pins and cylinder pins)
- C. Support hopper properly (off of the sweeper) for completing the removal of parts and repair.



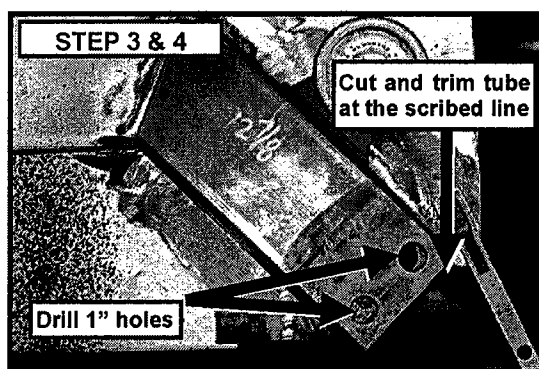
Step 2. Use Template to mark the hinge cut line (both sides)

- A. (Drawing DETAIL A) Place the template (included in the kit) over the hinge bushings and using a scribe, mark the cut line (template slot).
- B. Center punch the locations of four template holes.



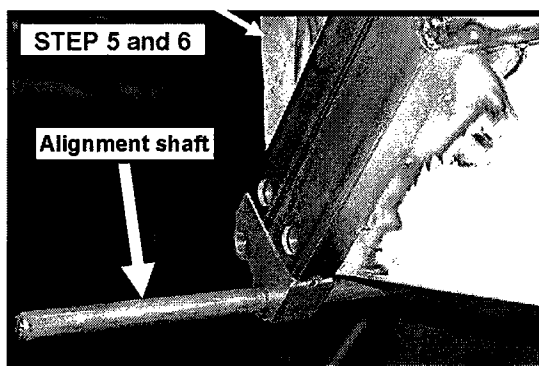
Step 3. Cut off existing hinge structure (both sides)

- A. Cut existing hinge structure at the pivot side of the scribed line using a cut-off wheel.
- B. Trim final cut to scribed line.
- C. Grind 1/8" chamfer all around tube edge.



Step 5. Install Hopper Pivot Lugs (both sides)

- A. Install Hopper Pivot Lugs and tack-weld into place.

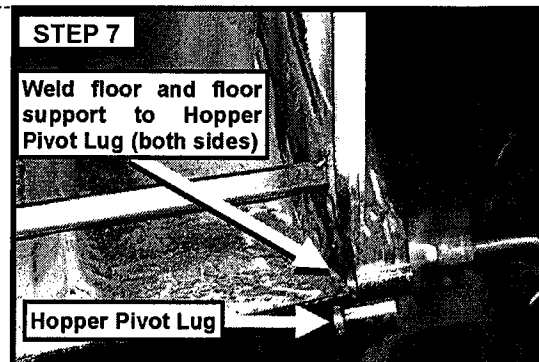


Step 6. Insert alignment shaft

- A. Insert a 1" OD cold rolled shaft through the lower set of hinge holes to ensure alignment.
- B. Install template and check alignment with punch marks as shown in Drawing DETAIL B.
- C. Adjust hinge position as necessary to align and tack-weld in place.

Step 7. Preheat the Hopper Pivot Lugs and Weld in place

- Preheat the Hopper Pivot Lugs to 150 degrees F using a torch or other suitable heat source. (Use TEMPILSTIK or equivalent temperature indicators as required.)
- Weld the Lugs in place as shown in Drawing DETAIL C using E7018 rod.
- Weld hopper floor and floor support to the Hopper Pivot Lugs (both sides).

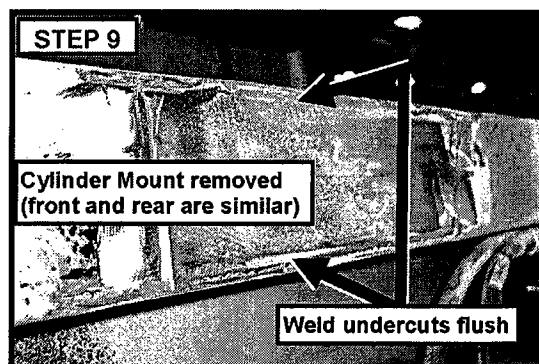
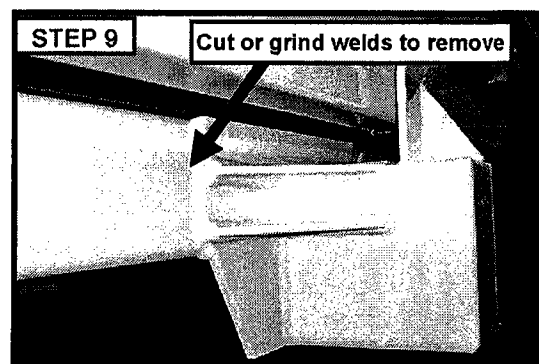


Step 8. Re-Install Hopper Door

- Reverse Step 1 to install Hopper Door. Use new Hopper Door Spacer between the door and hopper when re-installing the door. (This step may be performed at the conclusion of the installation if desired.)

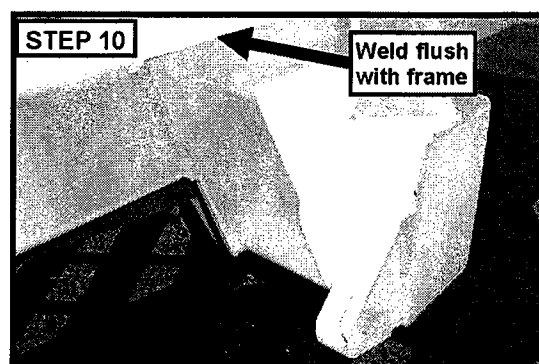
Step 9. Remove Cylinder Mount (both sides)

- Cut or grind out the existing welds from the cylinder mount attachment to the Scissor Top Assembly and remove the mount. **IMPORTANT:** Remove the assembly at the reinforcement plate attachment to the scissors tube.
- Grind all welds from the scissor tube. Use caution to remove as little of the tube material as possible.
- Weld to fill any undercuts, holes or gouges found in the parent material during the removal procedure.
- Grind surface flat after weld repairs are made to the parent metal.



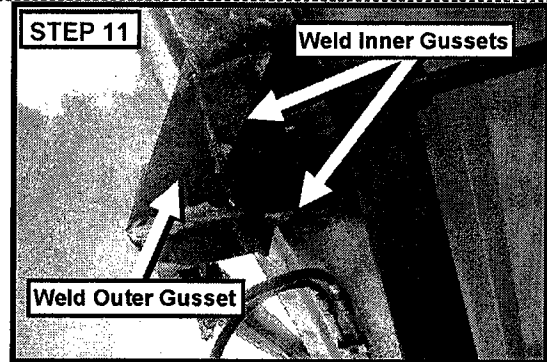
Step 10. Install Replacement Cylinder Mount (both sides)

- Position Replacement Cylinder Mount Weldments flush with frame assembly to dimensions shown in FSO Drawing Detail G.
- Weld frames to the Scissors Frame to the weld specifications defined in the FSO Drawing.



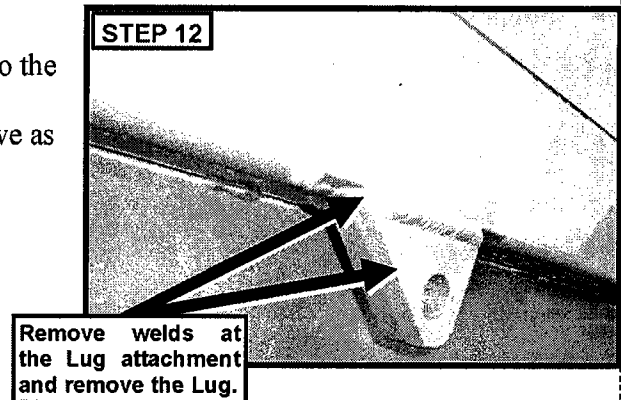
Step 11. Install Replacement Cylinder Mount (both sides)

- A. Weld in Inner Gussets as shown in FSO Drawing SECTION H-H Item #14 (two per mount)
- B. Weld in Outer Gusset as shown in FSO Drawing Item #15 (one per mount)



Step 12. Remove Hopper Cylinder Lug (both sides)

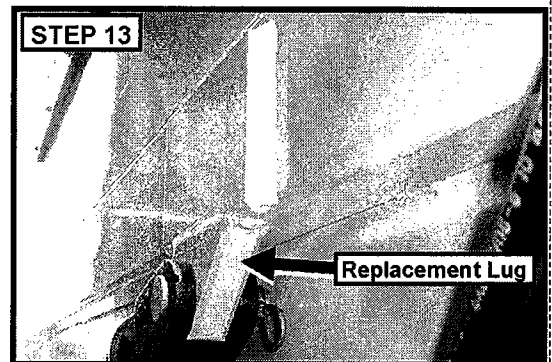
- A. Grind out the existing welds from the Lug attachment to the Hopper and remove.
- B. Grind all welds from the Hopper. Use caution to remove as little of the parent material as possible.



Step 13. Install Hopper Cylinder Lug (both sides)

- A. Install the hopper assembly to the scissors and measure the distance from the lower cylinder pivot to the position of the replacement Lug. The measurement between the cylinder attaching points must be no less than 34.25".

IMPORTANT: Hopper must rest on Scissors Top Assembly when the installation is complete. Dump cylinders may be in a slightly extended position (<1") after completion.

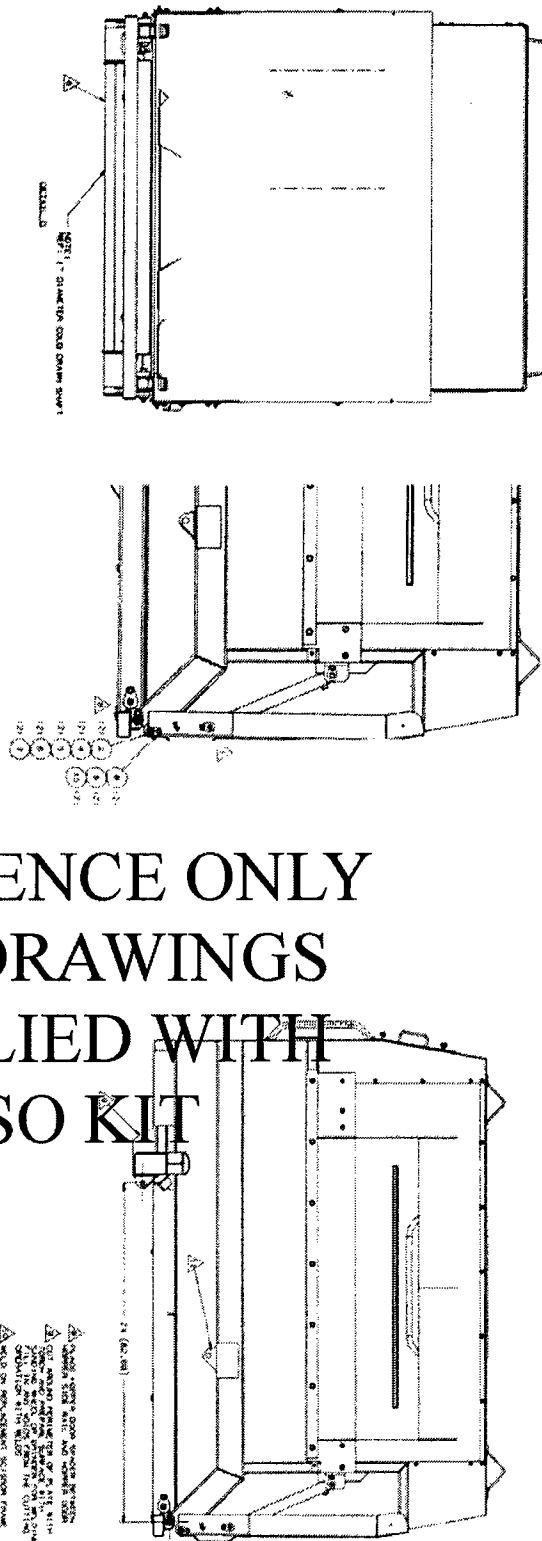


- B. Weld the replacement Lug as instructed in the FSO Drawing, Detail G

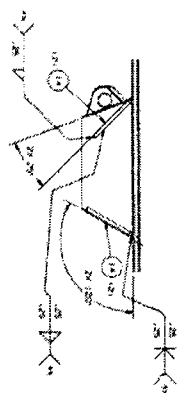
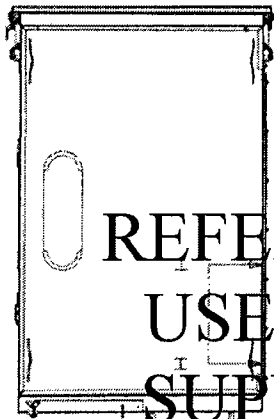
Step 14 Install Hopper Door and Systems Check

- A. Install the hopper door and connect door cylinder if not already completed.
- B. Install hopper dump cylinders if not already completed.
- C. Activate all hopper lift and dump functions and check for binding, interference, or other functional problems and repair as necessary.
- D. Prepare and re-paint the areas that have been welded or replaced.

ALWAYS REFER TO THE SAFETY SECTION IN THE OPERATORS MANUAL BEFORE STARTING WORK



REFERENCE ONLY
USE DRAWINGS
SUPPLIED WITH
FSO KIT



ALWAYS REFER TO THE SAFETY SECTION IN THE OPERATORS MANUAL BEFORE STARTING WORK

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**SAFETY RECALL
NOTICE**



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