



# GLOBAL

INSPECTIONS-NDT

PROVEN TECHNOLOGY, SPANNING THE GLOBE...



**Haul Truck Sample  
Non Destructive Evaluation  
Truck Frame  
April 2011**

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**Scope**



## Scope:

Personnel at the \_\_\_\_\_ Mine requested a demonstration of array inspection technology with EMCD. The demonstration consisted of passing a multi sensor probe over the critical areas on the frame of a haul truck. The critical areas inspected were the torque tubes, the smoke beam, and the front struts.



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# Summary



## Summary:

The results of the inspection reveal three cracks. The first crack was found on the front left strut on the top of the casting. The crack was small and should be monitored. The second crack was found by the right side of the torque tube on the plate that ties into the box frame. The third crack was found on the higher part of the right front strut. The crack runs horizontally through the plate and around the corner into the second plate. The results of the inspection can be viewed in the following pages of this report.

Jason Shumka

PCN Level II  
ISO 9712  
EN473

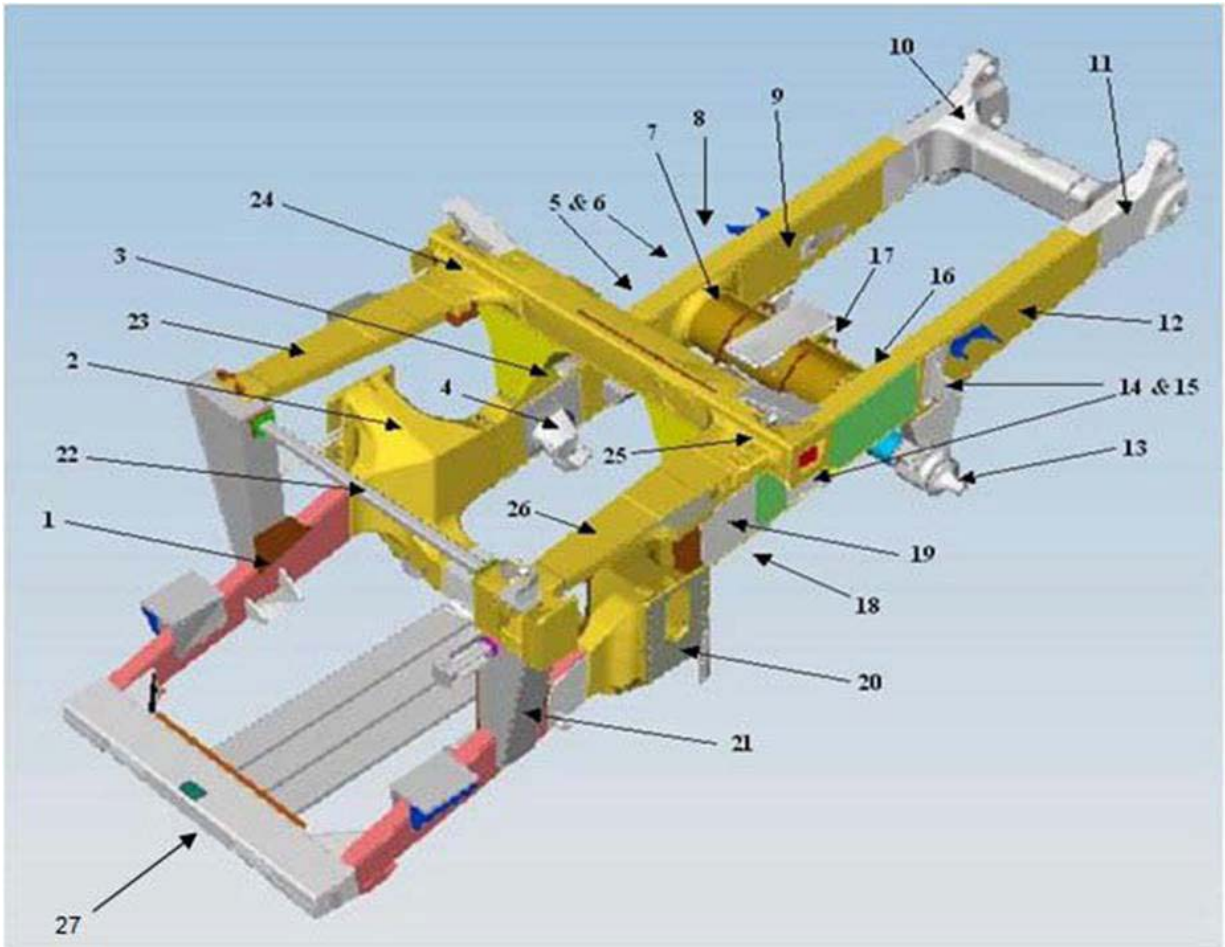


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# **Analysis Report**

# Areas Inspected



<u>Area #</u>	<u>Defects</u>
(# 2) Left and Right	Defect found on the left side
(# 3) Left and Right	Defect found on the right side
(# 17) and (# 16)	Defect found on # 7
(# 24) and (# 25)	No Defects Detected

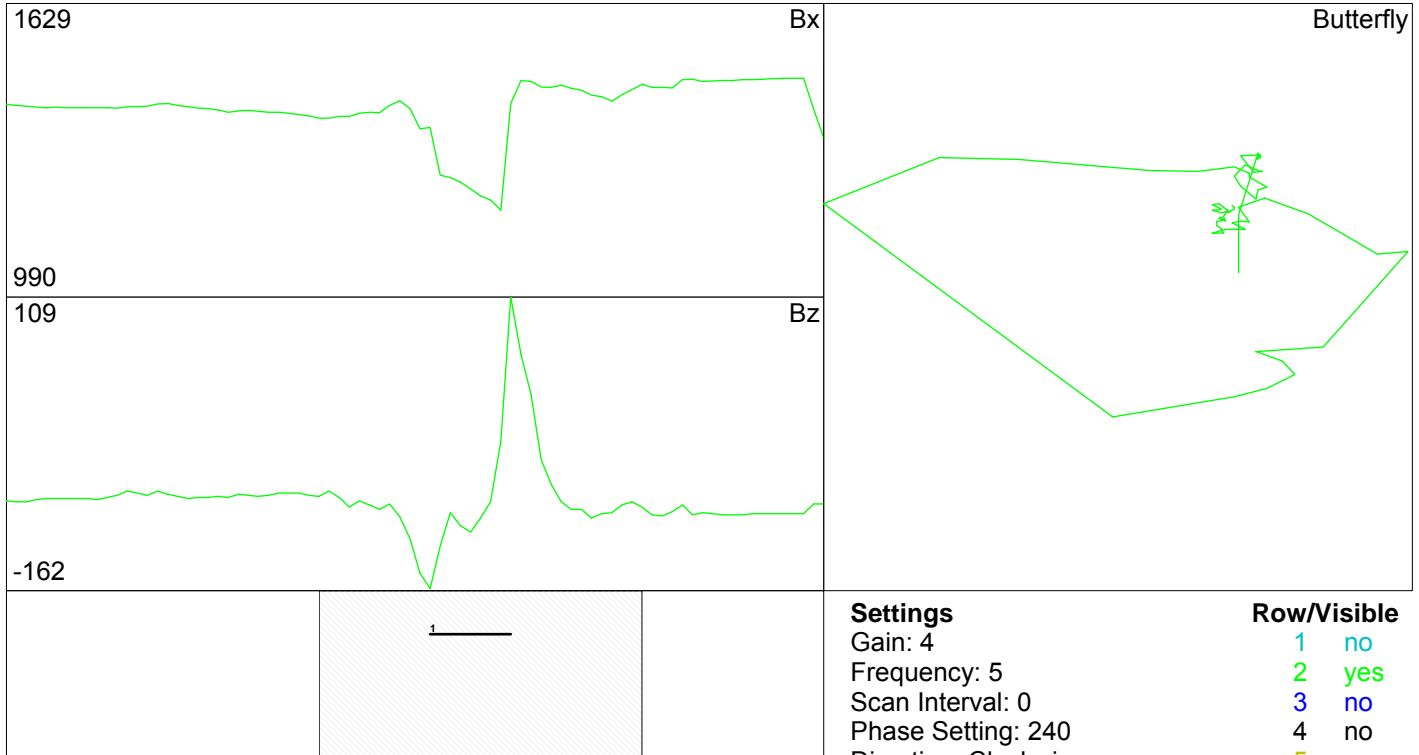


## GENERAL INSPECTION PAGE REPORT

**Component:** right front strut  
**Test Date:** 4/12/2011  
creek

**Test Time:** 12:56

**Original JobCode:** #20 cat haul truck line



**Region Key**  
 Defect   
  Other

**Settings**  
 Gain: 4  
 Frequency: 5  
 Scan Interval: 0  
 Phase Setting: 240  
 Direction: Clockwise  
 Data Field: X Field  
 Start Posn (mm): 0  
 Scalings: Changed

**Row/Visible**

1	no
2	yes
3	no
4	no
5	no
6	no
7	no
8	no

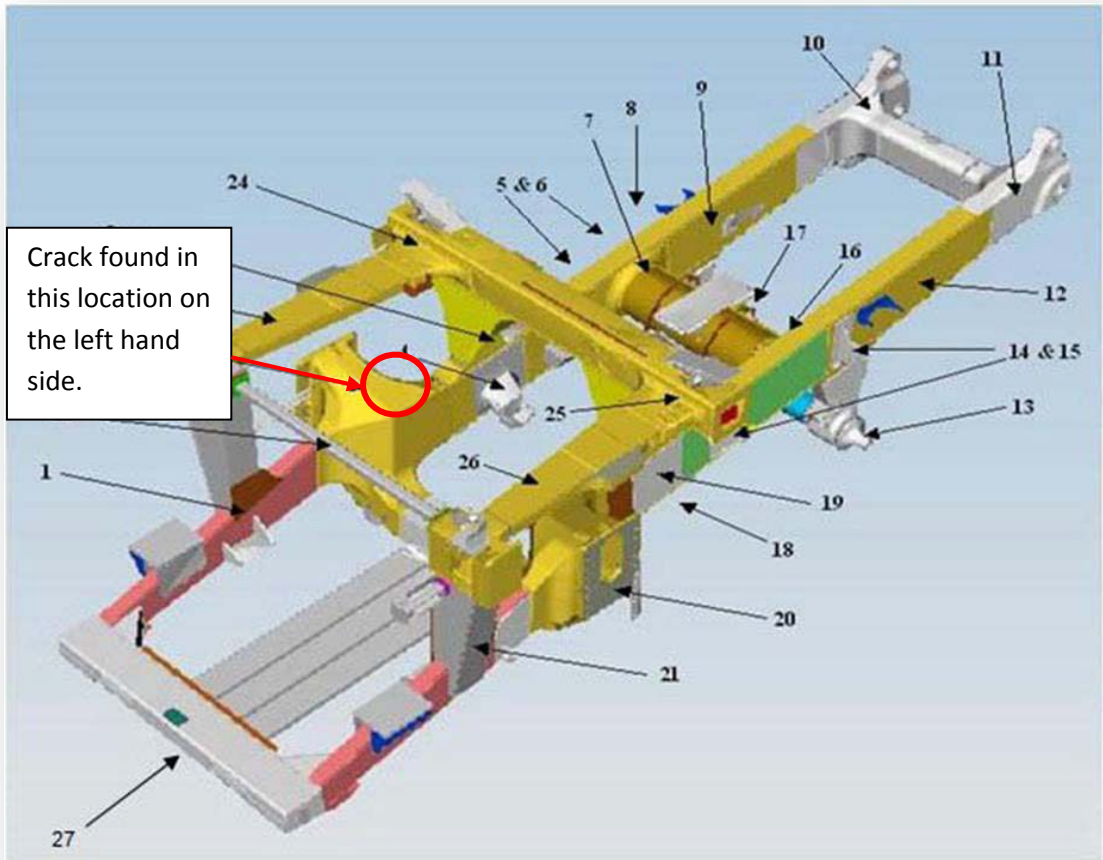
**Defects**

Len	Depth	Row(s)	Centre	Coat	CF
1: 38 mm	10.2 mm	2		0.0 mm	0.90

**Notes**

Crack found on the front left strut on the top of the part.

Probe: Hull Inspect Array  
 Serial Number: 2784  
 Configuration: Ferritic Steel  
 Factory Configured: Yes  
 Instrument Serial: 4023  
 Deployment: No encoder

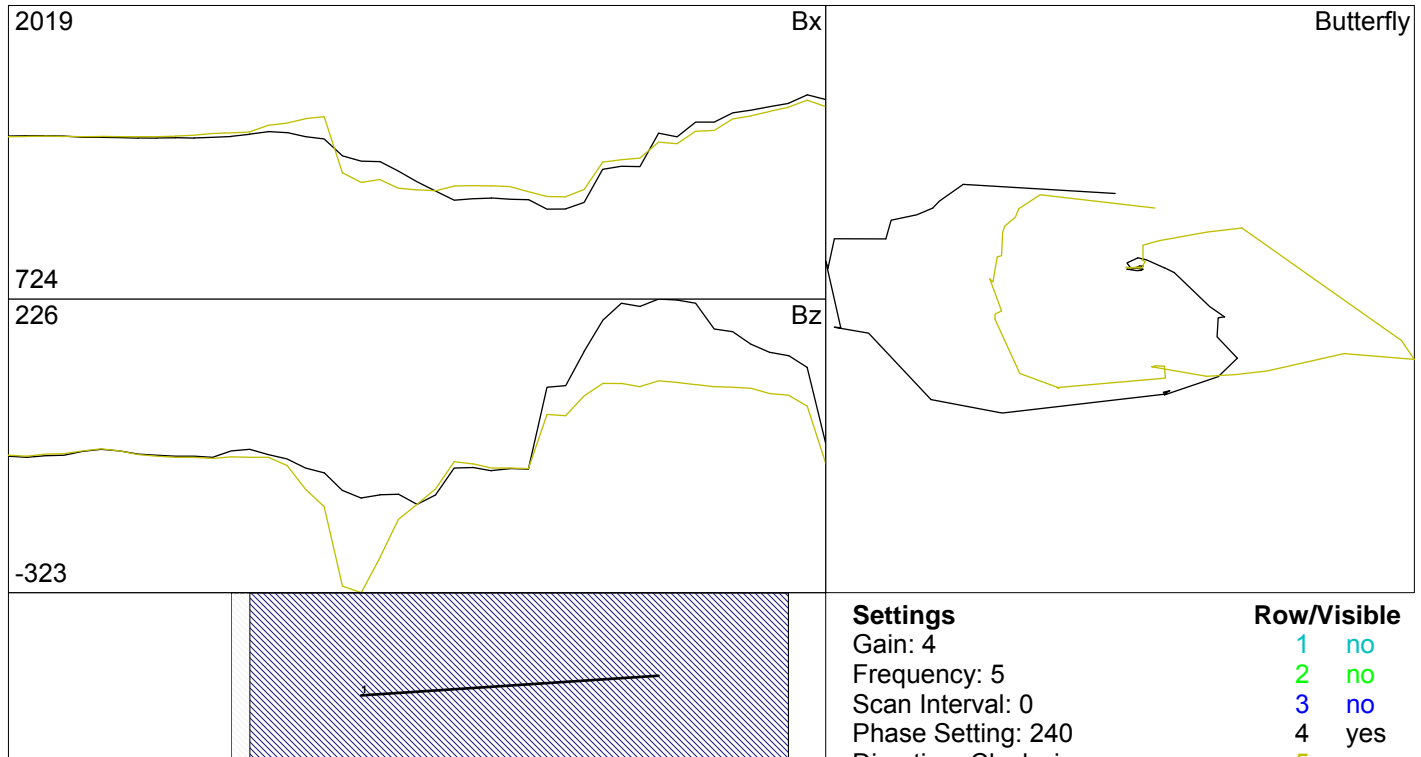


## GENERAL INSPECTION PAGE REPORT

**Component:** right torque tube  
**Test Date:** 4/12/2011  
creek

**Test Time:** 12:50

**Original JobCode:** #20 cat haul truck



**Region Key**  
 Defect    Other

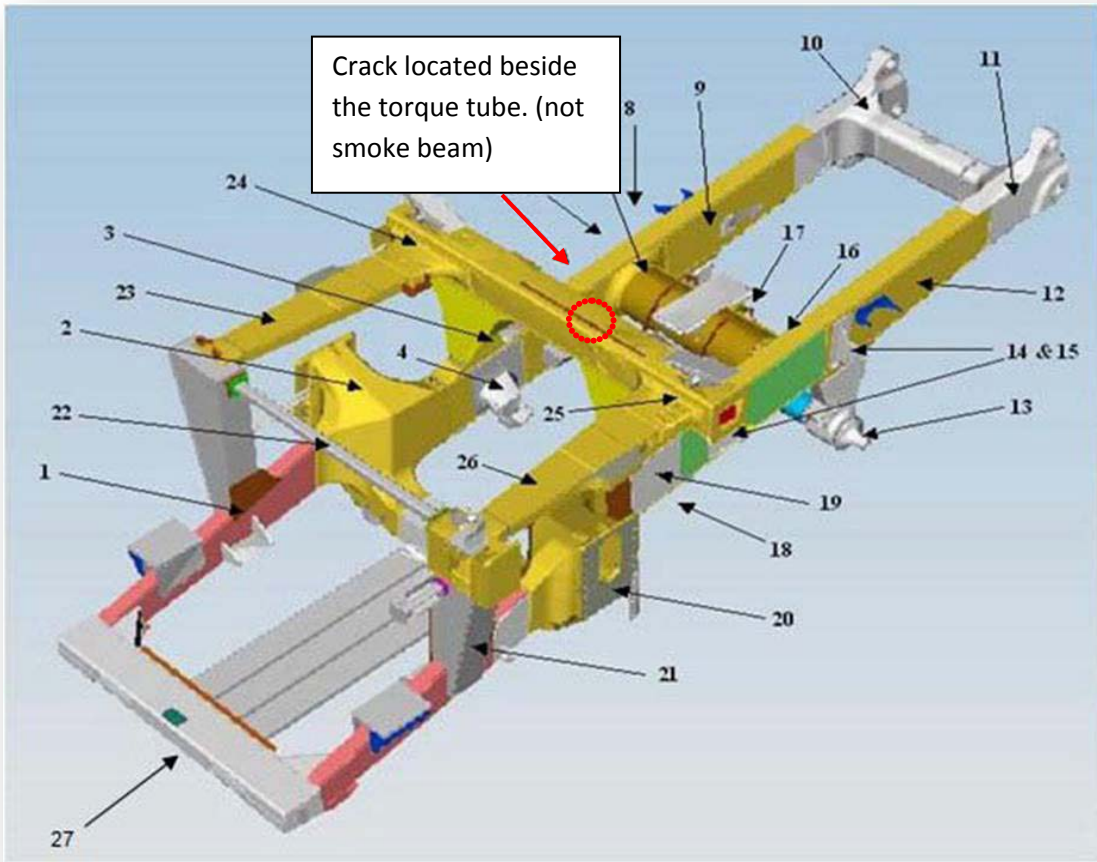
**Defects**

Len	Depth	Row(s)	Centre	Coat	CF
1: 95 mm	> 47.4 mm	5 to 4		0.0 mm	0.90

**Notes**

Crack found near the right torque tube area on the plate welded to the box frame.

Probe: Hull Inspect Array  
 Serial Number: 2784  
 Configuration: Ferritic Steel  
 Factory Configured: Yes  
 Instrument Serial: 4023  
 Deployment: No encoder

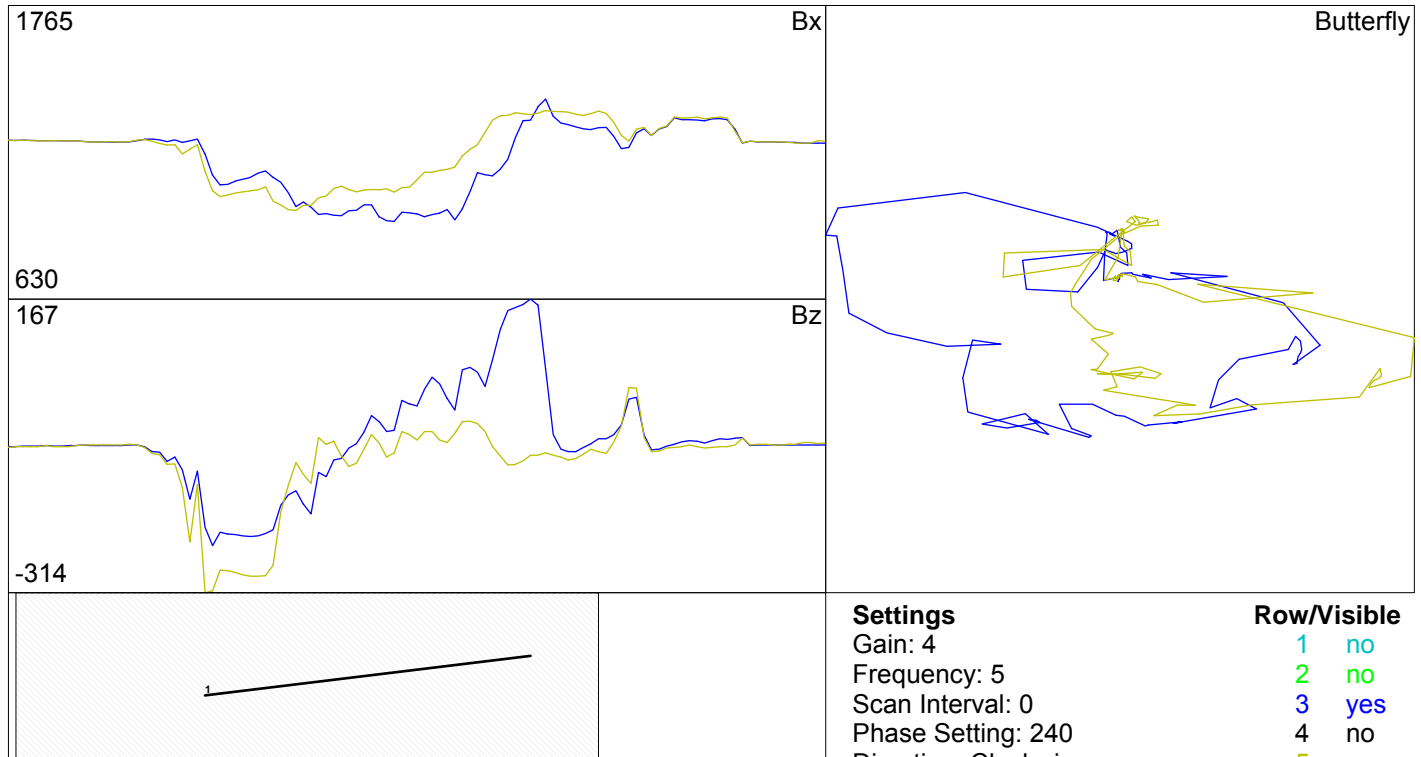


## GENERAL INSPECTION PAGE REPORT

**Component:** right front strut  
**Test Date:** 4/12/2011  
creek

**Test Time:** 13:07

**Original JobCode:** #20 cat haul truck



**Region Key**  
 Defect   
  Other

**Settings**

Gain: 4  
 Frequency: 5  
 Scan Interval: 0  
 Phase Setting: 240  
 Direction: Clockwise  
 Data Field: X Field  
 Start Posn (mm): 0  
 Scalings: Changed

**Row/Visible**

1 no  
 2 no  
 3 yes  
 4 no  
 5 yes  
 6 no  
 7 no  
 8 no

**Defects**

Len	Depth	Row(s)	Centre	Coat	CF
1: 157 mm	> 78.5 mm	5 to 3		0.0 mm	0.90

**Notes**

Crack found on the front right strut located near the top.

Probe: Hull Inspect Array  
 Serial Number: 2784  
 Configuration: Ferritic Steel  
 Factory Configured: Yes  
 Instrument Serial: 4023  
 Deployment: No encoder



