

Current Hazmon Field Situations

Concerning Existing Realities



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Illinois Elevator Explosion Could Have Been Worse

Debris field from the blast extended up to 500 feet



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Hazard Monitoring Understanding



Warnings

Alarms



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Hazard Monitoring Understanding



Warnings

Alarms

ROR?



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Hazard Monitoring Understanding



Warnings %

Alarms %



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Hazard Monitoring Understanding



On

Off



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**My system works properly!
.....right??**



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**Single-Wire, Digital
Intrinsically Safe Network**

**Clean, Consistent Installations
With HazMon-In-A-Box™**

**WS2-HM Communicates With
Any PLC/PC, or Hand-Held
Device - No MS Windows
Or Annual License Fees!**

Bus Converter Network



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A photograph of several large, cylindrical industrial silos or grain elevators. The silos are made of metal and have a corrugated texture. They are connected by a network of pipes and walkways. The scene is set outdoors, and the lighting is bright, suggesting a sunny day. The word "Validations!" is written in a large, bold, blue font with a white outline, slanted diagonally across the center of the image.

Validations!



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Real-World Examples



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Real-World Examples



ISSUE 54

Assigned To Crossover Belt

The conduit on the shaft speed sensor is broken.

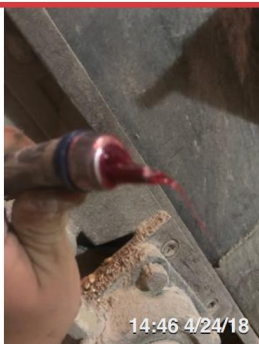
Real-World Examples



ISSUE 1

Assigned To Truck Leg

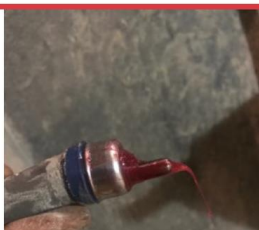
The knee pulley north bearing sensor was not properly tightened allowing it to leave the bearing.



ISSUE 2

Assigned To Truck Leg

The knee pulley south bearing sensor was not properly tightened allowing it to leave the bearing.



ISSUE 3

Assigned To Truck Leg

The tail north bearing sensor was not properly tightened allowing it to leave the bearing.

Real-World Examples

ISSUE 25

Assigned To Leg 3

The knee pulley south bearing sensor does not change temperature when exposed to heat.

ISSUE 26

Assigned To Leg 3

The knee pulley north bearing sensor does not change temperature when exposed to heat.



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Real-World Examples

ISSUE 8

Assigned To Leg 2

The tail north alignment sensor does not sound the alarm horn or shutdown on High Alarm.

ISSUE 9

Assigned To Leg 2

The tail north bearing sensor does not sound the alarm horn on High Warning.

ISSUE 10

Assigned To Leg 2

The tail north bearing sensor does not sound the alarm horn or shutdown on High Alarm.



ISSUE 11

Assigned To Leg 1

The tail north bearing sensor conduit was not fully put together.

Real-World Examples



ISSUE 6

Assigned To South Leg

The tail Field Interconnect Box (FIB) is not grounded on the outgoing A and B branches.

Real-World Examples

ISSUE 19

Assigned To East House Leg 1

The tail west alignment sensor does not Alarm or shutdown.

ISSUE 20

Assigned To East House Leg 3

The tail east bearing sensor does not shutdown.

ISSUE 21

Assigned To East House Leg 3

The tail west bearing sensor does not shutdown.

ISSUE 22

Assigned To East House Leg 3

The tail east alignment sensor does not shutdown.

Real-World Examples



ISSUE 6

Assigned To Truck Leg

The tail north bearing sensor is not long enough to properly monitor the bearing.



ISSUE 7

Assigned To Truck Leg

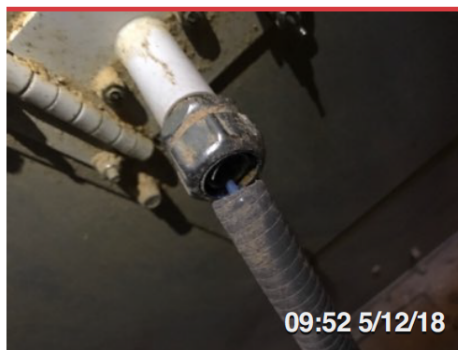
The tail north alignment sensor is flush with the casing. (Spacer was removed by CMC)

Real-World Examples

ISSUE 14

Assigned To West Leg

The shaft speed sensor shuts down at 10% of actual running RPM's (Low Warning).



ISSUE 15

Assigned To East Leg

The tail west alignment sensor conduit is broken.

ISSUE 16

Assigned To West Leg

The shaft speed sensor does not sound the audible alarm horn on Low Warning.

Real-World Examples

ISSUE 23

Assigned To Leg 2

The tail west alignment sensor does not Alarm unless the sensor is firmly compressed in the center.

12:24 5/15/18



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Real-World Examples



ISSUE 3

Assigned To Leg 4

The head north alignment sensor will not make contact with the belt.

Real-World Examples



ISSUE 4

Assigned To Truck Leg

The tail south alignment sensor is flush with the casing. (Spacer was removed by CMC)



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Real-World Examples



ISSUE 11

Assigned To Truck Leg

The plug sensor plunger does not move not allowing it to alarm.



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Real-World Examples



ISSUE 5

Assigned To Leg 3

The knee pulley north Touch Switch is packed with material and not able to compress to give alarms. (Sensor needs replaced)

Real-World Examples

ISSUE 8

Assigned To Leg 5

The tail north bearing sensor is labeled as the tail south bearing sensor.

ISSUE 9

Assigned To Leg 5

The shaft speed sensor does not give a low warning alarm until 14% of actual running RPM's.

(Fixed by Electric and revalidated)



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Real-World Examples

ISSUE 12

Assigned To Leg 4

The shaft speed sensor does not change in percentage value on the PLC until the sensor is emulated by the 4B tester to 1% of actual running RPMs and then a 20% Alarm is given in the PLC to shutdown. (Fixed by Electric and revalidated)

ISSUE 13

Assigned To Leg 5

The shaft speed sensor does not give a low alarm for shutdown until 4% of the actual running RPM's. (Fixed by Electric and revalidated)



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Real-World Examples



ISSUE 12

Assigned To East House Leg 3

The shaft speed sensor on the tail west bearing does nothing in the system.

Real-World Examples



ISSUE 45

Assigned To East House Leg 2

The shaft speed sensor on the tail west bearing does nothing in the system.

Real-World Examples



Single Site Report - Many Issues



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Q & A

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