EHMS & EHV Overview

RAILINC

Agenda

- Review EHMS
  - Viewing current equipment status
  - Viewing equipment history
- Review EHV
  - Equipment status from multiple applications
  - Reporting repairs and inspections
  - Associating component ID (CID)
  - Fleet Stats

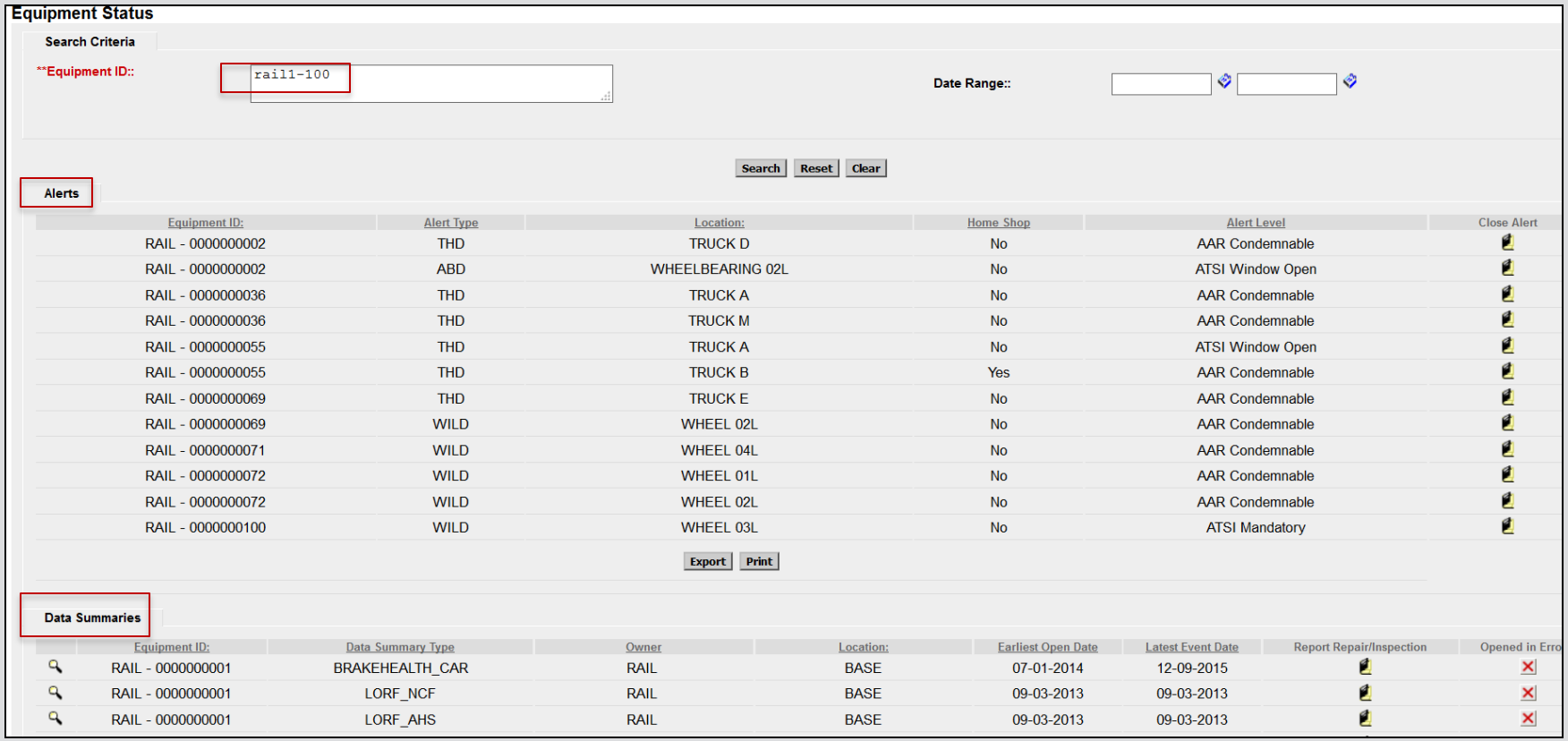
EHMS Overview

- EHMS contains alert and repair information for Field Manual of the AAR Interchange Rules 36, 37, 41, 43 & 44
  - Excludes containers and trailers
- Supported by AAR Interchange Rule 94
- Provides visibility to data summaries including line of road failure (LORF) data summaries
- Access to calibration records
  - Detector owners have access to upload
- Managed by Equipment Health Management Committee (EHMC)

EHMS Equipment Status

- Equipment Status screen provides access to:
  - Open alerts
  - Open data summaries
- Preferred option when searching for open alerts or data summaries
- Displays up to 1,000 rows of data on screen

Equipment Status Query Results



Equipment Status

Search Criteria

**Equipment ID:: rail1-100

Date Range::

Search Reset Clear

Alerts

Equipment ID:	Alert Type	Location:	Home Shop	Alert Level	Close Alert
RAIL - 0000000002	THD	TRUCK D	No	AAR Condemnable	
RAIL - 0000000002	ABD	WHEELBEARING 02L	No	ATSI Window Open	
RAIL - 0000000036	THD	TRUCK A	No	AAR Condemnable	
RAIL - 0000000036	THD	TRUCK M	No	AAR Condemnable	
RAIL - 0000000055	THD	TRUCK A	No	ATSI Window Open	
RAIL - 0000000055	THD	TRUCK B	Yes	AAR Condemnable	
RAIL - 0000000069	THD	TRUCK E	No	AAR Condemnable	
RAIL - 0000000069	WILD	WHEEL 02L	No	AAR Condemnable	
RAIL - 0000000071	WILD	WHEEL 04L	No	AAR Condemnable	
RAIL - 0000000072	WILD	WHEEL 01L	No	AAR Condemnable	
RAIL - 0000000072	WILD	WHEEL 02L	No	AAR Condemnable	
RAIL - 0000000100	WILD	WHEEL 03L	No	ATSI Mandatory	

Export Print

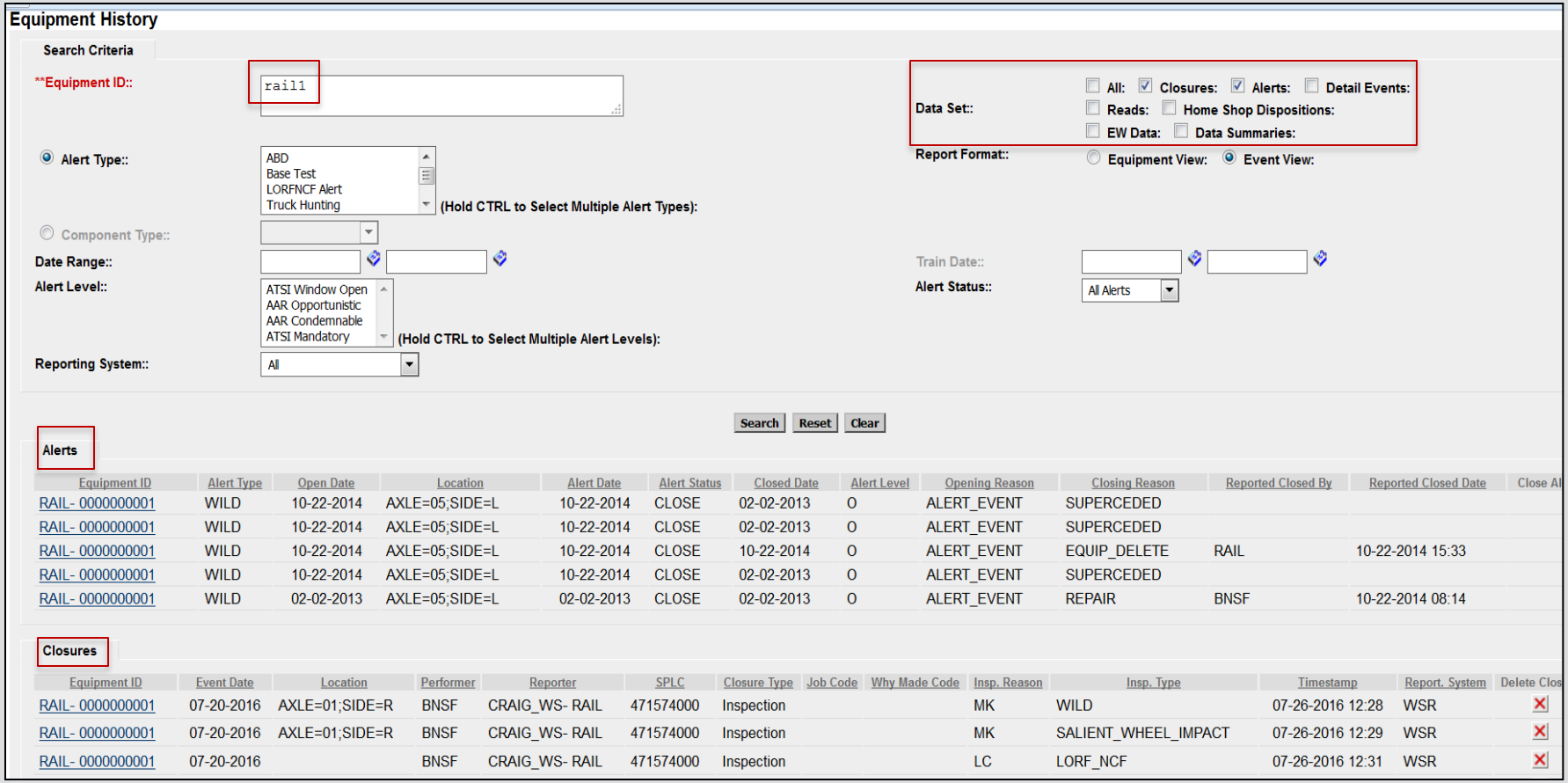
Data Summaries

Equipment ID:	Data Summary Type	Owner	Location:	Earliest Open Date	Latest Event Date	Report Repair/Inspection	Opened in Erro
RAIL - 0000000001	BRAKEHEALTH_CAR	RAIL	BASE	07-01-2014	12-09-2015		
RAIL - 0000000001	LORF_NCF	RAIL	BASE	09-03-2013	09-03-2013		
RAIL - 0000000001	LORF_AHS	RAIL	BASE	09-03-2013	09-03-2013		

EHMS Equipment History

- Equipment History screen provides access to:
  - Open and closed alerts
  - Open and closed data summaries
  - Repairs and closures
    - Including Reporter/Performer and Job Code
    - Visible to Umler interested parties (stencil mark owner, Umler owner, lessee, maintenance responsible party)
- Additional options include Early Warning information

Equipment History Query Results



Equipment History

Search Criteria

**Equipment ID:: rail1

Data Set:: All: Closures: Alerts: Detail Events: Reads: Home Shop Dispositions: EW Data: Data Summaries:

Alert Type:: ABD, Base Test, LORFNCF Alert, Truck Hunting (Hold CTRL to Select Multiple Alert Types):

Report Format:: Equipment View: Event View:

Component Type::

Date Range::

Train Date::

Alert Level:: ATSI Window Open, AAR Opportunistic, AAR Condemnable, ATSI Mandatory (Hold CTRL to Select Multiple Alert Levels):

Alert Status:: All Alerts

Reporting System:: All

Search Reset Clear

Alerts

Equipment ID	Alert Type	Open Date	Location	Alert Date	Alert Status	Closed Date	Alert Level	Opening Reason	Closing Reason	Reported Closed By	Reported Closed Date	Close Al
RAIL- 0000000001	WILD	10-22-2014	AXLE=05;SIDE=L	10-22-2014	CLOSE	02-02-2013	O	ALERT_EVENT	SUPERCEDED			
RAIL- 0000000001	WILD	10-22-2014	AXLE=05;SIDE=L	10-22-2014	CLOSE	02-02-2013	O	ALERT_EVENT	SUPERCEDED			
RAIL- 0000000001	WILD	10-22-2014	AXLE=05;SIDE=L	10-22-2014	CLOSE	10-22-2014	O	ALERT_EVENT	EQUIP_DELETE	RAIL	10-22-2014 15:33	
RAIL- 0000000001	WILD	10-22-2014	AXLE=05;SIDE=L	10-22-2014	CLOSE	02-02-2013	O	ALERT_EVENT	SUPERCEDED			
RAIL- 0000000001	WILD	02-02-2013	AXLE=05;SIDE=L	02-02-2013	CLOSE	02-02-2013	O	ALERT_EVENT	REPAIR	BNSF	10-22-2014 08:14	

Closures

Equipment ID	Event Date	Location	Performer	Reporter	SPLC	Closure Type	Job Code	Why Made Code	Insp. Reason	Insp. Type	Timestamp	Report. System	Delete Clos
RAIL- 0000000001	07-20-2016	AXLE=01;SIDE=R	BNSF	CRAIG_WS- RAIL	471574000	Inspection			MK	WILD	07-26-2016 12:28	WSR	
RAIL- 0000000001	07-20-2016	AXLE=01;SIDE=R	BNSF	CRAIG_WS- RAIL	471574000	Inspection			MK	SALIENT_WHEEL_IMPACT	07-26-2016 12:29	WSR	
RAIL- 0000000001	07-20-2016		BNSF	CRAIG_WS- RAIL	471574000	Inspection			LC	LORF_NCF	07-26-2016 12:31	WSR	

EQUIPMENT HEALTH VIEW OVERVIEW

Equipment Health View Overview

- EHV was implemented in early 2012, accessible via EHMS
  - Became stand-alone application in September 2016
  - Access via EHMS will be removed in 2017
- Consolidates health related information from Equipment Health Management System (EHMS), Umler, Early Warning (EW) and Damage Defective Car Tracking (DDCT)
- Proper application permissions required for each application to view or to report repairs/inspections
- Adheres to AAR Interchange Rules and other industry guidelines

Equipment Health View Overview

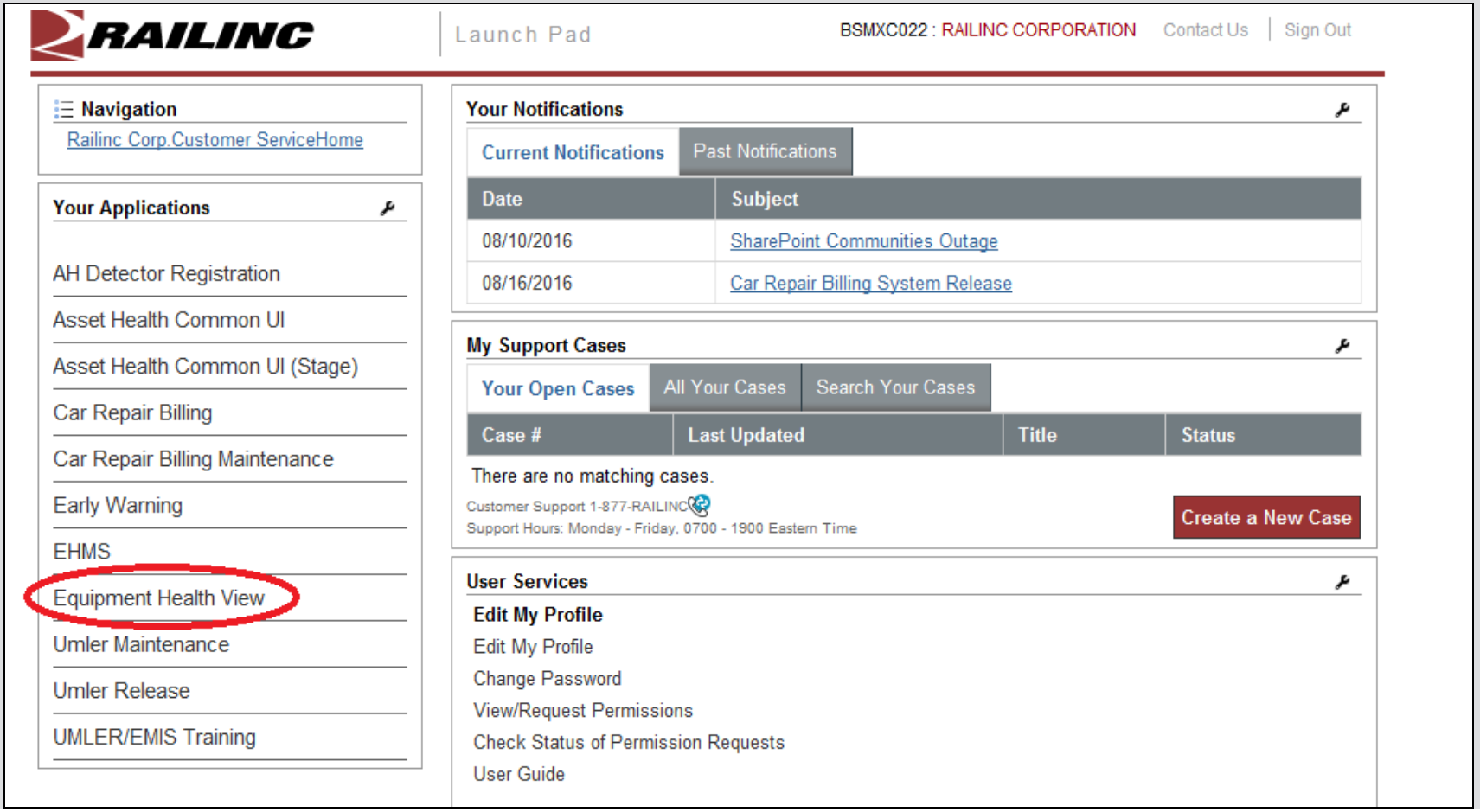
- EHV utilizes dashboard with Asset information such as:
  - Umler inspections, EHMS alerts and data summaries, Early Warning letter information, Association of Component ID (CID)
  - High-level DDCT info to Handing Carrier, Car Owner and/or shop involved with the incident (party to the incident)
  - Equipment location, mileage and Fleet Stats to car owners
  - Must have proper permissions for source applications

- Fleet Stats support car owners visibility to Asset info
  - Available only to car owners
  - Downloads where the equipment count exceeds 200 cars incur charges as defined in Railinc's Price List

Permissions Required for EHV

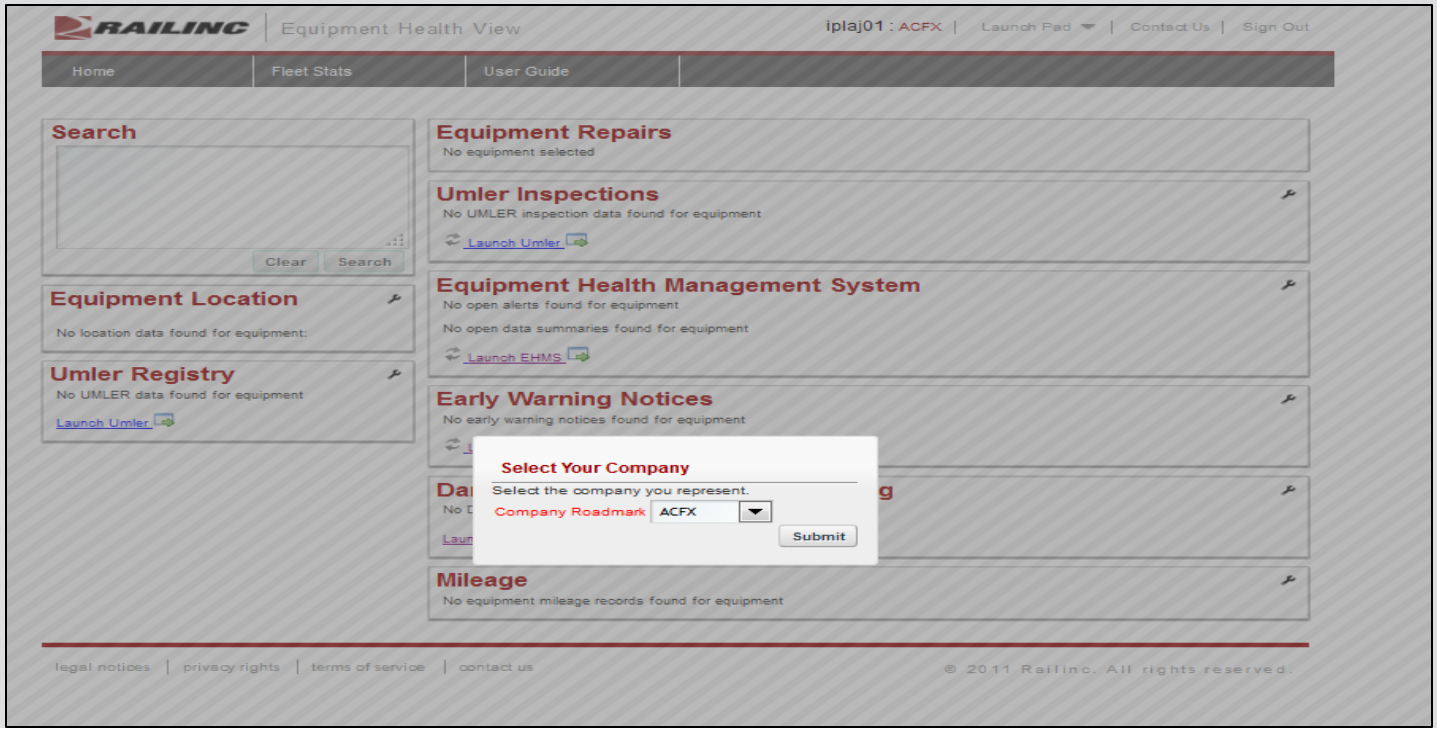
- EHV interfaces with several Railinc applications and proper access is required
- You will need:
  - EHV Access
    - ✓ EHV Generic Access
    - ✓ EHV Fleet Stats – required for Fleet Stats
    - ✓ EHV Billed Party – required for downloading more than 200 cars
  - Umler- view high-level equipment info and inspections such Air Brake Test due dates
    - ✓ Umler Inspection Rights
  - EHMS- view alerts and report repairs and inspections as well as Data Summaries
    - ✓ EHMS Generic and Car Repair History
  - Early Warning- displays when car is on MA or EW letter
    - ✓ EW Report inspection rights
  - DDCT- view high-level info that incident exists to parties of incident
    - ✓ Must have appropriate DDCT permissions.
  - Must be car owner to view Mileage or Equipment location
  - Must be party to the incident for DDCT

Access to EHV



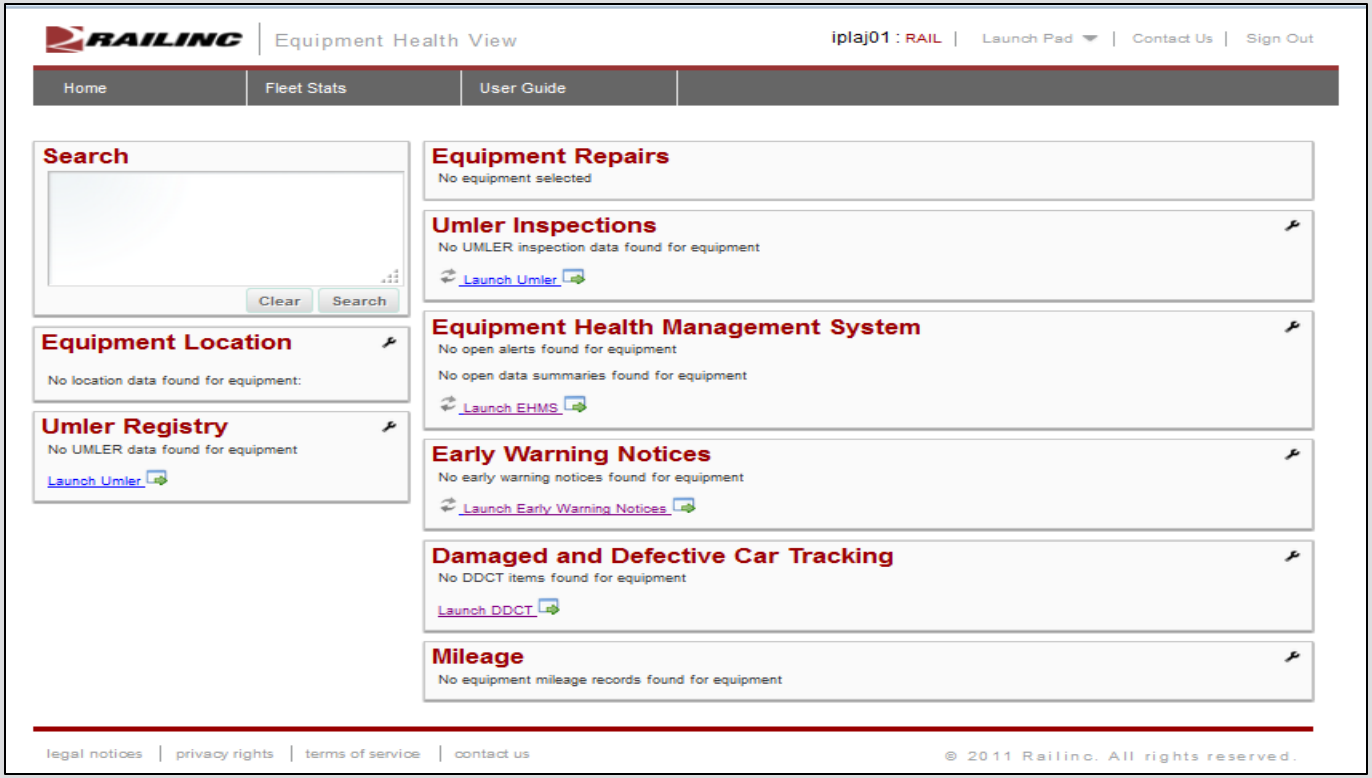
Access to EHV

- Select mark from ‘Select Your Company’

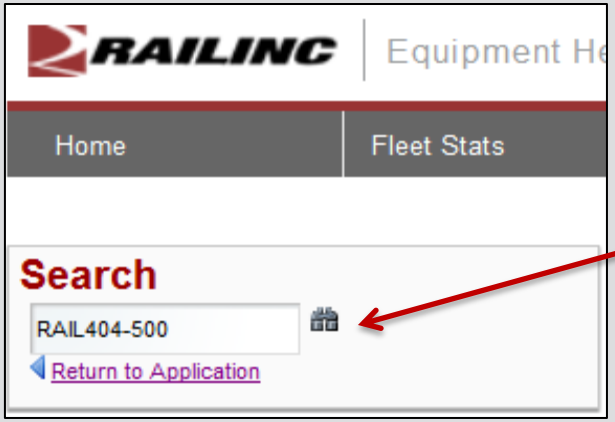


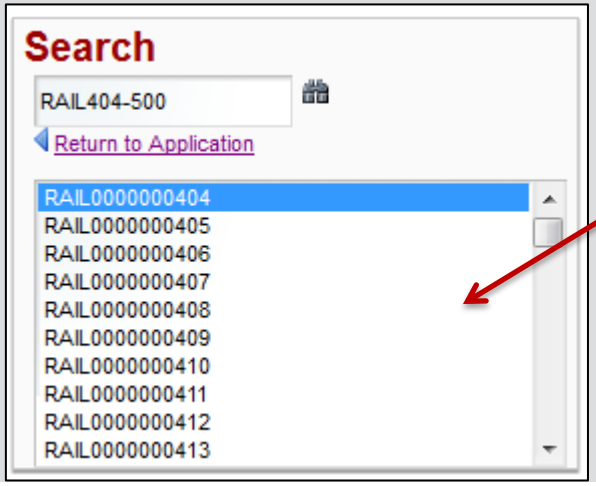
EHV Dashboard

- Must have EHV permission and other required permissions for applications



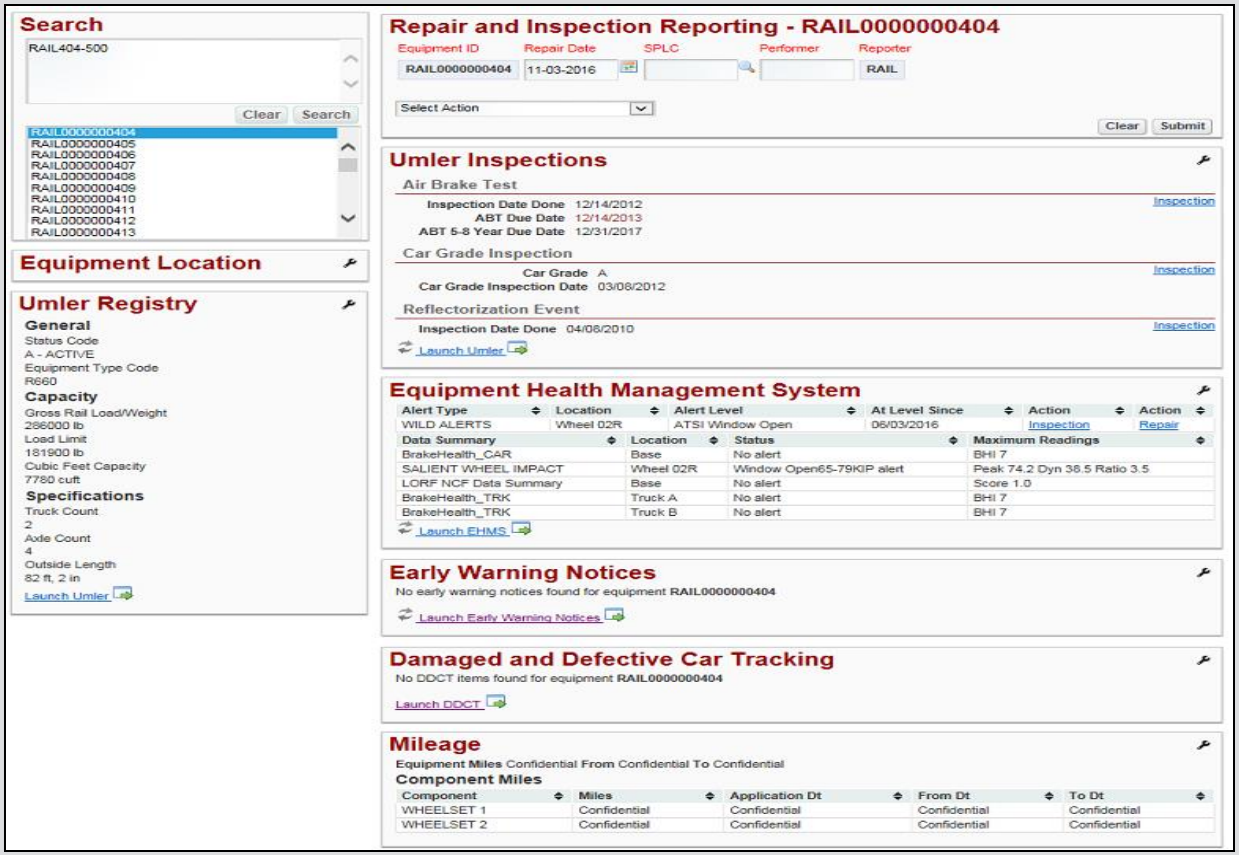
Searching Equipment



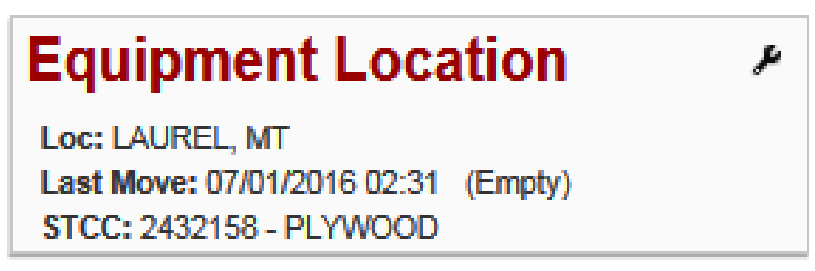


- Allows search by single equipment
- Ability to search range of equipment up to 200 equipment IDs
- Displays equipment IDs in numerical order
- Select equipment ID to view Asset information such as Umler, EHMS or Early Warning info

Viewing Health Data

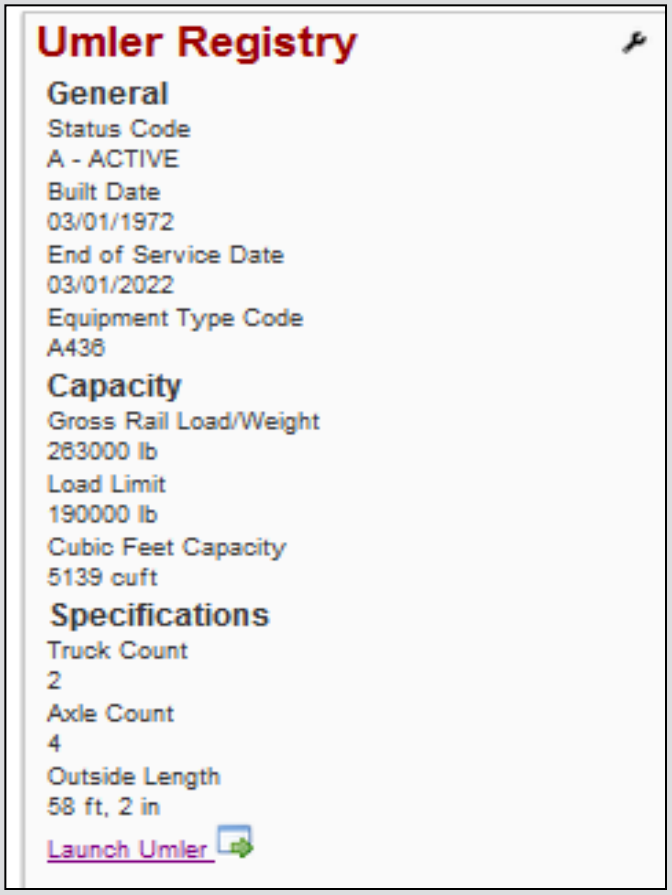


Viewing Equipment Location



- Displays location city/state, last move information and/or STCC when available
- Available to car owner or party to the waybill

Viewing Equipment Information



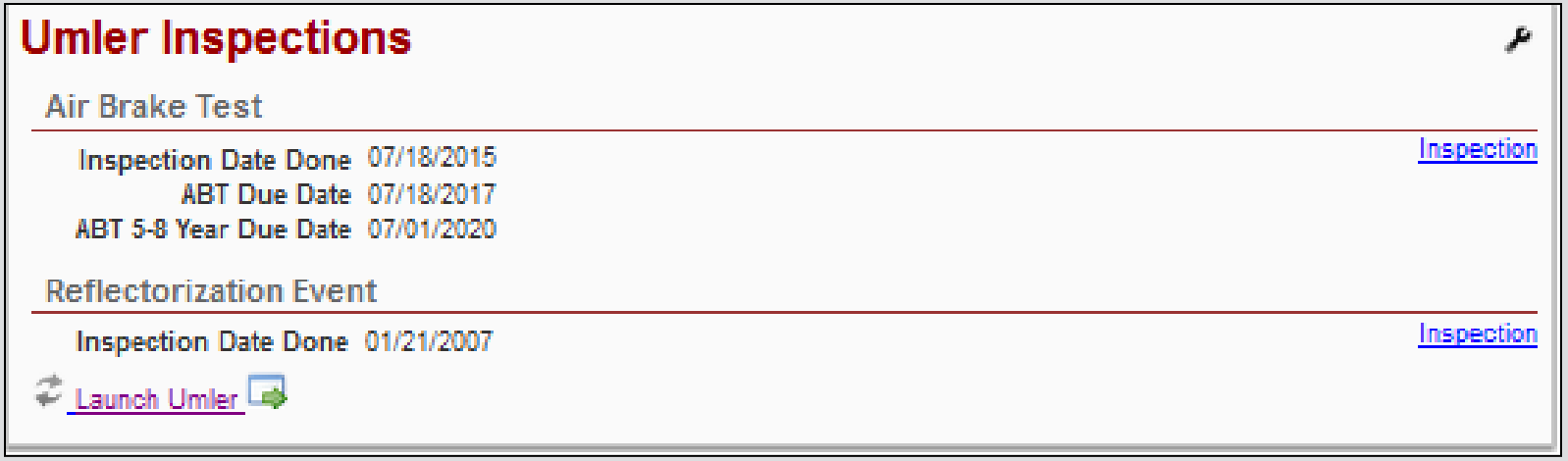
- Displays high level Umler info such as:
  - ✓ Equipment Type Code
  - ✓ Status Code
  - ✓ Equipment specifications such as truck and axle counts are shown
- Ability to access Umler using ‘Launch Umler’ link to view all details

Reporting Repairs and Inspections

- Ability to report repairs or inspections for Umler, EHMS or Early Warning
  - Use ‘Select Action’ dropdown to select
- Report Component ID (CID) associations
- Submit multiple actions at one time
  - Add completed repairs or inspections using ‘Select Action’, ‘Repair’ or ‘Inspection’ links

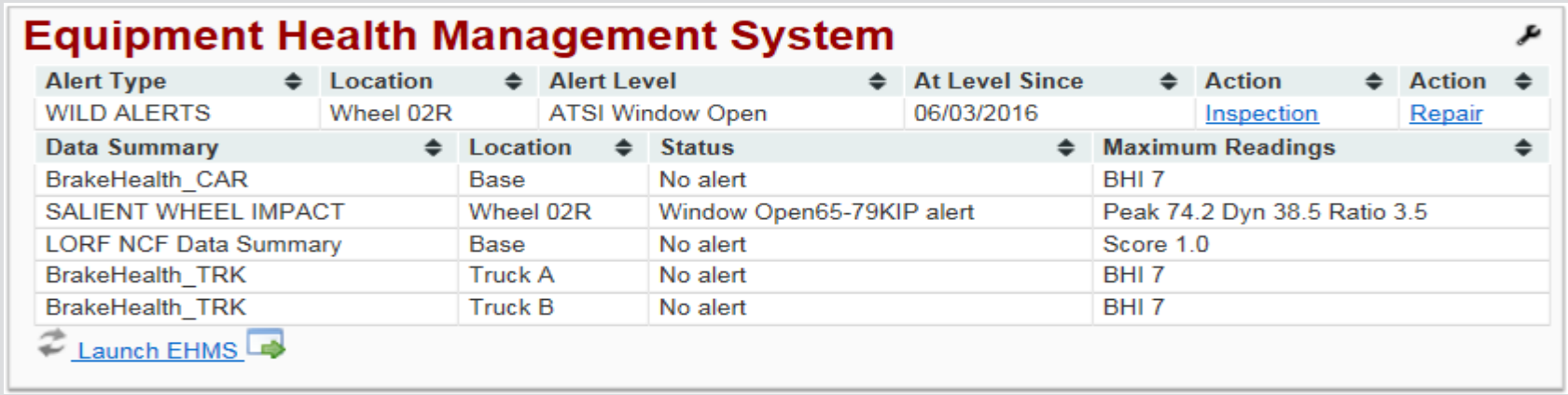
Viewing Umler Inspections

- Displays reported inspections including dates and details for each inspection (due dates, date done, etc.)
- Use ‘Inspection’ link to report inspection
- Access Umler using ‘Launch Umler’ link



Viewing EHMS Alerts and Data Summaries

- Displays open EHMS alert and data summaries information
- Use ‘Inspection’ or ‘Repair’ link to report repair or inspection
- Access EHMS using ‘Launch EHMS’ link



Equipment Health Management System

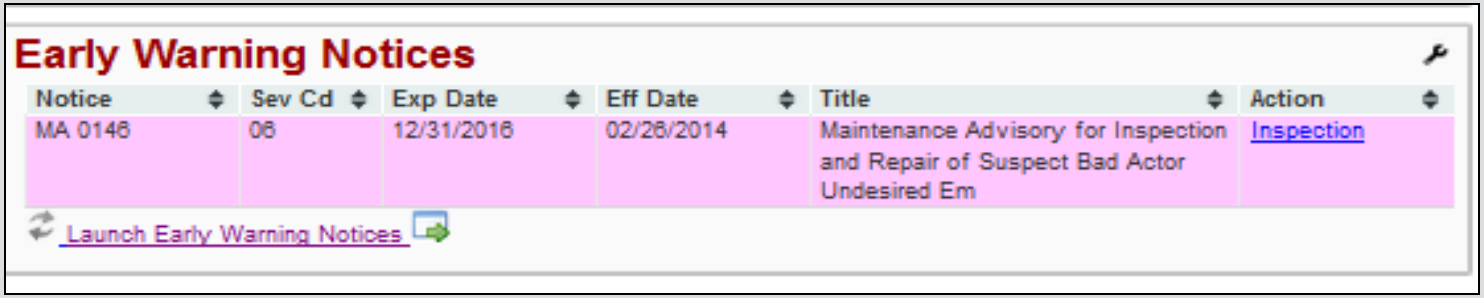
Alert Type	Location	Alert Level	At Level Since	Action	Action
WILD ALERTS	Wheel 02R	ATSI Window Open	06/03/2016	Inspection	Repair

Data Summary	Location	Status	Maximum Readings
BrakeHealth_CAR	Base	No alert	BHI 7
SALIENT WHEEL IMPACT	Wheel 02R	Window Open65-79KIP alert	Peak 74.2 Dyn 38.5 Ratio 3.5
LORF NCF Data Summary	Base	No alert	Score 1.0
BrakeHealth_TRK	Truck A	No alert	BHI 7
BrakeHealth_TRK	Truck B	No alert	BHI 7

Launch EHMS

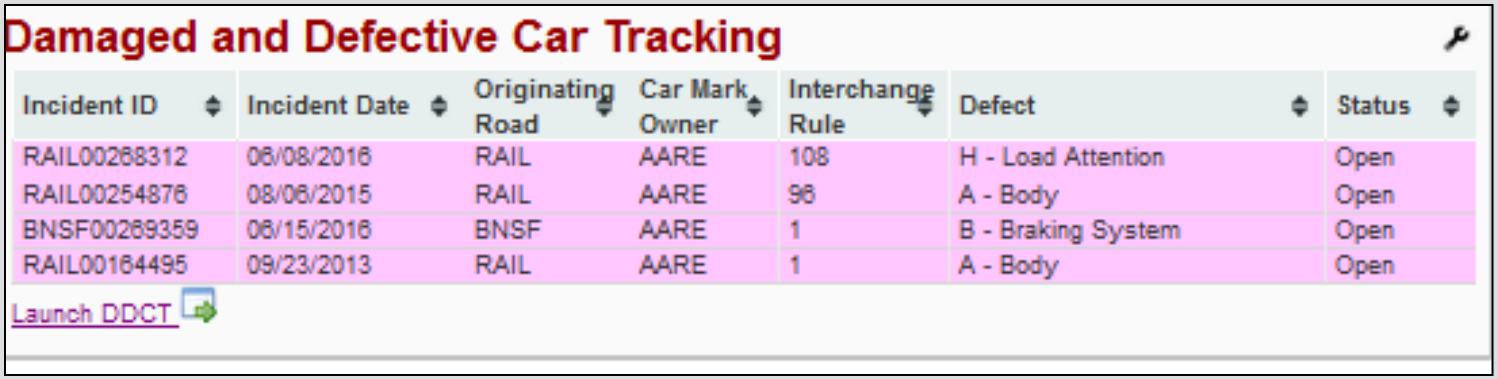
Viewing Early Warning

- Displays open Early Warning and Maintenance Advisories including Notice type and number, Severity Code, Effective/Expiration Date
  - ✓ Defined Early Warning Notices must be closed by reporting information to Umler
  - ✓ DDCT incidents must be closed by reporting repair in DDCT
- Access Early Warning using ‘Launch Early Warning Notices’ link



Viewing DDCT

- Displays open DDCT incidents to Handling Carrier, Car Owner or Shop associated with incident (party to the incident)
  - Requires DDCT permissions
- Access DDCT using ‘Launch DDCT’ link



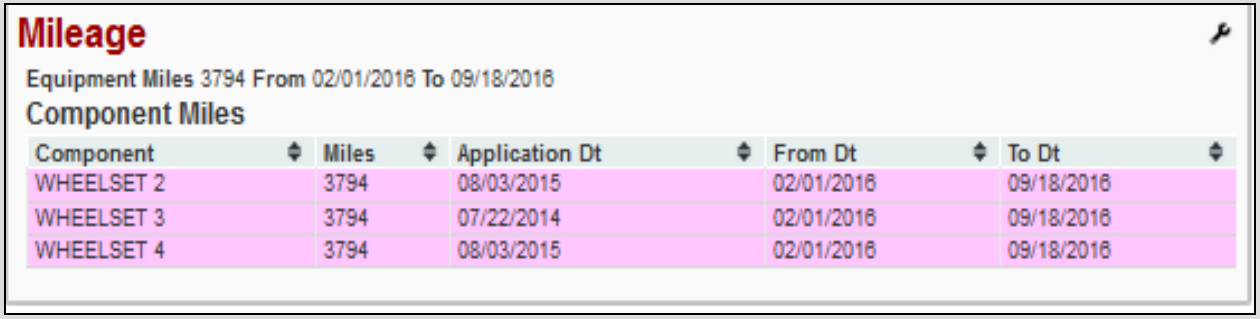
Damaged and Defective Car Tracking

Incident ID	Incident Date	Originating Road	Car Mark Owner	Interchange Rule	Defect	Status
RAIL00268312	06/08/2016	RAIL	AARE	108	H - Load Attention	Open
RAIL00254876	08/06/2015	RAIL	AARE	96	A - Body	Open
BNSF00269359	06/15/2016	BNSF	AARE	1	B - Braking System	Open
RAIL00164495	09/23/2013	RAIL	AARE	1	A - Body	Open

Launch DDCT

Viewing Mileage

- Uses car movement events to calculate equipment mileage
  - Data available starting January 2010 to present
  - From/To date showing first move to most recent movement
- Only visible to car owner



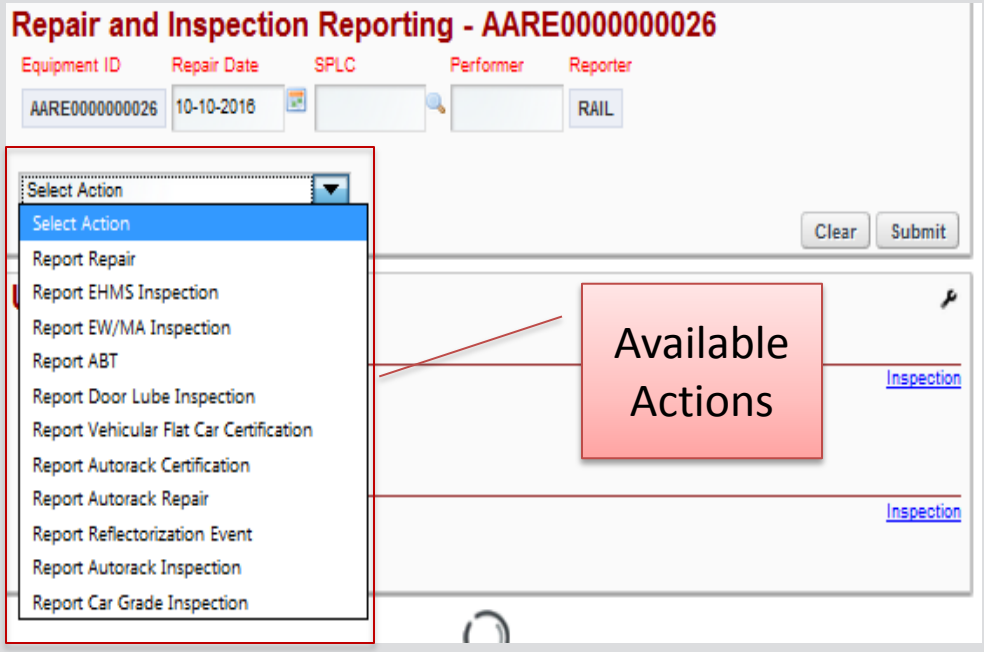
Mileage

Equipment Miles 3794 From 02/01/2016 To 09/18/2016

Component Miles

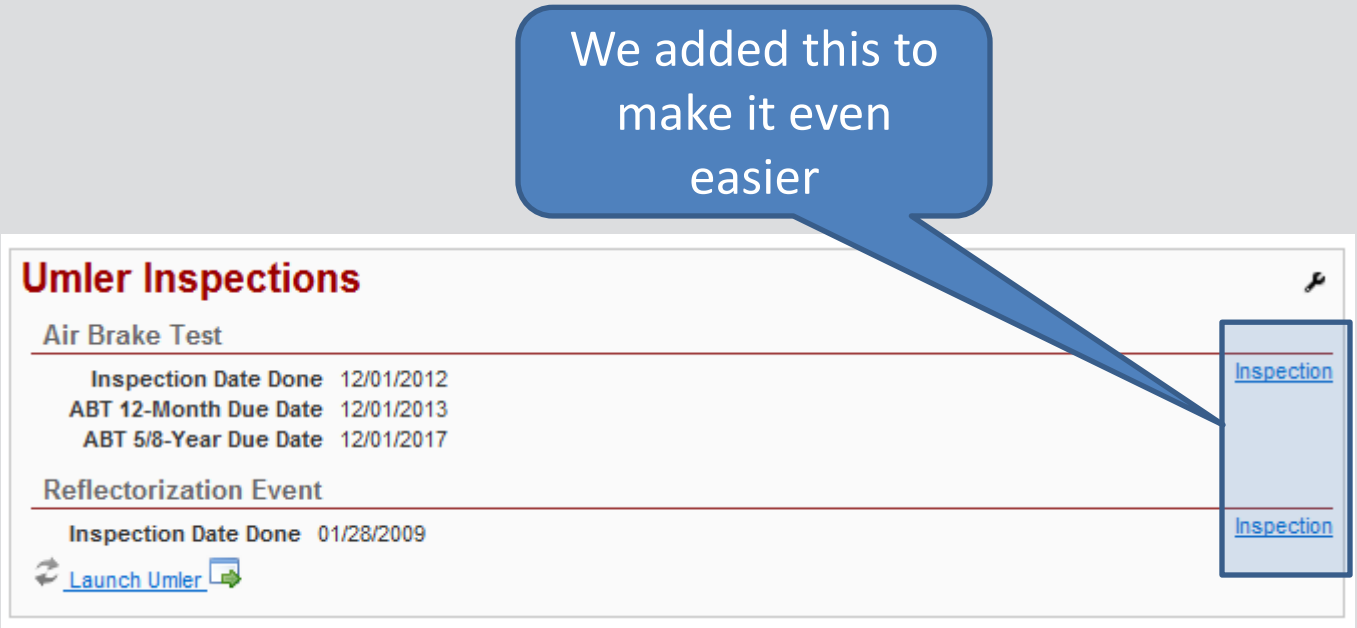
Component	Miles	Application Dt	From Dt	To Dt
WHEELSET 2	3794	08/03/2015	02/01/2016	09/18/2016
WHEELSET 3	3794	07/22/2014	02/01/2016	09/18/2016
WHEELSET 4	3794	08/03/2015	02/01/2016	09/18/2016

Reporting Repairs and Inspections



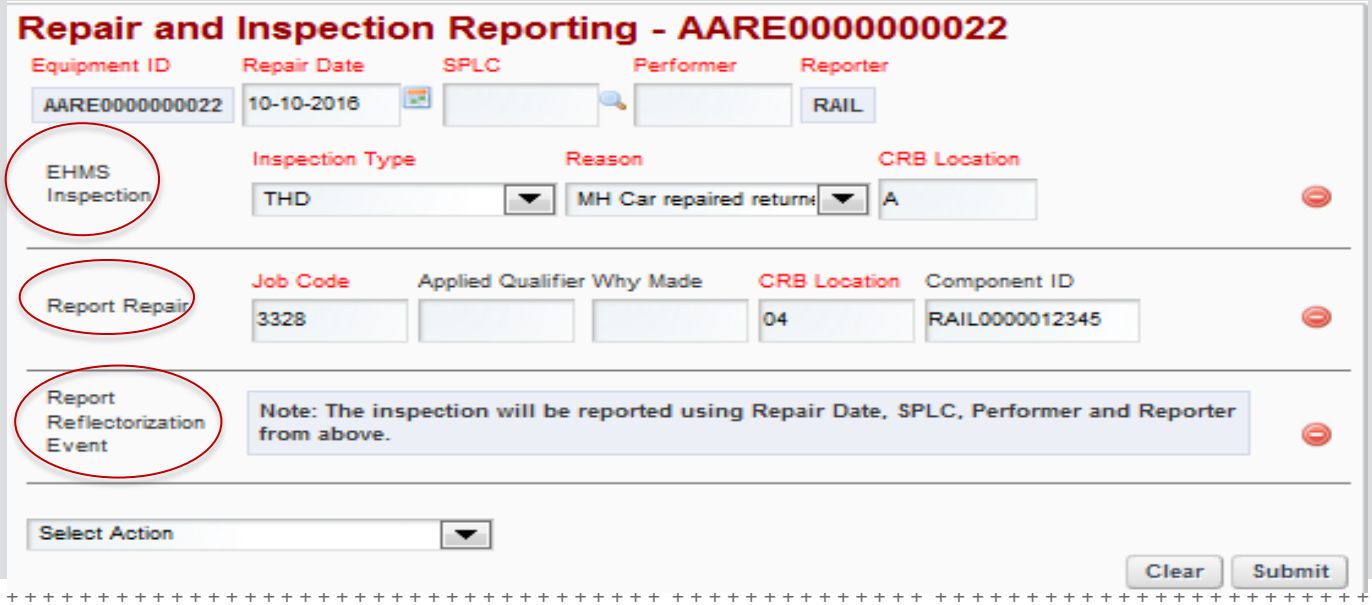
- Ability to use ‘Select Action’, ‘Repair’ or ‘Inspection’ links
- Multiple selections at one time

EHV Repairs & Inspections



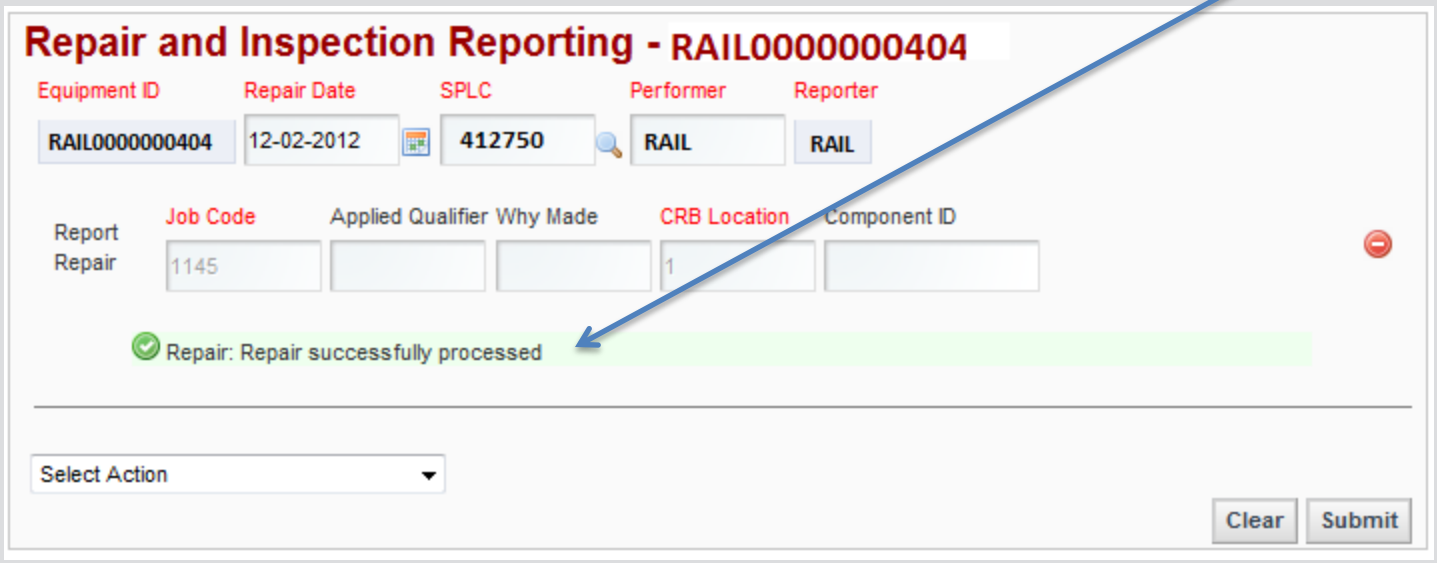
Reporting Multiple Actions

- Select appropriate repairs, inspections or associations to report
  - Required fields are in red
- Click ‘Submit’ when complete



EHV Repairs & Inspections

Not all repairs go to EHMS or Umler Component Registry (CEPM). Some are just stored in the database.



EHV Fleet Stats

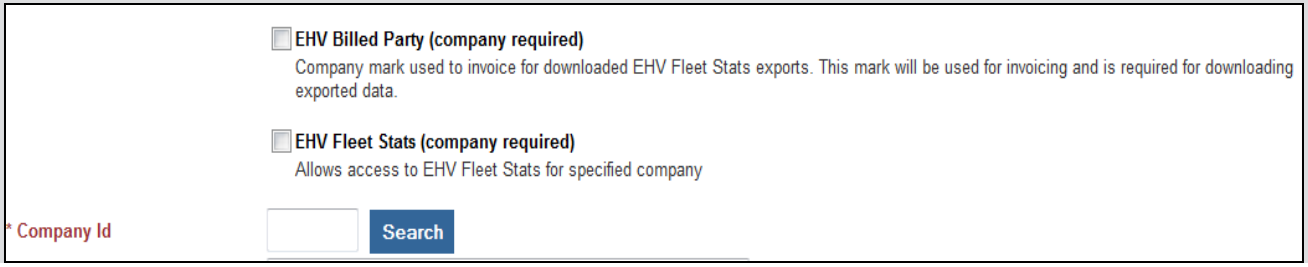
- EHV Fleet Stats provide visibility to car owner to view:
  - Aggregate Railinc data, at the fleet level, for all owned equipment
  - This data can be used to help understand the overall health at a fleet level
  - High level stats based on Railinc data
  - Visible only to the car owner (must have appropriate permissions to Fleet Stats)
  - The Fleet Stats screen has following note on data:
    - **Important note:** The data contained on this screen is served by a *data warehouse* that is updated nightly. Changes will occur throughout the day. The report is intended to be used as a fleet-level tool and not for making individual equipment decisions.

Data Available in EHV Fleet Stats

- EHV Fleet Stats contain information related to Asset Health information
- The report contains the following information for the car owner:
  - Counts by Umler Equipment Status
  - Counts by Mark for those that own more than one Mark
  - Counts by Umler Equipment Groups
  - Counts by EHMS Alert Type
  - Counts by EW and MA
  - Counts by DDCT Rule Number
  - Umler Inspections Past Due
  - Equipment Restricted from Interchange

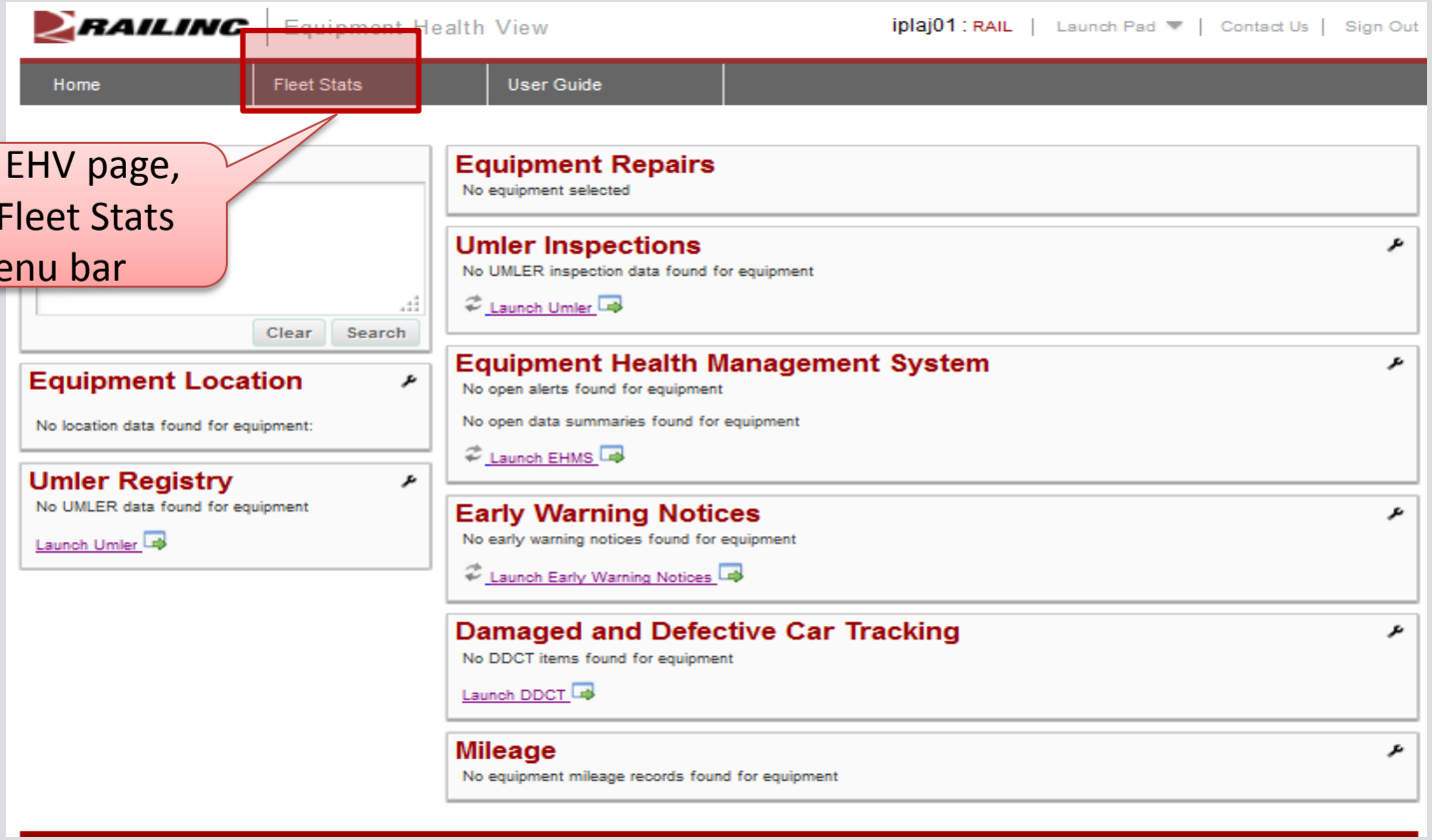
EHV Fleet Stats Permissions

- In addition to EHV Generic Access, car owners must have:
  - EHV Fleet Stats permission- required to view high level and detail info on fleet
    - ✓ User may request visibility to fleet for Company Id(s)/Mark(s)
  - EHV Billed Party permission- required to download reports that exceed equipment count of 200 cars
    - ✓ Downloads allowed for reports less than equipment count of 200 cars
    - ✓ A pop-up will display advising if download will incur fee
    - ✓ Only one EHV Billed Party permission allowed per user ID

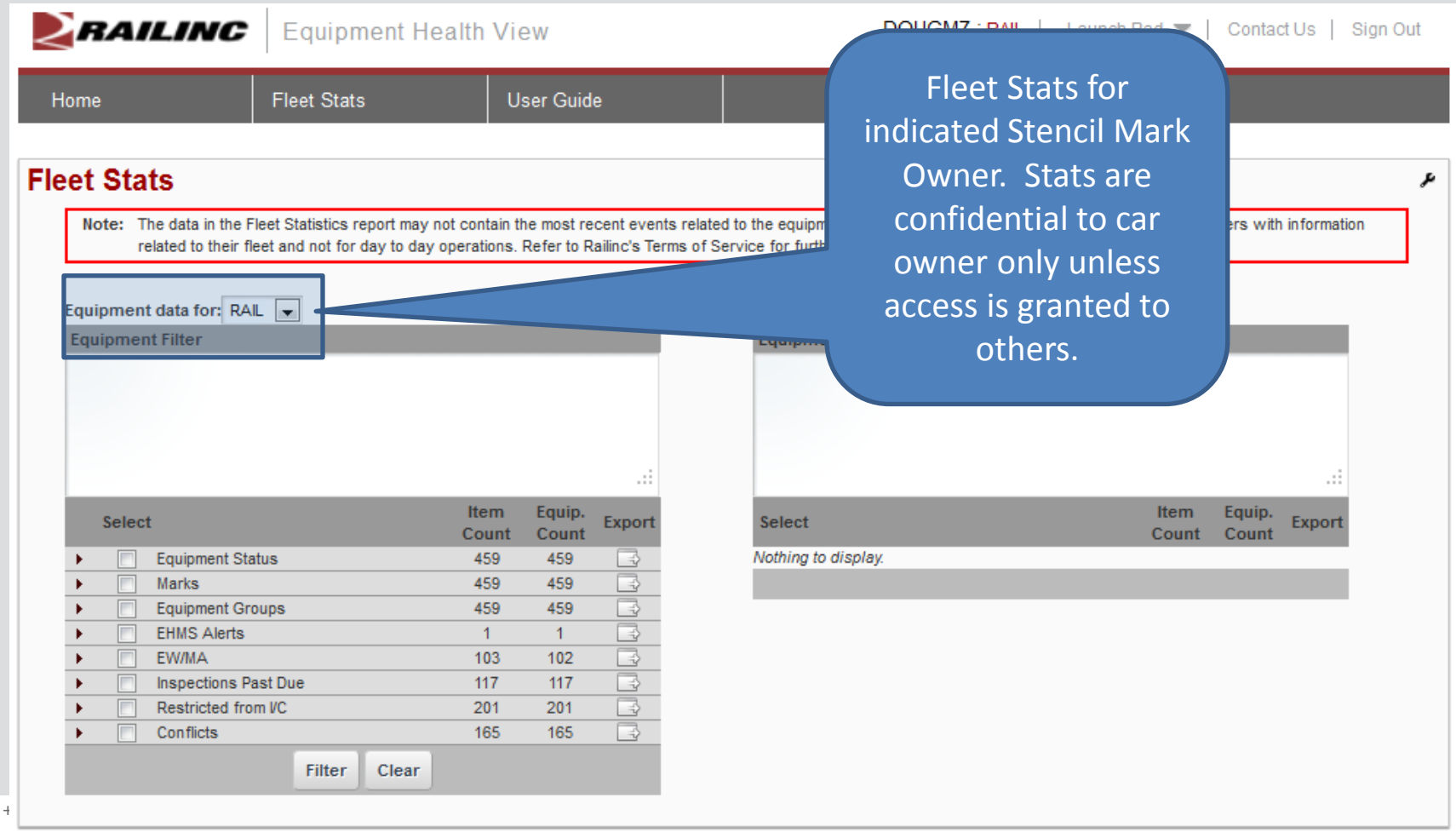


Accessing EHV Fleet Stats

- Access to Fleet Stats is located on EHV page



EHV Fleet Stats



Fleet Stats for indicated Stencil Mark Owner. Stats are confidential to car owner only unless access is granted to others.

et Stats

Please refer to prior note regarding the use of a data warehouse

How do I see the actual equipment?

By clicking the “Export” icon you will be able to download a CSV file listing the equipment counted on a the line

Select	Item Count	Equip. Count	Export
Equipment Status	1750	1750	
Marks	1750	1750	
Equipment Groups	1750	1750	
EHMS Alerts	2224	1464	
THD-C	88	77	
THD-W	598	426	
WILD-C	118	91	
WILD-O	218	174	
WILD-W	1202	696	
EW/MA	187	187	
EW	43	43	
MA	144	144	
DDCT Incidents	132	132	
Inspections Past Due	139	139	
Restricted from I/C	13	13	

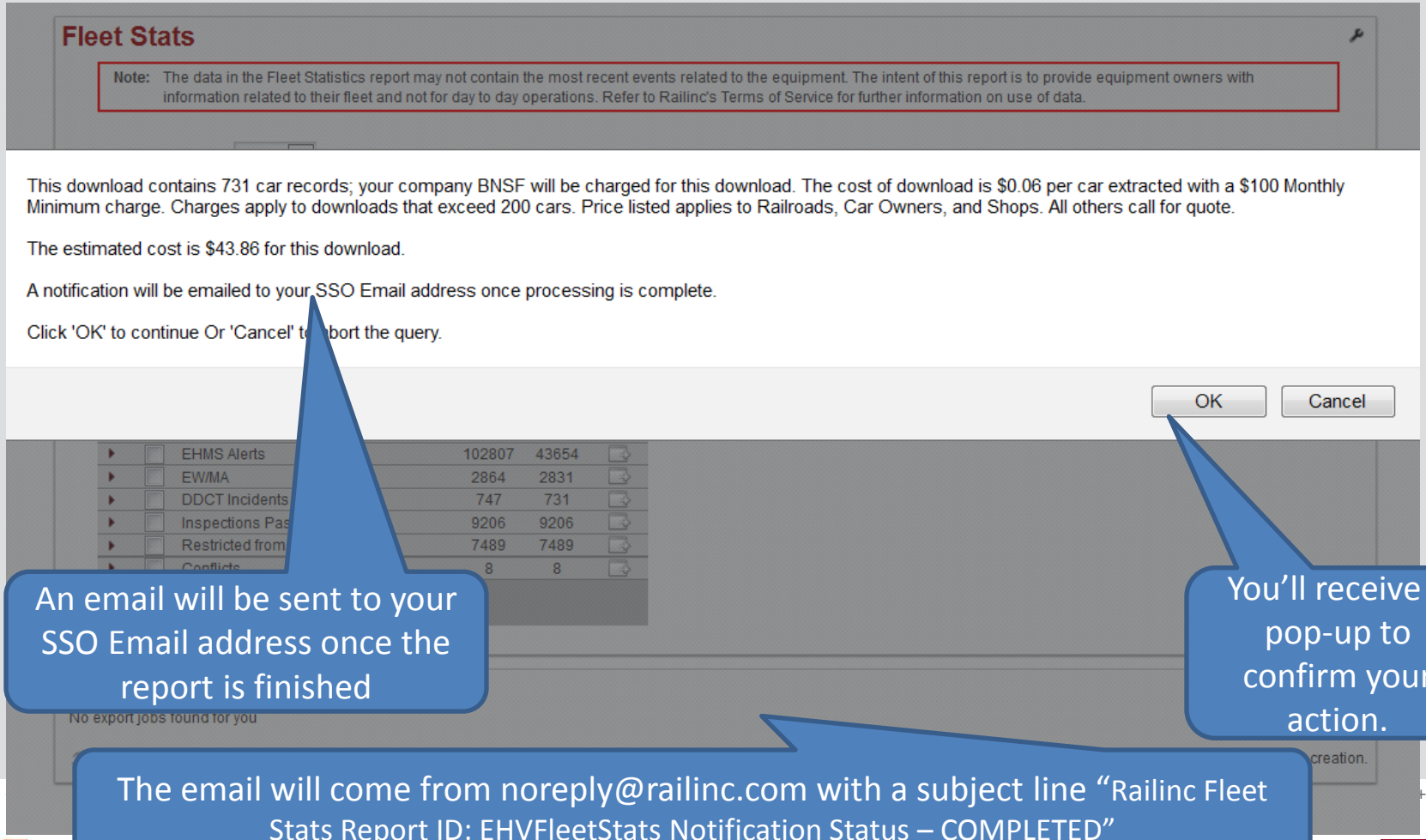
Filter Clear

Select	Item Count	Equip. Count	Export
Equipment Status	205	205	
Marks	205	205	
Equipment Groups	205	205	
EHMS Alerts	497	365	
THD-C	88	77	
THD-W	70	64	
WILD-C	118	91	
WILD-O	54	40	
WILD-W	167	93	
EW/MA	75	75	
EW	43	43	
MA	32	32	
DDCT Incidents	29	29	
Inspections Past Due	54	54	
Restricted from I/C	3	3	

The CSV will contain the detailed data for the equipment count selected

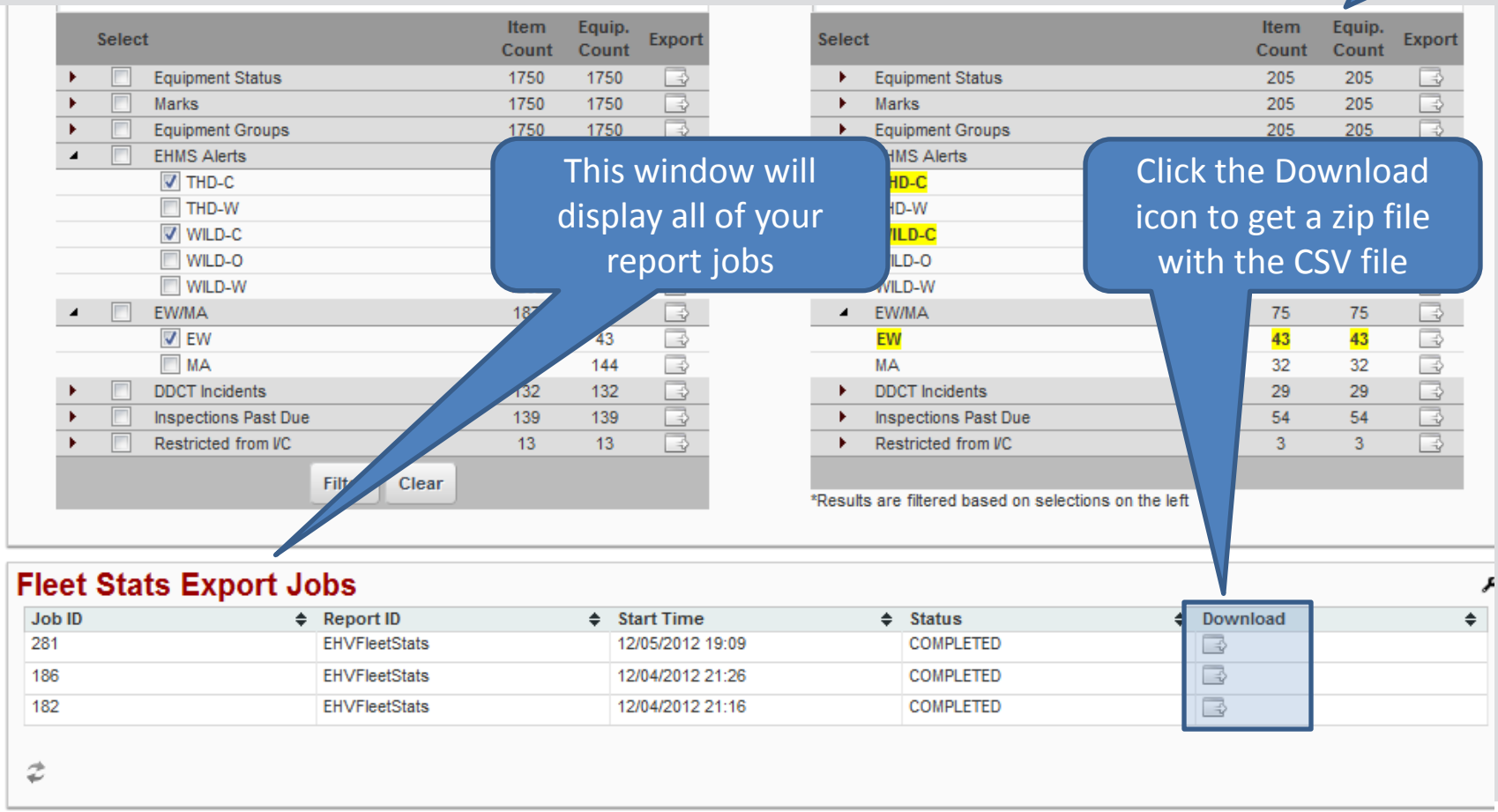
EHV Fleet Stats

After clicking the export icon…

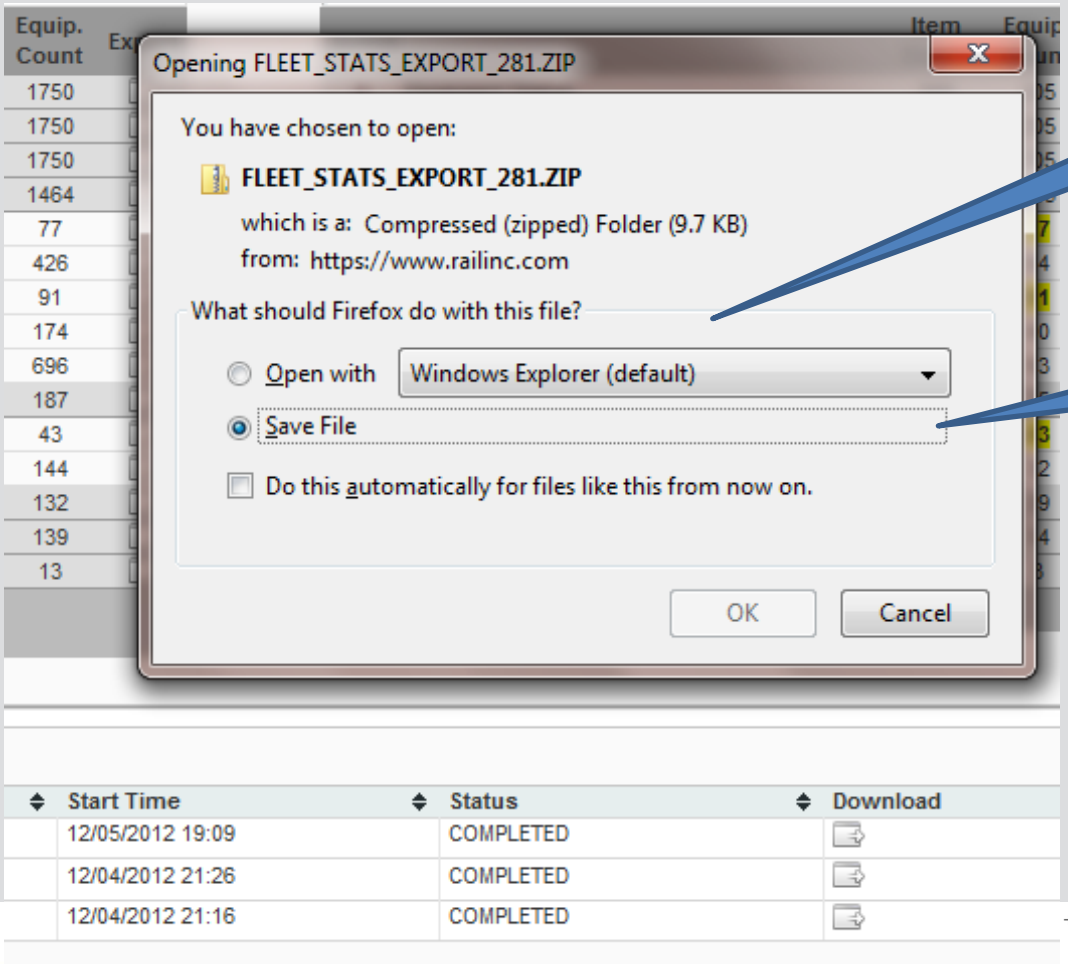


EHV Fleet Stats

How do I get my file?



EHV Fleet Stats



Your computer will prompt you to either open or save the file

Save it locally to easily work with it offline

et Stats

What is in the file?

A	B	C	D	E	F
Equipment Initi	Equipment Numb	Umler Stat	Umler SMO	Umler Equip Type Code UME	Umler Equip
RAIL	179676	A	RAIL	H350	
RAIL	512170	A	RAIL	E534	GOND
RAIL	8178	A	RAIL	D126	LOCO

Key Umler data

AR	AS	AT	AU
EHMS Alert Type	EHMS Alert Level	EHMS Alert Da	EHMS Location
WILD ALERTS	ATSI Window Open	6/10/2012	
WILD ALERTS	AAR Opportunistic	11/14/2011	WHEEL 05L
WILD ALERTS	ATSI Window Open	7/21/2010	WHEEL 04R
WILD ALERTS	ATSI Window Open	3/17/2011	WHEEL 04R
Truck Hunting	ATSI Window Open	3/8/2008	TRUCK E

EHMS data

AV	AW	AX	AY
EW Notice Typ	EW Notice Numb	EW Effective Da	EW Expirati
EW	5171	1/1/2009	12/31/9999
MA	125	7/21/2011	12/31/9999

EW/MA data

AZ	BA	BB	BC
DDCT Rule 1	DDCT Rule 95	DDCT Rule 107	DDCT Rule 108
		1	
		1	

DDCT Data

Additional data:
Last Move Date
Umler Restrictions

Note: this is a snapshot of the CSV opened in Excel

Railinc Customer Support Center

- For questions about EHMS or EHV, contact the Railinc Customer Support Center (CSC) via email or phone.
  - Email: csc@railinc.com
  - Phone: 877-724-5462
- The Railinc CSC team will open a case to track your question or request.