



**TANK  
CAR  
REGULATIONS  
SUMMARY**

### 2013

#### ADVANCE NOTICE OF PROPOSED RULEMAKING (ANPRM)

Issued: ..... Sept. 2013

Comment Period: ..... Closed Dec. 2013

### 2014

#### NOTICE OF PROPOSED RULEMAKING (NPRM)

Issued: ..... July 2014

Comment Period: ..... Closed Sept. 2014

(Over 180,000 individual comments)

### 2015

#### FINAL RULE

Published: ..... May 8, 2015

(Effective July 7, 2015)

Administrative Appeal, Litigation or Legislation ..... Ongoing

(Six administrative appeals, five individual court petitions will be consolidated into one case and seven separate bills in Congress)

Source: GBX Internal

# GREENBRIER HELPED SHAPE DOT/TC RULEMAKING



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**Leveraged Elite Earned & Paid Media**



**Hosted Events with Key Influencers**



**Influenced State and National Politicians**



**Commissioned Study on Retrofit Capacity**

Source: GBX Internal

# LEVERAGED EARNED MEDIA



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## FEBRUARY 20, 2015

“The West Virginia explosion should be a reminder that the Obama administration, the railroad industry and the oil producers all need to find answers, as quickly as possible, to an increasingly serious problem.”

*The New York Times*

## MAY 24, 2014

“On behalf of the public and the environment, government regulators must insist that top-notch transport and equipment be used in the process. They are not close to achieving that goal, and consequences could be disastrous.”

 *Poughkeepsie Journal*

## FEBRUARY 19, 2015

“Accidents have become too frequent and are potentially too catastrophic. It’s unfortunate that the safety of rail freight wasn’t improved earlier, but now that the business is booming, the country needs to catch up.”

*The Washington Post*

## JANUARY 31, 2015

“The DOT apparently is weighing the need for safer cars against a more comprehensive approach that includes train speeds, rail maintenance, etc. While those things are important, the one specific thing that will make our communities safer are substantially better designed and built tank cars.”

*The Modesto Bee*  
modbee.com

# LEVERAGED PAID MEDIA

SAFER  
TANK  
CARS  
NOW

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## Full-page Ad in WSJ



**THE U.S. GOVERNMENT REQUIRES RAILROADS TO HAUL HAZARDOUS MATERIALS IN TANK CARS THAT'S WRONG – WE NEED SAFER TANK CARS NOW**

**SAFER TANK CARS NOW**

For more than 20 years, the U.S. National Transportation Safety Board (NTSB) has warned of the "high incidence of failure" of tank cars designed decades ago to carry crude oil and ethanol.

Railroads are the safest way to haul large volumes of any freight, including hazardous materials. But to do this, railroads need the right railcars. Unfortunately, tank cars being used today were designed in the 1960s. They do not measure up to today's traffic volumes or operating practices. Railroads have no choice: they must use tank cars. These cars ride the rails because U.S. law requires railroads to accept them. The result: large volumes of flammable materials are moving in tank cars that are not as safe as they should be.

Railroads and shippers have tried to improve tank car safety. In 2011, the industry put in service an improved CPC-1232 car. The jacketed version of that car absorbs shock and forces better than its unjacketed "skin" version, yet nobody seems to understand the difference but engineers. Greenbrier's Tank Car of the Future is six to eight times safer than legacy CPC-111 cars and substantially safer than any CPC-1232 car, especially the unjacketed CPC-1232 design.

After more than 20 years, it's time for the U.S. and Canadian Governments to heed the NTSB's warnings and require safer tank cars.

**THE U.S. GOVERNMENT NEEDS TO:**

- Immediately set new and safer design standards for tank cars hauling hazardous materials
- Require retrofits to existing cars for any sustained time in service, using sequencing. Cars in service can be made better through important safety enhancements
- Keep it simple – forget about electronic braking for now
- Rapid phase-out, retrofit or retirement of cars which do not meet these standards

Support U.S. Department of Transportation Reauthorizing **WE NEED SAFER TANK CARS NOW**

Contact: Anthony Fox – U.S. Secretary of Transportation  
T 202-368-4000 @SecretaryFox #safertankcarsnow

**THE GREENBRIER COMPANIES**  
SAFER TANK CARS NOW  
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## Robust Paid Media Campaign in Key Markets



**The Washington Post**

Curfew lifts after calmer night in Baltimore

U.S. economic growth slows nearly to halt

**WE CALL IT A TANK. SHOULDN'T WE BUILD IT LIKE ONE?**

LEARN MORE >>



**TPM** NEW LISTINGS DAILY!

CBS Host To Perkins: You Lead 'Anti-Gay Hate Group'

**THE SLICE**

Can I Be a 'Single Lady' Without Being Single?

**WE CALL IT A TANK. SHOULDN'T WE BUILD IT LIKE ONE?**

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**Examiner**

Cruz explains how to abolish the IRS

**WE CALL IT A TANK. SHOULDN'T WE BUILD IT LIKE ONE?**

LEARN MORE >>



**ROLL CALL**

Testator's DSCC Pursues Same Strategy That Nearly Nixed Him In 2006

**WE CALL IT A TANK. SHOULDN'T WE BUILD IT LIKE ONE?**

LEARN MORE >>

# HOSTED EVENTS WITH KEY INFLUENCERS



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**APRIL 15-16, 2015**

## Houston, TX

Greenbrier hosted a tour of GBW's Hockley facility and Watco's Greens Port facility with a delegation from the NTSB, including Chairman Christopher Hart. National and local media, in addition to trade publications, attended to cover the event. Media coverage of Hart's visit showcased Greenbrier's Tank Car of the Future and GBW's ability to retrofit tank cars in a timely and cost effective manner.



# INFLUENCED STATE AND NATIONAL POLITICIANS



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## FEBRUARY 3, 2015

Greg Saxton, Sr., Vice President and Chief Engineer at the Greenbrier Companies addresses Congress



## MARCH 12, 2015

Roundtable with Acting PHMSA Administrator Tim Butters and Rep. Peter DeFazio (D-OR) — Ranking Member, House T&I Committee



## APRIL 29, 2015

Op-ed by Former NTSB Chairman, Jim Hall appears on thehill.com

# GREENBRIER'S SPRING OFFENSIVE PRODUCES RESULTS



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Tank Car Type / Service	Retrofit timeline in the original final rule submitted to OMB/OIRA <sup>1</sup> in February 2015	Retrofit timeline in the final rule published in the Federal Register on May 8, 2015
Jacketed DOT-111 tank cars in PG I service	November 30, 2020	March 1, 2018
Non Jacketed CPC-1232 tank cars in PG I service	June 30, 2023	April 1, 2020

**7,000**  
Tank cars retrofit or replaced two years earlier

**22,000**  
Tank cars retrofit or replaced three years earlier

<sup>1</sup> Assumes an April 1, 2015 publication date. Actual dates will vary depending on publication date.

# GREENBRIER VISITS WITH DEPARTMENT OF TRANSPORTATION OFFICIALS



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**APRIL 14, 2014**

**Meeting with Secretary Foxx**



**MAY 21, 2015**

**Visit with Federal Railroad Administrator**

# COMMISSIONED STUDY ON RETROFIT CAPACITY



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- Aggressive retrofit timelines for crude and ethanol are achievable. Using the assumptions in the RSI analysis, the retrofit process for unjacketed cars can be completed in the first 6 years, and the entire fleet in 6.7 years according to Cambridge Systematics, Inc.
- Per Greenbrier's recommendation, final rule prioritizes unjacketed cars, starting with DOT-111s, followed by CPC-1232s to remove risk as quickly as possible from tank cars in high mileage flammable liquids service
- The combination of new build, retrofit capacity, and standard retirement rates do not support claims of impending shortfalls

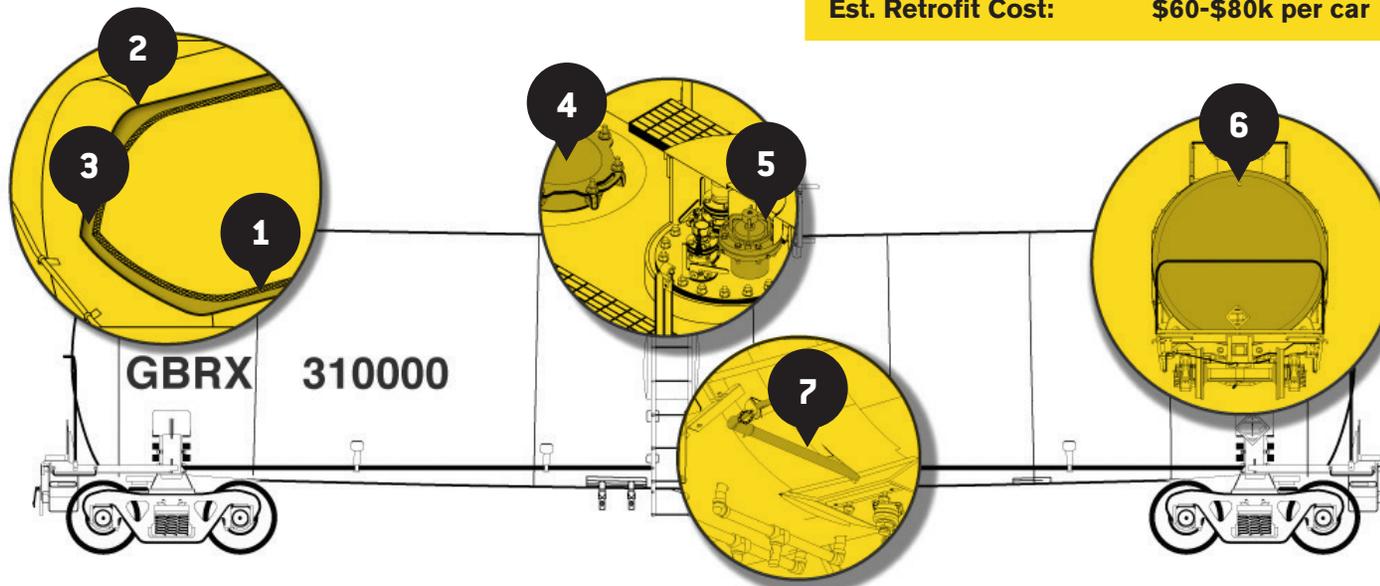
# RULING

## Option 2 = DOT-117 = GBX TCOF

All new HHFT cars built after **October 1, 2015** are required to meet **DOT-117 specification** (below), while older cars are required to meet **DOT-117R (Retrofit) specification** (same as DOT-117 except but 7/16" tank shell permitted) on a prescribed 2-10 year schedule.

Est. New Car Cost: \$160-\$180k per car

Est. Retrofit Cost: \$60-\$80k per car



**GBX and GBW  
Railcar Services  
support this option**

- ❶ 9/16 inch steel tank shell
- ❷ Minimum 11-gauge steel jacket
- ❸ Ceramic Insulation
- ❹ Top Fittings Protection
- ❺ High-Flow Pressure Relief Valve
- ❻ Full height 1/2-inch-thick head shields on both ends
- ❼ Detachable bottom outlet valve handle

# OTHER RULE DETAILS



## Speeds, Commodity Classification and Rail Operations

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### SPEEDS

50 MPH and 40 MPH in Certain Urban Areas

### OPERATIONS

Track Integrity, Securement, Engineer and Conductor Certification, Crew Size

### CLASSIFICATION

Unrefined Petroleum-Based Products  
Sampling and Documentation

### ROUTING

Rail Routing Risk Assessment

### NOTIFICATION

Rail Routing Information Access

Source: DOT PHMSA

# KEY TANK CAR DIFFERENCES



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TANK TYPE	PRE-PETITION	PETITION	FINAL RULE
Code	DOT-111	CPC-1232	DOT-117
Effective Date (new cars)	Nov-71	Oct-11	May-15
Max Gross Rail Load	263,000	286,000	286,000
Normalized Steel Heads & Shells	No	Yes	Yes
Half-Inch Head Shields	No	Half or Full Height	Full Height
Head & Shell Thickness	7/16 inch	7/16 to 1/2 inch*	9/16 inch*
Top Fittings Protection	No	Yes	Yes
Half-Inch Ceramic Insulation	No	No	Yes
Steel Jackets	Some	Some	Yes
High Flow Pressure Relief Valve	No	Some	Yes
Improved BOV Handle	No	No	Yes
ECP Brakes	No	No	Yes

\*Depends on jacketing

\*7/16 inch for retrofitted — DOT-117R

**Pre-petition** cars reflect the current government tank car standards (initially adopted in 1971).

**Petition cars** refer to the P-1577 standards that were adopted by AAR circular CPC-1232 for all cars ordered after October 1, 2011 (also known as “Good Faith” cars).

**Post-petition cars** reflect the new government standards released in May of 2015.

Source: GBX Internal

# N.A. FLAMMABLE LIQUIDS FLEET



(Estimated as of end of 2015)

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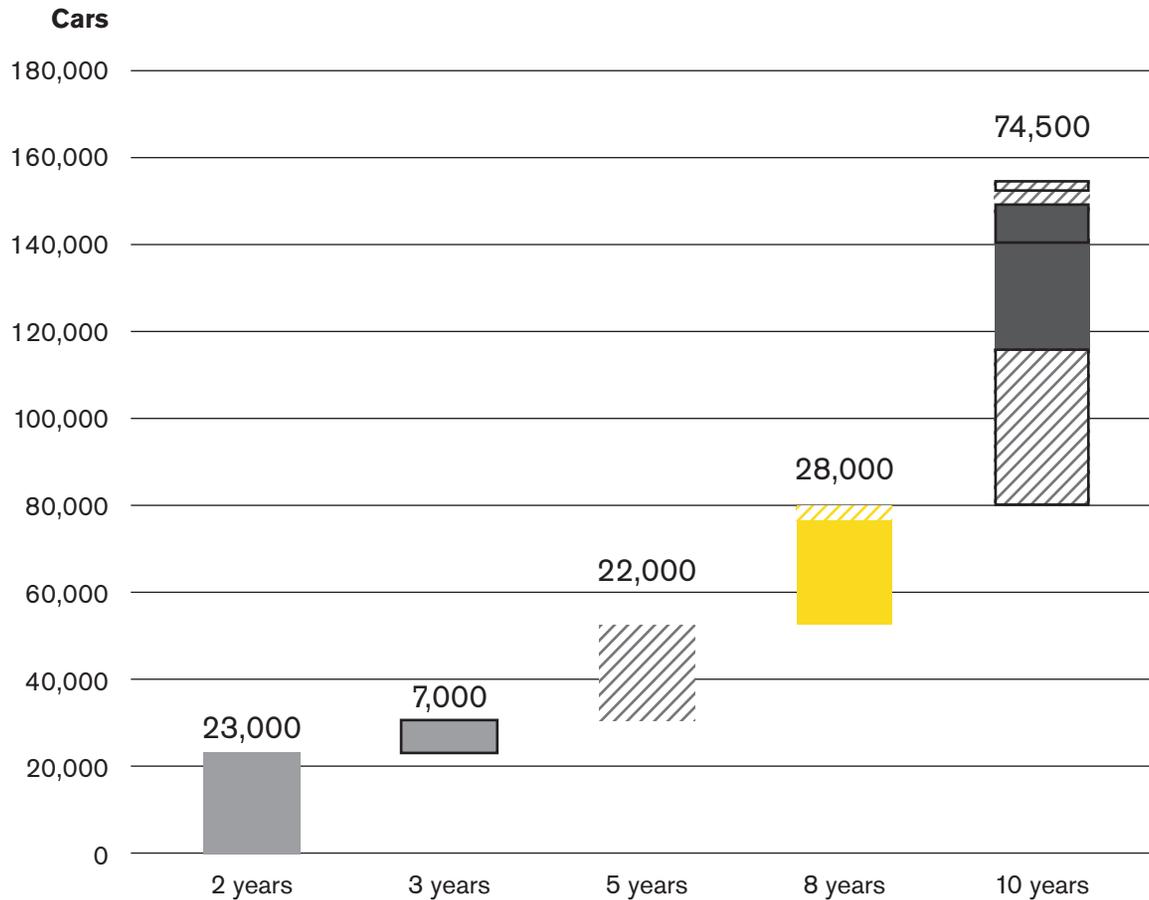
	CRUDE	ETHANOL	OTHER FLAMMABLE	TOTAL
DOT-111 Non-Jacketed	23,000	27,000	25,000	75,000
DOT-111 Jacketed	7,000	0	9,500	16,500
<b>DOT-111 Total</b>	<b>30,000</b>	<b>27,000</b>	<b>34,000</b>	<b>91,500</b>
CPC-1232 Non-Jacketed	22,000	1,000	3,000	25,500
CPC-1232 Jacketed	35,000	0	2,000	37,500
<b>CPC-1232 Total</b>	<b>57,500</b>	<b>1,000</b>	<b>5,000</b>	<b>63,000</b>
<b>TOTAL</b>	<b>87,500</b>	<b>28,000</b>	<b>39,000</b>	<b>154,500</b>

Source: Brattle Group 2014

# ESTIMATED RETROFIT / PHASE-OUT TIMELINE



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**GBX ANNUAL MFG. CAPACITY:**

7,000–8,000 tank cars

**GBW ANNUAL RETROFIT CAPACITY**

2,000–3,000 tank cars

SERVICE	IMPACTED CARS
Crude	87,500
Ethanol	28,000
Other Flammable	39,000
<b>Total</b>	<b>154,500</b>

**CAR TYPE:**

- Jacketed
- CPC-1232
- DOT-111

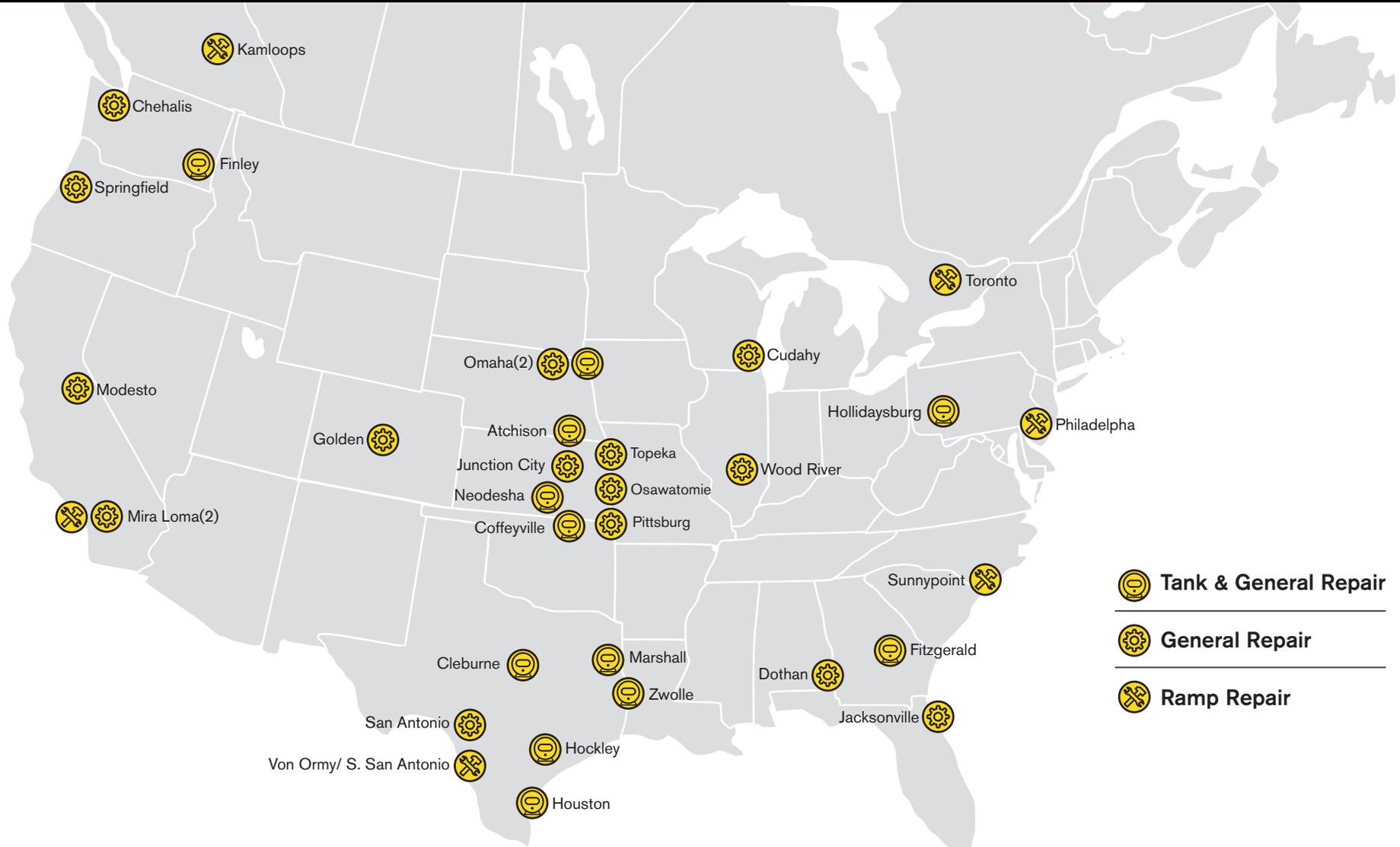
**FLAMMABLE MATERIAL:**

- Crude
- Ethanol
- Other Flammable

\*Fleet counts per Brattle Group end of 2015 estimates. Assumes all cars part of HHFT.

Source: Brattle Group 2014, DOT PHMSA

# GBW SHOPS READY FOR RETROFITS



-  Tank & General Repair
-  General Repair
-  Ramp Repair

**SAFER  
TANK  
CARS  
NOW**

