

Welcome	Background	Summary Findings	System Comparison	Tire Comparison Overview	PSI Variance by Tire	Interactive Analysis	Miles and PSI Analysis	Interactive Map Under Inflation ..	Interactive Map Over Inflation ..	Next Steps fo..
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## Overview of Analysis:

The focus of this analysis was to illustrate the performance advantage for truck trailers with AirBoxOne™ installed with Tire Pressure Monitoring and an Inflation & Deflation system (2-Way) compared to Vehicles without AirBoxOne™ (No-TPCS).

Because vehicles driving on over or under-inflated tires are more costly and accident prone, controlling and monitoring tire pressure is extremely critical to the trucking industry. In fact, tires that are under-inflated must be replaced every 18 months while tires kept at proper inflation only need to be replaced every 3 years. Tire replacement is the largest maintenance cost for trucks. Historically the focus has been on the tractor (truck pulling the trailer) with very little attention to the trailer - even though trailers can have up to 16 tires vs. 4 on the tractor. AirBoxOne™ addresses this disparity.

## DRŌV SMART TRUCK/TRAILER POWERED BY AirBoxOne™



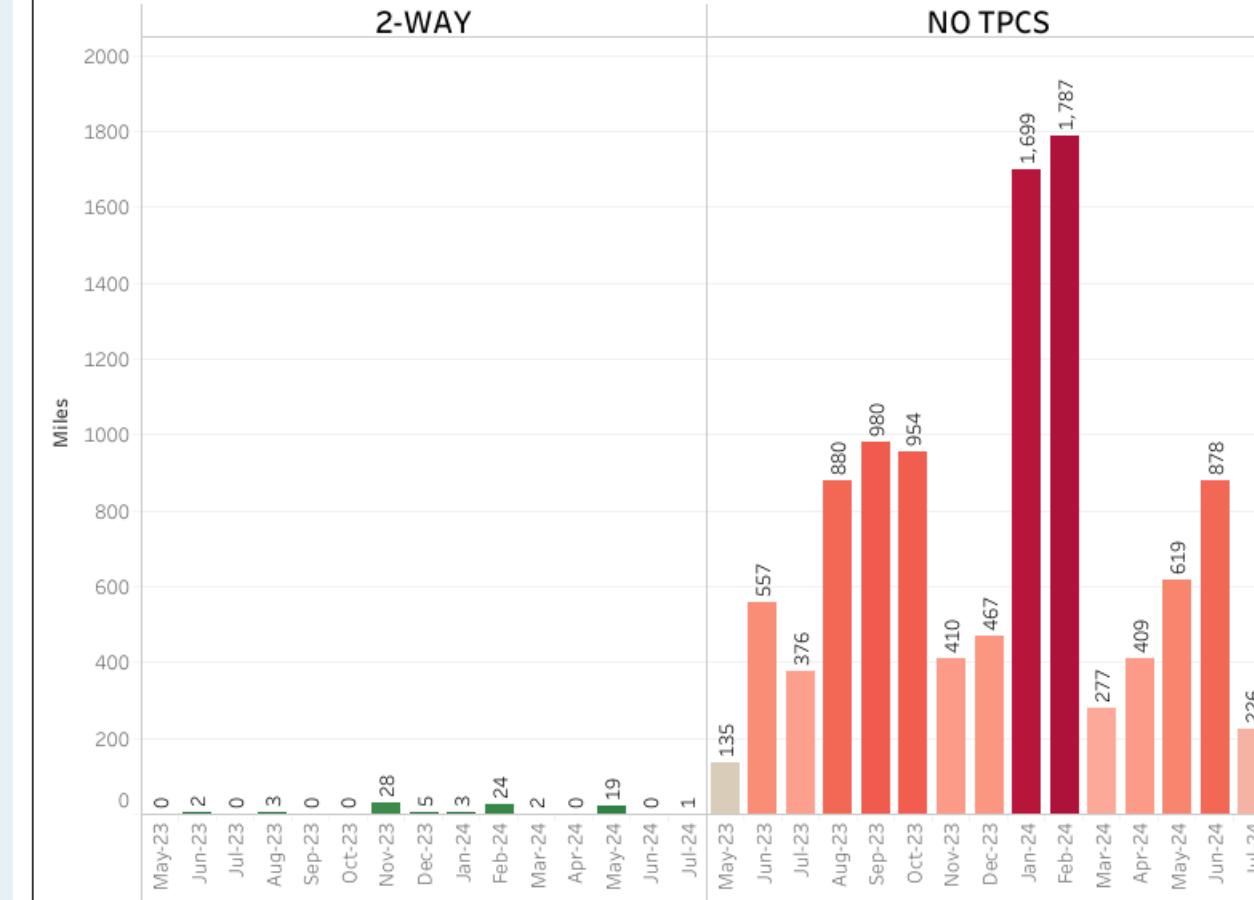
1. Driver Notification	6. Rear View Camera	11. Automated Tire Pressure Inflation & Deflation
2. Mobile App	7. System Alerts & Secure Cloud Communication	12. Weight Sensors
3. Vehicle Speed & Accelerometer	8. Exterior Cameras	13. ABS & Disc Brakes
4. GPS Location	9. SKF Trax Wheel End Monitor	14. Light Out Detection
5. Solar Panels	10. Tire Pressure Monitoring System	15. Fluid Level and Temperature Sensors *in Development

Our Data Analysis focused on data generated from the AirBoxOne™ Tire Pressure Monitoring System (#10 and #11 in the Diagram).

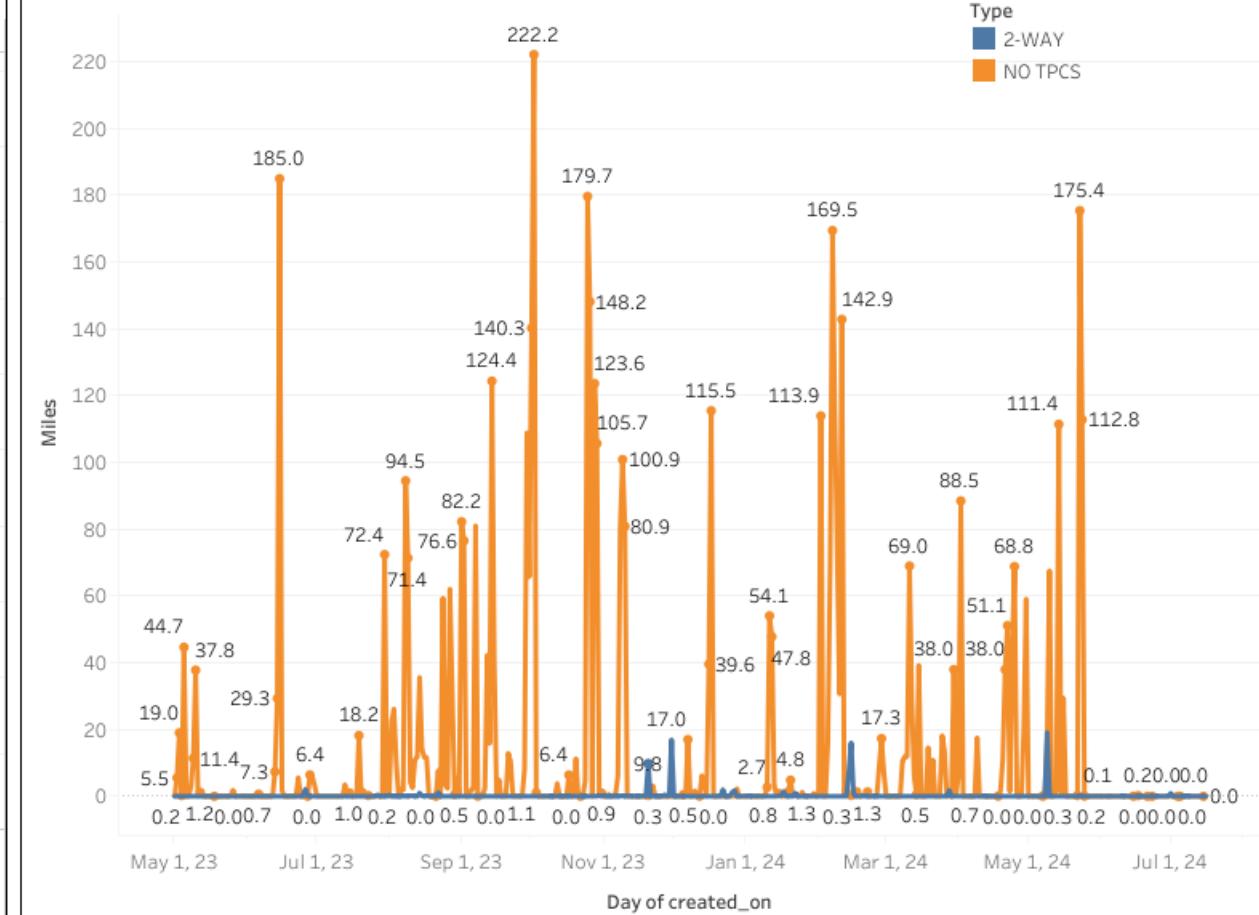
## Drōv's 2-Way System significantly outperforms trailers with No-TPCS

Drōv's 2-Way inflation system significantly improves wear on tires as shown from our analysis. Measuring actual "miles driven" both as under-inflated and over-inflated shows the direct impact of using Drōv's 2-Way system vs. no system. Importantly, looking at a small sample of vehicles with no TPCS you can see the actual miles driven in a single day with an under-inflated tire. Seasonality also effects the tire inflation with higher incidence of under-inflation during cooler months.

### Miles Driven Under-Inflated by Month

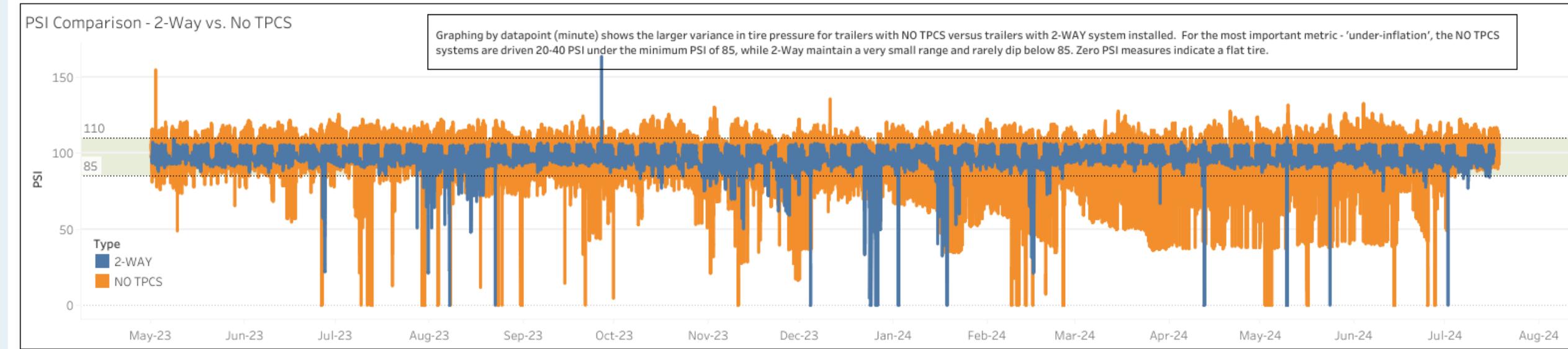


### Vehicles without 2-Way system may drive over 200 miles a day under-inflated

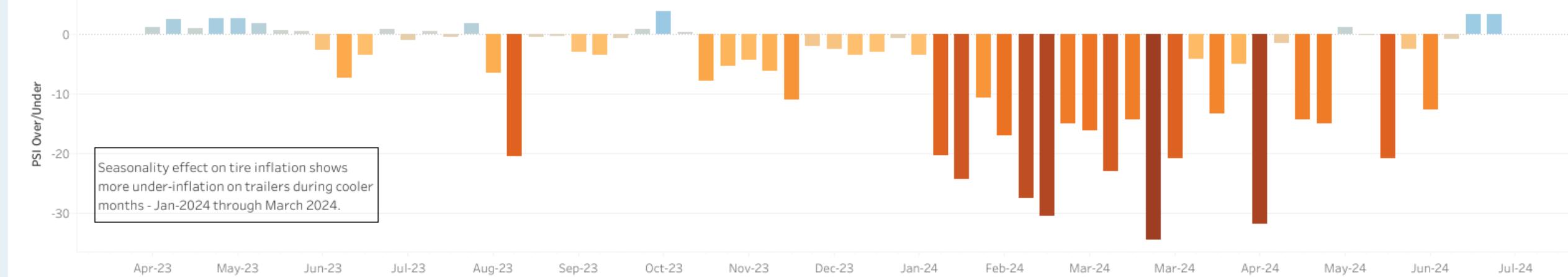


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## Drov's 2-Way Inflation System consistently maintains optimum PSI vs. NO TPCS systems.

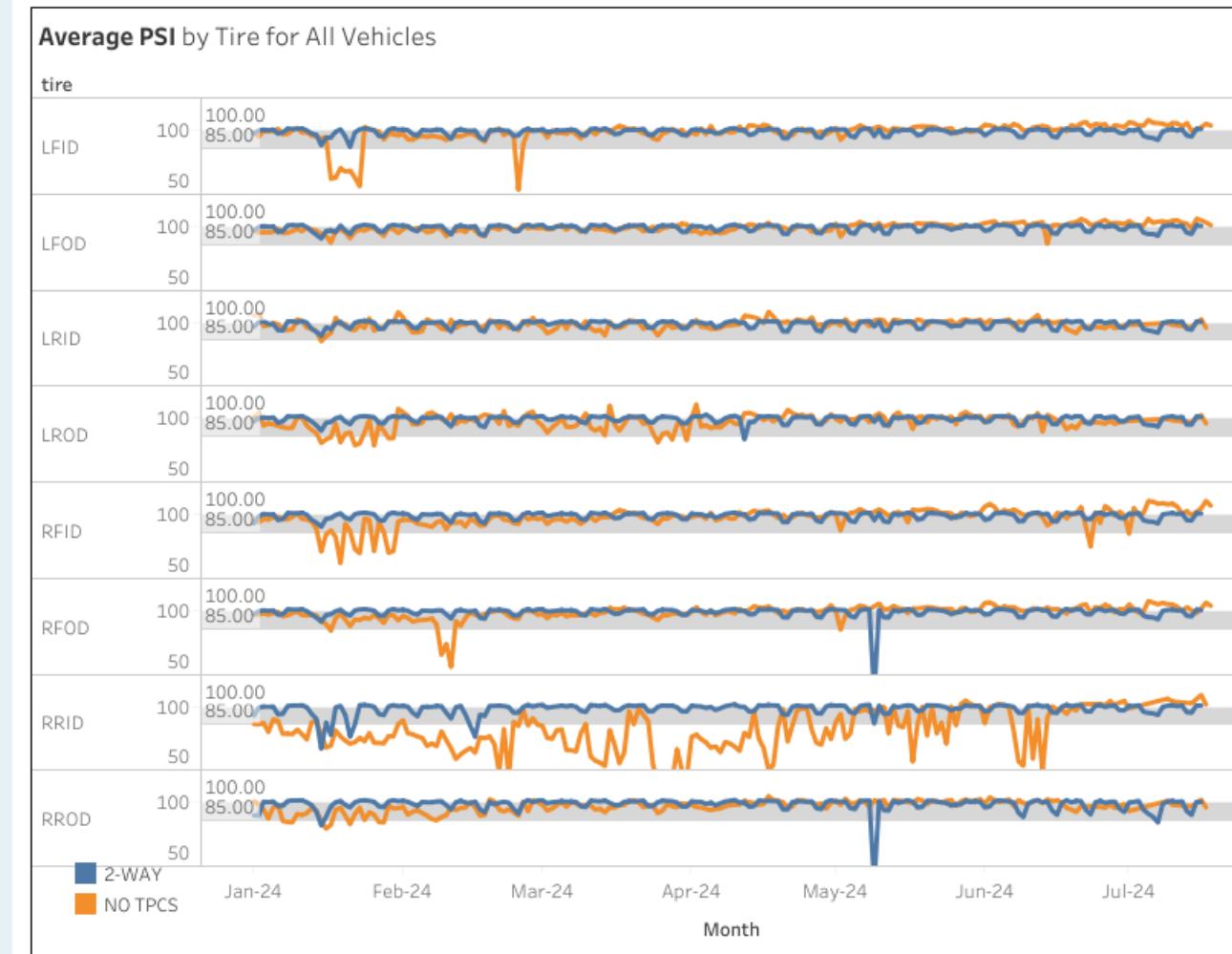


## Average PSI by Month for NO TPCS - Winter months increase incidence of Under-Inflation



## 2-Way System Maintains Optimum Pressure for ALL Tires

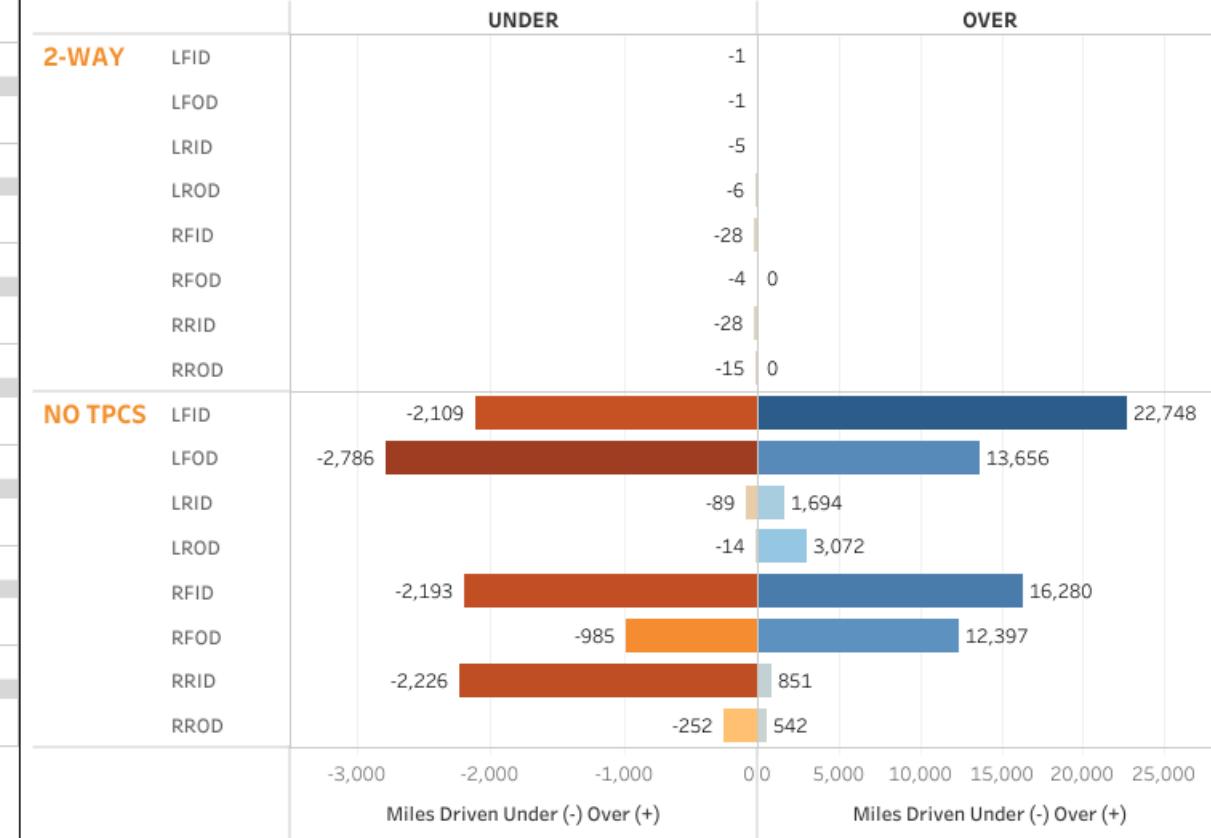
Analysis by Tire using average PSI and Miles Driven out of tolerance show that the INSIDE tires are more prone to PSI variation than outside tires.



### Select Timeframe for Analysis:

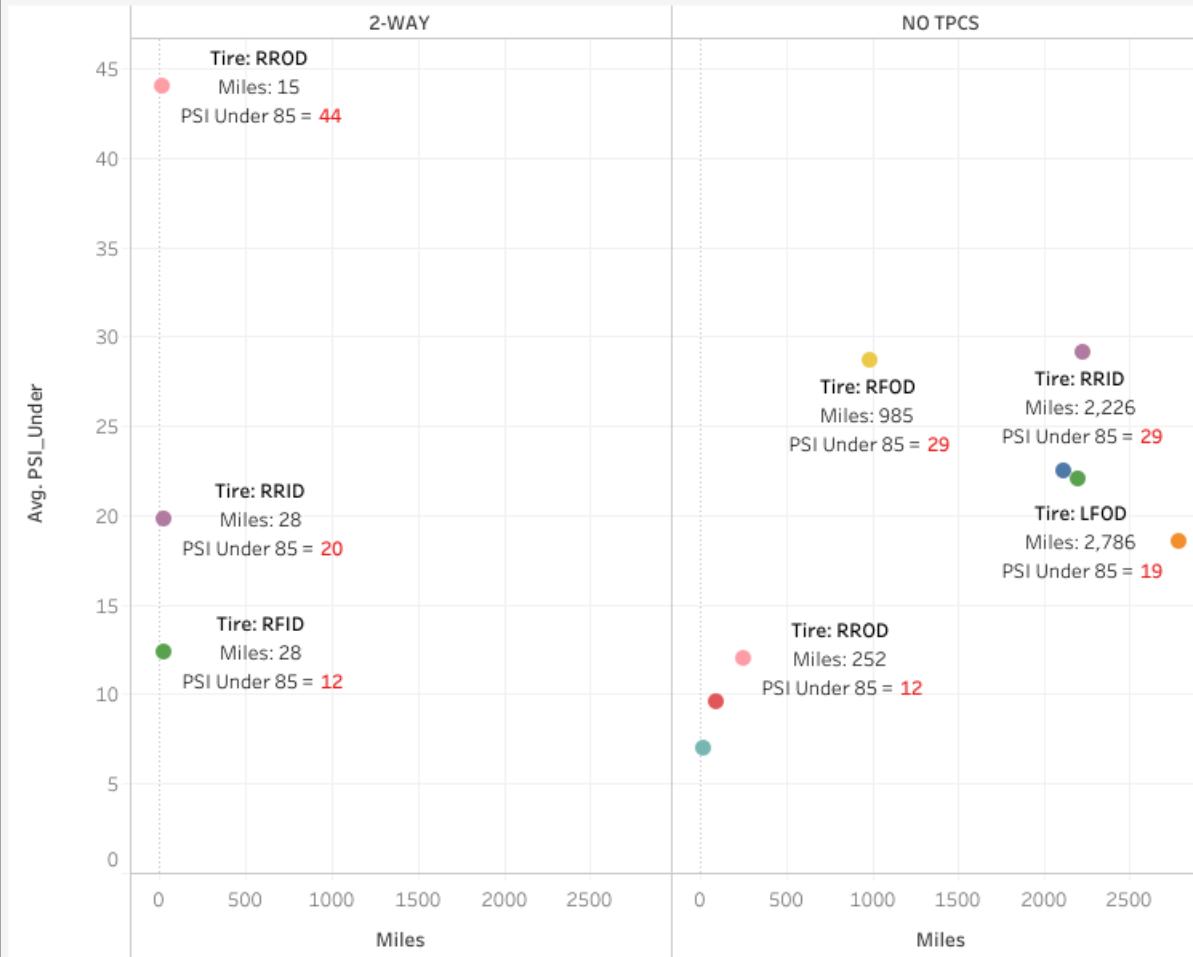
Date: 5/1/2023 5:08:26 AM to 7/18/2024 5:41:29 PM

### Miles Driven Under or Over Inflated by TIRE

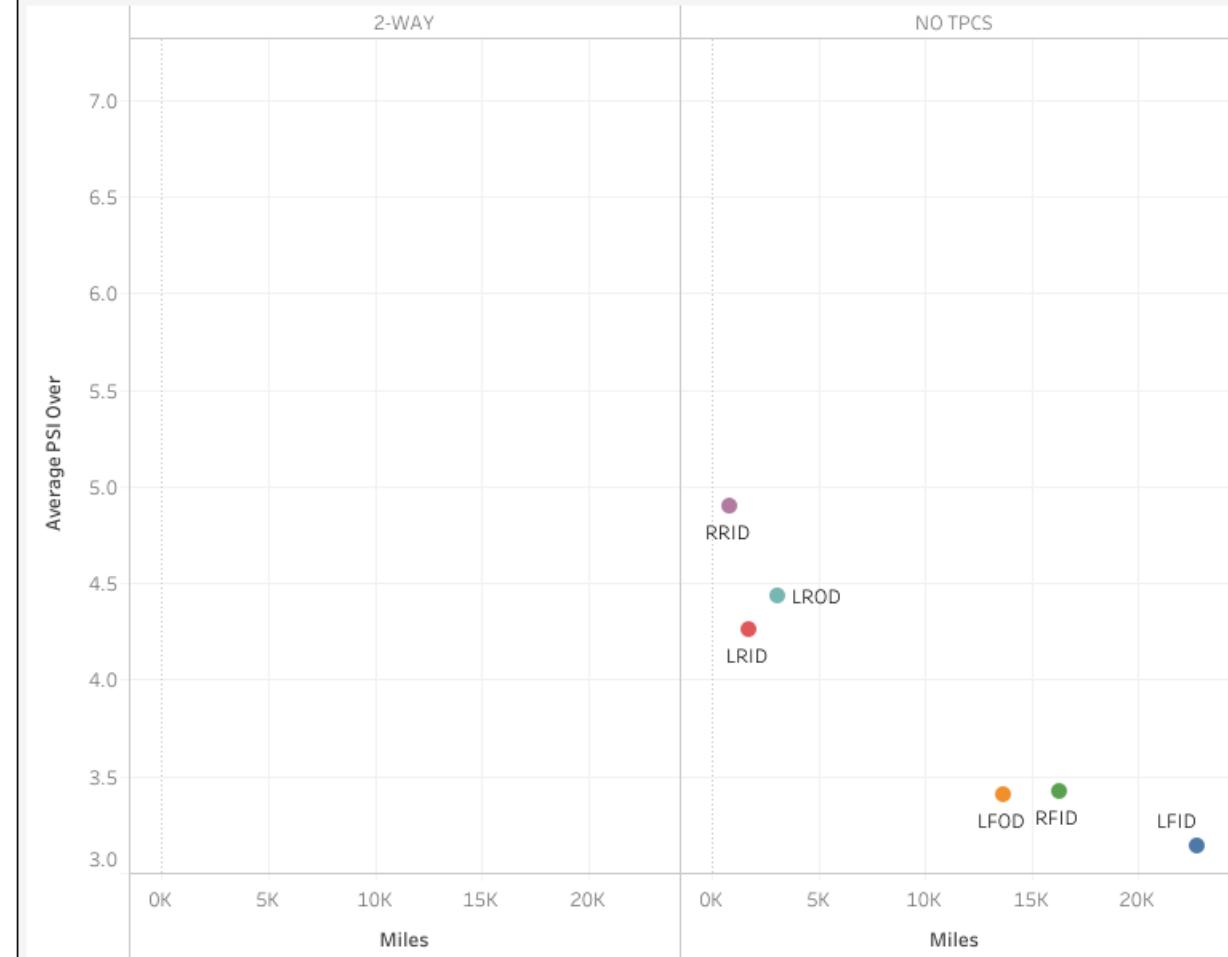


## 2-Way System outperforms when comparing Miles Driven Out-of-Range and Pounds Under/Over Recommended PSI

Average PSI for UNDER-Inflation vs. Distance Driven



Average PSI for OVER-Inflation vs. Distance Driven

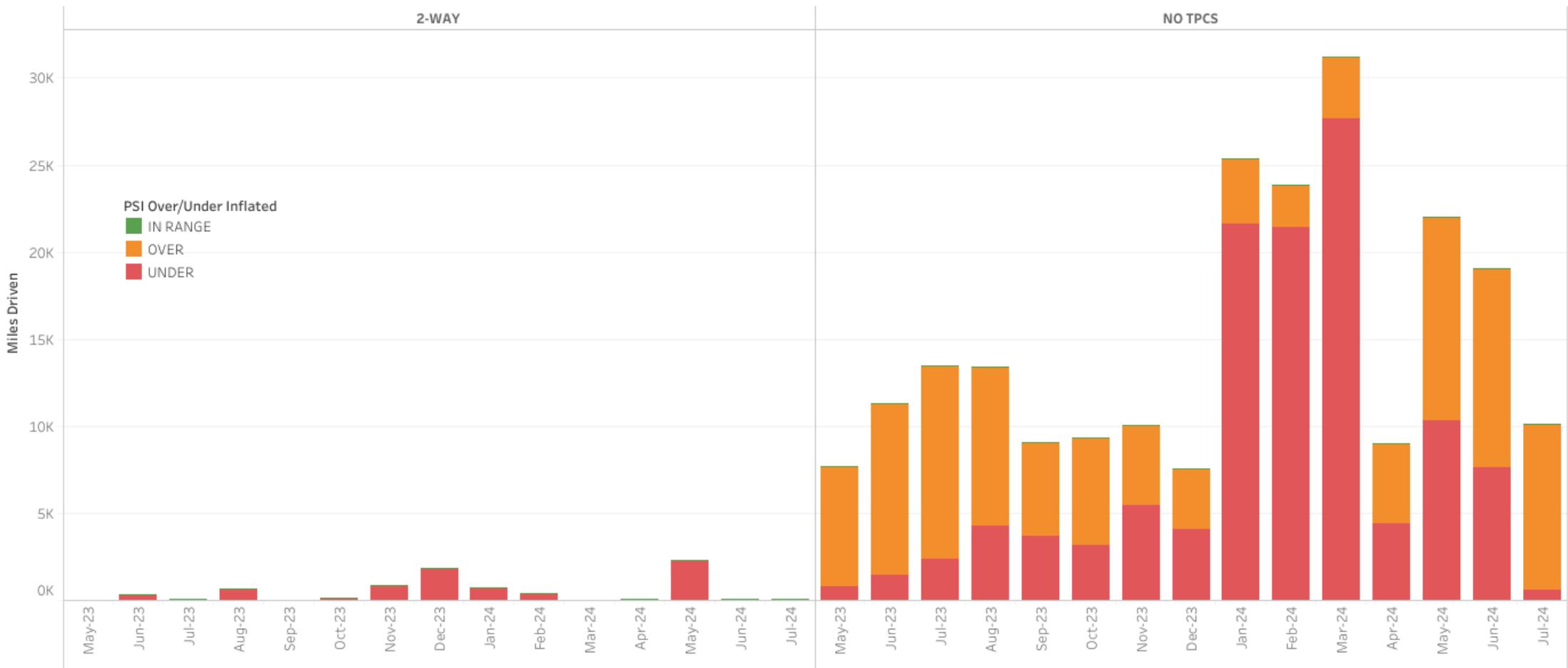


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Drov 2-Way inflation system consistently out performs all Non-TPCS Vehicles and Tires - Using the filters for Tire and Vehicle you can interactively view indivi..

### Miles Driven by Month

Tires: All Vehicles: All



Select Tire:

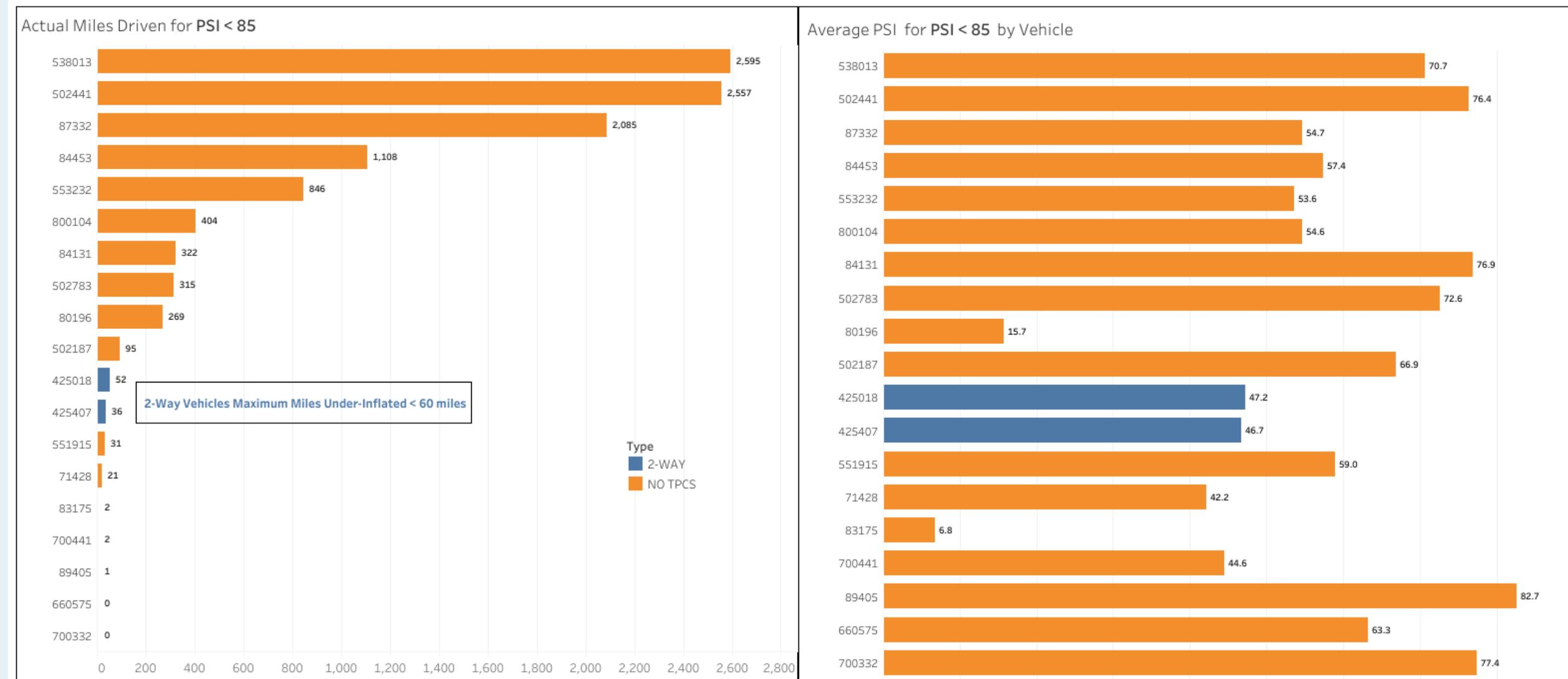
- LFID
- LFOD
- LRID
- LROD
- RFID
- RFOD
- RRID
- RROD

Select Vehicle:

- 71428
- 80196
- 83175
- 84131
- 84453
- 85749
- 86425
- 87332
- 89405
- 425018
- 425407
- 502187
- 502441
- 502783
- 538013
- 551915
- 553232
- 660575
- 700332
- 700441
- 800104

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## 2-WAY Inflation System Again Outperforms NO TPCS when comparing Actual Miles Driven Out-of-Range by Truck

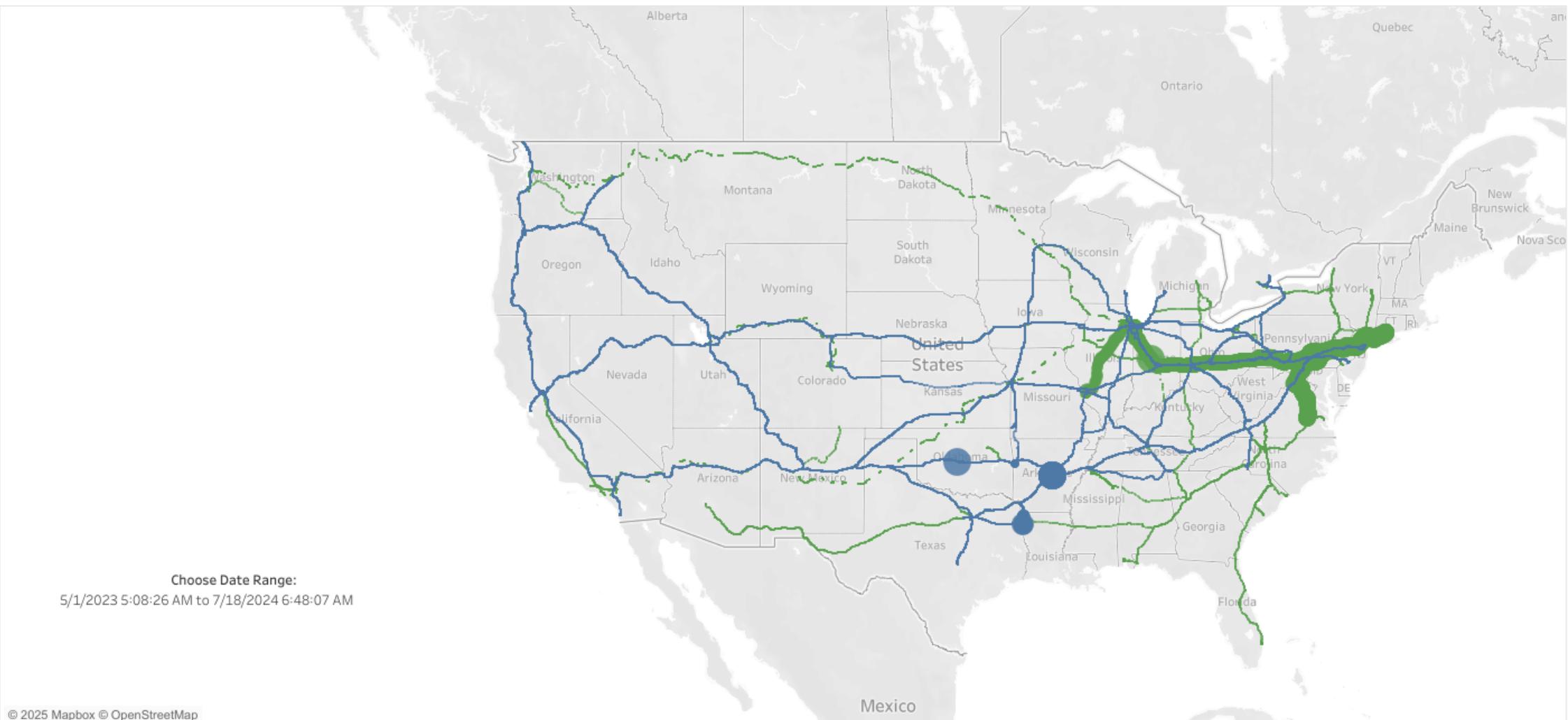


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The map shows routes traveled by Vehicle. Line thickness indicates pounds under-inflated.

Vehicle  
█ 71428  
█ 84453

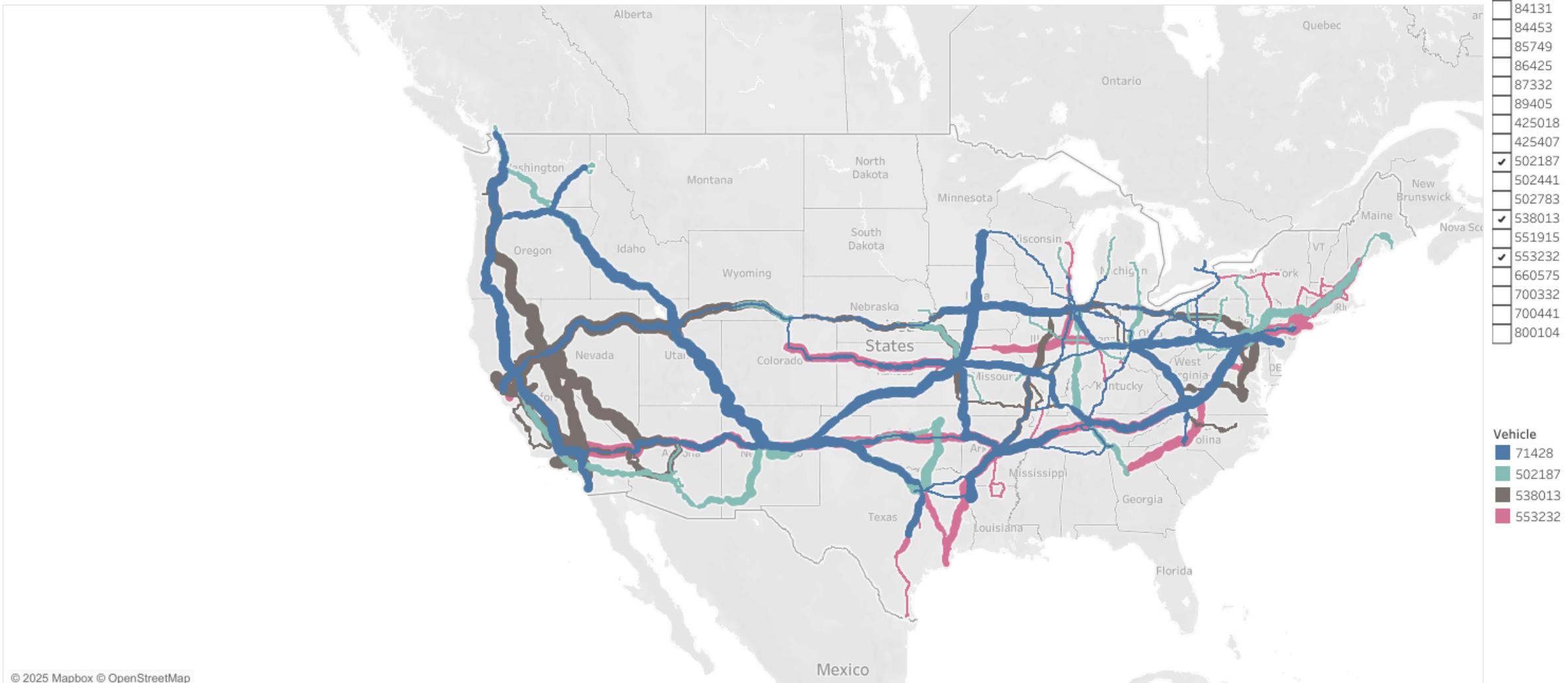
Map Under Inflated by Vehicle for vehicle: 71428 & 84453



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The map shows routes traveled by Vehicle. Line thickness indicates pounds Over-inflated.

Map Over Inflated by Vehicle for vehicle: 71428, 502187, 538013 and 1 more



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### Next Steps for Further Analysis:

- 1) Increase the number of vehicles with Drōv 2-way installed systems. Current analysis includes two 2-way and 18 no-tpcs, so adding at least 16 2-way vehicles would add depth to the analysis.
- 2) If Drōv would like further analysis of trucks with SI installed, more SI vehicles should be added to the data – currently we only have one.
- 3) From a geo-visual perspective, converting latitude/longitude to State/City/Zip code may reveal some geographic and/or seasonal insights.
- 4) The data can be expanded to include tanker vehicle data for deeper insights. Current vehicles are trailer type.
- 5) The AirBoxOne™ collects dozens of additional sensor data. This analysis only utilized Tire Pressure and Location by Inflation Type, Vehicle and Tire. Including temperature readings, event notifications, Vehicle Speed/Acceleration/Braking can provide insights far and beyond our current analysis.

# Drōv's Performance Advantage

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## Details for Data Utilized in this Analysis:

- 21 Vehicles, Two 2-Way, One SI, 18 No TPCS system
- 7 Vehicles with 8 Tires, 14 Vehicles with 6 Tires
- Total of 2.3M datapoints

## Data Metrics - Datapoints Utilized in this Analysis

Type	Vehicle	tire								Grand Total
		LFID	LFOD	LRID	LROD	RFID	RFOD	RRID	RROD	
2-WAY	425018	40,095	38,808	24,395	34,018	40,401	39,436	41,274	33,075	291,502
	425407	27,667	34,615	36,572	33,135	35,468	34,128	35,486	32,766	269,837
NO TPCS	71428	28,374	28,040			28,790	28,002			113,206
	80196	11,406	11,314			11,402	11,260			45,382
	83175	16,335	16,738			16,664	16,587			66,324
	84131	8,047	12,725			13,004	12,889			46,665
	84453	16,713	17,869			12,862	11,471			58,915
	86425	15,050	14,364			15,313	14,490			59,217
	87332	15,318	11,737			9,739	12,461			49,255
	89405	12,990	12,886			12,912	12,659			51,447
	502187	14,194	12,031			14,200	14,045			54,470
	502441	8,944	17,399			17,578	17,431			61,352
	502783	19,571	19,173			19,630	19,126			77,500
	538013	16,002	5,743	15,382	15,346	15,949	16,679	17,768	9,318	112,187
	551915	7,536	7,215			11,615	8,632			34,998
	553232	14,114	17,430			12,285	16,252			60,081
	660575	5,523	5,440	5,416	5,363	5,474	5,471	5,510	5,348	43,545
	700332	22,365	22,473	22,468	21,413	22,805	20,989	19,003	20,057	171,573
	700441	52,702	51,963	52,249	51,281	52,777	52,323	52,249	50,531	416,075
	800104	13,309	19,001	19,918	19,106	23,779	19,084	56,710	18,677	189,584
SI	85749	13,434	12,962			12,739	12,838			51,973
Grand Total		379,689	389,926	176,400	179,662	405,386	396,253	228,000	169,772	2,325,088