LEVERAGING DATA

To Reduce Maintenance Expense

OPERATING A MEDIUM- OR HEAVY-DUTY FLEET INCLUDES ***SEVERAL*** INEVITABLE COSTS (FUEL, DRIVER WAGES, MAINTENANCE)

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Maintenance Expense As
% Of Fleet Budget

Maintenance **Expense** 10%

All Other **Expenses** 90%

Source: ATRI Analysis of Operational Costs of Trucking

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Unscheduled **Roadside Repairs**

are often a ***significant*** contributor to total maintenance costs

Cost up to 4 times as much as shop repairs

Serves as an indicator of maintenance program effectiveness

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Analyzing
Unscheduled Maintenance

FleetNet manages **400,000** maintenance events annually

Of those events, **300,000** are "emergency" roadside events

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Maintenance
Event Analysis

After analyzing each emergency roadside event, we discovered that only a precious few fleets have fewer roadside repairs than similar fleets

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Conclusion

Most trucking companies have more unscheduled roadside repairs than they should

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Why?

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How Do We
Find The Answer?

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Identify A
New Maintenance Norm

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What
If You Knew...

YOU ARE CURRENTLY RUNNING
50,000 MILES
BETWEEN A BREAKDOWN EVENT

LAST YEAR YOU WERE RUNNING
75,000 MILES
BETWEEN A BREAKDOWN EVENT

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Vehicle Maintenance Reporting Standards (VMRS) Can Help You Identify The Source Of The Problem

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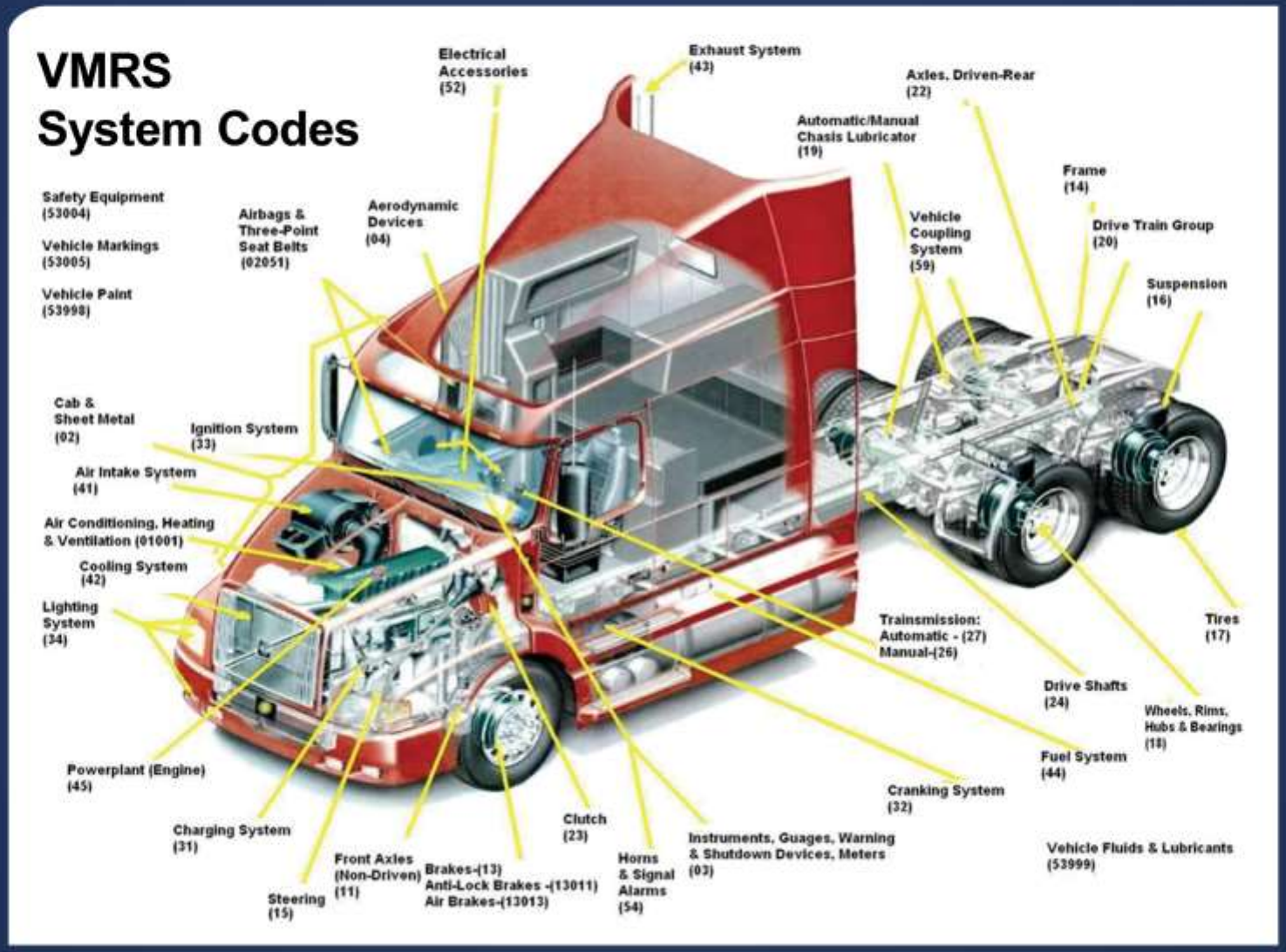
Vehicle Maintenance Reporting Standards (**VMRS**)



By Tracking Each Maintenance Event Using **VMRS** Codes, Fleet Managers Can Analyze Maintenance Data To:

Discover changes and improvements they can make to reduce unscheduled roadside repairs.

Better understand the effectiveness of their maintenance program by identifying a higher than normal roadside failure rate of specific systems.

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How Does It Work?

- Coding each maintenance event using VMRS allows you to compare fleet performance with the help of a business intelligence tool
- It's important to capture ***ALL*** maintenance data for accuracy and statistical significance

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Comparing Miles
Between Breakdowns

Sample Customer

Period 1 **CY 2015**
Period 2 **CY 2016**

Events*	Period 1 Total	Period 1 Miles Between (Miles: 95,025,154)	Period 1 per 100k Miles	Period 2 Total	Period 2 Miles Between (Miles: 90,678,021)	Period 2 per 100k Miles	Variance Utilization -4.6% decrease: Total	Variance: Miles Between	Variance: per 100k Miles
Total	1,577	60,257	1.7	1,756	51,639	1.9	11.4%	-14.3%	16.7%

Repairs/Services*	Δ in Dollars	Frequency			Frequency			Δ in Freq		
Tires, Tubes, Liners & Valves		547	173,721	0.6	614	147,684	0.7	12.2%	-15.0%	17.6%
Lighting System		457	207,933	0.5	502	180,634	0.6	9.8%	-13.1%	15.1%
Brakes		456	208,388	0.5	480	188,913	0.5	5.3%	-9.3%	10.3%
Cab & Sheet Metal		69	1,377,176	0.1	123	737,220	0.1	78.3%	-46.5%	86.8%
Trim & Miscellaneous Hardware		69	1,377,176	0.1	93	975,032	0.1	34.8%	-29.2%	41.2%
Trailer Frame & Support		66	1,439,775	0.1	54	1,679,223	0.1	-18.2%	16.6%	-14.3%
Cranking System		49	1,939,289	0.1	57	1,590,842	0.1	16.3%	-18.0%	21.9%
Air Intake System		65	1,461,925	0.1	38	2,386,264	0.0	-41.5%	63.2%	-38.7%
Cooling System		36	2,639,588	0.0	46	1,971,261	0.1	27.8%	-25.3%	33.9%
Wheels, Rims, Hubs & Bearings		36	2,639,588	0.0	33	2,747,819	0.0	-8.3%	4.1%	-3.9%
Towing Event		40	2,375,629	0.0	19	4,772,527	0.0	-52.5%	100.9%	-50.2%
Suspension		26	3,654,814	0.0	32	2,833,688	0.0	23.1%	-22.5%	29.0%
Fuel System		30	3,167,505	0.0	23	3,942,523	0.0	-23.3%	24.5%	-19.7%
Cargo Handling, Restraints, & Lift Systems		25	3,801,006	0.0	24	3,778,251	0.0	-4.0%	-0.6%	0.6%
Power Plant		27	3,519,450	0.0	16	5,667,376	0.0	-40.7%	61.0%	-37.9%
All Others		100	950,252	0.1	140	647,700	0.2	40.0%	-31.8%	46.7%

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VMRS System Level Analysis

Sample Customer

Period 1 **CY 2015**
Period 2 **CY 2016**

Events*	Period 1 Miles: 95,025,154 — Total	Miles Between	per 100k Miles	Period 2 Miles: 90,678,021 — Total	Miles Between	per 100k Miles	Variance Utilization -4.6% decrease — Total	Miles Between	per 100k Miles
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VMRS **Assembly Level Analysis**

Assemb Desc	Period 1	Period 2	%Change	Δ
Mirrors	8,483	21,775	157%	13,292
Cab Accessories - Interior	2,724	10,279	277%	7,555
Roof Panel & Reinforcement	300	736	145%	436
Cab Or Front Door Mechanis	208	600	189%	392
Panel - Rear Door, Cab	649	155	-76%	(493)
Seats	474	313	-34%	(161)
Windshield Wiper & Washer	508	-	-100%	(508)
Rear Door Mechanism	180	300	67%	120
Sleeper	-	300	100%	300
Sheet Metal Ornamentation	-	50	100%	50
Cab & Sheet Metal	-	-	100%	-
Grand Total	**13,525**	**34,508**	**155%**	**20,983**

By Customer Location

Cust Code	Values Period 1	Period 2	%Change	Δ
Montgomery	840	612	-27%	(228)
Anaheim	-	469	100%	469
Columbia	3,275	4,730	44%	1,456
Nashville	2,578	964	-63%	(1,614)
Orlando	1,220	9,018	639%	7,799
Houston	-	95	100%	95
Charlotte	4,804	17,337	261%	12,533
Phoenix	-	200	100%	200
Austin	-	126	100%	126
Dallas	601	-	-100%	(601)
Chicago	-	782	100%	782
Boston	-	175	100%	175
Buffalo	207	-	-100%	(207)
Grand Total	**13,525**	**34,508**	**155%**	**20,983**

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Use VMRS Data **To Compare**

Single Fleet
Year-Over-Year

Single Fleet
Multiple Locations

Peer-To-Peer
Benchmarking

TMC

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Conclusion

Most fleets are spending more on maintenance than they should

Effective use of data can help your maintenance team focus on areas likely to provide the greatest return

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Learn more about using data to reduce costs or visit
benchmarkit.fleetnetamerica.com
to participate in a peer-to-peer benchmarking study