

YOUR **TOMORROW** IS IN YOUR HANDS **TODAY!**



The AAA is fighting for you!



Fleet 101

3 Point Cycle of Care

Fleet Maintenance Management

Do you know what it can do for you?

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emsfleettoolcart



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Who am I?

Fleet Manager Richmond Ambulance Authority

20 years EMS Fleet Experience

15 Years EMS Fleet Management

ASE Certified Master Technician



MASTER AUTO TECHNICIAN





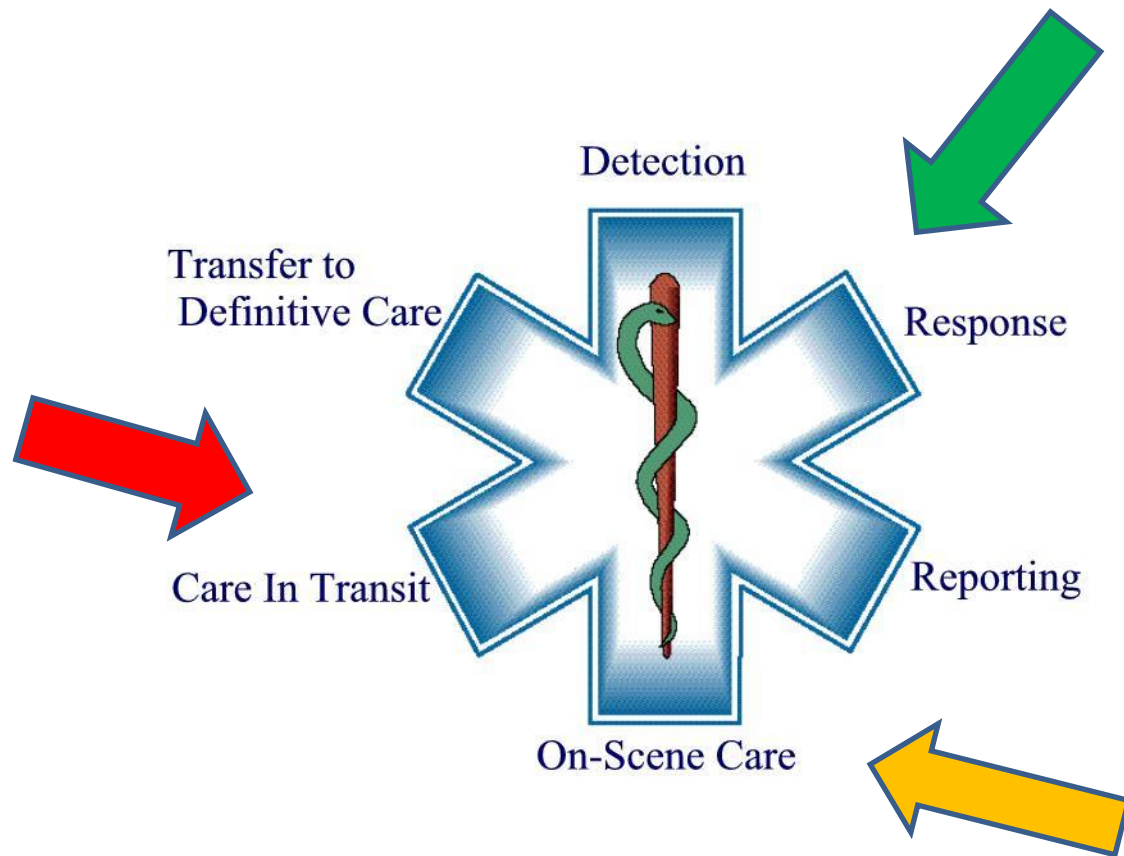
Why are you here today?



Not to learn how to make them fast, see me after, I have a guy for that.



What are the 3 points in the cycle of care?





Frequent Training Topics

- Clinical standards
- ICD 10 reporting
- Equipment and medical supply use
- Situational awareness
- Customer service



Well, no. We didn't notice the low left front tire, oil leak, fried brake pads, overheated engine, or "low battery" light. But the arm chair rest is a little wiggly and the left side music stereo speaker is a little weaker than the right.



Fleet maintenance is not usually on the top of peoples' minds until a major failure occurs.



How much do you know about maintenance?

- What did you do before managing a fleet?
- Where do you look for information when you do not know the answer?
- Are you willing to listen, learn, and share information to better your fleet?



Where to find information for emergency vehicle maintenance?

- Fleet blogs
- Owner's manuals
- Body manufacturers
- Other emergency fleet professionals
- Consultants



Why is emergency vehicle maintenance different?

- One size does not fit all.
- Here are three different types to compare.





Emergency Vehicles





Vehicles at work or home



So why are emergency vehicles supposed to be tougher?

Stuck?





Type of vehicle for the need?

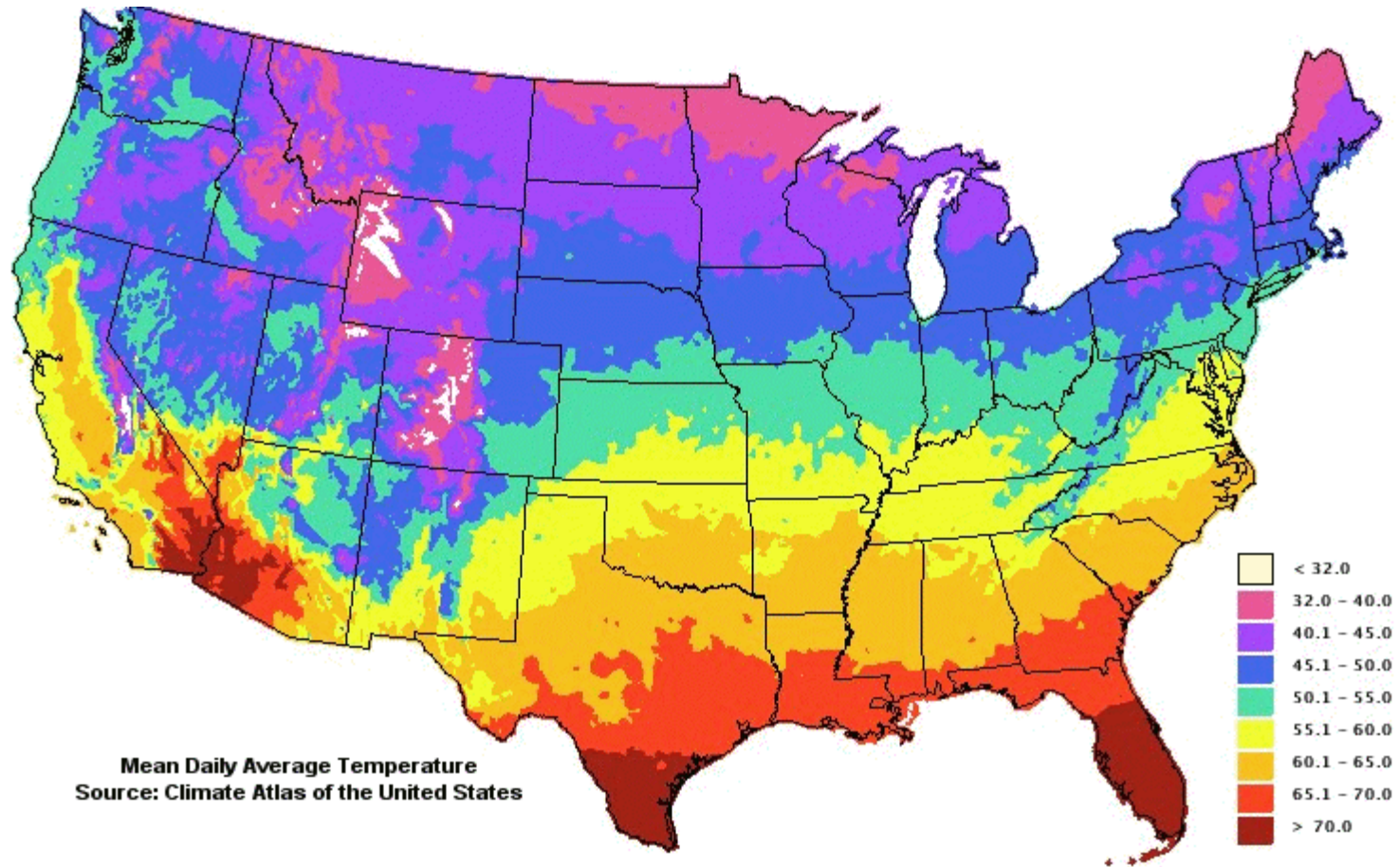




Table 1: Gas vs. Diesel

	Cost per gallon	MPG	Cost per mile
Gasoline	\$3.25	7.1	\$0.47
Diesel	\$3.43	5.37	\$0.66

Geography of Maintenance



Climate makes a difference in vehicle selection, design and maintenance





Clark County NV
2030 ft above sea level

1807 ft difference



Richmond VA
223 ft above sea level



Clark County NV
2030 ft above sea level

1807 ft difference



Richmond VA
223 ft above sea level



MINIMUM OCTANE RATING
(R + M) / 2 METHOD

87

P R E S S

MINIMUM OCTANE RATING
(R + M) / 2 METHOD

91

P R E S S

MINIMUM OCTANE RATING
(R + M) / 2 METHOD

93

P R E S S





MINIMUM OCTANE RATING
(R + M) / 2 METHOD

87

Push Here



Which Manufacturer?

- Decision may be limited by budget or bid.
- “Off the shelf” vehicles.
- Creating a vehicle specification.





First: Design Factors



KKK-A-182F





Second: EMS Vehicle Safety

**Crew Resource
Management**



Third: *Maintenance*



Without Maintenance



CHECK EVERY MONTH



OIL LEVEL

Add oil if low, and check for leaks.



HOSES*

Replace if bulging, rotten or brittle.



BELTS*

Replace if worn, frayed or glazed.



TIRE PRESSURE

Add air if too low.



COOLANT OR ANTIFREEZE*

Add if low, and check for leaks.



AIR FILTER

Replace if dirty.



INSPECT TIRES

For damage, bulges or uneven wear.



Time Marches On



Times and technology
change

15W-40

10W-30

5W-20





Management data

- Parts used
- Mileages
- Labor time
- KPI (Key Performance Indicators)
- Repair failure type



Basic Data Management

Vehicle	Date	LUH	Miles	Brakes	Lights	Transmission	Heat	A/C	Suspension	Tires	Interior
45	8/1/15	1	45678	1		1					
356	8/1/15	0.5	76890	1			1	1			
67	8/3/15	1.5	35678				1	1			
32	8/4/15	3	145987	1				1			
6578	8/7/15	2	4565	1				1			
45	8/17/15	2	47658	1							



Technician Intuition

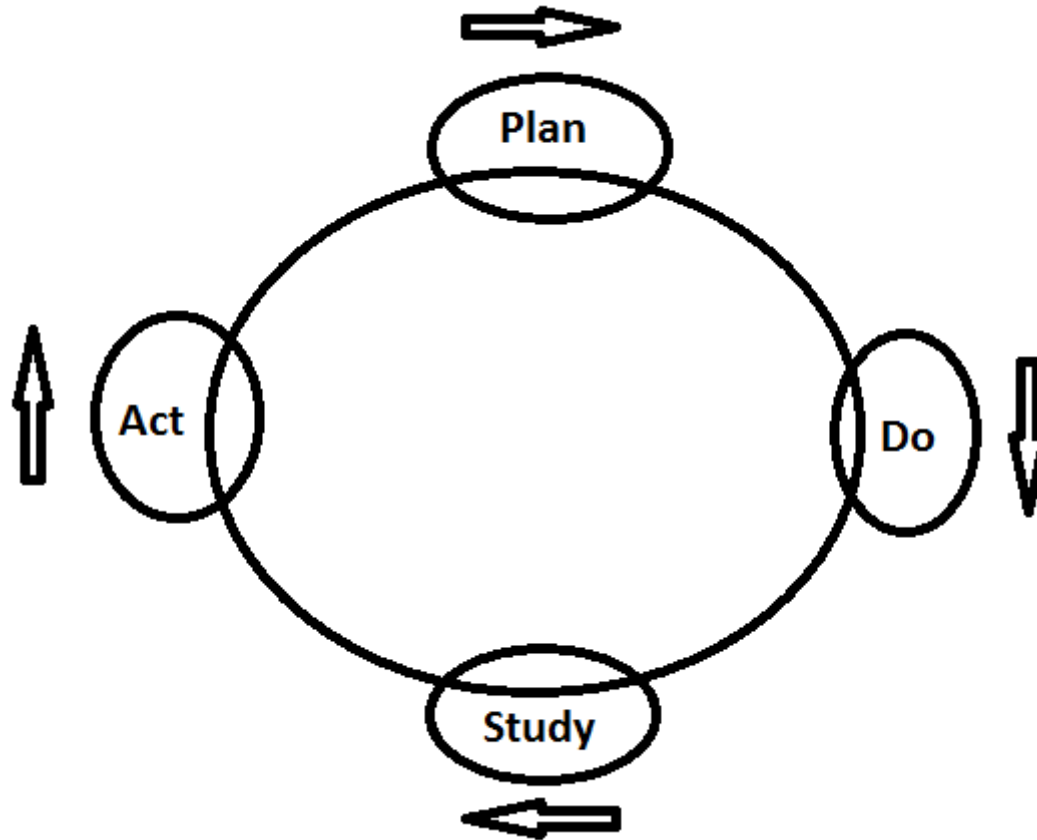


How do we do this?

- Root cause analysis.



PDSA





Key Performance Indicators





Service Schedules

- Most vehicle manufactures have regular and severe duty service recommendations.





- The weight of an ambulance body on a chassis is equivalent to towing an 18 to 25 foot trailer all day every day.



- A manufacturer will rarely take exception with providing more service then recommended for the use.



When , Where, and Why?

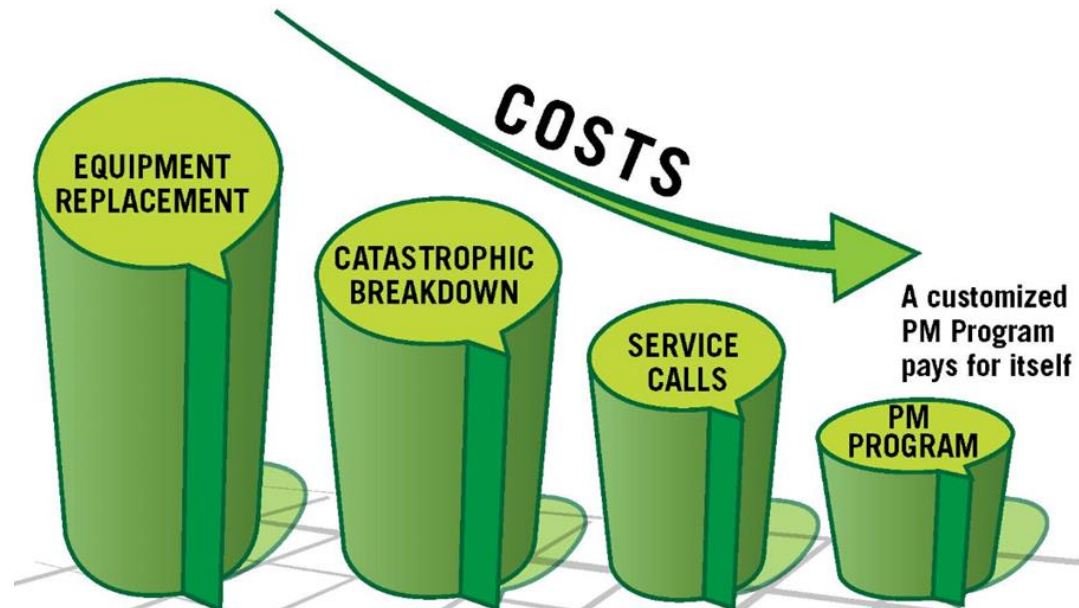
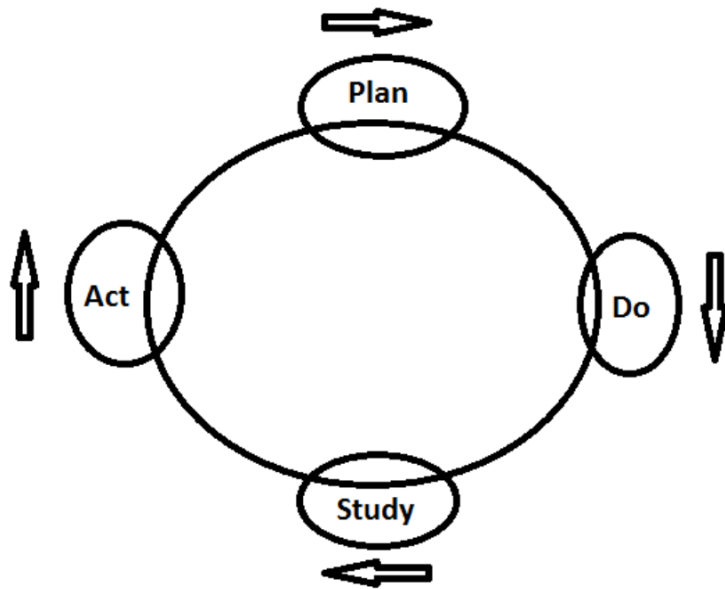
- Most have a P.M. (Preventative Maintenance) schedule
- Do you let them lapse because of higher repair volume or lack of available vehicles?

AMBULANCE PREVENTIVE MAINTENANCE SCHEDULE

[illegible]

Transition

- Gradual reduction in failures.
- Refine process to reduce repairs.





Fixing the Problem

- You must be as proactive with your P.M.'s as you are with payroll.
- If you miss one or hold off you are increasing failure potential.





I'm too far behind

Fresh Start

Next Service Set!



Inventory

VENDORS









Guidelines for Great Fleet Management

- Work to never leave a crew stranded.
- Work to never leave a patient needing another transport.
- Safety of the vehicle, crew and patient is the top priority.
- Take every issue reported as a real issue regardless.
- Quality over quantity.
- Know your environment.



Illustrations and photos provided by:

- Steve Berry EMS Cartoons
- Ford Fleet.com
- Freightliner.com
- International.com
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