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SOUTHERN EMERGENCY & RESCUE VEHICLE SALES



We have noticed over the past 24 months most services quit buying and quit remounting. This has been a tough time for a lot of services. In turn it has been tough for us also. The end of December we started to see a dramatic change and the phones have started to ring. Many services have held out as long as they can. The calls for remounts are definitely out weighing the calls for new units. A buyer now has one more item that has to be considered, gasoline versus diesel engines. Gas is definitely cheaper on the initial purchase. The diesel is more durable by the obvious warranties offered. The gasoline en-

gine warranty is typically 60,000 miles, vs. diesel 100,000 miles. Gasoline units are predicted to use oil at a rate of one quart every 1,500 miles. When trying to choose the correct direction to go in one must look at the overall picture. Some do not want to leave a particular brand because of the change. There is definitely going to be a change going from diesel to gas. In today's market with fuel price soaring I believe that you have to look at the fuel economy. When you are talking 8 mpg for the V-10 versus 15 mpg for the Sprinter diesel the fuel savings over 250,000 miles can be close to \$40,000.00. Unfortunately, in the EMS world reimbursements are set low and there

place to raise them in the near future. Purchasing the correct equipment in the future could possibly mean success or failure. Proper maintenance on your old equipment could extend its life and cut down huge operating expenses.

Every newsletter we send out we give you tips on how to keep your equipment running for the long haul. Every month we get calls from people who have finally implemented these tips and tell us they have noticed improvements. Copies of the old newsletters and the tips are kept on our website WWW.AMBULANCEPARTS.COM

2010 DIESEL EMISSIONS REQUIRE OPERATING CHANGES FOR EMS PROVIDERS

2010 brought significant changes to the vehicles we operate, according to Mark Van Arnam, President/CEO of AEV. "Ford switched their Econoline ambulance chassis to a gasoline engine, while other makes and models introduced new diesel engines that are compliant with the new 2010 Federal diesel emission requirements."

International medium-duty chassis are meeting the new emission standards through an exclusive advanced EGR system according to Van Arnam. However, ambulances built on new Chevrolet, Sprinter, Freightliner and Ford F trucks are equipped with 2010 diesel engines that have Selective Catalytic Reduction systems and require the usage of Diesel Exhaust Fluid (DEF) to operate. "SCR is new to the US," stated Van Arnam, "but it has been a requirement in Europe since 2006." DEF is a non-flammable fluid consisting of 67%-purified water and 33% ammonia-based urea, which is injected within diesel exhaust systems to reduce exhaust emissions. Acadian Ambulance is

currently operating both Sprinter and Chevrolet ambulances with DEF systems. Bill Vidacovich, Vice President of Fleet and Purchasing for Acadian has given us an update on his experience to date.

The Fleet Maintenance Department within Acadian Companies has developed a procedure for vehicles requiring DEF fluid. The Acadian procedure for a vehicle giving a low DEF notification consists of three options that a crew can turn to for information and/or solutions.

1. The first option is for that crew to travel to the nearest maintenance facility within 250 miles of the initial warning and a Fleet Maintenance technician will fill up the DEF tank.
2. The second option is that the crew travels to their station if it is within 250 miles of the initial warning and adds DEF to the tank until it is filled by using their station's inventory of DEF fluid.
3. The third option, if a maintenance facility or their station is

not within 250 miles of the warning, is for the crew to use the two gallons of DEF that is always kept onboard the unit for such situations. Anytime a Fleet Maintenance Technician tops off a unit; the fluid kept in the unit must be used first to avoid DEF expiration. Neither the Chevrolet nor Mercedes vehicles have a fluid level indicator for the DEF tank. Care must be taken when filling the DEF tank so not to over fill the tank. The desired fill level is two-three inches from the top of the fill neck. This allows the DEF to expand if the temperature gets below 12° F and it freezes. The optimum storage temperature is 77° F, and a constant temperature of 95° F only reduces the shelf life by less than six months. DEF typically has a shelf life of one year, providing recommended storage temperatures are maintained.

The Chevrolet chassis fill point for DEF is located on the passenger side engine compartment near the firewall. The driver will be alerted when the available



MANY MORE AVAILABLE
PLEASE CALL FOR INFO

Tires

Tires have been hit with at least a 12 percent price increase in the last month. This follows an 8 percent increase in December. According to a report by the Light and Medium Truck Magazine rubber has quadrupled in price within the last two years. Petroleum is also now through the roof. The tire manufacturers have cut back on production as estimates showed a single digit growth and the growth rate ended up in the teens. Immediate response to this growth is not predicted because of the

shortages in raw materials. Tire inventory is at an all time low and it is reported that there are starting to be some shortages in particular tire sizes from various manufacturers. This may be a common thing for the next few years until production can be increased.

Currently many manufacturers are filling tires with Nitrogen in lieu of air. According to most internet articles this is because the molecules of nitrogen are larger than oxygen. Air is 78% nitrogen and 21% oxygen, so the thought is tires will maintain

pressure better with pure nitrogen. The other reason for nitrogen is there is not any humidity in it. This cuts the moisture you may find in tires from air compressors that are not filtered. The humidity can cause wheel corrosion and possible failure. Not that I have seen this but it sounds like a good sales pitch. The problem with nitrogen in tires comes when you get a flat. Most shops do not have the equipment to refill pure nitrogen and the ones that do charge \$10 to \$40 per tire. Another problem is what does your crew do if they are out of town and notice a low tire?

CHASSIS STATUS

FORD— Since the gas burners have been in production they have had pretty good success. There has been an issue with some of the Fords built prior to 6/22/2010. Seems as Ford had put some kind of flapper in the air intakes. This valve can become stuck or disintegrate. The stuck part can cause lack of power and can create a vacuum in crank case causing oil usage. The **disintegration** can cause engine failure. Solution for the 2011 model year was to remove the flapper. The diesels have slowly faded from the market place. E-450's have a few older models around. The Type II diesel chassis are now gone. Prototype work is now in progress for the Transit van scheduled to replace the Econoline in 2013. This will be time to wake up and smell the coffee for the die hard Ford fan. This product will be very similar to the Sprinter product but definitely has some catching up to do. The pricing may make it more palatable. Currently May 27th is the last day to order 2011

E-Series from Ford and June 3rd for F-Series. Cutaways are running 6-10 week lead times with delays expected. The F-series are 12-14 weeks with delay on the 6.2 liter gas and 4x4's. Obviously the only changes on the 2012 will be the price as they start production the day after the last 2011 is built.

CHEVROLET— Chevrolet has finally got the Chevrolet van recertified to make a Type II out of. All units made after 2009 will take some modifications to make them compliant. The only problem with this product is the raw chassis from Chevrolet is about \$600.00 more than a Sprinter. Chevrolet does have an up fitter discount and some Governmental discounts that Sprinter does not offer, so this may make the truck competitive. There is some speculation in the next few years Chevrolet will have a 4500 and 5500 series similar to the current C-3500 for ambulance conversions. Maybe in a few years it will be an area of their expansions. The current C-3500 still does not have enough GVWR to install a

day to order 2011 Chassis is May 6th for cutaways and June 2nd for cab chassis. Evidently they are also making no changes except pricing as 2012's start the day after build out.

NISSAN— Nissan has introduced its van recently but as stated in our earlier newsletter this chassis was made too small.

DODGE— So far everyone that has a 2011 Dodge chassis is happy. In the future Dodge is still talking about bringing in the van product line made by Iveco. Cummins has announced 2nd Qtr production to increase hp and torque.

SPRINTER— Mercedes is now setting up additional dealers to service the Sprinter line. This should improve service availability. The diesel engine warranty covers towing to the nearest authorized Sprinter dealer if it cannot be driven because of a covered part that has failed. This would leave some interpretation room.



DEF Continued from Page 1

DEF level will provide for 1000 miles of range. At this point 3½ gallons should be added. If the alert is ignored, the driver will be continually alerted as to the range of the vehicle as it diminishes. A warning "EXHAUST FLUID LOW SPEED LIMITED SOON" will be displayed with 75 miles of DEF range remaining. "Exhaust Fluid Empty Refill Now" will be displayed with 75 miles of DEF range remaining. "Exhaust Fluid Empty Refill Now" will be alerted to the driver when the DEF tank is empty. If ignored further, the next engine start will restrict vehicle speed to 55 mph and the next start without adding fluid will limit the vehicle to 4 mph. A minimum of one gallon must be added to clear the message.

The Mercedes chassis DEF fill point is located on the front passenger side of the engine compartment. The driver will be notified by a warning light displayed in the instrument cluster alerting him/her that a range of 500 miles remains. Warning tones will continue until the tank is filled. After the 500-mile limit is diminished the vehicle will be limited to only 20 starts, counting from 20 to 0. A minimum of two gallons must be added to clear the message.

The Acadian Fleet Maintenance Department buys DEF by the gallon from a local parts warehouse for \$4.41 a gallon. The DEF fluid is bought by the case, with each case containing four individual gallons. This has proven to be cheaper than other bulk supply options.

Van Arnam stated that it is too soon in the process to have any good definitive data on DEF usage or maintenance requirements for ambulances equipped with the SCR technology. "This is new to all of us. We will know a lot more about real costs and duty cycles once these vehicles have been in operation in an EMS environment for a year or two."

The article above was written by Mark Van Arnam, CEO of AEV with the assistance of Bill Vidacovich, Vice President of Acadian Ambulance for the American Ambulance Association and reprinted with his permission.

ADDITIONAL DEF FACTS

The DEF system adds on average 200 lbs to the typical diesel truck. This system does not increase fuel economy and could possibly decrease mpg because of the added weight. The system is designed to last the life of the vehicle. The only requirements is to keep the system full of fresh API certified DEF. DEF fluid weighs 9 lbs per gallon. The tank system heats DEF to keep it from freezing. When it freezes it expands about 7% which the system is designed for.

Freezing and thawing out does not degrade the fluid according to Dodge. They state in their manuals to buy this product as needed. This product should be kept out of sunlight.

Look at date codes before buying. DEF is a nontoxic, non polluting, non-hazardous and non flammable solution. DEF can smell similar to ammonia and can be corrosive to certain materials. If it comes in contact with your vehicle rinse with lots of water. DEF is made of mostly water and evaporation can happen. Make an effort to keep the cap on at all times. Nothing but DEF can be put into the DEF tank. If fuel is accidentally added to the tank you need to contact your service center immediately. Our local Ford dealer had one where a customer some how put fuel into this tank. The entire tank had to be replaced, not cheap. Purity is everything about DEF. Buy the appropriate size containers and do not refill. The normal usage of DEF is 50:1 or 50 gallons of fuel to one gallon of diesel. Trucks equipped with this system will purge the lines after the engine is shut down. This process will take 60 seconds or less. Each model of trucks have different fill locations. Sprinter and Chevrolet cab chassis are located under the hood. Chevrolet Cutaways and vans, Ford F series, Freightliners and Dodge cab chassis are all mounted on driver side. Exact locations may vary. Sprinter, Dodge and Chevrolet cab chassis mounted tank under the cab. The rest of the trucks are mounted where they can. This has presented a large problem for most body builders.



INCREASING COSTS

One of our vendors informed of a new cost that will be having a direct impact on us immediately. About 5 to 6 years ago there was a change in the Aluminum extruding business. It seemed like overnight all of the business was sent overseas. The extruder we used answered the phone one day but would not take any orders. The employees said they thought they were going out of business. They quit answering the phones shortly thereafter. The next source we found was competitive but required larger runs with longer lead time. This we found out later was because it was all imported. Evidently the American companies filed a

complaint with the Federal government and they have decided over the time that the foreign items were being dumped in the US. The US government has now applied a 130% tariff on imported aluminum trim with an additional 60% penalty for dumping practices. In the meantime the US extruders that are left have also raised their prices.

While this is not a huge item there is a lot of this product being used in an ambulance. The trim for the Plexiglas doors, the pull for the door, floor trim and corner moldings are all impacted. In the past year and a half the price of units have gone up so rapidly that it is

impossible to quote a unit off the cuff. It is inconvenient for all involved not to be able to do so but it is moving at such a fast pace it is nearly impossible. The escalating fuel prices will once again cause fuel surcharges to be added to freight bills. As in the tire article I am sure there are going to be increases in the other rubber related products, i.e. door gaskets, rubber fenderettes. This ever escalating cost factor has unfortunately caused us to raise our prices recently.



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AMBULANCE PARTS DOT COM, LLC

We have had a huge response to our web site and we would like to thank those who have tried it. Installing new products on the site has taken longer than we would like, but in the mean time we have been able to pick up new items factory direct to help keep your cost down. The site's searches are constantly monitored to add items that you are looking for and we do not have listed. Remember, if you do not find it on the site, call us! We may have it. If there are items that you have been hunting and need a source, let us know and we will try to carry those items.



BACK UP
ALARM 105 DB

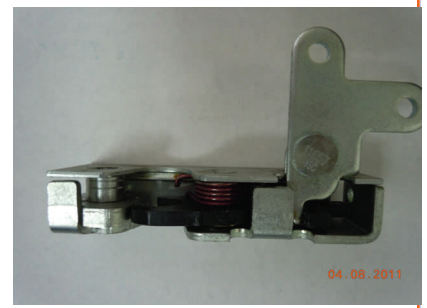
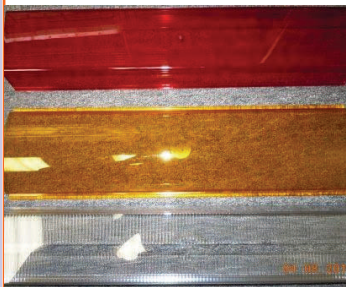
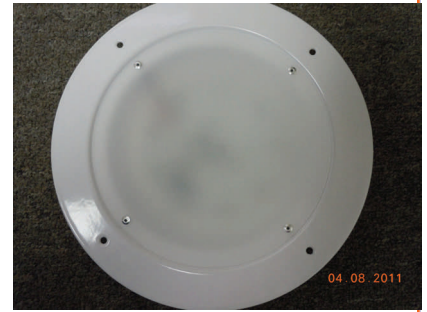
\$28.16

LED DOME
LIGHT HI/LO

\$80.50

LIGHT BAR
LENS AND ALL
ROTARY DOOR
LATCHES

15 % OFF



TIPS TO KEEP THEM GOING

FORD and CHEVROLET - We have had calls for propane trucks. While Ford and Chevrolet offer this product for commercial use, both manufacturers explicitly do not want it used in the ambulance market. To use propane in a gas engine, the valves and the seats must be hardened to last. The option for this cannot be combined with the ambulance prep package. This means if you are currently operating a propane truck you either do not have an ambulance prep package or hardened valves. Failure to have the ambulance prep package can cause your warranty to be voided.

ALL TRUCKS — Crews need to be made aware that new units have a smaller oil capacity. Running low on oil will cause critical and expensive failures easier. Ford F-350 has the largest capacity at 13 quarts and the smallest is the Sprinter with 3.21 quarts. The old 7.3 liter had a 16 quart capacity. If your crews had a problem checking oil back in the good old days you will definitely be in trouble in the future. Most of the trucks do have idiot lights and screens if you trust them. Crews need to check oil at every shift change. They will also need to check them on long distance trips to make sure they have adequate oil levels for the trip home.

CETANE - Is a term that will become very familiar with you shortly. The Cetane number is a measure of the fuel's delay of ignition time. A higher Cetane rating means a shorter ignition delay time and more complete combustion of the fuel. The lower the rating the less combustible it is and creates inefficient combustion cycles. This creates poor performance and poor fuel mileage. The unseen part of this is the carbon build up it causes in the engine. It is really being noticed in the long idle cycle vehicles such as ambulances. Many services are complaining about EGR issues. It is affecting every model that has one, and by every brand. Very few people know what Cetane rating they are buying. I was one, until recently, for the first time in Tennessee I ran across a BP station that had it posted on the pump. The label stated a minimum of 40 Cetane rating. This could be the reason there are issues with EGR's. Ford and Chevrolet have designed their engines to run on diesel with a 45 rating. Mercedes on the other hand designed theirs at 51, might be a European standard. The EGR coolers with the small core are clogging up regularly. Some suggestions that you may want to consider are having your bulk suppliers, if you have one,

to provide a higher quality of diesel with a higher Cetane rating. Get crew members to add 6 ounces of Cetane booster to every 35 gallons of fuel. Replace clogged small bore coolers with new large bore coolers (see November Newsletter). Reduce idling and keep it to a minimum. Have crews turn off their trucks and go into restaurants instead of posting in their trucks. This alone could save thousands in fuel, maintenance and breakdowns. The last but not least, service your trucks regularly. The old days of running them till they break is gone. Set up a pm program and make sure you follow it.

