

AMBULANCE OPERATOR CHECK LIST

1. **Walk-A-Round** – Visually inspect the vehicle exterior for any damage.
2. **Tire and Wheel Inspection**- Inspect the conditions of tires paying attention to any side wall damage, cuts, or abrasions. Inspect for adequate tread depth and proper inflation. Use tire gauge to verify correct pressures. Proper tire pressures can only be obtained when tires are cold. Minimum acceptable tread depth is 4/32” on front tire and 2/32” on rear tires when measured in any major groove. Be sure to retighten the lug nuts on all chassis after the first 100 miles. Refer to your owners manual.
3. **Engine Oil Level**- Check the oil level with the vehicle on level ground prior to cranking the engine. Never check the oil level with the engine running. If the engine has been running, wait approximately 15 to 20 minutes to allow all oil to drain fully back down to the oil pan. Maintain the oil level between the “L” (low) and the “F” (Full) marks on the dip stick. Never operate the engine with the oil level below the (low) level or above the (full) marks. Always obtain two readings before adding oil.
4. **Radiator Coolant Level**- This vehicle is equipped with a radiator surge tank. The proper coolant level is when the surge tank indicates full cold or hot on the sight glass. The level can also be checked by removing the pressure cap on the surge tank with the engine cold. When checking in this manner, the level should be at least 2 inches below the filler neck to allow for heat expansion. **WARNING** – Never remove the radiator cap when the cooling system is hot. If the coolant level is found to be low, check for leaks and advise supervisor.
5. **Power Steering**- Check the engine at the normal operating temperature and **NOT RUNNING**. Fluid must be maintained between the “ADD” and “Full” marks on the dipstick.
6. **Automatic Transmission Fluid Level**- Hot Check- because the fluid level rises as temperature increases, the fluid must be hot to ensure an accurate check. Be sure fluid has reached normal operating temperature of 160-200 degrees. Bring the vehicle to a level surface. Ensure that the engine is at low idle rpm. Put the transmission in N (Neutral). Apply the emergency brake and/or parking brake.

Chock the wheels and take any other steps necessary to keep vehicle from moving. Check fluid level reading. Repeat the check procedure to verify the reading.

NOTE: Safe operating level is within is the “Hot Run” band on the dipstick. The width of the “Hot Run” band represents approximately 1 quart of fluid at the normal operating sump temperature.

If the fluid level is not within the “Hot Run” band, add or drain as necessary to bring fluid level to within the “Hot Run” band.

Check Owners Manual for Fluid Recommendations

7. Engine Serpentine Belt- The Serpentine belt operates the alternator, cab air conditioning compressor, and fan. The belt is equipped with an automatic tensioner. With the engine off, touch or press belt to test that it is snug. Check for cracks, frays, loose fibers, or visible signs of wear. If the belt deflects more than $\frac{1}{2}$ to $\frac{3}{4}$ of an inch, slippage is probably excessive. With the engine running inspect the belt tensioner for unusual noise, excessive looseness. Report any abnormal condition.

8. Radiator and Heater Hoses- Inspect for good condition, no signs of chaffing or abrasions, pliable and soft, no signs of leakage and hose clamps tight.

9. Fluid Leaks- Check for signs of fluid puddles, or dripping fluids on the ground under the engine, or the underside of the engine, transmission or axles.

10. Brake Fluid Level- The fluid level should be up to the flange that surrounds the reservoir. Do not fill the master cylinder to the top of the reservoir. If the system is found to low notify your supervisor.

11. Radiator, Charge Air Cooler, and AC Condenser- With the engine off, visually inspect the front of the radiator and air conditioning condenser and charge air cooler core assembly for debris and clogging of external fins. Remove any debris blocking the core.

12. Windshield Washer Fluid- Maintain minimum level of half full.

13. Oil Pressure- If the light fails to go out or pressure is not indicated on the gauge within fifteen seconds, immediately stop engine and report to supervisor.

14. **Water temperature-** Normal engine operating temperatures will be between 175 to 203 degrees Fahrenheit. If the water temperature warning light and buzzer activate and temperature gauge indicates above 210 degrees, stop engine immediately and notify supervisor. If the temperature remains below 160 degrees during normal operation, the cooling system should be inspected to determine the cause.

15. **The Voltmeter-** This gauge should indicate 13.6 to 14.3 volts when the engine is running and the charging system is operating normally. If the emergency warning lights are activated and the vehicle is parked, the fast idle must be activated to maintain 13.6 to 14.3 volts.

Voltage readings less than 12.8 volts may indicate a charging system malfunction. If the malfunction is not corrected, power to operate lights and accessories is being robbed from the battery bank until they are dead. If this condition exists turn off all possible lights and accessories to prolong life of the battery pack.

16. **The Ammeter-** The ammeter indicates the rate of charge of electric current supplied by the alternator to the batteries, or the rate of discharge from the batteries. When the batteries are fully charged, a very slight charge (5 to 15) will be indicated during normal vehicle operation. A continuously higher reading with our warning lights activated, indicate that the batteries are becoming weak. Also continuous (-) discharge reading indicates that power is being robbed from the battery pack. Never allow the ammeter to remain in the (-) discharge region for an extended period of time. Reduce your electrical load immediately by turning off the lights and accessories.

17. **Air Pressure Gauge-** (If Applicable) Normal operating range of the air system is at 100 to 125psi. If the air pressure drops to below 62-68 psi, a Low Pressure warning light and buzzer should activate. The air system supplies the rear air ride suspension, parking brake, cab seats, and hood mounted air horns.

18. **Fuel Level-** Fuel level should be maintained above $\frac{3}{4}$ full.

19. **Air Tank-** (If Applicable) If the vehicle is equipped with a heated, automatic moisture ejector it will be at the lower forward end of the air reservoir. The ejector should automatically eject a small volume of air every time the air compressor cuts in and again when the compressor cuts out. This is not a visual check, only audible.

20. **Steering play**- Check for the excessive play in the steering linkages; it should have less than 4³/₄" lash with an 18 inch steering wheel.

21. **Heater/Defroster/ Air Conditioner**- Check to see all the Heater/Defroster/Air Conditioners are working. The air conditioner should also be used periodically during winter months to keep all seals and valves properly lubricated.

22. **Hydraulic Brake Check** (If Applicable) – With the engine running, pump the brake pedal three times. Then apply firm pressure to the pedal and hold for several seconds. The pedal should continue to be firm. If the pedal drifts toward the floor, there may be leak or other problem. If so, place the vehicle out of service and advise supervisor.

23. **Parking Brake** (If Applicable) - The parking brake is manually activated by pulling the yellow square labeled "Parking Brake." A sudden sound of air will occur when the brake activates

ALWAYS BRING THE VEHICLE TO a COMPLETE STOP PRIOR TO PLACING THE TRANSMISSION SHIFT SELECTOR IN NEUTRAL & APPLYING THE "PARK" BRAKE. The purpose of this brake is to hold the vehicle in the parked position. The parking brake should not be used to brake the vehicle during normal driving.

24. **Water in Fuel**- (if Applicable) - Visually inspect the level of fuel in the fuel filter/water separator. As restriction in the filter increases the fuel level will rise in the clear fuel bowl. If the level is at or near the change filter line, notification should be made in order to have the filter change scheduled. Vehicle is equipped with warning light indicating water in fuel. If light activates; notify supervisor.

25. **Lighting Non-emergency**- Check to see that all lights illuminate and are clean. Make sure headlights function on both high and low beams. Verify operation of turn signals, tail lights, brake lights, back up lights, and four way flashers. Verify operation of dome lights in cab and ambulance module.

26. **Lighting, Emergency**- Verify proper operations of all emergency warning lights. Verify all "switch on" indicators illuminate. For warning lights to activate, the master emergency light switch must be turned on. The sequence allows the operator to pre-select (turn-on) the warning lights desired. When the vehicle is started the operator only turns on the "Emergency Master" switch and warning lights will automatically turn on one at a time until they all illuminate. When the

“Emergency Master” is turned off, the warning lights will automatically turn off one at a time until they are all off.

An electrical load manager is also incorporated into the emergency warning light system. The load manager will determine if the alternator and battery pack is properly maintaining adequate system voltage. When the system voltage drops below an acceptable level the load manager will automatically start to turn warning lights off to reduce the rate of discharge to the battery pack. If a low voltage condition is noted while driving the vehicle it will be the responsibility of the vehicle operator to switch the lighting off and reduce the electrical load to an acceptable level.

27. Fast Idle- The fast idle will operate both manually and automatic. Turn the “Fast Idle” switch on to verify operation. The tachometer should indicate approximately 1300-1500 RPM’s and the voltmeter should indicate approximately 13.8 to 14.3 volts with or without warning devices and other electrical accessories operating. The fast idle should deactivate when you depress the brake pedal or if the transmission shift selector is moved from neutral or PARK position. The automatic fast idle control will activate whenever the system voltage is reduced to 12.8 volts for at least one minute. The automatic fast idle will remain on for a minimum of 10 minutes and until 13.0 volts is achieved.

STANDARD OPERATING PROCEDURE WILL BE TO ACTIVATE THE “FAST IDLE” BEFORE EXITING THE CAB ANY TIME THE ENGINE WILL BE LEFT RUNNING FOR MORE THAN FIVE MINUTES OR ANY TIME EMERGENCY LIGHTS ARE OPERATING WHILE ON SCENE

28. Extended Engine Idling- Avoid unnecessary idle either at normal or high speed settings in hot weather. Prolonged engine idle in high temperatures can result in increased fuel tank pressurization.

Frequently, out of habit operators will leave vehicles running or idling for extended periods of time when unnecessary. Engine idling should be allowed for the amount of time needed to load/unload the crew or patient or during situations of extreme weather. However, at other times while checking out the vehicle, re-stocking and in general just standing by, the vehicle engine should be shut off to save unnecessary wear and tear. When a diesel engine is allowed to idle for extended periods of time, the engine operating temperature drops, resulting in less efficient combustion of fuel.

The current **LOW SULPHUR** fuel washes down the cylinder walls, and dilutes the oil viscosity which extremely elevates the wear of the internal engine components. Extended periods of low RPM idle can clog injector nozzles and reduce engine acceleration and performance. Also during severe conditions, turbo slobber can occur and will result in raw motor oil being pumped straight out the exhaust pipe. Reduction in idling will help, increase the length of time between oil changes, and reduce operating expenses, increase engine performance and engine life. It will also increase the length of the warranty due to it being based on engine hours.

When refueling fuel tank, do not fill beyond the first automatic fuel nozzle shut-off click. Refuel tank when vehicle is parked on level ground

29. Fire Extinguisher- The unit is equipped with ABC dry powder fire extinguishers. Verify they are fully charged and that they are securely mounted. Also check the date.

30. Shoreline Plug's- Test proper operation of all shoreline connections. The shoreline plug is to be plugged in anytime the ambulance is parked and the engine is not running. The plug should be manually disconnected by the driver prior to opening the cab door.

31. Floor Covering- Mix detergent solution with warm water in bucket, dilute as recommended by the detergent manufacturer. Apply detergent solution liberally over floor surface with mop.

Let solution stand on floor for at least three minutes. Use medium bristle scrub brush. Scrub the surface to remove marks.

TO REMOVE A MAJORITY OF STAINS, FOLLOW THESE STEPS:

1. Apply warm water, then sprinkle 'OXYGEN BLEACH' made by Comet or Ajax, and let stand for about three minutes.
2. Scrub surface with medium bristle brush.
3. Rinse with cold clean water.
4. Allow surface to completely dry before allowing traffic.

32. Vinyl Surfaces- When cleaning vinyl surfaces, first remove all the loose dust. Use a quality vinyl cleaner to remove remaining dirt and restore luster and shine.

33. Plexiglass, Lexan- For general cleaning, use a lint-free cloth and a cleaner such as windshield washer fluid. Never use regular window cleaner as it contains

ammonia and will cloud plastic. Never use cleaners that contain abrasive materials. To remove scratches that can't be felt by a fingernail, use Novus brand plastic cleaner or polish.

Light bars and smooth surface exterior lenses are exposed to a much more aggressive environment with road grime, salt, sunlight, and heat. When washing, use a sponge, fresh water, an approved car wash detergent that is rated wax-safe. When needed, use NOVUS brand polish to restore lenses to a 'Clear' state and restore optical output.

Optical Pre-Emption Devices- For maximum range, it is absolutely necessary to always keep the pre-emption device len(s) unobstructed from dirt, scratches, and haze. Never use any polish on CLEAR lenses. Due to the high heat generated, the wax will "yellow", resulting in diminishing light amplitude.

34. Treadbrite Surfaces- To preserve the luster and characteristics of the treadbrite surface, it should be washed periodically with neutral detergent solution and protected with non-abrasive automotive wax. Longer protection against weathering or oxidation in aggressive atmosphere could be achieved by application of clear, non-yellowing protective lacquer formulations after thoroughly cleaning the surface with a mild etching cleaner (maintenance brighter).

CAUTION DO NOT USE STEEL WOOL, ABRASIVE TYPE CLEANERS, OR STRONG DETERGENTS CONTAINING CAUSTIC AGENTS ON CHROME PLATED MATERIALS OR ANODIZED ALUMINUM PARTS, BECAUSE YOU MAY DAMAGE THE PROTECTIVE COATING AND CAUSE DISCOLORATION OR PAINT DETERIORATION.

35. Cab/Body Washing- Pay attention to under wheel wells and side steps. If your vehicle has any underbody accessories: (Condenser, Side step, Tire Chains, or Other). Be sure to wash out any dirt or salts each day and pay attention to window frames and door post switches.

While the finish is fresh (the first 30 days), rinse frequently with water. Wash the vehicle weekly. If the vehicle is extremely soiled, use a mild liquid soap (with a neutral ph between 6 and 8), not detergent. Detergents containing butyl cellosolve or potassium hydroxide should not be used.

- Do not use any abrasives (brushes, chemicals, or cleaners).
- Do not wax this vehicle for the first 120 days after delivery.
- Do not use any kind of scraper to remove ice or snow from the painted surface.

- Do not allow any kind of diesel fuel or antifreeze to stand on the surface. Rinse with water.
- Have any paint nicks or bruises touched up as soon as possible to prevent corrosion.
- Park in a sheltered area whenever possible to extend the life of the finish.
- Vehicles should be cleaned on every shift unless inclement weather or high volumes of transports occur.
- Never wash the interior of the cab or floor area with a garden hose. Numerous electrical components are located in the cab that will be damaged by water. Use only damp rags to clean this area.

36. DOOR LATCHES AND HINGES- Apply WD-40 to all moving parts of the door.

37. LUBRICATE DOOR HARDWARE / SLIDE HARDWARE-

Compartment and cab door latches, compartment drawer slides, and all door hinges should be cleaned and lubricated lightly with Lubriplate #110 white lubricant or equivalent.

38. DOOR GASKETS- Use a thin coat of silicone spray lubricant to keep all compartment and cab door gaskets soft and pliable. Use 3M weather strip adhesive to re-glue any loose gasketing.