



CHARLOTTESVILLE - ALBEMARLE RESCUE SQUAD



STANDARD OPERATING GUIDELINE

TOPIC: Squad 134 Operations	S.O.P. # 5.7
Approved by: Lair D. Haugh, Chief	Revised: 2/9/2003 Approved:

I. PURPOSE

- a. To provide a guideline for checking and operating squad 133.

II. VEHICLE STARTUP

- a. With gear selector in the neutral position and brake lock on, turn battery selector switch to the on position,
- b. Turn ignition switch key to on,
- c. Depress the start button until the engine starts.
 - i. NOTE: If the engine does not immediately start, check the "engine off" handle to make sure it is not pulled out.
 - ii. Do not depress the accelerator until the oil pressure has risen to at least 30 psi.
- d. Air pressure must exceed 60 psi before the vehicle can be moved. If the low air buzzer is sounding, increasing the engine idle will not allow you to release the brakes and faster and will increase wear on the engine.

III. ENGINE OPERATIONS

- a. Extended Operations At Idle
 - i. Anytime the vehicle is running other than during normal driving, throttle the engine up with the high idle switch. This ensures that the engine is properly lubricated, normal operating temperatures are maintained, and the electrical system is operating at sufficient output.

IV. VEHICLE SHUTDOWN

- a. Place the gear selector in the neutral position.
- b. Set the parking brake.
- c. Allow the engine to idle for 3-5 minutes to allow the lubricating oil and water to carry heat away from the iron masses.
- d. Pull the engine shut-down knob until the engine stops and then reset the knob.
- e. Turn ignition switch key to off then turn the battery selector switch to off.

V. VEHICLE ENGINE CHECK

- a. The engine is an International DT 466 turbocharged diesel that develops 250 hp @ 2300 rpm and 660 ft. lbs. torque @ 1500 rpm.
- b. **ENGINE OIL CHECK**
 - i. Unlatch the hood on both sides and pull it open using the handhold on the front.
 - ii. Locate the dipstick on the driver's side and check fluid level.
 - iii. The dipstick is inside the fill tube.
 - iv. If oil is needed, this is where it goes.

- v. If vehicle has just been run, wait at least 15 minutes before checking the oil level.
- vi. Use 15W-40 diesel quality motor oil only.

c. **RADIATOR COOLANT LEVEL**

- i. The radiator fill is located on the passenger side of the engine.
 - 1. It is a white tank. (The radiator itself has no cap.)
- ii. Engine must be cool before the radiator cap can be removed.
- iii. Radiator coolant level is sufficient if it is at the fill level marked on the tank.
- iv. A mixture of water and antifreeze (50/50) is used.
- v. Make sure you re-tighten the cap securely.

VI. WINDSHIELD WASHER FLUID

- a. The reservoir is located on the passenger side on the firewall.
- b. Keep reservoir filled above the fill-line.

VII. TRANSMISSION FLUID

- a. The transmission is an Allison MT-643 4-speed automatic.
- b. The transmission fluid dipstick is located beside the motor oil dipstick.
- c. This fluid level can be checked with the transmission cold, look for the cold setting on the dipstick.
- d. Check fluid level same as motor oil. Replenish if necessary.

VIII. POWER STEERING FLUID

- a. The power steering reservoir is located on the driver's side.
- b. The small pop-up cap contains the dipstick.
- c. This fluid level can be checked with the engine hot or cold.
 - i. Look for the appropriate markings on the dipstick.
- d. The large cap is the fill.
- e. ***** If fluid is added, notify the Fleet Operations Officer *****

IX. GENERATOR CHECK

- a. The Hydra-Gen is rated at 15 kW.
 - i. 2. The Hydra-Gen can be used any time the vehicle is not in transit.
 - ii. 3. The Hydra-Gen supplies 120v current to six (6) twist-lock receptacles located on the outside of the box.
 - iii. There are also two (2) 120v household receptacles up in the interior of the box in compartment #1.
 - iv. In addition, there is a 120/220v cord reel located in compartment #3 and in compartment #6.
 - v. The generator also supplies 220v power to the receptacle in compartment #7 and the right and left side cord reels.
- b. **FLUID CHECK**
 - i. The Hydra-Gen is located on the top of the vehicle (for cooling) and adds to the overall height.
 - ii. The oil is checked by visual inspection of the sight gauge that is located on the side of the Hydra-Gen.

- iii. A visual inspection of the Hydra-Gen system should be done to check for leaks.
 - iv. The Fleet Operations Officer will maintain this fluid level.
- c. GENERATOR STARTUP
- i. Stop vehicle, set brakes and place gear selector in neutral position.
 - ii. While engine is at idle speed, engage PTO switch.
 - iii. The PTO will now engage.
 - 1. A green indicator light on the dash will glow, the engine will speed up and a whine will be heard from the motion of the Hydra-Gen.
- d. GENERATOR SHUTDOWN
- i. Shut off all circuit breakers (except the Hurst switch which is blue) and disconnect the main breaker.
 - ii. Shut off the PTO switch.
 - 1. The engine will return to idle and the vehicle is now ready to be driven.

X. SAFETY

- a. Always leave the vehicle's gear selector in the neutral position before leaving the vehicle's cab.
- b. Always activate the parking brake control before leaving the vehicle's cab whether the engine is running or not. The transmission does not have a park position.
- c. Always put the wheel chocks in position. One (1) chock in front of the rear wheels and one (1) chock behind the rear wheels.
 - i. This is the proper position regardless of the slope and direction of travel of the vehicle.
- d. Always position the vehicle so that the personnel can work in and out of the compartments with as little exposure to traffic as possible. This will help ensure their safety.
- e. Always use a spotter to watch for you when backing the vehicle.
- f. Always drive the vehicle with due regard to height (10'), width (8'), and speed.
 - i. This vehicle's center of gravity is a lot higher than the other vehicles in the CARS fleet.