

Santa Barbara City Fire Department - Standard Operating Procedures <b>Apparatus and Equipment Operations</b>	Code: <b>A-I-1</b>
<b>General Maintenance and Apparatus Checks</b>	
Chpt: I Apparatus General	Revised: 8/12/15 Pages: 7

## **I. PURPOSE**

A. To establish set guidelines and procedures for maintaining and checking the apparatus for readiness.

## **II. MORNING CHECK**

A. Note: this is in addition to the normal personal safety equipment checks

B. Use acronym “GO FLOE WATER”

C. G = Gauges,

1. Make sure they are working properly
2. Make sure they are reading in operable ranges.

D. O = Oil,

1. Check the engine oil level
2. If engine is warm or has just been run, wait 20 minutes before checking oil level
3. Check the condition of the oil
4. Are there any contaminants or foreign matter in the oil.

E. F = Fuel,

1. Be sure to top off the fuel when it gets to  $\frac{3}{4}$  of a tank.
2. Partially filled tanks can form condensation which promotes the growth of microorganisms that can clog fuel filters and restrict flow

F. L = Lights,

1. Head lights, hi and lo beams
2. Emergency lights
3. 4 way flashers
4. Turn signals

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5. Brake lights
6. Back up lights
7. Reflectors
8. Spot lights

### G. O = Outside equipment

1. Check to see that it is secure and hold downs or fasteners are in good operating condition

### H. E = Engage pump,

1. Perform floor test (See section III below)
2. Check that panel gauges match readings in cab
3. Test relief valve
4. Test throttle and valves
5. Restore pump, drain valves

### I. W = Water

1. Check level in water tank, do visual check in tank
2. Check water (coolant) level in radiator

### J. A = Air

1. Check air levels in system
2. Listen for air leaks or if tanks are not holding pressure
3. Look for torn air inlet piping or boots and loose or damaged clamps.

### K. T = Tires

1. Check for condition
2. Proper air pressure/inflation
3. Tread wear/uneven wear
4. Cuts or damage

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### L. E = Electrical

1. Apparatus has power to all systems
2. Check inverters

### M. R = Radios

1. Check rig radio
2. Check portable
3. Know how to change zones and channels
4. Make sure frequency chart is in apparatus

## III. APPARATUS PUMP FLOOR TEST

### A. IN CAB

1. Set anchor locks
2. Set Pump Controls (See [T-II-3](#) General instructions Engineer)
3. Turn on master switch (panel lights may not work w/o)
4. Observe to see that speedometer needle rises and “OK to pump” lights come on (if available)

### B. EXIT CAB

1. Chock wheels
2. Turn on panel lights
3. Turn on speaker

### C. RELIEF VALVE TEST

1. When the relief valve is not in operation, maintain a setting above the normal operating pressure.
2. Open tank to pump valve
3. Open tank fill less than 1/2 way.
4. Turn the control valve handwheel clockwise as far as it will go
5. Bring the pump pressure up to 150 PSI per normal operating procedures.

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6. Turn the control valve handwheel counterclockwise until the relief valve opens and the pilot light is lit. Master pressure gauge should drop at least 5 to 10 PSI
7. Turn the control valve handwheel clockwise then counterclockwise a few times to ensure that the handwheel turns freely. Master pressure gauge should increase and pilot light should go out. This action also ensures proper valve operation.
8. Reset the relief valve to its normal operational setting.
9. Close tank fill
10. Turn off light and radio
11. Restore apparatus to road operations
12. Bleed drains

### IV. MORNING CHECK DOCUMENTATION

**A. This FireHouse journal entry is the responsibility of the assigned apparatus operator.** Engineers and Rescue drivers are responsible for performing a thorough and complete morning check-out of the apparatus and equipment assigned to that apparatus. Documentation of this process is recorded in the “Morning Check” journal entry. Apparatus operators are responsible for documenting missing or broken equipment and notifying their company commanders of such occurrences.

# General Maintenance and Apparatus Checks

## V. SERVICE DAYS/WEEKLY CHECKS

A. A service day will be performed on all apparatus each week. The service days will involve a thorough inspection of all equipment to include operating and cleaning. The apparatus' systems and components will also be checked. In addition to the morning check, the following items will also be inspected:

### B. Belts and Hoses

1. Hoses: Look for cover damage, wear marks, twists, crimping, brittleness, cracks, and leaks
2. Service day – Belts and Hoses
3. Belts: Are they cracked, frayed or loose

### C. Fuel tank

1. Look for damage to the tank, retaining straps and fuel lines
2. Look for leaks

### D. Frame, Chassis

1. Check cracks in frame or fasteners
2. Check for loose fasteners or bolts
3. Check for rust around frame bolts or any place components attach to frame

### E. Suspension

1. Check leaf springs and leaf spring hangers for rust, cracks or loose bolts
2. Check shocks for leaks and connection points

### F. Fluid Levels

1. Washer fluid
2. Transmission fluid
  - a) Clean dirt from around the end of the fluid full tube before removing the dipstick
  - b) Transmission fluid should be checked warm
3. Engine oil

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- a) Check oil filters for leaks or damage
  - b) Check oil lines for cracks and leaks
  - c) Oil filters may leak a small amount of oil, this is OK. DO NOT tighten filters!
4. Primer pump reservoir – newer rigs don't have primer reservoirs
  5. Don't check differential or pump transmission fluids, but look to see if there are leaks in these areas
  6. Power steering fluid – check cold or warm
  7. Cab tilt reservoir is difficult to check accurately. Instead, look for signs of low fluid if the cab is slow to lift or limited in its ability to lift

### G. Glass

1. Check all glass for cleanliness and for cracks or damage
  - a) Make sure windshield is clean and free of debris
  - b) Check windshield wipers and washer fluid level

### H. Coolant Levels

1. Radiators without recovery systems, Level should be 1" to 1 ½" below the filler
2. Those with recovery systems, Check overflow bottle or sight glass

### I. Brakes

1. Check for pad or shoe thickness, should be at least as thick as the metal backing
2. Listen for air leaks and check airline routing for rubbing or chafing

### J. Wheel Hubs

1. Check oil level in front hubs through plastic sight feature. A small amount of oil film around the hub is OK, but any more than that should be reported

### K. Batteries

1. Check the hydrometer "Eye" of maintenance free batteries (if avail)
2. Inspect cables, clamps, and hold down brackets

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3. Look for loose connections or corrosion at terminals

### L. Fluid Leaks

1. What is leaking?
2. Where is it coming from?
3. What type of fluid is it?

### M. Drains & Valves

1. Open and drain all valves

### N. Service day – TPM relief valve

1. It is important to work the spring on the 2nd stage of the TPM relief valve. This is done by hooking up to a hydrant and setting the relief valve below 100. Let the 2nd stage relief valve dump to ground for 5-10 seconds. This also works the 1<sup>st</sup> stage relief valve as well

## VI. SERVICE AS NEEDED

- A. Use your senses
- B. If something doesn't sound, feel, or look right, CHECK OUT THE APPARATUS!
- C. After a heavy use or work load, CHECK OUT THE APPARATUS!
- D. After returning from the shop, CHECK OUT THE APPARATUS!
- E. If you are coming back from a long lay off, CHECK OUT THE APPARATUS!