



**Division 02** **Apparatus and Equipment**

**Chapter 17 – Monthly Vehicle Inspection Report**

February 2009

**POLICY**

This General Order shall set forth a policy and procedure to be followed when performing the daily, weekly and monthly apparatus checks. These procedures apply to all Emergency Fire/EMS apparatus authorized to operate within Prince George's County.

**DEFINITIONS**

**Apparatus** – For the purposes of this General Order, all emergency Fire/EMS vehicles, which are authorized to operate within Prince George's County, excluding support vehicles.

**Support Vehicle** – For the purposes of this General Order, sedans, pick-up trucks and support utility vehicles assigned to Fleet Maintenance for maintenance and repairs.

**PROCEDURES**

**1. Provisions**

A Monthly Vehicle Inspection Report (Form #3947) shall be maintained for each piece of apparatus at the station level.

A new Report will be started at the beginning of each month for each piece of apparatus. The previous month's original Report will be forwarded to Apparatus Maintenance by the 5th of the month; the copy shall be maintained at the station level.

All line spaces **shall be completed** as indicated:

- Block 1: MONTH, Month of inspection
- Block 2: YEAR, Year of inspection
- Block 3: MILEAGE, Starting mileage of vehicle for the month
- Block 4: MILEAGE, Ending mileage of vehicle for the month
- Block 5: ENGINE HOURS, Starting engine hours of vehicle for the month
- Block 6: ENGINE HOURS, Ending engine hours of vehicle for the month
- Blocks 7-10: UNIT, Radio I.D. Number assigned to vehicle
- Blocks 11-15: VEHICLE, Vehicle Inventory Control Number
- Blocks 16-17: STATION, Station Number
- Block 18: LEVEL OF INSPECTION, Indicate level of inspection
- Block 19: INITIAL, Initials of individual performing inspection
- Block 20: COMMENTS/ACTION TAKEN, Space for individual conducting inspection to advise on condition, action taken, or person called, etc.
- Block 21: DATE IN, Date unit was placed in shop for repairs
- Block 22: SHOP TICKET #, Shop Ticket number authorizing work
- Block 23: VENDOR, Name of vendor performing work
- Block 24: DESCRIPTION OF WORK, Brief description of work to be performed by vendor
- Block 25: DATE OUT, Date unit was returned from vendor
- Block 26: STATION SUPERVISOR, Signature of Station Supervisor

The Inspection Report shall be kept in such a manner as to give complete and accurate daily history of the apparatus assigned to the



station. All entries shall appear in ink; no pencil entries or erasures shall be made on the Inspection Report. In the event that an error is made, a single line shall be drawn through the incorrect entry and a corrected entry made and initialed.

In addition to the Monthly Vehicle Inspection Report for each vehicle, a Daily/Weekly/Monthly Apparatus Check Sheet (P.G.C. Form #4628) shall be filled out in its entirety. The Daily/Weekly/Monthly Apparatus Check Sheets, which are available from Apparatus Maintenance, correspond to the attached Apparatus Check Procedures. It is the responsibility of the Station Supervisor to set up the schedule determining when the weekly and monthly apparatus checks will be performed. Once the Apparatus Check Sheets are complete, they are to be signed off by the Station Supervisor and placed in the station vehicle file for one year. Only the Monthly Vehicle Inspection Report (Form #3947) will be forwarded to Apparatus Maintenance, as outlined above.

It shall be the Station Officer's responsibility to ensure that all apparatus inspections and related forms are properly completed. Failure to ensure that these duties are properly completed may result in disciplinary action.

#### REFERENCES

Apparatus Check Procedures

#### FORMS/ATTACHMENTS

Monthly Vehicle Inspection Report (Form #3947)

Daily/Weekly/Monthly Apparatus Check Sheets (Form #4628)



# PRINCE GEORGE'S COUNTY FIRE/EMS DEPARTMENT MONTHLY VEHICLE INSPECTION REPORT

MONTH \_\_\_\_\_ YEAR \_\_\_\_\_

STATION

DAILY = A  
WEEKLY = B  
MONTHLY = C  
QUARTERLY = D

MILEAGE

FIRST DAY                      LAST DAY

UNIT

VEHICLE

M

ENGINE HRS

FIRST DAY                      LAST DAY

DAY	↑	INITIAL	COMMENTS/ACTION TAKEN
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			

DATE IN	SHOP TICKET / P.O. #	VENDOR	DESCRIPTION OF WORK	DATE OUT

# PRINCE GEORGE'S COUNTY FIRE / EMS DEPARTMENT

## DAILY / WEEKLY / MONTHLY APPARATUS CHECK SHEET

DATE: <input type="text"/> - <input type="text"/> - <input type="text"/>							TO: <input type="text"/> - <input type="text"/> - <input type="text"/>							VEHICLE: <input type="text"/>																																			
<b>I. UNDER ENGINE COVER</b>							<b>VII. BODY</b>							<b>XI. GROUND LADDERS</b>																																			
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S																													
ENGINE OIL LEVEL							INSPECT FOR DAMAGE							VISUAL INSPECTION																																			
ENGINE OIL CONDITION							TOOLS & EQUIPMENT SECURE							OPERATION																																			
ENGINE OIL LEAKS							WHEEL CHOCKS							CLEAN & LUBRICATE																																			
ENGINE COOLANT LEVEL							TRIANGLES							<b>XII. NOZZLES &amp; APPLIANCES</b>																																			
ENGINE COOLANT LEAKS							FLARES							INSPECTION																																			
W							WASH EXTERIOR							OPERATION																																			
M							<b>VIII. CAB ELECTRICAL</b>							CLEAN & LUBRICATE																																			
M							S	M	T	W	T	F	S	<b>XIII. SCBA</b>																																			
FRONT OF RADIATOR CLEANLINESS							GAUGE OPERATION							VISUAL INSPECTION																																			
TRANSMISSION FLUID LEVEL							LOW OIL PRESSURE ALARM							WITHIN HYDRO DATE																																			
TRANSMISSION FLUID CONDITION							LOW AIR PRESSURE ALARM							CURRENT FLOW TEST STICKER																																			
TRANSMISSION FLUID LEAKS							HEADLIGHTS							CYLINDER AIR LEVEL																																			
BELT TENSION							TAIL LIGHTS							SCBA OPERATION																																			
BELT CONDITION							BRAKE LIGHTS							ALARM OPERATION																																			
M							TURN SIGNALS							PAK-ALERT BATTERIES																																			
PULLEY CONDITION							MARKER LIGHTS																																										
POWER STEERING FLUID LEVEL							BACK-UP LIGHTS																																										
POWER STEERING FLUID CONDITION							EMERGENCY LIGHTS																																										
POWER STEERING FLUID LEAKS							SIRENS							<b>XIV. AERIAL</b>																																			
BRAKE FLUID LEVEL							AIR HORNS							HYDRAULIC FLUID LEVEL																																			
BRAKE FLUID CONDITION							AUTO HORN							HYDRAULIC FLUID CONDITION																																			
BRAKE FLUID LEAKS							BACK STEP BUZZERS							HYDRAULIC FLUID LEAKS																																			
							BACK-UP ALARM							P.T.O. OPERATION																																			
<b>II. WHEELS HUBS AND TIRES</b>							SCENE LIGHTS							OUTRIGGER OPERATION																																			
W	M	T	W	T	F	S	INTERIOR DOME & MAP LIGHTS							OUTRIGGER & SUBSTRUCTURE INSPECTION																																			
W							SPOT LIGHTS							OUTRIGGER PADS																																			
W							<b>IX. 120/240 VOLT GENERATORS &amp; EQUIP.</b>							OUTRIGGER PINS																																			
W							S	M	T	W	T	F	S	OUTRIGGER CLEAN & LUBRICATE																																			
M							ENGINE OIL LEVEL							AERIAL VISUAL INSPECTION																																			
HUB OIL LEVEL							ENGINE OIL CONDITION							TURNTABLE CLEAN & LUBRICATE																																			
HUB OIL LEAKS							ENGINE OIL LEAKS							INTERLOCK OPERATION																																			
							ENGINE COOLANT LEVEL							OVERRIDE OPERATION																																			
<b>III. BRAKES</b>							ENGINE COOLANT CONDITION							EMERGENCY MOTOR OPERATION																																			
W							ENGINE COOLANT LEAKS							HI-IDLE OPERATION																																			
W							HYDRAULIC FLUID LEVEL							GAUGE OPERATION																																			
W							GEAR OIL LEVEL							WATERWAY OPERATION																																			
W							GENERATOR OPERATION							WATERWAY CLEAN & LUBRICATE																																			
W							CORD REEL OPERATION																																										
W							CORD REEL LUBRICATION																																										
W							CORD PLUG CONDITION							<b>XV. CAB INTERIOR</b>																																			
<b>IV. BATTERY COMPARTMENT</b>							<b>X. PUMP</b>							SEAT BELTS OPERATIONAL																																			
BATTERY WATER LEVEL							TRANSFER CASE OIL LEVEL							INTERIOR DOOR HANDLE DIRECTIONAL OPERATION																																			
BATTERY TERMINALS TIGHT							TRANSFER CASE OIL CONDITION							DOORS HINGES & LATCHES OPERATIONAL																																			
M							TRANSFER CASE OIL LEAKS							LUBRICATE DOOR HINGES & LATCHES																																			
M							PUMP SHIFT OPERATION							WINDOWS OPERATIONAL																																			
REMOVE BATTERIES & CLEAN COMP.							THROTTLE INTERLOCK OPERATION							MIRROR CONDITION																																			
							VALVE OPERATION							MIRROR ADJUSTMENTS																																			
<b>V. STEERING &amp; SUSPENSION</b>							VALVE LUBRICATION							WINDSHIELD CONDITION																																			
STEERING PLAY							DISCHARGE RELIEF VALVE OPERATION							WINDSHIELD WIPER CONDITION																																			
W							INTAKE RELIEF VALVE OPERATION							CLEAN INTERIOR																																			
M							ENGINE GOVERNOR OPERATION																																										
W							PUMP LUBRICATION																																										
M							MANUAL PUMP SHIFT OPERATION																																										
W							PUMP GAUGE OPERATION																																										
M																																																	
<b>VI. REAR AXLE (S)</b>							<b>TIRE TREAD DEPTHS REQUIRED READINGS</b>																																										
GEAR OIL LEVEL							AXLE		LEFT		RIGHT		MAX																																				
GEAR OIL CONDITION							STEERING		/32		/32																																						
GEAR OIL LEAKS							AXLE #2		/32 /32		/32 /32																																						
AUTOMATIC CHAIN OPERATION							AXLE #3		/32 /32		/32 /32																																						
AUTOMATIC CHAIN LUBRICATION																																																	
<b>BRAKE STROKE &amp; SLIDE PIN READINGS REQUIRED</b>																																																	
AXLE			LEFT		RIGHT		MAX		AXLE			LEFT		RIGHT		MAX		AXLE			LEFT		RIGHT		MAX																								
STEERING			BRAKE STROKE		BRAKE STROKE		BRAKE STROKE		AXLE #2			BRAKE STROKE		BRAKE STROKE		BRAKE STROKE		AXLE #3			BRAKE STROKE		BRAKE STROKE		BRAKE STROKE																								
			SLIDE PIN		SLIDE PIN							SLIDE PIN		SLIDE PIN							SLIDE PIN		SLIDE PIN																										
PROBLEMS/COMMENTS:																									SUPERVISOR SIGNATURE																								
<p style="text-align: right;"><b>LEGEND</b>                  ✓ INDICATES ITEM OKAY                  X INDICATES PROBLEM</p>																																																	

# APPARATUS CHECK PROCEDURES

## I. UNDER ENGINE COVER

**Engine oil level:** Engine oil level is to be maintained at the full mark on the dipstick. If necessary, add the proper oil. *Reference: General Order, Division 2, Chapter 33.*

**Engine oil condition:** When checking the oil level, observe the oil for any abnormal discoloration or odor, such as gas or diesel fuel, indicating contamination.

**Engine oil leaks:** Check the engine for any evidence of oil leaking. If oil is covering a large area, it may be necessary to degrease the engine to determine where the oil is coming from. Once the source of the leak is determined, attempt to repair it.

**Engine coolant level:** If a sight glass or translucent tank is provided to indicate coolant level, insure the proper level is maintained. If not, remove the radiator cap to ensure the coolant is filled to the bottom of the radiator cap opening. If necessary, add the proper coolant mixture. *Reference: General Order, Division 2, Chapter 16.*

**Engine coolant leaks:** Check for any indications of coolant leaking. If coolant is covering a large area, it may be necessary to degrease the engine to determine where the coolant is coming from. Once the source of the leak is determined, attempt to repair it.

**Engine coolant condition:** When checking the coolant level, observe the coolant for any abnormal discoloration, such as oil or excessive rust, indicating contamination. Check for freeze protection, which should be maintained at  $-20^{\circ}$  F, or below.

**Coolant hose condition:** Inspect all hoses for indications of dry rotting, cracks, cuts, etc. which would warrant the need for them to be replaced.

**Front of radiator cleanliness:** Inspect the front of the radiator to ensure there is no blockage such as debris, bugs, etc. If necessary, clean from the engine side of the radiator with a garden hose or pressure washer.

**Transmission fluid level:** Transmission fluid level is to be maintained at the full mark on the dipstick. The fluid should be checked when it is hot and the vehicle is running or according to the manufacturer procedures. If necessary, add the proper fluid. Manual transmissions, which do not have dipsticks, should be checked with the engine off by removing the proper fill plug and maintaining the level at the bottom of the fill plug opening.

**Transmission fluid condition:** When checking the transmission fluid level, observe the fluid for any abnormal discoloration indicating contamination.

**Transmission fluid leaks:** Check for any indications of transmission fluid leaking. If fluid is covering a large area, it may be necessary to degrease the area to determine where the fluid is coming from. Once the source of the leak is determined, attempt to repair it.

**Belt tension:** Inspect belts for proper tension.

**Belt condition:** Inspect belts for indications of dry rotting, cracking, cuts, etc., which would warrant the need for them to be replaced.

**Pulley condition:** Inspect all pulleys to ensure they are tight and in good condition.

**Power steering fluid level:** Power steering fluid level is to be maintained at the full mark on the dipstick or fluid housing. If necessary, add the proper fluid.

**Power steering fluid condition:** When checking the fluid level, observe the fluid for any abnormal discoloration indicating contamination.

**Power steering fluid leaks:** Check for any evidence of fluid leaking. If fluid is covering a large area, it may be necessary to degrease the area to determine where the fluid is coming from. Once the source of the leak is determined, attempt to repair it.

**Brake fluid level:** Brake fluid level is to be maintained at the full mark on the brake fluid housing. If necessary, add the proper fluid.

**Brake fluid condition:** When checking the fluid level, observe the fluid for any abnormal discoloration indicating contamination.

**Brake fluid leaks:** Check for any evidence of fluid leaking. If fluid is covering a large area, it may be necessary to degrease the area to determine where the fluid is coming from. Once the source of the leak is determined, attempt to repair it.

## **II. WHEELS, HUBS AND TIRES**

**Tire pressure:** Check each tire for proper air pressure. *Reference: General Order, Division 2, Chapter 50.*

**Tire tread depth:** Check and record each tire tread depth. *Reference: General Order, Division 2, Chapter 51.*

**Unusual tire wear:** Check treads for any indications of unusual tread wear, one side wearing prematurely, etc.

**Lug nuts tight:** Check to ensure lug nuts are in place and properly torqued. If the proper torque is in question, contact Apparatus Maintenance for assistance.

**Wheel condition:** Inspect each wheel for cracks, excessive rust, gouges, dents or any other unusual conditions.

**Axle nuts tight:** Check to ensure axle nuts are in place and properly torqued. If the proper torque is in question, contact Apparatus Maintenance for assistance.

**Hub oil level:** Hub oil level is to be maintained at the full mark on the hub housing. If necessary, add the proper fluid.

**Hub oil leaks:** Check for any indications of oil leaking. If oil is covering a large area, it may be necessary to degrease the area to determine where the oil is coming from. Once the source of the leak is determined, attempt to repair it.

### **III. BRAKES**

**Visual inspection:** Inspect the brakes at each wheel. Look through the wheel hand holes for any indications of worn or discolored rotors. From under the vehicle, look for any indications of worn or discolored rotors, broken drums, caliper pins not protruding through the caliper inboard boss, hydraulic brake fluid leaks, etc. Inspect all air lines for cracks, tears, etc.

**Brake strokes/ Slide pins:** Check and record each brake stroke and slide pin measurement on those vehicles equipped with air brakes. *Reference: General Order, Division 2, Chapter 35.*

**Caliper looseness:** On vehicles equipped with air disc brakes, the parking brake released, grab the brake chamber and shake the entire caliper assembly. It should float loose on the caliper pins when the brakes are not applied.

**Air leaks (brakes applied):** With the engine off, parking brake released and at least 100 psi air pressure, make a brake application and hold it. Listen for air leaks. It may be necessary to have one person in the cab applying the brakes while another is under the vehicle looking for leaks.

**Air leaks (brakes released):** With the engine off, parking brake applied and at least 100 psi air pressure, listen for air leaks under the vehicle. If air pressure is dropping over a long period of time, a soapy water solution should be applied to all airline fittings to locate the leak.

**Drain air tanks:** Slowly and partially open the air tanks drain valves and allow the moisture to escape. Once only air is coming out close the valve. *Reference: General Order, Division 2, Chapter 4.*

**Maxi-brake application:** With the parking brake applied, make certain that all brakes equipped with spring brakes have their slack adjusters in the applied position.

#### **IV. BATTERY COMPARTMENT**

**Battery water level:** Battery level should be maintained at the full mark. If necessary, add fluid.

**Battery terminals tight:** Battery terminals should be tight on the posts. You should not be able to move them with your hand.

**Battery terminals remove & clean:** Loosen the bolts clamping the terminal around the post. Remove the terminal and clean both the terminal and the post with a wire brush. Reinstall the terminal on the battery post and tighten.

**Remove batteries & clean compartment:** Unhook the cables and clamps. Remove the batteries and flush the compartment out with water. Allow the compartment to dry completely. If there is any corrosion, remove it with a wire brush and paint the area. Reinstall the batteries, clamps and cables.

#### **V. STEERING & SUSPENSION**

**Steering play:** With the engine running and the front wheels in straight ahead position, turn the steering wheel until turning motion can be observed at the front wheels. Mark rim of steering wheel and, using a pointer, turn the steering wheel in the opposite direction until motion can be observed at front wheels. Measure the distance between mark and pointer. This measurement should not exceed 3" if the wheel diameter is less than 21" or 3.5" if the wheel diameter is 21" or greater.

**Inspect linkage:** Make a visual inspection of all steering components for looseness or defective parts.

**Lubricate linkage:** With a hand grease gun, lubricate all grease fittings in the steering components.

**Inspect suspension:** Visually inspect all suspension components for cracks, loose bolts, etc.

**Lubricate suspension:** With a hand grease gun, lubricate all grease fittings in the suspension components.

**Inspect shocks for leaks:** Inspect each shock for signs of oil leaks. Leaking shocks should be replaced.

**Inspect shock bolts:** Inspect each shock bolt for tightness.



## **VI. REAR AXLE(S)**

**Gear oil level:** Gear oil level is to be maintained by removing the proper fill plug and maintaining the level at the bottom of the fill plug opening.

**Gear oil condition:** When checking the oil level, observe the oil for any abnormal discoloration indicating contamination.

**Gear oil leaks:** Check the area for any evidence of oil leaking. If oil is covering a large area, it may be necessary to degrease that area to determine where the oil is coming from. Once the source of the leak is determined, attempt to repair it.

**Automatic chain operation:** Activate and retract the automatic chains and observe them to ensure they are deploying properly. When they are in the retracted position, rotate the chain wheel to make sure it spins freely.

**Automatic chain lubrication:** Follow the manufacturer recommendations for proper lubrication and maintenance.

## **VII. BODY**

**Inspect for damage:** Walk around the entire vehicle and denote any new damage. Check the roof and underside as well.

**Tools and equipment secure:** All equipment should be secured in the compartments to prevent movement during transportation.

**Wheel chocks:** Ensure wheel chocks are in their properly stored location and secure.

**Triangles:** Ensure triangles are in their properly stored location and secure.

**Flares:** Ensure flares are in their properly stored location and secure.

**Wash Exterior:** Self-explanatory.

## **VIII. CAB ELECTRICAL**

**Gauge operation:** Start the vehicle and allow it to reach normal operating temperature. Observe each gauge on the pump panel for proper operation.

**Low oil pressure alarm:** Turn the battery and ignition to the on position without starting the vehicle. The alarm should sound in the cab and the exterior of the vehicle. Note: some vehicles require fuel pressure to activate the low oil pressure alarm and cannot be tested in this manner.

**Low air pressure alarm:** Turn the battery and ignition to the on position without starting the vehicle. Pump the brake pedal several times and observe the air system pressure gauge. Most vehicle low air pressure alarms will activate around 60 psi.

**Headlights:** Turn headlights on. Check that they are properly aligned and activate high beams.

**Tail lights:** With the headlights on, the tail lights should be activated.

**Brake lights:** The brake lights should activate with the application of the service brake.

**Turn signals:** Activate the left and right turn signals and check that the front, rear and side turn signals are all working properly.

**Marker lights:** The marker lights should all be activated and operational with the headlights on.

**Back-up lights:** When the vehicle is shifted into reverse, the back-up lights should automatically be activated.

**Emergency lights:** With the emergency light switches on, check that all lights are operational. Note: Some vehicles require the parking brake to be released and/or the transmission to be shifted out of neutral for some lights to activate.

**Sirens:** Activate each siren from every switch to ensure it is operational from all positions.

**Air horns:** Activate the air horns from every switch to ensure they are operational from all positions.

**Auto horn:** Activate the auto horn to ensure it is operational.

**Back step buzzer:** Activate the buzzer from each switch to ensure it is operational from all positions.

**Back-up alarm:** When the vehicle is shifted into reverse, the back-up alarm should automatically be activated.

**Scene lights:** Activate all scene lights to ensure they are operational.

**Interior dome & map lights:** Activate all dome and map lights to ensure they are operational.

**Spot lights:** Activate each spot light to ensure it is operational.

## **IX. 120/240 VOLT GENERATORS & EQUIPMENT**

**Engine oil level:** Engine oil level is to be maintained at the full mark on the dipstick. If necessary, add the proper oil. *Reference: General Order, Division 2, Chapter 33.*

**Engine oil condition:** When checking the oil level, observe the oil for any abnormal discoloration or odor, such as gas or diesel fuel, indicating contamination.

**Engine oil leaks:** Check the engine for any evidence of oil leaking. If oil is covering a large area, it may be necessary to degrease the engine to determine where the oil is coming from. Once the source of the leak is determined, attempt to repair it.

**Engine coolant level:** If a sight glass or translucent tank is provided to indicate coolant level, ensure the proper level is maintained. If not, remove the radiator cap to ensure the coolant is filled to the bottom of the radiator cap opening. If necessary, add the proper coolant mixture. *Reference: General Order, Division 2, Chapter 33.*

**Engine coolant condition:** When checking the coolant level, observe the coolant for any abnormal discoloration, such as oil or excessive rust, indicating contamination. Check for freeze protection, which should be maintained at  $-20^{\circ}$  F, or below.

**Engine coolant leaks:** Check for any indications of coolant leaking. If coolant is covering a large area, it may be necessary to degrease the engine to determine where the coolant is coming from. Once the source of the leak is determined, attempt to repair it.

**Hydraulic fluid level:** Hydraulic fluid level is to be maintained at the full mark on the dipstick or sight gauge. If necessary, add the proper oil.

**Gear oil level:** Gear oil level is to be maintained by removing the proper fill plug and maintaining the level at the bottom of the fill plug opening.

**Generator operation:** Run the generator and check that the oil pressure, engine temperature, voltage and hertz readings are within the acceptable range. Check to make certain that the generator is secure on the apparatus.

**Cord reel operation:** With the generator running, plug in an electrical device to ensure the reel is operational from each receptacle. Check to ensure the junction box and cable are securely attached. Check the reel rewind motor to ensure it is operational.

**Cord reel lubrication:** Lubricate the reel rewind drive chain and any grease fittings per the manufacturer recommendations.

**Cord/Plug condition:** Inspect all electrical cables, appliances, extension cords, adapters, etc. to ensure there are no frayed wires, cracked insulation, damaged plugs or unsafe conditions.

## **X. PUMP**

**Transfer case oil level:** Oil level is to be maintained by removing the proper fill plug and maintaining the level at the bottom of the fill plug opening.

**Transfer case oil condition:** When checking the oil level, observe the oil for any abnormal discoloration indicating contamination.

**Transfer case oil leaks:** Check the area for any evidence of oil leaking. If oil is covering a large area, it may be necessary to degrease that area to determine where the oil is coming from. Once the source of the leak is determined, attempt to repair it.

**Pump shift operation:** Following the pump manufacturer procedures, shift from road to pump and verify that the shift was completed and the road transmission went into lock-up by operating the pump. If the road transmission is not in lock-up, you will hear it shifting gears as the pump pressure is increased. Following the pump manufacturer procedures, shift from pump to road.

**Throttle interlock operation:** If the vehicle is equipped with a throttle interlock, when the transfer case is in the road position – only the cab foot throttle will operate; when the transfer case is in the pump position – only the pump panel throttle will operate.

**Valve operation:** Open and close every valve, including the drain valves, to exercise them. With the valves closed check for leaks when under pressure. Check all intake valves for the presence of a strainer.

**Valve lubrication:** On valves, which are accessible, remove the caps and spray the ball with silicone spray. Lubricate all valve control linkage, swivels, etc., with a penetrating oil such as WD-40. Operate each valve following lubrication.

**Discharge relief valve operation:** With the pump in gear, tank to pump and tank fill valves open to circulate water, run the pump pressure up to 200 psi and exercise the relief valve from its lowest setting to its highest setting. Reset at the stations predetermined pressure and return the engine to idle.

**Intake relief valve operation:** This will require another pumper to be pumping into the pumper being checked. Close all valves with the exception of the intake valve, which the supply line from the other pumper is coupled to. Have the operator charge the supply line and gradually increase pressure while you observe the intake pressure on the pump panel compound gauge. As the pressure increases, the intake relief valve should open and dump water on the ground. Denote the intake pressure when the relief valve opened. Let the water flow for a minute in order to flush any debris in the piping out. If the pressure setting needs to be adjusted, loosen the jamb nut, adjust to the desired setting, and tighten the jamb nut.

**Engine governor operation:** With the pump in gear, tank to pump and tank fill valves open to circulate water, in the RPM mode: To increase the engine speed from idle to maximum governed speed, hold the momentary switch in the increase position until the desired engine RPM is reached. To return to idle, hold the momentary switch in the decrease position, until the engine RPM return to idle. In the pressure mode: To increase the pump pressure from 45 to 300 psi, hold the momentary switch in the increase position until the desired pump pressure is reached. To return to idle, hold the momentary switch in the decrease position until the engine returns to idle.

**Pump lubrication:** On Waterous pumps, lubricate the front bearing utilizing the grease fitting, which is on the pump panel of most pumpers. On Hale pumps, ensure that the oil level is maintained in the Hale Auto-Lube at the front of the pump. On all other manufacturers' pumps, follow the pump manufacturer's recommendations for maintenance.

**Manual pump shift operation:** Following the pump manufacturer's procedures, manually shift the pump from road to pump and pump to road.

**Intake/Discharge gauge operation:** Cap off and open all discharges. With another pumper pumping into an intake, the gauge pressures shall be checked for accuracy at three points: 150 psi, 200 psi and 250 psi. All gauges should be within 10 psi of each other.

## **XI. GROUND LADDERS**

**Ladder visual inspection:** The visual inspection shall include, but not be limited to, the following:

- a. Heat sensor labels, for a change indicating heat exposure.
- b. All rungs for snugness and tightness.
- c. All bolts and rivets for tightness.
- d. Welds for any cracks or apparent defects.
- e. Beams and rungs for cracks, breaks, gouges, wavy conditions or deformation.
- f. Butt spurs for excessive wear or other defects.
- g. Halyards for fraying or kinking.
- h. Roof hooks for sharpness and proper operation.
- i. Rungs for punctures, wavy conditions, worn serrations, or deformation.
- j. Surface corrosion.
- k. Ladder slide areas for galling or absence of lubrication.
- l. Proper operation of pawl assemblies.
- m. Wire rope on 3 and 4 section ladders for snugness when the ladder is in the bedded position, to ensure proper synchronization of upper sections during operation.

Any ground ladder that appears to be unserviceable, or bordering on serviceability, shall be service tested.

**Ladder operation:** Ladders shall be extended and retracted to verify smooth and proper operation. If so equipped, roof hooks shall be opened and closed. Folding ladders shall be opened to all operable positions and closed to verify smooth and proper operation.

**Ladder clean and lubricate:** Remove all debris, dirt, grit, etc., and lubricate all slides, sheaves, pawls, roof hooks and pivot points.

## **XII. NOZZLES AND APPLIANCES**

**Device inspection:** Each nozzle and appliance shall be inspected for any damage or unusual condition.

**Device operation:** Each nozzle and appliance shall be operated through every function to verify smooth and proper operation.

**Device clean and lubricate:** Each nozzle and appliance shall be cleaned of all debris, dirt, grit, etc. and lubricated as necessary.

## **XIII. SELF CONTAINED BREATHING APPARATUS (SCBA)**

**Visual inspection:** Each SCBA shall be checked each day to ensure proper function and readiness of the equipment. Visually inspect your personally issued Face piece and Regulator for cracks, tears, excessive heat damage. Also check the Pak and cylinder for cracks, tears and other obvious damage along with the condition of the batteries for the Pak-Alert and the Heads Up Display (HUD) and any other discrepancies that would interfere with proper use of the Pak. Clean and sanitize if necessary.

Pay particular attention to the connection of the regulator to the Pak. If they will not go together, ***DO NOT FORCE IT.*** Reference: *General Order, Division 2, Chapter 41.*

**Cylinders within hydro:** All SCBA cylinders manufactured after July 1, 2001, must be hydrostatically tested every 5 years. All SCBA cylinders have a 15-year service life.

**Current flow-test sticker:** Check the backside or the bottom of the pressure reducer for the most recent flowtest date to be within one year.

**Cylinder air level:** The air level in all of the cylinders shall be maintained to at least 90 percent or 4050 psi.

**SCBA operation and Alarm operation:** Connect regulator to the Pak. Check that the purge valve (red knob on regulator) is closed (full clockwise and pointer on knob upward).

- a. Fully depress the center of the air saver switch on the top of the regulator and release.

- b. Slowly open the cylinder valve fully by rotating knob counterclockwise. Vibra-Alert and Pak-Alert shall activate and then stop briefly. The Heads Up Display (HUD) should come on, and all 5 lights should stay on for approximately 20 seconds while unit does a self check. During this time, the Pak-Alert should be going into a pre-alert mode several times increasing in volume until full alarm, if no movement is detected. To reset Pak-Alert, press yellow reset button twice. There should be no airflow from the face piece.
- c. Don the face piece or hold the face piece to the face to affect a good seal.
- d. Inhale sharply to automatically start the flow of air.
- e. Breathe normally from the face piece to ensure proper operation.
- f. Remove face piece from face. Air shall freely flow from the face piece.
- g. Fully depress the center of the air saver switch on the top of the regulator and release. The flow of air from the face piece shall stop.
- h. Rotate the purge valve  $\frac{1}{2}$  turn counterclockwise (pointer on knob downward). Air shall freely flow from the regulator.
- i. Rotate the purge valve  $\frac{1}{2}$  turn clockwise to full closed position (pointer on knob upward). Airflow from the regulator shall stop.
- j. Push in and rotate cylinder valve knob clockwise to close. When cylinder valve is fully closed, open purge valve slightly to vent residual air pressure from system. When bleeding the system, the HUD should coincide with the gauge on the console and the cylinder gauge. A full cylinder is indicated by two green lights,  $\frac{3}{4}$  cylinder is indicated by one green light,  $\frac{1}{2}$  cylinder is indicated by one yellow light slowly flashing,  $\frac{1}{4}$  cylinder is indicated by one red light at the far left flashing rapidly. By this time the Vibra-Alert on the mask mounted regulator shall activate. When the air flow stops, return the purge valve to the fully closed position (point knob upward).
- k. Once all the air is out of the system, rest the Pak-Alert by pressing the yellow button twice.

**Pak-Alert battery check:** With the cylinder closed, depress and hold the reset button on the console. The green LED will illuminate on the console to indicate sufficient battery power remaining; a red light indicates that the batteries must be replaced before the next use. If the light is red, place SCBA out-of-service. Fill out a Shop Ticket and send it to AMD for repair.

#### **XIV. AERIAL**

**Hydraulic fluid level:** Hydraulic fluid level is to be maintained at the full mark on the dipstick or fluid housing. If necessary, add the proper fluid.

**Hydraulic fluid condition:** When checking the fluid level, observe the fluid for any abnormal discoloration indicating contamination.

**Hydraulic fluid leaks:** Check for any evidence of fluid leaking. If fluid is covering a large area, it may be necessary to degrease the area to determine where the fluid is coming from. Once the source of the leak is determined, attempt to repair it.

**P. T. O. operation:** Inspect the power takeoff for external fluid leakage and proper operation (i.e., engagement and disengagement).

**Outrigger operation:** Verify that the outriggers can be deployed utilizing the aerial manufacturer's procedures.

**Outrigger and substructure inspection:** Visually inspect all outrigger structural components for defects such as weld cracks, dents, bends, loose bolts, etc. Inspect the hydraulic hose lines for kinks, cuts and abrasions, and leaks at connectors and fittings. Inspect all stabilizer cylinder pins and hinge pins for proper installation, lubrication, operation and retention. Inspect the outrigger extension cylinders rod-to-barrel seals and the end gland seals for excessive external fluid leakage.

**Outrigger pads:** Verify that the outrigger pads are present, of proper construction, and are in serviceable condition.

**Outrigger pins:** Verify that the outrigger pins are present, of proper construction, and are in serviceable condition.

**Outrigger clean and lubricate:** Following the aerial manufacturer's procedures, remove all debris, dirt, grit, etc., and lubricate.

**Aerial visual inspection:** Visually inspect all aerial ladder weldments, structural fasteners, top rails, base rails, rungs, ladder locks etc. for defects such as weld cracks, dents, bends, twists, loose bolts, etc.

- a. **Cable inspection:** Inspect all extension, retraction and ladder lock cables for signs of unusual wear, fraying or stretching.
- b. **Sheave inspection:** Inspect all sheaves for signs of wear, free movement during operation, proper retainers and lubrication. Visually inspect all sheave mounting brackets for defects and the welds for fractures.



- c. **Roller/Slide pad inspection:** Inspect all rollers for proper lubrication, operation, and any signs of wear. Inspect wear strips, pads, and slide blocks for wear, gouging and proper mounting.
- d. **Aerial operation:** A complete cycle of aerial operation shall be carried out after starting the engine, setting the outriggers, and transmitting power to the ladder. The ladder shall be fully elevated out of the bed, shall be rotated 90 degrees, and shall be extended to full extension. The ladder shall complete this test smoothly and without jerking or undue vibration within the time allowed by the standard in effect at the time of manufacture. The ladder shall be retracted, the turntable rotation shall be completed through 360 degrees, and then the ladder shall be lowered to its bed. The test shall demonstrate successful operation of all ladder controls. All controls should operate smoothly, return to the neutral position (if designed to do so) when released, should not bind during operation, and should be free of hydraulic fluid leakage.
- e. **Aerial clean and lubricate:** Following the aerial manufacturer's procedures, remove all debris, dirt, grit, etc., and lubricate. *Reference: Apparatus Maintenance Instruction No. 28.*

**Turntable clean and lubricate:** Following the aerial manufacturer's procedures, remove all debris, dirt, grit, etc., and lubricate. *Reference: Apparatus Maintenance Instruction No. 28.*

**Interlock operation:** If the vehicle is equipped with outrigger interlocks, verify that the interlock system is operating properly. When the aerial is out of its nested position, the outrigger controls should be inoperable. When the outriggers are not deployed to their normal operating position, the aerial controls should be restricted or inoperable. Refer to the manufacturer's operating manual for specifics on each vehicle.

**Override operation:** Most aerials have overrides for the interlocks. Refer to the manufacturer's operating manual for instructions on how to verify their operation. *Note: extreme caution must be exercised when overriding the interlocks. The aerial could become unstable and tip the vehicle over, or other damage and/or injuries could occur.*

**Emergency motor operation:** With the engine not running, verify that the emergency motor operates both the aerial and outriggers individually. Refer to the aerial operator's manual for proper operation.

**Hi-idle operation:** Verify that the hi-idle is operable and maintaining the operational engine rpms.

**Gauge operation:** Verify that all gauges on the turntable pedestal are operable.

**Waterway operation:** Prior to the operation of the waterway, inspect it and the attaching brackets for loose bolts, weld fractures, or other defects. The waterway shall be inspected for proper operation of all components. This shall include flowing water, checking the intake relief valve for proper setting, operation of all monitor controls and verifying the operation of any flowmeters or pressure gauges.

**Waterway clean and lubricate:** Following the aerial manufacturer's procedures, remove all debris, dirt, grit, etc., and lubricate.

## **XV. CAB INTERIOR**

**Seat belts operational:** Ensure seat belts extend and retract properly. Engage and disengage male and female ends to ensure proper operation.

**Interior door handle directional operation:** Check handles to see if they need to be lifted to exit the apparatus. The handles should have to be lifted to ensure that there is not an accidental opening while the apparatus is in motion.

**Door hinges and latches operational:** Check the operation of the handles to make sure they are opening and latching securely to ensure safety of occupants.

**Lubricate door hinges and latches:** Utilizing penetrating oil such as WD-40, spray all hinges and latches to flush out dirt and lubricate. Wipe off excess oil. Operate several times to ensure proper operation.

**Windows operational:** Roll up and down or slide open and closed to ensure proper operation. Note: It is beneficial to spray window tracks periodically with silicone spray.

**Mirror Condition:** Ensure that the apparatus has all mirrors in place for the safe operation of apparatus.

**Mirror adjustments:** Sitting in the driver's position, ensure all mirrors are properly adjusted and tight.

**Windshield condition:** Check the windshield to ensure the view of the driver and officer is unrestricted with chips or cracks.

**Windshield wiper condition:** Inspect each wiper blade and operate to ensure they clear the windshield sufficiently. If necessary, replace them.

**Windshield washer fluid level:** Ensure the proper level of windshield washer fluid is maintained.

**Clean Interior:** Self Explanatory.