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GENERAL MAINTENANCE

9.01 Scope:

To provide the Town of Menasha Fire Department with a systematic and orderly process in which to handle daily and emergency repairs that must be performed on apparatus and other equipment.

9.02 Station / Vehicle Cleaning:

STATIONS: Both stations shall be kept clean and orderly at ALL times. The stations shall be cleaned on a monthly basis or more frequently if required. It will be the responsibility of the Emergency Operations Captain to maintain cleanliness. Cleaning shall include floors, walls, ceilings, windows, and the immediate area surrounding each station. **Twice each year, in spring and fall a major cleaning project at each station will be scheduled by the Emergency Operations Captain!** While on "Stand-By", firefighters shall make sure the station is clean, including the apparatus floor.

VEHICLES: Cleanliness is a habit and has a direct impact on morale and vehicle life expectancy as well as Department Pride. Generally, every time a vehicle is used it should be washed and cleaned. Chamois are NEVER to be used on painted surfaces unless the vehicle has been washed with soap and water. While on Stand-By, firefighters are to inspect vehicles in the station and wash them if they are dusty or dirty. **Each time a vehicle returns, all firefighters are to assist in washing the vehicle (unless directed otherwise by the officer).** It is the driver/operator's responsibility to inspect the vehicle, inventory and all operational equipment before entering comments into the logbook. After the vehicle is washed, ALL compartment doors shall be left opened to dry thoroughly.

WET APPARATUS FLOORS - The floors can be extremely slippery when wet. Floors should be squeegeed IMMEDIATELY to prevent falls. If possible, wash the vehicles outside. Use extra caution on wet floors!!

IMMEDIATELY Wipe clean ANY oil, grease, etc. from the floors.

DO NOT activate the pump primer inside the bays on the apparatus floor!

CLEANLINESS OF ALL TOWN EQUIPMENT AND STATIONS IS A PRIORITY!!!

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9.03 Hose Storage:

Hose shall be stored at each station in sufficient amount to partially reload engine companies. The remaining amount of hose shall be stored at the storage warehouse. All double-jacket fabric hose shall be washed after use and hung to dry. After drying, all hose is to be stored at the stations on racks using the straight roll method. Hose that is damaged shall be recorded, red tagged and a Work Order forwarded to the officer in charge of hose maintenance.

9.04 Hose Testing:

All hose shall be tested each year and records kept. Any and all hose that is found not suitable for use shall be removed from service until repaired and retested. Annual Hose Testing will normally occur in the month of September.

Procedures:

a) Mark the rear of each coupling with a magic marker (to evaluate slippage)
b) Use the hose manifold with a gated valve that has a ¼" hole drilled in its center or the hose testing machine.
c) Fill the hose to 45psi, bleed air, and tighten couplings so there are no leaks.
d) Closed the gated valve with the ¼" hole before fully pressurizing hose.
d) Test pressures per NFPA 1962.

9.05 Self-Contained Breathing Apparatus:

Records shall be kept on every SCBA in the Department by the Air Crew. All SCBAs shall be tested yearly or as required by the manufacturer. A crew of specially trained individuals (Air Crew) shall maintain all SCBAs, thoroughly inspect them every two weeks and be responsible for Rescue 41. Anytime a fire fighter uses a SCBA in any manner, the SCBA unit shall be returned to a "ready state" (straps extended, dust cover in place, minimum 300psi below full, etc.)

9.06 Air Compressor:

Air used for SCBA cylinders shall be tested by an approved agency quarterly. A record shall be kept of this test. The air compressor at Station 41 shall be maintained as per the manufacturer's recommendations. Air Crew members should be the primary users of the air compressor. The compressor must be run at least 1 hour weekly.

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9.07 Weekly Apparatus Checks:

The fire department vehicles shall be inspected on a weekly basis by two fire fighters assigned the task on a rotating basis. Emergency Operations Captains are responsible for ensuring the inspections are performed properly. Inventories shall be thoroughly checked, all fluid levels inspected and all equipment operated. A checklist form shall be completed and placed in the station vehicle inspection notebook. Any deficiencies shall be noted on the worksheet and a work order form completed and forwarded to the Emergency Operations Captain. Firefighters conducting the inspection should make every effort to correct deficiencies immediately if they are qualified to do so. **Every firefighter shall participate in this program annually as it also provides training related to inventories, equipment use, etc.** It is a critical component of the firefighter job description and ensures our apparatus is in a 'ready' state! It is the driver/operator's responsibility to check the vehicle after each incident or use of the vehicle. The driver will be held accountable for lost or damaged equipment. At least one of the two firefighters shall be qualified to operate the fire pump properly (unless supervised by an officer)!

9.08 Ground Ladder Testing:

Each year all ground ladders shall be tested and approved for service by the Fire Officer assigned the task of ground ladder testing. Ground ladder testing normally occurs in February. Records shall be maintained of all ground ladder tests. Ladders are to be tested per NFPA 1932.

VEHICLE MAINTENANCE

9.09 Nature of Work Performed:

Personnel under the direction of the Fleet Maintenance Manager have the ability to repair and maintain department equipment and apparatus on a regular basis. This work may include routine maintenance such as oil changes, chassis lubrication, fuel filter changes, etc. minor repairs to apparatus, installation of equipment, and repairs to other department equipment such as generators, lights, and other portable equipment. The Apparatus Specialists are the **only** personnel that are to perform certain maintenance functions (add oil, anti-freeze, change light bulbs etc.) unless you are working under the direction of the Fleet Maintenance Manager. The Fleet Maintenance Manager shall decide as to the extent of the repairs made to equipment and apparatus.

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9.10 Work Hours:

The Fleet Maintenance Manager shall schedule and perform regular maintenance at least two times per month to on apparatus and equipment. Emergency repairs may have to be made that will not be performed at the scheduled time. Such repairs shall be approved by the Fleet Maintenance Manager.

9.11 Safety and Guidelines:

A. All work shall be recorded in the apparatus logbook as per the logbook entry policy. Major repairs shall also be logged into the Records Management System (Firehouse).

B. Protective equipment shall be worn at all times if required to prevent injury.

C. All work performed shall be performed with the proper tools and with sound repair principals and practices.

D. When working in and around apparatus, the apparatus shall be secured from falling or other movement, which may result in possible injury.

E. All purchasing of equipment or parts shall follow the purchasing policies of the Town and shall be made by the Fleet Maintenance Manager or designated assistants.

9.12 Scope:

This policy is to outline the minimum requirements to maintain vehicles in proper working order. This policy will not address each item concerning the vehicles; it will however address the major provisions that effect the operations of all companies. This policy does not pertain to the routine maintenance that must be performed on a regular basis.

The company officer shall be responsible to ensure that his/her company is maintained at all times.

MAINTENANCE

ENGINE CARE

9.13 General Maintenance:

All engine companies shall be kept clean and in operating conditions at all times. Engine companies shall be washed (soap and water) and all equipment cleaned (inside and out) after each alarm.

Each engine company shall be waxed at least twice per year, once in spring and once in the fall.

9.14 Vehicle Checks:

After each incident, a complete apparatus inventory shall be made by the driver/operator and any missing or damaged equipment shall be recorded and reported to the company officer for a work order to be generated.

9.15 Supply Lines:

A minimum of 1050 feet of 5” supply line shall be in the hose bed on each Engine Company and 500 ft. of 3" supply line. A 25' section of 5" line will also be stored in a hose compartment. Supply lines shall be packed as a Flat Load. The 50 ft. section ALWAYS is to be the top section. Supply lines in the hose bed shall be rotated periodically to prevent damage to hose.

9.16 Attack Lines:

A minimum of 2-200 foot sections of 1-3/4" hand line shall be stored in the **cross-lay** compartments (Packed Triple-Layer).

The Apartment Lines shall have a minimum of 200 feet of 3" line (triple-layer load) wyed to 200 feet of 1-3/4" hand line (triple-layer). The valves on the wye shall be closed on the unconnected outlet and open on the preconnected outlet (Packed-Triple Layer).

Straight Tip Line shall be 200 feet of 3" Hose Line with a stack tip nozzle (1”). (Packed Triple-Layer Load)

Garbage lines (front bumper area) shall have 100 feet of 1-3/4" hand line with fog nozzle shall be loaded similar to the cross-lays (triple-layer on its side though).

Straps - bright orange Velcro straps are provided to be utilized to help hold the triple layers together. Remove the straps before charging the line.

High-Rise Pack - Shall contain 100' of 1 3/4" hose, a gated wye, and an adjustable fog nozzle packed in a triple-layer fold.

High-Rise Bag - shall contain a 50' roll of 1 3/4" hose with 2 spanner wrenches.

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9.17 Nozzle Settings:
All 1-3/4" adjustable nozzles shall be set at 125gpm.

9.18 Master Stream Devices:
Master stream devices shall be preset for smooth bore operation with a fog nozzle stored nearby (Exception-L40's Platform shall be mounted with the Fog Nozzle and the control valve in the platform should be stored in the Open position). Water flow should be controlled via the valve in the platform normally.

9.19 Repairs/Damage:
Any repairs, damage, or missing equipment shall be reported immediately to the company officer for necessary corrective action. A written Work Order shall be submitted for every damaged/repair to the Emergency Operations Captain who will then forward the work order to the proper personnel.

9.20 Tests:
Each year the pumps shall be tested and recertified for service. All ground ladders shall be tested on a yearly basis by the assigned company officer. All aerial devices shall be tested on an annual basis by a recognized authority.

9.21 Pump Operation - Engines
Once a month, the pumps should be placed in operation and all tank water flushed from the system and replaced.

The following sequence is to place the pump in operation:

A. Engine running at idle & no faster

B. Transmission in neutral

C. Apply parking brake

D. Move pump shift to "PUMP" position – control in down position

E. Place transmission in DRIVE

F. Green "OK To Pump" light MUST now be on.

G. Speedometer must now indicate approximately 18 mph.

H. Open tank to pump discharge valve

I. Open appropriate discharge valve

J. Slowly increase RPM's until desired pump pressure is achieved

K. Connect supply line to pump intake, bleed air from supply line - open intake valve

L. Close tank to pump discharge valve

M. Open tank fill valve partially until booster tank is full, then close

9.22 Manual Pump Operations

Should the electrical or pneumatic pump shift fail, the following procedures shall be used; preferably with one person in the cab & one at the over ride control position:

A. Return Truck transmission to neutral and pump transmission to “road” position.

B. Pull electric pump shift disengage handle on the pump panel. Move in-cab pump shift control into "pump" position.

C. Push pump lever into "pump position" on the pump panel.

D. Place transmission in Drive.

E. Proceed to steps F through M (as listed above).

9.23 High Idle Operations - with Pressure Governors

A. Stop vehicle and shift transmission to neutral.

B. Set parking brake (mandatory).

C. If **"HIGH IDLE"** control is desired, check that the indicator light in, or next to, the switch on the dashboard control panel is lit. If the light is not on:

1. Verify that transmission is in neutral.
2. Verify that parking brake is set.
3. Verify that pump is not in gear.
4. Verify that indicator is not burned out.

D. To engage engine **"HIGH IDLE"**, push upper half of switch in and release. Engine RPM will increase to factory adjusted setting. To disengage engine **"HIGH IDLE"**, push lower half of switch in and release.

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9.24 Pump Operations – with Pressure Governors

A. If throttle control only is desired, push **"MODE SELECTOR"** TO **"THROTTLE CONTROL"** and release. Mode light will light. If light does not come on:

1. Verify that transmission is in neutral.
2. Verify that parking brake is set.
3. Verify that bulb is not burned out.

B. To increase engine RPM, push **"THROTTLE" or "INC"** switch up and release when desired RPM is reached. (Remember, there is a slight delay in its activation when you push it). To decrease engine RPM, push **"THROTTLE" or "DEC"** switch down and release when desired RPM is reached. For rapid or emergency return to idle, push red **"SYSTEM SHUT-DOWN"** button. The red **"IDLE"** switch serves the same function on the 1999 Pierce. Mode light will go out when **"SYSTEM SHUT-DOWN"** is used and will require that **"MODE** SELECTOR**"** be reset on the 1986 & 1999 Pierce. The 1990 & 1993 Pierce will stay in "throttle" mode.

C. If control of the pump is desired, engage the pump shift switch and verify that the shift has been completed (mandatory). Place truck transmission in drive. The pump may be controlled in either the **"THROTTLE CONTROL"** or **"PRESSURE CONTROL"** mode. If **"THROTTLE CONTROL"** is desired, proceed as detailed above in sections A &B.

D. If pressure control is desired, (preferred) push **"MODE SELECTOR"** to **"PRESSURE CONTROL"** and release. The **"MODE"** switch must be pushed twice on the 1999 Pierce. Mode light will light. If light does not come on:

1. Verify that pump has completed its shift as indicated by the green "OK to Pump" light.
2. Verify that parking brake is set.
3. Verify that bulb is not burned out.

E. Admit water to pump and establish prime. If the **"THROTTLE"** control switch is advanced prior to establishing prime, the engine speed will rapidly advance to no load RPM. The yellow **"INC"** switch serves the same function on the 1999 Pierce.

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F. To increase pump pressure, push **"THROTTLE" or "INC"** switch up and release when desired pressure is reached. (Remember, there is a slight delay in its activation when you push it). To decrease pressure, push **"THROTTLE" or "DEC"** switch down and release when desired pressure is reached. For rapid or emergency return to idle, push red **"SYSTEM SHUT-DOWN" or "IDLE"** button. Mode light will go out when **"SYSTEM SHUT-DOWN" or "IDLE"** is used and will require that **"MODE SELECTOR"** be reset on the 1986 & 1999 Pierce. The 1990 Pierce will return to "pressure" mode and the1993 Pierce will return to "throttle" mode.

NOTE ---The 1986 Pierce will return to idle if the mode selector is moved from one position to the other. The 1990, 1993, & 1999 Pierces' can be changed from one mode to the other & will retain their "rpm/pressure" settings.

G. In the **"PRESSURE CONTROL"** mode only, the maximum discharge pressure of the pump is limited to 400 PSI. If higher pressures are necessary, the unit will have to be operated in the **"THROTTLE CONTROL"** mode. This should be a very rare occurrence and should be done only with great care. "**Throttle Control" should be used when doing <u>hose service testing!</u>**

H. In the **"PRESSURE CONTROL"** mode only, the engine speed will return to idle if the pump discharge pressure decreases below 30 PSI once a 75 PSI or greater pressure has been achieved. The system will first attempt to increase the pressure by advancing the engine RPM up to maximum no load RPM. If after 5 seconds the desired pressure has still not been achieved, the engine will return to idle. This feature protects the pump from cavitation due to low or no water supply which can occur for numerous reasons but does not return the engine to idle if a momentary reduction in water supply occurs.

I. The system should be shutdown following its use simply by pushing the **"SYSTEM SHUT-DOWN" or "IDLE"** button.

9.25 <u>Emergencies</u>:

If pump problems develop, use emergency traffic to inform Incident Commander of problem. If pump failure is imminent, inform Incident Commander and attempt to keep the pump operating until firefighters are removed from hazard area.

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9.26 Cold Weather Operations for Vehicles with Fire Pumps:

Scope: Below Freezing temperatures can have an adverse impact on water movement and the proper operation of fire pumps. These guidelines were developed as steps to take to avoid freeze-up problems, especially during extremely cold weather.

1. **Heat pans** on the engines should be installed in the fall when the overnight temperature drops below 32 degrees F. They should be rinsed thoroughly after every run! In the spring when removed, they should be thoroughly cleaned and waxed before storage.

2. EXTREME caution should be taken (slower speeds) when icing or **slippery conditions** are present on the roadway.

3. On the engines, the **pump should be engaged and water circulated** from the tank thru the pump and back to the tank if no lines are flowing. The tank refill valve should be opened completely if the engine is at idle, about 1/2 if the engine is at high idle (1000 rpm) and closed when discharging hoselines.

4. Following operation, **ALL inlets and discharges must be completely drained.** The deluge gun and its related piping, front bumper discharge, front suction and the exposed valves for the 2 1/2" auxiliary suctions and the rear tank fill are VERY susceptible to freezing. The drain valves on these inlets and discharges should be opened immediately after use.

5. To prevent water from freezing in the **deluge gun** itself, the **nozzle** should be left in the below horizontal position. After the waterway is charged, it is best to remove the gun and drain all the water from the neck, etc.

6. The 2 1/2" auxiliary suction inlets at the pump panel and the rear tank fill valves have small petcocks on them. These **petcocks should be left in the "open" position** except when actually using the valve.

7. **Air bleed-off valves** on the gated intake relief valves should be left in the "open" position both as a safety precaution and to keep the bleed-off valve from freezing closed.

8. All of these items are exposed to cold air going down the road and ANY water left in them will freeze rapidly. This could cause **physical component damage** as well as rendering the component useless.

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9. If the unit is going to be on the scene for an extended period of time without flowing water or using the aerial, the **engine idle should be increased to 900-1000 RPM.** This increases oil pressure as well as helping to keep the engine operating temperature higher.

10. If hoselines are pulled and charged, **nozzles should be slightly cracked opened** to prevent the nozzle from freezing. Keep the water moving (even in supply lines)!

11. If extremely cold conditions are present, officers may make the decision to run the **pumps "Dry".** If the pump is completely drained, a note shall be posted on the vehicle dashboard near pump shift lever. At the emergency scene, <u>if water is needed the pump may have to be "primed" from the tank or hydrant supply.</u> Weekly checks should make sure that the tank to pump valve is not leaking and allowing water down into the pump or other lines.

12. During **weekly apparatus checks**, ALL drain valves should be opened. If water is found in any of them, the cap on the discharge or inlet should be removed to insure that all water is drained. It is a good idea to remove the cap on the gated intake relief valve in case water is trapped between the cap and the valve.

MAINTENANCE

AERIAL PLATFORM CARE

9.27 Master Stream Devices:
The pre-plumbed waterway shall be fitted with a master stream FOG nozzle.

9.28 Repairs/Damage:
Any repairs, damage, or missing equipment shall be reported immediately to the company officer for necessary corrective action. A written Work Order shall be submitted for every damaged/repair to the Emergency Operations Captain who will then forward the work order to the proper personnel.

9.29 Aerial Platform Operations:
SAFETY WARNING: The aerial device should NOT be placed in an operational area where contact with live electrical lines is a probability. The ground should ALWAYS be stable enough to support the weight of the aerial device. Preferably two qualified operators should participate in the safe set-up procedure of the ladder truck. **Ladder Extension and Angle Limitations SHOULD NEVER be exceeded! Constantly monitor the position of the ladder for safe operation.**

The following sequence is to place the ladder (1996 Pierce) in operation:

Pre-driving Checks Before Moving Unit:

1. Basket Level?
2. Ladder Stowed?
3. Stabilizers Stowed?
4. ALL Compartments closed and locked?

Set-Up Procedures:

1. Shift transmission to neutral position.

2. Apply Parking Brake & Auxiliary Front Wheel Lock

3. Push "ON" the two rocker switches marked "Aerial Master" and "Aerial PTO". The PTO indicator glows when the system has hydraulic power.

4. Complete a thorough 360 Degree visual inspection for hazards (electrical lines, ground stability, etc.)

5. Set wheel chocks in place at front wheels.

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6. Move to the stabilizer control panels at the rear of the vehicle.

7. Switch hydraulic power to "stabilizer".

8. Turn "ON" high idle switch. The engine high idle rpm is preset for maximum hydraulic power.

9. FULLY extend stabilizer beams and jacks. Level the low side of the apparatus before the high side.

10. Place ground pads under jack locations.

11. Raise the rear tires off the ground about 1 - 1/2". When stabilizers are set, they will be indicated by green lights.

12. Raise the front tires just enough to take out the bulge. <u>The front tires MUST contact the ground for stability.</u>

13. Turn "OFF" high idle.

14. Select ‘aerial’ hydraulic power.

18. Close and latch the door covering controls and indicators.

16. Install stabilizer safety pins keeping the collar about 1" from jack. If a jack would settle, it must sit on the pin evenly.

17. Close the stabilizer control doors.

18. Reposition wheel chocks. Downhill side against tire and uphill chock approximately 2” from tire. The aerial is ready for operation.

19. One operator MUST BE stationed at the turntable console. During operation their responsibility is to watch and warn of any obstruction the aerial may contact and be ready to override any potentially dangerous movement.

20. Personnel on platform should wear safety belts, helmet, boots and gloves at all times.

21. Raise to the required elevation First, then swing into the direction of the scene and Then extend out to it!

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22. When using the aerial for rescue, try to approach the victim from above to avoid the victim jumping into the platform.

23. **NEVER retract the aerial with a charged waterway!** Unless a nozzle in the basket is open and the aerial is retracted **VERY SLOWLY!**

24. DO NOT set the platform on the ground, roof edge or window ledge. Always allow space for deflection.

25. Be aware of ice build-up, which may cause overload/ and/or damage to the aerial.

26. Reverse all actions in the order indicated for bedding the aerial.

27. **Be completely familiar with the Pierce Aerial Platform Operator's Manual, including trouble-shooting sections, emergency over-rides, etc.**

GENERAL AERIAL PLATFORM SAFETY:

a) Civilians in the Platform - Under non-emergency conditions, it is not the purpose or intent of the aerial platform to provide "rides" for civilian personnel. There may be on special occasions a reason for such a demonstration. **Civilians may only be present in the platform, in non-emergencies, with permission of the Fire Chief. A firefighter's helmet or hard hat shall be worn by civilian personnel while in the platform.**

b) Firefighter Protective Clothing - Anytime the platform is elevated, the firefighter(s) shall have a minimum of helmets, boots and gloves on.

c) Use of the repelling arms during training - the ladder shall be positioned at maximum elevation (70 degrees) to prevent unnecessary stress on the ladder device. The truck will also be positioned with full implementation of the outriggers. NO "bouncing" (or free falling) is to occur during the descent or evacuation from the platform.

MAINTENANCE

RESCUE VEHICLE CARE

9.30 General Maintenance:

Rescue 41 shall be kept clean and in operating condition at all times. The Rescue Unit shall be washed and all equipment cleaned after each use.

Rescue 41 shall be waxed at least twice per year, once in spring and once in fall.

9.31 Vehicle Checks:

On a weekly basis, Rescue 41 shall be checked to ensure that it contains all required equipment and that the cascade bottles and associated filling system is in proper working order. After each incident, a complete apparatus inventory shall be made by the driver/operator and any missing or damaged equipment shall be recorded and reported to the company officer for a work order to be generated.

9.32 Repairs/Damage:

Any repairs, damage, or missing equipment shall be reported immediately to the company officer for necessary corrective action. A written Work Order shall be submitted for every damaged/repair to the Emergency Operations Captain who will then forward the work order to the proper personnel.

9.33 Generator/Electrical System Operation:

Operational Procedures

1. Several interlocks must be satisfied before the generator PTO can be engaged.
    a. The parking brake must be set.
    b. The vehicle transmission must be in neutral.
    c. The engine must be at normal idle speed (no high idle).

2. During set-up or upon arrival on the scene ensure that the parking brake is set, transmission is in neutral and the engine is a normal idle speed.

3. Locate and ensure that the exterior lighting switches are in the off position.

4. Locate and engage the generator PTO switch.

5. Wait approximately 5 seconds before turning on electrically operated equipment.

6. Verify at the generator operations panel the generator is operating at the correct frequency (60hz) and correct voltage (240).

7. Operate desired switches in the cab (lighting etc.) one switch at a time allowing the generator and engine to stabilize before turning on the next switch.

8. Turn on any other needed circuit breakers at the circuit breaker panel.

9. To turn off generator, shut off any unnecessary circuit breakers and exterior flood lights.

10. Disengage the generator PTO.

9.34 <u>Light Tower Operations:</u>

1. Ensure area is clear of power lines and trees.

2. Ensure generator is operating.

3. Remove the light control module from holder and extend cord to have the ability to observe and monitor tower operation from the ground.

4. On the Mast up/down switch, select the up function and continue to hold until the mast is at its fully raised position. The tower will not operate unless it is in the fully raised position.

5. Once tower is raised the other switches can be operated. Pan right rotates tower to the right. Pan left rotates the tower left. Tilt up rotates tower up. Tilt down rotates tower down.

6. Turn on the appropriate number of lights desired with the switches.

7. To lower the tower, on the mast up/down switch, select the down function and continue to hold until the tower is lowered in it's stowed position. This will happen automatically. The mast indicator light on the control module will turn off when the tower is in the properly stowed position.

8. If power is lost to the tower, refer to the manufacturers instructions for lowering the mast manually.

9. An indicator light on the dash of the vehicle is illuminated when the tower is out of the stowed position. If the tower is not in the stowed position and the parking brake is released, an audible alarm and flashing light will be activated. Correct the problem before moving the vehicle.

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9.35 Jaws Power Unit Operation:

1. Ensure that the generator is operating.

2. Verify that the control levers are in the neutral or no flow position.

3. Check the fluid level by sight glass on the power unit.

4. Turn on switch to energize the power unit.

5. Once a tool is attached to the hydraulic lines the controls levers can be moved to the on position ensuring the correct line is being activated.

6. Turn off switch to de-energize the power unit and properly stow tools and hydraulic lines.

9.36 Winch Unit Operations:

1. Ensure that the parking brake and front wheel lock are set and the vehicle transmission is in neutral.

2. Remove winch from tray and insert the winch hitch into the desired receiver.

3. Install the hitch pin through the hitch and receiver.

4. Plug in the electrical power cable.

5. Pay out the cable by moving the gear select lever to the neutral or disengage position. Pull out the cable using gloves or the payout strap to the desired length or until you observe the red painted marks on the cable. The cable shall not be removed past the red painted marks.

6. Move the gear select lever to the engaged position.

7. Plug in the control whip.

8. Operation of the winch is achieved by moving the rocker switch to the in or out position.

9. Ensure nobody or nothing is around the cable when in use.

10. Put the unit back in service to the stowed position with two personnel ensuring cable tension when bringing the cable in. Stowed position is achieved when the cable is wrapped properly on the spool and the end loop is stopped before going into the spool.

11. Disconnect the control whip and power cable.

12. Remove hitch pin and winch from receiver hitch and place winch back into the proper compartment tray.

SQUAD VEHICLE CARE

9.37 <u>General Maintenance</u>:

The squads shall be kept clean and in operating condition at all times. Oil and oil filters should be changed every quarter.

Squads shall be waxed at least twice per year, once in spring and once in fall.

Personnel using the squads shall ensure that the fuel tank is full after use and the vehicle is clean.