

---

**11.0 OPERATIONAL GUIDELINE****3/1/04** rev. 9/29/04

---

***EMERGENCY VEHICLE OPERATION***

---

- 11.1 SCOPE**
- 11.2 PURPOSE**
- 11.3 MAINTENANCE AND SAFETY CHECK – DAILY  
DRIVER RESPONSIBILITIES  
OFFICER RESPONSIBILITIES**
- 11.4 MAINTENANCE AND SAFETY CHECKS – WEEKLY,  
MONTHLY, ANNUALLY**
- 11.5 NON-EMERGENCY MODE OF OPERATION**
- 11.6 EMERGENCY MODE OF OPERATION**
- 11.7 OFFICER RESPONSIBILITIES IN THE EMERGENCY MODE OF  
OPERATION**
- 11.8 DRIVER RESPONSIBILITIES IN THE EMERGENCY MODE OF  
OPERATION**
- 11.9 CODE RED AND CODE YELLOW**
- 11.10 OPERATING ON THE HIGHWAY**
- 11.11 TOWING SPECIAL OPERATIONS VEHICLES**
- 11.12 BACKING INTO QUARTERS**
- 11.13 PASSING FIRE APPARATUS**
- 11.14 APPARATUS INVOLVED IN AN ACCIDENT**
- 11.15 TIRE CHAINS**

### **11.1.0 SCOPE**

This guideline defines the responsibilities and procedures for the safe operation of emergency apparatus in the Worcester Fire Department. It begins with the care and maintenance of the emergency vehicles and proceeds through the proper procedures necessary to safely operate fire apparatus in either emergency or non-emergency mode.

### **11.2.0 PURPOSE**

In order to perform the tasks necessary to mitigate emergency situations, it is imperative that fire crews arrive safely on the scene. This places a tremendous responsibility on the operator of the emergency vehicle. The purpose of this guideline is to provide the information necessary to safely operate fire apparatus.

**Notes: Any member operating any piece of W.F.D. apparatus must have a current and valid Massachusetts Driver's License.**

**All persons operating or riding in any W.F.D. apparatus shall be seated and belted securely by seat belts in approved riding positions any time the vehicle is in motion. Standing or riding on tail steps, sidesteps, running boards or in any other exposed position shall be specifically prohibited. Seatbelts shall not be released or loosened for any purpose while the vehicle is in motion.**

### **11.3.0 MAINTENANCE AND SAFETY CHECK - DAILY**

#### **DRIVER RESPONSIBILITIES**

**11.3.1** Immediately upon the start of each tour of duty, the driver shall perform a safety inspection of the vehicle for which he is assigned. The driver shall also conduct an inventory of all items on the vehicle. In the case of interruption due to an alarm, the safety inspection and inventory will be done immediately upon the return to quarters.

**11.3.2** The following checklist shall be used for the safety inspection:

- Visually inspect all tires for abnormal wear, cuts, proper inflation and proper tread depth.
- Visually inspect underneath vehicle for leaks, broken springs, cracked air canisters, loose equipment, etc.
- Check battery compartments for corrosion, proper fluid levels and proper charge.
- Check all lights for proper operation, including brake and reverse lights. Check for the proper operation of the reverse warning alarm.

- Check engine compartment for proper levels of all fluids including oil, power steering, transmission and radiator. Check for any leaks, loose or broken hoses, loose or broken wiring, etc. Companies with tilt cabs are **NOT** to be operated by any personnel except the Maintenance Division.
- Check steering wheel for excessive play with the engine running.
- Drivers of all Engine companies shall check water level in apparatus tank and ensure that the tank is full. This shall be done manually by looking inside the tank. The water level is not to be checked by using indicator lights on pump panel alone.
- Drivers of all tiller trucks shall inspect the air and electrical lines to ensure that they are not rubbing against or snagging on the tractor frame.

**11.3.3** Upon completion of the safety check, drivers shall perform an inventory of all items on the vehicle.

**11.3.4** All SCBA on the apparatus shall be checked for condition and air pressure level. Pressure below 4,000 lbs. should be refilled.

**11.3.5** Any item in the safety inspection that is deficient or any item in the inventory that is broken, missing or requires refilling shall be reported immediately to the Officer/Acting Officer of the apparatus and noted on the Daily Vehicle Inspection Report.

### **OFFICER RESPONSIBILITIES**

**11.3.6** Company Captains shall be responsible for establishing and maintaining a Vehicle Maintenance Log Book. The log book shall be a handwritten account of all safety and inventory problems and corrections as well as any additions or subtractions of inventory. The log book shall include the date, time, nature of problem and/or correction and signature of the person making the entry.

**11.3.7** Company Captains shall be responsible for the creation of a Daily Vehicle Inspection Report. The report shall be divided into two sections:

- The first section shall include all of the safety checks enumerated in Section 11.3.2.
- The second section shall include an inventory of all items on the vehicle. This section shall be specific to the apparatus.
- The report shall include the signature of the driver performing the inspection and the signature of the apparatus officer/acting officer.

**11.3.8** All Company Officers / Acting Officers shall be responsible for the completion of the Daily Vehicle Inspection Report.

**11.3.9** The Daily Vehicle Inspection Reports for any particular week shall be submitted to the Deputy Chief – Support each Monday of the following week.

**11.3.10** Upon receiving notice of a safety or inventory problem, the Officer/Acting Officer shall enter into the Vehicle Maintenance Log Book the date, time, nature of problem and signature. **In the case of a safety problem, the Officer/Acting Officer shall immediately notify the Maintenance Division.**

**11.4.0 MAINTENANCE AND SAFETY CHECKS – WEEKLY, MONTHLY, ANNUALLY**

**11.4.1** Regular monitoring of the parking (Maxi) brake system on all apparatus is necessary to ensure its reliability. This check shall be conducted on a weekly basis according to the following schedule:

- TUESDAY - ALL ODD NUMBERED ENGINES
- WEDNESDAY- ALL EVEN NUMBERED ENGINES
- THURSDAY - ALL AERIAL APPARATUS & RESCUE  
Spare apparatus shall be tested on the above days by the company responsible for that spare. If the spare is in service, it shall be tested by the company using it.

**11.4.2** The Maxi-brake check shall be completed as early as possible during the day shift. The check shall not be performed during dangerous weather conditions.

**11.4.3** The Maxi-brake check shall be conducted by proceeding to a steep incline within the company's district. With all due consideration to traffic, crew and public safety, stop the apparatus place the transmission in neutral and set the parking brake. The officer/acting officer shall take a position beside the apparatus and evaluate the holding effectiveness of the parking brake system for approximately one minute. (The driver will remain in the seat but will not engage the brake pedal during this period.) This will be conducted with the apparatus facing in both the uphill and downhill mode. Any movement of the vehicle during this period will require that the Maintenance Division be notified immediately. Arrangements will be made for the Maintenance Division to rectify the situation as soon as possible.

The officer/acting officer shall E-mail the company Captain/Acting Captain stating details of the date, time, location and outcome of the test and any work performed by the Maintenance Division. The Captain shall maintain a record of the completed tests as well as documenting why they were not performed as scheduled. An annual report of all tests performed, passed or failed during the year shall be submitted to the Health & Safety Chief.

**11.4.4** A weekly test of the air brake system shall be performed on all apparatus following the same schedule outlined for the Maxi-brake test in Section 11.4.1.

**11.4.5** Check air brakes in the following manner. On level surface, place chock blocks in front of and behind rear tire. Stop engine, parking brake off, air system at 110 – 120 psi. Leave master switch and ignition switch on so that alarms and indicator lights will function. Step on brake pedal and hold for 60 seconds. Notice air pressure drop. Next, pump foot brake rapidly, draining air pressure from system. At approximately 60-75 psi the low air warning alarm should sound and dash light should come on. Continue pumping the brake. The emergency spring brake should activate between 20-40 psi (indicated by the yellow knob automatically popping up). Stop pumping the brake, start the engine and allow air compressor to rebuild pressure in the brake system. At approximately 60-75 psi the parking brake can be manually disengaged and the low air warning should stop sounding and the indicator light should go out. Pressure should build to 120 psi and the compressor's governor should stop building pressure at 125 psi. **Failure of any single component of this test shall be reported immediately to the Officer/Acting Officer of the apparatus.**

The officer/acting officer shall E-mail the company Captain/Acting Captain stating details of the date, time, location and outcome of the test and any work performed by the Maintenance Division. The Captain shall maintain a record of the completed tests as well as documenting why they were not performed as scheduled.

**11.4.6** The Maintenance Division shall be responsible for all repairs and all other maintenance such as oil changes, tire changes or rotation, brake maintenance, tune-ups, etc. The Maintenance Division shall determine the frequency of such maintenance (weekly, monthly or annually) and shall keep proper records.

#### **11.5.0 NON-EMERGENCY MODE OF OPERATION**

**11.5.1** Non-emergency mode of operation may be defined as the everyday routine functions such as travel to and from the Maintenance Division, in-service inspections, driver training, returning from an alarm, etc. It is also defined as the response to an alarm that does not meet the criteria of an emergency.

**11.5.2** The following alarms, when received, shall be deemed to be a non-emergency response:

- Moving up to cover a station during multiple alarm incidents;
- Fire watch;
- Water problem;
- Smoke in the area;
- Lockouts (other than child in car)

- 11.5.3** When responding to an alarm that is deemed to be a non-emergency, or when performing routine travel, the apparatus shall be driven with the normal flow of traffic, without the use of lights and siren.
- 11.5.4** When traveling in non-emergency mode, situations posing any doubt as to the successful negotiation of a maneuver require that crew members be deployed as spotters to critical locations around the apparatus. Member(s) shall be placed behind the apparatus, as guides, whenever the vehicle is operated in reverse. They shall position themselves in a safe location that is clearly visible in the operator's mirrors. **The driver shall immediately stop at any time he/she loses sight of the spotter.** Cases involving tight clearances at the front of the apparatus will require a guide in that area, in direct line of sight of the operator. Spotters shall position with due regard to traffic conditions. The operator shall only move the vehicle with the approval and guidance of the spotters.
- 11.5.5** When traveling in a non-emergency mode of operation, all Massachusetts motor vehicle laws shall be observed. **At no time during non-emergency operation shall the vehicle be operated above the posted speed limit.**
- 11.5.6** Chock blocks shall be used whenever trucks are parked out of quarters and the cab is unattended. Blocks shall be placed on both sides of the wheel.

#### **11.6.0 EMERGENCY MODE OF OPERATION**

- 11.6.1** An emergency shall be defined as any alarm that without timely intervention could lead to the possibility of undue harm or death to people or to the destruction of property.
- 11.6.2** All alarms shall be deemed to be an emergency with the exception of those listed as non-emergency responses in section 11.5.2.
- 11.6.3** **When responding in the emergency mode, the warning lights and siren shall be in operation regardless of time of day or traffic conditions.**
- 11.6.4** When traveling in an emergency mode of operation, situations posing **any doubt** as to the successful negotiation of a maneuver require that crew members be deployed as spotters to critical locations around the apparatus. Member(s) shall be placed behind the apparatus, as guides, whenever the vehicle is operated in reverse. They shall position themselves in a safe location that is clearly visible in the operator's mirrors. **The driver shall immediately stop at any time he/she loses sight of the spotter.** Cases involving tight clearances at the front of the apparatus will require a guide in that area, in direct line of sight of the operator. Spotters shall position with due regard to traffic conditions. The operator shall only move the vehicle with the approval and guidance of the spotters.

**11.6.5** When traveling in an emergency mode of operation, all Massachusetts motor vehicle laws shall be observed with the following exceptions granted by MGL Chapter 89, Section 7b:

- The driver of a vehicle of fire shall be subject to the provisions of any statute, rule, regulation, ordinance or by-law relating to the operation or parking of vehicles, except that a driver of fire apparatus while going to a fire or responding to an alarm, may drive such vehicle at a speed in excess of the applicable speed limit **if he exercises caution and due regard under the circumstances for the safety of persons and property**, and may drive such vehicle through an intersection of ways contrary to any traffic signs or signals regulating traffic at such intersection **if he first brings such vehicle to a full stop and then proceeds with caution and due regard for the safety of persons and property**, unless otherwise directed by a police officer regulating traffic at such intersection.

#### **11.7.0 OFFICER RESPONSIBILITIES IN THE EMERGENCY MODE OF OPERATION**

**11.7.1** The Officer/Acting officer shares a responsibility with the driver for the safe operation of the vehicle.

**11.7.2** The Officer/Acting officer at no time shall order the driver of the vehicle to disobey the motor vehicle laws of Massachusetts.

**11.7.3** The Officer/Acting officer shall, upon observing the driver operating the apparatus in an unsafe or illegal manner, order the driver to correct his/her actions immediately.

#### **11.8.0 DRIVER RESPONSIBILITIES IN THE EMERGENCY MODE OF OPERATION**

**11.8.1** The driver is **ALWAYS** responsible for the safe operation of the vehicle, and at no time will unduly endanger the lives of civilians or fellow firefighters.

**11.8.2** The driver shall ensure that all compartment doors on the apparatus are closed before entering the cab of the truck

**11.8.3** The driver shall ensure that the crew is safely seated and belted, before proceeding. All tiller operators shall be seat belted and wearing their helmets whenever the vehicle is in motion.

**11.8.4** The driver shall ensure that the garage door is fully opened before proceeding.

**11.8.5** Before proceeding, the driver shall know the intended destination of the alarm AND the route to be taken.

**11.8.6** Chock blocks shall be used whenever trucks are parked out of quarters and the cab is unattended. Blocks shall be placed on both sides of the wheel.

**11.9.0** **CODE RED AND CODE YELLOW**

**11.9.1** Upon receipt of an alarm requiring an emergency mode of operation, there shall exist a CODE RED.

**11.9.2** Upon receipt of an alarm requiring a non-emergency mode of operation, there shall exist a CODE YELLOW.

**11.9.3** A CODE RED, when initiated, will require the response of **all** responding companies to an alarm to be in the emergency mode of operation.

**11.9.4** A CODE YELLOW, when initiated, will change the response of all incoming companies to an alarm from emergency to non-emergency mode of operation.

**11.9.5** When more than one company responds to an emergency alarm, the first arriving Officer/Acting officer shall include in their brief initial report (B.I.R.) the response mode of all other incoming companies.

**11.9.6** If the first arriving Officer/Acting officer deems the situation an emergency, the CODE RED shall be maintained. If the situation is deemed to be a non-emergency, the Officer/Acting officer shall initiate a CODE YELLOW in his/her B.I.R.

**11.9.7** Fire Alarm shall repeat the Brief Initial Report via radio to all other incoming companies.

**11.9.8** Upon initiation of a CODE YELLOW, all other incoming companies shall change their response from emergency to non-emergency mode of operation, and continue responding to the alarm with the normal flow of traffic.

**11.9.9** If, upon further investigation of the incident by the first arriving Officer/Acting officer or subsequent incident commander, it is deemed that the incident has escalated, he/she may re-institute the CODE RED.

**11.9.10** Fire Alarm shall repeat via radio the CODE RED to all other incoming companies.



**11.9.11** Upon initiation of the CODE RED, all other incoming companies shall change their response from non-emergency to emergency mode of operation.

### **11.10.0 OPERATING ON THE HIGHWAY**

**11.10.1** When traveling in the non-emergency mode of operation, apparatus shall refrain from using I-190 and I-290.

**11.10.2** When traveling in the emergency mode of operation to an incident NOT on the highway, the use of I-190 or I-290 should be avoided whenever possible. The limited access nature of the highways may result in a substantial delay if responding apparatus find themselves in a traffic tie-up.

**11.10.3** When a fire company arrives on the scene of a highway emergency and there are no police at hand to control traffic, firefighters themselves must first control the oncoming vehicles before safely turning their attention to the emergency. Apparatus should be parked in a safe position, and warning devices (cones, strobe lights) positioned several hundred feet from fire apparatus so that they are visible to an oncoming motorist. Firefighters must never turn their backs to oncoming vehicles.

### **11.11.0 TOWING SPECIAL OPERATIONS VEHICLES**

**11.11.1** The Worcester Fire Department will, on occasion, be dispatched to an incident requiring a Special Operation. It will sometimes, therefore, be necessary to tow a Special Operations trailer, such as the M.D.U. (mass decon unit) trailer, the personal watercraft trailer or the SCUBA dive boat.

**11.11.2** Prior to towing any Special Operations trailer, the driver shall ensure that the hitch has been safely and securely engaged and all light cords and safety chains are properly connected.

**11.11.3** When towing a Special Operations trailer, the driver must exercise further care during operation due to the increased stopping distances and wider turns necessary.

### **11.12.0 BACKING INTO QUARTERS**

**11.12.1** Upon returning to quarters, the operator shall stop the apparatus in a safe location with due regard to passing traffic in order for the officer and crew to disembark. Crew members shall then cautiously stop traffic (using flashlights under conditions of darkness or reduced visibility) and guide the apparatus onto the

apron in alignment with the apparatus bay. Crew members shall have portable radios to communicate with the driver, if necessary.

**11.12.2** The Officer/Acting officer ensures that the overhead garage door is in the fully opened position while spotter(s) position themselves to the rear of the apparatus clearly visible to the driver.

**11.12.3** As the driver backs into the apparatus bay, the Officer/Acting officer connects the plymovent to the exhaust pipe. Spotters guide apparatus until full stop.

**11.12.4** Driver secures apparatus.

### **11.13.0 PASSING FIRE APPARATUS**

**11.13.1** No company shall pass another fire apparatus while responding to an incident unless a communication is received via radio that the forward company has given permission to do so. This radio transmission may be initiated by the forward company or requested by the unit wishing to pass. Rules of the road are to be observed while passing another truck, the driver shall determine if this operation is safe to execute considering the traffic conditions, weather conditions and position of the forward truck

### **11.14.0 APPARATUS INVOLVED IN AN ACCIDENT**

**11.14.1** Whenever there is a vehicle incident resulting in injury to members or civilians, or damage to WFD apparatus, other vehicles or property, the following actions shall be taken.

**11.14.2** Any apparatus involved in an accident, including apparatus responding to an incident, shall stop **immediately** and assess any injuries or property damage. Fire Alarm shall be notified and, in turn, shall notify the appropriate District Chief. If responding to a structure fire or other serious incident AND if staffing levels allow AND if appropriate to leave the scene, the Officer/Acting officer may leave a member of the crew at the scene of the accident and continue the response to the incident. The crew member remaining at the accident scene shall comply with Section 11.14.5 until relieved by a superior officer.

**11.14.3** If the vehicle incident occurs during normal business hours, the Safety Chief (Car 7 @1849) shall be immediately notified and respond to the scene. If unavailable, the appropriate District Chief shall respond and investigate.

**11.14.4** In the event of serious injury or death as a result of a vehicle incident during non-business hours, the Safety Chief shall be notified, through Fire Alarm, to respond to the scene.

**11.14.5** The Officer/Acting officer of the apparatus shall gather information at the scene regarding the operator(s), passenger(s), owner(s), vehicle(s), witnesses and insurance. The District Chief's Aide shall gather and record this information in the event that the officer or crew is unable due to injuries. All information gathered shall be forwarded, via e-mail, to the Safety Chief.

**11.14.6** Multiple pictures, from various angles, shall be taken if deemed necessary. The Fire Investigation Unit may be called to photograph during normal business hours. A disposable camera should be available at all times in Cars 3 & 4 for non-business hour incidents. All photographs shall be forwarded to the Safety Chief.

**11.14.7** Upon returning to quarters, the Officer/Acting officer shall forward to the Safety Chief, via e-mail, a narrative. The narrative shall provide all details of the incident, including, but not limited to: status at the time of the incident (responding, returning, operating at, etc.), incident #, time, the apparatus operator and crew; the location and direction of travel of all vehicles, speed, weather and road conditions, injuries, extent of damage, related factors and any other facts of the incident.

**11.14.8** The apparatus operator shall fill out a WFD Apparatus Accident Report, including diagram. The completed report shall be submitted to the Safety Chief. These reports may be found on the WFD Intra-net and forwarded electronically to the Safety Chief upon completion.

**11.14.9** The operator shall complete a Commonwealth of Massachusetts Motor Vehicle Crash Operator Report when the damage to any one vehicle or property is over \$1,000 or if there is an injury to any person. This form may be obtained from the Safety Chief or any police department. Forward the original copy to the Safety Chief. The Safety Chief will then forward the original to the Registry of Motor Vehicles Crash Record Department. The Safety Chief shall also forward one copy to the local police department, one copy to the City Law Department and retain one copy for Fire Department records.

**11.14.10** The Safety Chief shall conduct an investigation into the circumstances of the incident. A report shall be forwarded to the Deputy Chief – Operations containing the facts and factors discovered, the conclusions drawn and the recommendations, if any, to avoid future occurrences.

**11.14.11** The Deputy Chief – Operations shall evaluate the report and take any action(s) deemed appropriate for the situation.

## **11.15.0 TIRE CHAINS**

Snow and ice present challenging driving conditions for operators of WFD emergency vehicles. In order to safely and effectively respond to emergency incidents, it is important for members of the WFD to know when to use tire chains when road conditions become difficult due to substantial snow and ice accumulation. Proper use and care of tire chains is necessary so that vehicles can be driven safely and effectively while simultaneously minimizing damage that can be caused by their improper use.

- 11.15.1** It shall be the responsibility of the Company Captain/Acting Captain to ensure that all vehicles assigned to that company have properly fitted tire chains, in good condition, by November 1 of each year.
- 11.15.2** Unless mounted, tire chains shall be carried on all apparatus during the period November 1 – April 1 of each year, allowing for installation on the road if unusual or unexpected conditions warrant.
- 11.15.3** Tire chains shall be inspected on a daily basis during the aforementioned period. Defective, heavily worn or improperly fitting chains shall be replaced or repaired forthwith. Severely worn cross-links shall be replaced by new cross-links immediately. Spare cross-links shall be kept with the apparatus in the event that an on-the-road repair becomes necessary.
- 11.15.4** Any apparatus that breaks a cross-link while on the road, including apparatus responding to an incident, shall stop **immediately** and remove the broken link to avoid unnecessary damage to the vehicle. Fire Alarm may have to be notified if a substantial delay due to tire chain failure occurs.
- 11.15.5** When new tires are installed on apparatus, tire chains shall be checked to make sure that they will properly fit the new tires.
- 11.15.6** Generally, tires on WFD apparatus should enable operators to safely drive in a few inches of snow. Chains should not be needed unless there are several inches of snow accumulation on the road. Several WFD vehicles have “on-spot” chains that are effective in snow up to an accumulation of 6”, according to the manufacturer. If greater accumulations exist, standard tire chains will provide better traction.
- 11.15.7** The Deputy Chief – Operations shall determine when chains shall be installed on **all** apparatus. This decision shall be based on weather reports, road conditions, good judgment and experience. In the absence of the Deputy Chief – Operations, the senior working District Chief shall make the determination regarding the installation of chains on **all** apparatus. Individual company Officers/Acting officers may install chains on their company prior to the determination being made by a Chief Officer if he/she feels that chains are necessary for that company to negotiate all roads in their district.

- 11.15.8** Chains should fit snugly, not loosely. When mounting chains on apparatus, personnel shall use wheel chocks and maxi-brakes. All other appropriate safety measures shall be taken by personnel when installing tire chains or when chains are being removed.
- 11.15.9** Icy roads present the most difficult driving conditions for operators of WFD emergency vehicles. Stopping on an icy road with chains on is very difficult. **EXTREME CAUTION SHALL BE USED WHENEVER DRIVING SURFACES ARE ICY.** Engine brakes (Jake brake) shall be turned off, or set to the lowest setting during icy road conditions.
- 11.15.10** The decision to remove chains that have been installed on apparatus shall be made by the Officer/Acting officer of the individual company. The decision shall be based on road conditions, good judgment, experience and knowledge of that company's district. The ability of a company to respond effectively and in a timely fashion to an incident in a remote, hilly area of their district, for example, is the type of consideration necessary when determining whether or not tire chains are to be removed.