

# SAN MIGUEL CONSOLIDATED FIRE PROTECTION DISTRICT

## Memorandum

**DATE:** January 19, 2011  
**TO:** All Personnel  
**FROM:** Gary Croucher, Division Chief  
**SUBJECT:** Preventive Maintenance Program and Services  
**DISPOSITION:** Read/Post/Retain Until Incorporated in Policy Manual

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Captains Initials		
A	B	C

The following guidelines were developed to help clarify the San Miguel Consolidated Fire Protection District's (the District) Fleet Services Preventive Maintenance Programs and Services and to identify the operator/crews' responsibilities.

- Attachment "A" is the draft "Out of Service Criteria"
- Attachment "B" is the Apparatus PM Schedule for 2011

### Fleet Maintenance Programs and Services:

1. Preventive Maintenance (PM)
  2. Biennial Inspection of Terminal (BIT)
  3. Lube, Oil and Filter
  4. Ground and Aerial Ladder Testing
  5. Mobile Mechanic
  6. After Hours
  7. Smog/Opacity Testing
  8. Customer Service Feedback
1. Preventive Maintenance (PM)
  - a. All PM's will be scheduled through the Fleet Maintenance Program based on the following priorities:
    - i. Calendar: Semi-Annual (6 months) and Annual (12 months).
    - ii. Mileage: 6,000 miles
    - iii. Hours: 300 hours
  - b. The PM Schedule will be published in January of each year. The PM Schedule will include the following:
    - i. Apparatus number and last date of completed PM
    - ii. Apparatus number and dates of the proposed PM's
  - c. Fleet Maintenance will contact the Battalion Chiefs at least one full shift prior to the scheduled maintenance to ensure the apparatus is delivered on time and an appropriate Reserve Engine is available.

- d. Should scheduling conflicts or delays occur, the Battalion Chief and the Fleet Maintenance Supervisor will coordinate an alternate PM date/schedule.
  - e. Prior to the scheduled PM the following items should be completed by the crews:
    - i. Apparatus are to be cleaned, including interior compartments, ladders and aerial device (if applicable).
    - ii. Insure inventory is complete and up to date.
    - iii. Coordinate and document a discrepancy list with other divisions that includes the operational (pump, lights, etc.) and non operational (body damage or needs) condition of the apparatus.
    - iv. The day of the scheduled PM, the apparatus is to be at the repair facility/shop no later than 1000 hours.
    - v. The crew will be responsible for performing an equipment inventory on the apparatus and documenting any equipment removed/transferred to the reserve apparatus being placed into service.
  - f. PM drop-off and pick-up will consist of the following elements:
    - i. Pre-acceptance inspection will be completed between the Engineer and the Mechanic scheduled to complete the PM. The pre-acceptance inspection will include review of the pre-inspection discrepancy list and inspection of the apparatus for cleanliness.
    - ii. The Mechanic who performed the PM will review all work completed (including discrepancies) and note any discrepancies not completed, the reason for not completing the work, and any additional work to be performed.
    - iii. Any equipment removed from the original apparatus shall be returned, with an inventory completed of the primary and reserve apparatus.
    - iv. An acceptance inspection will be conducted on the post PM apparatus prior to returning to service (this is include a pre-trip inspection).
    - v. A Customer Service Feedback Form will be completed by either the Captain or Engineer. All Customer Service Feedback Forms shall be returned to the Operations Division Chief.
  - g. Light Fleet PM's
    - i. Information on the Light Fleet Preventive Maintenance priorities will be developed as part of Policy 305 (District Vehicles and Apparatus).
2. Biennial Inspection of Terminal (BIT)
- a. The California Commercial Motor Vehicle Safety Act of 1988, commonly referred to as the Biennial Inspection of Terminals (BIT) Program, was enacted by the California Legislature in an effort to alleviate the growing number of truck related collisions on California's highways. Primarily, the intent is to ensure every truck terminal throughout the state is inspected by the California Highway Patrol (CHP) on a regular basis, thereby creating a level field for all motor carriers statewide. Terminal inspections have been conducted by the CHP since 1965 as a tool to determine if motor carriers are complying with motor carrier safety regulations in an ongoing fashion, particularly with regard to the legal requirement to maintain commercial motor vehicles according to a scheduled maintenance (preventive maintenance) program. Each motor carrier is permitted to establish his or her own maintenance program. The CHP role is to determine whether each carriers selected maintenance

schedules are adequate to prevent collisions or mechanical breakdowns involving the vehicles, and all required maintenance and driver records are maintained.

- b. The Fleet Maintenance Supervisor will continue to meet with the CHP to ensure the District meets all requirements of the BIT Program.
  - c. The District will provide online access to the National Out-of-Service Criteria publication referred to by the BIT Program by January 1, 2012. The National Out-of-Service Criteria includes the following:
    - i. Part I - Details violations which place a driver out-of-service.
    - ii. Part II - Outlines the critical vehicle inspection items and provides direction to each commercial vehicle inspector in North America, identifying at what point a commercial motor vehicle can no longer be safely operated due to its mechanical condition.
    - iii. Part III - Provides guidance for unsafe hazardous materials transportation, including conditions which fail to communicate a hazard and those which are themselves hazards.
    - iv. Part IV - Establishes criteria for placing a motor carrier out-of-service.
3. Lube, Oil and Filter
    - a. Lube, Oil and Filter changes will be performed on all apparatus per the preventive maintenance schedule or the manufacturers recommendation (whichever is sooner).
  4. Ground and Aerial Ladder Testing
    - a. Ground ladders will have a non-destructive test performed annually. Any defects noted during the testing will be corrected to meet certification requirements of the ground ladders.
    - b. Aerial Ladders will be scheduled annually for third party testing and certification which includes the manufacturer maintenance requirements. Every 50 hours, the crews will clean and lubricate the aerial device as recommended by the manufacturer.
  5. Mobile Mechanic
    - a. The District intends to provide a mobile mechanic whenever repair or inspection can be conducted on-site (station or roadside). Mobile Mechanics will address BIT and Out-of-Service discrepancies reported by the crews. Outside or mobile repairs should not exceed 2 hours. If repairs are estimated to exceed the 2-hour guideline, the Battalion Chief and Mechanic should review the feasibility of transferring to a Reserve Engine.
  6. After Hours Repair
    - a. Required repairs after hours, weekends and holidays should be addressed through the on-duty Battalion Chief. If the repairs are estimated to exceed the outside repair guideline of two hours and/or inhibit the necessary response coverage of the District, the Battalion Chief and Mechanic should review the feasibility of transferring to a Reserve Engine.
  7. Smog/Opacity Testing
    - a. The District will follow State and Federal guidelines/requirements regarding Smog Testing.

8. Customer Service Feedback

- a. The Customer Service Feedback Program was established to make program improvements and to assist fleet maintenance personnel in knowing the needs of their customers and their experience with the service provided.
- b. A Customer Service Feedback Form will be completed by either the Captain or Engineer. All Customer Service Feedback Forms shall be returned to the Operations Division Chief.

**305.10 FIRE APPARATUS OUT OF SERVICE CRITERIA**

The purpose of this policy is to establish criteria for when fire apparatus is to be taken out of service. The criteria is specific to the presence of defects and deficiencies that reduce the operational safety and performance of our apparatus below levels established in 49 CFR, part 390, "Federal Motor Carrier Safety Regulations"; applicable federal, state, and local regulations; applicable nationally recognized standards; manufacturers' recommendations.

Any San Miguel Consolidated Fire Protection District apparatus found, during operation or during any inspection, to have any of the following deficiencies or defects shall be taken out of service as soon as possible, until repairs are made. Any vehicle involved in any type of accident requires an immediate inspection.

The Fleet Maintenance Supervisor or Fire apparatus Mechanic shall be notified immediately before moving the apparatus and the Duty BC shall be notified the apparatus is out of service. If the parked apparatus creates a safety or traffic hazard, seek approval from the mechanic or Duty BC to move the apparatus to the closest area of safety.

**A. ENGINE SYSTEM**

1. Major coolant leak.
2. Engine unable to maintain proper temperature (i.e. overheating).
3. Major oil leak.
4. Low engine oil pressure. (Gauge in red zone or low oil pressure indicator).
5. Contaminated coolant or oil (i.e. oil in coolant, fuel in oil, coolant in oil, or coolant in transmission fluid).
6. Fuel leak.

**B. TRANSMISSION**

1. Automatic transmission overheats in any range.
2. Transmission has major leak.

3. Transmission will not go into lockup for fire pump operations.
4. Transmission fluid contaminated with coolant.

#### C. ELECTRICAL SYSTEM

1. Alternator not maintaining voltage less than 12.6 volts.
2. Battery gassing excessively.
3. Headlights out.
4. More than 1 emergency lights are out in any one Zone.

#### D. BRAKING SYSTEM

1. Any audible air leak with park brake released.
2. Any audible air leak with park brake released and service brake applied.
3. Vehicle pulling when brakes applied.
4. Compressor will not build air pressure.
5. Parking brake will not hold truck.
6. Shoes, drums, pads worn beyond manufacturer's minimum specifications.
7. Shoes or pads with oil contamination.
8. Excessive brake stroke.

#### E. CREW CAB AREA

1. Broken cab mounts.
2. Cut, broken or excessive wear of seat belts. (latches not holding or releasing properly).

3. Cracked or broken windshield obstructions (line of vision).
4. Inoperable windshield wipers.
5. Mirror(s) Broken to a point cannot be efficiently used.

#### F. CHASSIS, AXLES, STEERING & SUSPENSION SYSTEMS, DRIVE

##### LINE, WHEELS & TIRES

1. Tires cut to cords, audible air leak, flat or excessive low pressure.
2. Tires with tread depth less than 4/32 on steer axle.
3. Tires with tread depth less than 2/32 on drive axle.
4. Cracked or broken springs.
5. Cracked or broken spring hangers.
6. Loose steering system components.
7. Cracked rim.
8. Missing lug nuts.
9. Major leaks on power steering system.
10. Use of tow truck to free a stuck vehicle.
11. Cracked or Broken Frame or Steering Mounting Brackets.

#### G. FIRE PUMP

1. Pump test results fall below 90% of the original rating of the fire pump, in accordance with NFPA.
  1. 1911 standards.
  2. Pump will not engage manually and/or air/electrically.
  3. Pressure control system inoperable.

4. Pump transmission components have major leak.
5. Pump panel throttle/pressure controls inoperable.
6. Water tank has major leak.

#### H. AERIAL DEVICE SYSTEMS

1. Power take-off will not engage.
2. Stabilizer system inoperable.
3. Stabilizer has physical damage.
4. Aerial device defective or damaged.
5. Hydraulic system is leaking or defective.
6. Cable sheaves defective.
7. Cables frayed.
8. Aerial device structurally deformed or damaged.
9. Torque box/turntable fasteners broken or missing.
10. Excessive heat indication (aluminum aerial only).

## 2011 Annual Apparatus Maintenance Schedule

### January

Annual Maintenance	1117 (E22)	1119 (BR18)	
Semi Annual Maintenance	1111 (BR23)	1122 (R18)	(OES 305)
Service all fuel dispensing pumps			

### February

Annual Maintenance	1115 (E23)	1108 (BR14)	
Semi Annual Maintenance	1112 (T15)	1120 (E18)	
Service B/A Air compressors			

### March

Annual Maintenance	1110 (E14)	1121 (E19)	
Semi Annual Maintenance	1113 (E16)	1118 (E219)	
Service Emergency generators			

### April

Annual Maintenance	1114 (E21)	1107 (E222)	
Semi Annual Maintenance	1116 (E15)		
Shop equipment			

### May

Annual Maintenance	1123 (Tractor)		
Semi Annual Maintenance	1106 (E215)	(OES 307)	

### June

Annual Maintenance	1104 (E216)	(OES 305)	
Semi Annual Maintenance	1105 (E223)		

### July

Annual Maintenance	1111 (BR23)	1122 (R18)	
Semi Annual Maintenance	1117 (E22)	1119 (BR18)	

### August

Annual Maintenance	1112 (T15)	1120 (E18)	
Semi Annual Maintenance	1115 (E23)	1108 (BR14)	
Service all fuel dispensing pumps & Smog check on all staff and support vehicles			

### September

Annual Maintenance	1113 (E16)	1118 (E219)	
Semi Annual Maintenance	1110 (E14)	1121 (E19)	

### October

Annual Maintenance	1116 (E15)		
Semi Annual Maintenance	1114 (E21)	1107 (E222)	

### November

Annual Maintenance	1106 (E215)	(OES 307)	
Semi Annual Maintenance 1	123 (Tractor)		

### December

Annual Maintenance	1105 (E223)		
Semi Annual Maintenance	1104 (E216)		
Aerial and ground ladder inspection & Opacity smog check on all apparatus			