



# Fire Watch

Los Angeles Fire Department Newsletter

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**Our Mission**  
"To preserve life and property, promote public safety, foster economic growth through leadership, management and actions, as an all-risk fire and life safety response provider."

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## Supply and Maintenance Division

**SUPPLY and MAINTENANCE.** You could not find two better words to describe the logistical functions that the Supply and Maintenance Division (S&M) performs each and every day of the year. The Supply and Maintenance Division is located at 140 North Avenue 19, just a few miles northeast of downtown Los Angeles. The existing facility is built on a six-acre site, which includes a two-story, reinforced concrete and block 120,000 square foot building. Within the building are the warehouses, fire apparatus repair stalls, and administrative offices. One hundred seven civilian employees and thirteen LAFD sworn employees accomplish the task of supplying the Fire Department's 124 different work locations, including 103 fire stations as well as maintaining the Department's entire fleet of light and heavy apparatus.



The current S&M facility cost taxpayers 1.6 million dollars in 1963, which replaced an old antiquated facility. This S&M site is the same location as the previous repair facility, built in the late 1800's, a relic of the Fire Department's horse-drawn days. The prior yard housed mainly horses requiring medical attention, blacksmiths, and repair mechanics.

### **Supplies**

Supplying a fire department the size of LAFD is a large responsibility. This monumental task is shared by the Fire Department and the Department of General Services (DGS). DGS provides a variety of supplies from an auto parts warehouse and a general supplies warehouse located within the S&M facility. The hard working, dedicated staffs of both the Fire Department and DGS work together to meet a wide variety of needs. Staying within the annual budget is a constant balancing act, but the personnel assigned to supply functions at S&M take this requirement seriously, always seeking out the best parts and products at the lowest cost.

### **Administrative Office**

An Assistant Chief and Battalion Chief manage and oversee operations at the Supply and Maintenance Division. Managing the budget, meeting the



Department's needs within the budget, and interacting with vendors are primary functions of the administration. S&M is keeping up with changes in technology with several computer-based systems:

- Supply Management System (SMS) to make purchases,
  - Citywide Asset Management System (CAMS) to track inventory, and
  - Vehicle Maintenance System (VMS) to track apparatus repairs.
- S&M implemented the new electronic Supply Requisition System (SRS) at most work locations. SRS has proven beneficial to both the members in the field and to the S&M staff. SRS has built-in accountability and enables the Department to track changes in needed supplies and repairs.



MACHINE SHOP

the Purchasing Unit's efficiency in processing requests makes the task appear simple.

Department, with enough in reserve for emergency needs. Warehouse personnel use five stake-bed trucks to make monthly supply deliveries to over 124 different locations. Using an oil tender, warehouse personnel pick up waste motor oil and deliver fresh motor oil, which allows field members to change apparatus oil at the Department's recommended intervals. Recently, the LAFD warehouse received a Number One ranking out of ninety other warehouses citywide for safety and efficiency.

### Equipment Engineering Unit

The Equipment Engineering Unit's (EEU) primary responsibility is to procure all Fire Department vehicles, firefighting tools, equipment, and all types of personal protective equipment (PPE's) required by the Department. Their task begins by preparing a detailed specification for each item to be purchased and culminates when the item is placed into service. A typical budget year for the EEU consists of purchasing 100 to 120 apparatus per year, dozens of different types of firefighting tools, equipment, and PPE's. The average yearly budget includes 21 million dollars for apparatus purchases and two to three million dollars for firefighting tools, equipment, and PPE's.

### Purchasing Unit

The Purchasing Unit processes requisitions submitted by field and S&M personnel. The Purchasing Unit makes purchases from the LAFD budget, as well as various grants from FEMA, the California State Homeland Security Grant Program, and the Federal Urban Area Security Initiative. Seeking the best products at the lowest price is their specialty. Interacting with vendors, by e-mail or telephone, to research a product is time-consuming, but

### Warehouse

Warehousing practices have changed in industry, and S&M's practices have changed too. S&M no longer stocks large quantities of supplies as it did in the past. Many of the items ordered by field locations are purchased on an as-needed basis. When the items arrive at



WAREHOUSE

S&M, they are redistributed for delivery to the end-users. The warehouse still stocks items that are vital to the function of the Fire

The EEU is also involved at the national level assisting the National Fire Protection Association (NFPA), reviewing and making recommendations for the State of California, making presentations at national training seminars, and regularly receiving phone calls from other fire



departments across the country requesting copies of specifications.

**Medical Supplies Unit**

Procurement and distribution of medical supplies and equipment is this Unit's primary responsibility. Additionally, this Unit exchanges radiological test equipment (mini-radiacs), and distributes tools and equipment that have been repaired, along with oxygen bottles to battalion depots. Logistical support for special events and emergency incidents is another regular function of this Unit.

**Auto Parts and Tool Room**

The DGS Auto Parts warehouse stocks millions of dollars in replacement parts and rebuild kits for diesel engines, transmissions, and fire pumps. Personnel assigned to this unit have a well-versed understanding of the needs of the mechanics and transition quickly to the constantly changing LAFD fleet.

The Tool Room supplies mechanics with many specialized and custom-made tools and equipment. The Tool Room supplies various fasteners, including nuts, bolts and even reproduces keys on a regular basis.

**Turnout World**

Firefighting turnouts, boots and safety gear (PPE) in several different sizes are stocked and issued from this unit. New probationary members are fitted for size and issued firefighting gear the

same day with items directly off the shelf.

**Maintenance**

Maintaining a fleet of 1,100 light vehicles and heavy apparatus is not an easy task, especially when the apparatus are used in over 715,000 emergency responses yearly, in rapid start and stop conditions. Between the automotive repair technicians, the talented craft shops, and the specialized units, every S&M employee takes this enormous challenge seriously, providing

lifts moving up and down. Hand tools and tool boxes are purchased at the expense of the mechanics, which often exceed \$30,000 in accumulated cost. From engines to transmissions and even fire pump overhaul, there is no limit to what this shop can overhaul or repair. In the year 2003, over 4,000 repair orders were completed, mostly preventive maintenance and basic repairs, generating a total parts cost of \$2,457,000. There were 655 brake jobs completed in 2003 at a cost of \$496,400 while repairs to the Department's fire pumps and associated plumbing accounted for more than 7,347 hours worked.

S&M also provides mechanical repair services at the Valley Shop, located behind Fire Station 88 in the San Fernando Valley, and at the P-2 Shop located in City Hall East, below Department Headquarters. The Valley Shop provides many of the same

mechanical services as S&M, but on a much smaller scale.

**Field Mobile Mechanics**

Mechanical components can and will break at the most unexpected times and unexpected locations. Supply & Maintenance is ready to meet these needs with a fleet of six mobile mechanics who respond citywide, 24 hours a day seven days a week to provide many of the same services available at the main shop facility. By having the ability to repair apparatus in the field, the LAFD minimizes the need for time-consuming "change-overs" and towing of apparatus to the shop. This important service reduces the negative impact of



professional and comprehensive service that is far above any other department in the world.

**Aerial, Triple and Automotive Shops**

Most of the 41 journey-level mechanics at S&M are California State Fire Marshal Certified. They repair, maintain, and modify firefighting apparatus, rescue ambulances, suburbans, and sedans. Supporting these mechanics are 17 mechanical helpers. The thirty repair stalls remain busy and noisy throughout the day with the sound of pneumatic air tools and hydraulic



mechanical problems, and helps to ensure more companies are available for response.

**Body Shop**

Even with a defensive driving policy, it is inevitable that apparatus will be involved in vehicular accidents. Repairing the apparatus is the job of the Body Shop. Sanding, masking, and painting are performed in spray and drying booths large enough to accommodate full-length aerial ladder trucks. When these highly qualified body mechanics complete a repair and paint job, field members agree that the apparatus' appearance is a show-room finish.

**Craft Shops**

Unlike most other fire departments, the LAFD has a complete Metal Shop, Carpenter Shop, and Machine Shop staffed by capable fabricators that create a variety of items and reproduce hard to find or obsolete parts, thereby saving the Department thousands of dollars annually.

The Metal Shop produces and outfits apparatus with custom brackets and holders in order to safely store and secure tools and equipment on the fire apparatus. They also have the ingenuity to design and improve new equipment, making the firefighting equipment safer, more efficient, and effective.

When special-sized furniture or cabinets are needed at headquarters or a new kitchen table is requested by a fire station, whom will the LAFD contact? Well, of course, the Carpenter Shop. This craft Shop meets the custom needs of the Department in more

ways than one. This Shop annually inspects, repairs, and certifies over 1,000 wooden ground ladders found on Department apparatus.

Computerized lathes and mills are only a few pieces of the equipment that the machinists use to produce water valves, firefighting nozzles and plumbing in the Machine Shop. This Shop also rebuilds complete diesel engines and transmissions to manufacturer's



specifications and, in some instances, custom modifications are made to meet the Department's unique needs.

**Small Engine and Hose Repair Shop**

The Small Engine and Hose Repair Shop maintains and repairs all of the small gas-powered hand tools, rescue tools, and generators. The Shop also repairs and maintains the over 750,000 feet of hose used on the Department's different apparatus. Rescue ambulance gurneys require repair and maintenance and this Shop rebuilds them from the ground up when necessary.

**Rescue Maintenance Unit**

The certified technicians who staff this vital unit are all uniformed members. These members fulfill a dual purpose: non-emergency maintenance of Self-Contained Breathing Apparatus (SCBA) and emergency response to provide air-filling capabilities at emergency incidents. This Unit annually tests, certifies, and repairs 1,788 SCBA units and 3,734 SCBA facepieces. Each SCBA unit must be tested under realistic breathing conditions. This simulation (air demand) is accomplished with the use of the Posi-Check Simulator and, when readings are outside of their operational parameters, the Firefighter technicians perform precision adjustments or repairs to the SCBA components. Rescue Maintenance (RM) personnel also fill over 400,000 oxygen bottles used yearly on emergency medical incidents by field personnel.

Where can a member procure equipment covers, drop bags, webbing belts, or a hose sling? Yes, Rescue Maintenance also produces and repairs these hard to find items.

An Apparatus Operator and one Firefighter are assigned to each platoon in the Rescue Maintenance Unit. They respond with Rehab Air Tender 1 (formerly known as Emergency Air 1) to large-scale emergencies when additional SCBA air cylinders are needed. An on-board air compressor enables Rescue Maintenance personnel to fill SCBA bottles in a matter of minutes. SCBA units and facepieces can also be repaired in the field with tools and equipment carried on the Rehab Air Tender.



The Department has three additional mobile units: Rehab Air Tenders 28, 59 and 85. Stationary air filling facilities are located at Fire Stations 20, 49, 66 and 88.

## **Test Pit**

The Test Pit Engineer has the responsibility of testing, evaluating, and certifying the Department's fire pumps and aerial ladders as per NFPA standards 1911 and 1914. In the year 2004, the Test Pit Engineer pumped 20,247,000 gallons of water while conducting annual pump and acceptance tests. You may be wondering, where did all of that water go and was it recycled? Below the Test Pit site is a 63,000-gallon reservoir where the recycled water is stored between tests. The Test Pit Engineer also certifies the LAFD's fleet of five fireboats, four foam tenders and ARFF (Aircraft Rescue Fire Fighting) apparatus. Due to the large number of heavy apparatus in the Department's fleet, it takes an entire year for the Test Pit Engineer to certify and inspect our Department firefighting apparatus. Precision instrumentation and measuring tools of the trade include pitot tube gauges, pyrometers, refractometers, and lasers.

Annual certification tests for 61 Aerial Ladder Trucks and 200 Triple Combination Pumpers are only part of the work done by the Test Pit Engineer. This hard-working member also performs tests on apparatus when:

1. New from the factory (LAFD acceptance tests).
2. Repairs, modification and/or overhauls are performed on the fire pump or aerial ladder hydraulic system.
3. Major diesel engine repair or overhaul has been performed.
4. An aerial ladder has been used beyond its operational limitation.

## **Annual Holiday Festivities**

Supply and Maintenance is rich in history and the annual Holiday breakfast is a good example. Active members and retirees along with their families come to S&M to share in the annual holiday event. Food, toys, and singing are among the festivities and the children can always expect a visit from Santa Claus. Bring your family and join the members of S&M by making this Holiday Breakfast part of your annual celebrations. Please call (213) 485-6111 for more details.

The Los Angeles Fire Department appreciates the committed individuals of the Supply and Maintenance Division for their continued dedication and support, and for being an integral part of this Fire Department.



***Special thanks to Captain I Don Steinman, a 19-year veteran of the Los Angeles Fire Department currently assigned to the Rescue Maintenance Unit. Captain Steinman started his LAFD career as a civilian heavy-duty equipment mechanic, where he served 6½ years. In 1992, he became a Firefighter, and promoted to Engineer in 1999. In 2000, he served at S&M as the Test Pit Engineer.***