

SYRACUSE UPDATED

--a look at the Mini-Maxi Pumper concept in action

In this two-part article, Chief Loeb tells how the Mini-Maxi Pumper operations in Syracuse, New York, are working after two years of experience. Part II, next month, covers other apparatus and its relation to the Mini-Maxi Pumper concept.

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PART I

IF YOU READ the November 1972 issue of FIRE CHIEF Magazine, you should recall the bold plan incorporated in Syracuse, New York to restructure that fire department.

Since the presentation of that imaginative project appeared approximately two years ago while in its early stage of implementation, it is now reasonable to report on the progress and known conclusions as they appear today.

To best appreciate the results thus far achieved in Syracuse, it is sensible to summarize the goals and necessities of the fire department rejuvenation as they appeared in the original article titled, "Syracuse Attacks Today's Problems with New Concepts."

The decisive factor indicating that some action had to be forthcoming came when some years in advance the New York State Legislature ruled that the statewide

work week for paid fire departments would be 40 hours by January 1, 1974. This prior notice gave several hundred communities in the state providing professional fire protection the opportunity for a few years of planning to meet the mandate.

Syracuse fire officials, in looking at the demands of the approaching requirements, almost immediately realized that based on the make-up of their organization at the time, a considerable annual financial expenditure would be required just to maintain existing protection levels. Since such financial support coming from municipal officials is always questionable, it was doubtful whether existing fire protection levels could be maintained.

Chief Thomas Hanlon and his staff were aware that the organization they operated was based on horse and wagon response. It was not well suited to the geographic changes, structural replacement plans and population adjustments of present and projected Syracuse.

A long professional look at fire department procedures and operations was conducted as to unit area response and other pertinent factors. It was concluded that if the fire companies were properly distributed to take advantage of new streets and expressways, some reduction in the number of fire companies could be made. Based on a 9% decrease in population and other factors, it was decided to maintain 13 engine companies, as opposed to 16, and six ladder companies where formerly there had been eight. The 40 hour work week could be implemented by appointing 62 new firemen while 125 would have had to have been add-

ed with the old company standard.

The information required to help reach the above decisions indicated that engine companies were spending countless hours working at small incidents such as grass, brush, leaf and rubbish fires. To provide greater in-service time for fewer engine companies, it was decided to equip each engine company with a small unit to be known as a Mini-Pumper and in addition a larger unit to be known as a Maxi-Pumper. While the small apparatus would respond to minor calls with two men, three men could remain in quarters with the standard pumper still protecting the company area. When alarms were received that required a standard response, both units were to turn out. That would give the option to use one type or the other of apparatus or both depending on the existing situation.

The full alarm response for known or possible working fires was set at two engine companies, one ladder company and a seven man squad company running with a standard pumper.

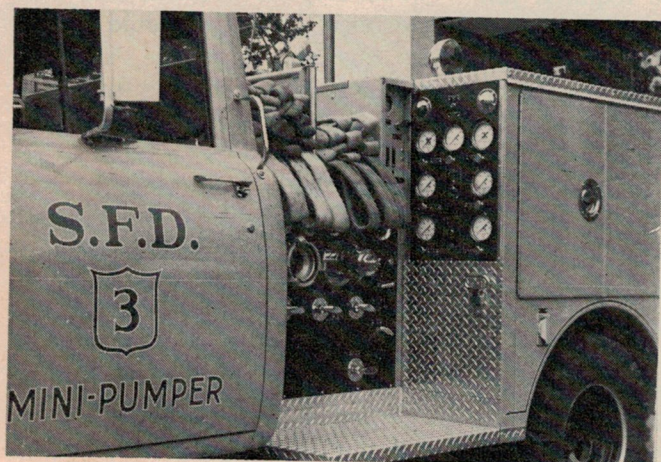
Two Mini-Pumpers were produced and assigned to busy companies to study the Mini-Maxi concept and it soon proved functional and rewarding.

Specifications were drawn up for ten Mini-Pumpers, nine Maxi-Pumpers and four Ladder Trucks. Contracts were awarded to Ward LaFrance, Pierce Manufacturing, Inc., and Sutphen Fire Equipment Co.

This was the approximate point of our initial report in the November 1972 issue. Since then the 40 hour work week became a reality.

(Turn page)

THE MINI-PUMPER...



Top: This Mini-Pumper is built on an International one-ton chassis, powered by a 392 cubic inch engine. Overhead height is kept down by excluding warning devices on the cab roof. This allows the vehicle to get into multi-floor automobile parking ramps.

Above: The arrangement of pump panel and side-mounted control panel prevents the gauges from being struck by hose couplings coming out of hose bed above. This also gives good visibility for pump operator. Note open pump intake for 3½-inch sexless hose coupling and discharge outlet with reducing caps.

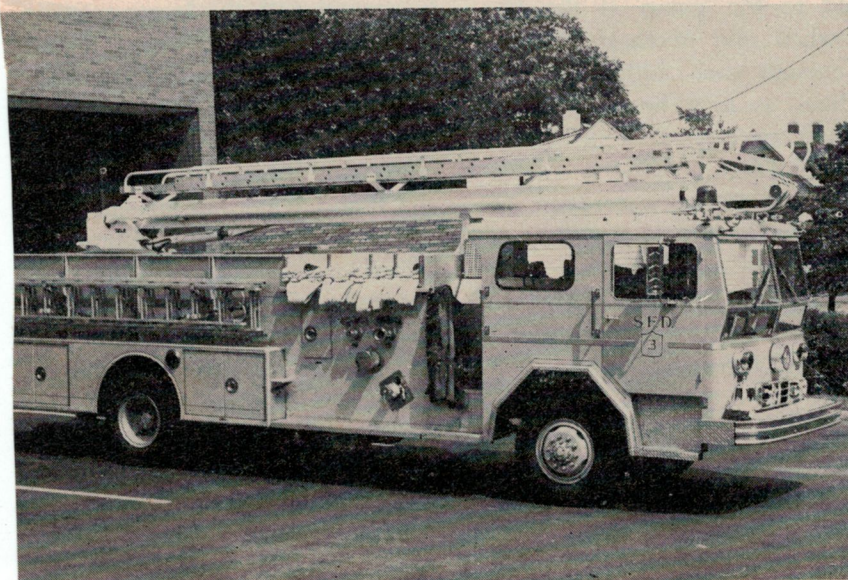
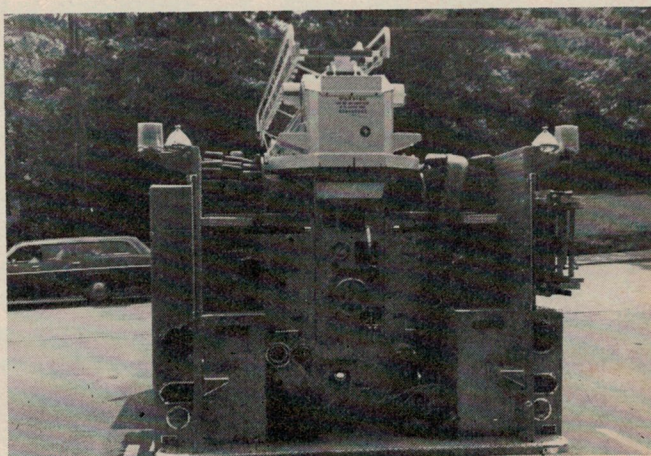
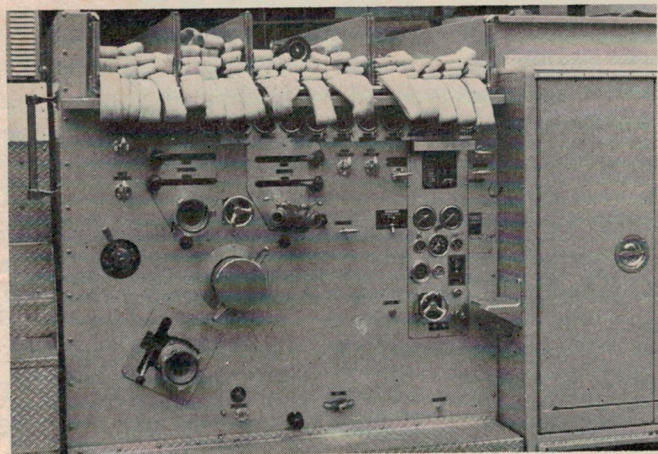
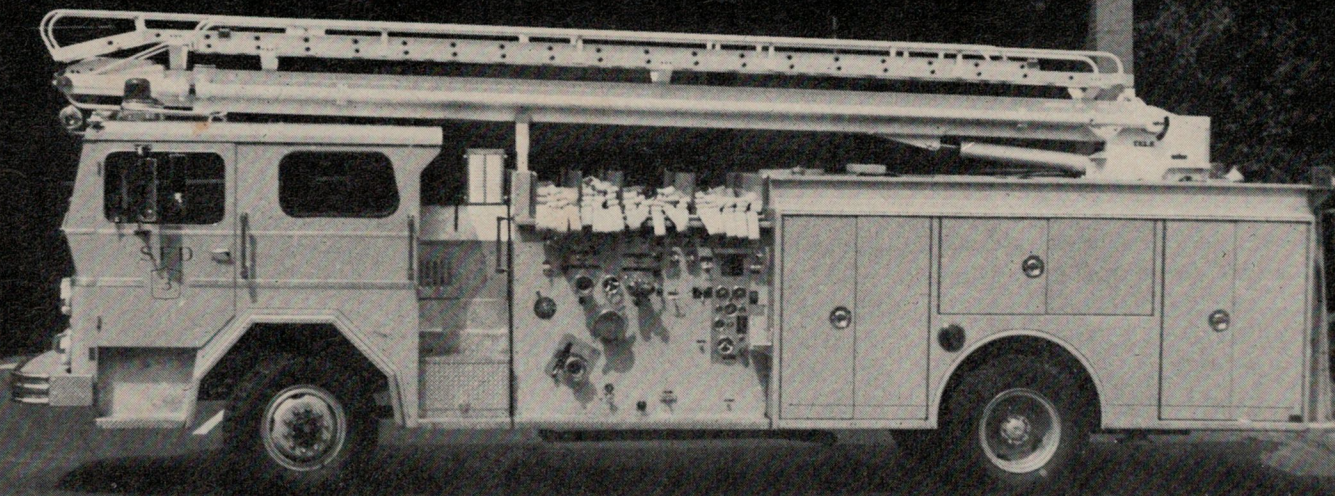
Above, right: Rear view shows 150 feet of ¾-inch booster line on an electric rewind reel, the supply line, several hand extinguishers, and short extension ladder.

Right: The Mini-Pumper operating its hydraulically operated deck gun from the vehicle tank. This has proven to be a great quick-hit on fires showing open flame.



THE MAXI-PUMPER...

FIRE STATION 3



Top: In place of the traditional hard suction hose on this Maxi-Pumper are high side equipment compartments. The telescoping water-way and ladder make these units even more impressive.

Above, left: The pump panel of the Maxi-Pumper showing 1¾-inch attack lines equipped with automatic nozzles for varying flows. Two hose beds have 200 feet of hose and two have 300 feet. One of the four 3-inch pump intakes can be seen in the lower left corner.

Above: Rear view shows the operating panel of the hydraulic boom. The hose bed on the right contains 750 feet of 3½-inch hose and the left bed has 500 feet of 2½-inch hose.

Left: This shot shows the extension and roof ladder which along with the 55-foot hydraulic ladder gives the unit good ladder capability in the absence of a truck company.

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New fire stations were built while some are still under construction. The new apparatus, previously mentioned, has been constructed, delivered and assigned. The Mini-Maxi concept is a reality in Syracuse and it is functioning brilliantly in that city of 197,000 persons.

The ten new Mini-Pumpers incorporate some features not present in the two early units. They are on one ton International chassis powered by 392 cubic inch engines. The units are low and short to make them suitable to go into modern parking garages and maneuverable for traffic and special fireground assignments such as the rear of involved buildings.

The Mini-Pumpers now have a single booster reel of 250 feet of $\frac{3}{4}$ -inch hose with electric rewind. The earlier models had two reels of 150 feet of one-inch booster hose. Early operations of the Mini-Pumpers showed that such a change was desirable.

Mounted on these units is a 300 gpm pump and a 200 gallon water tank. Above the pump are two cross-beds of $1\frac{1}{2}$ -inch hose. There is 750 feet of $3\frac{1}{2}$ -inch hose in a rear hose bed for supply line purposes.

In addition to forcible entry tools, hand extinguishers, and breathing apparatus, the Mini Pumpers have a Monex, hydraulically powered, remotely controlled deck gun that discharges in a range from 100 gpm to 500 gpm. This device, operating first-in on many fires showing open flame, has proven noteworthy. This has been true often by utilizing only the 200 gallons of water from the vehicle tank.

Again, the Mini-Pumper responds with two men on minor fires on its own and runs with its Maxi-Pumper for normal alarms. A decision is made by the company officer on arrival, based on the tactical situation, as to whether or not to use the Mini-Pumper in conjunction with the larger unit or park the small unit while all hands turn to the big pumper. On occasions such as fires in remote lo-

cations, poor topography, or snow accumulation, the four-wheel drive capability of the Maxi-Pumper gives it a new dimension in fire attack. The Mini-Pumper is a scaled down pumper, fast, hard hitting, capable of doing minor extinguishment work, assisting on the larger fires and providing good utilization in remote and hard to get at locations.

The Maxi-Pumpers used by the Syracuse Fire Department are, as their name depicts, large and impressive. The pumps are of 1500 gpm capacity and these units have a 500 gallon water tank and have no booster reels since this minor work is expected to be handled by the Mini-Pumpers.

One other unusual characteristic of these pumpers is that in addition to having no booster lines they have no $1\frac{1}{2}$ -inch hose either. Instead, attack lines from these companies come in the form of $1\frac{3}{4}$ -inch hose. This hose was selected over the traditional slightly smaller line for its decreased friction loss and its ability to flow higher volumes of water at normal pressure and high volumes when Rapid Water additive is utilized. All the Maxi-Pumpers are equipped with Rapid Water hardware and liquid.

For supply purpose the Maxi-Pumpers lay $3\frac{1}{2}$ -inch hose, of the plastic variety, with sexless snap couplings from hydrant to fire. Each carries 750 feet of this hose. The $3\frac{1}{2}$ -inch supply line is attached to the pump at the fire and when one of these lines is not enough such additional supply lines as may be needed are attached to any of four 3-inch pump intakes.

This amount of water can be applied on the fire in a variety of ways. Above the pump are four transverse hose compartments. Two have 200 feet of $1\frac{3}{4}$ -inch hose and two have 300 feet of the same. All are pre-connected and equipped with an automatic nozzle capable of flowing from 50 gpm to 350 gpm. Depending on the size of the fire and other factors, the amount of water that flows through these

attack lines will vary. The pump operator is guided by a scale of pressure settings attached to the pump. As he pumps at a greater pressure the nozzle automatically opens to discharge the greater amount. The magnitude of the fire dictates the officer's decision on which medium to call on for each working fire. (For more information on this nozzle and this procedure, see FIRE CHIEF, "A Look at the New Automatic Nozzles," April, May, June, 1974.)

The Maxi-Pumpers all have a permanently mounted deck gun piped from the pump for high caliber work.

In addition, each has a hydraulically operated boom which carries a water-way to feed discharge through an automatic nozzle. Included in this assembly is a telescoping ladder that extends with the boom and nozzle. The height of this facility is 55 feet.

There is a standard metal extension ladder and roof ladder found on traditional pumpers on the right side of each Syracuse Maxi-Pumper. These, along with the 55-foot, hydraulically operated ladder, provide overlapping ladderability to engine companies when arriving at a fire prior to a truck company.

To sum up, a Syracuse Fire Department Engine Company in a single sentence is an impossibility. It is a two unit company utilizing a small vehicle independently and in concert with the larger pumper on moderate incidents. The master vehicle, when working independently from its satellite, has tremendous versatility by virtue of its pump size, attack line capabilities, and Rapid Water equipment. Then you top this off with a pump connected master stream appliance, elevated master stream and telescoping 55-foot ladder. All of this offers an attack capability that to this writer is unprecedented and can only excite any fire officer who for years has longed to deploy companies offering such tactical promise.

(Continued next month)