

# The Stanley Hydraulic System

by Battalion Chief Raymond M. Downey, SOC

The first 1946 issue of *WNYF* used the centerfold to display some of the special tools and equipment of Rescue Companies. Interestingly enough, these tools and equipment ran the gamut of everything from a portable Kerotest acetylene unit, to a first-aid compartment that contained many medicines and drugs for use by doctors at the scene of an emergency. The Kerotest acetylene unit was used for cutting metal to effect rescue, ventilation, etc. (The unit was worn as a vest with pockets containing necessary tools and could be operated even while the wearer was suspended by a roof rope.) There were electrical, fuel-operated and manual tools mentioned, but not any battery, pneumatic or hydraulic tools. (*It was 1945.*)

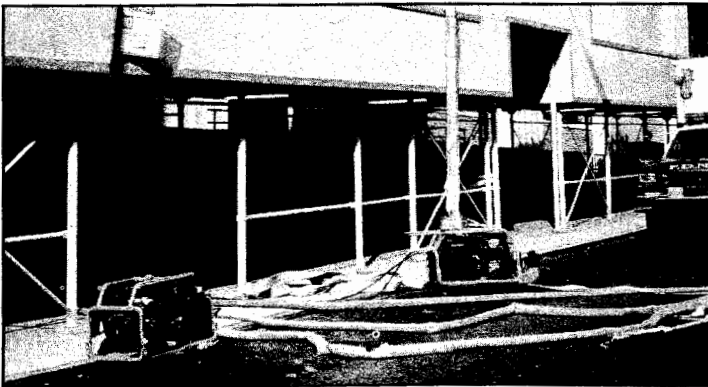
The past 20 years have witnessed a rapid growth in specialized tools for the fire service. Rescues and Squads carry a variety of manual-, fuel-, pneumatic-, electric-, battery- and hydraulic-operated tools. One of the most versatile tools carried by some of the units in the Special Operations Command (SOC) is the Stanley Hydraulic Unit. It is capable of doing everything from pumping 800 gallons per minute using a trash pump during flooded conditions, to penetrating concrete using a 15-inch Diamond chain saw.

There are two different types of power units: One is a single-circuit unit and the other is dual-circuit. Single-circuit units can supply only one tool at a time, while the dual-circuit unit can supply two tools. The units are compact enough to fit in the back of a suburban or station wagon. The unit is mounted on a chassis that has rubber tires, carrying handles and wheelbarrow-type handles that provide the versatility to move the unit to the rear yard of a building or into an elevator for use on the upper floors of a high-rise.

The units are battery-powered and have an 18-hp Briggs and Stratton Vanguard engine that provides either five- or 10-gpm output flow at 2000 psi. The newer units are the 10-gpm type and are needed to use the 800-gpm trash pump effectively.

The Stanley Hydraulic System comprises the following tools:

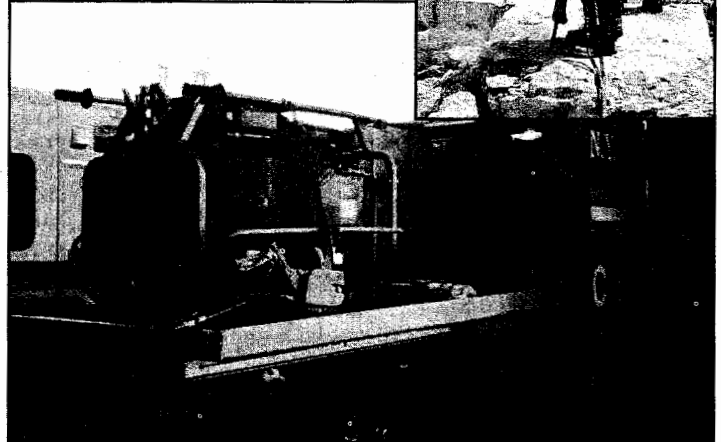
- 70-lb. breaker (demolition hammer)
- Hammer drill, which is capable of drilling up to two-inch holes in concrete or rock
- 800-gpm trash pump
- 500-gpm dewatering pump
- 14-inch cutoff saw



Two Stanley pumps operating at water main break that flooded Sloan Kettering Hospital. System also was used successfully in a dewatering operation on January 2, 1998, at a water and gas main break at Manhattan Box 33-588, 5th Avenue and 20th Street.

(Below) The Stanley Hydraulic System, ready to be removed from Tactical Support Unit 1. (Right) SOC member practices with Hammer drill, which can drill two-inch holes in concrete or rock.

*all photos courtesy BC Raymond Downey*



(for cutting concrete, steel beams and pipe) • Diamond chain saw (for cutting concrete, stone and brick) • Chain saws (15-, 20- and 43-inch lengths) • Pole chain saw (fiberglass pole--74-inches long) • 3500-watt alternator for power supply • 1700-cfm vent fan

- Impact wrench (3/4-inch square drive)

Stanley Hydraulic units are carried on Tactical Support Units 1 and 2, Rescue 3 Collapse Rig, Squad 1 Technical Response Vehicle, Rescue 1 and the SOC Dewatering unit. The latter has two units but carries only two 500-gpm dewatering pumps and two 800-gpm trash pumps.

All of the SOC units have been trained in their use. Although there are other tools and equipment that can be used with the Stanley Hydraulic System, the above-listed tools have been found to be most effective for the FDNY.

## About the Author...

Battalion Chief Raymond M. Downey is a 37-year veteran with the FDNY and heads up the Special Operations Command. He is a Contributing Editor for Fire Engineering, the author of *The Rescue Company*, a regular contributor to *WNYF* and a frequently requested speaker and instructor throughout the country. He holds an AAS degree in Fire Science.

