

Mighty Manifold

KME builds a small but powerful vehicle that makes long hoselays & high water flow a breeze



By Bob Vaccaro

KME built this mini-manifold unit on a Ford F-550 chassis.



PHOTOS COURTESY JOHN TOOMEY

As most of you know by now, I occasionally write about a basic engine or truck, but I try hardest to seek out unusually designed apparatus that serve a unique function in a fire department's response area.

Sometimes I come across really specialized vehicles to share with my readers. One of these vehicles belongs to the Rumson Borough (N.J.) Fire Department (RBFD): a manifold rig.

When you look up the word "manifold" in Webster's Dictionary, one definition is, "A pipe fitting with several lateral outlets for connecting one pipe with others." This is basically what this little vehicle accomplishes. Supplied with pumping capacity from other engines on the fireground, this vehicle will lay its own supply lines and use its 2,000-gpm deluge gun, two Blitz Fire monitors and crosslays to knock down a fire. It can get to hard-to-reach places, and is used for mutual aid responses in the area. When fully supplied by other engines, the vehicle can easily flow 4,000-gpm at a fire scene.

THE VISION

"This uniquely designed truck was first thought up more than 30 years ago by members of the department," says Jymm Fenn, RBFD chief. "We needed a vehicle that could navigate the long drive-

KME Manifold Vehicle Specs

- Ford F-550 chassis
- Hosebed capacity: 2,000 feet of 5" hose; 600 feet of 3" hose
- 2,000-gpm Akron monitor
- 9,000-lb. portable winch
- 10-kW Statco generator

ways that lead to several mansions in our response district." Some of the driveways are 2,200 feet from the street to the structure; the department must set up 3,200' hoselays to reach some areas. In addition, the fire district is located on a peninsula, so mutual aid response is often far away.

"The truck we were to design also needed to be small and have 4-x-4 capabilities to reach some of these areas," Fenn says. "In addition, we have bridges and boardwalks that have weight restrictions, so the smaller and lighter the vehicle, the better. And, as in most fire departments today, we needed to do more with less."

The department's five-member apparatus committee drew up the initial specs, then went back and forth for a year before the design was finalized. "We took the idea and specs to KME, who ended up ►

Although the vehicle is small in stature, it holds 2 fans, multiple saws, roof & extension ladders & a brow light for easy navigation down the narrow & long driveways RBFd encounters on a regular basis.

Rumson Borough (N.J.) Fire Department 411

- Population: 7,000
- Response area: Bedroom community to Wall Street with some commercial establishments. Normal residential construction consists of 5,000–15,000-square-foot homes.
- 400 alarms answered annually
- 35 firefighters; two stations
- Three engines: 2005 KME with 2,000-gpm pump and 300-gallon tank; 1995 KME with 1,250-gpm pump and 500-gallon tank; and a 1981 Hahn with 1,250-gpm pump and a 500-gallon tank
- One quint: 1999 E-One with 1,500-gpm pump, 300-gallon tank and 95' ladder
- One manifold engine
- One heavy-rescue: 2002 PL Custom/Rescue 1 International

being the only bidder on the vehicle,” Fenn says. “KME is no stranger to our department, since we had two other vehicles built by them. Dealing with their sales people and engineers was a plus for our committee.”

THE IMPLEMENTATION

The vehicle is the first of its type that KME ever built, but Fenn says you wouldn't have known it. “As far as we are concerned, they went above our expectations with the design and construction of the apparatus,” he says. “The vehicle was built in record time with great quality and workmanship.”

During the construction of the vehicle, RBFd members made several trips down to the factory, which is located just a couple hours from the department. “We encountered zero problems during the manufacturing process, which is kind of unheard of in today's environment,” Fenn says. “We thought we would have several change orders, but were pleasantly surprised when we didn't.”

Although the vehicle is small in stature, it holds two fans, multiple saws, roof and extension ladders and a brow light for easy navigation down the narrow and long driveways RBFd encounters on a regular basis. “We have everything at our disposal at the fire scene and, for the most part, firefighters don't have to walk down to other apparatus at



Cummins Onan
Performance you rely on.™



Power on the scene when you need it

Compact Cummins Onan hydraulic, portable and PTO generators deliver on-site emergency power you can rely on. Plus, with our new full-line Fire Market CD that contains detailed, easy-to-use Fire Specifications Sheets, you can deliver fire truck quotes faster, too.

Request your FREE CD at
www.cumminsonan.com/fire/firecd



© 2009 Cummins Power Generation Inc. All rights reserved.

Choose 30 at www.firerescuemagazine.com/rs

the street level,” Fenn says. “We’re pretty much self-sufficient.”

MAKE IT HAPPEN

The RBFD had the idea for this vehicle almost 30 years ago, but didn’t realize its design and operational capabilities until KME built the apparatus for them in 2008. The result: a small, agile vehicle that can tackle long hose stretches to reach certain structures in its response area, and is lightweight and able to carry a lot of tools. The vehicle exceeded the department’s expectations, not only in workmanship but in operational value.

Is your apparatus committee thinking creatively? Your response area’s unique features and needs can drive the design of your next apparatus. Get your committee in gear and talk about your present and future needs. There are many manufacturers out there willing to work with your department to present viable solutions for your community’s needs. ☺

Bob Vaccaro has more than 30 years of fire-service experience. He is a former chief of the Deer Park (N.Y.) Fire Department. Vaccaro has also worked for the Insurance Services Office, The New York Fire Patrol and several major commercial insurance companies as a senior loss-control consultant. Vaccaro is a life member of the International Association of Fire Chiefs.



Above: The vehicle features a 2,000-gpm deck gun on top, as well as crosslays over the pump panel.



Left: In the rear split hosebed, the RBFD carries 1,200 feet of red 5" hose on the left, 800 feet of yellow 5" hose on the right and two TFT Blitzfire nozzles.

Your source for mobile on-scene power

Cummins Onan offers a complete line of mobile power generation products for fire, emergency and specialty vehicles—from truck-mounted generators for dependable power to inverter portable generators for powering lights and other equipment at the scene. Lightweight and compact, Cummins Onan generators are designed to provide maximum power in minimum space.

The Cummins Onan CM SD 20kW diesel generator gives you a complete, integrated package powered by a 40 hp engine with low vibration for smooth operation. It offers excellent motor starting capability and a host of user-friendly features designed for easy service, maintenance and installation, all backed by a comprehensive two year, 1,000 hour warranty.

With more than 70 years of generator experience, you’ll find Cummins Onan generators meet your toughest demands for reliability, uptime and performance. The complete line of 1.7 to 40 kW mobile power products includes diesel, gasoline, LP, hydraulic, PTO, inverter/charger and portable generators.

For the nearest Cummins Onan distributor/dealer in your area, call 1-800-888-6626. Or visit www.cumminsonan.com/fire/firecd to download the free, full-line Fire Market CD.



Cummins Onan



Choose 30 at www.firerescuemagazine.com/rs