

Making Tracks

Yellowstone's new truck goes where many cannot



By Bob Vaccaro

The Yellowstone National Park Fire Department (YNPFD) in Wyoming is one of those unique departments you'd think would have everything it needs to fight fires. After all, Yellowstone is one of the largest and most popular national parks, and it's run by the federal National Park Service. And, with 2.2 million acres and 539 miles of roads, it's larger than Rhode Island and Delaware combined.

However, the YNPFD really struggled in the winter months, responding to alarms in a Snow Groomer, the type of vehicle you find at ski resorts. In fact, according to YNPFD Chief Britton Gray, "We don't plow our roads in the park, we groom them. This is done because we have to preserve the natural areas of the park. Paved roads are groomed

with this special vehicle that makes a smooth path for vehicles to travel on, but does not plow the snow down to asphalt level. We also have to make paths around our structures with snowmobiles so firefighters can gain access to fight fires.

"Just getting to the various buildings in the area to fight a fire is a major problem," he says. "It's not unusual to have 8 feet of snow in front of a building that may be on fire. Laying 5" hose in the snow only to have it disappear after it's charged is something we normally encounter."

To bring the department up to snuff and develop a snow-based firefighting vehicle, Gray and the engineers at Pierce Manufacturing and Mattracks teamed together to develop a unique vehicle for Yellowstone. "We needed an adequate engine to respond with the equipment and manpower needed to fight a fire in the severe conditions we normally encounter," Gray says. "We listened to our firefighters' needs and gave the list to Pierce. Pierce in turn dealt with the

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The Pierce Ford F-550 chassis with Mattracks installed.



PHOTO JIM PEACO/NATIONAL PARK SERVICE

engineers at Mattrack to develop a firefighting vehicle that would perform as needed.

“We did not just design a standard mini-pumper, which is what the vehicle resembles at first glance. The truck meets NFPA standards for a quick-attack unit. The vehicle is built on a Ford F-550 Super Duty 4 x 4 chassis [and] has a 1,000-gpm Hale single-stage pump, a 250-gallon [polypropylene water] tank and a FoamPro system with 30 gallons of Class A foam.”

“The hose load consists of the following: 600 feet of 5" hose, 200 feet of 3" hose, two 200-foot 1¼" crosslays, two 100', 1¼" high-rise packs and a ▶



PHOTO JIM PEACON/NATIONAL PARK SERVICE

The rear hosebed carries large diameter hose and a 2½" attack line.



PHOTO JIM PEACON/NATIONAL PARK SERVICE

The unit's right side features high-side compartments, a ladder rack, crosslays and a deck gun.

The Yellowstone National Park Fire Department

The Yellowstone National Park Fire Department is tasked with ensuring the life safety of park personnel, concessionaires and a large ongoing population of public visitors, as well as physical protection of park facilities. These facilities include nine hotels, 40 multi-storied dormitories, five warehouses, 14 concessionaire mercantile stores, eight steam plants and laundries, 60 storage and utility structures, 20 restaurants, 35 propane tank farms, the LPG service stations, 23 gas stations, 435 house trailers and 180 family dwellings. The park has a nighttime population of 25,000 and a daytime population of 40,000.

“The department is made of 65 paid, on-call members, who also work in the park as rangers, concessionaire workers, mechanics, etc.,” Gray says. “The only paid personnel are the chief, a secretary and a mechanic. I am responsible

for the structural side of firefighting in the park. The wildland fire protection responsibility is another area. Although during the wildfire season, we all work together. We have seven locations with apparatus, and 12 districts for various areas all over the park. However, we have a staffing problem. We had to look at different options. Three of the locations are entrances, so we have mutual-aid agreements with communities located just outside the park boundaries.”

Here's a list of the department's apparatus:

- 2005 Pierce Mini-Pumper (1,000 gpm, 250 gallons of water and 30 gallons Class A foam);
- 2004 Pierce Contender (1,250 gpm, 750 gallons of water and Class A and B foam);
- 2003 Pierce Contender (1,250 gpm, 750 gallons of water and Class A and B foam);
- 1998 Pierce Quantum (1,250 gpm,

1,000 gallons of water and Class A foam);

- 1993 Pierce Dash (1,250 gpm, 750 gallons of water and Class A foam);
- Two 1991 Pierce Dashes (1,250 gpm, 600 gallons of water and Class A foam);
- 1990 LMC (500-gpm pump on a trailer; for winter ops only);
- 1983 Pirsch (1,000 gpm and 500 gallons of water);
- 1979 International (750 gpm and 500 gallons of water);
- Two 1979 Fords (1,000 gpm and 500 gallons of water);
- 1969 International (500-gpm front-mount pump and 250 gallons of water);
- 1964 International (500 gpm front-mount pump and 250 gallons of water);
- 1963 Jeep (light-duty rescue); and
- Two hazmat trailers.

PHOTO COURTESY DELL WRIGHT/MATRACKS INC.



Above: This MatTracks unit has run 40–45 mph.
Right: The unit barrels through 24 inches of snow.

PHOTO JIM PEACON/NATIONAL PARK SERVICE



The truck carries a 12,000-lb. winch.

PHOTO JIM PEACON/NATIONAL PARK SERVICE



deck gun mounted on TFT's Extend-A-Gun," Gray continues. "There is also a factory, front-mounted, 12,000-lb. winch. Tools [include] a rear-mounted 4,500-volt Honda generator, 10' and 16' ground ladders, an attic ladder, Amkus Rescue Extrication tools (a pump, cutters, rams and spreaders), two air bags, an air chisel, two sawzalls and extension cords, two SCBAs and spare bottles, two Fire Research Focus lights (one on each side of the body), and assorted fittings, axes, pike poles and other tools.

"As you can see, we are fully stocked," Gray says.

The vehicle can maneuver on treacherous mountain roads.

PHOTO JIM PEACON/NATIONAL PARK SERVICE



"The vehicle has a GVW of 18,000 lbs., and we're at 17,600 lbs. with all the equipment. The body was also raised one foot off the ground to allow for the operation of the MatTracks."

THE MATTRACKS

The MatTracks system is really a neat operation to install on any vehicle. It's been around for 10 years and in operation in more than 40 countries. The company makes different sizes for various types and weights of vehicles.

Yellowstone operates the MatTracks 200 series. The rig will run on normal wheels in the spring, summer and fall, and will switch to MatTracks in the winter. Personnel can install the unit in as little as 30 minutes, and it features a rugged, rubber tread mounted over a welded steel frame. The tracks are 16 inches wide and provide for the same turning radius as the wheels, but add extra ground clearance and "floatation" for travel over soft surfaces, such as snow or mud. The track drive produces a natural gear reduction, which multiplies the engine power delivered to the track-drive system. The unit's little wheels have 12 seals per wheel to provide maintenance-free bearing protection.

According to Dean Gorder, marketing manager for MatTracks, "The company is a stand-alone manufacturer that will build units for all types of industry. We worked with Pierce to develop the best system for this vehicle. We have received nothing but great feedback on the operation of the vehicle so far."

HOW'S IT WORKING?

Chief Gray says that after two months of service, the vehicle has exceeded expectations. "Normally when you put this type of equipment on a vehicle, you would think that it would put an added strain on the engine and drive train. With the MatTracks, we can still travel at 40–45 mph and have a smooth, quiet ride. You can even steer with one hand with no strain on the vehicle at all. The truck has operated in 26 inches of snow so far.

"Our policy is to have two firefighters ride with this new vehicle and four others with our MatTracks-equipped ambulances to the fire," he says. "In the summer months, the wheels will be placed on the vehicle and it will be paired with one of our Pierce Contender pumpers. We are also planning on adding a hitch to tow one of our hazmat trailers.

"If things work out with funding, maybe we will be able to purchase a light-duty rescue and another engine similar to this design."

Decide what's right for your department and spec out a comprehensive and functional vehicle to meet all of your firefighting demands. ☺

Bob Vaccaro has 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® and The New York Fire Patrol. He is currently a senior loss control representative for a commercial insurance company. He has a Bachelor of Science degree in fire protection administration.