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Ring Power's Tactical Solutions Group turns Cat Multi Terrain Loader into Rook tactical vehicle



The Rook was designed by Ring Power's Tactical Solutions Group for use by law enforcement in tactical situations. The machine is based on Caterpillar's 287C Multi Terrain Loader and comes standard with an armored deployment platform that provides room for up to five law enforcement personnel.

**BY JACK BURKE**

**M**eet the Rook: It can help grade gravel one day and take on bad guys the next.

The Rook, which is based on the Caterpillar 287C Multi Terrain Loader (MTL), was developed by the Tactical Solutions Group of Ring Power Corp., the Caterpillar dealer for north and central Florida.

The idea for the Rook came from discussions with a SWAT team member who was looking for a more flexible tool for dealing with emergencies, said Shaun Mitchell, sales manager with Tactical Solutions at Ring Power.

Oftentimes, SWAT teams are limited to traditional armored vehicles, which can be hard to maneuver in tight spots and can get stuck once they leave paved surfaces, Mitchell said.

"We chose an MTL because the ground pressure is so light and it can go in all sorts of places — it actually has less ground pressure than a

human," Mitchell said. "It can climb stairs, it can go into soft footings, it can go over rock ... it can pretty much go anywhere and it can fit in tight places."

The original MTL weighed in at 9958 lb., but the Rook is bulked up to 13,000 lb. with the addition of custom-installed bulletproof glass and NIJ Level IV armor cab reinforcement fabrication. Although heavier, the MTL's original 3.3 L Cat C3.4 DIT diesel engine's 82 hp are enough to handle the additional load, Mitchell said.

"The application they're in, they're not in the construction side of it," Mitchell said. "They're not always moving dirt or tearing down houses. They don't take as much abuse as the construction side."

Likewise, the MTL's original High Flow XPS hydraulic system, which was designed to deliver up to 33 gpm, is able to provide ample power, Mitchell said. The original MTL also

incorporates Danfoss hydraulic pumps and Bonfiglioli wheel motors designed to Caterpillar specifications.

"The undercarriage can handle it, so we just turned the hydraulic system up to the higher end of its performance range," Mitchell said.

The High Flow system, which uses a Danfoss load sensing variable displacement pump, is designed to allow the use of attachments requiring high flow and pressure.

One such attachment is the hydraulic breaching ram attachment, which Ring custom-designed to deliver 6500 psi pressure. This standard attachment included with the Rook can extend from 6 to 10 ft. and give a controlled breach of the structure including block walls, reinforced steel doors, wood, concrete and windows protected by burglar bars, Mitchell said.

"Officers can go up and poke a hole in the house and they're behind the



The Rook's armored deployment platform includes two 5 in. x 9 in. sliding gun ports, four bulletproof glass sight ports and video cameras attached to the front of the platform.

armor of the Rook instead of a little shield," Mitchell said.

The ram also is equipped with four low-light video cameras and one infrared forward view camera recessed into the end — one on each side and one in front — giving the operator a 360° view of the breaching area. The video images are transmitted to the viewing screen inside the cab with the operator and can be viewed remotely as well.

The vehicle extraction tool (VET) attachment can be used to push or pull a parked vehicle, pick up the car completely and move it to a safe location, or can lift the front or rear end of an occupied vehicle to render it immobile, Mitchell said.

Mitchell said one of the Rook's key attachments is the armored deployment platform, which is designed to allow officers to approach a structure without crossing open, exposed ground on foot. The custom-built NIJ Level IV platform includes sloping partial roof cover, and floor-to-roof front shield consisting of sliding center door and batwing doors on the outer edges, plus independent power for two lights.

The platform provides room for up to five fully outfitted officers and is equipped with four gun ports, four bulletproof glass sight ports, and video cameras attached to the front of the platform with video feed to the equipment operator.

When the platform is mounted on the Rook, the operator can raise it to 11 ft. so that entry can be made on both first and second floors. In a vehicle take-down, the platform can also be slanted downward so shots can be fired into a car without endangering pedestrians or other passersby. With the attached rear platform lowered, three additional officers can be carried to the scene more safely than stacking behind a hand-carried ballistic shield, he said.

The grapple claw and bucket attachment has 4500 lb. of lifting capacity and can be used to remove fortified doors, burglar bars or exterior shrubbery to simplify access for officers. The grapple claw also aids in disaster relief efforts with the ability to remove debris from streets for emergency responders' access, he said.

Mitchell said another benefit of the Rook is that, unlike an armored vehicle, the Rook can be used during nonemergency situations.

"The neat thing about this machine is that all kinds of attachments can go on it," he said. "One department is using it with a snowblower. The Rook can grade their gravel, blow their snow — they can do all these different things so the machine's not just sitting there waiting for a call."

He said the Rook, which incorporates dual joystick controls, is simple to operate, another plus in stressful and dangerous situations.

The current Rook is the third iteration of the machine that had gone through a few modifications after Ring received feedback from operators. One change was how the cab was manufactured, Mitchell said.

He said the first few Rooks had cabs that were welded together and placed on the frame. That meant that if a part of the cab was damaged, the whole cab needed to be replaced, so Ring made the cab design more modular.

"If you damage one part of it, you can replace that part of it and not the whole thing," Mitchell said.

The Rook is the only product to come from Ring's Tactical Solutions Group so far and until now the eight machines in the field have been deployed in non-military applications. Mitchell said military applications are a possibility because of the Rook's smaller footprint, the fact that it can tackle diverse tasks and be controlled remotely. He also said more than 50 law enforcement agencies have contacted Ring to learn more about the machine, which was named the Rook because of its resemblance to a key board-game piece.

"The Rook name basically came from chess — because when it shows up, it's checkmate," Mitchell said. **dp**



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The Rook's vehicle extraction tool can be used to push or pull a parked vehicle or even pick up a vehicle and remove it.