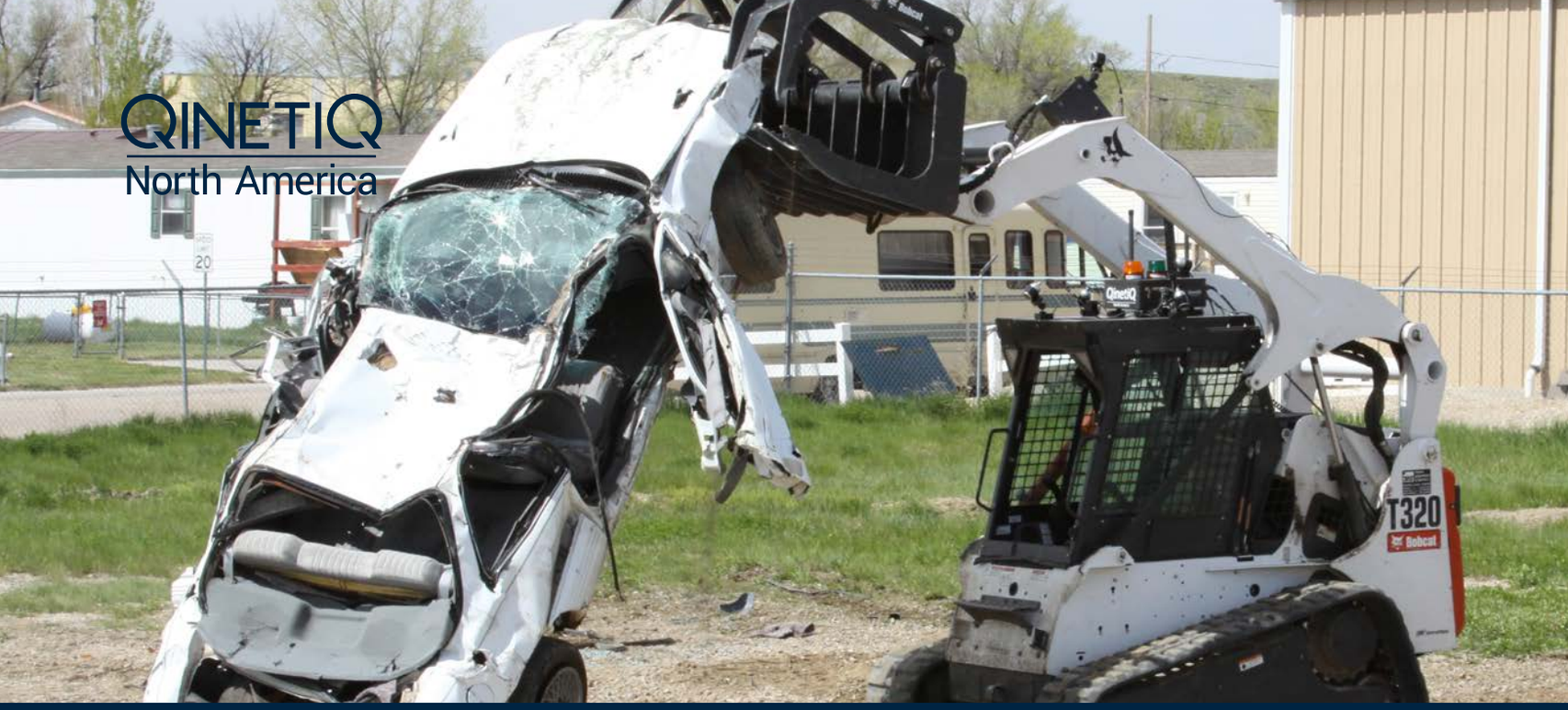
QINETIQ
North America



Flexible Configuration. Field Proven.

RAK

Robotic Appliqué Kit for Bobcat® Loaders

QinetiQ North America's Robotic Appliqué Kit (RAK) temporarily transforms a Bobcat into a remotely operated robot. Operable in both unmanned and manned modes, RAK supports first responders and military personnel with dangerous missions while keeping them away from harm's way.

Provides Safety

RAK enables a safe standoff for route clearance and to investigate large, deeply-buried and vehicle-borne IEDs, land mines and unexploded ordnance. The system offers multiple autonomy packages and operates in all weather and environments. RAK is equipped with several features such as GPS navigation, remote start, safety alerts and emergency manual shut off.

Flexible Design

RAK is capable of automating over 20 different vehicle types. Installation is simple and can be done in approximately 15 minutes! Once installed, the Bobcat can be driven autonomously from more than 900 meters. When a mission is complete, the operator can simply return the loader to manual operation. The same RAK can also be moved and installed from one SJC-equipped Bobcat loader to another leveraging its value.

Features:

- Keeps operators away from danger
- Unmanned and manned operation
- Combat and field proven
- Automates over 20 vehicle models
- Multiple, optional autonomy packages
- Easy installation
- Two controller options
- Night vision and thermal camera options
- Emergency shutoff and remote start
- Feedback of vehicle position (GPS) and orientation
- Operates in all weather and environments

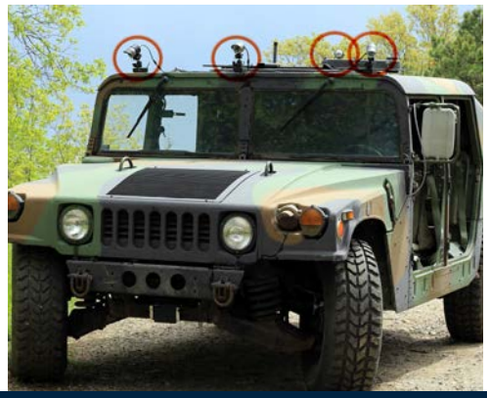
Benefits:

- Provides safety to warfighters for route clearance and to investigate large, deeply-burief and vehicle-borne IEDS, land mines and unexploded ordnance.

RAK transforms over 20 vehicle types into a high performance robotic platform.

RAK

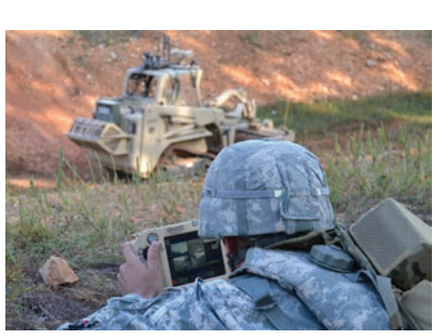
Robotic Appliqué Kit



Installed on more than 16,000 selectable joystick-controlled Bobcat loaders produced since 2001.

Tactical Robot Controller

The Tactical Robot Controller (TRC) is a lightweight, wearable controller that allows the soldier or operator to control a family of unmanned ground vehicles, various unmanned air vehicles, and unattended ground sensors – a wide variety of platforms made by different companies all controlled by the TRC.



One Controller. Multiple Unmanned Systems.

Specifications/Accessories:

- Weight: 5,000 lbs (2,270 kg) to 12,500 lbs (5,675 kg)
- Lift Capability: 1,500 lbs (681 kg) to 10,000 lbs (4,540 kg) with a wide variety of Bobcat attachments
- Safety: Integrated wireless power interrupt system (WPIS), dedicated remote emergency stop command via controller
- Speed: up to 5.2 mph (8 km/hr)
- Range: 900 m line of sight
- Microphone

Controllers:

- Two operator control units (OCU);
  - Tactical Robotic Controller (TRC) 11 lbs (5kg)
  - Laptop Control Unit (LCU) 1 lbs (7.7kg)

Environmental:

- Meets MIL-STD-810G standards

Cameras:

- Six fixed focus, auto infrared (IR) cameras
- One pan/tilt/zoom camera

  Choice of: IR PTZ camera with 360 degree continuous rotation and 36:1 zoom *or* the GeminEye PTZ with Thermal and 26:1 zoom
- Wide range of camera housing positions

Bobcat

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