

# Land Systems

Nondestructive testing of defense equipment plays a critical role in keeping forces ready to defend homeland security.

Land defense systems are subjected to a high degree of stress. Even a small flaw or vulnerable location caused by corrosion or wear and tear can result in the failure of a critical component and damaged asset.

Maintenance is essential to make sure the tanks and heavy-duty vehicles stand up to the rigors of daily operations.

This section introduces essential remote visual inspection solutions for land defense systems.

**Visual Inspection Solutions: Defense and Security**

Olympus Scientific Solutions



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# Engine/Transmission

## Application

Videoscopes are well suited for inspections of automotive engines and transmissions. The benefits of visually inspecting hard-to-access locations without disassembly is reduced maintenance costs and increased mission readiness.

## Challenges

Both engine and transmission boxes are confined in complex environments that are highly reflective and oily.

## Solutions

- IPLEX™ videoscopes with PulsarPic™ technology and dynamic pulse illumination automatically adjusts light output to optimize exposure from highly reflective surfaces
- Oil-clearing tip adaptors: draw oil away from the tip adaptor lens using natural capillary action



## Recommended Products

IPLEX GX/GT videoscopes and IPLEX G Lite videoscope



# Gun Barrel Bore Inspection

## Application

As the gun barrel is deformed or the inner surface of the bore is worn, firearms may malfunction. Weapons maintenance combine a 4 mm videoscope with a centering device to inspect the bore for deformation and material wear.

## Challenges

- Due to the close distance between the gun barrel inner wall and videoscope lens, images can become blurred if the videoscope lens is only far focused
- Gun barrel internal surfaces are metallic and very reflective, so they require an optimal balance of illumination brightness and probability of detection (POD)
- For large gun barrels, the videoscope insertion tube would lay on the bottom surface, causing a lower probability of detection

## Solutions

- IPLEX™ videoscopes offer a near-focus tip adaptor for both the direct and side view, enabling an optimal inspection of the bore such as deformation or material wear
- You can check the inner surface of the muzzle using a clear image with minimal image noise to maximize the POD of defects or material wear
- Various accessories such as centering devices can maintain consistency in the gun barrel bore inspection so images can be compared over time

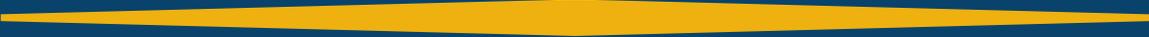


## Recommended Product

IPLEX GT videoscope



**OLYMPUS<sup>®</sup>**

A thick yellow horizontal line with a slight upward curve in the center, positioned below the word 'OLYMPUS'.

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