

Remote Visual Inspections for Automotive Applications



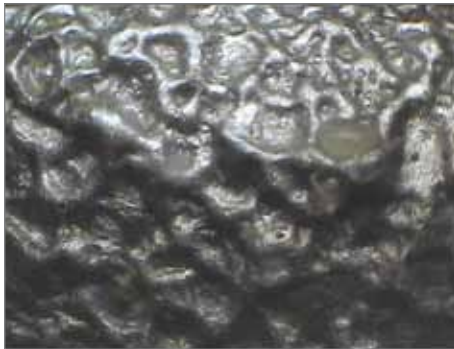
Olympus Contributes to Reliability in the Automotive Industry

Even tiny defects of small automotive parts can potentially cause fatal traffic accidents or expensive recalls. Automotive quality is globally improving and quality assessment is essential in the process of automotive development and production. With our extensive product lineup and innovative functionality of our industrial endoscopes, Olympus instruments provide high-quality and versatile inspections, and contributes to quality improvements in the automotive industry.

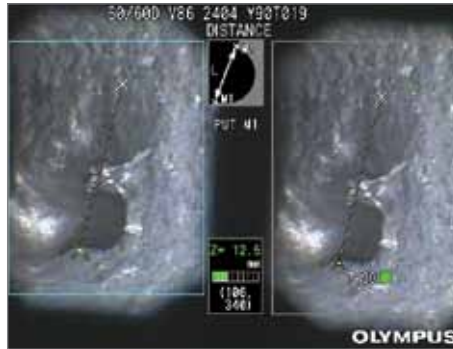


Accurate Defect Inspections

Casting Defects



Sand remaining

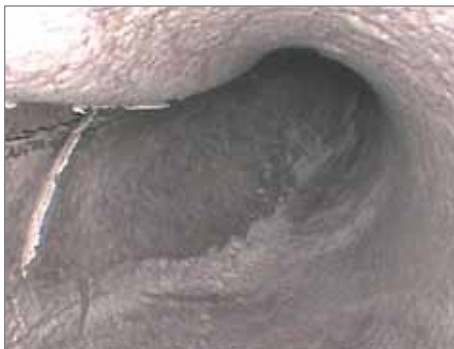


Stereo measurement of blowhole



Burnt

Machining Defects



Burr inside turbo charger



Metal chips



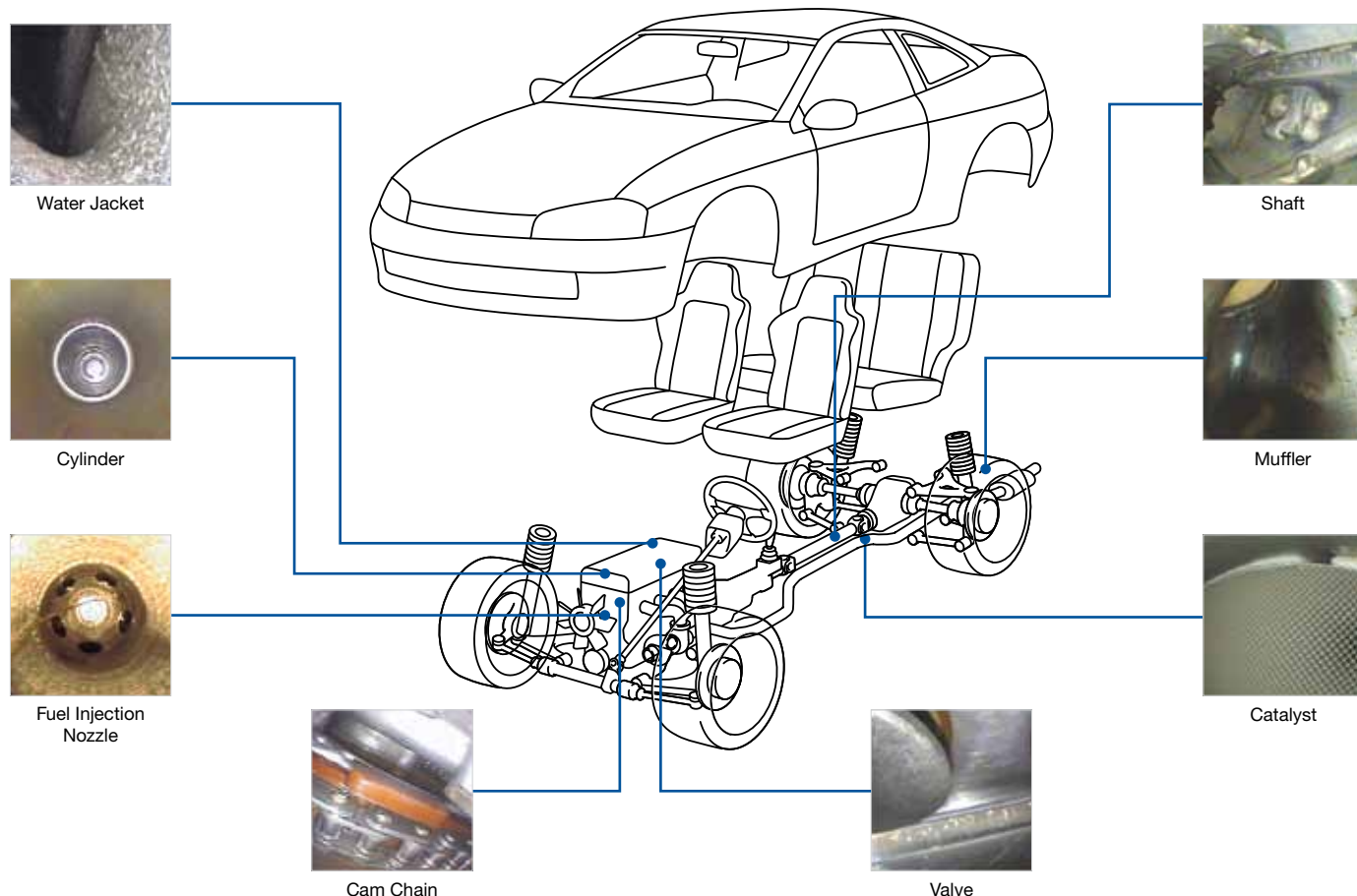
Crack

Welding Defects



Weld bead

Recommended Endoscopes by Application



	Object	Work process	Inspection	Recommended endoscope	Relevant model
Engine	Cylinder Manifold Valve Cam chain Water jacket	Casting	Sand remaining Blowhole Burnt Crack	ø2.4 mm - 6.0 mm Videoscopes	IPLEX TX, IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite
		Machining	Burr Metal chips Crack	ø2.4 mm - 6.0 mm Videoscopes, ø1.7 mm - 2.7 mm Mini borescopes	IPLEX TX, IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite, MK Modular Miniscopes
	Fuel injection nozzle	Drilling	Burr Flaw	ø1.2 mm - 1.7 mm Mini borescopes	MK Modular Miniscopes
	Turbocharger	Finishing	Assembly condition	ø2.4 mm - 6.0 mm Videoscopes	IPLEX TX, IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite
Drive system	Transmission	Casting	Sand remaining Blowhole Burnt Crack	ø2.4 mm - 6.0 mm Videoscopes, ø1.7 mm - 2.7 mm Mini borescopes	IPLEX TX, IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite, MK Modular Miniscopes
		Finishing	Burr Metal chips Crack	ø2.4 mm - 6.0 mm Videoscopes	IPLEX TX, IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite
	Differential gear	Casting	Sand remaining Blowhole Burnt Crack	ø2.4 mm - 6.0 mm Videoscopes, ø1.7 mm - 2.7 mm Mini borescopes	IPLEX TX, IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite, MK Modular Miniscopes
		Finishing	Burr Metal chips Crack	ø2.4 mm - 6.0 mm Videoscopes	IPLEX TX, IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite
	Drive shaft	Welding	Welding condition	ø6.0 mm - 8.5 mm Videoscopes	IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite
Exhaust system	Catalyst	Welding	Welding condition Clogging	ø2.4 mm - 6.0 mm Videoscopes	IPLEX TX, IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite
	Muffler	Welding	Welding condition	ø4.0 mm - 6.0 mm Videoscopes	IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite
Others	Hydraulic pressure cylinder	Grinding	Grinding condition	ø4.0 mm - 6.0 mm Videoscopes	IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite
	Fuel tank	Welding	Welding condition	ø4.0 mm - 8.5 mm Videoscopes	IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite
	Chassis	Welding	Welding condition	ø4.0 mm - 6.0 mm Videoscopes	IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite
	Radiator	Finishing	Welding condition	ø4.0 mm - 6.0 mm Videoscopes	IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite
	Brake	Finishing	Finishing condition	ø4.0 mm - 6.0 mm Videoscopes, ø2.7 mm Mini borescopes	IPLEX FX, IPLEX LX, IPLEX LT, IPLEX UltraLite, MK Modular Miniscopes

Industrial Videoscopes

The IPLEX series of videoscopes features a high-resolution image sensor positioned at the scope tip to deliver bright, color-rich images. Advanced LED illuminations provide optimum brightness to the inspection area. The compact and lightweight IPLEX series enables high quality inspections under demanding environments, featuring versatile functionality and proven durability compliant with IP55.

IPLEX FX

This high-end industrial videoscope system combines portability with advanced functionality, and ease of use with durability. From high image quality inspection to sufficient stereo measurement, its versatility achieves numerous benefits. The IPLEX FX is optimal for research and development.



IPLEX UltraLite

The palm-sized, ultralight videoscope combines superb image quality and durability, and delivers high quality and reliable inspections at any site. The IPLEX UltraLite is ideal for on-site quality inspections required in field services.



IPLEX LX/LT

The portable IPLEX LX/LT offers advanced features to achieve the best balance between ease-of-use and performance. The IPLEX LX/LT is recommended to users requiring portability and functionality.



IPLEX TX

The ultra-thin 2.4 mm diameter videoscope with articulation reaches inside almost any narrow or winding area, revealing tiny defects. The IPLEX TX provides excellent performances for inspections of casting, molds, and other parts with small cavities.



Industrial Rigid Borescopes

Where straight-line access to the inspection area is possible, the rigid borescopes provide efficient and cost-effective solutions. Using a precision optical lens, borescopes deliver high-quality images to an eye-piece or monitor.

MK Modular Miniscope

The innovative modular design with ultra-thin borescopes of 1.2 mm, 1.7 mm, and 2.7 mm diameter allows cost-effective inspections, combining with the compact and low-consumption LED light source. MK Modular Miniscopes are ideal for routine inspections requiring straight-line access.



Specifications

	IPLEX FX	IPLEX LX	IPLEX LT	IPLEX UltraLite	IPLEX TX	MK Modular Miniscope
Scope type	Flexible	Flexible	Flexible	Flexible	Flexible	Rigid
Direction of scope articulation	Up/Down/Right/Left	Up/Down/Right/Left	Up/Down/Right/Left	Up/Down/Right/Left	Up/Down	N/A
Scope diameter	4.0 mm/ 6.0 mm	4.0 mm/ 6.0 mm/ 8.5 mm	4.0 mm/ 6.0 mm/ 8.5 mm	4.0 mm/ 6.0 mm	2.4 mm	1.2 mm/1.7mm/ 2.7 mm
Scope lengths	2.0 m/ 3.5 m/ 5.0 m/ 7.5 m/ 12.0 m/ 18.0 m	2.0 m/ 3.5 m/ 5.0 m/ 7.5 m/ 10.0 m/ 20.0 m	2.0 m/ 3.5 m/ 5.0 m/ 7.5 m/ 10.0 m/ 20.0 m	2.0 m/ 3.5 m	1.2 m	90 mm/ 180 mm
Direction of view	Direct/ Side	Direct/ Side	Direct/ Side	Direct/ Side	Direct	Direct/ Oblique/ Side
Stereo measurement	✓	✓	N/A	N/A	N/A	N/A
Dust, Drip, Physical shock resistance	✓	✓	✓	✓	✓	N/A
Operating temperature (in air)	-25 to 100 °C	-25 to 100 °C	-25 to 80 °C	-25 to 100 °C	-25 to 80 °C	-10 to 80 °C

OLYMPUS CORPORATION is ISO 9001 and 14001 certified

*All specifications are subject to change without notice.

This device is designed for use in industrial environments for the EMC performance. Using it in a residential environment may affect other equipment in the environment.

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