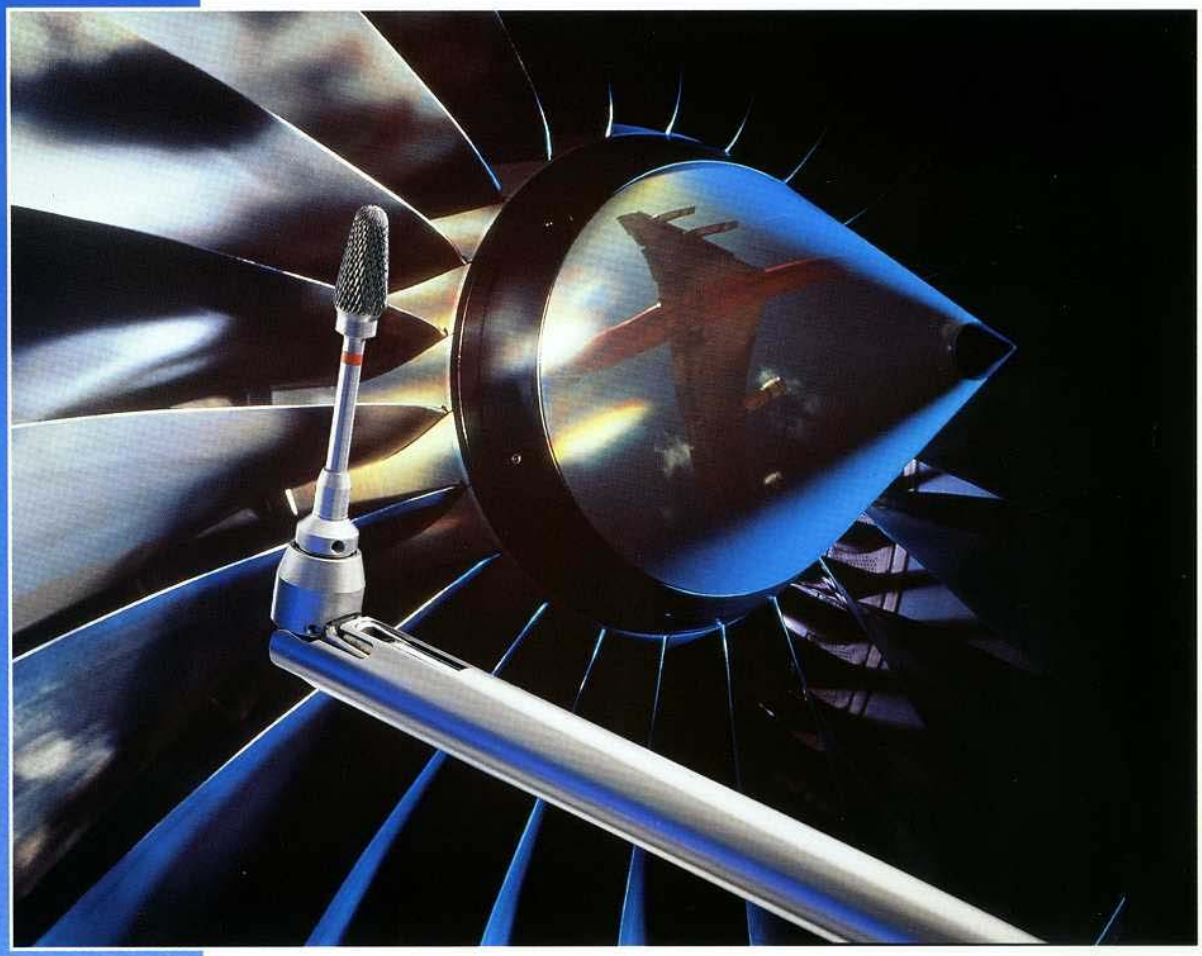
RICHARD WOLF

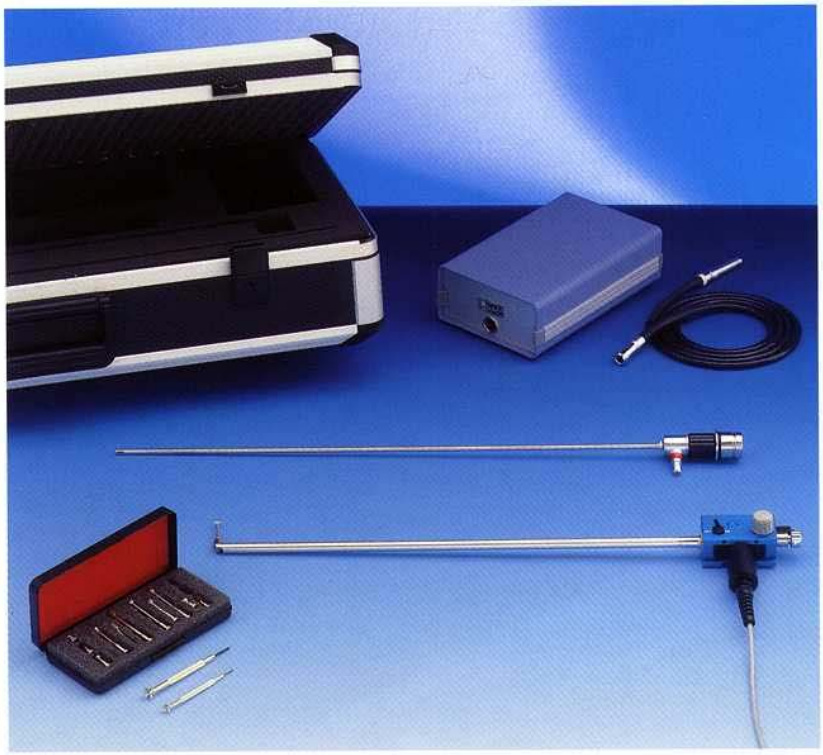
Technoscope



Richard WOLF Blending Scope

Restores engine to flight conditions on wing • Reduces engine ground time drastically • Is compatible to standard borescope inspection equipment

The Richard WOLF Blending Scope Kit



Richard WOLF Blending Scope

For years, Richard WOLF has been manufacturing borescopes specifically designed for the inspection of aircraft engines. Thanks to the skills and dedication of its craftsmen and engineers, borescopes made by Richard WOLF have gained their reputation for unsurpassed quality and durability. As a result, Richard WOLF borescopes are specified and recommended by the manufacturers of nearly all engines and are widely used by the leading operators.

Cooperation with manufacturers of jet engines and operators has led not only to the development of optical tools which offer the maximum in resolution and brightness, but also gave birth to the Richard WOLF Blending Scope, a completely new device which is a valuable asset to everyone responsible for safe and cost efficient engine operation.

Engine Removal Due to FOD

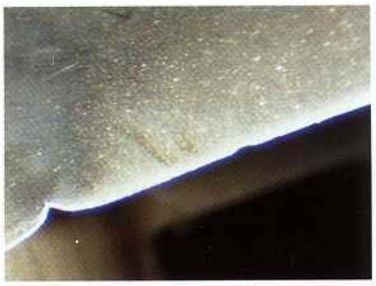
Among all operators it is well known that Unscheduled Engine Removal (UER) is a costly but unavoidable procedure in their daily work. Even the highest standards in design and manufacture of modern jet engines as well as in maintaining them cannot protect the engines from external damage. One of the reasons for an UER is Foreign Object Damage (FOD) of the engine blades, e.g., in the High Pressure Compressor (HPC).

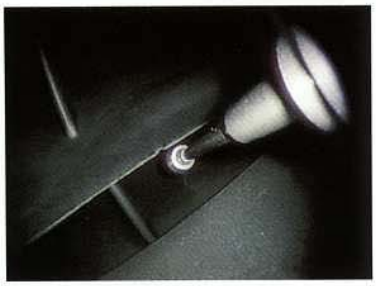
Until now, when FOD has occured, there was no way to correct the damage other than taking the engine off wing and disassembling it. The damaged blades were replaced, the engine had to be re-assembled and run in the test cell. Everyone is well aware of the time, effort and money which is involved in this procedure.

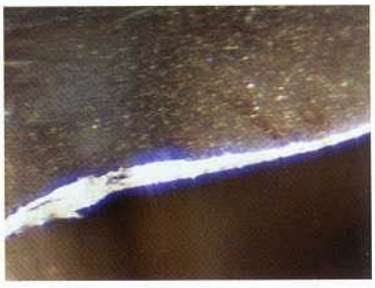
The Richard WOLF Blending Scope: Working principle

The Richard WOLF Blending Scope is built like a traditional borescope. Its shaft is inserted through one of the standard borescope ports with the tool extended. To engage the blending tip, just position it at about 90°. A motor drives the tip up to several thousand rpm. The blending process is observed through a high resolution optical lens system either by direct vision through the eyepiece (Richard WOLF standard) or via any standard industrial video camera system. A wide range of tools for cutting, grinding, polishing and brushing are available in different lengths and can be fitted to the unique patented miniature drive tool.

The Richard WOLF Blending Scope is an all-rigid design which enables the user to exert the working force directly on the damaged object and to "feel" the blending process. No loss occurs from flexible parts. For optimum vision the optical system can be moved within the shaft. Tools can be changed within a few seconds without affecting the optical system, and are secured in a positive manner against loss in the engine.
The Richard WOLF Blending Scope offers a variety of technical advantages:
• high precision handling • unsurpassed Richard WOLF image quality • ideal field of view • different tools for optimum efficiency • simple tool change • working angle adjustable for optimum access • simple way of measuring damage and blending result • observation position adjustable for different tool lengths • rpm adjustable • simple design, small size, light weight • can be used with and without video • compatible to all standard borescope equipment.







The Blending Device
incorporates motor handle with remote control, steering device for the tip and the optical system.

The Borescope
has been designed and optimized specifically for the observation of the blending process. Light cables can be connected via a standard light plug. The Richard WOLF eyepiece allows for attachment of nearly any video equipment.

The Tool Set
consists of a variety of tools which vary in type, shape and length and are designed for each engine individually.

The Power Unit
matches to any current source between 100 - 240 VAC and 50 - 400 Hz.

Accessories and Spare Parts
are all included in the Basic Kit and carrying case.

Please ask for detailed data sheets on the WOLF Blending Scope Kits designed for your engines

We gratefully acknowledge the excellent cooperation with Lufthansa Technik, Frankfurt.

RICHARD WOLF

Technoscope

Rigid Technoscopes
(Borescopes)

Flexible Technoscopes

Optical accessories

Light sources

Video documentation

The WOLF Technoscope program also includes:

Rigid Technoscopes/Borescopes
Ø 1.9 mm to 10 mm

Rigid swivel prism Technoscopes
Ø 8, 10 and 16 mm

Flexible Technoscopes with exchangeable objective heads
Ø 6.3 mm to 11.5 mm

Flexible Technoscopes with fixed head
Ø 1.6 mm to 11 mm

Special borescopes for turbines

Extendable rigid Technoscope Ø 15 mm, extendable to 10 m length with 20 W bulb illumination

Panoramic Technoscope 12 mm

Special Technoscopes for the automobile industry and workshops

Mirror attachment for 0°-Technoscopes

Pliable Technoscope Ø 0.6 mm

Special Borescope Kits for aircraft engines

Please ask for specialized brochures!

RICHARD WOLF GmbH · PBox 1164 · D-75434 Knittlingen · Phone ++49 7043 - 35-222 · Fax ++49 7043 - 930109

S&P

AUSTRIA:
RICHARD WOLF Austria
Ges.m.b.H.
Lederergasse 32
A-1082 Wien
Tel.: 0 222-405 62 19
Fax: 0 222-408 70 84

BELGIUM:
N.V. Endoscopie
RICHARD WOLF Belgium S.A.
Industriezone Drongen, Landegemstraat 6
B-9031 Gent-Drongen
Tel.: 09-282.92.15
Fax: 09-282.92.16

FRANCE:
RICHARD WOLF France S.A.R.L.
Rue Daniel Berger
Z.A.C. La Neuvillette
F-51100 Reims
Tél.: (03)-26.87.02.89
Fax: (03)-26.87.60.33

UK:
RICHARD WOLF UK Ltd
Waterside Way
Wimbledon
SW17 OHB
Tel.: 0181-944 7447
Fax: 0181-944 1311

USA:
RICHARD WOLF
Medical Instruments Corp.
353 Corporate Woods Parkway
Vernon Hills, Illinois 60061
Tel.: 847-913 1113
Fax: 847-913 1489

T 607.VI.96.GB.2