Fluorescent Leak Detection
and DIAGNOSTIC TOOLS
for Industrial Systems

- Hydraulic Systems
- Pipelines
- Turbines
- Vacuum Systems
- Liquid Holding Tanks
- Cooling Towers
- Compressed Air Lines
- Natural Gas Lines
- Pneumatic Systems
- Propane Tanks
- And Much More!
Industrial Systems Leak More Than Just Fluids... They Leak Money!

This is why in any industrial system, leaks of any kind—oil, hydraulics, gasoline, diesel fuel or water—are a source of major concern.

Do this simple math. There are 86,400 seconds in a day; 31,536,000 seconds in a year. If there is a leak at the rate of 1 drip every 5 seconds, this means 6,307,200 drips per year!

Left undetected, these leaks will take a huge bite out of your profits. Plus they lead to equipment breakdown, accidents and environmental damage. Unrepaired leaks disrupt production operations and increase equipment downtime. Also, leaks may lead to severe penalties for violation of tough environmental standards imposed by both local and national governments. These and other factors make the need to find an effective, economical and efficient leak detection method all the more important and urgent.

Current Leak Detection Methods—How Effective Are They?

There are many leak detection methods, including visual inspection and bubble solutions. Each has its advantages and disadvantages. One significant disadvantage is that while all of these methods may find some leaks, they are not effective in finding all leaks. Another disadvantage is that it is hard to locate the leaks unless you are very close to the suspect leak site. Now, there is a new and revolutionary way to detect leaks that beats all other methods when it comes to effectiveness, cost and durability.

Spectroline® Fluorescent Leak Detection: A Revolutionary Solution!

Many large industrial systems have hundreds of possible leak sites, including dozens of valves and fittings. Spectroline® fluorescent leak detection works effectively in any enclosed circulatory system where fluids are used for lubrication, hydraulics, cooling control or hydrostatic pressure testing. Fluorescent dyes also can reveal leaks in static systems that can be pressurized or agitated.

In terms of cost, ease of use and effectiveness, Spectroline® fluorescent leak detection is the best of all available methods. It is the easiest, quickest and most effective way to pinpoint the exact location of each and every leak—the first time, every time! It is also the only method that allows inspection of an entire system under virtually all operating conditions.

What the Pros Are Saying...

“Oil-GLO 44 is easy to use, and I don’t have to worry about it harming the hydraulic system.”
—D.J. Anderson,
Western Enterprises

“All power plants should use this simple technology to find leaks quickly. The savings is tremendous.”
—Tom Pike,
Western Farmers Electric Cooperative (WFEC)

“The yellow dye in Oil-GLO 22 works great in finding hard-to-spot leaks.”
—Dennis Lee,
Timkin Company
LEAK DETECTION DYES

Dyes for Circulating Fluids

Find Leaks Fast in Fuel, Synthetic Lubricant, Petroleum, Water and Water/Glycol-Based Systems!

Ideal for use as part of a diagnostic/preventive maintenance program for industrial systems. Work effectively in any enclosed circulatory system where fluids are used.

- **Versatile** — Allow inspection of an entire system under virtually all operating conditions. Find the smallest, most elusive leaks—even multiple and intermittent leaks!
- **Safe** — Work with any host fluid without damaging the fluid’s properties or any of the system’s components.
- **Cost Effective** — Highly concentrated. Contain more active ingredients per dose than competitive dyes.
- **NSF Certified** — OIL-GLO® and WATER-GLO® fluorescent dyes are registered to meet food-grade processing requirements.
  - OIL-GLO® oil-based dyes meet category codes HTX-2 and HX-2.
  - WATER-GLO® water-based dyes meet category codes G7, GX and HTX-2.
- **Special Formulations** — Available in several distinct colors to differentiate between different leaking fluid systems (see chart on back page).

Refer to the table on the back for detailed information about our most popular dyes.

**IMPORTANT NOTE:**
All OIL-GLO® oil-based dyes are manufactured to the highest quality standards, and are filtered down to 2 microns.

CORDLESS LED LEAK DETECTION FLASHLIGHTS

**OPX-400ICS OPTIMAX™ 400**
Economical, High-Output, Violet Light LED Flashlight

- Provides optimal fluorescent dye response and contrast to ensure that all leaks glow brilliantly!
- Power comparable to high-intensity 150-watt lamps
- Inspection range of 25 feet (7.6 m) or more
- Works with Spectroline® OIL-GLO® 33 (green), OIL-GLO® 44 (yellow/green) and OIL-GLO® 50 (red) oil-based dyes, as well as WATER-GLO® 802 (green) water dye
- Lightweight, compact design easily gets into tight, cramped spaces
- Powered by 3 AAA batteries (included)
- 100,000-hour LED service life
- Fluorescence-enhancing glasses, lanyard and belt holster
- Packaged in full-color hanging clamshell

**OLX-400I OPTI-LUX™ 400**
Powerful, Rechargeable, Violet Light LED Flashlight

- Provides optimal fluorescent dye response and contrast to ensure that all leaks glow brilliantly!
- Power comparable to high-intensity 150-watt lamps
- Inspection range of 25 feet (7.6 m) or more
- Works with Spectroline® OIL-GLO® 33 (green), OIL-GLO® 44 (yellow/green) and OIL-GLO® 50 (red) oil-based dyes, as well as WATER-GLO® 802 (green) water dye
- Lightweight, compact design easily gets into tight, cramped spaces
- Powered by a rechargeable lithium-ion battery (included). Provides 4 hours of continuous inspection between charges.
- 100,000-hour LED service life
- Smart battery charging cradle with AC and DC cord sets
- Fluorescence-enhancing glasses and lanyard

**OLX-365 OPTI-LUX™ 365**
Versatile, Rechargeable, UV LED Flashlight

- More than twice as powerful as most corded, high-intensity UV lamps
- Inspection range of 25 feet (7.6 m) or more
- Compact design easily gets into tight, cramped spaces
- Works with all systems and dyes, including difficult-to-fluoresce yellow, white and blue dyes, even in dirty fluids
- Powered by a rechargeable lithium-ion battery, with extra battery included. Each provides 4 hours of continuous inspection between charges.
- 100,000-hour LED service life
- Smart charging cradle with AC and DC cord sets
- UV-absorbing glasses, belt holster and rugged carrying case

How It Works

Just add a small amount of dye to the system and let it circulate. The dye/fluid mixture escapes with the host fluid wherever there is a leak and glows brightly when inspected with a high-intensity UV or violet light lamp.
**MLK-3500 Series**
**MAXIMA™**
Features State-of-the-Art Micro Discharge Light (MDL) Technology!
Delivers unprecedented power—up to 10 times the UV output of conventional High Intensity Discharge (HID) lamps!
- Instant-on operation; no warm-up time required
- Works even in direct sunlight
- Inspection range of 30 feet (9.1 m) or more
- For maximum convenience, a portable, battery-operated version is also available.

Available as lamp kits: The MLK-35 Kit includes UV-absorbing glasses (UVS-30), fluorescence-enhancing glasses (UVS-40), plastic carrying case (CC-350) and an 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner (CR-800). The MLK-35M Kit also includes the BP-12A 12-volt rechargeable battery pack, as well as AC and 12V DC cord sets. Choose dyes separately.

**TRI-365H**
**TRITAN™ 365**
Ultra-High Intensity, Multi-LED, Broad-Beam UV Lamp
- Features three UV LEDs for leak detection and one white light LED for component inspection
- Inspection range of 20 feet (6.1 m) or more
- Instant-on operation; no warm-up time required
- Broad-beam design provides wider coverage area than conventional UV leak detection lamps
- Rubber bumper with Borofloat® glass lens protects LEDs from damage
- UVS-30 UV-absorbing glasses

Includes:
- OPX-400 OPTIMAX™ 400 high-intensity, cordless, violet light LED leak detection flashlight
- 8 oz (237 ml) twin-neck bottle of patented OIL-GLO® 44 concentrated oil dye
- 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner
- 3 AAA batteries, lanyard, fluorescence-enhancing glasses and dye treatment tags
- Rugged carrying case

Also available:
- TRI-365MH TRITAN™ 365 AC/DC UV Lamp Kit. Features the battery-operated TRITAN™ 365 UV Lamp.
  Kit includes: rechargeable NiMH battery pack (BP-30), smart AC charger (BR-150A), AC/DC adapter (PRA-250A), UV-absorbing glasses (UVS-30) and soft carrying case (CC-370A).

**LEAK DETECTION KITS**

**OPK-441**
Specially Designed to Find Leaks in Small to Medium Sized Oil-Based Fluid Systems!
Pinpoints leaks quickly in hydraulic systems, compressors, engines, gearboxes and fuel systems.

Includes:
- OPX-400I OPTIMAX™ 400 high-intensity, cordless, violet light LED leak detection flashlight
- 8 oz (237 ml) twin-neck bottle of patented OIL-GLO® 44 concentrated oil dye
- 8 oz (237 ml) spray bottle GLO-AWAY™ dye cleaner
- 3 AAA batteries, lanyard, fluorescence-enhancing glasses and dye treatment tags
- Rugged carrying case

**OLK-402**
The Most Complete Kit to Find Leaks in Water- and Water/Glycol-Based Industrial Systems!
Allows inspection of the entire system under virtually all operating conditions!

Includes:
- OLX-400I OPTI-LUX™ 400 high-intensity, rechargeable, violet light LED leak detection flashlight
- 16 oz (473 ml) twin-neck bottle of WATER-GLO® 802 concentrated water dye
- 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner
- Smart charging cradle with AC and DC cords sets
- Lanyard, fluorescence-enhancing glasses and dye treatment tags
- Rugged carrying case

**OLK-444**
The Most Powerful Kit to Find Leaks in Any Size Oil-Based Fluid System!
Prevents expensive equipment breakdowns and potential environmental problems. Ideal for pinpointing leaks in hydraulic systems, compressors, engines, gearboxes and fuel systems!

Includes:
- OLX-400I OPTI-LUX™ 400 high-intensity, rechargeable, violet light LED leak detection flashlight
- 16 oz (473 ml) twin-neck bottle of patented OIL-GLO® 44 concentrated oil dye
- 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner
- Smart charging cradle with AC and DC cords sets
- Lanyard, fluorescence-enhancing glasses and dye treatment tags
- Rugged carrying case
**Cordless, Hands-Free LED Lamp**

**Ekm-365 EagleEye™ UV/White Light LED Leak Detection Lamp Kit**

Features the palm-sized, light weight, cool-running Ekm-365 EagleEye™ UV lamp. Features two ultra-high intensity UV LEDs for fluorescent leak detection, plus a three-LED white light assembly for component inspection.

- Power comparable to high-intensity 100-watt lamps
- Inspection range of 12 feet (3.6 m) or more
- Adjustable strap allows lamp to be worn on a hard hat or directly on the head for complete hands-free operation!
- Works with all oil- and water-based fluorescent dyes. Especially effective on difficult-to-fluoresce yellow, white and blue dyes, even in dirty fluids.
- Built-in fan keeps LEDs cool to maintain optimum intensity during extended use
- 100,000-hour LED service life
- Powered by a rechargeable lithium-ion battery, with three spare batteries included. Each battery provides up to 75 minutes of continuous inspection between charges.
- Comes complete with lanyard, three splash guards with integral particulate filters, charging cradle with AC and DC cord sets, UV-absorbing glasses and a soft carrying case.

**Specialty Tools**

**Mde-2000nc Marksman™ II Ultrasonic Diagnostic Tool**

Features advanced heterodyne circuitry and “Sound Signature Technology” to convert and amplify inaudible ultrasonic sound into audible “natural” sounds. Provides quick diagnosis and detection of problems before they lead to major breakdowns!

- Quickly detects compressed air, natural gas, propane tank, vacuum, steam, refrigerant and other pressurized leaks quickly and effortlessly
- 5-LED signal intensity indicator and audible alarm easily pinpoint the exact problem source
- Finds gear and bearing wear in internal components and electric motors
- Internal Noise Control ensures that tool is unaffected by ambient noise, making it ideal for use in extremely noisy environments
- Self-adjusting Automatic Gain Control circuitry enhances sensitivity and simplifies operation
- Unique ultrasonic emitter helps locate faulty seals, gaskets and weather stripping in doors, windows, ductwork and other non-pressurized enclosures
- Precision-engineered hollow air probe helps isolate leak sources in cramped areas
- Adjustable touch-control sensitivity pad and power switch
- Comes complete with ultrasonic receiver, ultrasonic emitter, hollow air probe, contact probe, noise-cancelling headphones, (2) D cell batteries and rugged carrying case.

**Im-50 Telescopic Inspection Mirror**

Ideal for both leak detection and component inspection. Provides easy access and viewing into hard-to-reach and confined spaces. Works with all leak detection lamps and flashlights!

- Large 2¼ in (5.7 cm) diameter mirror allows easy viewing in confined and hidden areas
- Flexible mirror head swivels to any angle and firmly holds in position
- Adjustable, 12 in (30.5 cm) stainless steel shaft telescopes to 29¾ in (75.4 cm)
- Durable, easy-grip handle
<table>
<thead>
<tr>
<th>Product No.</th>
<th>Application</th>
<th>Suggested Dilution Ratio</th>
<th>% Dye to System Fluid</th>
<th>Use With</th>
</tr>
</thead>
<tbody>
<tr>
<td>OIL-GLO® 23/8**</td>
<td>Light-colored hydraulic fluid</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) hydraulic fluid</td>
<td>0.01%</td>
<td>UVS-40 glasses only</td>
</tr>
<tr>
<td>OIL-GLO® 22-B</td>
<td>Very dark or intensely blue hydraulic and lubrication fluids</td>
<td>1 oz (30 ml) per 2 gals (7.6 L) hydraulic fluid</td>
<td>0.01%</td>
<td>UVS-30 glasses only</td>
</tr>
<tr>
<td>OIL-GLO® 22-P</td>
<td>Compressor oil</td>
<td>1 oz (30 ml) per 1.5 gals (5.7 L) engine oil</td>
<td>0.01%</td>
<td>UVS-30 glasses only</td>
</tr>
<tr>
<td>OIL-GLO® 22-G (Fluoresces yellow)</td>
<td>Gearbox oil</td>
<td>1 oz (30 ml) per 2 qts (1.9 L) gearbox oil</td>
<td>0.01%</td>
<td>UVS-30 glasses only</td>
</tr>
<tr>
<td>OIL-GLO® 30/8**</td>
<td>Light-colored hydraulic fluid</td>
<td>1 oz (30 ml) per 8 gals (30.3 L) hydraulic fluid</td>
<td>0.01%</td>
<td>UVS-40 glasses only</td>
</tr>
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<td>Very dark or intensely blue hydraulic and lubrication fluids</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) hydraulic fluid</td>
<td>0.01%</td>
<td>UVS-40 glasses only</td>
</tr>
<tr>
<td>OIL-GLO® 30-P</td>
<td>Compressor oil</td>
<td>1 oz (30 ml) per 5 gals (11.4 L) engine oil</td>
<td>0.01%</td>
<td>UVS-40 glasses only</td>
</tr>
<tr>
<td>OIL-GLO® 30-Q</td>
<td>Gearbox oil</td>
<td>1 oz (30 ml) per 1 gal (3.8 L) gearbox oil</td>
<td>0.01%</td>
<td>UVS-40 glasses only</td>
</tr>
<tr>
<td>WATER-GLO® 801-G</td>
<td>Light-colored hydraulic fluid</td>
<td>1 oz (30 ml) per 8 gals (30.3 L) hydraulic fluid</td>
<td>0.01%</td>
<td>UVS-30 glasses only</td>
</tr>
<tr>
<td>WATER-GLO® 801-G (Requires UV lamp)</td>
<td>Very dark or intensely blue hydraulic and lubrication fluids</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) hydraulic fluid</td>
<td>0.01%</td>
<td>UVS-30 glasses only</td>
</tr>
<tr>
<td>WATER-GLO® 801-Q</td>
<td>Compressor oil</td>
<td>1 oz (30 ml) per 5 gals (11.4 L) engine oil</td>
<td>0.01%</td>
<td>UVS-40 glasses only</td>
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<tr>
<td>WATER-GLO® 801-G (Fluoresces yellow)</td>
<td>Gearbox oil</td>
<td>1 oz (30 ml) per 1 gal (3.8 L) gearbox oil</td>
<td>0.01%</td>
<td>UVS-40 glasses only</td>
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**Note:** The suffix “B” denotes an 8 oz (237 ml) bottle; suffix “P” denotes a 16 oz (473 ml) bottle; suffix “G” denotes a 1 gal (3.8 L) pail. Other sizes also available.

The dilution ratio of Spectroline® fluorescent dyes to the host fluids shown above are only guidelines. These ratios can be increased or decreased depending on the fluorescent response required and the ambient lighting conditions. A simple way to check for proper fluorescence is to remove a small amount of host fluid from the system and add the suggested amount of dye to it. Then shine a Spectroline® leak detection lamp on this sample mixture and check for a bright fluorescent response.

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**Note:**
- Case of (24) 1 oz (30 ml) bottles
- Package of (6) 1 oz (30 ml) bottles
- Approx. clear: Will not discolor host fluid.
- Does not change the color of the host fluid

To learn more about our wide range of leak detection and diagnostic tools, visit [www.spectroline.com](http://www.spectroline.com)

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**SPECTROSCOPES CORPORATION**
95 Brush Hollow Road
Westbury, New York 11590
800-274-8888 • 516-333-6840
Fax: 516-333-6859
www.spectroline.com