A Unique Method of Finding Fluid Leaks in an Industrial Environment

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.

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.

Spectroline Advantage

- Fast, easy and accurate
- Finds all leaks —the first time, every time
- Economical
- Reduces labor costs
- Perfect for preventive maintenance
- Environmentally friendly
- Remains safely in system
- Improves working conditions
- Decreases equipment downtime
- Increases efficiency of machinery operation

Fluorescent Leak Detection Applications (open and closed loop)

- Lubrication systems
- Hydraulic systems
- Pipelines
- Cooling control and hydrostatic pressure systems
- Fuel systems
- Generator engines
**Dyes for Circulating Fluids**

Dyes fluoresce different colors depending on the host fluid.

<table>
<thead>
<tr>
<th>APPLICATION</th>
<th>OIL-GLO® 22</th>
<th>OIL-GLO® 30</th>
<th>OIL-GLO® 33</th>
<th>OIL-GLO® 40</th>
<th>OIL-GLO® 44</th>
<th>OIL-GLO® 45</th>
<th>OIL-GLO® 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shown Under 365 nm UV Light</td>
<td>Light Hydraulic Fluid</td>
<td>Dark Hydraulic Fluid</td>
<td>Compressor Oil</td>
<td>Engine Oil</td>
<td>Gearbox Oil</td>
<td>Light Hydraulic Fluid</td>
<td>Dark Hydraulic Fluid</td>
</tr>
<tr>
<td>Shown Under 400 nm Violet Light</td>
<td>Light Hydraulic Fluid</td>
<td>Dark Hydraulic Fluid</td>
<td>Compressor Oil</td>
<td>Engine Oil</td>
<td>Gearbox Oil</td>
<td>Light Hydraulic Fluid</td>
<td>Dark Hydraulic Fluid</td>
</tr>
</tbody>
</table>

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

**What the Pros Are Saying...**

- "The yellow dye in OIL-GLO 22 works great in finding hard-to-spot leaks.”
  — Dennis Lee, Timkin Company

- "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
**OIL SAMPLE TEST KITS**

Help you select the correct leak detection dye and lamp to meet your specific requirements. Choose from two do-it-yourself field kits, or our mail-in kit to get a free, expert analysis directly from Spectroline®.

**Tech Tip!**

Include the hose lines when determining dye dosage. In addition to the tank capacity, there is a significant amount of oil located in the lines.

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**Field Dye Dilution Ratio Kits**

Easy to use, mess-free and disposable! Each kit comes complete with dye samples, color chart, instructions, black evaluation plate, (2) 0.25 oz (7.4 ml) bottles of each sample dye, applicators and two 8 oz (237 ml) mixing bottles.

- **FDK-100 Kit**
  - Includes (2) 0.25 oz (7.4 ml) bottles of each sample dye:
    - OIL-GLO® 30 dye (glows white)
    - OIL-GLO® 33 dye (glows green)
    - OIL-GLO® 40 dye (glows bright blue)
    - OIL-GLO® 44 (glows yellow/green)

- **FDK-200 Kit**
  - Includes (2) 0.25 oz bottles (7.4 ml) of each sample dye:
    - OIL-GLO® 22 dye (glows yellow)
    - OIL-GLO® 45 dye (glows blue)
    - OIL-GLO® 50 dye (glows red)

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**AK-1000**

**Dye Selection/Oil Sample Analysis Kit**

Contains everything needed to collect an oil sample and send it to us for a professional analysis.

Makes sample collection and shipping fast and easy! Upon receipt, our expert chemists will test your oil sample and provide a report with dye, dilution ratio and leak detection lamp recommendations.

Includes an oil sample analysis form, 8 oz (237 ml) sample bottle with lid, absorbent cloth, plastic bag with tie, pressure-sensitive tape, box-sealing tape, shipping label, packaging instructions and cardboard shipping box.
All of our cordless leak detection flashlights feature a compact design for getting into tight areas, an anodized aluminum lamp body for durability, and a powerful, high-intensity LED with a 100,000-hour service life.

**OPX-400ICS**
**OPTIMAX™ 400**
- Power comparable to high-intensity 150-watt lamps
- 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

Includes fluorescence-enhancing glasses and lanyard.

**OLX-400I**
**OPTI-LUX™ 400**
- Power comparable to high-intensity 150-watt lamps
- 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
- Provides 4 hours of continuous inspection between charges

Includes smart charging cradle with AC and DC cord sets, fluorescence-enhancing glasses and lanyard.

**OLX-365**
**OPTI-LUX™ 365**
- Twice as powerful as most corded, high-intensity UV lamps
- Works with all systems and dyes, including difficult-to-fluoresce yellow, white and blue dyes — even in dirty fluids
- Provides 4 hours of continuous inspection between charges

Includes smart charging cradle with AC and DC cord sets, UV-absorbing glasses, belt holster, lanyard, spare battery and rugged carrying case.

**LT-300**
**LeakTracker™**
- More powerful than most corded, high-intensity UV lamps
- Works with all oil- and water-based fluorescent dyes, including difficult-to-fluoresce yellow, white and blue dyes — even in dirty fluids

Includes UV-absorbing glasses and lanyard.

**EK-365**
**EagleEye™**
**Leak Detection Lamp Kit**
*Features the palm-sized, lightweight, cool-running EE-365 EagleEye™ cordless, hands-free LED lamp, with two ultra-high intensity UV LEDs and a three-LED white light assembly.*
- Power comparable to high-intensity 100-watt lamps
- 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
- Lithium-ion battery provides up to 75 minutes of continuous inspection between charges. Two spare batteries included
- Includes lanyard, three splash guards with integral particulate filters, charging cradle with AC and DC cord sets, UV-absorbing glasses and a soft carrying case
**COMPLETE LEAK DETECTION KITS**

**OPK-441 – Starter Kit**  
Specially designed for finding leaks in small to medium sized oil-based fluid systems!  
- OPX-400 OPTIMAX™ 400 high-intensity, cordless LED leak detection flashlight  
- 8 oz (237 ml) twin-neck bottle of patented OIL-GLO® 44 concentrated oil dye

**OLK-402 – Water-Based Kit**  
The most complete kit for finding leaks in water- and water/glycol-based systems!  
- OLX-400I OPTI-LUX™ 400 high-intensity, rechargeable LED leak detection flashlight.  
- 16 oz (473 ml) twin-neck bottle of WATER-GLO® 802 concentrated water dye.

**OLK-444 – Oil-Based Kit**  
The most powerful kit for finding leaks in larger oil-based fluid systems!  
- OLX-400I OPTI-LUX™ 400 high-intensity, rechargeable LED leak detection flashlight  
- 16 oz (473 ml) twin-neck bottle of OIL-GLO® 44 concentrated oil dye

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**HIGH-INTENSITY UV LAMPS & KITS**  
—Choose Dyes Separately

**ML-3500S**  
**MAXIMA™**  
Features State-of-the-Art Micro Discharge Light (MDL) Technology!  
Delivers 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  
- Available in lamp kits at right

**MLK-35**  
(standard AC version)

**MLK-35M**  
(battery-operated version)

**TRI-365HB**  
**TRITAN™ 365**  
Ultra-High Intensity Broad-Beam UV Lamp  
- Three UV LEDs and one white light LED  
- 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  
- Built-in fans keep LEDs cool to maintain optimum output during extended use

**TRI-365MHB**  
**TRITAN™ 365 AC/DC UV Lamp Kit.**  
Features the battery-operated TRITAN™ 365 UV Lamp.

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Tech Tip!  
For very small leaks, allow enough time for the dye to accumulate at the leak site.
Tanks often have a separate holding area where the oil is cooled. Therefore, inject the fluorescent dye into the dispensed area to ensure adequate circulation.

Tech Tip!

MDE-2000NC Marksman™ II Ultrasonic Diagnostic Tool

Find leaks and component defects long before they lead to equipment breakdown!

- Adjustable touch-control sensitivity pad and power switch.
- Quickly detects compressed air, natural gas, propane tank, vacuum, steam, refrigerant and other pressurized leaks.
- Finds gear and bearing wear in internal components and electric motors.
- Precision-engineered hollow air probe helps isolate leak sources in cramped areas.
- Unique ultrasonic emitter helps locate faulty seals, gaskets and weather stripping.
- Comes complete with ultrasonic receiver, hollow air probe, contact probe, noise-cancelling headphones, (2) D cell batteries and carrying case.

CG-1000 PRO-Chek CG™ Combustible Gas Leak Detector

Ideal for finding leaks in natural gas systems, propane tanks, pipelines, regulators and valves, heat exchangers and many other combustible gas applications!

- Certified intrinsically safe for use in combustive/explosive environments
- Twice as sensitive as competitive units
- Detects natural gas, propane, ammonia, methanol, ethanol, ethane, butane and other gases
- Adjustable sensitivity control
- Variable-intensity audible alarm and flashing LEDs quickly determine leak size and strength
- Auto-zeroing function helps ignore background gas levels in test area
- Chrome-plated, flexible metal probe allows leak checking in tight spaces
- Field-replaceable sensor eliminates downtime
- Sensor, (2) D cell batteries and carrying case

PRO-Chek CG™ Sensitivity Rates

<table>
<thead>
<tr>
<th>GAS</th>
<th>SENSITIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Acetylene</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Ammonia</td>
<td>20 ppm</td>
</tr>
<tr>
<td>Butane</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Chlorine</td>
<td>1 ppm</td>
</tr>
<tr>
<td>Cyclopetane</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Ethane</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Ethanol</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Ethylene</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Gasoline</td>
<td>1 ppm</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Iso-butane</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Methane</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Methanol</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Methyl Chloride</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Methyl Ether</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Propane</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>5 ppm</td>
</tr>
</tbody>
</table>

This is a partial list of gases that are detectable by the PRO-Chek CG™

For applications that require exact dosing of fluorescent leak detection dye over precise intervals of time. Available in both air-assisted and manual pump versions.

IDD-2000A Air-Assisted Pump Dye Dispenser

Adjustable for dye doses from 0.33 oz to 5 oz (9.8 ml to 148 ml). For use on assembly lines or lubricant room. Works with 5 gallon to 55 gallon (19 L to 208 L) drums.

IDD-1000M Manual Dye Dispenser

Adjustable for dye doses from 0.33 oz to 2 oz (9.8 ml to 59 ml). For use on assembly lines or lubricant room. Works with 5 gallon to 55 gallon (19 L to 208 L) drums.
<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® 22/6*</td>
<td>Petroleum-Based Fluid Systems: Light-colored hydraulic fluid</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) hydraulic fluid</td>
<td>0.20%</td>
<td>+ OR</td>
</tr>
<tr>
<td>OIL-GLO® 22-8</td>
<td>Very dark or intensely blue hydraulic fluids</td>
<td>1 oz (30 ml) per 2 gals (7.6 L) hydraulic fluid</td>
<td>0.39%</td>
<td>+ OR</td>
</tr>
<tr>
<td>OIL-GLO® 22-P</td>
<td>Compressor oil</td>
<td>1 oz (30 ml) per 2 gals (7.6 L) compressor oil</td>
<td>0.39%</td>
<td>+ OR</td>
</tr>
<tr>
<td>OIL-GLO® 22-Q</td>
<td>Engine oil</td>
<td>1 oz (30 ml) per 1.5 gals (5.7 L) engine oil</td>
<td>0.52%</td>
<td>+ OR</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>1.56%</td>
<td></td>
</tr>
<tr>
<td>OIL-GLO® 30/6*</td>
<td>Petroleum-Based Fluid Systems: Light-colored hydraulic fluid</td>
<td>1 oz (30 ml) per 8 gals (30.3 L) hydraulic fluid</td>
<td>0.10%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 30-8</td>
<td>Very dark or intensely blue</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) hydraulic fluid</td>
<td>0.20%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 30-P</td>
<td>Compressor oil</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) compressor oil</td>
<td>0.20%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 30-Q</td>
<td>Engine oil</td>
<td>1 oz (30 ml) per 3 gals (11.4 L) engine oil</td>
<td>0.26%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 30-G (Fluoresces white)</td>
<td>Gearbox oil</td>
<td>1 oz (30 ml) per 1 gal (3.8 L) gearbox oil</td>
<td>0.78%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 33/8*</td>
<td>Synthetic- or Petroleum-Based Fluid Systems: Light-colored hydraulic fluid</td>
<td>1 oz (30 ml) per 8 gals (30.3 L) hydraulic fluid</td>
<td>0.10%</td>
<td>+ OR</td>
</tr>
<tr>
<td>OIL-GLO® 33-8</td>
<td>Very dark or intensely blue hydraulic fluids</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) hydraulic fluid</td>
<td>0.20%</td>
<td>+ OR</td>
</tr>
<tr>
<td>OIL-GLO® 33-P</td>
<td>Compressor oil</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) compressor oil</td>
<td>0.20%</td>
<td>+ OR</td>
</tr>
<tr>
<td>OIL-GLO® 33-Q</td>
<td>Engine oil</td>
<td>1 oz (30 ml) per 3 gals (11.4 L) engine oil</td>
<td>0.26%</td>
<td>+ OR</td>
</tr>
<tr>
<td>OIL-GLO® 33-G (Fluoresces green)</td>
<td>Gearbox oil</td>
<td>1 oz (30 ml) per 1 gal (3.8 L) gearbox oil</td>
<td>0.78%</td>
<td>+ OR</td>
</tr>
<tr>
<td>OIL-GLO® 40/6*</td>
<td>Synthetic- or Petroleum-Based Fluid Systems: Light-colored hydraulic fluid</td>
<td>1 oz (30 ml) per 8 gals (30.3 L) hydraulic fluid</td>
<td>0.10%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 40-8</td>
<td>Very dark or intensely blue hydraulic fluids</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) hydraulic fluid</td>
<td>0.20%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 40-P</td>
<td>Compressor oil</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) compressor oil</td>
<td>0.20%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 40-Q</td>
<td>Engine oil</td>
<td>1 oz (30 ml) per 3 gals (11.4 L) engine oil</td>
<td>0.26%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 40-G (Fluoresces bright blue)</td>
<td>Gearbox oil</td>
<td>1 oz (30 ml) per 1 gal (3.8 L) gearbox oil</td>
<td>0.78%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 44/6*</td>
<td>Synthetic- or Petroleum-Based Fluid Systems: Light-colored hydraulic fluid</td>
<td>1 oz (30 ml) per 8 gals (30.3 L) hydraulic fluid</td>
<td>0.10%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 44-8</td>
<td>Very dark or intensely blue hydraulic fluids</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) hydraulic fluid</td>
<td>0.20%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 44-P</td>
<td>Compressor oil</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) compressor oil</td>
<td>0.20%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 44-Q</td>
<td>Engine oil</td>
<td>1 oz (30 ml) per 3 gals (11.4 L) engine oil</td>
<td>0.26%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 44-G (Fluoresces yellow/green)</td>
<td>Gearbox oil</td>
<td>1 oz (30 ml) per 1 gal (3.8 L) gearbox oil</td>
<td>0.78%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 50/6*</td>
<td>Synthetic- or Petroleum-Based Fluid Systems: Light-colored hydraulic fluid</td>
<td>1 oz (30 ml) per 8 gals (30.3 L) hydraulic fluid</td>
<td>0.10%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 50-8</td>
<td>Very dark or intensely blue hydraulic fluids</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) hydraulic fluid</td>
<td>0.20%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 50-P</td>
<td>Compressor oil</td>
<td>1 oz (30 ml) per 4 gals (15.1 L) compressor oil</td>
<td>0.20%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 50-Q</td>
<td>Engine oil</td>
<td>1 oz (30 ml) per 3 gals (11.4 L) engine oil</td>
<td>0.26%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>OIL-GLO® 50-G (Fluoresces blue †)</td>
<td>Gearbox oil</td>
<td>1 oz (30 ml) per 1 gal (3.8 L) gearbox oil</td>
<td>0.78%</td>
<td>+ ONLY</td>
</tr>
<tr>
<td>GAS-GLO™ 32**</td>
<td>Gasoline and Diesel Fuel Systems</td>
<td>1 oz (30 ml) per 10 gals (37.9 L) gasoline/diesel fuel</td>
<td>0.08%</td>
<td>+ OR</td>
</tr>
<tr>
<td>GAS-GLO™ 32-P</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GAS-GLO™ 32-G (Fluoresces yellow)</td>
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</tr>
<tr>
<td>WATER-GLO® 801-P</td>
<td>Water- and Water/Glycol-Based Fluid Systems – Both Static and Circulating</td>
<td>1 pt (473 ml) per 500 gals (1,900 L) water</td>
<td>0.03%</td>
<td>+ OR</td>
</tr>
<tr>
<td>WATER-GLO® 801-Q</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>WATER-GLO® 801-G (Fluoresces blue †)</td>
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<tr>
<td>WATER-GLO® 802-P</td>
<td></td>
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<tr>
<td>WATER-GLO® 802-Q</td>
<td></td>
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<td></td>
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<tr>
<td>WATER-GLO® 802-G (Fluoresces green)</td>
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</tr>
</tbody>
</table>

**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 ratios of Spectrolite® 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 Spectrolite® leak detection lamp on this sample mixture and check for a bright fluorescent response.

* Package of (6) 1 oz (30 ml) bottles  ** Case of (24) 1 oz (30 ml) bottles  † Appears clear. Will not discolor host fluid.