

Fluorescent Leak Detection

How It Works

Simply add a small amount of fluorescent dye to a vehicle's A/C or fluid system and allow it to circulate. The dye escapes with the system's refrigerant or fluid and remains at all leak sites. When the system is scanned with a Tracerline® ultraviolet or blue light inspection lamp, the dye fluoresces a brilliant yellow-green to pinpoint the exact source of every leak.

To check repairs, the residual dye is removed from leak sites with GLO-AWAY™ dye cleaner. The system is run and repaired sites are then reinspected with the lamp. No glow means that all the leaks were repaired. It's that easy! The dye can remain safely in the system indefinitely.

Fluorescent leak detection is the <u>only</u> method that is ideal for both accurate diagnostics and preventive maintenance.

Tracerline® Fluoro-Lite® dye is the <u>only</u> co-solvent free dye that is certified to meet or exceed SAE standard J2297 for refrigerant leak detection. Fluoro-Lite® is also the <u>only</u> A/C dye that is factory installed in new cars and trucks by auto makers in the U.S., Japan, Europe, China, Korea, Brazil and Mexico.



Company Background

Tracer Products' parent company, Spectronics Corporation, *invented* fluorescent leak detection in 1955 and is the world leader in ultraviolet technology. Spectronics manufactures more than 1,000 different products for the biotechnology, laboratory, industrial, electronics and other markets.

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Cordless LED Lamps



TP-8690UV

OPTIMAX™ 365 Cordless, Rechargeable UV Leak Detection Flashlight (Patent Pending)

— Makes Even Dirty Diesel Engine Oil Leaks Glow Brightly!

- State-of-the-art, ultra-high intensity UV LED with 30,000-hour service life
- 4 times stronger than most corded, high-intensity UV lamps
- Inspection range of up to 20 feet (6.1 m) or more
- Powered by a rechargeable NiMH battery
- Smart AC and DC chargers (AC charger available in 120V, 230V, 240V or 100V versions)
- TP-9939 UV-absorbing glasses
- Belt holster and padded carrying case



TP-8640CS

OPTIMAX Jr™ Cordless, Ultra-Compact Blue Light Leak Detection Flashlight

— Powerful, Portable and Affordable!

- Very high intensity blue light LED with 100,000-hour service life
- Power comparable to high intensity 75W lamps
- Inspection range of up to 6 feet (1.8 m) or more
- Powered by 3 AA batteries (included)
- TP-9940 fluorescence-enhancing glasses
- Packaged in full-color hanging clamshell



TP-8620CS

OPTI-Lite™ Cordless, Economy Blue Light Leak Detection Flashlight

- Budget Friendly!

- (6) blue light LEDs with 100,000-hour service life
- Power comparable to 50W lamps
- Inspection range of up to 2 feet (0.6 m) or more
- Powered by 3 AA batteries (included)
- TP-9940 fluorescence-enhancing glasses
- Packaged in full-color hanging clamshell



TP-8690

OPTIMAX™ 3000 Cordless, Rechargeable Blue Light Leak Detection Flashlight

- Most Powerful Portable!

- Super-high intensity blue light LED with 50,000-hour service life
- 15 times brighter than regular LED lights
- Power comparable to super-high intensity 150W lamps
- Inspection range of up to 20 feet (6.1 m) or more
- Compatible with all standard leak detection dyes
- · Powered by a rechargeable NiMH battery
- 120V, 230V, 240V or 100V smart AC charger
- TP-9940 fluorescence-enhancing glasses



TP-9355

Dual-Max[™] Cordless Multi-Function Flashlight — Two Powerful LEDs! One Lightweight Lamp!

- Features super-bright blue light LED for leak detection, plus white light LED for component inspection
- Power comparable to high-intensity 75W lamps
- Inspection range of up to 6 feet (1.8 m) or more
- Lightweight, compact design allows easy access into tight spaces
- 100,000-hour LED service life
- Powered by 3 AAA batteries (included)
- TP-9940 fluorescence-enhancing glasses



— Most Professional Flexible!

- Three lamp positions: UV/White/Off (3 UV LEDs for leak detection and 1 white light LED for regular inspection, all with 100,000-hour service life)
- Flexible head allows precise positioning in tight spots
- Adjustable service mirror helps pinpoint "hidden" leaks
- Powered by 3 "AAA" batteries (included)
- TP-9940 fluorescence-enhancing glasses
- Packaged in full-color hanging clamshell

Cordless LED Lamp Kits



TP-8627 Complete OPTI-Lite™/EZ-Ject™ A/C and Fluid Kit

Contains:

- TP-8620CS OPTI-Lite[™] economy, 6-LED blue light leak detection flashlight
- TP-9845 EZ-Ject™ A/C dye injector assembly, TP-9847
 8" hose assembly, ¼" flare check valve, R-12 adapter/purge fitting and R-134a coupler, low side
- TP-9870 universal A/C dye cartridge for servicing up to 14 vehicles
- TP-3405CS 1 oz (30 ml) bottle of Dye-Lite® All-In-One™ standard dye for oil, fuel, ATF, PS and hydraulics, services 1 vehicle
- TP-3900-0001CS 1 oz (30 ml) bottle of Dye-Lite® waterbased dye for coolant and auto body leaks
- TP-9940 fluorescence-enhancing glasses
- TP-1143 plastic carrying case



TP-8647

Complete OPTIMAX Jr™/EZ-Ject™ A/C and Fluid Kit

Contains:

- OPTIMAX Jr™ high intensity blue light LED leak detection flashlight
- TP-9845 EZ-Ject™ A/C dye injector assembly, TP-9847 8" hose assembly, ¼" flare check valve, R-12 adapter/purge fitting and R-134a coupler, low side
- TP-9870 universal A/C dye cartridge for servicing up to 14 vehicles
- TP-3405CS 1 oz (30 ml) bottle of Dye-Lite® All-In-One™ standard dye for oil, fuel, ATF, PS and hydraulics, services 1 vehicle
- TP-3900-0001 1 oz (30 ml) bottle of Dye-Lite® water-based dye for coolant and auto body leaks
- TP-9940 fluorescence-enhancing glasses
- TP-1143 plastic carrying case



TP-8646

OPTIMAX Jr™/EZ-Shot™ A/C Kit

Contains.

- TP-8640CS OPTIMAX Jr™ super-compact, high intensity blue light LED leak detection flashlight
- TP-9790 EZ-Shot A/C dye injection kit with TP-9747 hose/ coupler for R-134a systems and R-12 adapter/purge fitting
- TP-9770-0108 8 oz (237 ml) universal A/C dye cartridge for servicing up to 64 vehicles
- 120884 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner
- TP-9940 fluorescence-enhancing glasses
- TP-1140 plastic carrying case



TP-8649

Complete OPTIMAX Jr™/Mini-EZ™ A/C and Fluid Kit

Contains

- OPTIMAX Jr[™] high intensity blue light LED leak detection flashlight
- TP-9845 Mini-EZTM A/C dye injector, TP-9847 8" hose assembly, ¼" flare check valve, R-12 adapter/purge fitting and R-134a coupler, low side
- (6) R-134a/PAG Mini-EZ™ A/C dye cartridges
- TP-3400-0001 1 oz (30 ml) bottle Dye-Lite® All-In-One™ concentrated dye for oil, fuel, ATF, PS and hydraulics, services up to <u>2 vehicles</u>
- TP-3940 1 oz (30 ml) bottle Rite-Blend™ extended-life coolant dye
- TP-9940 fluorescence-enhancing glasses
- TP-1143 plastic carrying case

Cordless LED Lamp Kits



TP-8621

Complete LeakFinder™ A/C and Fluid Starter Kit — Pinpoints A/C, Oil, Fuel, ATF, PS, Hydraulics and Coolant Leaks!

Contains:

- TP-8620CS OPTI-Lite™ economy, 6-LED blue light leak detection flashlight
- TP-9881 syringe A/C dye injector assembly with hose/coupler for R-134a systems and R-12 adapter/purge fitting
- TP-3840-0001CS 1 oz (30 ml) bottle of universal A/C dye, services up to 4 vehicles
- TP-3405CS 1 oz (30 ml) bottle of Dye-Lite[®] All-In-One[™] standard dye for oil, fuel, ATF, PS and hydraulics, services 1 vehicle
- TP-3900-0001CS 1 oz (30 ml) bottle of Dye-Lite® water-based dye for coolant and auto body leaks
- 120884 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner
- TP-9940 fluorescence-enhancing glasses
- TP-1140 plastic carrying case



TP-8626

OPTI-Lite™/EZ-Shot™ A/C Kit

- Most Economical!

Contains:

- TP-8620CS OPTI-Lite™ economy, 6-LED blue light leak detection flashlight
- TP-9790 EZ-Shot™ A/C dye injection kit with TP-9747 hose/coupler for R-134a systems and R-12 adapter/purge fitting
- TP-9770-0108 8 oz (237 ml) universal A/C dye cartridge for servicing up to 64 vehicles
- 120884 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner
- TP-9940 fluorescence-enhancing glasses
- TP-1140 plastic carrying case



TP-8648

Complete LeakFinder™ Wind & Water Kit — Find Leaks in Truck/Trailer/Auto Bodies, Fast and Easy!

Locate wind and water leaks in moon and sunroofs, windshields, door and trunk seals, cabs and joints, or any other place leaks can occur!

Contains:

- TP-8640CS OPTIMAX Jr™ ultra-compact, high-intensity blue light LED flashlight
- TP-1131 pressure-adjustable TracerJet[™] spray gun
- •TP-3900-0008 8 oz (237 ml), twin-neck bottle of Dye-Lite® fluorescent water dye
- TP-9940 fluorescence-enhancing glasses
- TP-1142 plastic carrying case

12-Volt, Corded Lamps and Kits

TP-8000A TITAN® UV/Blue™ 100-Watt Lamp (Patented) — Most Powerful!

- · Patented dichroic filter produces significantly more light for faster, more reliable leak detection
- Super-high intensity flashlight-style lamp
- Inspection range of up to 5 feet (1.5 m) or more
- · Bulb rating: 12 volts, 100 watts, "instant-on"
- 12-foot (3.7 m) coiled cord with alligator clips
- TP-9940 fluorescence-enhancing glasses



- **Blue Light 3-LED Lamp**
- Inspection range of up to 8 feet (2.4 m) or more
- 100,000-hour LED service life
- 14-foot (4.3 m) cord with alligator clips
- TP-9940 fluorescence-enhancing glasses

TP-1100 UV/Blue™ 50-Watt Lamp — Most Economical!

- Compact, high-intensity lamp
- Inspection range of up to 2 feet (0.6 m) or more
- Bulb rating: 12 volts, 50 watts, "instant-on"
- 14 foot (4.3 m) cord with alligator clips
- TP-9940 fluorescence-enhancing glasses



TP-1126 EZ-Shot™ 50-Watt A/C Kit

- TP-1100 high-intensity, 50-watt *UV/Blue™* lamp
- TP-9790 EZ-Shot A/C dye injection kit with:
- TP-9747 hose/coupler for R-134a systems with R-12 adapter purge fitting
- TP-9770-0108 8 oz (237 ml) universal A/C dye cartridge for servicing up to 64 vehicles
- 120884 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner
- TP-9940 fluorescence-enhancing glasses
- TP-1140 plastic carrying case





TP-1127

Complete EZ-Ject™/50-Watt A/C and Fluid Kit

- TP-1100 high-intensity, 50-watt UV/Blue™ lamp
- TP-9845 EZ-Ject[™] A/C dye injector assembly, TP-9847 8" hose assembly, 1/4" flare check valve, R-12 adapter/purge fitting and R-134a coupler, low side
- TP-9870 universal A/C dye cartridge for servicing up to 14 vehicles
- TP-3400-0001 1 oz (30 ml) bottle of Dye-Lite® All-In-One™ concentrated dye for oil, fuel, ATF, PS and hydraulics, services
- TP-3900-0001 1 oz (30 ml) bottle of Dye-Lite® water-based dye for coolant and auto body leaks
- TP-9940 fluorescence-enhancing glasses
- TP-1143 plastic carrying case



Complete LeakFinder™ A/C and Fluid Kit

- Finds All Auto Leaks! Pinpoints A/C, Oil, Fuel, ATF, PS, Hydraulics and Coolant Leaks Contains:

- TP-1100 high-intensity, 50-watt UV/Blue™ lamp
- TP-9881 syringe A/C dye injector assembly with hose/coupler for R-134a systems and R-12 adapter/purge fitting
- TP-3840-0001 1 oz (30 ml) bottle of universal A/C dye, services up to 4 vehicles
- TP-3400-0001 1 oz (30 ml) bottle of Dye-Lite® All-In-One™ concentrated dye for oil, fuel, ATF, PS and hydraulics, services
- TP-3900-0001 1 oz (30 ml) bottle of coolant dye
- 120884 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner
- TP-9940 fluorescence-enhancing glasses
- TP-1141 plastic carrying case

Kits for the Heavy Duty Market



TP-8697HD

Complete OPTIMAX™ 3000/EZ-Ject™ Heavy-Duty A/C and Fluid Kit

Contains

- TP-8690 OPTIMAX™ 3000 super-high intensity blue light LED flashlight with battery charger
- TP-9845 EZ-Ject™ A/C dye injector assembly, TP-9847 8" hose assembly, ¼" flare check valve, R-134a coupler, low-side and R-12 adapter/purge fitting
- TP-9870 (2) universal A/C dye cartridges, each ½ oz (14.8 ml) cartridge services up to 14 vehicles
- TP-3400-0008 8 oz (237 ml) bottle of Dye-Lite® All-In-One™ concentrated dye for oil, fuel, ATF, PS and hydraulics, services up to 16 vehicles
- TP-3900-0008 8 oz (237 ml) bottle of Dye-Lite® water-based dye for coolant and auto body leaks, services up to 8 vehicles
- 120884 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner
- TP-9940 fluorescence-enhancing glasses
- TP-1140 plastic carrying case



TP-8647HD Complete OPTIMAX Jr™/EZ-Ject™ Heavy-Duty A/C

and Fluid Kit

Contains:

- TP-8640CS OPTIMAX Jr[™] high intensity blue light LED leak detection flashlight
- TP-9845 EZ-Ject™ A/C dye injector assembly, TP-9847 8" hose assembly, ¼" flare check valve, R-134a coupler, low side and R-12 adapter/purge fitting
- TP-9870 (2) universal A/C dye cartridges, each ½ oz (14.8 ml) cartridge services up to 14 vehicles
- TP-3400-0008 8 oz (237 ml) bottle of Dye-Lite® All-In-One™ concentrated dye for oil, fuel, ATF, PS and hydraulics, services up to 16 vehicles
- TP-3900-0008 8 oz (237 ml) bottle of Dye-Lite® water-based dye for coolant and auto body leaks, services up to 8 vehicles
- 120884 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner
- TP-9940 fluorescence-enhancing glasses
- TP-1140 plastic carrying case

Quick Fact!

Tracerline® fluorescent dyes are used and approved by Kenworth, Freightliner, Cummins, Caterpillar, John Deere, GM, Ford, Chrysler, Nissan Diesel, International Truck and other major OEMs

Corded UV Lamps and Kits

Ultraviolet lamps are the original leak detection technology, producing virtually no visible light. This makes even the smallest leaks glow brighter!



TP-35020 Featuring the TP-35000 MAXIMA™ **Spot UV Lamp**



TP-35029M Featuring the TP-35000M MAXIMA™ **Battery-Operated Spot UV Lamp**

MAXIMATM Series Lamp Kits (U.S. Pat. 6,573,665)

— Ultra-high intensity UV output!

- Micro Discharge Light (MDL) technology delivers up to 10 times the UV output of 150-watt lamps
- Inspection range of up to 30 feet (9.1 m) or more
- Works even in direct sunlight
- Bulb: "instant-on", available in 120V, 230V, 240V and 100V versions
- 8 foot (2.4 m) cord from lamp to ballast, and 8 foot (2.4 m) cord from ballast to AC power source
- TP-35000 Specifications: lamp head 2.5 lbs (1.1 kg), solid-state ballast, 3.6 lbs (1.6 kg)
- TP-35000M Specifications: lamp head 2.5 lbs (1.1 kg), solid-state ballast with battery pack, 10.6 lbs (4.8 kg)

Kits include: UV-absorbing glasses (TP-9939), fluorescence-enhancing glasses (TP-9940), 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner (120884) and plastic carrying case (TP-1340). TP-35029M kit also includes 12-volt rechargeable battery, 120V AC charger and shoulder strap (TP-1509). Battery pack can be attached to ballast housing for easy transport. Lamp can also be AC operated via interchangeable power cord.

Also available:

- TP-35000FL flood lamp version for wider beam profile
- TP-35000RS retractable "flying" reel version
- TP-35110D diffusing filter, for use with TP-35000 spot bulb version

TP-1390 TRITAN™ 365 UV Lamp

Versatile, Ultra-High Intensity, Multi-LED, Broad-Beam UV Lamp!

- Three UV LEDs for leak detection plus one white LED for illuminating dark work areas
- Inspection range of up to 20 feet (6.1 m) or more
- · Works with all automotive/truck systems and dyes, especially difficult-to-fluoresce yellow dyes
- Extra-wide beam profile ideal for leak checking large radiators and condensers
- Instant-on operation; lamp reaches full intensity immediately.
- Grip-mounted, three-position rocker switch (white light/off/UV)
- Rubber bumper with Borofloat® glass lens protects LEDs from damage
- Built-in fan keeps LEDs cool to maintain optimum light intensity during extended use
- 8 foot (2.5 m) power cord with AC plug (available in 120V, 230V, 240V and 100V versions)
- Specifications: lamp head diameter, 3.25 in (8.3 cm); weight, 1 lb (454 g)
- TP-9939 UV-absorbing glasses



Battery-Operated UV Lamp Kit

Featuring the TP-1390M TRITAN™ 365 **UV Lamp**

Includes: rechargeable 12-volt NiMH battery pack (TP-1395), AC/DC adapter cord set (TP-1393), smart AC charger (TP-1396), UV-absorbing glasses (TP-9939) and soft carrying case (TP-1392A).



- Extremely high intensity
- Heat guard/lamp stand
- 8 foot (2.5 m) cord, AC-powered
- Inspection range of up to 25 feet (7.6 m) or more
- Built-In-Ballast™ bulb eliminates the need for a heavy, external transformer
- Bulb rating:150 watts (available in 120V, 230V, 240V and 100V versions)
- Specifications: 31/4 lbs (1.5 kg), 63/4 x 101/4 in (17.1 x 26 cm)
- TP-9939 UV-absorbing glasses

TP-1620 lamp kit also available: Contains TP-1600P UV lamp, UV-absorbing glasses (TP-9939), 8 oz (237 ml) spray bottle of GLO-AWAY™ dye cleaner (120884) and plastic carrying case (TP-1640, not shown)



Tracerline® 50-Watt Long Wave UV Lamp

— Portable!

- High intensity flashlight-style lamp
- Bulb rating: 12 volts, 50-watts, "instant-on"
- 12 ft. (3.7 m) coiled cord with alligator clips
- Inspection range of up to 11/2 ft (0.46 m) or more
- TP-9939 UV-absorbing glasses

Lamp Comparison/Selection Guide

Use this guide to select the lamp you need

TP-1390M, TP-1600P and **TP-1700P** lamps come with one pair of UV-absorbing glasses (TP-9939). **TP-35000** and **TP-35000M MAXIMA™** lamps come with one pair of UV-absorbing glasses (TP-9939) and one pair of fluorescence-enhancing glasses (TP-9940). All other lamps come with one pair of fluorescence-enhancing glasses (TP-9940).

	12-Vol	t, Corded L	amps		Cor	ded UV Lamps	
Specifications	TP-8000A	TP-1300	TP-1100	TP-1700P	TP-1600P	TP-35000 MAXIMA™	TP-1390 TRITAN™ 365
Recommended uses	А	·II	All except heavy duty			All	
Light Intensity	Super High	Very High	High	High	Extremely High	Ultra	High
Bulb Rating	100 watts	3 LEDs (comparable to 100W lamp)	50 watts	50 watts	150 watts	35 watts MDL	3 Ultra-High-Flux UV LEDs & 1 White LED (comparable to 300W lamp)
Inspection Range ^① Maximum	5 ft (1.5 m) or more	8 ft (2.4 m) or more	2 ft (0.6 m) or more	1½ ft (0.46 m) or more	25 ft (7.6 m) or more	30 ft (9.1 m) or more	Yellow Dye: Up to 20 ft (6.1 m) or more
Recommended	Up to 3 ft (0.9 m)	Up to 4 ft (1.2 m)	Up to 12 in (30 cm)	Up to 10 in (26 cm)	Up to 8 ft (2.4 m)	Up to 10 ft (3.0 m)	Green Dye: Up to 6 ft (1.8 m) or more ②
Lamp Style	Flashlight	Com	pact	Flashlight		Pistol Grip	
Operation		Instant-on		Instant-on	5 minute warm-up	Insta	int-on
Lamp Head Diameter x Length	3½ x 7½ in (8.3 x 19 cm)	2½ x 6 (6.3 x 1		3¼ x 7½ in (8.3 x 19 cm)	6% x 10% in (17.1 x 26 cm)	6¾ x 7½ in (17.1 x 19.1 cm)	3¼ x 8 in (8.3 x 20.3 cm)
Weight	10.5 oz (298 g)	3.9 (113	~-	10.5 oz (298 g)	3¼ lb (1.5 kg)	Lamp head 2.5 lb (1.1 kg) with ballast 6.1 lb (2.8 kg)	1 lb (454 g)
Cord Length	12 ft (3.7 m) coiled cord with alligator clips	14 ft (4 wit alligato	th	12 ft (3.7 m) coiled cord with alligator clips	8 ft (2.5 m) cord with AC plug	Primary and secondary cords are both 8 ft (2.5 m) long	8 ft (2.5 m) cord with AC plug
Power Requirement		12 VDC		12 VDC	120V, 230V, 240V 12 VDC and 100VAC versions		
Options/ Accessories	_	_	_	_	20 ft (6.1 m) cord	TP-35000M battery-operated version	TP-1390M battery-operated version

① Depending on room light levels, as measured from bulb to leak site.

② The lamp's broad UV beam works best at closer distances.

Lamp Comparison/Selection Guide

Use this guide to select the lamp you need

TP-8690UV lamp comes with one pair of UV-absorbing glasses (TP-9939). All other lamps come with one pair of fluorescence-enhancing glasses (TP-9940).

		Cordless LED Lamps								
Specifications	TP-8620CS OPTI-Lite™	TP-8640CS OPTIMAX Jr™	TP-8690 OPTIMAX™ 3000	TP-8690UV OPTIMAX™ 365	TP-8670CS Quad Max Pro™	TP-9355 Dual-Max				
Recommended uses			All		Light Duty	All				
Light Intensity	High	Very High	Super High	Ultra High	Medium	Very High				
Bulb Type	6 LEDs (comparable to 50W lamp)	High-Flux LED (comparable to 75W lamp)	Super-High-Flux LED (comparable to 150W lamp)	Ultra-High-Flux UV LED (comparable to 150W lamp)	3 UV LEDs & 1 White LED	1 High-Flux Blue LED & 1 High-Flux White LED (comparable to 75W lamp)				
Inspection Range ① Maximum	2 ft (0.6 m)	6 ft (1.8 m) or more	,	20 ft (6 m) or more		6 ft (1.8 m) or more				
Recommended	Up to 12 in (30 cm)	Up to 3 ft (0.9 m)	Up to (1.8		Up to 2 in (5 cm)	Up to 3 ft (0.9 m)				
Lamp Style		Flashlight Flexible head Flashlight			Flashlight					
Operation			Insta	int-on						
Lamp Head Diameter x Length	1 ³ / ₃₂ x (2.8 x		1 15/16 x 7 ½ in (4.9 x 20 cm)	2 x 8 in (5.1 x 20.3 cm)	5% x 18 in (1.6 x 46 cm)	11/8 x 61/16 in (2.9 x 15.4 cm)				
Weight	4.8 (13:		11.2 (318	~ -	7.5 oz (216 g)	5.8 oz (164 g)				
Power Requirement	3 "/ batte	= -	Rechargeable NiMH battery		Rechargeable NiMH battery		Rechargeable NiMH b		· ·	"AAA" atteries
Options/ Accessories	_	_	120V, 230V, 240V or 100VAC smart charger (included)	AC and DC smart chargers (included). AC chargers available in 120V, 230V, 240V and 100V versions)	Adjustable mirror (included)	_				

① Depending on room light levels, as measured from bulb to leak site.

Specialized Diagnostic Tools



TP-9370

Converts and amplifies inaudible ultrasonic sound into audible "natural" sound for accurate diagnosis of leaks and defects.

Finds problems <u>before</u> they result in major breakdowns.

- Detects air brake, tire, compressed air, vacuum, EVAP system and other pressurized leaks quickly and effortlessly
- Pinpoints gear and bearing wear in wheel hubs, transmissions, transfer cases, differentials and electric motors
- Checks for electrical discharge associated with insulation breakdown, carbon tracking and arcing
- Finds air and water leaks around faulty seals, gaskets and weatherstripping in passenger cabs, trailers and other non-pressurized enclosures

Master Kit includes: Ultrasonic receiver, ultrasonic emitter, headphones, air probe, contact probe and carrying case

Also available: TP-9371 (same as TP-9370, but without emitter)





TP-9360

Electronic Refrigerant Leak Detector Features high-performance heated-diode sensor technology!

- Optimum sensitivity detects leaks down to 0.25 oz/year (7 g/year)
- Sensor life up to 200 hours or more
- Automatically self-calibrates to neutralize background contamination
- Sensitive to R-12, R-134a and all other HFC refrigerants
- High/low switch for accurate diagnosis of both large and small leaks
- Variable-intensity audible alarm plus flashing LED help pinpoint leaks fast
- Chrome-plated, flexible metal probe holds its position in tight spaces
- Easily replaceable foam filter protects sensor and pump
- Includes sensor, replacement filters, (2) D cell batteries and rugged storage case



Specialized Diagnostic Tools

COBRA™ Series Multipurpose Borescopes





Feature built-in UV LED for detecting refrigerant leaks, fluid leaks and surface flaws, <u>plus</u> white light LED for component inspection!

- Advanced 7400 pixel imaging bundle and adjustable-focus eyepiece allow crystal-clear viewing
- "No-droop" shaft maintains position for easier access into hardto-view areas
- Strong, impact- and water-resistant nylon housing stands up to the daily abuse of a shop environment
- · Pistol grip handle provides steady, comfortable viewing
- Clip-on mirror permits viewing at an angle to detect "hidden" leaks and flaws
- TP-9350 COBRA™ equipped with 10 mm, 24 inch (61 cm) shaft
- TP-935036 COBRA-Plus[™] features 10 mm, extra-long 36 inch (91.4 cm) shaft for greater versatility
- · Includes fluorescence-enhancing glasses and padded carrying case



TP-9354 COBRA-4™

Features a detachable dual-head flashlight with superbright blue <u>and</u> white light LEDs for both leak detection <u>and</u> internal component inspection. Designed for specialized applications that require extended reach or viewing into deep recesses. Slides easily into inaccessible areas.

- Advanced 7400 pixel imaging bundle provides unsurpassed resolution and clarity
- Super-thin, 4 mm water- and abrasive-resistant 36 inch (91.4 cm) flexible shaft for added versatility. Gets into <u>very</u> small spaces and orifices other scopes miss!
- Efficient, press-fit coupler design allows for quick changing of light source
- Clip-on, angled mirror helps pinpoint leaks and flaws normally hidden from view
- Includes fluorescence-enhancing glasses and padded carrying case

Model	Light Source	Inspection Range	Lamp Style	Operation	Shaft Diameter X Length	Weight	Power Requirements
TP-9350 COBRA™	1 UV LED and	<i>Maximum:</i> 0.4 in (1 cm) to infinity ①	Flexible		0.4 x 24 in (10 mm x 61.7 cm)	1 lb (454 g)	4 "AA"
TP-935036 COBRA-Plus™	1 white LED (built-in)	Recommended: Up to 2 in (5 cm) ②	head	Instant-on	0.4 x 36 in (10 mm x 91.4 cm)	1¼ lb (567 g)	batteries
TP-9354 COBRA-4™	Dual-head flashlight with super-bright blue <u>and</u> white light LEDs	Maximum: 0.4 in (1 cm) to infinity ① Recommended: Up to 2 in (5 cm) ②	Compact Flashlight	Instant-on	0.16 x 36 in (4 mm x 91.4 cm)	7 oz (202 g)	3 "AAA" batteries

- Tocal viewing field
- ② For UV leak detection

Dye and Hardware Comparison/Selection Guide

Select the dye(s) and injection method you need based on the description, refrigerant, system size and other factors in this guide. All dyes, dye packs and leak detection kits include underhood labels.

Important Note: All Tracerline® universal/POE AC&R dyes have been laboratory tested and are proven safe for use in **hybrid** vehicles.





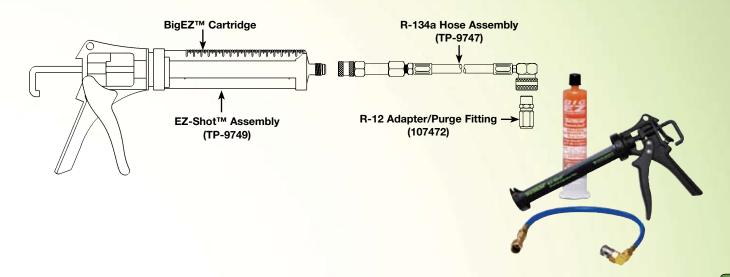




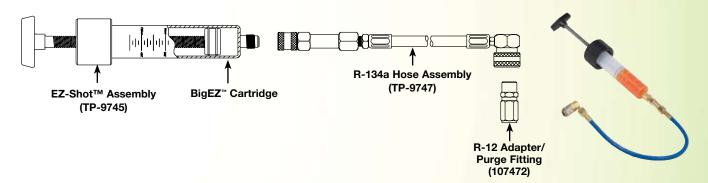


		3			Fam
Method	BigEZ™ Cartridges and BigEZ™ and EZ-Shot™ Injectors	EZ-Ject™ and Mini-EZ™ Cartridges and Injectors	Tracer-Stick [®] Capsules and R-134a Connect Set™ or Standard Hardware	Bottled Dyes and Injectors	Dyed Refrigerant Oils
Description	Fast, easy, economical Large size, multi-dose, prefilled, disposable multi-dose EZ-Ject™ and single-dose Mini-EZ™ dye cartridges		Easy Single-dose, prefilled, disposable dye capsules	Economical Bottled dyes used with refillable injectors	Fast and convenient Easy way to add both oil and fluorescent dye into system
For these refrigerants		Comp	atible with <u>all</u> refrigerant	S	
For this system size	4 oz (118 ml) cartridge services up to 32 vehicles 8 oz (237 ml) cartridge services up to 64 vehicles	 ½ oz (14.8 ml) EZ-Ject™ cartridge services up to 14 vehicles ¼ oz (7.4 ml) Mini-EZ™ cartridge services 1 vehicle 	Vehicle A/C systems with 2-25 lbs (0.9 – 11.3 kg) of refrigerant or 5 oz – 2 gal (150 ml – 7.6 L) of lubricant	1/4 oz (7.4 ml) of dye services 1 standard-size vehicle with up to 3 lbs (1.4 kg) of refrigerant or 10 fl oz (300 ml) of lubricant	All
Use this dose	1/8 oz (3.7 ml) per standard-size vehicle	EZ-Ject™ 0.035 oz (1 ml) per standard-size car. Mini-EZ™ ¼ oz (7.4 ml) per standard-size vehicle	See Tracer-Stick Capsules Section	1/4 oz (7.4 ml) per standard size vehicle	Check with system manufacturer
Dye types available	Universal/POE for <u>all</u> refrigerants, as well as lubricant-specific for R-134a/PAG and R-12/mineral oil	Universal/POE for <u>al</u>	Universal/POE for <u>all</u> refrigerants, as well as lubricant-specific for R-134a/PAG		
Dye available in	Individual 4 oz (118 ml) and 8 oz (237 ml) cartridges	Individual ½ oz (14.8 ml) EZ-Ject™ cartridges and ¼ oz (7.4 ml) Mini-EZ™ cartridges	Small and large capsules with four dye concentrations	12-pack – ½ oz (7.4 ml), 6-pack – 1 oz (30 ml) Single 8 oz (237 ml), 16 oz (473 ml) and 32 oz (946 ml) bottles	8 oz (237 ml), 32 oz (946 ml) and 1 gallon (3.8 L)
Injectors required	TP-9741 BigEZ™ PAG-low side, TP-9742 BigEZ™ universal, TP-9790 EZ-Shot™ universal	TP-9841CS EZ-Ject™ universal, TP-9848 EZ-Ject™ R-134a/PAG, TP-9890 Mini-EZ™ R-134a/PAG, TP-9891 Mini-EZ™ universal	R-134a Connect Set Small Capsules: TP-3887 (low side) TP-9887 (high side) Large Capsules: TP-3837 (low side) TP-9837 (high side)	Hose & coupler included TP-9880 universal dye injector for R-12 & R-134a systems TP-3886A injector for R-134a systems TP-9881 syringe dye injector for R-12 and R-134a systems	None

EZ-Shot™ Multi-Dose A/C Dye Injection Gun – Super Fast!



BigEZ™ Multi-Dose A/C Dye Injector – *Most Accurate!*



EZ-Shot™ and BigEZ™ hose assemblies and couplers are interchangeable and can be used for either system!

BigEZ™ Cartridge Hookup Chart



For These 4 oz (118 ml)		Use This Hose (Co	unler Included)
and 8 oz (237 ml) BigEZ™ Cartridges	With These Systems	LOW SIDE	HIGH SIDE
TP-9750 Series (R-12/mineral oil)	R-12/mineral oil		TP-9746*
TP-9760 Series (R-134a/PAG)	R-134a/PAG	TP-9747	TP-9748
TP-9770 Series	R-12/mineral oil		TP-9746*
(Universal/POE)	R-134a/PAG and R-134a/ester		TP-9748

^{*}Use any standard R-12 HIGH-SIDE adapter for high-side injection.

(U.S. Patent No. 6,056,162)

BigEZ™ Multi-Dose A/C Dye Injection Kits

The BigEZ™ dye injector is the easiest and most accurate method of adding dye to a vehicle's A/C system. Disposable BigEZ cartridges are prefilled with *co-solvent free* A/C dye, certified to meet SAE standard J2297 and calibrated for exact dosing. The 4 oz (118 ml) dye cartridge services up to 32 vehicles.

Low-side and high-side kits are available for R-134a/PAG systems and a low-side kit is available with universal/POE dye for <u>all</u> refrigerants. Low-side kits are available in full-color, plastic, hanging clamshell display packages ("CS" suffix in product number).

TP-9741CS
BigEZ™ R-134a/PAG
A/C Dye Injection Kit

TP-9742CS
BigEZ™ Universal
A/C Dye Injection Kit



8 oz (237 ml) BigEZ™ cartridges also fit most popular caulking gun dye injectors.

4 oz (118 ml) BigEZ™ cartridges also fit all popular caulking gun and pump-type dye injectors.

BigEZ™ Multi-Dose A/C Dye Injection Kits -What to Order

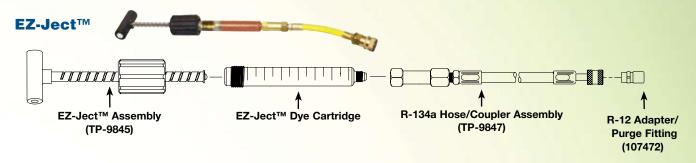
Product Number	Description (All kits include underhood labels)
TP-9741 or TP-9741CS	For <u>LOW-SIDE</u> injection of R-134a systems only 1 – TP-9745 BigEZ™ assembly 1 – TP-9760-0004 4 oz (118 ml) BigEZ™ multi-dose cartridge for R-134a/PAG systems 1 – TP-9747 injection hose with LOW-SIDE quick coupler for connection to R-134a/PAG systems 1 – 107472 R-12 purge/adapter fitting
TP-9742 or TP-9742CS	For <u>LOW-SIDE</u> injection of R-12 <u>and</u> R-134a systems 1 − TP-9745 BigEZ [™] assembly 1 − TP-9770-0004 4 oz (118 ml) BigEZ [™] multi-dose cartridge with universal/POE dye for <u>all</u> refrigerant systems 1 − TP-9747 injection hose with LOW-SIDE quick coupler for connection to R-134a/PAG systems 1 − 107472 R-12 purge/adapter fitting
TP-9743	For <u>HIGH-SIDE</u> injection of R-134a systems <u>only</u> 1 − TP-9745 BigEZ [™] assembly 1 − TP-9760-0004 4 oz (118 ml) BigEZ [™] multi-dose cartridge for R-134a/PAG systems 1 − TP-9748 injection hose with HIGH-SIDE quick coupler for R-134a/PAG systems

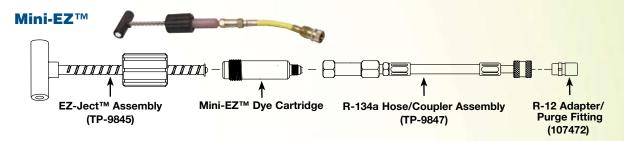
BigEZ™ Multi-Dose Dye and Oil Cartridges for BigEZ™ and EZ-Shot™ Injectors *–What to Order*



		Product Number	Description
	Dye for R-12/Mineral Oil Systems	TP-9750-0004CS	1 - 4 oz dye cartridge
DYE	Dye for R-12/Millieral Oil Systems	TP-9750-0108	1 - 8 oz dye cartridge
CARTRIDGES 4 oz (118 ml) and 8 oz (237 ml)	Dye for R-134a/PAG Systems	TP-9760-0004CS	1 - 4 oz dye cartridge
		TP-9760-0108	1 - 8 oz dye cartridge
	Universal/POE Dye (Compatible with <u>All</u> Lubricants and Refrigerants)	TP-9770-0004CS	1 - 4 oz dye cartridge
		TP-9770-0108	1 - 8 oz dye cartridge
		TP-9761-0108	1 - 8 oz oil cartridge - 46 cSt viscosity
OIL	PAG Oil	TP-9762-0108	1 - 8 oz oil cartridge - 100 cSt viscosity
8 oz (237 ml)		TP-9763-0108	1 - 8 oz oil cartridge - 125 cSt viscosity*
only	Fatan Oil	TP-9764-0108	1 - 8 oz oil cartridge - 150 cSt viscosity
_	Ester Oil	TP-9771-0108	1 - 8 oz oil cartridge - 100 cSt viscosity

EZ-Ject™ Multi-Dose and Mini-EZ™ Single-Dose Dye Injection Systems – *Simplest!*





EZ-Ject™ and Mini-EZ™ Dye Injection Systems are Available as Complete Kits -*What to Order*

Product Number	Description (All kits include underhood labels)
TP-9841 or TP-9841CS	EZ-Ject™ Universal Low-Side Kit 1 – EZ-Ject™ assembly – plunger handle and fitting (TP-9845) 1 – 8" hose assembly, ¼" flare check valve & R-134a coupler, low-side (TP-9847) 1 – R-12 adapter/purge fitting (107472) 1 – universal/POE A/C dye cartridge (TP-9870)
TP-9848	EZ-Ject™ R-134a/PAG Kit 1 – EZ-Ject™ assembly – plunger handle and fitting (TP-9845) 1 – 8" hose assembly, ¼" flare check valve & R-134a coupler, low-side (TP-9847) 1 – R-12 adapter/purge fitting (107472) 1 – R-134a/PAG dye cartridge (TP-9860)
TP-9890	Mini-EZ [™] R-134a/PAG Kit 1 – EZ-Ject [™] assembly – plunger handle and fitting (TP-9845) 1 – 8" hose assembly, ¼" flare check valve & R-134a coupler, low-side (TP-9847) 1 – R-12 adapter/purge fitting (107472) 6 – Mini-EZ [™] ¼ oz (7.4 ml) cartridges for R-134a/PAG systems (TP-9865-0601)
TP-9891	Mini-EZ [™] Universal Kit 1 – EZ-Ject [™] assembly – plunger handle and fitting (TP-9845) 1 – 8" hose assembly, ¼" flare check valve & R-134a coupler, low-side (TP-9847) 1 – R-12 adapter/purge fitting (107472) 6 – Mini-EZ [™] ¼ oz (7.4 ml) cartridges that are compatible with <u>all</u> lubricant systems (TP-9875-0601)

EZ-Ject™ and Mini-EZ™ Dye Capsule Replacements-What to Order

Product Number	Description
TP-9860-0601	6 – EZ-Ject™ ½ oz (14.8 ml) cartridges for R-134a/PAG systems
TP-9870CS	1 – EZ-Ject™ ½ oz (14.8 ml) universal/POE cartridge compatible with all A/C systems
TP-9870-0601	6 – EZ-Ject™ ½ oz (14.8 ml) universal/POE cartridges compatible with all A/C systems
TP-9865-0601	6 – Mini-EZ™ ¼ oz (7.4 ml) cartridges for R-134a/PAG systems
TP-9875-0601	6 – Mini-EZ™ ¼ oz (7.4 ml) universal/POE cartridges compatible with all A/C systems

Tracer-Stick® Single-Dose Dye Capsules, R-134a Connect Set™ and Standard Hardware

Tracer-Stick® Capsules 2-Step Selection Guide

Read across and choose the column with the amount of refrigerant/lubricant in the system being leak-checked. Use multiple Tracer-Stick® capsules for larger systems.

Amount of Refrigerant	Up to 2.9 lb	3 to 4.9 lb	5 to 9.9 lb	10 to 25 lb
	(1.3 kg)	(1.4 to 2.2 kg)	(2.3 to 4.5 kg)	(4.6 to 11.3 kg)
Amount of Lubricant	Up to 15 fl. oz	1 pt to 1.6 qt	1.7 to 3.2 qt	3.3 qt to 2 gal
	(450 ml)	(0.5 to 1.5 L)	(1.6 to 3.0 L)	(3.1 to 7.6 L)
Typical Vehicle Type	Passenger Cars	Vans and Small Trucks	Large Trucks and Small Buses	Full-Size Buses and Refrigerated Freight

Then read down that column and choose the Tracer-Stick® capsule part number below that is across from the lubricant type in the system. (If lubricant type is not known, Tracer-Stick® universal/POE capsules are compatible with <u>all</u> lubricants.)

Lubricant Type	Small Capsules	Large Capsules			
Mineral Oil	TP-3850	TP-3855	TP-3856	TP-3857	
PAG	TP-3860	TP-3865	TP-3866	TP-3867	
Universal/POE	TP-3870	TP-3875	TP-3876	TP-3877	

What to Order

	Product Number	Description
	TP-3850-0601	6 - 0.03 oz (1 ml) capsules
R-12/Mineral Oil Systems	TP-3855-0601	6 - 0.5 oz (14.8 ml) capsules
R-12/Mineral Oil Systems	TP-3856-0601	6 - 0.5 oz (14.8 ml) capsules
	TP-3857-0601	6 - 0.5 oz (14.8 ml) capsules
	TP-3860-0601	6 - 0.06 oz (1.9 ml) capsule
D 424a/DAC Systems	TP-3865-0601	6 - 0.5 oz (14.8 ml) capsules
R-134a/PAG Systems	TP-3866-0601	6 - 0.5 oz (14.8 ml) capsules
	TP-3867-0601	6 - 0.5 oz (14.8 ml) capsules
	TP-3870-0601	6 - 0.06 oz (1.9 ml) capsules
Universal/POE	TP-3875-0601	6 - 0.5 oz (14.8 ml) capsules
— for <u>All</u> A/C Systems	TP-3876-0601	6 - 0.5 oz (14.8 ml) capsules
	TP-3877-0601	6 - 0.5 oz (14.8 ml) capsules

How It Works

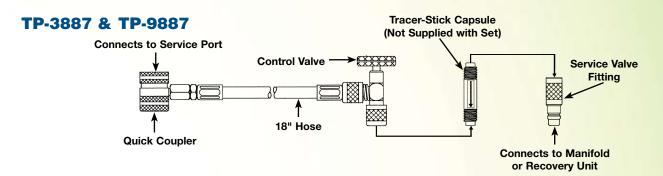
Choose the hardware you need according to whether SMALL CAPSULES (0.03 or 0.06 oz) or LARGE CAPSULES (0.5 oz) are used.

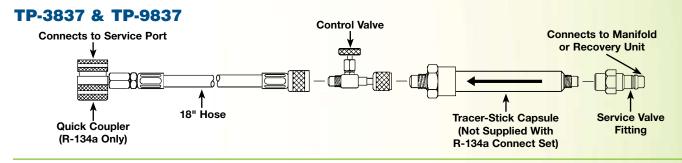
<u>For R-134a systems only</u>: There are two ways to hook up Tracer-Stick® Capsules to add Fluoro-Lite® dye

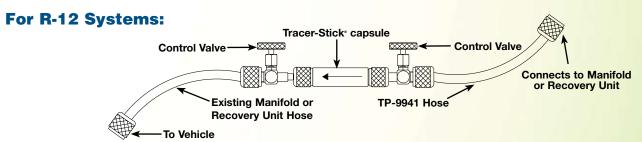
- An R-134a Connect Set[™] provides the easiest hookup method. Choose either LOW-SIDE or HIGH-SIDE connect set, or
- 2. Control valve and hose with quick coupler.



For these	Use this R-134a Connect Set [™] for			
Tracer-Stick® Capsules	LOW SIDE	HIGH SIDE		
TP-3860 (small capsules)	TP-3887	TP-9887		
TP-3870 (small capsules)	Includes: TP-9947 hose, TP-3888 coupler, TP-3889 fitting, TP-3861 valve	Includes: TP-9947 hose, TP-9888 coupler, TP-9889 fitting, TP-3861 valve		
TP-3865, TP-3866 and TP-3867 (large capsules)	TP-3837 <i>Includes:</i> TP-9946 hose, TP-3888	TP-9837 Includes: TP-9946 hose, TP-9888		
TP-3875, TP-3876 and TP-3877 (large capsules)	coupler, TP-3838 fitting, TP-3851 valve	coupler, TP-9838 fitting, TP-3851 valve		



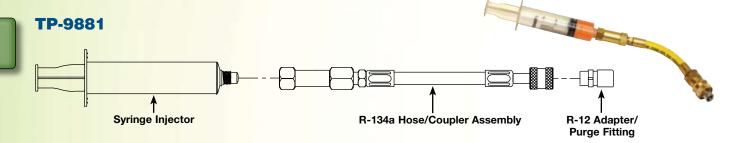




What to Order

Tracer-Stick® Capsule	Refrigerant System	Use This Hose	Use This Valve (2 required)	Hose Connections			
TP-3850 (small capsules), TP-3855, TP-3856, TP-3857 (large capsules)	R-12	TP-9941	TP-3851	1/4" flare			
TP-3860 (small capsules)	R-134a/PAG		Use R-134a Connect Set				
TP-3870 (small capsules)	R-134a/PAG and Ester	TP-3887 (low-side) or TP-9887 (high-side)					
TP-3870 (small capsules)	R-12	TP-9941	TP-3872	1/4" flare			
TP-3875, TP-3876, TP-3877 (large capsules)	R-134a/PAG and Ester	TP-38	Use R-134a Connect S 337 (low-side) or TP-9837 (hiç				
TP-3875, TP-3876, TP-3877 (large capsules)	R-12	TP-9941	TP-3851	1/4" flare			

Bottled Dyes and Dye Injectors Hookup, Hardware and Bottled Dyes TP-9880 R-134a Hose/Coupler Assembly OR R-12 Hose Assembly (with TP-9880 only) R-134a Adapter End Cap TP-3885 Extension Set



Dye Injectors

A Tracerline® dye injector is required to add Fluoro-Lite® bottled dye to an air conditioning or refrigeration system. To increase the capacity of a dye injector from ¼ oz (7.4 ml) (recommended for passenger cars) up to a maximum of 2 oz (59 ml) for larger AC&R systems, use the TP-3885 extension kit.

The TP-9880 universal A/C dye injector or TP-9881 syringe A/C dye injector can be used for ALL A/C dyes and systems. Includes ½" Acme and ¼" flare connection, with R-134a low-side quick coupler and R-12 adapter. Use any standard R-12 high-side adapter for high-side injection.

What to Order

Product Number	Description
TP-3849CS	Syringe A/C Dye Injection Kit 1 - TP-9881 syringe assembly with pressure check valve, hose, and R-134a coupler with R-12 adapter/purge fitting 1 - TP-3840-0001 1 oz (30 ml) bottle of Fluoro-Lite/E® universal/POE A/C dye for all mobile A/C systems
TP-3885	Extension Set increases the capacity of TP-9880 dye injectors from ¼ oz (7.4 ml) to 2 oz (59 ml) in ¼ oz (7.4 ml) increments
TP-3888	Quick coupler (LOW SIDE, R-134a only) for TP-9880 dye injectors and TP-9947 hose
TP-9880	Universal A/C Dye Injector (¼ oz (7.4 ml) capacity) with hoses and quick couplers for all systems
TP-9881	Syringe A/C Dye Injector with pressure check valve & hose for R-12 and R-134a
TP-9888	Quick Coupler (HIGH SIDE, R-134a only) for TP-9880 dye injector and TP-9947 hose
TP-9947	Hose with ½" Acme fittings — for TP-9880 dye injector

Fluoro-Lite® Bottled Dyes

Reminder:

Adding bottled dye to AC&R systems requires dye injection hardware and accessories.



SUGGESTED DILUTION RATIOS

Refrigerant/Lubricant	Product Number	Standard Vehicle	Larger AC&R Systems	
R-134a/PAG	TP-3820		1/4 oz (7.4 ml) for every	
R-12/Mineral Oil	TP-3830	½ oz (7.4 ml)	3 lbs (1 kg) of refrigerant OR	
Universal/POE — for <u>All</u> A/C Systems	TP-3840	,	1/4 oz (7.4 ml) for every 10 oz (300 ml) of lubricant	

Fluoro-Lite® Bottled Dyes What to Order

Refrigerant/Lubricant	Product Number	Description	
	TP-3820-12025	12 - 1/4 oz (7.4 ml) bottles	
	TP-3820-0601	6 - 1 oz (30 ml) bottles	
R-134a/PAG Systems	TP-3820-0008	1 - 8 oz (237 ml) bottle	
	TP-3820-0016	1 - 16 oz (473 ml) bottle	
	TP-3820-0032	1 - 32 oz (946 ml) bottle	
	TP-3830-0601	6 - 1 oz (30 ml) bottles	
R-12/Mineral Oil Systems	TP-3830-0016	1 - 16 oz (473 ml) bottle	
	TP-3830-0032	1 - 32 oz (946 ml) bottle	
	TP-3840-12025	12 - 1/4 oz (7.4 ml) bottles	
	TP-3840-0601	6 - 1 oz (30 ml) bottles	
Universal/POE — for All A/C Systems	TP-3840-0008	1 - 8 oz (237 ml) bottle	
	TP-3840-0016	1 - 16 oz (473 ml) bottle	
	TP-3840-0032	1 - 32 oz (946 ml) bottle	

Super Premium Universal/POE and PAG A/C Oils Premixed with UV Dye

Detect even the smallest leaks when used with any standard fluorescent leak detection lamp. Specially formulated for mobile air conditioning systems. These non-toxic, non-hazardous A/C oils contain super-bright, OEM-approved Fluoro-Lite® fluorescent dye and are <u>safe to use with all types of refrigerants and compressors</u>. In addition to exceptional R-134a miscibility, they also offer enhanced lubricity and stability with a proprietary additive package. Formulated with excellent anti-wear properties, these oils are perfect for preventive maintenance.

Universal/POE Oil with UV Dye

Compatible with R-134a and R-12 refrigerants. Designed for PAG and mineral oil air conditioning and refrigeration systems.

Product Number	Description
TD100E8	POE with UV dye, 8 oz (237 ml)
TD100EQ	POE with UV dye, 32 oz (946 ml)
TD100EG	POE with UV dye, 1 gallon (3.8 L)





PAG Oil with UV Dye

Specifically developed for OE and aftermarket R-134a A/C systems. Available in several viscosities

Product Number	Description
TD46P8	PAG 46 with UV dye, 8 oz (237 ml)
TD46PQ	PAG 46 with UV dye, 32 oz (946 ml)
TD46PG	PAG 46 with UV dye, 1 gallon (3.8 L)
TD100P8	PAG 100 with UV dye, 8 oz (237 ml)
TD100PQ	PAG 100 with UV dye, 32 oz (946 ml)
TD100PG	PAG 100 with UV dye, 1 gallon (3.8 L)
TD150P8	PAG 150 with UV dye, 8 oz (237 ml)
TD150PQ	PAG 150 with UV dye, 32 oz (946 ml)
TD150PG	PAG 150 with UV dye, 1 gallon (3.8 L)



Fluorescent Dyes for Fluid Leak Detection

Dye-Lite® All-In-One™ Full-Spectrum Oil Dyes

(U.S. Patent No. 6,165,384)

Unique formulations ideal for <u>all</u> oil-based fluids. Available in concentrated (TP-3400) and standard (TP-3405) formulas. Dye fluoresces yellow-green under both ultraviolet and blue light. TP-3400 available in 1 oz (30 ml), 8 oz (237 ml), 16 oz (473 ml), and 32 oz (946 ml) bottles. See price list for larger sizes. 1 oz (30 ml) bottles marked in ½ oz (14.8 ml) increments for easy pouring and measuring. TP-3405 available in 1 oz (30 ml) bottles only.



What to Order

FLUID		HOW MUC	H TO USE		WHAT TO ORDER		
TEOID	U.S.	Metric	U.S.	Metric	Product Number	Description	
Engine Oil (Includes Synthetics)	TP-3400	TP-3400	TP-3405	TP-3405	TP-3400-0001CS	1-1 oz (30 ml) bottle (Display Packaged)	
Gasoline	¹ /2 oz per 4-6 qt	14.8 ml per 3.8-5.7 L	1 oz per 4-6 qt	30 ml per 3.8-5.7 L	TP-3400-0601	6-1 oz (30 ml) bottles	
Diesel	1/2 oz per 4 qt	14.8 ml per 3.8 L	1 oz per 4 qt	30 ml per 3.8 L			
Power Steering	1/2 oz per 4 qt	14.8 ml per 3.8 L	1 oz per 4 qt	30 ml per 3.8 L	TP-3400-2401	24-1 oz (30 ml) bottles	
Automatic Transmission	1 oz per 12 qt	30 ml per 11.4 L	2 oz per 12 qt	59 ml per 11.4 L	TP-3400-0008	1-8 oz (237 ml) bottle	
Fuel (Gasoline and Diesel)	1 oz per 12-18 gal	30 ml per 45.4-68.1 L	2 oz per 12-18 gal	59 ml per 45.4-68.1 L	TP-3400-0016	1-16 oz (473 ml) bottle	
Hydraulics (Synthetic- or Petroleum-Based) Light-to-Medium Colored Very Dark or Intensely Blue	1 oz per 8 gal 1 oz per 4 gal	30 ml per 30.3 L 30 ml per 15.1 L	2 oz per 8 gal 2 oz per 4 gal	59 ml per 30.3 L 59 ml per 15.1 L	TP-3400-0032 TP-3405CS	1-32 oz (946 ml) bottle 1-1 oz (30 ml) bottle ① (Display Packaged)	

① Must order in quantities of six

Dye-Lite® Application-Specific Dyes for Oil-Based Fluids

	HOW	MUCH TO USE	WHAT	WHAT TO ORDER		
FLUID	U.S. 1 oz per	Metric 30 ml per	Product Number	Description	Fluorescent Color	
Gasoline Engine Oil	4 to 5 qt	3.8 to 4.7 L	TP-3090-0601 TP-3090-2401 TP-3090-0016 TP-3090-0032	6 – 1 oz (30 ml) bottles 24 – 1 oz (30 ml) bottles 1 – 16 oz (473 ml) bottle 1 – 32 oz (946 ml) bottle		
Diesel Engine Oil	4 to 5 qt	3.8 to 4.7 L	TP-3100-0601 TP-3100-2401 TP-3100-0016 TP-3100-0032	6 – 1 oz (30 ml) bottles 24 – 1 oz (30 ml) bottles 1 – 16 oz (473 ml) bottle 1 – 32 oz (946 ml) bottle	,	
Fuel (Gasoline and Diesel)	10 gal	37.9 L	TP-3700-0601 TP-3700-2401 TP-3700-0016 TP-3700-0032	6 – 1 oz (30 ml) bottles 24 – 1 oz (30 ml) bottles 1 – 16 oz (473 ml) bottle 1 – 32 oz (946 ml) bottle	Yellow/Green	
Automatic Transmission/ Power Steering	6 qt	15 to 22.7 L 3.8 L	TP-3200-0601 TP-3200-2401 TP-3200-0016 TP-3200-0032	6 – 1 oz (30 ml) bottles 24 – 1 oz (30 ml) bottles 1 – 16 oz (473 ml) bottle 1 – 32 oz (946 ml) bottle		
Hydraulics and Oils (Synthetic- or Petroleum-Based) Light-colored Hydraulic Fluid Very Dark or Intensely Blue	8 gal	30.3 L	TP-3330-0016 TP-3330-0100	1 – 16 oz (473 ml) bottle 1 – 1 gallon (3.8 L) pail	Green	
Hydraulic and Lubricaton Fluids Compressor Oil Engine Oil Gearbox Oil	4 gal 4 gal 3 gal 1 gal	15.1 L 15.1 L 11.4 L 3.8 L	TP-3340-0016* TP-3340-0100*	1 – 16 oz (473 ml) bottle 1 – 1 gallon (3.8 L) pail	Blue	
Hydraulics and Oils Petroleum-Based (Light) Hydraulic Compressor Oil	4 to 6 gal 1 gal	15 to 22.7 L 3.8 L	TP-3350-0016 TP-3350-0032 TP-3350-0100 TP-3350-0500	1 – 16 oz (473 ml) bottle 1 – 32 oz (946 ml) bottle 1 – 1 gallon (3.8 L) pail 1 – 5 gallon (19 L) pail		
Hydraulics and Oils Petroleum-Based (Dark) Hydraulic Engine Oil Gearbox Oil Lubrication Oil Fuel (Gasoline or Diesel)	4 to 6 gal 1 gal 2 qt 1 gal 10 gal	15 to 22.7 L 3.8 L 1.9 L 3.8 L 37.9 L	TP-3375-0016 TP-3375-0032 TP-3375-0100 TP-3375-0500	1 – 16 oz (473 ml) bottle 1 – 32 oz (946 ml) bottle 1 – 1 gallon (3.8 L) pail 1 – 5 gallon (19 L) pail	Yellow/Green	
Synthetic (Ester)-Based	4 to 6 gal	15 to 22.7 L	TP-3325-0016 TP-3325-0032	1 – 16 oz (473 ml) bottle 1 – 32 oz (946 ml) bottle		

Fluorescent Dyes for Fluid Leak Detection

Dye-Lite® Application-Specific Dyes (for <u>Water-Based</u> Fluids)







1 oz (30 ml)



8 oz (237 ml)



16 oz (473 ml)



32 oz (946 ml)

What to Order

HOW MUCH TO USE FLUID U.S. Metric		WH	Fluorescent		
TEOID	1 oz per	30 ml per	Product Number	Description	Color
Engine Coolant and Auto Body Leak Check*	6 gal	23 L	TP-3900-0001CS TP-3900-0008 TP-3900-0016 TP-3900-0032 TP-3900-0100 TP-3900-0500 TP-3900-0601 TP-3900-12025 TP-3900-2401	1 – 1 oz (30 ml) bottle 1 – 8 oz (237 ml) bottle 1 – 16 oz (473 ml) bottle 1 – 32 oz (946 ml) bottle 1 – 1 gal (3.8 L) pail 1 – 5 gal (19 L) pail 6 – 1 oz (30 ml) bottles 12 – ¼ oz (7.4 ml) bottles 24 – 1 oz (30 ml) bottles	Green
Clear-Blue™ Extended Life Coolant Dye (Ford-approved)	4 gal	15 L	TP-3920-0008 TP-3920-0016 TP-3920-0032 TP-3920-0601	1 – 8 oz (237 ml) bottle 1 – 16 oz (473 ml) bottle 1 – 32 oz (946 ml) bottle 6 – 1 oz (30 ml) bottles	Blue
Rite-Blend™ Extended Life Coolant Dye (GM-approved)	6 gal	23 L	TP-3940-0008 TP-3940-0016 TP-3940-0032 TP-3940-0601	1 – 8 oz (237 ml) bottle 1 – 16 oz (473 ml) bottle 1 – 32 oz (946 ml) bottle 6 – 1 oz (30 ml) bottles	Green

^{*} For auto body leak checks, mix dye in proper dilution with water and use the TracerJet™ spray gun (TP-1131) to spray the dye/water solution on the outside of the vehicle where a leak is suspected. Check inside the vehicle with a Tracerline® inspection lamp for leaks.



TP-3900

Leak detection dye for <u>all</u> engine coolants and auto body leak checks. Works with <u>any</u> leak detection inspection lamp.



Clear-Blue™ TP-3920 Leak detection dye for <u>all</u> engine coolants, including extended-life coolants. **Ford-approved**.

Requires a long-wave UV lamp such as the Tracerline® TP-1390, TP-1600P, TP-1700P, TP-8690UV or TP-35000. Will not discolor the coolant, which could lead to misdiagnosis of engine problems.



Rite-Blend™ TP-3940 Blended leak detection dye for <u>all</u> engine coolants, including extended-life coolants. **GM-approved**. Works with <u>any</u> fluorescent leak detection inspection lamp. Will not discolor the coolant, which could lead to misdiagnosis of engine problems.

GLO-AWAY™ Dye Cleaner

GLO-AWAY™ Dye Cleaner

GLO-AWAY[™] dye cleaner removes all traces of dye from repaired leak sites so repairs can be verified. It is water-based, nontoxic, non-flammable, noncarcinogenic, biodegradable and has no offensive odor. It contains no harmful solvents or CFCs and is safe for use on plastic, rubber and metals. It can be shipped without a hazardous material surcharge. GLO-AWAY[™] comes in 8 oz (237 ml) spray bottles and economical 16 oz (473 ml) refill bottles.

What to Order

Product Number	Description
TP-9000-0008	1 – 8 oz (237 ml) spray bottle
TP-9000-0016	1 – 16 oz (473 ml) refill bottle
TP-9000-1208	12 – 8 oz (237 ml) spray bottles
TP-9000-1216	12 - 16 oz (473 ml) refill bottles





Green Fact!

Going green has never been easier! Finding system leaks quickly not only saves you time <u>and</u> money, but also protects the environment from harmful contaminants.

Tracerline® fluorescent dyes are safe, economical and highly effective in detecting even the smallest leaks in any system. They come in a wide variety of dye formulations, including custom blends, to match each specific application. This means that they can work with <u>any</u> host fluid or refrigerant, without damaging its properties or system components.

Best of all, unlike other methods, fluorescent leak detection allows you to pinpoint the <u>exact</u> location of leaks—even multiple leaks—the first time and every time, with just one simple application!

Clamshell Packaged Products



TP-1124CS

LeakFinder™ Kit for Fluid Systems

Includes the 12-volt, 50-watt TP-1100 *UV/Blue*™ lamp, Dye-Lite® All-In-One™ concentrated fluorescent dye for <u>all</u> oil-based fluids and Dye-Lite® coolant/auto body dye. Fluorescence-enhancing glasses included.



TP-1135CS

LeakFinder™ Wind and Water Gun & Dye Kit

Includes the TracerJet[™] spray gun and 8 oz (237 ml) bottle of Dye-Lite® fluorescent water dye.



TP-3849CS

LeakFinder™ A/C Syringe Injector Kit

Includes the TP-9881 syringe injector, hose/coupler with check valve, purge fitting and 1 oz (30 ml) bottle of Fluoro-Lite® universal/POE A/C dye.



TP-25

Drip Plugs

Made of special absorbent foam to soak up residual dye in low-side hose coupler. Prevent messy toolboxes. Keep hands dye-free. Come 25 to a pack.



A/C Dye Cartridges

injectors. Treat up to 32 vehicles.

TP-9770-0004CS Universal/POE

TP-9750-0004CS R-12/Mineral Oil

TP-9760-0004CS R-134a/PAG

TP-9841CS

LeakFinder™ BigEZ™ 4 oz (118 ml) Fluorescent

Also fit most popular caulking gun and pump-type dye

EZ-Ject™ Injector Kit for All A/C Systems

Includes the EZ-Ject injector assembly, R-134a hose/coupler with check valve, purge fitting and one ½ oz (14.8 ml) cartridge filled with Fluoro-Lite® universal/POE A/C dye. Treats up to 14 vehicles.



TP-9870CS

EZ-Ject™ Universal/POE A/C Dye Cartridge

Works with <u>all</u> refrigerants. ½ oz (14.8 ml) cartridge treats up to 14 vehicles.

Clamshell Packaged Products



LeakFinder

Dye-Lite® 1 oz (30 ml) Refill Bottles

LeakFinder

TP-3400-0001CS

All-In-One[™] concentrated dye for <u>all</u> oil-based fluids. Services <u>2 vehicles</u>.

TP-3405CS

All-In-One[™] standard dye for all oil-based fluid systems. Services 1 vehicle.

TP-3840-0001CS

Fluoro-Lite[®] universal/POE dye for <u>all</u> A/C systems.

TP-3900-0001CS

Dye-Lite® dye for all water-based coolants.



TP-9742CS

LeakFinder™ BigEZ™ Injector Kit for All A/C Systems

Includes a 4 oz (118 ml) BigEZ™ cartridge with Fluoro-Lite® universal/POE A/C dye and injector assembly plus complete hardware. Treats up to 32 vehicles.



TP-8620CS OPTI-Lite™

Cordless, compact, economy blue light leak detection flashlight. Features 6 bright LEDs with 100,000-hour service life. Inspection range of up to 2 feet (0.6 m). Fluorescence-enhancing glasses and 3 "AA" batteries included.



TP-9741CS

LeakFinder™ BigEZ™ Injector Kit for R-134a/PAG A/C Systems

Same as TP-9742CS except with an R-134a/PAG dye cartridge. The <u>same</u> A/C dye that is factory installed in new cars by auto makers in the U.S., Japan, Europe, China, Korea, Brazil and Mexico!



TP-8640CSOPTIMAX Jr™

Powerful, ultra-compact, cordless blue light LED leak detection flashlight. Features super-bright LED with 100,000-hour service life. Inspection range of up to 6 feet (1.8 m). Fluorescence-enhancing glasses and 3 "AA" batteries included.



TP-8670CS

Quad Max Pro™

Flexible, multi-function LED leak detection lamp with adjustable service mirror. Three lamp positions: UV/White/Off (3 UV LED's for leak detection and 1 white LED light for regular inspection, all 100,000-hour service life bulbs). Powered by 3 "AAA" batteries (included). Fluorescence-enhancing glasses included.

Replacement Parts & Accessories

What to Order

107472	R-12 adapter/purge fitting
120654	Service mirror for TP-8650 and TP-8670CS
	lamps
120771	A/C dye syringe injector
120884	8-oz. non-refillable pump spray bottle GLO- AWAY™ dye cleaner
122466	Battery charger for TP-8680 lamp
122592	Battery stick for TP-8680 lamp
123775	Inspection mirror for TP-9350 and TP-935036
123802	Replacement sensor for TP-9360
123803	(20) tip filters for TP-9360
124106	Ultrasonic receiver for TP-9370 and TP-9371
124107	Headphones for TP-9370 and TP-9371
124108	Air probe for TP-9370 and TP-9371
124109	Contact probe for TP-9370 and TP-9371
124482	LED assembly for TP-8690 flashlight
124483	Battery stick with tail-cap for TP-8690 flashlight
124765	Magnet for TP-9350 and TP-935036 borescope
124821	Bulb for TP-1300 Lamp
125112	Inspection mirror for TP-9354 borescope
125113	Magnet for TP-9354 borescope
125608	Battery stick with tail-cap for TP-8690UV flashlight
TP-25	Drip plugs for low-side hose coupler
TP-1050	Filter lens for TP-1200P, TP-1600P and TP-35000 series lamps
TP-108231	Repair kit for TP-3887 R-134a connect set
TP-108235	(6) O-rings for TP-3851, TP-9937, TP-9941, TP-9946
TP-108236	(6) O-rings for TP-3861, TP-3871, TP-3872, TP-9942, TP-9947
TP-1140	Medium carrying case for TP-1125, TP-1126, TP-8120, TP-8122, TP-8220, TP-8225, TP-8226 TP-8626, TP-8646, TP-8647HD, TP-8687HD and TP-8697HD lamp kits
TP-1141	Medium carrying case for TP-1121 LeakFinder™ kit
TP-1142	Large carrying case for TP-8000 and TP-8000A series lamp kits, TP-1130 and TP-8648 kits
TP-1143	Small carrying case for TP-1127, TP-8627, TP-8647, TP-8649, TP-8677, TP-8687 and TP-8689 lamp kits
TP-1210	Bulb (1) 120V, 120W for TP-1200P lamp
TP-1340	Extra-large carrying case for MAXIMA™ series lamp kits
TP-1509	Portable rechargeable battery pack for 12-volt lamps with cigarette lighter plugs for TP-1100H, TP-8000AH, TP-8000AX, TP-35000M lamps. Includes 12-volt battery, 120-volt charger and nylon carrying case with shoulder strap
	(Note: 230V/50Hz, 240V/50Hz and 100V/50-60Hz chargers also available)

TP-1510-0001	Bulb (1) 12V, 50W for TP-1500P, TP-1700A, TP-1700P and TP-8200 lamps
TP-1510-0003	Bulb (3) 12V, 50W for TP-1500P, TP-1700A, TP-1700P and TP-8200 lamps
TP-1517	Adapter cord , 1-ft with cigarette lighter receptacle and alligator clips for TP-1100H, TP-8000AH and TP-8000AX lamps
TP-1518	Extension cord , 12-ft with cigarette lighter receptacle and plug for TP-8000H, TP-8000AH lamp and TP-8000AX lamps
TP-1610	Bulb (1) 120V, 150W for TP-1600P lamp
TP-1640	Extra-large plastic carrying case for TP-1600P lamp
TP-1712	Filter lens for TP-1700A lamp and TP-1700P lamp
TP-1810	Bulb (1) 12V, 35W for TP-1800 lamp
TP-35100	Spot bulb/reflector assembly for TP-35000 and TP-35000M spot series lamps
TP-35100F	Flood bulb/reflector assembly for TP-35000 (FLOOD) and TP-35000M (FLOOD) series lamps
TP-35110D	Diffusing filter for TP-35000 and TP-35000M series lamps
TP-8010-0001	Bulb (1) 12V, 100W for TP-8000, TP-8000A, TP-8000H, TP-8000AH and TP-8000AX lamps
TP-8010-0003	Bulb (3) 12V, 100W for TP-8000, TP-8000A, TP-8000H, TP-8000AH and TP-8000AX lamps
TP-8011	Filter lens for TP-8000, TP-8000A, TP-8000H, TP-8000AH and TP-8000AX lamps
TP-8115	Bulb (1) 12V, 50W for TP-8100 and TP-8200A lamps
TP-8211	Filter lens for TP-8100 lamp
TP-8211A	Filter lens assembly for TP-8200A lamp
TP-8303	Filter assembly for TP-8302 lamp (While supplies last)
TP-8307	Holster for TP-8300, TP-8302 and TP-8640 lamps
TP-8308	Battery for TP-8300 and TP-8302 lamps (While supplies last)
TP-8310	Bulb (1) 6W for TP-8300 and TP-8302 lamps
TP-8311	Filter, reflector assembly for TP-8300 lamp (While supplies last)
TP-9939	UV-absorbing glasses
TP-9940	Fluorescence-enhancing glasses
TP-9943	UV-absorbing goggles
TP-9948	Oil dispenser for oil cartridges