



Filtration

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Diesel, Gasoline, Coolant and Lube Additives

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Selection**General**

The *all-new* Racor additive line includes products for all climates and seasons. The products include a biocide: a year-'round conditioner and winter additive for diesel engines: a year-'round gasoline conditioner; lube oil treatment and coolant treatment. Racor additives mix well with fuels are not removed by fuel filters.

There are several convenient sizes: our 16 oz. bottle that makes measuring quick and easy, and 1 and 2.5 gallon bottles are convenient for larger fuel tanks. The high concentration of active ingredients in Racor additives allows for higher treatment rates.

Exhaust Smoke

In a properly warmed engine, there should be little, if any, significant smoke, black or white, coming from the exhaust pipe. Black smoke indicates incomplete combustion, typically from a dirty air filter, poor injection (a leaking or dribbling injector), engine overloading or the air intake temperature is too high (poor density).

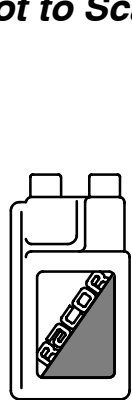
White smoke means that there is excess, unburned fuel being pushed through the system or that there is water ingestion (leaky gasket or crack in cylinder head or case).

Blue smoke means the engine is burning crankcase oil. Causes can be worn valve guides/stems, broken or worn piston rings, a leak in the turbo or too much oil in the crankcase.

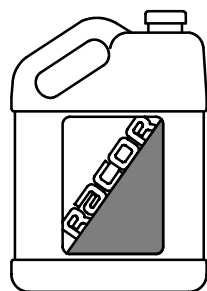
1. FOR OPTIMUM ENGINE PROTECTION AND EFFICIENCY, USE A FUEL AND OIL CONDITIONER ALL THE TIME.
2. FOR OPERATIONS IN COLD CLIMATES WHERE DIESEL FUELS MAY GEL, USE DIESEL WINTER PLUS+ WITH DIESEL CONDITIONER PLUS+.
3. FOR OPERATIONS IN HIGH HUMIDITY AREAS OR WHERE WATER IN FUEL TANK BOTTOMS IS EVER-PRESENT, USE DIESEL FUEL BIOCIDES WITH DIESEL CONDITIONER PLUS+.
4. FOR OPTIMUM COOLANT SYSTEM PROTECTION AND LUBRICATION, USE COOLANT TREATMENT.

Using this information, select a product from the following pages.

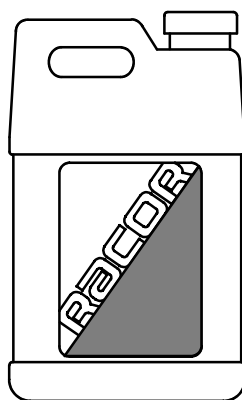
Container Illustrations Not to Scale



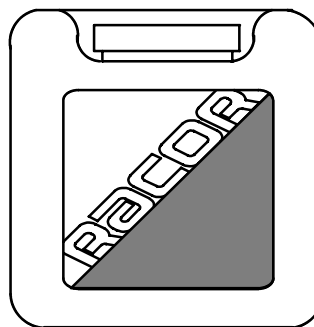
16 fl.oz.



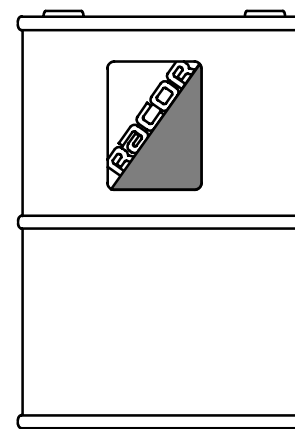
1 gallon



2.5 gallon



5 gallon



55 gallon drum

Special Notes

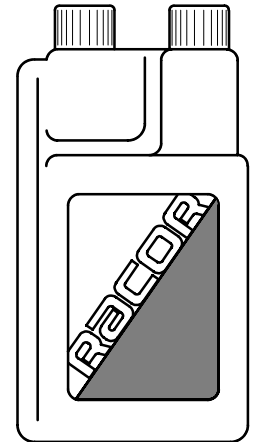
1. All sizes, 5 gallons and under, are plastic containers. Fifty-five (55) gallon drums are steel.
2. For additional information and availability, contact customer service at: (800) 344-3286, 6 AM to 5 PM, Pacific Time.

Specifications

Products	Conditioner Plus+	Diesel Fuel Biocide	Winter Plus+	Gasoline Treatment	Lube Oil Treatment	Coolant Treatment
Treatment Ratio	1 fl.oz./ 20 gallons	1 fl.oz./ 80 gallons	1 fl.oz./ 8 gallons	1 fl.oz./ 20 gallons	1 fl.oz./ 1 pint	1 fl.oz./ 1/2 gallon
Available Sizes, Case Dimensions, Quantity per Case and Weights						
16 fl.oz. Treats: 13.5 X 8.5 X 9 12/case 14 lbs.	320 gal.	1280 gal.	128 gal.	320 gal.	8 qts.	8 gal.
1 gallon Treats: 14.5 X 10 X 11 4/case 32 lbs.	2560 gal.	10,240 gal.	1024 gal.	NA	16 gal.	NA
2.5 gallon Treats: 15.5 X 10 X 15 2/case 45 lbs.	6400 gal.	N/A	2560 gal.	6400 gal.	NA	NA
5 gallon Treats: 10 X 11 X 14 1/case 39 lbs.	N/A	51,200 gal.	N/A	N/A	N/A	N/A
55 gallons Treats: 24 dia. X 37 1 drum, 450 lbs.	140,800 gal.	563,200 gal.	56,320 gal.	140,800 gal.	880 gal.	NA

Part Numbers / Sizes / Treatment

Part No.	Size	Treatment	Case Qty.
ADT 1116	16 fl.oz.	320 gallons	12
ADT 1201	1 gallon	2560 gallons	4
ADT 1325	2.5 gallons	6,400 gallons	2
ADT 1555	55 gallons	140,800 gallons	1 drum
RK 21644	Pour spout extension (for 16 oz. bottle only)		1



16 fl. oz. shown

Information about Racor Diesel Fuel Conditioner Plus+

During normal use, a diesel engine is subjected to a variety of loads under some of the most unusual conditions and in all types of weather. The performance of the engine is greatly determined by the quality of fuel it burns. The best way for the operator to ensure that quality fuel is being used is to supplement it with an additive. Racor's Diesel Fuel Conditioner Plus+ contains all the ingredients, *and in the right proportions*, to provide the right protection and maintain fuel quality.

Racor Diesel Conditioner Plus+ is a multi-functional diesel fuel additive for all season use. Its formulation contains a cetane improver which enhances power delivery, starting, and helps engines run smoother and quieter. Racor Diesel Conditioner Plus+ passes the Cummins L10 superior rating for detergency and the Scruffing BOCLE test for lubricity as demonstrated in low and high sulfur fuel. Use with Racor Diesel Winter Plus+ in cold weather and Racor Diesel Biocide in warm climates to achieve maximum performance benefits throughout the year.

Contains lubricity additives to reduce friction and improve fuel economy

Lubricity additives, more than ever, are needed in today's fuels. By including this important ingredient, friction is significantly reduced, therefore so is the operating temperature of the engine. When an engine runs cooler, it lasts longer and runs more efficiently.

Keeps injectors clean and dissolves gums and varnishes

Racor's Conditioner Plus+ wouldn't be much of a conditioner if it didn't do a little clean-up work too. A detergency additive (the strongest in the market) was selected that could actually do some good to clean up engines and at the same time keep them that way. The fuel then acts as the cleaning agent to remove the buildup of gums, varnishes and other deposits. Clean injectors stop rattling and start providing the spray pattern designed into them at the factory. Now more efficient combustion can take place, improving economy and reducing emissions.

Stabilizes fuel during prolonged storage and prevents corrosion

A very important component of *Diesel Conditioner Plus+* is the fuel stabilizer. During prolonged storage, fuel tends to oxidize and degrade. The fuel quality can actually deteriorate to such a point that the engine is easily fouled with contaminant by-products and water. The fuel stabilizer maintains the fuel quality (resistance to degradation) so that it is not susceptible to deterioration. The potential for corrosive elements is also eliminated by providing a protective coating to bare metal surfaces, keeping water away.

Alcohol free

Racor doesn't add alcohol to our additives. In fact, we add a compound that actually causes water to coalesce (make larger droplets) so your Racor Fuel Filter/Water Separator becomes much more efficient. Alcohol is damaging to many of the components in fuel systems and is not recommended by most engine manufacturers.

Use Instructions

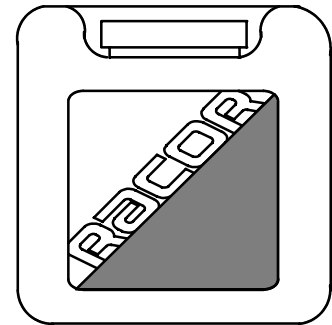
This product is most effective when added to the fuel tank, just prior to fueling. *Initial Treatment:* Add 2 oz. of Racor Diesel Conditioner Plus+ for every 20 gallons of fuel (approximately 300 PPM) the first time the product is used and/or every time the operator determines the injectors require cleaning. *Maintenance Treatment:* Add 1 oz. for every 20 gallons of fuel (approximately 150 PPM) at the above treat ratio.

Handling and Storage

Racor Diesel Conditioner Plus+ may be stored at up to 120°F (49° C). Viscosity of the additive is low enough to provide good handling under ambient conditions.

Part Numbers / Sizes / Treatment

Part No.	Size	Treatment	Case Qty.
ADT 2116	16 fl.oz.	1,280 gallons	12
ADT 2201	1 gallon	10,240 gallons	4
ADT 2405	5 gallons	51,200 gallons	1
ADT 2555	55 gallons	563,200 gallons	1 drum
RK 21644	Pour Spout Extension (for 16 oz. bottles only)		1



5 gallon shown

Information about Racor Diesel Fuel Biocide

Water is a heavier fluid than diesel fuel and will settle to the bottom of the fuel tank. At the layer where water and diesel separate, airborne microorganisms introduced through water condensation and poor fuel handling practices settle and grow. They live in the water and feed on the hydrocarbons in the fuel. In an ideal habitat, they can double their population every 20 minutes. The colony could grow so large as to completely contaminate the fuel tank, foul the fuel gauge sender and quickly plug the fuel filter. Microorganisms also produce waste acids that attack metal surfaces, resulting in forms of loose particles of iron oxide.

Racor's Diesel Fuel Biocide is a highly effective additive for use in controlling the growth of bacteria and fungi in all diesel fuel grades, especially those in use for marine applications. This formula also contains a non-foaming agent and a corrosion inhibitor to protect metallic surfaces.

EPA Registration No. 1448-172-47099, EPA Establishment No. 072342-CA-001

Racor's Biocide is registered with the U.S. Environmental Protection Agency. If a biocide product doesn't have an EPA registration number, it is in violation of federal regulatory controls. Racor's Biocide is an extremely effective and powerful product. It must be used in accordance with printed regulations and stored as directed.

Kills more forms of algae and bacteria and is non-selective

Racor's Biocide kills more forms of biological contamination than any other brand and is non-selective when doing so. In other words, this formula isn't formulated to kill some varieties or strains but to kill more and any that feed on fuel hydrocarbons.

Both water and fuel soluble and mixes at all temperatures

Racor Biocide not only kills microorganisms in the water but also kills them if they are in the fuel -*it's both water and fuel soluble!* As long as fuel can flow, Racor Biocide will mix more effectively and more thoroughly to provide protection in all temperatures.

Concentrated, time-release formula kills faster and longer

While some anti-foulants take time to kill microorganisms, Racor's Biocide additive works within 12 hours of application (other brands take up to 72 hours) and keeps on working longer than other brands. Another benefit is that regeneration is halted. Microbes are killed and that's final. There are no survivors to restart, or *regenerate*, the cycle.

Alcohol free

Alcohol is damaging to many of the components in fuel systems and is not recommended by most engine manufacturers. Racor doesn't add alcohol to our additives. Alcohol is damaging to many of the components in fuel systems and is not recommended by most engine manufacturers.

Use instructions

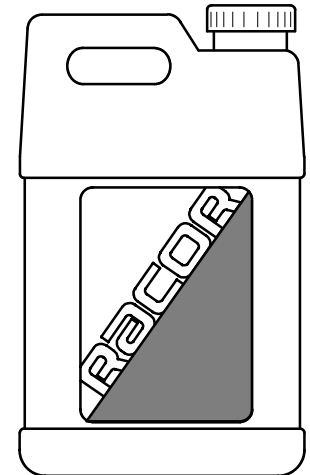
Initial treatment: add 1 oz of Racor Diesel Biocide for every 40 gallons of diesel fuel. *Maintenance treatment:* add 0.5 oz for every 40 gallons of diesel fuel.

NOTE: DEAD MICROBIAL GROWTH WILL EVENTUALLY FALL INTO THE FUEL STREAM AND WILL CAUSE FUEL FILTERS TO PLUG RAPIDLY. CARRY SPARE ELEMENTS WHEN USING RACOR BIOCID.

Part Numbers / Sizes / Treatment

Part No.	Size	Treatment	Case Qty.
ADT 4116	16 fl.oz.	128 gallons	12
ADT 4201	1 gallon	1024 gallons	4
ADT 4325	2.5 gallons	2560 gallons	2
ADT 4555	55 gallons	56,320 gallons	1
RK 21644	Pour Spout Extension (for 16 oz. bottle only)		1

Note: This special product activates only after being mixed with diesel fuels. When not in use, store Racor Winter Plus+ above 32°F (0°C).



2.5 gallon shown

Information about Racor Diesel Winter Plus+

When diesel fuels are chilled an unusual problem arises: *waxing*. At about 10°F. and colder, fuel becomes thick and cloudy because paraffin wax crystals (and suspended water ice crystals) take shape. This is known as the fuel *cloud point* (so named because the fuel begins to cloud or haze). Paraffin wax actually traps the fuel within the crystalline structure, reducing the ability to flow. Fuel filters gradually become plugged to the point of starving the engine of fuel. (If the fuel was chilled another ten degrees it would freeze completely and no longer flow! This is known as the fuel *pour point*).

Racor's Diesel Winter Plus+ is formulated to combat fuel icing and wax buildup. It retards ice formation and coats the system with a slip agent so ice will not cling and form plugs. Its formulation contains a cetane improver which enhances power delivery, starting, and helps engines run smoother and quieter.

Inhibits waxing, icing and gelling

Racor's Winter Plus+ modifies the structure of wax crystallization so that they cannot trap the fuel. This effect lowers the pour point of No.2 diesel fuel and provides protection down to -32°F. Engine starting is easier and continued operation in chilling climates is enhanced.

Stabilizes fuel during prolonged storage and prevents corrosion

A very important component of *Winter Plus+* is the fuel stabilizer. During prolonged storage, fuel tends to oxidize and degrade. The fuel quality can actually deteriorate to such a point that the engine is easily fouled with contaminant by-products and water. The fuel stabilizer maintains the fuel quality (resistance to degradation) so that it is not susceptible to deterioration. The potential for corrosive elements is also eliminated by providing a protective coating to bare metal surfaces, keeping water away.

Prevents corrosion and is alcohol free

Another component of Racor's Winter Plus+ is a corrosion inhibitor that protects bare metal surfaces, protecting the fuel from further contamination. Alcohol is damaging to many of the components in fuel systems and is not recommended by most engine manufacturers. Racor doesn't add alcohol to our additives. In fact, we add a compound that actually causes water to coalesce (make larger droplets) so your Racor Fuel Filter/Water Separator becomes much more efficient.

Use Instructions

This product is most effective when added to the fuel tank, just prior to fueling. Do not add this product to fuel that is already gelled in the tank. *Treatment Ratio:* One (1) oz. treats 8 gallons of diesel fuel. Typical treat level is 530 PPM.

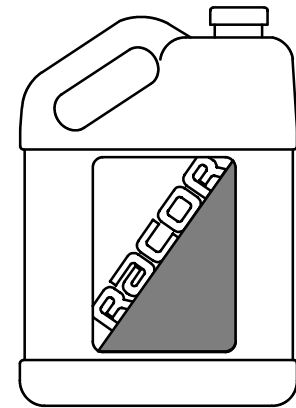
Additional Instructions

1. This product activates when mixed with diesel fuel. When not in use, store product above 32° F (0° C).
2. For extended cold weather operations, a diesel fuel heater may be needed as well. Refer to Section 1 for Racor Diesel Fuel Heaters.

Part Numbers / Sizes / Treatment

Part No.	Size	Treatment	Case Qty.
ADT 5116	16 fl.oz.	320 gallons	12
ADT 5325	2.5 gallons	6400 gallons	2
ADT 5555	55 gallons	140,800 gallons	1
RK 21644	Pour Spout Extension (for 16 oz. bottle only)		1

Note: Store product in a cool and dry location away from heat.



1 gallon shown

Information about Racor Gas Conditioner Plus+

Racor Gasoline Conditioner Plus+ enhances engine performance by cleaning the fuel injectors or carburetor and intake systems, providing better combustion and therefore better fuel economy. It can be used with all types of gasoline engines, systems and all gasoline blends. For the best protection, use this product regularly.

Cleans fuel injectors and carburetors

Racor’s Gasoline Conditioner Plus+ contains many fuel modifiers, providing a continuous cleaning action which inhibits and removes carbon buildup and the accumulation of deposits. *Gasoline Conditioner Plus+* cleans fuel injectors thereby maintaining a proper spray pattern, improving efficiency and reducing injector noise. Engine starting is easier and continued operation in all kinds of weather is enhanced.

Stabilizes fuel during prolonged storage

An important component of *Gasoline Conditioner Plus+* is the fuel stabilizer. During prolonged storage, fuel tends to oxidize and degrade. The fuel quality can actually deteriorate to such a point that the engine is easily fouled with contaminant by-products and water. The fuel stabilizer maintains the fuel quality (resistance to degradation) so that it is not susceptible to deterioration.

Prevents corrosion and is alcohol free

The potential for corrosive elements is also eliminated by providing a protective coating to bare metal surfaces, keeping water away. Alcohol is damaging to many of the components in fuel systems and is not recommended by most engine manufacturers. Racor doesn’t add alcohol to our additives.

Use Instructions

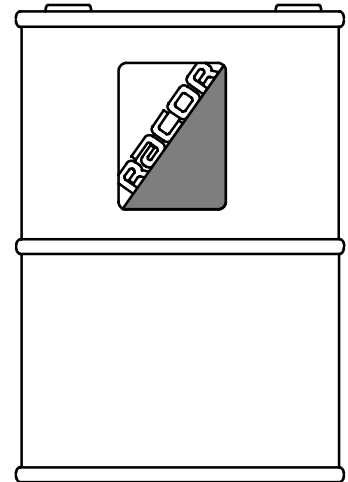
This product is most effective when added to the fuel tank, just prior to fueling. Additive dosage will vary, depending on the end user’s desire to keep the system clean or to improve performance. Recommended standard dosage is one (1) oz. of Racor Gasoline Conditioner Plus+ for every 20 gallons of fuel.

Additional Instructions

1. Store this product away from heat or flame in a cool, dry location, away from the reach of children.

Part Numbers / Sizes / Treatment

Part No.	Size	Treatment	Case Qty.
ADT 7116	16 fl.oz.	2 gallons	12
ADT 7201	1 gallon	16 gallons	2
ADT 7555	55 gallons	880 gallons	1
RK 21644	Pour Spout Extension (for 16 oz. bottle only)		1



55 gallon drum shown

Information about Racor Lube Oil Treatment

Racor Lube Oil Treatment is a fluorocarbon additive which contains an advanced, highly effective polymer lubricant. It provides a superior thin coating to protect precision engine parts and does not contain PTFE which has been known to fall from suspension and clog precision engine components. Many of today's leading oil companies are now slowly making way to the retail counters with their own types of treatments but only Racor has sourced an independent research laboratory that has developed this unique product and only Racor may offer it.

Reduces engine wear, noise and heat, increasing power, mileage and engine life

Racor's Lube Oil Treatment contains a proprietary ingredient, not available in any other competitive product, that offers superior lubrication even with standard engine oils. A protective barrier reduces friction, allowing parts to move smoothly. Reducing friction also reduces noise and heat that allows engines to run quieter and cooler. With continuous use at every oil change, you can assure your engine performance and extend its useful service life.

Compatible with all motor oils, and with diesel or gasoline engines

This product works in any grade of motor oil, both petroleum and synthetic, and in any kind of an engine. Put Racor's Lube Oil Treatment to the test in all of your engines.

Reduces harmful emissions and controls foaming

Racor's Lube Oil Treatment contains modifiers that stabilize oil reactions to crankcase heat and pressure to limit harmful emissions usually lost at crankcase breathers or into clean air intakes. Anti-foaming ingredients control crankcase lubrication system foam accumulation.

Use Instructions

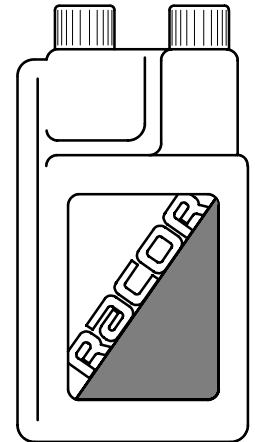
This product may be added to engine oil at any time. *Treatment Ratio:* two (2) oz. treat one quart of lube oil. Recommended for use after every four (4) oil changes, and may be used as often as every oil change.

Additional Instructions

1. This product is most effective with continued use.
2. Blend using conventional equipment and methods for blending finished fluids. Do not heat over 140°F (60°C) for prolonged periods to avoid possible release of alkyl mercaptans and/or hydrogen sulfide.

Part Numbers / Sizes / Treatment

Part No.	Size	Treatment	Case Qty.
ADT 8116	16 fl.oz.	8 gallons	12
RK 21644	Pour Spout Extension (for 16 oz. bottle only)		1
Use this product directly with your existing mixture of coolant (anti-freeze) and water. For use with ethylene glycol-based anti-freeze/coolant only; do not use with EHA or Dexcool type systems. Always consult your dealer or owner's manual for warranty restrictions. (1 fl.oz treats 1/2 gallon or 2 quarts or 4 pints)			



16 fl. oz. shown

Information about Racor Coolant Treatment

Racor's Coolant Treatment is a combination corrosion inhibitor and iron oxide/scale dispersant. Its unique formulation protects all types of metals, including aluminum, in the cooling system.

The advantage of using Racor Coolant Treatment over coolant system spin-on type applicators is that the mixture is correct at treatment time. Spin-on types tend to 'over-charge' the cooling system, becoming quite toxic. This mixture would then require a caustic flush and the waste would need to be disposed in accordance with local regulations. This could be very costly to perform, especially on a fleet of vehicles.

Meets all engine manufacturer's requirements for diesel and gasoline engines

An important feature of the Racor product is that it is acceptable for use with all engines utilizing ethylene glycol-based systems -an important point when using a coolant treatment. Racor Coolant Treatment is specially formulated to work with all types of cooling systems and that includes marine 'closed-type' cooling systems. It is able to maintain maximum efficiency in heat transfer to keep your engine running cooler. When an engine runs cooler, it lasts longer and runs more efficiently.

Contains a corrosion inhibitor, water pump lubricator and an anti-foaming agent

Racor's Coolant Treatment wouldn't be just another product on the shelf if it didn't do a little work too. A corrosion inhibitor was selected that could actually do some good to coat and protect the inside of your engine and coolant system components, creating a barrier to scale deposits and rust. A water pump lubricator maintains smooth operation by enhancing seal efficiency and protecting rubber and polymers. The anti-foaming agent keeps the coolant mixture from excessive foaming due to the turbulence within the cooling cycle. This maintains better coolant consistency for the best heat transfer.

For maximum protection, always treat a fresh mixture of engine coolant with Racor Coolant Treatment.

Note: Racor Coolant Treatment can be added to water-only "closed-type" cooling systems for control of scale deposits, rust, water pump/seal maintenance, and anti-foaming characteristics.