THE DALHIN EFFICIAMAX FUEL TREATMENT

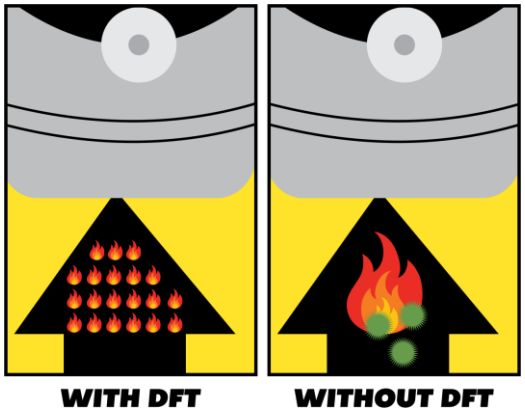
The Dalhin Efficiamax® Ten-35 fuel treatment is a combustion catalyst that gives your engine greater fuel efficiency. The Dalhin Efficiamax® decreases combustible carbon residue by providing a more complete burn. More efficient combustion yields to more useful power per gallon of fuel.
The Dalhin Efficiamax® Ten-35 is the ONLY fuel treatment in the world that reduces soot and smoke and other harmful emissions a guaranteed 40%, and in many cases much higher. The Dalhin Efficiamax® reduces the harmful emissions that damage the environment.

PROBLEM IN BIODIESEL IMPLEMENTATION

Most diesel engines are electronically controlled and designed to produce lower harmful emissions and a higher horsepower per displacement ratio. Consequently, they require a higher quality fuel to achieve this. High quality fuel is not consistently available. In addition, fuel containing water and particulate contamination will damage the newer electronically controlled fuel components reducing the reliability and longevity of newer engines.
These problems are intensified by the latest trend of mandated biofuel implementation. Government-mandated biodiesel fuel has less BTU energy per gallon than regular diesel fuel. Many countries have increased the percentage of biofuel in biodiesel to enforce renewable energy policies. The greater the percentage of biodiesel in the fuel, the more risk industry is forced to confront. Because of biofuels, engines today are faced with a higher water tendency, lower fuel efficiency, and fuel degradation.
One of the most viable solutions to these problems is the application of The Dalhin Efficiamax® fuel treatment. The Dalhin Efficiamax® fuel treatment minimizes the risks associated with the above-mentioned current fuel problems.
The Dalhin Efficiamax® Ten-35 fuel treatment is a fuel combustion catalyst that contains a water demulsifier, polymerization retardant, oxidation stabilizer, corrosion inhibitor, detergent and dispersant.

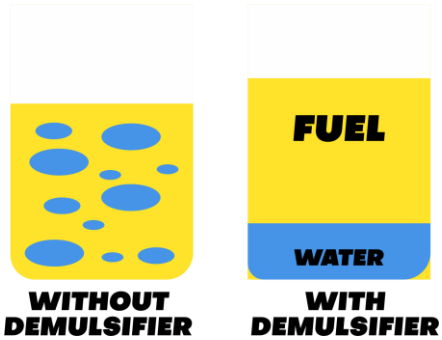
COMBUSTION CATALYST OF THE DALHIN EFFICIAMAX®

The Dalhin Efficiamax® Ten-35 fuel treatment contains organo- metallic compounds, as well as other materials, that optimize the combustion process by creating a more efficient use of fuel. The treatment is engineered to lower the ignition point of fuel and provide a longer residence time for the combustion process.



By lowering the ignition point, The Dalhin Efficiamax®Ten-35 fuel treatment optimizes the combustion process of hydrocarbon-based fuels, minimizing carbon deposits, soot, smoke and particulate matter. This results in less carbon and smoke emitted from exhausts due to unburned fuel, which helps protect the environment. The Dalhin Efficiamax® improves the burn rate by lowering the ignition point. This in turn burns lower-end BTUs in the fuel that are normally expelled out of the exhaust.

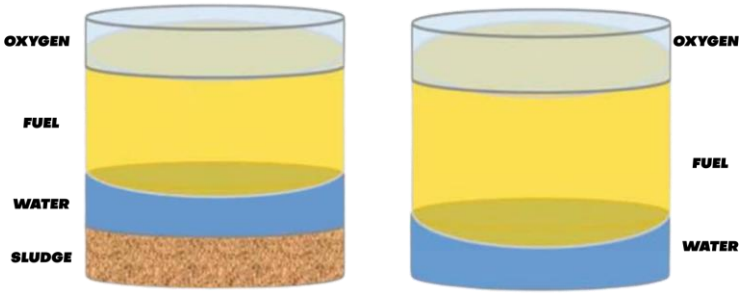
WATER DEMULSIFIER



The Dalhin Efficiamax® Ten-35 completely separates fuel from water, thus reducing injector and fuel pump failure.

POLYMERIZATION RETARDANT

Fuel naturally begins to break down as soon as it is refined, eventually returning to its original state as crude oil. This polymerization process starts to form submicron-sized particles. As the process continues, particles become larger and eventually agglomerate, forming macroscopic sludge. These particles can score injectors and eventually plug filters and injectors, and over long periods of time, render the fuel unpumpable. The Dalhin Efficiamax® disperses existing macroscopic sludge and retards further polymerization, permitting fuel to burn more efficiently.



OXIDATION STABILIZER

Biodiesel is prone to oxidation. When biodiesel oxidizes, insoluble by-products are created that cause injector deposits. These deposits can slow response or cause sticking of moving internal parts and lead to injector failure. The Dalhin Efficiamax® contains a dispersant that stabilizes fuels, thereby preventing oxidation.

CORROSION INHIBITOR

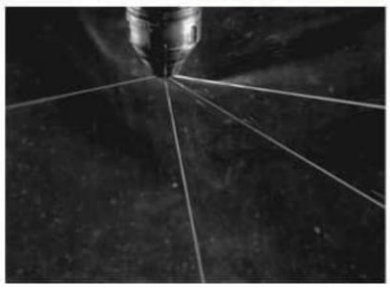
The Dalhin Efficiamax® Ten-35 contains a corrosion inhibitor to mitigate internal tank corrosion and a detergent to help keep lines, filters, and injectors clean. This results in increased efficiency and less maintenance for your engine.

Treated Fuel

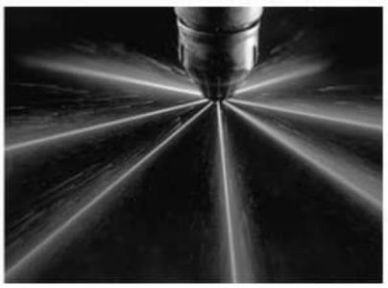
Untreated Fuel

DETERGENCY

The Dalhin Efficiamax® Ten-35 keeps fuel system components clean and within design tolerances for precise fuel delivery to the combustion chamber.



Dirty Injectors



Clean Injectors

THE DALHIN EFFICIAMAX®
A COMPLETE SOLUTION

The Dalhin Efficiamax® Ten-35 fuel treatment is designed to be an overall and COMPLETE solution for the fuel problems of today. The Dalhin Efficiamax® fuel treatment can be added to fuel kept in storage tanks or added directly into your vehicles, boats, lawnmowers, snowmobiles, motorcycles, chainsaws, and any Two-stroke engine.

THE EFFECTIVENESS OF THE DALHIN EFFICIAMAX®

Carbon Mass Balance testing can be used to evaluate the effectiveness of The Dalhin Efficiamax® Ten-35. The Carbon Mass Balance test measures carbon leaving the engine in the form of exhaust. The only source of carbon the engine has is its fuel. Mass cannot be created or destroyed; so the amount of fuel entering the engine can be determined. If the amount of fuel used is reduced under a given load, the effectiveness of a fuel treatment can be measured. This procedure is ideal for determining whether the addition of a fuel treatment has any effect on fuel efficiency and exhaust emissions that pollute the environment.

Carbon Mass Balance Test results of The Dalhin Efficiamax® Ten-35 show that harmful emissions are significantly lower.

TEST RESULTS	
5.2 Reduction in Fuel Consumption	Reduced NO2 (Nitrogen Dioxide)
Reduced CO (Carbon Monoxide)	24% Reduction of Unburned Hydrocarbon
2% Reduction of CO2 (Carbon Dioxide)	Reduced Exhaust Temperature
18% Reduction of NO (Nitrogen Monoxide)	

Less smog and smoke detected.

THE DALHIN EFFICIAMAX® Ten-35's interaction with fuel can be explained using a chemical formula.

The basic principles behind the benefits and catalytic effects of THE DALHIN EFFICIAMAX® Ten-35 are easy to understand. Today's engines leave some amount of fuel unburned on each piston stroke. THE DALHIN EFFICIAMAX® Ten-35 makes it easier for your engine to burn more of the fuel in the cylinder. Since more of the fuel is being burned, more power is being generated. Since less of the fuel is being wasted, you will have fewer emissions and better economy which saves money.

- **CHEMISTRY**

An engine converts fuel into energy by the following chemical processes:

$$C_xH_y + O_2 \rightarrow (CO_2 + H_2O) + (CO + HC + C) + \Delta H$$

The ΔH is known in chemistry as enthalpy and represents the energy created from the thermodynamic process taking place inside an engine. The CxHy represents the fuel, for example gasoline is C8H18 and diesel is C12H26. The CO2, H2O, CO, HC, and C on the right side of the arrow represent products that are released in the engine exhaust.

There are no exothermic (i.e. energy producing) reactions that could yield more energy out of the CO2 or H2O, so we've grouped those components together in the equation above. However, there are exothermic reactions that can extract additional energy from the second group: the CO, HC, and C.

When THE DALHIN EFFICIAMAX® Ten-35 is introduced into the engine; it acts as a catalyst and lowers the activation energy needed to further break down the unburned products in the above reactions. Specifically, when THE DALHIN EFFICIAMAX® Ten-35 is used the following additional chemical processes take place in the engine:

$$CO + O_2 \rightarrow CO_2 + \Delta H$$

$$HC + O_2 \rightarrow CO_2 + H_2O + \Delta H$$

$$C + O_2 \rightarrow CO_2 + \Delta H$$

The ΔH's in the three above equations are how THE DALHIN EFFICIAMAX® Ten-35 increases your engine's output. These ΔH's add to the ΔH produced by the engine's standard process to deliver more output energy from the engine. This extra energy can be used to either increase engine output power (if the amount of fuel input is kept constant) or reduce the engine's fuel intake (if the amount of output power is kept constant).

FREQUENTLY ASKED QUESTIONS & ANSWERS ABOUT THE DALHIN EFFICIAMAX® TEN-35

Q. Why is The Dalhin Efficiamax® better than other fuel additives on the market?

A. The Dalhin Efficiamax® Ten-35 is a highly concentrated fuel additive without all the fillers other manufacturers use. It's the only one in the world

that has been formulated with a lubricant, water emulsifier, polymerization retardant, oxidation stabilizer, and corrosion inhibitors. It is a highly concentrated fuel additive. Just 1 ounce will treat 80 gallons of fuel.

Q. What exactly is in The Dalhin Efficiamax® fuel additive?
A. A combustion catalyst (complex organometallic compounds), lubrication, water demulsifier, polymerization retardants, oxidation stabilizers, detergents, and corrosion inhibitors.

Q. What does an organometallic compound do?
A. It lowers the initial ignition point of the fuel in the cylinder, thereby allowing more time for the fuel closest to the piston to burn more completely. Your engine only has a limited amount of time to burn all of the fuel in the combustion chamber before it is swept out to the exhaust. Without The Dalhin Efficiamax® Ten-35, fuel is ignited from only one point in the chamber. The flame burns from the top down to the piston head.

The Dalhin Efficiamax® Ten-35 contains organometallic compounds that act as flame initiators. Because of this, the flame in your engine's combustion chamber isn't propagating only from top to bottom. It's also propagating from all of the The Dalhin Efficiamax® Ten-35 molecules in the fuel. More of the fuel in the chamber will be burned on each stroke and less will be wasted in the exhaust.

This also allows more of the BTUs in the fuel to be released and used in the form of energy, delivering more power to the transmission and providing better overall fuel economy.

Q. How does The Dalhin Efficiamax® Ten-35 affect the cetane or octane value of the fuel?
A. The cetane value of diesel is greatly enhanced by using The Dalhin Efficiamax® Ten-35, allowing for the diesel and all heavy fuels such as bunker fuel or No. 6 fuel to burn more efficiently and cleaner, obtaining close to the full cetane value of the fuel.

In gasoline engines, you can use the lowest octane fuel with The Dalhin Efficiamax® Ten-35 to achieve the performance of a higher-octane fuel. This is a real money-saver for everyone.

Q. Does The Dalhin Efficiamax® Ten-35 increase the BTUs in the fuel?
A. BTUs are not increased in the fuel with the use of The Dalhin Efficiamax® Fuel Treatment. The Dalhin Efficiamax® Ten-35 is able to release more of the available BTUs that already exist in your fuel. Most engines do not burn all the fuel available in the cylinder and therefore do not utilize all of the BTUs available. Unburned fuel is expelled into the exhaust system, creating smoke and pollution in the atmosphere. This unburned fuel that is expelled in the exhaust creates the need for catalytic convertors in smaller vehicles and ReGen systems in larger vehicles, in order to burn off the unused fuel to reduce pollution. If the engine can burn more of the available BTUs in the fuel, then there is less waste, more power, and more economy. There is also less need for DEF additive in ReGen systems and less need for catalytic convertors to burn off unused fuel in the exhaust system.

Q. What is meant by BTU?
A. BTU is a British thermal unit, which measures the amount of energy in a particular fuel. It is a similar measure to that of a calorie. For example: regular unleaded gasoline contains 114,100 BTUs; No. 2 Diesel contains 129,500 BTUs; Liquefied Natural Gas (LNG) contains 75,000; Liquefied Petroleum Gas (LPG or Propane) contains 84,300; Biodiesel contains 118,300 BTUs.

Q. How do BTUs relate to horsepower and fuel economy?
A. The more of the available BTUs the engine uses, the more efficient it is. The price of the fuel must be taken into consideration that the application it is going to be used in. For example, a large earth-moving machine in a mine will be more efficient using No. 2 Diesel with 129,500 BTUs, as it has more BTUs per pound of fuel than if the same machine was using LNG, which has only 75,000 BTUs. It would take 55,500 more BTUs of LNG to create the same power of No. 2 diesel. This would mean using larger tanks to contain the fuel and a larger engine (meaning larger cylinders and

pistons, valve openings, etc.) capable of creating the power necessary to achieve the same results as the diesel engine can achieve.

Q. Why does The Dalhin Efficiamax® Ten-35 contain a lubricant?

A. On-road diesel fuels today are almost completely sulfur-free. On-road gasolines are almost completely lead-free. Sulfur and lead are natural lubricants. Today's high-performance engines are subject to much more wear and breakdown when not lubricated properly, especially in the fuel injectors and valve systems. The Dalhin Efficiamax® Ten-35 lubricates the upper cylinders, valve system, and the entire fuel system, thereby minimizing breakdowns and ensuring long component life.

Q. Why does The Dalhin Efficiamax® Ten-35 contain a water demulsifier?

A. All fuels contain some degree of water. Water is naturally in the atmosphere and with each 24-hour period of day (warmer) and night (cooler), condensation is formed inside of fuel tanks and fuel lines, including engines. Having water in the fuel makes it less efficient in the engine and also causes acids to form, which are harmful to the engine and exhaust system. The Dalhin Efficiamax® Ten-35 separates water from the fuel, thereby allowing the fuel going into the engine to burn more completely.

In the following article by American Filtration and Separations Society, one of the most commonly thought of sources of water contamination is through condensation of atmospheric moisture to form liquid water. A research study shows that an empty 200 gallon fuel tank could contain a maximum amount of 22.8 grams of water vapor at 86°F, and 12.92 grams at 50°F. These values do not account for all of the water observed. Condensation is only one of the many ways in which water can contaminate fuel tanks. Fuel travels through several intermediate facilities prior to reaching the end user. It travels from refineries, is pumped through pipelines, is shipped via truck, and is stored in tank farms before reaching the fuel stations. https://www.afssociety.org/water-contamination-in-fuel-cause-and-effect/

Q. Why does The Dalhin Efficiamax® Ten-35 have a polymerization retardant in it?

A. Fuel naturally begins to break down soon after it is refined. Eventually, over time, it returns to its natural state as crude oil. This polymerization process starts to form submicron-sized particles. As the process continues, particles become larger and eventually agglomerate (cluster together), forming macroscopic sludge. These particles can score injectors and eventually plug filters and the very small openings in the injector's nozzles. Over long periods of time, they can render the fuel un-pumpable. For example, have you ever left your boat or lawnmower for a long period of time without using it? It becomes very hard to start because of this polymerization process. The Dalhin Efficiamax® disperses existing macroscopic sludge and retards further polymerization, permitting the fuel to flow and burn more efficiently.

Q. Why does The Dalhin Efficiamax® Ten-35 have an oxydation stabilizer?

A. All fuels are subject to oxidation. Oxidation creates insoluble by-products, which cause injector deposits. These deposits can slow response or cause sticking of moving internal parts and lead to injector failure. The Dalhin Efficiamax® Ten-35 contains a dispersant that stabilizes fuels, thereby preventing oxidation.

Q. Why does The Dalhin Efficiamax® Ten-35 have corrosion inhibitors?

A. Many parts of an engine are made up of ferrous metal components, aluminum, and plastics. Many fuels today contain ethanol (alcohol) and is highly corrosive to a variety of components in your fuel lines and engine. The Dalhin Efficiamax® Ten-35 contains a corrosion inhibitor in order to mitigate corrosion in tanks, engines, and fuel lines. It also has a detergent to help keep engines, fuel lines, filters, pumps, and injectors clean. This results in increased efficiency, less breakdowns, and less maintenance for your equipment.

Q. Is The Dalhin Efficiamax® Ten-35 beneficial for use in biodiesel fuel?

A. The Dalhin Efficiamax® Ten-35 is excellent for use in biodiesel fuels. Biodiesel has less BTUs than No. 2 diesel. Biodiesel is much more prone to higher water content, minimizing its effectiveness, as well as being subject

to faster fuel degradation than regular diesel. The Dalhin Efficiamax® Ten-35 is ideal for use in this type of fuel. Not only does it stabilize the fuel, but it also allows it to burn more effectively, utilizing more of the available BTUs and eliminating the water, thereby making the fuel more efficient.

Q. How long has The Dalhin Efficiamax® Ten-35 been in use?
A. The Dalhin Efficiamax® Ten-35 has been in use since the early 1990s. It is proven in all heavy industries, with the emphasis on mining. It is now available to the general public so they can also benefit from its amazing properties.

Q. Can The Dalhin Efficiamax® Ten-35 reduce pollution?
A. Yes. The Dalhin Efficiamax® Ten-35 is very effective at reducing carbon and greenhouse gasses, up to 70%. It does this by burning more of the available BTUs in the fuel and burning the fuel in the engine more efficiently. This gives the engine more horsepower and more fuel economy, which means you use less fuel to go the same distance, or to complete the same amount of work.

Q. Why has The Dalhin Efficiamax® Ten-35 not been available to the general public?
A. Heavy industry has been the primary user of The Dalhin Efficiamax® Ten-35 in the past. Our goal is to make this fuel treatment available to the general public, so they too can experience its benefits. We believe by doing so we will create a greener environment for our world.

Q. Can The Dalhin Efficiamax® Ten-35's interaction with fuel be explained using a chemical formula?
A. The basic principles behind the benefits and catalytic effects of The Dalhin Efficiamax® Ten-35 are easy to understand. Today's engines leave some amount of fuel unburned on each piston stroke. The Dalhin Efficiamax® Ten-35 makes it easier for your engine to burn more of the fuel in the cylinder. Because more of the fuel is being burned, more power is being generated. Since less of the fuel is being wasted, you will have fewer emissions.

CHEMISTRY
An engine converts fuel into energy by the following chemical processes:

$$C_xH_y + O_2 \rightarrow (CO_2 + H_2O) + (CO + HC + C) + \Delta H$$

The ΔH is known in chemistry as enthalpy and represents the energy created from the thermodynamic process taking place inside an engine. The C_xH_y represents the fuel; for example, gasoline is C_8H_{18} and diesel is $C_{12}H_{26}$. The CO_2, H_2O, CO, HC, and C on the right side of the arrow represent products that are released in the engine exhaust.

There are no exothermic (i.e. energy-producing) reactions that could yield more energy out of the CO_2 or H_2O, so we've grouped those components together in the equation above. However, there are exothermic reactions that can extract additional energy from the second group: the CO, HC, and C.

When The Dalhin Efficiamax® Ten-35 is introduced into the engine, it acts as a catalyst and lowers the activation energy needed to further break down the unburned products in the above reactions. Specifically, when The Dalhin Efficiamax® Ten-35 is used, the following additional chemical processes take place in the engine:

$$CO + O_2 \rightarrow CO_2 + \Delta H$$
$$HC + O_2 \rightarrow CO_2 + H_2O + \Delta H$$
$$C + O_2 \rightarrow CO_2 + \Delta H$$

The ΔH's in the three above equations are how The Dalhin Efficiamax® Ten-35 increases your engine's output. These ΔH's add to the ΔH produced by the engine's standard process to deliver more output energy from the engine. This extra energy can be used to either increase engine output power (if the amount of fuel input is kept constant) or reduce the engine's fuel intake (if the amount of output power is kept constant).

FLAME PROPAGATION

Your engine only has a limited amount of time to burn all of the fuel in the combustion chamber before it is swept out to the exhaust. Without The Dalhin Efficiamax® Ten-35, fuel is ignited from only one point in chamber. A red flame burns from the top down to the piston head. The Dalhin Efficiamax® Ten-35 contains compounds that act as flame initiators.

Because of this, with the use of The Dalhin Efficiamax®, the flame in your engine's combustion chamber isn't only propagating from top to bottom. It's also propagating from all of the The Dalhin Efficiamax® Ten-35 molecules in the fuel. More of the fuel in the chamber will be burned on each stroke and less will be wasted in the exhaust.

PRESSURE MEASUREMENTS

Sensors inside laboratory engines have shown that The Dalhin Efficiamax® Ten-35 changes the pressure cycle inside the combustion chamber. Because the average pressure is greater inside the chamber, the piston will receive more force, driving it down. Because the piston is being driven down faster, more output power is delivered to the crankshaft, resulting in improvements in efficiency.

Q. Can The Dalhin Efficiamax® Ten-35 be used by the shipping industry for heavy fuels such as No. 6 diesel fuel (bunker fuel)?

A. Yes. The Dalhin Efficiamax® Ten-35 is ideal for use in the shipping industry.

The treatment ratio is 1:5,000. After use over 1,000 hours, the treatment ratio can be extended 1:7,000.

To begin:

1 gallon of The Dalhin Efficiamax® will treat 5000 gallons.
1 liter of The Dalhin Efficiamax® will treat 5000 liters

After 1,000 hours, 1 gallon of The Dalhin Efficiamax® to 7,000 gallons bunker fuel.
1 liter of The Dalhin Efficiamax® will treat 7,000 liters fuel.

As a **Combustion Catalyst:** The Dalhin Efficiamax® is a burn-rate modifier. Due to its organometallic compounds, it lowers the initial combustion-point temperature, burns the lower end BTUs, and allows a longer resonance burn time, with fewer emissions.

Sulfur Content. Bunker fuel is exceptionally high in sulfur. The Dalhin Efficiamax® stabilizes the sulfur molecules, reducing the sulfur emissions of SO_2 and SO_3 about 10%, on average. The remaining sulfur passes through as

particulate matter. SO_2 and SO_3 form gas, which, when released into the atmosphere, combines with water during the condensation process and forms acid rain. The Dalhin Efficiamax® helps reduced this effect on our environment.

Polymerization Retardant. Bunker fuel has a longer molecular chain, almost 3 times longer than diesel fuel. This means it is more difficult for the longer molecule to get enough oxygen for a complete efficient burn. The polymerization retardant in The Dalhin Efficiamax® Ten-35 will delay the process of the fuel returning to crude oil and creating even longer molecular chains. Cracked fuels begin to deteriorate immediately after they are refined. As fuel ages in storage, it re-polymerizes, forming microscopic particles that score fuel-metering injectors. As re-polymerization continues, the molecular chains become longer and longer, forming large agglomerates (macroscopic sludge). Eventually, the fuel may become un-pumpable and even noncombustible in some cases.

The Dalhin Efficiamax® prevents these carbon chains from combining, keeping the fuel stable and eliminating it from returning to its crude state. Less sludge means more available BTUs and more horsepower to the drive and less manpower required to clean out the sludge in the holding tanks. The Dalhin Efficiamax® disperses existing macroscopic sludge, retards further polymerization, and permits fuel to be combusted efficiently, with fewer emissions.

Benefits for use in bunker fuel:

- Reduces engine carbon buildup.
- Reduces engine wear from carbon buildup.
- Reduces de-carbonization maintenance.
- Significantly extends the life of pistons, liners, injectors, and valve train components etc.
- Engine oil lasts longer due to less carbon in the oil sump/pan.
- Engines last longer due to less wear caused by carbon particles in the oil.

Contains Water Demulsifier and Detergents

Bunker fuel contains approximately 2% water. The Dalhin Efficiamax® Ten-35 removes water from the fuel. It also helps eliminate sludge,and solids

from forming and collecting in the fuel tank and fuel lines. It increases the life of filters, injectors, and fuel pumps caused by the above problems. The demulsifier and detergents separate the water and reduce the solid particles in the fuel. The Dalhin Efficiamax® will help maintain a clean fuel system, free from water, sludge, and corrosion.

Fuel Stability

1. Removes water from the fuel.
2. Eliminates existing solids in the fuel.
3. Prevents polymerization.
4. Stabilizes fuel in tanks for many years, allowing for the bulk purchase of fuels when they are inexpensive.

Fuel Economy

1. Increases available BTUs per pound of fuel @ minimum 3.5%.
2. Improves fuel economy and/or horsepower.
3. Dramatic reduction in fuel sludge.
4. Keeps oil cleaner.
5. Lubricates the fuel system.

Reduced Maintenance Costs

1. Longer life for pistons and rings.
2. Reduce hard-carbon deposits 60% to 90%.
3. Dramatic reduction of tank cleaning from fuel sludge (saves manpower hours).
4. Prevents fuel tank corrosion.
5. Reduces combustion system wear.
6. Prevents catalytic oxidation.

Additional Benefits for Internal Combustion Engines

1. a) Reduces vanadium, sulfur, and sodium deposits in the combustion chamber and exhaust spaces (valves, turbochargers).

2. b) Reduces or eliminates need to water wash turbocharger gas side.
3. c) Dispenses existing macroscopic sludge and stops further re polymerization.
4. d) Helps eliminate filter plugging.
5. e) Extends engine life.
6. c) Reduces soot, smoke, and particulate emissions.
7. d) Prevents the conversion of sulfur to SO_2 and SO_3.

Q. Can The Dalhin Efficiamax® Ten-35 be used in power generators to make electricity?

A. Yes. Some power-generating stations use engines and heavy fuels, similar to the shipping industry. See explanation on how The Dalhin Efficiamax® Ten-35 is used in the shipping industry.

Q. Can The Dalhin Efficiamax® Ten-35 be used in open-flame boilers?

A. Yes. The following is a synopsis of a test done at Grupo Fertinal in Mexico. (Full report on file.) It was determined that a fuel-consumption and emissions-reduction analysis should be conducted on two (2), 100 ton-per-hour steam plants utilized for the production of commercial fertilizers. The test units selected for this procedure were unit CA-001, a Babcock and Wilcox, 100 ton-per-hour boiler, and CA-003, a 100-ton-per-hour Rey boiler. CA-001 was operating at roughly 56.22% efficiency at baseline, while CA-003 was operating at about 18.82% efficiency.
The data showed that the average improvement in fuel consumption, for the test burner evaluated was 4.6% during dynamic testing, using the CMB test procedure and 3.9% using in-house volumetric fuel consumption flow meters.

The treated burner also demonstrated a large percentage reduction in soot particulates in the range of 27%, and reductions in harmful exhaust-related carbon fractions. Carbon dioxide reductions, based upon the measured reduction in fuel consumption, were also substantial. Steam

production was also increased by 2.5% in CA-001. Prior to cleaning, Fertinal employees reported an absolute efficiency increase of 4.18% (18.82% to 23%) in CA-003. When applied to steam generation in tons-per-hour, this represents an increase in steam production of close to 20%.

Q. Can The Dalhin Efficiamax® Ten-35 be used in propane or natural gas?

A. Yes, The Dalhin Efficiamax® Ten-35 can be used in all hydrocarbon-based fuels. The challenge is the delivery process to combine the The Dalhin Efficiamax® additive with the natural gas or propane.

Q. Does The Dalhin Efficiamax® Ten-35 need to be double-dosed for the first 3 or 4 tank fills?

A. No. Just using the regular treatment of The Dalhin Efficiamax® Ten-35 will keep your engine clean and keep the upper-engine components, injectors, valves, fuel pumps, etc. operating at peak performance.

Q. What do I do if I get Efficamax® Ten-35 on my skin, clothes, or eyes?

A. First Aid Response: IF SWALLOWED: Do NOT induce vomiting. Get immediate medical advice/attention. IF ON SKIN: Wash with plenty of water. IF INHALED: Remove person to obtain fresh air and keep comfortable breathing. Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical advice/attention. IF ON CLOTHING: Remove contaminated clothing. Wash contaminated clothing before reuse. IN CASE OF FIRE: Use carbon dioxide foam, dry chemical or smart media extinguisher to extinguish.

Prevention: KEEP OUT OF REACH OF CHILDREN. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use only non-sparking tools. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink, or smoke when using this product. **Use only outdoors or in a well-ventilated area.** Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. For emergency, call your physician, local

poison control center, or local emergency room. For other information, call (801) 233-9185.

Handling and Storage: Store in a well-ventilated area away from acids, alkalis, and open flames. Store in a closed container. For additional safety information, refer to the Safety Data Sheet for this product.

Disposal: Dispose of contents/container to a chemical landfill as approved by current, local, state, and federal laws and regulations.

Accidental release measures: Clean spill with absorbent materials. Eliminate ignition sources. Use full face NIOSH approved organic respirator if TWA/TLV limits are exceeded. Avoid runoff into storm sewers and ditches which lead to waterways.

Q. Is The Dalhin Efficiamax® Ten-35 hazardous and toxic?
A. Yes The Dalhin Efficiamax® Ten-35 is hazardous and toxic. Read instructions on use carefully. However, when used properly in your engine, it is rendered harmless.

Physical Hazards: Combustible liquid.

Health Hazards: Toxic if swallowed. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure

Acute Health Hazards: Possible symptoms of exposure may include the following: EYES: Can cause irritation, redness, blurred vision and possible permanent damage. SKIN: Prolonged contact can cause irritation, corrosion to the skin, burns. INGESTION: Harmful or fatal if swallowed. Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Aspiration into the lungs may cause lung damage and possible death. Can cause central nervous system depression. INHALATION: High concentrations can cause irritation, dizziness, nausea, fatigue, headache, and unconsciousness or asphyxiation and possible death. Can cause central nervous system depression.

Environmental Hazards: Very toxic to aquatic life with long-lasting effects.

Q. Why does the The Dalhin Efficiamax® Ten-35 bottle state that it does not meet EPA 2007 sulfur standards?

A. As a standalone product on the shelf, The Dalhin Efficiamax® Ten-35 does not meet the 2007 low sulfur standards. But when diluted in fuel, the sulfur content is negligible and more than meets the EPA 2007 low sulfur standards.

Q. How do I calculate the correct amount of The Dalhin Efficiamax® Ten-35 to use in my vehicle?

A. Just 1 oz (29.6 mL) of The Dalhin Efficiamax® Ten-35 will treat 80 gallons (302 liters) of fuel, either gasoline or diesel. Just ¼ oz (7.4 mL) will treat 20 gallons (75.6 liters); ½ oz (14.8 ml) will treat 40 gallons (151 liters). The metric measurement can be approximated as being just under 30mL for 1 oz; just under 7.5mL for ¼ oz; and just under 15 mL for ½ oz.

Ratio Table:

	0.25 OZ	0.50 OZ	1 OZ	1.5 OZ	2 OZ	4 OZ
20 GAL	X					
40 GAL		X				
80 GAL			X			
120 GAL				X		
160 GAL					X	

320 GAL	X
640 GAL	
1280 GAL	
1920 GAL	
10,000 GAL	

Q. How do I use the The Dalhin Efficiamax® Ten-35 bottle?
A. Watch our video here. (Click link.)

The The Dalhin Efficiamax® Ten-35 bottle is simple to use. Make sure the cap is on tight. Turn the bottle upside down and fill the reservoir until it's full. Turn the bottle until the scale and window is facing you and you can see the liquid in the window.

Let's say you only want ¼ oz or 7.4 mL of additive. You will notice 2 scales, one on either side of the window where the reservoir is. The scale on the right-hand side indicates the measurement in mL. The scale on the left-hand side is the measuring scale. The scale on the left-hand side determines the amount of fluid that will show up in the reservoir on the right-hand side scale.
With the scale and window facing you, tip the top of the bottle away from you until the fluid reaches the lowest scale on the left-hand side of the window for 10mL. Once the liquid in the reservoir reaches the lowest mark of the scale on the left-hand side of the window (10ml), then just tilt the bottle a little further until you gauge approximately 7.4 ml. When you set the bottle up vertically, you will have the correct amount of additive in the reservoir and on the right-hand side, where it should show a little under 10 mL. For larger amounts of additive, use the ratio table above.

Q. Does The Dalhin Efficiamax® Ten-35 contain octane?

A. No it does not. But The Dalhin Efficiamax® Ten-35 does slow the resonance burn of the fuel, allowing for more of the BTUs to be burned. Most fuels come from crude oil. Crude oil must be "cracked" in a cracking tower at the refinery. The higher up the tower, the more aromatic or lighter the fuel becomes, making it easier to ignite, but more expensive to produce. The less aromatic or heavier the fuel, the less expensive it is to produce. Heavy fuel could be bunker fuel, such as is used in ships or power-generating stations. This fuel is very high in BTUs per pound of fuel and provides more horsepower once it is ignited in an engine. It usually has to be heated up in order to get it to flow into the engine so that it can be burned. The heavier the fuel, the less aromatic it is and the more difficult it is to burn in the engine. The more aromatic the fuel, the lighter it is and easier to burn in an engine.
Number 2 diesel fuel is more aromatic than bunker fuel, which is sometimes called Number 6 diesel fuel. Number 6 diesel or bunker fuel contains much more BTUs per pound of fuel compared to Number 2 diesel. Lighter fuels can be gasoline (petrol) as used in many automobiles. The more gaseous the fuel, the more aromatic it is and the higher up the cracking tower the refining process must take place, making it more expensive to produce.
A high-performance sports car may require 94 octane fuel, whereas a regular family car may only need 85 octane fuel. The acceleration in the family car will be less responsive with a lower octane fuel compared to a higher-octane fuel if not using The Dalhin Efficiamax® Ten-35. By using The Dalhin Efficiamax® Ten-35 in a lower octane fuel, the performance can still be obtained, but at a lower cost with increased horsepower. In the lower octane fuel, there are more BTUs per pound of fuel compared to higher-octane fuels, which have lower BTUs per pound of fuel. As lower octane fuels are cheaper to purchase than higher octane fuels, by adding The Dalhin Efficiamax® Ten-35 to the lower octane fuel, you can save a lot of money and still obtain great fuel economy with more horsepower and performance, because The Dalhin Efficiamax® Ten-35 has now created a more aromatic fuel.

Q. Does The Dalhin Efficiamax® Ten-35 contain cetane?

A. Yes it does. It will boost diesel fuels and other heavy fuels approximately 3-4%. It allows for the heavier fuels to burn more efficiently and obtain the most BTUs from the fuel. Using The Dalhin Efficiamax® Ten-35 enhances

heavy fuels by making them more aromatic and stops the polymerization process, whereby the heavier solids begin to separate from the fuel, which is a natural process as fuel degrades over time.

Q. How Does The Dalhin Efficiamax® Ten-35 affect the cetane or octane value of the fuel?

A. The cetane value of diesel is enhanced 3-4% by using The Dalhin Efficiamax® Ten-35, allowing for diesel and all heavy fuels (such as bunker fuel in ships and power-generating stations) to burn more efficiently and cleaner, obtaining close to the full cetane value of the fuel.
In gasoline engines, you can use the lowest octane fuel with The Dalhin Efficiamax® Ten-35 and still achieve the performance of a higher-octane fuel. This is a real money-saver for everyone.

Testimonials

After the International MINExpo held in 2000, PT Pamapersada Nusantara (PAMA) Mining of Indonesia decided to use FILTAGREEN® International's The Dalhin Efficiamax® Fuel Treatment.

(PAMA is the largest privately held, independent mining contractor in the world, and the largest user of Komatsu equipment in the entire world.) They determined that if they gained a 2% increase in fuel efficiency, calculated based on the price point at which they would purchase the product, it would lead to a 300% return on their investment in the product. Initial tests of the product proved an increase of significantly more than 2%.

PAMA uses over 300 million gallons (US measurement) of fuel per year. Their machines run an average of 23 hours per day. This equates to approximately 822,000 gallons of The Dalhin Efficiamax®-treated fuel being used each day.

Currently, PAMA is at 4.5% increase in fuel efficiency. This represents 2.5% more than was originally estimated. Therefore, by using FILTAGREEN® International's The Dalhin Efficiamax® Fuel Treatment, this company is receiving a 675% return on investment and saving 37,000 gallons of fuel each day.