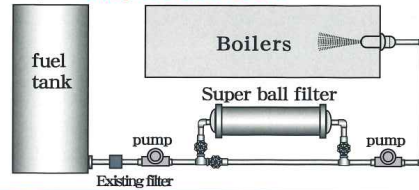


Boilers Fuel consumption reduction results 5-18%. (Depends on boiler type.)

Fuel molecules become extremely small \Rightarrow Easier to combine with oxygen \Rightarrow Lower fuel flash point (temperature) to increase combustion efficiency \Rightarrow **Complete combustion**



Attach to fuel supply piping. Super ball filter



Marine Fuel consumption reduction 5-10% actual

Decrease in surface tension \Rightarrow Decrease in resistance of cooling water path \Rightarrow Faster cooling water flow \Rightarrow Lower cylinder head temperature by 8 to 12° C \Rightarrow Increased air intake \Rightarrow **Complete combustion**

Offshore trawlers: 60 tons

Fuel type: Heavy oil A

Fuel consumption reduction: 5.1 to 10%.

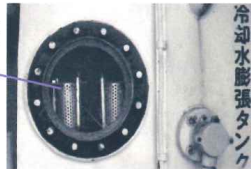
[Other]

Express passenger ship: 12,000 tons

Fuel Type: Heavy Fuel Oil C

Fuel consumption reduction rate: 5.9%

Place the Superball in the coolant expansion tank.



Ship with Super Ball

Agricultural

Treated water has improved permeability due to reduced viscosity and surface tension, antimicrobial activity, and reduction of ionic components (Fe^{2+} , K^+ , H^+) dissolved in the treated water. In addition, the reduction of ionic components (Fe^{2+} , K^+ , H^+) dissolved in the treated water can be expected to promote growth and improve vitality. In addition, K^+ ions prevent bacterial growth.

Observation of hyacinth growth



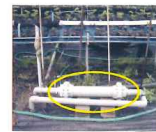
Right: with super ball
3rd day



Right: with super ball
Day 6



Right: with super ball
Day 9



Super ball filter
Installed in water supply piping
for hydroponics.



Effects of strawberry cultivation

Sugar content: 12-13 degrees (usually 7-8)

Original fertilizer: 10-15% reduction

Pesticides: Reduction in the number of applications

Yield: 20-30% increase



JEP Corporation

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E-mail: hayata@jepgroup.co.jp

Please be careful about similar products.

■ 2008.2.8 Fair Trade Commission issued

In accordance with the "Premiums and Representations Law," orders were issued to 19 manufacturers and distributors to exclude products that claim to improve automobile fuel efficiency.

■ 2023.2.10 Consumer Affairs Agency issued

Order to take measures based on the Act on Unjustifiable Representations against two companies that manufacture and sell products that claim to improve automobile fuel efficiency, etc.



Fuel expenses



Cleaner exhaust gas emissions and improved fuel efficiency of gasoline and diesel vehicles

Super ball

Made in Japan



Nature conservation
Let's save the earth now!



Super ball can also be used for boilers, ships, and agriculture.

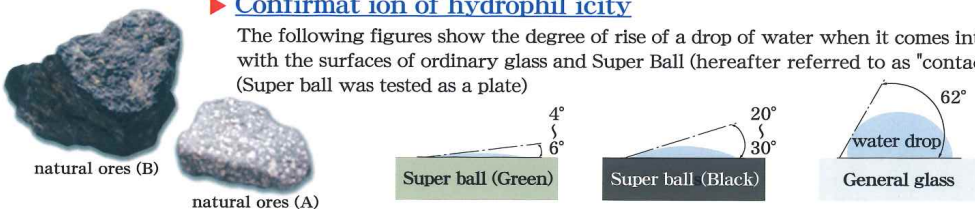
Super ball



Super Ball is a functional processed ore made by mixing two types of natural ores (A) and (B) respectively with quartz and processing them into green balls of 8 mm in diameter and black balls of 8 mm in diameter. Green balls have strong far-infrared radiation properties, deodorization, antibacterial action, super hydrophilicity, viscosity reduction, and reduction active water function, while black balls have magnetism and electrical conductivity. The "Super ball" is a product that takes advantage of the properties of these ores, and is effective in improving fuel efficiency and reducing harmful emissions from automobiles.

Confirmation of hydrophilicity

The following figures show the degree of rise of a drop of water when it comes into contact with the surfaces of ordinary glass and Super Ball (hereafter referred to as "contact angle"). (Super ball was tested as a plate)



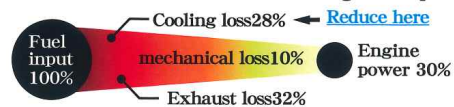
The contact angles between the Superball and the water droplets on the glass surface were measured to be 4 to 6 degrees for green and 20 to 30 degrees for black. The contact angle of normal glass is 62 degrees, indicating that the contact angle of the Superball (both green and black) is extremely low.

If the degree of rising of water droplets is low, the material is highly hydrophilic, which means that water can easily mix with the material.

The green color in particular is super hydrophilic (extremely hydrophilic). When water was dripped onto the green super ball with an eyedropper, it immediately ran down the sides of the glass and no droplets formed.

Mechanisms for Improving Fuel Efficiency and Reducing Toxic Gases

Water-cooled internal combustion engines have a cooling loss of 28%, and we focused on reducing this loss factor in order to increase engine output.

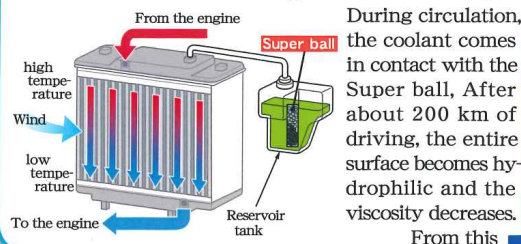


The reduction of cooling losses provides the following benefits

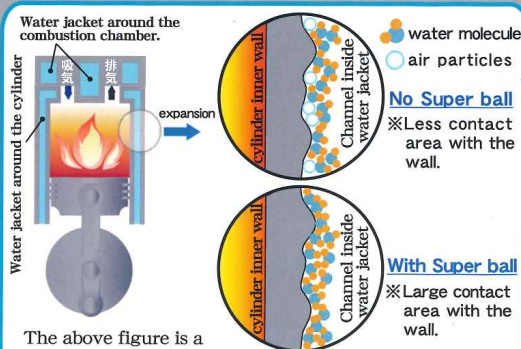
1. Increased engine horsepower
Improvement in fuel economy, (Water-cooled gasoline and light oil vehicles)
2. Increased combustion efficiency
It will lead to a reduction in harmful exhaust emissions.

Converts water in the radiator to hydrophilic and reduces viscosity

The diagram below shows the structure of a radiator. The engine is started with the Super ball in to the reservoir tank and the cooling water is circulated.



During circulation, the coolant comes in contact with the Super ball. After about 200 km of driving, the entire surface becomes hydrophilic and the viscosity decreases. From this



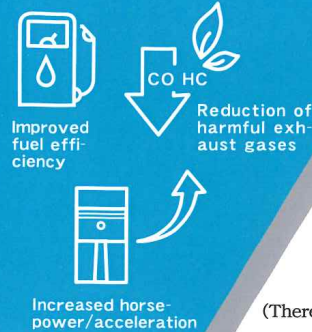
The above figure is a cross-sectional view of the engine piston section. Cooling water from the radiator flows through channels within the water jacket, but without Super ball the cooling water has a reduced contact area with the water jacket wall due to surface tension.

On the other hand, when Super ball is installed, its hydrophilic nature reduces the surface tension, increasing the contact area with the wall and increasing the cooling effect.

In the experiment, a significant temperature drop of 8 to 12 degrees Celsius was confirmed at the top of the combustion chamber wall.

Furthermore, the cooling water with reduced viscosity has a faster flow rate in the water channel, further increasing the cooling effect.

The above effects increase combustion efficiency, improve fuel efficiency, increase horsepower, and reduce harmful exhaust gases.



(There are 3 types: S, M, L)

Super ball

Vehicle displacement and compatible size

Displacement	Applicable size	Size (mm)
Under 2000cc	S	Length : 130 Diameter : 15
Over 2000cc	M	Length : 140 Diameter : 20
2t truck	L	Length : 250 Diameter : 20
4t truck	L	Length : 250 Diameter : 20

*For a 4-ton truck, use two.

Actual vehicle driving results

improvement : 20.8% (average)

Manufacturer	car model	area	year	cc	fuel	Fuel (%) improvement	Before use (km/L)	After use (km/L)
BMW	320i	Shizuoka prefecture Japan	2005	2000	gasoline	11.9	15.1	16.9
Honda	accord	Miyagi prefecture Japan	2014	2500	gasoline	27.3	9.9	12.6
Mercedes Benz	C class	Shiga prefecture Japan	2012	3500	gasoline	30.0	7.0	9.1
Honda	accord	Fukushima prefecture Japan	2012	2000	gasoline	19.8	12.1	14.5
made in China	Dialect Festival	Jining Municipal Invitation Bureau, Shandong Province, China	2012	1600	gasoline	18.5	11.0	13.0
made in China	Honda Accord	Jining Municipal Invitation Bureau, Shandong Province, China	2012	2000	gasoline	16.8	12.1	14.2
made in China	Honda Accord	Ecological Environment Bureau, Qinhuangdao City, Hebei Province	2007	2000	gasoline	18.0	11.3	13.4
Mercedes Benz	C class	Liaoning Province (Yingkou City) - Beijing 1520Km	2012	3500	gasoline	28.2	7.1	9.1
made in China	Honda Accord	Liaoning Province (Yingkou City) - Beijing 1520Km	2014	2500	gasoline	27.3	9.9	12.6
Indonesia	Honda Freed	Jakarta	2012	1500	gasoline	21.8	16.8	20.5
Honda	accord	Fukuoka prefecture Japan	2007	2000	gasoline	18.6	11.3	13.4
Volkswagen	golf	Nagano prefecture Japan	2011	2000	gasoline	17.6	8.5	10.0
Toyota	crown	Shizuoka prefecture Japan	2010	2000	gasoline	13.3	7.5	8.5
Daihatsu	mouvement	Saitama prefecture Japan	2012	660	gasoline	24.4	12.3	15.3
Honda	FIT	Yamanashi prefecture Japan	2013	1300	gasoline	22.5	17.8	21.7
Daihatsu	move	Chiba prefecture Japan	2008	650	gasoline	16.7	13.8	16.1

Hazardous exhaust gas verification results

Date of measurement : April 22, 2008

Inspected vehicle : Honda Station Wagon (Model: E-RF1) Year1997

Measurement details : Exhaust gas measurement before and after insertion of Super ball

Method : After idling is stabilized, perform 3 measurements before insertion, and 3 measurements after driving for 30 minutes after insertion. The average values (A) and (B) of each of the three measurements are compared and confirmed. The following three measurements were taken.

CO : Carbon monoxide HC : Hydrocarbon CO₂ : Carbon dioxide

Measuring instrument : Combined carbon monoxide and hydrocarbon measuring instrument

Manufacturer : HORIBA, Ltd. Model: MX-002 Manufactured in March 2006

*Conformity test for automobile inspection equipment : Inspected and calibrated products

Effect CO : 100% reduction
HC : 95% reduction
CO₂ : Minor increase

Item	unit	Before insertion			
		1st	2nd	3rd	Av(A)
CO	%VOL	0.57	0.56	0.58	0.57
HC	ppmVOL	128	145	140	138
CO ₂	%VOL	14.98	15.04	15.02	15.01

item	unit	After insertion			
		1st	2nd	3rd	Av(B)
CO	%VOL	0.00	0.00	0.01	0.00
HC	ppmVOL	4	8	8	7
CO ₂	%VOL	15.80	15.84	15.72	15.79

supplementary explanation

Incomplete combustion formula

* Incomplete combustion $(C_1H_1O) + O_2 \rightarrow CO + HC + \dots + CO_2 + H_2O \dots \dots \textcircled{1}$

When organic materials (such as gasoline) burn in oxygen deficient conditions, carbon monoxide, hydrocarbons, black smoke, etc. are produced.

* Perfect combustion $(C_1H_1O) + O_2 \rightarrow CO_2 + H_2O \dots \dots \textcircled{2}$

Reaction in which organic matter (e.g., gasoline) is combined with sufficient oxygen to form carbon dioxide and water.

In the measurement results shown in the table above, CO and HC generated during incomplete combustion decrease after insertion, while CO increases compared to the complete combustion formula ②. Complete combustion improves fuel efficiency and reduces total CO₂ emissions.