

DENSO Industrial Gas Plugs

The Iridium Saver Spark Plug Solution
For Your Industrial Engine Needs

Built to Exceed

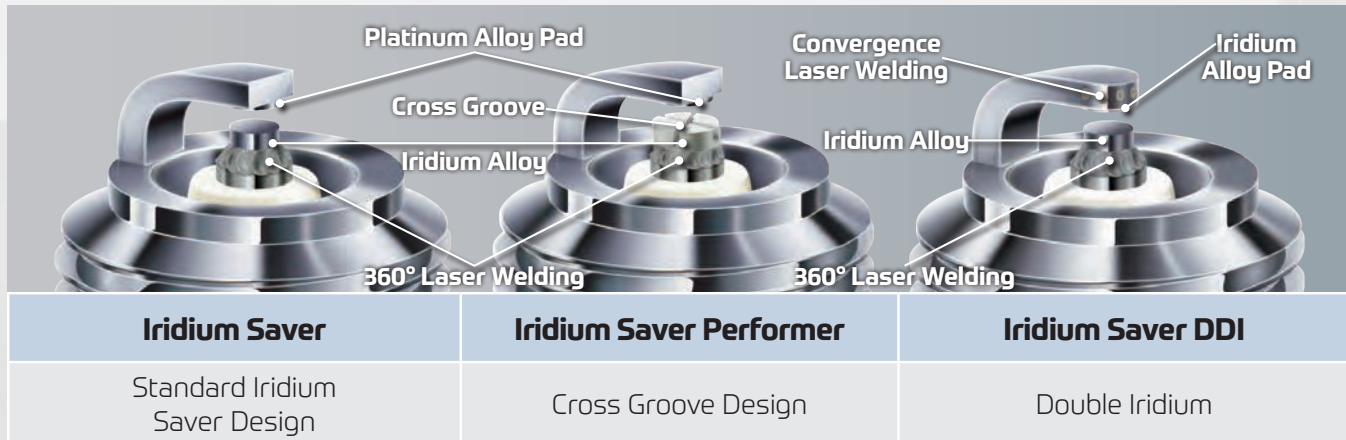


DENSO
**COMMERCIAL &
HEAVY DUTY**

Iridium Saver

Designed For Long Plug Life

DENSO Offers Three Iridium Options



CROSS GROOVE DESIGN (M18MM PLUG)

The cross groove creates four small electrodes which improves sparking performance and suppresses dispersion in voltage value, for an outstanding decrease in voltage required.

*Only Iridium Saver Performer

UNIQUE IRIIDIUM ALLOY

Iridium alloy – developed and patented by DENSO – offers a high melting point which dramatically improves wear resistance compared to other Iridium plugs.

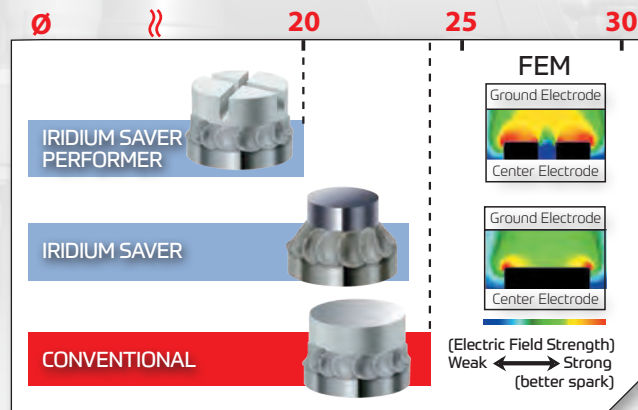
360° LASER WELDING

360° laser welding is used to create a seal so reliable the electrode resists wear even under the most extreme engine conditions.

PROVING LONGER LIFE

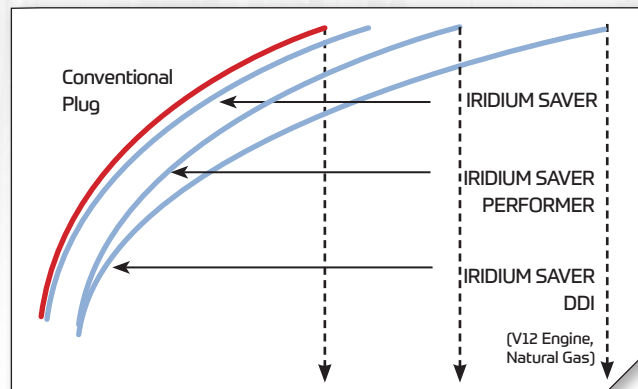
Using the same laser welding process as the Iridium Power spark plug, DENSO designed a long life spark plug for gas engines. With our patented Iridium alloy, DENSO was able to shrink the center electrode to 0.7mm, dramatically improving ignitability while maintaining longevity.

THE CROSS GROOVE DESIGN



Tested by DENSO

IGNITION VOLTAGE LIMIT



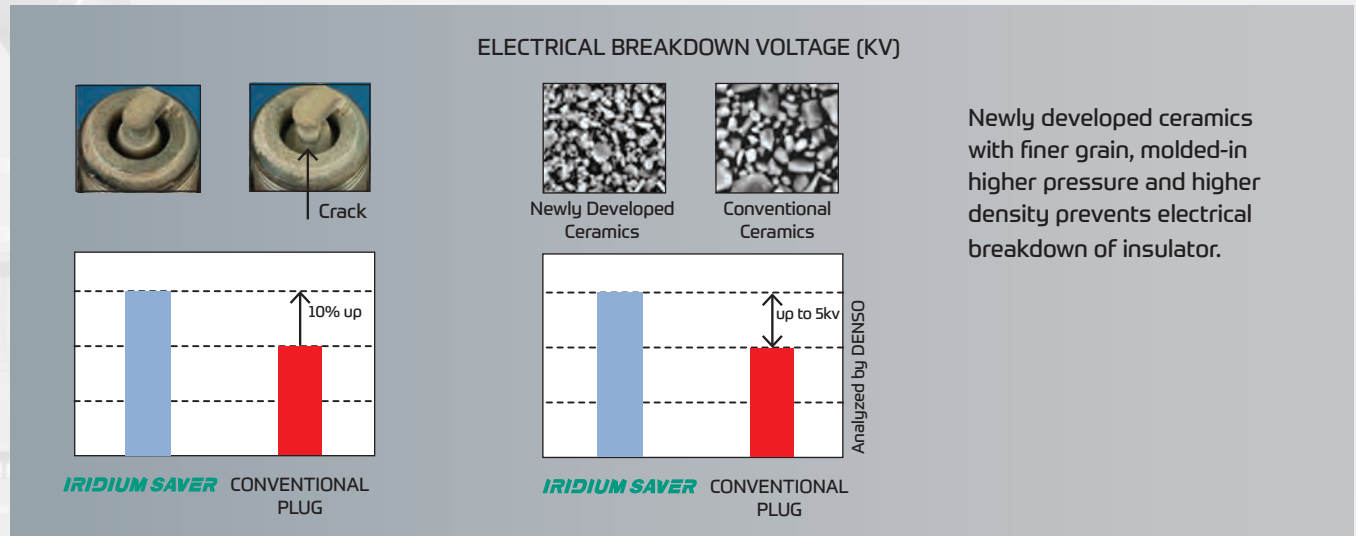
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Hours
Tested by DENSO

Iridium Saver

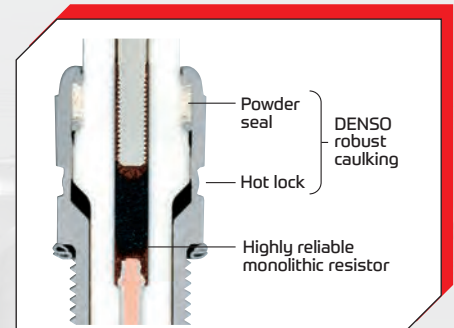
Designed For High Reliability

High Dielectric Ceramics



HIGHLY RELIABLE ROBUST CAULKING WITH POWDER SEAL AND HOT LOCK (M18MM PLUG)

For engines with higher combustion pressure, DENSO's robust caulking can secure air-tightness and prevent the caulk from loosening and ejecting the insulator.

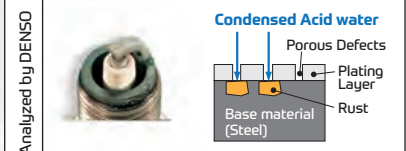


HIGHLY RELIABLE MONOLITHIC RESISTOR

The Iridium Saver design guarantees the reliability to withstand high combustion pressures by incorporating a stress resistant monolithic resistor that adheres to the resistor glass in high temperature environments. The resistor's purpose is to eliminate interference to electronic equipment from high energy coil noise.

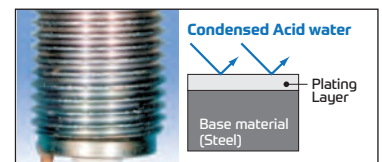
EXPOSURE TEST BY ACID STREAM ATMOSPHERE

Test Length: 700 Hours
Temperature: 90°C Acid Water: pH=2



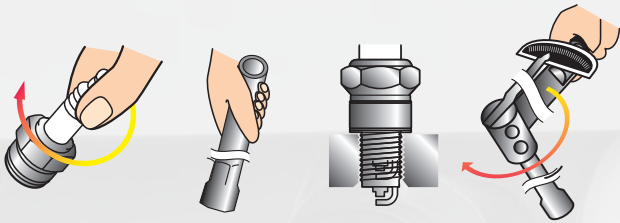
SPECIAL NICKEL PLATING WITH BETTER CORROSIVE RESISTANCE (ELECTROLESS PROCESS ELIMINATES POROUS DEFECTS)

Better corrosive resistance against condensed acid water.



Durable, Dependable, Quality

Recommended Tightening Torque



Thread size	Lubricant (on threads)	Recommended torque (cast iron head)	
M14 X 1.25	With lubricant	20 Nm	15 ft-lbs
	Without lubricant	30 Nm	22 ft-lbs
M18 X 1.5	With lubricant	30 Nm	22 ft-lbs
	Without lubricant	45 Nm	33 ft-lbs



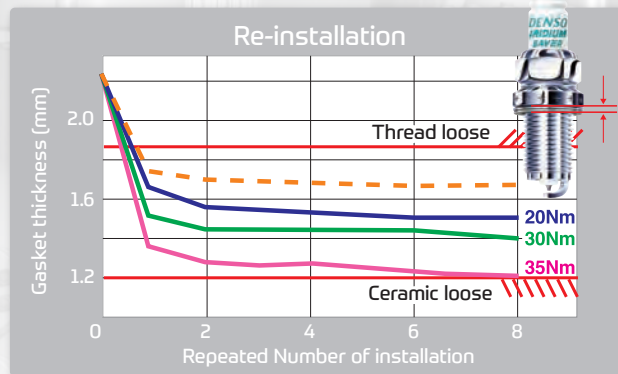
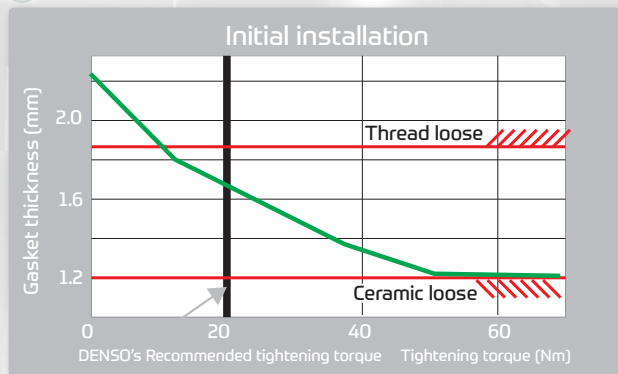
Possible cause of shorter plug life

- Non high quality gas fuel such as bio-gas, landfill gas will accelerate wear of electrodes
- Increase in energy of ignition coil accelerating wear of electrodes
- Deterioration of ignition coil causing a decrease in ignition voltage being supplied to the spark plug
- Deterioration of plug boot decreasing flashover resistance

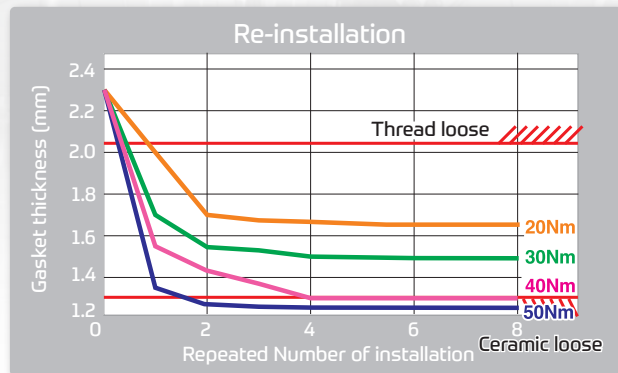
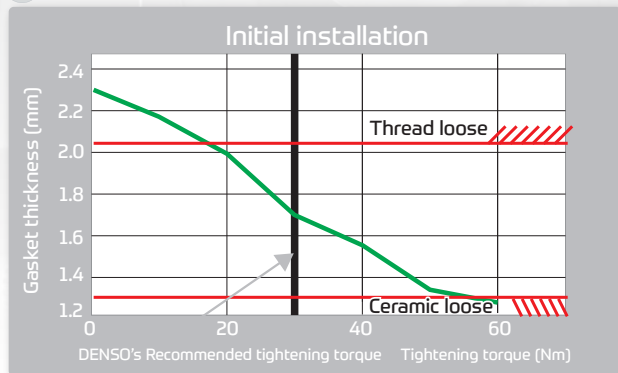
TIGHTENING TORQUE

Technician can examine gasket thickness to estimate if proper tightening torque was used.

▶ M14X1.25 With lubricant for cast iron head



▶ M18X1.25 With lubricant for cast iron head



Durable, Dependable, Quality

CAULKING STRENGTH

To secure stable reliability, Iridium Saver adopts a robust structure, such as a robust monolithic structure in the insulator. The bottom portion of the insulator is housed by a metal shell with a robust caulking.



RESISTOR NOISE REDUCTION

The Iridium Saver design guarantees the reliability to withstand high combustion pressures by incorporating a stress resistant monolithic resistor that adheres to the resistor glass in high temperature environments. The resistor's purpose is to eliminate interference to electronic equipment from high energy coil noise.



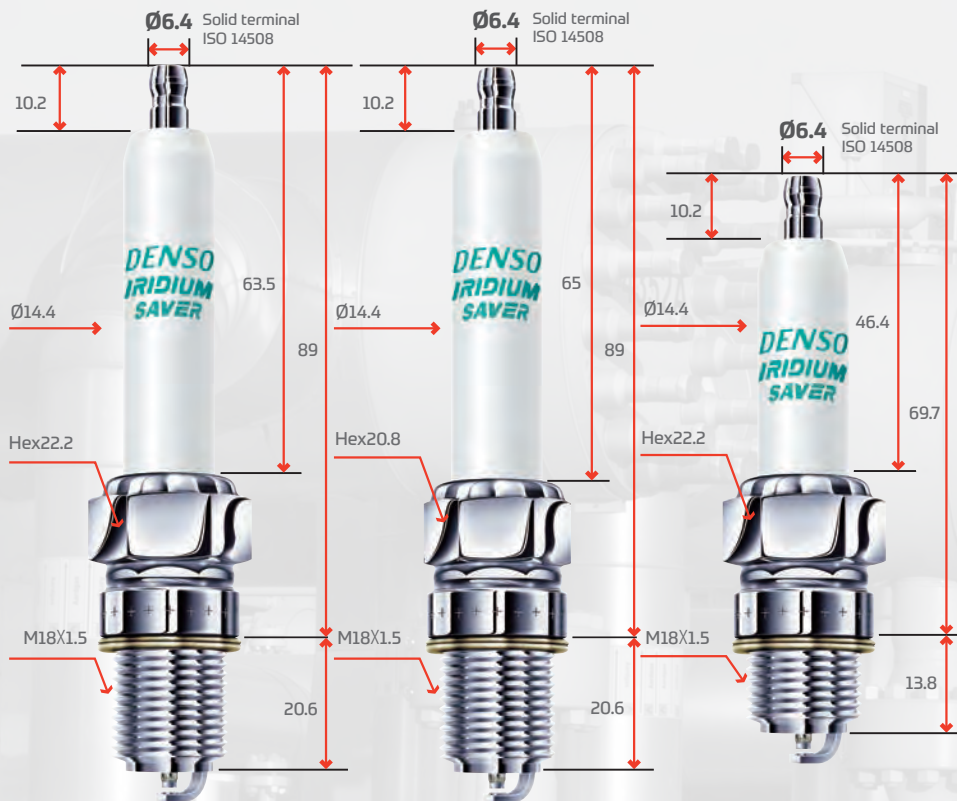
DENSO Iridium Saver

M18mm Plugs

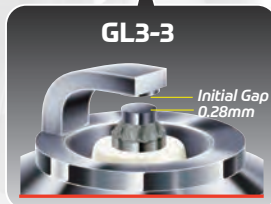
GI3-1 GI3-3 GI3-5

GL3-1 GL3-3 GL3-5

GT3-1



IRIDIUM SAVER



IRIDIUM SAVER PERFORMER



IRIDIUM SAVER DDI

