



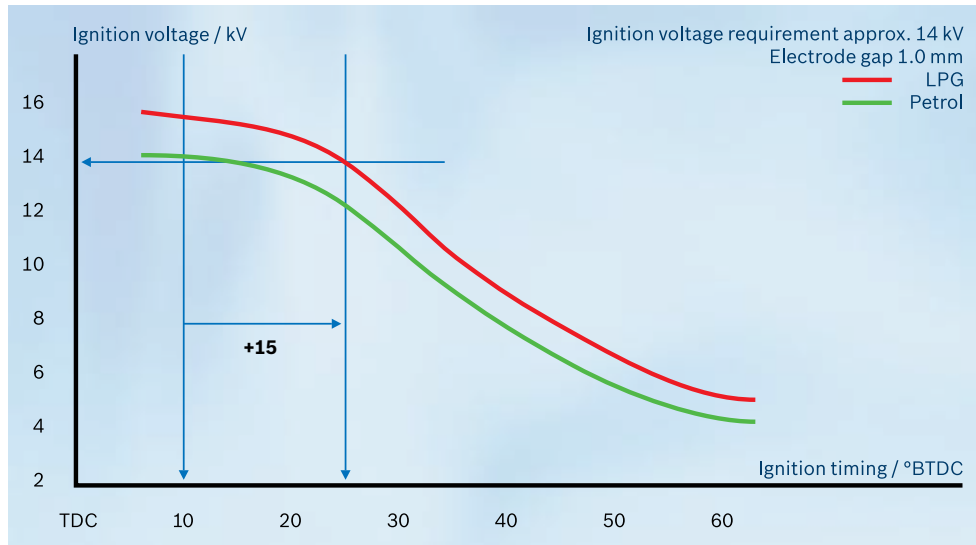
A **perfect solution**
- the **first dedicated** LPG spark plug program



BOSCH
Invented for life

Different sparks for different fuels

LPG engines work in the same basic way as a petrol or diesel engine. This allows almost any petrol or diesel engine to be easily and economically converted. However, a few things need attention:



1. Combustion chamber temperature

When petrol enters the combustion chamber, there is evaporative cooling. This cools the spark plug and other components (“charge cooling”). Since LPG is not a liquid, it burns dry, so there is no charge cooling effect. That means the combustion chamber and spark plug electrode are hotter.

2. Higher voltage requirements

As the internal combustion temperatures and pressures are higher in LPG engines, they need higher spark voltage for ionisation (the spark to jump the electrode gap) than petrol engines. Where a petrol engine might need 14 kV, the same engine but with LPG would need 16 kV. (See graphic)

3. Heat range

LPG operation also causes fewer deposits and less fouling, so the heat range selection can be one range colder than the spark plug used in petrol engines.

These factors accelerate spark plug wear, so LPG plugs need to be changed more often in comparison to plugs in standard petrol engines.

Bosch **Platinum** spark plugs: Precious metal for impressive performance

The quality of the spark plugs is fundamental to the reliability, efficiency, and life of an engine. Bosch works with leading car makers in the development of LPG powered vehicles. As OEM, Bosch has therefore developed spark plugs that are ideal for series-built LPG engines.



Bosch Platinum spark plugs are specifically designed for LPG engines.

Bosch Platinum spark plugs allow;

- ▶ Optimum ignition and longer life
- ▶ Higher sparking efficiency
- ▶ Extreme wear resistance to material erosion and less sensitivity to chemical effects in the combustion chamber

Bosch LPG spark plug program

Bosch, the inventor of the spark plug, is the first to introduce a dedicated LPG spark plug program to the Australian market. **The average life of most standard spark plugs is 15,000 kms, but with Bosch Platinum spark plugs specially designed for LPG applications the life is extended to 30,000 kms.**

Top Applications for Bosch LPG Spark Plugs

Make	Model	Model Code	Engine Size	Power	Engine Type	Gap (mm)	Bosch Spark Plug
Holden	Commodore	VX	3.8	152	VH <LN3>	0.7	HR 7 KI 332 S
Holden	Commodore	VX	5.7	225	VF <LS1>	0.9	HR 8 KI 332 W
Holden	Commodore	VX II	3.8	152	VH <LN3>	0.7	HR 7 KI 332 S
Holden	Commodore	VX II	5.7	225	VF <LS1>	0.9	HR 8 KI 332 W
Holden	Commodore	VY	3.8	152	VH <LN3>	0.7	HR 7 KI 332 S
Holden	Commodore	VY	5.7	225	VF <LS1>	0.9	HR 8 KI 332 W
Holden	Commodore	VY II	3.8	152	VH <LN3>	0.7	HR 7 KI 332 S
Holden	Commodore	VY II	5.7	235-245	VF <LS1>	0.9	HR 8 KI 332 W
Holden	Commodore	VZ	3.6	175	HB <Decontent>	0.7	HR 6 NI 332 S
Holden	Commodore	VZ	3.6	190	H7 <Premium>	0.7	HR 6 NI 332 S
Holden	Commodore	VZ	5.7	235-250	VF <LS1>	0.9	HR 8 KI 332 W
Holden	Commodore	VZ	6.0	260	L76	0.9	HR 8 KI 332 W
Holden	Commodore	VE	3.6	180	H7	0.7	HR 6 NI 332 S
Holden	Commodore	VE	3.6	195	H7 <Premium>	0.7	HR 6 NI 332 S
Holden	Commodore	VE	6.0	270	L98 <LS2>	0.9	HR 8 KI 332 W
Ford	Falcon	BA	4.0	156	S <GAS>	0.9	FR 7 KPP 33 U+
Ford	Falcon	BA	4.0	182	H <Barra 182>	0.7	FR 6 KI 332 S
Ford	Falcon	BA II	4.0	156	S <GAS>	0.9	FR 7 KPP 33 U+
Ford	Falcon	BA II	4.0	182	H <Barra 182>	0.7	FR 6 KI 332 S
Ford	Falcon	BF	4.0	156	S <Egas>	0.9	FR 7 KPP 33 U+
Ford	Falcon	BF	4.0	190	H <Barra 190>	0.7	FR 6 KI 332 S
Ford	Falcon	BF II	4.0	156	S <Egas>	0.9	FR 7 KPP 33 U+
Ford	Falcon	BF II	4.0	190	H <Barra 190>	0.7	FR 6 KI 332 S
Holden	Rodeo	KB	1.8	63	G180Z	0.7	WR 6 KI 33 S
Holden	Rodeo	KB	1.9	65	G200Z	0.7	WR 6 KI 33 S
Holden	Rodeo	TF	2.2	87	22NE	0.7	WR 6 KI 33 S
Holden	Rodeo	TF	2.3	81	4ZD1	0.7	WR 7 KI 33 S
Holden	Rodeo	RA	2.4	94	C24SE	0.7	WR 7 KI 33 S
Holden	Rodeo	TF	2.6	88	4ZE1	0.7	WR 7 KI 33 S
Holden	Rodeo	TF	3.2	140	6VD1	0.7	FR 6 KI 332 S
Holden	Rodeo	RA	3.5	147	6VE1	0.7	FR 6 KI 332 S
Holden	Rodeo	RA	3.5	147	6VE1	0.7	FR 6 KI 332 S
Holden	Rodeo	RA	3.6	157	H9 <HFV6 Euro3>	0.7	HR 6 NI 332 S
Toyota	Camry	SXV10	2.2	93	5SFE	0.7	FR 6 KI 332 S
Toyota	Camry	SXV20	2.2	94	5SFE	0.7	FR 6 KI 332 S
Toyota	Camry	ACV40	2.4	117	2AZFE	0.7	FR 6 KI 332 S
Toyota	Camry	VDV10	3.0	136	3VZFE	0.7	FR 6 KI 332 S
Toyota	Camry	VCV10	3.0	136	3VZFE	0.7	FR 6 KI 332 S
Toyota	Camry	MCV20	3.0	141	1MZFE	0.7	FR 7 LI 332 S
Toyota	Camry	MCV36	3.0	141	1MZFE	0.7	FR 7 LI 332 S
Mitsubishi	Triton	MK	3.0	133	6G72	0.7	FR 5 KI 33 S

NOTE: Please refer to the application listing in the Bosch LPG spark plug catalogue for the full range of LPG spark plugs.

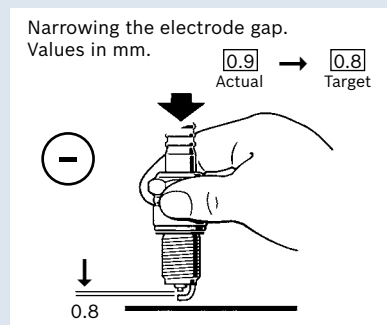
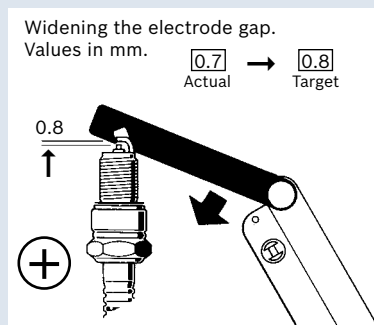
Right plug – right gap.

Bosch Platinum spark plugs for LPG do not require re-gapping – saving you time and money on every LPG service.

Electrode gap

Specified electrode gap

If spark plugs with the specified electrode gap are not available, the electrode gap must be adjusted by using a spark plug gap gauge.

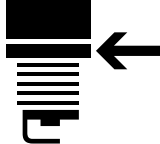


Correct installation of spark plugs with torque wrench

Tightening torques (Nm)
10Nm = 1 kpm

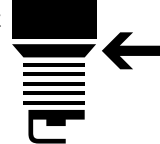
Please note:
The specified tightening torques apply for dry, non greased and non oiled threads.

Flat seat



	in cast iron	in light alloy
M 10x1	10 ... 15	10 ... 15
M 12x1,25	15 ... 25	15 ... 25
M 14x1,25	20 ... 40	20 ... 30
M 18x1,5	30 ... 45	20 ... 35

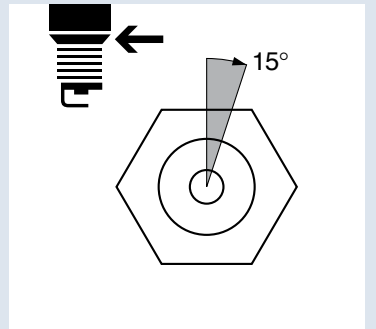
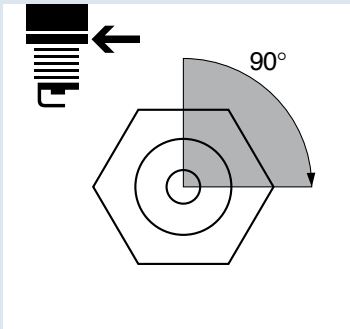
Conical seat



	in cast iron	in light alloy
M 14x1,25	15 ... 25	10 ... 20
M 18x1,5	20 ... 30	15 ... 23

Correct installation of spark plugs without torque wrench

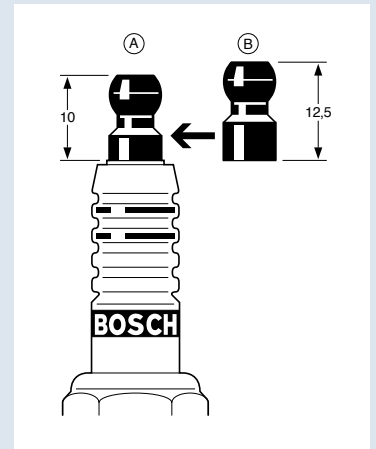
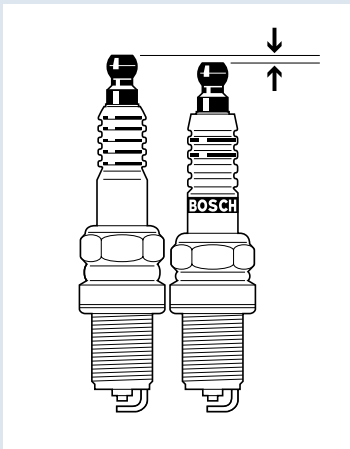
Screw in spark plug by hand until it is seated in the cylinder head. New spark plugs with flat seats are then screwed in by a further 90° (approx.) using the spark plug wrench. Spark plugs with conical seats as well as used spark plugs with flat seats are screwed in by a further 15° (approx.)



Spark-plug connection nuts

Spark plugs may be installed in the engine which differ in length from the Bosch spark plugs.

1. Unscrew old spark plugs
2. Compare with new Bosch spark plugs.
3. If replaced spark plugs are longer than Bosch spark plugs, replace the screwed on connection nut A with the longer connection nut B provided.



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For further information on **Bosch LPG spark plugs** or to find your local Bosch distributor call the Bosch Customer Service Line on **1300 30 70 40**.
Also visit the website at **www.bosch.com.au**

Stockist Details:

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