

Petrol Performance, Half the Noise

Field Test Report provided by Bosch Lawn and Garden Limited

1. BACKGROUND TO THIS REPORT

The information in this report has been collated by Bosch personnel on behalf of Bosch Lawn and Garden Limited (“**Bosch**”).

This report compares the performance of a Bosch GRA 53cm Professional Cordless Mower (“**Bosch GRA 53**”) with one leading petrol lawnmower in relation to performance and three leading petrol lawnmowers in relation to noise. Tests were carried out between 16 June 2014 and 15th December 2014 (“**Test Period**”) at a nearby testing facility.

The Bosch GRA 53 was tested at all times using two GBA 36V Hw d batteries (“**Batteries**”) charged to 100%. The charge time of the Batteries is 42 minutes (0-100%). Bosch recommends that the user has four Batteries and two chargers when operating the Bosch GRA 53.

2. TEST ONE

Battery Life

When fully charged the Bosch GRA 53 is able to cut grass from 60mm to 40mm up to a distance of 1500 square metres per hour.

Date	Make	Conditions	Height of Cut	Area cut(m2)	Time (Minutes)	Grassbags
19.05.14	Bosch	Grass was 60 mm, dry	40mm	1584	63	9

3. TEST TWO

Performance

For the purposes of this report, performance means the amount of time it takes to cut an area (m²) of grass. The comparative tests were completed when the Batteries for the Bosch GRA 53 were exhausted.

Bosch compared the Performance of the Bosch GRA 53 with one leading petrol lawnmower. The test was repeated seven times during the Test Period. The leading petrol lawnmower was in good working condition and tested side by side with the Bosch GRA 53 in order to ensure equivalent testing conditions and consistency. The run time of the Bosch GRA 53 did not drop below 45 minutes during the Test Period.

The tests proved that the Bosch GRA 53 was able to cut and collect more grass than the leading competitor five out of eight occasions. The tests also proved that the Bosch GRA 53 could cut the same area of grass in the same amount of time as the leading petrol lawnmower (note. the time was predetermined by the Bosch GRA 53).

Date	Make	Conditions	Height of Cut	Area cut (m2)	Time	Grassbags	kg
16.06.14	Bosch	Grass varying from 70 to 100mm, dry	50mm	859.1	45	10	56.4
	Competitor	Grass varying from 70 to 100mm, dry	50mm	859.1	45	10	62
23.06.14	Bosch	Grass varying from 70 to 80mm, dry	40mm	1044	65	12	108.5
	Competitor	Grass varying from 70 to 80mm, dry	40mm	1044	65	7	100.7
30.06.14	Bosch	Grass varying from 70 to 80mm, dry	40mm	1050	60	17	90.26
	Competitor	Grass varying from 70 to 80mm, dry	40mm	1050	60	19	116.49
14.07.14	Bosch	Grass varying from 100 to 60mm, dry	40mm	903	47.5	7	66.38
	Competitor	Grass varying from 100 to 60mm, dry	40mm	903	47.5	10	99.49
27.07.14	Bosch	Grass varying from 100 to 60mm, dry	40mm	1146	53	8	59.42
	Competitor	Grass varying from 100 to 60mm, dry	40mm	1146	53	4	55.18
29.07.14	Bosch	Grass varying from 80 to 90mm, dry	40mm	1046.07	55	10	113.64
	Competitor	Grass varying from 80 to 90mm, dry	40mm	1046.07	55	8	103.02
06.09.14	Bosch	Grass varying from 100 to 80 mm, dry	50mm	1085.46	57	11	60.62
	Competitor	Grass varying from 100 to 80 mm, dry	50mm	1085.46	57	10	57.94
15.12.14	Bosch	Grass varying from 60 to 70 mm, dry	40mm	1527	61	9	89.31
	Competitor	Grass varying from 60 to 70 mm, dry	40mm	1527	61	10	87.67

4. TEST THREE

Noise

Bosch compared the noise levels of the Bosch GRA 53 with three leading petrol lawnmowers. The information in relation to the noise levels of the leading petrol lawnmowers has been obtained from the relevant manuals, catalogues and website.

The comparison proves that the Bosch GRA 53 creates half of the noise when in use compared with the leading petrol lawnmowers.

Brand	Model	guaranteed sound power level (db)	source of information
Bosch	GRA 53	92	Manual, catalogue
Sabo	54 Vario	98	Website, catalogue, manual
Honda	HRH 536 HX	98	Website, catalogue, manual
Honda	HRD 536 HX	98	Website, catalogue, manual

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5. BACKGROUND TO THIS REPORT

The information in this report has been collated by Bosch personnel on behalf of Bosch Lawn and Garden Limited (“**Bosch**”).

Performance is defined throughout this report as the specific time taken to cut an area (m2) of grass for 30 minutes (“**performance**”).

This report compares the performance of two Bosch professional brushcutters; the Bosch GFR 25 (“**GFR 25**”) and the Bosch GFR 42 (“**GFR 42**”). Each brushcutter was compared to an equivalent competitor professional brushcutter. The GFR 25 was tested using a 2 tooth blade whereas the GFR 42 model was tested using the bump line feedhead. Competitor products were tested using equivalent accessories.

The GFR 25 was tested against one competitor for performance and against three competitors for noise. The GFR 42 was compared to one competitor for Performance. Tests were carried out between 01 July 2014 and 13 June 2015 (“**Test Period**”) at a nearby testing facility.

The GFR 25 and GFR 42 were tested at all times using one GBA 36V Hw-d battery (“**Battery**”) charged to 100%. The charge time of a Battery is 42 minutes (0-100%). Bosch recommends that the user has two Batteries and one charger when operating either the GFR 25 or GFR 42 for optimised, uninterrupted, performance and run time.

6. TEST ONE

Running Time

When fully charged the GFR 25 is able to cut thick dense grass in dry conditions up to a distance of 560 square metres.

Date	Make	Conditions	Accessory used	Area cut(m2)	Time (Minutes)
28/05/2015	Bosch	Dry, Medium Density Vegetation	2 Tooth Blade (GFR 25)	560	55

Bosch did not conduct a test for running time for the GFR 42.

7. TEST TWO

Performance

The leading petrol competitor brushcutters used in the tests below were in a good working condition and tested side by side with the GFR 25 and GFR 42 in order to ensure equivalent testing conditions and consistency.

The tests proved that the GFR 25 was able to cut a larger area in the pre-defined time period in two out of three occasions. The tests also demonstrated that the GFR 42 was able to cut a larger area in the pre-defined time period in three out of three occasions. These tests show a trend of superior performance.

GFR 25

Date	Make	Conditions	Accessory Used	Area cut (m2)
09/06/15	Bosch	Dry, Dense Vegetation	2 Tooth Blade (GFR 25)	251
	Competitor	Dry, Dense Vegetation	2 Tooth Blade	240
13/05/15	Bosch	Dry, Varied foliage	2 Tooth Blade (GFR 25)	228
	Competitor	Dry, Varied foliage	2 Tooth Blade	231
28/05/15	Bosch	Dry, Medium Grass	2 Tooth Blade (GFR 25)	306
	Competitor	Dry, Medium Grass	2 Tooth Blade	236

GFR 42

Date	Make	Conditions	Accessory Used	Area cut (m2)
12/05/15	Bosch	Dry, Dense Vegetation	2.4mm Line (GFR 42)	293
	Competitor	Dry, Dense Vegetation	2.4mm Line	275
01/06/15	Bosch	Dry, Light Grass	2.4mm Line (GFR 42)	329
	Competitor	Dry, Light Grass	2.4mm Line	306
01/06/15	Bosch	Dry, Light Grass	2.4mm Line (GFR 42)	312
	Competitor	Dry, Light Grass	2.4mm Line	305

8. TEST THREE

Noise

Bosch compared the noise levels of the GFR 25 with three leading petrol brushcutters. The information in relation to the noise levels of the leading petrol competitor brushcutters has been obtained from the relevant manuals, catalogues and website.

The comparison proves that the GFR 25 created less than half of the noise when in use compared with the leading petrol brushcutters.

Brand	Model	guaranteed sound power level (db)	source of information
Bosch	GFR 25	79	Manual, catalogue,
Stihl	FS130	108	Website, catalogue, manual
Husqvarna	535 RXT	113	Website, catalogue, manual
Honda	UMK 425 UE ET	110	Website, catalogue, manual

Bosch did not conduct a test for noise levels on the GFR 42.