

# TEST REPORT



## Stihl MS 461

Test Number: 6391

**OWNER OF THE TEST CERTIFICATE:**

Manufacturer and applicant:

Andreas Stihl AG & Co. KG  
Badstrasse 115  
D- 71336 Waiblingen

[www.stihl.de](http://www.stihl.de)



MS 461 / MS 461 VW



## Test Results and Evaluations

### Chain saws

STIHL MS 461 (Standard), STIHL MS 461 VW (with handle and carburettor heating)

Tested with 40 cm Stihl Rollomatic saw bar and full chisel tooth chain

Andreas Stihl AG & Co. KG; Badstrasse 115; D- 71336 Waiblingen

Test item	Test results				Evaluation
Class	Chain saw in the power class over 3 kW for professional use				
Engine power					
	Engine speed	Torque		Spec. fuel consumption	N.E.
P <sub>max</sub> = 4,4 kW	9750 min <sup>-1</sup>	4,3 Nm		58 kW/l	
Md <sub>max</sub> bei 4,0 kW	7500 min <sup>-1</sup>	5,0 Nm		52 kW/l	
Fuel consumption					
	max. power		max. torque		+
absolute / specific	2,5 l/h	391 g/kWh	2,3 l/h	400 g/kWh	
Exhaust emission					
Complies with level 2 of the standard 2002/88 EG					o
Approval number: e1*97/68SH3-IIA*2011/88*0702*00					
Chain lubrication					
Oil consumption	at 5000 min <sup>-1</sup>		at 9000 min <sup>-1</sup>		o
min / max	3 ml/min	8 ml/min	4 ml/min	2 ml/min	
Sound pressure level					
	idling speed	full load speed	Full throttle no load		-
at ear of the operator	84 dB(A)	105 dB(A)	107 dB(A)		
Equivalent sound pressure level, total value according to DIN EN ISO 22868: 105 dB(A) (average of Idling/full load/full throttle)					
Acoustic power according to DIN EN ISO 22868: 117 dB(A) (50:50 Mix: full throttle / full load)					
Vibration					
	idling speed	full load speed	full throttle no load		o
front handle	5.0 m/s <sup>2</sup>	5.1 m/s <sup>2</sup>	2.9 m/s <sup>2</sup>		
rear handle	4.4 m/s <sup>2</sup>	4.8 m/s <sup>2</sup>	1.9 m/s <sup>2</sup>		
Total equivalent vibration according to DIN EN ISO 22867					
Front handle 4.5 m/s <sup>2</sup> ; rear handle 3.9 m/s <sup>2</sup>					

<b>Chain brake</b>			
Handguard activation	Actuating force 29 N	aver. braking time 0.05 s	max. braking time 0.07 s <b>N.E.</b>
Inertia activation	horizontal acceleration 379 m/s <sup>2</sup>	vertical acceleration 926 m/s <sup>2</sup>	
<b>Kickback</b>			
Chain stop angle	28 °		<b>N.E.</b>
<b>Weight</b>			
Weight per unit power	With cutting equipment 1.8 kg/kW	Without cutting equipment 1.5 kg/kW	<b>+</b>
<b>Operability / handling</b>			
Control elements	Easy to reach and use		<b>o</b>
Machine start	Decompression valve		<b>+</b>
	Combined button for Engine ON/OFF and CHOKE		<b>+</b>
Engine control	Carburettor factory-adjusted for exhaust optimization, therefore limited adjustability of carburettor and idling regulator screws		<b>o</b>
Chain assembly	Easy to access and use		<b>o</b>
Chain tensioning	simple, tensioning on the side of machine		<b>o</b>
Refilling	No tools required for removing fuel tank caps (clip); easy access		<b>+</b>
<b>Maintenance</b>			
Air filter and spark plug cover, casing	Quick release, requires combine wrench		<b>o</b>
Air filter cleaning	No tools		<b>+</b>
soiling	low		<b>+</b>
<b>Reliability</b>	No problems encountered during tests		<b>o</b>
<b>Operating manual</b>	clear, well illustrated		<b>+</b>
<b>Work safety</b>			
EG-type examination test	DPLF K-EG-2011/6144		<b>N.E.</b>
GS-Test	DPLF K-GS-2011/6145		

Evaluation: ++ / + / o / - / -- / . (o = Standard / NE= no evaluation, complies with tolerance value)

Threshold values and evaluation criteria are described in the “Information for the Utility Value Test” available from the DLG and KWF.

## Description and Technical Data

### Engine

- Air-cooled single-cylinder two-stroke engine
- Displacement 76.5 cm<sup>3</sup>; bore 52 mm; stroke 36 mm
- Fuel: minimum octane number 90ROZ (Mixture 1:50) or two-stroke special fuel with “KWF-Test”; manufacturers recommendation: Stihl MotoMix
- Spark plug NGK BPMR 7A
- Idling speed 2500 rpm; max. speed 13500 rpm

### Cutting equipment

- Clutch drum with external chain sprocket
- Guide bar with 11 tooth chain sprocket
- Half or full chisel tooth chain
- Pitch 3/8“ guage 1.6 mm
- Choice of cutting bar lengths and chain types incl 0.325“ pitch chains are available for the saw

### Main dimensions and weights (measured values)

Length,	incl. cutting equipment 40 cm	820 mm
	engine unit without spiked bumper	440 mm
Width,	engine unit	200 mm
	incl. handle	255 mm
Height,	engine unit	220 mm
	with front hand guard	295 mm
Stump height,	chain sprocket cover	15 mm
	handle	20 mm
Tank volume,	fuel	780 ml
	chain oil	330 ml
Weight,	incl. cutting equipment 40 cm	7.9 kg
	without cutting equipment	6.8 kg

## Test

### Test institute

Kuratorium für Waldarbeit und Forsttechnik, Gross-Umstadt  
DLG-Testzentrum Technik & Betriebsmittel, Gross-Umstadt

### Field test

Waldarbeitsschule Kunsterspring  
Forstliches Bildungszentrum Königsbronn, Itzelberg  
Forestry office Lampertheim

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### FPA/DLG- Test commission

“Geräte und Werkzeuge”(“Equipment and tools”)  
Chairman: Sebastian Paar, FBZ Laubau

### FPA/DLG-approval until April 2017

In acknowledgment of the performance in the KWF test, the approved product is also licensed to carry the following test signs: “DLG SIGNUM TEST”

### Published by:

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