



TEST REPORT



STIHL MS 441

OWNER OF THE TEST CERTIFICATE:

Manufacturer and applicant:

Andreas Stihl AG & Co KG

Badstrasse 115

D-71336 Waiblingen

www.stihl.de



MS 441 C-Q with second chain brake

Test Results and Evaluations

Chain saw Stihl MS 441

MS 441 C-Q Quickstop Super = with second chain brake

MS 441-W = with handle heating

Firma Andreas Stihl AG & Co KG; 71336 Waiblingen, Badstrasse 115

| <i>Test item</i> | <i>Test results</i> | | | | <i>Evaluation</i> |
|--|---|------------------------|---------------------------|------------------------|-------------------|
| Function | Chain saw in the power class over 4 kW for professional use | | | | |
| Engine power | Power | Engine speed | Torque | Spec. fuel consumption | NE |
| | max. 4.1 kW | 9500 min ⁻¹ | 4.1 Nm | 58 kW/l | |
| | 3.3 kW | 7200 min ⁻¹ | max. 4.3 Nm | 47 kW/l | |
| Fuel consumption | | | | | |
| | | max. power | | max. torque | |
| absolute / specific | 2.3 l/h | 415 g/kWh | 2.2 l/h | 487 g/kWh | + |
| Exhaust emission | Complies with level 2 of the standard 2002/88 EG | | | | |
| | After combustion, the cylinder is purged with air. This reduces the proportion of unburned fuel in the emissions significantly. | | | | ++ |
| Chain lubrication | | | | | |
| Oil consumption | at 5000 min ⁻¹ | | at 9000 min ⁻¹ | | |
| min / max | 3 ml/min / 8 ml/min | | 5 ml/min / 13 ml/min | | ○ |
| Sound pressure level | | | | | |
| | idling speed | full load speed | Full throttle no load | | |
| at ear of the operator | 83 dB(A) | 103 dB(A) | 105 dB(A) | | - |
| Equivalent sound pressure level, total value 102 dB(A) (average of Idling/full load/full throttle) | | | | | |
| Acoustic power 114 dB(A) according to the standard 2000/14/EG | | | | | |
| Vibration | | | | | |
| | idling speed | full load speed | full throttle no load | | |
| front handle | 3.5 m/s ² | 3.2 m/s ² | 2.4 m/s ² | | ○ |
| rear handle | 3.7 m/s ² | 3.3 m/s ² | 2.7 m/s ² | | |
| Total equivalent vibration | | | | | |
| front/rear 3.0 / 3.2 m/s ² (average of Idling/full load/full throttle) | | | | | |

Stihl MS 441

| | | | | |
|---|--|--|-------------------|----|
| Chain brake | | | | |
| Handguard activation (C-Q) | Actuating force | aver. braking time | max. braking time | NE |
| | 26 N (31N) | 0,07 s | 0,09 s | |
| Inertia activation (C-Q) | horizontal acceleration | vertical acceleration | | NE |
| | 310 m/s ² (360 m/s ²) | 630 m/s ² (740 m/s ²) | | |
| Kickback | | | | |
| Cutting equipment 40 cm, 3/8" | Chain stop angle | | | NE |
| Half chisel tooth | 33 ° | | | |
| Mass | | | | |
| Weight per unit power | With cutting equipment | Without cutting equipment | | + |
| | 1.9 kg/kW | 1.6 kg/kW | | |
| Operability / handling | | | | |
| Control elements | Easy to reach and use | | | + |
| | Tank cap removable without tools | | | + |
| | Transparent tank allows simple control of fuel level | | | + |
| Primer | Decompression valve | | | + |
| Chain assembly | Drive sprocket easily accessible | | | O |
| Chain tensioning | On the side in the chain sprocket cover | | | O |
| Second brake (C-Q) | Chain stops when throttle trigger is released – this enhances work safety | | | + |
| Maintenance | | | | |
| Air filter and spark plug cover, casing | Quick release, tool required | | | + |
| Engine | Removal of cylinder and carburettor casing requires tools (1 and 4 bolts respectively) | | | O |
| Air filter cleaning | No tools require to remove 1 bolt | | | + |
| soiling | Very low | | | ++ |
| Reliability | | | | |
| | Damage to vibration dampers during initial test. No problems encountered during tests on machines from most recent production (March 2007) | | | O |
| Operating manual | | | | |
| | clear, well illustrated | | | + |
| Operator safety | | | | |
| EG-type examination test | DPLF) Test certificate no. K-EG-2005/4205 | | | |

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

Description and Technical Data

Engine

- Air-cooled single-cylinder two-stroke engine; exhaust emission improving "air purge" engine technology
- Displacement 70.7 cm³; bore 50 mm; stroke 36 mm;
- Fuel: minimum octane number 90 ROZ; mixed lubrication;
2T-special fuel with "KWF-TEST" or normal unleaded gasoline;
- Spark plug Bosch WSR 6F or NGK BPMR 7A;
- Idling speed: 2800 min⁻¹; max. speed: 13500 min⁻¹;
- Membrane carburettor Walbro

Cutting equipment

- Clutch drum with external replaceable chain sprocket;
- Guide bar with cutting lengths between 40 and 75 cm;
- Pitch 3/8", gauge 1.6 mm

Stihl MS 441

Main dimensions and weights

| | | 441 | W | C-Q | |
|---------------|-----------------------------------|-----|-----|-----|----|
| Length, | incl. cutting equipment 40 cm | | | 835 | mm |
| | engine unit without spiked bumper | | | 440 | mm |
| Width, | engine unit | | | 185 | mm |
| | incl. handle | | | 260 | mm |
| Height, | engine unit | | | 220 | mm |
| | with front hand guard | | | 310 | mm |
| Stump height, | chain sprocket cover | | | 20 | mm |
| | handle | | | 35 | mm |
| Tank volume, | fuel | | | 700 | ml |
| | chain oil | | | 345 | ml |
| Weight, | incl. cutting equipment 40 cm | 7.9 | 8.0 | 8.0 | kg |
| | without cutting equipment | 6.7 | 6.8 | 6.8 | kg |

Test

Test carried out by

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

Field test

Stihl 441: Forstamt Lampertheim; Forstamt Ehringshausen
Stihl 441 C-Q: Forstliches Bildungszentrum Königsbronn; LÖBF NRW, Arnsberg
Stihl 441-W: Forstamt Dieburg, LÖBF NRW, Arnsberg

Authors

Dietmar Ruppert, KWF, Groß-Umstadt
Harald Krämer, DLG, Groß-Umstadt

FPA/DLG Testing commission

“Geräte und Werkzeuge“ (“Equipment and tools”) with 16 members

Stihl MS 441

Chairman: Alois Zollner

FPA / DLG-Acceptance:

November 2006

FPA- Index: 1.01.4353

DLG-Test Report: 5622

The applicant is entitled to display the test mark on machines of this type according to the test regulations and to use the certification for advertising purposes.

DLG-Testzentrum Technik & Betriebsmittel Groß-Umstadt

**Max-Eyth-Weg 1
D-64823 Groß-Umstadt**

Telephone: 069/ 24788-(0) 638

Fax: 069/ 24788-690

E-mail: H.Kraemer@dlg.org

Internet: www://dlg-test.de

Kuratorium für Waldarbeit und Forsttechnik e.V. (KWF)

Forsttechnischer Prüfungsausschuss (FPA)

**Spremlinger Straße 1
D-64823 Groß-Umstadt**

Telephone: 06078/785-0

Fax: 06078/785 50

E-mail: Dietmar.Ruppert@kwf-online.de

Internet: www.kwf-online.de



ENTAM European Network for Testing of Agricultural Machines, is a cooperation between European test stations. ENTAM aims to distribute test results for agricultural and forestry equipment throughout Europe.

For more information about the network visit www.entam.com or contact ENTAM at the following e-mail address: info@entam.com