

检 测 报 告

样 品 名 称: YD-50-E 油锯

委 托 单 位: 华盛药械公司技术中心

检 测 类 别: 委托试验

报 告 编 号: HS-2019-012A



山东华盛中天机械集团有限公司实验室

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检测报告单

Form No: HS-4-063 Rev:A/0

样品名称	YD-50-E 油锯	样机编号	1#
送检单位	华盛药械公司技术中心	生产单位	华盛药械
送检单位地址及联系电话	山东省临沂市高新开发区中天路1号 0539-8488559		
检测类型	委托检测	样品状态	新机
样品数量	1 台	委托单号	HSWT-19-01-03
型号	YD-50-E	发动机型号	YD-50-E.1
送样人	王立勇	收样人	王磊
送/收样日期	2019.1.3	检测日期	2019.1.3-2019.2.15
试验目的	验证机器主要指标是否满足手持式油锯团体标准要求		
检测项目	手持式油锯团体标准主要性能指标要求		
检测依据及试验大纲	T/CNFMA BXXX-XXXX 户外林业机械 手持式油锯 GB 19726.1-2011 便携式油锯安全要求和试验 GB/T 5392-2017 油锯技术条件 GB/T 5390-2008 林业机械. 便携式动力机械噪声测定规范. 工程法 GB/T 5395-2008 林业机械. 便携式动力机械振动测定规范. 手把振动 LY/T 1199-2003 台架试验方法 LY/T 1188-1996 锯链导板		
所用主要仪器名称/编号	见表2		
检测结论	经检测, 送检油锯满足手持式油锯团体标准要求, 详见表3		
备注	试验结果仅对来样负责。		
检测人	刘浩山	编制	李少花
批准人	王磊		

表 1 受检产品的主要技术参数及执行标准

名 称	规 格
型号	YD-50-E
排量 (mL)	50.8
最大功率/转速 (kW/r/min)	2.2/9000
最大扭矩/转速 (Nm/r/min)	2.65/6500
燃油消耗率 (g/kW.h)	≤500
最高转速 (r/min)	≤13000
标定流量范围	0.98~1.02
锯链润滑油	SAE# 10W-30
起动方式	手拉自回绳起动
火花塞型号	CMR6A
点火方式	电子点火
净质量 (kg)	5.7
导板长度	20in
锯链尺寸	0.325in
执行标准	GB/T5392-2004 油锯技术条件

表 2 检验用主要仪器设备表

序号	名 称	型 号	精度等级
1	米尺		1
2	转速表	PET1000	±10r/min
3	低温试验箱	HGD-250	I 型
4	干湿球温度计	104	±1℃
5	高温试验箱	QW/YH-250	千万、
6	电子秤	HSC-2000BD	0.2g
7	机械秒表	HS-803	0.1S
8	启动器牵拉检测试验台		
9	停车开关耐久试验工装		
10	力矩扳手		0.5

二、检验结果

表 3 检验结果表

序号	试验项目		标准要求	检测结果	结果判定
1	标定功率和标定燃油消耗率(测试数据来自第三方欧排认证机构)				
(1)	标定功率		标定功率 $\geq 2.0+(v-50)*6\%=2.0+ (50.8-50)*6\%=2.048$	2.15	合格, 详见附表 1
(2)	标定燃油消耗率		标定燃油消耗率 $\leq 500\text{ g/ (kW}\cdot\text{h)}$	474	
2	锯切效率及锯切燃油消耗率(测试数据华盛实验室)				
(1)	锯切效率		$\geq 1.15\times V=1.15*50.8=58.5$	64	合格
(2)	锯切燃油消耗率		≤ 55	54	合格
3	起动性能	常温起动	≤ 5 次	4	合格
		热机起动	≤ 6 次	3	合格
		高温起动	≤ 8 次	6	合格
		低温起动	≤ 8 次	7	合格
4	怠速翻转性能				
		在怠速工况下稳定运行3 min后直接进行全方位翻转测试。要求在各方位翻转后均保持10 s, 油锯不应发生熄火现象。		无熄火现象	合格
5	最高空载稳定转速性能				
	最高空载转速	其最高空载稳定转速波动率应不大于4%。		3%	合格
6	排放指标(测试数据来自第三方欧排认证机构详见检测报告)	CO ≤ 603 HC+NO _x ≤ 72		CO:432 HC+NO _x :58.17	合格, 详见附表 1
7	制动时间 (数据来自第三方莱茵公司)				
	锯链制动器平均制动时间应不大于0.10 s, 最大制动时间应不大于0.12 s。			平均: 0.027s 最大 0.037s	合格, 详见附表 2
8	振动 (数据来自第三方莱茵公司)				

	前手把	≤ 7	5.145	合格
	后手把	≤ 7	4.698	合格, 详见附表 3
噪声 (数据来自第三方莱茵公司)				
9	操作者耳旁噪声 (A 计权声压级) 限值	≤ 102	96.8	合格, 详见附表 4
10	起动器耐久	手拉起动器的可靠性工作次数应不小于 15 000 次	15000 次后可以正常使用	合格
11	维护保养提示	设备安装计时和维护保养提示装置	有计时和维护保养提示装置, 提示准确	合格
12	停车开关耐久	通过不少于 10 000 次的循环测试后	10000 次后可正常使用	合格
13	锯链张紧器耐久	张紧扭矩 2 N · 紧固 600 次	600 次后可正常使用	合格
14	可靠性和耐久性 (驱动链轮、离合器、机油泵、空滤器、锯链、导板)	300 小时耐久试验 (锯切时间和台架耐久时间各 150 小时)	300 小时可靠性驱动链轮、离合器、机油泵、空滤器均能正常使用)	合格

备 注

1. 报告无检测单位“检测专用章”无效。
2. 报告无检测人、审核人/技术监督、批准人签字无效。
3. 本报告涂改无效，全文复制的报告未加盖红色“检测专用章”无效。
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6. 委托单位对检测结果若有异议，请于十五日内提出。
7. 本报告一式两份；本实验室存档一份，客户一份。

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附表 1

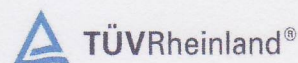
Shandong Huasheng Zhongtian Machinery Group Emission Laboratory

Emission Test Report

Test Name		0h Exhaust Emission Test		Test Cycle	SH:3	Dynamometer	ESF-M-6
Model		YD-50-E.1	Gasoline	EU2000	100.1	Analyzer	HORIBA MEXA-7200D
Code		-	Lub./ Fuel Ratio	1:30	20	Tester	LXL
EDP (h)		125	Lubricant	FC 2T	66.4	Test Date	2015/8/16
Test Data							
Mode	Speed [r/min]	Torque [Nm]	Power [kW]	Fuel Mass Flow [L/h]	Specific Fuel Consumption [g/kW·h]	Vmix [m³/min]	Exhaust Temperature [°C]
1	9000	2.28	2.15	1.427	-	3.70	43.10
2	3000	-	-	0.214	-	3.72	36.50
Volume Concentration of Exhaust Component							Specific Emissions[g/kW·h]
Mode	CO dry [ppm]	CO ₂ dry [%]	NO _x wet [ppm]	O ₂ dry [ppm]	THC wet [ppmC]	HC	57.75
1	4125.35	0.44	2.44	199835.73	1009.32	CO	432.03
2	330.39	0.09	0.16	213228.46	591.28	NO _x	0.42
						HC+NO _x	58.17



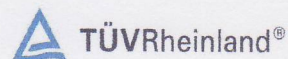
附表 2



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EN ISO 11681-1:2011			
Cl.	Requirement - Test	Result - Remark	Verdict
4.3.2.2	Verification		P
	Dimensions shall be verified by measurement. Strength requirements shall be verified by testing in accordance with ISO 6534.	Measured and tested, see relevant clause of ISO 6534	P
4.4	Balance		P
4.4.1	Requirements		P
	Chain-saws with an engine displacement of 80 cm ³ or less shall be longitudinally balanced to within $\pm 30^\circ$ between the centreline of the guide bar and the horizontal plane. The limit shall be met by the shortest and longest applicable guide bars. NOTE Sufficient information to allow the setting of a limit is not available for saws with an engine displacement of more than 80 cm ³ .	Guide bar specified in the instruction handbook is fitted, and measured in accordance with ISO 8334.	P
4.4.2	Verification		P
	The angle for longitudinal balance shall be verified by functional testing in accordance with ISO 8334.	Measured result: $\alpha = 8.6^\circ$ for YD-45-E $\alpha = 4.7^\circ$ for YD-50-E	P
4.5	Protection against injury by kickback		P
4.5.1	Chain brake		P
4.5.1.1	Requirements		P
	The chain-saw shall be fitted with a chain brake that can be activated manually by means of the front-hand guard. The chain brake release force shall be between 20 N and 60 N and the direction of movement shall be away from the operator. The average stopping time shall not exceed 0,12 s and the maximum stopping time shall not exceed 0,15 s.	Three samples were tested respectively. YD-45-E: Average braking time: 24.0/26.8/25.6 (ms); Max. braking time: 28.9/29.8/28.2 (ms) YD-50-E: Average braking time: 25.7/27.0/26.7 (ms); Max. braking time: 31.2/28.9/29.8 (ms)	P
4.5.1.2	Verification		P

附表 3

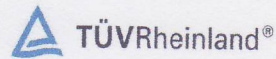


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EN ISO 11681-1:2011			
Cl.	Requirement - Test	Result - Remark	Verdict
	Chain-saws shall be provided with a means for adjusting the chain tension.	Chain tensioning device is provided	P
4.20.2	Verification		P
	The adjustment means shall be verified by inspection and functional testing.	Inspected and chain saw can be adjusted by the tensioning device.	P
4.21	Vibration		P
4.21.1	Reduction by design at source and by protective measures		P
	Vibration reduction shall be an integral part of the design process, thus specifically taking into account measures at source. The success of the applied vibration reduction measures is assessed on the basis of the actual vibration total values for each handle. The main sources causing and influencing vibration are generally the dynamic forces from engine, cutting means, unbalanced moving parts, impact in gear sprockets, bearings and other mechanisms and the interaction between operator, machine and material being worked.	Considered	P
	Besides measures to reduce vibration at source, technical measures such as isolators and resonating masses shall be used to isolate, when appropriate, the vibration source from the handles.		P
	NOTE 1 CR 1030-1 gives general technical information on widely recognized technical rules and means, and provides guidelines for the design of reduced hand-arm vibration machines.		P
	NOTE 2 ISO/TR 22521 provides useful information about comparative data on vibration levels.		P
4.21.2	Vibration measurement		P
	The vibration shall be measured and the equivalent vibration total value calculated for each handle in accordance with ISO 22867.	YD-45-E: Front handle: 5.244m/s ² Rear handle: 5.155m/s ² ; YD-50-E: Front handle: 5.145m/s ² Rear handle: 4.698m/s ² ; K=1.5 m/s ²	P

附表 4

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EN ISO 11681-1:2011			
Cl.	Requirement - Test	Result - Remark	Verdict
4.22	Noise		P
4.22.1	Reduction by design at source and by protective measures		P
	Noise reduction shall be an integral part of the design process, thus specifically taking into account measures at source. The success of the applied noise reduction measures is assessed on the basis of the actual noise emission values. The main sources causing and influencing noise are generally the air intake system, engine cooling system, engine exhaust system, cutting system and vibrating surfaces.		P
	ISO/TR 11688-1 gives general technical information and guidance for the design of low-noise machines.		P
	Special care shall be taken in the acoustical design of chain-saws.		P
	NOTE ISO/TR 11688- 2 gives useful information on noise generation mechanisms in machinery and ISO 14163 provides guidelines for noise control by silencers. ISO 11691 and ISO 11820 address the testing of the silencer. Information about comparative data on the emission sound pressure levels of some portable hand-held forestry machinery can be found in ISO/TR 22520. See the Bibliography.		P
4.22.2	Noise measurement		P
	The equivalent A-weighted emission sound pressure level at the operator's position and the A-weighted sound power level shall be measured and calculated in accordance with ISO 22868:	The equivalent A-weighted values as below: Sound pressure level (near the ear): YD-45-E: 96.7dB(A); YD-50-E: 96.8dB(A); Sound power level: YD-45-E: 111.4dB(A); YD-50-E: 111.9dB(A); (tested method is different from 2000/14/EC) K=2.5dB(A) Guaranteed sound power level: 115dB(A) for all models (according to 2000/14/EC)	P
4.23	Electromagnetic immunity		N/A