

12/14/2007

## TOOL TEST SUMMARY SHEET

NAME OF DEVICE UNDER TEST (DUT)  
TEST ENGINEER  
TEST DATE

Circular Saw  
Edward Zechmann, Prasad Kadam  
8/31/2004

TEST DESCRIPTION  
TEST LOCATION  
MANUFACTURER  
MODEL  
SERIAL NUMBER  
MODE OF OPERATION  
RUN NUMBER

Sound Power Level Measurement  
UC anechoic lab  
Porter Cable  
314  
247920A4061  
Normal  
1

YEAR MADE  
DIMENSIONS (inches)  
TECHNICAL SPECIFICATIONS  
MOUNTING CONDITIONS  
LOADING CONDITIONS  
K1 (dBA)  
K2 (dBA)  
TEMPERATURE (FARHENHEIT, CELSIUS)  
HUMIDITY %  
BAROMETRIC PRESSURE ("Hg, Pa)

Length 11, Width 8, Height 5  
4 1/4 inch saw blade  
free-free, bungy cords  
Full speed no load  
0  
1.18  
82 F  
50  
29.4 "Hg

TEST ENVIRONMENT  
TOOL TESTING STANDARD  
MEASUREMENT STANDARD  
MICROPHONE SET-UP  
SURFACE RADIUS

SEMI ANECHOIC, SEMI HEMISPHERICAL  
ANSI S12.15-1992  
ISO 3744:1994-05-01  
10-MICROPHONES  
2.00 meters

RATED POWER (WATTS)  
ACTUAL INPUT POWER (WATTS)  
VOLTAGE (VOLTS)  
CURRENT (AMPS)  
RATED RPM  
ACTUAL RPM  
SOUND POWER LEVEL (dBA)  
SOUND POWER (WATTS) A-weighted

540  
304  
116  
2.63  
4500  
4258  
96.6  
0.00454

SWL - k2 (dBA)  
SWL - k2 (WATTS) A-weighted  
SOUND PRESSURE LEVEL @ (2m) (dBA)

95.4  
0.00346  
82.7

AT THE NOMINAL HEARING ZONE OF OPERATOR  
SOUND PRESSURE LEVEL (dBA)

89.0

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## Directivity Study

DUT	Circular Saw
Manufacturer	Porter Cable
Model Number	314
Serial Number	247920A4061
MODE OF OPERATION	Normal
RUN NUMBER	1

### A-weighted Sound Pressure Level

Mic #	Position1 dBA	Position2 dBA
0	82.5	
1	81.5	
2	83.4	
3	80.1	
4	82.9	
5	82.3	
6	83.0	
7	83.4	
8	84.1	
9	84.2	
10	89.0	
dB difference	4.1	

Mic #	A-weighted Directivity Index	
	Position1	Position2
0	-0.2	
1	-1.2	
2	0.7	
3	-2.7	
4	0.1	
5	-0.4	
6	0.3	
7	0.7	
8	1.3	
9	1.4	
10	6.3	

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# TOOL TEST DATA SHEET

DUT                                   Circular Saw  
 Manufacturer                   Porter Cable  
 Model Number                   314  
 Serial Number                   247920A4061  
 MODE OF OPERATION           Normal  
 RUN NUMBER                     1

## TEST CONDITIONS

Actual Power (watt)                   304  
 Voltage (Volts)                     116  
 Current (Amps)                     2.63  
 Actual RPM                         4258  
 Temperature (Deg. F)               82 F  
 Humidity (%)                         50  
 Baro. Press. (inch of Hg)           29.4 "Hg

## Measurement Data

### Linear

	Position 1	Position 2
Sound Power Level (dB)	96.3	
Sound Power Level (Watt)	0.00430	
Sound Pressure Level (dB)	82.5	

### A-Weighted

	Position 1			
	Test 1	Test 2	Test 3	Test 4
Sound Power Level (dBA)	96.6	96.6	96.5	96.5
Sound Power Level (Watt)	0.00462	0.00458	0.00449	0.00445
Sound Pressure Level (dBA)	82.8	82.8	82.7	82.6

## Calculations

Average Sound Power Level (Watt)	0.00454
Average Sound Power Level (dBA)	96.6
Average Sound Pressure Level (dBA)	82.7
Std. Deviation of Sound Power Level (dBA)	0.0748
0.95 Confidence of Sound Power Level (dBA)	0.0797
Average Sound Power Level (dBA) -K2	95.39
Average Sound Pressure Level (dBA) -K2	81.55