

Skill-Bosch 1/2" Drill: Motor and Gearbox as a Single Unit: Performance Data with Shifter Ring in Rear Position (high speed range).

Test No.: ADHOC-Bosch-Drill 12v

Date Tested: 01/02/03

5.1 Test Results

Sample No. A

5.1.1 No-Load Parameters:

Simulated Battery Pack Parameters						
Power Supply Voltage	Internal Resistance	Gear Position	Amps (A)	Volts (V)	Watts (W)	RPM or OPM/SPM
12.5	0.099	NA	5.471	11.96	62.735	1,550

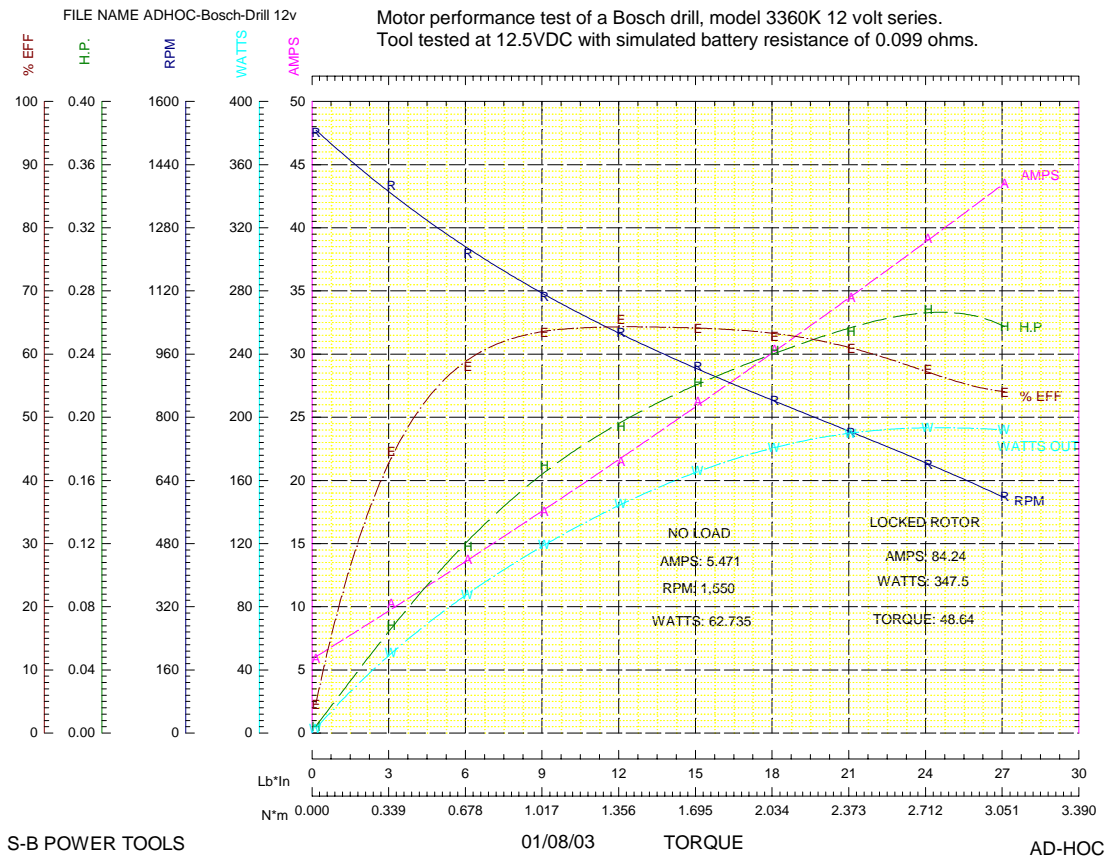
5.1.2 Performance Results:

Load Point	Input	Parameters			RPM	Output	Parameters		H.P.
	Volts (V _{in})	Amps (A _{in})	Watts (W _{in})	Torque (in-lb/oz-in)		Watts (W _{out})	% Efficiency		
1	11.98	5.853	63.391	1521	0.157	2.827	4.46	0.004	
2	11.51	10.19	114.32	1386	3.097	50.82	44.46	0.068	
3	11.14	13.70	151.26	1215	6.098	87.73	58.00	0.118	
4	10.76	17.53	187.98	1105	9.096	119.0	63.31	0.169	
5	10.37	21.46	221.65	1013	12.09	145.0	65.42	0.194	
6	9.900	26.22	259.24	928	15.10	165.9	64.00	0.222	
7	9.494	30.33	287.44	843	18.09	180.5	62.82	0.242	
8	9.091	34.45	312.36	760	21.09	189.7	60.76	0.254	
9	8.630	39.13	336.62	679	24.10	193.7	57.56	0.268	
10	8.197	43.48	355.64	598	27.09	191.8	53.93	0.257	
11									

5.1.3 Locked Rotor Torque & Current:

Trial No.	Peak L.R. Torque (in-lb/oz-in/N-m)	Peak L.R. Current (Amps)	L.R. Watts
1.	48.27	83.07	345.80
2.	50.05	85.01	349.52
3.	47.59	84.63	347.33
Average	48.64	84.24	347.55

5.1.4 Motor Performance Graph:



5.2 Comments

Test was completed without any problems.

Max hp = 0.2665 and Max Output watts = 192.72

5.3 Equipment Used

Equip. Number	Manufacturer	Model Number	Description	Range Used	Cal. Date	Next Cal. Date
Sk-5213	Magtrol	DSP-600	Dyno Controller	In-oz	12/05/02	12/05/03
Sk-5214	Magtrol	5100	Power Analyzer	50A 150V	12/05/02	12/05/03
Sk-2012	Magtrol	HD-400-6	Hysteresis Brake	40 in-oz	Before Use	NA
Sk-5258	Braun GMBH	C 118	Hand Tachometer	NA	12/05/02	12/05/03
NA	Mid-Eastern Ind.	RA40-150- SPC466	DC Power Supply	0-40V	NA	NA