SHORT BLOCK

Short Block:	Pontiac 455	Bore:	4.350 in	Stroke:	4.250 in
No. Cylinders:	8	Cylinder Volume:	1035.04 cc	Total Vol:	505.3 ci

CYLINDER HEADS

Cylinder Heads: Exhaust=Pipe-KRE High-Port Ported 1 Alum-Stan Weiss

Valve Specifications:

Intake Valves/Port:	1	Exhaust Valves/Port:	1
Intake Valve Dia:	2.200 in	Exhaust Valve Dia:	1.700 in

COMPRESSION

Compression Ratio:	11.00		
Combustion Space:	103.50 cc	Cylinder Volume:	1035.04 cc

INDUCTION

Induction Flow:	1100.0 cfm @	1.50 inHg	Fuel Type:	Gasoline	
Manifold Type:	Single-Plane Manifold		Nitrous Injection:	0.0 lbs/min	

Forced Induction Specifications:

Blower Type:	None				
Island Flow:	*** cfm	Surge Flow:	*** cfm	Pressure Ratio:	***
Impeller Speed:	*** rpm	Belt Ratio:	***	Internal Ratio:	***
Peak Efficiency:	*** %	Boost Limit:	*** psi	Intercooler:	*** %

EXHAUST

Exhaust System: Large-Tube Headers Open Exhaust

CAMSHAFT

Cam Name: HP Guess

Intake Lift At Valve:	0.667 in	Lifter Type:	Roller Hydraulic
Exhaust Lift At Valve:	0.667 in	Lifter Acceleration Rate:	3.00

Valve Opening/Closing Based On: 0.050-inch

Primary Timing (0.050-inch):	IVO: 12.0	IVC: 60.0	EVO: 62.0	EVC: 14.0
Secondary Timing (Seat-to-Seat):	IVO: ***	IVC: ***	EVO: ***	EVC: ***

Cam Installed Advanced(+)/Retarded(-): 0.0

True IVO:	12.0			True EVO:	62.0		
True IVC:	60.0	True ICA:	114.0	True EVC:	14.0	True ECA:	114.0

Cam Timing Summary:

Intake Duration:	252.0	Exhaust Duration:	256.0
Intake Centerline Angle:	114.0	Exhaust Centerline Angle:	114.0
Lobe Centerline Angle:	114.0	Valve Overlap:	26.0

NOTES

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CYLINDER HEAD AIRFLOW DATA

Description: Exhaust=Pipe-KRE High-Port Ported 1 Alum-Stan Weiss

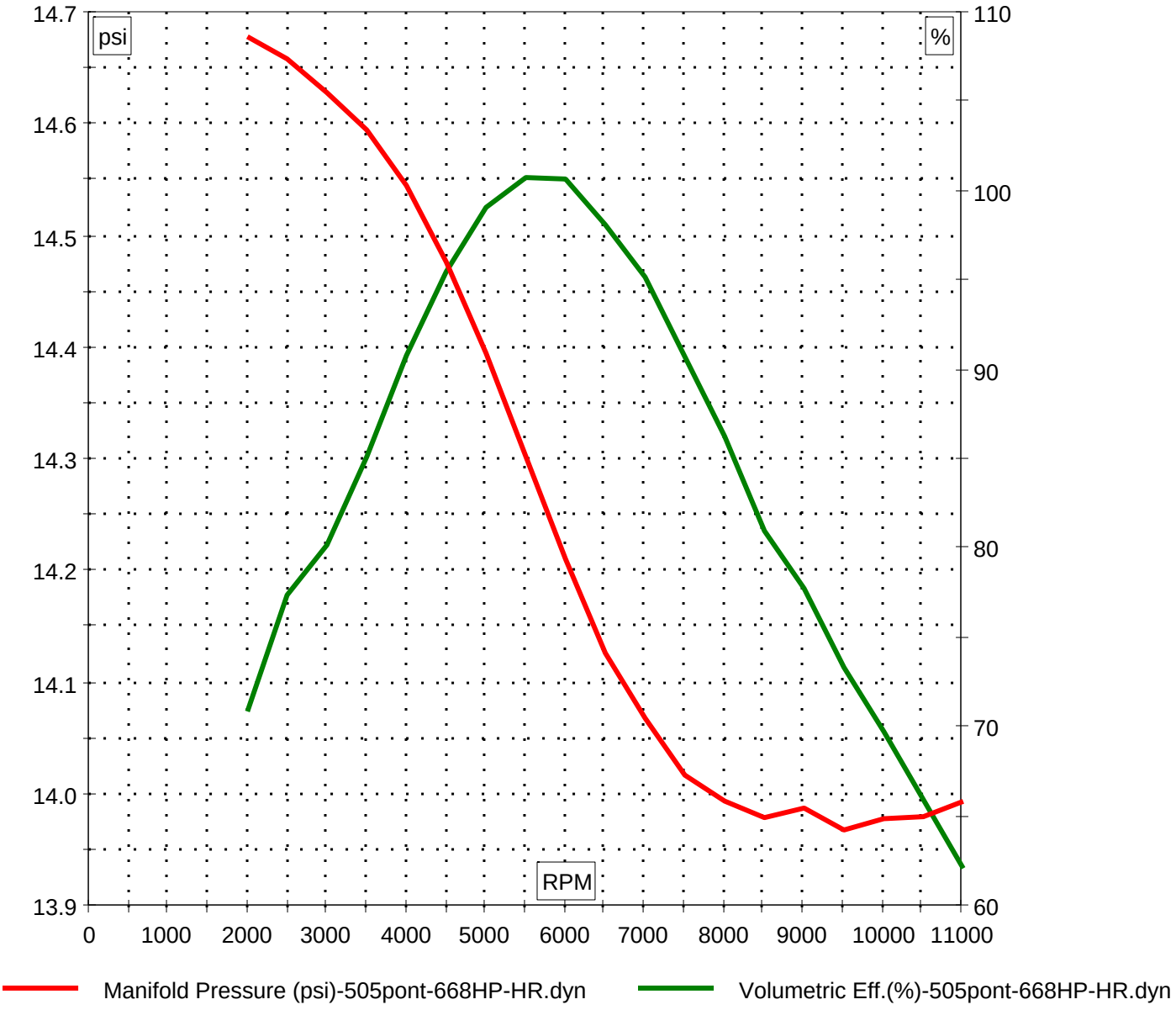
Intake Valve		Exhaust Valve	
Test Diameter:	2.200 in	Test Diameter:	1.700 in
Pressure Drop:	26.5 inH2O	Pressure Drop:	26.5 inH2O
Lift: in	Flow: cfm	Lift: in	Flow: cfm
0.100	82.0	0.100	70.0
0.200	162.0	0.200	126.0
0.300	232.0	0.300	178.0
0.400	286.0	0.400	219.0
0.500	322.0	0.500	234.0
0.600	342.0	0.600	248.0
0.700	351.0	0.700	259.0
***	***	***	***
***	***	***	***
***	***	***	***

CALCULATED POWER AND ENGINE PRESSURES

Engine RPM	Power (Fly)	Torque (Fly)	Int Man Pressure	Vol Eff %	BMEP Pressure
2000	183	480	14.68	70.9	145.4
2500	246	516	14.66	77.4	156.1
3000	303	530	14.63	80.2	160.4
3500	370	555	14.59	85.1	168.0
4000	446	585	14.54	90.8	177.1
4500	523	611	14.48	95.5	184.8
5000	592	621	14.39	99.1	188.1
5500	639	610	14.30	100.7	184.7
6000	668	584	14.21	100.7	176.9
6500	664	536	14.13	98.1	162.2
7000	645	484	14.07	95.2	146.4
7500	612	428	14.02	90.7	129.6
8000	559	367	13.99	86.3	111.1
8500	497	307	13.98	81.0	93.0
9000	450	262	13.99	77.8	79.4
9500	373	206	13.97	73.4	62.4
10000	313	164	13.98	69.8	49.7
10500	226	113	13.98	66.0	34.3
11000	138	66	13.99	62.2	19.9

PROTOOLS CALCULATED POWER AND ENGINE PRESSURES

Engine RPM	Power (Fly)	Indicated Power	Frictional Power	Pumping Power	Mech. Eff %	Induction Airflow	Piston Force	Piston Speed	IMEP Pressure	FMEP Pressure	PMEP Pressure
2000	183	209	19	5	88.7	207.4	2437	1417	164.0	14.8	3.7
2500	246	281	25	8	88.4	283.0	2623	1771	176.5	15.4	5.0
3000	303	350	31	12	87.7	351.9	2717	2125	182.8	16.1	6.3
3500	370	430	38	17	87.3	435.7	2861	2479	192.5	16.8	7.7
4000	446	520	45	24	86.8	531.1	3031	2833	203.9	17.5	9.3
4500	523	615	53	32	86.3	628.2	3183	3188	214.2	18.3	11.0
5000	592	702	62	40	85.5	724.3	3271	3542	220.1	19.4	12.6
5500	639	770	74	48	84.2	810.1	3261	3896	219.4	21.0	13.8
6000	668	822	88	56	82.4	883.1	3190	4250	214.6	23.0	14.7
6500	664	842	107	63	79.9	932.4	3019	4604	203.1	25.8	15.1
7000	645	851	129	68	76.8	974.2	2833	4958	190.6	28.9	15.2
7500	612	848	155	73	73.1	995.0	2634	5313	177.3	32.4	15.2
8000	559	828	186	76	68.4	1009.4	2412	5667	162.3	36.4	14.8
8500	497	803	221	78	62.8	1006.8	2200	6021	148.0	40.7	14.4
9000	450	795	257	82	57.4	1023.8	2057	6375	138.4	44.8	14.2
9500	373	761	300	83	49.7	1019.5	1866	6729	125.6	49.5	13.6
10000	313	747	345	85	42.4	1020.8	1740	7083	117.1	54.0	13.4
10500	226	711	396	85	32.3	1013.2	1577	7438	106.1	59.1	12.7
11000	138	676	452	85	20.7	999.9	1432	7792	96.4	64.3	12.1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%
RPM
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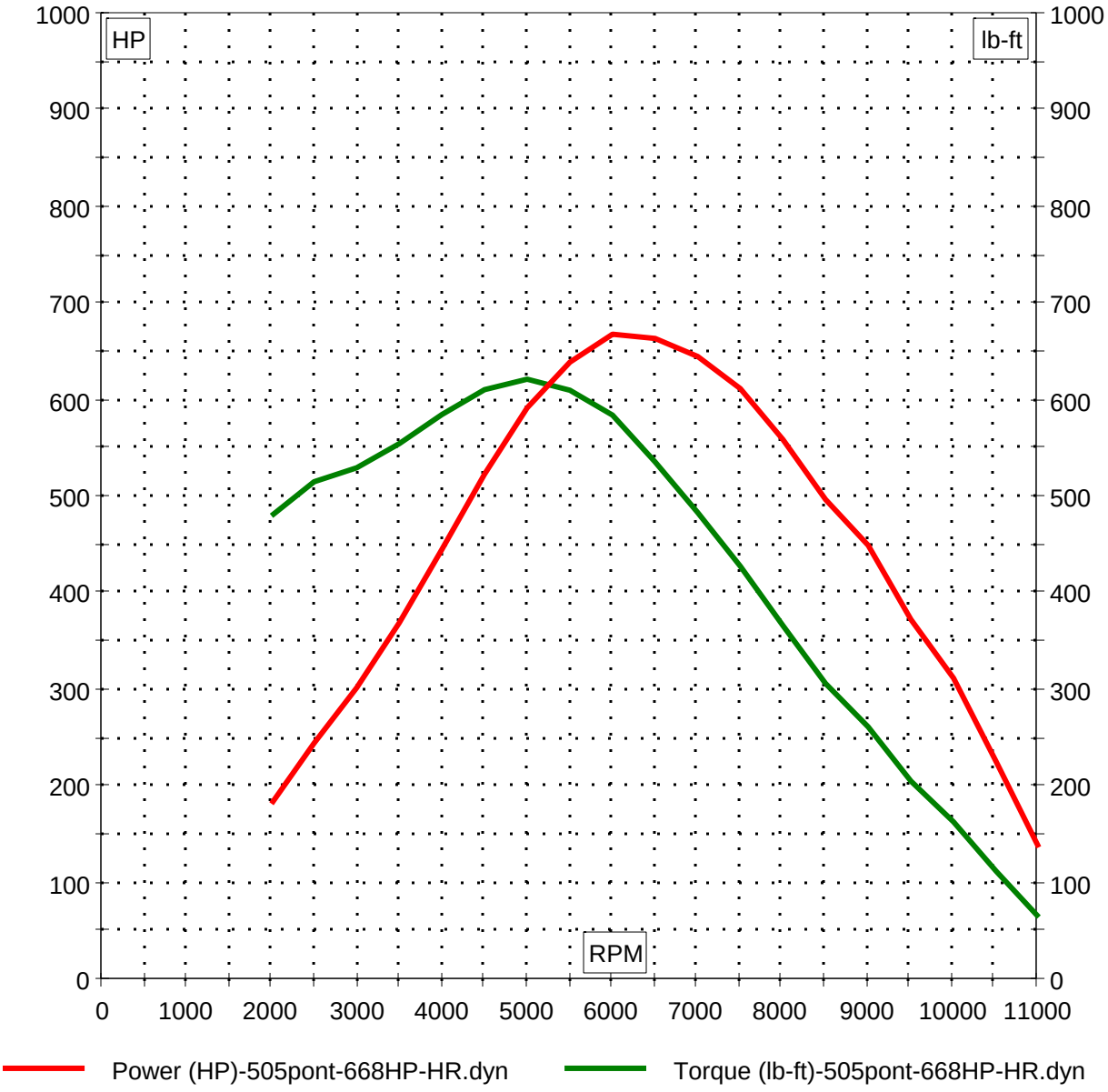
14.6
14.5
14.4
14.3
14.2
14.1
14.0
13.9
110
100
90
80
70
60
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
11000
Manifold Pressure (psi)-505pont-668HP-HR.dyn
Volumetric Eff.(%)-505pont-668HP-HR.dyn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RPM
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800
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600
500
400
300
200
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0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
11000
Power (HP)-505pont-668HP-HR.dyn
Torque (lb-ft)-505pont-668HP-HR.dyn