

A / C WILD-CAT 650 std

M.Performance Tel: 0250- 71321

Engine Basic Spec

Bore	78
Stroke	68
Con-Rod	120
Total cc	649.73
Bore/Stroke Ratio	1.147
Rpm Peak HP	8000
HP,max	108.8
Rpm Peak Torque	7750
Torque,max,lb-ft	72.7
BMEP Hp Peak,Psi	133.9
BMEP Hp peak,Bar	9.23
Piston Speed,m/s	18.06
Piston Speed,ft/min.	3555.26
Liter/Hk	169.7
Fuel Flow	88.8
Air/Fuel Ratio	10.4
BSFC	0.87

Head Basic Spec

Geometric CR/1	
Trapped CR/1	6.3
O-Ring	0.2
Gasket Bore	95
Deck Clearance	0.65
Head Step Cut	1.15
Total Squish Clea.	2.00
Head Bore	77.9
Used Cylinder gasket	
Est. Octane R+M/2	
Est. Crank Press,PSI	

Head Volume

Gasket Volume	
Deck Volume	
Port Closed Vol.	
Head cc Flat Plate	40.15
Head cc Installed	

Head Design

Type	Central
Bowl Width + ble.R	50.6
Bowl Radius	24
Squish Width	13.9
Squish Angle	16.8
SAR	0.579
Total deep	
Blending Radius	
Head width	40.7

Head Squish Action

Squish Velocity m/s	
Squish Pressure Ratio	
At deg btcd	
Kinetic Energy mj	

Std. Piston Spec

Skirt Length	78.25
Width intake side	52.27
Pin c. to up length	34.35
Pin c. to down length	43.90
Pin c. to trans inlet	19.7
Wrist-Pin diameter	20
Thickness of Rings	2 * 1.5
Dome Ang under Sq.band	14°
Dome volyme,cc	
Weight Pist. + Ring	376.5g

Intake Port Spec

Port intake diam.	48.1
Length in port	62.6
Dist. to top	79.1
Dist. to bottom	112
Port open mm	32.9
Number of ports	2
Width of each	32.2
Width total	48.35
Upper right radius	5
Upper left radius	10
Lower right radius	25
Lower left radius	5
Port area	1440
Time-Area	9.87
Angle-Area	4.74
Duration	160.77
A.T.D.C	80.39
% of bore width	61.99
Est. Carb size on area	41
Est. Carb size on cc/rpm	39
Intake gas velocity now est.	225
Estimated HP	71
Estimated BMEP,Psi	88.6

Transfers Spec

Main port roof to top	54.35
M-port liner width	34.5
M-port chordal width	32.9
M-port angle up	6.5
5-Port roof to top	54.4
5-port liner width	17.2
5-port chordal width	14.5
5-port angle up	31
Total area	1750
Time-Area	9.29
S-sg mm	3.01
Good to bmep/hp	183 / 146
Opens	117.83
Duration	125.4
TAW T/B ratio (ch)	1.57
TAW T/B ratio liner	1.78
Trans Inlet,mm	121.4

Exhaust Spec.

Dist. to top	32
Upper radius	20
Lower radius	19
Max width	50.1
Blowdown width	49.8
% of bore width	64.2%
Port type	rectangular
Port Opens	79.17°
Duration	201.67°
Blowdown deg.	38.9°
Total Area mm ²	1452
Blowdown Area mm ²	895
Lower Area,mm ²	557
Time-Area	12.28
Time-Area,blowdown	9.02
S-sg mm	3.99
Angle-Area	5.9
Estimated HP	80.4
Est. Blowdown HP	106.6
Estimated BMEP,Psi	100
Est. Blowdown BMEP.Psi	133
Length of port	48.9
I.D of port	38.7
Exh. I.D good to ,rpm	5-5250
Exh. gas velocity est.fps	240
Est. port i.d,based on port	43mm

Carburetor Spec

Type	Mikuni vm 40
Stock Main Jet	400
Main Jet on Dyno	350
Mj based on air temp,c	16.6
Mj based of barometer	29.83
Mj based on vapor press.	0.48
Jet Needle	7DJ2-2
Needle Jet	AA-2
Throttle valve cut.	3.5
Pilot Jet	50
Air Screw	1 1/2

Ignition Spec

6000 rpm	21
6000 rpm	2.88
Spark Plug	BR9ES

Reed Valve Data

Design Flow Area	1268
Carb Dia. for design area	35.2
Reed Natural Frequency	229
Engine Natural Frequency	133
Est. Hp this reed	55.4
Stop Plate Radius	48
Tip lift ratio	0.13
Est. reed tip lift	4.19mm

MULLE Tuesday 10 October
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