Port Flow Analyzer v3.0			Performance World							
Test: PW LS3 69255			www.performance-world.com							
Folder: LS3									Page: 1	
Head #:					Bore Adapter Diameter: 4.00"					
Customer:					Int Port Adapter: Radiused Inlet					
Operator:					Exh Port Adapter: Short "stub stack"					
Test Comments:										
PW 69255 Chevrolet LS3 aluminum head as cast. Intake valve with 30deg backcut										
Report of:					Tested at	Corr to	# Vlvs	Vlv Dia	Stem Dia	Port Area
Comparing				Int:	28"	28.0"	1	2.165"	.313"	.00 sq in
1 Cylinders				Exh:	28"	28.0"	1	1.60"	.313"	.00 sq in
Port	Lift	L/D	Avg CFM	Cyl 1 CFM						
Intake	0.100	0.046	80.3	80.3						
Intake	0.200	0.092	159.8	159.8	**NOTE: ALL FLOWBENCHES ARE NOT CREATED EQUAL!**					
Intake	0.300	0.139	222.6	222.6	**Data from one bench to the next can be vastly different.**					
Intake	0.400	0.185	275.8	275.8	**If you are modifying this head, it is important to "baseline"**					
Intake	0.500	0.231	302.1	302.1	**first to ensure accuracy.**					
Intake	0.600	0.277	331.6	331.6	**The data on this sheet is for reference only.**					
Intake	0.700	0.323	345.8	345.8						
Exhaust	0.100	0.063	55.5	55.5						
Exhaust	0.200	0.125	108.7	108.7						
Exhaust	0.300	0.188	153.5	153.5						
Exhaust	0.400	0.251	201.6	201.6						
Exhaust	0.500	0.313	237.7	237.7						
Exhaust	0.600	0.376	252.8	252.8						
Exhaust	0.700	0.439	261.7	261.7						
Head File: 69255										
Head Comments:										
PW 69255 Chevrolet LS3 aluminum head as cast. Intake valve with 30deg backcut										
Head Number					Customer					
Intake					Exhaust					
	Layout:	1 valve & 1 port				Layout:	1 valve & 1 port			
	Valve Diameter, in	2.165"				Valve Diameter, in	1.60"			
	Stem Diameter, in	8mm				Stem Diameter, in	8mm			
	Throat Diameter, in					Throat Diameter, in				
	Avg Seat Angle, deg	45				Avg Seat Angle, deg	45			
	Port Shape:	Rectangle				Port Shape:	Round			
	Port Volume, ccs	262cc				Port Volume, ccs	104cc			
	Avg Port Diameter, in					Avg Port Diameter, in				
	Avg Port Height, in					Avg Port Height, in				
	Port Length, in					Port Length, in				

Specifications 69255	
Material	A356 Aluminum
Combustion Chamber CC	70cc
Intake Port Volume CC	262cc
Intake Port Dimension	1.31" x 2.62" Rectangle
Exhaust Port Volume CC	104cc
Exhaust Port Dimension	1.70" x 1.815" D-Shape
Exhaust Port Location	OE Stock
Spark Plug Location	OE Stock
Intake Valve Size	2.165" x 5.45"
Exhaust Valve Size	1.60" x 5.45"
Valve Stem Diameter	8mm
Valve Angle	11 Degree
Valve Seat Machining	3-Angle
Valve Spring Pocket I.D.	1.64"
Valve Guide Material	Manganese Bronze
Valve Guide O.D. (top)	.502"
Valve Guide O.D. (base)	.560"
Deck Thickness	3/4"
Rocker Design	Special Billet Rails Included
Valve Cover Mounting	OE Stock (Raised Rail)

Hydraulic Roller (up to .625" lift)		
Suggested Components	**Size**	**Brand**
Intake Valves	2.165" x 5.45"	PW 360044 w/30deg backcut
Exhaust Valves	1.60" x 5.45"	PW 360048
Valve Springs	Beehive	PAC PAC-1219
Valve Retainers	Steel	PAC PAC-R311
Valve Locks		PAC PAC-L8113
Valve Seals	8mm Viton	PW 360488
Valve Spring Locators		PAC PAC-S111
Spark Plugs	Champion RC12YC or Equivalent	

**** NOTE!! THREAD SEALANT MUST BE USED ON ROCKER BOLTS AS THREADS INTERSECT INTAKE PORTS!**
**** NOTE!! ROCKER BOLTS MUST BE TIGHTENED WHEN LIFTER ON BASE CIRCLE ONLY!!**
OR MAY RESULT IN STRIPPED THREADS!!

Cylinder Head Checklist

All PWHEADS “bare” cylinder heads are sold ready for assembly.

What this means is the heads are ready for the assembly process, but still MUST be checked per the following list below. This includes a visual inspection. Check all cylinders and measurements as you normally would for any engine assembly.

It is the responsibility of the assembly technician/installer to:

1) Check valves for proper seating. Lap them and check surfaces.
2) Check guide to valve stem clearance. Clearance as required.
3) Check valve guide O.D. and ensure you have the correct seals.
4) Check valve springs for coil bind height and ensure they are correct for your camshaft.
5) Check for correct installed height on valve springs. Do this with inserts installed. Shim as necessary.
6) Check for retainer to top of guide clearance. Do this with inserts installed.
7) Use a non-hardening sealer on the rocker arm studs for applications where the threads run into a port such as the Small Block Chevrolet intake.
8) After setting the guideplates in place, torque the rocker studs down to 45 lb-ft in three stages.
9) Install sensors or pipe plugs in any open external water jacket holes if applicable.
10) Don’t forget to check for proper pushrod length after heads are installed.

Any questions, please contact your engine builder or e-mail tech@performance-world.com