



Port Flow Analyzer v3.0		Performance World	
Test: PW LS3 72273R		www.performance-world.com	
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Head #:		Bore Adapter Diameter: 4.155"	
Customer:		Int Port Adapter: Radiused Inlet	
Operator:		Exh Port Adapter: Short "stub stack"	
Test Comments: PW 72273R Chevrolet LS3 aluminum head Full CNC			
Report of:	Int:	Tested at	Corr to
Comparing	Exh:	28"	28.0"
1 Cylinders		28"	28.0"
		# Vlv	Vlv Dia
		1	2.165"
		1	1.60"
		Stem Dia	Port Area
		.313"	.00 sq in
		.313"	.00 sq in
Port	Lift	L/D	Avg Cyl 1
			CFM CFM
Intake	0.100	0.046	72.9 72.9
Intake	0.200	0.092	153.3 153.3
Intake	0.300	0.139	223.7 223.7
Intake	0.400	0.185	284.0 284.0
Intake	0.500	0.231	324.2 324.2
Intake	0.600	0.277	354.7 354.7
Intake	0.700	0.323	357.9 357.9
Exhaust	0.100	0.063	52.6 52.6
Exhaust	0.200	0.125	106.5 106.5
Exhaust	0.300	0.188	142.6 142.6
Exhaust	0.400	0.251	175.0 175.0
Exhaust	0.500	0.313	215.2 215.2
Exhaust	0.600	0.376	238.0 238.0
Exhaust	0.700	0.439	251.5 251.5
Head File: 72273R			
Head Comments: PW 72273R Chevrolet LS3 aluminum head Full CNC			
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	269cc	Port Volume, ccs	101cc
Avg Port Diameter, in		Avg Port Diameter, in	
Avg Port Height, in		Avg Port Height, in	
Port Length, in		Port Length, in	

NOTE: ALL FLOWBENCHES ARE NOT CREATED EQUAL!
Data from one bench to the next can be vastly different.
If you are modifying this head, it is important to "baseline"
first to ensure accuracy.
The data on this sheet is for reference only.

Specifications 72273R

Material	A356 Aluminum
Combustion Chamber CC	71cc
Intake Port Volume CC	269cc
Intake Port Dimension	1.39" x 2.64" Rectangle
Exhaust Port Volume CC	101cc
Exhaust Port Dimension	1.65" x 1.82" 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	Multi 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 SEE NOTE**
Valve Cover Mounting	OE Stock (Raised Rail)

Hydraulic Roller (up to .660" lift)

Suggested Components	Size	Brand
Intake Valves	2.165" x 5.45"	PW #360044 (or equal)
Exhaust Valves	1.60" x 5.45"	PW #360048 (or equal)
Valve Spring Kit	Dual 1.30" Springs	PW #69000A2KIT
Valve Retainers	Moly Steel	Included in above
Valve Locks	7 degree	Included in above
Valve Seals	8mm Viton	Included in above
Valve Spring Locators	.060"	Included in above
** Rocker Stand Shims (if required for rocker tip alignment)		PW #360260 (.060" set/8)
Spark Plugs	Champion RC12YC or Equivalent	

**** 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 sales@performance-world.com