



Port Flow Analyzer v3.0 Performance World
 Test: PW LS3 68276 www.performance-world.com
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Head #: Bore Adapter Diameter: 4.00"
 Customer: Int Port Adapter: Radiused Inlet
 Operator: Exh Port Adapter: Short "stub stack"

Test Comments:
 PW 68276 Chevrolet LS3 aluminum head as cast

| 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 | 1.59" | .313" | .00 sq in |

| Port | Lift | L/D | Avg CFM | Cyl 1 CFM |
|---------|-------|-------|---------|-----------|
| Intake | 0.100 | 0.046 | 74.1 | 74.1 |
| Intake | 0.200 | 0.092 | 150.3 | 150.3 |
| Intake | 0.300 | 0.139 | 213.8 | 213.8 |
| Intake | 0.400 | 0.185 | 265.8 | 265.8 |
| Intake | 0.500 | 0.231 | 296.6 | 296.6 |
| Intake | 0.600 | 0.277 | 323.0 | 323.0 |
| Intake | 0.700 | 0.323 | 332.1 | 332.1 |
| Intake | 0.750 | 0.346 | 332.1 | 332.1 |
| Exhaust | 0.100 | 0.063 | 57.4 | 57.4 |
| Exhaust | 0.200 | 0.125 | 110.7 | 110.7 |
| Exhaust | 0.300 | 0.188 | 152.9 | 152.9 |
| Exhaust | 0.400 | 0.251 | 190.5 | 190.5 |
| Exhaust | 0.500 | 0.313 | 210.0 | 210.0 |
| Exhaust | 0.600 | 0.376 | 219.9 | 219.9 |
| Exhaust | 0.700 | 0.439 | 228.1 | 228.1 |
| Exhaust | 0.750 | 0.470 | 231.0 | 231.0 |

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.

Head File: 68276
 Head Comments:
 PW 68276 Chevrolet LS3 aluminum head as cast

| Head Number | Customer |
|---------------------------|--------------------------|
| Intake | Exhaust |
| Layout: 1 valve & 1 port | Layout: 1 valve & 1 port |
| Valve Diameter, in 2.165" | Valve Diameter, in 1.59" |
| 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 273cc | Port Volume, ccs 90cc |
| Avg Port Diameter, in | Avg Port Diameter, in |
| Avg Port Height, in | Avg Port Height, in |
| Port Length, in | Port Length, in |

Specifications 68276

| | |
|--------------------------|--------------------------|
| Material | A356 Aluminum |
| Combustion Chamber CC | 69cc |
| Intake Port Volume CC | 273cc |
| Intake Port Dimension | 1.285" x 2.60" Rectangle |
| Exhaust Port Volume CC | 90cc |
| Exhaust Port Dimension | 1.47" x 1.64" D-Shape |
| Exhaust Port Location | OE Stock |
| Spark Plug Location | OE Stock |
| Intake Valve Size | 2.165" x 4.89" |
| Exhaust Valve Size | 1.59" x 4.91" |
| Valve Stem Diameter | 8mm |
| Valve Angle | 15 Degree |
| Valve Seat Machining | 3-Angle |
| Valve Spring Pocket I.D. | 1.30" |
| Valve Guide Material | Manganese Bronze |
| Valve Guide O.D. (top) | .502" |
| Valve Guide O.D. (base) | .560" |
| Deck Thickness | 5/8" |
| Rocker Design | LS3 Rails Required |
| Valve Cover Mounting | OE Stock |

Hydraulic Roller (up to .625" lift)

| Suggested Components | Size | Brand |
|-----------------------------|-------------------------------|---------------|
| Intake Valves | 2.165" x 4.89" | PW 360050 |
| Exhaust Valves | 1.59" x 4.91" | PW 360049 |
| 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