M-6049-Z2 Ford Performance Aluminum SB Cylinder Head

Overview:

This sheet contains important information regarding dimensions and specifications of the M-6049-Z2 cylinder head(s). These cylinder heads are equipped with larger than stock valves, therefore piston to valve clearance must be checked. This includes both radial and depth clearance checks. These heads require stud mount rocker arms, and rocker arm to valve cover clearance also must be checked. If there are any questions contact the Techline @ www.fordracingparts.com. These instructions should be reviewed by all engine builders, due to minor changes that could impact the engine assembly process.

Contents/Bill of Materials:

PAC-1219X    Valve Spring, Outer Beehive
PAC-L8025    Valve Retainer Locks
PAC-R310    Retainer, Valve Spring
M-6566-Z2 REV1    Guide Plate
M-6505-Z2    Exhaust Valve, 1.600" dia. x 5.080"
M-6507-Z2    Intake Valve, 2.050" dia. x 5.080"
VS-530V    Valve Seal
4705F-1    Valve Spring Seat/Locator
RRS-3H    Rocker Stud, 7/16" dia. x 1.900"

Features and Specifications:

Head material    Aluminum
Intake port location    Raised .125" from stock
Intake port volume    208 cc's
Intake valve part number    M-6507-Z2
Intake Valve Head Diameter    2.050"
Intake valve length    5.080"
Intake valve material    Stainless steel
Intake valve stem diameter    11/32"
Intake guide material    Manganese-bronze
Intake valve seat material    Ductile Iron
Exhaust port location    Raised .125" from Stock
Exhaust port volume    75 cc's

Please visit www.performanceparts.ford.com for the most current instruction and warranty information.

PLEASE READ ALL OF THE FOLLOWING INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION. AT ANY TIME YOU DO NOT UNDERSTAND THE INSTRUCTIONS, PLEASE CALL THE FORD PERFORMANCE TECHLINE AT 1-800-367-3788
Features and Specifications (continued):

Exhaust valve part number       M-6505-Z2
Exhaust valve head diameter       1.600"
Exhaust valve length           5.080"
Exhaust valve material       Stainless steel
Exhaust valve stem diameter    11/32"
Exhaust valve guide material   Manganese-bronze
Exhaust seat material       Ductile Iron
Combustion chamber volume     63.0ccs
Valve spring locator part number    4705F-1
Valve spring part number       PAC-1219X
Valve spring installed height     1.800"
Valve spring closed pressure     145 lbs.
Valve spring open pressure        358 lbs. @ 1.175"
Retainer part number          PAC-R310
Retainer manufacturer          PAC
Valve lock angle               10°
Valve lock part number         PAC-L8025
Valve stem seal part number    VS-530V
Rocker stud part number         RRS-3H
Pushrod guide plate part number        M-6566-Z2
Valve guide clearance intake    .0012"-.0022"
Valve guide clearance exhaust    .0016"-.0026"
Weight                          30 lbs.

Typical Air Flow:

Flowed at 28” inches of water

<table>
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<th>Bore size</th>
<th>Intake CFM</th>
<th>Exhaust CFM</th>
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<td>Lift</td>
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<tr>
<td>0.600</td>
<td>274.7</td>
<td>172.2</td>
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</table>
Recommended accessories:

- Intake gasket: M-9439-A50
- Exhaust gasket: Fel-Pro 1415
- Head gasket: M-6051-A302, M-6051-S331, M-6051-CP331, M-6051-R351
- Head bolts-studs: M-6065-BOSS, M-6014-Z304, M-6014-BOSS
- Valve Covers: All Ford Performance 302/351 valve covers
- Spark plugs: Motorcraft AGSP-32PP, Autolite® 3924, 3925
- Valve Cover Gasket: Fel-Pro® VS13264T
- Rocker Arms: 302/351 Ford with 7/16 stud

Assembly Notes:

Torque Specifications - Use light oil on threads except where noted,

Cylinder Head – see photo below for sequence

1. 7/16-14 (stock block) early reusable grade 8 bolts with ARP 200-8598 head bolt bushings. (apply Loctite® 567 or 565 thread sealant) (2) steps: 1) 50 lb*ft 2) 70 lb*ft
2. 7/16-14(stock block) torque to yield bolts (apply Loctite® 567 or 565 thread sealant) (3) steps: 1) 35 lb*ft 2) 55 lb*ft 3) ¼ turn (90°)
3. 1/2-13 (performance block) grade 8 bolts (2) steps: 1) 55 lb*ft 2) 100 lb*ft

Intake Manifold – (2) steps:
1) 10 lb*ft
2) 18 lb*ft


Rocker Stud – (Note apply Loctite® 567 or 565 on intake rocker studs) 50lb*ft

Header/Exhaust Manifold – 35 lb*ft

Valve Cover – 9 lb*ft (Note check for rocker arm to valve cover clearance)

Pushrods – Check for clearance between the head and pushrod. The guide plates are designed to allow for slight adjustment due to tolerance stack up. Loosen and adjust if necessary.
Assembly Notes (continued):

Accessory drive bolt holes are in stock locations and stock brackets will fit. Exhaust flange location and bolt pattern - The exhaust manifold plane is in the stock location. The exhaust is configured with the stock “narrow” 2.00” bolt spacing. Spark plug installation – a small amount of nickel or copper based anti-seize is recommended on the spark plug threads. Be cautious not to get any near the electrode or ground strap. Remember a little goes a long way with anti-seize.