



FORD PERFORMANCE

M-6049-SCJA

SUPER COBRA JET CYLINDER HEAD - ASSEMBLED WITH DUAL SPRINGS

Fits 429 and 460 ci engines (except BOSS 429)

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PRIOR TO INSTALLATION READ THESE INSTRUCTION COMPETELY
For questions, Call the FORD PERFORMANCE Techline 1-800-367-3788

Please visit <https://www.performanceparts.ford.com> for warranty information

OVERVIEW:

This instruction sheet contains important information regarding dimensions and specifications of the M-6049-SCJA cylinder heads. These cylinder heads are equipped with valves that are on different locations, angles and are larger than stock, therefore piston to valve clearance must be checked. This check includes both radial and depth clearance checks. Radial clearance .060" minimum, depth on intake .080" and .120" on exhaust. These heads use stud mounted rocker arms, rocker arm to valve cover clearance must also be checked. These instructions should be reviewed by all engine builders, due to minor changes that could impact the engine assembly process.

CONTENTS/BILL OF MATERIALS:

PART #	DESCRIPTION	QUANTITY
648-1	VALVE KEEPER SET	8
99944	VALVE RETAINER	8
M-6505-A429	EXHAUST VALVE	4
M-6507-B429	INTAKE VALVE	4
M-6566-SCJA	SCJ PUSHROD GUIDE PLATE	4
RRS-3MAN	ROCKER ARM STUD	8
SC1470-570-060	SPRING SEAT	8
TVS-1734	VALVE SPRINGS	8
VS-530V	VALVE STEM SEAL	8

FEATURES AND SPECIFICATIONS:

Head material	A356 aluminum
Intake port location	Stock Super Cobra Jet
Intake port volume	290 cc
Intake valve part number	M-6507-B429
Intake valve head diameter	2.200"
Intake valve length	5.265"
Intake valve material	Stainless steel
Intake guide material	Manganese-bronze
Intake valve stem diameter	11/32"
Intake valve seat material	Ductile iron
Exhaust port location	Stock Super Cobra Jet
Exhaust port volume	148 cc
Exhaust valve part number	M-6505-A429
Exhaust valve head diameter	1.760"
Exhaust valve length	5.050"
Exhaust valve material	Stainless steel
Exhaust guide material	Manganese-bronze
Exhaust valve stem diameter	11/32"
Exhaust valve seat material	Ductile iron
Combustion chamber volume	72 cc

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Valve spring locator	SC1470-570-060
Valve springs	TVS-1734
Valve spring installed height	1.850"
Valve spring closed pressure	135# (+/- 7) @ 1.850"
Valve spring open pressure	404# (+/- 20) @ 1.150"
Retainer	99944
Valve lock	648
Valve lock angle	7 deg.
Valve stem seal	VS-530V
Valve guide clearance intake	.0012-.0022"
Valve guide clearance exhaust	.0016-.0026"
Weight	Approximately 36#

TYPICAL AIR FLOW

LIFT	INTAKE CFM	EXHAUST CFM
0.100	68.5	53.3615
0.200	134.1	95.59
0.300	197.5	131.93
0.400	264.3	167.455
0.500	317.4	187.8
0.600	324.1	195.625
0.700	324.1	203.45

RECOMMENDED PARTS

Intake gasket	Fel-Pro 1231
Exhaust gasket	Fel-Pro 1420
Valve covers	M-6582-C460
Engine block	M-6010-A460X or M-460-A460XBB (Big bore version)
Harmonic damper	M-6316-A521
Timing chain set	M-6268-B429
Water pump	M-8501-C460
Spark plugs	AGSP32C

RECOMMENDED TORQUE VALUES

Head bolt	9/16-12 Head bolt torque is 135 lb*ft, torque in steps 70/105/135 lb*ft
Intake manifold	35lb*ft, torque in steps 20/35 lb*ft
Exhaust manifold	35 lb*ft, torque in steps 20/35 lb*ft
Valve cover	8-10 lb*ft
Rocker studs	65 lb*ft
Spark plugs	10-12 lb*ft

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