



ENGINE BUILD SHEETS

Engine Blueprint Record

Engine Type	
Build Date	
Displacement	
Special Notes:	

Piston

Piston Brand/PN	
Compression Height	
Wrist Pin Brand/PN	
Wrist Pin Dia./Length	
Wrist Pin Clearance	
Wrist Pin Retainer	

Block

Material	
Manuf./PN	
Bore Size	
Cam Location	
Main Bearing Dia.	
Special Mods:	

Piston Ring

Ring Brand/PN	
Top Ring Type	
Width	
Side Clearance	
End Gap	
2nd Ring Type	
Width	
Side Clearance	
End Gap	
Oil Ring Type	
Side Clearance	
Gap	

Piston Diameter and Bore Clearance

Cylinder #	1	3	5	7
Bore Dia.				
Piston Dia.				
Clearance				
Cylinder #	2	4	6	8
Bore Dia.				
Piston Dia.				
Clearance				
Width				

Piston Deck Height

Cylinder #	1	3	5	7
Deck Height				
Cylinder #	2	4	6	8
Deck Height				

Notes

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Rod and Main Bearings

Main Bearing Brand/PN	
Rod Bearing Brand/PN	
Camshaft Bearing Brand/PN	

Crankshaft

Crankshaft Brand/PN					
Stroke					
End Play					
Main	1	2	3	4	5
Main Bore					
Main Bore w/bearing					
Crank Main Journal					
Main Bearing Clearance					
Conn. Rod	1	3	5	7	
Big End Dia.					
Big End Dia. w/bearing					
Crank Journal Dia.					
Rod Bearing Clearance					
Conn. Rod	2	4	6	8	
Big End Dia.					
Big End Dia. w/bearing					
Crank Journal Dia.					
Rod Bearing Clearance					

Connecting Rods

Rod Brand/PN				
Length (Center to Center)				
Side Clearance	1-2	3-4	5-6	7-8
Wrist Pin/Piston Clearance				
Wrist Pin/Rod Clearance				
Rod Bolt Brand/PN				
Rod Bolt Torque				
Rod Bolt Stretch				

Valvetrain Data

Rocker Arms:	
Make	
PN	
Material	
Offset	
Rocker Arm Ratio:	
Intake	
Exhaust	
Intake Valve Lift	
Exhaust Valve Lift	
Pushrod:	
Length	
Diameter	
Wall Thickness	
Lifter:	
Make/PN	
Diameter	
Offset	
Rev Kit Make	
PN	

Crankshaft

Make of Style/Brand	
Cam PN	
Material	
Intake Duration @.050"	
Exhaust Duration @.050"	
Intake Installed at Centerline	
Lobe Separation Angle	
Intake Lobe Lift	
Exhaust Lobe Lift	
Intake Valve-to-Piston Clearance @ 10° ATDC	
Exhaust Valve-to-Piston Clearance @ 10° BTDC	
Intake Valve Lash	
Exhaust Valve Lash	

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Cylinder Head

Brand/PN	
Chamber Volume	
Intake Port Volume (cc)	
Intake Valve Type/PN	
Intake Valve Size	
Exhaust Valve Type/PN	
Exhaust Valve Size	
Valvespring Brand/PN	
Valvespring	
Inside Diameter	
Outside Diameter	
Installed Height	
Intake/Exhaust	
Valvespring Seat Pressure	
Valvespring Open Pressure	
Coil Bind Height	
Retainer Make/PN	
Keeper Make/PN	
Head Gasket Thickness	

Engine Balancing

Piston Weight (grams)	
Wrist Pin	
Pin Locks	
Ring Set (1 Piston)	
Rod, Small End	
Total Reciprocating Weight	
Rod, Big End	
Rod Bearing (1 Pair)	
Oil	
Total Rotating Weight	
Balance Percent* 0.50 for V-8 90-degree	
Bob Weight = 2 x (Reciprocating Wt. x .50 + Rotating Weight)	

Cylinder Head Flow

Modifications	
Flow Bench	
Test Pressure	
Bore Fixture Dia.	
Intake Valve Dia.	
Exhaust Valve Dia.	

Intake Flow

Lift	CFM
.100	
.200	
.300	
.400	
.500	
.600	
.700	

Exhaust Flow

Lift	CFM	Exh. to Int. %
.100		
.200		
.300		
.400		
.500		
.600		
.700		

Compression Ratio

Swept Volume*	
Dome (-) or Dish (+) Volume	
Ring Land Volume	
Deck Volume	
Head Gasket Volume	
Chamber Volume	
Total Volume	
$CR = \frac{\text{Total Volume}}{\text{Total} - \text{Swept Volume}}$	
CR = _____ : 1	
*Swept Volume (cc) = Bore ² x Stroke x 12.87	