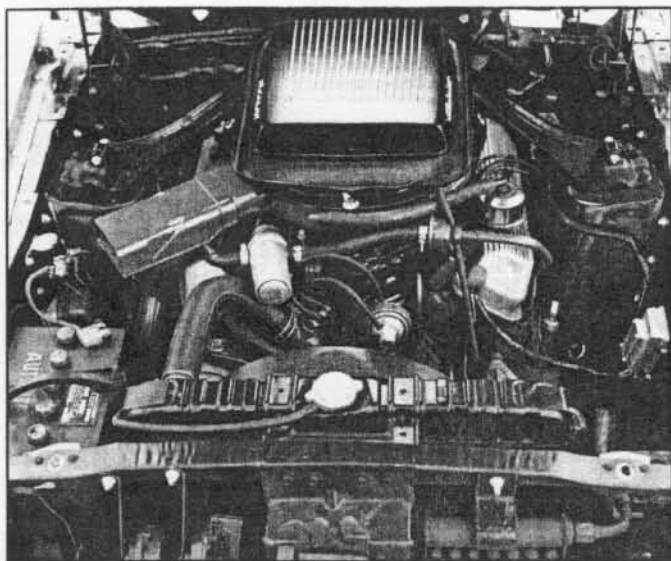


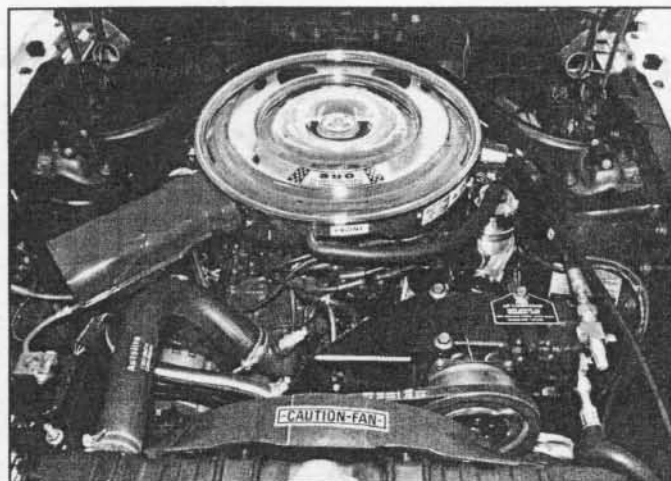
# Mustang Engine Specifications: 1967-1971 Big-Blocks



*The big, the bad...and the final installment in our vintage engine specs series.*

article by Mark Houlahan  
photographs from the *Mustang Monthly* archives

This month our engine specifications guide take us into the years of mega-horsepower and brutish torque that could be supplied only by big-block power. Some of Ford's cubic-inch demons of the '67-'71 performance era produced more than 400 lb-ft of torque. Couple that power with a Drag-Pak option or a 3.91:1 axle ratio and you could literally rip the pavement from the ground with one stab of the gas pedal. The era of the big-block engines was relatively short-lived, but left us with such famous powerplants as the Boss 429, the 390 GT, the Cobra Jet and Super Cobra Jet 428 and 429s, solid lifters and Ram Air induction. These engines not only



served to perpetuate the Mustang's image, but kept the competition keenly aware of what the Mustang's taillights looked like. While the big-blocks were around for only five model years, victims of the likes of OPEC and prudish consumer advocates, they will never be forgotten.

## 1967

Engine size:	390 cid
Data plate code:	S
Horsepower:	320 @ 4800 rpm
Torque:	427 @ 3200 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.05" X 3.78"
Compression ratio:	10.5:1
Combustion chamber:	71.2-74.2 cc
Rocker arm ratio:	1.73:1
Intake valve size:	2.022"-2.037"
Exhaust valve size:	1.551"-1.566"
Idle rpm:	C70F-A is 575, -B is 475, -C is 625, -D is 550
Fast idle rpm:	1850 for C70F-A and -C, 1900 for C70F-B and -D
Idle manifold vacuum:	17 in/hg
Compression pressure:	170-210
Initial Ignition timing:	12° w/o exhaust emissions, 6° w/exhaust emissions
Point gap:	.017"
Dwell @ idle rpm:	26-31°
Number of venturis:	four
Float setting:	parallel with float bowl floor with bowl inverted
Accelerator pump setting:	pump lever in #1 hole
Anti-stall dashpot setting:	N/A
Choke plate to airhorn:	N/A
Choke housing setting:	two rich
Fuel pump static pressure:	4.5-6.5 psi
Spark plug type and gap:	BF32 @ .032"-.036"
Oil pressure:	35-65 psi
Oil pan capacity:	five quarts

## 1968

Engine size:	390 cid
Data plate code:	S
Horsepower:	320 @ 4800 rpm
Torque:	427 @ 3200 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.05" X 3.78"
Compression ratio:	10.5:1
Combustion chamber:	67.1-70.1 cc
Rocker arm ratio:	1.73:1
Intake valve size:	2.022"-2.037"
Exhaust valve size:	1.551"-1.566"
Idle rpm:	700 for manual, 550 for automatic
Fast idle rpm:	1900 for manual, 2100 for automatic
Idle manifold vacuum:	17 in/hg
Compression pressure:	170-210
Initial ignition timing:	6°
Point gap:	.016"
Dwell @ idle rpm:	26-31°
Number of venturis:	four
Float setting:	parallel with float bowl floor with bowl inverted
Accelerator pump setting:	throttle lever in #1 hole for C80F-C manual carburetor, #2 hole for C80F-D automatic carburetor
Anti-stall dashpot setting:	.100"
Choke plate to airhorn:	.300"
Choke housing setting:	three rich
Fuel pump static pressure:	4.5-6.5 psi
Spark plug type and gap:	BF-32 @ .032"-.036"
Oil pressure:	35-65 psi
Oil pan capacity:	five quarts

Engine size:	428 cid
Data plate code:	R
Horsepower:	335 @ 5200 rpm
Torque:	440 @ 3400 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.13" X 3.984"
Compression ratio:	10.6:1
Combustion chamber:	72.7-75.7 cc
Rocker arm ratio:	1.73:1
Intake valve size:	2.080"-2.097"
Exhaust valve size:	1.645"-1.660"
Idle rpm:	700 for manual, 650 for automatic
Fast idle rpm:	1350
Idle manifold vacuum:	17 in/hg
Compression pressure:	lowest reading within 75% of highest reading
Initial ignition timing:	6°
Point gap:	.021" for manual, .017" for automatic
Dwell @ idle rpm:	24-29° for manual, 26-31° for automatic
Number of venturis:	four
Float setting:	parallel with float bowl floor with bowl inverted
Accelerator pump setting:	lever in #2 hole
Anti-stall dashpot setting:	.100"
Choke plate to airhorn:	N/A
Choke housing setting:	2 rich for manual, 1 rich for automatic
Fuel pump static pressure:	4.5-6.5 psi
Spark plug type and gap:	BF-32 @ .032"-.036"
Oil pressure:	35-60 psi
Oil pan capacity:	five quarts

Engine size:	427 cid
Data plate code:	W
Horsepower:	390 @ 5600 rpm
Torque:	460 @ 3200 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.23" X 3.78"
Compression ratio:	10.9:1
Combustion chamber:	72.7-75.7 cc
Rocker arm ratio:	1.73:1
Intake valve size:	2.080"-2.097"
Exhaust valve size:	1.645"-1.660"
Idle rpm:	600 for automatic
Fast idle rpm:	2100 for automatic
Idle manifold vacuum:	15 in/hg
Compression pressure:	160-200
Initial ignition timing:	6°
Point gap:	.017"
Dwell @ idle rpm:	26-31°
Number of venturis:	four
Float setting:	parallel with float bowl floor with bowl inverted
Accelerator pump setting:	#2 hole
Anti-stall dashpot setting:	.100"
Choke plate to airhorn:	.300"
Choke housing setting:	N/A
Fuel pump static pressure:	4.5-6.5 psi
Spark plug type and gap:	BF-32 @ .032"-.036"
Oil pressure:	35-65 psi
Oil pan capacity:	five quarts

## 1969

Engine size:	390 cid
Data plate code:	S
Horsepower:	320 @ 4800 rpm
Torque:	427 @ 3200 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.05" X 3.784"
Compression ratio:	10.5:1
Combustion chamber:	68.1-71.1 cc
Rocker arm ratio:	1.73:1
Intake valve size:	2.022"-2.037"
Exhaust valve size:	1.551"-1.566"
Idle rpm:	650 for manual, 550 for automatic
Fast idle rpm:	1300 for manual, 1500 for automatic
Idle manifold vacuum:	17 in/hg
Compression pressure:	lowest reading within 75% of highest reading
Initial ignition timing:	6°
Point gap:	.017"
Dwell @ idle rpm:	26-31°
Number of venturis:	four
Float setting:	13/16"
Accelerator pump setting:	480° stem height, lever in #3 hole
Anti-stall dashpot setting:	.178"
Choke plate to airhorn:	.300"
Choke housing setting:	index for manual, 1 lean for automatic
Fuel pump static pressure:	4.5-6.5 psi
Spark plug type and gap:	BF-42 @ .032"-.036"
Oil pressure:	35-60 psi
Oil pan capacity:	five quarts

# MUSTANG ENGINE SPECIFICATIONS: 1967-1971 BIG-BLOCKS

## 1969

Engine size:	428 cid
Data plate code:	Q
Horsepower:	335 @ 5200 rpm
Torque:	440 @ 3400 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.13" X 3.984"
Compression ratio:	10.6:1
Combustion chamber:	72.7-75.7 cc
Rocker arm ratio:	1.73:1
Intake valve size:	2.080"-2.097"
Exhaust valve size:	1.645"-1.660"
Idle rpm:	700 for manual, 650 for automatic
Fast idle rpm:	1350
Idle manifold vacuum:	17 in/hg
Compression pressure:	lowest reading within 75% of highest reading
Initial ignition timing:	6°
Point gap:	.021" for manual, .017" for automatic
Dwell @ idle rpm:	24-29° for manual, 26-31° for automatic
Number of venturis:	four
Floater setting:	parallel to float bowl floor with bowl inverted
Accelerator pump setting:	lever in #2 hole
Anti-stall dashpot setting:	100°
Choke plate to airhorn:	N/A
Choke housing setting:	2 rich for manual, 1 rich for automatic
Fuel pump static pressure:	4.5-6.5 psi
Spark plug type and gap:	BF-32 @ .032"-.036"
Oil pressure:	35-60 psi
Oil pan capacity:	five quarts

Engine size:	428 cid
Data plate code:	R
Horsepower:	335 @ 5200 rpm
Torque:	440 @ 3400 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.13" X 3.984"
Compression ratio:	10.6:1
Combustion chamber:	72.7-75.7 cc
Rocker arm ratio:	1.73:1
Intake valve size:	2.080"-2.097"
Exhaust valve size:	1.645"-1.660"
Idle rpm:	700 for manual, 650 for automatic
Fast idle rpm:	1350
Idle manifold vacuum:	17 in/hg
Compression pressure:	lowest reading within 75% of highest reading
Initial ignition timing:	6°
Point gap:	.021" for manual, .017" for automatic
Dwell @ idle rpm:	24-29° for manual, 26-31° for automatic
Number of venturis:	four
Floater setting:	parallel with float bowl floor with bowl inverted
Accelerator pump setting:	lever in #2 hole
Anti-stall dashpot setting:	100°
Choke plate to airhorn:	N/A
Choke housing setting:	2 rich for manual, 1 rich for automatic
Fuel pump static pressure:	4.5-6.5 psi
Spark plug type and gap:	BF-32 @ .032"-.036"
Oil pressure:	35-60 psi
Oil pan capacity:	five quarts

Engine size:.....429 cid  
 Data plate code:.....Z  
 Horsepower:.....360 @ 4600 rpm  
 Torque:.....476 @ 2800 rpm  
 Firing order:.....1-5-4-2-6-3-7-8  
 Bore & stroke:.....4.36" X 3.590"  
 Compression ratio:.....11.0:1  
 Combustion chamber:.....100 cc  
 Rocker arm ratio:.....1.53:1 on intake,  
 1.71:1 on exhaust  
 Intake valve size:.....2.275"-2.285"  
 Exhaust valve size:.....1.895"-1.905"  
 Idle rpm:.....700/500, lower number is  
 with solenoid de-energized  
 Fast idle rpm:.....2200  
 Idle manifold vacuum:.....17 in/hg  
 Compression pressure:.....lowest reading within  
 75% of highest reading  
 Initial ignition timing:.....10°  
 Point gap:......020", dual points  
 Dwell @ idle rpm:.....30-33°  
 Number of venturis:.....four  
 Float setting:.....parallel with float bowl floor  
 with bowl inverted  
 Accelerator pump setting:.....lever in #2 hole  
 Anti-stall dashpot setting:.....solenoid  
 Choke plate to airhorn:.....N/A  
 Choke housing setting:.....manual  
 Fuel pump static pressure:.....4.5-6.5 psi  
 Spark plug type and gap:.....AF-32 @ .035"  
 Oil pressure:.....35-60 psi  
 Oil pan capacity:.....eight quarts

## 1970

Engine size:.....428 cid  
 Data plate code:.....Q  
 Horsepower:.....335 @ 5200 rpm  
 Torque:.....440 @ 3400 rpm  
 Firing order:.....1-5-4-2-6-3-7-8  
 Bore & stroke:.....4.13" X 3.984"  
 Compression ratio:.....10.6:1  
 Combustion chamber:.....72.7-75.7 cc  
 Rocker arm ratio:.....1.73:1  
 Intake valve size:.....2.082"-2.097"  
 Exhaust valve size:.....1.645"-1.660"  
 Idle rpm:.....DOZF-AA is 725, -AB is 675, -AC is 725/500,  
 -AD is 675/500, lower number is with solenoid de-energized  
 Fast idle rpm:.....DOZF-AA and -AC is 1900,  
 DOZF-AB and -AD is 2100  
 Idle manifold vacuum:.....17 in/hg  
 Compression pressure:.....lowest reading within  
 75% of highest reading  
 Initial ignition timing:.....10°  
 Point gap:......021" for dual advance, .017" for single advance  
 Dwell @ idle rpm:.....24-29° for dual advance,  
 26-31° for single advance  
 Number of venturis:.....four  
 Float setting:.....parallel with float bowl floor with bowl inverted  
 Accelerator pump setting:.....lever in #2 hole  
 Anti-stall dashpot setting:.....DOZF-AA is .140", -AB is .200",  
 -AC and -AD are solenoid equipped  
 Choke plate to airhorn:.....N/A  
 Choke housing setting:.....manual  
 Fuel pump static pressure:.....4.5-6.5 psi  
 Spark plug type and gap:.....AF-32 @ .035"  
 Oil pressure:.....35-60 psi  
 Oil pan capacity:.....five quarts