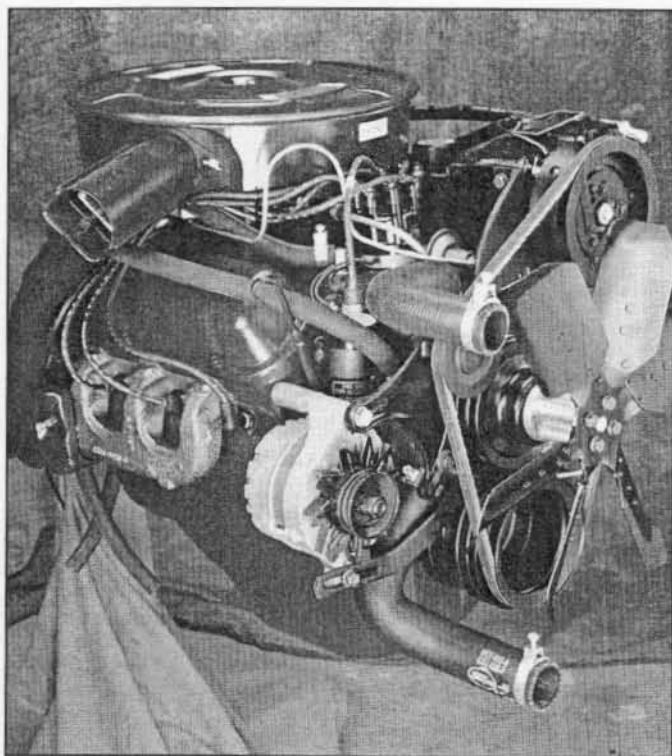


# Mustang Engine Specifications:

## Small-Blocks Part 1

### 1964½ - 1970



*Our series on early Mustang engine specifications continues with a detailed look at the legendary first-generation small-block V8s.*

article by Mark Houlihan

For part two of our engine specifications guide we scoured the books for all of the small-block engines found under the hoods of '64-1/2 to '73 Mustangs. We weren't able to come up with every answer. While the same information on six cylinder engines (featured in our May issue) came fairly easy, the V8 sections of the shop manuals had some data missing — evidenced by the "information unavailable" entry listed for some specifications. There was also the problem with long lead print times. For instance, when the 1969 shop manual went to the printers, no one knew that the '69 Mustang would receive a Boss 302 engine, hence no mention of the Boss in the manual. The Boss 302 specs were listed in the 1970 manual, so after some careful checking, the 1970 information was used for our 1969 Boss 302 listing.

We hope you have enjoyed our vintage Mustang engine specifications thus far.

1964-1/2

Engine size:	.....	260 cid
Data plate code:	.....	F
Horsepower:	.....	164 @ 4400 rpm
Torque:	.....	258 @ 2200 rpm
Firing order:	.....	1-5-4-2-6-3-7-8
Bore & stroke:	.....	3.80" x 2.87"
Compression ratio:	.....	8.8:1
Combustion chamber:	.....	53.0-56.0 cc
Rocker arm ratio:	.....	1.60:1
Intake valve size:	.....	1.582"-1.597"
Exhaust valve size:	.....	1.381"-1.396"
Idle rpm:	.....	575-600 rpm for manual, 475-500 for automatic
Fast idle rpm:	.....	1300 rpm for manual, 1600 rpm for automatic
Idle manifold vacuum:	.....	16 in/hg
Compression pressure:	.....	130-170 psi
Initial ignition timing:	.....	4° for manual, 8° for automatic
Point gap:	.....	.014"-.016"
Dwell @ idle rpm:	.....	26-28 1/2°
Number of venturis:	.....	two
Float setting:	.....	18/64" from the machined surface of the main body to the top of the free end of the float in the uppermost position
Accelerator pump setting:	.....	link in the inboard hole of the pump lever and #4 hole (40°F and below), #3 hole (40-80°F), or #2 hole (80°F and above) in the over travel lever
Anti-stall dashpot setting:	.....	1/16"-3/32" for automatic
Choke plate to airhorn:	.....	1/16"
Choke housing setting:	.....	two digits rich for manual, four digits lean for automatic
Fuel pump static pressure:	.....	6 psi
Spark plug type and gap:	.....	BF-42 @ .032"-.036"
Oil pressure:	.....	35-55 psi
Oil pan capacity:	.....	5 quarts

Engine size:	.....	289 cid
Data plate code:	.....	D
Horsepower:	.....	information unavailable
Torque:	.....	information unavailable
Firing order:	.....	1-5-4-2-6-3-7-8
Bore & stroke:	.....	4.00" X 2.87"
Compression ratio:	.....	9.0:1
Combustion chamber:	.....	information unavailable
Rocker arm ratio:	.....	1.60:1
Intake valve size:	.....	information unavailable
Exhaust valve size:	.....	information unavailable
Idle rpm:	.....	575-600 rpm for manual, 475-500 for automatic
Fast idle rpm:	.....	1300 rpm for manual, 1500 for automatic
Idle manifold vacuum:	.....	18 in/hg
Compression pressure:	.....	130-170
Initial ignition timing:	.....	8°
Point gap:	.....	.019"-.021"
Dwell @ idle rpm:	.....	information unavailable
Number of venturis:	.....	four
Float setting:	.....	primary and secondary 29/64" measured from the machined surface of the main body to the top of the free end of the float in the uppermost position
Accelerator pump setting:	.....	link in the inboard hole of the pump lever and #4 hole (40°F and below), #3 hole (40-80°F), or #2 hole (80°F and above) in the over travel lever
Anti-stall dashpot setting:	.....	1/16"-3/32" for automatic
Choke plate to airhorn:	.....	1/16"
Choke housing setting:	.....	three digits lean for manual and automatic
Fuel pump static pressure:	.....	6 psi
Spark plug type and gap:	.....	BF-42 @ .032"-.036"
Oil pressure:	.....	35-55 psi
Oil pan capacity:	.....	five quarts

## 1965

Engine size:	289 cid
Data plate code:	C
Horsepower:	200 @ 4400 rpm
Torque:	282 @ 2400 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.00" X 2.870"
Compression ratio:	9.3:1
Combustion chamber:	52.0-55.0 cc
Rocker arm ratio:	1.60:1
Intake valve size:	1.662"-1.677"
Exhaust valve size:	1.442"-1.457"
Idle rpm:	575-600 for manual, 475-500 for automatic
Fast idle rpm:	1400 rpm manual, 1600 rpm automatic
Idle manifold vacuum:	18 in/hg
Compression pressure:	130-170
Initial ignition timing:	6° for manual, 8° for automatic
Point gap:	.014"-.016"
Dwell @ idle rpm:	26-28 1/2°
Number of venturis:	two
Float setting:	19/64" measured from the machined surface of the main body to the top of the free end of the float in the uppermost position
Accelerator pump setting:	link in the inboard hole of the pump lever and #4 hole for manual and #3 hole for automatic in the over travel lever
Anti-stall dashpot setting:	5/64"
Choke plate to airhorn:	1/16"
Choke housing setting:	Index for manual, two rich for automatic
Fuel pump static pressure:	6 psi
Spark plug type and gap:	BF42 @ .032"-.036"
Oil pressure:	35-55 psi
Oil pan capacity:	five quarts

Engine size:	289 cid
Data plate code:	A
Horsepower:	225 @ 4800 rpm
Torque:	305 @ 3200 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.00" X 2.870"
Compression ratio:	10.0:1
Combustion chamber:	52.0-55.0 cc
Rocker arm ratio:	1.60:1
Intake valve size:	1.662"-1.677"
Exhaust valve size:	1.442"-1.457"
Idle rpm:	575-600 rpm for manual, 475-500 for automatic
Fast idle rpm:	1400 rpm manual, 1600 rpm automatic
Idle manifold vacuum:	18 in/hg
Compression pressure:	130-170
Initial ignition timing:	6° for manual, 8° for automatic
Point gap:	.014"-.016"
Dwell @ idle rpm:	26-28 1/2°
Number of venturis:	four
Float setting:	29/64" for primary and secondary, measured from the machined surface of the main body to the top of the free end of the float in the uppermost position
Accelerator pump setting:	link in the inboard hole of the pump lever and #3 hole in the over travel lever
Anti-stall dashpot setting:	5/64"
Choke plate to airhorn:	1/16"
Choke housing setting:	two rich
Fuel pump static pressure:	6 psi
Spark plug type and gap:	BF42 @ .032"-.036"
Oil pressure:	35-55 psi
Oil pan capacity:	five quarts

## 1965

Engine size:	289 cid
Data plate code:	K
Horsepower:	271 @ 6000 rpm
Torque:	312 @ 3400 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.00" X 2.870"
Compression ratio:	10.0:1
Combustion chamber:	52.0-55.0 cc
Rocker arm ratio:	1.60:1
Intake valve size:	1.662"-1.677"
Exhaust valve size:	1.442"-1.457"
Idle rpm:	750-775 rpm for manual, 650-675 for automatic
Fast idle rpm:	1800 rpm
Idle manifold vacuum:	15 in/hg
Compression pressure:	130-170
Initial ignition timing:	12° for manual, 12° for automatic
Point gap:	.019"-.021"
Dwell @ idle rpm:	30-33°
Number of venturis:	four
Float setting:	15/32" for primary, 29/64" for secondary, measured from the machined surface of the main body to the top of the free end of the float in the uppermost position
Accelerator pump setting:	link in the inboard hole of the pump lever and #3 hole in the over travel lever
Anti-stall dashpot setting:	5/64"
Choke plate to airhorn:	1/16"
Choke housing setting:	manual choke
Fuel pump static pressure:	6 psi
Spark plug type and gap:	BF32 @ .028"-.032"
Oil pressure:	35-55 psi
Oil pan capacity:	five quarts

## 1966

Engine size:	289 cid
Data plate code:	C
Horsepower:	200 @ 4400 rpm
Torque:	282 @ 2400 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.00" X 2.870"
Compression ratio:	9.3:1
Combustion chamber:	52.0-55.0 cc
Rocker arm ratio:	1.60:1
Intake valve size:	1.662"-1.677"
Exhaust valve size:	1.442"-1.457"
Idle rpm:	575-600 for manual, 475-500 for automatic
Fast idle rpm:	1400 rpm manual, 1600 rpm automatic
Idle manifold vacuum:	18 in/hg
Compression pressure:	130-170
Initial ignition timing:	6° for manual or automatic, TDC for vehicles with Thermactor
Point gap:	.017"
Dwell @ idle rpm:	26-31°
Number of venturis:	two
Float setting:	C6DF-E is .371", C6DF-B is .491"
Accelerator pump setting:	link in the inboard hole of the pump lever and #3 hole in the over travel lever
Anti-stall dashpot setting:	.060"-.090"
Choke plate to airhorn:	1/16"
Choke housing setting:	C6DF-E is Index, C6DF-B is two rich
Fuel pump static pressure:	4-6 psi
Spark plug type and gap:	BF42 @ .032"-.036"
Oil pressure:	35-55 psi
Oil pan capacity:	five quarts

# Mustang Engine Specifications 1964½ - 1970 Small-Blocks

## 1966

Engine size:	289 cid
Data plate code:	A
Horsepower:	225 @ 4800 rpm
Torque:	305 @ 3200 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.00" X 2.870"
Compression ratio:	10.0:1
Combustion chamber:	52.0-55.0 cc
Rocker arm ratio:	1.60:1
Intake valve size:	1.662"-1.677"
Exhaust valve size:	1.442"-1.457"
Idle rpm:	575-600 rpm for manual, 475-500 for automatic
Fast idle rpm:	1400 manual, 1600 automatic
Idle manifold vacuum:	18 in/hg
Compression pressure:	130-170
Initial ignition timing:	6° for manual or automatic, TDC for vehicles with Thermactor
Point gap:	.017"
Dwell @ idle rpm:	26-31°
Number of venturis:	four
Float setting:	C6ZF-A is .531", -D is .491, -B is .571, -E is .491
Accelerator pump setting:	link in the inboard hole of the pump lever and #3 hole in the over travel lever
Anti-stall dashpot setting:	.060"-.090"
Choke plate to airhorn:	1/16"
Choke housing setting:	two rich
Fuel pump static pressure:	4-6 psi
Spark plug type and gap:	BF42 @ .032"-.036"
Oil pressure:	35-55 psi
Oil pan capacity:	five quarts

Engine size:	289 cid
Data plate code:	K
Horsepower:	271 @ 6000 rpm
Torque:	312 @ 3400 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.00" X 2.870"
Compression ratio:	10.5:1
Combustion chamber:	52.0-55.0 cc
Rocker arm ratio:	1.60:1
Intake valve size:	1.662"-1.677"
Exhaust valve size:	1.442"-1.457"
Idle rpm:	750-775 rpm for manual, 650-675 for automatic
Fast idle rpm:	information unavailable
Idle manifold vacuum:	15 in/hg
Compression pressure:	130-170
Initial ignition timing:	12° for manual, 8° for automatic
Point gap:	.020"
Dwell @ idle rpm:	30-33°
Number of venturis:	four
Float setting:	.491"
Accelerator pump setting:	link in the inboard hole of the pump lever and #3 hole in the over travel lever
Anti-stall dashpot setting:	N/A
Choke plate to airhorn:	1/16"
Choke housing setting:	manual choke
Fuel pump static pressure:	4-6 psi
Spark plug type and gap:	BF32 @ .028"-.032"
Oil pressure:	35-55 psi
Oil pan capacity:	five quarts

## 1967

Engine size:	289 cid
Data plate code:	C
Horsepower:	200 @ 4400 rpm
Torque:	282 @ 2400 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.00" X 2.87"
Compression ratio:	9.3:1
Combustion chamber:	52.0-55.0 cc
Rocker arm ratio:	1.60:1
Intake valve size:	1.773"-1.783"
Exhaust valve size:	1.442"-1.457"
Idle rpm:	575 for manual, 475 for automatic w/o exhaust emissions, 625 for manual, 550 for automatic with exhaust emissions
Fast idle rpm:	1400 rpm manual, 1600 rpm automatic
Idle manifold vacuum:	18 in/hg
Compression pressure:	130-170
Initial ignition timing:	TDC with Thermactor, 6° without
Point gap:	.017"
Dwell @ idle rpm:	26-31°
Number of venturis:	two
Float setting:	.531"
Accelerator pump setting:	C7DF-F, -N, -V link in the inboard hole of the pump lever and throttle lever 1-1/2 turns open, C7DF-G, -H link in the outboard hole of the pump lever and throttle lever 1-1/2 turns open
Anti-stall dashpot setting:	C7DF-F is .060"-.090"; -G & -H is .110"-.140"; -N & -V are 1/8"

Choke plate to airhorn:	1/16"
Choke housing setting:	two rich
Fuel pump static pressure:	4-6 psi
Spark plug type and gap:	BF42 @ .032"-.036"
Oil pressure:	35-55 psi
Oil pan capacity:	five quarts

Engine size:	289 cid
Data plate code:	A
Horsepower:	225 @ 4800 rpm
Torque:	305 @ 3200 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.00" X 2.87"
Compression ratio:	9.8:1
Combustion chamber:	52.0-55.0 cc
Rocker arm ratio:	1.60:1
Intake valve size:	1.773"-1.783"
Exhaust valve size:	1.442"-1.457"
Idle rpm:	600 for manual, 525 for automatic w/o exhaust emissions, 625 for manual, 550 for automatic with exhaust emissions
Fast idle rpm:	1400 rpm manual, 1600 rpm automatic
Idle manifold vacuum:	18 in/hg
Compression pressure:	130-170
Initial ignition timing:	TDC with Thermactor, 6° without
Point gap:	.017"
Dwell @ idle rpm:	26-31°
Number of venturis:	four
Float setting:	.25/32"
Accelerator pump setting:	1/16"
Anti-stall dashpot setting:	1/8"
Choke plate to airhorn:	1/16"
Choke housing setting:	Index
Fuel pump static pressure:	4-6 psi
Spark plug type and gap:	BF42 @ .032"-.036"
Oil pressure:	35-55 psi
Oil pan capacity:	five quarts

## 1967

Engine size:	289 cid
Data plate code:	K
Horsepower:	271 @ 6000 rpm
Torque:	312 @ 3400 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.00" X 2.87"
Compression ratio:	10.5:1
Combustion chamber:	52.0-55.0 cc
Rocker arm ratio:	1.60:1
Intake valve size:	1.773"-1.783"
Exhaust valve size:	1.442"-1.457"
Idle rpm:	750 for manual, 650 for automatic
Fast idle rpm:	information unavailable
Idle manifold vacuum:	15 in/hg
Compression pressure:	130-170
Initial ignition timing:	12°
Point gap:	.020"
Dwell @ idle rpm:	30-33°
Number of venturis:	four
Float setting:	.491" for primary, .621" for secondary
Accelerator pump setting:	link in the inboard hole of the pump lever and throttle lever 1-1 1/2 turns open
Anti-stall dashpot setting:	N/A
Choke plate to airhorn:	1/16"
Choke housing setting:	manual choke
Fuel pump static pressure:	4-6 psi
Spark plug type and gap:	BF32 @ .032"-.036"
Oil pressure:	35-55 psi
Oil pan capacity:	five quarts

## 1968

Engine size:	289 cid
Data plate code:	C
Horsepower:	200 @ 4400 rpm
Torque:	282 @ 2400 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.00" X 2.87"
Compression ratio:	9.3:1
Combustion chamber:	60.5-63.5 cc
Rocker arm ratio:	1.60:1
Intake valve size:	1.773"-1.783"
Exhaust valve size:	1.442"-1.457"
Idle rpm:	625 for manual, 550 for automatic
Fast idle rpm:	1200 for manual, 1400 for automatic
Idle manifold vacuum:	18 in/hg
Compression pressure:	130-170
Initial ignition timing:	6°
Point gap:	.021"
Dwell @ idle rpm:	24°-29°
Number of venturis:	two
Float setting:	3/8"
Accelerator pump setting:	pump link inboard and lever in #2 hole
Anti-stall dashpot setting:	.125"
Choke plate to airhorn:	.060"
Choke housing setting:	one lean for IMCO, Index for Thermactor
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

## 1968

Engine size:	302 cid
Data plate code:	F
Horsepower:	210 @ 4400 rpm
Torque:	295 @ 2400 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.00" X 3.00"
Compression ratio:	9.5:1
Combustion chamber:	60.5-63.5 cc
Rocker arm ratio:	1.60:1
Intake valve size:	1.773"-1.783"
Exhaust valve size:	1.442"-1.457"
Idle rpm:	625 for manual, 550 for automatic
Fast idle rpm:	1200 for manual, 1400 for automatic
Idle manifold vacuum:	18 in/hg
Compression pressure:	130-170
Initial ignition timing:	6°
Point gap:	.021"
Dwell @ idle rpm:	24°-29°
Number of venturis:	two
Float setting:	3/8"
Accelerator pump setting:	pump link inboard and lever in #2 hole
Anti-stall dashpot setting:	.125"
Choke plate to airhorn:	.060"
Choke housing setting:	one lean for IMCO, Index for Thermactor
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:	302 cid
Data plate code:	J
Horsepower:	235 @ 4800 rpm
Torque:	318 @ 3200 rpm
Firing order:	1-5-4-2-6-3-7-8
Bore & stroke:	4.00" X 3.00"
Compression ratio:	10.5:1
Combustion chamber:	52.0-55.0 cc
Rocker arm ratio:	1.60:1
Intake valve size:	1.773"-1.783"
Exhaust valve size:	1.442"-1.457"
Idle rpm:	625 for manual, 550 for automatic
Fast idle rpm:	1250 for manual, 1400 for automatic
Idle manifold vacuum:	18 in/hg
Compression pressure:	130-170
Initial ignition timing:	6°
Point gap:	.017" for IMCO, .021" for Thermactor
Dwell @ idle rpm:	26°-31° for IMCO, 24°-29° for Thermactor
Number of venturis:	four
Float setting:	13/16"
Accelerator pump setting:	pump link in #1 hole for IMCO, #2 hole for Thermactor
Anti-stall dashpot setting:	.093" for IMCO, .062" for Thermactor
Choke plate to airhorn:	.300"
Choke housing setting:	two rich for IMCO, index for Thermactor
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