

STROKER ROD CLEARANCE MEASUREMENTS

(DRAFT)

(Joe Randolph, updated 7-27-2017)

Crank Used: 3.75" stroke (383), with 3.48" stroke (350) as a supplement for interference calculations

Block Used: 1968 Chevy 350 block, casting 3914678

Pre-scan: Using Scat Pro-Stock rod, block clearance ranged from .010" (piston in cylinder 3) to .060" (piston in cylinder 2). Piston in cylinder 2 was used for all subsequent measurements. Block clearance was measured between rod and outside lower edge of cylinder 1.

Cam clearance was measured to a round tube that fit snugly into the cam tunnel (with cam bearings installed). Note that is an **absolute worst-case representation** of possible lobe interference, and that **actual lobe clearance will be better**, but the difference will depend on the cam design and the cam phasing. Low-lift flat-tappet cams will typically have fewer clearance problems than high-lift roller cams.

All dimensions specified in the following table are in inches. Positive numbers indicate an air gap, while negative numbers indicate interference.

Rod	Journal	Bolt	Block Clearance	Cam Clearance
Stock 350 rod	2.1"	As-delivered	-.020	-.050
Scat Pro-Comp	2.1"	As-delivered	-.030	.000
Scat Pro-Stock	2.1"	As-delivered	+.060	-.020
Eagle SIR	2.1"	As-delivered	+.036	-.005
Eagle SIR	2.1"	<i>Scat Pro Stock</i>	+.080	-.005
Manley Sportsmaster	2.1"	As-delivered	+.075	-.015
Manley Sportsmaster	2.1"	<i>Scat Pro Stock</i>	+.097	-.015
Manley Pro Series	2.1"	As-delivered	+.045	-.010
Manley Pro Series	2.1"	<i>Scat Pro Stock</i>	+.065	-.010
Callies Ultra XD	2.1"	As-delivered	-.040	-.010
Crower Billet	2.1"	As-delivered	-.095	-.040
Scat Pro-Stock	2.0"	As-delivered	+.060	-.010
Eagle SIR	2.0"	As-delivered	+.075	-.020
Eagle SIR	2.0"	<i>Scat Pro Stock</i>	+.110	-.010
Crower Billet	2.0"	As-delivered	-.070	+.010

NOTES:

- 1) Scat Pro-Comp block clearance is +.060" to bolt head, but -.030" to raised shoulder around bolt head. All other rods have clearance limited by height of bolt head.
- 2) Eagle SIR bolt is 3/8-24, 1.5" under-head, with head height of .400".
- 3) Manley Sportsmaster rod and Manley Pro Series rod use a 3/8-24 bolt that is 1.5" under head, with a head height of .380" (Sportsmaster) and .393" (Pro Series).
- 4) Scat Pro-Stock bolt is 3/8-24, 1.6" under-head, with head height of .333". The lower height of the Scat Pro-Stock bolt provides improved clearance when this bolt is used in the Eagle SIR rod and the Manley rods.