

Disp	Year	Bore	Stroke	C/R	Cylinder Heads	Cyl Area	Cyl Vol	Calculated Disp	Chamber Vol (derived) cu in	Chamber Vol (derived) cc
331/5.4	49-51	3.8125	3.625	7.50	3630157/3630158	11.42	41.38	331.06	5.52	90.42
	52	3.8125	3.625	7.50	3630262/3630263	11.42	41.38	331.06	5.52	90.42
	53	3.8125	3.625	8.25	3630323/3630324	11.42	41.38	331.06	5.02	82.20
	54	3.8125	3.625	8.25	3630455/3630458	11.42	41.38	331.06	5.02	82.20
	55	3.8125	3.625	9.00	3630582/3630583	11.42	41.38	331.06	4.60	75.35
365/6.0	56	4	3.625	9.75	3630634/3630635	12.57	45.55	364.42	4.67	76.56
	57	4	3.625	10.00	3630754/3630755	12.57	45.55	364.42	4.56	74.65
	58	4	3.625	10.25	3632150/3632151	12.57	45.55	364.42	4.44	72.83
390/6.4	59-62	4	3.875	10.50	3632150/3632151	12.57	48.69	389.56	4.64	76.00
390/6.4	63	4	3.875	10.50	3632150/3632151	12.57	48.69	389.56	4.64	76.00
429/7.0	64-67	4.13	4	10.50	3632907/3632909	13.40	53.59	428.69	5.10	83.63

Now, if you were to install later heads on an earlier block, this SHOULD be the result:

Disp	Head Year			New C/R	Cylinder Heads					
331/5.4	56	3.8125	3.625	8.86	3630634/3630635	11.42	41.38	331.06	4.67	76.56
	57	3.8125	3.625	9.08	3630754/3630755	11.42	41.38	331.06	4.56	74.65
	58	3.8125	3.625	9.31	3632150/3632151	11.42	41.38	331.06	4.44	72.83
	59-62	3.8125	3.625	8.92	3632150/3632151	11.42	41.38	331.06	4.64	76.00
365/6.0	59-62	4	3.625	9.82	3632150/3632151	12.57	45.55	364.42	4.64	76.00
390/6.4	58	4	3.875	10.96	3632150/3632151	12.57	48.69	389.56	4.44	72.83

Notes:

2/2/2011

©2011 c322348@yahoo.com

1. Some pistons have a dish. I have no information on which ones have a dish and what the dish volume is.
2. Piston dish volume gets subtracted from the chamber volume to find the actual cylinder head volume.
3. Bore, Stroke & C/R is book data and is subject to being rounded off by the manufacturer which results in slight errors in the derived calculations that I have no control over. All I did was the math!
4. Factory data was compiled and provided to me by Chris (CaddyDaddy42 on the HAMB).
5. I make no claims that a 390 head will fit a 365 or 331. I've read that they will, but have no personal experience. All I am doing is mathematically exploring the possibilities. I also don't think a late 390 or 429 head will fit the earlier blocks, but I don't know for sure.
6. All numbers are approximate! I did not account for small effects like head gasket thickness.
7. Since the '58 365 appears to use the same head as the 59-62 390, I can only assume that the '58 365 had a flat top piston and this accounts for the different chamber volume even though the same head casting is being used. That being the case, I would discount the result of the 59-62 head on the 365 or 331 and use the '58 head calculations instead.