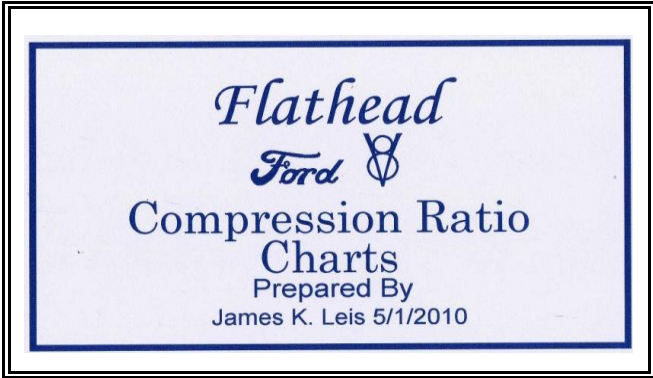


**VERSION 1.1**



**Contributors of Data**

**Key**

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**Contributor**

- Bruce Lancaster original USA & Canadian data Ford Service Bulletin dated Feb. 15, 1949
  - Joe Abbin Roadrunner Engineering
  - H&H Flatheads
  - Original chart data by David Fort developed in 2004
  - 59A & 8BA Aftermarket w/cc info back calculated from advertised compression ratio from 1953 Fenton catalog
- Special thanks to Armin Brown, Best Gasket Company & all the above

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**Note! Heads description indicates (CI) Cast Iron or (AL) Aluminum**

Ford Flathead V8 CR's Base 239 CU/IN 1939-1953 W'/Stock USA & Canadian Heads				Ford & Mercury U.S.A.												Ford & Mercury Canada				
				#Stock	#Denver	#Denver	#Stock	#Stock	#Stock	#Stock	%EABW/Ctrbores		%EABWO/Ctrbores		#Stock	#Stock	#Stock	#Stock		
				99T 6050-A & 6049-A w/0.057" gasket (CI)	99AS 6049, 6050 w/.057" gasket (CI)	19AS 6049, 6050 w/.057" gasket (CI)	29A-6049 & 6050 w/0.057" gasket(CI)	59A 6050-A head with 0.057" gasket (CI)	59A 6050-B w/0.057 gasket (CI)	FORD, 8BA, 8RT and Mercury EAC (CI)	No relief with 0.057" gasket (CI)	Relieved 0.100" w/0.057" gasket (CI)	No Relief WO/Counterbores w/0.057" gasket	Relieved 0.100" WO/Counterboresw/0. 057" gasket (CI)	Mercury 8CM 0.57" gasket (CI)	C99A-6049 B1, C99A- 6050 B1 W/0.057" gasket (AL)	C99A-6049 B2, C99A- 6050 B2 W/0.057" gasket (AL)	C-59A-6050-C-59A- 6049-A w/0.057" gasket (CI)		
Head Comb Chamber cc				91	66	71	79	76	76	76	76	71	71	71	71	83	75	82	75	
Valve Counterbores volume cc				8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	2.00	2.00	8.00	8.00	8.00	8.00
Relief volume cc													3		3					
Best Gasket base volume cc				14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	
0.222"H Domed piston cc's				-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	
Base Total Comb Chamber cc				100.18	75.18	80.18	88.18	85.18	85.18	85.18	85.18	80.18	83.18	74.18	77.18	92.18	84.18	91.18	84.18	
Piston	Bore	Stroke	Cu/In.	Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume																
Std	3.1875	3.75	239.4	5.89	7.52	7.12	6.56	6.76	6.76	6.76	7.12	6.90	7.61	7.35	6.32	6.83	6.38	6.83		
Std	3.1875	4	255.4	6.22	7.96	7.52	6.93	7.14	7.14	7.14	7.52	7.29	8.05	7.78	6.67	7.21	6.74	7.21		
Std	3.1875	4.125	263.3	6.38	8.17	7.73	7.12	7.33	7.33	7.33	7.73	7.48	8.27	7.99	6.85	7.41	6.92	7.41		
Std	3.1875	4.25	271.3	6.55	8.39	7.93	7.30	7.52	7.52	7.52	7.93	7.68	8.49	8.20	7.03	7.60	7.10	7.60		
Std	3.1875	4.375	279.3	6.71	8.61	8.14	7.49	7.72	7.72	7.72	8.14	7.88	8.71	8.41	7.21	7.80	7.27	7.80		
0.030	3.2175	3.75	243.9	5.98	7.64	7.22	6.66	6.86	6.86	6.86	7.22	7.00	7.73	7.47	6.42	6.93	6.47	6.93		
0.030	3.2175	4	260.2	6.32	8.08	7.64	7.04	7.25	7.25	7.25	7.64	7.40	8.18	7.90	6.78	7.32	6.84	7.32		
0.030	3.2175	4.125	268.3	6.48	8.30	7.85	7.23	7.45	7.45	7.45	7.85	7.60	8.40	8.11	6.96	7.52	7.02	7.52		
0.030	3.2175	4.25	276.4	6.65	8.52	8.05	7.42	7.64	7.64	7.64	8.05	7.80	8.62	8.33	7.14	7.72	7.20	7.72		
0.030	3.2175	4.375	284.6	6.81	8.74	8.26	7.60	7.84	7.84	7.84	8.26	8.00	8.85	8.54	7.32	7.92	7.39	7.92		
0.040	3.2275	3.75	245.4	6.02	7.70	7.28	6.71	6.91	6.91	6.91	7.28	7.05	7.79	7.52	6.46	6.98	6.52	6.98		
0.040	3.2275	4	261.8	6.36	8.14	7.70	7.09	7.30	7.30	7.30	7.70	7.45	8.24	7.96	6.82	7.38	6.89	7.38		
0.040	3.2275	4.125	270.0	6.53	8.36	7.90	7.28	7.50	7.50	7.50	7.90	7.66	8.46	8.17	7.01	7.58	7.07	7.58		
0.040	3.2275	4.25	278.2	6.69	8.59	8.11	7.47	7.70	7.70	7.70	8.11	7.86	8.69	8.39	7.19	7.78	7.26	7.78		
0.040	3.2275	4.375	286.3	6.86	8.81	8.32	7.66	7.89	7.89	7.89	8.32	8.06	8.92	8.61	7.37	7.97	7.44	7.97		
0.060	3.2475	3.75	248.5	6.09	7.79	7.36	6.78	6.99	6.99	6.99	7.36	7.13	7.88	7.61	6.53	7.06	6.59	7.06		
0.060	3.2475	4	265.1	6.43	8.24	7.79	7.17	7.39	7.39	7.39	7.79	7.54	8.34	8.05	6.90	7.46	6.97	7.46		
0.060	3.2475	4.125	273.3	6.60	8.46	8.00	7.36	7.59	7.59	7.59	8.00	7.75	8.57	8.27	7.09	7.67	7.15	7.67		
0.060	3.2475	4.25	281.6	6.77	8.69	8.21	7.55	7.79	7.79	7.79	8.21	7.95	8.80	8.49	7.27	7.87	7.34	7.87		
0.060	3.2475	4.375	289.9	6.94	8.92	8.42	7.75	7.99	7.99	7.99	8.42	8.15	9.02	8.71	7.45	8.07	7.53	8.07		
0.080	3.2675	3.75	251.6	6.15	7.87	7.44	6.86	7.06	7.06	7.06	7.44	7.21	7.96	7.69	6.60	7.13	6.66	7.13		
0.080	3.2675	4	268.3	6.50	8.33	7.87	7.25	7.47	7.47	7.47	7.87	7.62	8.43	8.14	6.97	7.54	7.04	7.54		
0.080	3.2675	4.125	276.7	6.67	8.56	8.08	7.44	7.67	7.67	7.67	8.08	7.83	8.66	8.36	7.16	7.75	7.23	7.75		
0.080	3.2675	4.25	285.1	6.84	8.79	8.30	7.64	7.87	7.87	7.87	8.30	8.04	8.89	8.58	7.35	7.95	7.42	7.95		
0.080	3.2675	4.375	293.5	7.01	9.02	8.51	7.83	8.07	8.07	8.07	8.51	8.24	9.12	8.81	7.53	8.16	7.61	8.16		
0.125	3.3125	3.75	258.5	6.31	8.01	7.57	6.98	7.19	7.19	7.19	7.57	7.34	8.10	7.83	6.72	7.26	6.78	7.26		
0.125	3.3125	4	275.8	6.66	8.47	8.01	7.38	7.60	7.60	7.60	8.01	7.76	8.57	8.28	7.10	7.68	7.17	7.68		
0.125	3.3125	4.125	284.4	6.84	8.71	8.23	7.58	7.81	7.81	7.81	8.23	7.97	8.81	8.51	7.29	7.89	7.36	7.89		
0.125	3.3125	4.25	293.0	7.02	8.94	8.45	7.78	8.01	8.01	8.01	8.45	8.18	9.05	8.74	7.48	8.10	7.55	8.10		
0.125	3.3125	4.375	301.6	7.19	9.17	8.67	7.98	8.22	8.22	8.22	8.67	8.39	9.28	8.96	7.67	8.30	7.75	8.30		
0.1875	3.3750	3.75	268.4	6.52	8.37	7.91	7.27	7.50	7.50	7.50	7.91	7.65	8.47	8.18	7.00	7.57	7.07	7.57		
0.1875	3.3750	4	286.3	6.89	8.86	8.37	7.69	7.93	7.93	7.93	8.37	8.10	8.97	8.65	7.40	8.01	7.47	8.01		
0.1875	3.3750	4.125	295.2	7.07	9.10	8.60	7.90	8.15	8.15	8.15	8.60	8.32	9.21	8.89	7.60	8.23	7.67	8.23		
0.1875	3.3750	4.25	304.2	7.25	9.35	8.83	8.11	8.36	8.36	8.36	8.83	8.54	9.46	9.13	7.80	8.45	7.88	8.45		
0.1875	3.3750	4.375	313.1	7.44	9.60	9.06	8.32	8.58	8.58	8.58	9.06	8.76	9.71	9.37	8.00	8.67	8.08	8.67		
Denver Heads												Big Bore Gasket Change								
Page 1 ....Jim Leis 5/1/10				Per Joe Abbin: Combinations of bore, stroke and combustion chamber size may create knock on todays gasoline above 9:1 ratio																

Ford Flathead V8 CR's Base 239 CU/IN 1939- 1953 W'/Stock USA & Canadian Heads, Begin 8BA Aftermarket Heads				Ford Canada (Cont'd)					Baron		Eldebrock			Fenton		Flatattack	Weiland	
				#Stock	#Stock	#Denver	#Stock	<#tock	*8BA w/0.500" Lift	8BA	*1115 8BA	*1116	8BA	8BA	8BA	*8BA		
				CaBA-6049, CaBA-6050 w/.057" gasket (AL)	C7RA-6050-A w/.057" gasket (CI)	C7RA-6050-B w/.057" gasket (CI)	CaCM-6049-A, CaCM-6050-A w/.057" gasket (CI)	CaCM-6049-B, CaCM-6050-B w/.057" gasket (AL)	Non-relieved head with 0.057 gasket (AL)	Relieved with 0.057" gasket (AL)	%Old Used Set, Milled? w/0.057" gasket (AL)	*No relief with 0.057" gasket (AL)	*Relieved with 0.057" gasket (AL)	*New CNC Series w/0.057" gasket (AL)	8BA-6049 Listed @ 7.5:1 CR w/.057" gasket (AL)	8BA-605050 Listed @ 7.5:1 CR w/.057" gasket (AL)	Either 59A or 8BA have 67cc Chambers w/0.057" Gasket (AL)	Weiland head with 0.057" gasket (AL)
Head Comb Chamber cc				70	74	70	83	76	92	92	62	61	61	73	66	56	67	69
Valve Counterbores volume cc				8.00	8.00	8.00	8.00	8.00	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Relief volume cc										3			3					
Best Gasket base volume cc				14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50
0.222"H Domed piston cc's				-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32
Total Comb Chamber cc				79.18	83.18	79.18	92.18	85.18	101.18	104.18	71.18	70.18	73.18	82.18	75.18	65.18	76.18	78.18
Piston	Bore	Stroke	Cu/In.	<b>Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume</b>														
Std	3.1875	3.75	239.4	7.19	6.90	7.19	6.32	6.76	5.85	5.71	7.89	7.99	7.70	6.97	7.52	8.52	7.44	7.27
Std	3.1875	4	255.4	7.61	7.29	7.61	6.67	7.14	6.17	6.02	8.35	8.45	8.15	7.36	7.96	9.02	7.87	7.69
Std	3.1875	4.125	263.3	7.81	7.48	7.81	6.85	7.33	6.33	6.18	8.58	8.69	8.37	7.56	8.17	9.28	8.08	7.90
Std	3.1875	4.25	271.3	8.02	7.68	8.02	7.03	7.52	6.49	6.33	8.81	8.92	8.59	7.76	8.39	9.53	8.30	8.11
Std	3.1875	4.375	279.3	8.23	7.88	8.23	7.21	7.72	6.65	6.49	9.04	9.15	8.82	7.96	8.61	9.78	8.51	8.32
0.030	3.2175	3.75	243.9	7.30	7.00	7.30	6.42	6.86	5.93	5.79	8.01	8.11	7.82	7.07	7.64	8.66	7.55	7.38
0.030	3.2175	4	260.2	7.72	7.40	7.72	6.78	7.25	6.26	6.11	8.48	8.58	8.27	7.48	8.08	9.17	7.99	7.81
0.030	3.2175	4.125	268.3	7.93	7.60	7.93	6.96	7.45	6.43	6.27	8.71	8.82	8.50	7.68	8.30	9.42	8.21	8.02
0.030	3.2175	4.25	276.4	8.14	7.80	8.14	7.14	7.64	6.59	6.43	8.95	9.06	8.73	7.88	8.52	9.68	8.42	8.23
0.030	3.2175	4.375	284.6	8.35	8.00	8.35	7.32	7.84	6.76	6.59	9.18	9.30	8.96	8.09	8.74	9.93	8.64	8.45
0.040	3.2275	3.75	245.4	7.36	7.05	7.36	6.46	6.91	5.97	5.83	8.07	8.17	7.88	7.12	7.70	8.72	7.61	7.44
0.040	3.2275	4	261.8	7.78	7.45	7.78	6.82	7.30	6.30	6.15	8.54	8.65	8.34	7.53	8.14	9.24	8.05	7.87
0.040	3.2275	4.125	270.0	7.99	7.66	7.99	7.01	7.50	6.47	6.31	8.78	8.89	8.57	7.74	8.36	9.50	8.27	8.08
0.040	3.2275	4.25	278.2	8.20	7.86	8.20	7.19	7.70	6.64	6.47	9.01	9.13	8.80	7.94	8.59	9.75	8.49	8.30
0.040	3.2275	4.375	286.3	8.42	8.06	8.42	7.37	7.89	6.80	6.63	9.25	9.37	9.02	8.14	8.81	10.01	8.71	8.51
0.060	3.2475	3.75	248.5	7.44	7.13	7.44	6.53	6.99	6.04	5.89	8.17	8.27	7.97	7.21	7.79	8.83	7.70	7.53
0.060	3.2475	4	265.1	7.87	7.54	7.87	6.90	7.39	6.38	6.22	8.65	8.76	8.44	7.62	8.24	9.35	8.14	7.96
0.060	3.2475	4.125	273.3	8.09	7.75	8.09	7.09	7.59	6.54	6.38	8.89	9.00	8.67	7.83	8.46	9.61	8.37	8.18
0.060	3.2475	4.25	281.6	8.30	7.95	8.30	7.27	7.79	6.71	6.55	9.12	9.24	8.90	8.03	8.69	9.87	8.59	8.40
0.060	3.2475	4.375	289.9	8.52	8.15	8.52	7.45	7.99	6.88	6.71	9.36	9.48	9.13	8.24	8.92	10.14	8.81	8.61
0.080	3.2675	3.75	251.6	7.52	7.21	7.52	6.60	7.06	6.10	5.95	8.26	8.36	8.06	7.28	7.87	8.93	7.78	7.61
0.080	3.2675	4	268.3	7.96	7.62	7.96	6.97	7.47	6.44	6.28	8.74	8.85	8.53	7.70	8.33	9.46	8.23	8.05
0.080	3.2675	4.125	276.7	8.17	7.83	8.17	7.16	7.67	6.61	6.45	8.98	9.10	8.76	7.91	8.56	9.72	8.46	8.27
0.080	3.2675	4.25	285.1	8.39	8.04	8.39	7.35	7.87	6.78	6.62	9.22	9.34	9.00	8.12	8.79	9.98	8.68	8.49
0.080	3.2675	4.375	293.5	8.61	8.24	8.61	7.53	8.07	6.95	6.78	9.47	9.59	9.23	8.33	9.02	10.25	8.91	8.71
0.125	3.3125	3.75	258.5	7.65	7.34	7.65	6.72	7.19	6.21	6.06	8.40	8.50	8.20	7.41	8.01	9.08	7.92	7.74
0.125	3.3125	4	275.8	8.10	7.76	8.10	7.10	7.60	6.56	6.40	8.89	9.00	8.68	7.84	8.47	9.61	8.38	8.19
0.125	3.3125	4.125	284.4	8.32	7.97	8.32	7.29	7.81	6.73	6.57	9.14	9.25	8.92	8.05	8.71	9.88	8.61	8.41
0.125	3.3125	4.25	293.0	8.54	8.18	8.54	7.48	8.01	6.91	6.74	9.38	9.50	9.16	8.27	8.94	10.15	8.84	8.64
0.125	3.3125	4.375	301.6	8.76	8.39	8.76	7.67	8.22	7.08	6.91	9.63	9.75	9.40	8.48	9.17	10.42	9.07	8.86
0.1875	3.3750	3.75	268.4	7.92	7.59	7.92	6.95	7.44	6.42	6.27	8.70	8.81	8.49	7.67	8.29	9.40	8.19	8.01
0.1875	3.3750	4	286.3	8.38	8.03	8.38	7.35	7.87	6.78	6.62	9.21	9.33	8.99	8.12	8.78	9.96	8.67	8.48
0.1875	3.3750	4.125	295.2	8.61	8.25	8.61	7.54	8.08	6.96	6.79	9.47	9.59	9.24	8.34	9.02	10.24	8.91	8.71
0.1875	3.3750	4.25	304.2	8.85	8.47	8.85	7.74	8.29	7.14	6.97	9.72	9.85	9.49	8.56	9.26	10.52	9.15	8.95
0.1875	3.3750	4.375	313.1	9.08	8.69	9.08	7.94	8.51	7.32	7.14	9.98	10.11	9.74	8.78	9.50	10.80	9.39	9.18
Denver Heads				No Longer Produced					Big Bore Gasket Change									
Page 2 ....Jim Leis 5/1/10				Per Joe Abbin: Combinations of bore, stroke and combustion chamber size may create knock on todays gasoline above 9:1 ratio														

Ford Flathead V8 CR's for Aftermarket Heads 1949-1953 239 cu/in Engine (end)				Navarro		Offenhauser										
				(8BA)	(8BA)	*425 8BA		*400 8BA			%/375 8BA		%/350 8BA		%/425 8BA	
				Nastolga '49-53 Low Flow w/.057" gasket (AL)	Nastolga '49-53 Blower w/.057" gasket (AL)	*No relief with 0.057" gasket (AL)	*Relieved 0.100" w/0.057" gasket (AL)	*No relief with 0.057" gasket (AL)	*Relieved 0.100" w/0.057" gasket (AL)	Relieved 0.125" w/0.057 gasket (AL)	No Relief w/0.057" gasket (AL)	Relieved 0.100" w/0.057" gasket (AL)	No relief with 0.057" gasket (AL)	3/16" Relief with 0.057" gasket (AL)	No relief with 0.057" gasket (AL)	3/16" relief with 0.057" gasket (AL)
Head Comb Chamber cc				65	75	64	64	54	54	54	57	57	52	52	47	47
Valve Counterbores volume cc				8.0	8.0	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Relief volume cc							3		3	4		3		4		
Best Gasket base volume cc				14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	
0.222"H Domed piston cc's				-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	
Total Comb Chamber cc				74.18	84.18	73.18	76.18	63.18	66.18	67.18	66.18	69.18	61.18	65.18	56.18	60.18
Piston	Bore	Stroke	Cu/In.	Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume												
Std	3.1875	3.75	239.4	7.61	6.83	7.70	7.44	8.76	8.41	8.30	8.41	8.09	9.02	8.52	9.73	9.15
Std	3.1875	4	255.4	8.05	7.21	8.15	7.87	9.28	8.90	8.79	8.90	8.56	9.55	9.02	10.31	9.69
Std	3.1875	4.125	263.3	8.27	7.41	8.37	8.08	9.54	9.15	9.03	9.15	8.80	9.82	9.28	10.60	9.96
Std	3.1875	4.25	271.3	8.49	7.60	8.59	8.30	9.80	9.40	9.27	9.40	9.03	10.08	9.53	10.89	10.23
Std	3.1875	4.375	279.3	8.71	7.80	8.82	8.51	10.06	9.64	9.52	9.64	9.27	10.35	9.78	11.18	10.51
0.030	3.2175	3.75	243.9	7.73	6.93	7.82	7.55	8.90	8.54	8.43	8.54	8.21	9.16	8.66	9.88	9.29
0.030	3.2175	4	260.2	8.18	7.32	8.27	7.99	9.42	9.04	8.92	9.04	8.69	9.70	9.17	10.47	9.84
0.030	3.2175	4.125	268.3	8.40	7.52	8.50	8.21	9.69	9.29	9.17	9.29	8.93	9.97	9.42	10.77	10.12
0.030	3.2175	4.25	276.4	8.62	7.72	8.73	8.42	9.95	9.55	9.42	9.55	9.18	10.24	9.68	11.06	10.40
0.030	3.2175	4.375	284.6	8.85	7.92	8.96	8.64	10.21	9.80	9.67	9.80	9.42	10.51	9.93	11.36	10.67
0.040	3.2275	3.75	245.4	7.79	6.98	7.88	7.61	8.97	8.61	8.49	8.61	8.28	9.23	8.72	9.96	9.37
0.040	3.2275	4	261.8	8.24	7.38	8.34	8.05	9.50	9.11	8.99	9.11	8.76	9.78	9.24	10.56	9.92
0.040	3.2275	4.125	270.0	8.46	7.58	8.57	8.27	9.77	9.37	9.24	9.37	9.00	10.05	9.50	10.86	10.20
0.040	3.2275	4.25	278.2	8.69	7.78	8.80	8.49	10.03	9.62	9.49	9.62	9.25	10.33	9.75	11.16	10.48
0.040	3.2275	4.375	286.3	8.92	7.97	9.02	8.71	10.30	9.87	9.74	9.87	9.49	10.60	10.01	11.46	10.76
0.060	3.2475	3.75	248.5	7.88	7.06	7.97	7.70	9.08	8.71	8.60	8.71	8.38	9.34	8.83	10.09	9.48
0.060	3.2475	4	265.1	8.34	7.46	8.44	8.14	9.62	9.23	9.10	9.23	8.87	9.90	9.35	10.69	10.05
0.060	3.2475	4.125	273.3	8.57	7.67	8.67	8.37	9.89	9.48	9.36	9.48	9.11	10.18	9.61	11.00	10.33
0.060	3.2475	4.25	281.6	8.80	7.87	8.90	8.59	10.16	9.74	9.61	9.74	9.36	10.46	9.87	11.30	10.61
0.060	3.2475	4.375	289.9	9.02	8.07	9.13	8.81	10.43	10.00	9.86	10.00	9.61	10.73	10.14	11.60	10.90
0.080	3.2675	3.75	251.6	7.96	7.13	8.06	7.78	9.18	8.81	8.69	8.81	8.47	9.45	8.93	10.20	9.59
0.080	3.2675	4	268.3	8.43	7.54	8.53	8.23	9.72	9.33	9.20	9.33	8.97	10.01	9.46	10.81	10.16
0.080	3.2675	4.125	276.7	8.66	7.75	8.76	8.46	10.00	9.59	9.46	9.59	9.21	10.29	9.72	11.12	10.45
0.080	3.2675	4.25	285.1	8.89	7.95	9.00	8.68	10.27	9.85	9.72	9.85	9.46	10.57	9.98	11.43	10.73
0.080	3.2675	4.375	293.5	9.12	8.16	9.23	8.91	10.54	10.11	9.97	10.11	9.71	10.85	10.25	11.73	11.02
0.125	3.3125	3.75	258.5	8.10	7.26	8.20	7.92	9.33	8.95	8.84	8.95	8.61	9.60	9.08	10.36	9.74
0.125	3.3125	4	275.8	8.57	7.68	8.68	8.38	9.88	9.48	9.36	9.48	9.12	10.17	9.61	10.98	10.32
0.125	3.3125	4.125	284.4	8.81	7.89	8.92	8.61	10.16	9.75	9.62	9.75	9.37	10.46	9.88	11.30	10.62
0.125	3.3125	4.25	293.0	9.05	8.10	9.16	8.84	10.44	10.01	9.88	10.01	9.63	10.75	10.15	11.61	10.91
0.125	3.3125	4.375	301.6	9.28	8.30	9.40	9.07	10.72	10.28	10.14	10.28	9.88	11.03	10.42	11.92	11.20
0.1875	3.3750	3.75	268.4	8.39	7.51	8.49	8.19	9.67	9.28	9.15	9.28	8.92	9.95	9.40	10.74	10.10
0.1875	3.3750	4	286.3	8.88	7.95	8.99	8.67	10.25	9.83	9.70	9.83	9.45	10.55	9.96	11.39	10.71
0.1875	3.3750	4.125	295.2	9.13	8.16	9.24	8.91	10.54	10.11	9.97	10.11	9.71	10.85	10.24	11.72	11.01
0.1875	3.3750	4.25	304.2	9.37	8.38	9.49	9.15	10.83	10.38	10.24	10.38	9.98	11.15	10.52	12.04	11.31
0.1875	3.3750	4.375	313.1	9.62	8.60	9.74	9.39	11.11	10.66	10.51	10.66	10.24	11.44	10.80	12.37	11.62
Denver Heads				No Longer Produced												
Page 3 ....Jim Leis 5/1/10				Per Joe Abbin: Combinations of bore, stroke and combustion chamber size may create knock on todays gasoline above 9:1 ratio												

### Ford Flathead V8 CR's Aftermarket 59A Heads on an 1949-1953 8BA, 8RT, 9CM & Up Engine

### Aftermarket 1945-1948 59A Heads on an 8BA, 8RT, 9CM & up engine

				Champion		Eldebrock		Fenton		Fenton Cast Iron W/No Pins				Flatattack	Kogel		Navarro		
				59 Champion 6050 @ 7.5:1 ratio w/0.057 gasket (AL)	59 Champion 6050 @ 8.5:1 ratio w/0.057 gasket (AL)	No relief with 0.057" gasket (AL)	1126 New Block Lettered Heads w/0.057" gasket(AL)	Fenton CH 1001 W/7.5:1 W0.057 gasket (AL)	Fenton CH 1001 W/7.5:1 W0.057 gasket (AL)	Fenton @ 7.5 CR w/0.057" gasket(Cl)	Fenton @ 8.0 CR w/0.057" gasket(Cl)	Fenton @ 8.5 CR (w/0.057" gasket(Cl)	Fenton @ 9.0 CR w/0.057" gasket(Cl)	Either 59A or 8BA have 67cc Chambers w/0.057" Gasket (AL)	59 HCR Rocket w/7.5:1 ratio w/0.057" gasket (AL)	59 HCR Rocket Racing w/8.5:1 ratio w/0.057" gasket (AL)	Nastolga '39-'48 Low Flow w/.057" gasket (AL)	Nastolga '39-'48 Blower Flow w/.057" gasket (AL)	
Head Comb Chamber cc				66	56	61	64	66	56	60	55	51	47	67	66	56	65	75	
Valve Counterbores volume cc				8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Relief volume cc				0	0			0	0	0	0	0	0		0	0	0	0	
Best Gasket base volume cc				14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	
0.222"H Domed piston cc's				-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	
Total Comb Chamber cc				75.18	65.18	70.18	73.18	75.18	65.18	69.18	64.18	60.18	56.18	76.18	75.18	65.18	74.18	84.18	
Piston	Bore	Stroke	Cu/In.	<b>Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume</b>															
Std	3.1875	3.75	239.4	7.52	8.52	7.99	7.70	7.52	8.52	8.09	8.64	9.15	9.73	7.44	7.52	8.52	7.61	6.83	
Std	3.1875	4	255.4	7.96	9.02	8.45	8.15	7.96	9.02	8.56	9.15	9.69	10.31	7.87	7.96	9.02	8.05	7.21	
Std	3.1875	4.125	263.3	8.17	9.28	8.69	8.37	8.17	9.28	8.80	9.40	9.96	10.60	8.08	8.17	9.28	8.27	7.41	
Std	3.1875	4.25	271.3	8.39	9.53	8.92	8.59	8.39	9.53	9.03	9.66	10.23	10.89	8.30	8.39	9.53	8.49	7.60	
Std	3.1875	4.375	279.3	8.61	9.78	9.15	8.82	8.61	9.78	9.27	9.91	10.51	11.18	8.51	8.61	9.78	8.71	7.80	
0.030	3.2175	3.75	243.9	8.60	9.77	9.14	8.81	8.60	9.77	9.26	9.90	10.49	11.17	8.50	8.60	9.77	8.70	7.79	
0.030	3.2175	4	260.2	7.64	8.66	8.11	7.82	7.64	8.66	8.21	8.77	9.29	9.88	7.55	7.64	8.66	7.73	6.93	
0.030	3.2175	4.125	268.3	8.08	9.17	8.58	8.27	8.08	9.17	8.69	9.29	9.84	10.47	7.99	8.08	9.17	8.18	7.32	
0.030	3.2175	4.25	276.4	8.30	9.42	8.82	8.50	8.30	9.42	8.93	9.55	10.12	10.77	8.21	8.30	9.42	8.40	7.52	
0.030	3.2175	4.375	284.6	8.52	9.68	9.06	8.73	8.52	9.68	9.18	9.81	10.40	11.06	8.42	8.52	9.68	8.62	7.72	
0.040	3.2275	3.75	245.4	8.76	9.96	9.32	8.97	8.76	9.96	9.44	10.09	10.70	11.39	8.66	8.76	9.96	8.87	7.93	
0.040	3.2275	4	261.8	7.70	8.72	8.17	7.88	7.70	8.72	8.28	8.84	9.37	9.96	7.61	7.70	8.72	7.79	6.98	
0.040	3.2275	4.125	270.0	8.14	9.24	8.65	8.34	8.14	9.24	8.76	9.37	9.92	10.56	8.05	8.14	9.24	8.24	7.38	
0.040	3.2275	4.25	278.2	8.36	9.50	8.89	8.57	8.36	9.50	9.00	9.63	10.20	10.86	8.27	8.36	9.50	8.46	7.58	
0.040	3.2275	4.375	286.3	8.59	9.75	9.13	8.80	8.59	9.75	9.25	9.89	10.48	11.16	8.49	8.59	9.75	8.69	7.78	
0.060	3.2475	3.75	248.5	8.82	10.02	9.38	9.03	8.82	10.02	9.50	10.16	10.77	11.47	8.72	8.82	10.02	8.93	7.98	
0.060	3.2475	4	265.1	7.79	8.83	8.27	7.97	7.79	8.83	8.38	8.95	9.48	10.09	7.70	7.79	8.83	7.88	7.06	
0.060	3.2475	4.125	273.3	8.24	9.35	8.76	8.44	8.24	9.35	8.87	9.48	10.05	10.69	8.14	8.24	9.35	8.34	7.46	
0.060	3.2475	4.25	281.6	8.46	9.61	9.00	8.67	8.46	9.61	9.11	9.75	10.33	11.00	8.37	8.46	9.61	8.57	7.67	
0.060	3.2475	4.375	289.9	8.69	9.87	9.24	8.90	8.69	9.87	9.36	10.01	10.61	11.30	8.59	8.69	9.87	8.80	7.87	
0.080	3.2675	3.75	251.6	8.92	10.14	9.48	9.13	8.92	10.14	9.61	10.28	10.90	11.60	8.81	8.92	10.14	9.02	8.07	
0.080	3.2675	4	268.3	7.87	8.93	8.36	8.06	7.87	8.93	8.47	9.05	9.59	10.20	7.78	7.87	8.93	7.96	7.13	
0.080	3.2675	4.125	276.7	8.33	9.46	8.85	8.53	8.33	9.46	8.97	9.59	10.16	10.81	8.23	8.33	9.46	8.43	7.54	
0.080	3.2675	4.25	285.1	8.56	9.72	9.10	8.76	8.56	9.72	9.21	9.86	10.45	11.12	8.46	8.56	9.72	8.66	7.75	
0.080	3.2675	4.375	293.5	8.79	9.98	9.34	9.00	8.79	9.98	9.46	10.12	10.73	11.43	8.68	8.79	9.98	8.89	7.95	
0.125	3.3125	3.75	258.5	8.95	10.17	9.52	9.17	8.95	10.17	9.64	10.31	10.92	11.63	8.85	8.95	10.17	9.06	8.11	
0.125	3.3125	4	275.8	8.01	9.08	8.50	8.20	8.01	9.08	8.61	9.20	9.74	10.36	7.92	8.01	9.08	8.10	7.26	
0.125	3.3125	4.125	284.4	8.47	9.61	9.00	8.68	8.47	9.61	9.12	9.75	10.32	10.98	8.38	8.47	9.61	8.57	7.68	
0.125	3.3125	4.25	293.0	8.71	9.88	9.25	8.92	8.71	9.88	9.37	10.02	10.62	11.30	8.61	8.71	9.88	8.81	7.89	
0.125	3.3125	4.375	301.6	8.94	10.15	9.50	9.16	8.94	10.15	9.63	10.29	10.91	11.61	8.84	8.94	10.15	9.05	8.10	
0.1875	3.3750	3.75	268.4	9.19	10.45	9.77	9.42	9.19	10.45	9.90	10.59	11.23	11.95	9.09	9.19	10.45	9.30	8.32	
0.1875	3.3750	4	286.3	8.29	9.40	8.81	8.49	8.29	9.40	8.92	9.53	10.10	10.74	8.19	8.29	9.40	8.39	7.51	
0.1875	3.3750	4.125	295.2	8.78	9.96	9.33	8.99	8.78	9.96	9.45	10.10	10.71	11.39	8.67	8.78	9.96	8.88	7.95	
0.1875	3.3750	4.25	304.2	9.02	10.24	9.59	9.24	9.02	10.24	9.71	10.39	11.01	11.72	8.91	9.02	10.24	9.13	8.16	
0.1875	3.3750	4.375	313.1	9.26	10.52	9.85	9.49	9.26	10.52	9.98	10.67	11.31	12.04	9.15	9.26	10.52	9.37	8.38	

No Longer Produced

Per Joe Abbin: Combinations of bore, stroke and combustion chamber size may create knock on todays gasoline above 9:1 ratio

Ford Flathead V8 CR's Aftermarket 59A Heads on an 1949-1953 8BA, 8RT, 9CM & Up Engine (Cont'd)				Aftermarket 1945-1948 59A Heads on an 8BA, 8RT, 9CM & up engine												
				*Offie 425 59A		*Offie 400 59A			%37.5 8BA		%350 8BA		%325 8BA		59A	Tatters
				*No relief with 0.057" gasket (AL)	*Relieved 0.100" w/0.057" gasket (AL)	*No relief with 0.057" gasket (AL)	*Relieved 0.100" w/0.057" gasket (AL)	Relieved 0.125" w/0.057 gasket (AL)	No Relief w/0.057" gasket (AL)	Relieved 0.100" w/0.057" gasket (AL)	No relief with 0.057" gasket (AL)	3/16" Relief with 0.057" gasket (AL)	No relief with 0.057" gasket (AL)	3/16" relief with 0.057" gasket (AL)	59A head with 0.057" gasket (AL)	Tattersfield @ 8.0:1 W0.057" gasket (AL)
Head Comb Chamber cc				64	64	54	54	54	57	57	52	52	47	47	63	61
Valve Counterbores volume cc				8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.0	8.0
Relief volume cc				0	3	0	3	4		3		4		0	0	
Best Gasket base volume cc				14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50
0.222"H Domed piston cc's				-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32
Total Comb Chamber cc				73.18	76.18	63.18	66.18	67.18	66.18	69.18	61.18	65.18	56.18	60.18	72.18	70.18
Piston	Bore	Stroke	Cu/In.	Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume												
Std	3.1875	3.75	239.4	7.70	7.44	8.76	8.41	8.30	8.41	8.09	9.02	8.52	9.73	9.15	7.79	7.99
Std	3.1875	4	255.4	8.15	7.87	9.28	8.90	8.79	8.90	8.56	9.55	9.02	10.31	9.69	8.25	8.45
Std	3.1875	4.125	263.3	8.37	8.08	9.54	9.15	9.03	9.15	8.80	9.82	9.28	10.60	9.96	8.47	8.69
Std	3.1875	4.25	271.3	8.59	8.30	9.80	9.40	9.27	9.40	9.03	10.08	9.53	10.89	10.23	8.70	8.92
Std	3.1875	4.375	279.3	8.82	8.51	10.06	9.64	9.52	9.64	9.27	10.35	9.78	11.18	10.51	8.93	9.15
0.030	3.2175	3.75	243.9	8.81	8.50	10.04	9.63	9.50	9.63	9.26	10.34	9.77	11.17	10.49	8.92	9.14
0.030	3.2175	4	260.2	7.82	7.55	8.90	8.54	8.43	8.54	8.21	9.16	8.66	9.88	9.29	7.91	8.11
0.030	3.2175	4.125	268.3	8.27	7.99	9.42	9.04	8.92	9.04	8.69	9.70	9.17	10.47	9.84	8.37	8.58
0.030	3.2175	4.25	276.4	8.50	8.21	9.69	9.29	9.17	9.29	8.93	9.97	9.42	10.77	10.12	8.61	8.82
0.030	3.2175	4.375	284.6	8.73	8.42	9.95	9.55	9.42	9.55	9.18	10.24	9.68	11.06	10.40	8.84	9.06
0.040	3.2275	3.75	245.4	8.97	8.66	10.24	9.82	9.69	9.82	9.44	10.54	9.96	11.39	10.70	9.09	9.32
0.040	3.2275	4	261.8	7.88	7.61	8.97	8.61	8.49	8.61	8.28	9.23	8.72	9.96	9.37	7.97	8.17
0.040	3.2275	4.125	270.0	8.34	8.05	9.50	9.11	8.99	9.11	8.76	9.78	9.24	10.56	9.92	8.44	8.65
0.040	3.2275	4.25	278.2	8.57	8.27	9.77	9.37	9.24	9.37	9.00	10.05	9.50	10.86	10.20	8.67	8.89
0.040	3.2275	4.375	286.3	8.80	8.49	10.03	9.62	9.49	9.62	9.25	10.33	9.75	11.16	10.48	8.90	9.13
0.060	3.2475	3.75	248.5	9.03	8.72	10.31	9.89	9.75	9.89	9.50	10.61	10.02	11.47	10.77	9.15	9.38
0.060	3.2475	4	265.1	7.97	7.70	9.08	8.71	8.60	8.71	8.38	9.34	8.83	10.09	9.48	8.07	8.27
0.060	3.2475	4.125	273.3	8.44	8.14	9.62	9.23	9.10	9.23	8.87	9.90	9.35	10.69	10.05	8.54	8.76
0.060	3.2475	4.25	281.6	8.67	8.37	9.89	9.48	9.36	9.48	9.11	10.18	9.61	11.00	10.33	8.78	9.00
0.060	3.2475	4.375	289.9	8.90	8.59	10.16	9.74	9.61	9.74	9.36	10.46	9.87	11.30	10.61	9.01	9.24
0.080	3.2675	3.75	251.6	9.13	8.81	10.43	10.00	9.86	10.00	9.61	10.73	10.14	11.60	10.90	9.25	9.48
0.080	3.2675	4	268.3	8.06	7.78	9.18	8.81	8.69	8.81	8.47	9.45	8.93	10.20	9.59	8.16	8.36
0.080	3.2675	4.125	276.7	8.53	8.23	9.72	9.33	9.20	9.33	8.97	10.01	9.46	10.81	10.16	8.63	8.85
0.080	3.2675	4.25	285.1	8.76	8.46	10.00	9.59	9.46	9.59	9.21	10.29	9.72	11.12	10.45	8.87	9.10
0.080	3.2675	4.375	293.5	9.00	8.68	10.27	9.85	9.72	9.85	9.46	10.57	9.98	11.43	10.73	9.11	9.34
0.125	3.3125	3.75	258.5	9.17	8.85	10.46	10.03	9.90	10.03	9.64	10.76	10.17	11.63	10.92	9.28	9.52
0.125	3.3125	4	275.8	8.20	7.92	9.33	8.95	8.84	8.95	8.61	9.60	9.08	10.36	9.74	8.30	8.50
0.125	3.3125	4.125	284.4	8.68	8.38	9.88	9.48	9.36	9.48	9.12	10.17	9.61	10.98	10.32	8.78	9.00
0.125	3.3125	4.25	293.0	8.92	8.61	10.16	9.75	9.62	9.75	9.37	10.46	9.88	11.30	10.62	9.03	9.25
0.125	3.3125	4.375	301.6	9.16	8.84	10.44	10.01	9.88	10.01	9.63	10.75	10.15	11.61	10.91	9.27	9.50
0.1875	3.3750	3.75	268.4	9.42	9.09	10.74	10.30	10.16	10.30	9.90	11.06	10.45	11.95	11.23	9.53	9.77
0.1875	3.3750	4	286.3	8.49	8.19	9.67	9.28	9.15	9.28	8.92	9.95	9.40	10.74	10.10	8.59	8.81
0.1875	3.3750	4.125	295.2	8.99	8.67	10.25	9.83	9.70	9.83	9.45	10.55	9.96	11.39	10.71	9.10	9.33
0.1875	3.3750	4.25	304.2	9.24	8.91	10.54	10.11	9.97	10.11	9.71	10.85	10.24	11.72	11.01	9.35	9.59
0.1875	3.3750	4.375	313.1	9.49	9.15	10.83	10.38	10.24	10.38	9.98	11.15	10.52	12.04	11.31	9.60	9.85
				No Longer Produced										Big Bore Gasket Change		
Page 5 ....Jim Leis 5/1/10				Per Joe Abbin: Combinations of bore, stroke and combustion chamber size may create knock on todays gasoline above 9:1 ratio												

Ford Flathead V8 CR's Aftermarket Heads 239 cu/in 1939-1942 & 59A (Begin)				Schampion		Eldebrock		Fenton		Fenton Cast Iron W/No Flrs				Flatattack	Kogel		Navarro	
Head Comb Chamber cc	66	56	61	64	66	56	66	60	56	52	67	66	56	65	75			
Valve Counterbores volume cc	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0			
Relief volume cc	0	0			0	0	0	0	0	0		0	0	0	0			
Best Gasket base volume cc	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50			
0.222"H Domed piston cc's	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32			
Total Comb Chamber cc	75.18	65.18	70.18	73.18	75.18	65.18	75.18	69.18	65.18	61.18	76.18	75.18	65.18	74.18	84.18			
Piston	Bore	Stroke	Cu/In.	Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume														
Std	3.1875	3.75	239.4	7.52	8.52	7.99	7.70	7.52	8.52	7.52	8.09	8.52	9.02	7.44	7.52	8.52	7.61	6.83
Std	3.1875	4	255.4	7.96	9.02	8.45	8.15	7.96	9.02	7.96	8.56	9.02	9.55	7.87	7.96	9.02	8.05	7.21
Std	3.1875	4.125	263.3	8.17	9.28	8.69	8.37	8.17	9.28	8.17	8.80	9.28	9.82	8.08	8.17	9.28	8.27	7.41
Std	3.1875	4.25	271.3	8.39	9.53	8.92	8.59	8.39	9.53	8.39	9.03	9.53	10.08	8.30	8.39	9.53	8.49	7.60
Std	3.1875	4.375	279.3	8.61	9.78	9.15	8.82	8.61	9.78	8.61	9.27	9.78	10.35	8.51	8.61	9.78	8.71	7.80
0.030	3.2175	3.75	243.9	8.60	9.77	9.14	8.81	8.60	9.77	8.60	9.26	9.77	10.34	8.50	8.60	9.77	8.70	7.79
0.030	3.2175	4	260.2	7.64	8.66	8.11	7.82	7.64	8.66	7.64	8.21	8.66	9.16	7.55	7.64	8.66	7.73	6.93
0.030	3.2175	4.125	268.3	8.08	9.17	8.58	8.27	8.08	9.17	8.08	8.69	9.17	9.70	7.99	8.08	9.17	8.18	7.32
0.030	3.2175	4.25	276.4	8.30	9.42	8.82	8.50	8.30	9.42	8.30	8.93	9.42	9.97	8.21	8.30	9.42	8.40	7.52
0.030	3.2175	4.375	284.6	8.52	9.68	9.06	8.73	8.52	9.68	8.52	9.18	9.68	10.24	8.42	8.52	9.68	8.62	7.72
0.040	3.2275	3.75	245.4	8.76	9.96	9.32	8.97	8.76	9.96	8.76	9.44	9.96	10.54	8.66	8.76	9.96	8.87	7.93
0.040	3.2275	4	261.8	7.70	8.72	8.17	7.88	7.70	8.72	7.70	8.28	8.72	9.23	7.61	7.70	8.72	7.79	6.98
0.040	3.2275	4.125	270.0	8.14	9.24	8.65	8.34	8.14	9.24	8.14	8.76	9.24	9.78	8.05	8.14	9.24	8.24	7.38
0.040	3.2275	4.25	278.2	8.36	9.50	8.89	8.57	8.36	9.50	8.36	9.00	9.50	10.05	8.27	8.36	9.50	8.46	7.58
0.040	3.2275	4.375	286.3	8.59	9.75	9.13	8.80	8.59	9.75	8.59	9.25	9.75	10.33	8.49	8.59	9.75	8.69	7.78
0.060	3.2475	3.75	248.5	8.82	10.02	9.38	9.03	8.82	10.02	8.82	9.50	10.02	10.61	8.72	8.82	10.02	8.93	7.98
0.060	3.2475	4	265.1	7.79	8.83	8.27	7.97	7.79	8.83	7.79	8.38	8.83	9.34	7.70	7.79	8.83	7.88	7.06
0.060	3.2475	4.125	273.3	8.24	9.35	8.76	8.44	8.24	9.35	8.24	8.87	9.35	9.90	8.14	8.24	9.35	8.34	7.46
0.060	3.2475	4.25	281.6	8.46	9.61	9.00	8.67	8.46	9.61	8.46	9.11	9.61	10.18	8.37	8.46	9.61	8.57	7.67
0.060	3.2475	4.375	289.9	8.69	9.87	9.24	8.90	8.69	9.87	8.69	9.36	9.87	10.46	8.59	8.69	9.87	8.80	7.87
0.080	3.2675	3.75	251.6	8.92	10.14	9.48	9.13	8.92	10.14	8.92	9.61	10.14	10.73	8.81	8.92	10.14	9.02	8.07
0.080	3.2675	4	268.3	7.87	8.93	8.36	8.06	7.87	8.93	7.87	8.47	8.93	9.45	7.78	7.87	8.93	7.96	7.13
0.080	3.2675	4.125	276.7	8.33	9.46	8.85	8.53	8.33	9.46	8.33	8.97	9.46	10.01	8.23	8.33	9.46	8.43	7.54
0.080	3.2675	4.25	285.1	8.56	9.72	9.10	8.76	8.56	9.72	8.56	9.21	9.72	10.29	8.46	8.56	9.72	8.66	7.75
0.080	3.2675	4.375	293.5	8.79	9.98	9.34	9.00	8.79	9.98	8.79	9.46	9.98	10.57	8.68	8.79	9.98	8.89	7.95
0.125	3.3125	3.75	258.5	8.01	9.08	8.50	8.20	8.01	9.08	8.01	8.61	9.08	9.60	7.92	8.01	9.08	8.10	7.26
0.125	3.3125	4	275.8	8.47	9.61	9.00	8.68	8.47	9.61	8.47	9.12	9.61	10.17	8.38	8.47	9.61	8.57	7.68
0.125	3.3125	4.125	284.4	8.71	9.88	9.25	8.92	8.71	9.88	8.71	9.37	9.88	10.46	8.61	8.71	9.88	8.81	7.89
0.125	3.3125	4.25	293.0	8.94	10.15	9.50	9.16	8.94	10.15	8.94	9.63	10.15	10.75	8.84	8.94	10.15	9.05	8.10
0.125	3.3125	4.375	301.6	9.17	10.42	9.75	9.40	9.17	10.42	9.17	9.88	10.42	11.03	9.07	9.17	10.42	9.28	8.30
0.1875	3.3750	3.75	268.4	8.29	9.40	8.81	8.49	8.29	9.40	8.29	8.92	9.40	9.95	8.19	8.29	9.40	8.39	7.51
0.1875	3.3750	4	286.3	8.78	9.96	9.33	8.99	8.78	9.96	8.78	9.45	9.96	10.55	8.67	8.78	9.96	8.88	7.95
0.1875	3.3750	4.125	295.2	9.02	10.24	9.59	9.24	9.02	10.24	9.02	9.71	10.24	10.85	8.91	9.02	10.24	9.13	8.16
0.1875	3.3750	4.25	304.2	9.26	10.52	9.85	9.49	9.26	10.52	9.26	9.98	10.52	11.15	9.15	9.26	10.52	9.37	8.38
0.1875	3.3750	4.375	313.1	9.50	10.80	10.11	9.74	9.50	10.80	9.50	10.24	10.80	11.44	9.39	9.50	10.80	9.62	8.60
				No longer produced												Big Bore Gasket Change		
Page 6 ....Jim Leis 5/1/10				Per Joe Abbin: Combinations of bore, stroke and combustion chamber size may create knock on todays gasoline above 9:1 ratio														
Ford Flathead V8 CR's				Aftermarket 1939-1942 & 59A Heads														

Aftermarket Heads 239 cu/in 1939-1942 & 59A (End)				*Office 425 59A		*Office 400 59A			%75 86A		%50 88A		%325 89A		%59A	Starters
				*No relief with 0.057" gasket (AL)	*Relieved 0.100" w/0.057" gasket (AL)	*No relief with 0.057" gasket (AL)	*Relieved 0.100" w/0.057" gasket (AL)	Relieved 0.125" w/0.057" gasket (AL)	No Relief w/0.057" gasket (AL)	Relieved 0.100" w/0.057" gasket (AL)	No relief with 0.057" gasket (AL)	3/16" Relief with 0.057" gasket (AL)	No relief with 0.057" gasket (AL)	3/16" relief with 0.057" gasket (AL)	59A head with 0.057" gasket (AL)	Tattersfield @ 8.0:1 W0.057" gasket (AL)
Head Comb Chamber cc				64	64	54	54	54	57	57	52	52	47	47	63	61
Valve Counterbores volume cc				8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.0	8.0
Relief volume cc				0	3	0	3	4		3		4		4	0	0
Best Gasket base volume cc				14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	
0.222"H Domed piston cc's				-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	
Total Comb Chamber cc				73.18	76.18	63.18	66.18	67.18	66.18	69.18	61.18	65.18	56.18	60.18	72.18	70.18
Piston	Bore	Stroke	Cu/In.	Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume												
Std	3.1875	3.75	239.4	7.70	7.44	8.76	8.41	8.30	8.41	8.09	9.02	8.52	9.73	9.15	7.79	7.99
Std	3.1875	4	255.4	8.15	7.87	9.28	8.90	8.79	8.90	8.56	9.55	9.02	10.31	9.69	8.25	8.45
Std	3.1875	4.125	263.3	8.37	8.08	9.54	9.15	9.03	9.15	8.80	9.82	9.28	10.60	9.96	8.47	8.69
Std	3.1875	4.25	271.3	8.59	8.30	9.80	9.40	9.27	9.40	9.03	10.08	9.53	10.89	10.23	8.70	8.92
Std	3.1875	4.375	279.3	8.82	8.51	10.06	9.64	9.52	9.64	9.27	10.35	9.78	11.18	10.51	8.93	9.15
0.030	3.2175	3.75	243.9	7.82	7.55	8.90	8.54	8.43	8.54	8.21	9.16	8.66	9.88	9.29	7.91	8.11
0.030	3.2175	4	260.2	8.27	7.99	9.42	9.04	8.92	9.04	8.69	9.70	9.17	10.47	9.84	8.37	8.58
0.030	3.2175	4.125	268.3	8.50	8.21	9.69	9.29	9.17	9.29	8.93	9.97	9.42	10.77	10.12	8.61	8.82
0.030	3.2175	4.25	276.4	8.73	8.42	9.95	9.55	9.42	9.55	9.18	10.24	9.68	11.06	10.40	8.84	9.06
0.030	3.2175	4.375	284.6	8.96	8.64	10.21	9.80	9.67	9.80	9.42	10.51	9.93	11.36	10.67	9.07	9.30
0.040	3.2275	3.75	245.4	7.88	7.61	8.97	8.61	8.49	8.61	8.28	9.23	8.72	9.96	9.37	7.97	8.17
0.040	3.2275	4	261.8	8.34	8.05	9.50	9.11	8.99	9.11	8.76	9.78	9.24	10.56	9.92	8.44	8.65
0.040	3.2275	4.125	270.0	8.57	8.27	9.77	9.37	9.24	9.37	9.00	10.05	9.50	10.86	10.20	8.67	8.89
0.040	3.2275	4.25	278.2	8.80	8.49	10.03	9.62	9.49	9.62	9.25	10.33	9.75	11.16	10.48	8.90	9.13
0.040	3.2275	4.375	286.3	9.02	8.71	10.30	9.87	9.74	9.87	9.49	10.60	10.01	11.46	10.76	9.14	9.37
0.060	3.2475	3.75	248.5	7.97	7.70	9.08	8.71	8.60	8.71	8.38	9.34	8.83	10.09	9.48	8.07	8.27
0.060	3.2475	4	265.1	8.44	8.14	9.62	9.23	9.10	9.23	8.87	9.90	9.35	10.69	10.05	8.54	8.76
0.060	3.2475	4.125	273.3	8.67	8.37	9.89	9.48	9.36	9.48	9.11	10.18	9.61	11.00	10.33	8.78	9.00
0.060	3.2475	4.25	281.6	8.90	8.59	10.16	9.74	9.61	9.74	9.36	10.46	9.87	11.30	10.61	9.01	9.24
0.060	3.2475	4.375	289.9	9.13	8.81	10.43	10.00	9.86	10.00	9.61	10.73	10.14	11.60	10.90	9.25	9.48
0.080	3.2675	3.75	251.6	8.06	7.78	9.18	8.81	8.69	8.81	8.47	9.45	8.93	10.20	9.59	8.16	8.36
0.080	3.2675	4	268.3	8.53	8.23	9.72	9.33	9.20	9.33	8.97	10.01	9.46	10.81	10.16	8.63	8.85
0.080	3.2675	4.125	276.7	8.76	8.46	10.00	9.59	9.46	9.59	9.21	10.29	9.72	11.12	10.45	8.87	9.10
0.080	3.2675	4.25	285.1	9.00	8.68	10.27	9.85	9.72	9.85	9.46	10.57	9.98	11.43	10.73	9.11	9.34
0.080	3.2675	4.375	293.5	9.23	8.91	10.54	10.11	9.97	10.11	9.71	10.85	10.25	11.73	11.02	9.35	9.59
0.125	3.3125	3.75	258.5	8.20	7.92	9.33	8.95	8.84	8.95	8.61	9.60	9.08	10.36	9.74	8.30	8.50
0.125	3.3125	4	275.8	8.68	8.38	9.88	9.48	9.36	9.48	9.12	10.17	9.61	10.98	10.32	8.78	9.00
0.125	3.3125	4.125	284.4	8.92	8.61	10.16	9.75	9.62	9.75	9.37	10.46	9.88	11.30	10.62	9.03	9.25
0.125	3.3125	4.25	293.0	9.16	8.84	10.44	10.01	9.88	10.01	9.63	10.75	10.15	11.61	10.91	9.27	9.50
0.125	3.3125	4.375	301.6	9.40	9.07	10.72	10.28	10.14	10.28	9.88	11.03	10.42	11.92	11.20	9.51	9.75
0.1875	3.3750	3.75	268.4	8.49	8.19	9.67	9.28	9.15	9.28	8.92	9.95	9.40	10.74	10.10	8.59	8.81
0.1875	3.3750	4	286.3	8.99	8.67	10.25	9.83	9.70	9.83	9.45	10.55	9.96	11.39	10.71	9.10	9.33
0.1875	3.3750	4.125	295.2	9.24	8.91	10.54	10.11	9.97	10.11	9.71	10.85	10.24	11.72	11.01	9.35	9.59
0.1875	3.3750	4.25	304.2	9.49	9.15	10.83	10.38	10.24	10.38	9.98	11.15	10.52	12.04	11.31	9.60	9.85
0.1875	3.3750	4.375	313.1	9.74	9.39	11.11	10.66	10.51	10.66	10.24	11.44	10.80	12.37	11.62	9.86	10.11
				No longer produced										Big Bore Gasket Change		
Page 7 ....Jim Leis 5/1/10				Per Joe Abbin: Combinations of bore, stroke and combustion chamber size may create knock on todays gasoline above 9:1 ratio												



Ford Flathead V8 CR's Stock 1938- 1942 221 cu/in Heads On a 59A Block (Begin)				Ford USA									Ford Canada						
				#Denver	#Stock					#Denver	#Stock				#Denver	#Stock			
				19AS 6049, 6050 w/0.057" gasket (CI)	81A 6049-A Right w/0.057" gasket (CI)	81A-6050-A Left w/0.057" gasket (CI)	81A-6049-B Right w/0.057" gasket (AL)	81A-6050-B Left w/0.057" gasket (AL)	81AS 6049, C81AS 6050 w/0.057" gasket. (CI)	81T-6049-A Right w/0.057" gasket (CI)	81T 6050-A Left w/ 0.057" gasket (CI)	41T 6050 Right w/ 0.057" gasket (CI)	C7RA-6050-A, CR7A- 6049-A, 6050-A w/0.057" gasket (CI)	C7RA-6050-B, CR7A- 6049-B, 6050-A w/0.057" gasket (AL)	C81A 6049 A, C81A- 6050 A w/ 0.057" gasket (CI)	C81A 6049BR, C81A- 6050BR w/0.057" gasket (AL)	C81T 6049 A, C81T- 6050 A w/0.057" gasket (CI)	C81T 6049-C, C81T 6050-C w/0.057" gasket. (CI)	
Head Comb Chamber cc				71	80	78	80	79	61	84	83	62	74	70	79	73	84	84	
Valve Counterbores volume cc				8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Relief volume cc				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Best Gasket base volume cc				14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50		
0.222"H Domed piston cc's				-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32		
Total Comb Chamber cc				80.18	89.18	87.18	89.18	88.18	70.18	93.18	92.18	71.18	83.18	79.18	88.18	82.18	93.18		
Piston	Bore	Stroke	Cu/In.	Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume															
Std	3.1875	3.75	239.4	7.12	6.50	6.62	6.50	6.56	7.99	6.26	6.32	7.89	6.90	7.19	6.56	6.97	6.26	6.26	
Std	3.1875	4	255.4	7.52	6.87	7.00	6.87	6.93	8.45	6.61	6.67	8.35	7.29	7.61	6.93	7.36	6.61	6.61	
Std	3.1875	4.125	263.3	7.73	7.05	7.19	7.05	7.12	8.69	6.79	6.85	8.58	7.48	7.81	7.12	7.56	6.79	6.79	
Std	3.1875	4.25	271.3	7.93	7.23	7.37	7.23	7.30	8.92	6.96	7.03	8.81	7.68	8.02	7.30	7.76	6.96	6.96	
Std	3.1875	4.375	279.3	8.14	7.42	7.56	7.42	7.49	9.15	7.14	7.21	9.04	7.88	8.23	7.49	7.96	7.14	7.14	
0.030	3.2175	3.75	243.9	7.22	6.60	6.73	6.60	6.66	8.11	6.36	6.42	8.01	7.00	7.30	6.66	7.07	6.36	6.36	
0.030	3.2175	4	260.2	7.64	6.97	7.11	6.97	7.04	8.58	6.71	6.78	8.48	7.40	7.72	7.04	7.48	6.71	6.71	
0.030	3.2175	4.125	268.3	7.85	7.16	7.30	7.16	7.23	8.82	6.89	6.96	8.71	7.60	7.93	7.23	7.68	6.89	6.89	
0.030	3.2175	4.25	276.4	8.05	7.34	7.49	7.34	7.42	9.06	7.07	7.14	8.95	7.80	8.14	7.42	7.88	7.07	7.07	
0.030	3.2175	4.375	284.6	8.26	7.53	7.68	7.53	7.60	9.30	7.25	7.32	9.18	8.00	8.35	7.60	8.09	7.25	7.25	
0.040	3.2275	3.75	245.4	7.26	6.63	6.76	6.63	6.69	8.15	6.39	6.45	8.05	7.04	7.34	6.69	7.11	6.39	6.39	
0.040	3.2275	4	261.8	7.68	7.01	7.14	7.01	7.07	8.63	6.75	6.81	8.52	7.44	7.76	7.07	7.52	6.75	6.75	
0.040	3.2275	4.125	270.0	7.89	7.19	7.34	7.19	7.26	8.87	6.93	6.99	8.76	7.64	7.97	7.26	7.72	6.93	6.93	
0.040	3.2275	4.25	278.2	8.10	7.38	7.53	7.38	7.45	9.11	7.11	7.17	8.99	7.84	8.19	7.45	7.92	7.11	7.11	
0.040	3.2275	4.375	286.3	8.31	7.57	7.72	7.57	7.64	9.34	7.29	7.36	9.23	8.04	8.40	7.64	8.13	7.29	7.29	
0.060	3.2475	3.75	248.5	7.36	6.72	6.85	6.72	6.78	8.27	6.47	6.53	8.17	7.13	7.44	6.78	7.21	6.47	6.47	
0.060	3.2475	4	265.1	7.79	7.10	7.24	7.10	7.17	8.76	6.84	6.90	8.65	7.54	7.87	7.17	7.62	6.84	6.84	
0.060	3.2475	4.125	273.3	8.00	7.29	7.44	7.29	7.36	9.00	7.02	7.09	8.89	7.75	8.09	7.36	7.83	7.02	7.02	
0.060	3.2475	4.25	281.6	8.21	7.48	7.63	7.48	7.55	9.24	7.20	7.27	9.12	7.95	8.30	7.55	8.03	7.20	7.20	
0.060	3.2475	4.375	289.9	8.42	7.67	7.83	7.67	7.75	9.48	7.39	7.45	9.36	8.15	8.52	7.75	8.24	7.39	7.39	
0.080	3.2675	3.75	251.6	7.44	6.79	6.92	6.79	6.86	8.36	6.54	6.60	8.26	7.21	7.52	6.86	7.28	6.54	6.54	
0.080	3.2675	4	268.3	7.87	7.18	7.32	7.18	7.25	8.85	6.91	6.97	8.74	7.62	7.96	7.25	7.70	6.91	6.91	
0.080	3.2675	4.125	276.7	8.08	7.37	7.51	7.37	7.44	9.10	7.09	7.16	8.98	7.83	8.17	7.44	7.91	7.09	7.09	
0.080	3.2675	4.25	285.1	8.30	7.56	7.71	7.56	7.64	9.34	7.28	7.35	9.22	8.04	8.39	7.64	8.12	7.28	7.28	
0.080	3.2675	4.375	293.5	8.51	7.75	7.91	7.75	7.83	9.59	7.46	7.53	9.47	8.24	8.61	7.83	8.33	7.46	7.46	
0.125	3.3125	3.75	258.5	7.56	6.90	7.03	6.90	6.97	8.48	6.65	6.71	8.38	7.32	7.64	6.97	7.40	6.65	6.65	
0.125	3.3125	4	275.8	7.99	7.29	7.44	7.29	7.36	8.98	7.02	7.09	8.87	7.74	8.08	7.36	7.82	7.02	7.02	
0.125	3.3125	4.125	284.4	8.21	7.49	7.64	7.49	7.56	9.23	7.21	7.28	9.12	7.95	8.30	7.56	8.04	7.21	7.21	
0.125	3.3125	4.25	293.0	8.43	7.69	7.84	7.69	7.76	9.48	7.40	7.47	9.36	8.16	8.52	7.76	8.25	7.40	7.40	
0.125	3.3125	4.375	301.6	8.65	7.88	8.04	7.88	7.96	9.73	7.59	7.66	9.61	8.37	8.74	7.96	8.46	7.59	7.59	
0.1875	3.3750	3.75	268.4	7.82	7.13	7.27	7.13	7.20	8.79	6.87	6.94	8.68	7.57	7.91	7.20	7.65	6.87	6.87	
0.1875	3.3750	4	286.3	8.27	7.54	7.69	7.54	7.62	9.30	7.26	7.33	9.19	8.01	8.37	7.62	8.10	7.26	7.26	
0.1875	3.3750	4.125	295.2	8.50	7.75	7.90	7.75	7.82	9.56	7.46	7.53	9.44	8.23	8.60	7.82	8.32	7.46	7.46	
0.1875	3.3750	4.25	304.2	8.73	7.95	8.11	7.95	8.03	9.82	7.66	7.73	9.70	8.45	8.83	8.03	8.54	7.66	7.66	
0.1875	3.3750	4.375	313.1	8.96	8.16	8.32	8.16	8.24	10.08	7.85	7.93	9.96	8.67	9.06	8.24	8.76	7.85	7.85	
Denver Heads				Use Best # 515G gaskets on 1/8" Overbore and greater. See Note 4 on page 18 for heads rework info											Big Bore Gasket Change				
Page 8....J. Leis 5/1/10				Per Joe Abbin: Combinations of bore, stroke and combustion chamber size may create knock on todays gasoline above 9:1 ratio															

Ford Flathead V8 CR's Stock 1938- 1942 221 cu/in Heads On a 59A Block (End)				Ford Canada (cont'd)					Future		
				#Stock							
				C81T 6049-E, C81T 6050-E w/0.057" gasket (CI)	C81T 6049-F, C81T 6050-F w/0.057" gasket (CI)	C91A 6049-B, C91A 6050-B w/0.057" gasket (AL)	C91A 6049-B1, C91A 6050-B1 w/0.057" gasket (AL)	C91A 6049-B2, C91A 6050-B2 w/0.057" gasket (AL)			
Head Comb Chamber cc				84	84	70	71	75			
Valve Counterbores volume cc				8.0	8.0	8.0	8.0	8.0			
Relief volume cc				0.00	0.00	0.00	0.00	0.00			
Best Gasket base volume cc				14.50	14.50	14.50	14.50	14.50			
0.1875"H Domed piston cc's				-13.32	-13.32	-13.32	-13.32	-13.32			
Total Comb Chamber cc				93.18	93.18	79.18	80.18	84.18			
Piston	Bore	Stroke	Cu/In.	Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume							
Std	3.1875	3.75	239.4	6.26	6.26	7.19	7.12	6.83			
Std	3.1875	4	255.4	6.61	6.61	7.61	7.52	7.21			
Std	3.1875	4.125	263.3	6.79	6.79	7.81	7.73	7.41			
Std	3.1875	4.25	271.3	6.96	6.96	8.02	7.93	7.60			
Std	3.1875	4.375	279.3	7.14	7.14	8.23	8.14	7.80			
0.030	3.2175	3.75	243.9	6.38	6.36	7.31	7.23	6.94			
0.030	3.2175	4	260.2	6.73	6.72	7.73	7.65	7.33			
0.030	3.2175	4.125	268.3	6.91	6.90	7.94	7.85	7.53			
0.030	3.2175	4.25	276.4	7.09	7.08	8.15	8.06	7.73			
0.030	3.2175	4.375	284.6	7.27	7.26	8.36	8.27	7.92			
0.040	3.2275	3.75	245.4	6.40	6.40	7.35	7.27	6.97			
0.040	3.2275	4	261.8	6.76	6.76	7.77	7.69	7.37			
0.040	3.2275	4.125	270.0	6.94	6.94	7.98	7.90	7.57			
0.040	3.2275	4.25	278.2	7.12	7.11	8.20	8.11	7.77			
0.040	3.2275	4.375	286.3	7.30	7.29	8.41	8.32	7.97			
0.060	3.2475	3.75	248.5	6.47	6.46	7.43	7.35	7.05			
0.060	3.2475	4	265.1	6.84	6.83	7.86	7.77	7.45			
0.060	3.2475	4.125	273.3	7.02	7.01	8.07	7.98	7.65			
0.060	3.2475	4.25	281.6	7.20	7.19	8.29	8.19	7.85			
0.060	3.2475	4.375	289.9	7.38	7.37	8.50	8.41	8.05			
0.080	3.2675	3.75	251.6	6.54	6.53	7.51	7.43	7.12			
0.080	3.2675	4	268.3	6.91	6.90	7.94	7.86	7.53			
0.080	3.2675	4.125	276.7	7.09	7.08	8.16	8.07	7.73			
0.080	3.2675	4.25	285.1	7.28	7.27	8.38	8.28	7.94			
0.080	3.2675	4.375	293.5	7.46	7.45	8.59	8.50	8.14			
0.125	3.3125	3.75	258.5	7.58	6.92	7.05	6.92	6.98			
0.125	3.3125	4	275.8	8.02	7.31	7.46	7.31	7.38			
0.125	3.3125	4.125	284.4	8.24	7.51	7.66	7.51	7.58			
0.125	3.3125	4.25	293.0	8.45	7.71	7.86	7.71	7.78			
0.125	3.3125	4.375	301.6	8.67	7.90	8.06	7.90	7.98			
0.1875	3.3750	3.75	268.4	7.79	7.11	7.25	7.11	7.18			
0.1875	3.3750	4	286.3	8.25	7.52	7.67	7.52	7.59			
0.1875	3.3750	4.125	295.2	8.47	7.73	7.88	7.73	7.80			
0.1875	3.3750	4.25	304.2	8.70	7.93	8.09	7.93	8.01			
0.1875	3.3750	4.375	313.1	8.93	8.13	8.29	8.13	8.21			
Use Best # 515G gaskets on 1/8" Overbore and greater. See Note 4 on page 18 for heads rework info									Big Bore Gasket Change		
Page 9....5/1/10				Per Joe Abbin: Combinations of bore, stroke and combustion chamber size may create knock on todays gasoline above 9:1 ratio							

Ford Flathead V8 CR's Base Stock 221 CU/IN 1932-1944 (41A)				Ford U.S.A.														
				#Stock												Stock		
				'32	'33-'36	'33-'36	'35-'36	'36	'36	'38-'42	'38-42	'38-42	'38-42	'38-42	'38-42	'38-'42	1944	
18 6049 & 18 5050 w/0.057" gasket (CI)	40 6049A & 6050A w/0.057" gasket (AL)	40 6049-B & 6050-B w/0.057" gasket (CI)	48 6049 & 6050 w/0.057" gasket (AL)	68 6049-AR-6050-AR w/0.057" gasket (AL)	68 6049-B-6050-B w/0.057" gasket (CI)	81A 6049-A Right w/0.057" gasket (CI)	81A-6050-A Left w/0.057" gasket (CI)	81A-6049-B Right w/0.057" gasket (AL)	81A-6050-B Left w/0.057" gasket (AL)	81AS 6049, 6050 w/0.057" gasket (CI)	81T-6049-A Right head w/0.057" gasket (CI)	81T 6050 Left w/0.057" gasket (CI)	41T 6050 Right w/0.057" gasket (CI)					
Head Comb Chamber cc				98	60	80	60	60	80	78	80	80	80	80	60	85	82	62
Valve Counterbores volume cc				8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Relief volume cc				0	0	0	0	0	0	0	0	0	0	0.00	0	0	0	
Best Gasket base volume cc				14.30	14.30	14.30	14.30	14.30	14.30	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	
0.108"H Domed piston volume cc				0.00	0.00	0.00	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	
Total Comb Chamber cc				120.30	82.30	102.30	69.41	69.41	89.41	87.11	89.11	89.11	89.11	69.11	94.11	91.11	71.11	
Piston	Bore	Stroke	Cu/In.	Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume														
Std	3.0625	3.75	221.0	4.76	6.50	5.42	7.52	7.52	6.06	6.20	6.08	6.08	6.08	7.55	5.81	5.97	7.37	
Std	3.0625	4	235.7	5.01	6.87	5.72	7.96	7.96	6.40	6.54	6.42	6.42	6.42	7.99	6.13	6.30	7.79	
Std	3.0625	4.125	243.1	5.14	7.05	5.87	8.17	8.17	6.57	6.72	6.59	6.59	6.59	8.20	6.29	6.47	8.00	
Std	3.0625	4.25	250.4	5.26	7.23	6.01	8.39	8.39	6.74	6.89	6.76	6.76	6.76	8.42	6.45	6.63	8.21	
Std	3.0625	4.375	257.8	5.39	7.42	6.16	8.61	8.61	6.91	7.06	6.93	6.93	6.93	8.64	6.61	6.80	8.43	
0.030	3.0925	3.75	225.3	4.84	6.63	5.52	7.67	7.67	6.18	6.31	6.19	6.19	6.19	7.70	5.92	6.08	7.51	
0.030	3.0925	4	240.4	5.10	7.00	5.82	8.12	8.12	6.52	6.67	6.54	6.54	6.54	8.15	6.25	6.42	7.95	
0.030	3.0925	4.125	247.9	5.23	7.19	5.98	8.34	8.34	6.69	6.85	6.71	6.71	6.71	8.37	6.41	6.59	8.17	
0.030	3.0925	4.25	255.4	5.36	7.38	6.13	8.56	8.56	6.87	7.02	6.89	6.89	6.89	8.60	6.57	6.76	8.38	
0.030	3.0925	4.375	262.9	5.49	7.56	6.28	8.79	8.79	7.04	7.20	7.06	7.06	7.06	8.82	6.74	6.93	8.60	
0.040	3.1025	3.75	226.8	4.86	6.65	5.54	7.70	7.70	6.20	6.34	6.22	6.22	6.22	7.73	5.94	6.10	7.54	
0.040	3.1025	4	241.9	5.12	7.03	5.85	8.15	8.15	6.55	6.69	6.57	6.57	6.57	8.18	6.27	6.44	7.98	
0.040	3.1025	4.125	249.5	5.25	7.22	6.00	8.37	8.37	6.72	6.87	6.74	6.74	6.74	8.40	6.43	6.61	8.19	
0.040	3.1025	4.25	257.0	5.38	7.40	6.15	8.59	8.59	6.89	7.05	6.91	6.91	6.91	8.63	6.60	6.78	8.41	
0.040	3.1025	4.375	264.6	5.51	7.59	6.30	8.82	8.82	7.07	7.23	7.09	7.09	7.09	8.85	6.76	6.95	8.63	
0.060	3.1225	3.75	229.7	4.90	6.69	5.59	7.75	7.75	6.24	6.38	6.26	6.26	6.26	7.78	5.98	6.15	7.59	
0.060	3.1225	4	245.0	5.16	7.07	5.89	8.20	8.20	6.59	6.74	6.61	6.61	6.61	8.23	6.31	6.49	8.03	
0.060	3.1225	4.125	252.7	5.29	7.26	6.04	8.42	8.42	6.77	6.92	6.79	6.79	6.79	8.45	6.48	6.66	8.25	
0.060	3.1225	4.25	260.4	5.42	7.45	6.20	8.65	8.65	6.94	7.10	6.96	6.96	6.96	8.68	6.65	6.83	8.47	
0.060	3.1225	4.375	268.0	5.55	7.64	6.35	8.87	8.87	7.12	7.28	7.14	7.14	7.14	8.91	6.81	7.00	8.68	
0.080	3.1425	3.75	232.7	4.95	6.77	5.64	7.83	7.83	6.31	6.45	6.33	6.33	6.33	7.86	6.05	6.21	7.67	
0.080	3.1425	4	248.2	5.21	7.15	5.95	8.29	8.29	6.67	6.81	6.68	6.68	6.68	8.32	6.38	6.56	8.12	
0.080	3.1425	4.125	255.9	5.35	7.34	6.11	8.52	8.52	6.84	7.00	6.86	6.86	6.86	8.55	6.55	6.73	8.34	
0.080	3.1425	4.25	263.7	5.48	7.54	6.26	8.75	8.75	7.02	7.18	7.04	7.04	7.04	8.78	6.72	6.91	8.56	
0.080	3.1425	4.375	271.5	5.61	7.73	6.42	8.97	8.97	7.20	7.36	7.22	7.22	7.22	9.01	6.89	7.08	8.78	
0.125	3.1875	3.75	239.4	5.08	6.97	5.80	8.08	8.08	6.49	6.64	6.51	6.51	6.51	8.11	6.22	6.39	7.91	
0.125	3.1875	4	255.4	5.35	7.37	6.12	8.55	8.55	6.86	7.02	6.88	6.88	6.88	8.59	6.57	6.75	8.37	
0.125	3.1875	4.125	263.3	5.49	7.57	6.28	8.79	8.79	7.04	7.20	7.06	7.06	7.06	8.82	6.74	6.93	8.60	
0.125	3.1875	4.25	271.3	5.63	7.77	6.44	9.03	9.03	7.23	7.39	7.25	7.25	7.25	9.06	6.92	7.11	8.83	
0.125	3.1875	4.375	279.3	5.76	7.97	6.60	9.26	9.26	7.41	7.58	7.43	7.43	7.43	9.30	7.09	7.29	9.06	
0.1875	3.2500	3.75	248.9	5.23	7.18	5.97	8.32	8.32	6.69	6.84	6.71	6.71	6.71	8.35	6.40	6.58	8.14	
0.1875	3.2500	4	265.5	5.51	7.59	6.30	8.81	8.81	7.07	7.23	7.09	7.09	7.09	8.84	6.76	6.95	8.62	
0.1875	3.2500	4.125	273.8	5.65	7.79	6.47	9.05	9.05	7.25	7.42	7.28	7.28	7.28	9.09	6.94	7.14	8.86	
0.1875	3.2500	4.25	282.1	5.79	8.00	6.63	9.29	9.29	7.44	7.61	7.47	7.47	7.47	9.33	7.12	7.32	9.10	
0.1875	3.2500	4.375	290.4	5.93	8.21	6.80	9.54	9.54	7.63	7.81	7.66	7.66	7.66	9.58	7.30	7.51	9.34	
Max 505G size 3.120"				For bores larger than 3.120" use Best 511G (59A) or 511C as Substitutes.												Gasket Change		
Page 10 ....Jim Leis 5/1/10				Denver Heads														

Ford Flathead V8 CR's Base Stock 221 CU/IN 1932-1944 (41A) (Cont'd)				Ford Canada										Future		
				#Stock	#Denver	#Stock										
				'37	'37	38-'42	38-'42	38-'42	'38-'42	'38-'42	'38-'42	'38-'42	'38-'42	'38-'42	'38-'42	
				C7RA-6049-A, C7RA-6050-A .057" gasket (CI)	C7RA-6049-B, C7RA-6050-B .057" gasket (AL)	C81A 6049 A, C81A-6050 A w/ .057" gask. (CI)	C81A 6049BR, C81A-6050BR w/0.057" gas. (CI)	C81T 6049 A, C81T- 6050 A w/0.057" gas. (CI)	C81T 6049-A, C81T- 6050-A w/0.057" gas. (CI)	C81T 6049-C, C81T- 6050-C w/0.057" gas. (CI)	C81T 6049-E, C81T 6050-E w/0.057" gas. (CI)	C81T 6049-F, C81T 6050-F w/0.057" gas. (CI)	C91A 6049-B, C91A 6050-B w/0.057" gas. (AL)	C91A 6049-B1, C91A 6050-B1 w/0.057" gas. (AL)	C91A 6049-B2, C91A 6050-B2 w/0.057" gas. (AL)	
Head Comb Chamber cc				74	70	79	73	74	74	74	74	74	74	70	75	75
Valve Counterbores volume cc				8	8	8	8	8	8	8	8	8	8	8	8	8
Relief volume cc				0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Best Gasket base volume cc				14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
0.108"H Domed piston volume cc				-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89	-12.89
Total Comb Chamber cc				83.11	79.11	88.11	82.11	83.11	83.11	83.11	83.11	83.11	79.11	84.11	84.11	
Piston	Bore	Stroke	Cu/In.	Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume												
Std	3.0625	3.75	221.0	6.45	6.72	6.14	6.51	6.45	6.45	6.45	6.45	6.45	6.72	6.38	6.38	
Std	3.0625	4	235.7	6.81	7.10	6.48	6.88	6.81	6.81	6.81	6.81	6.81	7.10	6.74	6.74	
Std	3.0625	4.125	243.1	6.99	7.29	6.65	7.06	6.99	6.99	6.99	6.99	6.99	7.29	6.92	6.92	
Std	3.0625	4.25	250.4	7.17	7.48	6.82	7.25	7.17	7.17	7.17	7.17	7.17	7.48	7.10	7.10	
Std	3.0625	4.375	257.8	7.35	7.68	6.99	7.43	7.35	7.35	7.35	7.35	7.35	7.68	7.28	7.28	
0.030	3.0925	3.75	225.3	6.57	6.85	6.25	6.64	6.57	6.57	6.57	6.57	6.57	6.85	6.50	6.50	
0.030	3.0925	4	240.4	6.94	7.24	6.60	7.01	6.94	6.94	6.94	6.94	6.94	7.24	6.87	6.87	
0.030	3.0925	4.125	247.9	7.13	7.44	6.78	7.20	7.13	7.13	7.13	7.13	7.13	7.44	7.05	7.05	
0.030	3.0925	4.25	255.4	7.31	7.63	6.95	7.39	7.31	7.31	7.31	7.31	7.31	7.63	7.24	7.24	
0.030	3.0925	4.375	262.9	7.50	7.83	7.13	7.58	7.50	7.50	7.50	7.50	7.50	7.83	7.42	7.42	
0.040	3.1025	3.75	226.8	6.60	6.88	6.28	6.66	6.60	6.60	6.60	6.60	6.60	6.88	6.53	6.53	
0.040	3.1025	4	241.9	6.97	7.27	6.63	7.04	6.97	6.97	6.97	6.97	6.97	7.27	6.90	6.90	
0.040	3.1025	4.125	249.5	7.15	7.47	6.81	7.23	7.15	7.15	7.15	7.15	7.15	7.47	7.08	7.08	
0.040	3.1025	4.25	257.0	7.34	7.66	6.98	7.42	7.34	7.34	7.34	7.34	7.34	7.66	7.27	7.27	
0.040	3.1025	4.375	264.6	7.53	7.86	7.16	7.61	7.53	7.53	7.53	7.53	7.53	7.86	7.45	7.45	
0.060	3.1225	3.75	229.7	6.64	6.92	6.32	6.70	6.63	6.63	6.63	6.63	6.63	6.92	6.57	6.57	
0.060	3.1225	4	245.0	7.02	7.32	6.68	7.09	7.02	7.02	7.02	7.02	7.02	7.32	6.94	6.94	
0.060	3.1225	4.125	252.7	7.20	7.52	6.85	7.28	7.20	7.20	7.20	7.20	7.20	7.52	7.13	7.13	
0.060	3.1225	4.25	260.4	7.39	7.71	7.03	7.47	7.39	7.39	7.39	7.39	7.39	7.71	7.32	7.32	
0.060	3.1225	4.375	268.0	7.58	7.91	7.21	7.66	7.58	7.58	7.58	7.58	7.58	7.91	7.50	7.50	
0.080	3.1425	3.75	232.7	6.71	7.00	6.39	6.78	6.71	6.71	6.71	6.71	6.71	7.00	6.64	6.64	
0.080	3.1425	4	248.2	7.09	7.40	6.75	7.17	7.09	7.09	7.09	7.09	7.09	7.40	7.02	7.02	
0.080	3.1425	4.125	255.9	7.28	7.60	6.93	7.36	7.28	7.28	7.28	7.28	7.28	7.60	7.21	7.21	
0.080	3.1425	4.25	263.7	7.47	7.80	7.11	7.55	7.47	7.47	7.47	7.47	7.47	7.80	7.40	7.40	
0.080	3.1425	4.375	271.5	7.66	8.00	7.29	7.74	7.66	7.66	7.66	7.66	7.66	8.00	7.59	7.59	
0.125	3.1875	3.75	239.4	6.91	7.21	6.58	6.98	6.91	6.91	6.91	6.91	6.91	7.21	6.84	6.84	
0.125	3.1875	4	255.4	7.31	7.63	6.95	7.38	7.31	7.31	7.31	7.31	7.31	7.63	7.23	7.23	
0.125	3.1875	4.125	263.3	7.50	7.83	7.13	7.58	7.50	7.50	7.50	7.50	7.50	7.83	7.43	7.43	
0.125	3.1875	4.25	271.3	7.70	8.04	7.32	7.78	7.70	7.70	7.70	7.70	7.70	8.04	7.62	7.62	
0.125	3.1875	4.375	279.3	7.90	8.25	7.51	7.98	7.90	7.90	7.90	7.90	7.90	8.25	7.82	7.82	
0.1875	3.2500	3.75	248.9	7.12	7.42	6.77	7.19	7.12	7.12	7.12	7.12	7.12	7.42	7.04	7.04	
0.1875	3.2500	4	265.5	7.52	7.85	7.15	7.60	7.52	7.52	7.52	7.52	7.52	7.85	7.45	7.45	
0.1875	3.2500	4.125	273.8	7.73	8.07	7.35	7.81	7.73	7.73	7.73	7.73	7.73	8.07	7.65	7.65	
0.1875	3.2500	4.25	282.1	7.93	8.28	7.54	8.02	7.93	7.93	7.93	7.93	7.93	8.28	7.85	7.85	
0.1875	3.2500	4.375	290.4	8.14	8.50	7.73	8.22	8.14	8.14	8.14	8.14	8.14	8.50	8.05	8.05	
Max 505G size 3.120"				For bores larger than 3.120" use Best 511G (59A) or 511C as Substitutes.												
Page 11 ....Jim Leis 5/1/10				Denver Heads												
														Gasket Change		

**Ford Flathead V8 CR's  
W/ Aftermarket 59A  
Heads on a 1938-1942  
221 cu/in Block (Begin)**

**Aftermarket 1939-1942 & 59A Heads**

				Champion		Eldebrock		Fenton		Fenton Cast Iron w/No Pins				Flatattack	Kogel		Navarro		
				59 Champion 6050 @ 7.5:1 ratio w/0.057" gasket (AL)	59 Champion 6050 @ 8.5:1 ratio w/0.057" gasket (AL)	No relief with 0.057" gasket (AL)	1126 New Block Lettered Heads w/0.057" gasket (AL)	Fenton CH 1001 W/7.5:1 W0.057" gasket (AL)	Fenton CH 1001 W/7.5:1 W0.057" gasket (AL)	Fenton @ 7.5 CR w/0.057" gasket (CI)	Fenton @ 8.0 CR (w/0.057" gasketCI)	Fenton @ 8.5 CR w/0.057" gasket (CI)	Fenton @ 9.0 CR w/0.057" gasket (CI)	Either 59A or 8BA have 67cc Chambers w/0.057" Gasket (AL)	59 HCR Rocket w/7.5:1 ratio w/0.057" gasket (AL)	59 HCR Rocket Racing w/8.5:1 ratio w/0.057" gasket (AL)	Nastolga '39-'48 Low Flow w/.057" gasket (AL)	Nastolga '39-'48 Blower Flow w/.057" gasket (AL)	
Head Comb Chamber cc				66	56	61	64	66	56	60	55	51	47	67	66	56	65	75	
Valve Counterbores volume cc				8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Relief volume cc				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Best Gasket base volume cc				14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50
0.222"H Domed piston cc's				-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32
Total Comb Chamber cc				75.18	65.18	70.18	73.18	75.18	65.18	69.18	64.18	60.18	56.18	76.18	75.18	65.18	74.18	84.18	
				Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume															
Piston	Bore	Stroke	Cu/In.	7.02	7.94	7.45	7.19	7.02	7.94	7.54	8.05	8.52	9.06	6.94	7.02	7.94	7.10	6.38	
Std	3.0625	3.75	221.0	7.42	8.41	7.88	7.60	7.42	8.41	7.98	8.52	9.02	9.59	7.34	7.42	8.41	7.51	6.74	
Std	3.0625	4.125	243.1	7.62	8.64	8.10	7.80	7.62	8.64	8.20	8.76	9.27	9.86	7.54	7.62	8.64	7.71	6.92	
Std	3.0625	4.25	250.4	7.82	8.87	8.31	8.01	7.82	8.87	8.42	8.99	9.52	10.13	7.73	7.82	8.87	7.92	7.09	
Std	3.0625	4.375	257.8	8.02	9.10	8.53	8.22	8.02	9.10	8.63	9.23	9.78	10.40	7.93	8.02	9.10	8.12	7.27	
0.030	3.0925	3.75	225.3	7.16	8.11	7.60	7.33	7.16	8.11	7.70	8.22	8.70	9.25	7.08	7.16	8.11	7.24	6.50	
0.030	3.0925	4	240.4	7.57	8.58	8.04	7.75	7.57	8.58	8.14	8.70	9.22	9.80	7.48	7.57	8.58	7.66	6.87	
0.030	3.0925	4.125	247.9	7.78	8.82	8.26	7.96	7.78	8.82	8.37	8.94	9.47	10.08	7.69	7.78	8.82	7.87	7.05	
0.030	3.0925	4.25	255.4	7.98	9.06	8.48	8.17	7.98	9.06	8.59	9.18	9.73	10.35	7.89	7.98	9.06	8.08	7.23	
0.030	3.0925	4.375	262.9	8.19	9.29	8.70	8.38	8.19	9.29	8.81	9.42	9.99	10.63	8.09	8.19	9.29	8.28	7.42	
0.040	3.1025	3.75	226.8	7.19	8.14	7.63	7.36	7.19	8.14	7.72	8.25	8.73	9.28	7.10	7.19	8.14	7.27	6.52	
0.040	3.1025	4	241.9	7.60	8.61	8.07	7.78	7.60	8.61	8.17	8.73	9.25	9.83	7.51	7.60	8.61	7.69	6.89	
0.040	3.1025	4.125	249.5	7.80	8.85	8.29	7.99	7.80	8.85	8.40	8.97	9.50	10.11	7.72	7.80	8.85	7.90	7.08	
0.040	3.1025	4.25	257.0	8.01	9.09	8.51	8.20	8.01	9.09	8.62	9.21	9.76	10.39	7.92	8.01	9.09	8.11	7.26	
0.040	3.1025	4.375	264.6	8.22	9.33	8.73	8.41	8.22	9.33	8.84	9.46	10.02	10.66	8.12	8.22	9.33	8.31	7.44	
0.060	3.1225	3.75	229.7	7.27	8.24	7.72	7.45	7.27	8.24	7.82	8.35	8.84	9.40	7.19	7.27	8.24	7.36	6.60	
0.060	3.1225	4	245.0	7.69	8.72	8.17	7.87	7.69	8.72	8.27	8.84	9.36	9.96	7.60	7.69	8.72	7.78	6.97	
0.060	3.1225	4.125	252.7	7.90	8.96	8.39	8.09	7.90	8.96	8.50	9.09	9.63	10.24	7.81	7.90	8.96	7.99	7.16	
0.060	3.1225	4.25	260.4	8.11	9.20	8.62	8.30	8.11	9.20	8.73	9.33	9.89	10.52	8.02	8.11	9.20	8.21	7.35	
0.060	3.1225	4.375	268.0	8.32	9.44	8.84	8.52	8.32	9.44	8.96	9.58	10.15	10.80	8.22	8.32	9.44	8.42	7.53	
0.080	3.1425	3.75	232.7	7.35	8.33	7.81	7.53	7.35	8.33	7.91	8.45	8.94	9.51	7.27	7.35	8.33	7.44	6.67	
0.080	3.1425	4	248.2	7.78	8.82	8.26	7.96	7.78	8.82	8.37	8.94	9.47	10.08	7.69	7.78	8.82	7.87	7.05	
0.080	3.1425	4.125	255.9	7.99	9.06	8.49	8.18	7.99	9.06	8.60	9.19	9.74	10.36	7.90	7.99	9.06	8.08	7.24	
0.080	3.1425	4.25	263.7	8.20	9.31	8.72	8.40	8.20	9.31	8.83	9.44	10.00	10.64	8.11	8.20	9.31	8.30	7.43	
0.080	3.1425	4.375	271.5	8.41	9.55	8.94	8.62	8.41	9.55	9.06	9.69	10.27	10.93	8.32	8.41	9.55	8.51	7.62	
0.125	3.1875	3.75	239.4	7.58	8.60	8.05	7.76	7.58	8.60	8.16	8.72	9.24	9.83	7.49	7.58	8.60	7.67	6.87	
0.125	3.1875	4	255.4	8.02	9.11	8.52	8.21	8.02	9.11	8.63	9.24	9.79	10.42	7.93	8.02	9.11	8.12	7.26	
0.125	3.1875	4.125	263.3	8.24	9.36	8.76	8.44	8.24	9.36	8.87	9.49	10.06	10.72	8.14	8.24	9.36	8.34	7.46	
0.125	3.1875	4.25	271.3	8.46	9.61	9.00	8.66	8.46	9.61	9.11	9.75	10.34	11.01	8.36	8.46	9.61	8.56	7.65	
0.125	3.1875	4.375	279.3	8.68	9.87	9.23	8.89	8.68	9.87	9.35	10.01	10.61	11.31	8.58	8.68	9.87	8.78	7.85	
0.1875	3.2500	3.75	248.9	7.80	8.85	8.29	7.99	7.80	8.85	8.40	8.98	9.51	10.12	7.71	7.80	8.85	7.90	7.07	
0.1875	3.2500	4	265.5	8.16	9.25	8.67	8.36	8.16	9.25	8.78	9.38	9.93	10.55	8.07	8.16	9.25	8.26	7.40	
0.1875	3.2500	4.125	273.8	8.39	9.51	8.91	8.59	8.39	9.51	9.02	9.64	10.20	10.85	8.29	8.39	9.51	8.48	7.60	
0.1875	3.2500	4.25	282.1	8.61	9.76	9.15	8.82	8.61	9.76	9.26	9.90	10.48	11.15	8.51	8.61	9.76	8.71	7.80	
0.1875	3.2500	4.375	290.4	8.83	10.02	9.39	9.05	8.83	10.02	9.51	10.16	10.76	11.45	8.73	8.83	10.02	8.94	8.00	

Use gasket #511G for all bores

No longer produced

Ford Flathead V8 CR's  
W/ Aftermarket 59A  
Heads on a 1938-1942  
221 cu/in Block (End)

Aftermarket 1939-1942 & 59A Heads

	*Offie 425 59A		*Offie 400 59A			%37.5 59A		%35.0 59A		%32.5 59A		59A	Tatters
	*No relief with 0.057" gasket (AL)	*Relieved 0.100" w/0.057" gasket (AL)	*No relief with 0.057" gasket (AL)	*Relieved 0.100" w/0.057" gasket (AL)	Relieved 0.125" w/0.057" gasket (AL)	No Relief w/0.057" gasket (AL)	Relieved 0.100" w/0.057" gasket (AL)	No relief with 0.057" gasket (AL)	3/16" Relief with 0.057" gasket (AL)	No relief with 0.057" gasket (AL)	3/16" relief with 0.057" gasket (AL)	59A head with 0.057" gasket (AL)	Tattersfield @ 8.0:1 W0.057" gasket (AL)
Head Comb Chamber cc	64	64	54	54	54	57	57	52	52	47	47	63	61
Valve Counterbores volume cc	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.0	8.0
Relief volume cc	0	3	0	3	4		3		4		4	0	0
Best Gasket base volume cc	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50
0.222"H Domed piston cc's	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32	-13.32
Total Comb Chamber cc	73.18	76.18	63.18	66.18	67.18	66.18	69.18	61.18	65.18	56.18	60.18	72.18	70.18

Piston	Bore	Stroke	Cu/In.	Compression Ratio = (Piston Displacement + Chamber Volume) / Chamber Volume												
Std	3.0625	3.75	221.0	7.19	6.94	8.16	7.84	7.74	7.84	7.54	8.40	7.94	9.06	8.52	7.27	7.45
Std	3.0625	4	235.7	7.60	7.34	8.64	8.30	8.19	8.30	7.98	8.89	8.41	9.59	9.02	7.69	7.88
Std	3.0625	4.125	243.1	7.80	7.54	8.88	8.52	8.41	8.52	8.20	9.14	8.64	9.86	9.27	7.90	8.10
Std	3.0625	4.25	250.4	8.01	7.73	9.12	8.75	8.64	8.75	8.42	9.39	8.87	10.13	9.52	8.11	8.31
Std	3.0625	4.375	257.8	8.22	7.93	9.36	8.98	8.86	8.98	8.63	9.63	9.10	10.40	9.78	8.32	8.53
0.030	3.0925	3.75	225.3	7.33	7.08	8.33	8.00	7.90	8.00	7.70	8.58	8.11	9.25	8.70	7.42	7.60
0.030	3.0925	4	240.4	7.75	7.48	8.82	8.47	8.36	8.47	8.14	9.08	8.58	9.80	9.22	7.84	8.04
0.030	3.0925	4.125	247.9	7.96	7.69	9.07	8.70	8.59	8.70	8.37	9.33	8.82	10.08	9.47	8.06	8.26
0.030	3.0925	4.25	255.4	8.17	7.89	9.31	8.93	8.82	8.93	8.59	9.59	9.06	10.35	9.73	8.27	8.48
0.030	3.0925	4.375	262.9	8.38	8.09	9.56	9.17	9.05	9.17	8.81	9.84	9.29	10.63	9.99	8.49	8.70
0.040	3.1025	3.75	226.8	7.36	7.10	8.36	8.03	7.92	8.03	7.72	8.60	8.14	9.28	8.73	7.44	7.63
0.040	3.1025	4	241.9	7.78	7.51	8.85	8.50	8.39	8.50	8.17	9.11	8.61	9.83	9.25	7.87	8.07
0.040	3.1025	4.125	249.5	7.99	7.72	9.10	8.73	8.62	8.73	8.40	9.36	8.85	10.11	9.50	8.09	8.29
0.040	3.1025	4.25	257.0	8.20	7.92	9.34	8.97	8.85	8.97	8.62	9.62	9.09	10.39	9.76	8.30	8.51
0.040	3.1025	4.375	264.6	8.41	8.12	9.59	9.20	9.08	9.20	8.84	9.87	9.33	10.66	10.02	8.52	8.73
0.060	3.1225	3.75	229.7	7.43	7.17	8.45	8.11	8.00	8.11	7.80	8.69	8.22	9.37	8.82	7.52	7.70
0.060	3.1225	4	245.0	7.86	7.59	8.94	8.58	8.47	8.58	8.25	9.20	8.70	9.93	9.34	7.95	8.15
0.060	3.1225	4.125	252.7	8.07	7.79	9.19	8.82	8.70	8.82	8.48	9.46	8.94	10.21	9.60	8.17	8.37
0.060	3.1225	4.25	260.4	8.29	8.00	9.44	9.06	8.94	9.06	8.71	9.71	9.18	10.49	9.86	8.39	8.60
0.060	3.1225	4.375	268.0	8.50	8.20	9.69	9.29	9.17	9.29	8.93	9.97	9.42	10.77	10.12	8.60	8.82
0.080	3.1425	3.75	232.7	7.53	7.27	8.56	8.22	8.11	8.22	7.91	8.81	8.33	9.51	8.94	7.62	7.81
0.080	3.1425	4	248.2	7.96	7.69	9.07	8.70	8.59	8.70	8.37	9.33	8.82	10.08	9.47	8.06	8.26
0.080	3.1425	4.125	255.9	8.18	7.90	9.32	8.94	8.82	8.94	8.60	9.59	9.06	10.36	9.74	8.28	8.49
0.080	3.1425	4.25	263.7	8.40	8.11	9.57	9.18	9.06	9.18	8.83	9.85	9.31	10.64	10.00	8.50	8.72
0.080	3.1425	4.375	271.5	8.62	8.32	9.82	9.42	9.30	9.42	9.06	10.11	9.55	10.93	10.27	8.72	8.94
0.125	3.1875	3.75	239.4	7.76	7.49	8.84	8.49	8.37	8.49	8.16	9.10	8.60	9.83	9.24	7.86	8.05
0.125	3.1875	4	255.4	8.21	7.93	9.37	8.98	8.86	8.98	8.63	9.64	9.11	10.42	9.79	8.31	8.52
0.125	3.1875	4.125	263.3	8.44	8.14	9.63	9.23	9.11	9.23	8.87	9.91	9.36	10.72	10.06	8.54	8.76
0.125	3.1875	4.25	271.3	8.66	8.36	9.89	9.48	9.36	9.48	9.11	10.18	9.61	11.01	10.34	8.77	9.00
0.125	3.1875	4.375	279.3	8.89	8.58	10.15	9.73	9.60	9.73	9.35	10.45	9.87	11.31	10.61	9.00	9.23
0.1875	3.2500	3.75	248.9	7.99	7.71	9.10	8.73	8.62	8.73	8.40	9.37	8.85	10.12	9.51	8.09	8.29
0.1875	3.2500	4	265.5	8.46	8.16	9.64	9.25	9.13	9.25	8.89	9.93	9.38	10.72	10.07	8.56	8.78
0.1875	3.2500	4.125	273.8	8.69	8.39	9.91	9.51	9.38	9.51	9.14	10.20	9.64	11.03	10.36	8.80	9.02
0.1875	3.2500	4.25	282.1	8.92	8.61	10.18	9.76	9.63	9.76	9.38	10.48	9.90	11.33	10.64	9.03	9.26
0.1875	3.2500	4.375	290.4	9.16	8.83	10.45	10.02	9.89	10.02	9.63	10.76	10.16	11.64	10.93	9.27	9.51

Use gasket #511G for all bores  No longer produced

Dome calculations done on a separate spreadsheet

	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>
	Dome Gain Base 239 CU/IN			
	Over Bore	Bore	Dome cc's	Dome Gain
661	Std	3.1875	13.420	
662	+.030	3.2175	13.680	-0.0870
663	+.040	3.2275	13.767	0.0870
664	+.060	3.2475	13.942	0.1750
665	+.080	3.2675	14.118	0.1760
666	+.125	3.3125	14.518	0.4000
667	+.1875	3.3750	15.083	0.5650

	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>
	Dome Gain Base 221 CU/IN			
	Over Bore	Bore	Dome cc's	Dome Gain
671	Std.	3.0625	12.893	
672	+.030	3.0925	13.143	0.2500
673	+.040	3.1025	13.227	0.0840
674	+.060	3.1225	13.395	0.1680
675	+.080	3.1425	13.564	0.1690
676	+.125	3.1875	14.233	0.6690
677	+.1875	3.2500	14.491	0.2580

688

**BEST COMPANY HEAD GASKET DATA**

689

Year	Model	Bolts or Studs	Mat'l	Gasket Bore	cc's	Part#	Mat'l	Gasket Bore	cc's	Part# Big Bore	Gasket Gain cc's
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690

'32-38	18, 48, 68, 78	21	Graph-Tite	3.17	14.30	507G	Copper	3.17	13.00	507C	-1.3
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691

'38-'42	81, 99, 19,29	24	Graph-Tite	3.12	14.00	505G	Copper	3.17	13.00	505C	-1.0
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692

'45-'48	41A, 59A	24	Graph-Tite	3.29	14.50	511G	Graph-Tite	3.44	15.50	515G	1.0
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693

'45-'48	41A, 59A	24	Copper	3.29	13.20	511C	Copper	3.43	14.00	515C	0.8
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694

'49-53-Left & Right Head	8RT,8BA, 9CM, & Up	24	Graph-Tite	3.29	14.50	521G-1& 521G-2	Graph-Tite	3.44	15.30	536G-1& 536G-2	0.8
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695

'49-53-Left & Left Head	8RT,8BA, 9CM, & Up	24	Copper	3.29	13.20	521C-1& 521C-2	Copper	3.43	13.90	536C-1& 536C-2	0.7
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696

Gasket Gain for 221 Cu/in 505G vs. 511G for calcs											0.50
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697

Table used for lookup information for auto gasket change per over bore diameter											
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698

699

**Fel Pro Gasket Data**

700

Year	Model	Bolts or Studs	Mat'l	Max Bore	cc's	Part#	Max Bore	cc's	Mat'l	Part#Big Bore	Gasket Gain cc's
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701

'32-38	18, 48, 68, 78	21	NA			NA			Copper NA	NA	
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702

'38-'42	81, 99, 19,29	24	NA			NA			Copper NA	NA	
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703

'39-'48 A '39-47 T	9,41A, 59A	24	Comp-osite	3.25	15.05	7283B			Copper NA	NA	
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704

'49-53-Right Head	8RT,8B A, 9CM, & Up	24	Comp-osite	3.25	15.05	7526A	3.42	15.89	Comp-osite	7525A-1	0.84
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705

'49-53-Left Head	8RT,8B A, 9CM, & Up	24	Comp-osite	3.25	15.05	7526B	3.42	15.89	Comp-osite	7526B-1	0.84
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706

707

708





## Notes & Addenums

Note 1. Compression Ratio is a calculation:  $((SW + CV)/CV)$ . SW is the volume (in cc's) of one of the cylinders and CV is the total combustion chamber volume. The conversion factor from cubic inches to cc's is to multiply the cubic inches by 16.387064. The cubic inches of one cylinder is easy as it is total motor cubic inches (fourth column from the left)/ 8. The combustion chamber volume is affected by several factors:

- a. Head combustion volume (+)
- b. Valves counterbore volume (+)
- c. Head gasket volume (+)
- d. Block deck relieved volume (+)
- e. Piston dome volume (-)

Factors a, b, c, d are added together and e. is subtracted from that total. As the piston dome extends into the combustion chamber it takes up space therefore it has to be subtracted from the total combustion chamber volume. The attached charts perform the calculations necessary to yield results within 0.02 of Ford published compression ratios. The charts include the head gasket minimum value for bores up to 1/8" overbore then add additional volume for using a big bore gaskets. The charts cover bores of Std., +0.030", +0.040", +0.060", +0.080", +0.125" and +0.1875". Stroke lengths of 3.75", 4", 4.125" 4.250" and 4.375" are also covered. Heads listed cc's have been accumulated from various sources and to the best of my knowledge are accurate. Some listed CR's include relieved deck values.

Note 2. Ford introduced the 8RT (239) engine in the 1948 trucks. The next year they introduced the 8BA (239) and the 9CM (255). Changes in these engines from the 59A were improved cooling by forcing more water to the rear of the block & out thru the front of the heads, relocate and postmount the distributor to the passenger side, Head gaskets are different from right to left. Sometime near 1952 Ford discontinued the use of hardened-replacable valve seats that resulted in a space loss of 6cc's in the combustion chamber. Near the same time the EAB heads were produced. Midway at the top of Page 1 are 4 columns that include EAB Head data. Two include the 8cc's for the counterbores and two include the 2cc's. Data values for CR's for Engines 1952 and later in the tables are lower than actual because of the 6cc's difference. Ford Canada produced Denver heads for the 8BA in aluminum, part #CaBA-6049, 6050.

Note 3. Ford introduced the 41A & 59A engines in 1944 & 1945. The valve angles in both engines were changed to 50\* on both sides from the previous 49.36\* right side, and 52\* left side. The 41A was produced as a replacement block for all earlier 24 stud, 221 cu/in engines. The 59A was used in Ford & Merc passenger cars from 1946 thru 1948 and in trucks from 1946 thru 1947. When installing stock 59A or 59A type aftermarket heads on a 8RT, 8BA or 9CM and Up engines; 59A head gaskets must be used and a water pump bypass hole in the front of each deck must be plugged. Additionally a distributor lockdown must be fabricated. Ford USA produced 3 Denver heads, in cast iron, for the 239 cu/in 1939-1942 engines part #'s 81AS 6049/6050, 99AS 6049/6050 & 19AS-6049/6050. Ford Canada produced one Denver head, in aluminum, part #C7RA 6050-B. The #C7RA 6050-B heads may be used on either side of the engine.

Note 4. When installing stock 221 cu/in heads on a 59A block only 59A gaskets should be used. For bores up to 3.90" use Best Brand gaskets #511G or 511C. For larger bores use Best Brand gaskets #515G or 515C. Because the original 221 valve angles were 49.36\* right side, and 52\* left side the left head XX 6050-X will require enlarging the combustion chamber at the top of the valves area for valve clearance. Center cooling holes in each head must also be enlarged for improved cooling. See Ford Service Manual 1937-1946

Note 5. When installing aftermarket 59A heads on 1938-1944 221 cu/in blocks only 59A gaskets should be used. For bores up to 3.90" use Best Brand gaskets #511G or 511C. For larger bores use Best Brand Gaskets #515G or 515C.