

CASE									
Case material /Alloy			Manufacturer						
Vendor									
Serial number		Head stud <input type="checkbox"/> 8mm <input type="checkbox"/> 10mm		Case savers <input type="checkbox"/> Yes <input type="checkbox"/> No					
Head stud material			Manufacturer			Length			
Vendor									
Crank bore depth									
Right									
#1		#2		#3		#4			
Left									
#1		#2		#3		#4			
Main bore diameter @ 25 ft-lb									
#1		#2		#3		#4			
Cam bore depth									
Right									
#1		#2		#3		#4			
Left									
#1		#2		#3		#4			
Cam thrust surface									
Right					Left				
Deck height									
#1		#2		#3		#4			
Cylinder spigot diameter									
#1		#2		#3		#4			
Lifter bore diameter									
#1					#2				
Intake		Exhaust		Intake		Exhaust			
#3					#4				
Intake		Exhaust		Intake		Exhaust			
Main thrust surface									
Right					Left				
Oil Pump depth									
Right					Left				
Oil Pump diameter @ 14 ft-lb									
Full flow <input type="checkbox"/> Yes <input type="checkbox"/> No			Oil galley tapped <input type="checkbox"/> Yes <input type="checkbox"/> No			Cam groove <input type="checkbox"/> Yes <input type="checkbox"/> No			
Shuffle pins <input type="checkbox"/> Yes <input type="checkbox"/> No		Location <input type="checkbox"/> Center <input type="checkbox"/> All		Sand seal <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Machine in <input type="checkbox"/> Press in			
Stroker clearance <input type="checkbox"/> Yes <input type="checkbox"/> No			Deep stud #3 <input type="checkbox"/> Yes <input type="checkbox"/> No			Welded behind #3 <input type="checkbox"/> Yes <input type="checkbox"/> No			
Deep sump <input type="checkbox"/> Yes <input type="checkbox"/> No			Oil capacity			Pick up tube welded <input type="checkbox"/> Yes <input type="checkbox"/> No			
Oil pick up tube diameter			Pick up tube to sump plate clearance						
Machine work completed by									
Sealant used			Location						
Sealant used			Location						
Assembly lube used			Location						
Notes:									

OIL PUMP									
<input type="checkbox"/> 21mm <input type="checkbox"/> 26mm <input type="checkbox"/> 30mm <input type="checkbox"/> 32mm					<input type="checkbox"/> Dry sump <input type="checkbox"/> Plugged for full flow <input type="checkbox"/> Maxi pump				
<input type="checkbox"/> O-ring <input type="checkbox"/> Hard anodized					<input type="checkbox"/> Aluminum <input type="checkbox"/> Cast iron				
Manufacturer			Vendor						
Body diameter			Body depth						
Drive shaft length			Body to cam gear clearance						
Gear to cover clearance									

OIL PUMP COVER									
<input type="checkbox"/> Standard <input type="checkbox"/> Full flow <input type="checkbox"/> Steel <input type="checkbox"/> Aluminum <input type="checkbox"/> O-ring									
Manufacturer			Vendor						
Oil pump stud overall length			Installed exposed length						
Notes:									

CRANK							
Stroke		<input type="checkbox"/> Cast <input type="checkbox"/> Forged			Manufacturer		
Model			Material/Alloy				
Vendor							
8 dowel <input type="checkbox"/> Yes <input type="checkbox"/> No		Dowel diameter			Dowel length		
Counterweight <input type="checkbox"/> Yes <input type="checkbox"/> No				Cross drilled <input type="checkbox"/> Yes <input type="checkbox"/> No			
Wedge mate <input type="checkbox"/> Yes <input type="checkbox"/> No				Flanged <input type="checkbox"/> Yes <input type="checkbox"/> No			
Crank run out							
#1			#2			#3	#4
Main journal diameter							
#1			#2			#3	#4
Main journal taper							
#1			#2			#3	#4
Rod journal diameter							
#1			#2			#3	#4
Rod journal taper							
#1			#2			#3	#4
Notes:							

RODS							
Type			Overall length			Manufacturer	
Vendor							
Rod balance							
Overall initial:							
#1			#2			#3	#4
Overall final:							
#1			#2			#3	#4
Big end initial:							
#1			#2			#3	#4
Big end final:							
#1			#2			#3	#4
Small end initial:							
#1			#2			#3	#4
Small end final:							
#1			#2			#3	#4
Rod side clearance							
initial:							
#1			#2			#3	#4
final:							
#1			#2			#3	#4
Wrist pin bushing ID							
#1			#2			#3	#4
Rod bolt							
Bolt type			Size			Manufacturer	
Vendor							
Rod bolt size before torque							
#1				#2			
Top			Tang			Top	Tang
#3				#4			
Top			Tang			Top	Tang
Rod bolt size after torque							
#1				#2			
Top			Tang			Top	Tang
#3				#4			
Top			Tang			Top	Tang
Final rod bolt torque							
Notes:							

CAMSHAFT											
Camshaft manufacturer					Grind number						
Vendor											
Advertised lift				Advertised duration							
Advertised duration @ .050				Lobe center							
Intake opens					Exhaust closes						
Exhaust opens					Intake closes						
Cam installed		<input type="checkbox"/> Straight up		<input type="checkbox"/> Advanced		Degrees		<input type="checkbox"/> Retarded		Degrees	
Cam lobe lift											
#1/#3					#2/#4						
Intake		Exhaust			Intake		Exhaust				
Lobe taper											
Intake		Exhaust			Intake		Exhaust				
LIFTERS											
Lifter manufacturer				Material			Head diameter				
Vendor											
Lifter shaft diameter											
#1					#2						
Intake		Exhaust			Intake		Exhaust				
#3					#4						
Intake		Exhaust			Intake		Exhaust				
Timing pinion end play				Shim stack measurement							
Crank timing gear type			Material			Manufacturer					
Cam gear type			Material			Manufacturer					

FLYWHEEL									
Material/Alloy					Manufacturer				
Vendor									
<input type="checkbox"/> 6V <input type="checkbox"/> 12V				Clutch <input type="checkbox"/> 180mm <input type="checkbox"/> 200mm <input type="checkbox"/> 210mm <input type="checkbox"/> 220mm					
Weight			Wedge mate <input type="checkbox"/> Yes <input type="checkbox"/> No			Flanged <input type="checkbox"/> Yes <input type="checkbox"/> No			
Mating surface depth									
Clutch surface to mounting surface depth									
Gland nut size			Material			Purchased			
Final torque					Shim stack				

MAIN BEARINGS									
Type					Manufacturer				
Vendor									
Inside Diameter									
#1		#2			#3		#4		
Outside Diameter									
#1		#2			#3		#4		
Main bearing running clearance									
#1		#2			#3		#4		
Thrust ID		Thrust OD			Installed crankshaft end play				

ROD BEARINGS									
Type					Manufacturer				
Vendor									
Installed inside Diameter									
#1		#2			#3		#4		
Width									
#1		#2			#3		#4		
Rod bearing running clearance									
#1		#2			#3		#4		

CAMSHAFT BEARINGS									
Type					Manufacturer				
Vendor									
Camshaft bearing running clearance									
#1		#2			#3		#4		
Double thrust <input type="checkbox"/> Yes <input type="checkbox"/> No				Installed camshaft endplay					
Notes:									

PISTONS									
Piston size		Material			Manufacturer				
<input type="checkbox"/> Cast	<input type="checkbox"/> Forged	<input type="checkbox"/> Domed	CC				<input type="checkbox"/> Dished	CC	
Vendor									
Crown diameter									
#1		#2		#3		#4			
Skirt diameter									
#1		#2		#3		#4			
Initial weight									
#1		#2		#3		#4			
Final weight									
#1		#2		#3		#4			

WRIST PINS									
Type		Material			Manufacturer				
Vendor									
Weight									
#1		#2		#3		#4			
Outer Diameter									
#1		#2		#3		#4			
Wrist pin retainer type		<input type="checkbox"/> Wire clip	<input type="checkbox"/> Spiral lock	<input type="checkbox"/> Teflon button				<input type="checkbox"/> True arc	

RINGS									
Ring type		Material			Manufacturer				
Vendor									
Second ring type		Material			Manufacturer				
Top ring gap									
#1		#2		#3		#4			
2nd ring gap									
#1		#2		#3		#4			
Top oil control ring gap									
#1		#2		#3		#4			
Bottom oil control ring gap									
#1		#2		#3		#4			
Copper head gasket size						Cylinder deck shim size			
Notes:									

CYLINDERS									
Cylinder type		Material			Manufacturer				
Vendor									
Hone finish									
Inside diameter top									
#1		#2		#3		#4			
Inside diameter bottom									
#1		#2		#3		#4			
Outside diameter top									
#1		#2		#3		#4			
Outside diameter bottom									
#1		#2		#3		#4			
Cylinder overall length (deck to case)									
#1		#2		#3		#4			

HEADS								
Casting				Material			Manufacturer	
Vendor								
Intake port <input type="checkbox"/> Stock <input type="checkbox"/> Ported				Exhaust port <input type="checkbox"/> Stock <input type="checkbox"/> Ported				
Intake port shape			Exhaust port diameter					
Port Volume								
#1				#2				
Int port cc			Exh port cc			Int port cc	Exh port cc	
#3				#4				
Int port cc			Exh port cc			Int port cc	Exh port cc	
Combustion chamber cc								
Chamber type			Chamber shape					
#1			#2			#3		
Cylinder bore diameter #1/#2								
#1			#2			#3		
Cylinder bore diameter #3/#4								
#1			#2			#3		
Cylinder fly cut depth #1/#2								
#1			#2			#3		
Cylinder fly cut depth #3/#4								
#1			#2			#3		
VALVES								
Size								
Intake			Exhaust					
Material			Manufacturer					
Valve stem groove type				Vendor				
Weight								
#1				#2				
Intake			Exhaust			Intake	Exhaust	
#3				#4				
Intake			Exhaust			Intake	Exhaust	
Valve job								
<input type="checkbox"/> 1 angle <input type="checkbox"/> 3 angle <input type="checkbox"/> 4 angle				<input type="checkbox"/> Other:				
VALVE SPRINGS								
<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple		Type		Manufacturer				
Vendor								
Uninstalled height				Installed height				
Coil bind @			Retainer to guide boss clearance					
Max lift spring clearance								
Seat pressure			Nose pressure					
Spring shim size			Manufacturer					
VALVE GUIDES								
Type			Material					
Length		Inside diameter			Outside diameter			
Seal <input type="checkbox"/> Yes <input type="checkbox"/> No				Type				
Lateral end play								
#1				#2				
Intake			Exhaust			Intake	Exhaust	
#3				#4				
Intake			Exhaust			Intake	Exhaust	
RETAINER								
Type		Material			Manufacturer			
Weight								
#1				#2				
Intake			Exhaust			Intake	Exhaust	
#3				#4				
Intake			Exhaust			Intake	Exhaust	
KEEPER								
Type		Material			Manufacturer			
Machine work completed by								
Notes:								

PUSH RODS			
Type		Material	
Vendor			
Length		Diameter	
PUSH ROD TUBES			
Type		Material	
Vendor			
Length			
Rocker stand shim stack		Rocker stand material removal	
Actual installed valve lift measured at spring			
Notes			

ROCKER ARMS									
Type		Ratio		Manufacturer					
Shaft type				Adjuster type					
Vendor									
Solid shaft initial side clearance									
#1/#2									
	Exh.			Int.			Int.		Exh.
#3/#4									
	Exh.			Int.			Int.		Exh.
Solid shaft shims									
#1/#2									
	Exh.			Int.			Int.		Exh.
#3/#4									
	Exh.			Int.			Int.		Exh.
Rocker stand shim stack				Rocker stand material removal					
Lash caps <input type="checkbox"/> Yes <input type="checkbox"/> No							Size		
Actual installed valve lift measured at spring									

General Engine Specifications

<p><u>Line Bore</u></p> <table> <tr><td>Std</td><td>65mm</td></tr> <tr><td>1st</td><td>65.5mm</td></tr> <tr><td>2nd</td><td>66mm</td></tr> <tr><td>3rd</td><td>66.5mm</td></tr> <tr><td>4th</td><td>67mm</td></tr> </table> <p><u>Thrust</u></p> <table> <tr><td>Std</td><td>22mm</td></tr> <tr><td>1st</td><td>21mm</td></tr> <tr><td>2nd</td><td>20mm</td></tr> </table> <p><u>Crank</u></p> <table> <tr><td>Std</td><td>55mm (2.165")</td></tr> <tr><td>1st undersize</td><td>.25mm (2.155")</td></tr> <tr><td>2nd undersize</td><td>.50mm (2.145")</td></tr> <tr><td>3rd undersize</td><td>.75mm (2.135")</td></tr> <tr><td>4th undersize</td><td>1.00mm (2.125")</td></tr> </table> <p><u>Conversion MM To Inches</u></p> <table> <tr><td>.25mm</td><td>.010"</td></tr> <tr><td>.50mm</td><td>.020"</td></tr> <tr><td>.75mm</td><td>.030"</td></tr> <tr><td>1.00mm</td><td>.040"</td></tr> </table>	Std	65mm	1 st	65.5mm	2 nd	66mm	3 rd	66.5mm	4 th	67mm	Std	22mm	1 st	21mm	2 nd	20mm	Std	55mm (2.165")	1 st undersize	.25mm (2.155")	2 nd undersize	.50mm (2.145")	3 rd undersize	.75mm (2.135")	4 th undersize	1.00mm (2.125")	.25mm	.010"	.50mm	.020"	.75mm	.030"	1.00mm	.040"	<p><u>Mains</u></p> <table> <tr><td>Std</td><td>1-3</td><td>54.97-54.99mm (2.1641 - 2.1649")</td></tr> <tr><td></td><td>4</td><td>39.98-40.00mm (1.5739 - 1.5748")</td></tr> <tr><td>1st</td><td></td><td>54.72-54.74mm (2.1541 - 2.1549")</td></tr> <tr><td>2nd</td><td></td><td>54.45-54.47mm (2.1441 - 2.1449")</td></tr> <tr><td>3rd</td><td></td><td>54.21-54.23mm (2.1341 - 2.1349")</td></tr> <tr><td>4th</td><td></td><td>53.94-53.96mm (2.1241 - 2.1249")</td></tr> </table> <p><u>Rods</u></p> <table> <tr><td>Std</td><td>54.98-55.00mm (2.1646 - 2.1654")</td></tr> <tr><td>1st</td><td>54.72-54.74mm (2.1546 - 2.1554")</td></tr> <tr><td>2nd</td><td>54.47-54.49mm (2.1446 - 2.1454")</td></tr> <tr><td>3rd</td><td>54.21-54.23mm (2.1346 - 2.1354")</td></tr> <tr><td>4th</td><td>53.97-53.99mm (2.1246 - 2.1254")</td></tr> </table> <p><u>Bore Sizes:</u></p> <table> <tr><td>85.5mm</td><td>90mm case,</td><td>93.8mm head</td></tr> <tr><td>88mm thick wall</td><td>94.4mm case,</td><td>97mm head</td></tr> <tr><td>90.5/92mm</td><td>96mm case,</td><td>98mm head</td></tr> <tr><td>94mm</td><td>97.25mm case,</td><td>101.1mm head</td></tr> </table> <p><u>Cylinder wall thickness</u></p> <table> <tr><td>85.5 standard-</td><td>4.14mm (.163")</td></tr> <tr><td>88 thick wall-</td><td>4.50mm (.177")</td></tr> <tr><td>90.5 standard-</td><td>3.75mm (.148")</td></tr> <tr><td>92 thin wall-</td><td>3.00mm (.118")</td></tr> <tr><td>92 thick wall-</td><td>4.54mm (.179")</td></tr> <tr><td>94 standard-</td><td>3.55mm (.140")</td></tr> </table>	Std	1-3	54.97-54.99mm (2.1641 - 2.1649")		4	39.98-40.00mm (1.5739 - 1.5748")	1 st		54.72-54.74mm (2.1541 - 2.1549")	2 nd		54.45-54.47mm (2.1441 - 2.1449")	3 rd		54.21-54.23mm (2.1341 - 2.1349")	4 th		53.94-53.96mm (2.1241 - 2.1249")	Std	54.98-55.00mm (2.1646 - 2.1654")	1 st	54.72-54.74mm (2.1546 - 2.1554")	2 nd	54.47-54.49mm (2.1446 - 2.1454")	3 rd	54.21-54.23mm (2.1346 - 2.1354")	4 th	53.97-53.99mm (2.1246 - 2.1254")	85.5mm	90mm case,	93.8mm head	88mm thick wall	94.4mm case,	97mm head	90.5/92mm	96mm case,	98mm head	94mm	97.25mm case,	101.1mm head	85.5 standard-	4.14mm (.163")	88 thick wall-	4.50mm (.177")	90.5 standard-	3.75mm (.148")	92 thin wall-	3.00mm (.118")	92 thick wall-	4.54mm (.179")	94 standard-	3.55mm (.140")
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<p><u>Torque Specifications</u></p> <table> <tr><td>Connecting Rod Nuts</td><td>24 ft-lb.</td></tr> <tr><td>Case Nuts</td><td>25 ft-lb.</td></tr> <tr><td>Case Nuts (8mm)</td><td>14 ft-lb.</td></tr> <tr><td>Oil Pump (8mm)</td><td>14 ft-lb.</td></tr> <tr><td>Flywheel Gland Nut</td><td>253 ft-lb.</td></tr> <tr><td>Cylinder Heads (10mm)</td><td>23 ft-lb.</td></tr> <tr><td>Cylinder Heads (8mm)</td><td>18 ft-lb.</td></tr> <tr><td>Rocker Shaft Nuts</td><td>18 ft-lb.</td></tr> <tr><td>Crankshaft pulley Bolt</td><td>33 ft-lb.</td></tr> <tr><td>Generator Fan Nut</td><td>45 ft-lb.</td></tr> <tr><td>Clutch Pressure Plate</td><td>18 ft-lb.</td></tr> <tr><td>Spark Plugs</td><td>22 ft-lb.</td></tr> <tr><td>Oil Cooler Nuts</td><td>60 in-lb.</td></tr> <tr><td>Oil Strainer Nuts</td><td>5 ft-lb.</td></tr> <tr><td>Oil Drain Plug</td><td>25 ft-lb.</td></tr> </table>	Connecting Rod Nuts	24 ft-lb.	Case Nuts	25 ft-lb.	Case Nuts (8mm)	14 ft-lb.	Oil Pump (8mm)	14 ft-lb.	Flywheel Gland Nut	253 ft-lb.	Cylinder Heads (10mm)	23 ft-lb.	Cylinder Heads (8mm)	18 ft-lb.	Rocker Shaft Nuts	18 ft-lb.	Crankshaft pulley Bolt	33 ft-lb.	Generator Fan Nut	45 ft-lb.	Clutch Pressure Plate	18 ft-lb.	Spark Plugs	22 ft-lb.	Oil Cooler Nuts	60 in-lb.	Oil Strainer Nuts	5 ft-lb.	Oil Drain Plug	25 ft-lb.	<p><u>General Specifications</u></p> <table> <tr><td>Firing Order</td><td>1-4-3-2</td></tr> <tr><td>Ignition Point Gap</td><td>.016-in.</td></tr> <tr><td>Spark Plug Gap</td><td>.024-.028-in.</td></tr> <tr><td>Dwell Angle</td><td>44-50-degrees</td></tr> <tr><td>Valve Lash Gap Intake</td><td>.004-in.</td></tr> <tr><td>Valve Lash Gap Exhaust</td><td>.006-in.</td></tr> <tr><td>Crankshaft End Play</td><td>.0027-.0051-in.</td></tr> <tr><td>Camshaft End Play</td><td>.0016-.0051-in.</td></tr> <tr><td>Camshaft Gear Backlash</td><td>.0000-.0019-in.</td></tr> <tr><td>Oil Pump Gear End Play Limit (No Gasket)</td><td>.004-in.</td></tr> <tr><td>Oil Pump Gear Backlash</td><td>.0012-.0031-in.</td></tr> <tr><td>Fan Belt Free Play</td><td>.6-in. (at midpoint)</td></tr> </table>	Firing Order	1-4-3-2	Ignition Point Gap	.016-in.	Spark Plug Gap	.024-.028-in.	Dwell Angle	44-50-degrees	Valve Lash Gap Intake	.004-in.	Valve Lash Gap Exhaust	.006-in.	Crankshaft End Play	.0027-.0051-in.	Camshaft End Play	.0016-.0051-in.	Camshaft Gear Backlash	.0000-.0019-in.	Oil Pump Gear End Play Limit (No Gasket)	.004-in.	Oil Pump Gear Backlash	.0012-.0031-in.	Fan Belt Free Play	.6-in. (at midpoint)																																
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Clutch Pressure Plate	18 ft-lb.																																																																																						
Spark Plugs	22 ft-lb.																																																																																						
Oil Cooler Nuts	60 in-lb.																																																																																						
Oil Strainer Nuts	5 ft-lb.																																																																																						
Oil Drain Plug	25 ft-lb.																																																																																						
Firing Order	1-4-3-2																																																																																						
Ignition Point Gap	.016-in.																																																																																						
Spark Plug Gap	.024-.028-in.																																																																																						
Dwell Angle	44-50-degrees																																																																																						
Valve Lash Gap Intake	.004-in.																																																																																						
Valve Lash Gap Exhaust	.006-in.																																																																																						
Crankshaft End Play	.0027-.0051-in.																																																																																						
Camshaft End Play	.0016-.0051-in.																																																																																						
Camshaft Gear Backlash	.0000-.0019-in.																																																																																						
Oil Pump Gear End Play Limit (No Gasket)	.004-in.																																																																																						
Oil Pump Gear Backlash	.0012-.0031-in.																																																																																						
Fan Belt Free Play	.6-in. (at midpoint)																																																																																						

VW Street / Racing Camshaft Specifications

Part #	Adv Dur.	Lift (in)	Lift (mm)	Lob Ctr	
<u>Auto Craft Machine</u>					
9500	250°	0.410"	10.41	111°	
9505	285°	0.422"	10.72	110°	
9506	285°	0.422"	10.72	106°	
9515	285°	0.427"	10.85	110°	
9523	297°	0.427"	10.85	103°	
9525	297°	0.427"	10.85	107°	
9588B	297°	0.427"	10.85	109°	
9527	297°	0.427"	10.85	104°	
9528	297°	0.427"	10.85	101°	
9529	292°	0.428"	10.87	102°	
9530	292°	0.428"	10.87	105°	
9531	292°	0.428"	10.87	108°	
9532	292°	0.428"	10.87	106°	
9533	292°	0.428"	10.87	104°	
9534	292°	0.420"	10.67	104°	
9535	297°	0.427"	10.85	110°	
9545	280°	0.450"	11.43	110°	
9555	280°	0.450"	11.43	106°	
9565	285°	0.422"	10.72	108°	
9575	285°	0.422"	10.72	110°	Dual lobe
	261°	0.380"	9.65	110°	
9585	285°	0.422"	10.72	104°	
9595	268°	0.420"	10.67	106°	
9596	285°	0.422"	10.72	110°	Dual lobe
	257°	0.375"	9.53	110°	
776.7	287°	0.430"	10.92	106°	
600B	287°	0.430"	10.92	110°	
120	261°	0.435"	11.05	108°	
125	270°	0.460"	11.68	108°	

Cams use with 1.25:1 (lift at cam)

428HV	280°	0.400"	10.16	106°	
SCO	287°	0.430"	10.92	104°	
900TX	318°	0.430"	10.92	110°	
925	287°	0.430"	10.92	112°	

Cams use with 1.4:1 (lift at cam)

9526	297°	0.427"	10.85	108°	
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Bugpack

Cams use with 1.1:1 rocker arms (lift at valve)

4061-10	270°	234°	0.396"	10.06	108°	Small displacement; high torque; bus or off-road
4062-10	284°	244°	0.415"	10.54	108°	Good all-round street cam. up to 6500rpm
4063-10	296°	268°	0.430"	10.92	108°	Street and strip; heavy idle; up to 7000rpm
4064-11	282°		0.448"	11.38	108°	Dual-lobe; off-road competition ; head work
	293°		0.578"	14.68	108°	
4065-10	268°		0.364"	9.25	108°	Turbo cam; good bottom end; reduced turbo lag

Cams use with 1.5:1 rocker arms (lift at valve)

4064-10	302°		0.633"	16.08	108°	Dual lobe; midget competition; high rpm
	304°		0.578"	14.68	108°	
4064-12	328°		0.645"	16.38	108°	Dual lobe; drag race competition; 5500rpm up
	328°		0.624"	15.85	108°	
4065-11	297°		0.515"	13.08	108°	Super street; heavy idle. mid to high rpm
4065-12	304°		0.573"	14.55	108°	Street and strip; heavy idle; 4500rpm up

CB Performance

Cams for use with 1.1:1 rocker arms (* also for 1.4 and 1.5:1) (lift at cam)

2229	262°	216°	0.300"	7.62	108°	Street; 1500-4500rpm; mild engine mods
2230	266°		0.302"	7.67	108°	Street; 1500-4500rpm; mild engine mods
2231*	274°		0.317"	8.05	108°	Street; 1500-4500rpm; mild engine mods
2233	272°	230°	0.370"	9.40	108°	Street and bracket race; off-road
2234	274°	234°	0.388"	9.86	107°	Super street and off-road; dual carbs; larger cc
2235	273°		0.375"	9.53	108°	Street and bracket race; good mileage and bhp
2236*	278°		0.335"	8.51	108°	Hot street; head work; dual carbs etc
2237	278°	244°	0.423"	10.74	108°	Super street; dual carbs; larger displacement
2238*	280°		0.309"	7.85	108°	Hot street; head work; dual carbs etc
2239	282°		0.385"	9.78	108°	Street and bracket race; off-road

2240	284°	248°	0.420"	10.67	107°	Super street and off-road; dual carbs; larger cc
2241	286°		0.390"	9.91	108°	Hot street and off-road; head work; dual carbs etc
2242*	300°		0.392"	9.96	108°	Hot street and off-road; head work; dual carbs etc
2243	306°	250°	0.424"			
2245	314°		0.393"	9.98	108°	High rpm midget racing etc
2246	314°	262°	0.436"	11.07	108°	All-out competition
2247	322°	278°	0.408"	10.36	108°	All-out competition
2248*	325°	276°	0.426"	10.82	108°	All-out competition
2250*	290°	256°	0.408"	10.36	108°	Off-road; wide power band
2251	273°		0.375"	9.53		Dual lobe; 109° or 115° lobe centers
	272°		0.370"	9.40		
2252	291°		0.422"	10.72		Dual lobe; 109° or 115° lobe centers
	280°		0.427"	10.85		
2253	273°		0.374"	9.50		Dual lobe; 109° or 115° lobe centers
	282°		0.385"	9.78		
2254	305°		0.375"	9.53		Dual lobe; 109° or 115° lobe centers
	314°		0.393"	9.98		
2255	317°		0.423"	10.74		Dual lobe; 109° or 115° lobe centers
	321°		0.412"	10.46		
2256	322°		0.408"	10.36		Dual lobe; 109° or 115° lobe centers
	325°		0.426"	10.82		
2257	325°		0.426"	10.82		Dual lobe; 109° or 115° lobe centers
	330°		0.405"	10.29		
2262	328°		0.477"	12.12		Dual lobe; 109° or 115° lobe centers
	330°		0.492"	12.50		

Cams for use with 1.25 rocker arms (* also for 1.4)

2208*	254°		0.413"	10.49	108°	Street and bracket race; good low and mid-rabge
2209*	260°		0.395"	10.03	108°	Hot street; head work; dual carbs etc
2207	274°		0.418"	10.62	108°	Super street; dual carbs; larger displacement
2210	283°		0.446"	11.33	108°	Super street; dual carbs; larger displacement
2211	295°	260°	0.448"	11.38	108°	Super street; dual carbs; larger displacement
2212	301°	270°	0.446"	11.33	108°	All-out competition
2213	308°	274°	0.446"	11.33	108°	All-out competition
2214	320°	292°	0.446"	11.33	108°	All-out competition
2215	328°		0.478"	12.14	108°	High rpm midget racing etc
2216	330°		0.448"	11.38	108°	High rpm midget racing etc

Cams for use with 1.25:1 and 1.4:1 rocker arms

2288	303°		0.385"	9.78	108°	Dual lobe; drag racing competition
	299°		0.382"	9.70	108°	
2289	314°		0.390"	9.91	108°	Dual lobe; drag racing competition
	321°		0.404"	10.26	108°	
2298	319°		0.405"	10.29	108°	Dual lobe; drag racing competition
	323°		0.402"	10.21	108°	
2299	321°		0.440"	11.18	108°	Dual lobe; drag racing competition
	321°		0.435"	11.05	108°	

Cams for Hydraulic Lifters (1.1:1 rockers or high-ratio)

1466	252°		0.350"	8.89	108°	Stock street
1467	263°		0.352"	8.94	108°	Street; single or dual carbs
1468	272°		0.360"	9.14	108°	Mild street; single or dual carbs
1469	282°		0.365"	9.27	108°	Strong mid-range or top end
1470	288°		0.375"	9.53	108°	Full-race; dual carbs; good idle
2260	266°		0.393"	9.98	108°	Street; strong mid-range; 5000rpm up
2261	278°		0.410"	10.41	108°	Hot street; dual carbs
2263	288°		0.440"	11.18	108°	Hot street; good mid-range and top end
2264	305°		0.440"	11.18	108°	Road race for kit cars; dual carbs; good idle

Chassis shop

Cams for use with 1.4:1 or 1.5:1 rocker arms

C15-040
C15-045

Turbo grind for engine on gasoline
Turbo grind for engine on alcohol

Crower Cams

Cams may be used with stock or ratio rocker arms (lift at valve with 1.1:1 rocker arms)

61002	260°	220°	0.375"	9.53	110°	Dual lobe; stock replacement; 1000-5000rpm
	268°	227°	0.381"	9.68	110°	
61000	268°	227°	0.354"	8.99	110°	Lower- to mid-range torque; 1800-6000+rpm
61003	276°	234°	0.429"	10.90	107°	
61004	284°	244°	0.429"	10.90	107°	Dual lobe; up to 2180cc; 2000-7000+rpm
	290°	252°	0.452"	11.48	107°	
61005	290°	252°	0.452"	11.48	107°	Dual lobe; up to 1800cc; 2500-7500+rpm
	298°	260°	0.468"	11.89	107°	
61006	298°	260°	0.468"	11.89	107°	Dual lobe; increased CR 3000-8000+rpm
	306°	272°	0.489"	12.42	107°	
61007	306°	272°	0.489"	12.42	107°	Dual lobe; 2000cc and up; 3500-8500+rpm
	312°	280°	0.506"	12.85	107°	

Eagle

Cams for use with 1.1:1 rocker arms (lift at cam)

36	282°		0.372"	9.45	
38	276°		0.351"	8.92	
41	286°		0.424"	10.77	
42	302°		0.429"	10.90	
45	314°		0.432"	10.97	
46	314°		0.452"	11.48	
47	322°		0.449"	11.40	
48	325°		0.469"	11.91	
50	296°		0.430"	10.92	
52	291°		0.464"	11.79	Dual lobe
	280°		0.470"	11.94	
54	305°		0.412"	10.46	Dual lobe
	314°		0.432"	10.97	
55	317°		0.466"	11.83	Dual lobe
	321°		0.453"	11.50	
56	314°		0.458"	11.63	Dual lobe
	331°		0.469"	11.91	
57	325°		0.469"	11.91	Dual lobe
	330°		0.445"	11.30	
88	303°		0.385"	9.78	Dual lobe
	299°		0.382"	9.70	
89	314°		0.390"	9.91	Dual lobe
	321°		0.404"	10.26	
98	319°		0.405"	10.29	Dual lobe
	323°		0.402"	10.21	
99	321°		0.440"	11.18	Dual lobe
	321°		0.435"	11.05	

Eagle Super lift

Cams for use with 1.1:1 rocker arms (lift at cam)

9	260°		0.434"	11.02	Wide base lifters only
10	283°		0.490"	12.44	Wide base lifters only
13	308°		0.490"	12.44	Wide base lifters only
14	320°		0.490"	12.44	Wide base lifters only
16	330°		0.492"	12.49	Wide base lifters only

Engle Racing Cams

Cams for use with 1.1:1 rocker arms (lift at cam)

VZ-14	274°	242°	0.420"	10.67	108°	Small displacement off-road closed course
VZ-15	279°	250°	0.435"	11.05	108°	Medium displacement off-road closed course
VZ-25	286°	256°	0.429"	10.90	108°	Midget circle track; bracket race; off-road comp
VZ-30	298°	262°	0.461"	11.71	108°	Off-road and drag race competition
VZ-35	309°	278°	0.448"	11.38	108°	Off-road and drag race competition

Cams for use with 1.1:1 or 1.25:1 rocker arms

W-100	276°	236°	0.383"	9.73	108°	Street and buggy; sand rail, vans, small capacity
W-110	284°	247°	0.392"	9.96	108°	Hot street and off-road; good low and mid-range
W-120	294°	253°	0.397"	10.08	108°	Hot street; large displacement; off-road comp
W-125	301°	262°	0.418"	10.62	108°	Drag racing and off-road competition
W-130	308°	267°	0.419"	10.64	108°	Drag racing and off-road competition
W-140	313°	274°	0.424"	10.77	108°	Drag racing competition only
TCS-10	284°	247°	0.392"	9.96	112°	Turbo cam; street and strip, good idle; low CR
	276°	236°	0.383"	9.73	112°	
TCS-20	294°	253°	0.397"	10.08	112°	Turbo cam; drag race only, large cc; low CR
	284°	247°	0.392"	9.96	112°	
TCS-30	308°	267°	0.419"	10.64	112°	Turbo cam; drag race only, large cc; low CR
	301°	262°	0.418"	10.62	112°	

Cams for use with 1.4 or 1.5:1 rocker arms

FK-41	269°	240°	0.364"	9.25	108°	Torque for bottom & midrange power 1000-5000
FK-42	275°	246°	0.373"	9.47	108°	Medium disp. engines midrange torque street/OHV
FK-43	284°	252°	0.383"	9.72	108°	Large disp. street race/OHV comp/drag 2500-6500
FK-44	290°	258°	0.389"	9.88	108°	Off road comp/drag, competition only 3000-7000
FK-45	295°	264°	0.401"	10.19	108°	Off road comp/drag, competition only 3500-7500
FK-46	303°	271°	0.409"	10.38	108°	Off road comp/drag, competition only 3800-7800
FK-47	308°	278°	0.419"	10.64	108°	Off road comp/drag, competition only 4000-8000
FK-48	314°	280°	0.420"	10.66	108°	Off road comp/drag, competition only 4200-8200
FK-65	280°	236°	0.342"	8.69	108°	Small displacement off-road closed course
FK-7	288°	244°	0.357"	9.07	108°	Medium displacement off-road closed course
FK-8	298°	266°	0.382"	9.70	108°	Large displacement street and strip or off-road
FK-10	310°	266°	0.385"	9.78	108°	Off-road and drag race competition
FK-87	320°	276°	0.401"	10.19	108°	Off-road and drag race competition
FK-89	328°	282°	0.416"	10.57	108°	Drag racing competition only
FK-91	328°		0.429"	10.90	108°	Drag racing competition only
FK-97	328°	287°	0.443"	11.25	108°	Drag race only; 1.4:1 rockers
FK-98	332°	290°	0.446"	11.33	108°	Drag race only; 1.4:1 rockers
KB-424	334°		0.407"	10.34	108°	Drag race only; 1.4:1 rockers
KB-425	338°		0.410"	10.41	108°	Drag race only; 1.4:1 rockers
KB-435	333°		0.430"	10.92	108°	Drag race only; 1.4:1 rockers

Erson Cams

Cams use with 1.1:1 rocker arms (lift at cam)

E746522	274°	220°	0.380"	9.65	106°
E749622	278°	225°	0.440"	11.18	108°
E749422	280°	242°	0.441"	11.20	106°
E740422	288°	258°	0.470"	11.94	110°

Cams use with 1.25:1 rocker arms (lift at cam)

E745322	322°	286°	0.466"	11.84	110°
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Babe Erson Cams

Cams use with 1.1:1 rocker arms (lift at cam)

XV252	252°	214°	0.306"	7.77	108°	
XV260	260°	222°	0.379"	9.63	108°	
XV272	272°	234°	0.392"	9.96	108°	
XV280	280°	242°	0.404"	10.26	108°	
XV290	290°	252°	0.419"	10.64	108°	
XV304	304°	262°	0.427"	10.85	108°	
XV308	308°	268°	0.456"	11.58	108°	
PKV280	280°	232°	0.419"	10.64	106°	Dual-lobe
	272°	228°	0.404"	10.26	106°	
PKV304	304°	262°	0.427"	10.85	108°	Dual-lobe
	290°	252°	0.419"	10.64	108°	
PKV305	304°	262°	0.482"	12.24	108°	Dual-lobe
	290°	252°	0.419"	10.64	108°	
PKV308	308°	268°	0.456"	11.58	108°	Dual-lobe
	290°	252°	0.419"	10.64	108°	

Cams use with 1.4:1 rocker arms (lift at cam)

XR262	262°	224°	0.330"	8.38	108°	
XR270	270°	232°	0.350"	8.89	108°	
XR280	280°	242°	0.362"	9.19	108°	
XR296	296°	254°	0.366"	9.30	108°	
XR302	302°	260°	0.379"	9.63	108°	
XR310	310°	268°	0.393"	9.98	108°	
XR316	316°	274°	0.387"	9.83	108°	
XR320	320°	278°	0.400"	10.16	108°	
XR324	324°	280°	0.393"	9.98	108°	
XR328	328°	286°	0.421"	10.69	108°	
XR329	330°	288°	0.396"	10.06	108°	
XR330	330°	288°	0.433"	11.00	108°	
XR332	332°	290°	0.439"	11.15	108°	
XR342	342°	300°	0.411"	10.44	108°	
XR356	356°	314°	0.382"	9.70	108°	
PKR270	270°	232°	0.342"	8.69	108°	Dual-lobe
	262°	224°	0.330"	8.38	108°	
PKR302	302°	260°	0.379"	9.63	108°	Dual-lobe
	296°	254°	0.366"	9.30	108°	
PKR310	310°	266°	0.393"	9.98	108°	Dual-lobe
	302°	260°	0.379"	9.63	108°	

Fat Performance

Cams for use 1.1:1 rocker arms (lift at valve)

FC400	274°	234°	0.424"	10.77	108°	Mild street; small displacement, low compression
FC410	284°	244°	0.430"	10.92	108°	Street; single or dual carb, up to 2000cc
FC411	284°	247°	0.442"	11.23	108°	Dual lobe; off-road; Class 9 competition
	274°	234°	0.424"	10.77	108°	
FC415	290°	252°	0.450"	11.43	108°	Dual lobe; off-road comp; Class 1/2 and 5/1600
	284°	242°	0.430"	10.92	108°	
FC420	294°	252°	0.434"	11.02	108°	Off-road; 1600cc and up; head work
FC425	301°	262°	0.442"	11.23	108°	Off-road; large displacement; single or dual carb
FC430	309°	268°	0.444"	11.28	108°	Off-road; large displacement; head work; carb etc

Gene Berg Enterprises

Cams use with 1.1:1 rocker arms (lift at cam)

GB295	276°	242°	0.418"	10.62	108°	Small capacity. short course off-road
GB296	276°	236°	0.374"	9.50	108°	1300-1700cc single 2-bbl or dual carbs
GB296A	279°	250°	0.433"	11.00	108°	1200-1700cc short course or heavy street car
GB297	284°	247°	0.385"	9.78	108°	All-around street cam; up to 5800rpm
GB297A	288°	256°	0.425"	10.80	108°	Similar but needs head work; 1600cc and up
GB300	294°	253°	0.390"	9.91	108°	1700cc and up; 1500-5500rpm; dual carbs
GB300A	292°	262°	0.450"	11.43	108°	Similar but wilder rpm range; good bottom end
GB301	300°	262°	0.405"	10.29	108°	Street engine with dual carbs and head work
GB302	308°	267°	0.405"	10.29	108°	1900cc and up; dual carbs and head work
GB302A	309°	278°	0.445"	11.30	108°	Similar but wilder rpm range; large dual carbs
GB303	313°	274°	0.424"	10.77	108°	More top end; less lower end; from 4000rpm up

Cams for use with 1.4 up to 1.65:1 rocker arms (lift at cam)

GB307	278°	237°	0.341"	8.66	108°	1600cc and up; single 2-bbl or dual 1-bbl carbs
GB308	286°	246°	0.356"	9.04	108°	1600cc and up; dual carbs; 100-500rpm
GB309	297°	254°	0.335"	8.51	108°	Small to mid-size engine; ratio rocker arms
GB310	304°	257°	0.380"	9.65	108°	Street or buggy; large motor; head work; exhaust
GB311	306°	270°	0.378"	9.60	108°	Larger engine; head work; 3500-7000rpm
GB315	320°	276°	0.390"	9.91	108°	Hot street; large engine; 48IDA carbs; close ratios
GB316	329°	282°	0.411"	10.44	108°	All-out race; very popular drag race cam
GB316B	328°	282°	0.429"	10.90	108°	Similar but for more radical heads
GB317	328°	287°	0.436"	11.07	108°	Similar but for more radical heads
GB318	332°	291°	0.440"	11.18	108°	All-out race; over 2200cc; radical heads
GB319	334°	294°	0.407"	10.34	108°	All-out race; even more duration and lift
GB319A	338°	296°	0.410"	10.41	108°	All-out race; even more duration and lift
GB319B	333°	297°	0.430"	10.92	108°	All-out race; even more lift

Norris

329S	272°		0.329"	8.35	107°	Any ratio rocker, street, broad power 2500-6200
330S	282°		0.330"	8.38	107°	Any ratio rocker, street, broad power 2500-6500
336S	290°		0.336"	8.53	107°	Any ratio rocker street/comp mid/topend 3500-7200
352S	254°		0.352"	8.94	107°	Any ratio rocker, RV gas miser 1500-5000
355S	304°		0.355"	9.01	107°	Any ratio rocker street/comp mid/topend 3500-7200
389S	298°		0.389"	9.88	107°	1:1 ratio only, street/comp wide torque 3500-6500
407S	280°		0.407"	10.33	107°	1:1 ratio only, street/comp wide torque 3500-6500
408S	300°		0.408"	10.36	107°	1:1 ratio only, street/comp mid/top end 3500-7200
V425S	278°		0.425"	10.79	107°	1:1 ratio only, street, broad power 2500-6500
V431S	290°		0.431"	10.94	107°	1:1 ratio only, street, broad power 2500-6500
444S	325°		0.444"	11.27	107°	1:1 ratio only, competition only 3000-7200
404S	326°		0.404"	10.26	107°	1.4 ratio or larger competition only 4000-9000
410S	318°		0.410"	10.41	107°	1.4 ratio or larger competition only 3500-8000
412S	328°		0.412"	10.46	107°	1.4 ratio or larger competition only 3500-8000
428S	332°		0.428"	10.87	107°	1.4 ratio or larger competition only 3500-8000
427S	308°		0.427"	10.84	107°	1.4 ratio or larger competition only 3500-7200

Pauter Machine

Cams for use with 1.1:1 and 1.25:1 rocker arms (lift at cam)

B4	262°	234°	0.372"	9.45	107°	Mild street; under 2000cc
B6	264°	238°	0.409"	10.39	107°	
C7	268°	236°	0.363"	9.22	108°	
D7	270°	243°	0.385"	9.78	108°	
F5	274°	246°	0.393"	9.98	108°	
F6E7	274°		0.424"	10.77	107°	Dual lobe; off-road
F8E7	276°		0.366"	9.30	107°	
H7	282°	250°	0.393"	9.98	108°	

Cams for use with 1.25:1 rocker arms (lift at cam)

J7	286°	260°	0.398"	10.11	108°	
K7	288°	255°	0.384"	9.75	108°	
K8E8	288°		0.384"	9.75	108°	Strong mid-range
M3	292°	268°	0.409"	10.39	108°	
O3	296°	255°	0.398"	10.11	108°	
O8E8	296°		0.465"	11.81	108°	Off-road; 2000cc plus
P3	297°	264°	0.429"	10.90	108°	
P4E8	298°		0.371"	9.42	108°	Hot street
R8	304°	274°	0.421"	10.67	108°	
T1E8	307°		0.350"	8.89	108°	
T2	307°	271°	0.419"	10.64	108°	
T3	307°	274°	0.437"	11.10	108°	
T7	308°	276°	0.416"	10.57	108°	
T7E8	308°	276°	0.415"	10.54	108°	
T8E8	307°		0.451"	11.46	108°	Off-road; light vehicle; large displacement
U4	310°	280°	0.435"	11.05	108°	

Cams for use with 1.4:1 and 1.5:1 rocker arms (lift at cam)

V4	314°	278°	0.406"	10.31	108°	
V4	314°	282°	0.451"	11.46	108°	
V5E8	314°		0.451"	11.46	108°	
V9E0	315°		0.367"	9.32	108°	Off-road; large displacement
X3	320°	284°	0.417"	10.59	108°	Drag race competition; high rpm
X5E0	321°		0.475"	12.07	110°	Drag race competition; high rpm
X6E0	324°		0.372"	9.45	110°	
Y3	331°	294°	0.430"	10.92	108°	
Y7	336°	298°	0.425"	10.80	108°	

Cams for use with roller-lifters

VN025	293°		0.406"	10.31	108°	Dune buggy; off-road; large motor
VN011	312°		0.452"	11.48	108°	Hot off-road; turbo dune buggy etc
VN130	314°		0.438"	11.13	108°	Drag race (turbo or carb); midget race

Scat Enterprises

Cams for use with 1.1:1 rocker arms (* or 1.4:1 rockers) (lift at valve)

C20*	278°		0.338"	8.59	108°	Street; mild cam; good with 1.4:1 rockers
C25	275°	235°	0.385"	9.78	108°	Bus and off-road. small cc; 5000rpm maximum
C35	286°	247°	0.410"	10.41	108°	Street and off road; good power spread; 6000rpm
C45	296°	254°	0.418"	10.62	108°	Street and strip; heavy idle; 4500-6500rpm
C55	312°	268°	0.428"	10.87	108°	Circle track; good mid-range; 4500-6500rpm
C65	318°	272°	0.440"	11.18	108°	Super Vee etc; variable rpm application
C75	342°	292°	0.445"	11.30	108°	Drag race competition; heavy car; 5000-7000rpm
C95	286°	262°	0.475"	12.07	108°	All-round competition; large displacement

Cams for use with 1.4* and 1.5 rocker arms**

C85*	330°	294°	0.574"	14.58	108°	5500-8500rpm; competition only
C89**	325°	269°	0.618"	15.70	108°	Drag race competition

Web-Cam

Cams for use with 1.1:1 rocker arms (lift at valve)

Stock	250°	214°	0.334"	8.48	108°	Factory specification
	250°	214°	0.314	7.97		
86	270°	234°	0.358"	9.08	108°	Street and off-road
111	272	238	0.476	12.09	108	Tremendous torque for small displacement
119	276°	240°	0.422"	10.72	108°	Street and off-road; broad power band; turbo
218	280°	242°	0.455"	11.56	108°	Street or turbo. Can be used with 1.25 rockers
218/119	280°	242°	0.455"	11.56	108°	Dual lobe; off-road competition; Class 1/2 1600
	276°	240°	0.422"	10.72	108°	Excellent torque!
118	283°	246°	0.402"	10.21	108°	Street; good mid-range and top end
163	284°	249°	0.422"	10.72	108°	Hot street; wide power band
110	284°	256°	0.435"	11.05	108°	Hot street and off-road; strong mid- and high rpm
110/119	284	256	0.435	11.05	108	1-1600 class off road with restrictor plates
	276	240	0.422	10.72	108	
110/163	284	256	0.435	11.05	108	1/2 1600 class off road with restrictor plates
	288	250	.0430	10.92	108	
109	286	260	.0465	11.81	108	Hot street and off road engines
109/119	286	260	.0465	11.81	108	1/2 1600 off road with restrictor plates
	276	240	0.422	10.72	108	added RPM power
109/163	286	260	0.465	11.81	108	1-2 1600 off road mid and top end
	288	250	0.430	10.92	108	
109/119	287°	260°	0.465"	11.81	108°	Dual lobe; off-road competition; Class 1/2 1600
	276°	240°	0.422"	10.72	108°	Added RPM power!
125	288°	260°	0.478"	12.14	108°	Off road competition
122/125	288°	262°	0.506"	12.85	108°	Dual lobe; large displacement street and off-road
	288°	262°	0.478"	12.14	108°	racing engines.
121	298°	271°	0.490"	12.45	108°	Hot street and off-road; large displacement
121/125	298°	270°	0.490"	12.45	108°	Dual lobe; large displacement
	288°	262°	0.478"	12.14	108°	Designed for Class 10 off-road racing engines.
165	312°	273°	0.492"	12.50	108°	Hot street; large displacement; mid- to high rpm

Cams for use with 1.25:1 or 1.5:1 rocker arms (lift shown with 1.5:1)

86a	290°	252°	0.502"	12.75	108°	Hot street and off-road
86b	300°	260°	0.575"	14.61	108°	Hot street and strip; large displacement; high rpm
86c	310°	272°	0.585"	14.86	108°	Drag race competition; high rpm
226	304°	278°	0.610"	15.49	108°	Good mid- to high rpm for drag cars. N/A
251	324°	285°	0.630"	16.00	108°	Large displacement. carb dragster and pro sedans
277	320°	288°	0.660"	16.76	108°	Large displacement. carb dragster and pro sedans
197	328°	295°	0.656"	16.65	108°	Large displacement. carb dragster and pro sedans

Weber Cam

Cams for use with hydraulic lifters (lift at cam)

529-521H	274°	0.350"	8.89	Dual lobe street cam
	268°	0.330"	8.38	
56TH	282°	0.338"	8.59	Dual lobe street cam
	270°	0.330"	8.38	
58TH	294°	0.342"	8.69	Dual lobe hot street cam
	282°	0.338"	8.59	
60TH	308°	0.370"	9.40	Dual lobe hot street cam
	304°	0.360"	9.14	
76	270°	0.323"	8.20	Low end torque; street or van
91	275°	0.382"	9.70	Street or off-road
142	282°	0.395"	10.03	Mid-range and good top end
91	286°	0.336"	8.53	For use with ratio rockers
142	294°	0.395"	10.03	Hot street; off-road; circle track
WC-1	299°	0.460"	11.68	Hot street; sand buggy; top end power
151	316°	0.450"	11.43	Drag race only; use 1.25 rockers
153	314°	0.461"	11.71	Dual lobe; turbo drag race
	308°	0.458"	11.63	

Bearing part numbers

Main bearings

	CRANK	CASE	THRUST
111 198 461	STD	STD	STD
111 198 471	STD	.020	STD
111 198 471OS	STD	.020	.040
111 198 471TOR	STD	.020	.040
111 198 473	.010	.020	STD
111 198 473OS	.010	.020	.040
111 198 473TOR	SAME		
111 198 475	.020	.020	STD
111 198 475OS	.020	.020	.040
111 198 475TOR	SAME		
111 198 477	.030	.020	STD
111 198 477OS	.030	.020	.040
111 198 477TOR	SAME		
111 198 479	.040	.020	STD
111 198 479OS	.040	.020	.040
111 198 479TOR	SAME		
111 198 481	STD	.040	STD
111 198 481OS	STD	.040	.040
111 198 481TOR	SAME		
111 198 483	.010	.040	STD
111 198 483OS	.010	.040	.040
111 198 483TOR	SAME		
111 198 485	.020	.040	STD
111 198 485OS	.020	.040	.040
111 198 485TOR	SAME		
111 198 487OR	.030	.040	STD
111 198 487OS	.030	.040	.040
111 198 487TOR	SAME		
111 198 4916	STD	.060	.080
111 198 4936	.010	.060	.080
111 198 4956	.020	.060	.080
111 198 4976	.030	.060	.080
111 198 4918	STD	.080	.080
111 198 4938	.010	.080	.080
111 198 4958	.020	.080	.080
111 198 4978	.030	.080	.080
111 198 4911OR	STD	.100	.080
111 198 4931OR	.010	.100	.080
111 198 4951OR	.020	.100	.080

Rod bearing

113 105 701	STD
113 105 707	.010
113 105 713	.020
113 105 719	.030
113 105 725	.040

Cam bearing

111198541	STD
111198541HD	Double thrust

Engine Part Numbers

1585cc Dual Port

Part Description	OEM Part #	Suffix
Alternator	AL82N	
Alternator 3 piece tin	113119031	
Alternator hub kit	111198123	A
Alternator pulley	043903109	
Alternator shims	111903131	A
Alternator stand	113101211	G
Alternator strap	113903141	B
Blue coil	00012	
Bolt. engine to trans	111199101	
Boot intake manifold	113129729	B
Cam plug	113101157	C
Camp plug rubber	040101157	
Camshaft dish	113109021	G
Camshaft flat	113109021	D
Carburetor 34 pict	113129031	
Case	043101025	
Case dowel pin	111101123	
Clutch bolts		
Clutch cover early	311141025	E
Clutch cover early	311141025	C
Clutch disk rigid	311141031	B
Clutch disk spring	311141031	D
Connecting rod	311105401	B
Connecting rod bushing	311105431	ASP
Connecting rod nut	113105427	
Crankshaft 69mm	043105101	A
Cylinder Head DP	043101355	CK
Cylinder head nut 8mm	043101457	
Cylinder tin lower (2)	311119317	A
Cylinder tin right/left	113119303/4	J/H
Distributor clamp	113905250	
Distributor drive gear	113105231	B
Distributor drive spring	111105233	
Distributor SVDA	043905205	
Dual port end casting left	113129709	D
Dual port end casting right	113129710	D
End play shim .24mm	113105281	A
End play shim .30mm	113105283	A
End play shim .32mm	113105285	A
End play shim .34mm	113105287	A
End play shim .36mm	113105289	A
Engine gasket kit German	111198007	AFG
Engine hardware kit	113198033	E
Exhaust installation kit	111298009	F
Exhaust tips (2)	113251163	C
Exhaust valve 8mm/32mm	113109612	A
Fan	113119031	B
Fan belt	111903137	D
Fan shroud	043119025	D
Flywheel 200mm	311105273	A
Flywheel dowel pin	113105277	
Front tin	113119517	S
Fuel filter	803201511	C
Fuel filter	803201511	C
Fuel pump (alt)	113127025	G
Fuel pump base	113127303	
Fuel pump rod	113127307	A
Gear. dist drive brass	111105233	

Part Description	OEM Part #	Suffix
Gear. spacer	113105219	
Gear. timing	113105209	
Gland nut	111105305	E
Head stud 8mm	043198035	
Heater box left	043255107	HD
Heater box right	043255108	HD
Heater connector pipes	113255165	
Heater hose	113255292	P
Heater tin		
Ignition wires	111998031	A
Intake end casting	113129709	G
Lifters	113109309	C
Manifold	113129701	M
Manifold boot kit	113129729	BS
Muffler	113251053	AK
Oil cooler	113117021	
Oil cooler adapter	113117301	
Oil dipstick	113115611	
Oil drain plug	113115193	
Oil filler cap	021115311	
Oil filler cap gasket	111115487	
Oil filler nut	113115495	
Oil filler tube	113115451	D
Oil pick up tube	040101149	1
Oil pump 8mm 26mm dish	111115107	BHD
Oil pump 8mm 26mm flat	111115107	AHD
Oil pump cover 8mm	311115141	C
Oil sending unit	021919081	B
Oil slinger	113105241	A
Oil strainer early	311115175	A
Oil strainer late	111115175	B
Oil sump plate	113115181	A
Piston rings 85.5mm 2x2x5	311198169	A
Pistons/Cylinders 85.5mm	311198069	F
Pulley	113105251	G
Pulley bolt	111105263	A
Pulley bolt washer	111105259	
Pulley tin	113119533	L
Pushrod tubes	311109335	
Pushrods	311109301	A
Rear duct	043198517	B
Rear tin	043119527	
Rocker arm assembly	113198900	
Rocker arm wavy washer	113109437	
Spark plugs	W8AC	
Throw out bearing early	111141165	A
Throw out bearing late	113141165	B
Valve adjusting screw 8mm	043109451	HD
Valve cover	113101475	A
Valve cover bail	043101487	
Valve guide 9mm	043101421	
Valve guide STD8mm	113101401	BR
Valve Keeper	113109651	A
Valve spring	113109623	C
Valve stem cap	113109621	
Woodruff key. crank pulley	113105249	
Woodruff key. timing gear	111105213	