

HYDRAULIC FLAT TAPPET



1978-1986

196 (3.2L) 231 (3.8L) 252 (4.1L) V6 Evenfire

Description (Note: See pages 6-7 for a detailed explanation of each Performance Level)	Part Number	C.I.D. Group	Grind	Lobe Sep.	Advertised Duration Intake Exhaust	Duration @ .050" Intake Exhaust	Gross Lift 1.6 / 1.6 Intake Exhaust	Suitable Component Kit
BAJA BEAST / Performance Level 2 Good hot street cam with emphasis on upper bottom to top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 Plus.	54915 MTO	ALL CID	280HDP	112°	280° 290°	204° 214°	.450" .474"	84053X3
ULTRA PERFORMANCE COMPU-PRO / Performance Level 3 Street/strip cam with strong mid to top end torque and horsepower. RPM Power Range: 2000 to 6000 / Redline: 6500 Plus.	54245	ALL CID	278HDP	112°	278° 284°	212° 218°	.462" .478"	84053X3
CUSTOM GROUND HYDRAULIC Special order hydraulic lifter camshaft ground to your specifications. Call with all engine data incl. head flow data, valve sizes, operating power range, etc when ordering.	00154H	ALL CID	Refer to www.crower.com for camshaft recommendation					

Note: Early 198-225 cid 1962-1967 Odd Fire cam cores are available from Crowder. Specify when ordering.

Note: These cams use .000" intake and exhaust valve lash.

Note: Crowder has an extensive inventory of Buick V6 cam profiles and roller lifters that were designed for the Buick V6 Indy turbo engines.

MECHANICAL FLAT TAPPET

Description (Note: See pages 6-7 for a detailed explanation of each Performance Level)	Part Number	C.I.D. Group	Grind	Lobe Sep.	Advertised Duration Intake Exhaust	Duration @ .050" Intake Exhaust	Gross Lift 1.6 / 1.6 Intake Exhaust	Suitable Component Kit
COMPU-PRO / Performance Level 3 Extended rpm range with emphasis on upper bottom to top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 plus.	54310 MTO	ALL CID	282FDP	107°	282° 287°	238° 242°	.483" .486"	84303
COMPU-PRO / Performance Level 4 Hot street/strip profile. Strong mid to top end torque and horsepower. RPM Power Range: 2200 to 6000 / Redline: 7000 plus.	54311 MTO	ALL CID	292FDP	108°	292° 298°	244° 248°	.501" .514"	84303
CUSTOM GROUND SOLID Special order solid lifter camshaft ground to your specifications. Call with all engine data including head flow data, valve sizes, operating power range, etc when ordering.	00154M	196 231 252	Refer to www.crower.com for camshaft recommendation					

Note: Custom ground turbocharged/supercharged camshafts are available from Crowder on a special order basis.

Buick GN 231 c.i. 6 cyl. 1977 ½ - 1987, 1988 - 1989 AMC

Note: "MTO" denotes that this item is not usually stocked but is Made To Order in 2-3 days.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Oil Seals	Remarks
84053	66050-12	68301X1-12	86032-12		Hydraulic Lifter.
84053X3	66050X3-12	68301X1-12	86032-12		CamSaver Hydraulic Lifter.
84303	66900-12	68390X3-12	87048-12	86072-12	Dual Spring.
84303X980	66900X980-12	68390X3-12	87048-12	86072-12	Dual W/ CoolFace Lifter

Spring pressure:

68301X1-12 Seat: 1.700" @ 101 lbs / Nose: 1.250" @ 274 lbs / Coil bind: 1.130"
68304-16 Optional Spring

Crowder Recommends ZDDPlus for all Flat Tappet Cams

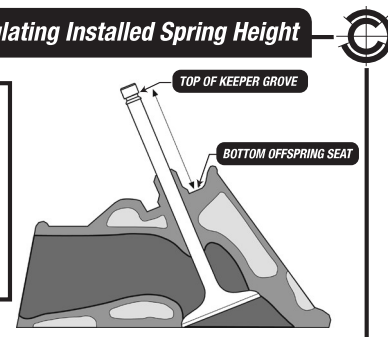
ZDDPlus™ contains 42,700 ppm of phosphorus and 57,300 ppm of zinc. When a 4-ounce bottle of ZDDPlus™ is added to 5 quarts of oil, it is diluted 41:1, which contributes 1047 ppm of phosphorus and 1397ppm of zinc to whatever the oil may or may not already contain.
Part #86092 - 4oz Bottle of ZDDPlus & Paste

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. See spring and retainer specs or contact Crowder for proper recommendations.

Your RPM range will vary depending on your Cylinder Head Air Flow Data & Cubic Inches.

Diagram 1. Calculating Installed Spring Height

Measure the height from top of keeper groove to bottom of spring seat. Refer to the "height" column of your retainer and add or subtract the amount given from the original overall measurement. See Page 148



Note: If heads have been extensively modified (machined spring pockets, longer valves, etc.) contact Crowder for proper spring, keeper, cup and retainer recommendations. Have your keeper/seat measurement available.



HYDRAULIC FLAT TAPPET

215 300 340 V8

Description (Note: See pages 6-7 for a detailed explanation of each Performance Level)	Part Number	C.I.D. Group	Grind	Lobe Sep.	Advertised Duration		Duration @ .050"		Gross Lift 1.6 / 1.6		Suitable Component Kit
					Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
MILEAGE COMPU-PRO / Performance Level 1 Enhances throttle response and low end torque while delivering fuel efficient drivability. RPM Power Range: Idle to 3500 / Redline: 4500 Plus	50227	300	256HDP	112°	246°	253°	184°	190°	.402"	.421"	84058
	50228	340	250HDP	112°	250°	258°	192°	196°	.424"	.430"	84058
POWER COMPU-PRO / Performance Level 2 Perfect combination of power and mileage with extended rpm range. Strong low end and mid-range power for spirited driving on or off the road. RPM Power Range: 1500 to 4000 / Redline: 5500 Plus.	50229	300	258HDP	112°	258°	260°	196°	202°	.430"	.446"	84058
	50230	340	260HDP	112°	260°	266°	202°	210°	.446"	.451"	84058
HIGH PERFORMANCE COMPU-PRO / Performance Level 3 These cams offer extended rpm range with emphasis on upper bottom and top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 Plus.	50231	300	270HDP	112°	270°	276°	210°	218°	.451"	.477"	84058
	50232	340	276HDP	112°	276°	281°	214°	218°	.488"	.490"	84058
ULTRA PERFORMANCE COMPU-PRO / Performance Level 4 These cams exhibit strong mid-range and top end torque and horsepower. RPM Power Range: 2000 to 6000 / Redline: 6500 Plus.	50233	300	280HDP	112°	280°	286°	220°	226°	.488"	.501"	84150
	50234	340	284HDP	112°	284°	290°	228°	234°	.512"	.526"	84150
CUSTOM GROUND HYDRAULIC Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	00151H	ALL CID	Refer to www.crower.com for camshaft recommendation								

Available for Land Rover, See Page 89

MECHANICAL FLAT TAPPET

Note: These cams use .000" intake and exhaust valve lash.

Note: "MTO" denotes that this item is not usually stocked but is Made To Order in 2-3 days.

Description (Note: See pages 6-7 for a detailed explanation of each Performance Level)	Part Number	C.I.D. Group	Grind	Lobe Sep.	Advertised Duration		Duration @ .050"		Gross Lift 1.6 / 1.6		Suitable Component Kit
					Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
COMPU-PRO / Performance Level 3 Strong mid to top end torque and horsepower. RPM Power Range: 2000 to 5500 / Redline: 7000 plus.	50303 MTO	300	282FDP	108°	282°	287°	238°	242°	.482"	.488"	84350X980
COMPU-PRO / Performance Level 3 Strong mid-range and top end power. RPM Power Range: 2500 to 6000 / Redline: 7500 plus.	50304 MTO	340	292FDP	108°	292°	298°	246°	250°	.502"	.514"	84350X980
COMPU-PRO / Performance Level 4 Tremendous upper mid to top end torque and horsepower. RPM Power Range: 3000 to 6500 / Redline: 7500 Plus.	50305 MTO	340	304FDP	108°	304°	310°	256°	262°	.536"	.549"	84350X980
CUSTOM GROUND SOLID Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	00151M	ALL CID	Refer to www.crower.com for camshaft recommendation								
CUSTOM GROUND ROLLER Special order roller lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	00060	ALL CID	Refer to www.crower.com for camshaft recommendation								

ENGINEERED COMPONENT KITS

Note: These cams use .022" intake, .024" exhaust valve lash.

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84058	66050-16	68313 -16	87019-16	86072-16	Hydraulic Lifter.
84350	66900-16	68405-16	87021-16	86072-16	Solid Lifter.
84150X3	66050X3-16	68405 -16	87021-16	86072-16	CamSaver Hydraulic Lifter.
84350X980	66900X980-16	68405-16	87021-16	86072-16	CoolFace Mechanical Lifter.

Spring pressure:

68405-16 Seat: 1.700" @ 104 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 0.980" (Machine work, use cutter 68983*).

* Machine work required, specify 3/8 pilot shaft when ordering.

Crower Recommends ZDDPlus for all Flat Tappet Cams
ZDDPlus™ contains 42,700 ppm of phosphorus and 57,300 ppm of zinc. When a 4-ounce bottle of ZDDPlus™ is added to 5 quarts of oil, it is diluted 41:1, which contributes 1047 ppm of phosphorus and 1397ppm of zinc to whatever the oil may or may not already contain.
Part #86092 - 4oz Bottle of ZDDPlus & Paste

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. Contact Crower.

Part numbers no longer listed may be available as custom grinds.
Please contact Crower.

Valve timing events are available online at: www.crower.com

Your RPM range will vary depending on your Cylinder Head Air Flow Data & Cubic Inches.

HYDRAULIC FLAT TAPPET



1968-1980
BUICK 350 V8

Description (Note: See pages 6-7 for a detailed explanation of each Performance Level)	Part Number	C.I.D. Group	Grind	Lobe Sep.	Advertised Duration Intake Exhaust	Duration @ .050" Intake Exhaust	Gross Lift 1.55 / 1.55 Intake Exhaust	Suitable Component Kit
MILEAGE COMPU-PRO / Performance Level 1 Enhances throttle response. Low end torque and fuel efficiency. RPM Power Range: Idle to 3500 / Redline: 4500 plus	50256	350	250HDP	112°	250° 258°	192° 196°	.411" .419"	84058
POWER COMPU-PRO / Performance Level 2 Power and mileage cam with extended rpm for spirited motoring. RPM Power Range: 1500 to 4000 / Redline: 5500 plus	50257	350	260HDP	112°	260° 266°	202° 210°	.434" .436"	84058
HIGH PERFORMANCE COMPU-PRO / Performance Level 3 Strong upper bottom to top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 Plus.	50258	350	276HDP	112°	276° 281°	210° 220°	.446" .468"	84150 84150X3
ULTRA PERFORMANCE COMPU-PRO / Performance Level 4 Street/strip profile with superior upper bottom to top end torque. RPM Power Range: 2000 to 6000 / Redline: 6500 Plus.	50259 MTO	350	284HDP	112°	284° 290°	226° 234°	.499" .508"	84150 84150X3
HI-DRAULIC HAULER / Performance Level 4 Rough idle. Strong mid to top end torque and horsepower. RPM Power Range: 2500 to 6000 / Redline: 6500	50260 MTO	350	296HDP	108°	296° 302°	228° 242°	.485" .512"	84150 84150X3
HI-DRAULIC HAULER / Performance Level 5 Rough idle. Explosive mid-range torque and horsepower. RPM Power Range: 3000 to 6500 / Redline: 6500	50261	350	304HDP	108°	304° 312°	240° 246°	.516" .544"	84150 84150X3
CUSTOM GROUND HYDRAULIC Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	00150H	ALL CID	Refer to www.crower.com for camshaft recommendation					

Note: These cams use .000" intake and exhaust valve lash.

MECHANICAL FLAT TAPPET

Description (Note: See pages 6-7 for a detailed explanation of each Performance Level)	Part Number	C.I.D. Group	Grind	Lobe Sep.	Advertised Duration Intake Exhaust	Duration @ .050" Intake Exhaust	Gross Lift 1.55 / 1.55 Intake Exhaust	Suitable Component Kit
COMPU-PRO / Performance Level 5 Superior mid-range and top end torque. RPM Power Range: 3500 to 7500 / Redline: 7750 plus.	50355 MTO	350	304HDP	108°	304° 310°	256° 262°	.519" .532"	84350
CUSTOM GROUND SOLID Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	00150M	ALL CID	Refer to www.crower.com for camshaft recommendation					

Note: These cams use .022" intake, .024" exhaust valve lash.

Note: "MTO" denotes that this item is not usually stocked but is Made To Order in 2-3 days.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Seals	Remarks
84058	66050-16	68313 -16	87019-16	86072-16	Hydraulic Lifter.
84350	66900-16	68405-16	87021-16	86072-16	Solid Lifter.
84150X3	66050X3-16	68405 -16	87021-16	86072-16	CamSaver Hydraulic Lifter.
84350X980	66900X980-16	68405-16	87021-16	86072-16	CoolFace Solid Lifter.

Your RPM range will vary depending on your Cylinder Head Air Flow Data & Cubic Inches.

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. Contact Crower.

Part numbers no longer listed may be available as custom grinds. Please contact Crower.

Crower Recommends ZDDPlus for all Flat Tappet Cams

ZDDPlus™ contains 42,700 ppm of phosphorus and 57,300 ppm of zinc. When a 4-ounce bottle of ZDDPlus™ is added to 5 quarts of oil, it is diluted 41:1, which contributes 1047 ppm of phosphorus and 1397ppm of zinc to whatever the oil may or may not already contain.

Part #86092 - 4oz Bottle of ZDDPlus & Paste

Spring pressure:

68405-16 Seat: 1.700" @ 104 lbs / Nose: 1.200" @ 297 lbs / Coil bind: 0.980" (Machine work, use cutter 68983*).

* Machine work required, specify 3/8 pilot shaft when ordering.

Valve timing events are available online at: www.crower.com

Note: "MTO" denotes that this item is not usually stocked but is Made To Order in 2-3 days.



HYDRAULIC FLAT TAPPET

Non Roller 1967-1976

400 430 455 V8

Description (Note: See pages 6-7 for a detailed explanation of each Performance Level)	Part Number	C.I.D. Group	Grind	Lobe Sep.	Advertised Duration		Duration @ .050"		Gross Lift 1.6 / 1.6		Suitable Component Kit
					Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	
MILEAGE COMPU-PRO / Performance Level 1 Enhances throttle response and low end torque while delivering fuel efficient drivability. RPM Power Range: Idle to 3500 / Redline: 4000 Plus.	52237	455	258HDP	112°	260°	266°	203°	210°	.445"	.450"	84054 Upgrade 84054X3
POWER COMPU-PRO / Performance Level 2 Perfect combination of power and mileage with extended rpm range. Strong low end and mid-range power for spirited driving on or off the road. RPM Power Range: 1500 to 4000 / Redline: 5500 Plus.	52239	455	276HDP	112°	276°	281°	212°	216°	.475"	.487"	84054 Upgrade 84054X3
HIGH PERFORMANCE COMPU-PRO / Performance Level 3 Intended for the hot street application, these cams offer extended rpm range with emphasis on upper bottom and top end power. RPM Power Range: 1800 to 4500 / Redline: 5000 Plus.	52240	455	280HDP	112°	280°	286°	222°	228°	.488"	.498"	84054 Upgrade 84054X3
HIGH PERFORMANCE COMPU-PRO / Performance Level 3 Intended for the hot street application, these cams offer extended rpm range with emphasis on upper bottom and top end power. RPM Power Range: 1800 to 4500 / Redline: 6000 Plus.	52241	455	284HDP	112°	284°	290°	230°	236°	.514"	.525"	84054 Upgrade 84054X3
ULTRA PERFORMANCE COMPU-PRO / Performance Level 4 Dual purpose hot street/drag strip profile. These cams exhibit strong mid-range and top end torque and horsepower. RPM Power Range: 2000 to 5000 / Redline: 6500 Plus.	52242	400 430	297HDP	112°	297°	308°	238°	242°	.538"	.536"	84054 Upgrade 84054X3
HI-DRAULIC HAULER / Performance Level 4 Strong mid-range to top end power. RPM Power Range: 2750 to 6250 / Redline: 6500 Plus.	52211 MTO	455	304HDP	108°	311°	316°	248°	252°	.546"	.559"	84054 Upgrade 84054X3
CUSTOM GROUND HYDRAULIC Special order hydraulic lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	00152H	ALL CID	<i>Refer to www.crower.com for camshaft recommendation</i>								

1957-66 Buick V8 364 401 425 (Nail Head) hydraulic & solid cams available. Call Crowder

Note: These cams use .000" intake and exhaust valve lash.

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Remarks
84054	66050-16	68143-16	87019-16	
84054X3	66050X3-16	68143-16	87019-16	CamSaver Lifter

Your RPM range will vary depending on your Cylinder Head Air Flow Data & Cubic Inches.

Spring pressure:

68143-16 Seat: 1.850" @ 92 lbs / Nose: 1.350" @ 300 lbs / Coil bind: 1.260" (Stock O.D., no machine work).

Note: When using high lift cams (over .480") or modified valve stem lengths, a longer pushrod is required to achieve proper lifter preload (.050" off snap-ring). Use checking pushrod to determine length and call with specs.

CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").

Note: "MTO" denotes that this item is not usually stocked but is Made To Order in 2-3 days.

Crowder Recommends ZDDPlus for all Flat Tappet Cams

ZDDPlus™ contains 42,700 ppm of phosphorus and 57,300 ppm of zinc. When a 4-ounce bottle of ZDDPlus™ is added to 5 quarts of oil, it is diluted 41:1, which contributes 1047 ppm of phosphorus and 1397ppm of zinc to whatever the oil may or may not already contain.

Part #86092 - 4oz Bottle of ZDDPlus & Paste

Valve timing events are available online at: www.crower.com



MECHANICAL FLAT TAPPET



1967-1976
400 430 455 V8

Description (Note: See pages 6-7 for a detailed explanation of each Performance Level)	Part Number	C.I.D. Group	Grind	Lobe Sep.	Advertised Duration @ .050"		Duration @ .050"		Gross Lift 1.6 / 1.6		Suitable Component Kit
COMPU-PRO / Performance Level 3 High torque, all purpose profile. RPM Power Range: 2500 to 6000 / Redline: 6000 Plus.	52310 MTO	ALL CID	282FDP	108°	282°	287°	238°	242°	.482"	.488"	84254 84254X980
COMPU-PRO / Performance Level 4 Superior mid-range and top end torque. Rough Idle RPM Power Range: 3500 to 6500 / Redline: 6500 Plus.	52312 MTO	ALL CID	304FDP	108°	304°	310°	258°	262°	.533"	.549"	84254 84254X980
CUSTOM GROUND SOLID Special order solid lifter camshaft ground to your specifications. Call our technical support staff for personalized camshaft assistance.	00152M	ALL CID	<i>Refer to www.crower.com for camshaft recommendation</i>								

Note: These cams use .022" intake, .024" exhaust valve lash.

1957-66 Buick V8 364 401 425 (Nail Head) hydraulic & solid cams available. Call Crower

ENGINEERED COMPONENT KITS

Part No.	Lifters	Springs	Retainers	Remarks
84254	66900-16	68143-16	87019-16	
84254X980	66900X980-16	68143-16	87019-16	CoolFace Lifter

Spring pressure:

68143 Seat: 1.850" @ 92 lbs / Nose: 1.350" @ 300 lbs / Coil bind: 1.280"
(Stock O.D., no machine work).

Note: If exceeding 6500 rpm, high pressure springs and titanium retainers may be required. See spring and retainer specs or contact Crower for proper recommendations.

CAUTION! When using high lift cams pay close attention to retainer, oil seal and valve guide clearance at full lift (minimum .050").

Valve timing events are available online at: www.crower.com

Part numbers no longer listed may be available as custom grinds. Please contact Crower.

Note: "MTO" denotes that this item is not usually stocked but is Made To Order in 2-3 days.

Note: Solid lifter camshafts require adjustable pushrods. See pushrods or contact Crower.

Crower Recommends ZDDPlus for all Flat Tappet Cams

ZDDPlus™ contains 42,700 ppm of phosphorus and 57,300 ppm of zinc. When a 4-ounce bottle of ZDDPlus™ is added to 5 quarts of oil, it is diluted 41:1, which contributes 1047 ppm of phosphorus and 1397ppm of zinc to whatever the oil may or may not already contain.
Part #86092 - 4oz Bottle of ZDDPlus & Paste

Your RPM range will vary depending on your Cylinder Head Air Flow Data & Cubic Inches.