

HOLDEN/CHEV LSA ENGINE ROCKER RATIO 1.70

Parts kit includes items marked in black (Order as Kit or Individually)
Camshaft not included in Parts Kit.

Application	RPM Range	Part No.	Adv. Duration		.050" Duration		Valve Lift		LSA	Installed Height	Parts Kit	Valve Spring	Retainer	Locks	Stem Seal	Spring Seat	Lifters	Timing Kit	Pushrods (See Notes)	Rockers
			Intake	Exhaust	Intake	Exhaust	Intake	Exhaust												
Smooth idle, Good for daily driver Standard auto	1500-6000	871230	261	281	209	229	.553"	.545"	120	1.780"	VTKLS9	4439-16 ^D	10708-16	10701-16	S9-16	VSS1251	5250		PR5740-110	N/A
Smooth idle, Strong lower/mid range torque. Standard auto	1800-6300	871279	267	302	215	249	.631"	.631"	121	1.780"	VTKLS9	4439-16 ^D	10708-16	10701-16	S9-16	VSS1251	5250		PR5740-110	N/A
Mild idle, Strong mid range. Standard auto	2000-6500	871744	271	286	219	236	.608"	.620"	118	1.780"	VTKLS9	4439-16 ^D	10708-16	10701-16	S9-16	VSS1251	5250		PR5740-110	N/A
Mild idle, Strong mid/upzper torque. Standard auto	2500-6700	871298	275	292	221	238	.581"	.583"	119	1.780"	VTKLS9	4439-16 ^D	10708-16	10701-16	S9-16	VSS1251	5250		PR5740-110	N/A
Supercharged street cam for low to medium boost engines. Great power and torque through wide RPM range. (See Fitting notes 1, 2 & 4)	2800-6900	871292SC	276	296	225	244	.607"	.607"	118	1.780"	VTKLS9	4439-16 ^D	10708-16	10701-16	S9-16	VSS1251	5250		PR5740-110	N/A
Supercharged Street cam for Medium to high boost engines. Excellent mid range to high RPM power and torque. (See Fitting notes 1, 2 & 4)	3000-7000	871288SC	289	298	234	249	.610"	.610"	118	1.780"	VTKLS9	4439-16 ^D	10708-16	10701-16	S9-16	VSS1251	5250		PR5740-110	N/A

CROW CAMS LS FAMILY PARTS LIST

HIGH PERFORMANCE TIMING SETS

HIGH PERFORMANCE TIMING CHAIN SETS				
Featuring hardened teeth for durability and multi keyway for precise cam timing.				
Part Number	Application	Triggers	Type	Chain Part Number
CS8LS1	Holden LS1 3 bolt	No Triggers	Double	3DR 60-IWIS
CS8LS1-SR	Holden LS1 3 bolt. Single row chain	No Triggers	Single	3SR 60-IWIS
CS8LS2	Holden LS2 3 bolt with position trigger	Half Circle Single Trigger	Double	3DR 60-IWIS
CS8LS2-SR	Holden LS2 3 bolt with position trigger. Single row	Half Circle Single Trigger	Single	3SR 60-IWIS
CS8LS7	Holden LS7 3 bolt. Double row chain	4 Triggers	Double	3DR 60-IWIS
CS8LS7-SR	Holden LS7 3 bolt. Single row chain	4 Triggers	Single	3SR 60-IWIS
CS8LS-3BK	Holden LS7 3 Bolt Gear & ARP Cam Bolts. Single row	4 Triggers	Single	Gear & Bolts Only
CS8LS-VE-SR	Chev/Holden LS3, L76, L77, L98, 6.0/6.2L	4 Triggers	Single	3SR 60-IWIS
CS8LS-VE3	Holden LS 3 bolt. Cam Gear Only L98 conversion	4 Triggers	Single	Gear Only
CS8L98d	Holden L98 1 bolt. Double row chain	4 Triggers	Double	3DR 60-IWIS
CS12586481	Holden VE 3 Bolt Cam Gear Only Genuine GM. Single	4 Triggers	Single	Gear Only

NOTES:

Valve lift calculated using standard 1.70 rocker ratio.
Advertised duration shown at .006".
Spring installed height should be checked before ordering.
See Spring Specs for installed height pressure ratings.

PUSHROD NOTES:

Standard pushrod length listed for reference only.
Pushrod length needs to be checked on assembly prior to ordering.

CROW CAMS LS FAMILY PARTS LIST

HIGH PERFORMANCE LS LIFTERS

HIGH PERFORMANCE LS LIFTERS			
Part Number	Application	Type	Body Diameter
5250	GM LS V8 LS7 Style Roller Hydraulic Lifter	Geniune Replacement	.840"
5251	GM LS V8 Street Performance Roller Hydraulic Lifter	High Performance Tie Bar Lifter	.840"
5294	GM LS V8 High RPM .750" Hydraulic Roller Diameter	Tie Bar	.840"
5261	GM LS V8 Street Race .750" Solid Roller Diameter	Tie Bar	.840"
6177BUSH	GM LS V8 Solid Roller Lifter BUSH Bearing Pressure Fed	Tie Bar	.840"
5263AFM	Holden L76 AFM Hydraulic Roller Lifter	Genuine Replacement (8 x 5250, 8 x 5250AFM-1)	.840"



No Trigger



Single Trigger



4 Triggers

FITTING NOTES: 1. Must use performance springs. 2. Must use performance retainers. 3. Machining required to fit these components. 4. Must use performance seal. 5. Notes 1 to 4 all apply to this part number. 6. Check valve train geometry before ordering pushrod. 7. Pushrod length varied in this model. Check length before ordering. 8. Spring height varies in models, check spring pressure before installation.








FITTING NOTES:






• Converter stall speed should be equal to or greater than the minimum rpm of the cam power range.
• All lash settings quoted are measured hot. • The use of high volume oil pumps may cause premature wear of the distributor gear.






LS FAMILY SPRING KITS

VTKLS1 LS SINGLE CONICAL SPRING KIT INCLUDES:				
(NOTE SPRING PRESSURE 120LBS @ 1.780" 270LBS @ .500" LIFT)				
Retainers (10707-16)	Conical Valve Springs (4231-16)	Locks (10701-16)	Stem Seals (S9-16)	Spring Seats (VSS1258-16)
				






VTKLS5 LS SINGLE CONICAL SPRING KIT INCLUDES:				
(NOTE SPRING PRESSURE 140LBS @ 1.780" 330LBS @ .500" LIFT)				
Retainers (10707-16)	PSI Conical Valve Springs (1511ML-16)	Locks (10701-16)	Stem Seals (S9-16)	Spring Seats (VSS1258-16)
				






VTKLS8 LS DUAL SPRING KIT INCLUDES:				
(NOTE SPRING PRESSURE 165LBS @ 1.780" 340LBS @ .500" LIFT)				
Retainers (10708-16)	Dual Valve Springs (4438-16)	Locks (10701-16)	Stem Seals (S9-16)	Spring Seats (VSS1251-16)
				

VTKLS9 LS DUAL SPRING KIT INCLUDES:				
(NOTE SPRING PRESSURE 165 @ 1.800" 360 @ .500" LIFT)				
Retainers (10708-16)	Dual Valve Springs (4439-16)	Locks (10701-16)	Stem Seals (S9-16)	Spring Seats (VSS1251-16)
				

VTKLST LS DUAL SPRING TITANIUM RETAINER KIT INCLUDES:				
(NOTE SPRING PRESSURE 165LBS @ 1.800" 360LBS @ .500" LIFT)				
Titanium Retainers	Dual Valve Springs (4439-16)	Locks	Stem Seals	Spring Seats
				

LS FAMILY SPRING KITS

VTKLST1 LS DUAL SPRING TITANIUM RETAINER KIT INCLUDES:				
(NOTE SPRING PRESSURE 155 @ 1.800" 385LBS @ .500" LIFT)				
Retainers (TR435-16)	Conical Valve Springs (4207X-16)	Locks (10701-16)	Stem Seals (S9-16)	Spring Seats (VSS1251-16)
				

VTKLST2 LS DUAL SPRING TITANIUM RETAINER KIT INCLUDES:				
(NOTE SPRING PRESSURE 160 @ 1.800" 415LBS @ .500" LIFT)				
Retainers (TR435-16)	Conical Valve Springs (4209X-16)	Locks (10701-16)	Stem Seals (S9-16)	Spring Seats (VSS1251-16)
				

LS ULTRA LIGHTWEIGHT HIGH RPM RETAINERS		
Part Number	Description	
TR435-16	LS Titanium Retainer Set. Ultra lightweight High RPM Retainers Suits all Dual LS Springs Best suited for Race/Track Engines	

***High Quality Chrome Moly retainers are general purpose retainers suited for street/ race applications. Use of Titanium Retainers in street cars may cause longevity issues.**

***Ultra Lightweight High RPM Titanium Retainers are suited for high revving engines with maximum power. Can be used for street applications but will not have the life expectancy of a Chrome Moly Retainer.**

***VTKLS1 Spring Kits are suited for stock or mild street LS Roller Camshafts. It will take a maximum lift of .550"**

***VTKLS5 Spring Kits are suited for mild-hot street LS Roller Camshafts if you prefer single Beehive Valve Springs. It will take a maximum lift of .600"**

***VTKLS8 Spring Kits are suited for hot street LS Camshafts. Can support up to .650" lift and give the added security of dual springs. The VTKLS8 is our most popular spring kit for street applications.**

***VTKLS9, VTKLST, VTKLST1, VTKLST2 Spring kits are recommended for use with High RPM Maximum Power engines that require higher seat pressure. Maximum lift ranging from .650" to .750". Talk to the Crow Cams technical department to match a spring kit with a camshaft.**

LS FAMILY PARTS LIST

HIGH PERFORMANCE HOLDEN V8 LS SPRINGS

Part Number	Installed Height	Installed Pressure	Pressure @ .5 Lift	Max. Lift	Solid Height	Spring Retainer	Valve Locks
4231-16	1.780"	120	270	.550"	1.100"	10707-16	10701-16
1511ML-16	1.780"	140	330	.600"	1.100"	10707-16	10701-16
4438-16^D	1.780"	165	340	.650"	1.000"	10708-16	10701-16
4439-16^D	1.800"	165	360	.650"	1.020"	10708-16	10701-16
4207X-16^D	1.800"	155	385	.700"	1.000"	TR435-16	10701-16
4209X-16^D	1.800"	160	415	.750"	1.000"	TR435-16	10701-16
1335-16^D	1.800"	250	860 @ .750"	.800"	0.985"	TR432-16	10701-16

Note: Springs marked with xxx-xx^D denotes that it is a double spring.

LS Heavy Duty Lifter and Guide Kit. (LS7LIFTERKIT) Includes:

Genuine OEM LS7 Roller Lifter (5250) & Lifter Guide Kit (LS7GUIDE) x 4



LS Rocker BUSH Trunnion Kit (CRCLSBUSH)

Factory Rocker LS Trunnion Upgrade Kit



Severe duty replacement for factory rocker needle roller bearings. Bronze bushes have 300x greater load capacity than needle rollers. Simple to install.

LS Rocker BUSH Trunnion Installation Kit (LSINST-KIT)

LS Rocker Trunnion Installation Kit



Tools included in installation kit:
2x Installation Washers
1x Removal Washer
1x 7/16" Diameter Press/Drive Pin

LS ENGINE PUSHRODS

PR-956-16	7.350 Inch 1 Piece, 0.080" Wall Heat Treated High Carbon Steel
PR-959-16	7.375 Inch 1 Piece, 0.080" Wall Heat Treated High Carbon Steel
PR-957-16	7.400 Inch 1 Piece, 0.080" Wall Heat Treated High Carbon Steel
PR-958-16	7.450 Inch 1 Piece, 0.080" Wall Heat Treated High Carbon Steel
PR5730-110	7.300 Inch 5/16" 0.110" Wall 210 Radius Chrome Moly Pushrod
PR5732-110	7.325 Inch 5/16" 0.110" Wall 210 Radius Chrome Moly Pushrod
PR5735-110	7.350 Inch 5/16" 0.110" Wall 210 Radius Chrome Moly Pushrod
PR5737-110	7.375 Inch 5/16" 0.110" Wall 210 Radius Chrome Moly Pushrod
PR5740-110	7.400 Inch 5/16" 0.110" Wall 210 Radius Chrome Moly Pushrod
PR5742-110	7.425 Inch 5/16" 0.110" Wall 210 Radius Chrome Moly Pushrod
PR5745-110	7.450 Inch 5/16" 0.110" Wall 210 Radius Chrome Moly Pushrod

For the complete Crow Cams Pushrod range please see pg.87-91



LS ROCKER BUSH TRUNNION KIT (CRCLSBUSH)



These new bushing LS trunnion kits for factory LS rockers are designed to increase durability and load capacity without the failure prone needle bearings. Engineered to provide maximum lubrication to the trunnion while also providing maximum load capabilities, the NEW bushing LS trunnion Upgrade kits give the LS world peace of mind.

The proprietary bushing material is fed with an oil channel at the 11 and 1 O'Clock positions of the trunnion. This channel constantly feeds oil to the bushing surface ensuring proper lubrication unlike needle bearing trunnions that have to rely on oil "finding" it's way to the needles.

The greater surface area of the bushing will support 300X the load of a needle roller bearing due to the fact that there are only three needles on the bottom of the bearing that are carrying the load. There is also no chance of needle bearings destroying the engine when using much more aggressive cam profiles.

Kit includes the trunnion, bushings and C-Clips and can be used with the stock rocker bolt. Fits all OEM LS Rockers, LS1, LS2, L76, L77, L98, LS3, LS6 and LS7.

POWERBOND LS HARMONIC BALANCERS & KITS

LS1/LS6 5.7, LS2 6.0 CATHEDRAL PORT	
Part Number	Application
PB1480-ST	LS1 5.7, LS2 6.0 Street, Std Diameter 6 Rib
PB1480-SS	LS1 5.7, LS2 6.0 Race, Std Diameter 6 Rib. Has keyway
PBU1480-SS10	LS1 5.7, LS2 6.0 Race 10% Underdrive Balancer
PBU1480-SS25	LS1 5.7, LS2 6.0 Race 25% Underdrive Balancer
PB081480-SC10	LS1, LS2 Supercharger Balancer 10% Overdrive 8 Rib
PBK001	LS1 5.7, LS2 6.0 25% Underdrive Balancer kit with Pulleys and Belts
OAP019	6 Rib LS1 alternator overrun pulley for retrofit to factory alternator
PK8030	8 Rib drive kit with std diameter balancer suit LS1. Does not suit VZ LS1, LS2
PK8031	8 Rib drive kit with 10% OD diameter balancer suit LS1. Does not suit VZ LS1, LS2.
L76, L77, L98 6.0, LS3 6.2 VE-ON RECTANGULAR	
Part Number	Application
PB1117-SS	L76, L77, L98, LS3 6.0, 6.2 Race Std Diameter 6 Rib
PBU1117-SS10	L76, L77, L98, LS3 6.0, 6.2 VE Commodore 10% Underdrive Balancer
PBU1117-SS25	L76, L77, L98, LS3 6.0, 6.2 VE Commodore 25% Underdrive Balancer
PB081117-SC10	L76,L77, L98, LS3 Supercharger Balancer 10% Overdrive 8 Rib
PBK002	L76, LS3 VE to 8/2010 25% Underdrive Balancer kit with Pulleys & Belts.
PBK016	L77, LS3 9/2010 Onwards 25% Underdrive Balancer kit with Pulleys & Belts
PBK021	L77, LS3 VF 25% Underdrive Balancer kit with Pulleys & Belts.
OAP027	6 Rib L98 alternator overrun pulley for retrofit to factory alternator
PK8032	VE L76, L77, L98, LS3 8 Rib drive kit with std diameter balancer
PK8033	VE L76, L77, L98 LS3 8 Rib drive kit with 10% OD diameter supercharger balancer

LS7 7.0, LSA S/C 6.2 & INSTALLATION TOOL KITS	
Part Number	Application
PB081503-SC10	LS7 Supercharger Balancer 10% Overdrive 8 Rib
PBK024	LSA 5% Overdrive Balancer and Drive Belt
PBK025	LSA 10% Overdrive Balancer and Drive Belt
PBK026	LSA 18% Overdrive Balancer and Drive Belt
PBK027	LSA 22% Overdrive Balancer, Drive Belt & Idler Bracket
PBK028	LSA 28% Overdrive Balancer, Drive Belt & Idler Bracket
PB01662-SS5	LSA Supercharger Balancer 5% Overdrive
PB01662-SS10	LSA Supercharger Balancer 10% Overdrive
PB01662-SS18	LSA Supercharger Balancer 18% Overdrive
PB01662-SS22	LSA Supercharger Balancer 22% Overdrive
PB01662-SS28	LSA Supercharger Balancer 28% Overdrive
BOPO16625	5% Overdrive Pulley suit PBO1662-SS
BOPO166210	10% Overdrive Pulley suit PBO1662-SS
BOPO166218	18% Overdrive Pulley suit PBO1662-SS
BOPO166222	22% Overdrive Pulley suit BOPO1662-SS
BOPO166228	28% Overdrive Pulley suit BOPO1662-SS
OAPT001	Overrun pulley complete installation tool kit
IPB001	Idler Relocation bracket for 22% and 28% Overdrives



ICE IGNITION LEADS & COILS

ICE PRO LS IGNITION LEADS	
Part Number	Application
9GM808	LS1, LS2 9mm Pro 100 Lead Set
9GM878	LS1, LS2 9mm Pro 100 Lead Set. Black with right angle plug leads.
9GM829	L76, L77, L98, LS3 9mm Pro 100 Lead Set Black
9GM868	LS1, LS2 9mm Pro 25mm longer lead set. 45 Degree plus ends.
9GM888	LS1, LS2 9mm Pro 50mm longer lead set for high covers. 45 Degree plus ends.



ICE PRO LS1 IGNITION COILS	
Part Number	Application
ICE4300	LS1 direct bolt on Ignition Coil





Twice the energy of factory coils with supplied dwell table

Advanced design to withstand vibration and deliver constant, maximum output



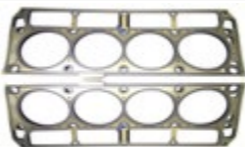
Current limiting set at 20Amps, as opposed to factory 8.25Amps



GENUINE GM HEAD BOLTS

Part Number	Description	
12498545	Genuine LS1 Head Bolt Kit (12498545) 2 Required Per Engine Suits Early LS1 to 2004	
17800568	Genuine LS Head Bolt Kit (17800568) 2 Required Per Engine Suits 2004-on LS engines	



GENUINE GM LS HEAD GASKETS




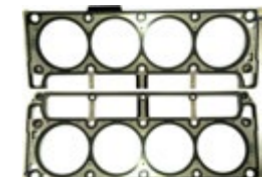

Part Number	Description	
12498544	Genuine GM LS1 5.7 Head Gasket Set. Sold as a pair (2 Gaskets Included)	
12610046	Genuine GM 6.0,6.2, L98, LS3 Head Gasket. Sold each (2 Required per engine)	
12622033	Genuine GM 6.2 LSA & LS9 Head Gasket. Sold each (2 Required per engine)	

TIMING COVER & INTAKE MANIFOLD GASKETS



Part Number	Description	
LSTIMCOVERGASK	LS Timing Cover Gasket Suits all LS engines.	
L98INTGASKET	Rectangular Port Intake Manifold Gaskets Suits L76, L77, L98, LS3 engines. 8 Per Set	

LS ARP CAM GEAR BOLTS & BALANCER BOLT



Part Number	Description	
134-1003	ARP LS Camshaft Gear 3 Bolt Kit	
234-2503	ARP LS Balancer Bolt	

L76D0DDELETE AFM conversion kit to remove Displacement on Demand lifters.				
Genuine LS7 Lifters (5250) & Guides (LS7GUIDE) x 4	Genuine Lifter Guide Bolts (12551163) x 4	Genuine Valley Cover & Gasket (12570471) x 1	Genuine GM 6.0/6.2 Head Gaskets (12610046) x 2	Genuine LS Head Bolt Kit (17800568) x 2
				

GENUINE GM LS CHAIN DAMPERS & TENSIONERS

Part Number	Description	
12588670	Genuine GM LS2, LS7 Chain Damper. Will not suit LS1 Blocks.	
12626407	Genuine GM LS3, L98 Chain Tensioner	

GENUINE GM OIL PUMP & PICKUP TUBE O-RINGS

Part Number	Description	
12678151	Genuine GM Performance High Pressure Oil Pump. Suits All LS except LSA & AFM hardware equipped engines. The pump does not include a pickup tube O-Ring. Please select the appropriate O-Ring below when purchasing.	
12557752	Genuine GM VT-VZ 5.7L Oil Pickup Tube O-Ring	
12584922	Genuine GM 6.0-6.2L Oil Pickup Tube O-Ring	