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# M8

## Milwaukee 8 Engine Camshafts

Andrews camshafts are available in 107 and 114 cubic inch sizes. Four-valve heads are showing lots of potential for big performance gains with Andrews camshafts. Cam timing specs for four-valve heads look very different from cams for similar two-valve applications. Engines with four-valve heads have much greater flow efficiency, so cam timing can be a lot shorter.



**292017** Pushrods (set of 4)

## Andrews Milwaukee 8 Engine Camshafts

PCP#	Grind	Timing *	CL**	Duration		Valve Lift	Lift @ TDC	Spring	Application
				.053	.020				
Stock 107	Int Exh	-07/01 33/-14	94 113.5	174 199	212 252	.350 .370	.055 .035	Stock	Stock 107 engine cam data listed for reference. (114 engines use same camshaft)
<b>217232</b>	M320	14/34 39/-01	100 110	228 218	268 258	.330 .310	.125 .078	Stock	107 engine 2017-on: long duration intake means power at higher RPM. 1700-5000 RPM
<b>217450</b>	M450	00/14 34/00	97 107	194 214	226 251	.450 .450	.080 .076	Stock	Bolt-in cams, 2017-on: more torque for riding with 107 or 114 engines, flat torque. 1000-5500 RPM
<b>217460</b>	M460	00/20 38/02	100 108	200 220	233 258	.460 .460	.080 .086	Stock	Want more power from a stock engine? This is the cam for you! See curves below. 1000-5600 RPM.
<b>217462</b>	M462	06/14 40/00	94 110	200 220	230 258	.460 .460	.106 .080	Stock	Bolt-in cam 17-on 107-114 inches. Big power (127 ft lbs and 109 hp). 1200 to 5500 RPM
<b>217464</b>	M464	06/24 50/00	099 115	210 230	241 267	.464 .460	.106 .080	Stock	Great mid-range torque & power with free flow exhaust pipes and injector tuning.
<b>217504</b>	M504	06/30 56/00	102 118	216 236	249 274	.504 .504	.105 .080	Hi-Lift	More torque and power for 114 inches and all around riding. 1500-5700 RPM
<b>217520</b>	M520	08/40 64/04	106 120	228 248	260 285	.520 .520	.115 .094	Hi-Lift	Cam for bigger cubic inches. More torque and power for modified engines. 1600 to 5500 RPM.

(\*) Timing and duration listed for .053 cam lift (\*\*) Lobe centerline angle



## M8 Finned Black Spark Plug Cover Set

Fits FLT 17-on and replaces 25800061.

**45395**

## S&S M8 Camshaft

Fits M8 17-on

### Features:

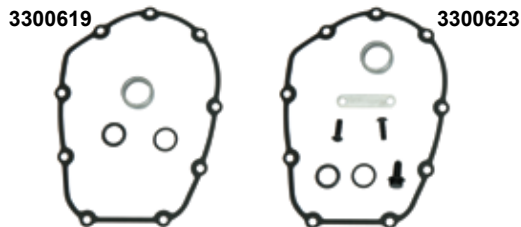
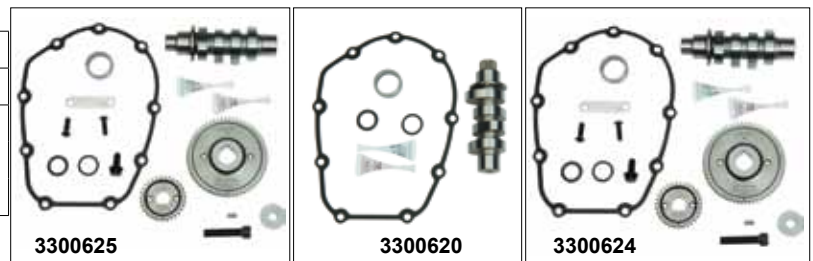
- Bolt-in, compatible with stock valve train components
- Gear drive cams provide improved valve timing accuracy
- Kits include required bearings, o-rings & hardware
- 350G Stock grind but eliminates cam drive chain & tensioner
- 465C/G Kits provide increased torque & horsepower



PCP#	Grind	Cylinder	Valve Timing		Valve Duration		Valve Lift		Lobe Centerline		Valve Lift@TDC	
			Int. Open BTDC/ Close ABDC	Exh. Open BBDC/ Close ATDC	Int.	Exh.	Int.	Exh.	Int.	Exh.	Int.	Exh.
<b>3300625</b>	350G	Both	-7.0/1.0	33.0/-14.0	174.0	199.0	.350	.374	94.0	113.5	.057	.048
<b>3300620</b> <b>3300624</b>	465C and 465G	Front	2.6/14.6	30.1/8.8	197.2	218.9	.462	.462	96.0	100.6	.087	.109
		Rear	2.8/14.4	33.1/5.8	197.2	218.9	.462	.462	95.8	103.6	.088	.098

### S&S Camshafts

PCP	Grind	Style	Years
<b>3300625</b>	350G (Stock)	Gear drive	M8 17-19
<b>3300620</b>	465C	Chain drive	
<b>3300624</b>	465G	Gear drive	



## S&S Cam Installation Kits

- Kits include parts needed to install a new cam in M8 engines
- Fits M8 17-19

PCP	Type	Years	Motor
<b>3300619</b>	Chain drive	17-19	Milwaukee-Eight
<b>3300623</b>	Gear drive		



## S&S Cam Drive Gear Kits

- Kits include cam drive gear & hardware
- Fits M8 17-19, BT 07-17 Dyna 06

**3300621**



## S&S Pinion Gear

- Use under/over size for proper gear lash

PCP	Teeth	Size	Motor
<b>3300622</b>	31	Standard	M-8 17-19 BT 07-17 FXD 06
<b>3300626</b>	31	Undersize	
<b>3300627</b>	31	Oversize	



## S&S Cam Cover Gasket

- Aluminum foamet material
- Fits M8 17-19

**3100911**

# M8



## S&S Cam Plate and Oil Pump Kits

Fits Touring 17-19 & Softail 18-19

Billet aluminum cam plate and oil pump with blue anodized finish. Plate features removable passage plugs for servicing and steel wear plate to protect from steel rotors. Oil pumps available as water-cooled or air-cooled. Pumps feature independent scavenge sections with debris screens for flywheel cavity and cam chest. There is a magnet in the cam chest to help prevent debris from entering the pump. Increased flow capacity on both feed and scavenge side. Adjustable pressure relief valve can be adjusted with unit in engine.



S&S Cam Plate and Oil Pump		
PCP	Item	Type
3100997	Kit	With water-cooled oil pump
3100998	Kit	With oil-cooled oil pump
3100939	Cam plate	
3100947	Oil pump	For Water-cooled
3100959	Oil pump	For Oil-cooled



**NEW ITEM  
COMING SOON**



## Fueling Cam Chains

Stock style replacement rollerchain.



PCP	Type	Links	Application	OEM
30204	Outer	22	M8 17-19 TC 07-17 Dyna 06 & Conversion camshafts	25675-06

## M8 HVHP Oil Pump

High volume, high pressure oil pump delivers 10% more oil flow than stock pump assembly. Fits FLT 17-on & FXST 18-on.

**30229** (62400178)





## S&S High Performance Tappets for Twin Cam

These tappets are standard equipment in the S&S complete 124" Twin Cam engine and are a good choice for any stock or high performance application. Set of 4.

**335350** M8 17-19 W/O HL2K

**335338** HL2T (hydraulic lifter limited travel spacers) 4 pcs



## S&S Premium High Performance Tappets

Intended for demanding street riders and racers. Close tolerances offer significantly lower leak down rates, constant quiet operation and stability at high RPMs. Features low mass silicon nitride check valve and lighter check ball spring for faster pump ups. Great for high lift cams and performance valve springs.

Set of 4. Fits M8 17-on

**3300174** Tappet set with HL2T spacer kit

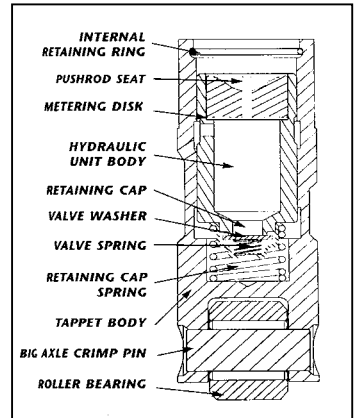
**3300175** Tappets set only, no spacer kit



## S&S Tappet Cuffs

Billet aluminum with hard anodized black coating. Eliminates distortion and improves stability in high lift and high RPM situations. Fits M8 Touring 17-19 and M8 Softail 18-19.

**3300655**



## Jims Twin Cam Powerglide II Tappet

- Big power, torque and increased spring weight
- Honed hydraulic cavity for reduced valve train noise.
- Billet body with premium hydraulic unit.
- Increased dynamic load capacities
- Increased lubrication capacities for hydraulic unit, top end, roller, cams, & cam bearings (increases cooling)

### PCP Fitment

**31641** M8 17-19 (STD O.D. .8420")

**31642** Oversize +.001

**31643** Oversize +.0015"

## Jims Powerglide Steady Roll Tappets

- Oil fed axle, billet steel body
  - Precision fit hydraulics
  - Steady Roll bronze bushing in place of the needle bearing roller
  - Failsafe against engine damage
- Use on M8 17-18 Sold each.

### PCP Size

**31143** STD (.8420" O.D.)

**31144** +.002"



## Feuling HP+ Hydraulic Lifters

- CNC machined, precision ground hydraulic roller lifter
- Use with Feuling oil pump or as OEM replacements
- Set of 4. Made in the USA.

PCP	Application	OEM
<b>30192</b>	M8	4000



## Sifton STD Hydraulic Tappet

Forged steel stock replacement for 18538-99. Fits M8 17-18

**30171** Each

**30196** 4 Pack



# M8



## M8 Quick Install Pushrod Set

One piece chrome moly pushrod is tapered at the cylinder head to accommodate higher lift cams. Threaded adjuster allows for easy cam installation without removing the cylinder heads or rocker boxes. Fits FLT 17-on. Set of 4.

30224



**NEW ITEM  
COMING SOON**

## M8 Pushrod Cover Kit

Includes clip, spring, cup, inner tube and titanium plated lower tube set. Fits FLT 17-on.

34103



## M8 Pushrod Set 17-on

American made chrome moly pushrods. Set of 4.

30200



## S&S Quickie Pushrods

- Save time on cam change-just cut stock pushrods & remove
- No disassembling rocker boxes or coolant lines
- Adjustable, chromoly steel reduces pushrod flex
- Compatible with all cams and tappets
- Kits include pushrods, chrome covers & keepers and o-rings

PCP	Item	Years	Motor
9300123	Kit	2017-on	Milwaukee-Eight
935122	Quickie pushrods		
9300129	Cover keeper set		



## S&S Black Quickie Pushrod Kits

- Stylish gloss black finish
- No disassembling top end or coolant lines
- Kits include pushrods, covers, o-rings & keepers

PCP	Item	Years	Motor
9300137	Kit	17-on	Milwaukee-Eight





## S&S M8 Cylinder & Piston Kit

- 107" to 125" Big Bore kit
- 114" to 128" Big Bore kit
- Bolt-on kit-no machining required
- Black with highlighted fins
- Kits include cylinders, forged piston kit, gaskets & hardware
- Fits M8 Touring 17-on and M8 Softail 18-on

PCP	Displacement	Bore	Stroke	C.R.
9100625	124"	4.250	4.375	11.1
9100684	128"	4.250	4.5	11.1

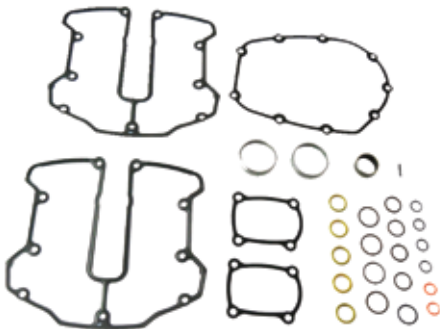


## S&S M8 Cylinders

- Black wrinkle with highlighted fins
- 4.250" Bore
- Fits M8 Touring 17-on and M8 Softail 18-on

**9100682** Cylinder set

**32095** KBW Dowel pin (4 pk)



## M8 Cam Service Gasket Kit

Fits FLT 17-on and FXST, FLST 18-on. Replaces 25700731.  
**25100**



## S&S M8 Valve Springs 17-on

- Works well with cams up to .605" lift
  - High performance conical single wire spring
  - Includes springs, top collars, keepers, valve seal/bottom collar
- 9000958**



## M8 Big Bore Black Cylinder Set

- Black cylinder set with machined edge fins
- Larger fins for increased cooling
- Increase bore size from 107" to 124", requires case boring
- 4.250" bore for 4.375" flywheels
- Requires separate purchase of Wiseco Piston kit

**34833** Cylinder set

**35849** Wiseco piston kit with Armor X coating



## Wiseco M8 Piston Kit with Cometic Gaskets

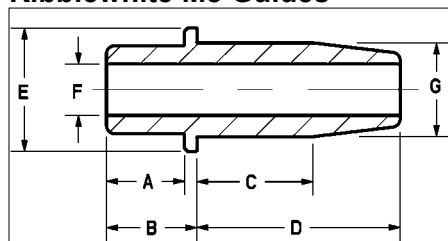
- Dished dome -9cc pistons with Armor-X coating
- 11:1 CR for use with 4.375" stock flywheel
- 107" bored to 2035cc = 124 cubic inches
- Requires recalibration and cylinder sleeving
- Fits M8 17-on.

**35849** VT2787



# M8 17-\*

## Kibblewhite M8 Guides



<b>A</b>	0.480"	<b>E</b>	0.600"
<b>B</b>	0.545"	<b>F</b>	0.2347"
<b>C</b>	0.540"	<b>G</b>	.4750"
<b>D</b>	1.110"		

M8 Intake-Guide (Std. 0.4750")			
C630 Bronze		Cast Iron	
PCP	Size	PCP	Size
<b>32376</b>	Std.	<b>32380</b>	Std.
<b>32377</b>	+0.001"	<b>32381</b>	+0.001"
<b>32378</b>	+0.002"	<b>32382</b>	+0.002"
<b>32379</b>	+0.010"	<b>32383</b>	+0.010"



<b>A</b>	0.480"	<b>E</b>	0.600"
<b>B</b>	0.545"	<b>F</b>	0.2342"
<b>C</b>	0.600"	<b>G</b>	.4750"
<b>D</b>	1.110"		

M8 Exhaust-Guide (Std. 0.4750")			
C630 Bronze		Cast Iron	
PCP	Size	PCP	Size
<b>32384</b>	Std.	<b>32388</b>	Std.
<b>32385</b>	+0.001"	<b>32389</b>	+0.001"
<b>32386</b>	+0.002"	<b>32390</b>	+0.002"
<b>32387</b>	+0.010"	<b>32391</b>	+0.010"



32340



32342

## Kibblewhite M8 Valve Spring Kits

### Ovate Wire Beehive Springs

Includes springs, retainers and basewashers.

PCP	Max Lift	Installed Ht.	Seat Pressure	Open Pressure	@ Lift	Retainers/Washers
<b>32340</b>	.465"	1.410"	80 lb.	212 lb.	.465"	Titanium
<b>32341</b>	.465"	1.410"	80 lb.	212 lb.	.465"	Steel

### High Lift Valve Spring Kit -Standard Springs

Includes springs and retainers.

<b>32342</b>	0.550"	1.550"	104 lb.	230 lb.	.550"	Titanium
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## Black Diamond Valves with Black Nitro-neg Stems M8 17-on

PCP	Type	Head Diam.	Stem Diam.	Tulip Radius/ Angle	OL	Remarks
<b>32371</b>	Int.	1.571"/39.90mm	0.2347"	0.235/10°	4.015"	Standard
<b>32372</b>	Int.	1.591"/40.40mm	0.2347"	0.235/10°	4.015"	Oversize
<b>32373</b>	Int.	1.630"/41.40mm	0.2347"	0.235/10°	4.055"	Oversize
<b>32374</b>	Exh.	1.284"/32.11mm	0.2342"	0.460/24°	4.050"	Standard
<b>32375</b>	Exh.	1.284"/32.61mm	0.2342"	0.460/24°	4.050"	Oversize

## White Diamond Inconel Oversize Exhaust Valves

PCP	Type	Head Diam.	Stem Diam.	Tulip Radius/ Angle	OL
<b>32343</b>	Exh.	1.284"/32.61mm	0.2342"	0.460/24°	4.050"



## M8 Valve Guide Reamer 32396



## M8 17 Tophat Valve Guide Seals

PCP	O.L.	Seal Ø	Stem Ø	UM
<b>32392</b>	.712"	1.170"	6.0mm	4 pk

## M8 17 Replacement Keeper Set •Triple radius bead

PCP	UM
<b>32393</b>	8 pack





## AV&V M8 Manganese Bronze Valve Guides

- Extreme duty, CNC machined, tapered & radiused nose
- Unfinished I.D.
- Hi-lift and high flow applications

Int.	Exh.	Size	O.D.	I.D.	O.A.L
31838	31840	Std	.4750"	5.9mm	1.655"
31839	31841	.001"	.4758"	5.9mm	1.655"



## AV&V M8 Valve Seals

- Stock replacement

PCP	Stem Ø	Seal Section O.D.
31842	6mm	.475"



## AV&V M8 Valve Spring Shims

Use shims to adjust spring pressure.

34076



## AV&V

- High silicon/vanadium Kobe alloy wire
- Includes beehive springs, retainers, valve lock & valve seals

PCP	Max Lift	Seat Pressure	Open Pressure	Coil Bind HT	Retainers/Washers
31843	.580"	75# @ 1.570"	250# @ .990"	.855"	Chromoly steel



## AV&V M8 Black Tulip Valves

- Heat treated, triple groove stainless steel alloy, high-flow valve
- 6mm stem, 1mm oversize valve

PCP	Type	Head Diam.	Stem Diam.	Tip Length	Tulip Angle	Remarks
31835	Int.	41mm	0.2351"	.093"	18°	AV4I
31836	Int.	41mm	0.2351"	.123"	18°	AV4I-030
31833	Exh.	33mm	0.2346"	.093"	21°	AV33
31834	Exh.	33mm	0.2346"	.123"	21°	AV33-030



## AV&V Solid Carbide Valve Guide Reamers

Ream to exact dimension without any taper or cross hatch. Self-centering reamers with long pilot for use with manganese bronze guides. Not for cast iron material. One size fits both intake and exhaust when using AV&V valves and guides.

PCP	Diameter	Application
34070	6mm	6mm stem valve, M8, V-Rod
34069	.2766"	7mm TC & XL
34071	.3110"	TC & Evo & XL
34072	.3115"	TC & Evo & XL
34073	.3120"	TC & Evo & XL
34074	.3777"	3/8" stem valve, Pan & Shovel
34075	.3782"	AV&V 3/8" stem valve, Pan & Shovel



# Twin Cam

## Twin Cam 99-06 Except Dyna 06

Andrews gear drive camshafts are available to run with S&S gear drives. Engines with gear driven cams show a 4 hp gain over cams with chains. If less power is needed to turn the camshafts, more power gets to the rear wheel. Also, gear drive cams do not have chain tensioner shoes to wear out. When deciding what cams to use in your 88 engine, the most important consideration is the proper match between compression ratio and intake cam duration. For best street performance, the static compression pressure should be around 175-180 PSI. Drag motors can handle still higher static pressures. Lower static pressure of 160 PSI are great for all around riding.



## Andrews Touring and Performance Cams

PCP#	Grind	Timing *	Duration		Valve Lift	Lift @ TDC	Spring	Application
			.053	.020				
Stock 88 Carburetors	(A)	-02/38 42/-03	216 219	255 259	.473 .474	.072 .110	Stock	Stock cam data listed for carbureted engine.
Stock 88 Injectors	(B)	02/34 42/-03	216 219	255 259	.473 .474	.087 .110	Stock	Stock cam data listed for fuel injected engine.
30072	21G	10/30 40/08	220 228	255 264	.498 .498	.134 .121	Stock	96" Bolt-in cam for 96" with stock CR. More torque for all around riding. 1700-4800 RPM
30073	26G	11/35 41/09	226 230	262 266	.490 .490	.138 .120	Stock	Bolt-in cams: 96-103" with stock CR. Great for two up touring. Big torque at mid RPM. 1800-5200 RPM
30074	37G	18/38 46/14	236 240	272 276	.510 .510	.174 .148	Stock	Hot street cams for 88" or 95". 80+ HP possible with well tuned 88", more with 95". Smooth idle, broad torque (2200-5600 RPM) 9.0 to 9.5 CR.
30075	44G	21/41 49/17	242 246		.495 .495	.182 .158	Stock	Smooth idle broad torque band. 80+ rear wheel HP. Same grind as TW37 but with gear drive. 2200-5800 RPM
30076	50G	20/48 54/18	248 252	283 287	.510 .510	.184 .168	Stock	Designed for easy installation in 95" motors with stock heads and 9.5 to 9.8 CR. 2400 to 6000 RPM.
30077	55G	22/46 52/20	248 252	283 292	.550 .550	.197 .181	Hi-Lift	Great cam for 95" with 9.8 to 10.2 CR. Max HP torque at mid and upper RPMs. 2600 to 6200 RPM
30078	60G	24/56 58/22	260 260	296 296	.560 .560	.205 .192	Hi-Lift	For well prepped 95-103" with 10.0 to 10.5 CR, 100+ HP is within reach. 2700-6500+ RPM
30079	59G	29/57 63/27	266 270	303 307	.590 .590	.238 .218	Hi-Lift	Great cam for 95-107+" with 10:2 CR or higher. Max torque and horsepower. 2700-6500+ RPM
30080	64G	30/62 66/30	272 276	307 312	.640 .640	.262 .232	Hi-Lift	Big cams for modified 96-120" motors running 10:2 CR or higher. Heads must be set for .700 lift. Ton 6500 RPM
(*) Timing and duration listed for .053 cam lift								

**Note: All Andrews cams for TC88 models require the additional purchase of Andrews sprockets**



### Inner Cam Bearing Tool

Four piece tool to safely install inner cam bearings to proper depth without damaging the bearings. Fits FXD 99-05 & 99-06 FLT, FLST and FXST  
26071



### Crankshaft Position Sensors

Installs in OE location. Each.

PCP	Application
29498	FLHT, FLHR, FLTR, FLHX 04-16 (32707-01B/C) FXD,FXDWG 06-17, XL 06-09 and 13-19 FXS, FXSB, FXSTFLS, FLST 01-17
29404	FLT, FLHT, FLHR, FLTR & FXD, FXDWG 00-03 (32798-00A/B)
29409	FLHT, FLHR, FLTR & FXD, FXDWG 99 (32497-99/A)
29410	FXST, FLST 00 (32707-00B)
29413	FXD,FXDWG 04-05 (32798-04C)
29414	XL 04-05 and 10-12 (32804-04B)
29422	V-Rod 02-17 (32313-01/A)

# Twin Cam



## Andrews Twin Cam 88 Chain Drive Cams for Twin Cam 99-06 Except Dyna 06

Want more power from your Twin Cam 88 engine? Andrews Products has proven cam grinds to get you there. More HP and torque for stock or modified engines is within easy reach. All cam grinds listed are designed for use with stock hydraulic lifters. For any bolt-in cam grind, EZ-install pushrods do not require removal of gas tanks or rocker boxes for installation.

Andrews Touring and Performance Cams Twin 88 99-06 (except Dyna 06)								
PCP#	Grind	Timing *	Duration		Valve Lift	Lift @ TDC	Spring	Application
			.053	.020				
<b>Stock 88 Carburetors</b>	(A)	-02/38 42/-03	216 219	255 259	.473 .474	.072 .110	Stock	Carbureted engine. Stock cam data listed for reference. Stock engine output is approximately 62 HP.
<b>Stock 88 Injectors</b>	(B)	02/34 42/-03	216 219	255 259	.473 .474	.087 .110	Stock	Fuel injected engine. Stock cam data listed for reference. Stock engine output is approximately 62 HP.
<b>288121</b>	TW21	10/30 40/08	220 228	255 264	.498 .498	.134 .121	Stock	Bolt-in cam. More torque for all around riding & heavy bikes and stock compression ratios and pistons. Similar to #23 cam for EV80. 1700-4800 RPM
<b>288126</b>	TW26a	11/35 41/09	226 230	262 266	.490 .490	.138 .112	Stock	Bolt-in cams: 88-95" and stock compression ratio. Great for two up touring, this cam will add torque and HP at lower and middle RPM ranges. 1700-4800 RPM
<b>288131</b>	TW31s	10/46 52/08	236 240	272 276	.510 .510	.131 .120	Stock	Great cam for motors with 95" and 9.8 to 10.2 CR. Lower TDC lift for easy installation. Similar to TW37 cam with different timing. 2400-5600 RPM
<b>288137</b>	TW37b	18/38 46/14	236 240	272 276	.510 .510	.174 .148	Stock	Hot street cams for 88" or 95". 80+ Rear wheel HP possible with well tuned 88", more with 95". Smooth idle, broad torque (2200-5600 RPM) 9.0 to 9.5 CR.
<b>288154</b>	TW54	16/42 43/15	238 238	273 273	.555 .555	.165 .158	Hi- Lift	Specially designed cam for 95"+ engines with CR up to 10:1. 2200-5600 RPM range
<b>288150</b>	TW50	20/48 54/18	248 252	283 287	.510 .510	.184 .168	Stock	Designed for easy installation in 95" motors with stock heads and 9.5 to 9.8 CR. 2400 to 6000 RPM.
<b>288155</b>	TW55	22/46 52/20	248 252	283 292	.550 .550	.197 .181	Hi- Lift	Great cams for 95" with 9.8 to 10.2 CR. Max HP and torque at mid and upper RPMs. 2600-6200 RPM.

(\*) Timing and duration listed for .053 cam lift



292188



292088

## Andrews Twin Cam Pushrods 99-on

EZ-install pushrods can be installed without removing gas tanks or rocker boxes. If you are installing bolt-in cams, this is a big plus!

PCP	Description
<b>292188</b>	EZ-install aluminum pushrods
<b>292088</b>	EZ-install chrome-moly pushrods

# Twin Cam



**Andrews TC Gear Drive Installation Kit 99-06**  
Gaskets and bearings for gear drive camshaft installation.  
**288901**



**Andrews Outer Drive Gear TC Cam Installation**  
This kit includes the crankshaft and cam drive gears for a gear drive installation. Both bolts for the gears are also included.TC 99-06  
**288903**



**Andrews TC 88 Rear Cam Sprocket Kit 99-06**  
All Andrews Twin 88 cam kits require a heat treated 34T rear cam drive sprocket that replaces OEM 25563-99. Sprockets are made from heat treated alloy steel and are longer than stock providing greater stability. Includes a full length 3/16 drive key and 3 spacer shims that allow the installed length of new sprocket to be the same as the original stock sprocket plus spacer.

PCP	Description
<b>288010</b>	Keyed 34T cam sprocket kit
<b>288015</b>	Splined 34T cam sprocket kit
<b>288020</b>	17T Crank sprocket kit



## S&S Cam Drive Gear Kits

- Kits include cam drive gear & hardware
  - Fits BT 07-17 & Dyna 06
- 3300621**



**Andrews Complete Drive Gear Cam Installation**  
Kit fits TC 99-06 and includes all 4 cam drive gears with installation bolts.  
**288905** Two inner cam drive gears only



## S&S Pinion Gear

- Use under/over size for proper gear lash

PCP	Teeth	Size	Motor
<b>3300622</b>	31	Standard	BT 07-17 FXD 06
<b>3300626</b>	31	Undersize	
<b>3300627</b>	31	Oversize	



# Twin Cam



## Twin Cam Bearings 00-06

### PCP Application

**15757** R/cam with inner race (8983)

**15758** R/S balance shaft bearing with retainer 00-06 TC "B" (8991)



## Twin Cam Hardware

### PCP Application

**11024** Retaining ring, 6 speed outer cam bearing 06-on (11461)

**11025** Retaining ring, main drive gear BT 06-on (10991)

**11673** Thrust washer, sprocket shaft TC 03-16 (8972)



## Jims Outer Cam Shaft Bearings TC 99-05

Fits FXD 99-05, and FXST, FLST, FLT 99-06.

**31105** 8990A

## Cam Drive Spacers

Fits TC FLT, FXST, FLST 99-06 & FXD 99-05. 5 pack.

### PCP Size

**11836** .350 (25562-99)

**11837** Set



## Andrews Gear Drive Installation Kit TC 07-on

Gasket and oil port cover plates are necessary to complete installation of gear drive cams. Camshafts for all Dyna 06 and all Twin Cam 07-on engines use needle bearings on inner journals, no ball bearings are used. Andrews installation kit includes 2 replacement bearings.

### PCP Description

**216901** Gear drive installation kit

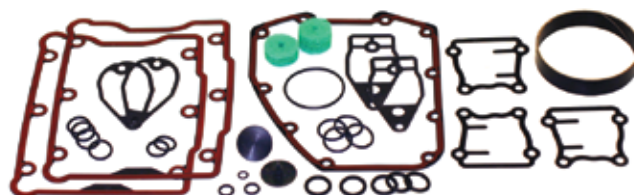


## TC Outer Cam Bearings 99-06

### PCP Application

**15746** Outer bearing TC 99-06, FXD 99-05 (8990A) (ea)

**15629** Torrington inner bearings (pair)



## James TC Quick Change Cam Kit

**79540** 99-on (25244-99-K)

## Cam Drive Sprocket Spacers

Fits BT 01. 5 pack.

### PCP Size

**11838** .327 (25717-00)

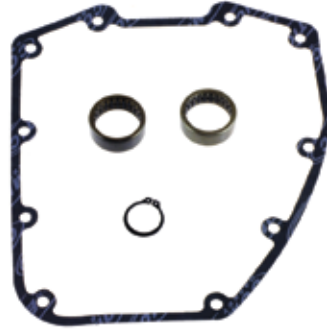
**11839** .317 (25719-00)

**11841** .287 (25722-00)

**11842** .297 (25723-00)



# Twin Cam



**216902** Installation kit with gasket & bearings

## Andrews Cams for all TC 2007-on & FXD 2006

Camshafts use roller chain cam drives. Camshafts made for 99-06 engines will not fit the 07-on (or '06 Dyna engines) as earlier twin cam engines run older type cam drive chains. Cams listed below are designed for use with stock H/D hydraulic lifters.

Crankshaft sprocket: +4 or -4 degree cam timing change for all 07-on TC engines and 2006 Dynaglides. Install at +4 degrees for more torque or -4 degrees for less compression pressure.

**216323** Crankshaft sprocket (+4 or -4 degree timing change)

## Andrews Camshafts for all TC 07-on Engines and Dyna 06

PCP#	Grind	Timing *	CL**	Duration		Valve Lift	Lift @ TDC	Spring	Application
				.053	.020				
<b>Stock 2006 Dyna</b>	Intake Exhaust	02/34 42/-03	106 112.5	216 219	256 259	.473 .474	.087 .110	Stock	Stock '06 Dyna cam data listed for reference. All 2006 Dynas are fuel injection only, no carburetors.
<b>Stock</b>	Intake Exhaust	-3.5/40 41/-1.5	107 112.5	216.5 219.5	256 259	.474 .474	.087 .110	Stock	Stock 2007-12 specs listed for reference. Short intake duration is stock on 2007-12 engines.
<b>216321</b>	21H	10/30 40/08	100 106	220 228	255 264	.498 .498	.134 .121	Stock	Bolt-in cams: 2007-13. More torque for all around riding & heavy bikes. Intended for stock compression ratios and pistons. Similar to #23 cam for EV80. 1700-4800 RPM
<b>216326</b>	26H	11/35 41/09	102 106	226 230	262 266	.490 .490	.138 .120	Stock	Bolt-in cams: 96"-103" and stock compression ratio. Great for two up touring. This cam will add torque and HP at lower and middle RPM ranges. 1800-5200 RPM
<b>216331</b>	31H	10/46 52/08	108 112	236 240	272 276	.510 .510	.131 .120	Stock	Great cam for motors with 96" and 9.8 to 10.2 CR. Lower TDC lift for easy installation. Similar to TW37 cam with timing set-up for higher compression. 2400-5600 RPM
<b>216337</b>	37H	18/38 46/14	100 106	236 240	272 276	.510 .510	.174 .148	Stock	Hot street cams for 96"-103". 90+ Rear wheel HP possible with well tuned 96", more with 103+". Smooth idle, broad torque (2200-5600 RPM) 9.0 to 9.5 CR.
<b>216344</b>	44H	21/41 49/17		242 246	279 283	.495 .495	.182 .158	Stock	For 88", 96", 103". 80+ Rear wheel HP possible with well tuned motors, more with 96". Smooth idle, broad torque. Stock to 9.5 CR. 2200-5600 RPM.
<b>216348</b>	48H	13/29 43/15	98 104	222 238	257 273	.548 .548	.153 .163	Stock	Broad tip cam for baggers with stock motors. Max torque at low and mid RPM. 2500-5500 RPM
<b>216350</b>	50H	20/48 54/18	104 108	248 252	283 287	.510 .510	.184 .168	Stock	Designed for easy installation in 96-103" motors w/stock heads and 9.5 to 9.8 CR. 2400-6000 RPM
<b>216355</b>	55H	22/46 52/20	102 106	248 252	283 292	.550 .550	.197 .181	Stock	Great cams for 96-103" engines with 9.8 to 10.2 CR. Max HP -torque at mid and upper RPMs. 2600-6200 RPM
<b>216357</b>	57H	18/38 46/14	100 106	236 240	270 274	.560 .560	.184 .153	Stock	Bolt-in broad tip cams: 96, 103 Limited and CVO 110 engines. Max torque: 2200-5600 RPM.
<b>216360</b>	60H	24/56 58/22	106 108	260 260	296 296	.560 .560	.205 .192	Stock	For well prepped 95-103" with 10.0 to 10.5 CR, 100+ HP is within reach 2700-6500+ RPM
<b>216367</b>	67H	24/48 58/22	102 108	252 260	287 297	.570 .570	.209 .187	Hi-Lift	Performance cams for 96-110+" with 10.0 to 10.8 CR and high flow head setup. 2600-6400+ RPM
(*) Timing and duration listed for .053 cam lift									
(**) Lobe Centerline angle									



# Twin Cam



## Crane Twin Cam 88 Cams 99-06 (except Dyna 06)

PCP	Application	Grind	Valve Lift Int./Exh.	Dur. @ .053" Adv. Dur.	
				Intake	Exhaust
34590	Max Hot Street, Modified. For modified engines. Higher comp 10.5:1-up, big bore kits, head mods., etc. Must use Crane V/springs, clearanced for .600" lift. Strong mid range torque w/upper RPM power. Must use perform. air filter and free-flow exhaust. Range: 2000 to 6200 RPM	HTC-304-2 (1-3004)	.600"/.600"	254 25/49	260 56/24

Note: All cams are for 1999-06 Twin Cam 88 engines. All cams are made for splined cam sprocket. Twin Cam 88 drive sprocket required for 1999 models, use Screaming Eagle No. 25446-99. Stock 2000-on models use stock cam gear. Also cam drive sprocket bolt No. 996 and washer No. 6294.

## Cam Kits for TC 07-on & Dyna 06

Get Crane's explosive dyno proven HP, torque RPM and reliability in five computer designed hydraulic cams. Available for mild street/cruising to race engine build-ups. Features lobe-to-lobe cam profile accuracy for off-idle torque to high RPM horsepower.



## Crane Camshafts for Twin Cam 07-on and Dyna 06

Grind	Application	Valve Lift Int./Exh.	Dur. @ .053" Adv. Dur.	
			Intake	Exhaust
<b>34631</b> 1-6001 HTC-310-2	<b>Moderate Street, Cruising</b> Bolt-in cam, Mild performance for Dynas, Softails or single riders. Stock compression ratio or up to 9.5:1. Best power with performance air cleaner and free flow exhaust. Uses stock valve springs. Range: 1500 to 5000 RPM.	.505"/.505" (.185"/.157")	236 20/36	242 47/15
<b>34632</b> 1-6002 HTC-316-2	<b>Street Performance, Some Engine Modifications</b> Bolt-in cam, OK with stock compression ratio but works best with up to 10.1:1. Best power with performance air cleaner and free flow exhaust. Uses stock valve springs. Range: 1800 to 5800 RPM.	.505"/.505" (.178"/.205")	242 19/43	252 48/24
<b>34635</b> 1-6005 HTC-296-2	<b>Hot Street Performance, Modified</b> For modified engines with 10.25:1-up compression, big bore kits, head mods, etc. Must use Crane valve springs, clearanced for .620" lift. Must use performance air cleaner and exhaust. Designed for use with Edelbrock Performer RPM Twin Cam cylinder heads. Range: 2000 to 6200 RPM.	.619"/.619" (.188"/.193")	246 20/46	254 52/22

# Twin Cam



## S&S TC Camshaft Installation Support Kit

Kit includes replacement gear cover gasket, inner and outer cam bearings and retainer ring for gear drive cams.

**335163** 99-06 (except 06 Dyna)

## S&S Twin Cam 88 Gear Drive Camshafts 99-06 (except Dyna 06)

These cams increase valve timing accuracy Twin Cam 99-06 engines by eliminating timing chain lash and the loosely fit stock cam gears. The chain, chain guides and tensioner are eliminated which negates the possibility of these parts failing and damaging other parts. The kit also reverses the rear cam's direction of rotation, providing additional operating clearance between cam lobes. Cam kit includes inner gears only. Outer cam drive gear kit must be ordered separately. Some modifications are required to the stock gear cover and crank case on .625" and .640" lift cams.

### S&S Gear Drive Cam Specifications

PCP	Series	Valve Timing Open/Close		Valve Duration Open/Close		Valve Lift	Centreline		Lift @ TDC	
		Intake	Exh.	Intake	Exh.		Intake	Exh.	Intake	Exh.
335166	570G	20/40	55/20	240	250	.570"	100.0	107.5	.187"	.179"
335168	585G	20/40	60/20	245	260	.585"	102.5	110.0	.186"	.176"
335170	625G	20/55	60/20	255	260	.625"	107.5	110.0	.189"	.184"
335172	640G	20/60	60/25	265	265	.640"	107.5	107.5	.228"	.221"
935095	Adjustable pushrod set									
935122	Quickee pushrod set									
Note:										
335166 is designed for 88-103 cubic inch engines with a compression ratio between 9:1 and 10:1										
335168 is designed for 88-95 cubic inch engines with compression ratios from 9.7:1 to 10.5:1										
335170 is designed for engines of 95 cubic inches or more with compression from 10:0 to 10.75:1										
335172 is designed for engines of 124 cubic inches with compression from 10.5:1 to 11.5:1										



## S&S Oil Passage Block-Off Kit

Block-off oil passages in cam plate when hydraulic cam chain tensioners are removed to install gear drive cams. Fits any cam plate designed for hydraulic tensioners.

**1065723**



## S&S TC Cam Gear Drive Kit

Includes front and rear inner cam gears, pinion gear and outer-cam gear. Fits BT 99-06 (not Dyna 06).

**334275**

## S&S Gear Drive Cams for BT 99-on Engines with Stock Oil Pumps

### Notes:

- Pinion shaft runout must be checked before installing S&S geardrive cams
- A hydraulic press and other professional tools are required to install S&S gear drive cams. Additionally, material must be removed from the inner surface of the stock gear cover. The stock crankcase will require clearancing for S&S .625", .640" and .675" lift cams. S&S recommends that gear drive cams be installed by a professional mechanic.
- New cam bearings and a new gear cover gasket are required to complete installation. Gear drive cams for 1999-06 models require the use of ball bearing style cam bearing, not stock roller bearing as they have more internal clearance which can cause excessive gear lash and increased noise. The correct parts are provided in S&S cam installation kit #335163.
- Due to the inherent characteristics of gear drives, you may experience more valve train noise with gear driven cams. Oversized and undersized gears are available to help achieve correct gear lash. With 160 lb of valve seat force, the S&S gear drive cams will perform well up to 6200 rpm. If higher rpm is anticipated, valve springs that provide higher seat force should be used.

### Which S&S Gear Drive Cam Kit to Order?

- If updating from the stock chain drive system, it is easiest to order a complete kit, which includes camshafts with inner gears, an outer cam drive gear kit and a camshaft installation kit which includes the S&S cam bearing retainer plate.
- If replacing cams in an engine already equipped with S&S gear drive cams, order a cam with inner gears and reuse the existing outer gears. Separate purchase of a camshaft installation kit for appropriate model year is recommended.
- If installing a gear drive cam set without inner gears from another cam manufacturer, cam drive gear kit for appropriate model year provides the inner cam gears as well as an outer cam drive gear kit. Separate purchase of a camshaft installation kit for appropriate model year is recommended.



## S&S Gear Drive Camshaft Kits for BT 99-on Engines - Meeting the Needs of High Performance Engines

The patented S&S gear drive cams are a must in order to achieve the full potential from high performance Harley-Davidson Twin Cam 88 engines. Since the chain drive system used in stock Twin Cam 88 engines is not adequate to accurately control valve action at high rpm when using high lift cams and high performance valve springs, a different system was needed. The S&S gear drive system was developed to improve performance and to eliminate potential engine damage caused by failure of the chain and tensioner system.

### Improved Timing, Accuracy and Less Drag

S&S gear drive camshaft kits improve valve timing accuracy by eliminating the timing chain lash as well as variations caused by the loose fitting stock cam drive sprockets. All stock chain drive components are replaced with S&S gear drive cams and outer drive gears. This simple, effective solution reduces power loss by eliminating chain drag, and allows more aggressive cam profiles and increased valve spring force to be used.

S&S Gear Drive Cams for BT 99-on Engines with Stock Oil Pumps				
Cam	Complete Kits		Cams with Inner Gears	
	99-06*	Dyna 06 TC 07-on	99-06*	Dyna 06 TC 07-on
475G (stock)	30600	N/A	30601	N/A
510C/510G	335177	335266	335174	335246
546G	335230	N/A	335236	N/A
570C/570G	335178	335267	335166	335247
585C/585G	335179	335268	335168	335248
625C/625G	335180	335269	335170	335249
640C/640G	335181	335270	335172	

Note: Complete kits include all parts needed for installation.  
 \*except 2006 Harley-Davidson Dyna Models  
 Although several cam grinds were used in stock engines from 1999-06, the timing specs for 475G cam is most similar to cams used in 1999-03 EFI engines.

## S&S Oversize and Undersize Replacement Gears

Due to machining variations in the stock complete, oversized or undersized gears may be needed to achieve correct gear lash.

### S&S Inner Cam Gears (Rear)

Oversize	Undersize	Fitment
73744*		TC 99-06 models except Dyna 06
73745	73747	Dyna 06 and BT 07

\*2.2461/2.2471 Over pin measurement using .125" pins  
 \*\* 2.2441/2.2451 Over pin measurement using .125" pins

### S&S Pinion Gears

These gears may help eliminate gear noise.

PCP	Description	Over Pin (using .125" pin)
73742	Pinion gear, oversize	2.1360 / 2.1369
73743	Pinion gear, undersize	2.1342 / 2.1351

# Twin Cam



## S&S Easy Start Cams

Start any Twin Cam engine regardless of displacement or compression, even those with a stock starter, without running down the battery. Available in chain or gear drive versions. Kits include cams, cam installation kit and gear drive kit, when required. Fully automatic, no buttons to push!

Twin Cam Easy Start Cams			
Years	07-on	07-on	99-06
Drive	Chain	Gear	Gear
Series			
551	30620	30635	30605
570			30606
583			30607
585	30623		30608
Note: 2006 Dyna uses 2007-on style cams			



## S&S 510 Chain Drive Camshaft Set for TC 88 Carb Models Only 99-06 (except Dyna 06)

Specifications:

	Lift	Duration	Open/Close	Centreline	TDC Lift
Int.	.510"	238	20/38	99	.187"
Exh.	.510"	252	52/20	106	.178"

Camshafts are intended for "hot street" applications-lighter motorcycles that can utilize significant power increases at 3000 RPM and above.

Recommend use of cam sprocket #288010.

**335182** Cam set only

**335175** Camshaft installation kit

## How It Works

- Each of the two exhaust cam lobes are equipped with a spring loaded compression release lobe on the "heel" of the cam at the point where the valve would normally be fully closed
- The lobe holds the exhaust valve open slightly at cranking speed. This releases some of the compression, making the engine much easier to crank.
- Once the engine starts, and RPM increases, the compression release lobe is centrifugally retracted and the engine runs normally, with full compression, and without any loss in performance. This allows a stock starter and battery to start nearly any engine

## Three Most Popular Grinds

Bolt-in cams were designed with a grind to provide low end torque for touring, a grind for maximum power and another for the best combination of torque and horsepower. Note: These cams were optimized for use with stock headpipes and performance slip-on mufflers.

### 551 Torque Cam

Optimized for a TC 07-on 96 to 106 CID touring bike with slip-on mufflers and a 9.0 to 10.0:1 compression. Not recommended for over 10:1 CR.

- Best bolt-in cam for Dressers
- Pulls hard from idle to 4000 RPM

### 583 Midrange Cam

Optimized for use as a great overall cam in the Softail, Dyna lines, but can be used in any TC 07-on model.

- Strong low end torque and horsepower you can feel
- Strongest from 1500-5000 in a Softail/Dyna application

### 585 Horsepower Cam

Optimized for a Softail 07-on or a Dyna 06-on 96 to 106 CID with slip-on mufflers, high flow air filter and 9.0 to 10.5:1 compression

- Great results from 3000-6000 RPM

S&S Chain and Gear Drive Specifications for TC 99-on									
Cam	Valve Timing Open/Close		Valve Duration		Valve Lift	Centreline		Lift @ TDC	
	Int.	Exh.	Int.	Exh.		Int.	Exh.	Int.	Exh.
551	15°/20°	39°/18°	215°	237°	.550"	92.5°	100.5°	.163"	.179"
583	8°/5°	60°/22°	204°	262°	.583"	92.5°	109°	.131"	.199"
585	20°/5°	60°/20°	245°	260°	.585"	102.5°	102.5°	.186"	.179"
Note: These specifications apply to all S&S chain and gear driven cams.									

Note: Stock valve springs in BT 99-04 models can handle cams with valve lifts as high as .515". Stock valve springs in 05-on engines can accomodate valve lifts up to .590".



## S&S Gear Drive Cams for TC 99-on Engines with Stock Oil Pumps

### Application Information for S&S BT Camshafts

S&S offers a variety of cam grinds for TC 99-on BT engines in chain drive and gear drive versions. Cams that exceed the limits of the stock valve springs require the use of special high lift springs. Most S&S cams have higher lift than stock and are designed to take advantage of the extra flow of ported stock heads or S&S Super Stock heads. Due to the high lift of these cams, S&S adjustable pushrods are recommended. Not all grinds are available in the chain drive version. To get the best performance from a performance cam installation, a high flow intake and exhaust system is also recommended.

### Easy Start Cams

These cams revolutionize the starting of late model Big Twins. Regardless of displacement or compression ratio, a stock starter and battery will now easily turn over any engine. These cams also install just as easily as non compression release versions and require no extra parts or machining. Available in cam and gear drive versions.

### How Easy Start Cams Work

At the heart of the Easy Start cam is a centrifugally retracted, spring loaded, compression lobe milled into the heel of each exhaust lobe. At cranking speeds, the lobe bumps the exhaust valve open slightly during the compression stroke, making the engine much easier to turn over. Once the engine fires and reaches 800 RPM, the lobe swings out of the tappet roller path, allowing the engine to run normally and with full compression.

### Note:

Stock valve springs in BT 99-04 models can handle cams with valve lifts as high as .515". Stock valve springs in 05-on engines can accommodate valve lifts up to .590".

### Recommended Application for S&S Cams

- **475:** Bolt-in replacement cam with stock cam timing. Use to eliminate the factory chain drive system, but are not necessarily looking for more power. Does not require tuning.
- **509:** Bolt-in high torque cam for 1999-06. 180 psi cranking compression, no need for compression releases. For 88" engines with stock CR. Idle-4500 RPM.
- **510:** Bolt-in cam for 88", 95", 96" engines with CR below 9.7:1. For stock heads that have not been ported. 3000-5500 RPM.
- **546:** Short duration emissions cam with very little overlap to reduce emissions. It is intended as a replacement for S&S emissions certified engines. Requires high lift springs and normal clearance checks. 1000-4000 RPM.
- **551:** For 96" to 106" engines with CR of 9:1 and 9:9. Bolt-in cam set for stock or mildly modified touring bikes. Not recommended for CR of 10:1 or greater. Greatly improves low-end to midrange torque, strongest from idle-4000 RPM.
- **570:** Designed for 88" to 103" engines with CR between 9:1 and 10:1. Provides nice power increase across the entire power band. 3200-5700 RPM. Excellent bolt-in for overall power on a 103".
- **583:** Optimal for use in the Softail/Dyna model lines. Provides horsepower and torque all through the RPM range, making the most power where you need it: 1500-5000 RPM.
- **585:** Designed for 88" to 95" engines with CR from 9.7:1 to 10.5:1 and 100" to 124" engines from 9:1 to 10:1 CR. Provides massive horsepower and torque increases starting at 3000 RPM and holds steady all the way to redline. 3500-6000 RPM for 88"-103" engines and 2500-5500 RPM for larger engines.
- **625:** Cam set designed for 95" or larger engine with CR between 10.0 and 10.75:1. 3000-6000 RPM.
- **640:** Used in S&S T124 engines, this cam makes horsepower! For 95" engines or more with CR between 10.5:1 and 11.5:1. 3000-6000 RPM.
- **675:** A high lift monster, this cam is designed for 120" or larger engines with at least 11:1 CR. 4500-6500 RPM.

**S&S Gear Drive Cam Specifications For TC 99-on**

Series	Valve Timing Open/Close		Valve Duration Open/Close		Valve Lift	Centreline		Lift @ TDC	
	Intake	Exh.	Intake	Exh.		Intake	Exh.	Intake	Exh.
475G (stock)	2/34	36/4	216	220	.475"	106	106	.060"	.060"
509	18/18	46/11	216	237	.509"	90	107.5	.174"	.140"
510	20/38	52/20	238	252	.510"	99	106	.187"	.178"
546	5/55	52/5	240	237	.546"	115	113.5	.126"	.106"
551**	17/19	41/17	216	238	.550"	91	102	.178"	.170"
570	20/40	55/20	240	255	.570"	100	107.5	.187"	.179"
583	5/18	58/24	203	262	.583"	96.5	107	.113"	.206"
585	20/45	60/20	245	260	.585"	102.5	110	.186"	.179"
625	20/55	60/20	255	260	.625"	107.5	110	.189"	.184"
640	25/60	65/25	265	270	.640"	107.5	110	.228"	.214"
675	25/64	70/25	269	275	.675"	109.5	112.5	.235"	.205"

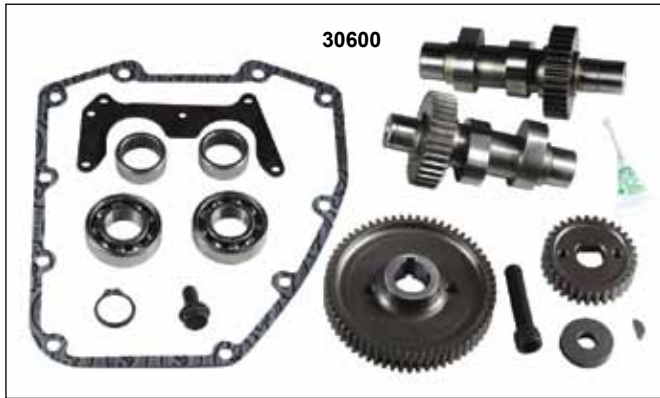
### Note:

\* Although several cam grinds were used in stock engines from 99-06, the timing specs of the 475G cam is most similar to cams used in 99-03 EFI engines.

\*\*551 Cams are not recommended with compression ratio of 10:1 or higher



# Twin Cam

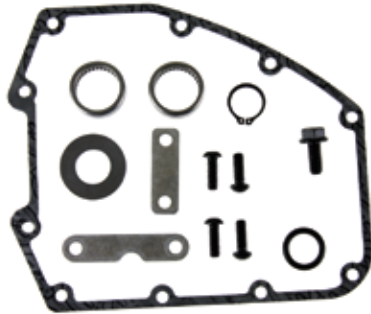


## S&S Stock Spec Gear Drive Cams for TC 99-06 BT...All You're Gaining is Piece of Mind!

Not everybody wants to go faster, but a lot of riders are concerned about the possibility of the stock cam chain drive in their Twin Cam 88 99-06 engine failing. The solution is to install a set of gear drive cams that has the same timing and lift specifications as the stock cam. Stock lift and timing allows bolt in installation. There is no need for carb jetting or EFI recalibration, and this stock lift cam set will not accelerate valve train wear like high lift cams do. Fits TC 99-06, except Dyna 06 models.

### Stock Spec Gear Drive Cams 99-06, Except Dyna 06

- 30600** 475G Cam kit  
**30601** Cams with inner gears only



### S&S Gear Drive Cam Installation Kit

Includes gearcover gasket, bearings, oil passage block-off kit, retaining ring, o-ring, thread-lock and instructions.

- Fits Dyna 2006 & all TC 07-16
- This kit is included in Easy Start Gear Drive Cam Kits

**1066068**



### S&S Inner Cam Drive Gears TC 07-on & Dyna 06

- | PCP           | Description          |
|---------------|----------------------|
| <b>334287</b> | Undersize inner gear |
| <b>334288</b> | Oversize inner gear  |



### S&S 640 Chain Drive Cam Kit

Kit includes cams and installation kit.

- Fits Dyna 06 and all TC 07-on
- Installs quickly, reusing many stock components
- Easy start cams allow stock starter to start any bike
- Fuel injection tuning is required

PCP	Cam	Type
<b>3300331</b>	635 H.O.	Easy Start
<b>1064399</b>	640	Standard
<b>1065235</b>	640	Easy Start



### S&S 635 H.O. Easy Start Gear Drive Cam Kit

Complete kit includes cam shafts with inner gears, outer cam drive gear kit and camshaft installation kit.

- Fits Dyna 06 and all TC 07-on
- Easy start cams allow stock starter to start any bike
- Improves valve timing accuracy
- No tensioner shoes to wear out or fail

**3300339**

# S&S TC "A" Style Crankcases

## Features:

- Greater overall strength than stock crankcases, especially in the front motor mount, important for high performance applications.
- Compatible with most stock components.
- Clearance for up to .675" lift cams & 5" strokes
- Includes pinion and Timken sprocket shaft bearing
- Crankcase breather reed valve eliminates oil carry-over and oil scavenging problems

## S&S Twin Cam Style Stock Replacement Crankcases

Fits TC 99-06 except Dyna 06. Kits include crankcase, breather reed valve, bearings and hardware.

Bore	Natural	Black	Stud Pattern
Stock	1064039	310172	Stock
4"	1064041	310175	Stock
4-1/8"	1064057	310181	Stock
4-1/8"	310107	-	Stock
4-1/8"		310178	S&S



## S&S Crankcase Breather Valve for Twin Cam

This valve helps to reduce crankcase pressure by reducing oil carry over problems. The use of this valve also can provide a slight increase in torque and horsepower through the midrange. Not available for Twin Cam 88B or Twin Cam 96B engines.

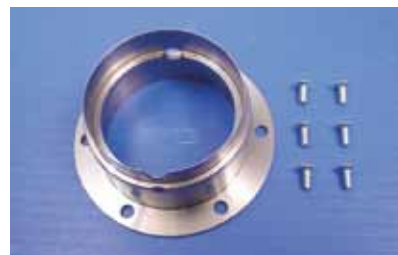
### For Engines with Stock Oil Pump

312070 99-02  
312071 03-10



### Engines with S&S Oil Pump

312093 99-02 stock crankcases  
3100742 07-on for all S&S "A" crankcases



## Timken Bearing Sleeve

Will convert TC-88 03-on models from a roller bearing to a Timken tapered bearing. Bearing sold separately. 73753

9955



9956



## BT Sprocket Shaft Spacers

PCP Years

11828 BT 98-99  
11829 BT 99-02



## Crankshaft Bushing TC 99-on

18613 25344-99 (each)



## Chrome Crank Sensor Cover

Includes mount screw.

44070 FLT 99-on & FXD 99-17,



## Complete Colony Motor Case Kits

Includes necessary hardware to bolt together the motor cases.

Allen	Acorn	Application
9956	9955	TC 99-on

# Twin Cam

## S&S T2 Crankcase Touring 07-16

Requires simple transmission case modifications. Looks like stock but is stronger due to thicker wall sections and aircraft grade aluminum construction. Features durable powder coat finish, reinforced front motor mount, Timken sprocket shaft bearing, pinion and Timken bearing and installed studs and cam bearing. Clearanced for strokes up to 4-13/16" and cams up to .720" lift. Installation requires additional purchase of S&S oil line kit. For easy installation S&S recommends the purchase of a transmission drilling fixture kit. Will not fit Dyna models.

### Wrinkled

Black	Silver	Bore	Bolt Pattern
3100367	3100366	Stock	Stock
3100369	3100368	4-1/8"	Stock

### Installation Kits

3100435	Oil line kit
5300006	Trans drilling fixture kit



## S&S 3 Piece Flywheel Assemblies 99-06

Fits BT 99-06 except Dyna 06 models-balanced or unbalanced. Hard, heat-treated material does not require thrustwashers. Larger 1.671" diameter crankpin for increased contact area and tighter press fit for a stronger joint. No welding required. Integral mainshafts, consistent balance and precision machining as well as reduced mainshaft deflection at high RPM result in less vibration, truer flywheels and higher possible RPMs. Compatible with gear drive cams.

Displacement	Stroke	Sprocket Bearing Race	Total Piston Weight	Pistons
88", 95", 97", 100"	4"	No	1230	Stock or S&S

### PCP TC 99-06 except Dyna 06 models

3200403 TC 88 99-02

3200397 TC 88B 00-06 w/o sprocket bearing

### Notes:

- Most S&S flywheel assemblies for 1999-16 BT engines are designed for use with Timken sprocket shaft bearings. They will fit directly in stock 1999-02 H-D crankcases and all S&S crankcases for 1999-15 BT engines with no modifications. However, stock 2003-later engines use a roller type bearing for the sprocket shaft. S&S does offer flywheel assemblies that are compatible with late roller style stock sprocket shaft bearings, but they are not recommended for very large, high performance engines.

- S&S Strongly recommends retrofitting 2003-15 model crankcases to accept a Timken sprocket shaft bearing. A Timken conversion sleeve, such as, OEM# 34822-08 or Jims # 956 may be used. A charging system spacer for 1999-02 model year is also required.

## Oil Seal Sprocket Shaft

14078 99-on (12068)



## Motor Sprocket Shaft Seal Spacer

Sold each.

PCP	Size	Fitment	OEM
18021	1.565"	With Timken bearing sleeve conversion FLHT, FLHX, FLHR, FLTR 08-14 Softail 07-15 Dyna 06-15	11887
18015	1.565"	FLHT, FLHX, FLHR, FLTR 08-16 Softail 07-16 Dyna 06-16	24009-06
18014	1.537"	FLT, FLHT, FLHX, FLHR, FLTR 03-07	24008-03
18022	1.096"	FLT 99-02	24008-99
18020	1.330"	Dyna 03-05	24038-03
18018	1.431"	Softail 03-06	24039-03
18017	0.983"	Softail 01-02	24039-01A
18019	0.890"	Softail 99-00, Dyna 99-02	24038-99





## S&S 106" Stock Bore Stroker for Twin Cam "A"

This S&S 4-1/2" stroke flywheel assembly with S&S 3-7/8" bore pistons for a displacement of 106 cubic inches. This is a perfect upgrade for standard Twin Cam 88 and 88B engines with internal balancers. Installation of the kit does not require any special machining, other than fitting the pistons. **This kit requires special 92-1210 forged S&S stroker pistons that must be purchased separately.** Stock 88" cylinders can be bored from 3-3/4" to 3-7/8" to accommodate the S&S pistons or prefit S&S cylinder and piston kits are available. Engines with factory 95" kits require piston fitting only. Stock or S&S cylinder heads can be used. Fuel injected engines will require remapping of the fuel injection systems. With stock H-D heads the compression ratio is 10.1:1, with S&S 89cc heads the compression ratio is 9.8:1. This kit includes assembled flywheels and piston oilers only. Engines with strokes over 4" may require S&S piston oiling jets and piston to jet clearance notches in the piston skirt to avoid contact. Maintains stock engine height.

Engine	Stroke	Bore	Cyl. Length	Application
106"	4-1/2"	3-7/8"	Stock (4.937")	Trips

### PCP Model (with stock bearing race)

3200459	TC 88A 99-06, except Dyna 06 (3-pc design)
3200453	TC 88B 00-06 except Dyna 06

### Piston Sets (3-7/8" Forged with Rings)

921210	STD
921214	.005
921211	.010
921212	.020

### Important Note:

S&S does not produce a set of flywheels that is a direct replacement for the 2003 and later Big Twin engines. Stock 2003-on engines use the same roller type bearing for the sprocket shaft that is used on the pinion shaft. However, S&S flywheels may be used in 2003-on engines with the installation of H-D bearing kit #24004-03A. These crankcases use a roller type bearing for the sprocket shaft. Verify that the bearing kit contains the 24604-00D or 24607-07 sprocket shaft bearing. Do **not** use #24604-00, 24604-00A, 24604-00B or 24604-00C bearing.



## Complete 88" Flywheel Assembly-(USA Made)

Shipped complete and assembled as pictured but trueness must be checked before assembly of motor.

**58053** 96" Softail Twin Cam B 07-on (23912-07)



## S&S TC Replacement Flywheel Assembly 03-16

- For use with stock style sprocket shaft bearings
- Strong, steel 3-piece flywheel with integral main shaft
- Features a larger 1.671" crankpin
- Fits directly into stock crankcases with no modifications
- To use a Timken sprocket shaft bearing, sprocket bearing race must be removed

TC A Motor	TC B Motor	Years	Motor	Stroke
3200402	3200396	03-06	88", 95", 100"	4"
3200352	3200358	07-16	96", 103", 110"	4-3/8"

## S&S TC Pinion Bearing

Fits Softails 01-02, balanced stock Twin Cam 88B 01-on engines, all TC 03-on stock engines and all Twin Cam style engines built with S&S crankcases. S&S does not recommend using this bearing in sprocket shaft applications in 03-on engines.

**314085**



## Bearing for Balance Shaft

BT 00-06 balanced motors.

**15765** Left side (8989)

**15758** Right side (8991)



# Twin Cam



## S&S Twin Cam Connecting Rods 99-06

Designed for use with S&S Twin Cam and Super Sidewinder Plus style flywheel assemblies. The set includes 1.500" diameter pressed in style crankpin, rod bearing assembly and front and rear connecting rods. .927 wrist pin, 7.668 long, with straight wrist pin ends.

**347405** For 5 piece flywheels



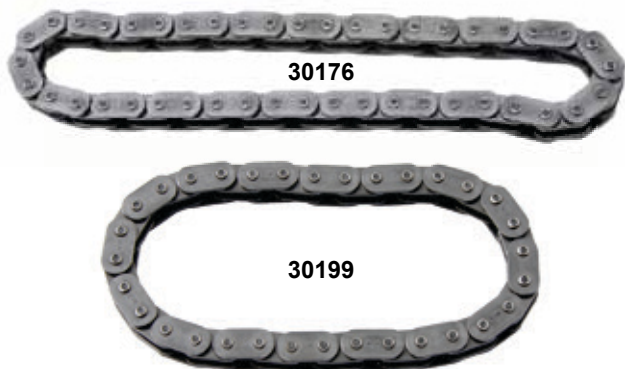
## Twin Cam Piston Pin Bushing

Twin Cam bushings are sold in pairs and have an O.D. of 1.020". Replaces 24316-99 on all Twin Cam models. Pair.

**18644** Preston

**31356** Jims

**32114** Kibblewhite 1.0190" o.d. piston pin bushings **do not** include oil holes, must be drilled after installation



## Stock Style Cam Drive Chains 07-on

Steel cam drive chain for FLT 07-16, Softail 07-17 FXD 06-17 & M8

**PCP** Item

**30176** Primary, outer, 22 link (25675-06)

**30204** Primary, outer, 22 link (25675-06) (Fueling)

**30199** Secondary, inner, 16 link (25683-06)

**30203** Secondary, inner, 16 link (25683-06) (Fueling)

## Twin Cam Rod Roller Kit

For three piece flywheels.

**15801** Sonnox

**3400072** S&S



## S&S Hydraulic Cam Chain Tensioner Kit

Fits TC 07-17 and 99-06 models with hydraulic cam plate upgrade.

**PCP** Application

**3300518** Kit

**3300519** Replacement inner cam chain tensioner

**3300520** Replacement outer chain tensioner

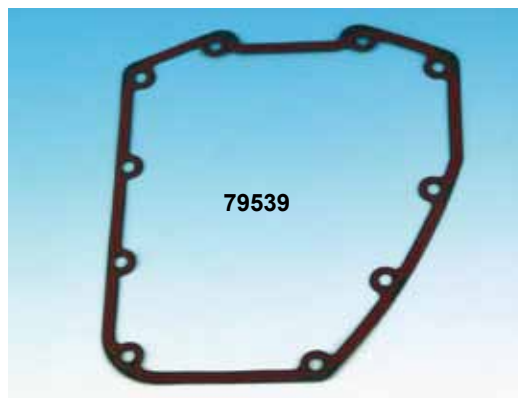
**3300521** Tensioner shoe



## Twin Cam B Tensioner Guards

For Twin Cam B motors 00-on. Replaces 14761-00.

**71008** 3 Piece set



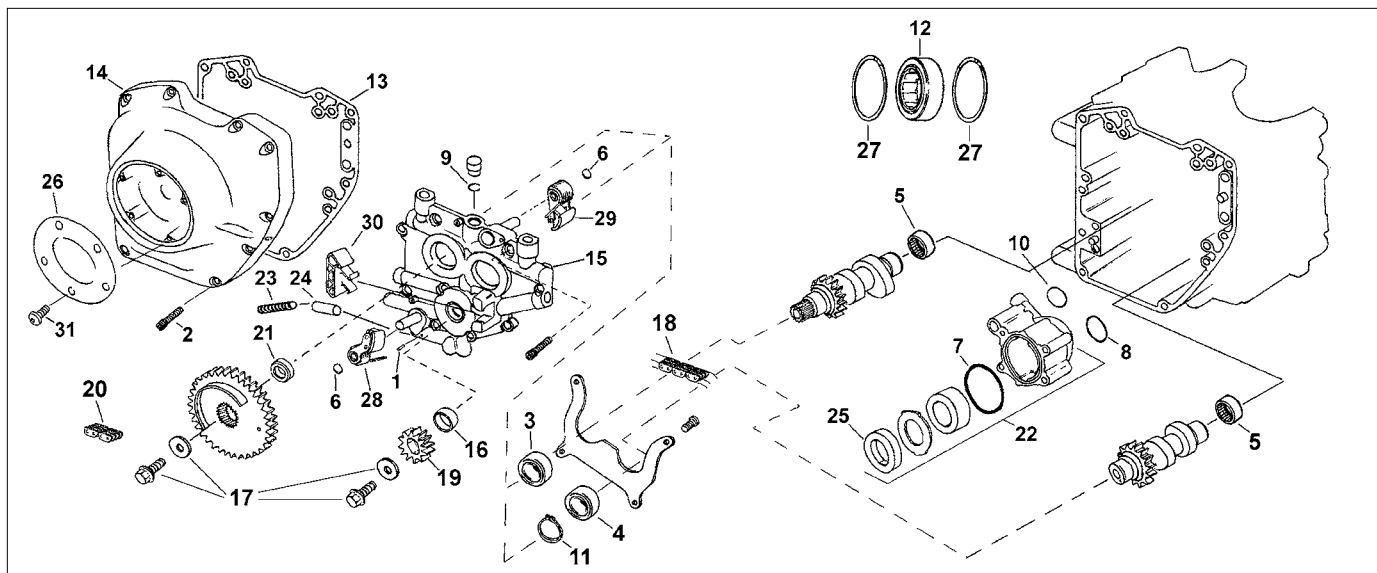
## James TC Cam Cover Gaskets 99-16

**PCP** Description

**79539** Gasket, .030 paper w/silicone (25244-99) (5 pk)

**79613** Foamet gasket with bead (25263-00-F)





	PCP	OEM	Description	Year	U/M
1	10103	601	Roll pin	99-05	10
2	9946	4740A	Chr/allen screws	99-*	kit
3	15757	8983	Outer cam bearing	99-05	ea
4	15746	8990A	Outer cam bearing	99-05	ea
5	15629	9198	Inner cam bearing	99-05	pair
	15634	9215	Inner cam bearing	06-on	ea
6	11016	11031	Retaining ring,	99-on	10
7	14587	11286	O-ring, oil pump	99-*	10
8	14591	11293	O-ring	99-*	10
9	14593	11298	O-ring, viton, plug	99-*	10
10	14594	11301	O-ring	99-*	10
11	11021	11494	Retaining ring	99-*	10
12	15747	24623-99C	R/S main bearing	1999	ea
	15520	24604-00C	R/S main bearing	00-06	ea
	15522	24605-07	R&L/S main bearing	03-on	ea
13	79539	25244-99	Gasket, cam cover	99-*	5 pk
	79540	25244-99	Quick change kit	99-*	kit
14	45336	25247-99	Chrome cam cover	99-00	ea
	45475	25369-01A	Chrome cam cover	01-14	ea
	30177	25369-01A	Black cam cover	01-14	ea
15	N/A	25267-99B	Cam support plate	99-05	ea
16	18613	25344-99	Bushing, crankshaft	99-*	ea
17	N/A	25533-99A	Sprocket retension	99-05	kit
	N/A	25566-06	Sprocket retension	06-*	kit

## Crankcase Main Bearing (see 12)

Assembled with correct spacer for proper end play. Two are required. Used on FXST, FLST 00-02 right side. FLT 03-on & FXD, FXST, FLST 03-17 right or left side. XL 04-on left side.

**15522** Sold each (24605-07)



## Twin Cam Drive Components

PCP	Application
30035	Primary cam chain tensioner 99-05 (39954-99)
30037	Secondary cam chain tensioner 99-05 (39964-99)

	PCP	OEM	Description	Year	U/M
18	29037	25607-99	Chain, secondary	99-06	ea
	30225	25607-99	Chain, secondary	99-06	ea
	30199	25683-06	Chain, secondary	07-on	ea
	30203	25683-06	Chain, secondary	07-on	ea
19	N/A	25609-99	Sprocket, 17T	99-05	ea
20	29038	25610-99	Chain, primary drive	99-05	ea
	30226	25610-99	Chain, primary drive	99-05	ea
	30176	25675-06	Chain, primary drive	07-on	ea
	30204	25675-06	Chain, primary drive	07-on	ea
21	N/A	25729-06	Cam drive spacer .100	06-*	ea
	11904	25738-06	As above .150	06-*	ea
22	71023	26035-99	Oil pump assembly	99-05	ea
	30039	26037-06	As above	07-*	ea
23	13010	26210-99	Relief valve spring	99-*	10
24	30113	26400-82B	Oil pump relief valve	99-*	ea
25	29155	26464-99	Pressure, geo-rotor	99-05	ea
26	45307	32679-99	Chrome sensor cover	99-*	ea
27	11111	35115-99	Retain/ring m/bearing	99-01	10
	11112	35114-02	As above	02-*	10
28	30035	39954-99	Prim/chain tensioner	99-05	ea
	30036	39968-06	Prim/chain tensioner	06-*	ea
29	30037	39964-99	Sec/chain tensioner	99-05	ea
	30038	39969-06	Sec/chain tensioner	06-*	ea
30	30175	39965-99	Chain guide	99-05	ea
31	9954	68042-99	Point cover screws	99-*	5

## Tappet Oil Screen

Includes 24983-00 screen and 11301 o-ring for Softail 00-on.

**72284**



## Cam Drive Components 06-on

PCP	Application
30038	Secondary drive chain tensioner (39969-06)

# Twin Cam



## S&S TC3 Oil Pump

Three stages for constant pressure and scavenging. Separate scavenge sections for flywheel and cam chest. Screens and traps help protect scavenge rotors from debris. S&S 99-06 oil pumps are not compatible with S&S 1999-06 cam support plates. All S&S TC3 cam support plates are machined for S&S 2007-on style oil pumps.

### PCP Application

- 3100640** BT 99-06 with gear drive cams, except Dyna 06  
**3100641** BT 07-17 & Dyna 06

30039



## Sifton Twin Cam Super Oil Pump

Utilizes an oversized highly efficient geo rotor design. Provides increased pump volume and more scavenging volume. High volume pump bolts into the stock location and includes o-rings and mounting hardware.

### PCP Application

- 21855** BT 96-06 except FXD 06  
**30039** FLT 07-17, FLST, FXST 07-17 & FXD 06-17



## Daytona High Performance Oil Pumps

High volume, high pressure pumps feature a 53mm trochoid rotor to offer tremendous scavenge volume and pressure, even at low RPMs. Includes a cam support adaptor to use with stock cam plate.

### PCP Application

- 71023** TC 99-06  
**71024** TC 07-17 and Dyna 06

30194



30195



## Feuling OE+ Oil Pump

- 6061 billet aluminum with 2" high flow chromoly gerotor gears
- Increase oil pressure and scavenge return volume
- Made in the USA.

PCP	Application	OEM
<b>30194</b>	TC 07-17 and Dyna 06	7030
<b>30195</b>	TC 99-06 (except '06 Dyna)	7010

## TC-88 Oil Bypass Shim

Machined shim assures proper spring pre load improving oil pressure and volume.

**73606**



## TC-88 Oil Pump Alignment Tool

Tapered tool threads into the oil pump and aligns the pump to the cam plate. Use on all TC and Evo engines.

**5894**



## TC-88 Chain Shoe Tool

Used to remove and replace the spring loaded cam chain tensioners. Fits FL 99-16 and FXST, FLST 00-17.

**26082**

# Twin Cam



## S&S TC3 Cam Plate

CNC machined, forged aluminum plate with adjustable oil pressure regulator, removable passage plugs and bronze bushings. Unless running gear drive cams, hydraulic tensioners and 2007-on style oil pump is required. **Not compatible with stock spring-loaded tensioners or stock 99-06 oil pumps.**

### PCP Application

- 3100623** TC 99-06 with gear drive cams (except Dyna 06)  
**3100625** TC 07-17 & Dyna 06

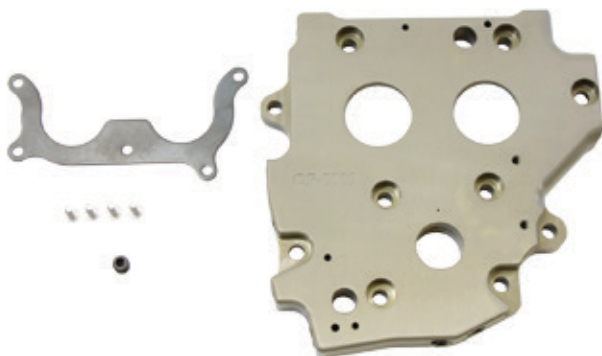


45336

## Twin Cam Chrome Cam Cover

### PCP Application

- 45336** FLT, FXD 99-00 & FXST 2000 (25247-99)  
**45475** FLT 01-16, Softail & FXD 01-on (25369-01A)  
**30177** Black powder coat FLT 01-16 FXST, FXD 01-on  
**9945** Acorn screw washer kit  
**9946** Chrome knurled allen screw kit  
**24470** Chrome polished allen screw kit



## Twin Cam Outer Cam Support Plate

Twin Cam heavy-duty billet cam plate with enlarged oil passages for improved oil flow. Hard anodized billet aluminum finish offers strength and stability under high temperatures.

### PCP Application

- 30178** FLT, FLST, FXST 99-06 & FXD 99-05  
**30179** FLT 07-16, FLST, FXST 07-on & FXD 06-on



## Chrome Cam Covers

Form fitting chrome steel covers fit over stock cam cases. No need to remove cam case or disturb cams or gears. Covers are held in place by existing screws.

- 45411** BT 00-on



## Fueling Hydraulic Cam Chain Tensioner

Fits TC 07-17 & Dyna 06.

### PCP Application

- 30197** Outer tensioner  
**30198** Inner tensioner  
**30202** Replacement tensioner pads



## S&S Billet Twin Cam Style Gear Covers 99-17

Machined aluminum billet gear covers match the gear covers supplied in the S&S TC style oil pumps. **Note:** S&S billet gear covers are not compatible with 99-01 EFI model engines which require a cam position sensor in the gear cover. For 88/95/103".

- 316516** Polished  
**1063774** Chromed



# Twin Cam



44068



44134



44135



44138



45307



45416



45416 Installed



45726



59187



45412



21065

## 5 Hole Ignition Timing Covers for Twin Cam Models 99-on

PCP	Design	Finish
44068	Raised skull with black eyes	Black with chrome skull
44134	Modern Skull	Chrome with raised black skull
44135	Pirate skull	Black with chrome border and skull
44138	Skull with chain	Chrome with horizontal holes
45062	LTR-Eagle Spirit	Chrome
45307	Plain, smooth (32679-99)	Chrome
45416	Raised Skull with black eyes	Chrome
45726	Red Baron-double edge	Chrome
59187	Maltese Cross	Chrome
45412	Raised Maltese Cross	Chrome
21065	Airflow	Black



## TC Chrome Timer Cover Screws

Acorn	Button	Application
9953	9954	TC 99-on



## Black Cam Cover Without Sensor Hole

- Black powder coated finish
  - Replaces 25369-01A on FLT, FXST, FLST, FXD 01-14
- 30177

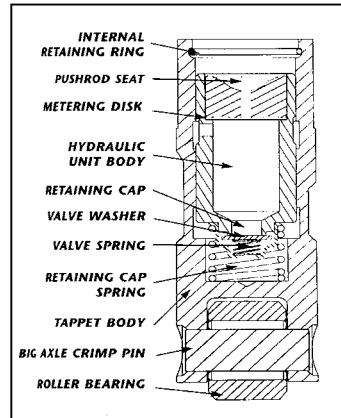
## Chrome Cam Cover Allen Style

- PCP Application  
9946 TC 88, Dyna, FLT 99-on (20 pcs)





# Twin Cam



## Jims Twin Cam Powerglide II Tappet

- Big power, torque and increased spring weight
- Honed hydraulic cavity for reduced valve train noise.
- Billet body with premium hydraulic unit.
- Increased dynamic load capacities
- Increased lubrication capacities for hydraulic unit, top end, roller, cams, & cam bearings (increases cooling)

### PCP Fitment

<b>31641</b>	TC 99-18 (STD O.D. .8420")
<b>31642</b>	Oversize +.001
<b>31643</b>	Oversize +.0015"



## Feuling HP+ Hydraulic Lifters

- CNC machined, precision ground hydraulic roller lifter
- Use with Feuling oil pump or as OEM replacements
- Set of 4. Made in the USA.

PCP	Application	OEM
<b>30192</b>	TC 99-18	4000



## Jims Powerglide Steady Roll Tappets

Features oil fed axle, billet steel body and precision fit hydraulics. Incorporates a Steady Roll bronze bushing in place of the needle bearing roller providing a failsafe against engine damage even if the bushing wears out. Use on Twin Cam 99-18 Sold each.

### PCP Size

<b>31143</b>	STD (.8420" O.D.)
<b>31144</b>	+.002"

## S&S High Performance Tappets for Twin Cam

These tappets are standard equipment in the S&S complete 124" Twin Cam engine and are a good choice for any stock or high performance application. Set of 4.

**335350** Twin Cam 99-18 without HL2K

**335338** HL2T (hydraulic lifter limited travel spacers) 4 pcs



## S&S Premium High Performance Tappets

Intended for demanding street riders and racers. Close tolerances offer significantly lower leak down rates, constant quiet operation and stability at high RPMs. Features low mass silicon nitride check valve and lighter check ball spring for faster pump ups. Great for high lift cams and performance valve springs. Set of 4. Fits BT 99-18

**3300174** Tappet set with HL2T spacer kit

**3300175** Tappets set only, no spacer kit



## Sifton STD Hydraulic Tappet

- Forged steel stock replacement tappet for 18538-99
- Precision ground O.D. & accurate pin and roller
- Fits FLT, FLST, FXD, FXST 99-18

**30171** Each

**30196** 4 Pack

# S&S TC Cylinder Kits



## S&S TC 95"/106" 99-06 with 3-7/8" Cylinders

- Cylinder kits include cylinders, fitted piston kit, head, base and exhaust gaskets.
- Can be used as stock replacement
- Stock-like fin profile with thicker casting in critical areas
- Requires no crankcase machining to install

**Cylinder sets without pistons are bored slightly under nominal size and are not honed. Hone to  $\pm 0.0001$ " for correct clearance when installing S&S pistons.**

S&S 3-7/8" Bore Cylinder Specifications					
Displacement	Stroke	Length	Compression Ratio		
			Stock	89CC S&S	79cc S&S
95"	4"	4.937"	9.7:1	9.3:1	10.3:1
106" Stroker	4-1/2"	4.937"	10.1:1	9.8:1	10.8:1

Silver	Black	Description
9100207	9100208	Cylinders only
9100200	9100204	95" Cylinders and pistons
9100199	9100203	106" Cylinders and pistons



## 92-1200 Series Pistons for 95" Hot Set Up Kits

- Pistons have a 5.3cc pop up dome
- Compatible with stock or S&S Super Stock heads
- Enlarged valve pocket recesses for oversize valves & higher lift cams

Kits include set of pistons, rings, wristpins and clips.

95"	Moly	106"	
Pistons	Rings	Pistons	Size
921200	941290	921210	Standard
921204	941294	921214	+ .005
921201	941291	921211	+ .010
921202	941292	921212	+ .020

Pistons work with 4" Stroke flywheels in 88" engines to produce 95 cubic inches



## Replacement Pistons for 106" Hot Set Up Kits

All piston kits include rings, wristpins and clips.

Piston Kits	Forged	Moly Rings
Standard	921210	941295 (3.875")
+ .005	921214	941299
+ .010	921211	941296
+ .020	921212	941297



## S&S 117" Big Bore Kits TC 07-16

Fits BT 0716 (Twin-Cooled models require 900-0609 head gaskets).

- Includes cylinders, fitted piston kit, head & base gaskets.
- Large displacement increase
- Stock-like fin profile
- ArmorGlide coated pistons are the same weight as stock TC 96/103 so does not require balancing

## S&S 117" Big Bore Cylinder Specifications

Displacement	Stroke	Cylinder Length
117"	4-3/8"	4.878"

	Piston	Compression Ratio			
		91cc Super Stock Heads	89cc Super Stock Heads	95cc Super Stock Heads	83cc CNC Ported Stock Heads
117"	Flat	10.4:1	10.5:1	10.9:1	11.2:1
117" LC	Dished	9.5:1	9.7:1	10.0:1	10.3:1

Silver	Black	Piston	Engine Type
9100213	9100221	Flat	117" Standard compression
9100321	9100318	Dished	117" Low compression
9000609			Head gaskets for Twin-Cooled models

# S&S TC Cylinder Kits



## S&S 4-1/8" Bore Twin Cam Style Cylinders and 92-1556 Series Pistons for 99-06 124" Engines

The 92-1566 series pistons are 4-1/8" bore pistons originally designed for the S&S Super Sidewinder Plus V2 style engine, may also be used in 4-1/8" bore Twin Cam style cases.

Displacement: 124"	Stroke: 4-5/8"
Bore: 4-1/8"	Cylinder Length: 5.013"
Compression for Stock heads: 10.8:1	
Recommended piston fit for forged pistons:	
Close: .0020" - .0025"	
Loose: .0032" - .0045"	
Piston deck height: 1.050"	

### Cylinders

Cylinder with piston kits include cylinders, piston kit, head gaskets, base gaskets and exhaust gaskets. These cylinders are designed to be used with the S&S 4-1/8" bore Twin Cam style crankcase. This crankcase has a 6" cylinder deck height.

Item	Silver	Black
Cylinders with pistons	9100215	9100223

### Replacement Piston Kits For S&S 89cc/91cc (Flat Top)

All piston kits include rings, wristpins and clips.

Piston Kits	Forged	Moly Rings
Standard	921556	941400 (4.125")
+.010	1063872	941401
+.020	1063964	941402



## S&S 106" Big Bore Kits for TC 07-on

Use these kits for an easy way to get more displacement without rebalancing flywheels or boring the crankcases. Cylinders can be swapped out without boring or splitting the cases. S&S suggests that these 3.927" bore cylinders have the largest bore that can be safely used with stock spigot diameter. S&S cylinders are made from a strong material that performs better than stock cylinders and S&S does not recommend boring stock cylinders to fit the 3.927" pistons.

This kit yields excellent results with stock cylinder heads, but a performance cam is recommended to get the best performance and to make the engine easier to turn over and start-up. However, for the best performance and easiest starting, S&S recommends S&S cylinder heads which provide increased head flow and increased power. Additionally S&S heads are machined to accept S&S electric or manual compression releases for easy, reliable starting.

For most applications S&S recommends the S&S single bore EFI throttle body with a teardrop air cleaner or tuned induction. 2008-on Touring models will need to use the stock intake or Screamin' Eagle® 58mm throttle body and race tuner or Pro EFI Super Tuner.

### Features:

- 106" Displacement
- 4-3/8" Stroke
- 3.927" Bore
- 10:1 CR using stock heads
- 9.7:1 CR using S&S 89cc heads
- Forged flat top pistons
- Choice of silver or black wrinkle powdercoat to match stock

### Kit Finish

9100202	Silver cylinders & standard pistons
9100206	Black powdercoat cylinders & standard pistons
1063690	Std forged pistons & rings (3.927" bore)
1064416	+.010 forged pistons & rings



## S&S Special Piston Cooling Jet Kit

TC engines with strokes greater than stock, require piston cooling jets to avoid contact with pistons at the bottom of the stroke. S&S jets provide an extra .150" of clearance compared with stock jets. Jets are included in the S&S 107" and 116" TC Style Sidewinder kits, Hot Set Up kits & S&S Super Sidewinder Plus Long Block Engines.

**312026** Kits include two jets, o-rings & screws



# TC Cylinder Kits



## 95" Big Bore TC Cylinder & Piston Kit 00-06

Kit includes silver colour cylinders with prefitted 9.3:1 cast pistons and Hastings rings. Convert a TC 88 (1450) to 95" (1550). Can also be used to convert a TC 96 (1584) to 103" (1690) when using stock flywheels. Cylinders do not require crankcase machining and are finished honed.

53183



## VT 107" TC-88 Big Bore Cylinder Kit 00-06

Requires case machining and includes a forged 10.5:1 piston kit. Black highlighted cylinders.

PCP	Item
34804	Black Kit
35578	Piston Kit
35579	Replacement ring set for 1 piston only
25408	Top end gasket kit



## VT TC-88 to 95" Big Bore Kits 00-06

Cylinder sets will increase TC-88 engines to 95 cubic inches (1450 to 1550cc). Can also be used with TC-96 to produce 103 cubic inches (1584 to 1690cc) with stock flywheels. No crankcase machining required for installation and are finished honed

Black	Silver	CR	Type
53072	34837	10.25:1	Cast
34836	34838	9:1	Forged
53183	-	9.3:	Cast
34839		9.3:1	Cast with chromoly coating



# TC Cylinder Kits



## S&S 103" 3-7/8" Cylinder Set TC 07-15

- Can be used as stock replacement
- Stock-like fin profile with thicker casting in critical areas
- Requires no crankcase machining to install

**Cylinder sets without pistons are bored slightly under nominal size and are not honed. Hone to  $\pm 0.0001$ " for correct clearance when installing S&S pistons.**

### S&S 3-7/8" Bore Cylinder Specifications

Displacement	Stroke	Length	Compression Ratio		
			Stock	89CC S&S	79cc S&S
103"	4-3/8"	4.937"	10.1:1	9.8:1	10.8:1

**Silver      Black      Description**  
**9100207   9100208   Cylinder set**



## S&S 3-7/8" Bore Forged Piston Kits for 103" Engines 07-17

- Forged and coated pistons with 5cc pop up dome
- Compatible with stock or S&S Super Stock heads
- Enlarged valve pocket recesses for oversize valves and higher lift cams

Kits include set of pistons, rings, wristpins and clips.

**PCP      Size**  
**1060432   Standard**  
**1060433   +.005**  
**1060434   +.010**



## 110" 4" Big Bore TC Cylinder & Piston Kit

Convert 96" or 103" to full 110" without removing the engine from the chassis. Cylinder slips into existing case without modification. Increases the internal bore from 3-7/8" to 4" without increasing O.D. of cylinder spigot. Adds 7 cubic inches of displacement for more torque through the RPM range. Kit includes cylinder set, system matched pistons with rings and top end gasket kit. Finished honed size of cylinder is 4.005". Fits FLT 07-16 and FLST, FXST, FXD 07-17.

**53184   Kit**  
**34825   Cylinder only**



## VT TC 2007-10 Cylinder & Piston Kit

Upgrade stock TC-96 to 103 cubic inches. Includes two black cylinders honed for final fitment with 10:1 CR Wiseco reverse domed pistons. Order gaskets separately. For FLT, Softail and FXD 07-10.

**34843**



## Twin Cam Replacement Cylinders-Sold Each

- Black finish with machined fins
- Stock replacement for use with stock stroke flywheel
- TC FLT, FXST, FLST, FXD 99-17

**PCP      Engine      Bore**  
**34808   96" TC      3.750" (17458-07A)**  
**34832   103" TC      3.875" (17460-07A)**

# Twin Cam



## Twin Cam Replacement Pistons

- Cast aluminum alloy construction with coating for long life
- OEM quality, ideal stock replacement
- Sold as a two pistons, wrist pins and clips
- Accepts Hastings rings (order separately)

96" TC 07-13 Pistons with 9.2:1 ratio.

PCP Size Hastings Rings (2M-4805)

35618	STD	35279
35619	+.005	35280
35620	+.010	35281
35621	+.020	



103" TC 07-15 Pistons with 9.6:1 ratio and 3.875" bore.

PCP Size Hastings Rings (2M-4941)

35622	STD	35275
35623	+.005	35276
35624	+.010	35277



## VT 103" TC-96 Cylinder Kits for FLT 99-16 & Sotail, FXD 99-17

Includes 9:1 or 10:1 Wiseco forged piston kit fitted to cylinder.

Black Silver CR

34845 34801 9:1

25407 - Gasket kit



## Twin Cam Hastings Piston Ring Sets- Moly

Twin Cam rings are sold in sets to do 2 pistons (1 engine).

Moly Ring Size	Engine Type		
	88" TC	95" BB TC	96" TC 07-on (1584cc)
STD	35271	35275	35279
.005	35272	35276	35280
.010	35273	35277	35281
.020	35274	35278	



## Piston Service Components

- 11056** Lock ring (22097-99) (10 pk)
- 32357** Piston pin (22132-99) (each)
- 18644** Preston's piston pin bushing (24316-99) (pair)
- 18645** Preston's piston pin bushing +.002 (24316-99) (pair)
- 31356** Jims piston pin bushing (24316-99) (pair)
- 32114** Kibblewhite piston pin bushings (24316-99) (pair)  
1.0190" o.d. Bushing does not include oil holes, Must be drilled after installation



## Twin Cam Cylinder Studs 99-17

- 312340** S&S (8 pk)
- 312325** S&S (each)
- 72083** Colony (16834-99) (8 pk)
- 32346** Kibblewhite (8 pk)

# Twin Cam



35896

## Wiseco TC Flat Top BB Piston Kit 1550CC 99-06

Includes forged pistons with Armour Glide coated skirt, rings, circlips, Cometic top end gasket kit and chrome piston pins. **Recalibration is required when these kits are used. Cylinder boring and honing is required.**

### 9:1 CR Flat Top Big Bore Piston Kits -95 cubic inch

K	Displ.	Bore	Stroke	Rings	Wiseco
35896	1550cc	STD/3.875"	4.000"	Top: .047" 2nd: .047" Oil: .079"	VT2719
35897		+.005/3.880"			VT2720
35898		+.010/3.885			VT2721
35929	Cometic gasket kit				



35880

## Wiseco TC 88 BB Piston Kit to 95" 10.5:1 99-06

Screaming Eagle ignition module recommended, 95 cu in. cylinders required, for carb models only. Cometic gasket included with these kits.

**This kit requires cylinder boring and recalibration.**

### 10.5:1 CR TC Big Bore Piston Kits -95 cubic inch

K	Bore	Stroke	Rings	Wiseco
35880	STD	4.000"	Top: .047" 2nd: .047"	VT2709
35881	+.005		Oil: .079"	VT2710
35929	Cometic gasket kit			



## Wiseco TC88 Standard Bore Piston Kit

Piston kit fits 1999-06 88 cubic inch models and offers 10.5:1 compression, 4.000" stroke and 1448cc. Includes forged pistons with Armour Glide, VM rings, circlips, and chrome piston pins.

PCP	Bore
35990	STD 3.750" (K2726)
35995	Cometic gasket kit



35926

## Wiseco 103" 1691cc BB Piston Kits 99-15

Fits TC88 99-06 w/4-3/8" stroke crank, TC96 07-14, TC103 12-15 drop-in kit. K Kits include forged pistons, rings, circlips and chrome piston rings.

- Recalibration and cylinder boring is required
- Compatible with Screamin' Eagle cylinder heads
- ArmourGlide skirt coated pistons and VM rings

## Wiseco 103" 1691cc BB Piston Kits 2012-15

### 9:1 CR Reverse Dome

K	Displ.	Bore	Stroke	Dome Specs	Wiseco
35926	1691cc	3.875"/1.25	4.375"	Volume: -11.5cc Int. Depth: -.205" Ext. Depth: -.205" Diam.: 2.250"	K2751
35927	1695cc	3.880"/.005			K2752
35928	1700cc	3.885"/.135			K2753
Valve pocket depths measured measured from deck height					
35929	Cometic gasket kit				



# Twin Cam



## TC Chrome Billet Lifter Bases

**59868** FXD 99-on, FLT 99-16, Softail 00-on



## TC Chrome Lifter Base Set 1999-on

Replaces 17964-99 front and 17966-99 rear. For FLT 99-16, FXD 99-on & Softail 00-on.

**30092**



## Jims Twin Cam 88 Billet Lifter Covers

CNC machined billet aluminum chrome high tech lifter block covers for use on all TC FXST, FLST, Dyna engines 99-on and FLT 99-16. Use with Jims #31647 hydrosolid or #31649 Powerglide tappets.

**31266**



## V-Thunder Pushrod Kits

Made from .049 wall 4130 chrome moly steel to exacting tolerances for reliability. These rods fit stock or Velva Touch Lifter units. Can be installed or removed without disassembling heads

**30048** Twin Cam 00-on



## Chrome Lifter Block Covers TC Softail 00-on

Not for use with chrome interface cover OEM# 66510-00.

**64233** 18262-00



## S&S Twin Cam Billet Tappet Covers

Fits stock and S&S Twin Cam style crankcases.

**335601** Polished

**1063883** Chrome



## Pushrod Cover Kit

Lower pushrod covers and upper clips used when installing adjustable pushrods in Twin Cam motors. Requires the use of OEM springs, retainers and washer.

**72148**





## Black Pushrod Cover Kit

Includes inner, lower and upper covers to fit Softail and FXD 99-17 & FLT 99-16

**34104**



## Titanium Plated Pushrod Cover Kit

Includes inner, lower and upper covers to fit Softail and FXD 99-17 & FLT 99-16.

**34112**

**34100**



**34101**



## Sifton Taper Lite Adjustable Pushrods

- Install without removing gas tank, rocker box or cam cover
- Hardened adjusters and ball ends
- Fits FLT 99-16 & FXST, FLST, FXD 99-17

**PCP Type**

**34100** Red aluminum alloy

**34101** Steel

## Pushrod Thread Guide

- Threads per inch

Type	Threads	Type	Threads
Andrews	28-32	Revolution chromoly	32
Crane	32	Rev Tech	36
Crane Time Savers	24-28	Rivera Taper Lite	40
H-D	32	S&S	32
Jims Pro-Lite	24	Screamin Eagle	32
Slim Jims	32		



## Chrome Billet Pushrod Cover & Lifter Base Kit

Fits TC 99-17 & FLT 99-16

**30091** Complete kit

**34113** Pushrod cover set. Includes covers, seals & o-rings.



## TC-88 Quick Install Pushrods

Install without removal of heads on TC engines 99-on. Chrome moly construction for superior strength.

**34111**



## Andrews Twin Cam EZ-Install Pushrods

EZ-Install pushrods can be installed in an engine without removing fuel tanks or rocker boxes. Available in anodized aluminum and chrome moly tubing.

**292188** 4 Aluminum pushrods

**292088** 4 Chrome moly pushrods

# Twin Cam



934039

## S&S Pushrod Cover Kits

Includes top and bottom covers, cover cap, cover spring, and spring washer for four pushrods.

**PCP**      **Application**

**934039**   TC 99-16

**934038**   As above, for engines 1" or more taller than stock



## S&S Quickie Pushrod and Cover Set

Chrome moly steel pushrods to fit TC 99-17  
Can be installed without the removal of rocker boxes.

**1066051**   Kit with chrome pushrod covers

**9300143**   Kit with gloss black pushrod covers

**935122**   Pushrods only



## S&S Time-Saver Adjustable Pushrods

No need to remove the rocker covers. Can be installed with stock pushrod tubes. Fits TC 99-17

**9300053**



## S&S TC Adjustable Pushrods & Cover Kit

Kit includes chrome-moly pushrods, gaskets, o-rings, retainer clips, and upper pushrod covers. Designed to provide a more stable and rigid cover assembly. Requires the removal of rocker covers for installation. (84-99 style push rod covers are required to allow push rod adjustment)

**935095**   Kit (96-103-106") TC 99-17

**935096**   Pushrods only



## S&S Quickie Pushrods

The threaded adjuster screws into the pushrod until the threads disengage and the adjuster simply slides into the pushrod making installation or removal a snap. Once the pushrod is installed and adjusted the locknut prevents the adjuster from moving. The ball ends of the pushrods are drilled so that oil can flow through the pushrod.

**PCP**      **Application**      **Displacement**

**935122**   Twin Cam 99-16

88-124"

**\*\*Note:** 1984-99 EVO style push rod covers are required for access to the Quickie push rod adjusters in Twin Cams



## Chromoly E-Z Install Adjustable Pushrods

Fits TC 99-on. USA made.

**30057**

# Twin Cam



## Twin Cam Complete Pushrod Cover Kits

Visible parts are all chrome and includes upper covers, inner cover, and lower covers.

**34107** FXD 99-on, Softail 00-on & FLT 99-16



## Chrome Billet Pushrod Cover Kit TC

Chromed aluminum pushrods feature a groove design. Fits TC 99-on & FLT 99-16

**61072** 18096-00A



## Chrome Upper Pushrod Cover Kits (outer)

Includes 4 each of chrome 1-3/4" retaining clips, chrome cups, springs, cork gaskets, and steel washers.

**9970** TC FXD 99-on, Softail 00-on & FLT 99-16



## Chrome Lower Pushrod Cover Kits

Includes 4 stock style chrome pushrod covers and 4 cork gaskets for TC 99-on & FLT 99-16

**9968**



## Upper, Inner Pushrod Covers

**9969** TC 99-on & FLT 99-16



## Twin Cam Chrome Billet Pushrod Cover Set

Includes chrome pushrod covers, seals and necessary o-rings. Fits TC 99-on and replaces 18096-00.

**59260**



# Twin Cam



## AV&V 7mm Manganese Bronze Valve Guides

- Extreme duty, CNC machined, tapered & radiused nose
- Special hi-temp Viton o-rings prevent oil infiltration
- Use either OEM style or viton seals
- Unfinished I.D. ready to be finished with carbide reamer
- Hi-lift and high flow applications

Int.	Exh.	Size	O.D.	I.D.	O.A.L
31850	31859	Std	.5625"	.273"	2.040"
31851	31860	.001"	.5635"	.273"	2.040"
31852	31861	.002"	.5645"	.273"	2.040"
31853	31862	.003"	.5655"	.273"	2.040"
31854	31863	.004"	.5665"	.273"	2.040"
31855	31864	.005"	.5675"	.273"	2.040"
31856	31865	.006"	.5685"	.273"	2.040"
31857	31866	.010"	.5725"	.273"	2.040"
31858	31867	.025"	.5875"	.273"	2.040"
34037	OE style viton valve seals (4 pk)				
34044	AV&V +.001 reamer				



## AV&V High Performance Valve Guides for Twin Cam Models to 2004

Manganese bronze guides have a shortened seal area and are tapered for use on high lift and high flow applications. Use with OEM style .530" valve seals. Unfinished I.D. ready to be easily finished with carbide reamer.

Intake	Exhaust	Oversize	O.D.	I.D.
31756	31768	STD	.5625"	.308"
31757	31769	.001"	.5635"	.308"
31758	31770	.002"	.5645"	.308"
31759	31771	.003"	.5655"	.308"
31760	31772	.004"	.5665"	.308"
31761	31773	.005"	.5675"	.308"
31762	31774	.006"	.5685"	.308"
31763	31775	.008"	.5705"	.308"
31764	31776	.010"	.5725"	.308"
31765	31777	.012"	.5745"	.308"
31766	31778	.015"	.5775"	.308"
31767	31779	.025"	.5875"	.308"
34039	.531 Viton seals (4 pk)			

## Rowe 7mm TC Valves and Guides 05-on

PCP	Type	Size
32221	Intake	Std.
32222	Intake	+1/16" OS
32223	Intake	.100" OS
32224	Exhaust	Std.



Guides	Size
17700	Std.
17701	.001
17702	.002
17703	.004
17704	.006

## AV&V Valve Seal Drivers

Allows easy, precise installation of OE or viton valve seals. Seal is installed in the centreline with the guide. Prevents comeback caused by a loose seal.

PCP	Description
31824	For all 7mm valve seals
31825	For all 5/16 valve seals



## AV&V Stock Replacement Valve Guides for Evo and Twin Cam Models to 2004

Manganese bronze guides are stock length for direct stock replacement. Use with .531" OEM style valve seals. Same guide will fit intake or exhaust.

PCP	Oversize	O.D.	I.D.
31801	STD	.5625"	.308"
31802	.001"	.5635"	.308"
31803	.002"	.5645"	.308"
31804	.003"	.5655"	.308"
31805	.004"	.5665"	.308"
31806	.025"	.5875"	.308"
31820	OE style, metal clad seals (4 pk)		



## Kibblewhite Compression Release Valves

Designed to reduce hot start issues and starter/battery loads. Custom molded knobs ensure a cool touch and easy operation. For high demand applications. Sold in package of 2.

PCP	Application	A	B	C
32110	Various EVO	M10 x 1	1.400"	0.350"
32111	Various Twin Cam	M10 x 1	1.730"	0.350"
32112	H-D Custom	M10 x 1	1.750"	0.500"



# Valve Guides & Springs

## Kibblewhite Twin Cam 88 99-04 with 5/16" Stem Valves



### Performance Rebuild Ovate Wire Spring Kits

- Progressively wound using Kobe Super-Clean chrome silicon based wire that is heat treated and shot peened
- Hardened steel or titanium Posi-Loc style retainers
- Hardened steel collars
- Offer optimum performance and durability

### Performance Rebuild Beehive Valve Spring Kits

Includes springs, retainers and lower collars.

PCP	Lift	Seat Pressure		Retainers
32154	.610"	160-175 lb.	400 lb. @ .610"	Steel
32155	.630"	180-190 lb.	370 lb. @ .630"	Steel
32107	.660"	178 lb.	370 lb. @ .660"	Steel

\*32155 Not recommended for lifts over .630"

### Lightweight Racing Valve Spring Kit

Includes springs, retainers, keepers, collars and spring shims.

PCP	Lift	Seat Pressure		Retainers
32156	.550"	150-160 lb.	380 lb. @ .550"	Titanium
32157	.550"	150-160 lb.	380 lb. @ .550"	Steel

### Lightweight Racing Valve Spring Kit

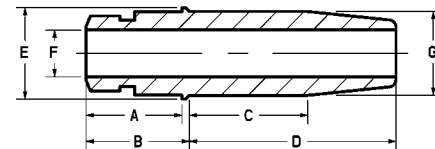
Includes springs, retainers, keepers, and lower collars.

PCP	Lift	Seat Pressure		Retainers
32158	.600"	175 lb.	380 lb. @ .600"	Titanium
32159	.600"	175 lb.	380 lb. @ .600"	Steel
32160	.655"	190 lb.	450 lb. @ .655"	Titanium
32161	.655"	185 lb.	450 lb. @ .655"	Steel



### Valve Guides

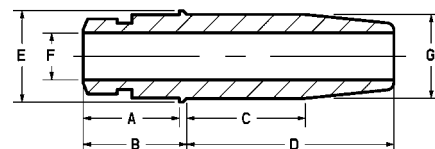
Shouldered guide w/Viton Seal  
Shortened for .600" Lift



A	0.650"	D	1.400"
B	0.700"	E	0.615"
C	0.800"	F	0.3098"

### Intake-G (Std. 0.5620") C630 Bronze

PCP	Size
32162	Std.
32163	+0.001"
32164	+0.002"
32165	+0.004"
32166	+0.010"



A	0.650"	D	1.450"
B	0.700"	E	0.615"
C	1.150"	F	0.3098"

### Kibblewhite Black Diamond Valves TC 99-04

•Black Nitroreng stems

PCP	Type	Head Diam.	Stem Diam.	Tulip	OL	Remarks
32334	IN	1.840"/46.74mm	0.3100"	23°	4.445"	Standard (OEM 18074-83A)
32335	IN	1.900"/48.26mm	0.3100"	28°	4.420"	Oversize
32176	IN	2.000"/50.80mm	0.3100"	23°	4.445"	Oversize
32358	EX	1.565"/39.75mm	0.3100"	17°	4.505"	Standard (OEM 18085-99)

### Recommended Valve Guide Seals-4 Pack

PCP	Type of Seal	Guide Top Diam.
32256	IN/EX, style 5, Steel clad Viton	0.420"
32259*	IN/EX, style 6, Solid White PC style Seal	0.415"

\*May require use of seal cutter

### Exhaust-G (Std. 0.5620") C630 Bronze

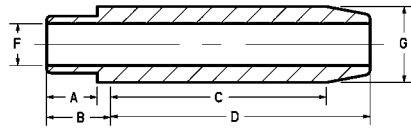
PCP	Size
32167	Std.
32168	+0.001"
32169	+0.002"
32170	+0.004"
32171	+0.010"

# Kibblewhite

## Kibblewhite TC 88 99-04

### Valve Guides

OEM Style - .420" Top



<b>A</b>	0.375"	<b>D</b>	2.025"
<b>B</b>	0.375"	<b>E</b>	-
<b>C</b>	1.700"	<b>F</b>	0.3098"

Intake/Exhaust-G (Std. 0.5620")			
C630 Bronze		Cast Iron	
PCP	Size	PCP	Size
<b>32237</b>	Std.	<b>32283</b>	Std.
<b>32238</b>	+0.001"	<b>32284</b>	+0.001"
<b>32239</b>	+0.002"	<b>32285</b>	+0.002"
<b>32240</b>	+0.003"	<b>32286</b>	+0.003"
<b>32241</b>	+0.004"	<b>32287</b>	+0.004"
<b>32242</b>	+0.010"	<b>32288</b>	+0.010"



### OEM Style Replacement Seals

PCP	Guide Ø	Stem Ø	UM
<b>32345</b>	0.420"	0.3125"	10 pack

### Seal Installation Tools

•For OEM style replacement seals

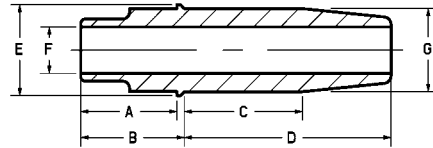
PCP	UM
<b>32211</b>	Each

### Installation Protectors

PCP	Stem Diam.	UM
<b>32213</b>	0.3125"	Pair

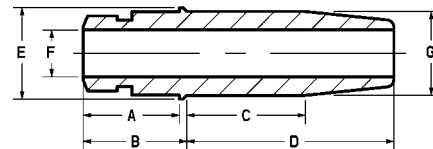
### Valve Guides

Shouldered guide - .420" Top  
Shortened for .600" Lift



<b>A</b>	0.650"	<b>D</b>	1.400"
<b>B</b>	0.700"	<b>E</b>	0.615"
<b>C</b>	0.800"	<b>F</b>	0.3098"

Intake-G (Std. 0.5620")			
C630 Bronze		Cast Iron	
PCP	Size	PCP	Size
<b>32183</b>	Std.	<b>32247</b>	Std.
<b>32184</b>	+0.001"	<b>32248</b>	+0.001"
<b>32185</b>	+0.002"	<b>32249</b>	+0.002"
<b>32187</b>	+0.003"	<b>32250</b>	+0.003"
<b>32188</b>	+0.004"	<b>32251</b>	+0.004"
<b>32189</b>	+0.010"	<b>32252</b>	+0.010"



<b>A</b>	0.650"	<b>D</b>	1.450"
<b>B</b>	0.700"	<b>E</b>	0.615"
<b>C</b>	1.150"	<b>F</b>	0.3098"

Exhaust-G (Std. 0.5620")			
C630 Bronze		Cast Iron	
PCP	Size	PCP	Size
<b>32190</b>	Std.	<b>32277</b>	Std.
<b>32191</b>	+0.001"	<b>32278</b>	+0.001"
<b>32192</b>	+0.002"	<b>32279</b>	+0.002"
<b>32193</b>	+0.003"	<b>32280</b>	+0.003"
<b>32194</b>	+0.004"	<b>32281</b>	+0.004"
<b>32195</b>	+0.010"	<b>32282</b>	+0.010"



### Cylinder Dowels

•All Twin Cam models

PCP	O.D.	UM
<b>32344</b>	0.4365"	4 pack



### Replacement Keeper Set BT 84-04

PCP	Application	UM
<b>32218</b>	OEM Style	8 pack



### Rocker Arm Bushings

•Constructed of SAE660 bearing bronze bar stock. Sold in pack of 8.

PCP	Application	OD
<b>32233</b>	BT 66-16	0.6795"

## Kibblewhite Twin Cam 88"-103" 05-17 with 7.0mm Valve Stems



### Performance Rebuild Ovate Wire Beehive Spring Kits

- Progressively wound using Kobe Super-Clean chrome silicon based wire that is heat treated and shot peened
- Hardened steel or titanium Posi-Loc style retainers
- Hardened steel collars
- Offer optimum performance and durability

#### Performance Rebuild Valve Spring Kits (Beehive)

Includes springs, retainers and lower collars. 88-103" Engines.

PCP	Lift	Seat Pressure		Retainers
<b>32293</b>	.610"	175 lb.	400 lb. @ .610"	Steel
<b>32294</b>	.660"	178 lb.	371 lb. @ .660"	Steel

\*32294 Not recommended for lifts over .630"

#### Lightweight Racing Valve Spring Kit (Std springs)

Includes springs, retainers, keepers, and lower collars.

PCP	Lift	Seat Pressure		Retainers
<b>32295</b>	.600"	160 lb.	365 lb. @ .600"	Steel
<b>32296</b>	.655"	185 lb.	450 lb. @ .655"	Steel

### Black Diamond Valves

For Twin Cam 05-17

•Black Nitronex stems

PCP	Type	Head Diam.	Stem Diam.	Tulip	OL	Remarks
<b>32347</b>	IN	1.805"/45.85mm	0.2760"	1.700"R	4.420"	Standard (18074-05)
<b>32348</b>	IN	1.900"/48.26mm	0.2760"	28°	4.420"	Oversize
<b>32349</b>	EX	1.575"/40.00mm	0.2755"	22°	4.520"	Standard (18085-05)
<b>32350</b>	EX	1.615"/41.40mm	0.2755"	34°	4.520"	Oversize

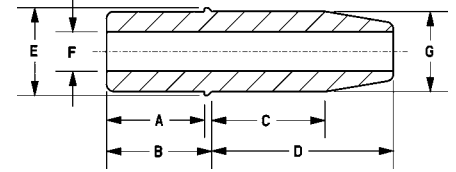


### Replacement Keepers

PCP	Application	UM
<b>32089</b>	05-on 7mm	4 Pair

### Valve Guides

Shouldered guide uses OEM or Kibblewhite style seals. 7.0mm I.D.

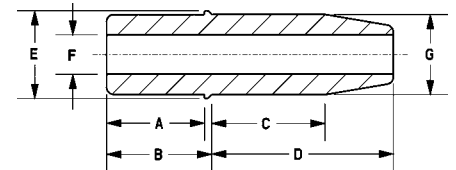


<b>A</b>	0.690"	<b>D</b>	1.280"
<b>B</b>	0.770"	<b>E</b>	0.615"
<b>C</b>	0.800"	<b>F</b>	0.2750"



### Intake-G (Std. 0.5620")

C630 Bronze		Cast Iron	
PCP	Size	PCP	Size
<b>32300</b>	Std.	<b>32308</b>	Std.
<b>32301</b>	+0.001"	<b>32309</b>	+0.001"
<b>32302</b>	+0.002"	<b>32310</b>	+0.002"
<b>32303</b>	+0.010"	<b>32312</b>	+0.010"



<b>A</b>	0.650"	<b>D</b>	1.280"
<b>B</b>	0.770"	<b>E</b>	0.615"
<b>C</b>	1.030"	<b>F</b>	0.2750"



### Exhaust-G (Std. 0.5620")

C630 Bronze		Cast Iron	
PCP	Size	PCP	Size
<b>32304</b>	Std.	<b>32318</b>	Std.
<b>32305</b>	+0.001"	<b>32319</b>	+0.001"
<b>32306</b>	+0.002"	<b>32320</b>	+0.002"
<b>32307</b>	+0.010"	<b>32321</b>	+0.010"



### 7mm Valve Guide Seals

•OEM style, 4 pack.

PCP	Type	Guide Ø
<b>32090</b>	IN/EX, Tophat	0.562"



# Twin Cam

## AV&V Tulip Replacement Valves for Twin Cam 99-04 with 5/16" Stems

One piece tulip valves are forged from racing grade stainless steel alloy, heat treated and ground to a micro-finish. Valves have a hardened tip to prevent premature wear when used in high lift applications. Features a 45 degree angle below the lock groove to reduce stress in this area and to facilitate valve seal installation. Available in hard black or chrome finish.

PCP#	Type	Head Diam.	Overall Length	Stem Diam.	Coating	AV&V #
<b>31791</b>	Exhaust	1.570"	4.525"	.3106"	Black	AV1570
<b>31792</b>	Exhaust	1.610"	4.525"	.3106"	Black	AV1610D
<b>31794</b>	Intake	1.900"	4.440"	.3108"	Black	AV1900
<b>31796*</b>	Intake	1.940"	4.440"	.3108"	Black	AV1940C
<b>31797</b>	Intake	1.940"	4.440"	.3108"	Chrome	AV1940C
<b>31798</b>	Intake	2.020"	4.440"	.3108"	Black	AV2020A

\*oversize valve, if used in stock heads larger seats must be installed



## AV&V Extreme Duty Replacement S/S Valves for TC 99-04 with 5/16" Stems

PCP#	Type	Head Diam.	Overall Length	Stem Diam.	Coating	Stem	AV&V #
<b>31660</b>	Exhaust	1.570"	4.525"	.3106"	Black	5/16 stem	HD12
<b>31661</b>	Intake	1.845"	4.455"	.3108"	Black	5/16 stem	HD-11



## AV&V Triple Groove Valves with 7mm Stem for Twin Cam 05-17 Stock Heads

PCP#	Type	Sz.	Head Diam.	Overall Length	Stem Diam.	Coating	Stem	AV&V #
<b>31830</b>	Exhaust	Stock	1.575"	4.560"	.2755"	Chrome	7mm	AV1575-7TGC
<b>31832</b>	Exhaust	+.040	1.610"	4.545"	.2755"	Chrome	7mm	AV1610-7TGC
<b>31814</b>	Intake	Stock	1.810"	4.455"	.2757"	Chrome	7mm	AV1810-7TGC
<b>31815</b>	Intake	+.040	1.850"	4.455"	.2757"	Black	7mm	AV1850-7TGB
<b>31816</b>	Intake	+.040	1.850"	4.455"	.2757"	Chrome	7mm	AV1850-7TGC
<b>31827</b>	Intake	+.090	1.900"	4.445"	.2757"	Black	7mm	AV1900-7TGB
<b>31828</b>	Intake	+.090	1.900"	4.445"	.2757"	Chrome	7mm	AV1900-7TGC

Notes: +.040 oversize use in stock heads and +.170 oversize valves require the installation of larger seats.



## Universal Ball Hones

Kibblewhite precision valve guide hones are durable enough to size C630 bronze and cast iron valve guide materials.

### PCP Size

- 32115** 7.0mm
- 32116** 5/16" (.3125")
- 32117** 3/8" (.3750")





## Fluoro-Viton Valve Seals (5 packs)

Fluoro-viton polymer with teflon added to prevent valve to seal friction. A metal spring keeps constant seal to valve tension to prevent oil consumption. Seals are then bonded to a steel jacket that provides a secure fit to the guide. The internal ribs are designed to allow for installation without any tools, but hold secure after installation.

PCP	Stem	Guide
<b>32276</b>	6mm	.347 (hat style)
<b>32275</b>	7mm	.562 (hat style)
<b>32274</b>	5/16"	.420
<b>32269</b>	3/8"	.531
<b>32272</b>	3/8"	.625
<b>32271</b>	11/32"	.531



## TC 7mm Valve Stem Keepers

Replaces 18260-02 for BT 05-on

**30019** (4 pair)



## Kibblewhite Cylinder Studs

- Machined from fine grain, heat treated, aircraft quality steel with black oxide finish
- Centerless ground OD
- Black oxide finish

PCP	Application	UM
<b>32346</b>	All Twin Cam	8 pack

## Kibblewhite Cylinder Dowels

- All Twin Cam models

PCP	O.D.	UM
<b>32344</b>	0.4365"	4 pack



## AV&V Valve Seats

Valve seats are made from heat and wear resistant high quality alloy steel and manufactured with clear identification markings and radius edges for easy installation. Seats will resist intense valve pounding and effectively dissipate heat for constant valve sealing. Valve seats will increase in hardness during engine break-in period.

Exhaust and intake valves are made from the same material, choose size as needed. Machining may be required.

PCP	O.D.	I.D.	Thickness
<b>31787</b>	1.630"	1.180"	.385"
<b>31789</b>	1.757"	1.371"	.315"
<b>31780</b>	1.757"	1.410"	.430"
<b>31788</b>	1.880"	1.439"	.410"
<b>31784</b>	1.944"	1.570"	.400"
<b>31781</b>	2.008"	1.610"	.440"
<b>31782</b>	2.040"	1.590"	.420"
<b>31790</b>	2.068"	1.750"	.315"
<b>31783</b>	2.070"	1.610"	.460"
<b>31785</b>	2.135"	1.750"	.400"
<b>31786</b>	2.163"	1.750"	.455"



## Kibblewhite Powdered Metal Valve Seats

- Recommended for TC & EVO 84-17
- Compatible with leaded and unleaded fuels including methanol and ethanol fuel blends
- Excellent thermal characteristics

PCP	O.D. +/- .0002	I.D. +/- .0005	HT. +/- .0005	Type
<b>32366</b>	1.9690"	1.535"	0.453"	IN
<b>32367</b>	2.0070"	1.562"	0.450"	IN
<b>32369</b>	2.1320"	1.690"	0.450"	IN
<b>32365</b>	1.7570"	1.375"	0.450"	EX

# Valve Springs



## S&S Sidewinder .650" Lift Valve Spring Kits

Kits fit stock style 05-17 Twin Cam 96/103 Big Twins with 7mm valve stems and all S&S CNC ported heads. Made from high silicon, micro peened and nitrided kobe alloy wire. Includes valve keepers, top and bottom collars, springs, shims and valve guide seals. Note S&S recommends the use of roller rocker arms be used with lifts over .585"

Lift	Installed Height	Seat Force	Force @ Max Lift	Max RPM
.650"	1.860"	178 lb.	376 lb.	6500

**9000050** TC 99-04 with 5/16" stems

**1065909** TC 05-17 with 7MM stems



902078

## S&S High Performance Valve Spring Kits

Kits fit stock style and S&S Super Stock Heads on 84-04 BT and 86-03 XL. O.D. of outer spring fits within stock spring compartment. Used with "no shoulder" style valve guides and special keepers fit stock 5/16" diameter stemmed valves and S&S collars only (these guides can be retrofitted to early BT V2 heads equipped with "shoulder" style valve guides). Features patented steel top collars specially drilled to lighten and allow oil to cool springs. Includes 4 of .015" and 4 of .030" shims.

**Kits are good for up to .640 lift**

**902077** Kit with steel top collars

**902078** Kit with titanium top collars

Note: Stock valve springs in Big Twin 99-04 models can handle cams with valve lifts as high as .515". Stock valve springs in 2005-on engines can accomodate valve lifts up to .590".

9000593



## S&S .585" Lift Valve Spring Kits

Kits fit Twin Cam 88 Big Twins with stock heads and all S&S Super Stock heads. Dual springs reduce the risk of valve float. Suitable for performance applications and accommodates camshaft lift to 0.585". Includes inner and outer springs, valve keepers, top and bottom collars, shims and valve guide seals.

Lift	Installed Height	Seat Force	Force @Max Lift	Max RPM
.585"	1.850"	135 lb.	335 lb.	6500

### PCP Fitment

**9000593** TC 99-04 with 5/16" valve stems

**9000594** TC 05-17 with 7mm stems

Lift	Installed Height	Seat Force	Force @Max Lift	Max RPM
.585"	1.800"	130 lb.	325 lb.	

**902277** TC 99-04 with 5/16" valve stems



## S&S .640" Lift Dual Valve Spring Kits

Kits fit Twin Cam 88 Big Twins with stock heads and all S&S Super Stock heads. Dual springs reduce the risk of valve float. Suitable for performance applications and accommodates camshaft lift to 0.640". Includes inner and outer springs, valve keepers, top and bottom collars, shims and valve guide seals.

Lift	Installed Height	Seat Force	Force @Max Lift
.640"	1.800"	130 lb.	325 lb.

### PCP Fitment

**9000420** TC 05-15 with 7mm stems

## Andrews Heat Treated Spring Collars

Provides .050" more spring travel than stock collars. Collars are stronger and 10% lighter than stock collars. Use stock keepers. Fits TC 99-04.

**293115**





# Valve Springs

## Kibblewhite TC 88 99-04 with 5/16" Stem Valves



### "Performance Rebuild" Ovate Wire Beehive Spring Kits

- Progressively wound using Kobe Super-Clean chrome silicon based wire that is heat treated and shot peened
- Hardened steel or titanium Posi-Loc style retainers
- Hardened steel collars
- Offer optimum performance and durability

#### Performance Rebuild Valve Spring Kits

Includes springs, retainers and lower collars.

PCP	Max Lift	Seat Pressure		Retainers
32154	.610"	175 lb.	400 lb. @ .610"	Steel
32155	.630"	180 lb.	370 lb. @ .630"	Steel
32107	.660"	178 lb.	371 lb. @ .660"	Steel

#### Lightweight Racing Valve Spring Kit

Includes springs, retainers, keepers, collars and spring shims.

PCP	Lift	Seat Pressure		Retainers
32156	.550"	150-160 lb.	380 lb. @ .550"	Titanium
32157	.550"	150-160 lb.	380 lb. @ .550"	Steel

#### Lightweight Racing Valve Spring Kit

Includes springs, retainers, keepers, and lower collars.

PCP	Lift	Seat Pressure		Retainers
32158	.600"	175 lb.	380 lb. @ .600"	Titanium
32159	.600"	175 lb.	380 lb. @ .600"	Steel
32160	.655"	190 lb.	465 lb. @ .655"	Titanium
32161	.655"	185 lb.	450 lb. @ .655"	Steel

## Crane Valve Spring Sets

Precision wound spring wire and chromoly 4140 steel retainers. Chromoly retainers offer strength and durability while eliminating inaccurate assembly heights. **Note #** is the symbol that denotes pounds.

#### Crane Valve Spring and Retainer Kits for Twin Cam 88 & 96 1999-04

PCP	Nominal Diameter		Retainer Type	Seat Pressure & Installed Height	Nominal Open Pressure & Height	Coil Bind Height
	Inside	Outside				
34695	.800	1.460	Steel	175# @ 1.700	352# @ 1.180	1.080

## Kibblewhite TC 88"-103" 05-14 with 7.0mm Valve Stems



### Performance Rebuild Ovate Wire Beehive Spring Kits

- Progressively wound using Kobe Super-Clean chrome silicon based wire that is heat treated and shot peened
- Hardened steel or titanium Posi-Loc style retainers
- Hardened steel collars
- Offer optimum performance and durability

#### Performance Rebuild Valve Spring Kits

Includes springs, retainers and lower collars.

PCP	Lift	Seat Pressure		Retainers
32293	.610"	175 lb.	400 lb. @ .610"	Steel
32294	.660"	178 lb.	371 lb. @ .660"	Steel

#### Lightweight Racing Valve Spring Kit

Includes springs, retainers, keepers, and lower collars.

PCP	Lift	Seat Pressure		Retainers
32295	.600"	165 lb.	365 lb. @ .600"	Steel
32296	.655"	185 lb.	450 lb. @ .655"	Steel



# Valve Springs



## AV&V Valve Spring Kits 99-04 for 5/16" Valve Stems (not 7mm stems)

Premium springs are manufactured from an ultra clean, high silicon and vanadium kobe alloy wire; the best alloy available on the market for high lift and endurance applications. The chrome moly 4140 steel retainers are the strongest most durable retainers offered. High grade titanium retainers add strength and reduce weight allowing the spring pressure to operate more efficiently. This lets your motor accelerate quicker and produce more power. Springs feature a small O.D. of 1.460" so very little or no grinding is required to the inside of the rocker cover.

AV&V Selection Chart for 99-04 with 5/16" Valve Stems						
PCP	Recommended Lift	Retainer Type	Application	Seat Pressure & Initial Height	Nominal Open Pressure and Height	Coil Bind Height
34027	.600"	Steel	Twin Cam	155# @ 1.885"	405# @ 1.260"	1.080
34028	.600"	Titanium	Twin Cam	155# @ 1.885"	405# @ 1.260"	1.080
34032	.650"	Steel	Twin Cam	185# @ 1.860"	460# @ 1.160"	1.080
34033	.650"	Titanium	Twin Cam	185# @ 1.860"	460# @ 1.160"	1.080

AV&V High Performance Beehive Spring Kit with 5/16" Valve Stems 99-04									
Manufactured from ultra clean high silicon kobe alloy wire then micro shot peened and nitrided. Features CNC machined extreme duty 9° locks and ultralite chromoly forged retainers.									
PCP	Lift	Application	Seat Pressure & Initial Height	Nominal Open Pressure and Height	Coil Bind Height	Small End		Large End	
						I.D.	O.D.	I.D.	O.D.
34065	.600"	TC	165# @ 1.860"	384# @ 1.250"	1.200"	.650"	1.085"	1.000"	1.445"
34066	.650"	TC	178# @ 1.880"	385# @ 1.200"	1.150"	.740"	1.185"	1.055"	1.500"

AV&V High Performance Beehive Spring Kit for 7mm Valve Stems on 05-on									
Fits both single and triple groove valves. Manufactured from ultra clean high silicon kobe alloy wire then micro shot peened and nitrided. Features CNC machined extreme duty 9 deg. locks and ultralite chromoly forged retainers.									
PCP	Lift	Application	Seat Pressure & Initial Height	Nominal Open Pressure and Height	Coil Bind Height	Small End		Large End	
						I.D.	O.D.	I.D.	O.D.
34067	.600"	TC	165# @ 1.860"	384# @ 1.250"	1.200"	.650"	1.085"	1.000"	1.445"
34068	.650"	TC	178# @ 1.860"	385# @ 1.200"	1.150"	.740"	1.185"	1.055"	1.500"

## EVO/TC Heat Treated Valve Shims

Used on Twin Cam an all Evolution Engines 84-04

PCP Fits

13505 .015" thick (20 pack)

13506 .030" thick (20 pack)



# Twin Cam



## Sifton Roller Rocker Arm Set TC 99-on

4 Piece set features drop forged construction with hardened steel roller and is fitted with bushings at shaft area. Fits Evo and Twin Cam except 2017 Touring. Order shafts separately.

PCP	Application
32338	Arm Set
30300	Rocker shaft (17611-83) (each)



## S&S Standard Forged and Roller Rocker Arms

Forged steel for maximum strength. Roller tip reduces side thrusting on valve stem in high lift applications and .750" bushings provide 50% more load bearing area than stock. Recommended for cams of .585" lift or more. Fits TC engines except Touring 2017-on

PCP	Item	Ratio
9004065	Roller arm set	1.625:1
9004098	Roller arm set	1.725:1
9004119	Standard forged 8620 steel arm set	

\*Adjustable pushrods must be used w/roller arms to obtain proper valve clearance



## Kibblewhite Rocker Arm Bushings

•Constructed of SAE660 bearing bronze bar stock. Sold in pack of 8.

PCP	Application	OD
32233	BT 66-16	0.6795"



## Delkron Billet Rocker Arm Supports TC-88

Made of 6051 aluminum, doubling the strength of the die-cast stock part. .030" Offset used in high performance applications when using long stem valves. Replaces 17594-99.

32570



## Jims Roller Rocker Arms

Rocker roller arms are investment cast from purified, aircraft quality, 4340 chrome moly steel. Both stock and aftermarket rocker arms were analysed to determine a baseline for the design: 660 bronze bushings were retained and a bearing grade steel roller tip was integrated into the design. Rocker arms feature a segmented parabolic pushrod cup that reduces friction, wear, and improves roller tip oiling. Stock ratio of 1.625 will easily accomodate a .700" lift cam (at the valves). Replaces 17360-83 and 17375-83. Set of 4. USA made

31251 BT 84-on except Touring 17-on

## Jims Compression Release Valves

Release valves make starting your engine effortless by venting cylinder compression with the push of a button. Indispensable when used with stroker kits, high compression engines and large displacement engines. Simply drill and tap each cylinder head and thread in the self-sealing release valves.

31283 Fits all BT and XL (10mm)





# Twin Cam



## Headbolt Covers for TC and Evo

Chrome headbolt covers to hide dull 12 point headbolts on all FL, FX. Set of 4.

**72024** Custom hex dome style

**72232** Smooth style

**72262** Pike style



## Scorpion Head Bolt Covers for TC-88

Chrome covers are easy to install and are held in place with set screws. For added convenience spark plugs can be removed without removing covers.

**PCP**      **Application**  
**45264**    TC-88 99-07



## Black Cylinder Headbolt Cover Set

4 piece set for FLT, FXST, FLST, FXR, XL 86-on.

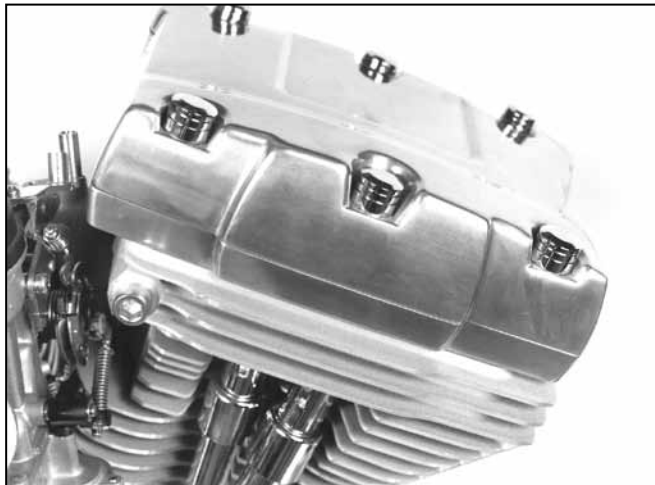
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## Headbolt Kits For Twin Cam- 8 Pack

Polished and chrome plated 12 point dome top headbolts.

**72012** BT 92-on (16480-92, 16478-85A)



## Valve Cover Screw Cover Set TC88 99-on

Screw covers are grooved to match head bolt covers. Fits TC88 99-on. 4 Pack.

**44045** 43868-99



## Head Bolt and Spark Plug Cover Kit

- Black spark plug covers & chrome cylinder head bolt covers
- Replaces 43859-00 on EFI models
- Fits FLT 99-16, FXD 99-17 and FLST, FXST 00-on

**45271**



## Twin Cam Stock Style Heads

For BT 99-04 in silver or black finish.

PCP	OEM	Description	Finish
<b>65215</b>	16716-99	Front head	Silver
<b>65217</b>	16722-99	Front head	Black
<b>65218</b>	16724-99	Rear head	Black

# Twin Cam



72024

## Headbolt Covers for Evo and Twin Cam

Chrome hex dome headbolt covers hide 12 point headbolts on all FL, FX L85-on. Installs with set screw.

72024



## TC Chrome Screw Set

Includes o-ring seals to mount upper rocker box cover on twin cam models.

24087



904097

## S&S Twin Cam Rocker Gasket Sets

904097 Stock rocker covers

904073 S&S billet style rocker covers

904111 S&S die cast style



## Radii Contoured Chrome Top Rocker Box Set

Chrome rocker box set for FLT, FLST, FXD and FXST 99-on.

21999



## S&S Style Chrome Rocker Box Set TC

Fits TC Softail, FXD, FXR 99-on & FLT 99-16

59556 Rocker box set



## Chrome Billet TC Rocker Box Kit

Fits TC Softail, FXD, FXR 99-on & FLT 99-16 and will accept high lift cams.

45918 For 2 heads (17572-99)



45916

## Twin Cam Chrome Engine Parts

Fits Dyna 99-on, FLT 99-16 and Softail 00-on.

PCP Description

45916 Chrome upper rocker covers (pair)



## Head Bolt & Spark Plug Cover Kit

Black finned covers for carbureted models. Fits FLT, Softail and FXD 99-06.

21059

# Twin Cam & Multi-Fit

## Chrome Polished Allen Motor Show Bike Kits

Includes hardware needed to mount: rocker box, primary cover, lifter base, transmission covers, oil pump, air cleaner, cam cover, point cover, timing plug and motor mounts. Sportster kits also include fasteners for sprocket cover, rear master cylinder and generator. Early XL motor mounts include spacers. Twin Cam 88 kits also include fasteners for motor case and oil hose cover. Button head allens and flat head allens are used where necessary.

<b>7951</b>	Dyna 06-17
<b>7950</b>	Dyna 99-05
<b>7949</b>	Dyna 93-98
<b>7948</b>	Dyna 91-92
<b>7954</b>	Softail 07-on
<b>7947</b>	Softail 00-06
<b>7946</b>	Softail 92-99
<b>7945</b>	Softail 89-91
<b>7944</b>	Softail 87-88
<b>7956</b>	FLT 09-16
<b>7953</b>	FLT 07-08
<b>7942</b>	FLT 99-06
<b>7941</b>	FLT, FXR 92-98
<b>7940</b>	FLT, FXR 87-91
<b>7943</b>	Evo 4 speed 84-86
<b>7939</b>	Evo 5 speed 85-86



## Colony Twin Cam Kits

All kits are polished allens except where noted by (\*), which are button heads.

PCP	Description
<b>9776*</b>	Handlebar lever mount and master cylinder cover screws BT 96-07
<b>9932</b>	Intake manifold to cylinder head mounting kit BT 95-on
<b>9942</b>	Lifter base screw kit TC 88, Dyna, FLT 99-on, Softail 00-on
<b>9956</b>	Motor case mounting kit TC 88, Dyna, FLT 99-on, Softail 00-on
<b>9939</b>	Oil adaptor screw kit TC 88 and FLT 99-on
<b>9950</b>	Oil hose cover mounting kit TC 88, Dyna, FLT 99-on
<b>9954*</b>	Point cover screws TC 88, Dyna, FLT 99-on, Softail 00-on
<b>9959</b>	Primary cover screw kit TC 88, FLT 1999-06
<b>24470</b>	Timing cover screw kit TC 88, Dyna, FLT 99-on, Softail 00-on
<b>72046</b>	Voltage regulator mounting kit Softail 00-on
<b>72116</b>	Lower front motor mount all Softail 00-on



## Rocker Cover Screw Kit

Chrome plated 12 point screw, washers, and gaskets mount rocker covers on FL,FX 85-on

**72280**





# Twin Cam & Multi-Fit



## Colony Lower Motor Mount Kit

Complete kit for 00-on Softail models features heat treated and plated bolts, locknuts and heavy duty washers.

### PCP Finish

**72116** Polished allen bolts

**72117** Chrome cap bolts

**72118** Cadmium cap bolts



## TC Chrome Snap Caps Bolt Cap Cover Kits

Chromed caps easily install over the raw OE bolt heads on engine, transmission, primary and more. Individually marked pieces that make identification and installation a breeze.

Model	Year	PCP	Kit Qty.
Touring	07-08	<b>21901</b>	75
	09-on	<b>21902</b>	126
Dyna	06-on	<b>21905</b>	76
	99-05	<b>21906</b>	86
	99-on TC	<b>21907</b>	156
Softail	07-on	<b>21908</b>	81
	00-06	<b>21909</b>	87
	09-on	<b>21910</b>	125
FXCW/C	09-on	<b>21911</b>	105
FLSTSB	09-on	<b>21912</b>	175
Twin Cam	Engine	<b>21913</b>	79



## Acorn TC Motor & Transmission Kits

Chrome complete acorn style motor and transmission kits.

### Complete Kits

**7925** All Dyna 99-17

**7929** All FLT 99-06

### Individual Kits-Acorn

**9957** Air cleaner all BT 83-on

**9945** Cam cover all 99-on

**9941** Lifter base all Dyna-FXST 99-17, FLT 99-16

**9955** Motor case all Dyna-FXST 99-17, Touring 99-16

**9938** Oil filter adapter kit all Dyna 99-17, Touring 99-16

**9949** Oil hose cover all Dyna 99-17, Touring 99-16

**9936** Motor mounting kit, front all Dyna 91-17

**9953** Point cover all TC 99-on

**8917** Primary cover Dyna 89-05, FXST 89-06

**9958** Primary cover all FLT 99-06

**9943** Rocker box all TC 99-on

**9861** Transmission dipstick, custom all BT 87-06

**9934** Trans to motor all 99-06

**9785** Trans shifter cover all Dyna 91-05

**9951** Trans shifter cover all FLT, Softail 98-06



## Colony Chrome Motor Mount Bolt Covers

Chrome plated covers add a smooth finished look when easily installed with a set screw. Sold in sets of 2.

**72119** Softail 00-on

# EVO

All cases warranted direct by manufacturer only



## S&S Engine Cases (For 8-1/2" Flywheels only)

84-91 Evo type for 84-99 chassis with cast aluminum primary chain cover (requires aluminum oil pump OEM#26193-73).

Natural	Black	Description
310000	310052	Standard Bore
310001	310053	Big Bore 3-5/8"
310024	-	Big Bore 4"

92-99 Evo type for 84-99 chassis with cast aluminum primary chain cover (requires OEM#26050-92 oil pump or Revolution pump PC #29802)

Natural	Black	Description
310005	310055	Standard Bore
310077	310078	Big Bore 3-5/8"
310011	-	Big Bore 3-5/8"
310047	-	Big Bore 4"
-	310075	Big Bore 3-5/8" w/o sensor (for small diam. wheels)

All S&S Evo style alternator style crankcases for stock diameter flywheels manufactured after Oct 1, 2004 are machined for a crank position sensor. This allows the use of a stock EFI crank position sensor or an S&S crank position sensor for S&S Variable Fuel Injection (VFI) systems, or S&S Intelligent Spark Technology (IST) ignition systems. If no position sensor is used, the hole is covered with a small plate supplied with each set of cases. Crank position sensors must be used with flywheels with timing notches machined into the rim of the drive side flywheel

## Softail Motor Mount Shims

Fit on front and rear 84-98.

PCP	Thickness
13514	.036 (5 pack)



## Timing Plugs

Acorn style plug fits all BT and Sportster timing plug holes and oil tanks with 5/18-18 drain holes.

1690

Acorn style plug with an oversize thread and one tap for re-threading the stripped out timing hole.

1758 Plug and tap

1759 Plug ONLY

Cap style plug fits all BT and Sportster timing plug holes and oil tanks with 5/18-18 drain holes.

2896 With 5/8 - 18" drain hole

5258 BT 81-on 1/2-20 thread

Custom design plug fits all BT and Sportster timing plug holes and oil tanks with 5/18-18 drain hole.

3591 Chrome

5282 Cad

5283 Black oxide



## Clear Timing Plugs

Available in standard or long version.

Sold each

PCP Type

626 Standard (96295-65TA)

73653 Long

73654 Hex



## Colony Allen Timing Plug all HD 1970-on

5/8-18 Thread. Sold each and replaces 720.

9402 Chrome

9403 Cad

# Big Twin EVO



12569



12612

## Motor Sprocket Nuts

PCP	Application (each)
12569	BT 70-90 (40392-70)
12612	BT 91-06 (40392-91)



45145



45146

## Chrome Front Motor Mount Cover

Cover your front case to hide any casting imperfections.

45145	FXST 84-on
45146	FXR 84-94



## Big Twin Case Chrome Trim

Fits between the cylinders on EVO 85-99 by mounting to center case stud with the acorn nut included.

45066



40019



40021



21000

## FLT-FXR Motor Mount Components

PCP	Description
40021	Front mount, black (16207-79B)
40022	Front mount, chromed (16207-79B)
40019	Stabilizer link, chrome upper or lower FLT 79-08, FXR 82-94; upper on Dyna 91-94 (16219-79C)
40020	Chrome upper stabilizer Dyna 95-17 (16258-95B)
21000	Front bracket BT Touring 79-06 (47159-79A)



## Chrome Front Motor Mount Assembly

Fits FXR-FLT 80-06 models and includes bracket, link ISO mount and hardware.

59207



## Chrome Billet Crankcase Breather

Includes 1/8" NPT fittings.

77106





# Motor Case Hardware



## Chrome Upper and Lower Motor Mount Kit

Complete stock motor mount kit features heat treated, plated bolts, locknuts and heavy duty washers.

**9854** Softail 84-99

## Complete Colony Motor Case Kits

Kits includes necessary hardware to bolt together Harley motor cases.

### Big Twin 1979-95

Chrome	Cad	Style
1804	5189	Stock
5188	-	Acorn

### Evo Big Twin 1996-99

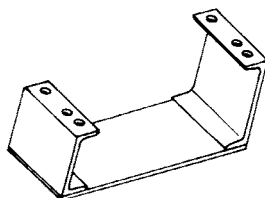
Chrome	Zinc	Style
9882	-	Acorn
9883	9884	Flanged nuts



## Big Twin Engine Stand

Perfect for Harley Engine repair. Bench stand works on all BT 36-99 engine cases.

**2831** 96815-46



## Lower Motor Mount Kit

Includes heat treated, plated bolts, locknuts and heavy duty washers. Fits FLT, FLHT, FXR, FXRS 88-06 with rubber mounted motors.

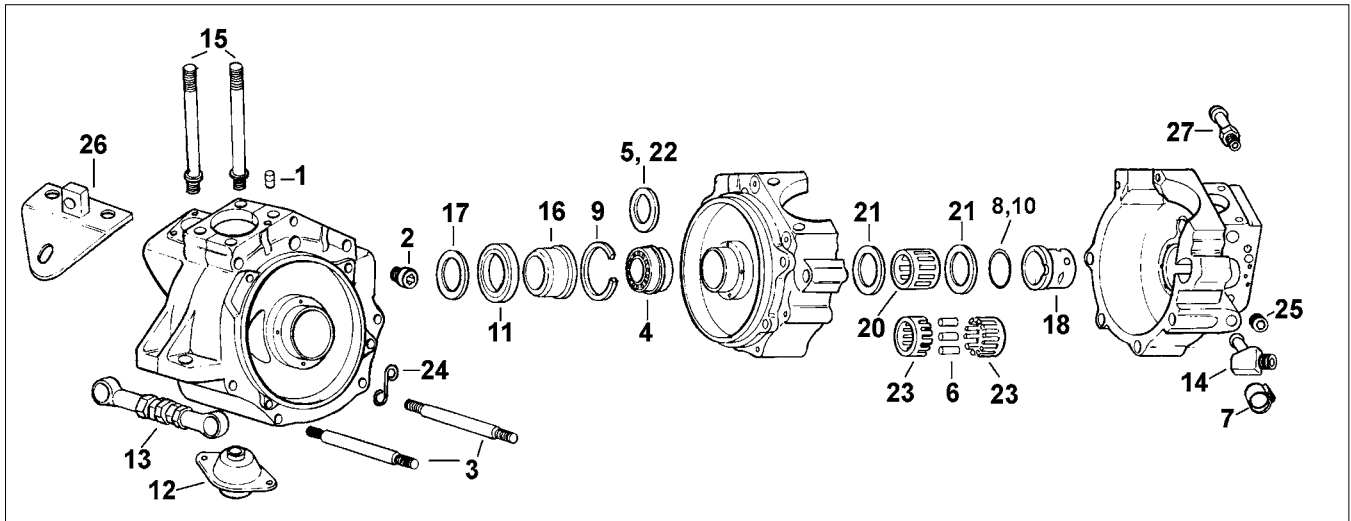
**9859** Chrome



## Chrome Colony Kits

Application	Gold Acorn	Acorn	Allen	Cap
Head bolt covers (4 pieces)	9001	9000	-	9002
Rocker cover BT 85-on, (8 Screws, 3 washers)			8931	

# Crankcase BT Evo



	PCP	OEM	Description	Year	U/M
1	10112	358	Dowel pin (2)	85-*	10 Pk
2	10612	720	Timing hole plug	84-*	Each
4	15500	9028	Bearing assembly	70-02	Each
5	13540	9120 to 9134	Shim assortment 16 sizes .0895-.120	70-*	Set
6	15050	9220A	R/S Rollers STD (28)	58-86	Set
	15051	9221A	" " .0002	58-86	Set
	15052	9222A	" " .0004	58-86	Set
	15053	9223A	" " .0006	58-86	Set
	15054	9224A	" " .0008	58-86	Set
	15055	9225A	" " .001	58-86	Set
	15056	9225A+2	" " .002	58-86	Set
7	16228	10080	Clamp oil line	84-86	10 Pk
8	11007	11007	R/S Retaining ring	58-86	10 Pk
9	11039	11160	L/S Retaining ring	L83-*	5 Pk
10	11043	11177A	R/S Retaining ring	87-*	10 Pk
11	14016	12026B	Oil seal	70-98	5 Pk
	79067	12026B	James oil seal	70-98	5 Pk
12	40021	16207-79B	Engine mount, front	80-*	Each
13	40019	16219-79A	Stabalizer link/lwr	79-08	Each
14	10509	16302-81	Fitting, crankcase	81-*	Each
	N/A	16304-87	Fitting, crankcase	87-*	Each
15	10816	16837-85A	Stud, cylinder	L85-99	Each
16	11800	24002-70	Spacer	70-*	Each

	PCP	OEM	Description	Year	U/M
17	11810	24032-70	Spacer .060	70-*	5 pk
	11811	24033-70	" .090	70-*	5 pk
	11812	24034-70	" .120	70-*	5 pk
	11813	24035-70	" .150	70-*	5 pk
	11814	24036-70	" .180	70-*	5 pk
	11815	24037-70	" .210	70-*	5 pk
	11848		Spacers .060-.210	70-*	6-pc
18	1009	24599-58A	R/S Bushing STD	58-*	Each
	31070		Jims bushing STD	58-*	Each
	1171	24600-58A	R/S Bushing .002	58-*	Each
	1010	24601-58A	R/S Bushing .005	58-*	Each
	31071		Jims +.010 bush	58-*	Each
	1011	24601-58A	R/S Bushing .010	58-*	Each
	31090		Jim's +.032	58-*	Each
20	15920	24650-58	R/S bearing STD	58-86	Kit
	15872	24626-87	" " white/grey	87-*	Set
	15861	24628-87	" " green	87-*	Set
	15862	24641-87	" " red	87-*	Set
	15863	24643-87	" " blue	87-*	Set
21	11816	24692-58	R/S Washer .070 (2)	58-86	Pair
	317004		As above .050		Pair
22	11850	35850-84	L/S Spacer .010	70-*	5 Pk
	11851	35851-84	" " .020	70-*	5 Pk
	11852	35852-84	" " .032	70-*	5 Pk
23	10732	43578-35	R/S Bearing cage (2)	58-86	Each
24	16260	45095-85	Retainer connector	78-88	5 Pk
25	10545	45830-48	Plug case oil line	L84-*	5 Pk
26	21000	47159-79A	Engine mount chr.	80-06	Each
27	10575	63533-41	Fitting oil hose	L84-*	5 Pk



## BT Pinion Gear Side Bearing Set 87-99

Includes cages. Available in a 1 piece or 2 piece style.

1-Piece	2-Piece	OEM	Colour	Size
15871	15861	24628-87A	Green	STD
15872	-	24626-87A	White/grey	+0.0001
15873	15863	24643-87A	Blue	+0.0002
15874	15862	24641-87A	Red	+0.0003
-	15864	24642-87A	Black	+0.0005
-	15865	24644-87A	Yellow	+0.0010
-	15866	24645-87A	Brown	+0.0015
-	15867	24646-87A	Silver	+0.0020
<b>Pinion Shaft Race 87-99</b>				
18007	-	23928-87	-	1.372"

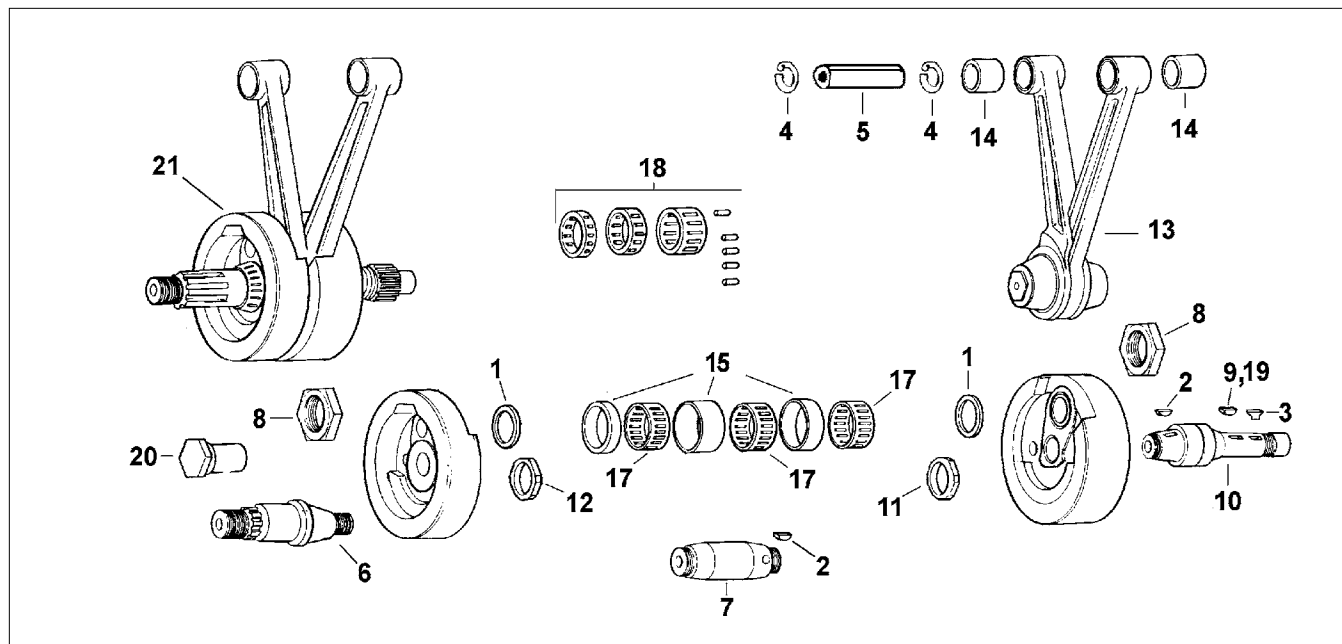


## Pinion Bearing Sets

Bearing set for right side that includes rollers and cages.

15411 BT 74" & 80" 58-86

# Flywheels BT Evo



	PCP	OEM	Description	Year	U/M		PCP	OEM	Description	Year	U/M
1	<b>11520</b>	6506	Bronze washer (2)	70-99	Pair	11	<b>12539</b>	24016-80	Nut, gear shaft	L81-89	Each
	<b>11523</b>	6506B	+005 O/S (.065)	70-99	Pair	12	<b>12541</b>	24017-80	Nut/sprocket shaft	L81-E85	Each
	<b>11535</b>	6506B	Steel +005 O/S (.065)	70-99	Pair	13	<b>34004</b>	24281-83	Rod assembly	L83-99	Each
2	<b>10301</b>	11218	Key c/pin & pinion	L81-99	10	14	<b>32050</b>	24334-36	Bush. piston .STD	36-98	Pair
3	<b>10302</b>	11219	T-Key, pinion	88-99	10		<b>32051</b>	24334-36	Bush. piston .002	36-98	Pair
4	<b>11051</b>	22589-83	Lock ring (4)	84-99	10		<b>18509</b>	24335-36	" " .010	36-98	Pair
5	<b>32352</b>	22719-85	Piston pin (2)	86-99	Each		<b>18644</b>	24316-99	Pin bushing	99-on	Pair
6	<b>31200</b>	23909-80	Sprocket shaft, Jims	L81-E85	Each	15	<b>977</b>	24345-36	Rod race, narrow (2)	36-99	Set
7	<b>32549</b>	23961-80A	Crank pin 3 hole	L81-99	Each			24356-36	" " wide (1)		
	<b>31156</b>		Jims as above 3 hole	L81-99	Each	17	<b>10723</b>	24366-71	Cages, narrow (2)	73-86	Set
	<b>32548</b>	23975-87	USA crank pin .002	L83-99	Each			24367-71	" " wide (1)		
8	<b>12536</b>	23969-83	Nut, crank pin (2)	L83-99	Pair	18	<b>15850</b>	24385-40B	Rollers/cages STD	41-86	Set
9	<b>10306</b>	23985-54	Key, pinion (2-'89)	54-99	10		<b>15800</b>	24346-87A	Bearings and cages	87-99	Set
10	<b>1889</b>	24006-83	Pinion shaft	L83-86	Each	19	<b>10310</b>	26348-15	Key, pinion	36-99	10 Pk
	<b>31247</b>		Jims as above	L81-86	Each	20	<b>12569</b>	40392-70	Nut, sprocket	70-90	Each
	<b>32502</b>	24006-87	" " STD	87-88	Each		<b>12612</b>	40392-91	As above, thru-hole	91-06	Each
	<b>31248</b>		Jims as above	87-88	Each	21	<b>58016</b>	23906-93B	Flywheel assembly	93-99	Each



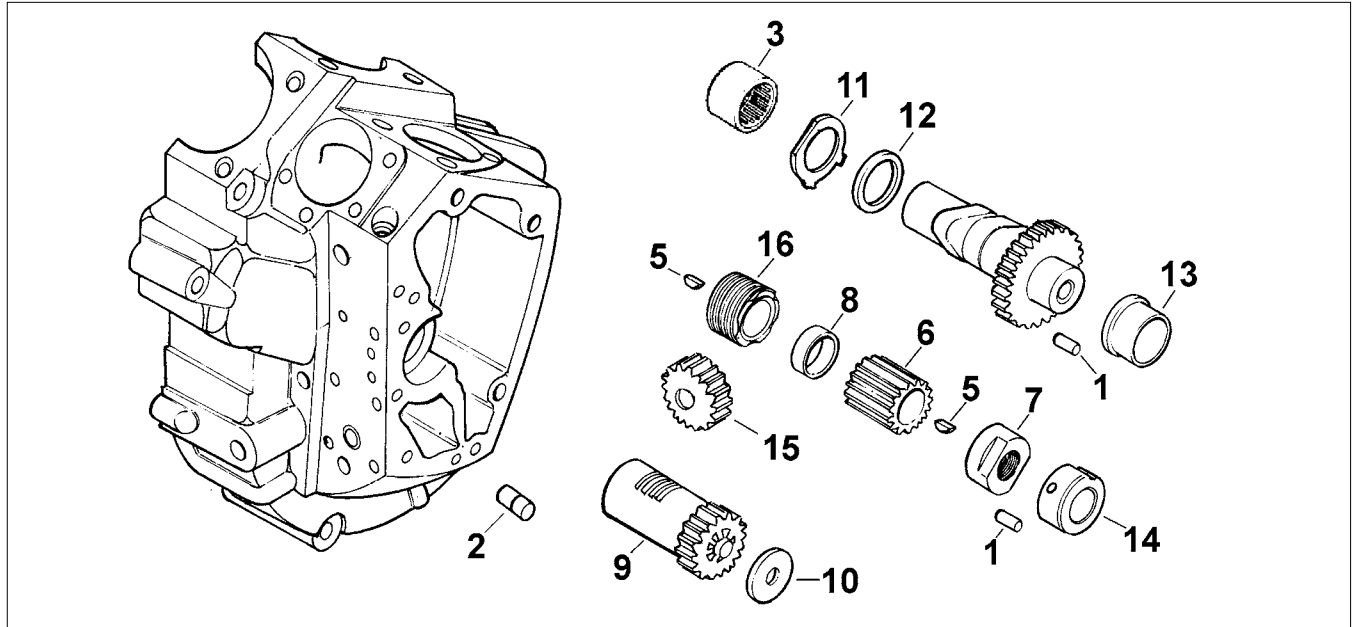
## Complete 80" Flywheel Assembly

- 4 1/4" stroke flywheel assembly for stock Big Twin 93-99
- Shipped complete and assembled but not trued
- Trueness **must** be checked before assembly of motor

**58016** 93-99 EVO with carburetor (23906-93B)



# BT Evo Cam Case



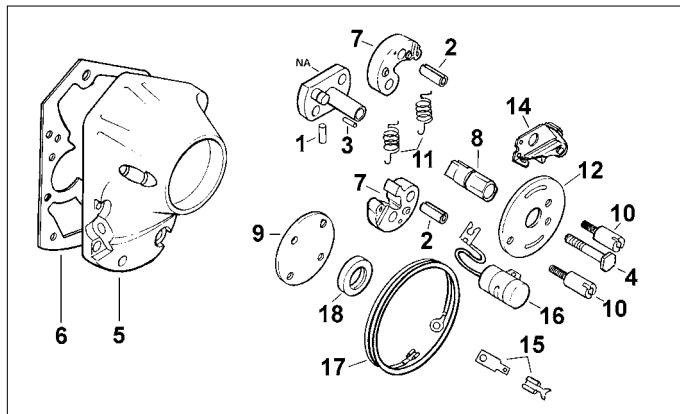
## Big Twin Gear Case 84-99

Big Twin Gear Case 84-99						PCP	OEM	Description	Year	U/M		
	PCP	OEM	Description	Year	U/M	11565	25326-82	" "	.155	L82-*	5 Pk	
1	10155	275	Dowel pin (2)	57-on	10 Pk	11566	25327-82	" "	.160	L82-*	5 Pk	
2	10112	358	Dowel pin (2)	41-on	10 Pk	11567	25328-82	" "	.165	L82-*	5 Pk	
3	15607	9058	Cam bearing	58-99	Each	11568	—	Ass't of various sizes		L82-*	8 Pk	
5	10306	23985-54	Key, pinion	54-89	10 Pk	11	11529	25550-57	Lock washer, cam	58-*	5 Pk	
	10302	11219	T-Key, pinion	90-99	10Pk	12	13522	25550-36	Cam washer .050	36-*	5 Pk	
6	31309	24240-78	Pinion gear, orange	77-89	Each	13523	25551-36	" "	.055	36-*	5 Pk	
	31310	24041-78	Pinion gear, white	77-89	Each	13524	25552-36	" "	.060	36-*	5 Pk	
	31311	24042-78	Pinion gear, yellow	77-89	Each	13525	25553-36	" "	.065	36-*	5 Pk	
	31312	24043-78	Pinion gear, red	77-89	Each	13526	25554-36	" "	.070	36-*	5 Pk	
	31313	24044-78	Pinion gear, blue	77-89	Each	13521	25555-84	" "	.045	36-*	5 Pk	
	31314	24045-78	Pinion gear, green	77-89	Each	13528	25556-79	" "	.080	36-*	5 Pk	
	31315	24046-78	Pinion gear, black	77-89	Each	13529	25557-79	" "	.085	36-*	5 Pk	
	29089	24043-93	Pinion gear, red	93-06	Each	13530	25558-79	" "	.090	36-*	5 Pk	
7	12544	24023-54	Nut, pinion	54-89	Each	13531	25559-79	" "	.095	36-*	5 Pk	
	12542	24022-90	As above	90-92	Each	13532	—	" "	.100	36-*	5 Pk	
	31015		Jims, as above			13520	—	Ass't (.050-.095)			10Pk	
	12613	7916A	As above	93-99	Each	13	18513	25581-70	Cam bush cover STD	70-*	Each	
8	1193	24703-54	Spacer, pinion	54-89	Each	18514	--	" "	" .005	70-*	Each	
	11534	24704-90	As above	90-92	Each	18629		" "	" .010	70-*	Each	
9	30119	25310-82A	Breath valve, plastic	L77-99	Each	14	18518	25582-73	Pinion bush cover	L73-92	Each	
	30168	25313-77A	Breather valve, steel	L77-99	Each	18639		As above +.005			Each	
10	11560	25320-82	Plastic washer .130	L82-*	5 Pk	18601	25582-93	Pinion bushing STD		93-99	Each	
	11561	25321-82	" "	.135	L82-*	5 Pk	18602	As above +.005			Each	
	11562	25322-82	" "	.140	L82-*	5 Pk	15	2268	26345-73	Pump drive gear 24T	73-99	Each
	11563	25323-82	" "	.145	L82-*	5 Pk	16	31351	26349-84	Pinion pump gear	L85-89	Each
	11564	25325-82	" "	.150	L82-*	5 Pk	30125	26354-90	As above		90-92	Each
						30133	26354-93	As above		93-17	Each	



**Crankcase Oil Screen**  
16270 24983-00 (each)

# BT Nose Cone 1970-99



## Cam Bushing Kit

BT kits include cam and gear shaft bushings/bearings with lock pins and thrust plate. USA made.

### BT Kits

<b>15400</b>	93-99
<b>15401</b>	73-92

## Big Twin Cam Cover (Points Ignition) 70-78

	PCP	OEM	Description	Year	U/M
1	<b>10127</b>	615	Pin breaker plate	70-78	10 Pk
2	<b>10183</b>	620	Pin breaker weight	70-78	10 Pk
3	<b>10115</b>	623	Pin	70-78	10 Pk
4	<b>2556</b>	3570	Timer bolt	70-99	Each
5	<b>45469</b>	25268-84A	Chrome gear cover	73-92	Each
	<b>45557</b>	25268-84A	Black gear cover	73-92	Each
	<b>45471</b>	25256-93A	Chrome gear cover	93-99	Each
	<b>45560</b>	25256-93A	Black gear cover	93-99	Each
6	<b>79280</b>	25225-70B	Gasket, James .031	70-92	10 Pk
	<b>79282</b>	25225-70-X	Gasket, black .031 w/silicone	70-92	5 Pk
	<b>79283</b>	25225-93	Gasket, paper, cam	93-99	10 Pk
	<b>79285</b>	25225-93-X	Gasket, black w/silicone	93-99	5 Pk
7	<b>2555</b>	32522-70	Advance weights	70-78	Pair
8	<b>30052</b>	32542-70A	Cam, breaker	70-78	Each
9	<b>79565</b>	32591-70	Gasket 2 hole	70-79	10 Pk
	<b>25110</b>	32591-80	Gaskets 4 hole	80-99	10 Pk
10	<b>10844</b>	32601-78	Stud timer cover	L72-E82	Pair
	<b>10846</b>	32606-82	" " "	L82-99	Pair
	<b>10896</b>	As above	Oversize 12/24 threads		Pair
11	<b>12165</b>	32605-70	Advance springs	70-78	10 Pk
12	<b>3333</b>	32618-70	Points plate, bare	70-78	Each
13	<b>N/A</b>	32629-70	Shaft & plate	70-E78	Each
14	<b>724</b>	32661-70	Points	70-78	10 Pk
16	<b>727</b>	32726-30A	Condensers	48-78	10 Pk
18	<b>14074</b>	83162-51	Oil seal cover	70-99	5 Pk



**29100**



**29139**

- 29100** Ignition rotor cup, gold 83-99 (32402-83) (requires OEM bolt #26113, not included)
- 29139** Ignition rotor cup Evo fuel injected models 95-99 (32456-95)



**31359**



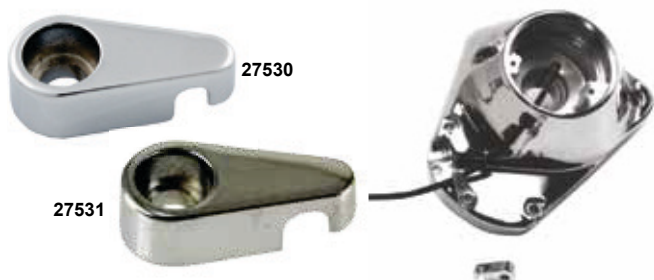
**31360**



**31361**

## Jims BT Cam Cover Bushings

PCP	Description (Each)
<b>31359</b>	BT 70-99 STD
<b>31360</b>	BT 70-99 .005 (25581-70)
<b>31361</b>	BT 70-99 .9875 (25581-80AB)



## Ignition Wire Hold-Downs (5 packs)

Die-cast, chromed aluminum ignition wire hold-downs neatly secure the ignition wire to the cam cover. They accept a socket head screw (not included).

**27530** Small wire hold-down for point-type ignitions

**27531** Large wire hold-down for electronic-type ignitions.



**31367**



**31368**

## Jims Pinion Bushing

PCP	Application
<b>31367</b>	BT 93-99 (25582-93)
<b>31368</b>	BT 93-99 .005

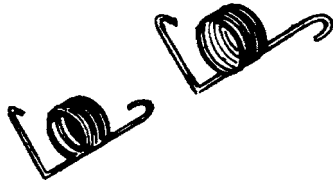
# BT Cam Case 1970-99



## Tuneable Advance Unit 70-99

Features stainless base, heat treated weights, cam bolt and colour coded springs that allows full advance at 1400, 2000, and 2600 RPM, depending on which springs are selected. Can be used with all ignitions, points, single or dual fire types which utilize an advance unit.

**28127** Tuneable unit



## Advance Weight Spring 70-99

### PCP Description

- 12165** Black, stock OEM style springs, 1400 RPM (10 pack)  
**13001** Heavy advance weight springs for slightly modified stock low compression or mild Stroker. Helps solve minor idle problems, 2000RPM (pair)  
**13002** Severe duty weight springs for high compression and heavily modified engines. Also useful for engines experiencing pinging or erratic idling, 2600 RPM (pair)



## Advance Unit Assembly 70-99

Replacement unit assembly for those worn out parts on the stock 70-E78 models as a complete kit to convert late 1978 models electronic ignitions back to point style ignitions.

**681** Complete Kit

**4396** Points wire only

## Rotor & Weight Assembly

Replaces frozen or worn hubs & weights on FX-FL 70-99. Includes shaft, weights, springs and cam assembled.

**30054** 32505-78A



## Needle Bearing Advance Unit 1970-99

Features redesigned weights which house full complement miniature needle bearings for perfect balance and centrifugal actuation. Includes base, cam, weights with installed needle bearings; and stock springs. Fits BT 70-99, and can be used with all ignitions, points, electronic, single, or dual types which utilize an advance unit. Springs available separately and allow full advance at RPMS listed.

**28123** Complete unit

## Timing Cover Screw

### Kit All Big Twins

#### 1970-92

**1748** Acorn Style

**5353** Allen Style

**24038** Stainless Steel





# BT Cam Cover



## Jims Polished Billet Cam Cover, BT 93-99

Made from 7075-T651 aluminum with a tensile strength of almost triple the stock cast unit. Cam cover is right to the center line of the cam bushing and pinion bushing. Two piece construction, inner cover houses the cam bearing and seal. O-Rings are used with both covers to offer superior sealing. Two mounting bolts are all that show at final assembly.

**31296** 93-99 (25254-93A)



## Evolution BT Nose Cone Gear Covers

- Fit Big Twin 84-99 models with end oiling
- Installed bushings and includes seal

Chrome	Polished	Satin Black	Application	OEM
<b>45469</b>	<b>45470</b>	<b>45557</b>	73-92	25268-84A
<b>45471</b>		<b>45560</b>	93-99	25256-93A
<b>45597**</b>	<b>67403*</b>		93-99	25256-93A

\*Made in the USA, \*\*Made in Japan



## Jims BT Chrome Cam Cover Kit

**31269** BT 93-99



## Polished Chrome Timing Cover Screw Kit

**8761** FX 70-92, EVO



## Colony Cam Cover Screws



## Chrome Acorn Style

PCP	Application
<b>1748</b>	BT 70-92
<b>9820</b>	BT 93-99 (not TC 88)
<b>9945</b>	TC 88, Dyna, FLT 99-on

## Chrome Cap Style

PCP	Application
<b>8466</b>	BT 70-92

## Chrome Allen Style

PCP	Application
<b>5353</b>	Shovel and Evo 70-92
<b>9819</b>	BT 93-99, FXST 89-06, Dyna 91-05

# BT Cam Cover

310203



## S&S Crankcase Gear Cover Kits 73-99

Machined from 356-T6 aluminum castings and feature a distinctively different from stock appearance. Includes inner gear cover and decorative bolt-on outer cover. Will accept either points or an electronic ignition system.

Flangeless	Year
310203	73-92
310204	93-99



## S&S Polished Billet Gear Cover Kit

Chromed billet aluminum covers fit 93-99 and are perfect for stock or any engines built with 92-99 stock flywheel assemblies as they are machined to accommodate the larger stock pinion gear nut. 93-99 gear covers do not have the breather passage required for "case breathing" engines and should only be used with engines that have the crankcase breather routed through the cylinder heads. Kits include gear cover, ignition cover, gaskets and mounting hardware.

PCP	Description
310336	Complete kit 93-99
310332	Ignition cover only



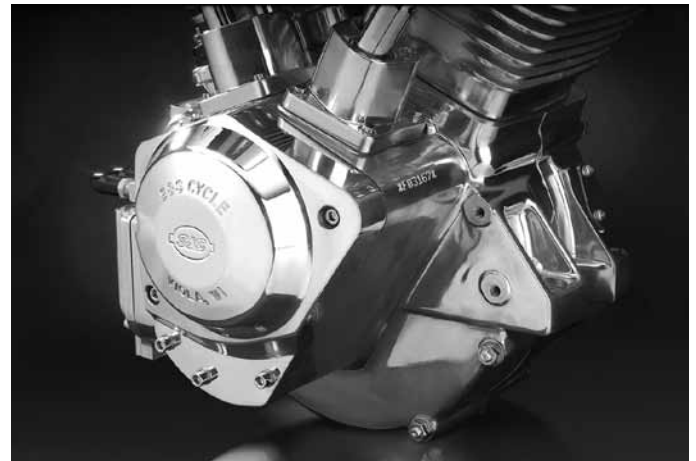
## Polished Billet Flame Points Cover

Radical flamed points cover features skull motif to fit BT 70-99. 59707



## Chrome Nose Cone Cover

Includes seal and installed bushings. Fits FLT, FLST, FXD, FXR & FXST 93-99. 45597



## S&S Billet Gear Cover for Evo Style S&S Engines with Crank Position Sensor Ignition

Gear cover is intended for engines that make use of a notched flywheel and crank position sensor for ignition timing. It is not machined to accept an ignition system. Shorter than standard type gear covers, it is not subject to cam seal leaks, since the cam is entirely contained within the cover. Solid one piece polished cover is machined from billet aluminum and features the S&S logo. Direct replacement for gear covers supplied on S&S engines equipped with IST ignition or Variable Fuel injection.

310313

# BT Cam Cover



## Chrome Cam Covers BT 70-92

Stamped steel covers completely enclose your cam and point covers like a second skin. Each cover includes necessary mounting hardware.

**45049** Plain version



## Chrome Skull Design Cover

PCP	Type	Application
<b>45482</b>	Points	BT 70-98
<b>59171</b>	Derby	BT 70-98
<b>59172</b>	Derby	FLT 99-15, FXST 99-on, FXD 99-17



## Chrome Maltese Cross Covers

PCP	Cover	Type
<b>59184</b>	Derby	3 Hole BT
<b>59185</b>	Derby	5 Hole BT
<b>59186</b>	Points	2 Hole
<b>59187</b>	Points	5 Hole



## Chrome Nose Cone Cover 70-92

Cover slips over your existing nose cone and mounts with the existing hardware.

**45332** BT 70-92



## Chrome Nose Cone Cover BT 93-99

Steel cover slips over your existing cam cover. Hardware included.

**45051**



## Ignition Cover Gasket

Use on all 70-99 Twins.

Preston	James	Type (10 pack)
-	<b>79565</b>	2-Hole (32591-70)
<b>25110</b>	<b>79309</b>	4-Hole (32591-80)
<b>25224</b>	-	2 Hole rubber

## Point Cover Allen Screws

Fits BT 70-on.

PCP	Style	Length	Year
<b>2864</b>	Acorn	.400	70-99
<b>5256</b>	Cap	.400	70-99
<b>8492</b>	Gold Cap		70-99
<b>5356</b>	B/Head	.500	70-78
<b>5357</b>	B/Head	.600	79-99





# Point Covers



Two Hole Multi-Fit Point Covers				
PCP	Design	Finish	Fitment	Holes
3409	Domed	Smooth chrome	70-99 (32584-88T)	Any
5486	6 Bolt Domed Racer	Chrome with 6 non-functional buttonhead allen screws	70-99 Evo	
45112	LTR-Eagle Spirit	Chrome	70-99 BT	Horizontal
45212	LTR-Eagle Spirit	Chrome with gold overlay	70-99 BT	Horizontal
59001	Spinner	Chrome with multi-holes	70-99 BT	
44065	Mesh skull	Chrome with black mesh skull	70-99 BT	Horizontal
45482	Raised skull	Chrome with black eyes	70-98 BT	Horizontal
44072	Raised skull	Black with raised chrome skull	84-99 BT	Horizontal
44136	Chained Skull	Chrome	70-99 BT	Horizontal
44133	Modern skull	Chrome with raised black skull	70-99 BT	Horizontal
44131	Pirate skull	Black with chrome skull and band	70-99 BT	Horizontal
59707	Flaming Skull	Polished billet	70-on BT	Horizontal
45165	Flames	Chrome	70-98 BT	Horizontal
59186	Maltese Cross	Chrome	70-98 BT	Horizontal

# BT Oil Pump



## S&S Standard Billet Oil Pump Kits

Note that some kits include a breather gear and shim kit with an oil pump assembly. Primary chain oiling is automatic and precise eliminating potential damage to the primary chain or drive clutch because of too little or too much oil.

Oil pump only kit includes supply gears, return gears, drive shaft, drive shaft keys, drive shaft snap rings, check ball, check ball spring, pressure valve, pressure valve spring, cover screws with o-rings, miscellaneous hose fittings, plugs, screws, paper gaskets, and mounting hardware with both early style 1/4"-24 and late style 1/4"-20 mounting bolts.

### Caution:

Incorrect gear fit causes binding and premature wear or damage to gears which may also result in damage to other engine components.

### Oil Pump Assembly Only

- 316203** 73-91 with universal cover
- 316206** 92-99 with standard cover
- 316205** 92-99 with universal cover

### Oil Pump Assembly with Drive Gear, Breather Gear, Shims

- 316295** 78-91 with universal cover
- 316296** 92-99 with standard cover

### Oil Pump w/Custom Cover, Without Gears

- 316207** 92-99

### Oil Pump w/Custom Cover and Gears

- 316247** 92-99



## S&S BT Billet Oil Pump Gasket Kits

### S&S Oil Pump Gasket Kit

- 316271** 36-91 with paper gaskets
- 316273** 92-99 with paper gaskets



## S&S BT Oil Pump Kit Replacement Parts

### Pump Body 92-99

- 316051**

### Pump Cover 92-99

- 316062** Standard



## S&S Oil Pump Master Rebuild

Fits all S&S pumps 36-99

- 316275** Kit

# BT Oil Pump



## S&S High Volume/Pressure Billet Oil Pump

Designed for the sidewinder plus long blocks with piston cooling jets that spray oil on the underside of the pistons. The high volume/high pressure pump is recommended for any engine with 92-99 style crankcases. Pumps feature a new tooth profile which provides increased supply and return oil volume. Supply gears are 9% wider than stock and return gears are 28% wider than stock to help prevent oil carry over. Even with wider gears the pump remains the same width as a stock pump. Available with or without breather gears and with a universal or standard cover. The standard cover has the feed and return lines in the 92-99 stock location. The universal cover is a custom cover that provides a number of feed and return options for the custom builder.

### Oil Pump Only (no breather gears) 92-99

**316208** With universal cover

**316209** With standard cover

### Oil Pump with Breather Gears 92-99

**316302** With universal cover

**316298** With standard cover

### Oil Pump Only (no breather gears) 84-91

**316214** With universal cover

### Oil pump Kit with Gears 84-91

**316307** With universal cover

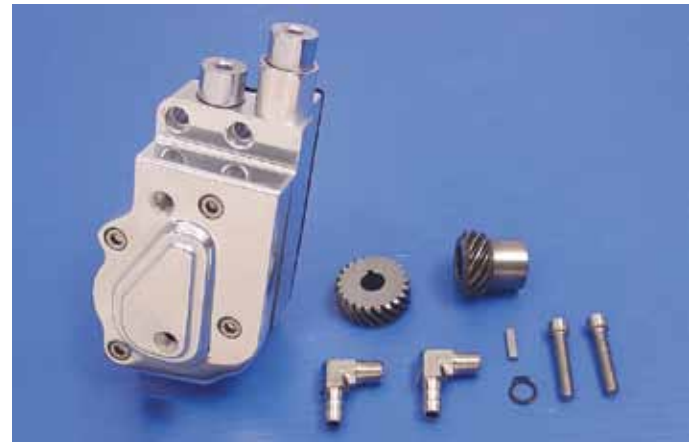
## S&S HVHP Oil Pump Rebuild Gasket Kit

High Volume High Pressure oil pump gasket kit includes key and retaining ring.

### PCP Application

**316308** BT 84-91

**316299** BT 92-99



## Sifton Oil Pump BT 1992-99

Features geo-rotor compact cad/cam design, modular billet aluminum construction, superior scavenging, increased feed flow rate which eliminates wet-sumping in crankcase.

**21695**



## Oil Pump Top Cover

Chrome plate fits the gap between engine and transmission on FLT, FLHT, FLHRC, FLHS, FLHR, FLTR 93-98 models with ribbed or classic oil pump cover. Does not fit Twin Cam 99-on engines. Replaces 66090-96A.

**64201**

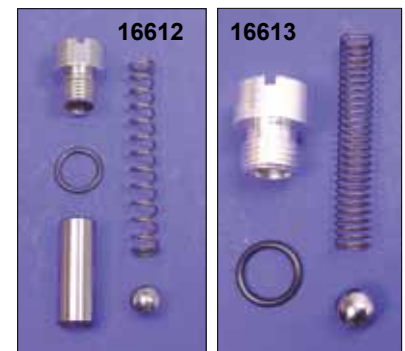
## Oil Pump

### Valve Kits

#### PCP Application

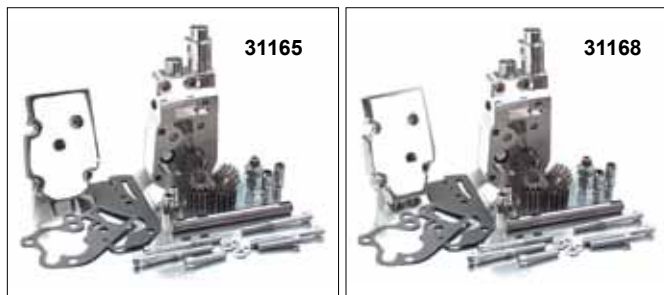
**16612** Relief valve/  
bypass  
(spring, plug,  
valve)

**16613** Check valve  
81-99  
(ball, spring,  
cap)





# BT Oil Pump



## Jims Polished Billet Aluminum Oil Pump

CNC machined Flow Pro 1 pump will provide an increase in oil return (scavenge) volume over stock pumps. Provides increased horsepower by decreasing drag on the flywheels and other rotating parts. Choice of end cover for custom or stock oil line connection. Feed and return gears are matched to each body. Available for L73-on Evo BT 74" to 140" motors. 81-on bolts on with no modification. 73-80 cases will require a simple drilling for oil drain hole by using JIMS #2286 drilling tool. No provisions for front or rear chain oiling.

- 31165** BT 73-91 w/top feed and return
- 31167** BT 73-91 w/bottom feed and return
- 31168** BT 92-99 w/bottom feed and return
- 31159** Oil pump body only BT 73-91
- 31160** Oil pump body only BT 92-99

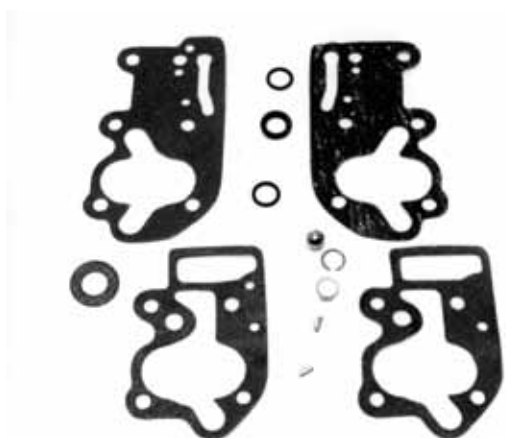


## BT Oil Pump Assembly

Features improved oil pump pressure regulation that will ensure correct oiling to all areas of BT engines 73-on. Kit includes all necessary fittings, snap rings, keys, gaskets and mounting bolts. Can be used with either chain drive or belt drive models.

**Note:** Available with breather which also includes drive gear gasket, breather gear and washers.

Pump Only	Pump W/ Breather	Year	Finish
<b>30063</b>	<b>59564</b>	73-91	Polish
<b>30064</b>	<b>59565</b>	73-91	Chrome
<b>30065</b>	<b>59566</b>	92-99	Polish
<b>30066</b>	<b>59567</b>	92-99	Chrome



## Oil Pump Rebuild Kit

Includes all gaskets, seals, clips, keys, check ball for FX-FL BT 81-on.

### Oil Pump Rebuild Kits

James	Fits	Material
<b>79819</b>	81-91	Paper
<b>79818</b>	81-91	Mylar
<b>79820</b>	92-99	Paper
<b>79837</b>	92-99	Metal gaskets

## Colony Allen Plug Set

Fits BT 81-99 chrome plated polished allen.  
**72074** 3 Pack



## BT Oil Pump Fitting Kit

PCP	Years	Type
<b>73598</b>	84-91	Stock



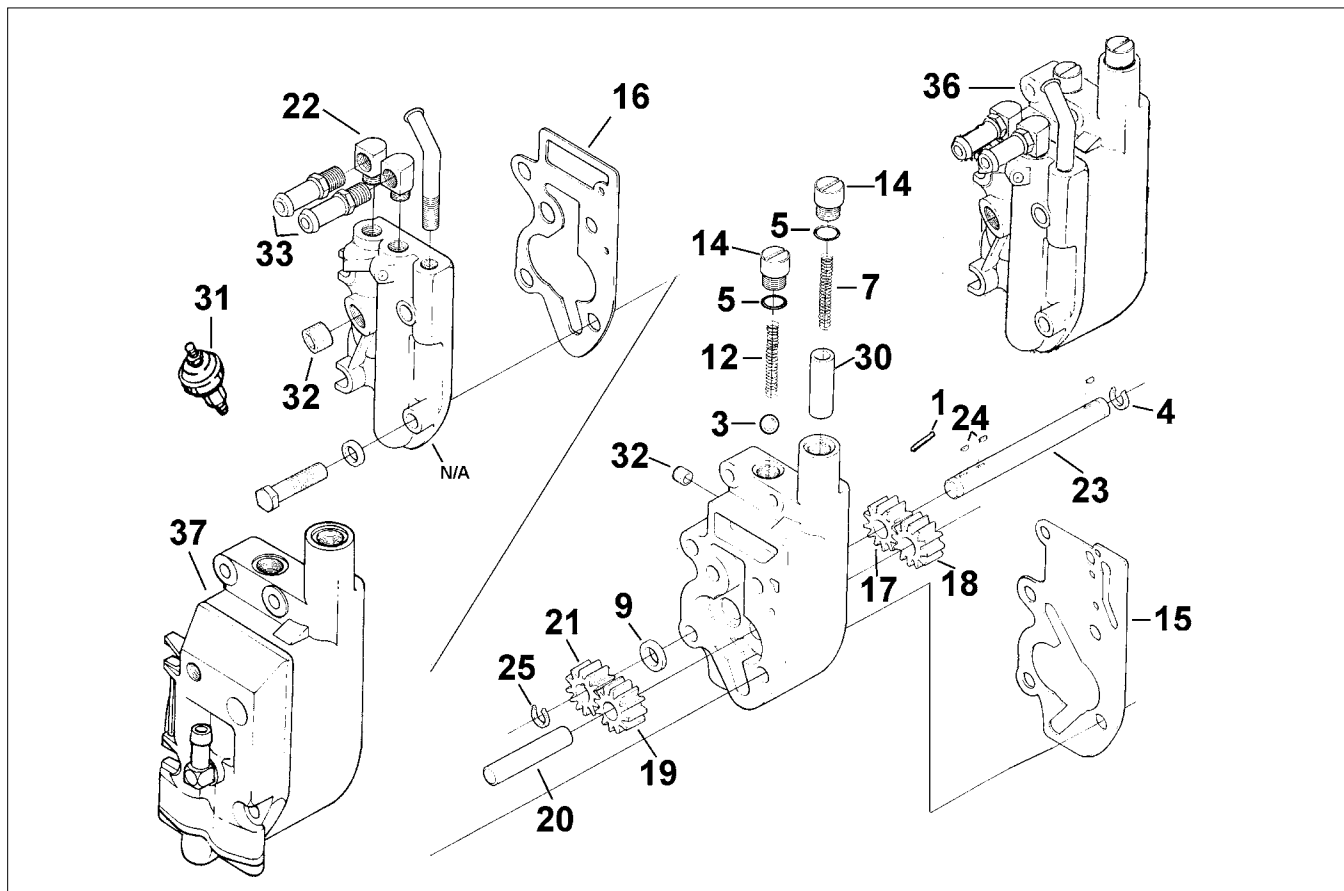
## Pro Just Relief Cap

Without oiler for 81-99 models. This cap allows the precise adjustment of oil pressure by turning the adjusting screw clockwise to increase oil pressure. Comes with a "super pump" spring provided in our spring kit #13260> Works in stock BT 81-99 oil pumps as well as S&S and other pumps.

**30401**



# Oil Pump BT 1984-99



PCP	OEM	Description	Year	U/M	PCP	OEM	Description	Year	U/M
1	10102	600 Pin valve stop	83-99	10Pk	19	30102	26326-62A Drive idler gear, feed	L62-99	Ea
3	15574	8873 Ball chk valve 3/8"	52-on	25Pk	20	30104	26327-68 Idler gear shaft	68-99	Ea
4	11003	11002 Retaining ring	68-99	10Pk	21	30106	26328-74 Drive gear, feed	41-99	Ea
5	14505	11105 O-ring chk valve (2)	79-99	10Pk	22	10520	26338-68 Elbow fitting (2)	68-92	5 pk
7	13132	26207-83 Relief valve spring	83-99	10Pk	23	1408	26346-70 Drive shaft	68-99	Ea
9	14032	26227-58 Oil seal	68-99	5 Pk	24	10310	26348-15 Key, drive shaft (3)	68-99	10 pk
12	13133	26262-80 Check valve spring	81-99	10Pk	25	11060	26348-36 Snap ring, shaft	36-99	10 pk
14	30111	26263-80 Plug check/relief	81-99	Each	30	30113	26400-82 Valve oil pump	82-99	Ea
15	79141	26273-80B Gasket body paper	L80-91	10Pk	31	5672	26561-84 Oil switch 5 speed	84-99	Ea
	79142	26273-92 Gasket body paper	92-99	10Pk	32	10545	45830-48 Oil plug (2)	48-99	5 pk
16	79143	26276-80A Gasket cover paper	L80-91	10Pk	33	10575	63533-41 Fitting oil line (2)	41-99	5 pk
	79145	26276-92 Gasket cover paper	92-99	10Pk	36	N/A	26190-73 Oil pump assembly	73-91	Ea
17	30100	26315-68A Drive gear, return	68-99	Each	37	N/A			
18	30101	26317-68A Idler gear, return	68-99	Each					



## Chrome Oil Pump Covers for Big Twins

Covers were designed to bolt-on to stock aluminum oil pumps. Enhances the right side of the motorcycle.

**45031** BT 68-91 (except Dyna Glide™) **without** a fitting for the primary chain oiler and with belt drive

**45030** BT 68-91 **with** a fitting for the primary chain oiler (except Dyna Glide™)

**45027** BT 92-99

# BT Oil Pump



## Colony Oil Pump Plugs

### Oil Screen Plug

FL, FX 81-99 with o-ring (26263-80).

**9644** Chrome

**9645** Cad

### Oil Pump Check and Relief Valves

FL, FX 81-99 with o-ring (26263-80).

**9634** Chrome

**9635** Cad



### Tappet Oil Screen, Oil Pump Check Valve, Relief Valve Plug

Fits BT 81-99 and replaces 26263-80

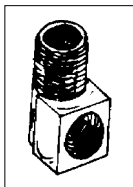
**3583** Chrome

### Tappet Oil Screen, Oil Pump Check Valve, Relief Valve Plug Set

Complete set of 3 chrome plugs fit 81-98 Big Twins.

Replaces OEM P/N 26263-80

**3576**



### Oil Pump Fitting

Chrome 90 degree fitting for all BT 68-92. Will also work on many custom applications. (26338-68)

**10520** 5 Pack

### BT Tappet Screen Oil Plug

**72073** 81-99



### Chrome Tight Spot Oil Pump Fitting Set

5/16" Allen socket for easy installation or removal. Includes 1/8" NPT nipples.

**16329** BT 68-99



### Accel Oil Pressure Switch

Precision calibrated heavy duty contacts, plastic insulator and a bright finish. Fits Evo BT 84-99 (not models w/electric oil pressure gauge).

**5672** 26561-84

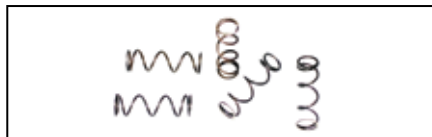


### Tappet Oil Screens (each)

**3378** 24981-70 70-99

### Oil Screen Springs for Tappet Oil

**13127** 24982-70 70-99 (5 pk)



### Colony Oil Tappet Screen/ Spring BT 1970-99

Replaces OEM 24981-70 oil screen and OEM 24982-70 spring.

**72146**



### BT Oil Screen Kit

• Includes plug, screen, spring & o-ring  
Fits FLT 81-98, FXR 82-94, FXST 84-99, FLST 86-99 & FXD 91-98.

**2991**



### "Super-Pump" Spring Kit BT 72-91

Kit consists of three colour-coded, steel springs. Each spring applies more pressure on the relief valve plunger, thus controlling the output pressure of the oil pump. The average output pressure, (taken at road speed, 55-60 mph) would be as follows: Blue spring 20psi, Yellow spring 24psi, Red spring 28psi. At idle the pressure drops no lower than 10psi. The customer can select the spring desired depending on weight of oil used, driving habits, climate, etc... Plus, springs are easily changed if one of these variables change. These springs work well on S&S and Rev-Tech pumps as well.

**13260**



### Jims BT Oil Pump Shaft Kit

**31193** 68-99



### TC-88 Oil Pump Alignment Tool

Tapered tool threads into the oil pump and perfectly aligns the pump to the cam plate. Use on all TC and Evo engines.

**5894**



# BT Pinion Gear



## BT EVO Pinion Gears 93-06

Fits FLT, FXST 96-06, FXR 93-94, FXD 93-05.

**PCP Colour**

**29089** Red (24043-93)



## Topline Pinion Pump Gear BT 90-92

**30125** 26354-90

## BT Pinion Spacer 90-92

**11534** Each (24704-90)



## BT 6 Tooth Pinion Drive Gear 93-17

Fits FLT 93-on, and FXST, FXD 93-17.

**30133** 26354-93

**31350**



**31351**



## Jims BT Oil Pump Drive Gears

Precision machined and heat treated.

PCP	JIMS	Application	OEM
<b>2268</b>	<b>31350</b>	24T Oil pump shaft gear 73-91	26345-73
<b>30153</b>	<b>31351</b>	Pinion/oil pump drive gear L85-89	26349-84



## Colony Oil Pump Mounting Kit

Chrome polished allen bolts for Evo 78-91.

**8747**



**5337**

## Oil Pump Mounting Kits

Chrome	Zinc	Style	Application
<b>5334</b>	<b>9787</b>	Stock	BT 78-91
<b>1821</b>	-	Acorn	BT 78-91
<b>9763</b>	-	Acorn	FLT, FXD 92-98, FXST 92-99

## Chrome Allen

**5337** BT 78-91

**9762** FXST 92-99, Dyna, FLT 92-98

# BT Breather/Pinion



## Jims Big Twin Pinion Gear 77-89 (24040-78)

PCP	OEM	Size	Colour
31309	24040-78	1.4751-1.4756	ORANGE
31310	24041-78	1.4745-1.4751	WHITE
31311	24042-78	1.4737-1.4745	YELLOW
31312	24043-78	1.4729-1.4737	RED
31313	24044-78	1.4721-1.4729	BLUE
31314	24045-78	1.4715-1.4721	GREEN
31315	24046-78	1.4710-1.4715	BLACK

## Jims BT Breather Valve Gear

Breather valve made from aerospace quality steel and CNC machined to highest standards for precise control of exhausting crank case pressure. Designed to replace stock plastic valve gear. Also available in +.030" oversize to correct a damaged breather valve hole.

### PCP Description

**31254** BT L77-99 standard

**31255** BT L77-99 +.030" oversize



## Jims Breather Gear With Elongated Oil Hole

Steel breather gear with elongated rear hole to aid in better crankcase flywheel cavity vacuum.

**31696** Fits late BT 77-99 single cam only

## Sifton Air Ramp

Fits S&S/Sifton breather gear on 1936-99 models to remove more air and oil from crankcase. Requires removal of oil screen for installation.

**34021**



## S&S Big Twin Pinion Gears and Related Parts

Engine Year/ Pinion Shaft	Largest			Average			Smallest
77-89	Orange	White	Yellow	Red	Blue	Green	Black
	<b>334141</b>	<b>334142</b>	<b>334143</b>	<b>334144</b>	<b>334145</b>	<b>334146</b>	<b>334147</b>

## Related Items

24T Pump drive gear 73-91	<b>334230</b>	<p>Note: Gear sizes are listed from largest (orange) to smallest (black). This colour coding sequence is identical to stock H-D coding. When in doubt use a gear from the middle to the small side of the range. A combination of smaller gears should provide adequate gear under most circumstances. Both excessive and zero gear lash combinations cause engine noise, but no clearance or zero gear lash causes binding and premature wear.</p> <p>** Requires OEM 26345-73 oil pump drive shaft drive gear</p>
Pinion drive gear 54-89	<b>334232**</b>	
Gear spacer 54-89	<b>334289</b>	
Gear nut 54-89	<b>334244</b>	
Keys 54-89 (10 pk)	<b>10306</b>	

# BT Breather



## Crankcase Breather Assembly

Mount your breather in plain view instead of hiding it behind your engine or transmission case. Comes complete with a one-piece filter molded to a light weight chrome end cap, a chrome zinc die-cast mounting base with 5/16" inlet and a hose clamp. The hose clamp holds the filter to the base when the vent hose is installed.

- 77101** Complete assembly  
**4634** Replacement Filter ONLY (no chrome)  
 2" diameter x 1/2" height



## S&S Breather Reed Valve for BT Evo Engines

Consists of three steel reeds that are normally in the closed position. When the pistons travel downward in the cylinders, pressure created causes the reeds to open and air and oil mist in the crankcase escapes into the cam chest. When the pistons travel upwards in the cylinders, a vacuum is created in the crankcase that closes the reeds preventing air from entering the crankcase. This greatly improves oil scavenging and maintains a slight vacuum in the crankcase. Easy installation, just insert into the breather valve cavity. Available in standard diameter to replace stock rotary style breather valve and also +.030" diameter for engines with heavily damaged breather bores.

STD	+.030	Application
312096	312100	BT 93-99



## S&S BT Steel Breather Gear or Valve Gear Kit

Machined breather valve replaces the stock steel or plastic unit. Offered in stock duration. Stock O.D. and +.030 oversize for use in worn or damaged breather holes. Washer set also available separately.

STD	+.030	Item	OEM
334241	334242	Gear only	25313-77A/B
334250*	334260*	Valve gear kit	25313-77A/B
334249	Washer Set (8 pk)		

**\*NOTE: Requires the use of 77-on style and diameter cam and pinion gears; and steel spacing shims.**



## ET Breather Kit BT 78-85

30127



## Preston's BT Breather Valve Gear L77-99

Steel and CNC machined valve gear to replace stock plastic gear. Precise control of exhausting crankcase pressure.

PCP	Description
30168	STD



# S&S BT EVO



## S&S Replacement Flywheels BT EFI 95-98

4-1/4" and 4-5/8" stroke EFI flywheels for 95-98 fuel injected BT are intended for use in stock replacement and fuel injected performance applications. The drive side flywheel features a pressed in sprocket shaft for improved rigidity. Standard tapered S&S crankpin and pinion shaft are used for ease of service. Notches on the drive side flywheel are compatible with stock EFI system as well as the new S&S Variable Fuel Injection (VFI) system.

### PCP Application

**322145** 4-1/4" EFI style flywheels (23941-95)

**322146** 4-5/8" EFI style flywheels



## S&S 96" EVO Sidewinder Basic Kit

Designed for BT EVO 84-99. These flywheels are assembled with heavy duty rods, balanced and trued. Includes series 1900 forged pistons, complete with rings, pins, retainers, gasket set and instructions. Note: Stock cases will require a crankcase boring operation to accept these cylinders. For 1990-99 models you must order #334148 pinion shaft conversion kit. Kits feature 96" with 3-5/8" bore, 4-5/8" stroke and a 9.75:1 compression ratio.

### PCP Finish

**917660** Natural

**917661** Black



## S&S Big Twin Sprocket Shaft Assembly

**332004** 70-99 S&S SE or SL flywheels only



## S&S Big Twin 81-89 Pinion Shaft Assembly

**332027** Fits std size S&S BL, SL, or stock flywheels.

Replaces 24006-80, 24006-83, 24006-87

**332028** As above, +.001 oversize. 1.251" (24020-87)



## Chrome Crankcase Breathers

### PCP Application

**77102** 3/8"

**77103** 1/8" NPT

		CUBIC INCH CHART						
		STOCK 74		STOCK 80				
STROKE...		3 1/2	3.968	4 1/4	4 1/2	4 5/8	4 3/4	5.00
B O R E	3 7/16	64.8	73.7	78.7	83.4	85.7	88.0	92.8
	3 1/2	67.2	76.3	81.6	86.6	89.0	91.4	96.1
	3 5/8	72.1	81.7	87.4	92.9	95.5	99.0	103.2
	3 11/16	74.6	84.7	90.7	96.1	98.8	101.5	106.8
	3 7/8	79.9	90.6	97.0	102.8	103.7	108.5	114.2
	3 3/4	82.3	93.4	100.1	106.0	108.9	111.9	117.8
	4.000	87.9	99.7	106.8	113.0	116.1	119.3	125.6
	4 1/8	93.4	106.0	113.5	120.2	123.5	126.9	133.6
	4 1/4	99.2	112.6	120.5	127.6	131.1	134.7	141.8



## S & S Crankshaft Assemblies 84-99 with Carb

8-1/2" OD S&S flywheel kits are engineered from the strongest components for maximum potential engine life. Each kit is assembled with heavy duty rods, both shafts and is trued and ready to install. Can be used with stock heads and balanced to stock HD 80" pistons.

**4-1/4" Stroke (Stock) BT Evo 89"**

**322239** BT Evo 84-99

**334148** Pinion shaft conversion kit required for 90-99



## S&S 89" Stroker Kit for BT Evo 84-99

For 84-99 engines with stock, S&S or performance heads. 4-5/8" Stroke, 3" bore kit offers 9.5:1 CR and requires no special machine work other than crankcase clearance operation and normal piston fitting. **S&S 1065554 series stroker forged pistons must be purchased separately.**

**PCP 89" Stroker Kits**

**322230** 84-99 Carbureted engines



## Replacement Flywheel for V113 Engine 84-99

8-1/2" OD S&S flywheels are dynamically balanced with S&S mainshafts and heavy duty 7.440" connecting rods. Pinion shaft is 1/4" longer than stock to accommodate wider S&S crankcases. Replacement flywheel for S&S carbureted 113" V engine.

**4-1/2" Stroke BT Evo 113"**

**322149** BT Evo 84-99



## S&S 1065554 Series Pistons

3-1/2" Bore forged stroker piston kits fit 89" BT V2 stock heads and offers 9.5:1 compression. Kits include a set of pistons, rings, wristpins and clips. Recommended piston fitment:

Close: 0.008"-0.0013" Loose: 0.0020"-0.0025"

**PCP Size**

**1065554** STD

**1065555** +.010

**1065556** +.020

**1065793** +.030

\*Note if ordering replacement pistons for an older 89" kit, flywheel rebalancing will be required.



## Pinion Shaft Conversion Package 84-89

Kit includes 77-89 pinion gear, 54-89 pinion shaft oil pump drive gear, 54-89 pinion shaft gear spacer, and 54-89 pinion shaft gear nut. Average size (red)- fits S&S shaft 33-2024, 33-2029, or 1977-89 shaft.

**334148**

## S&S Pinion Shaft Gear Kits

Contains components that need to be installed on the pinion shaft.

BT 84-89		
Size	Colour	PCP
Biggest	Yellow	<b>334185</b>
Average	Red	<b>334148</b>
	Blue	<b>334181</b>
Smallest	Black	<b>334180</b>



## 8.5" Diameter 3 Piece Flywheel Assembly

Replace OEM flywheels when using high performance pistons that allow the use of full width wrist pin ends. Features integral mainshafts, 7.659" rods, straight rod ends and sprocket bearing race.

**4-3/8" Stroke**

**3200350** 96, 103, 106 big bore, 110, 117 with S&S pistons

# BT Rod Components



## Wrist Pin Bushings

Sold in pairs. Bronze OEM type

PCP	Jims	OEM	Size	Fits
18507	31354	24334-36	STD	BT 36-98
32050		K/W	STD	BT 36-98
32051		KW	.002	BT 36-98
18508	31355	N/A	.005	BT 36-98
18509		24335-36	.010	BT 36-98



## Crank Pins

Crank Pins available from U.S.A. makers, Eastern, Jims, OEM and Taiwan. American pins are made of 8620 steel, with .062 heat treat penetration.

Note: All crank pins have one or three oil holes.

PCP	OEM	Model	Holes/Brand
31142	23961-80A	new oil location	3 Jims AF
31149		A Cut Above	3 Jims
31156	23974-87	BT Evo 87-99	3 Jims +.001
32548	23975-87	"	1 USA +.002



## S & S Crank Pin

Includes 2 nuts and key.

PCP	Application	O.D.	OEM
342102	BT 81-86, S&S 81-on	1.249	23961-80A
342103	BT 87-on	1.250	23974-87

## BT 3 Hole Crank Pin Kit L81-86

Includes 3 hole crank pin, rod races, standard rod rollers and retainers.

34022



## S&S Crankpin with Nuts BT 81-99

PCP	Size
342102	(1.249) Stock
342103	(1.250)
342105	(1.251)
342106	(1.252)

Note: Order by crank pin .O.D as required

## Connecting Rod Roller Sets

Each set supplies enough rollers for alloy rod cages only.

Big Twins 73-on

PCP	Size
15100	-0002 US
1040	STD
1041	0002 OS
1042	0004 OS
1043	0006 OS
1044	0008 OS
1045	001 OS
4113	002 OS
3548	003 OS







## Preston Stock Replacement Rod Sets

Includes new rods, crank pin nuts, cages and standard rollers. Piston pin bushings are installed and honed for stock wrist pin.

**PCP Model**

**34004** BT Evo L83-99 (24281-83)

Always check rod roller fitting before assembly



## S&S Regular Heavy Duty Connecting Rods

Recommended for any street application.

<b>347013</b>	BT Evo 84-99	Steel	7.440"	.792
<b>347800</b>	883-1200 86-99	Alloy	6.926"	.792



## Jims BT Connecting Rod Bearing Sets 41-99

Torrington rod bearings and steel cages. Will retro fit to 1941. Available in standard size only. When refitting rods use this bearing set with Jims oversize crankpins.

**31169** 24356-87A



## S&S Alloy Rod Bearing Retainers BT 41-99

Replacement roller type for Harley BT 41-99 connecting rods.

**344020** (24366-71, 24367-71)



## Connecting Rod Race Sets BT 36-99

Made hardened steel to handle extreme pressure.  
**977**



## S&S BT Bearing Assembly

Steel cages and STD rollers for 41-99

**344010**

## Wrist Pin Bushings

- Bronze OEM type bushings for BT 36-98
- Sold in pairs

	Big Twin		Sportster	
Size	PCP	JIMS	PCP	JIMS
STD	<b>18507</b>	<b>31354</b>	<b>18504</b>	
+0.002			<b>18598</b>	
+0.005	<b>18508</b>	<b>31355</b>	<b>18505</b>	<b>31353</b>
+0.010	<b>18509</b>		<b>18599</b>	



## Kibblewhite Engine Builder Wrist Pin Bushing 36-98

•SAE660 bearing bronze construction

PCP	Application	UM
<b>32050</b>	Std. O.D.	Pair
<b>32051</b>	+0.002" O.D.	Pair

## Preston's Rod Bearing Sets with Cages

Set of cages fitted with standard size Torrington rollers for connecting rods. Cage material noted!

PCP	Application	Cage	OEM
<b>15850</b>	74" & 80" 41-86	Alloy	24385-40B
<b>15800</b>	BT 87-99	Steel	24346-87A

# S&S EVO Cams



**S&S BT Evolution 84-99 Cam Specification Chart**

With the exception of the bolt-in 508 and 510V camshafts, S&S cams are high lift and designed to take advantage of the extra flow of ported stock heads or S&S Super Stock heads. Due to the high lift of these cams, S&S adjustable pushrods and high performance valve springs are recommended.

PCP	Cam	Application	Valve Timing Open/Close		Valve Duration		Valve Lift	Lift @ TDC		Spring Spacing Re- quired	Tappet Type
			Intake	Exh.	Intake	Exh.		Intake	Exh.		
<b>3300093</b>	508	Bolt-in cam for less than 10:1 CR. Excellent low/mid range torque for touring.	11/25	50/5	217	235	.508"	.141"	.110"	No	Hydraulic
<b>335124</b>	510V	96" Bolt-in w/10:1 CR. Works well with stock or ported heads. 3000-5000 RPM.	20/38	52/20	238	252	510	187	178	No	Hydraulic
<b>335073</b>	520	Short duration emissions cam for 80"-96" engines. Requires high lift springs and normal clearance checks. 1000-4500 RPM.	0/40	50/2	220	232	.520"	.086"	.094"	Yes	Hydraulic
<b>335072</b>	546	Short duration emissions cam for 111"-124" engines. Requires high lift springs and normal clearance checks. 1000-4000 RPM.	5/55	52/5	240	237	.546"	.126"	.106"	Yes	Hydraulic
<b>335076</b>	561	Best cam for 80" to 96" engines. 9.5:1 to 10.5:1 CR. Strong midrange power. 3000-5500 RPM.	32/40	50/26	252	256	.560"	.252"	.210"	Yes	Hydraulic
<b>335057</b>	563	103"+ street/race cam for 11:1+ CR. Strong top end, easy starting.	32/64	64/32	276	276	.560"	.250"	.220"	Yes	Solid or Hydraulic
<b>335109</b>	585V	80"-96" engines w/ 10:1 to 10.5:1 CR and larger engines with 9.5:1 to 10:1 CR. 3500-6000 RPM.	20/45	60/20	245	260	.585"	.186"	.180"	Yes	Hydraulic
<b>335058</b>	600	Excellent for large displacement engines with 9.5:1 to 10.5:1 CR. 3500-6000 RPM.	20/55	60/20	255	260	.600"	.192"	.184"	Yes	Hydraulic
<b>335080</b>	631	For all high RPM engines. Street and racing engines with 11:1 and higher CR. Additional wear on valve train components requires valve spring and other normal clearing checks. 4500-6500 RPM.	34/61	66/29	275	275	.630"	.281"	.221"	Yes	Solid or Hydraulic
<b>335108</b>	640	Big inch engines 10.5 to 11.5:1. Or smaller engines with 11:1 to 12:1 CR. Requires less compression than the 631 and provides more linear power. 3000-6000 RPM	25/60	65/20	265	265	.640"	.222"	.192"	Yes	Hydraulic

Notes: Timing designation is function of zero lash @.053" off base circle.  
 Lifts at TDC are measured at the valve and are for reference only.  
 Overlap valve lifts must be checked on assembled motor.  
 Minimum valve to valve clearance of .040" is recommended.

# Crane EVO Cams



Duration .053" Gross Valve Lift Open/Close						EVO 84-on Cams
PCP	INT.	EXH.	INT.	EXH.	Series/Grind	Type/Application
34559	266 23/63	276 68/28	.550**	.550**	Hydraulic Hi Roller H310-2 (1-1003)	Performance cam designed for larger cubic inch and increased CR's. Street-strip type performance 88 cu. in., 10.5:1 CR and larger. Heads must be clearanced and have performance valve springs installed. Basic RPM depends on the combination, approx. 3000-6500. Cam lift at TDC: Int. .143", Exh. .143"
Notes: ** Gross valve lift for Evo with 1.6 rocker arm ratio * To convert cam lift to valve lift, multiply the cam lift figure by the rocker arm ratio: 1.6						



### Andrews Gauge Pins

- 212105 Gauge pins .105" diameter pins (pair)
- 212116 As above .108" diameter pins (pair)



### Sifton Cam Chest Kit BT 87-99 Evo

Includes Sifton 140 cam.  
21766

140 Cam		Open	Closed	Lift	TDC	Coil Bind @
	IN	30	42	.450"	.222	.480
	EX	55	27		.177	.480



# ANDREWS EVO CAMS



## Evolution 80 Engine Cams 84-99

Performance cams mean extra power for evolution engines. Hydraulic lifters are capable of 6000+RPM with stock springs and no valve float. Aluminum (T7) or chrome-moly pushrods (both fully adjustable) are available to match any of our camshafts. Aluminum pushrods are lighter while the chrome-moly steel pushrods are more rigid for high performance. E-Z install pushrods can be installed without removing fuel tanks or rocker boxes.

- 50% Lighter than stock
- More spring travel (+.050 over stock)

**292215** E-Z install aluminum pushrods (set of 4)

**292245** E-Z install chrome-moly steel pushrods (4)

PCP#	Grind	Timing*	CL	Duration		Valve Lift	Lift @ TDC	Spring	Application
				.053	.020				
Stock 88-91	(L)	01/37 53/-01	108 117	218 232	266 280	.495 .495	.091 .083	Stock	Listed for reference. 84-87 Cam is 212° intake, 202° exhaust. .472" Lift on both valves.
Stock 92-on	(N) (Carb)	-02/30 31/-09	106 110	208 202	250 242	.472 .472	.070 .049	Stock	Listed for reference. "N" cam is close to 84-87 specs. Fuel injector "O" cams are 200° intake & 216° exhaust.
<b>291123</b>	EV23	10/30 40/08	100 106	220 228	255 264	.498 .498	.134 .121	Stock	Mild bolt-in street cam with more torque & HP for all around riding with stock CR. Similar to stock L cam but with more output. 1800-5200 RPM.
<b>291113</b>	EV13	15/31 45/13	98 106	226 238	270 280	.485 .495	.161 .148	Stock	Bolt-in street/touring cam for heavy bikes. Much more low and mid-range power than either stock cam. Best cam for 2 up riding with camping gear & side cars.
<b>291127</b>	EV27	20/36 46/14	98 106	236 240	270 274	.495 .495	.182 .166	Stock	A great bolt-in cam for stock EV80 engines. Very strong, broad torque band which will pull hard from 2000-5500 RPM.
<b>291130</b>	EV3	21/37 43/15	98 104	238 238	280 280	.495 .495	.197 .159	Stock	Bolt-in street cam for light bikes (FXRS, etc). Lots more mid-range & upper end power. Smooth idle 2800-6500 RPM cam with stock heads & springs.
<b>291146</b>	EV46	25/41 49/17	98 106	246 246	283 283	.495 .495	.207 .163	Stock	Bolt-in performance cam with special ramp design. Longer duration than EV3 but higher static comp. pressure. Wide torque band 2600-6000+ RPM.
<b>291151</b>	EV51	28/44 54/22	98 106	252 256	286 290	.510 .510	.233 .195	Stock	Easy installation, longer duration for modified street engines with hydraulic lifters and 9.0 or higher CR. Power range from 2800-6500 RPM.
<b>291159</b>	EV59	28/48 56/24	100 106	256 260	290 294	.560 .560	.236 .208	Hi-Lift	Upgraded EV57, fast ramps for modified 80 to 88 inch motors. Use with AP springs and collars. Very broad power band, 6000 RPM. OK for hydraulic lifters.
<b>291172</b>	EV72	30/54 60/28	102 106	264 268	298 302	.560 .560	.246 .230	Hi-Lift	Upgraded EV7 for 92+ inch street motors. For use with Andrews springs & heat treated steel collars. Very broad power band, 2800-6000 RPM. OK for hydraulic lifters.
<b>Cams Requiring Installation Machine Work and Are Intended for Big Inch Engines and Drag Strips</b>									
<b>291584</b>	EV 84	32/64 70/30	106 110	276 280	310 314	.640 .640	.269 .246	Hi-Lift 160 #	Quick ramps, broad nose type design means more power for 90-100 inch motors. 6500+ RPM.
(*) Timing and duration listed for .053 cam lift									

# Lifter Base



## Chrome Tappet Block Covers - Stamped Steel

Fits over stock units, maintaining the original contours. Hidden slot in the back allows easy installation without removing pushrods. Held in place with a small amount of silicone adhesive. Four 12-point chrome screws are included to replace OEM screws which protrude slightly through the holes in the covers. Sold in sets.

**45040** Evolution® BT 84-99



## Diecast BT EVO Tappet Block Covers - All Years

Chrome guide block covers have a slot which allows installation without removing pushrods. Simply lift pushrod lower covers and insert chrome covers. Designed as a press fit, but industrial sealant (not supplied) such as silicone is recommended.

**45039** Set, as shown

**5299** Chrome 12 point screws (if required) 76-99



## Chrome Tappet Block Cover

Includes screws and fits BT Evo 84-on.

**45267**



## Chrome Lifter Block Bolt Caps for BT 76-99

Chromed machined aluminum caps install easily onto the stock 12-point mounting bolts, using a dab of clear silicone.

**44001** (8 pack)



## Colony Lifter Base Screw Kit

Polished allen bolts for BT 1976-99.

**8726**



## Chrome Acorn Style

**1788** Big Twin 1976-99

**2632** Late Lifter Bases to Pre-1976  
Cases 1/4-24 Thread



## Chrome Allen Style- 8 Pk

**5315** BT 76-99



## 12 Point Style- 8 Pk

**5299** BT 76-99 Chrome 1/4-20

**5300** BT 76-99 Cad 1/4-20

# Lifter Base



## JIMS EVO Billet Chrome 7075-T651 Tappet Blocks

Designed to accomodate a gross valve lift of .655" at the valves. This is about .350" at the tappets, leaving a clearance of .035" roller to block free play. Will clear most small base circle cams having a lift of .600" or more. Any cam over .550" lift needs to be checked and should have .035" to .045" roller to block clearance. If using a cam with a higher lift, a simple modification to the tappet block is required. Caution: you still need to follow manufacturers guide lines. Kit includes blocks, gaskets and chrome screws.

**31264** Billet chrome tappet block kit.



## Jims Evo Billet Tappet Blocks with Tappets

Made from 7075-T651 this kit features Big Axle Power Glide tappets. Accomodates a gross valve lift of .625" at the valves, leaving a clearance of .035" roller to block free play. If using a cam with higher lift, a simple modification is needed. Blocks will clear most small base circle cams having lift of .655" or more.

These tappet blocks are machined to the centre line of the cam and hold  $\pm .002$ ". Also, the bores are held perpendicular to the mounting flange to a  $\pm .0002$ ". Kit includes blocks, 4 big axle "Powerglide" tappets, gaskets and chrome screws.

### PCP Description

**31263** Kit with chrome blocks for use on BT 84-on

**31262** Kit with polished blocks for use on BT 84-on



## S&S Big Twin Black Tappet Guide Set

Stock style black tappet guide set is cast from 356-T6 aluminum and is designed to be stronger, resist wear and last longer than stock. Set includes gaskets and mounting screws. Fits stock style and S&S Super Stock evolution cases.

**335324**



## Big Twin Evo Chrome Tappet Blocks

Nice quality set of billet style lifter blocks, chrome plated to fit Big Twins 84-99.

**32336**



## Jims BT Evo Tappet Block Kit

**31261** With polished pushrod covers



# Lifter Base



## S&S Billet Tappet Blocks BT 84-99

S&S tappet blocks are machined from solid aluminum billet providing superior quality and dimensional precision in a great looking product. This set can be used on engines with stock style crankcases, and for engines using S&S Special Application crankcases with .250" offset cam chest.

**335323** Polished tappet block set

**1065428** Chrome tappet block set



## S&S Tappet Roller Kits

- Kit includes four bearings and four chromoly axles
- Fits Evo 84-99

**3300378**



## Sifton Evo Performance Cam Kit 84-89

Includes cam E-Z install pushrods, chrome lifter bases and roller tappets. (.495 lift)

**32337**



## Big Twin Evo Tappet Blocks

S&S tappet blocks are cast from 356-T6 aluminum and designed to be stronger, resist wear and last longer than stock. The clean looking, burnished aluminum finish matches S&S Super Stock crankcases and can readily be painted or polished as desired.

**335301** As shown

**335309** For engines using Special Application crankcases with .250" offset cam chest



## Cast Tappet Block Gaskets BT EVO & XL 86-90

PCP	OEM	Description	Year	U/M
<b>79270</b>	18633-48C	Gask., rear tappet .031	48-90	10 Pk
<b>25029</b>	18633-48	Foamet .046" R/tappet	48-90	10PK
<b>79273</b>	18634-48B	James front tappet .031	48-90	10 Pk
<b>25028</b>	18634-48	Foamet .046" R/tappet	48-90	10PK
<b>79271</b>	18633-48D	James rear tappet .020	91-99	10 Pk
<b>79274</b>	18634-48C	James front tappet .020	91-99	10 Pk

# Lifters



## Tappet Lifter BT EVO 84-99

<b>30150</b>	STD (.8445 O.D.)
<b>30151</b>	.002
<b>30152</b>	.005



## Jims Adjustable STD Tappet

Fits Big Twin 84-99. Sold each.

<b>31128</b>	18523-86SA
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## Jims Powerglide Steady Roll Tappets

Features oil fed axle, billet steel body and precision fit hydraulics. Incorporates a Steady Roll bronze bushing in place of the needle bearing roller providing a failsafe against engine damage even if the bushing wears out. Use on 84-on Evo Sold each.

PCP	Size
<b>31114</b>	STD (.8425" O.D.)



## Jims Hydrosolid Tappet

This tappet performs like a hydraulic tappet from start up to about 5500 rpm and then turns into a solid from 5600 rpm on. When solid it adds 3-6 more useable horsepower. When springs start to surge the tappet rollers start lofting off the back side of the cam and will not pump up allowing your valves to hit. Must use adjustable pushrods.

PCP	Application
<b>31644</b>	BT 84-99 OD .8425"
<b>31645</b>	As above +.002"



## Sifton Hydraulic Tappet Unit Set

4 Tappet set features maxi-axle roller and pin design and an unique "no-bleed" integral pump unit. Pump design features full hydraulic action up to 5000 RPM, above that it acts like a solid unit.

PCP	Size
<b>30140</b>	STD
<b>30141</b>	.002



## Preston Tappet Roller Repair Kit BT EVO

High quality tappet roller assembly and roller pin.

<b>15624</b>	Roller kit for 4 tappets
<b>15623</b>	Roller kit for one tappet (18534-86)

# Lifters

## Jims Power Glide Hydraulic Evo 84-99 (18523-86)

STD O.D. .8425.  
(149 grams)

Big Axle	Size
31625	STD
31626	.002
31627	.005



## Adjustable Solid Evo Tappet with Screw Nut BT 1984-99

Requires shorter pushrod available from Axtel. (126 grams)

Big Axle	Size	Jims
31622	STD	
31623	.002	
31624	.005	



30193

## Feuling HP+ Hydraulic Lifters



- CNC machined, precision ground hydraulic roller lifter
- Use with Feuling oil pump or as OEM replacements
- Set of 4.
- Made in the USA.

PCP	Application	OEM
30193	EVO BT 85-99	4061



## S&S EVO Hydraulic Tappets

Tappets fit all BT V2 style and XL 86-91 engines. Features a larger inner bearing race to reduce bearing stresses. Redesign plunger assembly better withstands forces associated with heavy-duty valve springs and pushrods typical to high performance applications. Precisely controls oil delivery to top end, insuring rapid lifter pump up and reducing the possibility of oil starvation to the bottom end.

**335352** 4 Pack without HL2T kit (18523-86A)

**335353** 4 pack with HL2T kit

**Note:** S&S Tappets with HL2T require the use of adjustable pushrods. Because of close tolerances tappets in #335353 may require slightly longer bleed-down time than conventional tappets. At temperatures of 65°F and above, however, bleed-down should take 20 minutes or less using 20W5 engine oil.



## S&S Tappet Roller Kits

- Kit includes four bearings and four chromoly axles
- Fits Evo 84-99

**3300378**



## Solid Tappet BT Evo 84-99

Must use adjustable pushrods. (109 grams)

Big Axle	Size
31619	STD (STD O.D. .8425) Jims
31620	.002
31621	.005



# Cylinders/Pistons

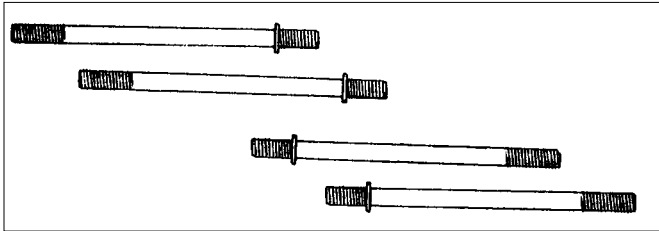


## VT BT Evo 83" Bolt-On Cylinder Kit

Includes 10:1 compression Wiseco forged piston kit (Fitted), No case boring required.

PCP	Finish
34826	Black
34827	Silver
35548	Piston set
35549	Ring set

The Sifton cylinders have a very thick, large O.D., "cast in" liner which has been proven to be an important factor in maintaining thermal stability which is the ability to retain cylinder bore dimension through repeated heat cycles.



## BT Evo Cylinder Head Studs 85-99

PCP	Fits
10816	T/L BT 85-99 (16837-85C) (ea)
9424	Colony BT 85-99 (16837-85A) (8 pk)
72083	Colony TC 99-on (16834-99) (8 pk)
60104	Sifton BT 84-99 (8 pk)
32196	Kibblewhite (8 pack)
60106	S&S (8 pack)
312321	S&S (ea)



## BT Evo Cylinder 84-99 (each)

These front & rear cylinders do not include pistons. 3.487" i.d.

PCP	Finish
34812	Silver (16510-83)
34809	Black (16512-86A)



## Evolution Cylinder Oil Passage Drain Tubes

For stock bore size cylinders only. Each kit includes tap, hex wrench, and 2 drain tubes. BT 84-98.

30123	Kit
30124	Replacement tubes only (pr)



## Preston Racers Evo Stud Kit

Includes 8 inserts, drill tap and 8 chrome moly studs. Allows more torque to be applied which helps cure oil leaks and protects case threads during disassembly.

PCP	Description
59448	Complete shop kit
60104	8 Studs only
10052	8 Inserts only

# Cylinders/Pistons



## 3-5/8" Big Bore Cylinder for 4-1/4" Stroke Evo

Forged pistons with Hastings rings are pre-fit in heavy wall cylinders. **Cylinder sets 3-5/8" and larger require case boring.**

**PCP Ratio Piston Finish**

**34828** 9.25:1 Wiseco Silver

**34829** 9.25:1 Wiseco Black

**34835** 9.25:1 Sifton Silver

**34830** Silver cylinder 5.540 gasket-to-gasket (each)

**34831** Black cylinder (each)



## VT Cylinder and Piston Kits L85-99 1340cc

Honed and pre-fitted with stock compression cast pistons and Hastings rings. They are ready to run and will require break-in as suggested in the appropriate shop manual. Sold in pairs for stock stroke only. Order gasket set separately

**PCP Finish Compression**

**34820** Black 8.5:1

**34821** Silver 8.5:1



## VT 93.4" Cylinder Kits

Includes Wiseco 9.5:1 compression piston set with rings pre-fit to new 3.75" cylinders. **Cases must be bored to accept this kit.**

**PCP Finish**

**34823** Silver

## Kibblewhite Cylinder Studs

- Machined from fine grain, heat treated, aircraft quality steel
- Centerless ground OD

- Black oxide finish

PCP	Application	UM
<b>32196</b>	All Evolutions	8 pack



## S&S Manual Compression Release Kit

S&S manual compression releases are activated by a cable similar to a choke control. Before starting, the handle is pulled, which opens the compression releases. When the engine fires, the increased cylinder pressure automatically closes the compression releases. The S&S manual compression releases can be used with any style rocker covers.

**904925** Manual

## S&S Two-Piece Socket Kit

Special S&S two piece compression release socket kit allows in-frame installation of S&S compression releases and protects wiring from damage during installation.

**530045**



## S&S Cable Knob

Billet accessory knob for manual compression release.

**508701**



# S&S Cylinders/Pistons



## S&S 3-5/8" Bore V2 Big Twin Cylinders and 92-1900 and 92-1930 Series Pistons For Stock Style Evo Heads

The 92-1900 and 92-1930 series pistons are forged, flat top, 3-5/8" big bore pistons used in S&S Sidewinder kits and engine kits for V2 engines with stock style cylinder heads. The 92-1900 series is used for 4-1/2" stroke BT engines with stock diameter (8-1/2") flywheels, and for 4-3/4" stroke BT engines with 8-1/4" diameter flywheels. The 92-1930 series is a modified version of 92-1900 which is clearanced for 4-5/8" stroke BT engines with stock 8-1/2" diameter flywheels. Replacement cylinders and cylinder kits with pistons are available for the Sidewinder kits and engine that S&S offers. Cylinders are available in natural and black powdercoat finish. **Stock crankcases must be machined to accommodate the larger spigot diameter.**

Displacement	88"	93"	96"	<b>Forged Pistons</b>  Recommended Piston Fit: Close: .0015" - .0020" Loose: .0030" - .0040"		
Stroke	4-1/4"	4-1/2"	4-5/8"			
Bore	3-5/8"	3-5/8"	3-5/8"			
Cylinder Length	5.375"	5.500"	5.565"			
Compression (stock heads)	9:1	9.5:1	9.75:1			
Cylinders only- natural	<b>917000</b>	<b>917100</b>	<b>917200</b>			
Cylinders only- black	<b>917500</b>	<b>917600</b>	<b>917700</b>			
Cylinders w/pistons- natural	<b>917002</b>	<b>917102</b>	<b>917202</b>			
Replacement Piston Kits	Forged	Forged	Forged	Rings Moly Faced	Wristpin Hard- ened	Keeper Clips (4 pk)
Standard Piston	<b>921900</b>	<b>921900</b>	<b>921930</b>	<b>941210</b>	<b>949256</b>	<b>949254</b>
+ .010	<b>921901</b>	<b>921901</b>	<b>921931</b>	<b>941211</b>		
+ .020	<b>921902</b>	<b>921902</b>	<b>921932</b>	<b>941212</b>		
+ .030	<b>921903</b>	<b>921903</b>	<b>921933</b>	<b>941213</b>		
+ .040	<b>921904</b>	<b>921904</b>	<b>921934</b>	<b>941214</b>		
Piston Deck Height	1.200"	1.200"	1.200"			
Notes: Cylinder with piston kits include cylinders, piston kit, head gaskets, base gaskets and exhaust gaskets. All piston kits include rings, wristpins and clips.						

## S&S Chrome Head Bolt Covers

Dress up your engine with these magnetic chrome head bolt covers. Easy installation, no tools or adhesives required. A powerful magnet holds cover in place, yet allows easy removal. Chrome plated steel looks great on any engine especially on polished engines. For S&S head bolts only.

**500333** Set of 4



## BT Evo Oil Fix Kit

Kit includes 2 cylinder base gaskets and 2 oil jet controls which regulate the oil coming from the head through the barrel and into the case, preventing the oil from touching the base gasket which may cause leaking.

**25637** Kit



# S&S Cylinders/Pistons



S&S Head Bolt Kits for V2 BT Engines (8 pack)				
PCP	Engine	Stroke	Cyl. Length	Cylinder Head Type
933010	S&S 89", HD 80"	4-1/4"	5.550"	88-90, 91-on HD
	S&S 93" V2	4-1/4"	5.500"	



## S&S Service Components Cylinder Studs

**60106** BT 85-99 (16837-85C) (8 pack)



## S&S Teflon Button Style Keepers

Keepers are available in different sizes (thickness) to control wrist end play that varies with bore size. Button style keepers must be fully supported by wrist pin hole. Sold as 4 pack.

## "C" Style Piston Pin Clips (most other series)

**949254** 4 Pack



## S&S 3-1/2" Bore BT Evo Style Cylinders and 106-5554 Series Pistons for 89"

The 106-5554 series pistons are forged 3-1/2" bore stroker pistons designed for use with 4-5/8" stroke flywheels to convert stock 80" V2 Big Twin engines to 89". These pistons are normally used with stock HD cylinders, however cylinder and piston kits are available for engines that require new cylinders.

Displacement	89"	Forged Flat Top Pistons  Recommended Piston Fit: Close: .0020" - .0025" Loose: .0030" - .0035"		
Stroke	4-5/8"			
Bore	3-1/2"			
Cylinder Length	5.550"			
Compression Stock Heads	9.25:1			
Compression 89cc Heads	9.8:1			
Compression 79cc Heads	10.4:1	Natural	Black	
Cylinders Only	<b>917210</b>			
Cylinders w/Pistons	<b>917211</b>			
Replacement Piston Kits	Forged	Moly Rings	Wristpin Hard-ened	Keeper Clip
Standard	<b>1065554</b>	<b>942206</b>	<b>949256</b>	<b>949254</b>
+.010	<b>1065555</b>	<b>942207</b>		
+.020	<b>1065556</b>	<b>942208</b>		
+.030	<b>1065793</b>	<b>942209</b>		

Notes: Cylinder with piston kits include cylinders, piston kit, head gaskets, base gaskets and exhaust gaskets. All piston kits include rings, wristpins and clips.  
For cylinder only kits, pistons must be measured & cylinders bored&honed accordingly

## S&S 4" Evolution Ring Sets

Ring sets are sold for a complete engine.

PCP	Size
<b>941300</b>	STD
<b>941301</b>	+.010"
<b>941302</b>	+.020"
<b>941303</b>	+.030"



# Pistons



## BT EVO 84-99 80" (3.500 OD) 8:1

Piston kits include 2 STD compression pistons with pins, clips and a moly ring set. Pistons sold each include a pin and clips only. Hastings rings are sold in sets for 2 pistons and are available in cast or moly styles with 1/16" (.062) compression rings.

Size	Piston Kit	Piston Each	Hastings Rings Cast	Moly
STD	35600	35890	35100	35260
.005	35601	35891	35101	35261
.010	35602	35892	35102	35262
.020	35603	35893	35103	35263
.030	35604	35894	35104	35264
.040	35605	35895	35105	35265



## S&S 3 1/2" Cast Stock 80" Piston Kits

Replacement pistons for stock or S&S performance replacement heads. Fits Evo BT engines. Piston kits include a set of pistons, rings, wristpins and clips. No balancing required.

Kits	Size	Moly Rings
9200015	STD	942216
9200026	+.010"	942217
9200027	+.020"	942218

Recommended piston fit:

Close: 0.008"-0.0013" Loose: 0.0020"-0.0025"



## S&S 3.5" Bore Forged Domed Piston Kit

Fits BT 84-99 with S&S Super Stock heads. 80" Displacement, 4-1/4" stroke, 3.5" bore, 10:1 CR and 1.3750" deck height.

922026 STD



## S&S 3 1/2" Forged Flat Top Stroker Piston Kits

Forged 89" stroker pistons for stock or S&S performance replacement heads. Fits Evo BT engines. Piston kits include a set of pistons, rings, wristpins and clips.

Kits	Size	Moly Rings
1065554	STD	942206
1065555	+.010"	942207
1065556	+.020"	942208
11051	Keeper clips	

Recommended piston fit:

Close: 0.0020"-0.0025" Loose: 0.0030"-0.0035"

May require rebalancing if replacing old 92-2040 series pistons.



## S&S Evo 4" Forged Piston Kit for 113" Motor

PCP	Size
921410	STD
921411	+.010
921412	+.020

## S&S 3-5/8" Evolution Ring Sets

Ring sets are sold for a complete engine. Top ring .062, 2nd ring .062 and oil ring .158.

PCP	Size
941210	STD
941211	+.010"
941212	+.020"
941213	+.030"
941214	+.040"



# Wiseco Piston Kits



## Wiseco BT Evo 3-5/8" B.B. 84-99

Also fit thru 1997 stock stroke 4.250" (88 cu in.). 9.25:1 compression with Hastings X ring package .062" top ring, .062" second ring and .158" oil ring.

PCP	Wiseco	Bore	Ring Set Per Cylinder
35986	K1671	.005	35962



## Wiseco BT Evo 3-5/8" B.B. 84-99 Domed

Also fit thru 1997 stock stroke 4.250" (88 cu in.). 10:1 compression with Hastings X ring package .062" top ring, .062" second ring and .158" oil ring.

PCP	Wiseco	Bore	Ring Set Per Cylinder
35876	K1677	.005	35962



## Wiseco BB Piston Kit 85-99

Fits HD 1340 EVO stroker with 3-5/8" bore. (K1705)

35866	+ .005
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## Wiseco 10.5:1 CR TC88 Piston Kit 99-06

PCP	
35993	+ .020 (K1729)
35994	+ .030 (K1730)



## Wiseco BT Evo 84-99 (80 cu. in.)

8.5:1 compression with Hastings X moly ring package. Will also fit Screamin Eagle cylinder head with 9.75:1 compression. Armour Glide coated skirt.

PCP	Wiseco	Bore	Ring Set Per Engine
35975	K1640	STD	35260
35976	K1641	.010	35262
35977	K1642	.020	35263
35978	K1643	.030	35264
35979	K1644	.040	35265



## Wiseco BT Evo 84-99 (80 cu. in.)

10:1 compression with Hastings X moly ring package: .062" top ring, .062" second ring and .158" oil ring. Armour Glide coated skirt.

PCP	Wiseco	Bore	Ring Set Per Engine
35760	K1665	STD	35260
35761	K1675	.005	35261
35762	K1666	.010	35262
35763	K1667	.020	35263
35764	K1668	.030	35264
35765	K1669	.040	35265



## Wiseco BT Evo Piston Kit 84-99

Kits have 11:1 compression with 4.250" stroke for 80 cubic inch engines. Hastings X rings, top ring is .062", 2nd ring is .062" and oil ring is .158". Kits include forged pistons, rings, circlips and chrome piston pins.

35968	+ .010 3.508" (K1692)
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# Pushrods

## S&S Pushrod Kits

S&S pushrods are engineered to help you obtain maximum horsepower through positive valve action and can be used in any stock replacement or high performance engine application. All chrome moly steel pushrods are made of 7/16" OD chrome moly steel tubing with pressed-in heat treated steel ends. This combination provides maximum strength and durability regardless of the performance application.

### Important Note

It is recommended that an appropriate cam change be made when using solid lifter pushrods in late 1977-on engines. It is S&S's experience that excessive valve train noises are prevalent when a combination of solid lifter pushrods and the stock hydraulic cam is used.



935076

## S&S BT Evo Adjustable Pushrods

Features 7/16" O.D. chrome moly adjustable pushrods.

**935076** BT 80" 84-99

**935017** BT 80" 3/16"

**935018** BT 80" 1/16"

## S&S Quickie Pushrods

The threaded adjuster screws into the pushrod until the threads disengage and the adjuster simply slides into the pushrod making installation or removal a snap. Once the pushrod is installed and adjusted the locknut prevents the adjuster from moving. The ball ends of the pushrods are drilled so that oil can flow through the pushrod.

**PCP Application Displacement**

**935120\*** BT 84-99 80-98", 113", 117", 124" (not 88")

\*Not for 88" or Indian motorcycle engines as rear intake pushrod is too long



## Hydraulic Lifter Limited Travel Kit S&S

Designed to maximize the efficiency of the stock hydraulic tappets on all Evolution engines.

**335338** Fits 84-85



## S&S Time-Saver Adjustable Pushrods

No need to disassemble the top end or remove the rocker arms to change pushrods or cam shafts. Larger 9mm chrome moly tubing for superior strength and less flex. Single adjuster end for 9.5" to 11.5" lengths. Use for stock height and taller engines.

Set of four.

**9300052**

# Pushrods



## Preston Adjustable BT Evo Pushrods 84-99

Made from 7/16" diameter 4130 military specification chrome moly tubing with 9 x 1mm adjusters. Easy installation and removal without disassembling engine. (USA)  
**30060**



**292110**



**292140**

## Andrews Adjustable Pushrods

Available for all Evolution engines. Fully adjustable with stock diameter so there is no cover tube interference.

**PCP Type**

**292110** Aluminum

**292140** Chrome-moly steel



## Sifton Tapered Adjustable Pushrods

Manufactured from 4130 steel with hardened adjusters and ball ends. Set of 4. Fits FXST 84-98, FLST 86-98, FXR 84-94, FXD 91-98, and FLT 84-98.

**21809** Fits hydraulic or solid Evo Big Twin



**292215**



**292245**

## Andrews EZ-Install Adjustable Pushrods

Available for all Evolution engines. Fully adjustable with stock diameter so there is no cover tube interference.

**PCP Type**

**292215** Aluminum

**292245** Chrome-moly steel



## V-Thunder Pushrod Kits

Made from .049 wall 4130 chrome moly steel to exacting tolerances for reliability. These rods fit stock or Velva Touch Lifter units. Can be installed or removed without disassembling heads

**30045** BT Evo 84-99

**30041** Stroker

**30046** BT Evo 84-99



**17517**



**12529**

**PCP Description**

**17517** Converter bushings to fit all late 85-on 1340, 86-88 XL883/1100/1200 (18507-85)

**12529** Locknuts 9/32-32 to fit the above kits and other p/rod adj. screws using this thread (18570-38) (4pk)



## EVO Adjustable Chromoly Pushrod Set

Designed to be installed without removal of heads or rocker boxes. Fits FLT, FXST 84-98, FXR 84-94, FLST 86-98 & FXD 91-98. Replaces 17987-98A.

**34114**

# Pushrod Cover Kits



## Complete Pushrod Cover Kits, Multi-Fit

All parts from top to bottom fit all V-Twin engines. Visible parts are all chrome and includes upper covers, inner cover, and lower covers.

### PCP Fits

**34106** BT Evo 84-99

**34107** TC-88 99-17



## BT Chrome Pushrod Cover Dress-Up Kit

Kit includes chrome lifter base covers for Evo 84-99.

**59173**



## Chrome Billet Pushrod Cover Kit BT 84-99

Pushrod cover kit includes all pieces and seals for complete installation on BT Evo models.

**30049**



## S&S Pushrod Cover Kits

Includes top and bottom covers, cover cap, cover spring, and spring washer for four pushrods.

### PCP Application

**934039** TC 99-on, BT Evo 84-99

**934038** TC 99-on, BT Evo 84-99, for engines 1" or more taller than stock



## Jims Pro-Lite Evo Pushrods

Adjustable pushrods for Big Twins are made from aerospace quality heat treated aluminum with steel ends. Does not require dissassembly of top end or removal of the cam. Pushrods will replace OEM 17921-83, 17924-83, 17927-83, 17930-83 and S&S 935076. Will work with .200 taller cycle in drive.

**31178** BT Evo single cam 84-99



# BT EVO Push Rod Covers



**Billet EVO Polished Push Rod Cover Set.**  
Fits BT Evo models.  
**34715**



**Upper, Inner Pushrod Covers**  
**9213** Colony BT Evo 84-99 (Quad)



**Chrome Lower Pushrod Cover Kits**  
Stock pushrod covers are duplicates of the OEM part.  
**9202** BT Evo with 8 seals 84-99



## Upper Pushrod Cover Kits

Each kit contains 4 chrome plated retaining clips, 4 chrome plated cups, 4 springs, 4 cork gaskets, and 4 steel washers. Exact duplicates.

### Chrome Plated (Outer)

- 1772** BT Evo (3-5/16" clips)  
**9865** BT Evo with S&S lifter blocks (3" clips)



## Chrome Push Rod Cover Hardware 36-on

- PCP Fits**  
**13101** Spring (17947-36) (10 pack)  
**2002** Chrome cup (17945-36) (4 pack)  
**13557** Spring washer (6762B) (10 pack)



## Pushrod Cover Rubber Seal Kit

Fits all BT 84-on and includes 12 machined rubber seals.

- 9529** Colony  
**14580** Preston

# Valve Springs



## Jims Valve Spring Kits BT 84-04

PCP	Lift	Open #	OD	ID	Retainers
31170	.600	160	1.460	.700	Chrome-moly
31171	.600	160	1.460	.700	Titanium
31172	.675	184	1.510	.745	Chrome-moly
31173	.675	184	1.510	.745	Titanium



## Valve Keeper Keys BT and XL

Split type, sold in 8 packs, enough for one engine.

PCP	Description
30013	Evo 83-99 & Twin Cam 1999-04 (18229-83)
34585	Crane 175# spring keepers



## Skull Push Rod Cover Cups

Feature die-cast construction with chrome or gold plating, set of 4. Matching Kromettes with 1/4 x 20 studs in 5 packs also available.

PCP	Description
44010	Chrome cups
44002	Chrome kromett
44005	Chrome kromett w. red eyes



## S&S High Performance Valve Spring Kits

Kits fit stock style and S&S Super Stock Heads on 84-04 BT. O.D. of outer spring fits within stock spring compartment. Used with "no shoulder" style valve guides and special keepers fit stock 5/16" diameter stemmed valves and S&S collars only (these guides can be retrofitted to early BT V2 heads equipped with "shoulder" style valve guides). Features patented steel top collars specially drilled to lighten and allow oil to cool springs. Includes 4 of .015" and 4 of .030" shims. Good for lifts up to .640".

902077	Kit with steel top collars
902078	Kit with titanium top collars



## Andrews Evolution High Lift Springs (Multi-Fit)

When installed on Evo engines with titanium spring collars, cam lifts of .560 are possible. Installation does not require machining of heads. High lift springs and collars make installing big cams easier.

**294150** 4 Inner and outer springs

# Valve Springs



## Eastern Valve Spring Kits

Includes all springs, collars and keepers necessary for each application.

**PCP Model**

**32018** 1340 E85-04 (18201-83, 18202-83, 18219-83)

**Note:** Valve guide oil seals will require machining of valve guide and/or collar in order to re-establish overall valve guide height on all but the latest-style valve guides. Installation tools are available separately. Refer to service manual and valve guide specifications for modifications required.



## Eastern Stock Valve Spring Kits

Each valve spring kit is manufactured from top quality materials. Heat treated with machined ground end for a perfect fit. Made in USA.

**32005** BT 83-04 (18201-83, 18202-83)



## K/W EVO/TC Valve Guide Oil Seals

This will dry the combustion chamber and end smoking problems. Sold in 10 packs.

**32345** BT 84-04



**13505**

## EVO/TC Valve Shims

Used on Twin Cam and all Evolution Engines 84-04

**PCP Fits**

**13505** Evolution .015" thick (20 pack)

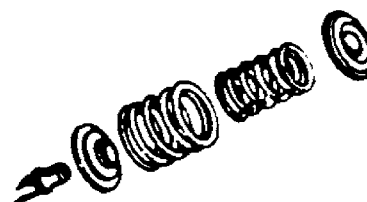
**13506** Evolution .030" thick (20 pack)



## K/W EVO Valve Guide Oil Seal Sets

For one engine.

**32199** Big Twin with one sleeve  
Evolution 84-04 (4 pack)



## Evolution Valve Collars

61-74-80 OHV

**PCP Application**

**30003** Lower 84-on 1340 Evo (18222-83)

**30006** Upper 84-on 1340 Evo (18219-83)

## K/W Valve Guide Oil Seal Set

Set of two seals only.

**PCP Item**

**32213** 5/16" Green

**32225** 3/8" Red

**32227** 11/32" Yellow or clear





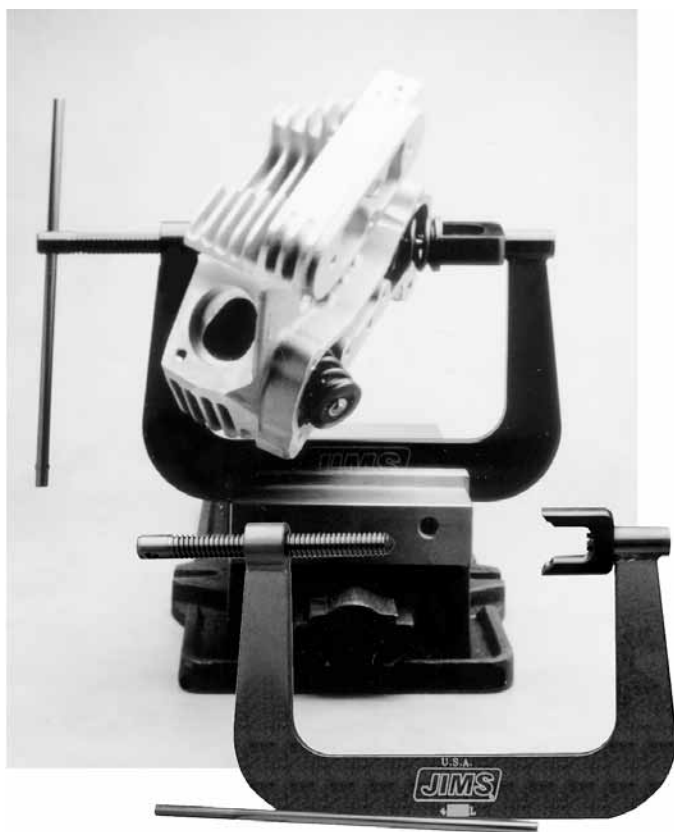
# Valve Springs

## Crane EVO Valve Spring Sets

Manufactured from the finest quality spring wire and precision wound. Kits come with choice of chromoly 4140 steel retainers or titanium retainers. Chromoly retainers offer strength and durability while eliminating inaccurate assembly heights. Titanium retainers are strong and light which allows the valve to move easily, producing more power. **Note** # is the symbol that denotes pounds.



Crane Valve Spring and Retainer Kits						
PCP	Nominal Diameter		Retainer Type	Seat Pressure & Installed Height	Nominal Open Pressure & Height	Coil Bind Height
	Inside	Outside				
34695	.800	1.460	Steel	175# @ 1.700	352# @ 1.180	1.080



## Valve Spring Compressor Tool

Jims tool for removing or installing valves. Hardened ball bearing style tip at valve head end eliminates damage to valve. Can be clamped into vice and includes valve collar receiver for safer tool use.

**31471** BT EVO and all aftermarket heads

# Valve Springs

## Kibblewhite BT Evo with 5/16" Stem Valves



### "Performance Rebuild" Ovate Wire Beehive Spring Kits

- progressively wound using Kobe Super-Clean chrome silicon based wire that is heat treated and shot peened
- Hardened steel or titanium Posi-Loc style retainers
- Hardened steel collars
- Offer optimum performance and durability

#### Performance Rebuild Valve Spring Kits "Beehive"

Includes springs, retainers and lower collars.

PCP	Max Lift	Seat Pressure		Retainers
<b>32154</b>	.600"	160-170 lb.	370 lb. @ .600"	Steel
<b>32155</b>	.630"	180-190 lb.	370 lb. @ .630"	Steel
<b>32107</b>	.660"	178 lb.	371 lb. @ .660"	Steel



### S&S .585" Lift Valve Spring Kits

Kits fit Big Twins with stock heads and all S&S Super Stock heads. Dual springs reduce the risk of valve float. Suitable for performance applications and accommodates camshaft lift to 0.585". Includes inner and outer springs, valve keepers, top and bottom collars, shims and valve guide seals.

Lift	Installed Height	Seat Force	Force @Max Lift	Max RPM
.585"	1.850"	135 lb.	335 lb.	6500

#### PCP Fitment

**9000593** TC 99-04 with 5/16" valve stems

Lift	Installed Height	Seat Force	Force @Max Lift	Max RPM
.585"	1.800"	130 lb.	325 lb.	

**902277** TC 99-04 with 5/16" valve stems



## Kibblewhite Valve Spring Kits 5/16" stems

### Lightweight Racing Valve Spring Kit -Standard Springs

Includes springs, retainers, keepers, collars and spring shims.

PCP	Lift	Seat Pressure		Retainers
<b>32156</b>	.550"	150-160 lb.	380 lb. @ .550"	Titanium
<b>32157</b>	.550"	150-160 lb.	380 lb. @ .550"	Steel

### Lightweight Racing Valve Spring Kit -Standard Springs

Includes springs, retainers, keepers, and lower collars.

PCP	Lift	Seat Pressure		Retainers
<b>32158</b>	.600"	170-180 lb.	380 lb. @ .600"	Titanium
<b>32159</b>	.600"	170-180 lb.	380 lb. @ .600"	Steel
<b>32160</b>	.655"	185-195 lb.	465 lb. @ .655"	Titanium
<b>32161</b>	.655"	185-195 lb.	450 lb. @ .655"	Steel



### S&S .640" Triple Lift Valve Spring Kits

Kits fit stock style and S&S Super Stock Heads. O.D. of outer spring fits within stock spring compartment. **Used with "no shoulder" style valve guides and special keepers** fit stock 5/16" diameter stemmed valves and S&S collars only (these guides can be retrofitted to early BT V2 heads equipped with "shoulder" style valve guides). Features patented steel top collars specially drilled to lighten and allow oil to cool springs. Includes 4 of .015" and 4 of .030" shims. Kits are good for up to .640 lift

**902077** Kit with steel top collars BT 84-99

**902078** Kit with titanium top collars BT 84-99

# AV&V Valve Springs



## AV&V Valve Spring Kits 1984-04 for 5/16" Valve Stems (not 7mm stems)

Premium springs are manufactured without compromise from an ultra clean, high silicon and vanadium kobe alloy wire; the best alloy available on the market for high lift and endurance applications. The chrome moly 4140 steel retainers are the strongest most durable retainers offered. High grade titanium retainers add strength and reduce weight allowing the spring pressure to operate more efficiently. This lets your motor accelerate quicker and produce more power. Springs feature a small O.D. of 1.460" so very little or no grinding is required to the inside of the rocker cover.

AV&V Selection Chart for 1984-04 with 5/16" Valve Stems						
PCP	Recommended Lift	Retainer Type	Application	Seat Pressure & Initial Height	Nominal Open Pressure and Height	Coil Bind Height
34027	.600"	Steel	Evo	155# @ 1.885"	405# @ 1.260"	1.080
34028	.600"	Titanium	Evo	155# @ 1.885"	405# @ 1.260"	1.080
34032	.650"	Steel	Evo	185# @ 1.860"	460# @ 1.160"	1.080
34033	.650"	Titanium	Evo	185# @ 1.860"	460# @ 1.160"	1.080



AV&V High Performance Beehive Spring Kit for 5/16" Valve Stems									
Manufactured from ultra clean high silicon kobe alloy wire then micro shot peened and nitrided. Features CNC machined extreme duty 9 deg. locks and ultralite chromoly forged retainers.									
PCP	Lift	Application	Seat Pressure & Initial Height	Nominal Open Pressure and Height	Coil Bind Height	Small End		Large End	
						I.D.	O.D.	I.D.	O.D.
34065	.600"	Evo	165# @ 1.860"	384# @ 1.250"	1.200"	.650"	1.085"	1.000"	1.445"
34066	.650"	Evo	178# @ 1.880"	385# @ 1.200"	1.150"	.740"	1.185"	1.055"	1.500"



# AV&V Valve Guides



## AV&V Valve Seats

These valve seals are made from heat and wear resistant high quality alloy steel, and are manufactured with clear identification markings and radius edges for easy installation. These seats will resist intense valve pounding and effectively dissipate heat for constant valve sealing. These valve seats will increase in hardness during engine break-in period.

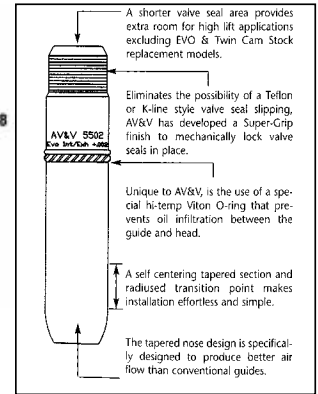
Exhaust and intake valves are made from the same material, choose size as needed. Machining may be required.

PCP	O.D.	I.D.	Thickness
31787	1.630"	1.180"	.385"
31789	1.757"	1.371"	.315"
31780	1.757"	1.410"	.430"
31788	1.880"	1.435"	.410"
31784	1.944"	1.700"	.400"
31781	2.008"	1.610"	.440"
31782	2.040"	1.590"	.420"
31790	2.068"	1.750"	.315"
31783	2.070"	1.610"	.460"
31785	2.135"	1.750"	.400"
31786	2.163"	1.750"	.410"



## Rowe Valve Guides

Model	Size	Cast Iron		Ampco 45	
		Intake	Exh	Intake	Exh
Evo 1984-on	STD			17510	17510
BT and XL	+.001			17511	17511
.5620	+.004	17674			
	+.005	17675	17685	17522	17522
	+.006		17686	17515	17515
	+.008			17523	17523



## AV&V High Performance Valve Guides for Evo and Twin Cam Models to 2004

These manganese bronze guides have a shortened seal area and are tapered for use on high lift and high flow applications. Use with .530" valve seals.

Intake	Exhaust	Oversize	O.D.	I.D.
31756	31768	STD	.5625"	.308"
31757	31769	.001"	.5635"	.308"
31758	31770	.002"	.5645"	.308"
31759	31771	.003"	.5655"	.308"
31760	31772	.004"	.5665"	.308"
31761	31773	.005"	.5675"	.308"
31762	31774	.006"	.5685"	.308"
31763	31775	.008"	.5705"	.308"
31764	31776	.010"	.5725"	.308"
31765	31777	.012"	.5745"	.308"
31766	31778	.015"	.5775"	.308"
31767	31779	.025"	.5875"	.308"

## AV&V High Performance Valve Guides for Evo and Twin Cam Models to 2004 (for stock heads)

These manganese bronze guides are stock length for direct stock replacement. Use with .530" valve seals. Same guide will fit intake or exhaust.

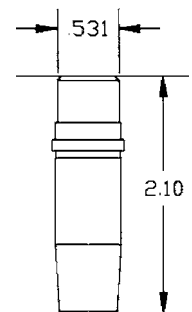
PCP	Oversize	O.D.	I.D.
31801	STD	.5625"	.308"
31802	.001"	.5635"	.308"
31803	.002"	.5645"	.308"
31804	.003"	.5655"	.308"
31805	.004"	.5665"	.308"
31806	.025"	.5875"	.308"



## Rowe Unhoned Small Bore Cast Iron Guides

Evolution with flange .300"

shorter Int./Exh.	Size
17590	STD
17591	.001
17592	.002
17593	.003



## S&S Valve Guides

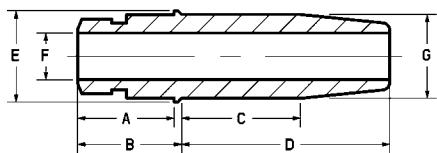
PCP	Description
902210	STD V2 Int/Exh
902211	+.001 V2 Int/Exh
902212	+.002 V2 Int/Exh
902213	+.003 V2 Int/Exh
902219	+.030 V2 Int/Exh



# Kibblewhite Valve Guides

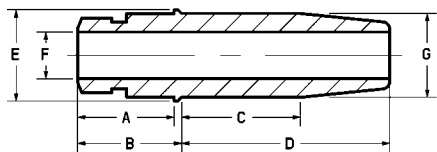
## Valve Guides

Shouldered guide w/Viton Seal  
Shortened for .600" Lift



<b>A</b>	0.650"	<b>D</b>	1.400"
<b>B</b>	0.700"	<b>E</b>	0.615"
<b>C</b>	0.800"	<b>F</b>	0.3098"

Intake-Guide (Std. 0.5620") C630 Bronze	
PCP	Size
<b>32162</b>	Std.
<b>32163</b>	+0.001"
<b>32164</b>	+0.002"
<b>32165</b>	+0.004"
<b>32166</b>	+0.010"



<b>A</b>	0.650"	<b>D</b>	1.450"
<b>B</b>	0.700"	<b>E</b>	0.615"
<b>C</b>	1.150"	<b>F</b>	0.3098"

Exhaust-Guide (Std. 0.5620") C630 Bronze	
PCP	Size
<b>32167</b>	Std.
<b>32168</b>	+0.001"
<b>32169</b>	+0.002"
<b>32170</b>	+0.004"
<b>32171</b>	+0.010"



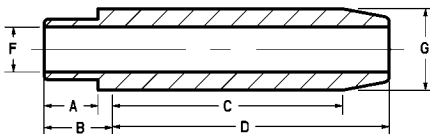
## Universal Ball Hones

Kibblewhite precision valve guide hones are durable enough to size C630 bronze and cast iron valve guide materials.

PCP	Size
<b>32115</b>	7.0mm
<b>32116</b>	5/16" (.3125")
<b>32117</b>	3/8" (.3750")

## Valve Guides

OEM Style - .420" Top

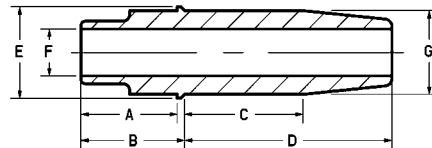


<b>A</b>	0.375"	<b>D</b>	2.025"
<b>B</b>	0.375"	<b>E</b>	
<b>C</b>	1.700"	<b>F</b>	0.3098"

Intake/Exhaust-Guide (Std. 0.5620")			
C630 Bronze		Cast Iron	
PCP	Size	PCP	Size
<b>32237</b>	Std.	<b>32283</b>	Std.
<b>32238</b>	+0.001"	<b>32284</b>	+0.001"
<b>32239</b>	+0.002"	<b>32285</b>	+0.002"
<b>32240</b>	+0.003"	<b>32286</b>	+0.003"
<b>32241</b>	+0.004"	<b>32287</b>	+0.004"
<b>32242</b>	+0.010"	<b>32288</b>	+0.010"

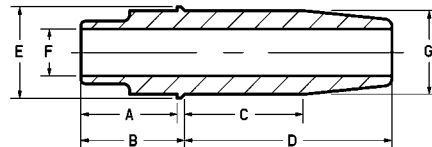
## Valve Guides

Shouldered guide - .420" Top  
Shortened for .600" Lift



<b>A</b>	0.650"	<b>D</b>	1.400"
<b>B</b>	0.700"	<b>E</b>	0.615"
<b>C</b>	0.800"	<b>F</b>	0.3098"

Intake-Guide (Std. 0.5620")			
C630 Bronze		Cast Iron	
PCP	Size	PCP	Size
<b>32183</b>	Std.	<b>32247</b>	Std.
<b>32184</b>	+0.001"	<b>32248</b>	+0.001"
<b>32185</b>	+0.002"	<b>32249</b>	+0.002"
<b>32187</b>	+0.003"	<b>32250</b>	+0.003"
<b>32188</b>	+0.004"	<b>32251</b>	+0.004"
<b>32189</b>	+0.010"	<b>32252</b>	+0.010"



<b>A</b>	0.650"	<b>D</b>	1.450"
<b>B</b>	0.700"	<b>E</b>	0.615"
<b>C</b>	1.150"	<b>F</b>	0.3098"

Exhaust-Guide (Std. 0.5620")			
C630 Bronze		Cast Iron	
PCP	Size	PCP	Size
<b>32190</b>	Std.	<b>32277</b>	Std.
<b>32191</b>	+0.001"	<b>32278</b>	+0.001"
<b>32192</b>	+0.002"	<b>32279</b>	+0.002"
<b>32193</b>	+0.003"	<b>32280</b>	+0.003"
<b>32194</b>	+0.004"	<b>32281</b>	+0.004"
<b>32195</b>	+0.010"	<b>32282</b>	+0.010"



## Seal Installation Tools

•For OEM style replacement seals

PCP	UM
32211	Each

## Installation Protectors

PCP	Stem Diam.	UM
32213	0.3125"	Pair

## OEM Style Replacement Seals

PCP	Guide Ø	Stem Ø	UM
32199	0.420"	0.3125"	4 pack



## Replacement Keeper Set

•OEM style

PCP	UM
30013	8 pack



## Cylinder Dowels

•All Evolution models

PCP	O.D.	UM
32332	0.5575"	4 pack



## Kibblewhite 1984-99 Evolution Valves

Black Diamond Valves						
PCP	Type	Head Diam.	Stem Diam.	Tulip	OL	Remarks
32172	EX	1.615"/41.02mm	0.3096"	29°	4.520"	Standard (OEM 18082-83)
32173	IN	1.840"/46.74mm	0.3100"	23°	4.445"	Standard (OEM 18074-83B)

Black Diamond Valves						
Specially designed for HD Racing applications						
PCP	Type	Head Diam.	Stem Diam.	Tulip	OL	Remarks
32174	IN	1.940"/49.28mm	0.3100"	23°	4.400"	Replacement (Branch heads)
32176	IN	2.000"/50.80mm	0.3100"	23°	4.445"	Oversize (STD heads)
32177	IN	1.900"/48.26mm	0.3100"	28°	4.420"	Oversize (racing profile)
32178	EX	1.630"/41.40mm	0.3096"	40°	4.520"	Oversize (*Inconel)
32180	EX	1.630"/41.40mm	0.3096"	40°	4.520"	Oversize (racing profile)
32182	EX	1.750"/44.45mm	0.3095"	24°	4.480"	Oversize (STD heads)

\*Inconel is a high nickel content stainless steel super alloy. It retains its mechanical properties at higher temps, resists valve face pitting and recession in performance applications with unleaded or exotic fuels. Excellent choice for turbocharged and nitrous applications.

Recommended Valve Guide Seals-4 Pack		
PCP	Type of Seal	Guide Top Diam.
32256	IN/EX, style 5, Steel clad Viton	0.420"
32259*	IN/EX, style 6, Solid White PC style Seal	0.415"

\*May require use of seal cutter

## Powdered Metal Valve Seats

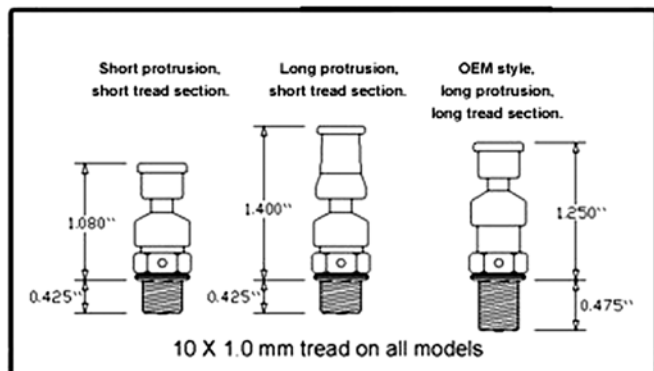
•Recommended for Evo's  
•Compatible with leaded and unleaded fuels including methanol and ethanol fuel blends  
•Excellent thermal characteristics



PCP	A +/- .0002	B +/- .0005	C +/- .0005	Type
32366	1.9690"	1.535"	0.453"	IN
32367	2.0070"	1.562"	0.450"	IN
32369	2.1320"	1.690"	0.450"	IN
32365	1.7570"	1.375"	0.450"	EX



# Release Valves and Seals



## AV&V Solid Carbide Valve Guide Reamers

Reamers feature a 2" long pilot for a perfect alignment with the valve guide while reaming & are specially designed for use with manganese bronze material. Valve guides can be reamed to exact dimension without any taper in just a few seconds. These durable tools will last for hundreds of guides. When using AV&V valves and guides this one tool allows you to fit both intake and exhaust. Not for use on cast iron guides.

PCP	Diameter	Application
34044*	7mm +0.001"	Stock OEM valves
34045	0.3110"	Evo, Twin Cam
34046	0.3115"	Evo, Twin Cam
34047**	0.3120"	Evo, Twin Cam

\*HD 7mm valves are .001" oversized, #34044 must be used to fit AV&V bronze guides to accept OEM valves

\*\* Recommended size for all Evo and Twin Cam AV&V valves



## AV&V Compression Release Valves (Pairs)

AV&V compression valves are available as a stock replacement and in short thread styles. Short thread valves are easy to install as you don't need to machine the heads as deeply as when using stock OEM style valves. All valves feature a high temperature resistant knob that comes in a charcoal colour to more closely match heads. 10 x 1.0mm threads.

PCP	Thread	Protrusion	Recommended Application
34041	Short	Short	Evo models
34042	Short	Long	Twin Cam
34043	Long	Long	Stock replacement



## Fluoro-Viton Seals (5 Pack)

Seals are made from a fluoro-viton polymer with teflon added to prevent valve to seal friction. A metal spring keeps constant seal to valve tension to prevent oil consumption. These seals are then bonded to a steel jacket that provides a secure fit to the guide. The internal ribs are designed to allow for installation without any tools, but hold secure after installation.

PCP	Application	Stem	Guide
32276	V-Rod	6mm	.347
32275	Evo	7mm	.562
32274	Evo	5/16	.420

## AV&V Viton Valve Seals (4 Pack)

Seals resist higher temperatures to offer superior sealing.

PCP	Application	Guide O.D.	I.D.
34035	V-Rod	8.5mm	6mm
34037	OEM style	0.562"	7mm
34038*	Evo, Twin Cam	0.420"	5/16"
34039	Evo, Twin Cam	0.530"	5/16"

\* Designed for shortened valve guide length due to the limited clearance between stock guides and upper spring coll



## Rowe Valves with Machined Heads



### Rowe TC/EVO Machined Valves 1984-04

High flow, forged one piece valves made from 21-4N stainless steel. Precision CNC machined with black melonite heat treating process (nitride), chromed or plain. Sold each.

PCP	Rowe	Application	Head Diam.
32234	700-12	Intake TC/EVO chromed	$\pm .005$ 1.844
32217	700-14	Intake TC/EVO -.040 shorter	1.844
32214	714-13	Intake TC/EVO +1/16 head -.048 shorter	1.900
32220	700-51	Intake TC/EVO +.100 head plain stem	1.944
32215	915-13	Exhaust Twin Cam black	



### Jims Evo and Twin Cam Black Tulip Valves

Jims completes the quest for the ultimate valve train system with the addition of these high-performance valves. Designed to withstand extreme conditions, these valves are constructed from a forged one piece racing grade stainless steel alloy, and specially heat-treated and processed with nitride for superior wear resistance. A special micropolished 45 degree angle just below the lock groove prevents excessive stress on the valve, and makes valve seal installation easier.

Evo and Twin Cam valves represent the latest evolution in performance valves with their high-radius stem to valve transitions. Longer life and better flow was the emphasis in the development of these valves, and through extensive testing the valve contouring has been optimized for both aerodynamic and volume maximization with the longest life of a valve possible. Use on 84-on Evo BT and 99-04 TC engines and most after-market performance heads.

PCP	Type	Head Diam.	Length	Stem Diam.	Profile
31652	Exhaust	1.570"	4.525"	.3106"	Dished
31653	Exhaust	1.610"	4.525"	.3106"	Flat
31655	Intake	1.940"	4.440"	.3108"	Dished
31656	Intake	2.020"	4.440"	.3108"	Dished



### BT EVO-TC Valves w/Forged Stems 1984-04

Hard Chrome

Head Intake  
STD 3467

# Valves



## AV&V Black Tulip and Chrome Tulip Valves

These superb valves feature the highest flow on the market. One piece valves are forged from a racing grade stainless steel alloy and are available in hard black or chrome finish. Each valve has a bearing quality hardened tip at the end of the stem to prevent premature wear with high lift applications. The Tulip Valve design also features a 45 degree angle below the lock groove to reduce the stress in this area and to facilitate the valve seal installation. Each valve is heat treated with a special process and the stem is centreless grinded to a microfinish for a longer life.

## Evolution Big Twin & TC 84-04

PCP	Type	Head Diam.	Length	Stem Diam.	Finish
31791	Exhaust	1.510"	4.525"	.3106"	Black
31792*	Exhaust	1.610"	4.525"	.3106"	Black
31794*	Intake	1.900"	4.440"	.3108"	Black
31796**	Intake	1.940"	4.440"	.3108"	Black
31797	Intake	1.940"	4.440"	.3108"	Chrome
31798	Intake	2.020"	4.440"	.3108"	Black

\* Stock heads

\*\* If used in stock heads, larger seats must be installed



## AV&V Stainless Steel Valves

These valves are heat treated and nitride processed for excellent wear resistance. These valves feature a 45 degree angle, cut below the lock groove to reduce stress in this area, as well as making valve seal installation easier.

## Evolution BT Valves 84-99 Stock Replacement

PCP	Valve	Head Diam.
31662	Exhaust	1.615"
31661	Intake	1.845"



## EVO & TC Rocker Arm Shaft

31198	Jims
30300	Preston USA





## Jims Roller Rocker Arms

Precision, American made roller rocker arms are investment cast from purified, aircraft quality, 4340 chrome moly steel. Both stock and aftermarket rocker arms were analysed to determine a baseline for the design: 660 bronze bushings were retained and a bearing grade steel roller tip was integrated into the design. Rocker arms feature a segmented parabolic pushrod cup that reduces friction, wear, and improves roller tip oiling. Stock ratio of 1.625 will easily accommodate a .700" lift cam (at the valves). Replaces 17360-83 and 17375-83. Set of 4.

**31251** BT 84-17 EVO & Twin Cam



## S&S Standard Forged and Roller Rocker Arms

Forged steel for maximum strength. Roller tip reduces side thrusting on valve stem in high lift applications and .750" bushings provide 50% more load bearing area than stock. Recommended for cams of .585" lift or more. Fits EVO BT & TC

**PCP Item Ratio**

**9004065** Roller arm set 1.625:1

**9004098** Roller arm set 1.725:1

**9004119** Standard forged 8620 steel arm set

**31100**



**31102**



## Jims Rocker Arm Bushing (Must be Reamed)

**31100** 17428-57 Stock replacement BT 66-on, XL 57-on (8 pack)

**31102** 17428-83K Jims roller rocker bushings less mill slot **not to be used on Shovels or Ironhead XL I.D. .555"** (8 pack)



## Rocker Arm Bushings (Kibblewhite)

•Constructed of SAE660 bearing bronze bar stock

PCP	Application	UM
<b>32233</b>	O.D.-0.6795"	8 pack

\*Adjustable pushrods must be used w/roller arms to obtain proper valve clearance



## Preston's BT Evo Rocker Arm and Shaft Kit

Fits BT EVO & all TC. Kit includes 2 (17375-83) rocker arms, 2 (17360-83) rocker arms and 4 (17611-83) shafts.

**32333** Kit

**30058** F/Int and R/Exh rocker arm (17360-83)

**30059** R/Int and F/Exh rocker arm (17375-83)

**30300** Shaft only, Preston (17611-83)

**31198** As above, Jims



## Preston Rocker Arm Bushings

**18503** 17428-57 Stock replacement (split OEM style) XL 57-on (4 pk for 1 head)

# BT Evo

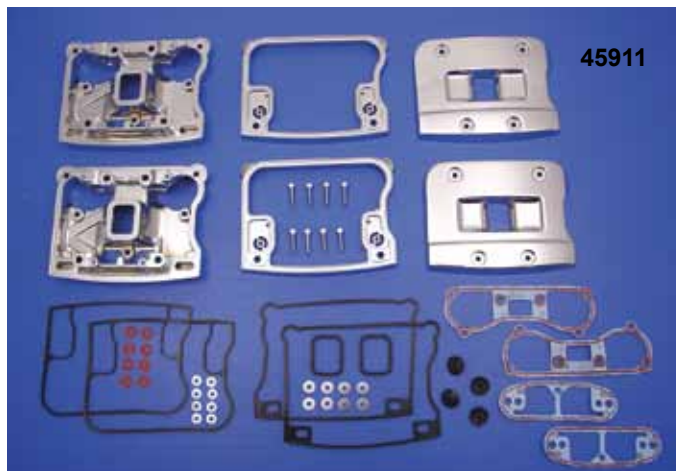
45910



45911



45910



45911

45915



45917

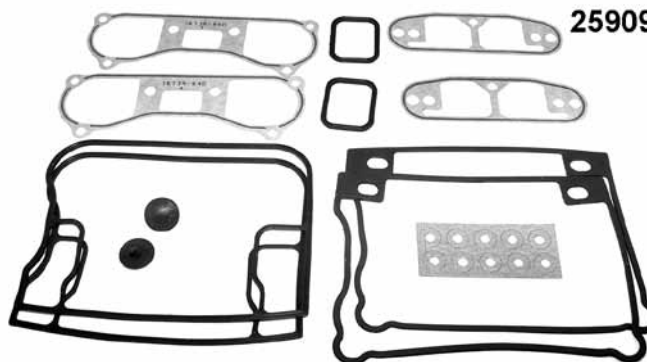


## Preston Chrome BT Evo Rocker Cover Sets

Die cast, machined covers are polished and chromed. These covers have a slightly changed contour than stock around screw holes for a smoother look. Complete 6 piece set includes all necessary gaskets and chrome allens for installation for both heads.

Chrome	Black	Years
45910	45915	84-91
45911	45917	92-99

25909



## Topline Gaskets U.S.A.

BT Evo

25904 Graphite head Evo .055 (16770-84D) (pr)

25908 Rocker kit 84-91 (17038-90)

25909 Rocker kit (17042-92A)



## S&S Style Chrome Rocker Box Set 84-99

Two piece set for two heads on 84-99 Evo models.

**59555** Rocker box set

**25406** Gasket set



## Chrome Rocker Box Top Cover with D-Ring

Fits BT 84-91 models. Gaskets are sold separately.

**59049**



## Jims Compression Release Valves

These release valves make starting your engine effortless by venting cylinder compression with just the push of a button. These are indispensable when used with stroker kits, high compression engines and large displacement engines. Simply drill and tap each cylinder head and thread in the self-sealing release valves.

**31283** Fits all BT



## S&S Chrome Head Bolt Covers

Dress up your engine with these magnetic chrome head bolt covers. Easy installation, no tools or adhesives required. A powerful magnet holds cover in place, yet allows easy removal. Chrome plated steel looks great on any engine especially on polished engines. For S&S head bolts only.

**500333** Set of 4



## Chrome Head Bolt Covers

Covers fit BT 86-99

**44043** Grooved

**44044** Smooth



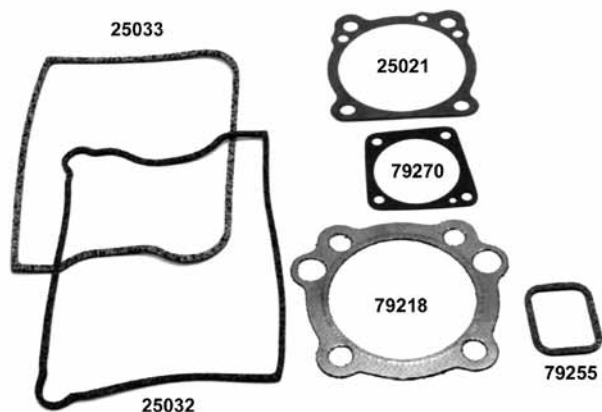
## Black Cylinder Headbolt Cover Set

4 piece set for FLT, FXST, FLST, FXR, XL 86-on.

**44166**



# BT Evo



Jans	James	OEM	Item
	79218	16773-85	Head Gasket
25021	79226	16774-86A	Cyl. Base
	79227	16774-86AC	Coated cylinder base
14538		26432-76A	Stud O-Ring
	79366	16779-84-X	1 piece rocker w/silicone
	79219	16773-85T	.046 Blk head gasket (5pk)
	79506	16773-85TS	.046 BB w/silicone bead
	79249	17355-84	Lower Rocker, cork
25033	79252	17356-84	Upper Rocker, cork
	79255	17358-84	Centre Rocker, cork
	79256	17358-84-A	Centre top rubber 87-99
	79270	18633-48D	Rear Tappet
	79274	18634-48C	Front Tappet
25170		63858-49	Washer (drain plug)
14525		11145 (10)	Lower Push Rod Cover
14521		11157 (10)	Upper Push Rod Cover

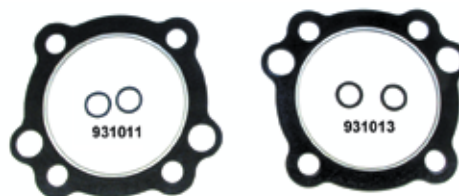


## James Genuine Metal Cylinder Base Gasket

Gasket has a steel base metal which has been coated on both sides with a specially formulated high temperature oil resistant rubber compound. Silicone beading around the inner and outer perimeter forms a seal on both sides of gasket. Pairs.

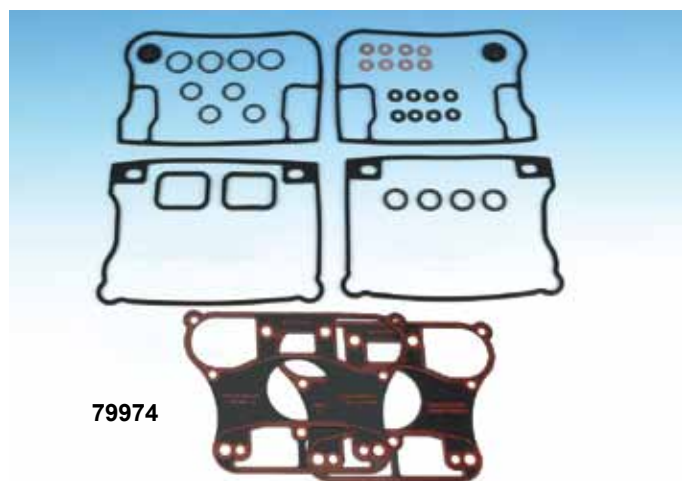
### PCP Description

79240	BT Evo 84-99 (16777-94)
79525	BT Evo 3-5/8" (16777-94S)



## S&S Gaskets

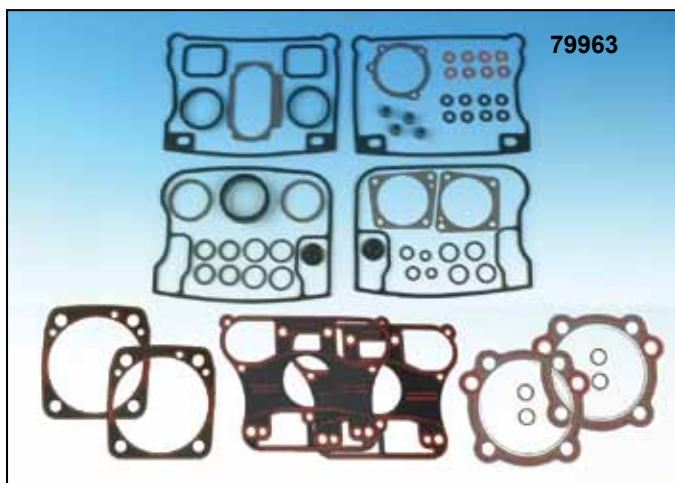
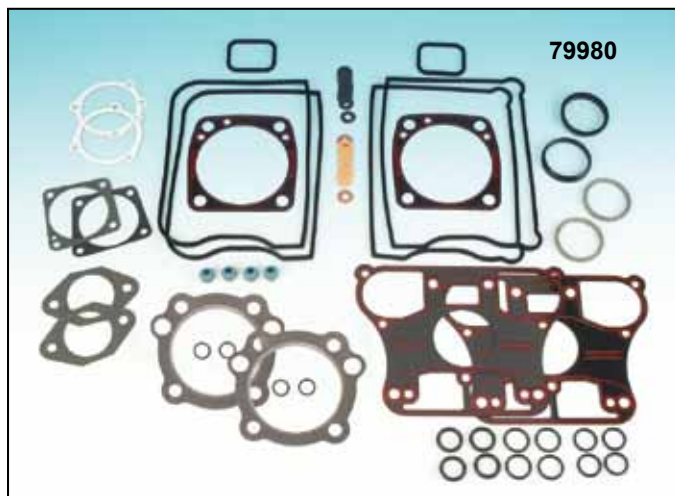
931011	Head gasket, stock EVO 3-1/2" (each)
931013	Head gasket, stock EVO 3-1/2" (each)



## EVO Big Twin Rocker Cover Gasket Kits

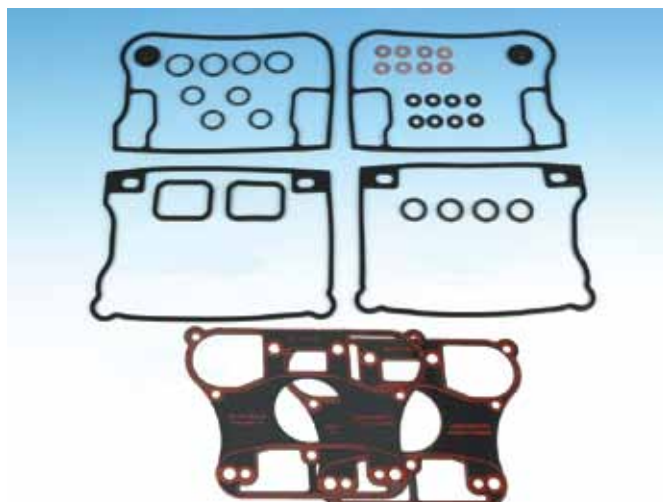
These gasket kits include both rocker to head gaskets and your choice of **Molded O-Ring or Cork cover** gaskets with bolt seals and washers for two heads for models listed.

Preston	James	Type	Year
	79972	Cork	84-91
	79973	O-Ring	84-91
	79991	As above w/steel	
25415	79974	O-Ring	92-99 Evo
	79992	As above, w/steel	



## James Top End Gasket Kits Evo BT 84-99

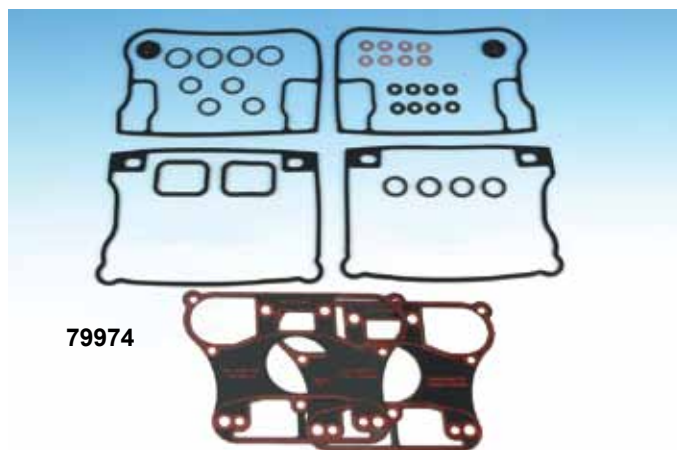
PCP	OEM	Description
79961	17033-83*	84-91 (cork and teflon)
79980	17033-83-A	87-91 (rubber & Teflon)
79984	17040-92	92-99 (.045 & rubber rockers)
79963	17033-92	Big bore 92-99 (.045 & rubber)



## James Rocker Cover Gasket Kit

Includes coated steel base gaskets. Replaces 17042-92-X.

79992 Kit



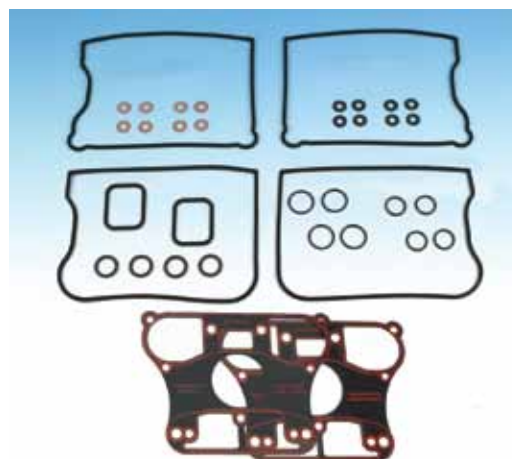
## James Rocker Cover Gasket Kits

PCP	OEM	Description
79972	17033-83-R	1340cc 84-91, cork
79973	17038-90	1340cc 84-91, rubber
79974	17042-92	1340cc 92-99, rubber



## James Motor Gasket Kits

PCP	OEM	Description
79982	17035-83-B	1340cc 84-91, rubber 4 & 5 speed
79985	17041-92-A	1340cc 92-99, rubber



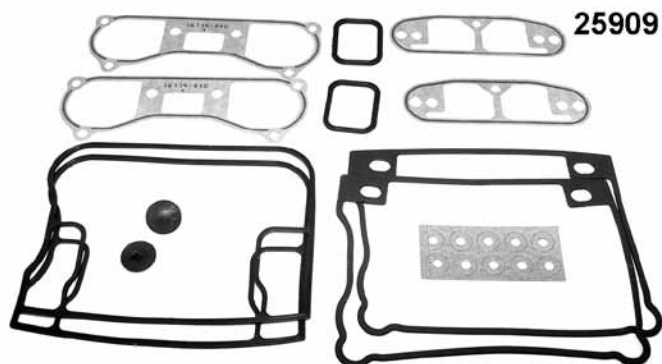
## James Rocker Gasket Kit with Steel BT 84-91

79991 17038-90-X

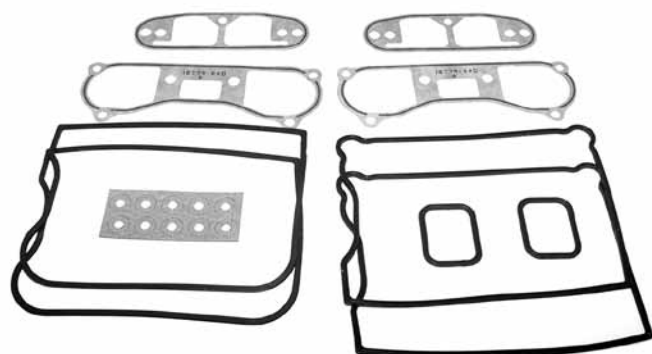


# BT Evo

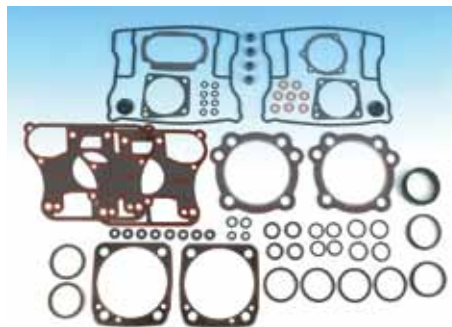
## Topline BT Gaskets



**25909** 17042-92A Rubber rocker box kit 92-99



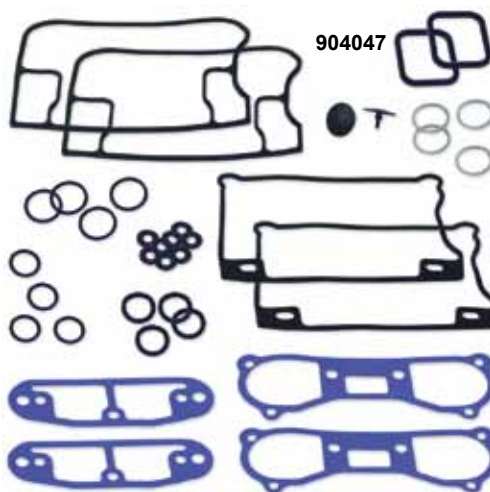
**25908** 17038-90 Rubber rocker box kit 84-91



### James Evo BT Top End Kits

Top end only kit w/.046" by 3-5/8" head gaskets for use on Evo BT with S&S rocker boxes.

**79996**



**904047**



**79215**



**79216**

### S&S Evo Rocker Cover Gasket Kits

Gasket kits for S&S rocker covers feature o-ring style seal between upper and lower cover.

**PCP Description**

- 904046** 84-91 stock rubber (17038-90)
- 904047** 92-99 stock rubber (17042-92A)
- 904049** S&S billet, all BT & Sportster Evo
- 904091** S&S billet, all BT & Sportster Evo



**79218**



**79219**



**79506**

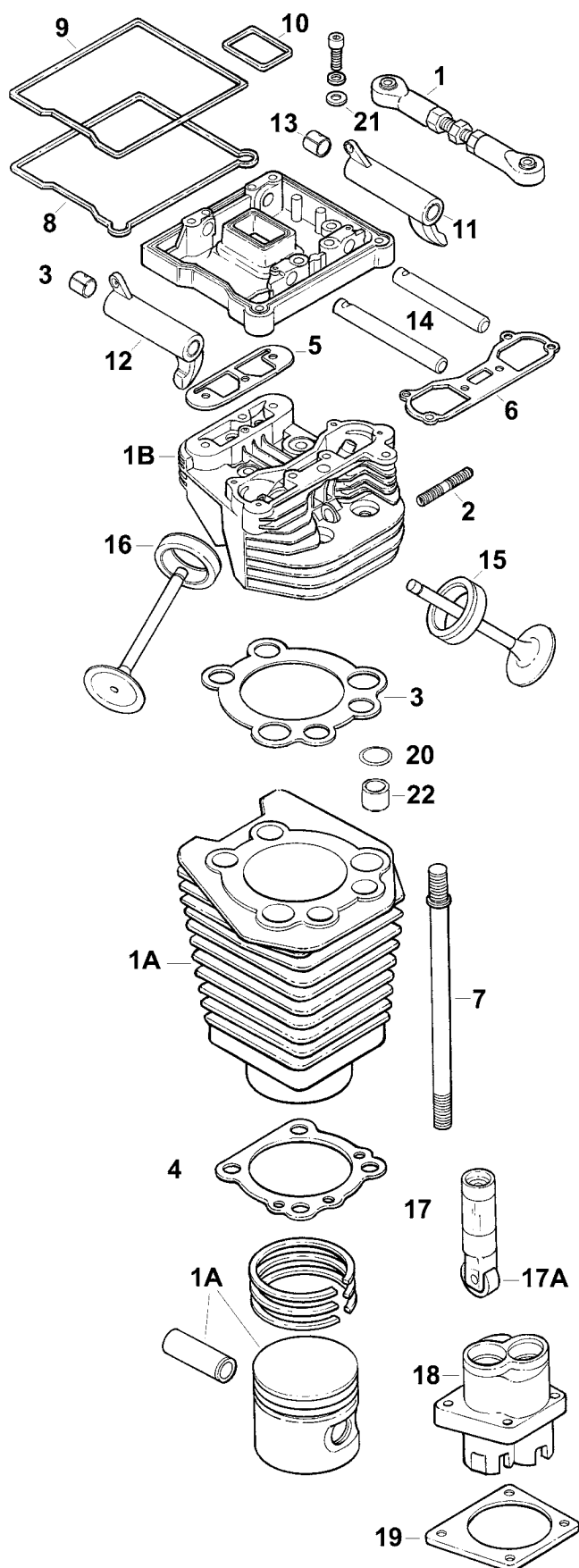


**79553**

### James Head Gasket 84-99

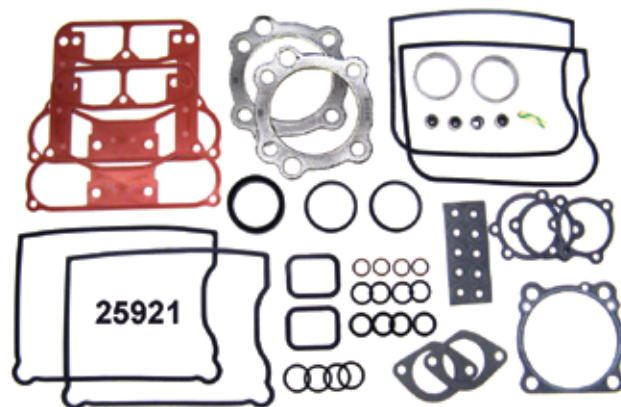
- 79215** 16770-84-A .046" Head gasket and coated base with 4 blue o-rings. Also XL 99-on. (kit)
- 79216** 16770-84-B .048" Carbon graphite head gaskets with o-rings (5 pk)
- 79217** 16770-86-S 3 5/8" .064" Head gasket & .016" cylinder gasket kit with 4 red o-rings (kit)
- 79218** 16773-85 .064" Black teflon head gaskets (5 pk w/10 o-rings)
- 79219** 16773-85-T .046" Black teflon head gasket with o-rings (5 pk)
- 79506** 16773-85-TS .046" 3 5/8" Head gasket with silicone (5 pk)
- 79553** 16770-84-X .036" Head gasket 84-01 (2 pk)





## Hard Parts

	PCP	OEM	Description	Year	U/M
1	40019	16219-79B	Stabalizer link, top (not FXST)	80-	Each
1A	N/A	16510-83A	Cylinder & piston	85-*	Each
1B	N/A	16691-85C	Front head	85-91	Each
2	72188	16715-83	Stud exhaust & nut	85-*	Kit
3	79218	16773-85	Head gasket (2)	84-*	5 Pk
4	25021	16774-86A	Base gasket (2)	84-*	10 Pk
5/6	79366	1677-84X	1 pc rocker, paper	84-*	Pr
5/6	79581	16779-99X	As above steel	84-*	Pr
7	10816	16837-85C	Cylinder stud (8)	85-*	Each
	9424	16837-85B	Cylinder studs, Colony	85-*	8 Pk
	60106		Cylinder studs, S&S	85-*	8 Pk
8	79249	17355-84A	Rocker gskt/lwr,cork (2)	84-91	5 Pk
9	25033	17356-84A	Rocker gskt/up,cork (2)	84-91	10 Pk
10	79255	17358-84A	Cork gskt/ln (2)	84-91	10 Pk
11	30058	17360-83	Rocker arm F/I, R/E	84-*	Each
12	30059	17375-83	Rocker arm R/I, F/E	84-*	Each
13	18503	17428-57	Bushing rocker (8)	66-*	4 Pk
14	30300	17611-83	Rocker shafts (4)	84-*	Each
	31198		Jims as above		Each
15	29006	18011-86	Exhaust seat STD (2)	84-*	Each
16	29008	18020-83	Intake seat STD (2)	84-*	Each
17	N/A	18523-86	Tappet roller (4)	86-*	Each
17A	15623	-	Roller with pin (4)	86-*	Each
	15624	--	Roller set	86-*	Set
18	N/A	18540-83B	Guide block rear	84-*	Each
	N/A	18542-83B	Guide block front	84-*	Each
19	79270	18633-48C	R/Tappet gask .031	48-91	10 Pk
	79271		As above .020	92-99	10 Pk
	79273	18634-48C	F/Tappet gask .031	48-91	10 Pk
	79274		As above .020	92-99	10 Pk
20	14538	26432-76A	O-Ring	84-*	10 Pk
21	25170	63858-49	Washer, screw	84-*	10 Pk
22	18705	16573-83	Steel insert	84-*	8 Pk

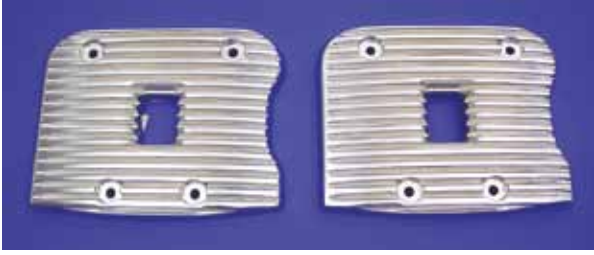


## Topline Evo Top End Gasket Kits

PCP	Application
25921	FXST, FXR, FLT 84-91 (17033-83A)

SEE THE GASKET SECTION FOR MORE GASKETS

# BT Evo Rocker



## EVO Finned Rocker Cover

Die cast aluminum. Besides looking great, these covers provide cooler oil running temperature due to the heat sink construction of the fins.

**6840** Polished (1984-91)

**6841** Chrome (1984-91)



## Evo Rocker Box Screw Kit

Includes chrome allen screws and washers with copper sealing washers.

**PCP** Description

**8931** Allen screw kit

**20500** Sealing washer (6114) (10)

**25170** Fibre washer (63858-49) (10)



## Top Motor Mount to Cylinder Head Bracket Kit

Chrome top motor mount to cylinder head bracket mounting kit feature companion countersunk washers and flat head allen screws. Fits BT 93-on

**9967**



## Rocker Box Breather Upgrade 92-99

**16326** Kit



## Head Bolt/Spark Plug Covers For EVO 86-99

These sets are diecast and chrome plated to cover the head bolt and spark plug base area. They are held in place by a rubber grommet which fits over the spark plug and a recess in the casting fitting over the 12 point head bolt, for a secure fit.

**45072** Pair BT 86-99



## Chrome Head and Spark Plug Cover 86-99

Fits 86-99 evolution models. Covers are held in place by supplied rubber inserts.

**59703**

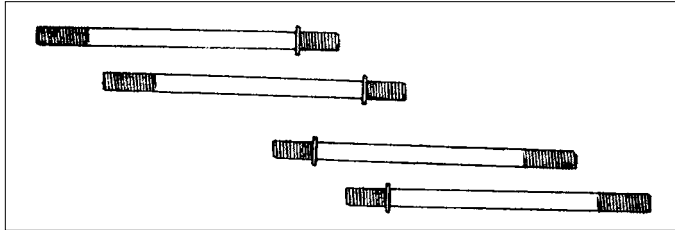


## Colony Lower Rocker Box Mounting Kit

Stock replacement hardware for mounting both lower rocker boxes on Evo Big Twin

**72078**

# EVO Cylinder Hardware



## Evo Cylinder Head Studs

PCP	Fits
10816	T/L BT 85-99 (16837-85C) (ea)
9424	Colony BT 85-99 (16837-85A) (8 pk)
72083	Colony TC 99-on (16834-99) (8 pk)
60104	Sifton BT 84-99 (8 pk)



## S&S BT Evo Cylinder Studs 85-99

60106	8 Pack
312321	Each

## Kibblewhite BT Cylinder Studs

- Machined from fine grain, heat treated, aircraft quality steel
- Centerless ground OD

- Black oxide finish

PCP	Application	UM
32196	All Evolutions	8 pack



## Headbolt Covers for Evo and Twin Cam

Chrome hex dome headbolt covers hide 12 point headbolts on all FL, FX L85-on. Installs with set screw.

**72024** Custom hex dome style

**72232** Smooth style

**72262** Pike style



## Rocker Cover Screw Kit

Chrome plated 12 point screw, washers, and gaskets mount rocker covers on FL,FX 85-on, XL 86-on.

**72280**



## BT Evo Inserts

**10052** 8 piece kit



# BT Evo Rocker



## "Tru-Seal" EV Rocker Box Cover Collar and Screw Kit

Kit includes 8 screws and sealing washers with built-in o-rings for a positive seal.

**24558** Chrome



## Colony Rocker Cover Screw Kit

Fits FX, FL 85-on.

**9788**



## Evo Headbolt Washers

Stock replacement washers for BT L85-91

**72017** Chrome (16482-85) (8 pk)



## Sifton Evo Cylinder Drain Inner Filter

Use this filter to return top end oil. Features a stainless steel screen and a ceramic magnet that will stop ferrous debris from valve train wear and is effective at stopping broken valve spring material from entering engine oiling system through cylinder drain. The thin wall steel dowel protects the magnet and provides proper head to cylinder alignment.

**17509**



## Custom Evo Rocker Cover Screw Kit

Chrome kits include flat head allen screws, low profile, companion countersunk washers and gaskets to mount rocker covers on FL-FX 85-99

**9833**

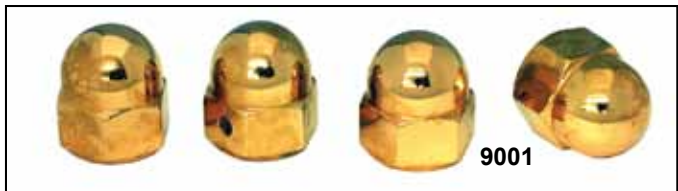


## Headbolt Kits Evo 8 Pack

Chrome plated 12 point dome top headbolts.

**72011** BT 85-91 (16480-85A, 16478-85A)

**72012** BT 92-on (16480-92, 16478-85A)



## Head Bolt Covers

Fit over 12 point head bolts on BT Evolution 85-on. Evo styles include 4 pieces for left side only.

PCP	Finish	Style	Model	Year
<b>9000</b>	Chrome	Acorn	Evo	86-91
<b>9001</b>	Gold	Acorn	Evo	86-91
<b>9002</b>	Chrome	Cap	Evo	86-91
<b>45035</b>	Chrome	Dome	Evo	86-on



Andrews Products performance cams are available for all EV Sportster engines. Many of the cams listed below will run to 6500 RPM with stock hydraulic lifters. Since the stock lifters are such proven units, we continue to recommend that they not be changed to solid lifters. For lower lift EV Sportster cams, stock base circle sizes are used so stock (non-adjustable) pushrods can be used (except V9 or BV). Adjustable aluminum or chrome-moly-steel pushrods are also available. Note: the #2 cam drive gears used in 00-on EV Sportster cams uses 46 teeth; the 1991-99 #2 cam gear has 36 teeth.

**Note:** 91-on Sportster engines are considerably different than earlier EV Sportsters. Cam gears for earlier EV Sportsters will not fit 91-on engines. 46T gears will fit 1991-99 #2 cams.

## Adjustable Length Pushrods

- 292020** Aluminum pushrods (set of 4) 1986-90
- 292090** Chrome-moly steel pushrods (set of 4) 1986-90
- 292030** Aluminum pushrods (set of 4) 1991-on
- 292085** Chrome-moly steel pushrods (set of 4) 1991-on

## SPORTSTER EVOLUTION ENGINE CAMS

PCP#	Years	Grind	Timing *	CL	Duration		Max Lift	Lift @ TDC	Application
					.053	.020			
Stock	86-90	D	02/41 41/02	109.5 109.5	223 223	270 270	.458 .458	.094 .094	Specifications listed for reference and comparison. (Note: 1986-1987 exhaust cam lift is .414)
Stock	91-on	W	10/28 38/16	99 101	218 234	256 272	.474 .474	.122 .138	Late Sportster cam data listed for comparison. Late cams marked "D" (1991-on) have same specs as "W" cams
<b>298120</b>	86-90	V2	22/38 46/18	98 104	240 244	283 290	.465 .440	.180 .155	Bolt-in cam for stock 883, 1100 or 1200 engines. More duration and lift means extra power thru RPM range. Stock springs and hydraulic lifters recommended. 2000-6000 RPM.
<b>298125</b>	91-99	N2							
<b>298130**</b>	00-on	N2							
<b>298135</b>	04-on	N3	22/48 43/11	98 106	240 234	278 270	.465 .482	.181 .134	Bolt-in power for 2004-on 883/1200S with stock springs and heads. Cams for 2004-on heads with more than .550 lift may need new valves, springs, collars.
<b>298140</b>	86-90	V4	30/46 52/24	98 104	256 256	296 296	.490 .490	.216 .189	Street/drag: Stock or modified 883/1100/1200. Stock springs, hydraulic lifters are recommended. RPM range: 2000-6000.
<b>298145</b>	91-99	N4							
<b>298150**</b>	00-on	N4							
<b>298180</b>	86-90	V8	32/44 56/28	96 104	256 264	296 302	.490 .500	.226 .212	Modified 1100-1200, stroked 883's with stock springs and hydraulic lifters. Same intake cam as N4: more exhaust cam duration. Great mid-range power: 2000-6500 RPM.
<b>298185</b>	91-99	N8							
<b>298190**</b>	00-on	N8							
<b>298160</b>	86-90	V6	34/50 56/28	98 104	264 264	302 302	.500 .500	.241 .212	Modified 1200s to 80"and/or high compression pistons. Stock springs and hydraulic lifters are recommended: RPM range 2500-6800.
<b>298165</b>	91-99	N6							
<b>298170**</b>	00-on	N6							
<b>214210</b>	86-90	V9	33/53 53/33	100 100	266 266	309 309	.555 .555	.240 .240	Cams for stroked engines from 80-88 inches. Broad torque range to 600+RPM. Andrews'springs, collars and pushrods are required. 1991-on need long pushrod.
<b>214215</b>	91-99	N9							
<b>214219**</b>	00-on	N9							
<b>214268</b>	91-99	NV	35/59 59/35	102 102	274 274	316 316	.590 .590	.260 .260	Andrews' pushrods, springs, collars required. BV/NV cams start easy-run strong. 2000-6000+ RPM with hydraulic lifters. 1991-on need long pushrod.
<b>214272**</b>	00-on	NV							

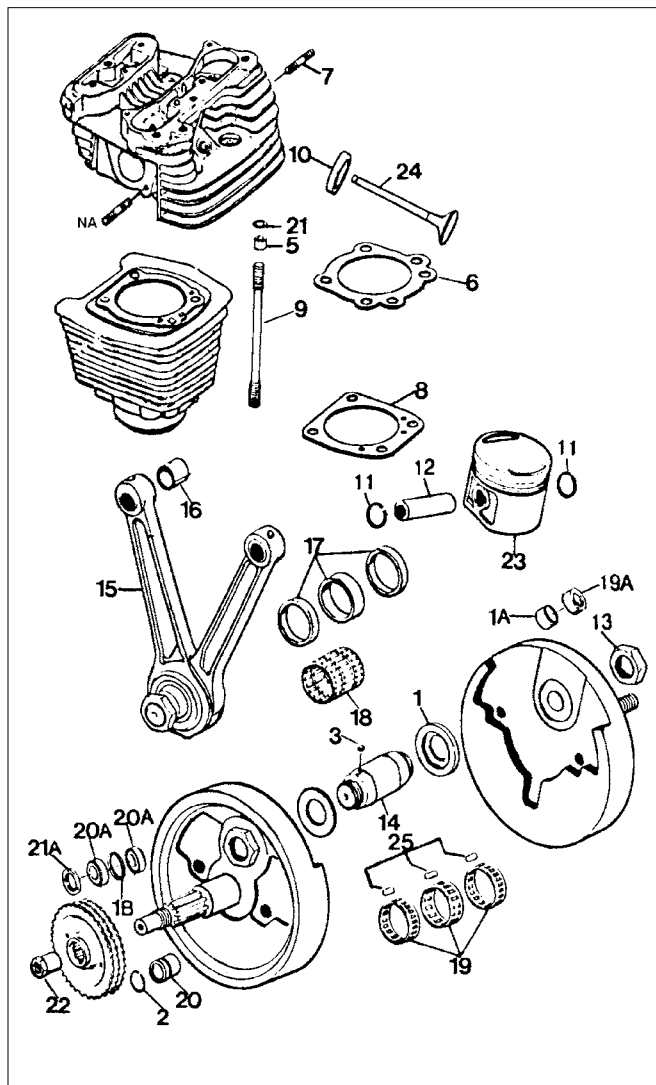
(\*) Timing and duration listed for .053 Lift figures

(\*\*) 2000-on Sportster engines require a different #2 cam drive gear than 1991-99 engines.

# XL Evo 1986-On

	PCP	OEM	Description	Year	U/M
1	11521	6508	Flywheel washer .120	87-*	Pair
1A	18706*	8881	Bearing race	87-*	Each
1B	13600	9142-9149	Shim asst. 100-.114	86-*	8 Pk
2	11043	11177A	Retaining ring	87-*	10Pk
3	10301	11218	Key, crank pin	86-*	10Pk
5	18705	16573-83	Insert/cyl. stud (2)	86-*	8 Pk
6	79200	16664-86	Head gasket XL883	86-08	5 Pk
	79201	16665-86	Head gasket XL1100	86-87	Pair
	79218	16773-85	Head gasket XL1200	88-08	5 Pk
7	10807	16715-83	Stud, exh. port (4)	86-*	5 Pk
8	25021	16774-86A	Gasket cyl. base	86-*	10Pk
9	9507	16832-86B	Stud for cylinder	86-*	8Pk
10	29006	18011-86	Exh. seat XL 1100	86	Each
	29012	18011-87	Exh. seat XL "-1200	87-*	Each
	29014	18012-87	Exh. seat XL 883	86-*	Each
	29008	18020-83	In. seat XL 1100	86	Each
	29015	18020-87	In. seat 1100-1200	87-*	Each
	29017	18021-87	In. seat XL 883	86-*	Each
11	11051	22589-83	Retain/ring piston	86-*	10Pk
12	32352	22719-85	Piston pin 883	86-98	Each
13	12530	23901-81	Nut, crank pin (2)	86-*	Pair
14	3412	23960-80A	Crank pin STD	86-*	Each
15	34008	24275-86A	Connecting Rods	86-99	Set
16	18504	24331-36	Bush/piston pin STD	86-*	Pair
	18599	24332-36	Bush/piston pin .010	86-*	Pair
17	1102	24341-52A	Steel rod races	54-86	Set
		24352-52A			
18	15810	24354-87A	Rod bearing set	L86-99	Set
19	10720	24362-54A	Alloy rod cages	57-E86	Set
		24365-54A			
19A	15880	24647-87	2nd largest bear/pinion/blue	87-*	Each
	15881	24650-87	Largest " red	87-*	Each
	15882	24659-87	2nd smallest wh/gry	87-*	Each
	15883	24660-87	Smallest " green	87-*	Each
20	18703	24658-86	Bearing race, pinion	86	Each
	18704*	24658-87	Bearing race, pinion	87-*	Each
21	14538	26432-76A	'O' Rings, stud	86-*	10Pk
21A	14042	35151-74	Sprocket seal	74-99	5 Pk
22	12568	40387-70	Nut, engine shaft	70-88	Each

\*Race O.D. 1.2558. Race requires honing.



**XL Cam Bushing Kit**

15407 86-90

15406 91-on



**Genuine Torrington Bearing Set XLS 52-90**

15632 4 Piece set



**Sportster Oversized Valve Seats**

Machining required.

PCP	Application	Valve	O.D.	I.D.	Thickness
31787	883-1200cc	Exhaust	1.630"	1.180"	.385"
31788	883-1200cc	Intake	1.880"	1.439"	.410"



**Left Crankcase Main Bearing Set**

15506 XL 77-03 (24729-74)



# XL Evo 1986-On



## Sportster Oil Pump Assembly

Oil pumps come complete and have a natural finish.

- 29051** 86-90 (26204-86) (USA)
- 30149** 86-90 (26204-86) (Preston)
- 29056** 86-90 Body only (26484-86)
- 29052** 91-on (not for XR1200) (26204-91) (USA)



## Colony Motor Case Kit

Hardware has stock zinc finish and fits XL 77-90.  
**9879**



## James XL Cam Cover Gaskets

PCP	Year	Engine	Description
<b>79564</b>	00-09	883cc 1200cc	Paper cam gear cover gasket w/silicone (5 pk)

## XL Timing Plugs

Functional and custom design plug fits all models Harley Sportster timing plug holes and oil tanks with 5/18-18 drain hole.

Hex	Allen	Finish
<b>3591</b>	<b>9402</b>	Chrome
-	<b>9960</b>	Chrome (Oversize)
<b>5282</b>	<b>9403</b>	Cad
<b>5283</b>	-	Black oxide



## XL Oil Pump Gear Shaft

These USA made oil pumps come complete with all gears as shown and fit models listed. (natural finish)

- 30146** 75-90 (26488-75)
- 30147** 91-97 (26488-91)
- 30148** 98-06 (26488-98)



## XL Connecting Rod Set

Kit includes new rods, crank pin, nuts, cages and standard rollers fitted and assembled. Fits XL 00-03.

- |               |                                  |
|---------------|----------------------------------|
| <b>PCP</b>    | <b>Fitment</b>                   |
| <b>34012</b>  | XL 00-03                         |
| <b>34008</b>  | XL 86-99                         |
| <b>347900</b> | XL 86-99 (S&S Supreme duty)      |
| <b>347800</b> | XL 86-99 (S&S Heavy Duty) 6.926" |



## Quick Change Cam Gear Gasket and Seal Kit

Fits XL and Evo motors. Includes both cork and quad seals for pushrods to fit all year range.

- |              |                    |
|--------------|--------------------|
| <b>PCP</b>   | <b>Application</b> |
| <b>25616</b> | 91-99              |



# XL Evo 1986-On



## Sportster Cam Bushings (each)(3 used)

- 31369** Jims XL 54-on STD (25586-37)  
**18519** Preston as above  
**31370** Jims XL 54-on .005 (25586-37 +005)  
**18557** Preston as above  
**31371** Jims R/Int. XL 57-90 (25588-57)  
**31372** Jims R/Int. XL 57-90 +.005



## Top Motor Mount to Cylinder Head Bracket

Chrome top motor mount to cylinder head bracket mounting kit feature companion countersunk washers and flat head allen screws. Fits XL 86-07

**9967**



## Colony Stock Acorn Lifter Base Screw Kit

- | PCP         | Application       |
|-------------|-------------------|
| <b>5503</b> | XL 883/1100 86-90 |
| <b>9765</b> | XL 91-94          |
| <b>9766</b> | XL 95-03          |



**24002**



## Chrome XL Screw Sets

Fits XL 04-on.

PCP	Fitment	Style
<b>24002</b>	Primary and derby	Allen
<b>72222</b>	Timing cover	Allen
<b>72226</b>	Sprocket cover	Allen
<b>72224</b>	Tappet block	Allen
<b>72280</b>	Rocker box 86-on	12 Point

## Pinion Bushing

- | PCP          | Description                  |
|--------------|------------------------------|
| <b>31376</b> | XL 77-on STD (25593-74) Jims |
| <b>18527</b> | As above, Preston            |



**18603**



**18604**

## Rear Intake Cam Bushing XL 1991-03

- 18603** (25588-91) (Eastern)  
**18604** As above +.005 (Jims)



## S&S Pinion Shaft Assemblies XL 86-03

- 332325** Std size requires 87-on main bearing. Fits S&S D or DR flywheels only.  
**332336** +.001 oversize requires 87-on main bearing. Fits as above.



## Colony Motor Mount Kit

- | PCP         | Application                          |
|-------------|--------------------------------------|
| <b>5506</b> | Lower XL 883/1100 86-on chrome acorn |
| <b>5507</b> | Upper XL 883/1100 86-03 chrome acorn |
| <b>9774</b> | XL 91-on chrome allen                |

## Chrome Allen Oil Pump Mounting Kit

- Knurled chrome
- | PCP          | Application | Style |
|--------------|-------------|-------|
| <b>78817</b> | XL 77-90    | Allen |
| <b>79774</b> | XL 91-03    | Allen |



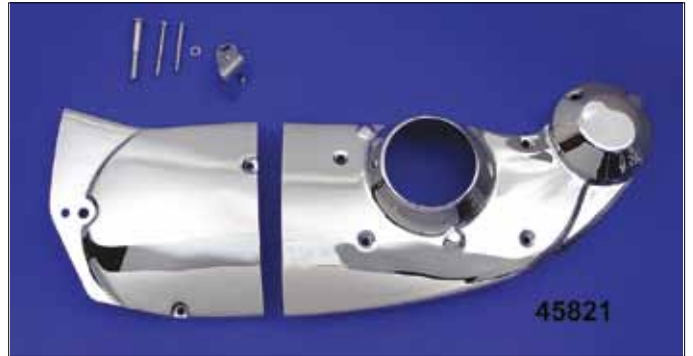


# XL Evo 1986-On



## XL Chrome Engine Dress Up Kit 91-03

Features chrome covers to fit over original aluminum covers which are formed to mirror the contour for a tight fit. Includes cam cover trim, sprocket cover trim and primary cover trim.  
45853



## Colony Stock Cam Cover Screw Kit

PCP	Application	Style
5501	XL 883/1100 86-on	Chrome acorn
9751	XL 86-03	Chrome allen knurled



## Custom Dress-Up Kit (Right Side)

Fits right side of XL 83-on. Includes chrome steel cam cover trim, chrome diecast sprocket cover, chrome master cylinder reinforcement bracket and hardware.

45808	Chain XL 83-90
45809	Belt and chain XL 91-03
45821	Belt, electric type 04-on



## Sportster Cam Bushing Kit

XL kits include all cam and gear bushings/bearings, lock pins and shims. USA made.

### XL Kits

15406	91-96
15407	86-90



# XL Evo 1986-On



## Chrome Cam Cover

These form fitting Chrome steel covers fit over stock cam cases. No need to remove cam case or disturb cams or gears. Covers held in place by existing screws.

- 45045** 83-90 Sportster
- 45102** XLH 91-03
- 45846** 04-on
- 45866** 04-on, black cover



## Chrome Right Side Cam Cover/ Sprocket Cover Set 91-03

Covers include gaskets and chrome allen screws for assembly.

- 90420** 91-03



## XL Chrome and Black Mesh Skull Point Cover

Chrome ignition points cover has skull design cut-out with black mesh inlay. Features 2 vertical mount holes.

- 44064** XL 71-03
- 44065** XL 04-on



## XL Tappet Block Cover

Chromed diecast cover fits from the pushrod tube base to the cam cover.

- PCP** **Years**
- 45373** 91-03



## XL Chrome Cylinder Base Cover

Provides a smooth, chrome cover for the area below the cylinder base on left side of engine.

- PCP** **Years**
- 45364** 04-on (32729-07)



## Ribbed Cam Cover Trim

- Aluminum cover mounts over existing cover
- Re-use existing screws plus 3 additional included screws
- Fits XL 91-15.

- 45861** Polished
- 45862** Black

## Oil Pump Gasket XL 89-on

- 25244** 26495-89 (10 pack)



# Ignition and Points Cover



Two Hole Multi-Fit Point Covers				
Universal Fit- Can be installed horizontally or vertically				
PCP	Design	Finish	Fitment	Holes
3409	Domed	Smooth chrome	71-on (32584-88T)	Any
5486	6 Bolt Domed Racer	Chrome with 6 non-functional buttonhead allen screws	71-on	Any
59001	Spinner	Chrome with multi-holes	71-on	Any
XL 04-on - Mounts Horizontally				
45112	LTR-Eagle Spirit	Chrome	04-on	Horizontal
45212	LTR-Eagle Spirit	Chrome with gold overlay	04-on	Horizontal
44065	Mesh skull	Chrome with black mesh skull	04-on	Horizontal
45482	Raised skull	Chrome	04-on	Horizontal
44072	Raised skull	Black with raised chrome skull	04-on	Horizontal
44136	Skull & chain	Chrome	04-on	Horizontal
44133	Modern skull	Chrome with raised black skull	04-on	Horizontal
44131	Pirate skull	Black with chrome skull and band	04-on	Horizontal
59707	Flaming skull	Chrome	04-on	Horizontal
45165	Flame	Chrome	04-on	Horizontal
45087	Flame	Black with raised chrome flames	04-on	Horizontal
XL 71-03 - Mounts Vertically				
45113	LTR-Eagle Spirit	Chrome	71-03	Vertical
44067	Bird	Chrome	71-03	Vertical
3102	Ribbed	Chrome	71-03	Vertical
44064	Mesh skull	Chrome with black mesh skull	71-03	Vertical
44108	Raised skull	Black with raised chrome skull	71-03	Vertical
44132	Pirate skull	Black with chrome skull and band	71-03	Vertical
44137	Skull & chain	Chrome	71-03	Vertical



# XL Evo 1986-On



53080



53098

**1200cc XL Conversion Cylinder & Piston Set**  
Set includes 2 silver finished cylinders or black wrinkle with milled edge fin cylinders. Fitted with Wiseco 10:1 piston and ring set. Order gaskets separately. Will fit 883 and 1100cc models.

**1986-03**

**53079** Silver finish

**53080** Black finish

**2004-on**

**53098** Silver finish

**53099** Black finish



## 3-1/2 Bore Piston Kit XL 883 to 1200 1986-90

3-1/2" Bore Piston Kits is an easy and economical way of increasing the displacement and performance of the Evolution Sportster engine. By simply boring out the stock cylinders and refitting them with a set of our special pistons, a 1202 cc engine can be made. This is a gain of 319cc over stock for an 883 or 102 ccs for an 1100. Kit includes 2 pistons with rings, wrist pins and wrist pin locks and gaskets. Fits 1986-87 XL1100 and 1986-88 XL 883. **Important: XL 883 models REQUIRE EXTENSIVE HEAD WORK.**

**PCP Item**

**6649** Complete top end kit

**25618** Gasket update kit for 90-03 XL



53070

## 1200cc XL Conversion Cylinder and Piston Set

Set includes 2 silver finished cylinders fitted with Wiseco moly 9.5:1 reverse dome pistons and ring set. Order James rocker box gasket set separately. Will fit 883 and 1100cc models 1986-03.

**53070** Wiseco (silver)

**79989** 86-90 Top rocker box gasket kit w/steel base

**79990** 91-03 Top rocker box gasket kit w/steel base

**79977** 91-03 Top rocker box gasket set w/rubber base



## S&S XL 1200cc Stock Replacement Cylinders

Stock 3 1/2" replacement cylinder sets are offered in a natural aluminum finish. The bore is slightly undersized so standard piston can be fitted with minimal honing. Additional fin surface improves heat dissipation. Made with stock oil return passages for a simple stock-like installation.

**913010** Stock length (4.650") Sportster 86-03



79215

## James Head Gasket XL 99-on

**79215** 16770-84-A .046" Head gasket and coated base with 4 blue o-rings.



# XL Evo 1986-On



## Cylinder Base Stud Set XL 86-on

Colony alloy steel studs are heat treated with interference threads.

**9507** Colony (16832-86A)(8 pack)

**312331** S&S (8 pack)



## Cylinder Dowels

•All Evolution models

PCP	O.D.	UM
<b>32332</b>	0.5575"	4 pack

**34816**



**34818**



## XL Evo Cylinders 86-on

Sold each and are **not honed for final fit**. Cylinders are sold without pistons.

**PCP Application Finish**

<b>34813</b>	883 86-99	Silver, (16446-86B)
<b>34819</b>	1200 88-03	Black wrinkle
<b>34816</b>	1200 88-03	Silver (needs honing)
<b>34814</b>	1200 88-03	Silver (16447-88) (finish bore 88.82 mm)
<b>34817</b>	1200 04-on	Silver
<b>34818</b>	1200 04-on	Black wrinkle (bore 88.89 to 88.90 to fit Wiseco pistons)



## S&S Forged 883cc to 1200cc Conversion Pistons for 1986-03 H-D Sportster Models with Stock Cylinder Heads

883cc to 1200cc Conversion kit does not require rebalancing of stock 883cc fly wheel assembly. Piston kits include a set of pistons, rings, wristpins and clips.

Displacement	Bore	Stroke	CR	Forged Piston Kits			Moly Ring Sets		
				Standard	+ .010"	+ .020"	Standard	+ .010"	+ .020"
1200cc	3 1/2"	3-13/16"	9.4:1	<b>1065548</b>	<b>1065549</b>	<b>1065550</b>	<b>942216</b>	<b>942217</b>	<b>942218</b>

Recommended piston fit: Close: 0.0025"-0.0030" Loose: 0.0035"-0.0045"

## Hastings Moly Piston Ring Set XL 04-on

XL 1200cc rings are sold in sets to do 2 pistons (1 engine).



Size	Hastings 2M5069	
STD	<b>35285</b>	Bore: 3.498 (88.85mm)
.005	<b>35286</b>	Comp. Ring: 1.2mm Top ring 1.5mm 2nd ring
.010	<b>35287</b>	Oil Ring: 2.5mm

## Hastings X-Rings

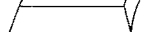
### .062" Top Ring

Moly Filled Barrel Faced  
Cast Iron Compression Ring



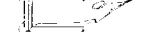
### .062" Second Ring

Taper Faced Cast Iron  
Second Ring



### .158" Oil Ring

3 Piece Low Tension Oil Ring



# XL Evo 1986-On



## 1200cc XL Cylinder and Piston Kit

Cylinder kit includes fitted Wiseco 9:1 piston and ring set. To be used with 1200cc heads only. Fits XL 88-03.

**PCP** **Finish**

**53056** Black

**53075** Silver



## 1200cc XL Cylinder and Piston Conversion Kit

Kit includes 2 cylinders with milled edge fins, fitted Wiseco moly 9.5:1 reverse dome piston and ring set.

**PCP** **Finish** **Fitment**

**53071** Black XL 86-03

**53077** Silver XL 04-on

**53078** Black XL 04-on



## XL Cylinder Kits

Kits are prefitted with cast 9:1 pistons and Hastings rings

**PCP** **Size** **Fitment** **Finish**

**53186** 883cc 86-03 Silver

**53187** 1200cc 88-03 Silver

**53188** 1200cc 88-03 Black



## 883 to 1200cc XL Cylinder & Piston Conversion

Kit includes 2 black cylinders, moly-coated piston kit and a ring set. For XL 04-on.

**53182**



## S&S 3-9/16" Cylinder & Piston Kits XL 86-18

Kits include cylinders, forged flat top pistons, head, base and exhaust gaskets. Cylinders are honed to fit included pistons. Fits 86-18 883cc and 1200cc XL models.

CC Displ.	Bore	Stroke	CR	Cyl. Length
1250cc	3-9/16"	3-13/16"	10.3:1	4.650"

Deck height: 1.208"

**PCP** **Finish**

**9100433** Silver

**9100443** Black wrinkle



## S&S Bolt-On XL Cylinder and Piston Kit 86-18

Boost any 883cc Sportster to 1200cc without machining or rebalancing. No cylinder machining is required. Dished dome pistons are the same weight as stock 883 pistons and offer 9.6:1 CR with stock 883cc heads. Kits include an S&S 883-1200 conversion piston kit, 3-1/2" bore cylinders and cylinder head, base and exhaust gaskets. Powdercoat finish. For use on 86-15 XL 883cc models.

3-1/2" Bore, 4.650", 3-13/16" Stroke.

**PCP** **Finish**

**9100296** Black wrinkle

**9100301** Silver

# Pistons



## Wiseco 10.5:1 Piston Kit for XL 04-15

Kits include 3.812" stroke, forged pistons, Hastings ring set, retainer clips and chrome piston pins. Hastings rings have a .062" top and 2nd ring and a .158" oil ring. Ring sets are for 2 cylinders. Armour Glide skirt coated pistons. (73 cu. in)

PCP	Bore	Wiseco	Ring Set
<b>35923</b>	STD (3.498")	K1746	35260
<b>35924</b>	.010 (3.508")	K1747	35262
<b>35925</b>	.020 (3.518")	K1748	35263
<b>35930</b>	Cometic top end gasket kit (W6378)		

Valve pocket dimensions are measured from deck height:  
Intake/Exhaust Pocket: Depth: .167" Diameter: 2.100"



## Hastings Moly Piston Rings (2M6199) XL 1100cc

Fits Sportster EVO 1100cc 86-87. For 3.350 DIA. pistons.

Sold 1 set for 1 engine.

PCP	Size
<b>35226</b>	STD
<b>35227</b>	.005
<b>35228</b>	.010
<b>35229</b>	.020
<b>35230</b>	.030
<b>35231</b>	.040

## Compression Ratio

Sportster 900cc (3" Bore) Stock 9 to 1; Low (Not available)

Sportster 1000cc (3-3/16 Bore) Stock 9 to 1; Low 8.4 to 1

Harley 74: 1200cc (3-7/16" Bore) Stock 8.5 to 1; Low 7.5 to 1; High 10.0 to 1.

Harley 80" 1340cc (3.298 Bore) Stock 8 to 1; Low 7 to 1



## Piston Pin Locks

**11051** Snap ring Evo 1983-on (22589-83) (10 pk)



## 1200 XL Evo 88-03

Piston kits include 2 STD compression pistons with pins, clips and a **moly** ring set. Hastings rings are sold in sets for 2 pistons and are available in cast or moly styles with 1/16" (.062) compression rings.

	Piston Kit	Hastings Rings Cast	Hastings Rings Moly
STD	<b>35870</b>	<b>35100</b>	<b>35260</b>
.005	<b>35871</b>	<b>35101</b>	<b>35261</b>
.010	<b>35872</b>	<b>35102</b>	<b>35262</b>
.020	<b>35873</b>	<b>35103</b>	<b>35263</b>
.030	<b>35874</b>	<b>35104</b>	<b>35264</b>



## Sportster Evolution 883

Piston kits include 2 STD compression pistons with pins, clips and a **moly** ring set. Pistons sold each include a pin and clips only. Hastings moly rings are sold in sets for 2 pistons with 1/16" (.062) compression rings.

	Piston Kit	Piston Each	Hastings Rings Moly
STD	<b>35558</b>	<b>35860</b>	<b>35220</b>
.005	<b>35559</b>	<b>35861</b>	<b>35221</b>
.010	<b>35560</b>	<b>35862</b>	<b>35222</b>
.020	<b>35561</b>	<b>35863</b>	<b>35223</b>
.030	<b>35562</b>	<b>35864</b>	<b>35224</b>
.040	<b>35563</b>	<b>35865</b>	<b>35225</b>



## Sifton Evo XL Piston Oil Supply Squirter

Reduces cylinder temperature and engine damage by cooling pistons with extra oil supply. Increases horsepower by reducing friction between piston and cylinder wall. Note: Engine must be unassembled for installation.

**73602** Rear 00-03



# Wiseco Piston Kits

Wiseco's extensive R&D programs have revolutionized the power and performance of Wiseco's HD piston kits. All Wiseco pistons are forged for superior strength and dependability. Kits include forged pistons, rings, circlips and wrist pins.



## XL 1200 88-03 Evo Flat Top 73 Cu. In.

**9:1 compression** with **Hastings X** Ring package: .062" top ring, .062" second ring and .158" oil ring. All XL Evo and Buell with stock 1200 heads.

PCP	Wiseco	Bore	Ring Set Per Engine
35855	K1660	STD	35260
35856	K1661	.010	35262
35857	K1662	.020	35263
35859	K1664	.040	35265



## Wiseco Domed Piston Kit XL 1200 88-03

Domed piston kit fits all Evo XL & Buell with stock 1200 heads through to 2003. This kit offers **10.5:1 compression** and a 3.812" stroke. Top ring is .062", 2nd ring is .062" and oil ring is .158". No cylinder head modification is required and top end gaskets are available separately. Kits include forged pistons, rings, circlips, and chrome wrist pins.

PCP	Bore	Ring Set Per Engine
35980	STD 3.498" (K1685)	35260
35981	+.010 3.503" (K1686)	35262
35982	+.020 3.508" (K1687)	35263



## Wiseco Wrist Pins (each)

**35937** 1340cc BT Evo 1985-99

## Wiseco wrist pin circlips (pairs)

**35933** All Wiseco pistons

**NOTE:** Hastings X rings and Wiseco XC rings are NOT interchangeable. Wiseco XC rings sold per cylinder.



## XL 883 86-18 Evo Overbore to 1200cc

Reverse dome, **9.5:1 compression** with **Hastings X** Ring package: .062" top ring, .062" second ring and .158" oil ring. No headwork required on 86-07. **08-18 must use 1200cc cylinder.** For 73 cu.in.

PCP	Wiseco	Bore	Ring Set Per Engine
35850	K1655	STD	35260
35851	K1656	.010	35262
35852	K1657	.020	35263
35853	K1658	.030	35264



## Wiseco Evo XL 883 to 1200 Piston Kit 86-18

These kits offer **10:1 compression** and 3.812" stroke with no cylinder head modification required. Top ring is .062", 2nd ring is .062" and oil ring is .158". Kit includes forged reverse dome pistons, rings, circlips and chrome wrist pins. 2008-18 must use 1200cc cylinder.

35887	STD 3.498" (K1682)
35888	+.010 3.508" (K1683)
35889	+.020 3.518" (K1684)



## Wiseco XL 883 to 1200 Piston Kit 86-18

This kit offers **8.5:1 compression** and 3.812" stroke with no cylinder head modification required. Top ring is .062", 2nd ring is .062" and oil ring is .158". Fits Evo 883 XL overbore to 1200cc (73 cu. in.) models 86-on with correct gasket kit. 2008-18 must use 1200cc cylinders. Kit includes forged reverse dome pistons, rings, circlips and chrome wrist pins. Armour Glide skirt coated pistons have a dome volume of -13.7cc. on 86-07. 08-18 must use 1200cc cylinder. Ring sets are for 2 cylinders.

PCP	CC Displ.	Bore	Wiseco	Ring Set
35845	1200cc	STD (3.498")	K1723	35260

Valve pocket dimensions are measured from deck height:  
Intake/Exhaust Pocket: Depth: .215" Diameter: 2.100"

# XL Evo 1986-On



## Andrews XL Adjustable Length Pushrods

PCP	Description
292020	4 aluminum pushrods 86-90
292090	4 chrome-moly steel rods 86-90
292030	4 aluminum pushrods 91-03
292085	4 chrome-moly steel rods 91-03



## Andrews Fixed Length Pushrods 91-03

292025	Aluminum pushrods (set of 4)
292095	Chrome-moly steel pushrods (set of 4)



## S&S Pushrod Cover Kits

Includes top and bottom covers, cover cap, cover spring, and spring washer for four pushrods.

PCP	Application
934039	XL 86-90

## Sifton Hydraulic Tappet Kit

Includes roller tappets and adjustable pushrod set.

PCP	Year
30159	86-90
30161	00-03



## Sifton Quick Install XL Pushrod Set

Can be installed without the removal of rocker boxes or cylinder heads. Precision made from 4130 chrome moly tubing.

30083	XL 91-03
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## S&S Adjustable Pushrods

Evolution kit includes 7/16" O.D. adjustable type chrome moly steel pushrods. These pushrods can be used in place of stock non adjustable type with hydraulic lifters or with solid lifters in any application.

PCP	XL 86-90
935033	Stock
935021	+ 5/16"
935024	+ 1.010"
935025	+ 1.100"
PCP	XL 1991-14
935022	Stock
935085	+ 5/16"
935089	+ 7/16"
935086	+ .915"



## S&S XL Standard Adjustable Pushrod Kit

Rigid 7/16" chromoly steel pushrods have threaded adjusters. Compatible with solid or hydraulic lifters but early style collapsible pushrod covers must be used to allow access to the adjusters. Adjustable to ensure accurate valve train operation under various conditions. Rocker covers must be removed for installation or removal. Kits include pushrods, covers, keepers and o-rings.

PCP	Application
9300024	Complete kit 04-17
935022	Pushrods only 91-17



## S&S XL Quickee Pushrod Set

Quickee pushrods fit 91-14 Harley-Davidson® Sportster® models. Installation does not require removal of the gas tank, rocker assemblies, or even the rocker box cover! OEM pushrods may be cut for removal without rocker disassembly. The threaded adjuster screws into the pushrod until the threads disengage and the adjuster simply slides into the pushrod, making installation or removal a snap. Once the pushrod is installed and adjusted, the locknut prevents the adjuster from moving. Works with stock pushrod covers and adjustable to work with all stock and aftermarket cams.

PCP	Application
9300023	Complete kit 04-17
935122	Pushrods only 91-17

# XL EVO 1986-On



## Pushrod Cover Kit

Complete kit includes upper, lower and inner pushrod covers to convert your Sportster 04-on to early style removable pushrod covers.

**72253**



## Colony Pushrod Cover Adaptor Kit

Adapts Sportster 90-on lifter base to use the early style removable pushrod covers. Complete kit includes upper, lower, inner and adaptors.

**72140**



## Pushrod Cover Conversion Kit

Complete kit includes upper, lower and inner pushrod covers to convert your XL 91-03 to the early style removable pushrod covers. Use PCP# 72254 adapter kit.

**72255**



**61099**

## T/L Chrome XL Lifter Covers 04-07

High lustre polished chrome covers fit XL models.

**61099** 17994-04



## XL Chrome Pushrod Cover Kit

Includes all pieces and seals.

**34110** XL 91-03



## XL Billet Pushrod Cover and Mount Base Kit

Allows adjustable covers to be used on Sportster 91-03.

**59479** Kit

**14082** Seal kit for mount base



## XL Collapsible Pushrod Cover Set

Allow for ease of pushrod change or adjustment.

**21836** 04-on



# XL Evo 1986-On



## Sportster Upper Pushrod Cover Kits 86-90

Each kit contains 4 chrome plated retaining clips, 4 chrome plated cups, 4 springs, 4 cork gaskets and 4 steel washers.

**9887** With chrome plated outers (2-13/16 clips)



## Pushrod Cover Adaptor Set

Use to adapt XL 85-89 models to 91-03.

**335355** S&S XL

**34105** Preston



## Pushrod Cover Conversion Adaptor Kit

These adaptors eliminate the need to remove the cylinder heads to access the pushrods by allowing installation of the early style removable pushrod covers and easy installation of adjustable pushrods. Fits Sportster 91-03. Use with Colony's complete pushrod cover kit PCP# 72255.

**72254**



## Chrome XL Allen Lifter Base Screws

**PCP** **Fitment**

**9759** XL 91-94

**9760** XL 95-03

**72224** XL 04-on



## Complete Pushrod Cover Kit

All parts from top to bottom fit all V-Twin engines. Visible parts are all chrome and each kit includes upper covers, inner cover and lower covers.

**PCP** **Application**

**34108** All Evo XL 85-89

**34109** XL 1200, 1 piece design 90-03

**34110** As above, 16 piece design 90-03



## Chrome XL Tappet Block Cover Set

Fits XL 04-on. Replaces 17994-04. Pair.

**30174** Cover set

**72224** Screw set



## Chromed Aluminum Alloy Tappet Block Set

Machined, stock type four piece tappet block set includes front and rear exhaust, as well as front and rear intake. Fits XL 86-90. Replaces 18617-86.

**30170**

# XL EVO 1986-On



## Chrome Push Rod Cover Hardware 36-on

PCP	Fits
73545	XL 86-89 clips (17950-86) (4 pack)
13101	Spring (17947-36) (10 pack)
2002	Chrome cup (17945-36) (4 pack)
13557	Spring washer (6762B) (10 pack)



## Upper Pushrod Cover Kits

Each kit contains 4 chrome plated retaining clips, 4 chrome plated cups, 4 springs, 4 cork gaskets, and 4 steel washers. Exact duplicates.

### Chrome Plated (Outer)

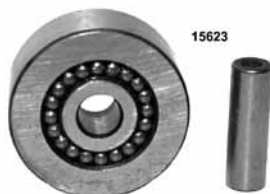
9887 Sportster 86-90 (2-13/16" clips)

## Complete Pushrod Cover Kits

All parts from top to bottom fit all V-Twin engines. Visible parts are all chrome and includes upper covers, inner cover, and lower covers.

### PCP Fits

34108	All Evo Sportsters 85-89
335355	Adapts PCP #34108 to XL 91-03
34109	Sportster 883, 1200, 1 piece design 90-03
34110	Sportster 883, 1200,, 16 piece design 90-03



## Tappet Roller Repair Kit XL 86-99

High quality tappet roller assembly and roller pin.

15624	Roller kit for 4 tappets
15623	Roller kit for one tappet (18534-86)



## Pushrod Cover Rubber Seal Kit

Fits all BT 84-on and XL 86-90 and includes 12 machined rubber seals.

9529	Colony
14580	Preston

# XL EVO Tappets 86-on



## Feuling HP+ Hydraulic Lifters

- CNC machined, precision ground hydraulic roller lifter
- Use with Feuling oil pump or as OEM replacements
- Set of 4.
- Made in the USA.

PCP	Application	OEM
30192	XL 00-17, XR 1200	4000
30193	XL 86-90	4061



## S&S Premium High Performance Tappets

- Reduced valve train noise from start-up to shut-down
- Close tolerances & superior high RPM performance
- Low mass silicon nitride check valve and lighter check ball spring for faster pump ups
- Set of 4. Fits XL 00-19.

**3300174** Tappet set with HL2T spacer kit

**3300175** Tappets set only, no spacer kit



## Sifton STD Hydraulic Tappet

- Forged steel stock replacement tappet for 18538-99
- Precision ground O.D. & accurate pin and roller
- Fits XL 00-19.

**30171** Each

**30196** 4 Pack



## S&S High Performance Hydraulic Tappets

These tappets are a good choice for any stock or high performance application. Set of 4. S&S tappets with HL2T kits require the use of adjustable pushrods.

PCP	Years	Type
335353	86-90	Standard tappets with HL2T kit
335352	86-90	Standard w/o HL2T kit
3300288	91-99	Standard w/o HL2T kit
335350	00-19	Standard w/o HL2T kit

## Hydraulic Lifter Limited Travel Spacer (HL2T)

Improved cold start, positive valve train activation and more HP at higher RPM's. Improved cold start and

**335338** XL 86-03 with stock or S&S tappets

## S&S Tappet Roller Kits

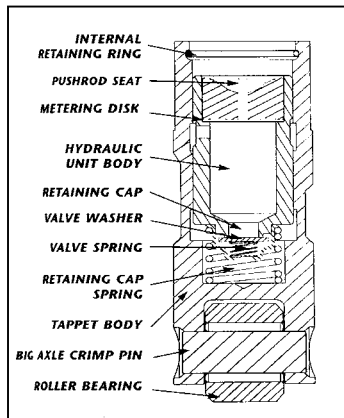
- Kit includes four bearings and four chromoly axles
- Fits XL 86-99

**3300378**





# XL EVO Tappets



## Jims Powerglide II Tappet XL 00-19

- Big power, torque and increased spring weight
- Honed hydraulic cavity for reduced valve train noise.
- Billet body with premium hydraulic unit.
- Increased dynamic load capacities
- Increased lubrication capacities for hydraulic unit, top end, roller, cams, & cam bearings (increases cooling)

### PCP Fitment

**31641** XL 00-19 (STD O.D. .8420")

**31642** Oversize +.001

**31643** Oversize +.0015"



## Jims Powerglide Steady Roll Tappets XL 00-19

Features oil fed axle, billet steel body and precision fit hydraulics. Incorporates a Steady Roll bronze bushing in place of the needle bearing roller providing a failsafe against engine damage even if the bushing wears out. Sold each.

### PCP Size

**31143** STD (.8420" O.D.)

**31144** +.002"



## Jims Power Glide Hydraulic XL 86-90 (18523-86)

STD O.D. .8425. (149 grams)

### Big Axle Size

**31625** STD

**31626** .002

**31627** .005



**31631**

## Jims XL and Buell 91-on Solid Tappets

Clearanced for about .700 lift. Use with adjustable pushrods. (123 grams)

**Big Axle** **Size** (STD O.D. .9035)

**31631** STD



**31639**



## Jims Billet Steel Power Glide Hydraulic Tappet XL 91-99 (18526-PG)

Clearanced for about .700 lift. (143 grams)

**Big Axle** **Size**

**31639** STD



## Jims Hydrosolid Tappet

This tappet performs like a hydraulic tappet from start up to about 5500 rpm and then turns into a solid from 5600 rpm on. When solid it adds 3-6 more useable horsepower. When springs start to surge the tappet rollers start lofting off the back side of the cam and will not pump up allowing your valves to hit. Must use adjustable pushrods.

### PCP Application

**31644** XL 86-90 OD .8425"

**31645** XL 86-90 +.002"



# Valve Springs



9000593



## S&S .585" Lift Valve Spring Kits

Kits fit BT or XL with stock heads and all S&S Super Stock heads. Dual springs reduce the risk of valve float. Suitable for performance applications and accommodates camshaft lift to 0.585". Includes inner and outer springs, valve keepers, top and bottom collars, shims and valve guide seals.

Lift	Installed Height	Seat Force	Force @Max Lift	Max RPM
.585"	1.850"	135 lb.	335 lb.	6500

### PCP Fitment

**9000593** XL 86-03 with 5/16" valve stems

**9000594** XL 04-17 with 7mm stems

Lift	Installed Height	Seat Force	Force @Max Lift	Max RPM
.585"	1.800"	130 lb.	325 lb.	

**902277** XL 86-03 with 5/16" valve stems



9000050



1065909

## S&S Sidewinder .650" Lift Valve Spring Kits

Kits fit stock style TC 96/103 BT 05-17 & XL 04-17 with 7mm valve stems and all S&S CNC ported heads. Made from high silicon, micro peened and nitrided kobe alloy wire. Includes valve keepers, top and bottom collars, springs, shims and valve guide seals. Note S&S recommends the use of roller rocker arms be used with lifts over .585"

Lift	Installed Height	Seat Force	Force @ Max Lift	Max RPM
.650"	1.860"	178 lb.	376 lb.	6500

**9000050** XL 86-03 with 5/16" stems

**1065909** XL 04-17 with 7MM stems



## Jims Compression Release Valves

These release valves make starting your engine effortless by venting cylinder compression with just the push of a button. These are indispensable when used with stroker kits, high compression engines and large displacement engines. Simply drill and tap each cylinder head and thread in the self-sealing release valves.

**31283** Fits all BT

# XL Evo 1986-On



## Andrews High Lift Evolution Springs

Used with titanium spring collars, cam lifts of .550+ can easily be accommodated. Installation does not require machining of heads.

**294150** (4 inner and 4 outer springs)



## Standard Valves-Forged

Model	Intake	Exhaust
Sportster 1986-on 883CC	<b>32197</b> (18031-86)	<b>32198</b> (18030-86)



## TC 7mm Valve Stem Keepers

Replaces 18260-02 for XL 04-on

**30019** (4 pair)



## Rowe Machined Sportster EVO Valves

High flow, forged one piece valves made from 21-4N stainless steel. Precision CNC machined with black melonite heat treating process (nitride) or machined chrome. Sold each.

Head Diam.

PCP Rowe Application ± .005

EVO 883 04-on (7mm)

**32265** 712-13 Intake black 1.585

EVO 1200 87-2003

**32260** 702-13 Intake black 1.715

**32261** 703-13 Exhaust black 1.478

EVO 1200 04-11

**32267** 704-13 Intake black 1.585

**32268** 705-13 Exhaust black 1.350



## AV&V Sportster Extreme Duty Replacement Valves

PCP#	Type	Head Diam.	Overall Length	Stem Diam.	Coating	Model	AV&V #
<b>31807</b>	Exhaust	1.355	4.635"	.3106"	Black	883 (5/16 stem)	AV1355
<b>31808</b>	Intake	1.590"	4.550"	.3108"	Black	883 (5/16 stem)	AV1590
<b>31809</b>	Exhaust	1.485"	4.560"	.3106"	Black	1200 (5/16 stem) (stock replacement)	AV1485
<b>31800</b>	Intake	1.720"	4.480"	.3108"	Black	1200 (5/16 stem) (stock replacement)	AV1720B
<b>31810</b>	Exhaust	1.575"	4.620"	.2755"	Black	1200 (7mm) (stock replacement)	AV1576-7TGB
<b>31811</b>	Intake	1.810"	4.480"	.2757"	Black	1200 (7mm) (stock replacement)	AV1811-7TGB
<b>31799*</b>	Exhaust	1.480"	4.640"	.3106"	Black	883 to 1200 Conversion (5/16 stem)	AV1480
<b>31817*</b>	Intake	1.720"	4.560"	.3108"	Black	883 to 1200 Conversion (5/16 stem)	AV1720
<b>31821</b>	Exhaust	1.485"	4.680"	.2755"	Black	883 to 1200 Conversion 04-on (7mm stem)	AV1485-7TGB
<b>31822</b>	Intake	1.725"	4.580"	.2757"	Black	883 to 1200 Conversion 04-on (7mm stem)	AV1725-7TGB

\*Note: Seats must be machined deeper and their I.D. must be enlarged to accept these valves



# XL Valve Train



## AV&V 7mm Manganese Bronze Valve Guides XL 04-18

- Extreme duty, CNC machined, tapered & radiused nose
- Special hi-temp Viton o-rings prevent oil infiltration
- Use either OEM style or viton seals
- Unfinished I.D. ready to be finished with carbide reamer
- Hi-lift and high flow applications

Int.	Exh.	Size	O.D.	I.D.	O.A.L
31850	31859	Std	.5625"	.273"	2.040"
31851	31860	.001"	.5635"	.273"	2.040"
31852	31861	.002"	.5645"	.273"	2.040"
31853	31862	.003"	.5655"	.273"	2.040"
31854	31863	.004"	.5665"	.273"	2.040"
31855	31864	.005"	.5675"	.273"	2.040"
31856	31865	.006"	.5685"	.273"	2.040"
31857	31866	.010"	.5725"	.273"	2.040"
31858	31867	.025"	.5875"	.273"	2.040"
34037	OE style viton valve seals (4 pk)				
34044	AV&V +.001 reamer				

## Rowe 7mm XL Valves and Guides 04-18

### Valves

PCP	Type	Size
32221	Intake	Std.
32222	Intake	+1/16" OS
32223	Intake	.100" OS
32224	Exhaust	Std.

### Guides

Size
17700 Std.
17701 .001
17702 .002
17703 .004
17704 .006



## AV&V Valve Seal Drivers

Allows easy, precise installation of OE or viton valve seals. Seal is installed in the centreline with the guide. Prevents comeback caused by a loose seal.

### PCP Description

31824	For all 7mm valve seals
31825	For all 5/16 valve seals



## AV&V High Performance Valve Guides for for TC, Evo and XL to 03 with 5/16" Stems

Manganese bronze guides have a shortened seal area and are tapered for use on high lift and high flow applications. Use with OEM style .530" valve seals. Unfinished I.D. ready to be easily finished with carbide reamer.

Intake	Exhaust	Oversize	O.D.	I.D.
31756	31768	STD	.5625"	.308"
31757	31769	.001"	.5635"	.308"
31758	31770	.002"	.5645"	.308"
31759	31771	.003"	.5655"	.308"
31760	31772	.004"	.5665"	.308"
31761	31773	.005"	.5675"	.308"
31762	31774	.006"	.5685"	.308"
31763	31775	.008"	.5705"	.308"
31764	31776	.010"	.5725"	.308"
31765	31777	.012"	.5745"	.308"
31766	31778	.015"	.5775"	.308"
31767	31779	.025"	.5875"	.308"
34039	.531 Viton seals (4 pk)			

## AV&V Stock Replacement Valve Guides for TC, Evo and XL to 03

Manganese bronze guides are stock length for direct stock replacement. Use with .531" OEM style valve seals. Same guide will fit intake or exhaust.

PCP	Oversize	O.D.	I.D.
31801	STD	.5625"	.308"
31802	.001"	.5635"	.308"
31803	.002"	.5645"	.308"
31804	.003"	.5655"	.308"
31805	.004"	.5665"	.308"
31806	.025"	.5875"	.308"
31820	OE style, metal clad seals (4 pk)		



## Kibblewhite Compression Release Valves

Designed to reduce hot start issues and starter/battery loads. Custom molded knobs ensure a cool touch and easy operation. For high demand applications. Sold in package of 2.

PCP	Application	A	B	C
32110	Various EVO	M10 x 1	1.400"	0.350"
32111	Various Twin Cam	M10 x 1	1.730"	0.350"
32112	H-D Custom	M10 x 1	1.750"	0.500"

# XL Valve Train



## Kibblewhite Ovate Wire Beehive Spring Kits

- progressively wound using Kobe Super-Clean chrome silicon based wire that is heat treated and shot peened
- Hardened steel retainers
- Hardened steel collars
- Offer optimum performance and durability
- Includes springs, retainers and lower collars.

XL 883cc 86-03, XL 1100cc 86-87, XL 1200cc 86-03				
PCP	Lift	Seat Pressure		Retainers
32154	.600"	160-175 lb.	400 lb. @ .600"	Steel
32155	.630"	180-190 lb.	370 lb. @ .630"	Steel
32107	.660"	178 lb.	370 lb. @ .660"	Steel
*32155 Not recommended for lifts over .630"				

XL 883cc 04-17, XL 1200cc 04-17				
PCP	Lift	Seat Pressure		Retainers
32293	.600"	160-170 lb.	370 lb. @ .600"	Steel
32294	.630"	180-190 lb.	375 lb. @ .630"	Steel
*32294 Not recommended for lifts over .630"				



## Cylinder Studs

- Machined from heat treated, aircraft quality steel
- Centerless ground OD
- Black oxide finish

PCP	Application	UM
32235	XL 883cc 86-17 XL 1100cc 86-87 XL 1200cc 88-17	8 pack



## Kibblewhite Lightweight Racing Sprint kit

- Hardened steel or titanium Posi-Loc style retainers
- Hardened steel collars
- Includes springs, retainers and collars.

XL 883cc 86-03				
PCP	Lift	Seat Pressure		Retainers
32156	.550"	150-160 lb.	380 lb. @ .550"	Titanium
32157	.550"	150-160 lb.	380 lb. @ .550"	Steel
XL 883cc 86-03, XL 1100cc 86-87, XL 1200cc 86-03				
PCP	Lift	Seat Pressure		Retainers
32158	.600"	175 lb.	380 lb. @ .600"	Titanium
32159	.600"	175 lb.	380 lb. @ .600"	Steel
32160	.655"	190 lb.	450 lb. @ .655"	Titanium
32161	.655"	185 lb.	450 lb. @ .655"	Steel
XL 883cc 04-17, XL 1200cc 04-17				
PCP	Lift	Seat Pressure		Retainers
32295	.600"	160 lb.	365 lb. @ .600"	Steel
32296	.655"	185 lb.	450 lb. @ .655"	Steel



## Universal Ball Hones

Kibblewhite precision valve guide hones are durable enough to size C630 bronze and cast iron valve guide materials.

PCP	Size
32115	7.0mm
32116	5/16" (.3125")
32117	3/8" (.3750")



## High Performance Wrist Pin Bushing

- Machined from solid C630 nickel bronze alloy
- Exceptional Rockwell hardness
- Sold each

PCP	Application	OD	I.D.	OAL
32353	XL 883cc 86-17 XL 1100cc 86-87 XL 1200cc 88-17	0.897"	0.788"	0.945"

# XL Valve Train



## OEM Style Replacement Keeper Set

- Single square bead

PCP	Application	UM
<b>32218</b>	XL 883cc 86-03 XL 1100cc 86-87 XL 1200cc 88-03	8 pk



## OEM Style Replacement Keeper Set

- Triple radius bead

PCP	Application	UM
<b>32089</b>	XL 883cc 04-17 XL 1200cc 04-17	8 pk



## Kibblewhite Powdered Metal Valve Seats

- Compatible with leaded & unleaded fuels
- Fits XL 1100cc 86-87

PCP	O.D. +/- .0002	I.D. +/- .0005	HT. +/- .0005	Type
<b>32366</b>	1.9690"	1.535"	0.453"	IN
<b>32367</b>	2.0070"	1.562"	0.450"	IN
<b>32369</b>	2.1320"	1.690"	0.450"	IN
<b>32365</b>	1.7570"	1.375"	0.450"	EX



## 7mm Valve Guide Seals

- OEM style 3 Tophat seals, sold 4 pack
- Intake or exhaust

PCP	Application	Guide Ø	O.D.
<b>32090</b>	XL 883cc 04-17 XL 1200cc 04-17	0.560"	1.457"

32289



## Kibblewhite Black Diamond Valves

- Black nitro-neg stems
- Sold each

### XL 883cc 86-03

PCP	Type	Head Diam.	Stem Diam.	Tulip Radius/angle	OL	Remarks
<b>32289</b>	IN	1.585"/40.26mm	0.3100"	0.250/23°	4.550"	Standard (OEM 18031-86)
<b>32290</b>	EX	1.350"/34.29mm	0.3095"	0.250/17°	4.640"	Standard (OEM 18030-86)

### XL 1100cc 1987, XL 1200cc 88-03

PCP	Type	Head Diam.	Stem Diam.	Tulip Radius/angle	OL	Remarks
<b>32315</b>	IN	1.715"/43.56mm	0.3100"	0.236/23°	4.480"	Standard (OEM 18023-87)
<b>32316</b>	EX	1.480"/37.59mm	0.3096"	0.500/40°	4.660"	Standard (OEM 18024-87)

### Special Conversion Valves XL 883cc to 1200cc 86-03

PCP	Type	Head Diam.	Stem Diam.		OL	Remarks
<b>32291</b>	IN	1.715"/43.56mm	0.3100"		4.550"	Conversion Valve
<b>32292</b>	EX	1.480"/37.59mm	0.3096"		4.625"	Conversion Valve

### Special Conversion Valves XL 883cc to 1200cc 04-17

PCP	Type	Head Diam.	Stem Diam.	Tulip	OL	Remarks
<b>32297</b>	IN	1.715"/43.56mm	0.2755"	23°	4.580"	Conversion Valve
<b>32298</b>	EX	1.480"/37.59mm	0.2755"	40°	4.660"	Conversion Valve

### XL 1200cc 04-17

PCP	Type	Head Diam.	Stem Diam.	Tulip Radius/angle	OL	Remarks
<b>32322</b>	IN	1.805"/45.85mm	0.2760"	0.344/28°	4.525"	Standard (OEM 18690-02)
<b>32323</b>	IN	1.900"/48.26mm	0.2760"	0.344/28°	4.500"	Oversize
<b>32324</b>	EX	1.575"/40.00mm	0.2755"	0.500/34°	4.610"	Standard (OEM 18691-02)
<b>32325</b>	EX	1.615"/41.02mm	0.2755"	0.500/34°	4.590"	Oversize



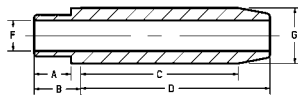
# XL Valve Train

## Kibblewhite Stock Replacement Valve Guides

- C630 bronze or cast iron
- .420" Seal diameter
- Sold each

XL 883cc 86-03, XL 1100cc 86-87, XL 1200cc 88-03

Intake/Exhaust-G (Std. 0.5620")		
Size	C630 Bronze	Cast Iron
Std.	32237	32283
+0.001"	32238	32284
+0.002"	32239	32285
+0.003"	32240	32286
+0.004"	32241	32287
+0.010"	32242	32288



A	0.375"	D	2.025"
B	0.375"	E	-
C	1.700"	F	0.3098"

## Seal Installation Tools

- For OEM style replacement seals

PCP	UM
32211	Each

## Installation Protectors

PCP	Stem Diam.	UM
32213	0.3125"	Pair



## OEM Style Replacement Seals XL 88-03

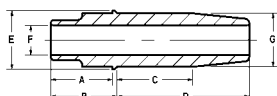
PCP	Guide Ø	Stem Ø	UM
32199	0.420"	0.3125"	4 pack

## Kibblewhite Shortened Valve Guides for .600" Lift

- C630 bronze or cast iron
- .420" Seal diameter
- Shouldered and shortened for .600" lift
- Sold each

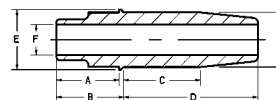
XL 883cc 86-03, XL 1100cc 86-87 & XL 1200cc 88-03

Intake-G (Std. 0.5620")		
Size	C630 Bronze	Cast Iron
Std.	32183	32247
+0.001"	32184	32248
+0.002"	32185	32249
+0.003"	32187	32250
+0.004"	32188	32251
+0.010"	32189	32252



A	0.650"	D	1.400"
B	0.700"	E	0.615"
C	0.800"	F	0.3098"

Exhaust-G (Std. 0.5620")		
Size	C630 Bronze	Cast Iron
Std.	32190	32277
+0.001"	32191	32278
+0.002"	32192	32279
+0.003"	32193	32280
+0.004"	32194	32281
+0.010"	32195	32282



A	0.650"	D	1.450"
B	0.700"	E	0.615"
C	1.150"	F	0.3098"

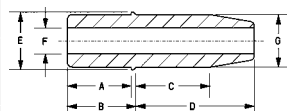


## Kibblewhite Shortened Valve Guides for .655" Lift

- C630 bronze or cast iron
- Use 7mm I.D. OEM or KBW seals
- Shouldered and shortened for .655" lift
- Sold each

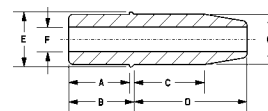
XL 883cc 04-17 & XL 1200cc 04-17

Intake-G (Std. 0.5620")		
Size	C630 Bronze	Cast Iron
Std.	32300	32308
+0.001"	32301	32309
+0.002"	32302	32310
+0.010"	32303	32312



A	0.690"	D	1.280"
B	0.740"	E	0.615"
C	0.800"	F	0.2750"

Exhaust-G (Std. 0.5620")		
Size	C630 Bronze	Cast Iron
Std.	32304	32318
+0.001"	32305	32319
+0.002"	32306	32320
+0.010"	32307	32321



A	0.690"	D	1.280"
B	0.740"	E	0.615"
C	1.030"	F	0.2750"





## Preston's XL Rocker Arm and Shaft Kit

Fits XL 86-on models. Kit includes 2 (17375-83) rocker arms, 2 (17360-83) rocker arms and 4 (17611-83) shafts.

- 32333** Kit
- 30058** F/Int and R/Exh rocker arm (17360-83)
- 30059** R/Int and F/Exh rocker arm (17375-83)
- 30300** Shaft only, Preston (17611-83)
- 31198** As above, Jims



## S&S Standard Forged and Roller Rocker Arms

Forged steel for maximum strength. Roller tip reduces side thrusting on valve stem in high lift applications and .750" bushings provide 50% more load bearing area than stock. Recommended for cams up to .585" lift or more. Fits EVO XL 86-19

### PCP Item Ratio

- 9004065** Roller arm set 1.625:1
- 9004098** Roller arm set 1.725:1
- 9004119** Standard forged 8620 steel arm set
- 31198** Jim's rocker arm shaft (each)

\*Adjustable pushrods must be used w/roller arms to obtain proper valve clearance



## Rocker Arm Bushings

- Constructed of SAE660 bearing bronze bar stock
- Sold in pack of 8.

PCP	Application	OD	I.D.	OAL
<b>32233</b>	XL 883cc 86-19 XL 1100cc 86-87 XL 1200cc 88-19	0.6795"	0.548"	1.065"



## Jims Roller Rocker Arms

Precision, American made roller rocker arms are investment cast from purified, aircraft quality, 4340 chrome moly steel. 660 bronze bushings were retained and a bearing grade steel roller tip was integrated into the design. Rocker arms feature a segmented parabolic pushrod cup that reduces friction, wear, and improves roller tip oiling. Stock ratio of 1.625 will easily accommodate a .700" lift cam (at the valves). Replaces 17360-83 and 17375-83. Set of 4.

- 31251** XL 86-17



## Preston Rocker Arm Bushings

- 18503** 17428-57 Stock replacement (split OEM style)  
XL 57-19 (4 pk for 1 head)

**31100**



**31102**



## Jims Rocker Arm Bushings (Must be Reamed)

- 31100** 17428-57 Stock replacement BT 66-17  
XL 57-19 (8 pack)
- 31102** 17428-83K Jims roller rocker bushings less mill slot **not to be used on Shovels or Ironhead XL I.D. .555"** (8 pack)

# XL Evo 1986-On



## Sportster Chrome Rocker Cover Kits

Die-cast aluminum covers include gaskets and hardware.

- 45894** 86-90 2 heads
- 45895** 91-03 1 head
- 45896** 91-03 2 heads
- 45903** 04-06 2 heads
- 45914** 07-on XLS 2 heads, includes gaskets



## Topline Chrome Sportster Rocker Covers

- | PCP          | Description                       |
|--------------|-----------------------------------|
| <b>64235</b> | Cover spacer XLH 91-03 (17538-96) |



**45900**

## XL Chrome Rocker Cover Screw Kits

Fits 86-on

- | PCP         | Type              |
|-------------|-------------------|
| <b>5504</b> | Acorn             |
| <b>8931</b> | Allen             |
| <b>9788</b> | Button head allen |



**45898**



**45902**



## Chrome XL EVO Rocker Cover Parts

Tops include allen screws and gaskets.

- | PCP          | Application                      |
|--------------|----------------------------------|
| <b>45900</b> | Top set 86-03 (17501-86)         |
| <b>45898</b> | Top cover & D-Ring kit 86-90     |
| <b>45899</b> | As above 91-03                   |
| <b>45902</b> | Top covers only 04-on (17551-04) |
| <b>45904</b> | Top cover & D-Ring kit 04-06     |



## XL Chrome Rocker Box Cover Set

Covers fit over rocker box assembly without disassembly of engine. Includes chrome allen screws.

- 45708** 86-03





## Chrome Snap Caps Bolt Cap Cover Kits

These bolt cover kits make any bike look great and are also great for custom builders. Beautifully designed and chromed, these caps easily install over the raw OE bolt heads on engine, transmission, primary and more. Each kit includes individually marked pieces that make identification and installation a breeze.

Model	Year	PCP	Kit Qty.
XL	04-on	21914	77
	84-03	21915	74
	04-on Engine	21916	63
	04-on	21926	109



## T/L XL Chrome Outer Rocker Cover 2004

64282 17551-04



## Chrome Rocker Box Cover Kit

Includes two die-cast upper covers and two lower rocker box housings, gaskets and hardware. Lower box housings feature integral D-ring. Fits XL 07-12. Set for two heads.

45905



## Chrome Polished Allen Motor Show Bike Kits

Complete motor kit includes everything needed to mount the following: rocker box, primary cover, lifter base, transmission covers, oil pump, air cleaner, cam cover, point cover, timing plug, motor mounts (early XL motor mounts include spacers). Sportster kits also include fasteners for sprocket cover, rear master cylinder and generator. Button head allens and flat head allens are used where necessary.

7955 Sportster 04-on

7934 Sportster 94-03

7933 Sportster 91-93

7932 Sportster 86-90



## Chrome Rocker Box Cover Set

Chrome 6 piece rocker box covers feature a smooth chrome finish and include gaskets for both heads.

45914 XLS 07-on

# XL Evo Rocker 86-on



72024



72232



72262

## Headbolt Covers for XL Evo

Chrome hex dome headbolt covers hide 12 point headbolts on all late 86-on. Installs with set screw.

**72024** Custom hex dome style

**72232** Smooth style

**72262** Pike style

5504



## Colony Rocker Cover Screws

**PCP** Application

**5504** XL 883/1100 86-on acorn

**9788** Buttonhead



## Colony Lower Rocker Box Mounting Kit

Stock replacement hardware for mounting both lower rocker boxes on Evo Big Twin and Sportsters.

**72078**



## Top Motor Mount to Cylinder Head Bracket Kit

Chrome top motor mount to cylinder head bracket mounting kit feature companion countersunk washers and flat head allen screws. Fits XL 86-07

**9967**



44043

44044

## Chrome Head Bolt Covers

Covers fit XL 86-on.

**44043** Grooved

**44044** Smooth



## Chrome XL Screw Sets

Fits XL 04-on.

PCP	Fitment	Style
24002	Primary and derby	Allen
72222	Timing cover	Allen
72226	Sprocket cover	Allen
72224	Tappet block	Allen
72280	Rocker box	12 Point





### Custom Evo Rocker Cover Screw Kit

Chrome kits include flat head allen screws, low profile, companion countersunk washers and gaskets to mount rocker covers on XL 86-on.

9833



### Headbolt Kits Evo and Twin Cam- 8 Pack

Chrome plated 12 point dome top headbolts.

72011 XL 86-92 (16480-85A, 16478-85A)

72012 XL 93-on (16480-92, 16478-85A)



### Head Bolt Covers

Fit over 12 point head bolts on 1986-up Evo 883-1100-1200 Sportster Evo styles include 4 pieces for left side only.

PCP	Finish	Style	Model	Year
9000	Chrome	Acorn	Evo	86-91
9001	Gold	Acorn	Evo	86-91
9002	Chrome	Cap	Evo	86-91
45035	Chrome	Dome	Evo	86-on

## XL Evo Rocker 86-on



### "Tru-Seal" EV Rocker Box Cover Collar and Screw Kit

Kit includes 8 screws and sealing washers with built-in o-rings for a positive seal.

24558 Chrome



### Colony Rocker Cover Screw Kit

Fits XL 86-on

9788



### Evo Headbolt Washers

Stock replacement washers for XL 84-91.

72017 Chrome (16482-85) (8 pk)



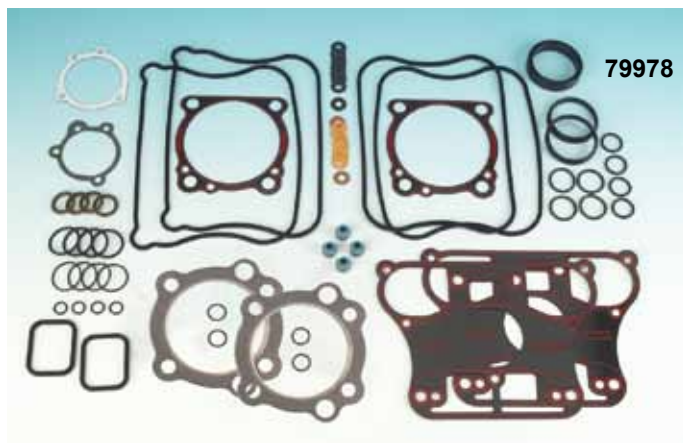
### Sifton Evo Cylinder Drain Inner Filter

Use this filter to return top end oil. Features a stainless steel screen and a ceramic magnet that will stop ferrous debris from valve train wear and is effective at stopping broken valve spring material from entering engine oiling system through cylinder drain. The thin wall steel dowel protects the magnet and provides proper head to cylinder alignment.

17509

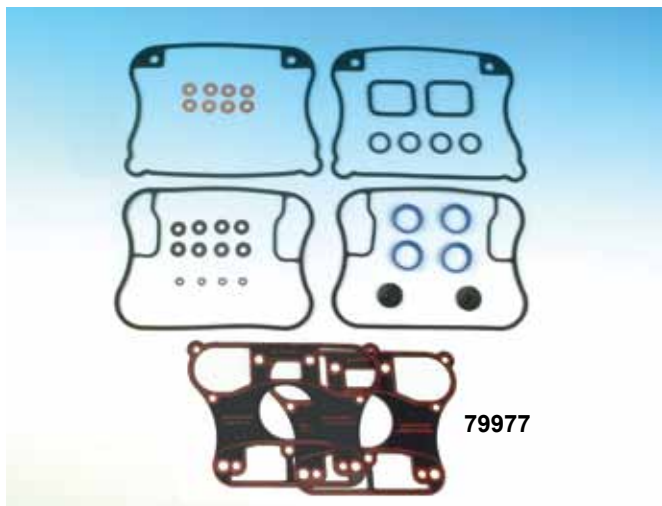


# XL EVO 1986-On Gaskets



## James Top End Gasket Kits-Evo

PCP	OEM	Description
79978	17032-86-B	XL 1200 86-90 (w/steel base)
79975	17032-86-MLS	XL 1200 86-90 .040 MLS head gasket
79979	17032-91	XL 1200cc 91-03 w/.045 h/gasket and metal rocker base
79976	17032-91-MLS	XL 1200 91-03 w/.040 MLS head
79957	17049-04-X	XL 883/1200 04-06 w/.045" head for both motors & RCM cyl/rocker



## James Rocker Cover Gasket Kits

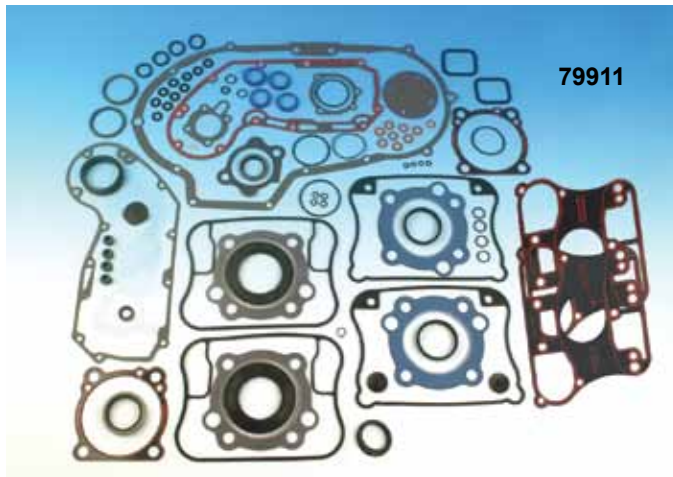
PCP	OEM	Description
79971	17030-89	86-90 w/rubber & paper rocker base
79989	17030-89-X	86-90 w/steel rocker base
79977	17030-91	91-03 w/rubber & paper base
79990	17030-91-X	91-03 w/rubber & steel base



## Black Top Rocker Box Cover & D-Ring Kit

Rocker box cover set and D-ring kit for XL 86-90.

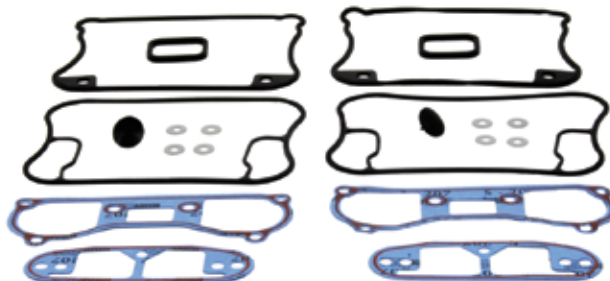
45919



## James Motor Gasket Kits-Evo

PCP	OEM	Description
79929*	17026-86	XL 86-90 w/metal base & rocker
79911*	17026-91	XL 883cc 91-03 w/rubber
79912	17026-91-MLS	XL 883/1200cc 91-03 w/MLS head gasket, .020 RCM base and RCM rocker base
79917	17027-08-X	XR 1200 08-13 .045 head w/fire ring With RCM cyl/rocker base
79924	17047-07-X	XL 883/1200 07-on .045" head for both motors RCM cyl/rocker base
79932	17047-04-X	XL 883/1200 04-06 .045" head with fire ring for both motors & RCM base

\*Motor and transmission gasket and seal kit



## V-Twin Rocker Box Gasket Kits

These gasket kits include both rocker to head gaskets and molded o-ring cover gaskets with bolt seals and washers for two heads. Fits 91-03 XL 883-1200 models.

25414



## James Oil Pump Gasket and Seal Kits

79814	77-90
79928	91-10 883-1200CC