



# FEULING®

FEULINGPARTS.COM

PERFORMANCE PARTS FOR HARLEY-DAVIDSON® MOTORCYCLES

**BULLETPROOF™**

**YOUR  
ENGINE**



# MASTER CATALOG 2014



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## FEULING® REAPER® SERIES CAMSHAFTS



**Put the Power Band Where It Counts!**

Wake up your Twin Cam® engine with a set of FEULING® Reaper® series camshafts. FEULING® uses the force of the Reaper's scythe to put the power band where it counts, creating a real seat of the pants feel. The Reaper® camshaft profiles produce more power and more torque in the riding RPM range increasing throttle response, acceleration and fuel mileage. Dyno proven and track tested. The Reaper® beats them all!

- FEULING® REAPER® camshafts have wide lobe separations producing very wide power bands
- Smooth camshaft lobe ramps are easier on valve-train components eliminating excessive valve-train noise and wear.
- Better Throttle Response
- Increased MPG
- Easy Starting
- Unique Idle Sound
- Made in U.S.A.

**Better Throttle Response - Increased MPG - Easy Starting - Unique Idle Sound**

GRIND	VALVE LIFT	OPEN	CLOSE	DURATION @.053°	LIFT @ TDC	LOBE CENTERLINE	FITMENT
525	INTAKE 525" EXHAUST 535"	4° 51°	42° 5°	226° 236°	.099° .112°	.109° .113°	525 Cams are a direct bolt in replacement for T/C 88", 95" 96" & 103" engines, can be used with stock valve springs, pushrods & lifters
543	INTAKE 543" EXHAUST 553"	15° 56°	43° 12°	238° 248°	.160° .140°	.104° .112°	543 Cams are a direct bolt in replacement for T/C 96", 103" & 110" engines. '99-'04 T/C 88" & 95" engines require higher lift valve springs, can be used with stock pushrods and lifters
574	INTAKE 574" EXHAUST 574"	15° 61°	45° 14°	240° 255°	.163° .143°	.105° .113.5°	574 Cams are a direct bolt in replacement for T/C 96", 103" & 110" engines. Performance pushrods and lifters are recommended but not required. '99-'04 model 88" & 95" require higher lift valve springs
594	INTAKE 594" EXHAUST 604"	19° 64°	56° 16°	255° 260°	.190° .167°	.108.5° .114°	594 Cams require performance valve springs, pushrods, lifters, clutch and increased compression ratio.
630	INTAKE 630" EXHAUST 630"	20° 60°	58° 19°	258° 263°	.188° .171°	.109° .112.5°	630 Cams require performance valve springs, pushrods, lifters and increased compression ratio.

*\*Cam specs measured @ tappet with 1.65 rocker arm ratio*

**525 CAMS** - A real workhorse, designed to increase torque band width and increase fuel economy. Great bolt in camshaft upgrade for stock 88" & 96" engines also performs very well in 103" strokers. Produces strong low and mid range power with a linear horsepower and torque curve. Can be used with factory valve springs, pushrods and lifters. Increases throttle response and eases starting. Will also respond well to increased compression and cylinder head work. RPM 1,750 – 5,500

**543 CAMS** - The 'Freeway Flyer', a great camshaft for those who want more top end power than our 525 cam without sacrificing low end torque. Extremely smooth cam lobe layout maintains quiet valve-train and produces the smoothest cruise power band available. Excellent bolt in camshaft for stock to mild 96", 103", 106" and 107" engines and works well in 88" & 95" engines. This cam is easy starting, increases throttle response and fuel mileage. Responds well to increased compression ratio, performance exhaust and a high flow air cleaner. Performance valve springs are required on '99-'04 engines and performance pushrods and lifters are recommended but not required. RPM 1,900 - 6,000

**574 CAMS** - Wicked power band for modified engines and an excellent bolt in for stock 103" & 110" engines. Works very well with 95", 106", 107", 114" big bore engines. This is a great all around camshaft with solid low end performance and mind blowing mid and top end power. Extremely smooth cam lobe design creates a very smooth valve-train motion. Responds very well to modified cylinder heads, increased compression ratio, performance exhaust and intake systems. Performance valve springs are required on '99-'04 engines and performance pushrods, lifters and clutch modifications are recommended. RPM 2,200 - 6,500

**594 CAMS** - Fierce performing camshaft for an array of engines sizes, large displacement 103", 110" & 124" engines looking for a superior torque band with excellent horsepower gains in heavy bikes (RPM 2,200 - 6,250.) Smaller high revving displacement 95" style engines in lighter bikes looking to twist the throttle and tap into some horsepower (RPM 2,500 - 6,800). Large displacements respond well to increased compression ratio and smaller displacements will require it. 594 cams require high performance valve springs, pushrods, lifters, carburetor and or throttle body work, performance exhaust, intake and clutch.

**630 CAMS** - Vicious power gains, wide streetable power band from a high lift profile camshaft for high performance engines with highly modified cylinder heads and compression ratio. Carburetor and or throttle body work required along with a performance exhaust and intake system. Maintains low end performance with eye blurring mid and top end power. High performance valve springs, pushrods, lifters and clutch required. RPM 2,500 - 6,900+

## **FEULING® REAPER® SERIES GEAR DRIVE CAMSHAFTS**

FEULING® REAPER® Series gear drive camshafts are stock replacement fit and utilize the standard cam gears offered by FEULING®, ANDREWS® and S&S®.

### **Twin Cam Gear Drive '99 – '06 (Except '06 Dyna)**

- Part # 1004 - (525G) 525" Intake, 535" Exhaust**
- Part # 1021 - (543G) 543" Intake, 553" Exhaust**
- Part # 1007 - (574G) 574" Intake, 574" Exhaust**
- Part # 1302 - (594G) 594" Intake, 604" Exhaust**
- Part # 1010 - (630G) 630" Intake, 630" Exhaust**



### **Twin Cam Gear Drive '07 – '14 (Includes '06 Dyna)**

- Part # 1005 - (525G) 525" Intake, 535" Exhaust**
- Part # 1022 - (543G) 543" Intake, 553" Exhaust**
- Part # 1008 - (574G) 574" Intake, 574" Exhaust**
- Part # 1304 - (594G) 594" Intake, 604" Exhaust**
- Part # 1011 - (630G) 630" Intake, 630" Exhaust**



## **FEULING® REAPER® SERIES GEAR DRIVE CAMSHAFTS + CAM GEAR KITS**

These kits include FEULING® REAPER® Series gear drive camshafts and cam gear set. Cam gear sets includes the standard size inner and outer cam gears, key ways, crank & cam bolts & washers.

### **Twin Cam Gear Drive Kits '99 – '06 (Except '06 Dyna)**

- Part # 1004K - (525G) 525" Intake, 535" Exhaust**
- Part # 1021K - (543G) 543" Intake, 553" Exhaust**
- Part # 1007K - (574G) 574" Intake, 574" Exhaust**
- Part # 1302K - (594G) 594" Intake, 604" Exhaust**
- Part # 1010K - (630G) 630" Intake, 630" Exhaust**



### **Twin Cam Gear Drive Kits '07 – '14 (Includes '06 Dyna)**

- Part # 1005K - (525G) 525" Intake, 535" Exhaust**
- Part # 1022K - (543G) 543" Intake, 553" Exhaust**
- Part # 1008K - (574G) 574" Intake, 574" Exhaust**
- Part # 1304K - (594G) 594" Intake, 604" Exhaust**
- Part # 1011K - (630G) 630" Intake, 630" Exhaust**



## **FEULING® CAM GEAR KITS**

FEULING® cam gear kits manufactured by ANDREWS® include standard size inner and outer cam gears, key ways, crank & cam bolts and washers. For use on all aftermarket gear drive camshafts.



\*Gear drive cams mounted on camplate #8000

- Part #1095 -'99 – '06 (Except '06 Dyna)**
- Part #1096' -'07 – '14 (Includes '06 Dyna)**

**'Gear drive cams on '07-'14 models require block off plates which are used to block off the oil holes for the hydraulic chain drive tensioner system. See Feuling #8016**



## **FEULING® REAPER® SERIES CHAIN DRIVE CAMSHAFTS**

FEULING® REAPER® Series chain drive camshafts utilize the factory chains, sprockets and tensioner systems.

### **Twin Cam Chain Drive '99 – '06 (Except '06 Dyna)**

**Part # 1001<sup>1</sup>** - (525C) 525" Intake, 535" Exhaust

**Part # 1000<sup>1</sup>** - (543C) 543" Intake, 553" Exhaust

**Part # 1002<sup>1</sup>** - (574C) 574" Intake, 574" Exhaust

**Part # 1301<sup>1</sup>** - (594C) 594" Intake, 604" Exhaust

**Part # 1003<sup>1</sup>** - (630C) 630" Intake, 630" Exhaust



*\*Include Outer Cam Bearings*

*'99-'01 engines with Magneti Marelli ignition require Andrews sprocket # 288015 (Feuling #1093)*

### **Twin Cam Chain Drive '07 – '14 (Includes '06 Dyna)**

**Part # 1006** - (525C) 525" Intake, 535" Exhaust

**Part # 1020** - (543C) 543" Intake, 553" Exhaust

**Part # 1009** - (574C) 574" Intake, 574" Exhaust

**Part # 1303** - (594C) 594" Intake, 604" Exhaust

**Part # 1012** - (630C) 630" Intake, 630" Exhaust



## **FEULING® REAPER® SERIES 'CONVERSION' CHAIN DRIVE CAMSHAFTS**



**UPDATE YOUR OLD MECHANICAL STYLE CAMS AND TENSIONERS TO THE NEW HYDRAULIC STYLE TENSIONER SYSTEM**

Conversion camshafts for '99-'06 Twin Cam engines utilize the '99-'06 inner cam journals with the '07-'14 outer cam journals allowing the use of the '07-'14 camplates, oil pump, hydraulic chain tensioners and chain drive system.

### **Twin Cam 'Conversion' Chain Drive '99 – '06 (Except '06 Dyna)**

**Part # 1016<sup>1</sup>** - (525CC Conversion Cam) - 525" Intake, 535" Exhaust

**Part # 1015<sup>1</sup>** - (543CC Conversion Cam) - 543" Intake, 553" Exhaust

**Part # 1017<sup>1</sup>** - (574CC Conversion Cam) - 574" Intake, 574" Exhaust

**Part # 1019<sup>1</sup>** - (594CC Conversion Cam) - 594" Intake, 604" Exhaust

**Part # 1018<sup>1</sup>** - (630CC Conversion Cam) - 630" Intake, 630" Exhaust

*'Factory hydraulic tensioners, outer cam & crank sprockets and thrust washers required, purchased separately - See #8080 & #8083*

## **REQUIRED FACTORY COMPONENTS FOR CONVERSION CAMSHAFTS**

Installing conversion camshafts in '99-'06 style T/C engines, require use the '07-'14 style camplate and oil pump along with the following:

- 1 - # 25675-06 Outer chain
- 1 - # 25683-06 Inner chain
- 1 - # 25673-06 Outer crank sprocket 17 tooth
- 1 - # 25728-06 Outer cam sprocket 34 tooth
- 1 - # 39968-06 Outer hydraulic tensioner unit
- 1 - # 39969-06 Inner hydraulic tensioner unit
- 1 - Bolt kit (2 - 1/4-20 x 3/4") (2 - 1/4-20 x 1-1/4")
- 1 - Spacers Installation requires qty. 2 of the following spacers, NOTE: correct spacer thickness is a must for proper sprocket alignment
  - 1-# 25729-06 Thrust washer - front cam .100
  - 1 - # 25731-06 Spacer (.110 for cam alignment; use as required)
  - 1 - #25734-06 Spacer (.120 for cam alignment; use as required)
  - 1 - #25736-06 Spacer (.130 for cam alignment; use as required)
  - 1 - #25737-06 Spacer (.140 for cam alignment; use as required)
  - 1 - #25738-06 Spacer (.150 for cam alignment; use as required)

**NOTE:** '99-'01 engines with Magneti Marelli ignition requires use of Andrews sprocket #216015 in replacement of HD 34 tooth sprocket #25728-06.

## FEULING® REAPER® SERIES CAMSHAFTS FOR XL'S



**PART # 1370** 505"/515" Bolt-in REAPER® cams for XL's producing a wide power band in stock engines, a great way to take a Sporty to a hot new level of performance. Split lift camshaft with .505" lift on the intake and .515" lift on the exhaust produce a solid power band with top fuel sound. Can be used with stock pushrods and valve-springs on factory 883 and 1200 engines, FEULING® recommends matching new camshafts with new lifters but not required.

**Fits:** '00-'14 XL and '00-'02 Buell as a direct bolt-in replacement for 'fine' pitch pinion gear, cam set also fits '91-'99 but requires pinion gear swap using HD # 24047-00 to convert the '91-'99 'wide' pitch pinion gear to a 'fine' pitch setup.

	<u>Valve Lift</u>	<u>Open</u>	<u>Close</u>	<u>Duration @ 53"</u>	<u>lift @ TDC</u>	<u>Lobe Centerline</u>
Intake	.505	11	48	239	.137	108.5
Exhaust	.515	53	15	248	.150	109
<b>RPM range: 2,100 - 6,800+     <u>Grind:</u> 515     <u>Overlap:</u> 26</b>						

**PART # 1377** 580" REAPER® high lift cams for XL's are designed for the rider who is looking for more horsepower with a higher RPM power band. Camshafts have .580" lift on both intake and exhaust, require high lift valve springs see FEULING® BEEHIVE® ENDURANCE® or HIGH LOAD® valve springs, higher compression recommended with performance pushrods and lifters. High flow intake and performance exhaust required.

**Fits:** '00-'14 XL and '00-'02 Buell as a direct bolt-in replacement for 'fine' pitch pinion gear, cam set also fits '91-'99 but requires pinion gear swap using HD # 24047-00 to convert the '91-'99 'wide' pitch pinion gear to a 'fine' pitch setup.

	<u>Valve Lift</u>	<u>Open</u>	<u>Close</u>	<u>Duration @ 53"</u>	<u>lift @ TDC</u>	<u>Lobe Centerline</u>
Intake	.580	21	57	258	.191	108
Exhaust	.580	67	21	268	.187	113
<b>RPM range: 2,400 - 6,900+     <u>Grind:</u> 580     <u>Overlap:</u> 42</b>						



## **FEULING® ECONO BEEHIVE® VALVE SPRINGS**



FEULING® ECONO performance BEEHIVE® valve springs are designed to handle up to 585" lift camshafts at an economical price. These FEULING® BEEHIVE® springs are made from the same premium stress relieved conical ovate wire as our HIGH LOAD springs but are developed for economical engine budgets. They have an excellent level of fatigue life and are designed to handle the demands of performance engines with 585" and smaller lift camshafts. Dyno proven and track tested.

- FEULING® BEEHIVE® valve springs use a much smaller and lighter weight retainer which drastically reduces the valve weight creating a much quicker revving and smoother motion than comparable dual valve springs.
- FEULING® ECONO springs allow up to 585" lift cams, no rocker box clearancing required.
- Eliminate valve spring separation, maximize stability, reduce valve-train noise & harmonics!
- Available for 5/16" and 7mm valves
- FEULING® BEEHIVE® valve springs must be installed at the correct OPEN HEIGHT, matching max lift to the open height spec of the valve springs

Kits include: FEULING® ECONO BEEHIVE® valve springs, lightweight 7° steel retainers, machined heat treated chrome moly spring seats, seat shims, valve locks and a set of premium Viton® valve seals equipped with a spring loaded valve stem wiper system.

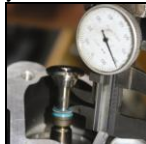
***Don't get stung by inferior valve springs!  
Quicker Revving - Smoother Motion - Fit up to 585" Lift Camshafts***

### **SEAT Lbs. / INSTALLED HEIGHT**

**183 Lbs. @ 1.760" (0.510" Lift)**  
**175 Lbs. @ 1.785" (0.535" Lift)**  
**172 Lbs @ 1.803" (0.553" Lift)**  
**165 Lbs @ 1.825" (0.574" Lift)**  
**163 Lbs @ 1.835" (0.585" Lift)**  
**380 Lbs @ 1.250" OPEN HEIGHT**  
**Coil Bind @ 1.180"**

**Part # 1120**    **EVO/Twin Cam Big Twin '84-'04,XL '86-'03, Buell '95-'02, 10° Std. 5/16" valve stem and keeper groove**  
**Part # 1121**    **Twin Cam '05-'14, XL '04-'13, XR 1200 '09-'14, 7°, 7mm valve stem with stock triple keeper groove**

**NOTE:** Feuling® ECONO BEEHIVE® valve spring kits are direct replacement with no machining or rocker box clearance required up to .574" lift for '84-'04 Big Twin and '86-'03 XL and up to .585" lift for '05-'14 Twin Cam. Always check bottom of retainer to seal clearance as cylinder heads vary.



## **FEULING® ENDURANCE BEEHIVE® VALVE SPRINGS**

MAXIMIZE VALVE SPRING STABILITY  
REDUCE VALVE-TRAIN NOISE & HARMONICS!



FEULING® ENDURANCE BEEHIVE® valve springs are a direct bolt in replacement up to 650" lift camshafts no spring seat machining required. Machined from a premium grade Hi-tensile chrome silicon single conical ovate wire, shot-peened with a specially processed thermal heat treat and super NexTex® finish to give these valve springs the needed fatigue life to exceed the high demands of V-Twin engines from stock to performance.

- FEULING® BEEHIVE® valve springs use a much smaller and lighter weight retainer which drastically reduces the valve weight creating a much quicker revving and smoother motion than comparable dual valve springs.
- FEULING® endurance springs are a direct bolt-in replacement up to 650" cam lift no machining or rocker box clearancing required.
- Eliminate valve spring separation, maximize stability, reduce valve-train noise & harmonics!
- Available for 5/16" and 7mm valves
- FEULING® BEEHIVE® valve springs must be installed at the correct OPEN HEIGHT, matching max lift to the open height spec of the valve springs

Kits include: FEULING® ENDURANCE BEEHIVE® valve springs, lightweight 7° Titanium heat treated retainers, machined spring seats, seat shims, valve locks and a set of premium Viton® valve seals equipped with a spring loaded valve stem wiper system.

***Don't get stung by inferior valve springs!***

***Quicker Revving - Smoother Motion - Light Weight Ti Retainers - Bolt in up to 650" Lift***

### **SEAT Lbs. / INSTALLED HEIGHT**

**198 Lbs. @ 1.685" (0.535" Lift)**

**194 Lbs. @ 1.703" (0.553" Lift)**

**190 Lbs. @ 1.724" (0.574" Lift)**

**187 Lbs. @ 1.754" (0.604" Lift)**

**185 Lbs. @ 1.780" (0.630" Lift)**

**160 Lbs @ 1.800" (0.650" Lift)**

**375 Lbs @ 1.150" OPEN HEIGHT**

**Coil Bind @ 1.100**

**Part # 1100 EVO/Twin Cam Big Twin '84-'04, XL '86-'03, Buell '95-'02, 7° Std. 5/16" valve stem & keeper groove**

**Part # 1105 Twin Cam '05-'14, XL '04-'14, XR 1200 '09-'14, 7°, 7mm valve stem with stock triple keeper groove**

**Part # 1101 T/C Screamin Eagle Heads with 5/16" valve stems with std keeper grooves and .530" diameter valve guides**

**NOTE:** Feuling® ENDURANCE BEEHIVE® valve spring kits are direct replacement with no machining or rocker box clearance required up to .574" lift for '84-'04 Big Twin and '86-'03 XL and up to .650" lift for '05-'14 Twin Cam. Always check bottom of retainer to seal clearance as cylinder heads vary.





## FEULING® HIGH LOAD BEEHIVE® VALVE SPRINGS



FEULING® HIGH LOAD premium performance BEEHIVE® valve springs handle up to 750" lift camshafts. Designed for steep ramped large lift camshafts - These Feuling® valve springs are made from premium stress relieved conical ovate wire with a nitrided surface heat treatment, shot-peened surface enhancements along with a Nano Peen™ polish. They have an extremely high level of fatigue life and are designed to handle the highest demands of performance engines with high lift, steep ramped camshafts. Dyno proven and track tested.

- FEULING® BEEHIVE® valve springs use a much smaller and lighter weight retainer which drastically reduces the valve weight creating a much quicker revving and smoother motion than comparable dual valve springs.
- FEULING® HIGH LOAD springs allow up to 750" lift cams, no rocker box clearancing required.
- Eliminate valve spring separation, maximize stability, reduce valve-train noise & harmonics!
- Available for 5/16" and 7mm valves
- FEULING® BEEHIVE® valve springs must be installed at the correct OPEN HEIGHT, matching max lift to the open height spec of the valve springs.

Kits include: FEULING® HIGH LOAD BEEHIVE® valve springs, lightweight 10° Titanium retainers manufactured from Ti-17 alloy and micropolished for enhanced fatigue life, machined heat treated chrome moly spring seats, seat shims and valve locks and a set of premium Viton® valve seals equipped with a spring loaded valve stem wiper system.

**Don't get stung by inferior valve springs!**

**Quicker Revving - Smoother Motion - Light Weight Ti Retainers - Fit up to 750" Lift Camshafts**

**SEAT Lbs. / INSTALLED HEIGHT**

**217 Lbs @ 1.789" (0.574" Lift)**

**215 Lbs @ 1.800" (0.585" Lift)**

**208 Lbs @ 1.819" (0.604" Lift)**

**200 Lbs @ 1.845" (0.630" Lift)**

**185 Lbs @ 1.900" (0.685" Lift)**

**170 Lbs @ 1.935" (0.720" Lift)**

**415 Lbs @ 1.215" OPEN HEIGHT**

**Coil Bind @ 1.125"**

- Part # 1200**     **EVO/Twin Cam Big Twin '84-'04, XL '86-'03, Buell '95-'02, 10° Std. 5/16" valve stem and keeper groove**  
**Part # 1205**     **Twin Cam '05-'14, XL '04-'14, XR 1200 '09-'14, 7°, 7mm valve stem with stock triple keeper groove**  
**Part # 1201**     **T/C Screamin Eagle Heads - Fits SE heads with 5/16" valve stems with std keeper grooves and 0.530" diameter valve guides**

### VALVE RETAINER & LOCK WEIGHT COMPARISON

VALVE	YEAR	STOCK	FEULING® ENDURANCE
5/16" STD Groove	'84 - '04	28.7 g	10 g
7MM Triple Groove	'05 - '12	14.4 g	9.4 g
VALVE	YEAR	STOCK	FEULING® HIGH LOAD
5/16" STD Groove	'84 - '04	28.7 g	14.1 g W/ Ti Locks 11.4 g
7MM Triple Groove	'05 - '12	14.4 g	8.5 g

**\*NOTE:** FEULING® HIGH LOAD BEEHIVE® valve spring kits are direct replacement no machining or rocker box clearance required up to .574" lift for '84-'04 Big Twin, '86-'03 XL, and up to .700" lift for '05 - '14 Twin Cam. Larger lift camshafts require valve guide machining for seal to retainer clearance. Always check bottom of retainer to seal clearance as cylinder heads vary.



## **FEULING® VALVE LOCKS**



Part # 1206



Part # 1212



Part # 1213



Part # 1214

**Part # 1206**     *0.050" off-set 10° machined steel locks fit 5/16" valve stems with standard keeper groove. Raises the valve spring retainer to gain 0.050" installed height without machining the cylinder head spring seat. Also fits FEULING® HIGH LOAD BEEHIVE® springs #1200 and #1201*

**Part # 1212**     *Machined steel locks, Standard height standard groove 5/16 valve stems, 7° degree, stock replacement EVO & T/C '84-'04, XL '86-'03*

**Part # 1213**     *Steel Valve Locks STD. height 7mm valve stem triple groove keepers, stock replacement '05-'14 T/C*

**Part # 1214**     *Ti – valve locks, 10° for 5/16" valve stems, standard height, also fits FEULING® HIGH LOAD BEEHIVE® springs #1200 and #1201*

## **FEULING® TI RETAINERS FOR SE® BEEHIVE® VALVE-SPRINGS**



**PART # 1220**

*Titanium retainers for Screamin Eagle performance BEEHIVE® valve-springs with 0.725" top ID and 7mm valves. Kit includes Ti retainers, steel triple groove keepers and Viton® valve seals for factory guides. '05-later T/C engines, '04-Later XL and XR engines.*

**PART #1221**

*Allows installation of the Screamin Eagle performance BEEHIVE® valve-springs with 0.725" top ID onto the early style 5/16" valve stem cylinder heads. Includes Ti retainers, standard height steel keepers, machined steel spring seats for spring bottom ID 1.130" and Viton® valve seals for factory guides. EVO, T/C Big Twin '84-'04, XL '86-'03, Buell '95-'02*

## **FEULING® SPRING SEAT SHIMS**



**Part # 1217**

*Set your valve spring open height to match your camshaft lifts for optimum valve-train stability and performance. Quality machined valve spring seat shims in two thicknesses, 0.060" and 0.015" with outside 1.500" Diameter and inner 0.645" diameter. Quantity 4 of each thickness*

## **VALVE SEALS**



*High quality Viton valve seals designed to handle high engine temperatures with a built in spring loaded wiper to clean excess oil from valve stem with minimal friction. Includes 4 seals & 1 seal installer tool.*

**Part # 1075**     *Fit: EVO, Sportster & T/C up to 2004, with 5/16" valves (White tool)*

**Part # 1076**     *Fit: T/C 2005 - 2014, XL '04-'14 with 7mm valves (Black tool)*

**Part # 1077**     *Fit: .530" O.D. Guides, 5/16" Valve stems, Fits most Screamin Eagle Heads (Black tool)*

**Part # 1078**     *Fit: .500" O.D. Guides, 5/16" Valve stems (White tool)*

## **FEULING® OIL FILTER COOLERS**



Part #:2000, 2001, 2002, 2003



Part #:2005, 2006, 2007, 2008



Filter Cooler Cut-A-Way

Cleaner cooler oil with the Feuling® oil cooler/filtration system, this oil cooler is designed with an internal spun glass element cartridge filter which is used as an additional oil filter in conjunction with the factory spin on oil filter. The Feuling® oil cooler system drastically reduces contamination and viscosity breakdown in the oil; protecting the engine from cylinder, piston, ring and bearing wear. Preventing extreme oil temperatures, promoting engine performance, longer engine life & extended oil change intervals.

This oil cooler system makes a clean custom look, mounting between the frame rails in position to take advantage of the air flow from the front tire. Available in chrome or gloss black, the housing measures 5" long and 3-3/4" in diameter.

Kits include filter cooler housing, replaceable spun glass cartridge filter, gloss black mounting bracket, off-set oil filter adapter, braided steel lines with swivel fittings, K&N® spin-on oil filter, ARP® 12 bolt fasteners and all necessary hardware. Kits available in chrome finish with stainless lines, & black finish with black lines.



#2000 Softail Classic



#2005 Softail Std.



#2002 Bagger



#2007 Bagger



#2008 Dyna

**CHROME** Part # 2000 – Chrome '00 – Present Softail, non ABS models  
 Part # 2001 – Chrome '99 - Present Dyna models  
 Part # 2002 – Chrome '99 – Present FL models – Baggers  
 Part # 2003 – Chrome '99 - Present Dyna models W/O charcoal canister

**BLACK** Part # 2005 – Black '00 – Present Softail, non ABS models  
 Part # 2006 – Black '99 – Present Dyna models  
 Part # 2007 – Black '99 – Present FL models – Baggers  
 Part # 2008 – Black '99 - Present Dyna models W/O charcoal canister

## **FEULING® REPLACEMENT FILTER COOLER OIL FILTER**



Replacement filter for the Feuling® Filter Cooler filtration system. Includes new O-ring. This filter is a glass element filter and Feuling® recommends replacing this filter with your next oil change after installation then replace every other oil change.

[Part # 2020](#) Fits: Feuling #2000, 2001, 2002, 2003, 2005, 2006, 2007, 2008

## **FEULING® OFFSET OIL FILTER ADAPTER**



Feuling® Offset sandwich adapters allow easy hook up of any style remote oil cooler or additional oil filter set up. These adapters are designed with a pressure relief valve vs. the standard thermostat which allows constant oil flow through your remote oil cooler with total protection from starving the engine from oil flow. 1/8" NPT ports. Available in chrome or anodized black finish. Fits '99-'14 Twin Cam and EFI EVO models.

[Part # 2021](#) Chrome  
[Part # 2022](#) Black Part # 2022  
[Part # 2023](#) Rebuild Kit includes gasket, O-ring & allen head hardware

## **FEULING® ARP® CYLINDER STUD & HEAD BOLT KITS**



- The strongest studs & bolts available!
- Top engine builders demand quality fasteners! Secure your engine with complete confidence
- Superior in strength and performance to any other cylinder stud head bolt kit on the market, this kit is designed to exceed the needs of high performance engines.
- Don't Risk Head Gasket Failure!
- Stock Cylinder studs are designed as a stretch to torque stud with a one time use only lifespan
- Feuling® studs are installed to a torque spec, can be reused and carry a lifetime warranty
- Heat-treated 8740 chrome moly steel studs, 190,000+ psi tensile strength, precision j-form threads for optimum engagement to prevent galling and promote more consistent torque loading.
- Head bolts are manufactured from a special 300 alloyed corrosion resistant stainless steel with tensile strength rated @ 180,000 psi
- Manufactured by ARP® to Feuling's® exact specifications
- Recommended for all V-Twin engines
- Stock replacement
- Made in the U.S.A.

Kits includes 8 cylinder studs, 8 head bolts, moly assembly lubricant and thread sealant

**Part# 3000**

**'99 – Present TWIN CAM® ENGINES**

**Part# 3025**

**'85 – '99 Evolution® BIG TWIN ENGINES**

## **FEULING® CYLINDER STUD KITS**



Feuling® studs are installed to a torque spec, can be reused and carry a lifetime warranty. Heat-treated 8740 chrome moly steel studs, 190,000+ psi tensile strength, precision j-form threads for optimum engagement to prevent galling and promote more consistent torque loading. Note factory cylinder studs are designed as a stretch to torque stud with a one-time use only lifespan

Kits include 8 cylinder studs which include the machined dowel on case side of studs, moly assembly lubricant and thread sealant

**Part # 3001 – T/C® '99 – Present**

**3/8" x 6.325" studs**

**Part # 3026 – Evolution® Big Twin '85 – '99**

**3/8" x 6.675 studs**



## **FEULING® ARP® HEAD BOLT KITS**



Quality 12 point head bolts are manufactured from a special 300 alloyed corrosion resistant stainless steel with tensile strength rated @ 180,000 psi, polished to a show finish.

**Part # 3005** - Fits: T/C® '99 – Present, Evolution® Big Twins '85 – '99, Sportster® '92 – Present, Buell® '00 - Present  
Includes: Qty. 4 head bolts with 1.875" UHL and Qty. 4 head bolts with 3.175" UHL

**Part # 3006** - Fits: S&S heads requiring all 'long' head bolts, Qty. 8 head bolts with under head length 3.175"

## **FEULING® ARP® CYLINDER HEAD BOLTS FOR PAN, SHOVEL & XL**



Quality hex head, hardened stainless steel bolts with a "SHOW" corrosion-resistant finish, tensile strength rated @ 180,000 psi – Superior & Stronger than OEM

**Part # 3010** Fits: Harley Davidson '48-'84 Pan Heads & Shovel Heads

**Part # 3011** Fits: Harley Davidson '57-'73 XL's

## FEULING® ARP® ENGINE DRESS-UP FASTENER KITS



Part #: 3033



Part #: 3030 & 3031



Part #: 3035



Part #: 3048

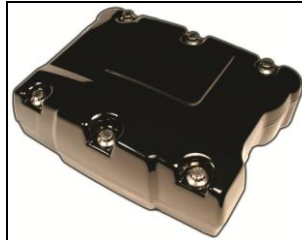
### INSTALLED IMAGES



Part # 3035



Part # 3033



Part # 3040



Bolt Close Up

- Feuling® Dress-up fastener kits, quality 12-point hardened stainless steel bolts with a “SHOW” corrosion-resistant finish
- Feature precision rolled threads for optimum engagement, to prevent galling and promote more consistent torque loading.
- Wide underhead flange design provides even load distribution for optimum sealing of surfaces – preventing leaks.
- Top engine builders demand quality fasteners! Secure your engine with complete confidence.
- Eliminates thread problems associated with chromed hardware
- Tensile strength rated @ 170,000 psi – Superior & Stronger than OEM & stronger than grade 8 fasteners
- Manufactured by ARP® to Feuling’s® exact specifications
- Kits include moly assembly lubricant for installation
- Made in the U.S.A.

### TWIN CAM® ENGINE DRESS UP KITS - EXTERNAL BOLTS

[Part # 3030](#) - Case bolts (Qty. 9) '99-'14 A Motors

[Part # 3031](#) - Case Bolts (Qty. 12) '00-'14 B Motors

[Part # 3033](#) - Lifter block bolts (Qty. 8) '99-'14

[Part # 3035](#) - Kit - Lifter blocks, Cam Cover, Oil filter adapter, Crank Sensor (Qty. 22) '99-'14

[Part # 3040](#) - Rocker covers (Qty. 12) '99-'14

[Part # 3048](#) - Exhaust studs & lock nuts (Qty. 8) T/C '99-'14, EVO '84-'99

### TWIN CAM® PRIMARY AND TRANSMISSION 12 POINT DRESS UP KITS - EXTERNAL BOLTS

Kits include 12 point stainless bolts and applicable washers for the primary cover, derby cover, inspection cover, transmission top cover, transmission bearing housing, clutch release cover, speed sensor and engine to transmission mounting bolts.

#### DYNA

[Part # 3054](#) '99 - '05

[Part # 3055](#) '06 - '14

#### BAGGER

[Part # 3056](#) '00 - '06

[Part # 3057](#) '07 - '14

#### SOFTAIL

[Part # 3058](#) '00-'06

[Part # 3059](#) '07 - '14

### XL SPORTSTER® ENGINES '04 – PRESENT

[Part # 3060](#) – Complete external engine 12 point bolt kit, Includes: right side cover, lifter blocks, rocker covers, front engine mount, case bolts, crank sensor, required washers, Allen head button screws for points cover and moly paste for installation

[Part # 3063](#) - Complete external primary 12 point bolt kit, Includes: Primary cover, clutch cover, required washers and moly paste for installation

[Part # 3066](#) - Chassis and trim 12 point bolt kit, Includes: Front caliper, front rotor, fork clamps, rear fender struts, rear rotor, rear master cylinder line bracket, rear belt guard, required washers and moly paste for installation

## **FEULING® ARP® ENGINE FASTENERS - INTERNAL**



**Part #: 3042**



**Part #: 3048**



**Part #: 3045, 3046**



**Part # 3042 Installed on a Gear Drive System**



- **Top engine builders demand quality fasteners! Secure your engine with complete confidence.**
- **Feuling® engine fastener kits for Twin Cam® engines**
- **Quality 12-point heat treated 8740 chrome moly steel bolts with black oxide finish**
- **Feature precision rolled threads for optimum engagement, to prevent galling and promote more consistent torque loading.**
- **Wide underhead flange design provides even load distribution for optimum sealing of surfaces - preventing leaks.**
- **Tensile strength rated @ 170,000 psi – Superior & Stronger than OEM & stronger than grade 8 fasteners**
- **Manufactured by ARP® to Feuling's® exact specifications**
- **Kits include moly assembly lubricant for installation**
- **Made in the U.S.A.**

### **TWIN CAM® ENGINES**

**Part # 3042** – Cam & Pinion shaft bolts, Hardened Washers, Camshaft retaining ring, Moly lube, Loctite.  
Fits: T/C '99 – Present

**Part # 3045** - Rocker Housing Fastener Kit – Supports, Breathers, Rocker box housings ,Washers, Moly lube  
Fits: T/C '99 – '00 Dyna & FLT models, '00 – '01 Softail models

**Part # 3046** - Rocker Housing Fastener Kit - Supports, Breathers, Rocker box housings, Washers, Moly lube  
Fits: T/C '01 – Present Dyna & FLT, '02 – Present Softail models

**Part # 3048** – Exhaust studs, lock nuts, moly lube.  
Fits: T/C '99 – Present, EVO '84-'99, XL '86-'14

## **FEULING® ARP® COMPLETE T/C ENGINE FASTENER KITS**



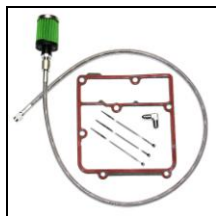
- **Complete Twin Cam engine 12-point fastener kits including dress up “special alloyed stainless” external engine fasteners and heat treated 8740 black oxide internal engine fasteners.**
- **Top engine builders demand quality fasteners! Secure your engine with complete confidence.**
- **Tensile strength rated @ 170,000 psi – Superior & Stronger than OEM & stronger than grade 8 fasteners**
- **Includes all necessary fasteners for the Twin Cam® engine under one part #: 3000 cylinder studs/head bolts, 3030 case bolts, 3035 Lifter blocks, cam cover, oil filter adapt. 3040 rocker covers, 3042 cam/pinion shaft bolts/washers, 3045 Rocker arm supports, breathers, rocker box housing bolts/washers, 3048 exhaust studs & lock nuts, Moly lubricant, Loctite, thread sealant and installation instructions**
- **Made in the U.S.A.**

**Part # 3050** '99 – '00 Dyna & FLT models, '00 – '01 Softail model  
(Includes #:3000, 3031, 3035, 3040, 3042, 3045, 3048)

**Part # 3051** '01 – Present Dyna & FLT models, '02 - Present Softail model  
(Includes #:3000, 3031, 3035, 3040, 3042, 3046, 3048)



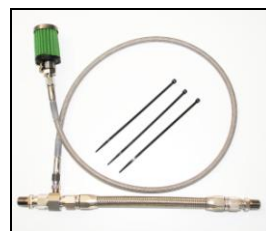
## **FEULING® OIL TANK BREATHER KITS**



**Part #: 3070**



**Part #: 3075**



**Part #: 3080**



**Part #:3071**



**Part #: 3076**



**Part #: 3081**



**Part # 3082**



- **Stop dipstick blowout**
- **Releases power robbing pressures from oil tank & crank case, reduces blow - by**
- **Promotes proper oil flow and oil tank function**
- **Braided steel lines & stainless steel fittings, breather line is coated with clear pvc**
- **Lifetime warranty breather element**
- **Available in stainless or black finish**
- **Gasket, thread sealant, necessary hardware and installation instructions included**
- **Dyna models require removal of the transmission/oil tank cover. Early FLT models require removal of dipstick housing – new gaskets are supplied.**
- **Made in the U.S.A.**

**Part # 3070** '99 -'05 Dyna models, stainless

**Part # 3071** '99 -'05 Dyna models, black

**Part # 3075** '99 -'01 FLT models, stainless

**Part # 3076** '99 -'01 FLT models, black

**Part # 3080** '02 - '06 FLT models, stainless

**Part # 3081** '02 - '06 FLT models, black

**Part # 3082** Replacement breather element

## **FEULING® HP+® HYDRAULIC LIFTERS**



**Part #: 4000**



**Part #: 4025**



**Part #: 4061**

- **Performance hydraulic roller lifters**
- **Optimized oil flow to top end - valves, springs, rockers, shafts & valve guides**
- **Cooler oil and reduced wear**
- **Extends life of top end valve gear**
- **CNC machined and precision ground**
- **Drop in replacement for stock lifters**
- **Dyno developed and track tested**
- **Recommended for use with the Feuling® Oil Pump or comparable high volume oil pump**
- **Made in the U.S.A.**

**Part # 4000 Std. Diameter, fits: Twin Cam® '99 – Present, Sportster & Buell '00 – '13**

**Part # 4025 Std. Diameter, fits: XL & Buell® '91 – '99**

**Part # 4061 Std. Diameter, fits: EVO® '85 – '99, XL '86 – '90**

## **FEULING® RACE SERIES® EVO® LIFTERS**



**FEULING® EVO® RACE SERIES® Lifters are machined from a steel body and are designed with precision tolerances and a slower bleed down rate increasing valve-train stability when used with large lift camshafts and heavy valve spring pressures. Feuling® Race Series Lifters are full travel hydraulics with big axles designed to decrease valve float and promote maximum valve lift.**

**Part # 4062 Std. Diameter, fits: EVO® '85 – '99, XL '86 – '90**

## **FEULING® RACE SERIES® HYDRAULIC LIFTERS**



***FEULING® RACE SERIES® full travel hydraulic lifters are machined from a steel body and designed to exceed the needs of large lift camshafts and higher valve spring pressures with a slower bleed down rate. RACE SERIES® lifters maintain proper oil flow to the top end, increase engine RPM, valve-train stability, decreasing valve float promoting maximum valve lift.***

***Feuling® recommends Race Series® lifters for engines running higher than 185Lbs. valve spring seat pressure. FEULING recommends the use of a high volume oil pump which will result in quieter, better performing lifters. Race Series® lifters are compatible with either FEULING® HP+® or Race Series® oil pumps and are designed for use with both street and strip engines. Spin-Tron dyno developed and track proven, Made in the USA.***

- ***Available in oversized diameters – Case Savers!***
- ***Recommended for both strip and performance street engines***
- ***Sold in sets of 4***
- ***Made in the U.S.A.***

***Part # 4050 Std. Diameter (0.842" - 0.8425") T/C® '99 – Present, Sportster/Buell® '00 – Present***  
***Part # 4051 Oversized Dia. (0.843" - 0.8435") T/C® '99 – Present, Sportster/Buell® '00 – Present***  
***Part # 4052 Oversized Dia (0.8435" - 0.844") T/C® '99 – Present, Sportster/Buell® '00 – Present***

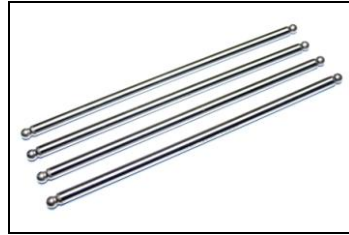
## **FEULING® RACE SERIES® SOLID LIFTERS**



- ***Designed for engines with radical valve spring pressures and large lift camshafts***
- ***Optimize valve - train stability at high RPM, decrease valve float***
- ***Maintain maximum valve lift , Increase horsepower & torque output.***
- ***Made from hardened steel, CNC machined and precision ground with 0.700" Diameter rollers***
- ***Maintaining proper and critical oil flow to top end with metered oiling***
- ***Utilizes standard pushrod seat height, Feuling recommends the use of #4070 Race Series adjustable pushrods or comparable heavy duty adjustable pushrods***
- ***Recommended for both strip and high performance street engines***
- ***For best results Feuling recommends the use of a high volume oil pump***
- ***Made in the U.S.A.***
- 

***Part # 4055 Standard diameter (0.8422" - 0.8425") fits: T/C® '99 – Present, Sportster/Buell® '00 – Present***

## **FEULING® HP+® & RACE SERIES® ADJUSTABLE PUSHRODS**



- **Maintain maximum valve lift!**
- **Increased stiffness and column rigidity maximizing valve-train stability, increasing engine RPM horsepower and torque output.**
- **Tapered 7/16" 4130 chrome moly adjustable pushrods, use a minimal adjustment parameter eliminating flex and loss of valve train-stability problems associated with most adjustable pushrods.**
- **Individual length intake & exhaust pushrods keep the adjustment extension to a minimum**
- **Designed to exceed the needs of performance engines using larger lift camshafts and high spring pressures, while maintaining proper and critical oil flow to top end valve gear.**
- **CNC machined with 32 thread per inch adjustment, Double jam nut lock system, HP+® pushrod wall thickness 0.095", RACE SERIES® wall thickness .120"- recommended when extreme valve-spring pressures are used. New style 24 threads per inch**
- **Designed for use with hydraulic or solid lifters and street or race engines**
- **These pushrods require removal of rocker covers and rocker arm supports**
- **FEULING® pushrods can be used with the factory pushrod tubes.**
- **Made in the U.S.A.**
- 

### **TWIN CAM® '99 – Present**

**#4065 HP+® 0.095" Wall**

**#4070 RACE SERIES® 0.120" Wall, New style 24 threads per inch**

### **EVO® Big Twins '84 – '99**

**#4077 HP+® 0.095" Wall**

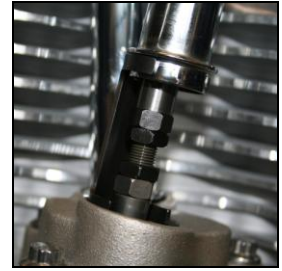
**#4080 RACE SERIES® 0.120" Wall**

### **SPORTSTER® '91-'03**

**#4085 HP+® Fixed Length Chrome moly one piece pushrods 3/8 tube with 0.065" wall thickness and hardened ball ends. Length is 0.040" under stock. Intake 10.706", Exhaust 10.760"**



## **FEULING® FAST INSTALL® ADJUSTABLE PUSHRODS**



*FEULING® FAST INSTALL® adjustable pushrods are made from the same great design as the regular install FEULING® adjustable pushrods but feature a slightly shorter tapered tube and come disassembled allowing the engine builder to install the pushrods without removing the top rocker box. These pushrods feature a dual jam nut locking system and include FEULING® part #9012 which is a tool to hold the pushrod tubes up and out of the way while adjusting the pushrods.*

*FEULING® pushrods can be used with the factory pushrod tubes and are the longest FAST INSTALL® pushrods available on the market. FEULING® pushrods use separate lengths for intake and exhaust which keeps the adjustment area to a minimum creating a FAST INSTALL® pushrod with maximum rigidity promoting maximum valve lift.*

**Twin Cam® '99 – Present**  
**#4090 FAST INSTALL® 0.095" Wall**

**Evolution® Big Twins '84 – '99**  
**#4091 FAST INSTALL® 0.095 Wall**

## **FEULING® REPLACEMENT PUSHROD NUTS**



**Part # 4089** Replacement pushrod nuts, fits all FEULING® 32 threads per inch pushrods HP+®, FAST INSTALL® & RACE SERIES®.

**NOTE:** New style RACE SERIES® pushrods have 24 threads per inch

## **FEULING OE+ OIL PUMPS**



***FEULING® OE+ stock replacement billet oil pumps deliver increased oil pressure and return scavenge volumes over the factory oil pumps. The competitively priced OE+ product line is an upgraded alternative to stock components. As with all FEULING® products, the OE+ Oil Pumps are designed and manufactured to the highest standard of quality with proven FEULING® performance.***

- ***Billet 6061 aluminum***
- ***Increases oil pressure***
- ***18% more pressure volume over stock***
- ***38% more scavenge volume over stock***
- ***2" Chrome Moly gerotor gears***
- ***Stock replacement***
- ***Made in the U.S.A.***

***Part # 7010 Fits: Twin Cam® Engines '99 – '06 Except '06 Dyna***



- ***Billet 6061 aluminum***
- ***Increases oil pressure***
- ***10% more pressure volume over stock***
- ***16% more scavenge volume over stock***
- ***2" Chrome Moly gerotor gears***
- ***Stock replacement***
- ***Made in the U.S.A.***

***Part # 7030 Fits: Twin Cam® Engines '07 – '14 Including '06 Dyna***

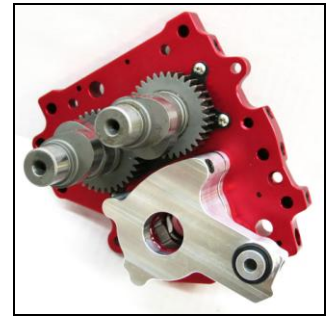
## **FEULING® HP+® HIGH VOLUME OIL PUMPS**



Part #7000



Part #7060



#7000 Installed on #8000

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Billet 6061 aluminum</li> <li>• Increases oil pressure</li> <li>• No more oily air cleaners</li> <li>• Eliminates blow by &amp; wet sumping</li> <li>• More HP and Torque to the rear wheel</li> <li>• Fits both A and B Twin Cam engines</li> <li>• High Flow 2" Chrome Moly gerotor gears</li> </ul> | <ul style="list-style-type: none"> <li>-High Volume oil pump</li> <li>-Cooler oil &amp; engine temperatures</li> <li>-40% more pressure volume than stock, 16%+ more than SE</li> <li>-60% more scavenge (return) volume than stock, 9%+ more than SE</li> <li>-Stock replacement</li> <li>-Feuling® design, tolerances &amp; material</li> <li>-Made in the U.S.A.</li> </ul> |
|---|--|

**Part # 7000 Fits: Twin Cam® Engines '99 – '06 Except '06 Dyna**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Billet 6061 aluminum</li> <li>• Increases oil pressure</li> <li>• No more oily air cleaners</li> <li>• Eliminates blow by &amp; wet sumping</li> <li>• More HP and Torque to the rear wheel</li> <li>• High Flow 2" Chrome Moly gerotor gears</li> <li>• Made in the U.S.A.</li> </ul> | <ul style="list-style-type: none"> <li>-High Volume oil pump</li> <li>-Cooler oil &amp; engine temperatures</li> <li>-32% more pressure volume than stock, 16%+ more than SE</li> <li>-38% more scavenge (return) volume than stock, 9%+ more than SE</li> <li>- Stock replacement</li> <li>- Feuling® design, tolerances &amp; material</li> </ul> |
|---|---|

**Part # 7060 Fits: Twin Cam® '07-'14 Includes '06 Dyna models**

**Fits: Screamin Eagle® and other aftermarket camplates which utilize the late style '07-'14 oil pumps**

## **FEULING® OIL PUMP FOR R&R CYCLES CAMPLATE**



**Fits: R&R Cycles T/C engine Cam Support Plates designed for use with '06 Dyna and newer T/C style oil pump.**

**R&R Camplate part #'s: #12-2014B  
#12-2014C  
#12-2014R**

**Part # 7068**

## **FEULING® RACE SERIES® OIL PUMPS**



**Part # 7050**



**Part #: 7062**

- 7075 Billet aluminum with military spec hard anodized, blue printed and designed for the racer!
- The 7075 alloy is 50% harder and stronger than 6061 aluminum and holds tighter tolerance under temperature
- More pressure volume and more oil pressure
- More scavenge volume eliminating power robbing wet sumping, blow - by and oily air cleaners
- Cooler oil and engine temperatures
- More horsepower, more torque, more oil pressure, more return volume
- High Flow 4140 heat treated Chrome Moly gerotor gears
- Stock replacement for Twin Cam® engines
- When combined with the Feuling® Camplate test results show 3 Horsepower gain and 4 ft/lbs of Torque gain to the rear wheel, while- lowering engine & oil temperature. Feuling® NOT required.
- Stock replacement for Twin Cam® engines, recommended for both strip & performance street engines
- Made in the U.S.A.

**Part # 7050** Twin Cam® '99 – '06 Except '06 Dyna

**Part # 7062** Twin Cam® '07-'14 Including '06 Dyna

## **SUPER SCAVENGER™ OIL PUMP**



**FEULING®**  
SUPER SCAVENGER



The NEW FEULING® SUPER SCAVENGER™ oil pump has an increased scavenge to pressure volume ratio creating the ultimate oil pump for Twin Cam engines. The SUPER SCAVENGER™ is manufactured using the same 7075 billet material and specs as the FEULING® RACE SERIES® oil pumps but feature a thinner pressure housing resulting in an increased ratio for the scavenge side of the oil pump.

Test results show a decrease in cylinder head temperatures and an increased amount of oil removed from engine crankcase & camchest eliminating power robbing wet sumping and oil carry over.

### Pressure Volume

18% more than '99-'06 factory oil pump

10% more than '07-'14 factory oil pump

1% more than SE oil pump

### Scavenge Volume

60% more than '99-'06 factory oil pump

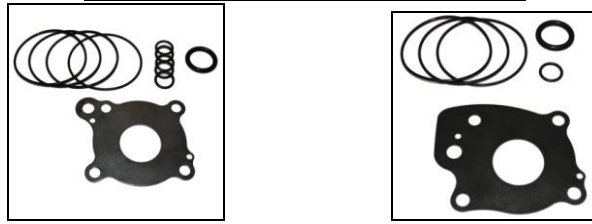
38% more than '07-'14 factory oil pump

9% more than SE oil pump

**#7059** - Fits Twin Cam® '99 – '06 Except '06 Dyna

**#7069** - Fits Twin Cam® '07-'14 Including '06 Dyna

## **FEULING® OIL PUMP REBUILD KITS**



- The Feuling® rebuild kit includes everything needed to properly rebuild the high volume Feuling® Twin Cam® Oil Pumps.
- Kit includes new O-rings, separator plate and installation instructions.
- Made in the U.S.A.

Part # 7001 Fits Feuling® oil pumps # 7000 & 7050

Part # 7061 Fits Feuling® oil pump # 7060 & 7062

## **FEULING® REPLACEMENT OIL PUMP HOUSINGS**



**FEULING® offers replacement oil pump housings, when damage occurs to either the gear set or aluminum housing the components must be replaced as a set because the inner & outer gears are matched to each other then matched to the aluminum housing within 0.0005" requiring the items be replaced as a matched set. NOTE: The best way to repair a damaged FEULING® pump is to send it in to our returns department for re-manufacturing.**

Part # 7002 **HP+®** oil pump #7000, Pressure housing, Pressure gear set, Separator plate, fasteners & O-rings '99 - '06, except '06 Dyna

Part # 7003 **HP+®** oil pump #7000, Scavenge housing, Scavenge gear set, Separator plate, fasteners & O-rings '99 - '06, except '06 Dyna

Part # 7051 **RACE SERIES®** oil pump #7050, Pressure housing, Pressure gear set, Separator plate, fasteners & O-rings '99 - '06, except '06 Dyna

Part # 7052 **RACE SERIES®** oil pump #7050, Scavenge housing, Scavenge gear set, Separator plate, fasteners & O-rings '99 - '06, except '06 Dyna

Part # 7063 **HP+®** oil pump #7060, Pressure housing, Pressure gear set, Separator plate, fasteners & O-rings '07 - '14, Includes '06 Dyna

Part # 7064 **HP+®** oil pump #7060, Scavenge housing, Scavenge gear set, Separator plate, fasteners & O-rings '07 - '14, Includes '06 Dyna

Part # 7065 **RACE SERIES®** oil pump #7062, Pressure housing, Pressure gear set, Separator plate, fasteners & O-rings '07 - '14, Includes '06 Dyna

Part # 7066 **RACE SERIES®** oil pump #7062, Scavenge housing, Scavenge gear set, Separator plate, fasteners & O-rings '07 - '14, Includes '06 Dyna



## FEULING® HIGH FLOW CAMPLATES



**Part #: 8000**



**Part #: 8010**



**Part #: 8011**



**Part #8015**

- FEULING® HIGH FLOW camplates for T/C® engines increase engine oil flow and volume by enlarging the oil pump reservoirs and critical oil passages including matching the oil port holes throughout the camplate to the port holes in the engine case increasing engine oil flow to the lifters, piston cooling jets, crankshaft and rod bearings resulting in 25-35 degree cooler engine temperatures.
- Made from 7075 billet aluminum which is 50% harder and stronger than the factory, SE® and other aftermarket camplates. The 7075 increases the strength and hardness of the camplate, holding tighter tolerances under temperature eliminating flexing and the need for bronze bushings as 7075 material has excellent bearing like properties.
- FEULING® camplates are blue printed and matched to the Feuling® oil pumps, which allow the Twin Cam® engine to take full advantage of the increased volume from the high flow oil pumps resulting in cooler quieter engine operation.
- Tighter cam bearing bore tolerance for improved press fit
- Camplates are pressure tested & pressure relief valve and spring are pre-set and designed for the increased volume and pressure, eliminating the need to stretch the spring or use a shim.
- When matched with the Feuling® Race Series Oil Pump rear wheel power gains of 3 Horsepower and 4 ft/lbs of Torque are achieved.
- For use ONLY with the Feuling® oil pumps
- Bolts into stock location
- Made in the U.S.A.

**Part # 8000** CAMPLATE “Gear Drive” T/C® ‘99 – ‘06, Except ‘06 Dyna

Includes military spec hard anodized, bearing retainer plate & hardware, For use ONLY with FEULING® oil pumps #7000 & 7050

**Part # 8010<sup>2</sup>** CAMPLATE “Chain Drive” T/C® ‘99 – ‘06, Except ‘06 Dyna,

Includes military spec hard anodize, bearing retainer plate, tensioner pins & chain guide tower, For use ONLY with FEULING® oil pumps #7000 & 7050

**Part # 8015<sup>1</sup>** CAMPLATE T/C® ‘07-‘14 Includes ‘06 Dyna models. Chain and Gear Drive

For use ONLY with FEULING® oil pumps #7060 & 7062

- Tighter cam journal bore tolerance for improved cam fitment
- Added Cam journal oil groove for cold start up protection and increased cam journal lubrication
- Added oil pressure feed holes to front and back of cam journals to prevent excessive thrusting wear

**Part # 8011<sup>3</sup>** ‘CONVERSION’ CAMPLATE’ for T/C® ‘99 - ‘06, Except ‘06 Dyna – has the original style ‘99 – ‘06 Twin Cam® cam bearing bores for use with the press in bearings. This camplate is designed to use the new style ‘07 – ‘14 Factory hydraulic chain tensioner system with the original ‘99 -‘06 Twin Cam® style camshafts. Great for those who have already upgraded their early style engine and like their existing camshafts. Camplate includes bearing retainer plate and hardware. Requires the purchase of ‘factory’ hydraulic chain drive tensioners. See Feuling #8081. \*‘99-‘01 engines with Magneti Marell ignition utilize the OE outer silent chain and rear cam sprocket. For use ONLY with FEULING® oil pumps #7060 & 7062

<sup>1</sup> Gear drive cam systems require block off plates - see Feuling #8016

<sup>2</sup> Includes tensioner pins and guide hardware

<sup>3</sup> Requires purchase of ‘factory’ hydraulic chain drive tensioners, chains, sprockets & hardware

### FACTORY COMPONENTS REQUIRED FOR CONVERSION CAMPLATE KITS

Required components to upgrade ‘99-‘06 style camshafts to the late style hydraulic chain tensioner system when using the FEULING® conversion camplate matched with original style ‘99-‘06 camshafts. If using conversion camshafts use ‘07-‘14 style oil pump & plate with ‘07-‘14 style chain drive components.

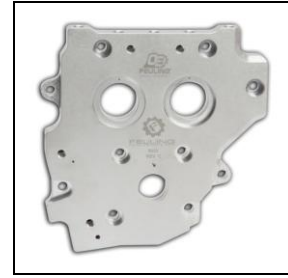
1 - # 25675-06	Outer chain 'New style'
1 - # 25607-99	Inner chain 'Old Style'
1 - # 25673-06	Outer crank sprocket 17 tooth
1 - # 25728-06	Outer cam sprocket 34 tooth
1 - # 39968-06	Outer hydraulic tensioner unit
1 - # 39969-06	Inner hydraulic tensioner unit
1 - #25285-08	Cam spacer kit
1 - Bolt kit	(2 - 1/4-20 x 3/4") (2 - 1/4-20 x 1-1/4")



## **FEULING OE+ CAMPLATES**



**Part # 8030**



**Part # 8033**

**FEULING® OE+ stock replacement billet camplates are manufactured from 6061 aluminum providing increased rigidity and machined to FEULING's® high tolerance standards. The pressure relief valve and spring are pre-set, matched and seated by FEULING® with a full pop off pressure of 50-60 psi. OE+ camplates are a direct bolt in replacement and will accept the factory oil pump. As with all FEULING® components, the competitively priced OE+ camplates are designed and manufactured to the highest standard of quality with proven FEULING® performance.**

**Part # 8030 CAMPLATE "Gear Drive" T/C® '99 – '06, Except '06 Dyna  
Includes bearing retainer plate & hardware, for use with any '99-'06 style oil pumps  
Compatible FEULING oil pumps: #7000, 7010, 7050**

**Part # 8031<sup>2</sup> CAMPLATE "Chain Drive" T/C® '99 – '06, Except '06 Dyna,  
Includes bearing retainer plate, tensioner pins & chain guide tower, for use with '99-'06 style oil pumps, compatible FEULING® oil pumps: #7000, 7010, 7050**

**Part # 8033<sup>1</sup> CAMPLATE T/C® '07-'14 Includes '06 Dyna models. Chain and Gear Drive for use with '07-'14 style oil pumps, compatible with FEULING® oil pumps: #7030, 7060, 7062**

- Tighter cam journal bore tolerance for improved cam fitment
- Added Cam journal oil groove for cold start up protection and increased cam journal lubrication
- Added oil pressure feed holes to front and back of cam journals to prevent excessive thrusting wear

**Part # 8032<sup>3</sup> 'CONVERSION' CAMPLATE' for T/C® '99 - '06, Except '06 Dyna – has the original style '99 – '06 T/C® cam bearing bores for use with the press in bearings. This camplate is designed to use the new style '07 – '14 Factory hydraulic chain tensioner system with the original '99 -'06 Twin Cam® style camshafts. Great for those who have already upgraded their early style engine and or prefer their existing camshafts.**

**Requires the purchase of 'factory' hydraulic chain drive tensioners and needed hardware. \*'99-'01 engines with Magneti Marell ignition utilize the stock outer silent chain and rear cam sprocket or will require separate purchase of Andrews sprocket # 216015 which will allow use of the '07-'14 style roller chain.**

**Camplate includes bearing retainer plate and hardware. For use with '07-'14 style oil pumps, compatible with FEULING® oil pumps: #7030, 7060, 7062**

**<sup>1</sup> Gear drive cam systems require block off plates - see Feuling #8016**

**<sup>2</sup> Includes tensioner pins and guide hardware**

**<sup>3</sup> Requires purchase of 'factory' hydraulic chain drive tensioners, chains, sprockets & hardware**

### **FACTORY COMPONENTS REQUIRED FOR CONVERSION CAMPLATE KITS**

**Required components to upgrade '99-'06 style camshafts to the late style hydraulic chain tensioner system when using the FEULING® conversion camplate matched with original style '99-'06 camshafts. If using conversion camshafts use '07-'14 style oil pump & plate with '07-'14 style chain drive components.**

**1 -# 25675-06 Outer chain New style**

**1 -# 25607-99 Inner chain Old Style**

**1 -# 25673-06 Outer crank sprocket 17 tooth**

**1 -# 25728-06 Outer cam sprocket 34 tooth**

**1 - # 39968-06 Outer hydraulic tensioner unit**

**1 - # 39969-06 Inner hydraulic tensioner unit**

**1 - #25285-08 Cam spacer kit**

**Allen Head Bolt kit (2 - 1/4-20 x 3/4") (2 - 1/4-20 x 1-1/4")**

## FEULING® OILING SYSTEM KITS



Part #7070



Part #7071



Part #7074



Part #7076



Part #7072



Part #7073



Part #7075



Part #7077

### Oil is the Life Blood of your Engine!

FEULING® oiling system kits combine all the needed components to finish your T/C® engine's oiling system under 1 Part #, available in HP+® or RACE SERIES® kits. FEULING® oiling system kits increase oil pressure, oil volume, engine oil flow and return oil scavenging, eliminating wet sumping and oily air cleaners. Test results show 25-35 degree cooler engine temperatures, 15-30 degree cooler oil temperatures, 15-30 more pounds of oil pressure and quieter smoother engine operation. Results also show a substantial increase of oil pressure and 3 H.P. and 4 Ft. Lbs of T.Q to the rear wheel.

Both HP+® and RACE SERIES® kits include FEULING'S® HIGH FLOW billet camplate made from 7075 aluminum which is 50% harder and stronger than the factory, SE® and other aftermarket camplates. FEULING® increases oil flow and volume by enlarging the oil pump reservoirs and critical oil passages including matching the oil port holes throughout the camplate to the port holes in the engine case which increases engine oil flow to the lifters, piston cooling jets, crankshaft and rod bearings.

**-HP+® SERIES Kits** include a billet 6061 aluminum high volume oil pump, FEULING® HIGH FLOW camplate, HP+® Hydraulic roller lifters, gaskets and o-ring kit.

**-RACE SERIES® Kits** include a billet 7075 hard anodized oil pump which is 50% harder and stronger than the factory pump holding tighter tolerances under temperature. RACE SERIES® hydraulic lifters have a full .200" of total travel designed with a slower bleed down rate to handle heavy valve spring pressures, increase engine RPM before valve float and feature increased roller clearance for steep ramped camshafts. Kits include a RACE SERIES® oil pump, RACE SERIES® lifters, HIGH FLOW camplate, gaskets and o-rings.

**CONVERSION CAMPLATE Kits** #7076 & #7077 utilize the early style '99-'06 chain drive camshafts and upgrade the cam chain system to use the late style '07-'13 hydraulic tensioner system. 'Factory' sprockets, tensioners, chain and hardware purchased separately - see Feuling #8081  
\*99-'01 engines utilize the OE outer silent chain and rear cam sprocket.

### HP+® SERIES

#### T/C '99-'06 EXCEPT '06 DYNA

#7070 <sup>3</sup>	'99-'06 Except '06 Dyna, HP +® Series – Gear Drive	(Part #'s: 2050, 4000, 7000, 8000, 8001)
#7071 <sup>3</sup>	'99-'06 Except '06 Dyna, HP +® Series – Chain Drive	(Part #'s: 2050, 4000, 7000, 7078, 8000, 8001)
#7076 <sup>1</sup>	'99-'06 Except '06 Dyna, HP +® Series – Conversion Camplate	(Part #'s: 2050, 4000, 7060, 8001, 8011)

#### T/C '07-'14 INCLUDES '06 DYNA

#7074 <sup>2</sup>	'07-'14 + '06 Dyna Models HP +® Series – Gear & Chain	(Part #'s: 2050, 4000, 7060, 8015)
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### RACE SERIES®

#### T/C '99-'06 EXCEPT '06 DYNA

#7072 <sup>3</sup>	'99-'06 Except '06 Dyna, RACE SERIES® – Gear Drive	(Part #'s: 2050, 4050, 7050, 8000, 8001)
#7073 <sup>3</sup>	'99-'06 Except '06 Dyna, RACE SERIES® – Chain Drive	(Part #'s: 2050, 4050, 7050, 7078, 8001, 8000)
#7077 <sup>1</sup>	'99-'06 Except '06 Dyna, RACE SERIES® – Conversion Camplate	(Part #'s: 2050, 4050, 7062, 8001, 8011)

#### T/C '07-'14 INCLUDES '06 DYNA

#7075 <sup>2</sup>	'07-'14 + '06 Dyna Models RACE SERIES® – Gear & Chain	(Part #'s: 2050, 4050, 7062, 8015)
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<sup>1</sup> Conversion camplate uses '99-'06 chain drive camshafts with late style '07-'14 hydraulic chain tensioner system, purchased separately - See - Feuling # 8081 pg. 33

<sup>2</sup> Gear drive cams require block off plates see Feuling #8016

<sup>3</sup> Includes bearing retainer plate & hardware

## FEULING OE+ OIL PUMP/CAMPLATE KITS



Part #7080



Part # 7081



Part # 7084

**FEULING® OE+ oil pump and camplate kits are an upgrade to the stock oiling system, delivering increased oil pressure and return scavenge volumes from an OE+ billet oil pump and matched OE+ billet camplate. The OE+ billet camplates have increased rigidity and are machined to tighter tolerances compared to stock. The OE+ camplate pressure relief valve and spring are seated and pre-set with a 50-60 psi pop off.**

**The competitively priced OE+ product line is an upgraded alternative to stock and as with all FEULING® products, the OE+ engine components are designed and manufactured to the highest standard of quality with proven FEULING® performance.**

### OE+ SERIES

#### T/C '99-'06 EXCEPT '06 DYNA

#7080 <sup>2</sup>	'99-'06 Except '06 Dyna, <b>OE+ Series – Gear Drive</b>	(Part #'s: 7010, 8001, 8030)
#7081 <sup>3</sup>	'99-'06 Except '06 Dyna, <b>OE+ Series – Chain Drive</b>	(Part #'s: 7010, 7078, 8001, 8030)
#7086 <sup>1 3</sup>	'99-'06 Except '06 Dyna, <b>OE+ Series – Conversion Camplate</b>	(Part #'s: 7030, 8001, 8032)

#### T/C '07-'14 INCLUDES '06 DYNA

#7084 <sup>2</sup>	'07-'14 + '06 Dyna Models <b>OE+ Series – Gear or Chain</b>	(Part #'s: 7030, 8033)
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<sup>1</sup> Conversion camplate uses '99-'06 chain drive camshafts with late style '07-'14 hydraulic chain tensioner system, purchased separately

<sup>2</sup> Gear drive cams require block off plates see Feuling #8016

<sup>3</sup> Includes bearing retainer plate & hardware





**BULLETPROOF™**

## **FEULING® CAMCHEST KITS**



Part # 7201 & 7202



Part # 7222

### **BULLETPROOF™ CAMCHESTS!**

**FEULING® camchest kits include all necessary components from top to bottom of the camchest conveniently packaged under 1 part #. These combination kits not only ensure each individual part is designed to work and function together but to do so in total harmony. These camchest kits take the guess work out of the ordering process and guarantees the engine builder maximum reliability, peak performance and the coolest engine and oil temperatures obtainable.**

**25-35 degree cooler engine temperatures, 15-30 degree cooler oil temperatures, 15-30 more pounds of oil pressure, quieter and smoother engine operation, eliminate wet sumping, blow by and oily air cleaners.**

**Camchest kits are available in FEULING® HP+® and RACE SERIES® combinations and with gear drive or chain drive REAPER® camshafts. Fitments available for '99-'13 Twin Cam® engines.**

**Kits include: FEULING® high volume Oil pump, high flow billet Camplate, REAPER® Series Camshafts, hydraulic roller Lifters, adjustable Pushrods, TIMKEN®/KOYO® Bearings, Gaskets, O-rings, hardware, ARP® fasteners, washers, moly lube and LOCTITE®. Camchest kits are available in FEULING® HP+® and RACE SERIES® combinations and with gear drive or chain drive REAPER® camshafts. Fitments available for '99-'13 Twin Cam® engines.**

### **CHAIN DRIVE CAMCHEST KITS**

FEULING® REAPER® Series chain drive camshafts utilize the factory chains, sprockets and tensioner systems.

#### **T/C '99-'06 EXCEPT '06 DYNA**

- #7201 **HP+®** Camchest Kit, 525" Chain Drive '99-'06 Except '06 Dyna – (Includes #1001, 2060, 4000, 4090, 7000, 8010, 8020)
- #7230 **HP+®** Camchest Kit, 543" Chain Drive '99-'06 Except '06 Dyna – (Includes #1000, 2060, 4000, 4090, 7000, 8010, 8020)
- #7202 **HP+®** Camchest Kit, 574" Chain Drive '99-'06 Except '06 Dyna – (Includes #1002, 2060, 4000, 4090, 7000, 8010, 8020)
- #7214 **RACE SERIES®** Camchest Kit, 574" Chain Drive '99-'06 Except '06 Dyna – (Includes #1002, 2060, 4050, 4090, 7050, 8010, 8020)
- #7234 **RACE SERIES®** Camchest Kit, 594" Chain Drive '99-'06 Except '06 Dyna – (Includes #1301, 2060, 4050, 4090, 7050, 8010, 8020)
- #7203 **RACE SERIES®** Camchest Kit, 630" Chain Drive '99-'06 Except '06 Dyna – (Includes #1003, 2061, 4050, 4070, 7050, 8010, 8020)

#### **T/C '07-'14 INCLUDES '06 DYNA**

- #7206 **HP+®** Camchest Kit, 525" Chain Drive '07-'14 Includes '06 Dyna – (Includes #1006, 2070, 4000, 4090, 7060, 8015, 8020)
- #7231 **HP+®** Camchest Kit, 543" Chain Drive '07-'14 Includes '06 Dyna – (Includes #1020, 2070, 4000, 4090, 7060, 8015, 8020)
- #7209 **HP+®** Camchest Kit, 574" Chain Drive '07-'14 Includes '06 Dyna – (Includes #1009, 2070, 4000, 4090, 7060, 8015, 8020)
- #7215 **RACE SERIES®** Camchest Kit, 574" Chain Drive '07-'14 Includes '06 Dyna – (Includes #1009, 2070, 4050, 4090, 7062, 8015, 8020)
- #7235 **RACE SERIES®** Camchest Kit, 594" Chain Drive '07-'14 Includes '06 Dyna – (Includes #1303, 2070, 4050, 4090, 7062, 8015, 8020)
- #7212 **RACE SERIES®** Camchest Kit, 630" Chain Drive '07-'14 Includes '06 Dyna – (Includes #1012, 2071, 4050, 4070, 7062, 8015, 8020)

### **CONVERSION CHAIN DRIVE CAM CAMCHEST KITS**

#### **UPDATE YOUR OLD MECHANICAL STYLE CAMS AND TENSIONERS TO THE NEW HYDRAULIC STYLE TENSIONER SYSTEM**

Conversion camshafts for '99-'06 Twin Cam engines. These camshafts utilize the '99-'06 inner cam journals with the '07-'13 outer cam journals allowing the use of the '07-'13 camplates, oil pump, hydraulic chain tensioners and chain drive system

#### **T/C '99-'06 EXCEPT '06 DYNA**

- #7220<sup>2</sup> **HP+®** Camchest Kit, 525" Conversion Chain Drive cams, '99-'06 Except '06 Dyna – (#'s: 1016, 2063, 4000, 4090, 7060, 8015, 8020)
- #7224<sup>2</sup> **HP+®** Camchest Kit, 543" Conversion Chain Drive cams, '99-'06 Except '06 Dyna – (#'s: 1015, 2063, 4000, 4090, 7060, 8015, 8020)
- #7221<sup>2</sup> **HP+®** Camchest Kit, 574" Conversion Chain Drive cams, '99-'06 Except '06 Dyna – (#'s: 1017, 2063, 4000, 4090, 7060, 8015, 8020)
- #7222<sup>2</sup> **RACE SERIES®** Camchest Kit, 574" Conversion Chain Drive cams, '99-'06 Except '06 Dyna – (#'s: 1017, 2063, 4050, 4090, 7062, 8015, 8020)
- #7225<sup>2</sup> **RACE SERIES®** Camchest Kit, 594" Conversion Chain Drive cams, '99-'06 Except '06 Dyna – (#'s: 1019, 2063, 4050, 4090, 7062, 8015, 8020)
- #7223<sup>2</sup> **RACE SERIES®** Camchest Kit, 630" Conversion Chain Drive cams, '99-'06 Except '06 Dyna – (#'s: 1018, 2064, 4050, 4070, 7062, 8015, 8020)

<sup>1</sup>Requires cam gear set, FEULING® part #'s 1095 or 1096 or see Andrews® or S&S® gear kits

<sup>2</sup>Conversion cams use early '99-'06 style inner cam journals with late style '07-'14 outer journals requiring late style hydraulic chain tensioners, sprockets and chains - purchased separately see Feuling # 8080 - See page #33





## **BULLETPROOF™** **FEULING® CAMCHEST KITS**



Part # 7204, 7207 & 7232



Part # 7216K & 7236K

### **GEAR DRIVE CAMCHEST KITS**

FEULING® REAPER® Series gear drive camshafts are stock replacement fit and utilize the standard cam gears offered by FEULING®, ANDREWS® and S&S®.

#### **T/C '99-'06 EXCEPT '06 DYNA**

- #7204' **HP+®** Camchest Kit, 525" Gear Drive '99-'06 Except '06 Dyna – (Includes #1004, 2060, 4000, 4090, 7000, 8000, 8020)
- #7232' **HP+®** Camchest Kit, 543" Gear Drive '99-'06 Except '06 Dyna – (Includes #1021, 2060, 4000, 4090, 7000, 8000, 8020)
- #7207' **HP+®** Camchest Kit, 574" Gear Drive '99-'06 Except '06 Dyna – (Includes #1007, 2060, 4000, 4090, 7000, 8000, 8020)
- #7216' **RACE SERIES®** Camchest Kit, 574" Gear Drive '99-'06 Except '06 Dyna – (Includes #1007, 2060, 4050, 4090, 7050, 8000, 8020)
- #7236' **RACE SERIES®** Camchest Kit, 594" Gear Drive '99-'06 Except '06 Dyna – (Includes #1302, 2060, 4050, 4090, 7050, 8000, 8020)
- #7210' **RACE SERIES®** Camchest Kit, 630" Gear Drive '99-'06 Except '06 Dyna – (Includes #1010, 2061, 4050, 4070, 7050, 8000, 8020)

#### **T/C '07-'14 INCLUDES '06 DYNA**

- #7205' **HP+®** Camchest Kit, 525" Gear Drive '07-'14 Includes '06 Dyna – (Includes #1005, 2065, 4000, 4090, 7060, 8015, 8020)
- #7233' **HP+®** Camchest Kit, 543" Gear Drive '07-'14 Includes '06 Dyna – (Includes #1022, 2065, 4000, 4090, 7060, 8015, 8020)
- #7208' **HP+®** Camchest Kit, 574" Gear Drive '07-'14 Includes '06 Dyna – (Includes #1008, 2065, 4000, 4090, 7060, 8015, 8020)
- #7217' **RACE SERIES®** Camchest Kit, 574" Gear Drive '07-'14 Includes '06 Dyna – (Includes #1008, 2065, 4050, 4090, 7062, 8015, 8020)
- #7237' **RACE SERIES®** Camchest Kit, 594" Gear Drive '07-'14 Includes '06 Dyna – (Includes #1304, 2065, 4050, 4090, 7062, 8015, 8020)
- #7211' **RACE SERIES®** Camchest Kit, 630" Gear Drive '07-'14 Includes '06 Dyna – (Includes #1011, 2066, 4050, 4070, 7062, 8015, 8020)

*'Requires cam gear set, FEULING® part #'s 1095 or 1096 or see Andrews® or S&S® gear kits*

### **GEAR DRIVE CAMCHEST KITS WITH CAM GEAR SET (K)**

These kits include FEULING® REAPER® Series gear drive camshafts and cam gear set. Cam gear sets includes the standard size inner and outer cam gears, key ways, crank & cam bolts & washers.

#### **T/C '99-'06 EXCEPT '06 DYNA**

- #7204K **HP+®** Complete Camchest Kit, 525" Gear Drive '99-'06 Except '06 Dyna - #'s: 1004, 1095, 2060, 4000, 4090, 7000, 8000, 8020
- #7232K **HP+®** Complete Camchest Kit, 543" Gear Drive '99-'06 Except '06 Dyna - #'s: 1021, 1095, 2060, 4000, 4090, 7000, 8000, 8020
- #7207K **HP+®** Complete Camchest Kit, 574" Gear Drive '99-'06 Except '06 Dyna - #'s: 1007, 1095, 2060, 4000, 4090, 7000, 8000, 8020
- #7216K **RACE SERIES®** Complete Camchest Kit, 574" Gear Drive '99-'06 Except '06 Dyna - #'s: 1007, 1095, 2060, 4050, 4090, 7050, 8000, 8020
- #7236K **RACE SERIES®** Complete Camchest Kit, 594" Gear Drive '99-'06 Except '06 Dyna - #'s: 1302, 1095, 2060, 4050, 4090, 7050, 8000, 8020
- #7210K **RACE SERIES®** Complete Camchest Kit, 630" Gear Drive '99-'06 Except '06 Dyna - #'s: 1010, 1095, 2061, 4050, 4070, 7050, 8000, 8020

#### **T/C '07-'14 INCLUDES '06 DYNA**

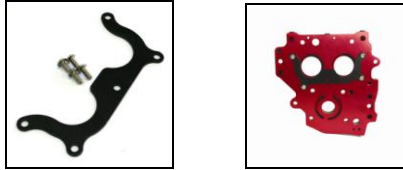
- #7205K **HP+®** Complete Camchest Kit, 525" Gear Drive '07-'14 Includes '06 Dyna - #'s: 1005, 1096, 2065, 4000, 4090, 7060, 8015, 8020
- #7233K **HP+®** Complete Camchest Kit, 543" Gear Drive '07-'14 Includes '06 Dyna - #'s: 1022, 1096, 2065, 4000, 4090, 7060, 8015, 8020
- #7208K **HP+®** Complete Camchest Kit, 574" Gear Drive '07-'14 Includes '06 Dyna - #'s: 1008, 1096, 2065, 4000, 4090, 7060, 8015, 8020
- #7217K **RACE SERIES®** Complete Camchest Kit, 574" Gear Drive '07-'14 & '06 Dyna - #'s: 1008, 1096, 2065, 4050, 4090, 7062, 8015, 8020
- #7237K **RACE SERIES®** Complete Camchest Kit, 594" Gear Drive '07-'14 & '06 Dyna - #'s: 1304, 1096, 2065, 4050, 4090, 7062, 8015, 8020
- #7211K **RACE SERIES®** Complete Camchest Kit, 630" Gear Drive '07-'14 & '06 Dyna - #'s: 1011, 1096, 2066, 4050, 4070, 7062, 8015, 8020

## **FEULING® CHAIN GUIDE TOWER & TENSIONER PINS**



**Part #7078** Adapts Feuling kit #'s 7070 & 7072 and camplate #8000 to chain drive systems. Fits '99-'06 Twin Cams, Except '06 Dyna

## **FEULING® BEARING RETAINER PLATE**



**Part # 8001** - Bearing retainer plate & hardware fits all Twin Cam model camplates '99 - '06, Except '06 Dyna, FEULING camplate #8000 Includes the bearing retainer plate.

## **FEULING® PLUNGER, SPRING, ROLL PIN KIT**



**Part #8002**

**Part # 8004**

FEULING® camplate pressure relief valve plunger, spring & roll pin. Increase the pressure relief valve pop off PSI with the Feuling spring, bench testing recommended with FEULING® camplate pressure test tool #9010 to ensure proper valve seal and valve operation.

**Part # 8002** Relief valve plunger, spring & roll pin

Fits: '99 – '14 Twin Cam® Engine camplates 'All Models'

**Part # 8004** Relief valve plunger 'only'

Fits: '99 – '14 Twin Cam® Engine camplates 'All Models'

## **FEULING® CAMPLATE CHAIN TENSIONER PINS**



When changing Twin Cam chain drive camplates or replacing chain drive tensioners these FEULING® heat treated chrome moly pins ensure proper press fit.

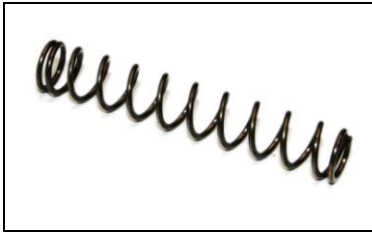
**Part # 8003** Fits All: '99 – '06 (Except '06 Dyna) Twin Cam Chain Drive camplates

## **FEULING® BLOCK OFF PLATES**



**Part # 8016** - Block off plates for '07 – '14 Camplates when using gear drive camshafts, used to block off the oil holes for the hydraulic chain tensioner system. Fits all T/C model camplates '07-'14, Includes '06 Dyna. Factory, Screamin Eagle and aftermarket

## **FEULING® PRESSURE RELIEF SPRINGS**



*Increase the camplate pressure relief pop off pressure with a Feuling® spring. Our spring has the proper spring rate to control the pop off pressure and oil flow in the bypass port. Bench testing recommended with the Feuling® camplate pressure test tool (#9010) set your pop off pressure to your preference. For use with all Twin Cam® camplates*

**Part # 8018** Twin Cam® '99 – Present, Qty. 1

**Part # 8019** Twin Cam® '99 – Present, Qty. 6

## **FEULING® CAMPLATE / OIL PUMP FASTENER KIT**



- **Optional Feuling® camplate/oil pump fastener kit for Twin Cam® engines**
- **Quality 12-point heat treated 8740 chrome moly steel bolts with black oxide finish**
- **Feature precision rolled threads for optimum engagement, to prevent galling and promote more consistent torque loading.**
- **Wide underhead flange design provides even load distribution for optimum sealing of surfaces - preventing leaks.**
- **Quality engine builders demand quality fasteners! Secure your engine with complete confidence.**
- **Tensile strength rated @ 170,000 psi – Superior & Stronger than OEM & stronger than grade 8 fasteners**
- **Manufactured by ARP® to Feuling's® exact specifications**
- **Kits include moly assembly lubricant for installation**
- **Made in the U.S.A.**

**Part # 8020** Twin Cam® Engines '99 - Present equipped with Feuling® Camplate & Oil Pump

**NOT AVAILABLE - HYDRAULIC CHAIN TENSIONER/CHAINS/SPROCKET KITS**



**PART # 8080**



**PART # 8081**



**PART # 8083**

**Part # 8080 - For use with conversion camshafts & '07-'14 oiling systems**

- 1 - # 25675-06 Outer chain
- 1 - # 25683-06 Inner chain
- 1 - # 25673-06 Outer crank sprocket 17 tooth
- 1 - # 25728-06 Outer cam sprocket 34 tooth
- 1 - # 39968-06 Outer hydraulic tensioner unit
- 1 - # 39969-06 Inner hydraulic tensioner unit
- 1 - #8082 Bolt kit (2 - 1/4-20 x 3/4") (2 - 1/4-20 x 1-1/4")
- 1 - Spacer Kit Includes the following spacers
  - 1-# 25729-06 Thrust washer - front cam .100
  - 1- # 25731-06 Spacer (.110 for cam alignment; use as required)
  - 1 - #25734-06 Spacer (.120 for cam alignment; use as required)
  - 1 - #25736-06 Spacer (.130 for cam alignment; use as required)
  - 1 - #25737-06 Spacer (.140 for cam alignment; use as required)
  - 1 - #25738-06 Spacer (.150 for cam alignment; use as required)

**Part #8083 - For use with conversion camshafts & '07-'14 oiling systems on '99-'01 engines W/ Magneti Marell ignition. Kit Includes the same parts as #8080 with exception of Andrews sprocket #216015 which replaces HD 34 tooth sprocket #25728-06. Includes the following**

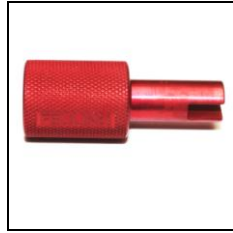
- 1 - # 25675-06 Outer chain
- 1 - # 25683-06 Inner chain
- 1 - # 25673-06 Outer crank sprocket 17 tooth
- 1 - # 216015 Andrews Outer cam sprocket 34 tooth (Feuling #1094)
- 1 - # 39968-06 Outer hydraulic tensioner unit
- 1 - # 39969-06 Inner hydraulic tensioner unit
- 1 - #8082 Bolt kit (2 - 1/4-20 x 3/4") (2 - 1/4-20 x 1-1/4")
- 1 - Spacer Kit Includes the following spacers
  - 1-# 25729-06 Thrust washer - front cam .100
  - 1- # 25731-06 Spacer (.110 for cam alignment; use as required)
  - 1 - #25734-06 Spacer (.120 for cam alignment; use as required)
  - 1 - #25736-06 Spacer (.130 for cam alignment; use as required)
  - 1 - #25737-06 Spacer (.140 for cam alignment; use as required)
  - 1 - #25738-06 Spacer (.150 for cam alignment; use as required)

**Feuling Part #8081 - For use with '99-'06 camshafts & conversion camplate which allows use of hydraulic tensioner system. Includes the following H-D components**

- 1 - # 25675-06 Outer chain 'New style'
- 1 - # 25607-99 Inner chain 'Old Style'
- 1 - # 25673-06 Outer crank sprocket 17 tooth
- 1 - # 25728-06 Outer cam sprocket 34 tooth
- 1 - # 39968-06 Outer hydraulic tensioner unit
- 1 - # 39969-06 Inner hydraulic tensioner unit
- 1 - #25285-08 Cam spacer kit
- 1 - #8082 Bolt kit (2 - 1/4-20 x 3/4") (2 - 1/4-20 x 1-1/4")



## **FEULING® PRESSURE RELIEF SPRING/VALVE REMOVAL TOOL**



*This tool makes for easy removal and installation of the pressure relief spring, by-pass valve and roll pin in the Twin Cam camplate. The tool is used to hold the relief spring down and away from the roll pin. Fits all Twin Cam® engine camplates. Made in the U.S.A.*

**Part # 9000**

## **FEULING® PRESSURE RELIEF PSI TEST TOOL**



**Part #: 9000, 9010**



**Part #: 9010**



**Multi view #: 9000, 9010**



**Part # 9011**

*This pressure test tool is a must for any H-D® Twin Cam engine builder. Bench test each camplate before installation, cycle the pressure relief valve, testing operation and assuring the valve moves freely, seats and seals each time, any leakage at the relief valve will reduce oil pressure.*

*This tool allows the engine builder to know what PSI the relief valve opens; the spring tension can be adjusted to achieve the desired pop off PSI. Tool includes: air regulator, 0 – 100 psi pressure gauge, gasket & needed hardware, fits all Twin Cam engine camplates. Feuling® recommends the camplate valve be seated 0-30 psi with full pop off at 55-60 psi. Made in the U.S.A.*

**Part # 9010**

**Part # 9011** Replacement gasket for tool #9010

## **REAMER FOR T/C CAMPLATE RELIEF VALVE BORE**



*Engine builders can use this reamer to perform a 'valve job' on the pressure relief valve seat of all T/C engine camplates, factory & aftermarket. Best used in conjunction with Feuling pressure test tool #9010, lightly machine (clean) the camplate relief valve seat and re-seat the plunger valve. Feuling recommends installing a new relief plunger valve - See Feuling #8002 or #8004.*

**Part # 9008** Reamer for T/C camplate pressure relief valve

## **AIR REGULATOR**



**Part #9009** Air regulator, 1/8" NPT gauge fitting, 1/4 NPT air inlet and outlet, fits FEULING tool #9010



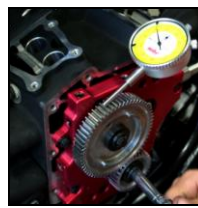
## **FEULING® CRANKSHAFT RUN OUT & GEAR DRIVE BACKLASH MEASURING TOOL**



**Part # 9015**



**Measuring Run Out**



**Measuring Back Lash**



**Part # 9016**

*This tool simplifies and speeds the process of checking crankshaft run out on both Twin Cam® and EVO® model engines with the crankshaft installed. The tool mounts to the cam chest side of the engine case using the designated mounting holes of the tool combined with the handled thumb screws and the case cam cover bolt holes. The tool gives quick and accurate readings of the engine's crank pinion shaft run out and makes for a great display to show and explain to customers the condition of their crankshaft.*

*Quickly and accurately measures gear drive back lash on T/C engines, using the supplied spacer to bolt indicator to top right cam cover bolt hole.*

*Tool includes: tool plate, +/-0.001" dial indicator, thumb screws & hardware. MADE IN THE U.S.A.*

**FEULING® PART # 9015** FITS: T/C® '99 – PRESENT, EVO® '84 – '99  
**FEULING® PART # 9016** Replacement universal 1" Dial indicator fits tool #9015. 0.001"

## **FEULING® REMOTE OIL PRESSURE GAUGE/LINE KIT**



*Remote oil psi gauge/line kit allows you to check engine oil pressure using a quality liquid filled mechanical psi gauge while keeping your factory electronic gauge and or low oil pressure indicator light hooked up. Great tool for verifying actual engine oil pressure and comparing readout of factory psi gauge.*

*Hooks up to existing oil psi ascending unit port, oil line routes up the right side frame rail, gauge fastens to the handlebars near the master cylinder.*

*Fits all models*      **#9018** Stainless/chrome  
                          **#9019** Black

## **OIL PRESSURE GAUGES**



*Quality liquid filled pressure gauge 1.5" dial with 0-100 range, stainless steel case with white or black dial face, brass 1/8 NPT male bottom port. Accuracy 3-2-3%*

**#9040** White dial face  
**#9041** Black dial face

## **PUSHROD TUBE HOLDER TOOL**



*Feuling® pushrod tube holder makes for easy adjustment of adjustable pushrods, holding pushrod tubes up and out of the way. Tool included in FAST INSTALL™ pushrod kits #4090 & #4091. Made in the U.S.A.*

*#9012 Quantity 1*

*#9013 Quantity 4*

## **FEULING® OIL SQUIRT CAN**



*This tool easily pumps up hydraulic lifters, using thin 5 or 10 weight motor oil or automatic transmission fluid to pump oil into the lifter side feed hole to push all of the air out of the lifter internals. You will see air bubbles come out the top pushrod seat hole, It's best to work the oil back and forth from the side feed hole and back through the top pushrod seat hole to work all the air out. This will ensure the lifter is fully pumped up and will not run dry on initial start up.*

*Part # 9005 Works on all hydraulic lifters*

## FEULING® TIMKEN® OUTER CAM BEARINGS



Part # 2075



Part #2078

TIMKEN



FEULING® supplies the best bearings available, our outer camshaft/camplate bearings are single-row deep groove bearings manufactured by Timken® Fafnir®. Timken® Fafnir® housed units are a necessity where tough applications and conditions apply.

Radial ball bearings consist of an inner and outer ring with a cage containing a complement of precision balls. The standard Conrad-type bearing has a deep-groove construction capable of handling radial and axial loads from either direction and are engineered for use in high-speed, high precision applications.

Timken® Fafnir® - Wherever there is motion, you'll find Timken® at work. Timken® is one of the world's leading producers of highly engineered antifriction bearings and related products and services. Timken® has operations in 30 countries on six continents, and their team of 21,000 employees is dedicated to improving our customers' performance in a variety of applications.

**Part # 2075** Outer camshaft bearings for Twin Cam camplates, Timken® ball bearing style bearings qty.

2 Fits: T/C '99-'06 except '06 Dyna - gear drive cams

**Part #2078** Outer camshaft bearing kit includes qty. 1 ball bearing style front cam bearing and qty. 1 roller bearing style rear cam bearing with race. Factory H-D #8983

Fits: T/C '99-'06 except Dyna with chain drive cams

## FEULING® KOYO® TORRINGTON® INNER CAM BEARINGS



Koyo.  
Torrington®

FEULING® supplies the best bearings available, our inner cam bearings are heavy duty full complement style designed to accept the higher loads and demands of performance engines. As of recent there has been a change in the labeling and packaging of our inner cam bearings due to the following acquisition.

Koyo Bearings USA LLC, was created following the acquisition of The Timken Company's Needle Roller Bearings business. The acquisition combines the strength, heritage and intellectual capital of Koyo® and Torrington® Needle Roller Bearings to create one of the world's largest needle roller bearing manufacturers.

**Part # 2076** Inner Cam Bearings - Full needle bearing, Torrington®, qty. 2,

Fits: T/C '99-'06 except '06 Dyna

**Part # 2077** Inner Cam Bearings - Full needle bearing, Torrington®, qty. 2,

Fits: T/C '07-'14 Includes '06 Dyna

## FEULING® TIMKEN® STEERING HEAD BEARINGS/RACES

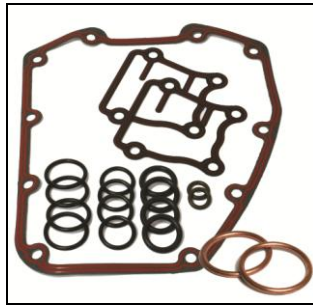


**Part # 2081** Timken® Steering head bearings. Timken # L44643, Qty. 1

**Part # 2082** Timken® Steering head races. Timken #L44640, Qty. 1 for bearing #L44643.

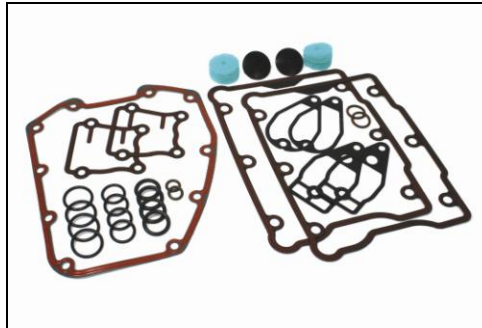
Fits: 85 FX, 85-86 FXWG, 84-14 FXST, FLST, 86-14 XL, 84-84 FXR, 91-14 Dyna Glide, 84-13 FLT, FLHT, FLHR and 02-13 V-Rod

### **GASKET KIT – QUICK CHANGE**



*Quick cam change gasket kit – Includes cam cover, lifter block and exhaust gaskets, camplate and pushrod tube O-rings. **Part #2050** Fits T/C engines '99-Present*

### **GASKET KIT – QUICK CHANGE + TOP END**



*Quick change + Top End gasket kit – Includes rocker cover, cam cover, lifter block, exhaust and breather assembly gaskets. Camplate, pushrod tube, rocker assembly and factory oil pump O-rings. Breather umbrella valves and filter elements. **Part #2055** Fits T/C engines '99-Present*

### **EXHAUST GASKETS**

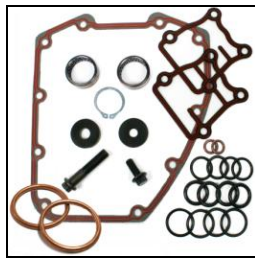


*Exhaust gaskets, quantity 2, Manufactured by James Gaskets®. To get proper exhaust sealing requires proper torque of the exhaust nuts, FEULING® recommends replacing exhaust studs and nuts if necessary - See Feuling part #3048. **Part #2051***

## FEULING® CAMSHAFT INSTALLATION KITS



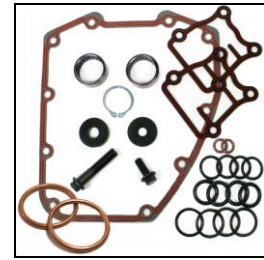
Part # 2060



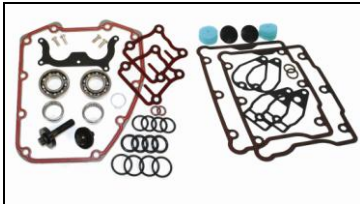
Part # 2063



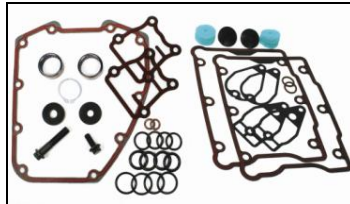
Part # 2065



Part # 2070



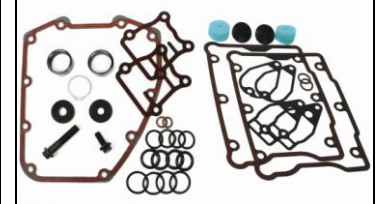
Part # 2061



Part # 2064



Part # 2066



Part # 2071

**FEULING® Quick Change** Camshaft installation kits for Twin Cam® engines include Timken® camplate roller bearings, KOYO® Torrington® full roller needle inner cam bearings, 12 point ARP® camshaft and crankshaft bolts with hardened washers and camshaft retaining clip. Gaskets include cam cover, lifter blocks, exhaust, pushrod tube and camplate o-rings, ARP fastener moly paste, and Loctite thread compound.

**FEULING® Quick Change + Top End** kits also include rocker box cover and breather assembly gaskets, breather elements, breather umbrella valves and rocker support O-rings.

### T/C '99-'06 EXCEPT '06 DYNA - CHAIN DRIVE

**Part # 2058 Quick Change:** Gasket kit #2050, bearing retainer plate #8001, camplate bearings 1 roller with race and 1 ball bearing style FEULING #2078, 2 inner cam bearings #2076, cam/crank bolt/washer kit # 3042.

**Part # 2059 Quick Change + Top End:** Gasket kit #2055, exhaust gaskets #2051, bearing retainer plate #8001, camplate bearings 1 roller with race and 1 ball bearing style FEULING #2078, 2 inner cam bearings #2076, cam/crank bolt/washer kit # 3042.

### T/C '99-'06 EXCEPT '06 DYNA - GEAR DRIVE

**Part # 2060 Quick Change:** Gasket kit #2050, bearing retainer plate #8001, 2 camplate bearings #2075, 2 inner cam bearings #2076, cam/crank bolt/washer kit # 3042.

**Part # 2061 Quick Change + Top End:** Gasket kit #2055, exhaust gaskets #2051, bearing retainer plate #8001, 2 Camplate bearings #2075, 2 inner cam bearings #2076, cam/crank bolt/washer kit # 3042.

### T/C '99-'06 EXCEPT '06 DYNA - CONVERSION CAMS

**Part # 2063 Quick Change:** Gasket kit #2050, 2 inner cam bearings #2076, cam/crank bolt/washer kit # 3042.

**Part # 2064 Quick Change + Top End:** Gasket kit #2055, exhaust gaskets #2051, 2 inner cam bearings #2076, cam/crank bolt/washer kit #3042.

### T/C '07-'14 INCLUDES '06 DYNA - GEAR DRIVE

**Part # 2065 Quick Change:** Gasket kit #2050, block off plate kit #8016, 2 inner Cam Bearings #2077, cam/crank bolt/washer kit # 3042.

**Part # 2066 Quick Change + Top End:** Gasket kit # 2055, exhaust gaskets #2051, block off plate kit #8016, 2 inner cam bearings #2077, cam/crank bolt/washer kit # 3042.

### T/C '07-'14 INCLUDES '06 DYNA - CHAIN DRIVE

**Part # 2070 Quick Change:** Gasket kit #2050, 2 inner cam bearings #2077, cam/crank bolt/washer kit # 3042.

**Part # 2071 Quick Change + Top End:** Gasket kit #2055, exhaust gaskets #2051, 2 inner cam bearings #2077, cam/crank bolt/washer kit # 3042.



## **JAMES GASKETS® HEAD GASKETS**



### **T/C 88" & 96" - 3.750" BORE**

#17047-98 *Graphite on steel core, fire-ring Armor, printed seal, 0.045" W/ final crush 0.042" (Factory thickness).  
Kit Includes: 2 Head gaskets, 2 base gaskets & O-rings.*

#16775-99-x *Graphite on steel core, fire-ring Armor, printed seal, 0.036" W/ final crush 0.032"  
Gaskets only. This part # is for a 5-pack, break up and sell individually*

### **T/C 95" & 103" - 3.875" BORE**

#16787-99-MLS *Multi-Layered Steel Head gasket w/ Base O-rings, 0.050" W/ final crush 0.040".  
Kit Includes: 2 Head gaskets, 2 base gaskets & O-rings.*

#16787-99 *Graphite on steel core, fire-ring armor, Teflon®-coated, 0.045" W/ final crush 0.042"(Factory thickness)  
Kit Includes: 2 Head gaskets, 2 base gaskets & O-rings.*

#16787-99-X *Graphite on steel core, fire-ring armor, Teflon®-coated, 0.036" W/ final crush 0.032"  
Kit Includes: 2 Head gaskets, 2 base gaskets & O-rings.*

### **T/C 110" - 4.00" BORE**

#16105-07-X *Graphite on steel core, fire-ring Armor, printed seal, 0.045" W/ final crush 0.042".  
Gaskets only, includes 2 head gaskets.*

**FEULING® POINTS COVERS**



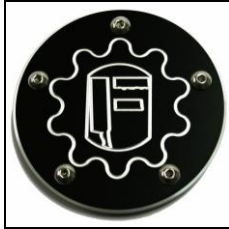
Part # 9120



Part # 9121



Part # 9122



Part #9125



Part # 9126



Part # 9127

*Dress your engine in style with a FEULING® points cover, machined from billet 6061 aluminum, bolts onto the factory cam cover, includes 5 stainless steel button head fasteners. Available in chrome or black powder coat with a contrast cut finish, made in the U.S.A.*

**FIT: '99-'14 TWIN CAM FACTORY CAM COVERS - 5 BOLT HOLE**

**CHROME**

- Part # 9120 Gear Logo
- Part # 9123 Gear/Cross Wrench Logo
- Part # 9121 FEULING® Logo
- Part # 9122 BULLETPROOF® Tank Logo

**BLACK WITH CONTRAST CUT**

- Part # 9125 Gear Logo
- Part # 9124 Gear/Cross Wrench Logo
- Part # 9126 FEULING® Logo
- Part # 9127 BULLETPROOF® Tank Logo

**FIT: BIG TWIN '85 - '99 & XL '04 - '14 FACTORY CAM COVERS - 2 BOLT HOLE**

**CHROME**

- Part # 9130 Gear/Cross Wrench Logo

**BLACK WITH CONTRAST CUT**

- Part # 9133 Gear/Cross Wrench Logo

**DERBY COVERS - FEULING GEAR/CROSS WRENCH LOGO**



Part # 9153

**FIT: '99-'14 TWIN CAM PRIMARY DERBY COVER - 5 BOLT HOLE**

**CHROME WITH CONTRAST LOGO**

- Part # 9150 Gear/Cross Wrench Logo

**BLACK WITH CONTRAST LOGO**

- Part # 9153 Gear/Cross Wrench Logo

**FIT: BIG TWIN '84 - '98 PRIMARY DERBY COVER - 3 BOLT HOLE**

**CHROME WITH CONTRAST LOGO**

- Part # 9156 Gear/Cross Wrench Logo

**BLACK WITH CONTRAST CUT**

- Part # 9157 Gear/Cross Wrench Logo

## **FEULING® HANDLEBAR TOP CLAMPS**



#9140

***FEULING® logo handlebar top clamps, machined from billet 7050 aluminum, fits 1" bars includes 12 point stainless steel ARP® fasteners. Fits most '84-'15 models with 3 1/2" on center risers and offset mounting holes.***

***NOTE: Not for models with gauge mount and indicator light mount attached to the handlebar clamp***

Part # 9140 - Polished finish, engraved FEULING® logo

Part # 9141 - Chrome finish, engraved FEULING® logo

Part # 9142 - Black gloss finish with contrast laser etched FEULING® logo

Part # 9143 - Black gloss finish over engraved FEULING® logo

## **FEULING® 110" CYLINDER HEAD PLATES**



***Replaces the factory Screamin' Eagle® 110" cylinder heads plates, bolts into the factory cutout on the special 110" cylinder heads.***

Part # 9100 FEULING® 110" cylinder head plates replace the factory SE® plates, Qty. 2, Made in the U.S.A.

## FEULING® OXYGEN SENSORS



**FEULING® oxygen sensors are precision made consisting of a ceramic body made of stabilized zirconium dioxide, surface coated with gas-permeable platinum electrodes and a porous ceramic to aid the prevention of erosion due to contamination and particulates in the exhaust gases.**

**An oxygen sensor or commonly called O2 sensor is a device which determines the oxygen content of the exhaust gas by producing a voltage proportional to the amount of oxygen in the exhaust versus the air.**

**Oxygen sensors can fail when the sensor's ceramic element is exposed to certain types of contaminants such as silicone compounds or even an oil-burning engine can easily foul a sensor. Small amounts of contamination in the gasoline or over-the-counter fuel additives, which are not "oxygen sensor safe", can also kill an oxygen sensor.**

**Failures can occur instantaneously at the time the contaminant contacts the O2 sensor, causing a dead sensor, or gradually over a period of time. Gradual deterioration results in a slow sensor which does not react as quickly as it should. Slow oxygen sensors can cause a drop in fuel economy of 10-15%, excessive exhaust emissions and poor drivability. Unfortunately, the symptoms of a slow oxygen sensor are not always obvious to the rider unless a major decline in fuel economy is noticed or drivability problems occur.**

**Life expectancy of an average oxygen sensor in a properly tuned engine is typical 30,000 - 50,000 miles**

**FEULING® sensors meet or exceed OE specifications, assembled in the U.S.A.**

- #9900 Overall length 12.5"**
- #9901 Overall length 16.25"**
- #9902 Overall length 22.25"**

**#9915 Replacement Wide Band O2 sensor for aftermarket ignition tuners, Overall Length 30.25"**

### **CVO SERIES**

- (Feuling# 9900)** 08-07 - CVO - FLHRSE4/3 - Screamin Eagle Road King - (Front & Rear)
- (Feuling# 9901)** 09-07 - CVO - FXTSSE3, FXSTSSE2, FXSTSSE - Screamin Eagle Softail Springer - (Front & Rear)
- (Feuling# 9901)** 09 - CVO - FLHTCUSE4 - Screamin Eagle Ultra Classic Electra Glide - (Front)
- (Feuling# 9900)** 09 - CVO - FLHTCUSE4 - Screamin Eagle Ultra Classic Electra Glide - (Rear)
- (Feuling# 9900)** 08-07 - CVO - FLHTCUSE3, FLHTCUSE2 - Screamin Eagle Ultra Classic Electra Glide - (Front & Rear)
- (Feuling# 9901)** 11-10 - CVO - FLSTSE - CVO Softail Convertible - (Front & Rear)
- (Feuling# 9901)** 09 - CVO - FLTRSE3 - CVO Road Glide - (Front)
- (Feuling# 9900)** 09 - CVO - FLTRSE3 - CVO Road Glide - (Rear)
- (Feuling# 9901)** 10-09 - CVO - FXDFSE, FXDFSE2 - CVO Dyna Fat Bob, CVO Fat Bob - (Front & Rear)
- (Feuling# 9901)** 08-07 - CVO - FXDSE2, FXDSE - Screamin Eagle Dyna - (Front & Rear)

### **DYNA SERIES**

- (Feuling# 9901)** 10-08 - DYNA - FXDF - Fat Bob - (Front & Rear)
- (Feuling# 9901)** 09-06 - DYNA - FXDL, FXDLI - Low Rider - (Front & Rear)
- (Feuling# 9901)** 11-06 - DYNA - FXDB, FXDBI - Street Bob - (Front & Rear)
- (Feuling# 9901)** 09-06 - DYNA - FXD, FXDI, FXDI35 - Super Glide - (Front & Rear)
- (Feuling# 9901)** 11-06 - DYNA - FXDC, FXDCI - Super Glide Custom - (Front & Rear)
- (Feuling# 9901)** 11-06 - DYNA - FXDWG, FXDWGI - Wide Glide - (Front & Rear)



## **OXYGEN SENSORS CONT**

### **SOFTAIL SERIES**

(Feuling# 9901) 11-09 - SOFTAIL - FLSTSB - Softail Cross Bones - (Front & Rear)  
(Feuling# 9901) 07 - SOFTAIL - FLSTSC - Softail Springer Classic - (Front & Rear)  
(Feuling# 9901) 07 - SOFTAIL - FXSTD - Softail Deuce - (Front & Rear)  
(Feuling# 9901) 07 - SOFTAIL - FXST - Softail Standard - (Front & Rear)  
(Feuling# 9901) 08-07 - SOFTAIL - FXSTB - Softail Night Train - (Front & Rear)  
(Feuling# 9901) 08-07 - SOFTAIL - FXSTC - Softail Custom - (Front & Rear)  
(Feuling# 9901) 11-07 - SOFTAIL - FLSTC - Heritage Softail Classic - (Front & Rear)  
(Feuling# 9901) 11-07 - SOFTAIL - FLSTF - Softail Fat Boy - (Front & Rear)  
(Feuling# 9901) 11-10 - SOFTAIL - FLSTFB - Fat Boy Lo, Sportster Fat Boy Special - (Front & Rear)  
(Feuling# 9901) 11-07 - SOFTAIL - FLSTN - Softail Deluxe - (Front & Rear)  
(Feuling# 9901) 08 - SOFTAIL - FXCW, FXCWC - Rocker, Rocker C - (Front & Rear)

### **SPORTSTER SERIES**

(Feuling# 9900) 08-07 - SPORTSTER - XL883 - Sportster 883 - (Front & Rear)  
(Feuling# 9900) 09-08 - SPORTSTER - XL883C - Sportster 883 Custom - (Front & Rear)  
(Feuling# 9900) 11-07 - SPORTSTER - XL883L - Sportster 883 Low - (Front & Rear)  
(Feuling# 9900) 11-09 - SPORTSTER - XL883N - Sportster Iron 883 - (Front & Rear)  
(Feuling# 9900) 11 - SPORTSTER - XL883R - Sportster 883 Roadster - (Front & Rear)  
(Feuling# 9900) 11-07 - SPORTSTER - XL1200C - Sportster Custom - (Front & Rear)  
(Feuling# 9900) 11-07 - SPORTSTER - XL1200L - Sportster 1200 Low - (Front & Rear)  
(Feuling# 9900) 11-07 - SPORTSTER - XL1200N - Sportster Nightster - (Front & Rear)  
(Feuling# 9900) 11-07 - SPORTSTER - XL1200R - Sportster 1200 Roadster - (Front & Rear)  
(Feuling# 9900) 11-10 - SPORTSTER - XL1200X - Sportster Sportster Forty-Eight - (Front & Rear)  
(Feuling# 9900) 07 - SPORTSTER - XL50 - Sportster Anniversary Limited Edition - (Front & Rear)

### **BAGGERS (TOURING) SERIES**

(Feuling# 9901) 09 - TOURING - FLHR,FLHRC - Road King, Classic - (Front)  
(Feuling# 9900) 09 - TOURING - FLHR,FLHRC - Road King, Classic - (Rear)  
(Feuling# 9900) 08-07 - TOURING - FLHR,FLHRC - Road King, Classic - (Front & Rear)  
(Feuling# 9900) 07 - TOURING - FLHRS - Road King Custom - (Front & Rear)  
(Feuling# 9901) 09 - TOURING - FLHT - Electra Glide Standard - (Front)  
(Feuling# 9900) 09 - TOURING - FLHT - Electra Glide Standard - (Rear)  
(Feuling# 9900) 08-07 - TOURING - FLHT - Electra Glide Standard - (Front & Rear)  
(Feuling# 9901) 09 - TOURING - FLHTC - Electra Glide Classic - (Front )  
(Feuling# 9900) 09 - TOURING - FLHTC - Electra Glide Classic - (Rear)  
(Feuling# 9900) 08-07 - TOURING - FLHTC - Electra Glide Classic - (Front & Rear)  
(Feuling# 9901) 09 - TOURING - FLHTCU - Ultra Classic Electra Glide - (Front)  
(Feuling# 9900) 09 - TOURING - FLHTCU - Ultra Classic Electra Glide - (Rear)  
(Feuling# 9900) 08-07 - TOURING - FLHTCU - Ultra Classic Electra Glide - (Front & Rear)  
(Feuling# 9901) 09 - TOURING - FLHTCUTG - Trike Tri Glide Ultra Classic - (Front )  
(Feuling# 9900) 09 - TOURING - FLHTCUTG - Trike Tri Glide Ultra Classic - (Rear)  
(Feuling# 9901) 09 - TOURING - FLHX - Street Glide - (Front )  
(Feuling# 9900) 09 - TOURING - FLHX - Street Glide - (Rear)  
(Feuling# 9900) 08-07 - TOURING - FLHX - Street Glide - (Front & Rear)  
(Feuling# 9901) 09 - TOURING - FLTR - Road Glide - (Front)  
(Feuling# 9900) 09 - TOURING - FLTR - Road Glide - (Rear)  
(Feuling# 9900) 08-07 - TOURING - FLTR - Road Glide - (Front & Rear)

### **VRSC (V ROD) SERIES**

(Feuling# 9902) 08 - VRSC - VRSC - AW/A V-Rod - (Front & Rear)  
(Feuling# 9901) 09 - VRSC - VRSCAW - V-Rod - (Front )  
(Feuling# 9902) 09 - VRSC - VRSCAW - V-Rod - (Rear)  
(Feuling# 9902) 08 - VRSC - VRSCAW - V-Rod 105th Anniversary Edition - (Front & Rear)  
(Feuling# 9902) 08 - VRSC - VRSCD/A - Night Rod - (Front & Rear)  
(Feuling# 9901) 09 - VRSC - VRSCDX - Night Rod Special - (Front)  
(Feuling# 9902) 09 - VRSC - VRSCDX - Night Rod Special - (Rear)  
(Feuling# 9902) 08 - VRSC - VRSCDX/A - Night Rod Special - (Front & Rear)  
(Feuling# 9901) 09 - VRSC - VRSCF - V-Rod Muscle - (Front)  
(Feuling# 9902) 09 - VRSC - VRSCF - V-Rod Muscle - (Rear)

## **FEULING® OXYGEN SENSOR BUNG & PLUG KIT**



Complete kits include quantity 5 of an assortment of 18 & 12 mm bungs, plugs anti-seize compound and copper washers. Available in 1215 steel or 303 stainless steel kits. Refill packs available.

### **STEEL BUNG/PLUG REFILLS**

18mm bungs-3/8"	<b>Part # 9850</b> Refill Qty.5
18mm bungs - 1/2" with step	<b>Part # 9851</b> Refill Qty.5
18mm bungs - 1" angled	<b>Part # 9852</b> Refill Qty.5
18mm bungs - 1" straight	<b>Part # 9853</b> Refill Qty.5
18mm plugs - 1" Hex head	<b>Part # 9854</b> Refill Qty.5
18mm plugs - 5/16" Allen head	<b>Part # 9855</b> Refill Qty.5
18mm copper crush washers (Qty. 10)	<b>Part # 9856</b> Refill Qty.10

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12mm bungs - 5/16" with step	<b>Part # 9857</b> Refill Qty.5
12mm bungs - 1/2"	<b>Part # 9858</b> Refill Qty.5
12mm plugs - 5/8" Hex head	<b>Part # 9859</b> Refill Qty.5
12mm plugs - 6mm Allen head	<b>Part # 9860</b> Refill Qty.5

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Anti-Seize compound packets (Qty. 10) **Part # 9861** Refill Qty.10

### **STAINLESS STEEL BUNG/PLUG REFILLS**

<b>Part # 9862</b> Refill Qty.5
<b>Part # 9863</b> Refill Qty.5
<b>Part # 9864</b> Refill Qty.5
<b>Part # 9865</b> Refill Qty.5
<b>Part # 9866</b> Refill Qty.5
<b>Part # 9867</b> Refill Qty.5
<b>Part # 9856</b> Refill Qty.10

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<b>Part # 9868</b> Refill Qty.5
<b>Part # 9869</b> Refill Qty.5
<b>Part # 9870</b> Refill Qty.5
<b>Part # 9871</b> Refill Qty.5

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**Part # 9861** Refill Qty.10

**#9928** *Steel bung & plug kit*

**#9929** *Stainless Steel bung & plug kit*

## **FEULING® OXYGEN SENSOR REDUCER BUNGS 18MM TO 12MM**



**#9927** *Reducer bung, adapts 18mm O2 sensor exhaust ports to allow installation of 12mm O2 sensors. Stainless steel, qty. 2*

## **FEULING® FUEL INJECTORS**



Part # 9941



Part #9943



Part #9945



Part #9944

### **TWIN CAM ENGINES**

#### **Part # 9940**

Fuel injector 3.91 g/s, Fits '06 - later Twin Cam 96" & 103" engines except ETC models, OE 46mm Cable drive. Injectors are an OE replacement, delivering fuel at 3.91 grams per second. These injectors are the 'new style' updated 25° angle cone spray with 6 spray hole nozzle ends, replacing the original #27625-06 injectors which have 8° cone spray with 3 spray hole nozzle ends per HD service bulletin M-1185, resolving cold start and drive-ability issues.

**OEM # 27709-06/A - supersedes OEM#27625-06**

#### **Part # 9941**

Fuel injector 4.3 g/s, Fits OE 46mm Cable Drive, OE 50mm ETC, SE 43mm Cable drive. Injectors are an OE replacement injector, delivering fuel at 4.3 grams per second. Recommended for stock to mild performance engines making under 90 horsepower to the rear wheel. IWP 162, **OEM #27609-01B**

#### **Part # 9942**

Fuel injector 4.9 g/s, Fits '06 - later Twin Cam except ETC models, Including SE 50, 58 and 62mm cable drive throttle bodies. Injectors provide 25% more fuel than the OE injectors, delivering fuel at 4.9 grams per second. Recommended for performance engine combinations making over 100 rear wheel horsepower. For RACE application ONLY.

**OEM # 27654-06**

#### **Part # 9943**

Fuel injector 5.3 g/s, Fits '08 - Later touring w/Electronic Throttle Control (ETC). Including SE 58mm throttle body and SE high flow oval port intake manifold. Injectors provide 23% more fuel than the OE injectors, delivering fuel at 5.3 grams per second. Recommended for performance engine combinations making more than 100 rear wheel horsepower. For RACE application ONLY. IWP 029B, **OEM #27617-08**

#### **Part # 9944**

Fuel injector 6.2 g/s, Fits T/C cable drive including SE Pro 58mm and 62mm high flow throttle bodies. Injectors provide 59% more fuel than the OE injectors, delivering fuel at 6.2 grams per second. Recommended for performance engine combinations making 120+ rear wheel horsepower. For RACE application ONLY. 12613412

**OEM # 27400004**

#### **Part # 9945**

Fuel injector 6.7 g/s, Fits '08 - later touring, Electronic Throttle Control (ETC) including SE 58mm and 64mm throttle bodies. Injectors provide 56% more fuel than the OE injectors, delivering fuel at 6.7 grams per second. Recommended for performance engine combinations making 120+ rear wheel horsepower. For RACE application ONLY. IWP189

**OEM # 27400003**

## **FEULING® THROTTLE POSITION SENSORS**



Part # 9950



Part #9952

The throttle position sensor (TPS), is used to monitor the position of the throttle butterfly valve.

**Part # 9950** Throttle Position Sensor  
Fits T/C '06-'14 DYNA, FXST, FLST, '06-'07 FLHT, Replaces **OEM # 27659-07**

**Part # 9952** Throttle Position Sensor  
Fits T/C '01-'05 FXSTI, FLSTI, FXSTDI, '02-'05 FLT, FLHT, '04-'05 DYNA, Replaces **OEM # 27629-01**

## **FEULING® MAP SENSOR**



#9953



#9954

The manifold absolute pressure sensor (MAP) provides instantaneous manifold pressure information to the engine's electronic control unit (ECU). The data is used to calculate air density and determine the engine's air mass flow rate, which in turn determines the required fuel metering for optimum combustion and influence the advance or retard of ignition timing. A faulty MAP sensor will usually display symptoms of a rough running engine during acceleration, deceleration or at idle.

**Part #9953** Map Sensor Fits T/C '99-'10 Fuel Injected models (Except '08-'15 Touring), '00-'06 big twin carb models, '04-'06 XL, replaces **OEM # 32416-10 which supersedes # 32316-99**

**Part #9954** Map Sensor Fits T/C Fuel Injected Touring '08-'14 and XL '07-'14. **OEM #32319-07**

## **FEULING® IDLE AIR CONTROL**



Idle air control actuator or idle air control valve (IAC actuator/valve) is used in fuel-injected vehicles to control the engine's idling RPM. The most common failure is partial/complete jamming of the valve (due to dirt/dust or even oil) where it cannot be smoothly controlled. The result is an engine that idles very rough and frequently stalls.

**Part #9951** Idle Air Control Module Fits '06-'14 Dyna, FXST, FLST and '06-'07 FLHT models, replaces **OE # 27658-06**



## WIX® OIL FILTERS



High-efficiency glass media - meets or exceeds the rigid quality specifications for various Harley-Davidson motorcycles

Type: Full Flow

Media: Glass

Height: 3.404 in.

Outside Diameter (Top): 2.921 in.

Nominal Micron Rating: 5

Thread Size: 3/4-16

By-Pass Valve Setting (PSI): 8

Anti-Drain Back Valve: Yes

Max Flow Rate: 7-9 GPM

Gasket Diameters:

Outside Diameter: 2.734 in.

Inside Diameter: 2.43 in.

Thickness: 0.226 in.

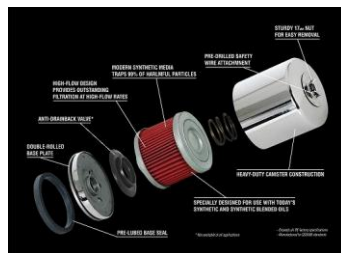
**Part # 57148**

**Part # 57348**

BLACK - T/C '99-'14 Replacement screw on oil filter, **OE# 63731-99A**

CHROME - T/C '99-'14 Replacement screw on oil filter, **OE# 63798-99A**

## K&N® OIL FILTERS



**K&N® spin on Oil filters - quality filters you can count on! Designed to exceed the needs of today's performance engines providing outstanding filtration without sacrificing oil flow. K&N® oil filters include the 'Must Have' anti drain back valve for Twin Cam engines, as well as a pressure by-pass valve and a 11/16" nut for quick & easy service. These stock replacement filters exceed OEM specifications, available in chrome or black finish**

**KN-171C Chrome '99 – Present Twin Cam®, OE# 63798-99A**

**KN-171B Black '99 – Present Twin Cam®, OE# 63731-99A**

**KN-170C Chrome**

'80 – '98 FLT, FLHT, FLHR,

'82 – '94 FXR

'84 – '98 Softail, FXRP, FLHTP

'84 – Present Sportsters

**KN-170B Black**

'80 – '98 FLT, FLHT, FLHR,

'82 – '94 FXR

'84 – '98 Softail, FXRP, FLHTP

'84 – Present Sportsters

**KN-173C Chrome, '91 – '98 Dyna**

**KN-172C Chrome**

'82 – '84 FLH

'80 Classics

'82 – '84 FXWG, FXSB, FXEF

'80 – '84 XL, XLS, XLX, Sportsters

**KN-174C Chrome, V – Rod**

## **CHAMPION SPARK PLUGS**



Copper Plus conventional spark plug with Nickel alloy copper core center electrode which increases conductivity and allows for accurate control of heat range, optimizing performance, and longevity of the spark plug. OE replacement.

- Patented SAC-9 semi-conductor resistor for maximum EMI and RFI suppression
- Patented Ultraseal™ coated shell for rust prevention

### **RA8HC - Plug Specifications**

- Thread Size: 12mm
- Hex Size: 5/8" (16mm)
- Reach: 19mm (3/4")
- Seat Type: Gasket
- Gap: .024" (0.61mm)
- Heat Range: 8
- Terminal Type: Removable Nut
- Resistor: Yes
- Brand: Champion

### **RN12YC-Plug Specifications**

- Thread Size: 14mm
- Hex Size: 13/16" (20.6mm)
- Reach: 19mm (3/4")
- Seat Type: Gasket
- Heat Range: 12
- Resistor: Yes
- Brand: Champion

### **Center Electrode**

Type: Standard  
Material: Nickel  
Projection: Projected Core Nose

### **Ground Electrode**

Type: J-Gap  
Material: Nickel  
Quantity: 1

Part # **RA8HC** (#810)  
Part # **RN12YC** (#404)

Fits: T/C '99-'14 + XL '86-'14  
Fits: EVO BIG TWIN '84-'00

## **BOSCH YTTRIUM SPARK PLUG**



- Dual ground electrode
- Heavy Duty Yttrium-Enhanced Center Electrode with Copper Core Provides Superior Reliability and Durability
- Tapered Cut Nickel Chromium Ground Electrode Assists in Cold Weather Starts and Provides Increased Ignitability
- Nickel-Plated Rolled Threads Provide Anti-Seize and Corrosion Protection
- Metal Glass Fused Resistor Gives Maximum Interference Suppression
- Angular, 5-Rib Insulator Design Prevents Flashover

### **Plug Specifications**

- Thread Size: 12mm
- Hex Size: 5/8" (16mm)
- Reach: 19mm (3/4")
- Seat Type: Gasket
- Gap: .032" (0.8mm)
- Heat Range: 6
- Terminal Type: Solid
- Resistor: Yes
- Brand: Bosch

### **Center Electrode**

Type: Standard  
Material: Yttrium Enhanced  
Projection: Projected

### **Ground Electrode**

Type: Taper Cut  
Material: Nickel  
Quantity: 2

Part # **YR6LDE** Fits: T/C '99-'14 + XL '86-'14

## **NGK IRIIDIUM SPARK PLUG**



Designed specifically for the performance enthusiast. Iridium IX® offers extreme ignitability, improved throttle response and superior anti fouling.

- Fine Iridium tip ensures high durability and a consistently stable spark
- Iridium alloy has extremely high melting point, perfect for today's high-tech, high-performance engines
- Trivalent Metal Plating - superior anti-corrosion and anti-seizing properties
- Outstanding acceleration, high fuel efficiency and durability
- Ultimate design, technology and performance

### **DCPR7EIX Plug Specifications**

**Thread Size:** 12mm  
**Hex Size:** 5/8" (16mm)  
**Reach:** 19mm (3/4")  
**Seat Type:** Gasket  
**Gap:** .032" (0.8mm)  
**Heat Range:** 7  
**Terminal Type:** Solid  
**Resistor:** Yes  
**Thread Pitch:** 1.25mm  
**Brand:** NGK

### **DCPR8EIX Plug Specifications**

**Thread Size:** 12mm  
**Hex Size:** 5/8" (16mm)  
**Reach:** 19mm (3/4")  
**Seat Type:** Gasket  
**Gap:** .032" (0.8mm)  
**Heat Range:** 8  
**Terminal Type:** Removable Nut  
**Resistor:** Yes  
**Thread Pitch:** 1.25mm  
**Brand:** NGK

### **BPR5EIX-11 Plug Specifications**

**Thread Size:** 14mm  
**Hex Size:** 13/16" (20.6mm)  
**Reach:** 19mm (3/4")  
**Seat Type:** Gasket  
**Gap:** .044" (1.1mm)  
**Heat Range:** 5  
**Terminal Type:** Solid  
**Resistor:** Yes  
**Thread Pitch:** 1.25mm  
**Brand:** NGK

### **Center Electrode**

**Type:** Fine Wire  
**Material:** Iridium  
**Size:** 0.6mm  
**Projection:** Projected

### **Ground Electrode**

**Type:** Taper Cut  
**Material:** Nickel  
**Quantity:** 1

**Part # DCPR7EIX (#6046) Fits: T/C '99-'14 + XL '86-'14**

**Part # DCPR8EIX (#6546) Fits: V-Rod '06-'14**

**Part # BPR5EIX-11 (#2115) Fits: EVO BIG TWIN '84-'00**

## **DENSO SINGLE® IRIDIUM SPARK PLUGS**



### **Harley® Screamin' Eagle® OE factory spark plugs**

- 0.4mm Iridium Tipped Laser Welded Fine Wire Center Electrode
- Tapered Cut U-Groove Ground Electrode Increases Ignitability and Decreases Quenching
- Machine Rolled Threads Prevent Seizing or Cross Threading During Installation and Removal
- 100% Pre-Fired to Assure the Highest Quality Possible
- Purified Alumina Powder Insulator Provides Exceptional Strength and Thermal Conductivity
- Five Rib Insulator Prevents Flashover
- Copper-Glass Seal Bonds Center Electrode and Insulator for a Gas-Tight Seal

### **IXU22 Plug Specifications**

Thread Size: 12mm  
Hex Size: 5/8" (16mm)  
Reach: 19mm (3/4")  
Seat Type: Gasket  
Gap: .036" (0.9mm)  
Heat Range: 22  
Terminal Type: Removable Nut  
Resistor: Yes

**Part # IXU22 (#5308) (HD SE #32192-10)**

**Part # IW16 (#5305) (HD SE #32189-10)**

**Part # IXU24 (#5309) (HD SE #32186-10)**

### **IW16 Plug Specifications**

Thread Size: 14mm  
Hex Size: 13/16" (20.6mm)  
Reach: 19mm (3/4")  
Seat Type: Gasket  
Gap: .044" (1.1mm)  
Heat Range: 16  
Terminal Type: Removable Nut  
Resistor: Yes

**Fits: T/C '99-'14 + XL '86-'14**

**Fits: EVO BIG TWIN '84-'00, '75-'81 Shovelhead**

**Fits: V-Rod '06-'14**

### **Center Electrode**

Type: Fine Wire  
Material: Iridium  
Size: 0.4mm

### **Ground Electrode**

Type: Taper Cut  
material: Nickel  
Quantity: 1

## **DENSO NICKEL SPARK PLUGS**



### **Harley® OEM factory spark plugs**

- U-Groove Ground Electrode Promotes Ignitability and Decreases Quenching
- Fully Projected Insulator Reduces Carbon Fouling
- Machine Rolled Threads Prevent Seizing or Cross Threading During Installation and Removal
- 100% Pre-Fired to Assure the Highest Quality Possible
- Purified Alumina Powder Insulator Provides Exceptional Strength and Thermal Conductivity
- Five Rib Insulator Prevents Flashover
- Copper-Glass Seal Bonds Center Electrode and Insulator for a Gas-Tight Seal

### **XU22EPR-U Plug Specifications**

Thread Size: 12mm  
Hex Size: 5/8" (16mm)  
Reach: 19mm (3/4")  
Seat Type: Gasket  
Gap: .028" (0.7mm)  
Heat Range: 22  
Terminal Type: Solid  
Resistor: Yes

**Part # XU22EPR-U (#3179) (HD#32362-04)**

**Part # W16EPR-U10 (#3022)**

### **W16EPR-U10 Plug Specifications**

Thread Size: 14mm  
Hex Size: 13/16" (20.6mm)  
Reach: 19mm (3/4")  
Seat Type: Gasket  
Gap: .040" (1.0mm)  
Heat Range: 16  
Terminal Type: Solid  
Resistor: Yes

**Fits: T/C '99-'14 + XL '86-'14**

**Fits: EVO BIG TWIN '84-'00, '75-'81 Shovelhead**

### **Center Electrode**

Type: Standard  
Material: Nickel  
Projection: projected

### **Ground Electrode**

Type: U-Groove  
Material: Nickel  
Quantity: 1



## **FEULING® PROMO ITEMS**



**Part # 1037  
LED Flashlight**



**Part # 1038  
Click Bic Ink Pen**



**Part # 1039  
Note Pad**



**Part # 1034  
Magnet**

## **FEULING® HATS**



**Part #: 9080, 9081, 9082**



**Part #: 9085, 9086, 9087**



**Part #: 9090, 9091, 9092**

***Flex Fit hats with Feuling® gear logo on front panel***

### **Available Styles:**

***Standard – Brushed twill 6 panel flex fit***

***Trucker – Brushed twill front panels + visor, stretchable mesh side & back, flex fit***

### **Available Sizes:**

**Standard – S/M 6 3/4" – 7 1/2"**

**L/XL 7 1/8" – 7 5/8"**

**Trucker – Stretchable 6 7/8" – 7 1/2"**

### **BLACK**

**#9085 Trucker**

**#9086 S/M**

**#9087 L/XL**

### **BROWN**

**#9080 Trucker**

**#9081 S/M**

**#9082 L/XL**

### **RED**

**#9090 Trucker**

**#9091 S/M**

**#9092 L/XL**

## **FEULING® BANNERS**



*Part #1050 - FEULING logo, black banner*

*Part #1050 - FEULING logo, white banner*



*Part # 1052 - Reaper logo banner*



*Part # 1053 - BULLETPROOF TANK logo banner*

*Part # 1054 - FEULING GEAR/CROSS logo banner*

*Part # 1055 - BFD logo banner*

## **FEULING® MOUSE PADS**



*Part # 1046 - BULLETPROOF TANK logo Mouse pad*



*Part # 1047 - REAPER logo Mouse pad*



*Part # 1048 - FEULING GEAR/CROSS logo Mouse pad*

## **FEULING® CATALOG**



**FEULING® STICKERS**



*Part # 1025 FEULING corporate logo  
Logo sticker 5"*



*Part # 1027 Beehive® Valvespring  
Logo Sticker 5"*



*Part # 1026 Reaper® Camshaft  
Logo Sticker 5"*



*Part # 1028 Bulletproof™  
Logo Sticker 3"*



*Part # 1029 HP+®  
Logo Sticker 3"*



*Part # 1030 RACE SERIES  
Logo Sticker 3"*



*Part # 1031 Fast Install  
Logo Sticker 3"*



*Part # 1032 OE+  
Logo Sticker 3"*



*Part # 1033 HIGH FLOW  
Logo Sticker 3"*



*Part # 1024 FEULING GEAR/CROSS  
Logo Sticker*

## **FEULING® OIL PUMP/CAMPLATE DISPLAY**



**Part # 1060**

Hand Crank Display – FEULING® high volume high flow Twin Cam oil pump/camplate vs. stock oil pump/camplate. Turning the knobs demonstrates to the customer the friction difference between the FEULING® Oil Pump & the stock HD oil pump. Display is powder coated black with vinyl stickers and includes brochure and sticker holders stocked with 50 flyers and 50 stickers. Measures 22" x 13" x 9"

## **FEULING® LIFTER & PUSHROD DISPLAY**



**Part # 1061**

FEULING® Lifter and Pushrod display - this counter display shows a set of the FEULING® HP+® adjustable pushrods and a selection of hydraulic roller lifters – HP+ Twin Cam, Sportster & EVO along with the Race Series Twin Cam lifter. Display is powder coated black with vinyl stickers and includes brochure and sticker holders stocked with 50 flyers and 50 stickers. Measures 22" x 13" x 9"

## **FEULING® OIL COOLER DISPLAY**



**Part # 1062**



**Part # 1063**

FEULING® Oil Cooler display, show your customers the high quality and awesome appearance of the FEULING® oil cooler and filtration system. Displays are available in the chrome kit or black chrome kit. Display is powder coated black with vinyl stickers and includes brochure and sticker holders stocked with 50 flyers and 50 stickers. Measures 22" x 13" x 9"

## **FEULING® REAPER® CAMSHAFT & BEEHIVE® VALVE-SPRING DISPLAY**



Measures 22" x 13" x 9"

**Part # 1064** FEULING® Camshaft & Valve Spring Display



## **CYLINDER HEAD TOOLS**

### ***Valve Spring Seat Cutters & Cutter Pilots***



**Pilot**



**Seat Cutter**

*Machine valve spring seats for proper installed spring height and spring cup fitment. Cutter bodies and pilots are interchangeable, Hardened pilots fit all 3/8" and 1/2" hand drills.*

		<u>I.D. x O.D.</u>
Part # 9020	Cutter	0.625" x 1.570"
Part # 9021	Cutter	0.625" x 1.635"
Part # 9022	Cutter	0.625" x 1.750"
Part # 9025	Pilot	5/16" – 8mm      EVO & T/C up to 2004, EVO Sportster '86-up
Part # 9026	Pilot	7mm      T/C 2005 and newer
Part # 9027	Pilot	3/8"      Pan & Shovel Head 1948 – 1984

### **VALVE GUIDE CUTTER & PILOTS**



*Part # 9035 Cuts valve guide height, used to increase clearance between bottom of valve spring retainer and top of valve guide seal, uses pilots # 9036, 9037*

Part # 9035	Valve guide height cutter
Part # 9036	Pilot for valve guide cutter, 5/16" - 8mm valves
Part # 9037	Pilot for valve guide cutter, 7mm valves

### **VALVE SPRING HEIGHT GAUGE**



***AVOID COIL BIND!***

*Measure installed valve spring height. Place tool on cylinder head in place of valve spring with spring cup and retainer in place, twist measuring tool to get accurate spring height measurement.*

Part # 9030



## **TWIN CAM® ENGINE TECH MEMO**

*The TC-88 and TC-88B engines have a small, die cast, crank-speed gerotor style oil pump that utilizes a spring washer to preload the pump gears against the cam support plate and pump housing. The side loading from the spring washer can cause excessive friction and premature wear.*

*The TC-88 engine uses a dry-sump lubrication system. To perform properly, the dry sump system requires a properly sized, **BALANCED SYSTEM** including a scavenge pump that is capable of removing all residual oil from the crankcase at all engine speeds and conditions. Failure of the scavenge pump to perform to these requirements causes "WET SUMPING." Instead of returning to the oil tank, the oil builds up in the crankcase and cam chest causing excessive friction/power loss and oil aeration. This can result in oil being forced out the breather, air cleaner contamination, oil leaks, loss of oil supply, lifter clatter, component wear and potential engine failure.*

*TC-88 engines have piston cooling jets that are designed to squirt oil on the under side of the pistons. These jets have a check valve that opens at approximately 25-28 PSI oil pressure. Without adequate pressure pump volume this pressure regulated oil flow to the jets can short circuit critical oil flow from the lifters and top end.*

*Twin Cam valve springs need oil for cooling. Inadequate oil flow can cause excessive valve spring temperature causing loss of spring tension resulting in noisy valve train separation and potential engine failure. Inadequate oil supply to the rocker boxes can cause excessive rocker arm bushing wear and component failure.*

*The Twin Cam® crankshaft has machined "paddles" on the periphery of the left flywheel to provide a trigger for the crank position sensor (CPS). These paddles can whip up unscavenged oil in the crankcase, turning the oil into aerated frothing "peanut butter" that pushes its way up into the rocker boxes-out the breather, into the air cleaner and beyond!*

*Feuling® Oil Pump Corporation has high efficiency, billet, bolt-in replacement oil pumps for T/C® engines that provide increased supply and scavenge volume over the stock oil pump. Large diameter gerotors, aerospace materials and tolerances create high efficiency pumps without the need for a high friction spring washer. The Feuling® Lifters, camplates, and pushrods are designed to optimize the Feuling® oil pumps creating a **BALANCED SYSTEM** resulting in cooler engine and oil temperatures, more HP and TQ. to the rear wheels.*

*Feuling's® filter cooler is the ultimate in oil cooling and filtration technology. Combining an oil cooler and oil filter in one, used in conjunction with the stock spin on oil filter. Creating cleaner cooler oil!*

*The dyno-developed and track tested combination of Feuling® components will allow the Twin Cam® engine to provide maximum power, reliability and longevity.*

*The Feuling® products are THE solution!*





## WARRANTY

***WE TAKE PRIDE IN OUR WORK!  
RUN FEULING® PRODUCTS WITH COMPLETE CONFIDENCE!***

**IMPORTANT NOTICE:**

Damage to Feuling oil pump corporation products from excessive pinion shaft run out and or valve spring coil bind will void manufacturer's warranty.

**WARRANTY:**

All parts are guaranteed to the original purchaser to be free of manufacturing defects in materials and workmanship for a period of twelve (12) months from the date of purchase. Merchandise that fails to conform to these conditions will be repaired or replaced at FOP's option if the parts are returned to FOP by the purchaser within the (12) month warranty period. In the event warranty service is required, the original purchaser must notify FOP of the problem immediately. Some problems may be rectified by a telephone call and need no further action. A part that is suspect of being defective must not be replaced without prior authorization from FOP. If it is deemed necessary for FOP to make an evaluation to determine whether the part was defective, it must be packaged properly to avoid further damage, and be returned prepaid to FOP with a copy of the original invoice of purchase and a detailed letter outlining the nature of the problem, how the part was used and the circumstances at the time of failure. After an evaluation has been made by FOP and the part was found to be defective, repair, replacement or refund will be granted. Excessive flywheel pinion shaft run out will damage camplate and oil pump and or cause engine damage and or failure. Damage to Feuling oil pump corporation products from excessive pinion shaft run out will void manufacturer's warranty. Valve spring coil bind will damage lifters and or pushrods and will void manufacturer's warranty.

**ADDITIONAL WARRANTY PROVISIONS:**

FOP shall have no obligation in the event an FOP part is modified by any other person or organization, or if another manufacturer's part is substituted for one provided by FOP. FOP shall have no obligation if an FOP part becomes defective in whole or in part as a result of improper installation, improper break-in or maintenance, improper use, abnormal operation, or any other misuse or mistreatment.

FOP shall not be liable for any consequential or incidental damages resulting from the failure of an FOP part, the breach of any warranties, the failure to deliver, delay in delivery, delivery in non-conforming condition, or any other breach of contract or duty between FOP and the customer.

The installation of parts may void or otherwise adversely affect your factory warranty. In addition, such installation and use may violate certain federal, state and local laws, rules and ordinances as well as other laws when used on motor vehicles operated on public highways, especially in states where pollution laws may apply. Always check with federal, state, and local laws before modifying your motorcycle. It is the sole and exclusive responsibility of the user to determine the suitability of the product for his/her use, and the user shall assume all legal, personal injury risk and liability and all other obligations, duties and risks associated therewith. Our high performance parts, engines and motorcycles are intended for experienced riders only.

Feuling Oil Pump Corporation reserves the right to change prices and/or discounts without notice and to bill at the prevailing prices at the time of shipments. The words Harley®, Harley-Davidson® and H-D® and all H-D® part numbers and model designations are used in reference only. Feuling Oil Pump Corporation is in no way associated with, or authorized by Harley-Davidson Motor Co®. To manufacture and sell any of the engine parts described in this instruction sheet.

### FEULING® WARRANTY DEPARTMENT

Phone 661-824-2064  
M-F 9:00 – 5:00 P.S.T.  
CLOSED FOR LUNCH  
Info@FeulingParts.com

**\*Returns must include:**

1. Copy of the original invoice of purchase
2. Note detailing the issue
3. Return shipping address
4. Contact information

1620 Sabovich Street, Unit B, Mojave CA 93501 Ph. 619-917-6222 Fax 760-487-1545

[www.feulingparts.com](http://www.feulingparts.com)

## **FEULING® V-TWIN TROUBLE SHOOTING GUIDE**

Having oiling, noise or sumping issues with your Twin Cam engine: please review the following trouble shooting guide that Feuling® has compiled over the years to help assist you.

### **\* ALWAYS CHECK YOUR OIL PRESSURE - WHAT IS YOUR OIL PRESSURE COLD? HOT?**

#### **LOW OIL PRESSURE**

1. Pressure gauge not reading properly – double check with another mechanical PSI gauge
2. Pressure relief valve in camplate leaking, sticking open or not seating properly – see Feuling camplate PSI test tool Part #9010
3. Pinched Oil Pump O-ring(s)
4. Camplate scored at oil pump mounting surface, pressure gears and or housing scored from debris running through oil pump
5. Camplate top plug not sealing, camplate leaking at oil passages – warped camplate
6. Excessive crankshaft pinion shaft run out causing oil cavitation
7. Intermittent oil psi loss on bagger/FL models during hard acceleration - oil tank baffle shifted & blocking oil pick up hole
8. Mis alignment of oil pump – center camplate to pinion shaft then oil pump to pinion shaft by rotating engine over while tightening bolts
9. Leaky piston cooling jets
10. Leaky camplate hydraulic tensioners ('07-'13 Including '06 Dyna models) when tightening outer tensioner push tensioner toward chain

#### **NO OIL PRESSURE**

1. Pressure relief valve stuck open in camplate – see Feuling camplate PSI test tool Part #9010
2. Missing plug in camplate face (boss vs. no boss)
3. Air lock in oiling system – fill oil filter full of oil - If this is the initial engine start up
4. Broken oil pump gears - gears & housings not lubricated properly during install, debris running through engine & or excessive run out - in pinion shaft
5. Broken piston cooling jets
6. Stock oil pump installed on Feuling camplate

#### **WET SUMPING / BLOW - BY**

1. To verify if engine is wet sumping, run engine to operating temperature then shut down and pull the allen head plug from bottom of engine case. Measure oil and if more than 5oz. drains from the sump then there is a wet sumping issue.
2. Oil level too high - run oil level no more than 3/4 - 7/8 full cold, check oil level per owner's manual
3. Sub seal of oil pump mis aligned with the scavenge port hole of the engine case.
4. Piston rings not seated, causing oiling system cavitations, run a cylinder leak down test - Vent oil tank - Feuling's oil tank breather kits
5. Scavenge gears and or housing scored from debris running through oil pump causing out of tolerance scavenge side of oil pump
6. Excessive run out in pinion shaft - causing oil pump/system cavitation
7. Pinched Oil Pump O-ring(s)
8. FL/Baggers – 6 speed trans with dipstick in rear of trans can allow more oil to be added to oil tank and not show on dipstick
9. Excessive RPM on rev limiter, de-seated rings
10. Flapper valves in breathers stuck
11. Return oil passages plugged, pick-up hole in crankcase plugged

#### **DIPSTICK BLOW OUT**

1. Excessive cylinder leak down – run a cylinder leak down test
2. Oil level too high, run oil level 3/4 - 7/8 full cold
3. Rocker housing gaskets are wrong or installed improperly
4. Spark knock, piston detonation, rings not seated or coming un-seated under hard acceleration
5. Excessive RPM on rev limiter, de-seating rings
6. Vent oil tank – see Feuling oil tank breather kits

#### **NOISY VALVE-TRAIN**

1. Lifter to lifter bore clearance too large, Feuling recommends a clearance of 0.001” - 0.0015” for proper lifter performance
2. Pushrods flexing and hitting pushrod tubes - look for a shiny ring witness mark around pushrod normally seen towards the cylinder head.
3. Low oil pressure
4. Rocker arms/bushings out of tolerance
5. Valve spring to camshaft combination creating valve-train separation – See Feuling Beehive valve springs
6. Leaky/broken piston cooling jets
7. Clearance for roller rocker arms on underside of rocker box cover
8. Steep ramped camshafts, valves closing so fast the valves bounce off valve seats – See Feuling® Beehive® valve springs
9. Pushrod center oil hole plugged