



**Confederate Motors
Breaks
3000-A-PF Class Record
at 172.2105 mph
at the
2012 BUB Motorcycle Speed
Trails,
Bonneville Salt Flats**

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S&S®

X-WEDGE® PERFORMANCE ENGINES

S&S Performance X-Wedge fuel injected engines are similar to the emissions compliant versions, but are intended for closed course competition and for display vehicles. Performance X-Wedge engines do not come with emissions compliance documentation, and there are no limitations on vehicle weight, exhaust system, or gear ratios. Like all other S&S performance engines, a Manufacturer's Statement of Origin (MSO) is issued at the time of sale, and the installer is not required to document compliance. The S&S Variable Fuel Injection (VFI) module included with this engine is the full performance version with no restrictions on tuning. Otherwise, features and specifications are the same as the 49-state and 50-state compliant models. Not legal for sale or use in pollution-controlled motor vehicles.

FITMENT

- Custom X-Wedge chassis
- Harley-Davidson® FXR or bagger chassis modified for X-Wedge
- For closed course competition or display vehicles

FEATURES AND BENEFITS

- 117 or 132 cubic inch displacement
- 56° cylinder angle — reduced piston interference and less vibration
- Unique belt driven, three cam design — better pushrod angles and reduced noise
- Forged one-piece crankshaft with automotive style plain bearings
- Automotive style low mass rocker arms
- Gerotor style oil pump
- S&S closed loop fuel injection with knock sensing ignition
- Easy Start cams: 548 cams for 117" and 569 cams for 132"



CAN X-WEDGE® ENGINES BE USED IN STOCK FRAMES?

X-Wedge engines will not fit in stock Harley-Davidson® frames unless some major modifications are made. Luckily, frame manufacturer, Rolling Thunder can modify FXR and bagger frames to accommodate the X-Wedge engine. Not only can the frame be set up for the X-Wedge engine, but tire width, rake, and stretch can be customized at the same time. There are several advantages to taking this approach. For one thing, it allows you to use most of the components from an existing motorcycle. More importantly, the stock VIN number on the frame is retained. S&S offers X-Wedge compatible frames from several manufacturers (see pages 6-24)

OPTIONS

- Choice of silver powdercoat, wrinkle black (WBlack) powdercoat or polished finish

KIT CONTENTS

- Fully assembled engine



WATCH THE X-GLIDE VIDEOS AT
SSCYCLE.COM/MEDIA/VIDEOS.PHP

SPECIFICATIONS S&S® X-WEDGE® PERFORMANCE ENGINES

Engine	Chassis Style	Displacement	Cylinder Angle	Bore	Stroke	Compression Ratio	Fuel System	Ignition
X117	S&S X-Wedge®	117"	56.25°	4 1/8"	4 3/8"	9.75:1	S&S Closed Loop Single Bore VFI	S&S VFI w/Knock Sensing
X132	S&S X-Wedge®	132"		4 3/8"		10.1:1		

S&S® X-WEDGE® PERFORMANCE ENGINES

Engine	Certification	Warranty	Silver	MSRP	WBlack	MSRP	Polished	MSRP
X117	None	3 year	106-1542	\$8,660.00	106-1541	\$8,660.00	106-1543	\$9,595.00
X132	None	2 year	310-0226	\$9,695.00	310-0225	\$9,695.00	310-0227	\$10,265.00

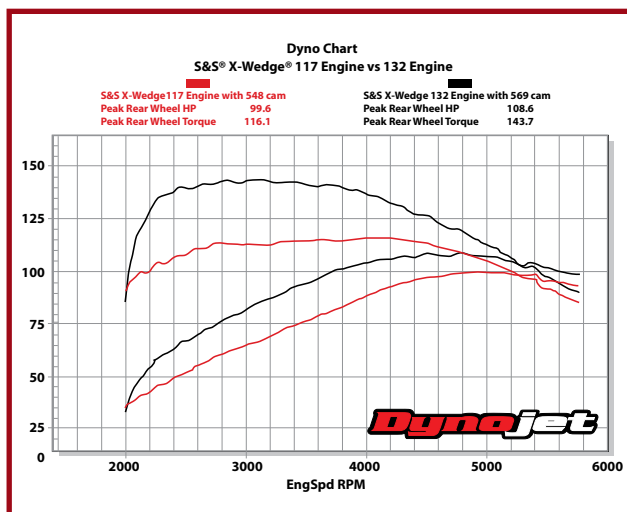
COMPLETE ENGINE REBUILD GASKET KITS

S&S Engine Family	Year Group	Bore Size	Part No	MSRP
X-Wedge®	Custom	4 3/8"	106-1031	\$134.95
X-Wedge®	Custom	4 1/4"	106-1029	\$132.95
X-Wedge®	Custom	4 1/8"	106-1030	\$132.95

This dyno chart shows the performance of an X-Wedge 117 engine with 548 cams and an X-Wedge 132 engine with 569 cam. Both engines are equipped with an S&S 52mm throttle body, single bore tuned induction and a custom made 2:1 exhaust with performance mufflers.

NOTE

Builders using modified frames from existing, previously registered motorcycles must use non-certified X-Wedge engines from the chart on this page.



S&S®

X-WEDGE® ENGINES

49-STATE AND 50-STATE EMISSION COMPLIANT

The X-Wedge® engine is an S&S® designed 56° pushrod v-twin with three belt-driven cams in a unique configuration that provides nearly straight pushrod angles to all valves. In the lower end, a one-piece forged crankshaft with automotive style plain bearing connecting rods and plain main bearings offer greater load capacity, increased engine durability and reduced noise. The cylinder heads are designed with automotive style, low-mass rocker arms and a unique cross-flow wedge style combustion chamber. The fuel system consists of an S&S single bore throttle body and Variable Fuel Injection module, which boasts closed loop feedback for fuel control and knock sensing ignition. This engine was designed as an emissions compliant performance engine right from the get-go. It was intended to fill a need in the market for manufacturers and custom bike builders who wanted something a little different, while maintaining emissions compliance. Available in 49-state and 50-state versions.

FITMENT

- New build custom motorcycles

FEATURES AND BENEFITS

- 117 cubic inch displacement
- 56° cylinder angle — reduced piston interference and less vibration
- Unique belt driven, three cam design — better pushrod angles and reduced noise
- Forged one-piece crankshaft with automotive style plain bearings
- Gerotor style oil pump
- Automotive style low mass rocker arms
- S&S closed loop fuel injection with knock sensing ignition
- Easy Start 548 cams

OPTIONS

- Choice of silver powdercoat, wrinkle black (WBlack) powdercoat or polished finish
- 49-state or 50-state compliant versions

KIT CONTENTS

- Fully assembled engine
- Full documentation
- X117C includes an evaporative emissions hardware kit
- Three year warranty



The X-Wedge® engine is an S&S proprietary design with a 56° cylinder angle and three belt driven cams. Requires a special frame as it will not fit in frames designed for Harley-Davidson® engines.

SPECIFICATIONS S&S® X-WEDGE® 49-STATE AND 50-STATE ENGINES

Engine	Chassis Style	Displacement	Cylinder Angle	Bore	Stroke	Compression Ratio	Fuel System	Ignition
X117E and X117C	S&S X-Wedge®	117"	56.25°	4⅜"	4⅜"	9.75:1	S&S Closed Loop Single Bore VFI	S&S VFI w/Knock Sensing

S&S® X-WEDGE® 49-STATE AND 50-STATE ENGINES

Engine	Certification	Silver	MSRP	WBlack	MSRP	Polished	MSRP
X117E	49-State	31-8061	\$9,110.00	31-8060	\$9,110.00	31-8062	\$9,675.00
X117C	50-State	106-3753	\$9,110.00	106-3752	\$9,110.00	106-3754	\$9,675.00

COMPLETE ENGINE REBUILD GASKET KITS

S&S Engine Family	Year Group	Bore Size	Part No	MSRP
X-Wedge®	Custom	4⅜"	106-1031	\$134.95
X-Wedge®	Custom	4¼"	106-1029	\$132.95
X-Wedge®	Custom	4⅝"	106-1030	\$132.95

PERFORMANCE
KITS

Parts for
Twin Cam 96°/103°
2007-2013

Parts for
Twin Cam 88°
1999-2006

Parts for
Evolution®
1984-1999

Parts for
Sportster® & Buell®
1986-2013

Parts for
Vintage Engines
1926-1984

Parts for
X-Wedge®
2007-2013

Parts for
Victory®
2003-2013

Racing
Products

Tools & Shop
Supplies

Dealer Services
& Promo Items

Warranty &
Company Policy

OEM Cross Reference
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X-WEDGE® SERVICE MANUAL

These manuals are created to help you maintain your S&S engine. They outline the procedures necessary for both the home mechanic and shop technician to ensure maximum performance and longevity.

S&S® SERVICE MANUAL

Application	Part No.	MSRP
S&S X-Wedge Engines - All displacements	106-0735	\$30.95



PERFORMANCE
KITS

Parts for
Twin Cam 96/103™
2007-2013

Parts for
Twin Cam 88™
1999-2006

Parts for
Evolution™
1984-1999

Parts for
Sportster® & Buell™
1986-2013

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Vintage Engines
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CRANKCASES FOR S&S® X-WEDGE® ENGINES

These crankcases are intended as replacement parts for existing engines, but may also be used to build large high performance engines. It should be noted that only engines built by S&S Cycle with the specified parts and documentation are considered "emissions compliant".

FITMENT

- X-Wedge® engines

FEATURES AND BENEFITS

- Cylinder deck height of 6.125" and will accommodate 4 $\frac{1}{8}$ " up to 4 $\frac{3}{8}$ " bore cylinders without modification.

OPTIONS

- Silver powdercoat, wrinkle black (WBlack) powdercoat, or polished finish

KIT CONTENTS

- S&S crankcase
- Hardware
- Seals

CRANKCASE KITS FOR S&S X-WEDGE® ENGINES

Finish	Part No.	MSRP
Silver Powdercoat	106-0604	\$1,809.95
WBlack Powdercoat	106-0605	\$1,809.95
Full Polish	106-0603	\$1,809.95

NOTE

S&S recommends using Permatex Right Stuff® for sealing crankcases.

REPLACEMENT PARTS ON PAGE 6-26



CRANKSHAFTS FOR S&S® X-WEDGE® ENGINES

Replacement forged crankshafts are available for X-Wedge engines in two strokes. The 4 $\frac{1}{4}$ " stroke crank fits X114 and X128 engines and the 4 $\frac{3}{8}$ " crankshaft fits X117 and may be used to build X132 engines. Crankshafts are machined and ready to assemble with standard bearings. Crank assembly includes rods.

CRANKSHAFT ASSEMBLIES FOR S&S® X-WEDGE® ENGINES

Engine	Stroke	Crankshaft Only	MSRP	Crankshaft Assembly	MSRP
X117/X132	4 $\frac{3}{8}$ "	106-0607	\$989.95	106-0609	\$1,299.95
X114/X121/X128	4 $\frac{1}{4}$ "	106-0606	\$989.95	106-0608	\$1,299.95



106-0607

Replacement forged crankshafts for X-Wedge® engines are ready to assemble with standard bearings.

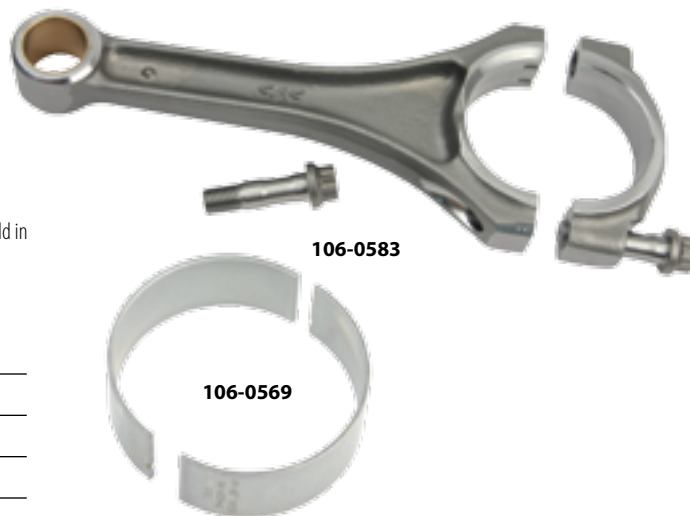
ANY JOB IS EASY WITH THE RIGHT TOOLS
S&S Crankshaft Main Bearing Protector for X-Wedge®, see page 9-8

CONNECTING RODS FOR S&S® X-WEDGE® ENGINES

All X-Wedge engines, regardless of stroke or displacement, use the same connecting rods. These forged rods are 7.400" plain bearing, automotive style, with a two piece design, 2.200" journal diameter, and .927" wristpin diameter. Since the front and rear rods are identical, rods are not sold in sets but are available individually. Bearings are not included and must be purchased separately.

S&S CONNECTING RODS FOR X-WEDGE® ENGINES

Description	Part No.	MSRP
Connecting Rod Front or Rear	106-0583	\$187.95
Bearing Inserts Standard	106-0569	\$33.95
Bearing Cap Screws 12 pt, 7/16"-20 x 1.60"	50-0346-S	\$11.25



Connecting rods for S&S X-Wedge® engines are sold individually since they are the same for front and rear cylinders. Plain bearing inserts are not included with the connecting rod and are available separately.

OIL PUMP FOR S&S® X-WEDGE® ENGINES

This gerotor pump is a direct replacement for the oil pump in any X-Wedge engine. Kit includes all parts needed to replace a worn or damaged pump.

X-WEDGE® OIL PUMP KIT

For X-Wedge Engines	106-0680	\$332.95
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REPLACEMENT PARTS ON PAGE 6-29

BELT COVERS FOR S&S® X-WEDGE® ENGINES

Replacement belt covers for X-Wedge engines are available in chrome finish and carry the S&S logo. Note that unlike many other v-twin engines, the outer cover of an X-Wedge engine is just a cover to protect the cam drive belt and cam sprockets. These covers will fit any X-Wedge engine.

X-WEDGE® BELT COVERS

Chrome	106-0587	\$223.95
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REPLACEMENT PARTS ON PAGE 6-28

S&S®

X-WEDGE® EASY START CAMS

All cams for S&S X-Wedge engines feature the S&S Easy Start automatic, mechanical compression release. The ease of starting with the Easy Start cams, coupled with the fact that compression ratio does not increase proportionally with displacement in X-Wedge engines, allows cams to be used with a wide range of displacements. Production cams for X-Wedge are designed to be "non-interference" cams. That means that if the valve train were to stop for any reason, there is enough valve to valve, and valve to piston clearance to avoid engine damage from valves contacting each other, or the piston.

Recommended Applications For S&S X-Wedge Cams

545 Cams— Bolt-in cams for X-Wedge engines. These camshafts provide 10 ft./lbs. more torque than 548 cams between 1900–3300 rpm. For all displacements with 9.5–10.0:1 compression ratio.

548 Cams— Stock replacement cams for X114, X117, and X121 engines. Emissions compliance is maintained when these cams are installed. Use with stock pushrods. Non-interference.

569 Cams— Bolt-in performance upgrade cams for any displacement X-Wedge engine from 9.8:1 to 10.2:1 compression ratio. Use with stock pushrods. These cams are non-interference, but are not emissions compliant.

618 Cams— Performance upgrade cams for any displacement X-Wedge engine from 9.8:1 to 10.2:1 compression ratio. The 618 cams can be installed as a bolt-in, but it is recommended that the S&S .650 lift spring kit #900-0212 be installed to increase spring force for improved high rpm valve control. The 618 cams are not non-interference cams, and are not emissions compliant. Due to the smaller diameter cam base circle, the X618 cams require a special, slightly longer pushrod set #930-0021, or billet aluminum rocker arm set #900-0213.



S&S® exclusive centrifugally actuated compression release holds the exhaust valve open slightly until the engine has achieved about 700 rpm. At that point, centrifugal force retracts the compression release, allowing the exhaust valves to close completely, and the engine runs normally. Early engines not equipped with compression release, can be updated with the Compression Release Update Kit.

ANY JOB IS EASY WITH THE RIGHT TOOLS
S&S Cam Alignment Tools for X-Wedge®, see page 9-9



WATCH THE S&S EASY START CAMS CRANK TEST VIDEO AT
SSCYCLE.COM/MEDIA/VIDEOS.PHP

S&S® X-WEDGE® EASY START CAMS SPECIFICATIONS

Cam Name	Valve Timing (open/close) ¹		Valve Duration		Valve Lift ²	Centerline		Lift@TDC ³	
	Intake	Exhaust	Intake	Exhaust		Intake	Exhaust	Intake	Exhaust
	Open BTDC/Close ABDC	Open BBDC/Close ATDC							
545	13°/39°	57°/0°	206°	237°	0.548"	116°	119°	.050"	.080"
548	5°/55°	57°/0°	240°	237°	0.548"	115°	118.5°	0.136"	0.080"
569	9°/40°	47°/17°	229°	244°	0.569"	105.5°	104.5°	0.137"	0.179"
618	9°/43°	62°/23°	232°	264°	0.618"	107°	109°	0.140"	0.224"

¹ Timing designation is a function of zero lash @ 0.053" off base circle.

² Valve lift is calculated from a 1.76:1 ratio rocker arm.

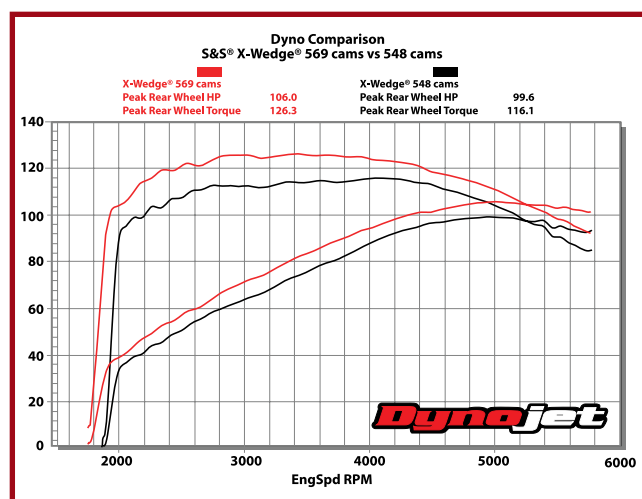
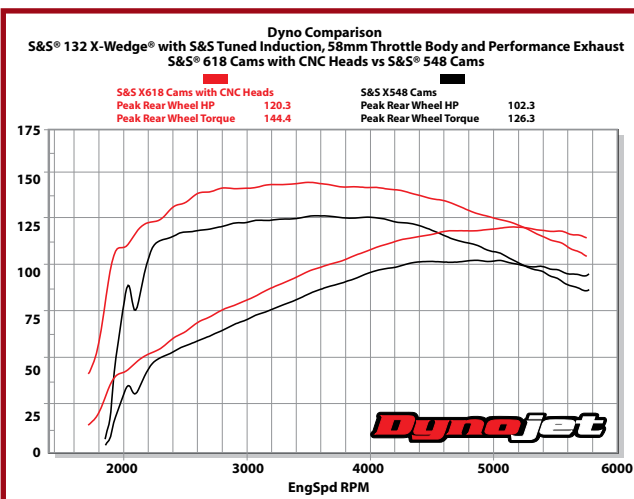
³ TDC lift is measured at the valve and is for reference only.

S&S® X-WEDGE® CAM KITS

545 Easy Start (3 cams)		548 (3 cams)		569 Easy Start (3 cams)		618 Easy Start (3 cams)	
106-4444	\$424.95	106-0577	\$424.95	330-0047	\$424.95	330-0074	\$424.95

COMPRESSION RELEASE 548 UPDATE KIT

(2 exhaust cams)	106-3809	\$424.95
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VISIT US AT WWW.SSCYCLE.COM

Parts for
Twin Cam 96"/103"
2007-2013

Parts for
Twin Cam 88"
1999-2006

Parts for
Evolution®
1984-1999

Parts for
Sportster® & Buell®
1986-2013

Parts for
Vintage Engines
1936-1984

Parts for
X-Wedge®
2007-2013

Parts for
Victory®
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CAM CHEST REPLACEMENT PARTS FOR S&S® X-WEDGE® ENGINES

These replacement parts for the cam drive system are universal for all X-Wedge engines. Note that one pinion sprocket and three cam sprockets are required per engine.

CAM CHEST REPLACEMENT PARTS

Description		Part No.	MSRP
Pinion sprocket, 19-tooth		106-0741	\$18.95
Cam sprocket, 38-tooth		106-0740	\$18.95
Belt, cam drive, 127-tooth, 30mm		106-0571	\$110.95
Belt tensioner, 30mm		106-0751	\$166.95
Pinion sprocket bolt	each	50-0467	\$2.10
	5 pack	106-0731	\$9.65
Pinion washer, flanged		106-0753	\$5.95



106-0740



106-0751



106-0741



106-0753



50-0467



106-0571

CAM BEARING REPLACEMENT PARTS FOR S&S® X-WEDGE®

CAM BEARING REPLACEMENT PARTS

Description	Part No.	MSRP
Inner Cam Bearing for S&S X-Wedge®	31-4080	\$8.50
Outer Cam Bearing for S&S X-Wedge®	106-1424	\$8.55



31-4080



106-1424

CYLINDERS AND PISTONS

FOR S&S® X114, X117 & X121 X-WEDGE® ENGINES

The S&S X-Wedge engine is different from anything we have offered before. Developing a new design allowed us to incorporate a number of useful new features, and one of our priorities early on in the design process was to make this engine easy to service. The front and rear cylinders and pistons are interchangeable, which means that we don't have to sell cylinders or pistons in sets. In addition, the diameter of the X-Wedge pistons is held to such a tight tolerance that it is not necessary to measure each piston and fit a cylinder to it. Cylinders can be honed to the specified size and any piston of the correct oversize will fit with the correct clearance.

FITMENT

- X114, X117 & X121 X-Wedge engines

FEATURES AND BENEFITS

- The front and rear cylinders and pistons are interchangeable
- Cylinders can be honed to the specified size and any piston of the correct oversize will fit with the correct clearance.

OPTIONS

- Silver powdercoat, wrinkle black (WBlack) powdercoat, or polished finish



91-7461
Pistons are sold separately

INDIVIDUAL CYLINDERS ONLY FOR S&S® X-WEDGE® ENGINES

Displacement	Stroke	Bore	Cylinder Length	Compression Ratio	Silver	MSRP	WBlack	MSRP	Full Polished	MSRP
117"	4.375"	4.125"	4.645"	9.75:1	91-7461	\$289.95	91-7463	\$289.95	91-7465	\$393.95
121"	4.25"	4.25"	4.645"	9.75:1	91-7467	\$289.95	91-7469	\$289.95	91-7471	\$393.95

Pistons are sold separately. See chart below.

FORGED INDIVIDUAL PISTONS FOR S&S® X-WEDGE® ENGINES

Displacement	Standard	MSRP	+ .020"	MSRP
114"	106-0108	\$233.95	—	—
117"	106-0108	\$233.95	—	—
121"	106-0109	\$233.95	106-0687	\$233.95

All individual pistons include one piston, rings, wristpin, and clips.

Due to piston coating, piston measurements are not reliable.

Bore cylinders to nominal diameter +/- .0005" for correct clearance.

REPLACEMENT MOLY FACED RINGS FOR X-WEDGE PISTONS

Description	Standard	MSRP
X114 & X117 2 pack	106-0011	\$130.95
X121 1 pack	106-0709	\$43.95
X121 2 pack	106-0012	\$130.95

REPLACEMENT WRISTPINS AND KEEPERS

Description	Part No.	MSRP
Wristpin	X114 & X117 & X121	106-1000 \$11.05
Keeper	All Displacements	106-0004 \$1.05

REPLACEMENT MOLY FACED RINGS FOR X-WEDGE PISTONS

Description	Standard	MSRP	+ .010"	MSRP
X128 & X132 2 pack	94-4285X	\$43.95	94-4286X	\$43.95

X-WEDGE® GASKETS & DOWELS

Description	Bore	Part No.	MSRP
Head Gasket	4 $\frac{3}{8}$ " each	93-1132	\$11.85
	4 $\frac{3}{8}$ " 10 pack	106-0627	\$107.95
	4 $\frac{1}{4}$ " each	93-1131	\$10.50
	4 $\frac{1}{4}$ " each	93-1130	\$11.30
Base Gasket	4 $\frac{1}{4}$ " 10 pack	106-0626	\$102.95
	All each	93-1120	\$8.05
Dowel Pin .187" x .635"	each	50-8031	\$1.00
	10 pack	106-0613	\$7.50

4-3/8" BORE CYLINDER AND PISTON UPGRADE KITS FOR X-WEDGE® X128 AND X132 ENGINES

Increase the displacement of your X-Wedge engine with these bolt-on cylinder and piston kits. A 1/8" bore increase will take an X121 to X128, and a 1/4" bore increase will take an X117 to X132! No changes to the crankcases or flywheels are required. Bolt-on Proven Performance® from S&S!

FITMENT

- S&S X-Wedge® engines

FEATURES AND BENEFITS

- Bolt-on performance
- Increase displacement without crankcase modifications
- Fits all X-Wedge engines

OPTIONS

- Silver powdercoat, wrinkle black (WBlack) powdercoat or polished finish



4 3/8" BORE CYLINDER ONLY SETS FOR S&S® X-WEDGE® ENGINES

Displacement	Stroke	Bore	Cylinder Length	Compression Ratio	Silver	MSRP	WBlack	MSRP	Full Polished	MSRP
132"	4.375"	4.375"	4.645"	10.3:1	910-0002	\$611.95	910-0001	\$611.95	910-0003	\$753.95

Cylinders are honed and ready for assembly. Cylinder sets include front and rear cylinders. Includes head and base gaskets. Pistons are sold separately. See chart below.

FORGED PISTON SETS FOR S&S® X-WEDGE® ENGINES

Displacement	Standard	MSRP	+ .010"	MSRP
128"	920-0003	\$389.95	920-0006	\$389.95
132"	920-0002	\$389.95	920-0004	\$389.95

All piston sets are for two pistons and include rings, wristpin, and clips.

Due to piston coating, piston measurements are not reliable.

Bore cylinders to nominal diameter +/- .0005" for correct clearance.

REPLACEMENT MOLY FACED RINGS FOR X-WEDGE PISTONS

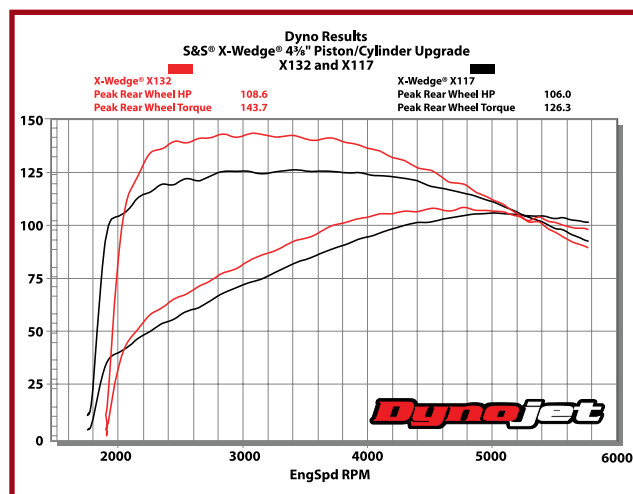
Description	Standard	MSRP	+ .010"	MSRP
X128 & X132	2 pack 94-4285X	\$43.95	94-4286X	\$43.95

REPLACEMENT WRISTPINS AND KEEPERS

Description	Part No.	MSRP
Wristpin	94-9277	\$14.40
Keeper	106-0004	\$1.05

X-WEDGE® GASKETS

Description	Bore	Part No.	MSRP
Head Gasket	4 3/8"	each 93-1132	\$11.85
		10 pack 106-0627	\$107.95
Base Gasket	All	each 93-1120	\$8.05



This dyno chart shows the performance enhancements from increasing displacement. While peak horsepower is not greatly affected, overall torque drastically increases — 140 ft./lb. at 2500 rpm! Both engines are configured with S&S X569 cams, S&S 58mm throttle body, S&S tuned runner intake and custom made 2:1 header system with a performance muffler.

CNC PORTED CYLINDER HEADS FOR X-WEDGE®

S&S® now offers a CNC porting service for stock cylinder heads for X-Wedge® engines. This is an economical way to get a substantial horsepower increase. S&S has developed high flowing intake port, exhaust port, and combustion chamber shapes for X-Wedge cylinder heads. S&S then digitally reproduces them in a head casting with our 5 axis CNC machining centers. After CNC porting, heads are assembled with new valves and high performance, conical high silicon alloy valve springs.

FITMENT

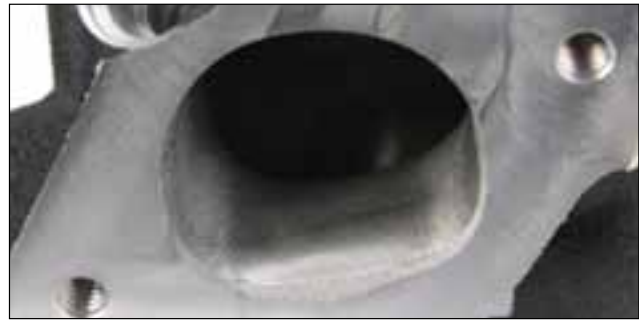
- 128" and 132" X-Wedge engines
- Features and benefits
 - CNC machined ports for a consistent performance increase from original heads
 - Choice of two different chamber machinings (107cc or 113cc)
 - Great throttle response, high velocity port without losing low RPM torque
 - Assembled with performance valves and springs
 - Finish options: Full polished, silver, wrinkle black powdercoat

SERVICE OPTIONS

- Buy New CNC, or...
- Rework Service
 - Heads sent to S&S
 - Get the same set of heads back with CNC machined ports & chambers
 - The best option for heads with a special cosmetic treatment
 - Allow 2 week turn-around
- Custom CNC Port Duplication
 - S&S can digitize your port design and machine it in your heads, ask an S&S customer service representative for details



WATCH THE S&S CNC PORTING VIDEOS AT
SSCYCLE.COM/MEDIA/VIDEOS.PHP



Shown is an intake port from a CNC machined X-Wedge® cylinder head. Notice the detailed machining that gives our CNC ported heads the performance that your big-inch engine demands.



Digitized port shapes are faithfully reproduced in X-Wedge cylinder heads on our 5-Axis CNC machining center. Intake port, exhaust port and combustion chamber are all modified. This head will be assembled with new valves and high lift valve springs to complete the package.

S&S CNC PORTING SERVICE FOR X-WEDGE® HEADS

Fitment	Part No.	MSRP
128" and 132" X-Wedge engines	106-6480	Call for Pricing

		Stock Heads	CNC Ported by S&S®
Valve Size	Intake	2.00"	2.2"
	Exhaust	1.605"	1.675"
Max "Free Spin" Valve Lift*		0.0580"	0.0580"
Port Flow	Intake	261.2 cfm	315 cfm
	Exhaust	190.8 cfm	215 cfm
Compression Ratio	128"	10.1:1	10.2:1
	132"	10.3:1	10.5:1
Cylinder Heads Decked		—	0.030"
Chamber Volume		104 cc	102 cc**

* "Free Spin" valve lift controlled by valve reliefs in piston.

** After decking.

Flow testing performed on a SuperFlow® 1020 flow bench at 28" of water test pressure at .600" lift through radiused inlet.

CNC porting is not available for previously ported heads, heads that have been structurally damaged, or heads that are determined to be unserviceable during initial inspection. These heads will be returned to the customer without modification. In these cases customer will be notified and options reviewed. New CNC ported heads are available for purchase.

Due to variations in cylinder head castings, all inside surfaces of the ports may not "clean up" during machining. As a result, the inside of one or more ports may not appear to be completely machined. This does not effect performance and is not considered a defect.

INDIVIDUAL PARTS FOR X-WEDGE® CNC PORTED HEADS

Spring	106-5689	\$32.95
Intake Valve	900-0275	\$40.95
Exhaust Valve	900-0276	\$67.95
Valve Guide Seal	each	90-2281 \$5.75
	4 pack	106-0581 \$20.95
Top Collar	106-5690	\$5.90
Bottom Collar	106-3827	\$7.50
Valve Keeper	each	90-2094-S \$1.95
	8 pack	50-7166 \$13.95



VISIT US AT WWW.SSCYCLE.COM

Parts for
Twin Cam 96"/103"
2007-2013

Parts for
Twin Cam 88"
1999-2006

Parts for
Evolution
1984-1999

Parts for
Sportster® & Buell
1986-2013

Parts for
Vintage Engines
1926-1984

Parts for
X-Wedge®
2007-2013

Parts for
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CYLINDER HEADS FOR S&S® X-WEDGE® ENGINES

These cylinder heads are intended as replacement parts for existing engines, but may also be used to build large high performance engines. These can be used on 114", 117", 121" and 132" X-Wedge engines.

FITMENT

- X-Wedge engines

FEATURES AND BENEFITS

- .585" lift Sidewinder® springs
- Powder metal valve guides
- Completely assembled stock heads – ready to bolt-on

OPTIONS

- Silver Powdercoat, Wrinkle Black (WBlack) Powdercoat, or Full Polished Finish



ASSEMBLED CYLINDER HEADS FOR S&S® X-WEDGE® ENGINES

Finish	Set	MSRP	Front	MSRP	Rear	MSRP
Silver	106-0646	\$1,039.95	106-0652	\$701.95	106-0656	\$701.95
WBlack	106-0647	\$1,039.95	106-0651	\$701.95	106-0657	\$701.95
Full Polished	106-0644	\$1,429.95	106-0649	\$857.95	106-0654	\$857.95

REPLACEMENT PARTS ON PAGE 6-30

HEAD BOLTS FOR S&S® X-WEDGE® ENGINES

Will fit any production X-Wedge engine regardless of displacement. 10 are required for complete replacement.

S&S HEAD BOLT FOR S&S X-WEDGE ENGINES

Description	Part No.	MSRP
Head bolt	93-3028-S	\$6.45
Washer (.150")	50-0418-S	\$1.35



Parts for
Twin Cam 96°/103°
2007-2013

Parts for
Twin Cam 88°
1999-2006

Parts for
Evolution®
1984-1999

Parts for
Sportster® & Buell®
1986-2013

Parts for
Vintage Engines
1926-1984

Parts for
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PERFORMANCE
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S&S®

HIGH PERFORMANCE HYDRAULIC TAPPETS

These high quality tappets are the same ones used in production S&S X-Wedge engines. So when the time comes to rebuild your X-Wedge, these are the tappets to use to bring your engine back to original condition.

S&S® HIGH PERFORMANCE HYDRAULIC TAPPETS

Tappet, Hydraulic, X-Wedge®	37-0030	\$29.95
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NOTE

Tappets for S&S X-Wedge engines are not designed for use with S&S HL₂T limited travel kits.



TAPPET COVERS FOR S&S® X-WEDGE® ENGINES

For replacement and customization, these tappet covers fit all X-Wedge engines. Available in silver powdercoat, wrinkle black powdercoat, or polished finish. Kit includes two tappet guides, gaskets, dowel pins, and mounting hardware. Everything needed for installation.

TAPPET COVER KITS FOR S&S® X-WEDGE®

Silver Powdercoat	106-0746	\$99.95
Wrinkle Black Powdercoat	106-0747	\$99.95
Polished	106-0745	\$109.95

REPLACEMENT PARTS

Gasket	each	37-0006	\$6.60
	10 pack	106-0633	\$59.95

Parts for
Twin Cam 96°/103°
2007-2013Parts for
Twin Cam 88°
1999-2006Parts for
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PUSHRODS FOR S&S® X-WEDGE® ENGINES

Unlike other S&S engines and stock engines modified with S&S high performance kits, all production X-Wedge engines are the same height. Changes in stroke are limited to what can be accommodated by changing the piston deck height, without changing cylinder length. This limits the range of strokes available, but the range of bore size provides a wide range of available displacements. Based on this, pushrod length is determined by cam and rocker arm combination

PUSHRODS FOR S&S® X-WEDGE®

Description	Part No.	MSRP
X-Wedge® Pushrod Sets – All displacements with stock rocker arms		
Stock Length (for use with 545, 548 and 569 cams)	106-0699	\$79.95
+ .030" length (for use with 618 cams)	930-0021	\$79.95
X-Wedge® Pushrod Set – All displacements with aluminum roller rocker arms		
-0.35" length (for use with all cams)	930-0017	\$79.95



Pushrod set part #106-0699 features four pushrods of the same length.

ROLLER ROCKER ARM KIT FOR S&S® X-WEDGE® ENGINES

Automotive style billet aluminum rockers with roller tips and needle fulcrum bearings. These rockers increase your ratio to 1.80 from the 1.76 stock. Comes with all parts necessary to install in your X-Wedge.

FITMENT

- X-Wedge® engines – all displacements
- Works with any cam

FEATURES AND BENEFITS

- Increased cam lift
- Aluminum construction reduces weight
- Friction reducing bearings and rollers
- Allows for tappet adjustment



ROLLER ROCKER ARM KIT FOR S&S® X-WEDGE® ENGINES

S&S® Roller Rocker Arm Kit	900-0213	\$394.95
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REPLACEMENT GASKETS

Rocker Cover Gaskets	each	39-0010	\$6.45
	2 pack	106-0622	\$8.25

S&S® SIDEWINDER® VALVE SPRINGS

Lighter and simpler than our previous valve springs, S&S Sidewinder springs are made from special ovate spring wire and have only one progressively wound coil. Since they do not add as much mass to the valve train as multi-coil spring packs, they offer high rpm capability with less spring force. Two spring kits available. The .585" Sidewinder kit and the .650" Sidewinder kit. The .650" Sidewinder kit is required when installing the 618 cam.

FITMENT

- X-Wedge® engines

FEATURES AND BENEFITS

- .585 Sidewinder Springs:
 - Lower spring force results in reduced valve train noise, increased valve stability, and longer valve train component life
 - Stock replacement in X-Wedge
- .650 Sidewinder Springs:
 - Manufactured from ultra clean high silicon kobe alloy wire then micro shot peened and nitrided
 - Increased force for high rpm valve control

KIT CONTENTS

- Valve keepers
- Springs
- Top collars
- Bottom collars
- 0.015" and 0.030" shims



106-0772

S&S .585" Sidewinder® valve spring kit is ideal for stock rebuilds and for mild performance cams up to .585" lift.

S&S® SIDEWINDER® VALVE SPRINGS SPECIFICATIONS

Lift	Installed Height	Seat Force	Force @ Max Lift	Max RPM
.585"	1.970"	80 lb.	245 lb.	5750
.650"	2.00"	136 lb	319 lb	6500

S&S® SIDEWINDER® VALVE SPRING KITS

Description	Part No.	MSRP
.585" Sidewinder® Valve Spring Kit	106-0772	\$77.95
.650" Sidewinder® Valve Spring Kit	900-0212	\$159.95

REPLACEMENT PARTS ON PAGE 6-29

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PARTS

Parts for
Twin Cam 96°/103°
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Twin Cam 88°
1999-2006

Parts for
Evolution®
1984-1999

Parts for
Sportster® & Buell®
1986-2013

Parts for
Vintage Engines
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S&S®

ROCKER COVERS

These replacement rocker covers for the proprietary S&S X-Wedge engine are the same high quality die-cast chrome plated covers that come on a new engine. Covers are interchangeable for front or rear cylinder heads. Sold each or as a set.

FITMENT

- Fits all S&S X-Wedge engines

FEATURES AND BENEFITS

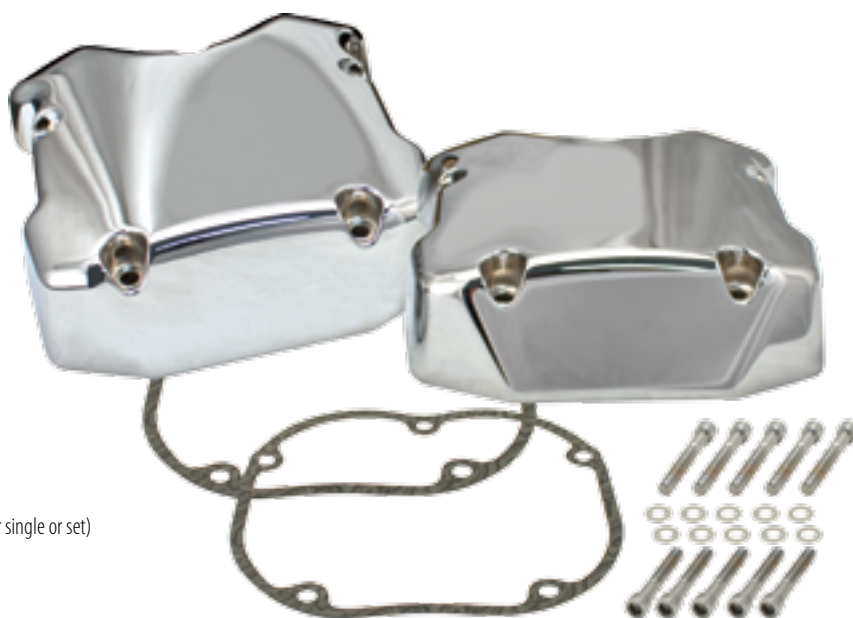
- OEM stock replacement — same as original equipment
- Die-cast aluminum with show chrome finish

KIT CONTENTS

- One rocker cover or a set of two rocker covers (see part numbers for single or set)
- Mounting hardware
- Gasket(s)

OPTIONS

- Single rocker cover
- Set of two rocker covers
- Chrome plated only



106-0593

S&S® ROCKER COVERS FOR S&S® X-WEDGE®

Description	Part No.	MSRP
Single Rocker Cover (with hardware and gasket)	106-0600	\$221.95
Rocker Cover Set (with hardware and gaskets)	106-0593	\$387.95

REPLACEMENT PARTS

Rocker cover screw	10 pack	106-1058	\$44.95
Washers	each	50-7026	\$1.00
	10 pack	50-7028	\$4.85
Rocker gasket	each	39-0010	\$6.45
	2 pack	106-0622	\$8.25

PERFORMANCE PARTS

Parts for
Twin Cam 96°/103°
2007-2013

Parts for
Twin Cam 88°
1999-2006

Parts for
Evolution®
1984-1999

Parts for
Sportster® & Buell®
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S&S®

SINGLE BORE TUNED INDUCTION SYSTEM

FITMENT

- S&S X-Wedge® engines

FEATURES AND BENEFITS

- Bolt-on performance — over twice the filtering area over stock intake system
- Increases horsepower and torque across the rpm range using air column inertia and carefully timed gas dynamic pressure waves
- Smooth intake tract of carefully selected tuned lengths increases performance
- High flow washable and reusable cotton media provides performance, protection, and economy



S&S SINGLE BORE TUNED INDUCTION SYSTEM KITS

Fitment	Fuel Delivery	Finish	Part No.	MSRP
S&S X-Wedge	Single Bore	Chrome Runner and Red Filters	170-0082	\$539.95
CTO	Specify	Specify	106-5337*	Call for Pricing

*Use the Configure to Order (CTO) part number to order different finish and filter color.

REPLACEMENT PARTS ON PAGE 6-32



Billet adaptor brackets make single bore tuned induction compatible with a lot of different engines and motorcycles.



S&S THROTTLE BODY

58mm	106-3960	\$267.95
52mm	106-3141	\$242.95

REPLACEMENT PARTS ON PAGE 6-34



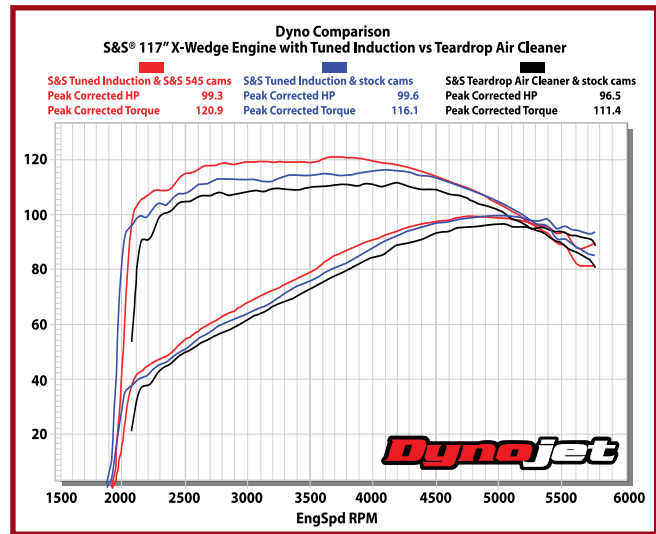
106-0248



17-1020



106-1164



S&S Air Filter Covers

- Water resistant and filters out large debris, allowing the filter media to stop small dirt particles from getting into your engine
- Washable nylon

S&S High Flow Replacement Filter

- High flow washable and reusable cotton media provides performance, protection, and economy
- Choice of red or blue — red filters come standard with all S&S Single Bore Tuned Induction kits
- Kit includes one filter and one clamp

S&S Air Filter Oil

- Use after cleaning the cotton media — this colored oil brings back the vibrance of your filter
- Designed for S&S air filters and is available in red or blue

ACCESSORIES

Description		Part No.	MSRP
Air Filter (each sold with clamp)	Red	17-1020	\$52.95
	Blue	17-1023	\$52.95
Air Filter Oil, 8 oz. Bottle	Red	106-1163	\$13.30
	Blue	106-1164	\$13.30
Nylon Air Filter Cover	each	106-0247	\$24.95
	2 pack	106-0248	\$44.95



S&S® SUPERIOR S&S® LUBRICATION FOR YOUR AMERICAN V-TWIN

PROVEN PERFORMANCE® PROTECTION

S&S Cycle is pleased to introduce a new line of quality lubricants to keep your American v-twin motorcycle running like new for years to come. S&S has long been known for building the biggest, baddest engines on the street and strip so it only makes sense that the same company that provides the parts should offer a way to protect them from the rigors of high performance riding. Make no mistake, though, you don't have to be a racer to benefit from world-class S&S lubrication. Whether your rides last a quarter mile or cover a continent, S&S engine, transmission, and primary oils provide the best protection available. S&S lubricants are custom blended for by Spectro Oils of Brookfield, CN and are the best choice for stock Harley-Davidson® and S&S high performance engines.

- Complete drive train protection – Engine, transmission, and primary
- Superior Lubrication – Exceeds S&S® and Harley-Davidson® warranty requirements
- Reduced wear – Enhanced levels of zinc and phosphorus for longer engine life and high flash additives are safe for catalytic converters!
- Multiple grades and formulations – Petroleum or full synthetic
- Easy pour "long neck" bottle – No funnel needed
- Made in the USA! – Custom formulated for S&S by Spectro Oils of Brookfield, CT, USA



S&S Premium Synthetic Engine Oil

S&S Premium Synthetic engine oil provides consistent viscosity, and resists thermal breakdown and oxidation at elevated temperatures. In addition the premium synthetic base stock coupled with the exclusive S&S additive package offers superior lubrication for reduced engine wear and lower oil temperatures. The best choice for any engine, but a must for performance engines and for engines operated in demanding conditions.

S&S 20W50 PREMIUM SYNTHETIC ENGINE OIL

Case of 12 1-Qt bottles	310-0285	\$155.40
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S&S Heavy Duty Engine Oil

This petroleum based oil for air cooled v-twin engines contains superior petroleum stocks blended with advanced anti-wear additives for reduced wear and extended engine life. Anti-carbon additives eliminate a primary cause of valve sticking. This is a good choice for vintage and modern engines under normal driving conditions and for touring.

S&S 20W50 HEAVY DUTY ENGINE OIL

Case of 12 1-Qt bottles	310-0287	\$95.40
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S&S Premium Synthetic Transmission Oil

The combination of premium synthetic PAO (polyalphaolefin) base oils and an advanced additive package delivers protection under high loads and stands up to extreme heat. S&S Premium Synthetic Gear Oil extends gear life, and reduces drag, friction losses, and wear. A.P.I. GL-1 rated.

S&S 75W140 PREMIUM SYNTHETIC TRANSMISSION OIL

Case of 12 1-Qt bottles	310-0292	\$227.40
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S&S Heavy Duty Transmission Oil

This quality petroleum based hypoid gear lubricant is formulated specifically for Harley-Davidson® big-twin transmissions and is highly recommended for aftermarket v-twin gearboxes, as well. S&S Heavy Duty Gear Oil reduces drag, friction losses, wear, and extends gear life. In addition, it prevents rust, corrosion, oxidation, foaming, and gear pitting. A.P.I. GL-5 rated.

S&S 85W140 HEAVY DUTY TRANSMISSION OIL

Case of 12 1-Qt bottles	310-0291	\$119.40
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S&S Extreme Duty Primary Oil

S&S Cycle's new Extreme Duty Primary Oil is formulated specifically for use in primary chain cases of Harley-Davidson® big twin and Sportster® models. This is a petroleum-based lubricant with high shear stability and the ability to withstand extreme loads. Special polymer additives allow it to remain stable at elevated temperatures and provide exceptional clutch engagement. The SAE 85W viscosity provides low drag and frictional losses and eliminates clutch drag and slipping.

S&S 85W EXTREME DUTY PRIMARY OIL

Case of 12 1-Qt bottles	310-0290	\$95.40
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NEW! S&S® QUICK OIL CHANGE KIT

S&S® recommends that you change your oil and filter every 2500 miles or six months, whichever comes first. And to make it easy, we offer S&S Quick Oil Change kits. Everything you need in one convenient package.

KIT CONTENTS

- Four quarts of either S&S Heavy Duty 20w50 Petroleum, or Premium Full Synthetic motor oil
- S&S oil filter with chrome finish



S&S QUICK OIL CHANGE KITS

Fitment	S&S 20w50 Premium Synthetic		S&S 20w50 Heavy Duty	
1984-'99 BT, 1986-'13 XL and 1991-'02 Buell®	310-0297	\$64.95	310-0293	\$44.95
1999-'13* BT and all X-Wedge®*	310-0298	\$64.95	310-0294	\$44.95

*Contains an anti-drain back valve

S&S®

OIL FILTERS

The most important thing you can do to maximize the life of your engine is to keep your oil clean. Friction wear particles and combustion byproducts are picked up by your motor oil. Regular oil changes are essential to keep contaminants from accumulating, but from one oil change to the next, your oil filter is your first line of defense against these wear causing particles. Make sure you have an S&S oil filter working for you.

FEATURES AND BENEFITS

- Captures smaller particles than stock filters
- Low restriction to oil flow
- Direct bypass — bypass oil does not pass over dirty filter media
- Smaller diameter for easier installation
- Black or chrome finish



S&S® OIL FILTERS

Year Application	Micron Rating	QTY	Chrome	MSRP	Black	MSRP
1984-'99 Evolution®, 1986-'12 XL and 1991-'02 Buell®	30µ	each	31-4102 (H-D®#63796-77A)	\$14.40	31-4101 (H-D®#63805-80A)	\$11.65
		12 pack	310-0240 (H-D®#63796-77A)	\$157.95	310-0239 (H-D®#63805-80A)	\$127.95
1999-'12* Twin Cam 88®/96™/103™ and all X-Wedge®	10µ	each	31-4104 (H-D®#63798-99A)	\$14.40	31-4103 (H-D®#63731-99A)	\$11.65
		12 pack	310-0242 (H-D®#63798-99A)	\$157.95	310-0241 (H-D®#63731-99A)	\$127.95

* Contains an anti-drain back valve

CHAMPION® SPARK PLUGS

Replace Your Spark Plugs For Maximum Performance and Fuel Economy. S&S® now offers the same high quality Champion® spark plugs that we include with our engines for replacement in S&S X-Wedge engines. They are the correct heat range for all S&S engines and also fit 1977 and later Harley-Davidson® engines. Compatible with any ignition system.

CHAMPION® SPARK PLUGS

Application	Size	QTY	Part No.	MSRP
Twin Cam 88®/96™/103™, Sportster®, X-Wedge® & S&S 4 1/8" bore engines	12mm Long Reach Champion® #RN12YC	each	55-1320 (H-D®#32317-86A, 32362-04)	\$6.30
		2 pack	55-1322 (H-D®#32362-04, 32317-86A)	\$11.45
Evolution®, Vintage Models (SH-Series, Iron XL, KN-Series, P-Series) & S&S 3 3/8" & 4" bore engines	14mm Long Reach Champion® #RA8HC	each	55-1321 (H-D®#32311-83, 32342-04)	\$4.85
		2 pack	55-1323 (H-D®#32311-83, 32342-04)	\$8.85



55-1322

S&S®

FUEL PUMP FOR FUEL INJECTED CUSTOM BIKES

Building a fuel injected custom bike can have its problems, and one that always comes up is finding a cool looking gas tank with a fuel pump in it. This fuel pump can help with that problem since it can be mounted in nearly any tank. Hollow mounting bolts secure the pump flange to the bottom of the tank and provide an outlet for wiring and pressurized fuel. A fiber media filter, placed at the lowest point in the tank prevents contaminants from damaging the fuel pump.

S&S FUEL PUMP KIT

For Fuel Injected Custom Bikes	55-5089	\$609.95
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S&S® IN-TANK FUEL PUMP SPECIFICATIONS

Manufacturer	Pressure	Capacity	Current Draw
Walbro	4 Bar/58 PSI	45 Lt/Hr	5 Amps

NOTE

This is not a stock replacement pump for Harley-Davidson® motorcycles.



S&S® fuel pump kit contains fuel pump, inlet hose, an in-tank filter, mounting hardware, and instructions.

S&S®

INNER PRIMARY BEARING RACE

FEATURES AND BENEFITS

- Will not "walk" on transmission mainshaft
- Prevents costly damage to mainshaft seal and output gear
- Simple to install
- Unique "stepped" design prevents the race from moving inward

S&S INNER PRIMARY BEARING RACE

X-Wedge	56-5089	\$51.95
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The S&S inner primary bearing race positively eliminates bearing race movement that can cause costly damage to the transmission seal and output bearing. A must for high performance applications.

ANY JOB IS EASY WITH THE RIGHT TOOLS

S&S Inner Primary Bearing Race Installer, see page 9-10

S&S®

XW-R TRANSMISSION CASE KITS FOR X-WEDGE® ENGINES

This series of transmission cases is for the S&S X-Wedge engine in the Rolling Thunder Rubber Mounted Bagger or FXR style frames. Available in several styles for left side drive five and six-speed transmissions and five-speed right side drive transmissions. Cases are available in silver powdercoat, wrinkle black powdercoat, and polished finishes.

This case is a must for anyone who intends to use the Rolling Thunder Rubber Mounted X-Wedge frame to build a custom bike. Case kits come complete with hardware and mounting plate, and are compatible with stock and other five-speed gear sets.



S&S® XW-R TRANSMISSION CASES FOR S&S X-WEDGE® ENGINES

Description	Black	MSRP	Silver	MSRP	Polished	MSRP
Five Speed Left Side Drive	106-3376	\$637.95	106-3377	\$637.95	106-3375	\$776.95
Five Speed Right Side Drive*	106-3384	\$637.95	106-3385	\$637.95	106-3383	\$776.95

* Machined to accept most aftermarket RSD Transission kits that fit in stock transmission cases. Accommodates 250 rear tire.

REPLACEMENT HARDWARE

Description	Part No.	MSRP
Transmission Mounting Plate	Silver	106-3098 \$58.95
	WBlack	106-3097 \$58.95
	Chrome	106-3096 \$69.95
Hardware Kit	106-3359	\$27.95



OPTIONAL ACCESSORIES

Description	Part No.	MSRP
Billet Trap Door Kit	56-1027	\$228.95



56-1027
Trap Door Assembly

S&S®

TRANSMISSION TOP COVERS

The S&S transmission top cover is made of chrome plated die-cast or polished billet aluminum. So naturally, it looks great!

S&S Chrome Die Cast Transmission Top Cover For 1991-'99 Softail® and 1991-'00 FLT Models
This cover may be used as stock replacement for 1991-'99 Harley-Davidson® Softail® and 1991-'00 FLT Models.

S&S® TRANSMISSION TOP COVER

Chrome Die Cast	56-5115	\$134.95
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56-5115



This chrome plated die-cast top cover can be used to replace top covers on 1991-'99 Harley-Davidson® Softail® and 1991-'00 FLT models.

All reference to H-D® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding H-D® part number shown.

Parts for
Twin Cam 96"/103"
2007-2013

Parts for
Twin Cam 88"
1999-2006

Parts for
Evolution®
1984-1999

Parts for
Sportster® & Buell®
1986-2013

Parts for
Vintage Engines
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S&S® HIGH PERFORMANCE CLUTCH

The S&S high performance clutch offers more gripping power with more friction surfaces and a larger friction centerline diameter. This clutch is able to handle over 150 horsepower. For competition applications, stronger pressure plate springs are available that increase the power handling capacity to nearly 200 horsepower. Fits in stock primary cases with only minor clearancing operations, which are not visible when the primary is assembled.

FITMENT

- Available for 1991-'06 big twin
- 1994-'06 models require an early style starter pinion gear

FEATURES AND BENEFITS

- Updated clutch to simplify installation — *no need for retention epoxy*
- Superior to competitively priced high performance clutches
- Fits in stock primary with minor modification
- With supplied springs, lever effort is similar to stock Harley-Davidson® clutch, but handles engines up to 150 hp
- Optional high pressure clutch springs, available for competition applications, increases power handling capacity to nearly 200 hp
- Light duty springs for light clutch pull in less demanding stock street applications
- 11 friction plate, 10 steel plate design — narrow friction rings increase contact diameter for increased torque capacity
- Supplied with early style 66-tooth ring gear for increased strength and reduced tooth breakage

OPTIONS

- Mechanical or hydraulic actuation
- 36 or 37-tooth sprocket
- Early style starter pinion gear required for 1994-'99 models to match 66-tooth ring gear supplied

KIT CONTENTS

- Clutch assembly
- Special inner transmission mainshaft bearing race
- Installation Hardware
- Instructions



The S&S high performance hydraulically actuated clutch is compatible with Harley-Davidson® hydraulic clutch, pushrod, and bearing.

S&S® HIGH PERFORMANCE CLUTCH

Description	Part No.	MSRP
Mechanical Actuation	36-Tooth Sprocket 56-5150A	\$749.95
	37-Tooth Sprocket 56-5151A	\$749.95
Hydraulic Actuation	36-Tooth Sprocket 56-5152A	\$803.95
	37-Tooth Sprocket 56-5153A	\$803.95

OPTIONAL PARTS

Description	Part No.	MSRP
Starter Pinion Gear — 9-Tooth	56-1037	\$47.95
High Pressure "Competition" Clutch Springs <i>6 pack</i>	56-5106	\$74.95
Low Pressure "Touring" Clutch Springs <i>6 pack</i>	56-5109	\$74.95
Loctite® Epoxy — .12 ounce	51-9007-S	\$6.40

LEVER EFFORT COMPARISON CHART

	Stock Clutch	S&S Standard Clutch	S&S Touring Springs	S&S Race Springs
Max. HP	Up to 90 HP	Up to 150 HP	Up to 85 HP	Up to 200 HP
Lever Pull	26.0 lbs	27.4 lbs	20.3 lbs	45.0 lbs



S&S high performance cable actuated clutch is compatible with stock and aftermarket cable style transmission side covers. See page 6-21 for S&S chrome billet transmission side covers.



This S&S inner primary bearing race, which is included with the S&S clutch kits, positively will not move on the transmission mainshaft. This prevents damage to the mainshaft seal and the main output gear.

REPLACEMENT PARTS ON PAGE 6-35

S&S®

GATES® HIGH STRENGTH FINAL DRIVE BELTS

How many final drive belts have S&S engines broken? Yes, a lot of power can break things, so what's the solution? The solution is that we are offering stronger belts! S&S has teamed up with the Gates® Corporation, a leading manufacturer of power transmission belts, to offer a series of secondary drive belts for many popular v-twin models. These belts feature Gates' super strong X3N carbon cord material which is significantly stronger than the Aramid material used in many OEM final drive belts.

S&S final drive belts by Gates are available with 14mm pitch in 1½" and 1⅞" widths. See the chart and match the width and number of teeth required for your vehicle. You can find this information in the vehicle service manual.



Attention Custom Bike Manufacturers!

Special Order Belts From S&S® and Gates®

Special belt sizes, private brand labeling, and assistance with belt drive design, are available to custom performance OEM's and aftermarket bike builders, through S&S. These products and services are available for licensed motorcycle manufacturers only, and a minimum order quantity may be required.

Drive belts with your company name imprinted on them are a perfect way to show off your brand. Any belt size currently available in the S&S catalog, as well as the special ordered sizes, can be specially branded. Minimum order quantities would apply.

Whether you're designing a completely new chassis, or simply need a replacement belt, S&S can help you find the belt you're looking for. Through the combined efforts of Gates and S&S, S&S can now provide customers with the technical assistance they need for designing new secondary belt drive systems. In addition, S&S can help you determine required tooth count for your existing chassis design, based on the pulley center-to-center distances and pulley tooth counts.

All belts have a 14mm tooth pitch, and are made of the super strong Gates Carbon X3N material. Belts are available in three standard widths of 1.125", 1.5" and 1.81" (30mm), but can be special ordered in nearly any width for a nominal charge. If you want a belt with a special tooth count, they are also available (see the special order chart for availability).

Contact your S&S Customer Support Representative for more information.

SECONDARY DRIVE BELTS (14mm PITCH)

Teeth	1⅞" Wide	MSRP	1½" Wide	MSRP
125	106-0357	\$182.95	—	—
126	—	—	106-0348	\$193.95
127	—	—	106-0349	\$193.95
128	106-0358	\$182.95	106-0350	\$193.95
130	106-0359	\$182.95	106-0351	\$193.95
132	106-0360	\$182.95	106-0352	\$193.95
133	106-0361	\$193.95	106-0353	\$197.95
135	106-0362	\$193.95	106-0354	\$199.95
136	—	—	106-0355	\$199.95
139	106-0363	\$193.95	106-0356	\$205.95
149	106-1338	\$207.95	—	—
156	—	—	106-2827	\$207.95

BELTS AVAILABLE BY SPECIAL ORDER (14mm PITCH)

Tooth Count	1.181" (30mm) Width*	1.25" Width*
125	●	
126	●	●
127	●	●
128	●	
130	●	
131	●	●
132	●	
133	●	
135	●	
136	●	●
137	●	●
139	●	
140	●	●
149	●	
150	●	●
151	●	●
152	●	●
156	●	

*Minimum order required: 1.181" (30mm) — 16 belts; 1.25" — 17 belts.

PERFORMANCE PARTS

Parts for
Twin Cam 96°/103°
2007-2013

Parts for
Twin Cam 88°
1999-2006

Parts for
Evolution®
1984-1999

Parts for
Sportster® & Buell®
1986-2013

Parts for
Vintage Engines
1926-1984

Parts for
X-Wedge®
2007-2013

Parts for
Victory®
2003-2013

Racing
Products

Tools & Shop
Supplies

Dealer Services
& Promo Items

Warranty &
Company Policy

OEM Cross Reference
Appendix & Index

CHASSIS FROM DAYTEC®

The Daytec Raptor frame for X-Wedge is a right side drive, under-chassis shock design. The frame features 38° rake with 5" top-tube stretch, a single down-tube, and a 1" drop neck. This chassis is constructed of 1½" diameter tubing over-all, except for the 2" diameter front down-tube. The swing arm has a 2" stretch and will accommodate 280 to 300 width rear tires. The Raptor chassis is compatible with stock and aftermarket components for 1998 and earlier Harley-Davidson® Softail® models.

KIT INCLUDES

- Frame
- Stealth swing arm
- Aluminum rear motor mount
- Front shock mount
- Polished stainless steel rock guard kit
- Forward adapter plate right & left
- Bump stop
- Pivot axle & bolt kit
- Pivot axle bearings (installed)
- Rear axle kit and axle block cover kit



The predatory stance of the new Raptor frame for the S&S® X-Wedge® engine invokes images of a custom bike that strikes fear in the hearts of the herd. The frame shown here is painted to show possibilities, but frames will be shipped unpainted.

X-WEDGE® FRAME KIT BY DAYTEC®, UNPAINTED

Frame w/Oil Tank	106-2644	\$2,275.00
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OIL TANK KIT

For X-Wedge® Frame by Daytec®	106-2598	\$315.00
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ROLLING THUNDER 200X FRAME FOR S&S® X-WEDGE® ENGINES

Everybody likes having a choice. That's why S&S offers this smokin' Rolling Thunder 200X frame for the X-Wedge engine. The rake of this frame is 34°, which keeps a narrow wheel base and allows for a tight nimble ride. The 2" diameter backbone has a mild radius and a 2" forward stretch, which provides a simple yet elegant profile. The under-chassis shock frame and swing arm includes a 1" hidden axle, and both stock and custom weld-on brake tabs to suit various build requirements. The 200X frame is constructed of the best quality DOM seamless tubing. Included with the 200X frame is a center fill oil tank with a 4-quart capacity that allows for a full size battery box. This frame positions the engine directly on center line, and the transmission is offset by 1", requiring a 1" primary spacer. The 200X is designed to accommodate a 200mm rear tire with a 1½" final drive belt.

FEATURES AND BENEFITS

- 100% TIG welded
- .120" wall seamless DOM tubing
- CNC machined components
- Engine on frame center line
- Internal fork stop machined into 21/2" neck
- Battery box dimensions 31/2" wide x 7" long x 61/2" high
- Compatible with stock or aftermarket drive train components for pre-1999 Harley-Davidson® Softail® models



This frame is painted, but they come bare to facilitate the installation of weld-on tabs and any other custom fabrication required before painting.

ROLLING THUNDER, 200X FRAME KIT FOR X-WEDGE

Unpainted	106-0811	\$3,389.95
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KIT INCLUDES

- Swing arm (under-frame 1984-'99 style shock)
- Internal fork stop plate
- Splash guard
- Oil tank (4-quart) and mounting hardware/rubbers
- Pivot tube with stainless pivot bolts
- 1" axle and hardware
- Hidden aluminum axle covers
- Weld-on custom and stock brake tabs

SPECIAL ORDER ROLLING THUNDER FRAMES FOR X-WEDGE® ENGINES

If the Rolling Thunder 200X frame shown on the previous page isn't just what you had in mind, take a look at this! We now offer three special order frames with styles and options that should satisfy even the most particular bike builder.

Using Rolling Thunder's frame manufacturing expertise and designs from both Rolling Thunder and S&S, we are able to offer the highest quality frames for the X-Wedge at competitive prices. First, we have a special order version of the Rolling Thunder "under-chassis shock" 200X frame, for those who want to build a custom ride that is similar to a Harley-Davidson® Softail®. Second, a sporty rubber mount frame for bikes similar to an FXR. Finally, we offer a rubber mount touring frame for a bike like an FLT. These frame styles are set up as special order items and offer a number of options for tire size, transmission style, down-tube stretch, back-bone stretch, and rake. These special order frames will be drop-shipped directly from the Rolling Thunder factory to our customers.

Here's How It Works

When you order one of the part numbers below, you will have to choose from several options and specify several dimensions. For example, you can order an oil tank with the frame if you want a "tailor-made" or you can fabricate your own. You will also need to choose between Left Side Drive (LSD) with a maximum rear tire width of 200mm or Right Side Drive (RSD) with a maximum rear tire width of 250mm. RSD and oil tanks are extra cost options and will increase the final price of the frame package. The three frame styles have different ranges for rake, back-bone stretch, and down-tube stretch. You can select any values within the ranges shown for that particular style in the chart below. Once the order has been taken, the frame will be manufactured and will be shipped to you direct from the Rolling Thunder factory.



FLT Style

Frames are shown painted, but are shipped unpainted to facilitate weld-on tabs and other custom fabrication required before painting. Shocks not included.



FXR Style

Frames are shown painted, but are shipped unpainted to facilitate weld-on tabs and other custom fabrication required before painting. Shocks not included.



Contact:
Rolling Thunder Mfg.
1810 Ford Blvd
Chateauguay, Quebec J6J 4Z2 Canada
Tel: 450-699-7045 Fax: 450-699-6974
www.rollingthunderframes.com

SPECIAL ORDER X-WEDGE® FRAMES BY ROLLING THUNDER

Frame Style	Engine Mount	Oil Tank	LSD-200 tire / RSD 250 tire	Rake	Back-bone Stretch	Down-tube Stretch	Part No.	MSRP
200X	Solid Mount	Optional	Choose	34° - 39°	0" - 6"	0" - 6"	999-0009	Call for Pricing
FLT Style	Rubber Mount	Optional	Choose	26° - 30°	0" - 4"	0" - 3"	999-0010	Call for Pricing
FXR Style	Rubber Mount	Optional	Choose	28° - 32°	0" - 4"	0" - 3"	999-0011	Call for Pricing

S&S®

CRANKCASE REPLACEMENT PARTS FOR S&S® X-WEDGE® ENGINES

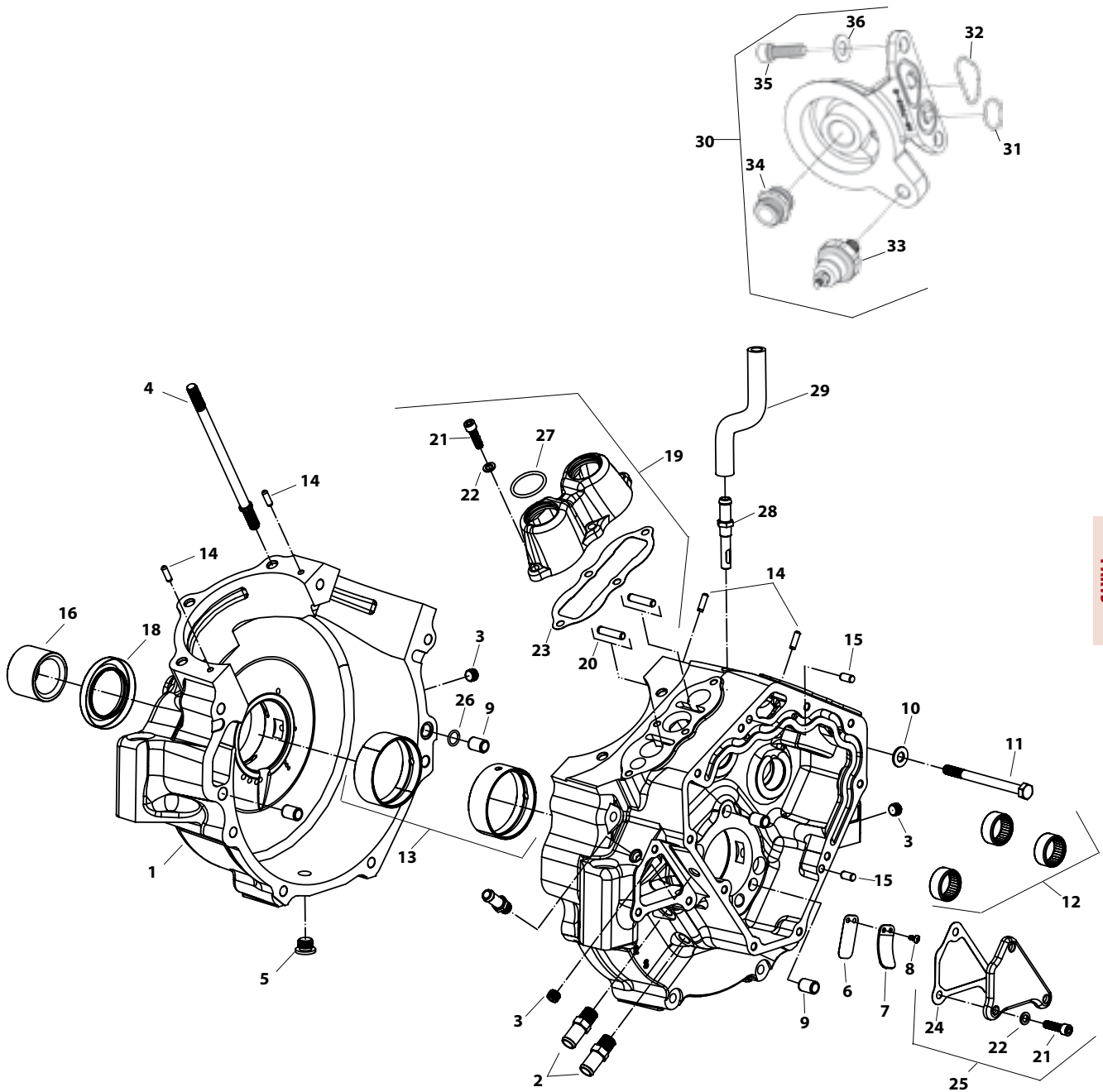
1. Crankcase Set - See page 6-5
2. Fitting, pipe, straight ¼-18 NPTF x 1.510 x ½, zinc **50-8158-S** \$5.15
3. Plug ½-27 NPT with taper
each **50-8331** \$1.00
10 pack **50-1015** \$4.25
4. Stud, cylinder base, 6.68", black oxide
each  **31-2321-S** \$4.40
8 pack  **31-2321** \$31.95
5. Transmission crankcase drain plugs with o-ring
Plug, magnetic, SH, ½-20 **50-8335** \$9.95
6. Reed, breather valve, X-Wedge
each **36-7031** \$3.65
5 pack **106-0700** \$16.60
7. Stop, breather reed valve, X-Wedge
each **36-7032** \$3.40
5 pack **106-0742** \$15.50
8. Screw, BHS, 6-32 x ¾", stainless steel
each **50-0060-S** \$1.00
10 pack **106-0725** \$6.65
9. Pin, dowel, .438 diameter x .610 (each) **50-8177** \$2.15
4 pack **50-8177-4** \$7.85
10 pack **50-8179** \$20.95
10. Washer, flat, ¾" x 1½" x ¼" **50-7034** \$0.25
11. Screw, HHCS, ¾"-18 x 3¾", zinc **50-0011** \$1.00
12. Bearing, assembly, inner, needle, cam, 1999-up BT **31-4080** \$8.50
13. Bearing, main journal, standard, plain
each **34-8640-S** \$13.95
4 pack **106-0570** \$49.95
14. Dowel pin, .187" x .635" (each) **50-8031** \$1.00
10 pack **106-0613** \$7.50
15. Dowel pin, ¼" x ½" (each) **50-8022** \$2.35
2 pack **50-8022-2** \$4.25
5 pack **50-8105** \$4.15
16. Spacer, charging system
1.75" x 1.25" **106-0736** \$25.95
1.75" x 1.115" **106-0737** \$25.95
17. Fitting, pipe, straight, male, chrome, steel,
½-27 NPTF x 1.344" x .375" (each) **50-8129-S** \$4.85
10 pack **106-0617** \$43.95
18. Left main bearing oil seal 1970-up BT
each **31-4010** \$4.00
5 pack **31-4110** \$18.25
19. Tappet cover, set
Polished, X-Wedge **106-0745** \$109.95
Silver, X-Wedge **106-0746** \$99.95
Wrinkle black, X-Wedge **106-0747** \$99.95
20. Pin, dowel, .250" x 1.125" (each) **50-8287** \$1.00
10 pack **106-0615** \$7.95
21. Screw, SHCS, ¼-20 x 7/8"
Bright zinc **50-0025** \$0.50
Chrome (each) **106-0534** \$2.65
10 pack **106-0727** \$23.95
22. Washer, flat, .260" x .425" x .060", chrome, steel
each **50-7017** \$1.00
12 pack **50-7013** \$5.50
23. Gasket, tappet cover, X-Wedge (each) **37-0006** \$6.60
10 pack **106-0633** \$59.95

24. Gasket, reed pocket, X-Wedge (each) **36-0097** \$8.25
10 pack **106-0631** \$74.95
25. Cover, reed pocket
Polished, X-Wedge **106-0597** \$36.95
Silver, X-Wedge **106-0598** \$33.95
Wrinkle black, X-Wedge **106-0599** \$33.95
26. O-ring, oil feed line (-13), .437" I.D. x .565" O.D., Viton®
each **50-8008** \$1.00
10 pack **50-8078** \$7.50
27. O-ring, bottom, pushrod tube (-122), 1.112" I.D. Viton **50-7964-S** \$1.45
28. Fitting, hose, straight, ½-27 NPTF x .500 **50-8218-S** \$39.95
29. Hose, vent, breather, .375" x .625" **106-3011** \$3.20
30. Bracket, oil filter, X-Wedge
Polished **106-0572** \$88.95
Silver **106-0573** \$83.95
Wrinkle black, X-Wedge **106-0574** \$83.95
31. O-ring, Viton, -017 **50-0466** \$1.10
32. O-ring, Viton, size -022 (each) **50-8005** \$1.20
10 pack **106-0682** \$11.05
33. Switch, oil pressure, X-Wedge **106-0744** \$19.95
34. Fitting, straight, ¾-16 UNF 2a
each **50-8197-S** \$6.15
5 pack **106-0618** \$27.95
35. Screw, SHC, ¾-18 x 1, zinc **50-0101** \$0.55
36. Washer, flat, ¾" x 1½" x ¼", zinc, steel **50-7034** \$0.25

NOT SHOWN:

- Crank position sensor **106-0734** \$72.95

REPLACEMENT PARTS



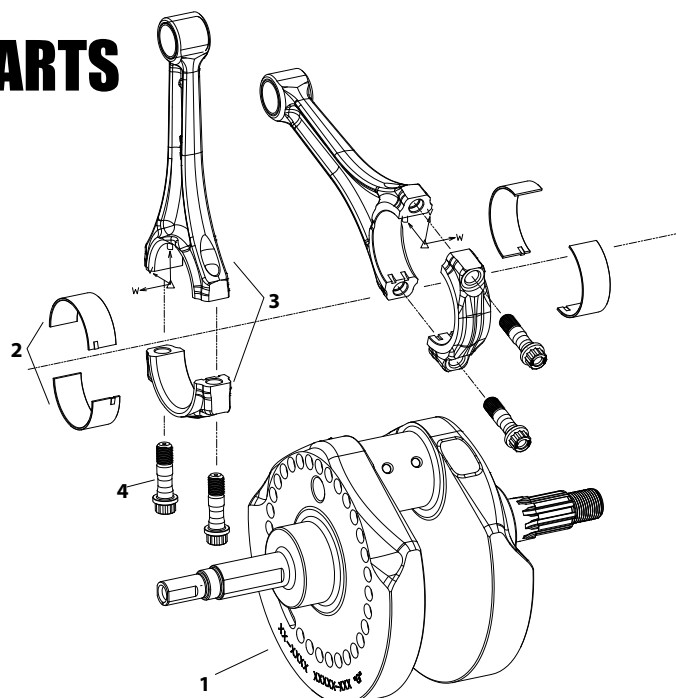
REPLACEMENT PARTS

Parts for Twin Cam 96°/103° 2007-2013	Parts for Twin Cam 88° 1999-2006	Parts for Evolution® 1984-1999	Parts for Sportster® & Buell® 1986-2013	Parts for Vintage Engines 1926-1984	Parts for X-Wedge® 2007-2013	Parts for Victory® 2003-2013	Parts for Racing Products	Parts for Tools & Shop Supplies	Parts for Dealer Services & Promo Items	Parts for Warranty & Company Policy	Parts for OEM Cross Reference Appendix & Index
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S&S®

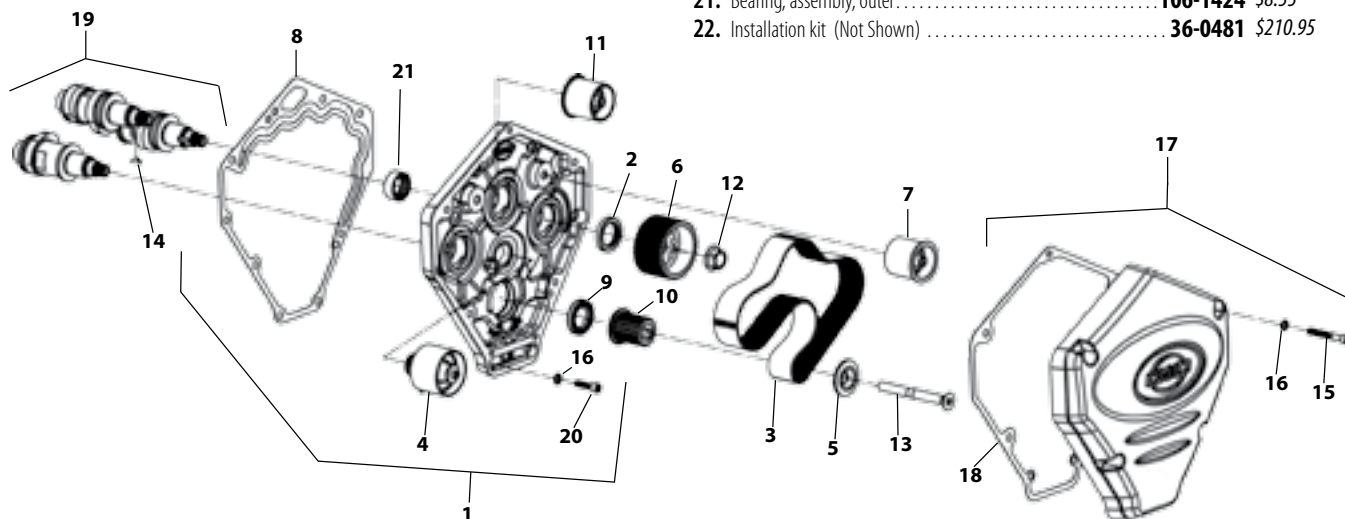
CRANKSHAFT REPLACEMENT PARTS FOR X-WEDGE® ENGINES

1. Crankshaft Assembly (includes #2, 3, 4)
 - All X-Wedge w/ 4 $\frac{3}{8}$ " stroke - X117/X132 **106-0609** \$1,299.95
 - All X-Wedge w/ 4 $\frac{1}{4}$ " stroke - X114/X121/X128 **106-0608** \$1,299.95
2. Bearing Insert (4 pack) **106-0569** \$33.95
3. Connecting Rod (each) - front or rear **106-0583** \$187.95
4. Bearing Cap Screw (each) **50-0346-S** \$11.25
- 4 pack **106-0729** \$40.95



CAMS AND RELATED VALVE TRAIN COMPONENTS REPLACEMENT PARTS

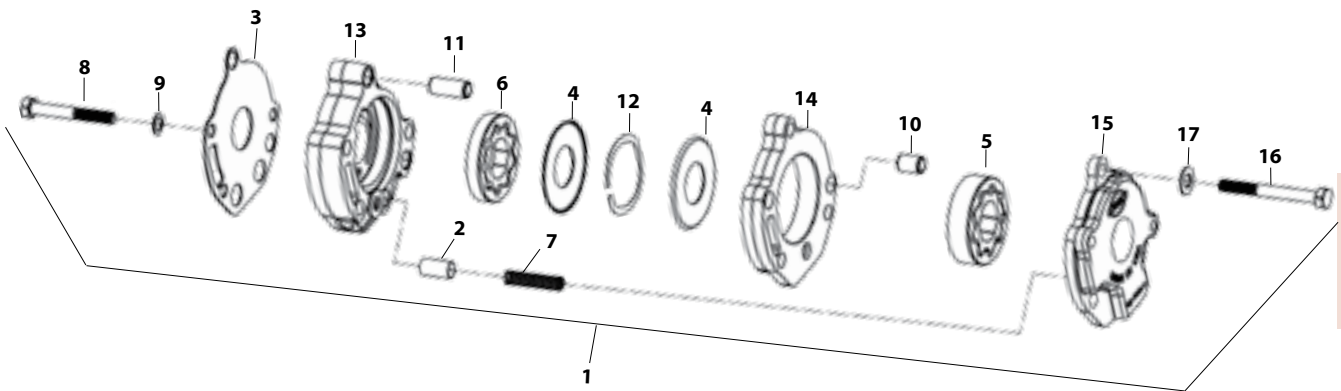
1. Cover, intermediate cam (includes gasket and hardware)
 - Polished **106-0590** \$199.95
 - Silver **106-0591** \$199.95
 - Wrinkle black **106-0592** \$199.95
2. Seal, cam cover/cam, .875" x 1.375" x .250", viton
 - each **37-0230** \$16.15
 - 3 pack **106-0732** \$43.95
3. Belt, cam drive, 127 tooth, 30mm **106-0571** \$110.95
4. Tensioner, belt, packaged, 30mm **106-0751** \$166.95
5. Washer, pinion sprocket, flanged **106-0753** \$5.95
6. Sprocket, cam, 38-tooth **106-0740** \$18.95
7. Pulley, front, idler, 1.50" x 30mm **106-0696** \$33.95
8. Gasket, intermediate cam cover **37-0097** \$12.85
9. Seal, pinion, dual lip, 22mm x 35mm x 7mm **37-0044** \$11.95
10. Sprocket, pinion, 19-tooth **106-0741** \$18.95
11. Pulley, rear, idler, 1.50" x 30mm **106-0697** \$33.95
12. Nut, flanged, 1/2-20 UNF-2B, steel
 - 10 pack **106-0124** \$1.00
 - 10 pack **106-0677** \$7.25
13. Screw, torx, flat countersunk head, alloy steel
 - 3/8-24 UNF x 3 1/2" **50-0467** \$2.10
 - 5 pack **106-0731** \$9.65
14. Key, woodruff, .125" x .500" x .491", steel
 - each **50-8223-S** \$1.20
 - 5 pack **50-1010** \$4.40
 - 10 pack **50-1105** \$8.80
15. Screw, SHC, 1/4-20 x 1 3/4", chrome **50-0488** \$3.60
- 10 pack **106-0726** \$32.95
16. Washer, flat, .260" x .425" x .060", chrome, steel
 - each **50-7017** \$1.00
 - 12 pack **50-7013** \$5.50
17. Cover, belt drive
 - Chrome **106-0587** \$223.95
18. Gasket, belt drive cover **106-0087** \$4.45
19. Camshaft, kit, .548 **106-0577** \$424.95
- Camshaft, kit, .545 **106-4444** \$424.95
20. Screw, SHCS, 1/4-20 x 7/8" **50-0025** \$0.50
21. Bearing, assembly, outer **106-1424** \$8.55
22. Installation kit (Not Shown) **36-0481** \$210.95



S&S®

OIL PUMP REPLACEMENT PARTS FOR X-WEDGE® ENGINES

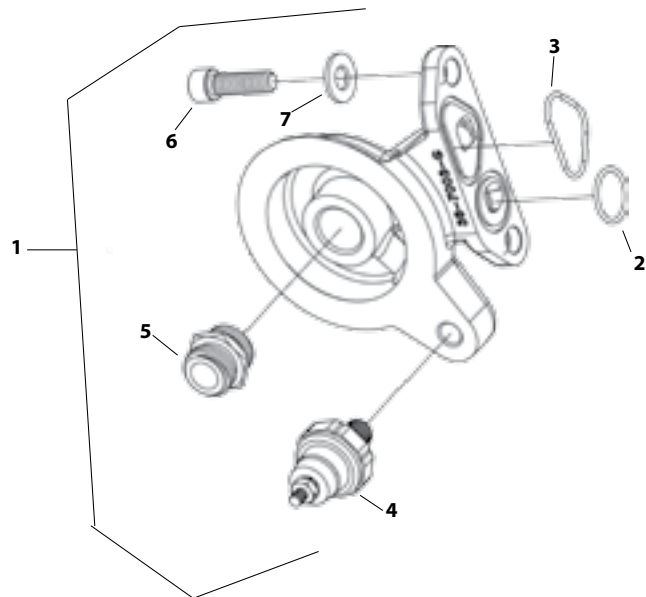
1. Oil pump, kit, X-Wedge.....	106-0680	\$332.95	10. Dowel pin, .437" diameter x .610" (each).....	50-8177	\$2.15
2. Valve, pressure relief, X-Wedge.....	106-0774	\$7.70	4 pack.....	50-8177-4	\$7.85
3. Plate, S&S oil pump, X-Wedge.....	106-0694	\$9.60	10 pack.....	50-8179	\$20.95
4. Plate, divider, S&S oil pump, X-Wedge (each).....	36-7005	\$26.95	11. Dowel pin, .437" x 1" (each).....	50-8284	\$2.20
2 pack.....	106-0693	\$48.95	10 pack.....	106-0614	\$19.95
5. Rotor, set, oil pump return, X-Wedge.....	106-0717	\$66.95	12. Spring, wave, 1.60" x 2" x .085".....	106-0773	\$15.50
6. Rotor, set, oil pump supply, X-Wedge.....	106-0722	\$66.95	13. Oil pump, body, supply, X-Wedge.....	106-0679	\$60.95
7. Spring, relief valve, X-Wedge (each).....	36-7041	\$1.95	14. Oil pump, body, return, X-Wedge (Includes dowel pin #11).....	106-0678	\$66.95
5 pack.....	106-0738	\$8.85	15. Cover, oil pump, return, X-Wedge.....	106-0596	\$38.95
8. Screw, HHC, 5/16-18 x 2 1/4 (each).....	50-0462	\$1.00	16. Screw, HHC, GR5, 5/16-18 x 2 3/4 (10 pack).....	106-0724	\$6.45
10 pack.....	106-0723	\$6.65	17. Washer, flat, .344" x .688" x .065", zinc, steel.....	50-7034	\$0.25
9. Washer, flat, zinc, .319" (each).....	50-7026	\$1.00			
10 pack.....	50-7028	\$4.85			



S&S®

OIL FILTER BRACKET REPLACEMENT PARTS FOR S&S® X-WEDGE® ENGINE

1. Bracket, oil filter, X-Wedge					
Polished.....	106-0572	\$88.95			
Silver.....	106-0573	\$83.95			
Wrinkle black.....	106-0574	\$83.95			
2. O-ring, Viton, -017.....	50-0466	\$1.10			
3. O-ring, Viton, size -022 (each).....	50-8005	\$1.20			
10 pack.....	106-0682	\$11.05			
4. Switch, oil pressure, packaged, X-Wedge.....	106-0744	\$19.95			
5. Fitting, straight, 3/4-16 UNF 2a (each).....	50-8197-S	\$6.15			
5 pack.....	106-0618	\$27.95			
6. Screw, SHC, 5/16-18 x 1, zinc.....	50-0101	\$0.55			
7. Washer, flat, 5/16 x 1 1/4 x 1/4, zinc, steel.....	50-7034	\$0.25			



S&S®

CYLINDER HEAD REPLACEMENT PARTS FOR X-WEDGE® ENGINES

These are direct replacements for the heads included on engines used by our original equipment manufacturers such as Big Dog Motor Cycle® and Big Bear Choppers®. The same heads are used in our X117 engines sold to our dealers and distributors.

1. Head, kit, .585", SW steel, X-Wedge
 - Full polished..... **106-0644** \$1,429.95
 - Silver..... **106-0646** \$1,039.95
 - Wrinkle black..... **106-0647** \$1,039.95
2. Valve
 - Intake, 2" x 4.450", @ 1.943" gauge..... **90-2000** \$23.95
 - Exhaust, 1.605" x 4.428", @ 1.509" gauge..... **90-2001** \$53.95
3. Valve seat
 - Intake, 2.000"..... **90-2002** \$19.40
 - Exhaust, 1.605"..... **90-2003** \$45.95
4. Valve guide, intake/exhaust..... **106-2162** \$12.85
5. Shim Bottom Collar (for rebuild only)
 - .015" (each)..... **90-2086** \$1.00
 - 5 pack..... **50-7161** \$3.75
 - .030" (each)..... **90-2087** \$1.40
 - 5 pack..... **90-2198** \$6.45
6. Collar, bottom, valve spring, Sidewinder, w/seal, .585", steel (each)..... **90-2281** \$5.75
 - 4 pack..... **106-0581** \$20.95
7. Spring, valve, Sidewinder .585"..... **106-0739** \$15.50
8. Collar, top, valve spring, .585", steel..... **90-2070** \$5.25
9. Valve keeper (each)..... **90-2094-S** \$1.95
 - 8 pack..... **50-7166** \$13.95
10. Spring, kit, valve, .585", steel w/seal..... **106-0772** \$77.95
11. Head bolt, kit, S&S heads, w/washer, 12 pt
 - 3/8-16 x 1.940" x .950" TD..... **93-3028** \$8.30
12. Washer, .515" x .900" x .150"..... **50-0418-S** \$1.35
13. Gasket, exhaust, stainless steel (each)..... **106-5029** \$4.50
 - 10 pack..... **93-1072** \$40.95
14. Exhaust port stud 3/8" x 1.7" (each)..... **50-0493** \$2.60
 - 5 pack..... **50-1028** \$11.80
15. Screw, SHCS, 3/8-18 x 1", zinc..... **16-0136-S** \$2.70
16. Bolt, mounting, HH, grade 5, 3/8-18 x 1", zinc (each)..... **50-0108** \$1.00
 - 10 pack..... **50-0155** \$3.75
17. Washer, flat, .344" x .688" x .065", zinc..... **50-7034** \$0.25
18. Flange, manifold, X-Wedge (each)..... **16-0150** \$8.50
 - 4 pack..... **106-0619** \$30.95
19. Seal, manifold, 2.060" x 2.285" x .0240" (each)..... **16-6601** \$4.40
 - 10 pack..... **106-0676** \$39.95
20. Sensor, kit, knock, IST, w/o bracket..... **55-1096** \$25.95
21. Sensor, temperature, cylinder head, 4/8"..... **55-1014** \$49.95
22. Gasket, head, .043", graphite
 - 4/8" (each)..... **93-1130** \$11.30
 - 10 pack..... **106-0626** \$102.95
 - 4/4"..... **93-1131** \$10.50
 - 4/8" (each)..... **93-1132** \$11.85
 - 10 pack..... **106-0627** \$107.95
23. O-ring, (-220), 1.375" ID x 1.625" OD, viton (each)..... **50-8245-S** \$2.25
 - 5 pack..... **50-8245** \$10.20
24. Pushrod cover, set, X-Wedge..... **106-0698** \$72.95
25. Stud, 3/8-24, 7/16-14 x 2.44" (each)..... **50-0497** \$3.70
 - 4 pack..... **106-0743** \$13.45
26. Retainer, Set, alignment, rocker arm support..... **106-0730** \$16.00
27. Rocker arm, set, X-Wedge..... **106-0716** \$38.95
28. Nut, Lock, HH, Gr8, 3/8-24 x 1/4", Zinc Plated, Steel (each)..... **106-1749** \$1.00
 - 5 pack..... **106-2940** \$4.30

29. Washer, flat, .344" x .688" x .065", zinc..... **50-7034** \$0.25
30. O-ring, bottom, injector, .310" ID x .580" OD..... **50-8265-S** \$1.70
31. Fuel injector, assembly, style B, 31.3lbs/hr@58psi..... **55-5005** \$83.95
32. O-ring, top, injector, .290" ID x .570" OD..... **50-8264-S** \$1.85
33. Insulator, hold down, fuel injector (each)..... **106-1303** \$1.00
 - 10 pack..... **106-1616** \$12.95
34. Clamp, front, hold-down, fuel injector..... **106-0578** \$46.95
35. Clamp, rear, hold-down, fuel injector (5 pack)..... **106-3606** \$28.95
36. Screw, SHC, 1/4-20 x 7/8, zinc..... **50-0025** \$0.50
37. Valve, bleed, 1/16-27 NPT..... **106-0755** \$22.95
38. Fuel line, cut to size, 3/8" x 12", black, rubber (each)..... **106-0159** \$13.20
 - 5 pack..... **106-0620** \$59.95
39. Fuel line, cut to size, 3/8" x 2.250", black, rubber (each)..... **106-0157** \$7.25
 - 5 pack..... **106-0621** \$32.95
40. Clamp, Hose, Stepless® Ear, 15.3mm..... **106-2250** \$1.30
41. Fitting, hose, tee, 3/8", black, glass filled, nylon (each)..... **106-0409** \$3.10
 - 5 pack..... **106-0616** \$14.00
42. Rocker Cover Gasket (each)..... **39-0010** \$6.45
 - 2 pack..... **106-0622** \$8.25
43. Rocker Cover (includes cover screw, washers and gasket(s))
 - Front or Rear..... **106-0600** \$221.95
 - Set..... **106-0593** \$387.95
44. Washer, Flat, .319" x .545" x .042", Zinc, Steel (each)..... **50-7026** \$1.00
 - 10 pack..... **50-7028** \$4.85
45. Screw, SHC, 5/16-18 x 1-7/8" Polished Chrome (10 pack)..... **106-1058** \$44.95

.650" Lift Sidewinder® Valve Springs

46. Valve Spring Shim
 - .015" (each)..... **500-0013** \$1.15
 - .030" (each)..... **500-0014** \$1.15
47. Collar, Bottom, Steel (each)..... **106-3827** \$7.50
48. Spring, Valve .650" (set of 4)..... **106-5927** \$124.95
49. Collar, Top, Steel..... **106-5690** \$5.90
50. Valve Keeper
 - each..... **90-2094-S** \$1.95
 - 8 pack..... **50-7166** \$13.95
51. Valve spring kit
 - .650" Lift Sidewinder®..... **900-0212** \$159.95

GASKET KITS

Description	Bore Size	Part No.	MSRP
Top End Rebuild Kit	4 1/4"	90-9701	\$82.95
	4 1/8"	106-1262	\$88.95
Complete Engine Rebuild Kit	4 1/8"	106-1030	\$132.95
	4 1/4"	106-1029	\$132.95
	4 3/8"	106-1031	\$134.95

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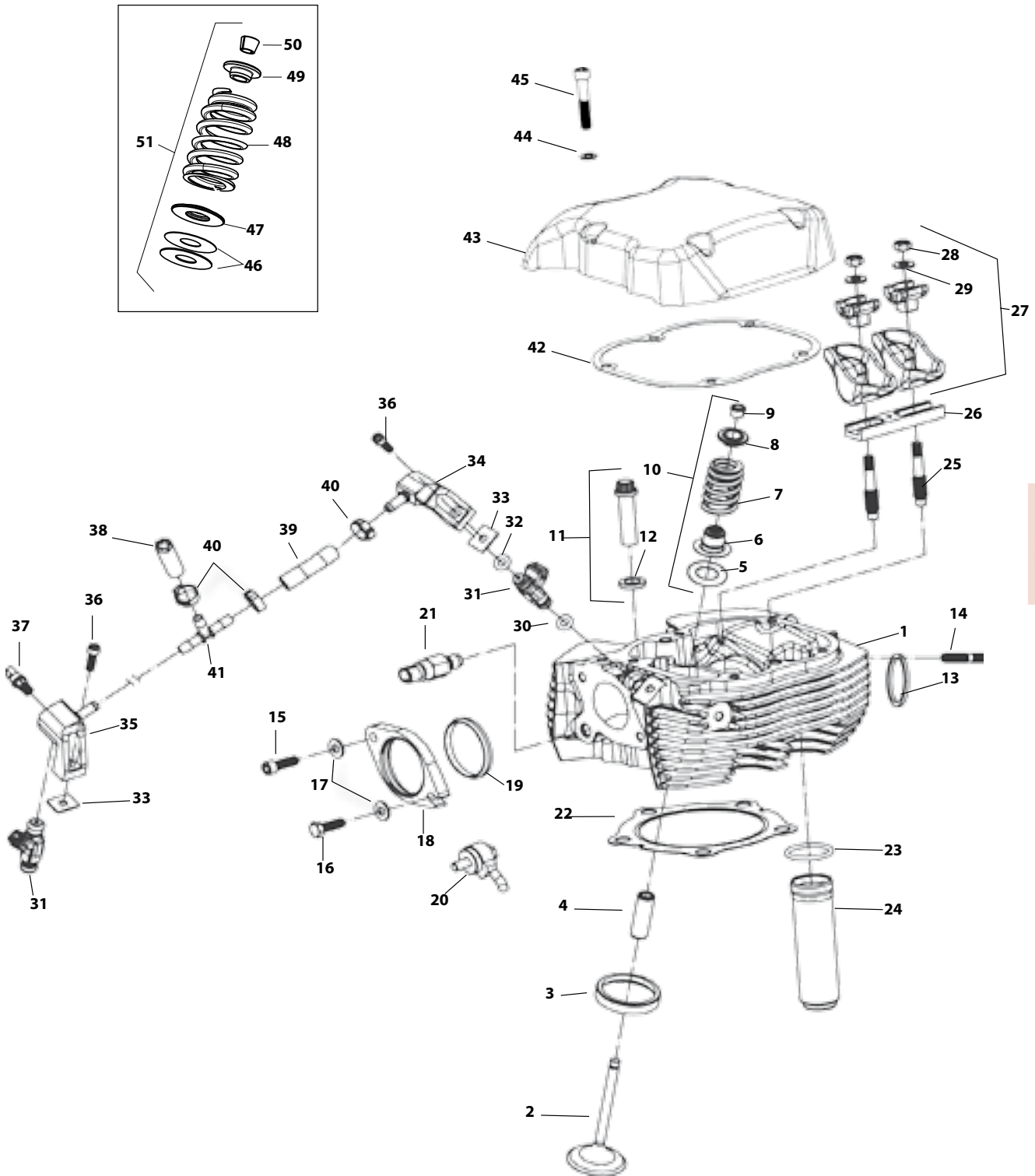
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.650" Lift Sidewinder® Valve Springs

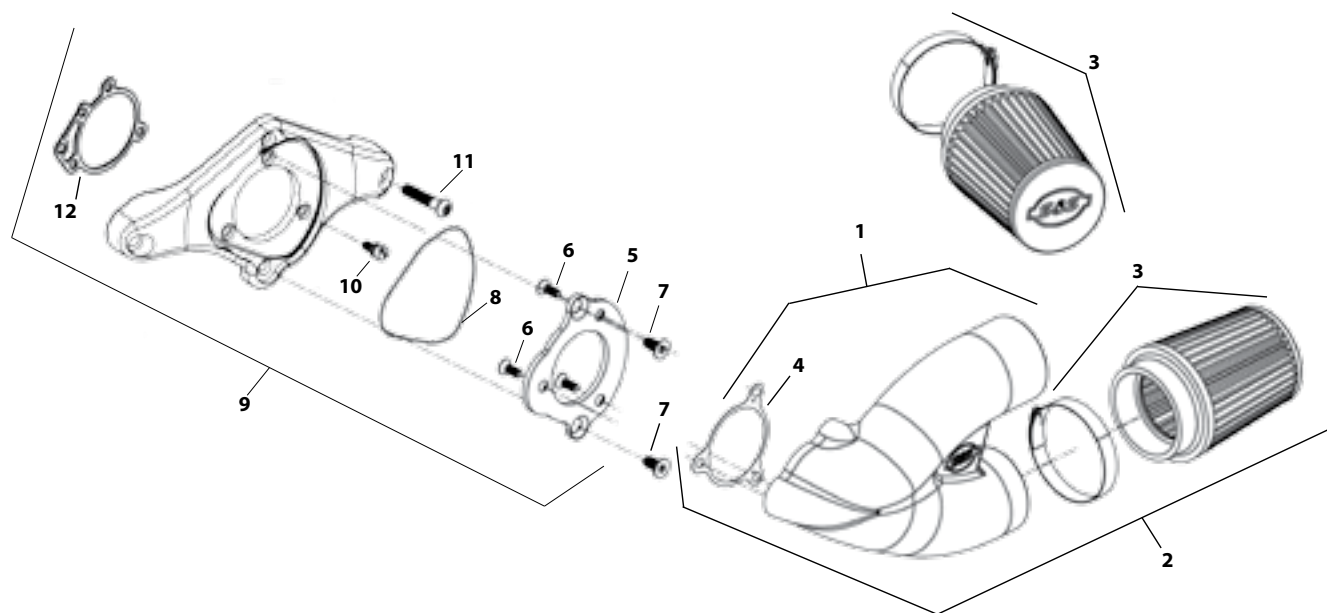


REPLACEMENT PARTS

S&S®

SINGLE BORE TUNED INDUCTION SYSTEM REPLACEMENT PARTS

- | | | |
|---|------------------|----------|
| 1. Tuned Intake Kit, 2.19" Single Bore | | |
| Natural | 106-4965 | \$239.95 |
| Wrinkle Black | 106-4966 | \$249.95 |
| Chrome Plated | 106-4967 | \$259.95 |
| 2. Tuned Intake Assembly, 2.19" Single Bore | | |
| Natural | 106-4968 | \$129.95 |
| Wrinkle Black | 106-4969 | \$139.95 |
| Chrome Plated | 106-4970 | \$149.95 |
| 3. Air Filter, with Clamp, Stainless Cap — Conical — 2 $\frac{1}{16}$ " I.D. x 4" | | |
| Red (each) | 17-1020 | \$52.95 |
| Blue (each) | 17-1023 | \$52.95 |
| 4. Gasket, Intake — Adapter Plate, 2.19" Single Bore Tuned Intake | 17-1022 | \$1.30 |
| 5. Plate, Adapter, 2.19" Single Bore Tuned Intake | | |
| Chrome Steel | 17-1014 | \$38.95 |
| 6. FHSC $\frac{1}{4}$ -20 x $\frac{5}{8}$ " (each) | 50-0433 | \$2.35 |
| 3 pack | 50-1071 | \$6.35 |
| 7. FHSC $\frac{5}{16}$ -18 x $\frac{3}{4}$ " (each) | 50-0432 | \$4.05 |
| 2 pack | 50-1070 | \$7.40 |
| 8. O-Ring, Adapter Plate Bracket, 3 $\frac{3}{8}$ " O.D. x 3 $\frac{1}{2}$ " I.D. $\frac{1}{16}$ CS, Viton® | | |
| each | 50-0446 | \$2.25 |
| 5 pack | 50-1083 | \$10.20 |
| 10 pack | 50-1075 | \$38.95 |
| 9. Bracket Kit, S&S X-Wedge® | 106-4972 | \$299.95 |
| 10. Backplate Screw LSHC Black Oxide (X-Wedge Only) | 106-0817 | \$2.15 |
| 11. Screw, Button Head Cap Screw, $\frac{5}{16}$ -18 x 1 $\frac{1}{2}$ " Grade 5, Chrome | | |
| each | 50-0309-S | \$4.55 |
| 2 pack | 50-1078 | \$8.25 |
| 12. Gasket, Backplate (each) | 106-1724 | \$1.50 |
| 10 pack | 106-2328 | \$13.60 |
| 13. Filter oil, 8oz. bottle (N/S) | | |
| Red | 106-1163 | \$13.30 |
| Blue | 106-1164 | \$13.30 |

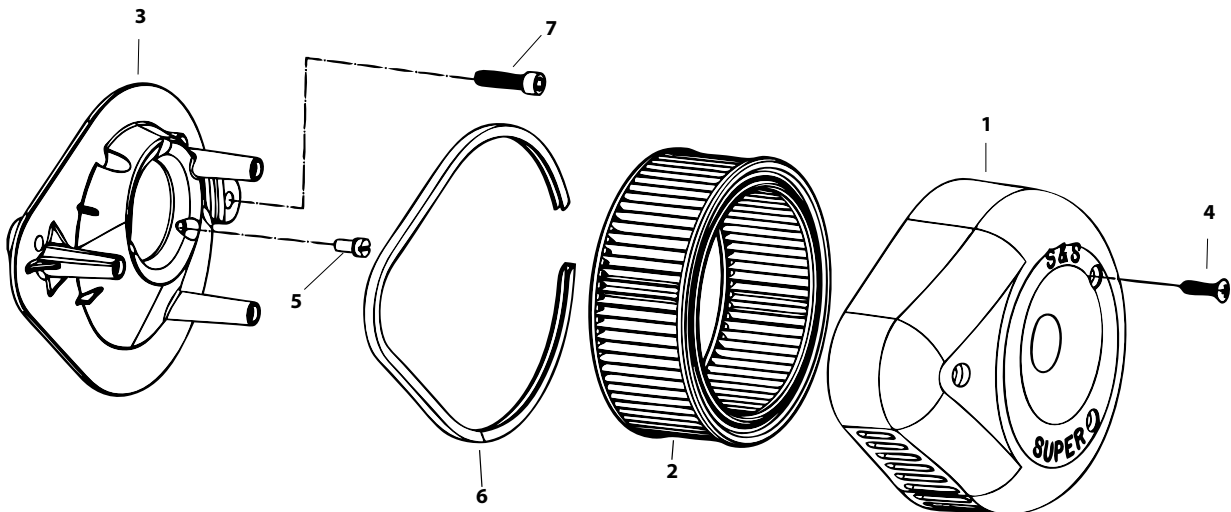


REPLACEMENT PARTS

S&S®

TEARDROP AIR CLEANER REPLACEMENT PARTS FOR S&S® X-WEDGE®

1. Air Cleaner Cover
Chrome, noise reduction **106-1438** \$145.95
2. Element, pleated **106-4722** \$18.15
3. Backplate SBFFI **106-0568** \$82.95
4. Screw, oval 1/4-20 x 1 (each) **50-0072** \$1.00
3 pack **50-1052** \$2.25
10 pack **50-0094** \$6.65
5. Backplate screw, Zinc Plated
each **106-2084** \$1.00
10 pack **106-2105** \$6.25
6. Seal, backplate, neoprene, **106-1667** \$5.55
7. Screw, SHC, 5/16-18 x 1 1/4" **50-0121** \$0.55


106-1438

X-Wedge® Noise Reduction Air Cleaner

REPLACEMENT
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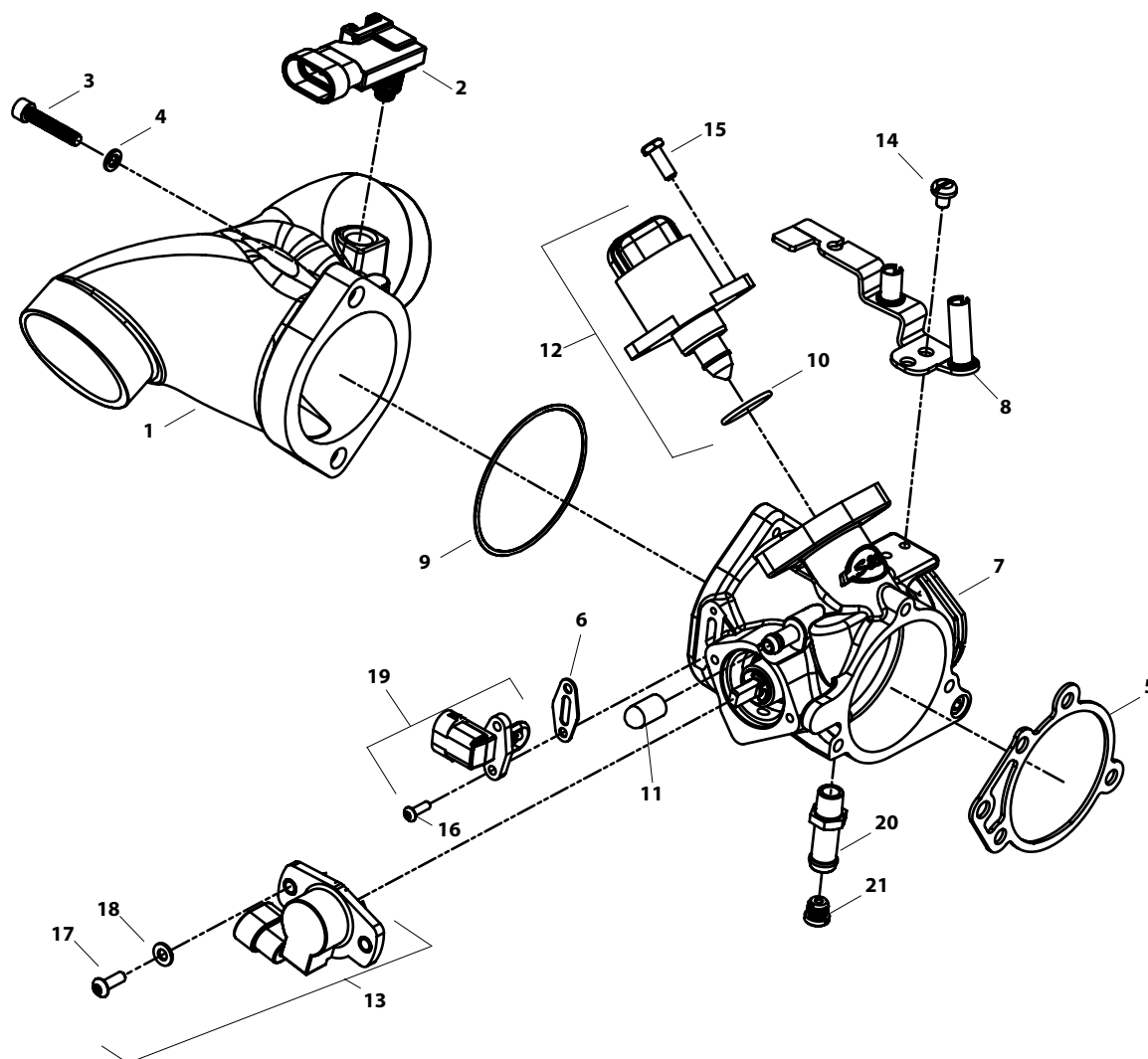
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THROTTLE BODY AND RELATED REPLACEMENT PARTS FOR X-WEDGE® ENGINES

- | | | |
|---|------------------|----------|
| 1. Manifold, SBEFI, 2 1/4", X-Wedge | | |
| Natural | 106-0674 | \$123.95 |
| Polished | 106-0675 | \$145.95 |
| 2. Sensor kit, map, IST, w/VOES fitting | 55-1037 | \$49.95 |
| 3. Screw, SHSC, 10-24 x 1" (each) | 50-0359-S | \$1.00 |
| 10 pack | 50-1063 | \$4.25 |
| 4. Washer, lock, .200" x .334" x .047", zinc, steel | 50-7000 | \$0.25 |
| 5. Gasket, backplate, Super E & G | | |
| 52mm (each) | 106-1724 | \$1.50 |
| 10 pack | 106-2328 | \$13.60 |
| 58mm | 106-4662 | \$2.95 |
| 6. Gasket, Air Temperature Sensor, S&S® VFI | 16-5009-S | \$3.00 |
| 7. Throttle body, assembly, single bore, w/tps, natural | | |
| 52mm | 106-3141 | \$242.95 |
| 58mm | 106-3960 | \$267.95 |
| 8. Guide, throttle cable, w/hardware, X-Wedge | 106-0634 | \$26.95 |
| 9. O-ring, (-036), 2.364" ID x 2.504" OD, nitrile | 50-7967-S | \$0.45 |
| 10. O-ring, (-018) .739" ID x .879" OD x .070, viton | 50-8149-S | \$0.70 |
| 11. Cap, canister purge fitting (each) | 50-8266-S | \$3.90 |
| 5 pack | 50-1062 | \$17.75 |
| 12. Motor, kit, idle air control, EFI | 55-5085 | \$85.95 |
| 13. Sensor, kit, throttle position, VFI | 55-5058 | \$40.95 |
| 14. Screw, SLTD, PH, 10-24 x 1/4" (each) | 50-0041 | \$1.00 |
| 10 pack | 50-0062 | \$3.35 |
| 15. Screw, 10-24 x .500 trimmed HXHD m/s (each) | 50-0356-S | \$1.00 |
| 10 pack | 50-1060 | \$5.35 |
| 16. Screw, torx, m3 x 10mm, zinc, steel | 50-0357-S | \$0.55 |
| 17. Screw, torx, m4 x 12mm, zinc, steel (each) | 50-0358-S | \$1.00 |
| 10 pack | 50-1056 | \$6.95 |
| 18. Washer, flat, 4mm x 9mm x .9mm, stainless steel (each) | 50-7145-S | \$1.25 |
| 10 pack | 50-1057 | \$11.30 |
| 19. Sensor, kit, temperature, intake air | 55-5041 | \$14.50 |
| 20. Fitting, hose, straight, 1/8-27 NPTF x .375", w/ 3/16" T, zinc, steel | | |
| each | 106-2981 | \$10.35 |
| 5 pack | 106-3546 | \$46.95 |
| 21. Jet, Main, Series 72, .100" (each) | 11-4100 | \$7.70 |
| 5 pack | 11-7250 | \$34.95 |

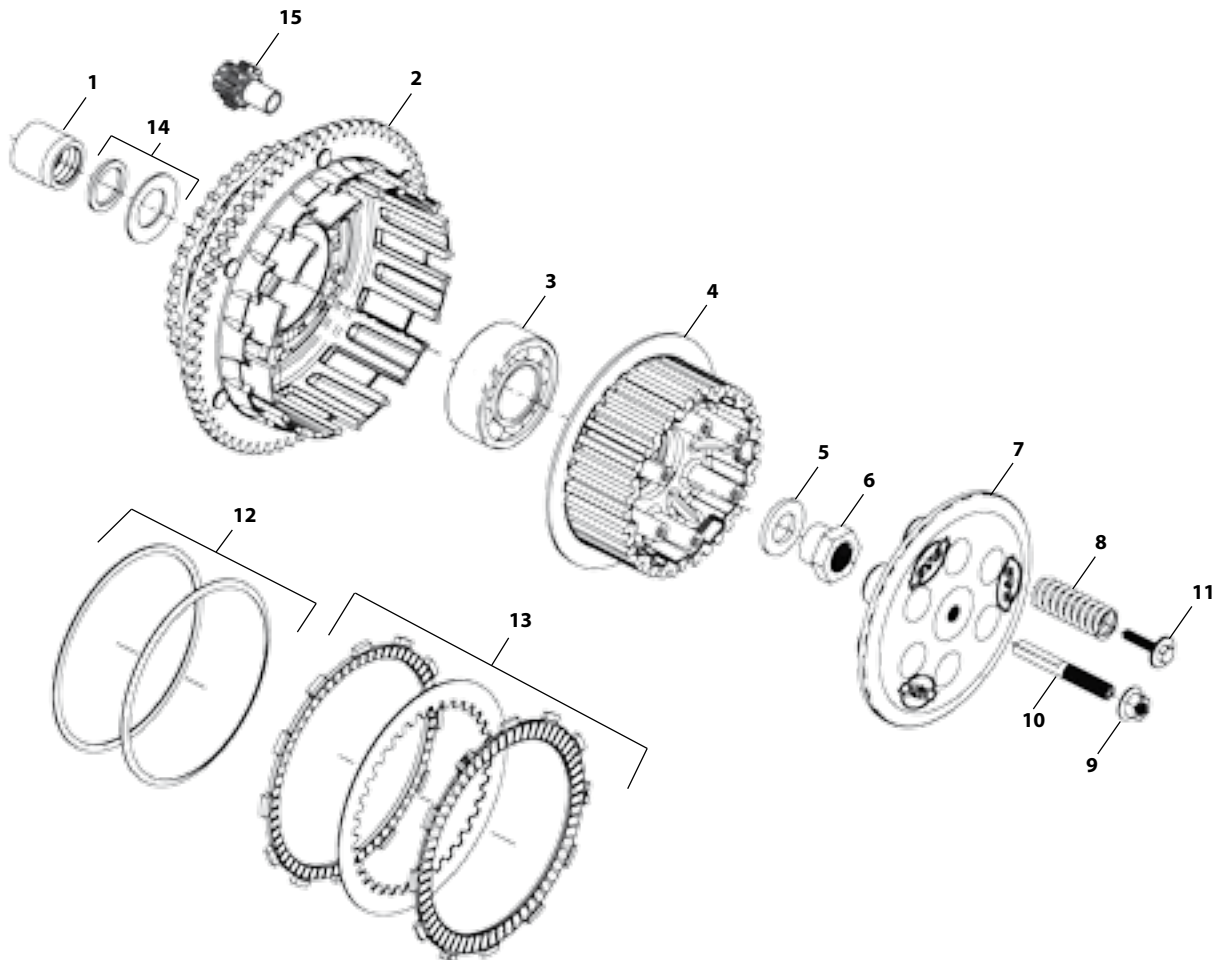


REPLACEMENT PARTS

S&S®

HIGH PERFORMANCE CLUTCH REPLACEMENT PARTS

- | | | |
|---|------------------|----------|
| 1. Race, inner primary bearing, 5/6 speed main shaft..... | 56-5089 | \$51.95 |
| 2. Basket,
Clutch, 36-tooth..... | 56-5081 | \$565.95 |
| Clutch, 37-tooth..... | 56-5082 | \$565.95 |
| 3. Bearing, clutch (basket to hub) | 56-5102 | \$159.95 |
| 4. Hub, clutch | 56-5075 | \$251.95 |
| 5. Washer, thrust, 19.5 mm I.D. x 35.6 mm O.D. | N/A | |
| 6. Nut, mainshaft, clutch hub, 3/4-18 UNS-2B..... | N/A | |
| <i>(Recommended early style mainshaft nut H-D® #37496-84)</i> | | |
| <i>(Recommended late style mainshaft nut H-D® #37496-90)</i> | | |
| 7. Plate, pressure - clutch
Mechanical (3-piece pushrod actuated)..... | 56-5076 | \$97.95 |
| Hydraulic (1-piece pushrod actuated)..... | 106-3147 | \$99.95 |
| 8. Spring, pressure plate, clutch
Light duty, 334 lbs. (6 pack) | 56-5109 | \$74.95 |
| Standard, 370 lbs. | 56-5105-S | \$9.70 |
| Heavy duty, 408 lbs. (each) | 56-5106-S | \$13.70 |
| 6 pack..... | 56-5106 | \$74.95 |
| 9. Nut, flange, M10 x 1.25"..... | 50-8411 | \$10.70 |
| 10. Screw, clutch adjuster, M10 x 1.25"..... | 50-8414 | \$44.95 |
| 11. Bolt, special, M6 x 30, w/washer..... | 50-8413-S | \$5.70 |
| 12. Jutter spring with seat..... | 56-5110 | \$32.95 |
| 13. Clutch pack, 11 frictions, 10 steels..... | 56-5085-S | \$277.95 |
| 14. Kit, shim, clutch inner race | 56-5090 | \$32.95 |
| Shim, 5/6 speed main shaft, 1.300" O.D. x .960" I.D. x | | |
| .0075" (36 gauge)..... | 56-5092-S | \$2.10 |
| .0150" (28 gauge)..... | 56-5093-S | \$2.10 |
| .0240" (24 gauge)..... | 56-5094-S | \$2.10 |
| .0470" (18 gauge)..... | 56-5095-S | \$11.40 |
| OPTIONAL: | | |
| 15. Pinion Gear..... | 56-1037 | \$47.95 |
| 16. Loctite®, fast cure epoxy .12 ounce (Not Shown) | 51-9007-S | \$6.40 |



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