



# INSTRUCTIONS

J06074

2014-05-26



## SE120R SCREAMIN' EAGLE PRO RACE-USE CRATE ENGINE

### GENERAL

#### Kit Number

19206-15

#### Models

For model fitment information, see the P&A Retail Catalog or the Parts and Accessories section of [www.harley-davidson.com](http://www.harley-davidson.com) (English only).

#### NOTE

**This engine is for race use only! Remove the emissions label and license plate from the factory chassis.**

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Table 1.

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### Installation Requirements

- For 2007-2011 Softail models (except FXCW and FXCWC): Installation of SE High Capacity Compensator Kit (Part No. 40274-08A) is **REQUIRED** for installation of this engine.
- Recommended synthetic engine oil, Screamin' Eagle SYN3<sup>®</sup> 20W50 (Part No. 99824-03/00QT).
- A clutch kit that supports a minimum of 190 N·m (140 ft-lbs) of torque. Harley-Davidson recommends installation of Screamin' Eagle pressure clutch (Part No. 37000121) and diaphragm spring (Part No. 37951-98). Drag racing applications use clutch kit (Part No. 37976-08A).
- SE throttle body, Air Cleaner and High Flow injectors. Refer to the Screamin' Eagle Pro Catalog or contact a Harley-Davidson dealer.
- SE exhaust gaskets kit (Part No. 17048-98).
- Oil cooler is recommended. See P&A Retail Catalog or the Parts and Accessories section of [www.harley-davidson.com](http://www.harley-davidson.com).
- SE Pro Super Tuner. Refer to Screamin' Eagle Pro Catalog or contact a Harley-Davidson dealer.
- See appropriate sections in service manual for the special tools required to install this kit.

### ▲ WARNING

Rider and passenger safety depend upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333b)

#### NOTE

This instruction sheet references service manual information. A service manual for your model motorcycle is required for this installation. One is available from a Harley-Davidson dealer.

### REMOVAL

#### Remove OE Engine

1. Raise the motorcycle.

#### NOTE

Disarm security system.

2. Remove seat according to the instructions in the service manual.

### ▲ WARNING

When servicing the fuel system, do not smoke or allow open flame or sparks in the vicinity. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00330a)

3. Remove main fuse. Refer to service manual for your motorcycle.
4. Remove the fuel tank according to the instructions in the service manual.
5. Refer to ENGINE section of the appropriate service manual for removal of engine from chassis.

### SE120R ENGINE INSTALLATION

1. Before installing the engine, make sure that there is no debris or contaminants in the oiling system. The tank should be flushed-out. Have the tank flush-out performed by an authorized dealer or qualified technician.
2. Remove the oil passage caps/plugs at the engine to transmission interface.
3. Refer to the ENGINE section of the appropriate service manual for installation of the engine to the chassis.



- For 2007-2011 Softail models (except FXCW and FXCWC): Install SE High Capacity Compensator Kit (40274-08A, purchased separately) following instructions included with kit. For 2012-Later Softail Models (All FXCW and FXCWC): Install original equipment compensator following instructions in the service manual.

## Final Assembly

- Install the fuel tank according to the instructions in the service manual.
- Refer to the service manual to install the main fuse.
- Install the seat according to the instructions in the service manual.

### ⚠ WARNING

After installing seat, pull upward on seat to be sure it is locked in position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070b)

### NOTICE

You must recalibrate the ECM when installing this kit. Failure to properly recalibrate the ECM can result in severe engine damage. (00399b)

- Download the new ECM calibration when installing this kit. Refer to the Screamin' Eagle Pro Catalog or contact a Harley-Davidson dealer.
- Start and run the engine. Repeat several times to verify proper operation.

## OPERATION

- Refer to BREAK-IN RIDING RULES in the owner's manual to break-in the new engine.

## MAINTENANCE

- Refer to the MAINTENANCE SCHEDULE in the appropriate service manual or owner's manual.
- Refer to ENGINE section of service manual.

## SE120R ENGINE SPECIFICATIONS

### NOTE

The following sections provide unique information not available in the service manual ENGINE section for the appropriate Twin Cam 96™ alpha engines from Touring or Dyna platforms.

Table 2. Engine: SE Twin Cam 120R

Item	Specification	
Compression Ratio	10.5	
Bore	4.060 in.	103.12 mm
Stroke	4.625 in.	117.48 mm
Displacement	119.75 in.	1962.39 cc
Lubrication system	Pressurized dry sump with oil cooler	
Maximum sustained engine speed	6200 RPM	

## MANUFACTURING TOLERANCES

Refer to the Twin-Cam 96™ specifications in the service manual for any specification not shown in the following tables.

Table 3. Cylinder Heads

ITEM	IN.	MM
Valve guide in head (tight)	0.0020-0.0033	0.051-0.084
Intake valve seat in head (tight)	0.004-0.0055	0.102-0.140
Exhaust valve seat in head (tight)	0.004-0.0055	0.102-0.140

Table 4. Valves

ITEM	IN.	MM
Fit in guide (intake and exhaust)	0.0011-0.0029	0.028-0.074
Seat width	0.034-0.062	0.86-1.57
Stem protrusion from cylinder head boss	1.990-2.024	50.55-51.41

Table 5. Valve Springs Specifications

ITEM	PRESSURE	DIMENSION
Closed	180 lbs (79 kg)	1.800 in. (45.7 mm)
Open	500 lbs (196 kg)	1.177 in. (29.9 mm)
Free length	n/a	2.210 in. (56.1 mm)

Table 6. Pistons

Piston:	Clearance (in.)
Piston-to-cylinder fit (Loose)	0.0026-0.0036
Piston pin fit (Loose)	0.0003-0.0008
Top Ring End Gap	0.012-0.020
Second Ring End Gap	0.016-0.024
Oil Control Ring Rail Gap	0.008-0.0028
Top Ring Side Clearance	0.0010-0.0022
Second Ring Side Clearance	0.0010-0.0022
Oil Control Ring Side Clearance	0.0003-0.0072

Table 7. Cam Specifications - SE266E

Intake	Specification
Opens	24 BTDC
Closes	58 ABDC
Duration	262°
Max. Valve Lift	0.658 in.
Valve Lift @ TDC	0.208 in.
Exhaust	Specification
Opens	69 BBDC
Closes	17 ATDC
Duration	266°
Max. Valve Lift	0.658 in.
Valve Lift @ TDC	0.178 in.
Cam Timing @ 0.053" of Tappet Lift in Crankshaft Degrees	

## SERVICE WEAR LIMITS

Use wear limits as guide to part replacement.

### NOTE

Refer to the Twin-Cam 96 specifications in the service manual for any specification not shown in the following tables

**Table 8. Cylinders**

ITEM	REPLACE IF WEAR EXCEEDS	
	IN.	MM
Taper	0.002	0.051
Out of round	0.002	0.051
Warpage of gasket or O-ring surfaces: top	0.006	0.152
Warpage of gasket or O-ring surfaces: base	0.004	0.102

**Table 9. Cylinder Bore**

ITEM	REPLACE IF WEAR EXCEEDS	
	IN.	MM
Standard	4.062	103.17
0.010 in. oversize	4.072	103.43

**Table 10. Pistons**

Piston-to-cylinder fit (Loose)	Wear Limit (in.)
Fit in cylinder (Loose)	0.0061
Piston Pin Fit (Loose)	0.0011
Top Ring End Gap	0.030
Second Ring End Gap	0.034
Oil Control Ring Rail Gap	0.038
Top Ring Side Clearance	0.0030
Second Ring Side Clearance	0.0030
Oil Control Ring Side Clearance	0.0079

## SE120R CYLINDERS

1. Raise the motorcycle.

*NOTE*

*Disarm security system.*

2. Remove seat according to the instructions in the service manual.

### ⚠ WARNING

**When servicing the fuel system, do not smoke or allow open flame or sparks in the vicinity. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00330a)**

3. Remove main fuse. Refer to service manual for your motorcycle.
4. Remove fuel tank according to the instructions in the service manual.

## Remove Engine Components

1. Refer to service manual to remove existing air cleaner assembly.
2. Remove the existing exhaust system following service manual procedures.
3. Disassemble the engine top end. Refer to the appropriate engine sections in the service manual.

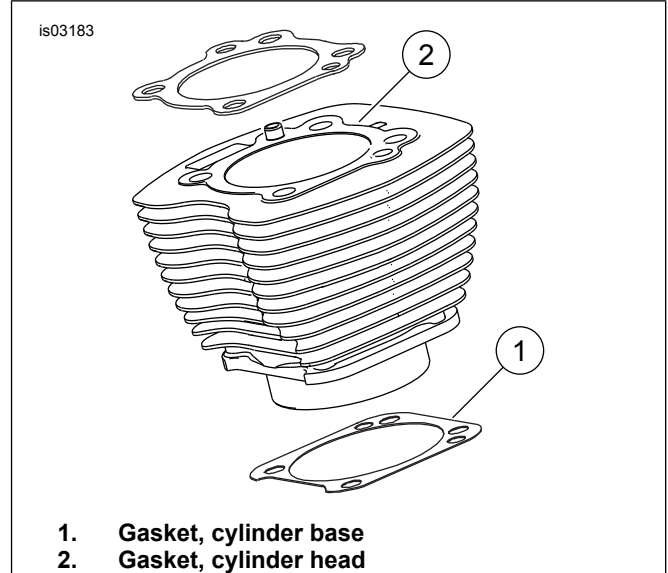
## Install Engine Top End Components

*NOTE*

*Figure 1. The 4.060 in cylinder base gasket (1) and cylinder head gasket (2) eliminate the need for O-rings. Do not use O-rings on cylinder dowels or cylinder spigots.*

*When installing new base gasket (1), install with the embossed side down and the concave side up.*

1. Refer to the appropriate service manual and assemble the engine with the following changes:
  - a. Assemble the top end of the engine using the base gaskets and head gaskets provided in the kit. Refer to the appropriate engine section in the service manual.



**Figure 1. Cylinder Gaskets**

## Final Assembly

1. Install the fuel tank according to the instructions in the service manual.
2. Refer to the service manual to install the main fuse.

### ⚠ WARNING

**After installing seat, pull upward on seat to be sure it is locked in position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070b)**

3. Install the seat according to the instructions in the service manual.

## SE120R PISTON

1. Refer to ENGINE section of service manual.

## INSTALLATION

### ⚠ WARNING

**To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect battery cables (negative (-) cable first) before proceeding. (00307a)**

**▲ WARNING**

Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00049a)

1. See the service manual to remove the seat. See the service manual to disconnect the battery cables, negative cable first.

**▲ WARNING**

When servicing the fuel system, do not smoke or allow open flame or sparks in the vicinity. Gasoline is extremely flammable and highly explosive, which could result in death or serious injury. (00330a)

2. Refer to the ENGINE: STRIPPING MOTORCYCLE FOR SERVICE and TOP END OVERHAUL, DISASSEMBLY sections of the service manual for cylinder head, cylinder and piston removal procedures.
3. Follow the procedures in the ENGINE: SUB-ASSEMBLY SERVICE AND REPAIR, TOP END/ CYLINDER/ UPPER CONNECTING ROD sections of the service manual for inspection of parts.
4. See the ENGINE: SUB-ASSEMBLY SERVICE AND REPAIR, CYLINDER section of the service manual for boring and honing instructions.

**NOTE**

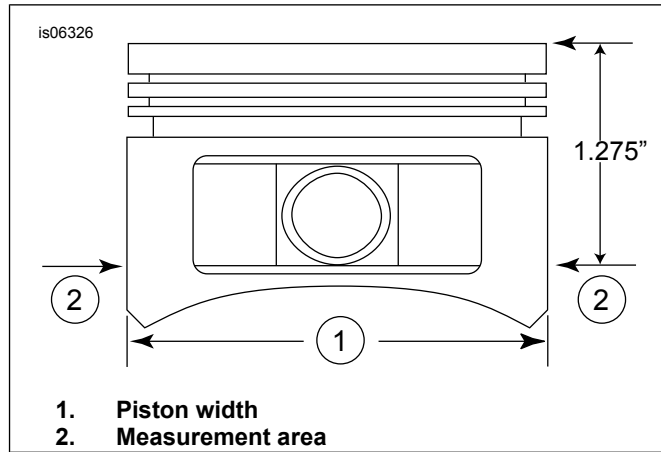
Install the top ring (barrel-faced) and second ring (taper-faced Napier) with the "N" marking facing up. Oil ring rails can be installed either side up.

The 4.060 in cylinder base gaskets and cylinder head gaskets included in the kit eliminate the need for O-rings (11273). **Do not** use O-rings on cylinder dowels or cylinder spigots.

When installing new base gasket, install with the embossed side down and the concave side up.

**NOTE**

Checking piston-to-cylinder fit at this location per table 11 is for reference.



**Figure 2. Piston Measurements**

5. See Figure 2. Measure the piston width (1), 90 degrees horizontally from both sides of the piston pin hole and 1.275 in down from the deck surface (top) of the piston (2). See table 11 for piston-to-cylinder fit at this location.
6. The pistons in this kit are front and rear specific. Install the piston marked "FRONT" in the front cylinder with the arrow pointing towards the **front** of the engine. Install the piston marked "REAR" in the rear cylinder with the arrow pointing towards the **front** of the engine.
7. Refer to the ENGINE: TOP END OVERHAUL, ASSEMBLY section of the service manual for piston, cylinder and cylinder head installation procedures.

**Table 11. Specifications**

Piston:	Clearance (in.)
Piston-to-cylinder fit (Loose)	0.0026-0.0036
Piston pin fit (Loose)	0.0003-0.0008
Top Ring End Gap	0.012-0.020
Second Ring End Gap	0.016-0.024
Oil Control Ring Rail Gap	0.008-0.0028
Top Ring Side Clearance	0.0010-0.0022
Second Ring Side Clearance	0.0010-0.0022
Oil Control Ring Side Clearance	0.0003-0.0072

**Table 12. Service Wear Limits**

Piston-to-cylinder fit (Loose)	Wear Limit (in.)
Fit in cylinder (Loose)	0.0061
Piston Pin Fit (Loose)	0.0011
Top Ring End Gap	0.030
Second Ring End Gap	0.034
Oil Control Ring Rail Gap	0.038
Top Ring Side Clearance	0.0030
Second Ring Side Clearance	0.0030
Oil Control Ring Side Clearance	0.0079

**Piston Pin Retaining Ring (Circlip) Installation**

**NOTE**

Circlip gap must be at 12:00 or 6:00 position when installed.

1. See Figure 3. Insert the open end of the circlip (1) into the notch (2) on the groove (3) around the piston pin boss so the gap is at the 12:00 or 6:00 o'clock position when installed.

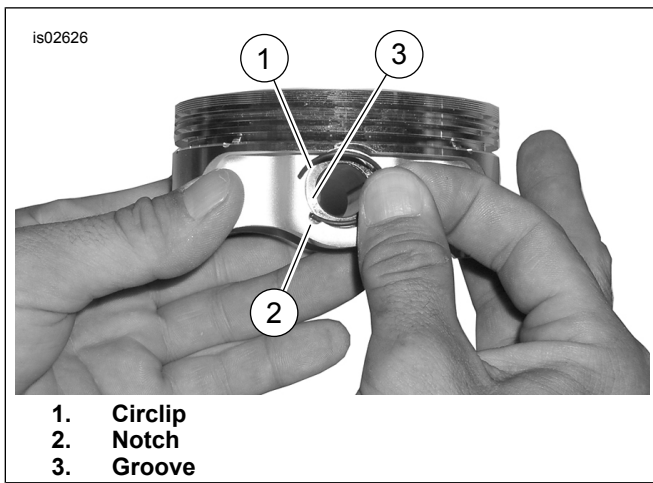


Figure 3. Circlip and Piston

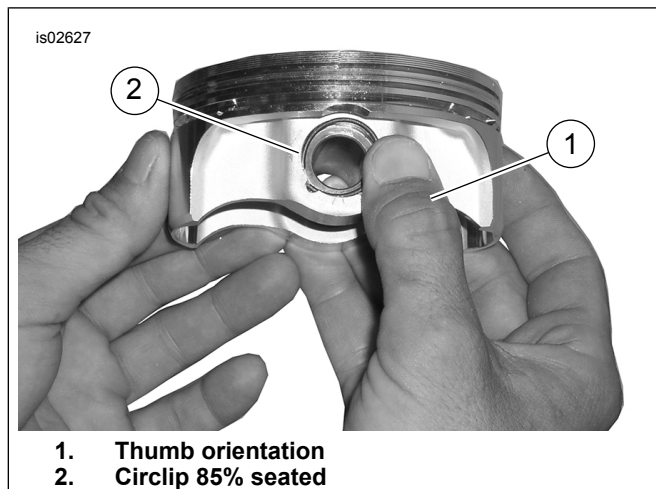


Figure 4. Install Circlip

2. See Figure 4. Position your thumb (1) as shown, and press firmly until approximately 85% of the circlip (2) is seated in the groove.
3. Do not scratch or mar the piston, use a small-bladed screwdriver to wedge the circlip into the remainder of the groove. Repeat for the remaining circlips.

**NOTE**

Verify that piston circlip is fully seated, or ENGINE DAMAGE WILL OCCUR.

4. Refer to the ENGINE: ASSEMBLING MOTORCYCLE AFTER STRIPPING section of the service manual for final reassembly procedures.

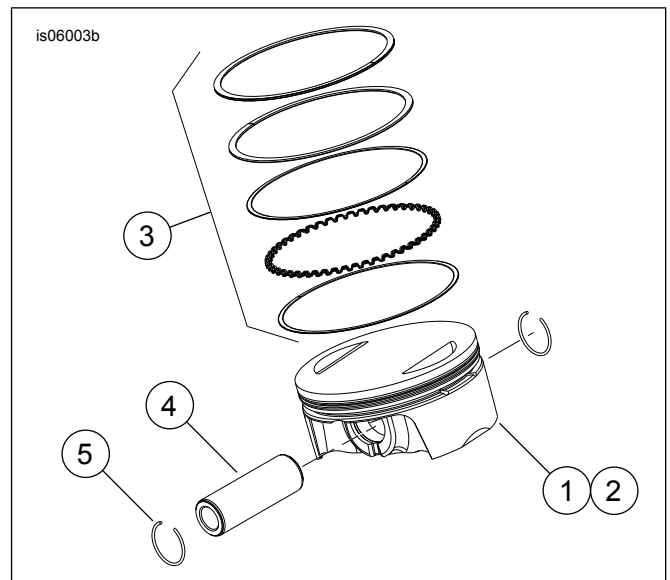


Figure 5. Piston Assembly

Table 13. Piston Assembly

Item	Description (Quantity)
1	Piston (front, standard)
2	Piston (rear, standard)
3	• Ring set, standard (2)
4	• Piston pin (2)
5	• Circlip (4)
1	Piston (front, +0.010)
2	Piston (rear, +0.010)
3	• Ring set, +0.010 (2)
4	• Piston pin (2)
5	• Circlip (4)

## REPLACING/SERVICING PUSHRODS

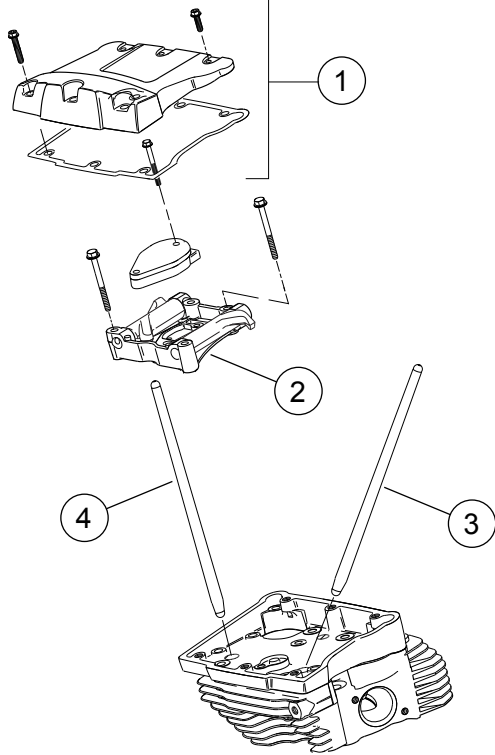
1. Refer to ENGINE section of service manual.

**NOTE**

See service manual procedures for installing or removing the pushrods. The pushrods are marked Intake and Exhaust.

The pushrods are directional. Verify that the larger ends of the pushrods are installed down in the lifter sockets.

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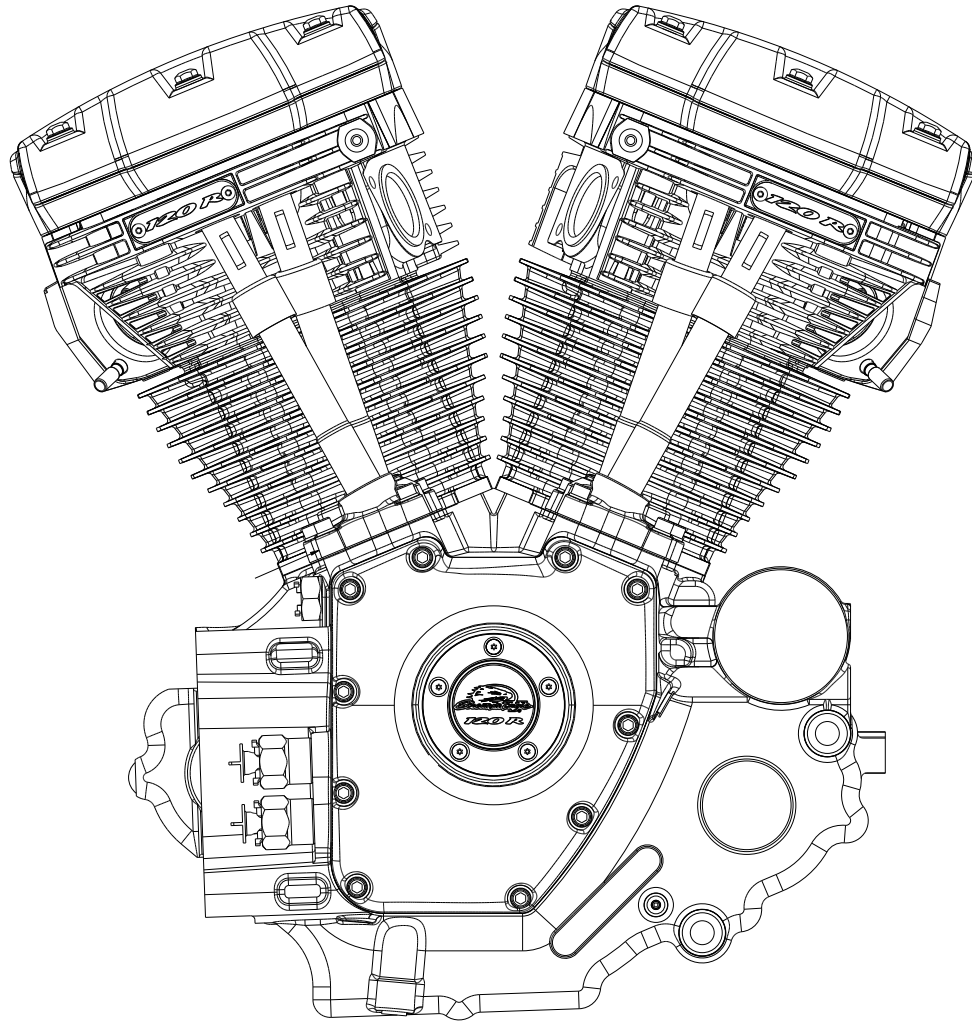


1. Rocker cover assembly
2. Rocker arm support plate assembly
3. Rear intake pushrod
4. Rear exhaust pushrod

Figure 6. Push Rods

# SERVICE PARTS

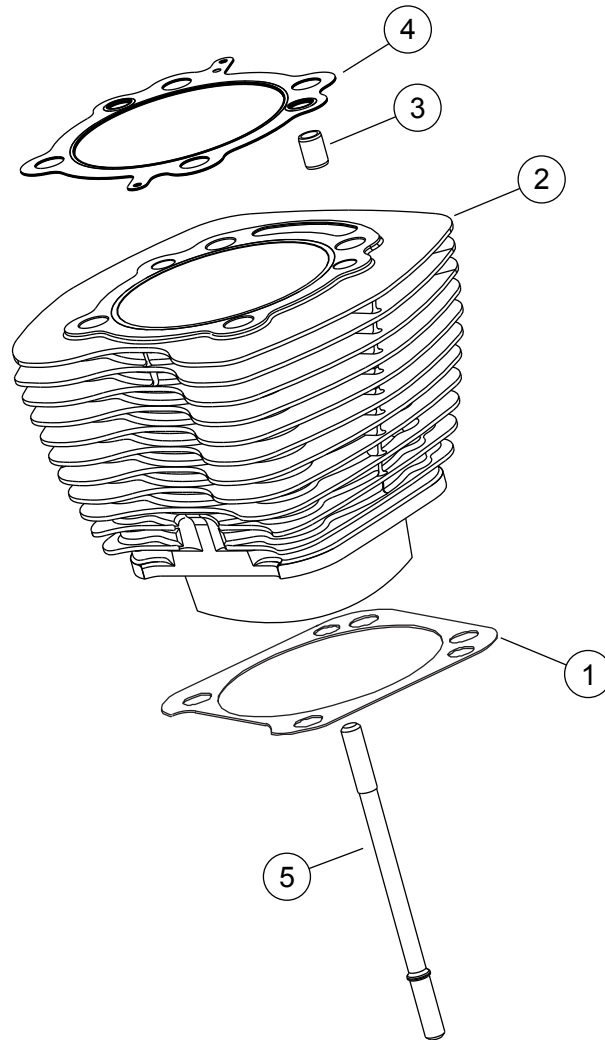
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**Figure 7. Service Parts: Engine Assembly, SE 120R Complete**

**Table 14. SE120R Screamin' Eagle Pro Race-Use Crate Engine**

Item	Description (Quantity)	Part Number
1	Engine assembly, complete	19206-15

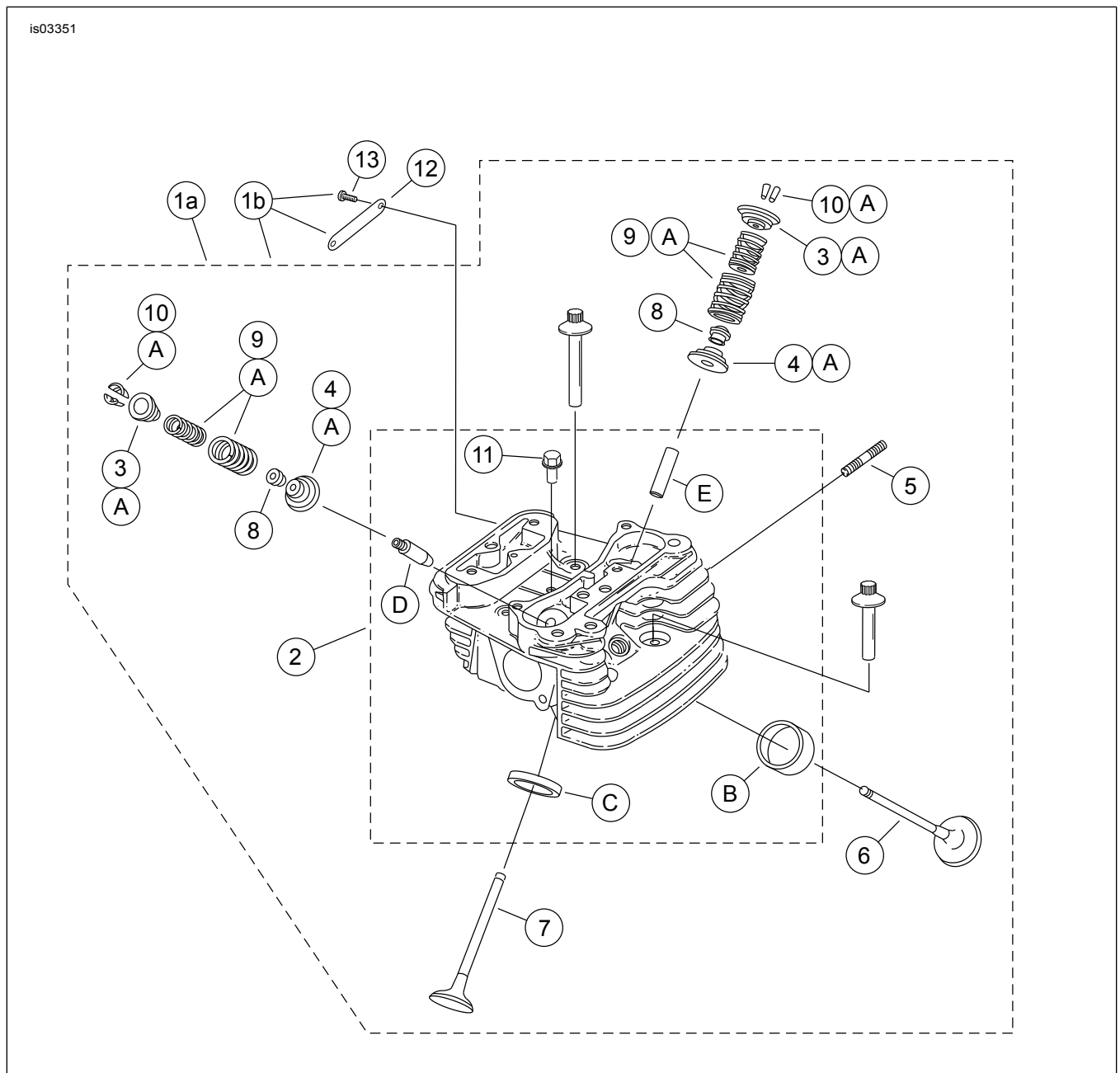


**Figure 8. Service Parts: SE120R Screamin' Eagle Pro Race-Use Crate Engine**

**Table 15. Service Parts: SE120R Screamin' Eagle Pro Race-Use Crate Engine**

Item	Description (Quantity)	Part Number
1	Base gasket, cylinder (2)	16736-04A
2	SE cylinder kit, 4.060 in., (black) (includes items 1, 3, 4, 1105 and 1086A)	16550-04C
3	Dowel pin, ring (4)	16595-99A
4	Gasket, cylinder head (2)	16104-04
5	Stud, cylinder (8)	16834-99A
6	Gasket kit, engine overhaul (does not include cylinder head gasket, base gasket or valve stem seals) (Not Shown)	17053-99C
7	Gasket kit, top-end, (does not include cylinder head gasket, base gasket or valve stem seals) (Not Shown)	17052-99C





**Figure 9. Service Parts: SE120R Screamin' Eagle Pro Race-Use Crate Engine**

**Table 16. Service Parts: SE120R Screamin' Eagle Pro Race-Use Crate Engine**

Item	Description (Quantity)	Part Number
1a	Cylinder head assembly, rear (includes Items 2 through 11)	16921-08
1b	Cylinder head assembly, front with CNC ported medallion (includes Items 2 through 13)	16917-08
2	• Cylinder head (machined, with items B, C, D and E installed)	Not Sold Separately
3	• Collar, valve spring, upper (4)	See Service Kits
4	• Collar, valve spring, lower (4)	See Service Kits
5	• Stud, exhaust port (4)	16715-83
6	• Intake valve (2)	18190-08
7	• Exhaust valve (2)	18183-03
8	• Seal, valve (4)	18046-98
9	• Valve spring unit (4)	See Service Kits
10	• Retainer, valve collar (8). Also included with Kit 18281-02A	18240-98

**Table 16. Service Parts: SE120R Screamin' Eagle Pro Race-Use Crate Engine**

<b>Item</b>	<b>Description (Quantity)</b>	<b>Part Number</b>
11	• Automatic compression release plug (2)	16648-08
12	• Medallion, "120R" (for front cylinder head only)	17136-10
13	• Screw, button head, TORX (2) (for front cylinder head only)	94634-99
14	Screw, internal thread, 3-3/16 inch (4)	16478-85A
15	Screw, internal thread, 1-7/8 inch (4)	16480-92A
16	Spark plugs (not shown) (2)	32186-10
<b>Service Kits:</b>		
A	Valve Spring Kit, Screamin' Eagle	18281-02A
<b>The following Screamin' Eagle parts are available separately:</b>		
B	Valve seat, intake	18191-08
C	Valve seat, exhaust	18048-98A
D	Valve guide, intake (for service)	
	• (+ 0.003 in.)	18158-05
	• (+ 0.002 in.)	18156-05
	• (+ 0.001 in.)	18154-05
E	Valve guide, exhaust (for service)	
	• (+ 0.003 in.)	18157-05
	• (+ 0.002 in.)	18155-05
	• (+ 0.001 in.)	18153-05

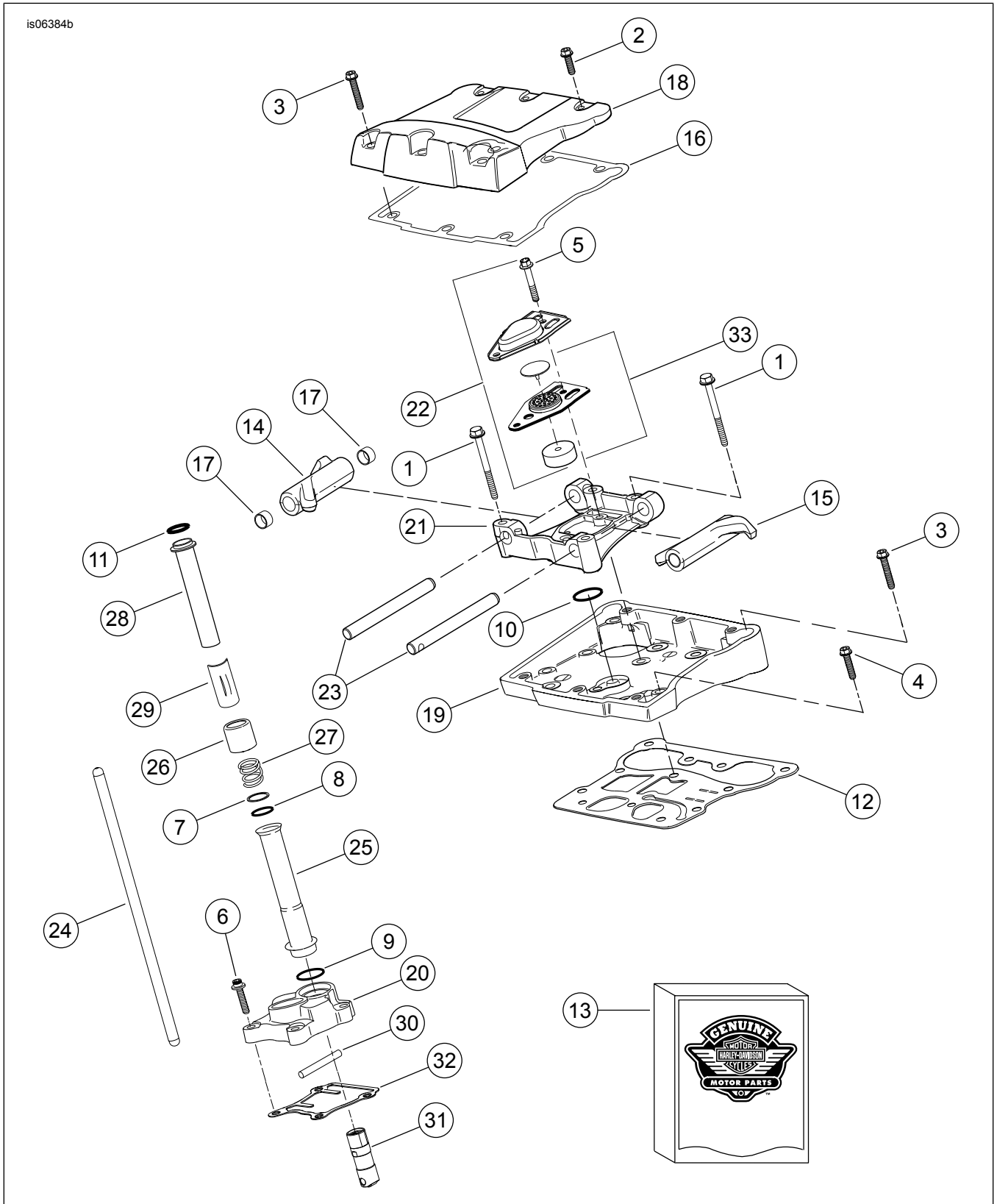


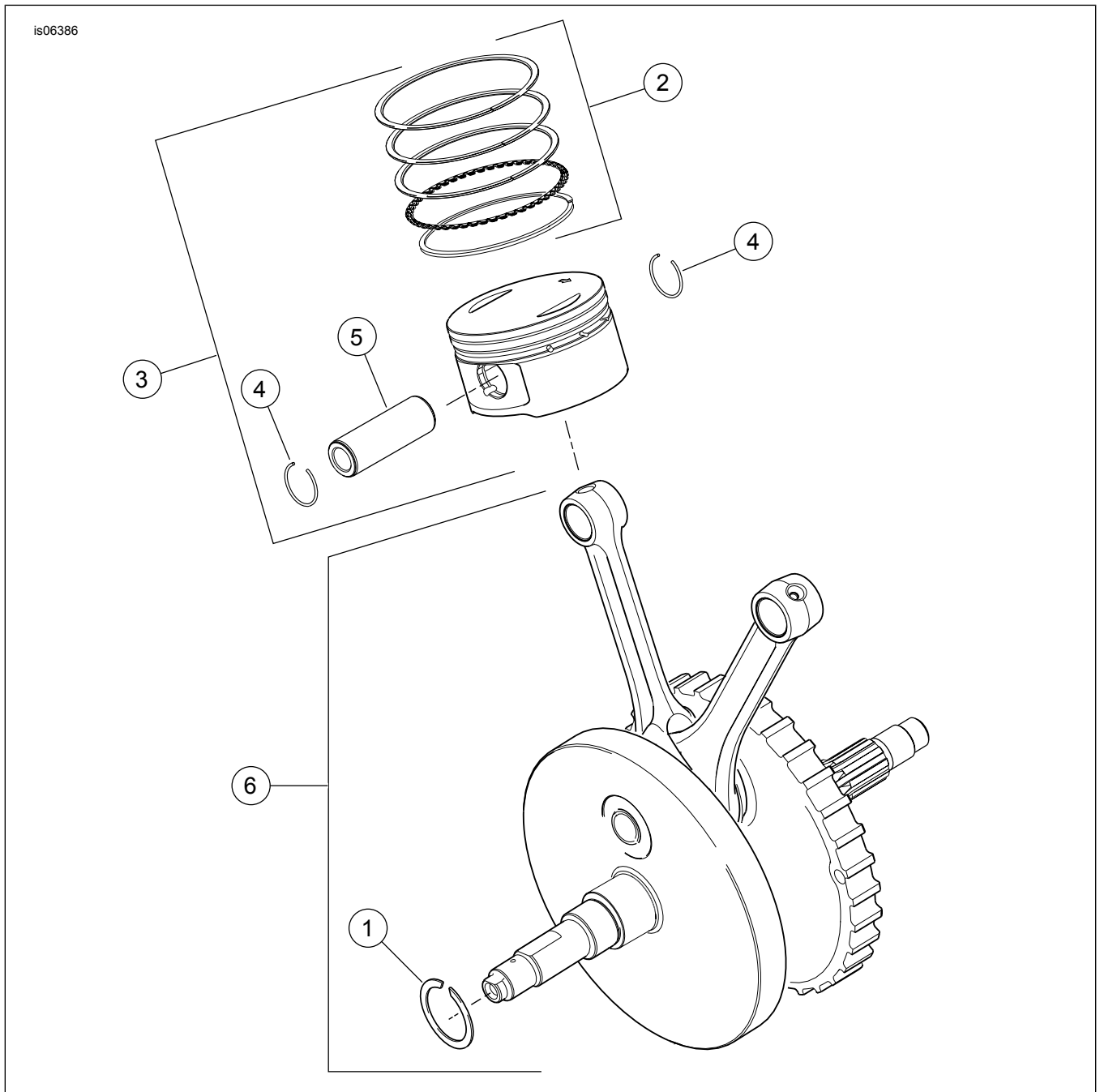
Figure 10. cService Parts: SE120R Screamin' Eagle Pro Race-Use Crate Engine

Table 17. Service Parts: SE120R Screamin' Eagle Pro Race-Use Crate Engine

Item	Description (Quantity)	Part Number
1	Screw 5/16-18 X 2-1/2 hex flange hd. (Grade 8) (8)	1039
2	Screw 5/16-18 X 1.0 hex hd., w/lockpatch (6)	3692A
3	Screw 5/16-18 X 1-3/4 hex hd., w/lockpatch (10)	3693A

**Table 17. Service Parts: SE120R Screamin' Eagle Pro Race-Use Crate Engine**

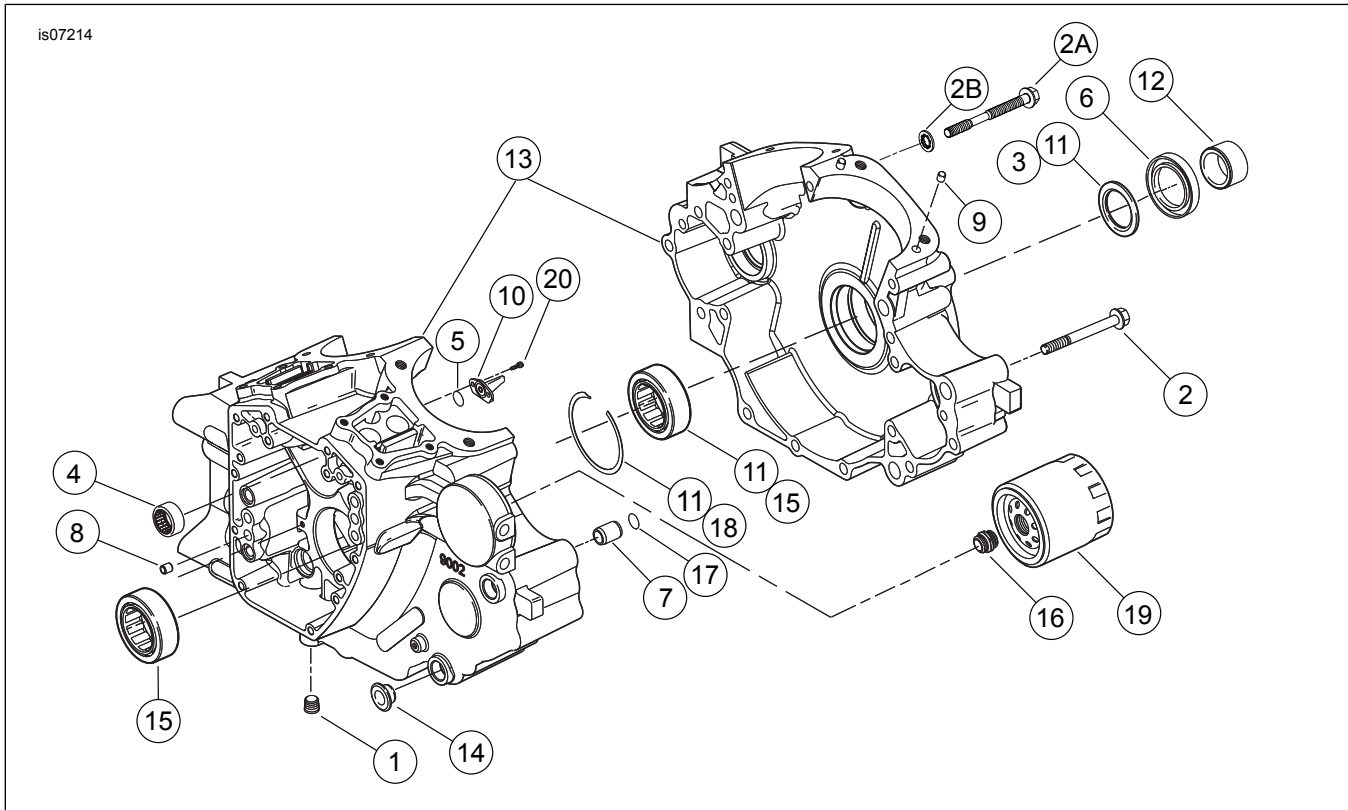
<b>Item</b>	<b>Description (Quantity)</b>	<b>Part Number</b>
4	Screw 5/16-18 X 1-1/4 hex flange hd., w/lockpatch (8)	3736B
5	Screw 1/4-20 hex flange X 1-11/16 hex hd., w/lock patch, (Grade 8) (4)	4400
6	Screw 1/4-20 X 1 socket hd., w/lockpatch (8)	4741A
7	Washer 11/16 X 29/32 X 1/32 (4)	6762B
8	O-ring, push rod cover (4)	11132A
9	O-ring, push rod cover (4)	11145A
10	O-ring (2)	11270
11	O-ring (4)	11293
12	Gasket, rocker housing (2)	16719-99B
13	Gasket kit, cam service	17045-99D
14	Rocker arm, front intake, rear exhaust, with bushings (2)	17360-83A
15	Rocker arm, rear intake, front exhaust, with bushings (2)	17375-83A
16	Gasket, rocker cover (2)	17386-99A
17	Bushing, rocker arm (8)	17428-57
18	Rocker cover, (chrome) (2)	17572-99
19	Rocker housing, (chrome) (2)	17578-10
20	Lifter cover, front (chrome) Lifter cover, rear (chrome)	17964-99 17966-99
21	Support, rocker arm (2)	17594-99
22	Breather assembly kit, (2)	17025-03A
23	Shaft, rocker arm (4)	17611-83
24	Perfect Fit push rod kit (+0.030 inch)	18401-03
25	Cover, push rod, lower (4)	17939-99
26	Cap, cover spring (4)	17945-36B
27	Spring, push rod cover (4)	17947-36
28	Cover, push rod upper (4)	17948-99
29	Retainer, spring cap (4)	17968-99
30	Pin, anti-rotation (2)	18535-99
31	Hydraulic lifter kit (Includes 4 lifters)	18572-13
32	Gasket, lifter cover (2)	18635-99B
33	Baffle assembly, breather (2)	26500002



**Figure 11. Service Parts; SE120R Screamin' Eagle Pro Race-Use Crate Engine**

**Table 18. Service Parts: SE120R Screamin' Eagle Pro Race-Use Crate Engine**

Item	Description (Quantity)	Part Number
1	Retaining ring	11177A
2	Piston ring set, standard (2)	22526-10
	Piston ring set, 0.010 inch over size (2)	22529-10
3	Piston kit, front and rear, with ring sets, piston pin and lock rings, standard	22574-10
	Piston kit, front and rear, with ring sets, piston pin and lock rings, 0.010 inch over size	22576-10
4	Lock ring, piston pin (4)	22097-99
5	Piston pin (2)	22310-10
6	Flywheel assembly kit	24100013



**Figure 12. Service Parts: SE120R Screamin' Eagle Pro Race-Use Crate Engine**

**Table 19. Service Parts: SE120R Screamin' Eagle Pro Race-Use Crate Engine**

Item	Description (Quantity)	Part Number
1	Plug (3)	765
2	Screw, 5/16-18 x 3.0 inch, hex flange head, (11)	895
2a	Screw, top center crankcase	1105
2b	Washer, sealing	1086A
3	Washer 1-1/4 x 1-53/64 x 1/8 (2)	8972
4	Needle bearing, left side of camshafts (2)	9298
5	O-ring (2)	10930
6	Oil seal	12068
7	Dowel pin (2)	16574-99A
8	Dowel pin (2)	16589-99A
9	Dowel pin (4)	16595-99A
10	Piston cooling jet, with 10930 (2)	22315-06A
11	Bearing kit, left side with 8972, 24605-07, 35114-02, and inner race	24004-03B
12	Spacer, sprocket shaft	24009-06
13	Crankcase set, (black) with bearings, cooling jets, and through bolts including bolt 21	24400001A
14	Spacer (4)	24603-00
15	Bearing, main (2)	24605-07
16	Adapter, oil filter	26352-95A
17	Retaining ring	35114-02
18	Oil filter (chrome)	63798-99A
19	Screw, TORX® head, 8-32 x 3/8 (4)	68042-99
20	Screw, TORX® button head, bearing retention, 1/4 - 20 x 7/16 inch (2)	703B

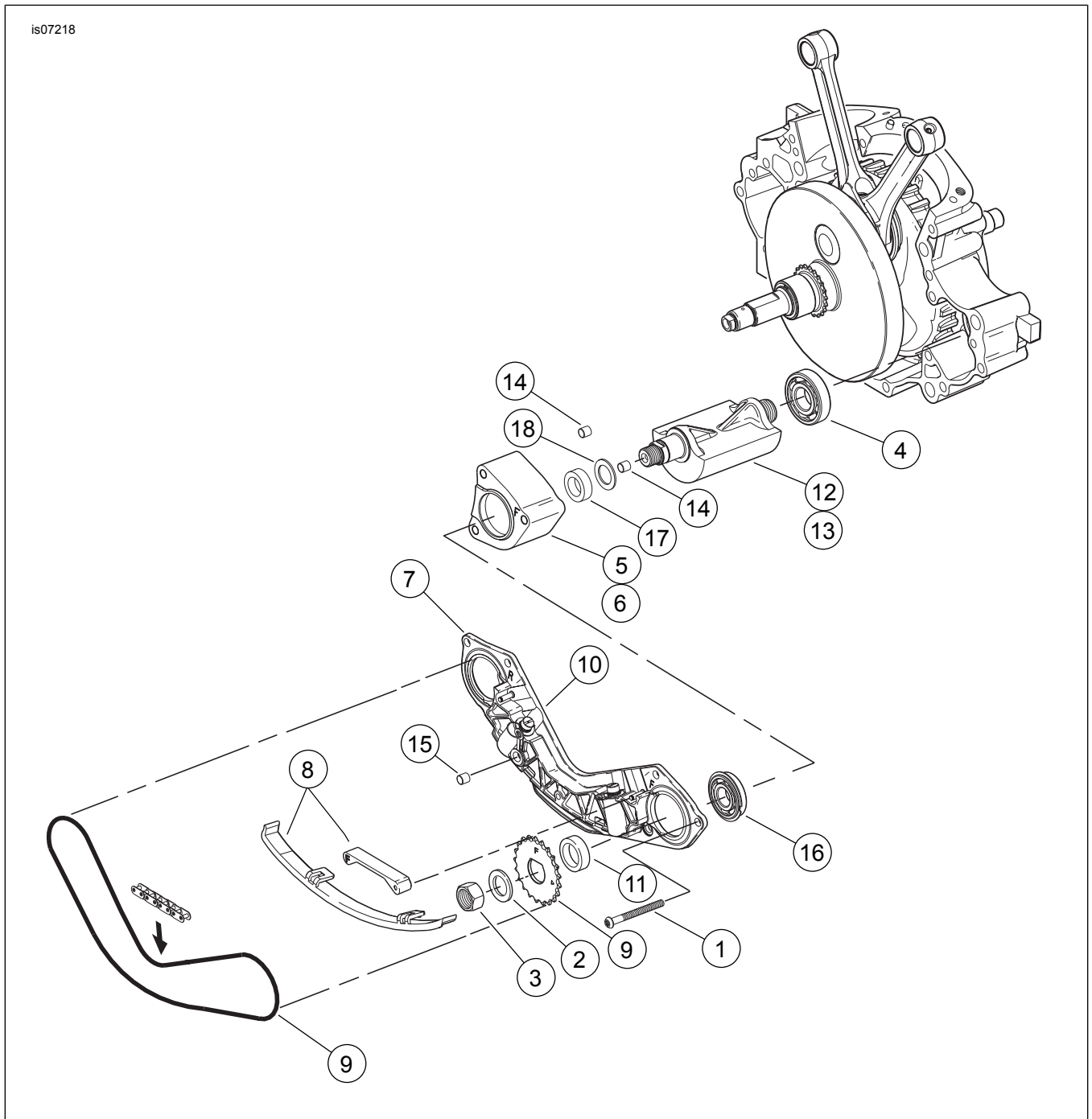


Figure 13. Service Parts: SE120R Screamin' Eagle Pro Race-use Crate Engine

Table 20. Service Parts Table

Item	Description (Quantity)	Part Number
1	Screw (2)	703B
2	Screw (6)	956
3	Bolt, balancer shift bolt (2)	3110
4	Washer, balancer shift bolt (2)	6456
5	Bearing, shell (2)	8959
6	Bearing, (2)	8992A
7	Support assembly, chain guide, includes tensioner pistons	14728-07
8	Guide drive kit, w/14769-00, front and rear sprockets	14761-00
9	Guide kit, chain tensioner, includes lower front and rear guides	14762-00
10	Piston assembly kit, chain tensioner (2)	14764-00
11	Chain, balancer drive	14769-00
12	Spacer, .039 thick	14784-07

Table 20. Service Parts Table

Item	Description (Quantity)	Part Number
13	Balance shaft kit, w/8959, 8992A and balance shaft (2)	14789-07
14	Bushing, dowel (2)	16583-00A
15	Retaining ring, balancer shift bearing (2)	35240-07
16	Seal, oil interconnect	45359-00

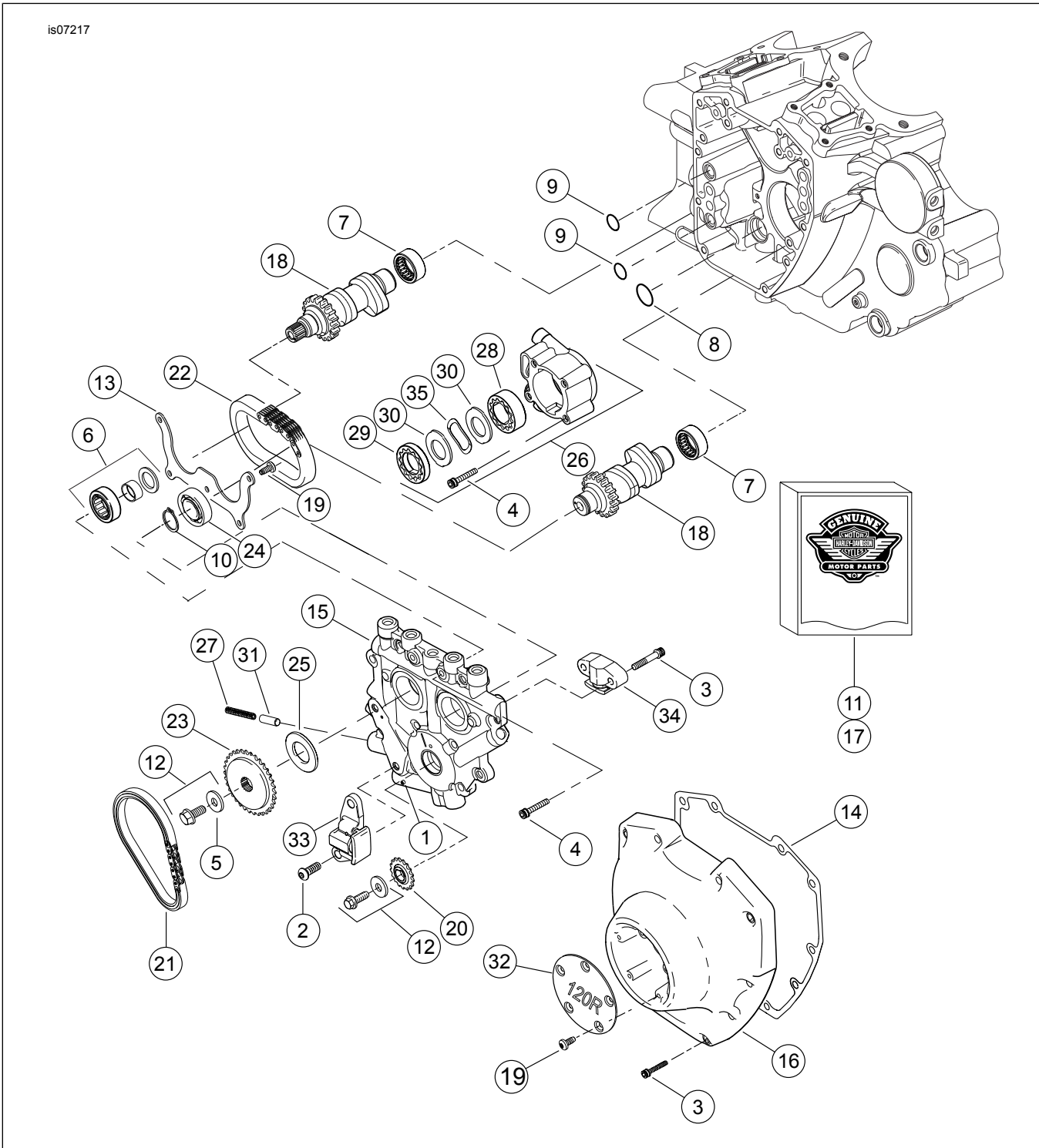


Figure 14. Service Parts: SE120R Screamin' Eagle Pro Race-use Crate Engine



**Table 21. Service Parts: SE120R Screamin' Eagle Pro Race-use Crate Engine**

<b>Item</b>	<b>Description (Quantity)</b>	<b>Part Number</b>
1	Roll pin	601
2	Screw, primary cam chain tensioner (2)	942
3	Screw, cam cover, 1/4-20 x 1-1/4, knurled with lockpatch (grade 8), (10)	4740A
	Screw, secondary cam tensioner, 1/4-20 x 1-1/4, knurled with lockpatch (grade 8), (2)	4740A
4	Screw, 1/4-20 x 1, socket head, with lockpatch (8)	4741A
5	Washer, 3/8 x 1-1/8 x 7/32	6294
6	Bearing assembly w/bearing, inner race, washer and O-ring	8983
7	Needle bearing kit, camshafts (2) (Kit includes 2)	24017-10
8	O-ring	11293
9	O-ring (2)	11301
10	Retaining ring	11494
11	Gasket kit, cam service	17045-99D
12	Cam drive sprocket retention kit, with 6294, screws and washer	25566-06
13	Plate, bearing retaining	1200018
14	Gasket, cam cover	25244-99A
15	Cam support plate, with bypass valve	25400018
16	Cam cover, (chrome)	25369-01B
17	Camshaft chain and fastener kit, with 25566-06, 25673-06, 25675-06 and 25728-06	25585-06
18	Camshaft, front and rear kit, SE266E	25400029
19	Screw, 8-32 x 3/8 TORX® head (9)	68042-99
20	Sprocket, cam drive on crankshaft, 17 T	25673-06
21	Chain, primary cam drive	25675-06
22	Chain, secondary cam drive	25607-99
23	Sprocket, cam drive, 34 T	25728-06
24	Ball bearing	8990A
25	Spacer, cam drive sprocket alignment 0.287 inch thick	25722-00
	Spacer, cam drive sprocket alignment 0.297 inch thick	25723-00
	Spacer, cam drive sprocket alignment 0.307 inch thick	25721-00
	Spacer, cam drive sprocket alignment 0.317 inch thick	25719-00
	Spacer, cam drive sprocket alignment 0.327 inch thick	25717-00
	Spacer, cam drive sprocket alignment 0.337 inch thick	25725-00
	Spacer, cam drive sprocket alignment 0.347 inch thick	11889
	Spacer, cam drive sprocket alignment 0.357 inch thick	11890
26	Oil pump assembly, with items 28-30, 35 and body	62400001
27	Spring, relief valve	26210-99
28	Gerotor assembly, scavenge	Not Sold Separately
29	Gerotor assembly, pressure	Not Sold Separately
30	Separator plate, gerotor (2)	Not Sold Separately
31	Relief valve, oil pump	26400-82B
32	Cover, 120R	25495-10
33	Chain tensioner, primary cam drive chain	39968-06
34	Chain tensioner, secondary cam drive chain	39969-06
35	Spring, separator	40323-00