



**Performance
Machine Inc.**

ASSEMBLY INSTRUCTIONS

For 0179-1907 and 0179-1910 Primary

0048-0849

REVISION A 5/27/09

PAGE 1



IMPORTANT NOTICE

Before installing this Belt Drive Primary, read through these instructions completely; this will familiarize you with the way in which the parts fit together and the tools needed to complete the job.

The PM Contour Primary involves alterations to your motorcycle and may void your factory warranty. PM STRONGLY recommends this installation be done by an experienced motorcycle mechanic.

Before performing any installation steps, disconnect the motorcycle's battery to eliminate any possibility of damage to the electrical system or injury to yourself due to a short circuit.

DISCLAIMER

These Performance Machine parts are designed for high performance motorcycle applications and are intended for the very experienced rider only. The installation of these Performance Machine parts may adversely effect or void your factory warranty.

PERFORMANCE MACHINE LIMITED WARRANTY INFORMATION

Performance Machine Inc. warrants to the original purchaser that the parts of this Belt Drive Primary to be free of manufacturing defects in materials and workmanship for a period of one (1) year from the date of purchase. In the event warranty service is required, you must call Performance Machine immediately with a description of the problem.

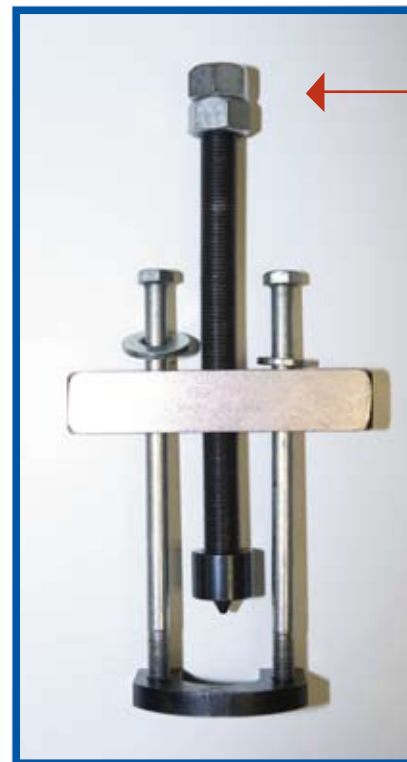
If it is deemed necessary for Performance Machine to make an evaluation to determine whether the part is defective, a return authorization number will be given by Performance machine. The parts must be packaged properly so as to not cause further damage and returned prepaid to Performance Machine with a copy of the original invoice of purchase and a detailed letter outlining the nature of the problem. If after the evaluation by Performance Machine the part was found to be defective it will be repaired or replaced at no cost to you. If we replace it, we may replace it with a reconditioned one of the same design.

Performance Machine shall not be held liable for any consequential or incidental damages resulting from the failure of a Performance Machine part.

Performance Machine shall have no obligation if a part becomes defective as a result of improper installation or abuse.

RECOMMENDED USE OF SPECIAL TOOL

Inner bearing race remover/installer



CONTACT INFORMATION

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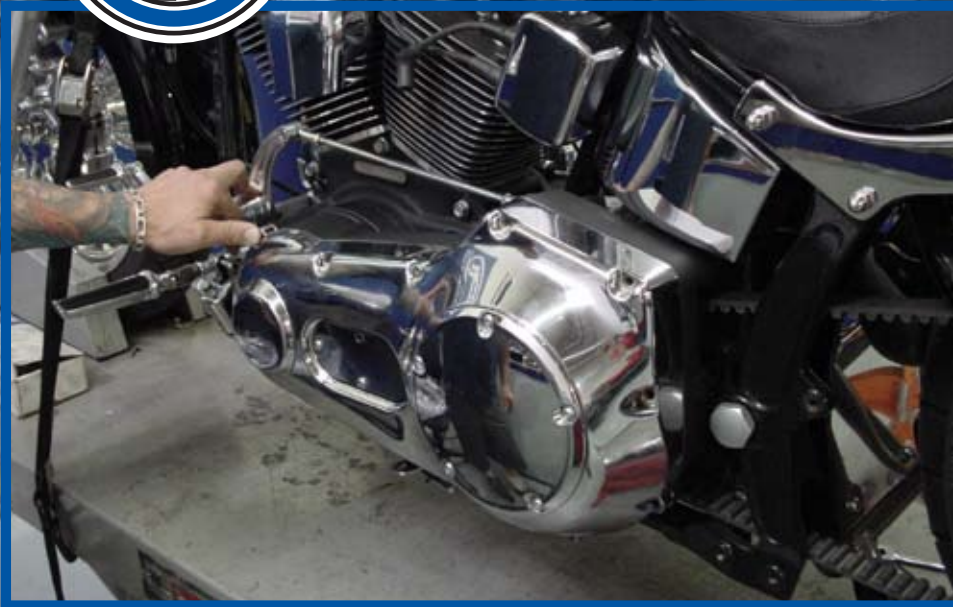
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CONTOUR BELT DRIVE PRIMARY

For 2007-2009 Softail, 2006-2009 Dyna w/ PM Phatail Kit Only (Not Stock Offset)

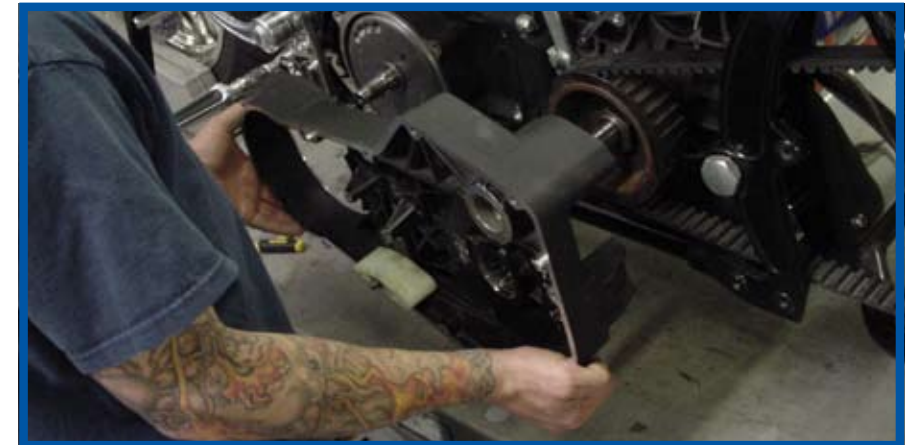
ATTENTION: This instruction sheet is written under the assumption that you will be replacing a traditional primary. If you are doing a ground up custom build, this page of information will not be used.

WARNING: To install the Performance Machine Belt Drive Primary it will be necessary to raise the motorcycle off the ground on a suitable lift. Be sure to center the motorcycle on the lift so that it does not fall over when you raise it up or when you are working on it.

NOTE: Installation of the PM Contour Belt Drive Primary begins with the disassembly and removal of the entire primary drive. For detailed information on removal of these parts, consult your factory manual.

STOCK COMPONENT REMOVAL

1. Disconnect the battery and drain oil from primary
2. Remove the following:
 - Seat
 - Battery
 - Pipes (if they block access to starter motor)
 - Oil Tank (if it blocks access to starter motor bolts)
 - Outer Primary
 - Clutch assembly, motor sprocket and chain (**NOTE:** Crankshaft nut is standard thread direction and trans shaft nut is reverse thread)
 - Mainshaft bearing race
 - Inner Primary
 - Bolts from starter motor (from right side of bike)





1. Using an Inner Bearing Race Remover, completely remove the inner bearing race located on the transmission main shaft



4a



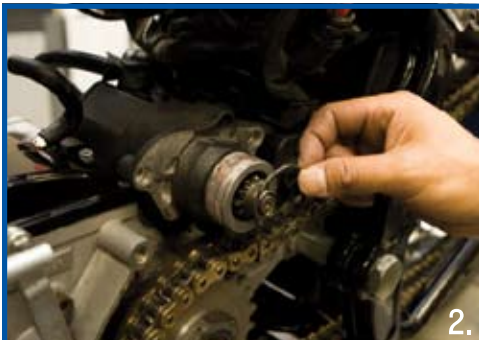
6.



4b



Place inner primary against motor spacer (4a) and capture transmission housing spacers between transmission and inner primary (4b).



2.

Remove the rubber O-ring located on the electric starter to ease the installation of the backing plate in the following steps



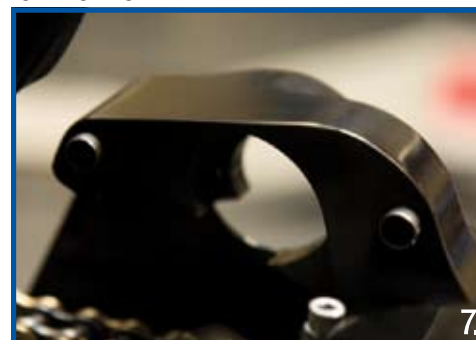
3.

Remove the OEM Gasket and place supplied motor spacer.



5.

Following the components drawing included in the instructions, attach the backing plate with the specified hardware listed on the drawing. **NOTE:** The use of thread locking compound is highly recommended on the specified hardware when attaching the backing plate



7.

Install the electric starter using the supplied bolts **NOTE:** Use of the 2 alignment dowel pins located between the starter and primary are required



8.

Before applying the clutch basket and components, the use of thread locking compound is required on the transmission main shaft. **NOTE:** Not using thread locking compound will void any warranty with PM/BDL



9.

Place clutch spacer onto the transmission input shaft



10a

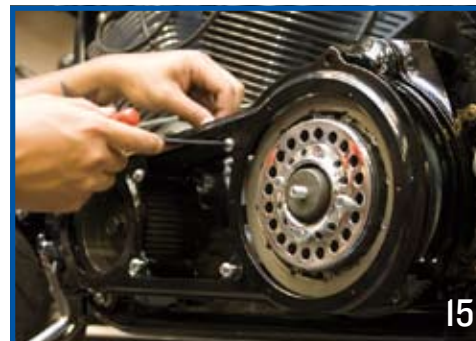
Place the front pulley spacer onto crankshaft and spring spacer onto front pulley.



10b



13a



15



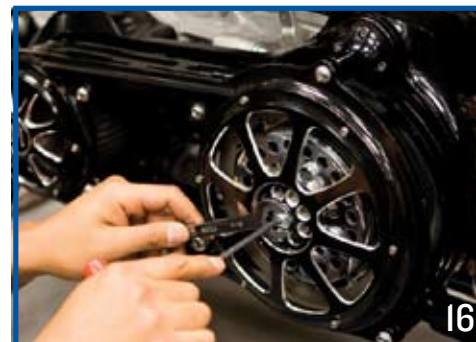
11.

Apply the clutch basket, front pulley and belt. Carefully grease the supplied ball bearing and install into transmission shaft.



13b

Tighten the supplied compensating sprocket bolt with both the supplied and the stock washers (13a) to 155 to 165 ft-lbs with thread locking compound (13b).



16

With the supplied 12 stainless steel 8-32 bolts attach the front and rear covers. Torque to 10-13 in-lbs using thread locking compound. Install push rod adjuster screw and jam nut. Adjust screw until you feel light pressure, but can still turn the throw out cup by hand. This will create a zero preload condition, then tighten down the jam nut. It may be necessary to readjust after the first ride.



12

Apply the main shaft nut and torque to 70 to 80 ft-lbs

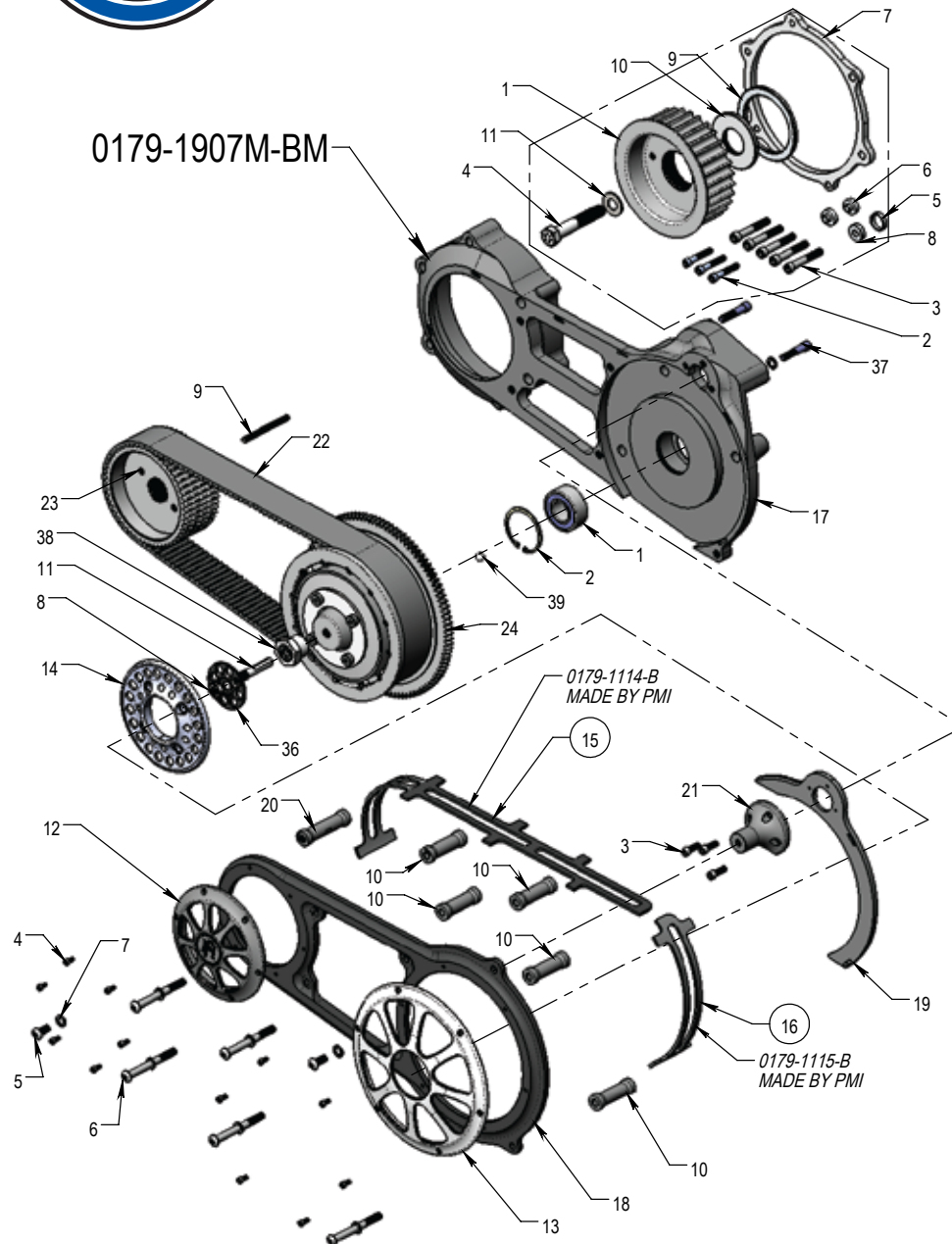


14

Apply the spring plate cover with the shoulder bolts and the starter cone using the 3 supplied 1/4-20 bolts (use thread locker and torque spring plate bolts to 25 to 30 ft-lbs and the starter cone bolts to 6-10 ft-lbs

FINAL ASSEMBLY AND INSPECTION

Check kickstand for proper clearance
Remove bike from lift and place in gear. Depress clutch and make sure it will roll. Adjust clutch if necessary.
Test at slow speeds, in short intervals. Visually inspect belt drive primary after road testing. During first 100 mile break in inspect belt for any abnormal wear.
It may be necessary to re-adjust clutch during initial break in period.



BOM Table		
ITEM NO.	DESCRIPTION	QTY
1	BALL BRG 52MMx13/16 DOUBLE ROW SEALED	1
2	SNAP RING 2" INTERNAL, ZINC PLATE	1
3	SHCS 1/4-20 X 3/4 CHROME	3
4	SHCS 8-32 X 3/8, 18-8 STAINLESS	12
5	BHCS 5/16-18 X 3/4 CHROME	2
6	BHCS 5/16-18 X 3-1/4 CHROME	5
7	WASHER .33 X .56 X .06 AL, FLAT	9
8	NUT 7/16-20 X 1/4 JAM, ZINC PLATED	1
9	STUD 1/4-20 X 3, 18-8 STAINLESS	1
10	SPACER INNER TO OUTER PLATE, PM PRIMARY - BDL	5
11	CLUTCH PUSH ROD END LT .70 THD, PM PRIMARY-BDL	1
12	FRONT COVER - PM PRIMARY - BDL	1
13	REAR COVER - PM PRIMARY - BDL	1
14	SPRING PLATE COVER - PM PRIMARY - BDL	1
15	FRONT BELT GUARD, PM PRIMARY - BDL 2007-09	1
16	REAR BELT GUARD, PM PRIMARY - BDL 2007-09	1
17	MOTOR PLATE - INNER, PM PRIMARY - BDL 2007-09	1
18	OUTER PLATE, PM PRIMARY - BDL 2007-09	1
19	PRIMARY RING COVER, PM PRIMARY-BDL 2007-09	1
20	SPACER INNER TO OUTER PLATE FR, PM PRIMARY-BDL 2007-09	1
21	SPACER INNER TO OUTER PLATE, PM PRIMARY-BDL 2007-09	1
22	2" BELT X 142 TOOTH, PM PRIMARY-BDL 2007-09	1
23	52T FRONT PULLEY, PM PRIMARY-BDL 2007-09	1
24	BDL 69T REAR CLUTCH KIT, PM PRIMARY - BDL 2007-09	1
25	FRONT BELT SPROCKET 32T X 14mm, PHATAIL 2007-09	1
26	SHCS 1/4-20 X 1-1/2 CAD I FINISH	3
27	SHCS 5/16-18 X 2 CAD I FINISH	5
28	BOLT 9/16-12 X 3-1/4 HEX GRD 8, COMMERCIAL ZINC PLATE	1
29	CLUTCH SPACER, PM PHATAIL FXST TC96 2007-09	1
30	STEPPED PRIMARY SPACER PM PHATAIL FXST TC96 2007-09	2
31	PRIMARY SPACER PHATAIL, PM PRIMARY BDL 2007-09	1
32	STRIGHT PRIMARY SPACER PM PHATAIL FXST TC96 2007-09	1
33	STATOR OFFSET SPACER, PM PHATAIL FXST TC96 2007-09	1
34	COMPENSATOR SPACER, PM PHATAIL FXST TC96 2007-09	1
35	MAIN SHAFT WASHER	1
36	CLUTCH CENTER COVER BM	1
37	SHCS .3125-18 X 1.50 GRADE 8 ZINC	2
38		1
39	BALL BEARING 3/8	1