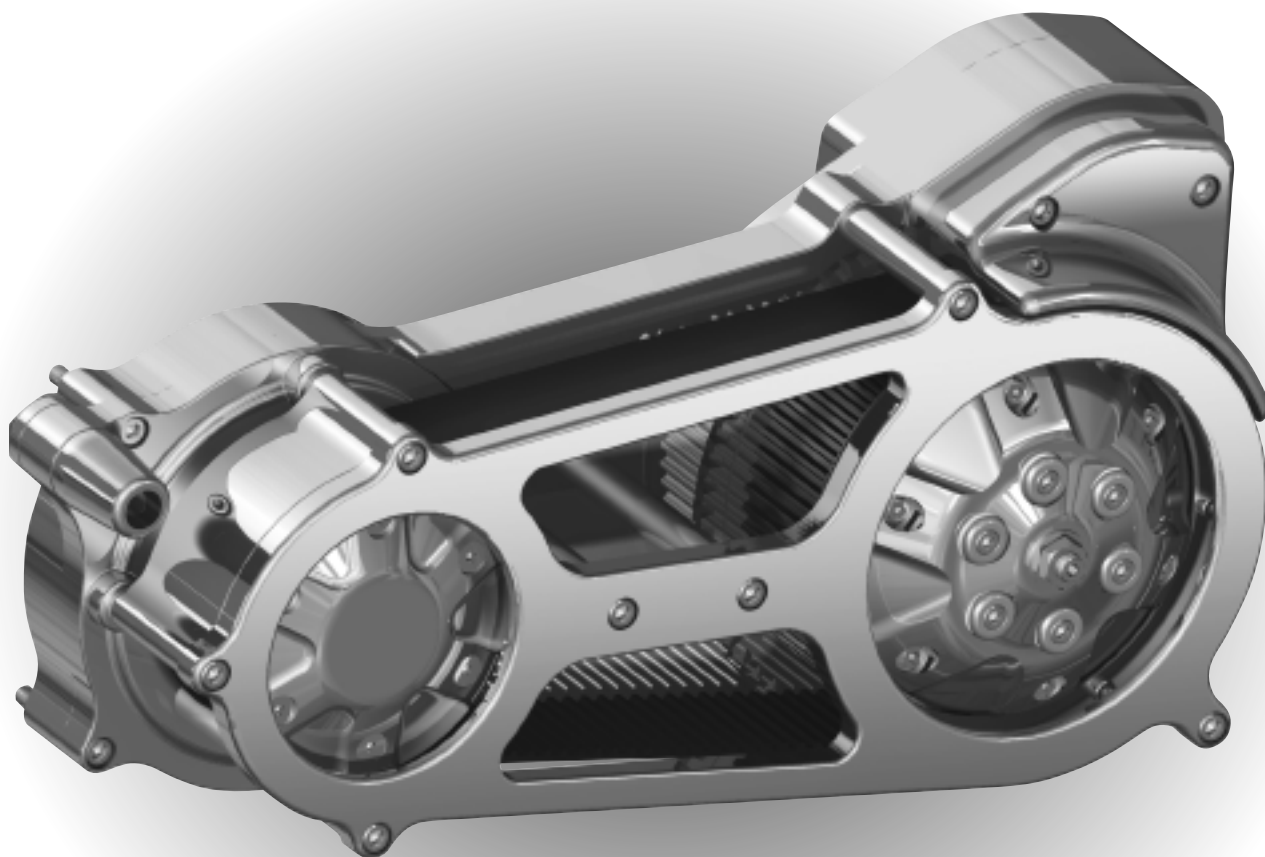




ASSEMBLY DIAGRAM AND ASSEMBLY REFERENCE ULTIMA "BAGGER" 2" BELT DRIVE UNITS

FLT, FLH & FXR MODELS 1990-2006



Part #

**58-853 BAGGER 2" BILLET BELT DRIVE ASSEMBLY,
POLISHED**

REV 10-22-14

ASSEMBLY DIAGRAM AND ASSEMBLY REFERENCE

ULTIMA 8MM BELT DRIVE UNITS

BELT DRIVE PRODUCTS

WARRANTY PROVISIONS

Ultima's® component parts used in our belt drives are guaranteed to the original purchaser to be free of manufacturing defects in materials and workmanship for a period of twelve (12) months from the date of purchase through Midwest Motorcycle Supply.

Merchandise that fails to conform to these conditions will be repaired by Ultima® if the parts are returned to Midwest Motorcycle Supply by the purchaser within the 12-month warranty period or within 10 days thereafter.

Some problems can be rectified by a telephone call and need no further course of action. A part that is suspected of being defective must not be replaced by a Dealer without prior authorization from Midwest Motorcycle Supply. If it is deemed necessary for Ultima® to make an evaluation to determine whether the part was defective, it must be packaged properly to prevent further damage and be returned prepaid to Midwest Motorcycle Supply with a copy of the original invoice of purchase, detailed letter outlining the nature of the problem, how the part was used and the circumstances at the time of failure. If, after an evaluation has been made by Ultima® and the part was found to be defective, repair or replacement will be granted at Ultima's® discretion.

ADDITIONAL WARRANTY PROVISIONS:

1. Ultima® shall have no obligation in the event an Ultima® part is modified by any other person or organization.
2. Ultima® shall have no obligation in the event an Ultima® part becomes defective in whole or in part as a result of improper installation, improper maintenance, improper use, abnormal operation, or any other misuse or mistreatment of the Ultima® part.
3. Ultima® shall not be liable for any consequential or incidental damage resulting from the failure of an Ultima® part, the breach of any warranties, the failure to deliver, delay in delivery, delivery in non-conforming condition, or for any other breach of contract or duty between Ultima® and a customer.
4. These Diagrams are provided for a reference only and in no way imply that this part is suitable for the applications it is being installed to. The Part #'s these diagrams reference were designed to fit OEM FLT & FXR style motorcycles made from 1990-2006.

PROFESSIONAL INSTALLATION REQUIREMENTS:

Ultima® Belt Drives should be installed by trained professional mechanics into a motorcycle in which they were intended for use. Failure to do so may result in injury and even death. It is the customer's responsibility to insure their mechanic has proper training.

ASSEMBLY INSTRUCTIONS

I. PREPARATION FOR ASSEMBLY

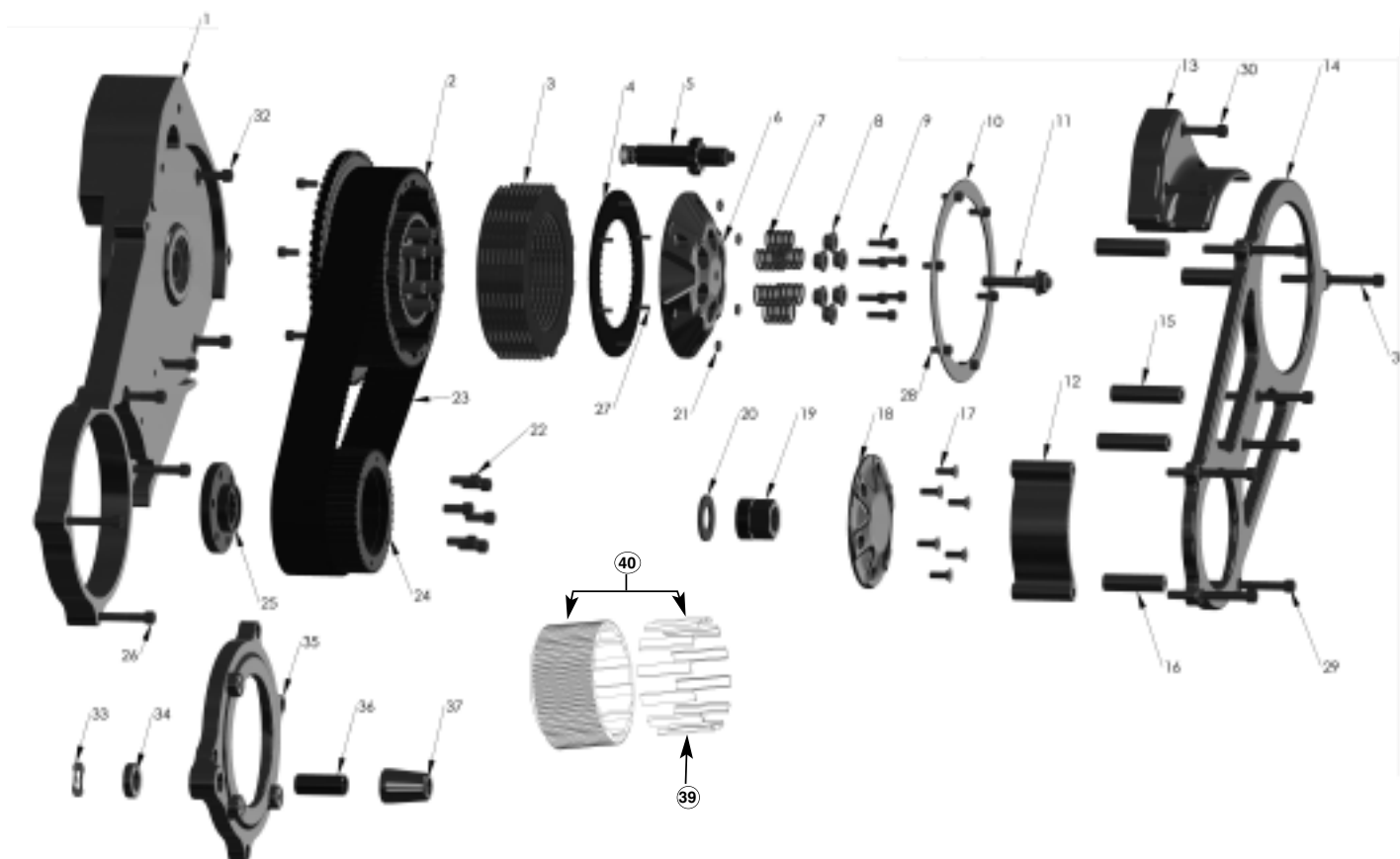
Before installing the Ultima® belt drive system you must remove your entire existing primary drive. This also includes the pressed on transmission mainshaft race used with chain drive inner primary bearings. **Always disconnect battery before removing or installing primary drive systems.**

The Ultima® belt drive system comes with a 1989-1993 type starter drive shaft which will fit 89'-06' starter models. Starter bolts are available to accommodate 89'-06' starters. We also suggest using any of our heavy duty Ultima® Thunder Fire® starters part # 70-220 thru 70-229 which incorporate both 89/93 and 94/06' style drive shaft bolt arrangements. These starters are available in 1.4, 1.75, 2.0 and 2.4 Kw configurations.

At this time we suggest inspection of your charging system.

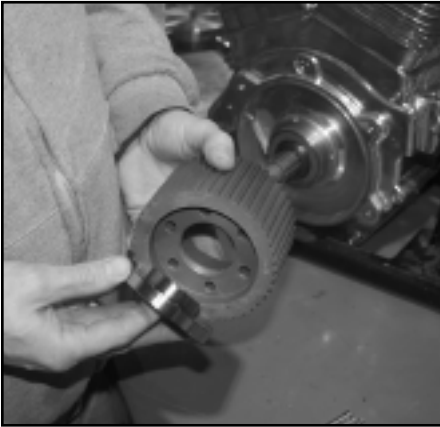
While you are inspecting the alternator we highly recommend that you install a new crankshaft seal on the engine replacing the existing seal with a high quality double lip seal and installing the seal with the steel face out. Belt drive units require a dry environment free from oil and by flipping the oil seal you ensure any crankcase pressure and oil will stay in your engine. This is also a great time to inspect the transmission sprocket and seal for wear and to ensure the sprocket is tight.

ULTIMA® 2" BAGGER PRIMARY BELT DRIVE



Item#	Part#	Description	QTY.	Item#	Part#	Description	QTY.
1	58-809	Motor Plate assembly, Bagger BeltDrive includes # 33, 34, 35, 36, 37	1	24	58-821	44T Motor Pulley (Bagger Only)	1
2	58-834	Complete Trans Pulley Assembly	1	25	58-605	Sprocket Shaft Collar	1
	58-923	Transmission Pulley w/stainless inserts 71T	1		IMPORT	USA MADE	
	58-925	Stainless inserts for 2" pulley.	Pkg		*58-606	— 1/4" Offset Collar, Sprocket Shaft	
3	58-769	Clutch Plate Kit	1		*58-607	— 1/2" Offset Collar, Sprocket Shaft	
4	58-772	Upper Drive Plate	1		*58-608	— 3/4" Offset Collar, Sprocket Shaft	
5	58-633	Starter Gear Assembly	1		*58-609	— 1" Offset Collar, Sprocket Shaft	
6	58-830	Pressure Plate, Bagger BeltDrive	1		*58-610	— 1-1/4" Offset Collar, Sprocket Shaft	
7	96-251	Spring, Clutch - Medium (68lb @ 1")	6		*58-611	— 1-1/2" Offset Collar, Sprocket Shaft	
	96-249	Spring, Clutch - Heavy Duty (82lb @ 1")	6		*58-612	*58-106 1-3/4" Offset Collar, Sprocket Shaft	
	96-250	Spring, Clutch - Extra Heavy Duty (98lb @ 1")	6		*58-613	— 2" Offset Collar, Sprocket Shaft	
8	58-852	Spring Guide	6	26	58-861	5/16-18 x 2" Socket Head Cap Screw	4
9	58-835	Bolt (M6)	6	27	58-774	Screws	6
10	58-761	Belt Guide**	1	28	58-862	1/4-20 x 0.5" Socket Head Cap Screw	6
11	58-779	Clutch Adjuster Assembly	1	29	58-863	5/16-18 x 3" Socket Head Cap Screw	3
12	58-854	Belt Guard, Bagger BeltDrive	1	30	58-864	5/16-18 x 1.5" Socket Head Cap Screw	2
13	58-855	Starter Cover w/bushing, Bagger BeltDrive	1	31	58-865	5/16-18 x 3.5" Socket Head Cap Screw	4
14	58-856	Outer Plate, Bagger BeltDrive	1	32	58-866	5/16-18 x 2.5" Socket Head Cap Screw	3
15	58-857	Spacer, Aluminum	4	33	58-890	Wave Washer	1
16	58-858	Spacer, Aluminum	1	34	58-891	Shift spacer	1
17	58-859	Counter Sunk Screws, 1/4-20 x 0.75"	6	35	58-892	Motorplate Sub-Plate, Bagger	1
18	58-860	Front Belt Guide, Bagger BeltDrive	1	36	58-893	Shift Bushing	1
19	58-723	Motor Pulley Nut	1	37	58-894	Bushing Cover	1
20	58-726	Washer	1	38	58-718	Starter Bolt--1/4-20 x 2.75	
21	58-773	Nuts	6		58-719	Starter Bolt--10-32 x 2.75	
22	58-796	bolts	6	39	58-925	Pulley Inserts only, 2"	
23	58-918	Belt, Bagger BeltDrive	1	40	58-923	Outter Pulley 71T w/inserts, 2"	

II. SELECTING THE PROPER OFFSET PULLEY INSERT



Ultima Drives use 6 bolts to fasten the motor pulley to the pulley insert. Install these bolts using red Loctite and tighten to 18-22 ft lb torque. All Ultima Drives include the stock offset spacer. When using a stock offset spacer, always use the proper thickness shim between the pulley and the rotor. Failure to do so will result in improper torque on the outer portion of the motor pulley instead of the pulley insert.

The following spacers/inserts are available separately for wide tire applications.

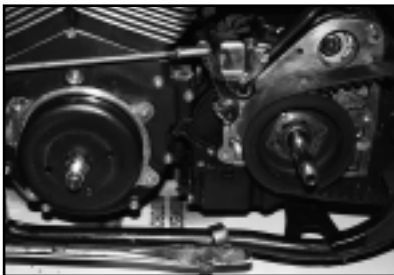
MWM # 58-606 .250" Offset	MWM # 58-608 .750" Offset	MWM # 58-611 1.5" Offset
MWM # 58-607 .500" Offset	MWM # 58-609 1.00" Offset	MWM # 58-612 1.75" Offset
	MWM # 58-610 1.25" Offset	MWM # 58-613 2.00" Offset

When use of a 1-1/2" to 2" offset is needed, you must purchase Midwest Part#**58-724** motor pulley nut.

III. INSTALLING THE MOTOR PLATE



Before installing the motor plate you must remove the inner primary race from the transmission mainshaft if it is present.

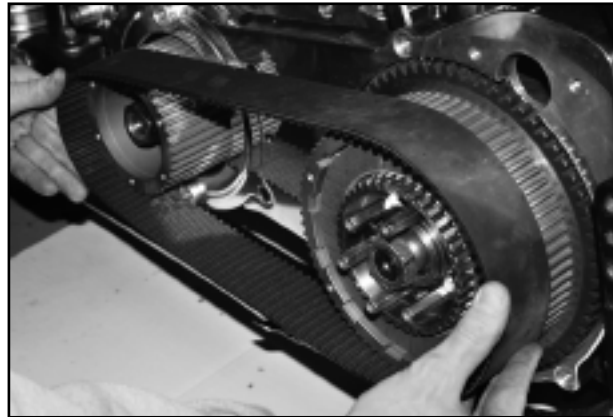


Install the motor plate and motor sub-plate without the rubber o-ring for the inner primary to engine. Align the motor plate to the engine and transmission then install the mounting bolts for the engine and trans snug only. You might need a dead blow or plastic hammer to seat the motor plate over the transmissions dowel pin. Torque all bolts to 18-22ft lb.

IV. INSTALLING PULLEYS AND BELT



Install the clutch basket assembly onto the transmission mainshaft. Apply red Loctite to the mainshaft nut and torque to 55-65 ft lb.

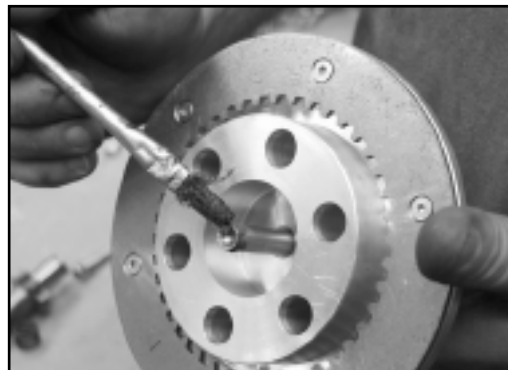
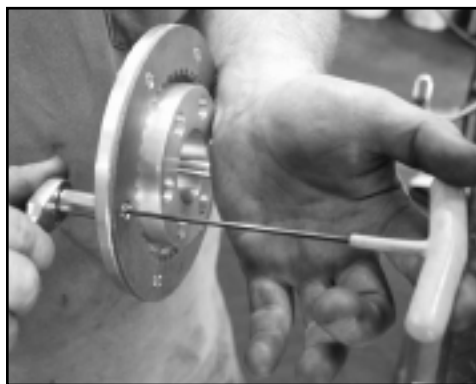
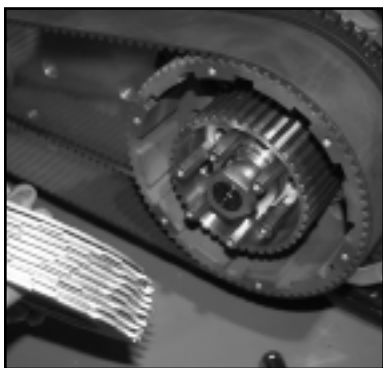


Ultima Belt Drives are not as sensitive as chain drives to pulley alignment as the clutch basket acts as a guide but proper alignment should be checked. To insure a completely dry running primary many people use a bead of clear RTV Silicone at each spline to insure no oil will travel between the shaft and spline.

Install the motor pulley nut using red Loctite and torque to mfg recommended specification.

Install the belt at this time. It can be tricky to align the belt teeth with some tension on the belt. Once you get the belt started you can lightly tap on it with a dead blow or plastic hammer, working around until the belt is fully installed.

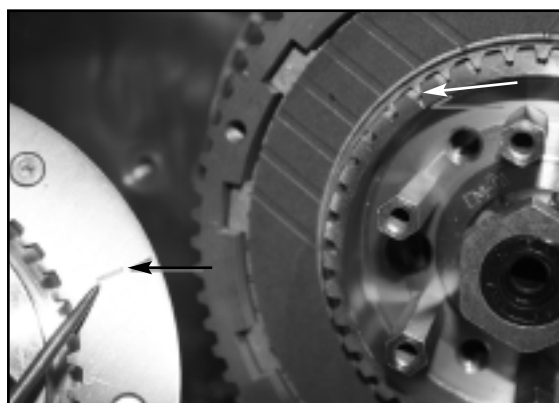
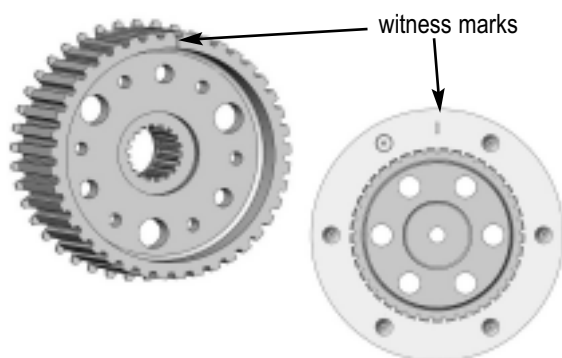
V. INSTALLING THE CLUTCH COMPONENTS



Ultima 2" belt drives utilize 8 of the old style 900cc sportster steel drive plates and 8 special size fiber plates designed to provide a very adjustable clutch package. When installing the clutch pack install the thick .119" steel plate first then alternate fiber/steel. The last plate you install should be fiber.

Check the pressure plate screws to ensure they are all tight and the heads of the bolts are sitting below the plate surface.

Install the clutch adjusting screw using a small amount of high temp grease or anti-sieze on the thread and on the clutch pushrod end. Don't get too much grease out there –Remember this is a DRY clutch.



Align the witness marks on the pressure plate and inner clutch hub as shown when installing pressure plate. This will insure clutch hub studs will be centered in the appropriate pressure plate holes.



NOTE: CENTER PUSHROD IS REQUIRED

The center clutch push rods (located in the transmission main shaft) may need to be changed depending on setup. Below is a list of available sizes.

<u>PART#</u>	<u>LENGTH</u>	<u>DESCRIPTION</u>
96-442	11.375"	1987-1989 5 speed
96-538	10.8125"	1990+ 5 speed
96-469	11.875"	1985+ 5 & 6 speed

After installing the pressure plate, install clutch springs w/supplied spring collars and narrow-headed 1/4-20 bolts. Install using blue Loctite. Spring collars should bottom on clutch hub studs. Torque to 120 in-lbs.

In higher horsepower applications, heavier springs are available.

Midwest Part#**96-249** (82lbs @ 1")

Midwest Part#**96-250** (98lbs @ 1")

VI. INSTALLING THE STARTER GEAR

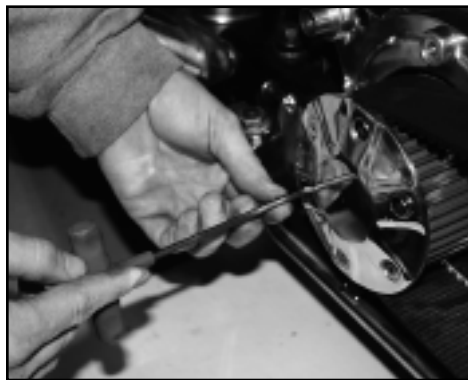


- 58-718** 1/4-20 x 2.75 (89'-93' **supplied**)
58-719 10-32 x 2.75 (94'-06' **available**)



Install your starter motor to the motor plate then install the starter drive gear assembly in the order shown using blue Loctite. The starter drive gear should be a minimum of .150" from the clutch basket starter ring gear once installed. **APPLY SOME HIGH TEMP GREASE OR ANTI-SIEZE TO THE STARTER END CAP BUSHING.** Apply upward pressure to end cap when torquing to 18-22ft lbs, always use blue Locktite on end cap bolts. Reapply grease to bushing every 6 months minimum - **DO NOT RUN DRY!**

VII. INSTALLING PULLEY CAP AND CLUTCH TRIM RING



Install motor pulley cap and clutch basket trim ring at this time using the supplied 1/4-20 bolts. Torque to 120-140 in-lbs w/blue Loctite.

VIII. ADJUSTING CLUTCH

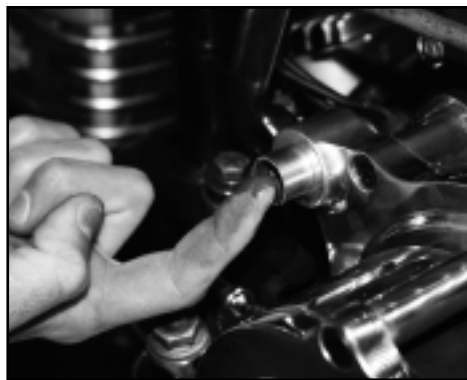


At this time you will adjust your clutch. Thread in the adjuster until it makes contact w/the clutch pushrod. Once it is lightly seated, back adjuster off 1/4 turn. Using an 11/16" wrench, tighten the adjuster locknut. Clutch cable adjustment can now be done leaving some end play at the lever.

IX. INSTALLING BELT COVER & SHIFTER ASSEMBLY



Install belt covers using the supplied spacers, hardware & blue loctite. Torque bolts to 18-22 ft lbs.



Before installing the shifter assembly we recommend lubricating the shifter bushing & shaft for smoother & quieter shifting operation. Install shifter, spacers & shims as shown in the picture.

X. FLOORBOARD CONSIDERATIONS

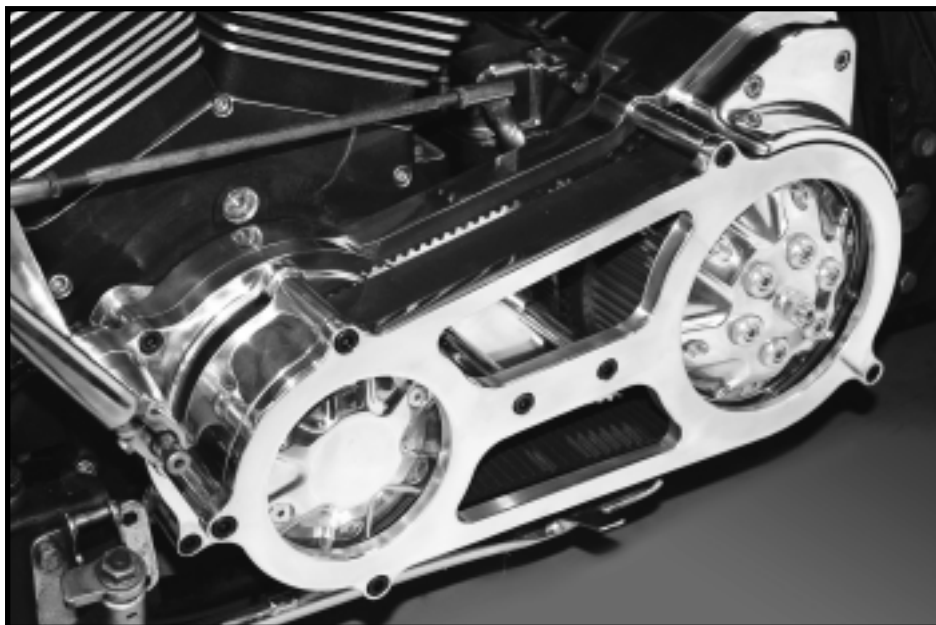


Ultima 2" Bagger Belt Drives are designed to work with stock floorboards. We recommend verifying there are no clearance issues w/your floorboards at this time. Shim/space as necessary.

XI. KICKSTAND CONSIDERATIONS



Check your kickstand clearance to the belt by pushing down on the belt then adding at least 1/2" of travel. Use MWM # 5-190 adjustable kickstand leg stop if needed. This is an important safety check and should be performed before initial startup.



Shown without the floorboards installed.