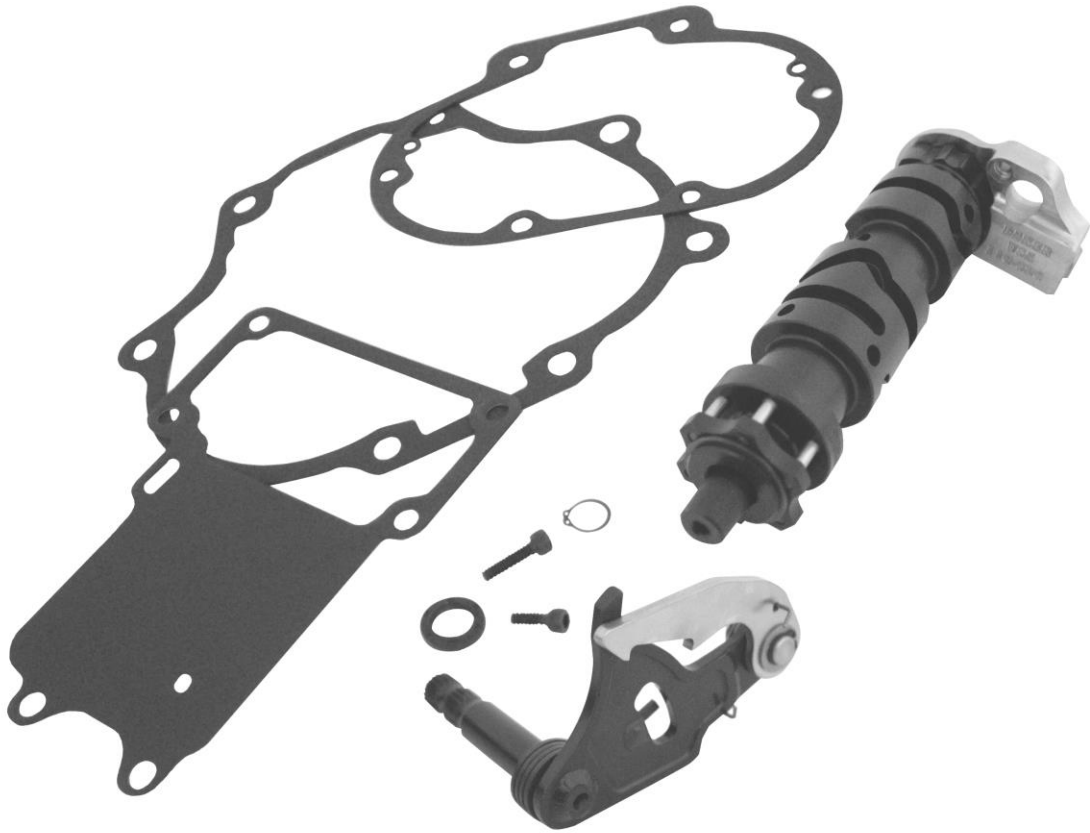


# BAKER CD6 SMOOTH SHIFT KIT



**PN 602-CD6** (Cruise Drive Smooth Shift Drum Kit)



## BAKER CD6 SMOOTH SHIFT KIT OVERVIEW

### FEATURES

- **Easier to find neutral** - Redundant neutral feature, and improved ratchet pawl geometry assist the rider in finding neutral the first time, every time.
- **Smoother, more positive shifting** - Smoother, positive shifting is achieved by incorporating advanced geometry in the fork pin groves, and the integration of a linear detent bearing on the right side mounting plate.
- **Reduced shift effort** - The fixed spindle drum design offers lower friction as the drum rotates, reducing the effort required by the rider to complete a shift.
- **Less shift clunk** – All of the CD6 design improvements are systemically engineered to achieve a precise mechanical choreography that is inherently silent.
- **Prevents miss shifts** - The ratchet pawl design incorporates an anti-overshift feature for both up and downshifts that prevent the rider from skipping over a gear.
- **Easy Installation** - Just remove the stock gearset from the case and swap out the stock shift drum and pawl for the BAKER Smooth Shift Kit Drum & Ratchet Pawl. There is no need to disassemble the stock gearset from the bearing door.
- **No adjustments needed** for the ratchet pawl or shift drum, direct bolt in design. Re-uses stock pawl centering pin, shift forks and fork rods.
- **High Durability** – 4140 steel ratchet pawl shaft has machined splines for higher strength and less chance of stripping. Precision TIG welded shaft to ratchet pawl body combined with improved mechanical press fit design increase long term durability.

### FITMENT

- 2006 Dyna Models
- 2007-Later Big Twin Models (all)

### TOOLS REQUIRED

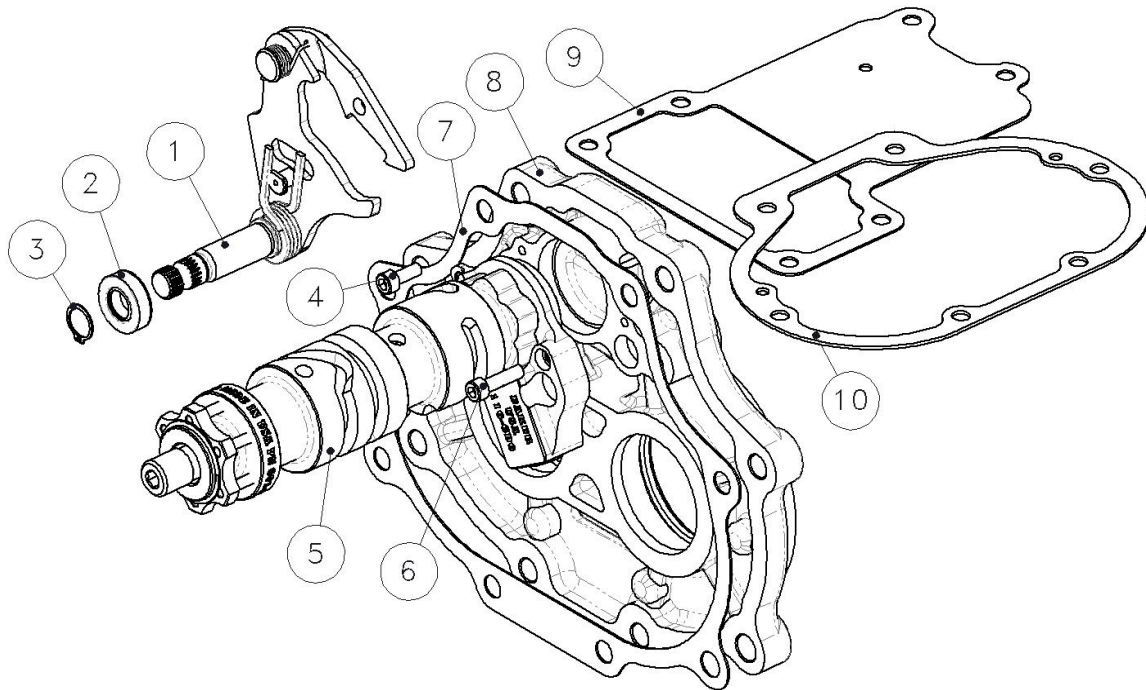
- Torque Wrench (reads both in. lbs. and ft. lbs.)
- Common Hand Tools (allen wrenches, sockets, snap ring pliers, etc.)
- Transmission fluid and primary fluid.
- Primary Gaskets
- Inner Race Puller / Install Tool (BAKER PN TOOLB-56 or equivalent)
- H-D Factory Service Manual

# **BAKER CD6 SMOOTH SHIFT KIT**

## **TABLE OF CONTENTS:**

- 2) Overview
- 3) Table Of Contents
- 4) Exploded View and Legend
- 5) Prep and Installation
- 6) Installation Continued
- 7) Terms
- 8) Disclaimer

## BAKER CD6 SMOOTH SHIFT KIT DETAIL VIEW



**FIGURE 1**

<b>ITEM</b>	<b>QTY</b>	<b>P/N</b>	<b>DESCRIPTION</b>
1	1	555-06A	Shifter Pawl Assembly
2	1	37101-84B	Seal, Shifter Pawl
3	1	68010	Snap Ring, 7/16" External
4	1	10C50KCS	Fastener, 10-24 x .500" SHCS
5	1	601-CD6-A	CD6, 6 Pin Shift System
6	1	10C75KCS	Fastener, 10-24 x .750" SHCS
7	1	35654-06-F	Gasket, Bearing Door
8	**	Visual Aid	Stock Door Shown For Visual Only
9	1	34917-06-F	Gasket, Top Cover
10	1	36805-06-F	Gasket, Side Cover

## BAKER CD6 SMOOTH SHIFT KIT

### PREPARATION:

- 1) Remove the exhaust system, primary, clutch and transmission gerset from the motorcycle chassis per your H-D factory service manual. Figure 2.
- 2) Remove the stock shift forks, rods, shift system and detent spring assembly. Figure 3.



**THOROUGHLY CLEAN THE SHIFT DRUM MOUNTING THREADED HOLES ON THE BEARING DOOR AND TRANSMISSION CASE. USE BRAKE CLEANER OR EQUIVALENT. BLOW OUT DEBRIS / CLEANER USING SHOP AIR. REMEMBER SAFETY FIRST; WEAR EYE PROTECTION.**

- 3) Clean the supplied new 10-24 x .500" and 10-24 x .750" fasteners for installing the new shift system. Use brake cleaner or equivalent.
- 4) Remove the stock shifter pawl assembly from the transmission case and shifter pawl seal. Keep the washer for step 6 of the installation.
- 5) Clean all fasteners removed from the transmission case during gerset removal and gasket surfaces.

### INSTALLATION:

- 1) Install the new shift system on the bearing door using the supplied 10-24 x .500" and 10-24 x .750" SHCS (socket head cap screw) with Red Loctite<sup>®</sup>. Figure 4.
- 2) Install the 10-24 X .750" long SHCS in the location marked in figure 4 with the white arrow, thick side of the new shift system assembly.
- 3) Torque the two 10-24 fasteners to 57-63in-lbs (6.4-7.1Nm)
- 4) Re-install the factory shift forks and rods referencing your H-D factory service manual.



FIGURE 2; STOCK SHIFT SYSTEM



FIGURE 3; STOCK SYSTEM REMOVED



FIGURE 4; INSTALLING SYSTEM

**(CONTINUED ON NEXT PAGE)**

## BAKER CD6 SMOOTH SHIFT KIT

- 5) Now that your new BAKER smooth shift system is installed you can move onto installing the supplied shifter pawl assembly.
- 6) Install the new, supplied shifter pawl seal, shifter pawl assembly and snap ring into the transmission case. You will be reusing the stock factory washer removed in step 4 of prep. Reference Figure 6



**MAKE SURE THAT THE SNAP RING IS FULLY SEATED ON THE NEW PAWL ASSEMBLY.**

- 7) Reinstall your transmission gearset assembly using the supplied new gaskets following your H-D factory service manual.



**DURING THE INSTALLATION OF THE GEARSET YOU WILL HAVE TO SLIGHTLY HOLD UP ON THE RATCHET PAWL ARM TO GET THE SHIFT DRUM TO SLIDE PAST. PULL UP JUST ENOUGH TO GET THE DRUM TO SLIDE BY (FIGURE 7), DO NOT OVER STRETCH THE SPRING. EXTENDING THE ARM TOO FAR WILL BEND THE SPRING AND CAUSE THE PAWL ARM NOT TO FUNCTION / SHIFT THE DRUM PROPERLY.**

- 8) Re-install your exhaust and primary components per your H-D factory service manual. Installation is complete; make sure to add the proper fluids following your H-D factory service manual and check fluid levels after initial test ride.



FIGURE 5; NEW SYSTEM INSTALLED



FIGURE 6; INSTALLING NEW SHIFTER PAWL



FIGURE 7; PULL PAWL ARM OVER SHIFT DRUM DURING INSTALLATION

# BAKER CD6 SMOOTH SHIFT KIT

## **SPECIAL ORDERS**

A minimum \$500 deposit is required with all special orders. Special orders include unique case finishes, unique side door requests (i.e.; wrinkle black door or no logo).

## **ALL OTHER ORDERS**

Orders can be pre-paid using VISA, MasterCard or American Express.

Prices shown are F.O.B. Haslett, MI. BAKER™ provides free UPS ground shipping on all retail orders for complete transmissions or transmission kit. UPS air shipment is available upon request. Customer is responsible for air shipment premiums.

## **LIMITED WARRANTY**

BAKER™ Inc. transmission accessories are guaranteed to the original purchaser to be free of manufacturing defects in materials and workmanship for a period of 2 years from the date of purchase or up to 24,000 miles - whichever is sooner.

If the product is found by BAKER™ to be defective, such products will, at the option of BAKER™, be replaced or repaired at cost to BAKER™.

In the event warranty service is required, the original purchaser must call or write BAKER™ immediately with the problem. If it is deemed necessary for BAKER™ to make an evaluation to determine whether the transmission assembly or transmission kit is defective, the entire transmission assembly, whether originally purchased as an assembly or kit, must be properly packaged and returned prepaid to BAKER™ with a copy of the original invoice of purchase. If after an evaluation has been made by BAKER™ and a defect in materials and/or workmanship is found, BAKER™ will, at BAKER™ option, repair or replace the defective part of the assembly. Warranty card must be returned within 45 days of purchase to be valid.

## **ADDITIONAL WARRANTY PROVISIONS**

This limited warranty does not cover labor or other costs or expenses incidental to the repair and or replacement of BAKER™ products. This warranty does not apply if one or more of the following situations is judged by BAKER™ to be relevant: improper installation, accident, modification (including but not limited to use of unauthorized parts), racing, high performance application, mishandling, misapplication, neglect (including but not limited to improper maintenance), or improper repair.

BAKER™ shall not be liable for any consequential or incidental damages arising out of or in connection with a BAKER™ transmission assembly, transmission kit, swingarm, fender, component or part. Consequential damages shall include without limitation, loss of use, income or profit, or losses sustained as the result of injury (including death) to any person or loss of or damage to property.

BAKER™ transmissions, transmission kits, and Wide Tire Kits are designed exclusively for use in Harley-Davidson® motorcycles. BAKER™ shall have no warranty or liability obligation if a BAKER™ part is used in any other application.

If it is determined that a BAKER™ transmission assembly has been disassembled during the warranty period for any reason, this limited warranty will no longer apply.

## **BAKER CD6 SMOOTH SHIFT KIT**

The words Harley Davidson, and H-D are registered trademarks and are for reference only. Use of H-D model designations and part numbers are for reference only. BAKER Drivetrain has no association with, and makes no claim against, these words, trademarks, or companies.

It is the sole responsibility of the user to determine the suitability of this product for his or her use, and the user shall assume all legal, personal injury risk and liability and all other as well as all other obligations, duties and risks associated therewith.

### **CUSTOMER SUPPORT**

For any installation or service questions, please contact our BAKER technical department toll free: 1-517-339-3835.

