BAKER HYDRAULIC SIDE COVERS FOR
FACTORY 6-SPEED

INSTALLATION INSTRUCTIONS

BAKER
DRIVETRAIN
Wielding American power to the pavement for all
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FITMENT

• CD6, Cruise Drive Models (P/N DD7-106C-KIT)
  o 2006-2017 Dyna®
  o 2007-2017 Softail®
  o 2007-2016 Touring

• M8, Milwaukee-Eight® Models (P/N M8-106C-KIT)
  o 2018-Later Softail®
  o 2017-Later Touring

INCLUDED PARTS FOR P/N M8-106C-KIT

1x - Center rod, clutch release, P/N 37088-90
1x - Adjuster screw, clutch, P/N 9P235-56
1x - Clutch release plate, P/N 37903-90
1x - Jam nut, 7/16-20, P/N 36258
1x - Retaining ring, 1-7/8", P/N 68065
2x - Nut, mainshaft, countershaft, P/N 7340BD
1x - Hydraulic adapter line, P/N 434-RV17
1x - Banjo bolt, 3/8-24, P/N 41747-82A
2x - Washer, banjo bolt, P/N 41731-01
## BAKER CD6 HYDRAULIC SIDE COVER

**ITEM** | **QTY** | **P/N** | **DESCRIPTION**
--- | --- | --- | ---
1 | 1 | 37084-84 | Clutch Actuator Rod Assembly (2.623” Overall)
2 | 2 | BD411-56 | Thrust Washer, Heavy Duty
3 | 1 | FNT-1024 | Throwout Bearing, Heavy Duty
4 | 1 | BD410-56 | Washer, Spacer, Brass, Throwout Bearing
5 | 1 | 10705-01149 | C-Clip, Retaining Ring, Actuator Rod
6 | 2 | 66855 | Hydraulic Piston O-Ring
7 | 1 | 124-56L | Hydraulic Piston, 1-1/2” Diameter, LSD
8 | 1 | 36805-06-F | Gasket, Side Cover
9 | 1 | DD7-106C | CD6 Hydraulic Side Cover, 1-1/2” Bore
10 | 1 | 94-4504 | Bleeder Valve (1/4-28 Thread)
11 | 6 | 6099SS | Washer, Stainless Steel
12 | 6 | 73463 | 1/4-20 X 1-1/4” 18-8 S.S. SHCS

**FIGURE 1 | CD6 HYDRAULIC SIDE COVER**
<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>P/N</th>
<th>DESCRIPTION</th>
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<tr>
<td>1</td>
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<td>37084-84L</td>
<td>Clutch Actuator Rod Assembly (2.815&quot; Overall)</td>
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<tr>
<td>2</td>
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<td>TWC411</td>
<td>Thrust Washer</td>
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<td>TC411</td>
<td>Throwout Bearing</td>
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<td>10705-01149</td>
<td>C-Clip, Retaining Ring, Actuator Rod</td>
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<td>5</td>
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<td>128-6L</td>
<td>Hydraulic Piston, 28MM Diameter</td>
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<td>2</td>
<td>9262K269</td>
<td>Hydraulic Piston O-Ring, 3 x 22MM</td>
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<td>7</td>
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<td>9435K78</td>
<td>Compression Spring, 302 Stainless</td>
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<td>8</td>
<td>1</td>
<td>36805-06-F</td>
<td>Gasket, Side Cover</td>
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<td>9</td>
<td>1</td>
<td>M8-106C</td>
<td>M8 Hydraulic Side Cover, 28MM Bore</td>
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<td>10</td>
<td>1</td>
<td>45-9403</td>
<td>Bleeder Valve (5/16-24 Thread)</td>
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<td>11</td>
<td>6</td>
<td>6099SS</td>
<td>Washer, Stainless Steel</td>
</tr>
<tr>
<td>12</td>
<td>6</td>
<td>73463</td>
<td>1/4-20 X 1-1/4” 18-8 S.S. SHCS</td>
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REQUIRED PARTS, TOOLS, & REFERENCE MATERIALS

- Factory Service Manual for your year and model motorcycle
- Common hand tools (allen wrenches, sockets, retaining ring pliers, etc.)
- Torque wrenches, 3/8" & 1/2" drive
- Red & blue thread lock
- Brake bleeder pump if available
- Transmission fluid, 28-32 oz.
  o BAKER recommends Spectro Heavy Duty Platinum 6-Speed Transmission Oil; P/N BD-75140-32
- Hydraulic brake fluid for your make and model
  o 2006-07 Models – DOT 5
  o 2008-Later Models – DOT 4
  o See brake fluid compatibility chart

ADDITIONAL PARTS FOR NON-M8 MODELS

All BAKER hydraulic actuators are designed to use mechanical ball and ramp components for the center rod that goes through the transmission mainshaft, as well as the release plate, adjuster screw, jam nut and retaining ring that are in the clutch basket. The BAKER hydraulic feed port is designed to work with aftermarket style banjo fittings and bolts and is not compatible with the CVO™ style straight entry, formed end hydraulic line. As such, you may need to purchase a few additional parts, listed below.

2013 - 2017 ALL NON-M8 MODELS (HYDRAULIC PISTON) REQUIRE:
- Hydraulic line adapter with fitting (BAKER P/N 432-RV07-A)
  o Includes 1x banjo bolt and 2x banjo washers

2006 - 2012 CD6 MODELS (MECHANICAL BALL & RAMP) REQUIRE:
- 11/16" bore hydraulic clutch lever (master cylinder) assembly
- AN-3 hydraulic line for your make and model
- 2x 3/8"-24 banjo bolt
- 2x 10mm banjo fitting
- 4x banjo washers

2006 - 2012 CVO™ MODELS (HYDRAULIC PISTON) REQUIRE:
- AN-3 hydraulic line for your make and model
- 1x 3/8"-24 banjo bolt (re-use 1 already on bike)
- 2x 10mm banjo fitting
- 4x banjo fitting washers
- Clutch release pushrod (P/N 37092-06)
- Adjuster screw (P/N 37090-98A)
- Jam nut (P/N 7848W)
- Release plate (P/N 37903-90)
- Retaining ring, internal (P/N 37909-90)
**DISSASSEMBLY**

1. Securely support your motorcycle on a bike lift or jack and drain the transmission fluid. Refer to your Factory Service Manual for the location of your drain plug.

2. Depending on the style of exhaust that you have on your motorcycle, the exhaust may need to be removed at this time to allow access to the transmission side cover.

3. If you have a mechanical ball and ramp style side cover, remove the clutch cable and clutch lever (master cylinder) at this time. If you have a 2006-2012 CVO™ model, remove only the hydraulic line from the clutch lever (master cylinder) at this time. You will be replacing these in a later step.

4. Unbolt the side cover from the transmission. Remove the stock side cover, as well as the factory clutch actuator rod, and set aside.

5. Remove the derby cover and back off the jam nut for the clutch adjustment. If you have a CVO™ model, remove the clutch rod and snap ring at this time.

6. Wipe down the gasket surface of the bearing door and inspect to make sure it is free of residual oil, old gasket material and debris.

**MILWAUKEE-EIGHT® MODELS ONLY**

1. Remove the mainshaft and countershaft retaining nuts on the end of the shafts. Hold the rear brake or shift the bike into gear to keep the transmission from spinning.

2. Thoroughly clean the threads on both shafts and on the supplied retaining nuts. Use a rag and brake cleaner, lacquer thinner, or equivalent.

3. Install the supplied mainshaft and countershaft retaining nuts with red thread lock. Install the nuts so that the chamfer faces outward (see figure 3).

4. Torque both retaining nuts to 75-85 ft-lb. Hold the rear brake or shift the bike into gear to keep the transmission from spinning.

**INSTALLATION**

1. Install the supplied side cover gasket on the bearing door. Place the provided clutch actuator rod assembly into the hole in the end of the mainshaft on the right side of the bike.

2. Remove the hydraulic piston from the side cover. Tip – Place the side cover on a towel or rag with the back side facing down. Use the light touch of an air blow gun in the hydraulic feed port to push the piston out of its bore and onto the towel/rag.

3. Bathe the piston in brake fluid, making sure the O-rings are fully coated. You must use the correct type of brake fluid for your make and model (see compatibility chart on page 3).

4. Double check that the inside of the side cover, especially the hydraulic bore, is free of dirt and debris. Clean with shop air or brake cleaner/lacquer thinner if necessary.
5. Coat the inside walls of the hydraulic bore with the same brake fluid that you used to lubricate the O-rings. Gently slide the piston back into the side cover until it bottoms out. Take care to not force the piston into place – you don’t want to damage the O-rings on the edge of the hydraulic bore.

**THESE EXTRA LUBRICATION STEPS ARE NECESSARY FOR THE PARTS TO FUNCTION AS DESIGNED**

6. Place the side cover onto the bearing door using the 3/16” dowels for proper positioning.
7. Using the provided fasteners, torque the side cover bolts to 130 in-lb using blue thread lock. Refer to the proper torque sequence to the right (figure 4).
8. Route the hydraulic line to the side cover, making sure there are no kinks. Torque the 3/8”-24 banjo bolt to 17-22 ft-lb. Note: All ball and ramp & 2006-2012 CVO™ models require a new hydraulic line. 2013-2017 non M8 models will require a hydraulic line adapter, P/N 432-RV07-A.

**TAKE THE NECESSARY TIME AND PROPER PRECAUTIONS TO ROUTE THE HYDRAULIC LINE AWAY FROM ANY MOVING PARTS AND EXHAUST PIPES THAT COULD DAMAGE THE LINE IN ANY WAY. MAKE SURE THAT YOU ARE ABLE MOVE THE FRONT END THROUGH ITS FULL RANGE OF MOTION LEFT TO RIGHT WITHOUT BINDING, KINKING OR PINCHING THE HYDRAULIC LINE. FAILURE TO DO SO COULD RESULT IN PART FAILURE OR PERSONAL INJURY.**

9. If you have converted from a mechanical to a hydraulic system, install the clutch master cylinder and the banjo bolt with washers.
10. Bleed the hydraulic clutch system. Refer to the next page for detailed instructions.

**FINISH LINE**

1. Fill the transmission with 32 oz. of transmission fluid. Re-install the exhaust. Double check that all fasteners are tight on the motorcycle, any ancillary parts that you removed to perform this installation are back in their intended place on the motorcycle, and that your hydraulic clutch fluid line is secured to the motorcycle frame.
2. Once a short maiden voyage has been made around the block or down the road, take the time to double check all fasteners and hydraulic fittings for tightness. Make sure that you have no leaks around the side cover or on any part of the hydraulic clutch system. With the bike securely on the kickstand and the transmission warmed up, double check the level of the transmission fluid. Drain off any excess fluid if the transmission is overly full.
Baker Drivetrain strongly recommends that a power bleeder system be utilized, whether that is a hand operated pump or pneumatic, to bleed the hydraulic clutch system on your motorcycle. It is the most effective and only surefire way to ensure that all of the air bubbles are purged from the system. If you do not own a power bleeder, the following set of instructions will enable you to bleed your clutch system. Great care and attention to detail must be used in following these steps to ensure a properly bled and functioning system and your safety as a rider.

1. Before you can bleed the hydraulic clutch system, you must adjust the free play and rod length at the clutch. Loosen the bleeder valve on the side cover. Using an Allen wrench, run the adjuster bolt (center of the clutch) inboard until you can feel the piston bottom out in the side cover. You will also know that you have hit the bottom point as the clutch will begin the move. At the point where it is fully bottomed out, back the adjuster off 1/2 to 1 full turn. The closer to the 1 full turn that you adjust it to, the more reserve you will have in the lever before the motorcycle begins to move; the full engagement of the clutch will be proportionally closer to the end of the sweep of the lever. This amount can be adjusted to suit rider comfort and riding style. Tighten the jam nut to 120 in-lb while holding the adjuster screw from rotating.

2. Snug the bleeder valve and place a clear tube over the bleeder valve on the side cover. Run the tube into a clean container.

3. Stand the motorcycle upright so that the master cylinder on the clutch lever is level. Remove the master cylinder lid and gasket.

4. Add new brake fluid (per your make and model) to the master cylinder reservoir until the fluid level is at or below the full line. DO NOT OVERFILL THE MASTER CYLINDER.

5. Squeeze the lever 5-10 times. Open the bleeder valve on the side cover and clutch fluid should flow through the tubing. If not, keep pumping the lever as it may take a few minutes for the fluid to make it all of the way through the line and cover. Once fluid begins to flow through the clear tube, close the bleeder valve. It may be necessary to add more fluid at this time, even before any fluid begins to flow out of the clear tubing.

6. Squeeze the clutch lever and hold it against the handlebar to build up hydraulic pressure. Open the bleeder valve on the side cover about 1/2 turn. Clutch fluid will flow through the clear tubing. Close the bleeder when the clutch lever has traveled about 50-75% of its full travel. Wait for the clutch lever to return to its released position. Repeat this step until all air bubbles have been forced out of the system and there are no bubbles in the fluid within the clear tubing.

7. When the system has been fully bled and the clutch lever no longer feels mushy, fully tighten the bleeder valve on the side cover to 80 in-lb. It may be necessary to fill the fluid in the reservoir to the full line at this time. DO NOT OVERFILL THE MASTER CYLINDER.

8. Place the cover back on the master cylinder and tighten down according to the manufacturer’s specifications. Check to make sure that the hydraulic line is tight at the clutch lever and the side cover at this time.

9. Install the primary derby cover, referring to the Factory Service Manual for the proper torque sequence.
ORDERS
Orders can be pre-paid using VISA, MasterCard, American Express, and Discover or via wire transfer ($30 wire transfer fee applies). All orders not pre-paid will be sent C.O.D. certified check or money order only unless pre-approved for company check acceptance. Any orders from outside the USA must be pre-paid in US funds via wire transfer ($30 transfer fee applies). Prices shown are F.O.B. Haslett, MI. BAKER™ ships via UPS Ground or USPS Parcel Post for all orders. UPS air shipment or USPS Priority/Express services are available upon request. Customer is responsible for all shipping charges unless otherwise arranged at the time of sale.

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

LIMITED WARRANTY
BAKER™ transmission assemblies, transmission kits, primaries, and oil pans are guaranteed to the original purchaser to be free of manufacturing defects in materials and workmanship for a period of 5 years from the date of purchase or up to 50,000 miles. BAKER™ clutches, kicker cover kits, belt drives, F6F kit, reverse systems, covers and 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. Electrical components are guaranteed for 90 days, chrome finish is guaranteed for 6 months.

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.

BAKER Warranty card must be returned within 45 days of purchase to be valid.

RETURNS AND EXCHANGES
Any merchandise returned for any reason (exchange, credit or modification) must be accompanied by a Returned Goods Authorization (RGA) number or it will be refused. Call BAKER™ to obtain this number prior to returning goods for any reason. There is a 15% restocking fee for all returned items. BAKER™ is not liable for any shipping charges or damages incurred during shipping. Shipments of returned goods must be insured by the customer.

ADDITIONAL WARRANTY PROVISIONS
NOTE: 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 accessories are designed exclusively for use in American V-Twin 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 unless you were instructed to do so by a BAKER Drivetrain technician for diagnostic purposes.

DISCLAIMER
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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.