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INSTRUCTION FOR JIMS® 4/6-SPEED PRECISION CUT TRANSMISSIONS , SUPER KITS, & 4/5 CASE

INSTRUCTION SHEETS FOR PART NUMBERS 8028C6, 8030C6, 8101, 8096, & 8096P

All 4/6-Speed transmissions come with close ratio 1st gear, JIMS® chrome top and side covers, chrome hardware and JIMS® 7075T billet chrome trapdoors.

WARNING: Read all instruction before performing work!

Application Requirements

For use on FX & FL style frames, 1970 - Early 1984 only

1. Dry clutch as used on 4-speed tapered I.D. clutch hubs.
2. Chain final drive *(Transmission to rear wheel)*
3. 5-Speed style clutch cable
4. Electric start only *(No provisions for kickers)*
5. Designed to use OEM style forward controls and mid controls available through aftermarket.
6. May be used with either primary belt or primary chain drive

Clean-Cut 4/6 Speed

Application/ Year	Part No.	Case
FX & FL 1970 early '84	**8028C6**	Plain Aluminum
FX & FL 1970 early '84	**8030C6**	Polished Aluminum
FX & FL 1970 early '84	**8101**	Super kit (No Case)

4/5 Speed Transmission Case

Application/ Year	Part No.	Case
FX & FL 1970 early '84	**8096**	Plain Aluminum
FX & FL 1970 early '84	**8096P**	Polished Aluminum

Required (but not included) components for complete transmissions & Super kit	
37088-79	Center clutch pushrod (H-D®)
38607-87A	Clutch cable (H-D®) 87 to Present BT
45031-65	Clutch cable pivot pin (H-D®)
2226	Clutch release bearing kit (JIMS®)
74420-94*	Electronic Speedo Sensor
Aftermarket*	Speedo with built in calibrator
Aftermarket*	Forward controls (H-D®) or equivalent)
12018	Inner Primary Seal (H-D®)
37090-79	Left clutch pushrod (H.D®)
35216-36	Lock washer, MDG (10 pk JIMS®)
35211-36	Nut, main drive gear (H-D®)
37089-79	Right clutch pushrod (H-D®)
33715-85AC	Shifter lever (JIMS®)
33337-83*	Sprocket 23T or larger (Aftermarket)
Aftermarket*	Starter bracket (Fabricated)
31479-83*	Starter bracket, 4/5 only
9037	Primary Bearing (H-D®)

***Optional, may be used with aftermarket equivalent**

JIMS 6-SPEED IN A 4-SPEED STYLE CASE

JIMS® 4/6-speed transmission will deliver increased gas mileage, prolonged engine life, smoother shifting, increased torque, freed horsepower, and smoother cruising speeds while still using a 4-speed style case.

JIMS® 4/6-speed transmissions are assembled by JIMS® with JIMS® shafts and gears encased in a JIMS® case. All JIMS® transmissions are sealed with JIMS® gaskets and seals.

JIMS® **Precision Cut** gears feature back cut shift dogs with lead-in ramping on mating gears for smooth shifting. Each gear in this kit (Close ratio first gear, 2.94) is precision machined from forged aerospace material and is matched to their corresponding gear.

Note: See page 3 for important case information

Additional required (but not included) components for Super kit 8101 only	
2371CK*	Trans side cover kit, mechanical (JIMS®)
36801-87K*	Gasket, Side cover (10pk) (JIMS®)
8999CK*	Top cover & fasteners (JIMS®)
8096,8096P*	Transmission Housing (JIMS®)

***Optional, may be used with aftermarket equivalent**

CAUTION: WEAR SAFETY GLASSES. EXCESSIVE FORCE MAY DAMAGE PARTS! ,SEE JIMS® CATALOG FOR OVER 100 OTHER TOP QUALITY PROFESSIONAL TOOLS. THE LAST TOOLS YOU WILL EVER NEED TO BUY.

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TRANSMISSION INSTALLATION INSTRUCTIONS

WARNING: ALWAYS REMOVE NEGATIVE CABLE FROM BATTERY BEFORE PERFORMING ANY WORK!

Pre-installation procedures (Complete Transmission Assembly)

Read all Instructions before performing any work

1. Unpack and inspect all parts for damage, or missing components. Immediately notify the JIMS® dealer you purchased this transmission from for appropriate actions. Use the parts list on page 11-14 of these instruction sheets for inventory reference. Use JIMS® tool No.1008-TS trans holder for performing pre-installation work.
2. Remove original transmission according to your Harley-Davidson® Service manual.
3. Clean and inspect all reusable parts and components, and replace parts as needed.
4. Check all parts for correct fitment before installing transmission.
5. Remove the side cover (No.2371C) from trans assembly. Lube and install three clutch pushrods (H-D®37089-79 right, H-D® No 37088-79 center, and H-D.® No.37090-79 left) inside main shaft, also attach clutch release bearing kit (JIMS® No2226) to right pushrod (No.37089-79). Attach clutch cable o-ring (No.11179) and clutch cable to side cover (No.2371C). Also connect end of clutch cable to coupler (No.34920-86) and attach to inner ramp inside side cover. Now you are ready to mount gasket (No.36801-87A) and side cover (No.2371C) to trans assembly. Lube and torque side cover screws to 10-12 ft-lbs.
6. (Optional) Install JIMS® No.74420-94 electronic speedo sensor into the trap door speedo hole. ***NOTE:*** *Early transmissions used a mechanical drive from the trans case to drive the speedo, while later 4-speed transmissions used a mechanical drive from the front wheel . JIMS® new 4/6-speed was designed to be used with JIMS® No.74420-94 electronic speedo sensor in conjunction with one of the many aftermarket electronic speedos (with a built in calibrator). If your speedometer does not have a built in calibrator, use JIMS No.8126.*
7. *(Optional)* If you decide not to use JIMS® electronic speedo sensor you must install JIMS® No.8042 speedo sensor hole block-off plate (included in kit with gasket and screw), or JIMS No.8102 billet block off plug kit or aftermarket equivalent.

Step- 1 Mount Transmission

With primary covers removed, align transmission-mounting studs with transmission plate mounting holes and anchor the transmission to the transmission mounting plate with nuts and washers. Tighten nuts enough to lock transmission in place. Do not tighten to proper torque. **CAUTION:** *Protect mounting stud threads while mounting. All JIMS® transmissions are shipped with a main shaft spline protector, this protector should be left in place until transmission is fully mounted and secured.*

Step- 2 Install main drive gear final drive sprocket

1. Place final drive sprocket No.33336-83 (H-D® ref.) on main drive gear with convex side of sprocket *(**Note:** must use 23 tooth or larger 1980-early 84 5-Speed sprocket)* facing outward with lock washer H-D® No.35216-36 and nut H-D® No. 35211-36. Sprocket available thru aftermarket.
2. Lock sprocket with chain and JIMS® tool no.2234, and tighten sprocket nut to 110-120 ft-lbs. of torque. Bend one tab on lock washer.
3. Install shifter arm, JIMS® No. 33715-85AC on to shifter spline shaft. Tighten shifter arm screw to 18-22 ft-lbs of torque. **NOTE:** *JIMS® suggest positioning the shifter arm slightly off center pointing up and forward. (11:55 on a clock)*

Step- 3 Assemble inner primary cover to engine/transmission

1. Replace old inner primary bearing and seal. Install new bearing (H-D® No.9037) and (H-D® No.12018) seal.

NOTE: *You must support the inner primary bearing bore as you install the new bearing and seal.*

2. Loosen transmission-mounting nuts. **NOTE:** *There must be enough play to position transmission, inner primary cover, and frame to prevent any binding.*
3. Align inner primary cover with transmission mounting studs and secure it with anchoring nuts and bolts to H-D® factory specs per H-D® manual.
4. Before continuing, check the clearance between inner primary cover, and the final drive sprocket with the chain on, it should be with 0.05" – 0.06". **NOTE:** *Some chains require more room and you may need to make clearance. Also check nut no.35211-36 to seal No.12018 for having at least .050" of clearance*
5. Tighten transmission to transmission mount plate. Torque to factory H-D® manual specs. **NOTE:** *Check No.8049 mounting stud, shim if needed to sit level on frame. (Shim between frame and 5th mount)*
6. Pre-assemble clutch hub and mount on main shaft. Check for clearance between clutch hub and inner primary cover, and relieve as necessary to maintain a clearance of .020" to .050". Finish up assembly of clutch, primary chain, adjuster, etc. per H-D® service manual.
7. Attach clutch cable to handle lever assembly using H-D® No.45031-65 clutch cable pivot pin. Clutch cable length may vary per risers or handlebars. Check clutch adjustment per H-D® manual for 1987 and later BT 5-speed models.
8. Use H-D® No.72405-98TN and No.72405-98BK connector and wiring for connecting neutral switch wiring to top of trans.
9. For ease of installation and cost, use front wheel drive units to drive Speedo or see your dealer for electronic Speedos. Some fabrication will be required.
10. **IMPORTANT!** Add approximately 20-24 oz. Of 80W-90 transmissions gear oil, Jims No. 1230, to transmission through filler hole. After running transmission, allow bike to sit for a few minutes, and double check oil level. Fill as needed. Change trans oil after 1st 500 miles of use and then change oil at normal H-D® service intervals.

Super Kit Pre-installation procedures

*We have included the following instructions for the installing JIMS® **No.8101** Super kit into JIMS® **No.8096**, or **8096P** transmission case. If using another manufacturers case, please read super kit note below. These instructions also apply to the disassembly and reassembly of JIMS® No.**8028C6**, **8030C6** and complete transmissions.*

SUPER KIT NOTE

Depending on the manufacturer of the case you are using, you will need to measure the diameter of the hole where the main drive gear bearing sits in the case. If you have a dimension of approximately 2.95" diameter then you will need to use the following in the main drive gear area.

A. 2.95" Main drive gear case bearing

8978- bearing, Main drive case (JIMS®)
11057K- Retaining ring, (10pk) (JIMS®)
805- Seal, Main drive case (JIMS®)
33334-79- Spacer, Main drive (JIMS®)

B. 3.345" Main drive gear bearing (8096 & 8096P Kits)

8996- Bearing, Main drive case (JIMS®)
11161- Retaining ring (JIMS®)
8089- Spacer, Main drive (JIMS®)
11165- Quad seal (JIMS®)
12067A- Seal, Main drive case (JIMS®)

JIMS® TRANSMISSION CASE NOTE

No.8096 & 8096P Pre-Assembly Procedures
5-Speed transmission installation

If you are building a 5-speed transmission using JIMS® 5-speed superkits No.8100 or an aftermarket equivalent you will not need to modify this case. However, you should always check for running clearances when mixing products from other manufacturers. Refer to the super kit note to the left for main drive gear differences. Refer to pages 12-14 for the listing of all parts associated with the 8096/8096P transmission case kit.

6-Speed Transmission Installation

If you are installing JIMS® 6-speed Super Kits No.8101 you will need to read and follow the entire instruction sheet No.8028C6. Please note that JIMS® 6-speed super kit No.8101 require case modifications for proper case to gear clearances.

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JIMS® SPECIAL TOOLS

#2234	Primary Drive Locking Tool
#94660-37A	Main shaft Sprocket Wrench
#2260	Big Twin Sprocket Locker
#35316-80	5-speed Transmission Main Drive
#2189	5-Speed Shaft Installer
#2362	Lock ring pliers
#1078	Door Bearing Remover / Installer

WARNING

(NOTE: Read all instructions before performing work)

Prior to installation of this kit, please read and follow the procedures and safety precautions to reduce the risk of personal injury. Refer to your bike's year and model H-D® Service Manual during installation of this kit. Read these instructions completely so you understand before performing any steps. Always disconnect battery cables to prevent injury. Your work place should be clean and well lit. Wear safety glasses and protective clothing when working around power tools and compressed air. Be careful with chemicals when cleaning parts. Protect your skin from solvents and use only in a well ventilated area. Degreasers are flammable and are a fire hazard. Just use common sense and exercise good judgment.

This kit is basically easy to install, but does require some special tools (See tool list).

Use a 5-speed Big Twin H-D® Service Manual and parts book for reference. If you are not sure about the procedures in these instructions, have a reputable H-D® repair shop perform those procedures for you.

INSTALLATION INSTRUCTIONS

Case Preparation / Gear set Removal

If Super kit is replacing or refreshing an existing 4/5-speed, refer to your early 5-speed H-D® Service Manual for removal of your 5-speed gear set.

The JIMS® 4/6-speed Super kit is designed to fit into JIMS® and other 4/5-speed transmission cases with some modifications. These modifications require that you remove case material in key clearance areas. Please read all instructions completely before attempting modifications.

Note: *these modifications will not limit your ability to use a 4/5-speed gear set in the future.*

CAUTION: Before grinding or filing (cover or remove all bearings and seals, and any motor or transmission parts in the area.)

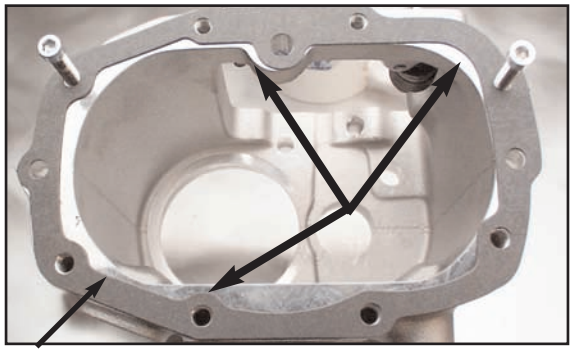
Check No.1 - Main shaft 6th gear clearance check (Note: *You must maintain a .060" of gear to case clearance at all times)*

Placed the side door gasket provided onto the dowel pins of the case. **Figures 1-4** shows the areas of concern that have to be checked.

If the material of the case around the 5/16 -18 screw hole is above the profile of the gasket, the material must be removed from the case.

To accomplish this, mark the area with a black felt pen and draw around the gasket as shown in **figure 2**. Remove the marked material 1/2" inward (perpendicular to gasket surface) from the gasket surface of the case. A die grinder

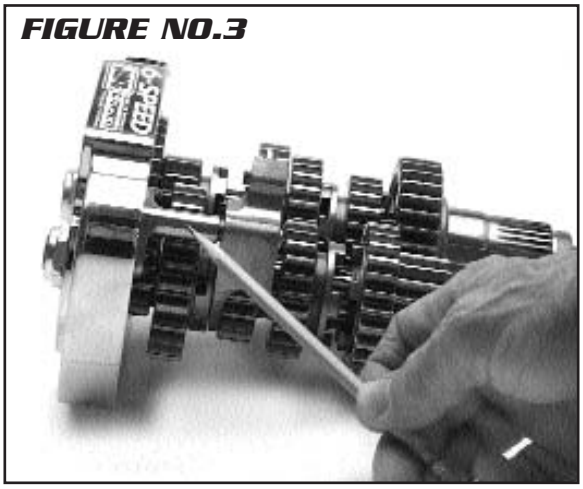
FIGURE NO.1



gasket

FIGURE NO.2

FIGURE NO.3



with a carbide bit for aluminum cutting can be used or a coarse flat file also works well.

Check No.2 - Auxiliary fork shaft bridge clearance

The auxiliary fork shaft bridge comes installed on the inside of the side door as shown in **figure 3**. The fork shaft bridge functions as the support for the 4th C/S gear fork shaft.

Again, with the gasket still in place on the dowels, notice the upper right hand corner of the gasket, and if any aluminum is present below the gasket, as shown in **figures 1 & 2**, remove the material inward (perpendicular to gasket surface) 1-3/8" from the gasket surface. A large, coarse round file works well.

Clearancing must also be done internally on the right rear mounting stud perch. ***(Note:** This is for the third gear main shaft clearance. You must maintain a .060" of gear to case clearance at all times)* Remove approximately a .625" radius perpendicular to the trap door.

See **figure 4 and 5.**

FIGURE NO.4

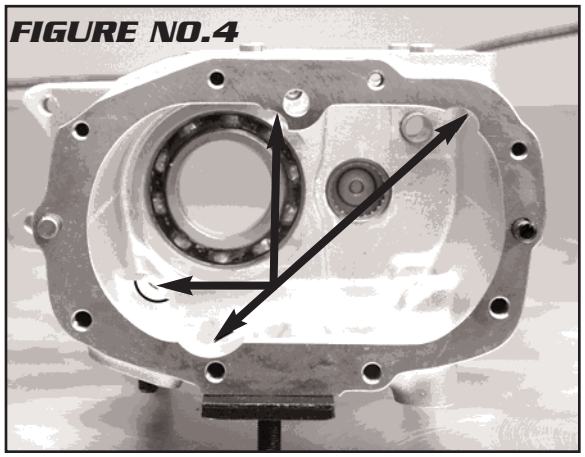
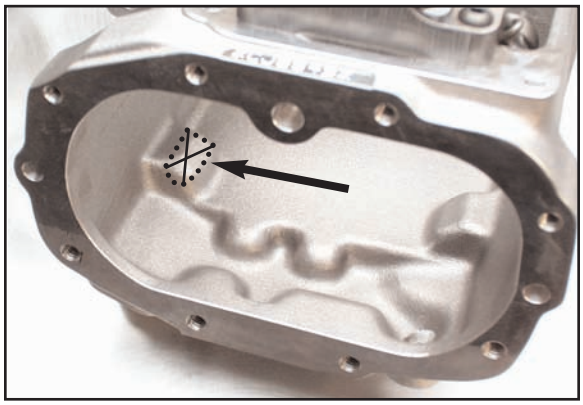


FIGURE NO.5



Note: *The stud hole will become partially exposed while clearancing the above area. Some contact with the steel stud may occur and it is important that you use a die grinder bit suitable for both aluminum and steel. All base studs have been coated with locking compound prior to installation to prevent oil bypassing through this exposed stud hole.*

Check No.3 - Right side pillow block clearance

The right side pillow block/roller detent assembly needs to be checked for proper fit to the case. The face of the pillow block to case clearance - see **figure 6**. Minimum clearance .010, maximum clearance is .060.

The pillow block / detent assembly must also fit squarely down over the dowels.

Also check to make sure that some gap

FIGURE NO.6

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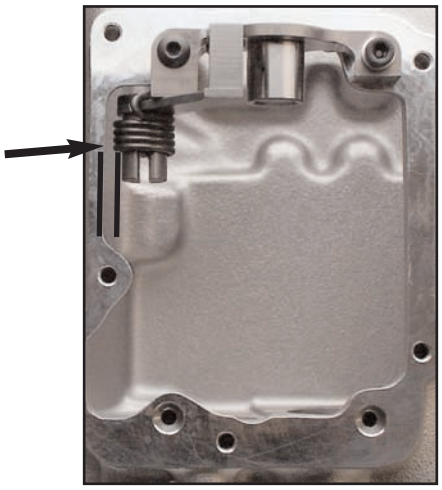
FIGURE NO.7



exists (approximately 1/16" - 1/8") between the torsion spring and the side of the case as shown in **figure 7**.

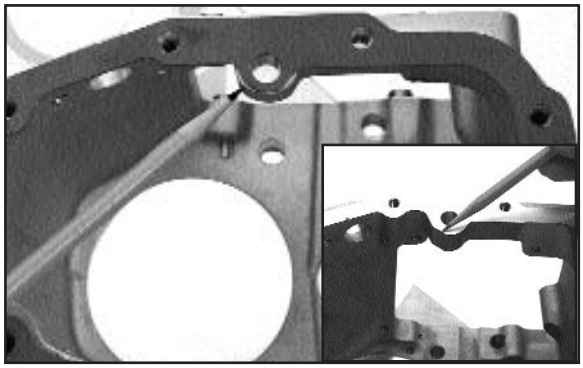
Check #4 - Primary fork rod boss clearance

The boss, in which the fork rod slides through, must be checked for clearance for the main shaft 6th gear. Once again, use the side door gasket for this check. **Figure 1 & 8** shows the area of concern. If the material of the case is outside the profile of the gasket, remove material below gaskets, 1/2" inward (perpendicular to gasket surface.) A large, coarse flat file works best

CAUTION: REMOVE ALL METAL FILINGS FROM INSIDE OF CASE BEFORE FINAL ASSEMBLY.

SET-UP AND CHECKS

FIGURE NO.8



GEAR SET INSTALLATION FOR PRECISION GEARS 6-SPEEDS

Note: *Apply assembly lube to all moving parts, from your seals to your bearings.*

(**Note:** *Some aftermarket 4/5 transmissions cases may use other year main drive gear bearings. See page 3 Super Kit note.*) NEVER install the bearing into the case by applying pressure to the inner race, you will destroy the bearing. Install the new retaining ring, JIMS® No.11067K with the bevel facing out. For a new case, install the main drive gear bearing with assembly lube and retaining ring as indicated. Install the main drive gear into the main drive gear bearing using the same JIMS® tool No.35316-80. Hang the side door gasket onto the case dowel pins and carefully push it down to seat against the case gasket surface.

Apply some spray lube JIMS® No.1226 or equivalent to the main drive gear seal and to the main shaft (on the portion adjacent to the splines).

CAUTION: MAKE SURE THE SEAL PROTECTOR IS STILL ON THE END OF THE MAIN SHAFT, BEFORE SLIDING THROUGH THE MAIN DRIVE GEAR.

(see **figure 15)** No. 82 or parts list on page 13.

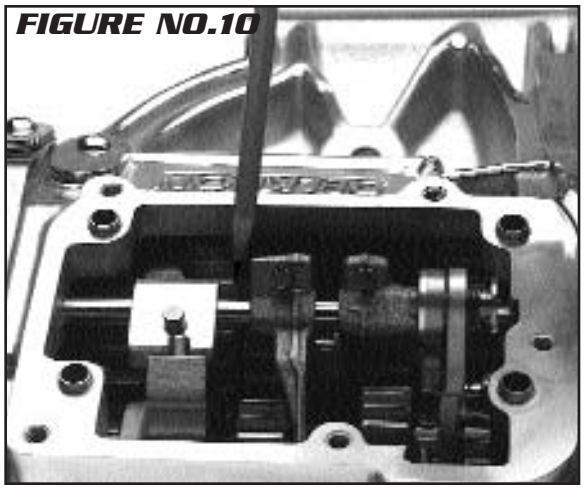
Install the gear set by sliding the main shaft through the main drive gear and slowly pushing the whole trap door / gear set assembly until the case dowel pins contact the dowel holes in the side door. A rubber hammer is helpful to tap the side door over the case dowel pins without risking any damage to the aluminum / chrome of the side door.

Install the four 5/16" SHCS (socket head cap screws, with lube on the threads) in the lower 4 screw holes and torque them to 13-16 ft-lbs. Install the two 1/4" SHCS in the screw holes above each dowel and torque them to 7-9 ft-lbs.

Shift Fork Installation

Figure 13 details the names of the 4 shift forks that are provided with this kit. See **Page 10** details where these forks belong on the gear set.

FIGURE NO.10



The 3rd C/S, 2nd M/S, and 1st M/S forks will ride on the primary fork rod (like 5-speed). The 4th C/S fork rides on the auxiliary shaft that will be pushed through the door.

First, install the 1st M/S fork. You must slide the 1st gear away from the door and engage the dogs of the adjacent gear (4th) to allow room for the fork to slide, see **Figure 10**.

Next, install the 4th C/S fork.

Install the 3rd C/S and 2nd M/S forks in the positions specified. Slide the primary fork rod through the 1st M/S fork, 3rd C/S fork, and 2nd M/S fork.

Insert shift fork shaft No. 8075, with a small amount of lube No.1226 on small end of shaft only, through trap door and into shift fork No. 8069A C/S 4th fork.

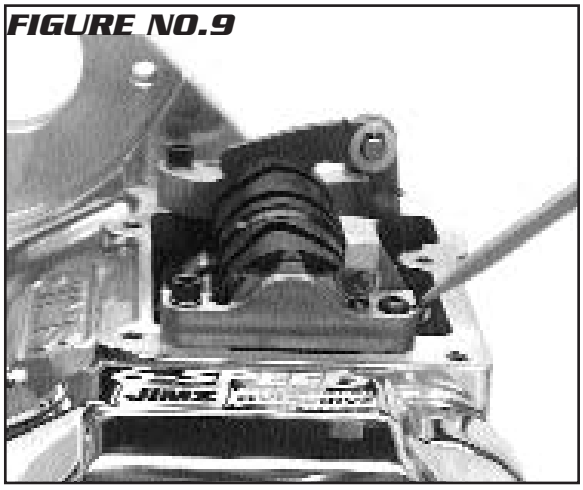
NOTE: *While pushing the auxiliary fork shaft through, hold onto the 4th C/S gear fork and make sure the fork is positioned correctly to receive the auxiliary fork shaft that is simultaneously being pushed through.*

Install set screw No.3784C with 2 drops of Thread locking compound No. 242 on screw. Torque to 2-4 Ft Lbs.

Function check

With the 4 forks and the primary and secondary fork rods installed, check to make sure that the forks slide freely on the fork rods by moving them back and forth with your fingers. If you experience any binding of the 4th C/S fork, you most likely need to go back and perform clearance check #2 in the case clearance checks section.

FIGURE NO.9



SHIFT DRUM / DETENT SYSTEM / PILLOW BLOCK INSTALLATION

The kit includes (4) Allen Head screws to hold the pillow blocks in place. 3 of the screws are 1/4"-20"x1 1/4" socket head Allen, and one screw is a 1/4"-20"x1 1/4" button head Allen.

There are 3-AN type washers, these are used on the socket head Allen screws. The button head screw does not use a washer. The button head screw is used on the right side pillow block in the forward position, below the detent roller. See **Figure 9**.

Apply a small amount of assembly lube to dowels. Put the Allen screws into the pillow block holes and tighten down the shift drum / pillow block assembly squarely. Squarely means tighten down the screw, one turn at a time to pull down the pillow blocks over the dowels*. A circular pattern for tightening the four screws works best.

**The right side pillow block may be stubborn in making its way over the dowels. Tightening down the pillow block screws in a circular pattern, as specified above, is usually sufficient to overcome this.*

Install the shift drum assembly as detailed in Set-Up and Checks section. You must be careful to make sure the fork pins are in the grooves in which they belong. Monitor closely the pins of the forks relative to the shift drum grooves. Application of Thread locking compound No. 242 to all four bolts is recommended. Install H-D No.34978-00A centering pin screw per H-D® Service Manual.

Clutch Rod End - Right Side

Refer to the Pre-installation procedures on page 3.

Top Transmission Cover and Neutral Switch

For Super Kits install No. 34904-00 provided neutral switch in a JIMS No. 8999CK or H-D No. 34468-98 top transmission cover or equivalent.

Neutral Switch Wiring

We have included the correct connectors for the wiring conversion from early single post to late two post neutral switch wiring. One of the post wire connectors will have to be mounted as a ground wire using the eyelet connector we've provided.

CLUTCH RELEASE SIDE COVER INSTALLATION:

1. Install throwout bearing kit JIMS No.2226 onto end of right clutch pushrod JIMS No.8076 (supplied). Refer to 1999 H-D Service Book.
2. Install and lube right clutch pushrod, with throwout bearing attached, then insert into end of mainshaft.
3. Note: On all JIMS 6-Speed Super Kits, if you do not use a JIMS side cover No.2371P or No. 2371CH, you will need to modify your H-D or aftermarket side cover as shown in **Fig. 11**. You will also need to cut the side cover gasket to match the side cover gasket surface area. These modifications allow clearance for trap door bearings.
4. Assemble side cover inner and outer clutch ramps, ball bearings, cable coupler and retainer inside side cover. Refer to H-D Service Manual.
5. Locate clutch cable O-ring, JIMS No.11179 (provided) and locate on threaded hole on side cover. Then thread clutch cable end through threaded hole in side cover. Connect clutch cable end to clutch cable coupler inside side cover. Refer to H-D Service Manual.
6. Locate your side cover gasket, JIMS No. 36801-87A (supplied) against trap door and attach side cover.

Note: If you are using an O.E.M. side cover you must use the two 1/4-20 x 2" No. 1291 SHCS with 2 AN washers JIMS No. 1114 (provided) or equivalent SHCS with a 2" length. The positions of these two screw holes are shown in **FIG 12**. Use your O.E.M. screws or equivalent for remaining four side cover mounting screws. Apply a small amount of lube or Blue Loctite to each screw. Torque screws to 7 to 9 ft-lbs in a criss-cross pattern. Refer to your H-D Service Manual. See **FIG 12** for screw layout.

SPEED SENSOR INSTALLATION

If you have a transmission case with speed sensor provisions, install one of the sensor block-off plate kits No. 8042K or 8102 billet block off plug in the case. Relocate the speed sensor to the provision in the side door. If you are not running a speed sensor, use another block off plate kit No. 8042K, in the side door. You may require a speed sensor signal conversion box to correctly calibrate the speedo head. Use JIMS No.8126 speedometer calibration module.

Fluid Fill

Fill the assembled gearbox with 20-24 oz. of Torco 80W-90W oil, JIMS® No. 1230. Change oil at 500 miles. Refill case with 75W-140 Synthetic, or equivalent.

DISASSEMBLY

In general, disassembly of your JIMS® 6-speed Overdrive is the reverse of the Installation Instructions with only one note; to remove the auxiliary fork shaft No.8075, you may need a slide hammer with a 10-32 threaded tip.

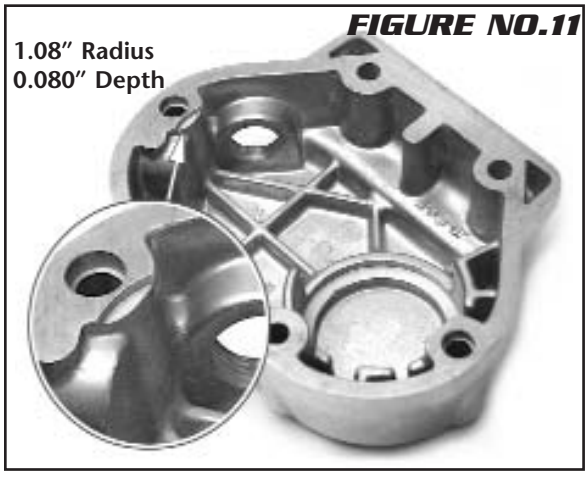


FIGURE NO.11

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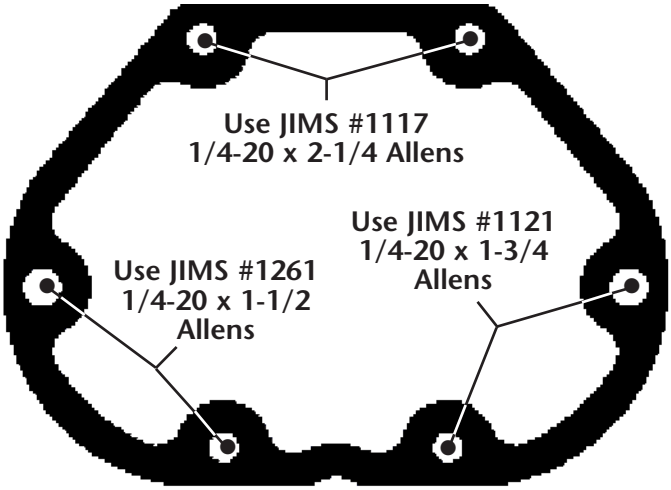
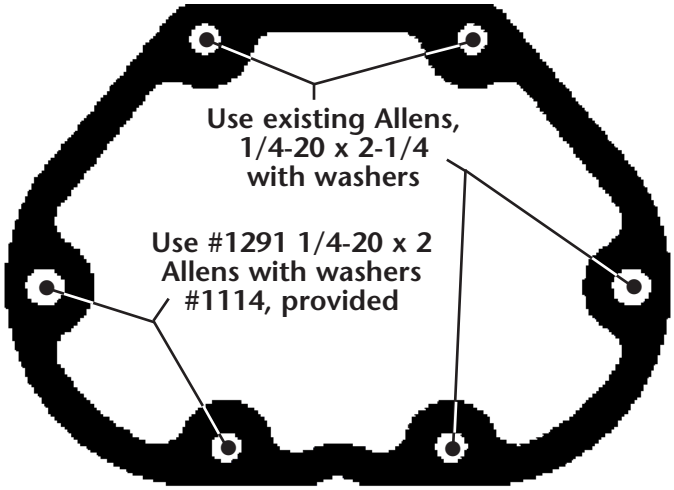


HARDWARE NEEDED FOR
JIMS BILLET SIDE COVER
(NOT PROVIDED)



HARDWARE USED ON ORIGINAL
HARLEY SIDE COVER

FIGURE NO.12

WARRANTY

All JIMS® parts are guaranteed to the original purchaser to be free of manufacturing defects in material and workmanship for a period of six (6) months from the date of purchase. Merchandise that fails to conform to these conditions will be repaired or replaced at JIMS® option if the parts are returned to us by the purchaser within the six (6) months warranty period or within ten (10) days thereafter.

In the event warranty service is required, the original purchaser must call or write JIMS® immediately with the problem. Some problems can be rectified by a telephone call and need no further course of action. A part suspected of being defective must not be replaced by a dealer without prior authorization by JIMS®. If it is deemed necessary for JIMS® to make an evaluation to determine whether the part is defective, it must be packaged properly to prevent further damage and be returned prepaid to JIMS® with a copy of the original invoice of purchase and a 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 JIMS® and the part was found to be defective, repair, replacement or credit will be granted.

ADDITIONAL WARRANTY PROVISIONS

1. JIMS® shall have no obligation in the event a JIMS® part is modified by person or organization.
2. JIMS® shall have no obligation if a JIMS® 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 part.
3. JIMS® shall not be liable for any consequential or incidental damages resulting in the failure of a JIMS® 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 JIMS® and a customer.
4. JIMS® parts are designed exclusively for use in Harley-Davidson® motorcycles. JIMS® shall have no warranty or liability obligation if JIMS® part is used in any other application.
5. Any JIMS® parts or tools that are returned and replaced become the property of JIMS® and will not be returned under any circumstance.

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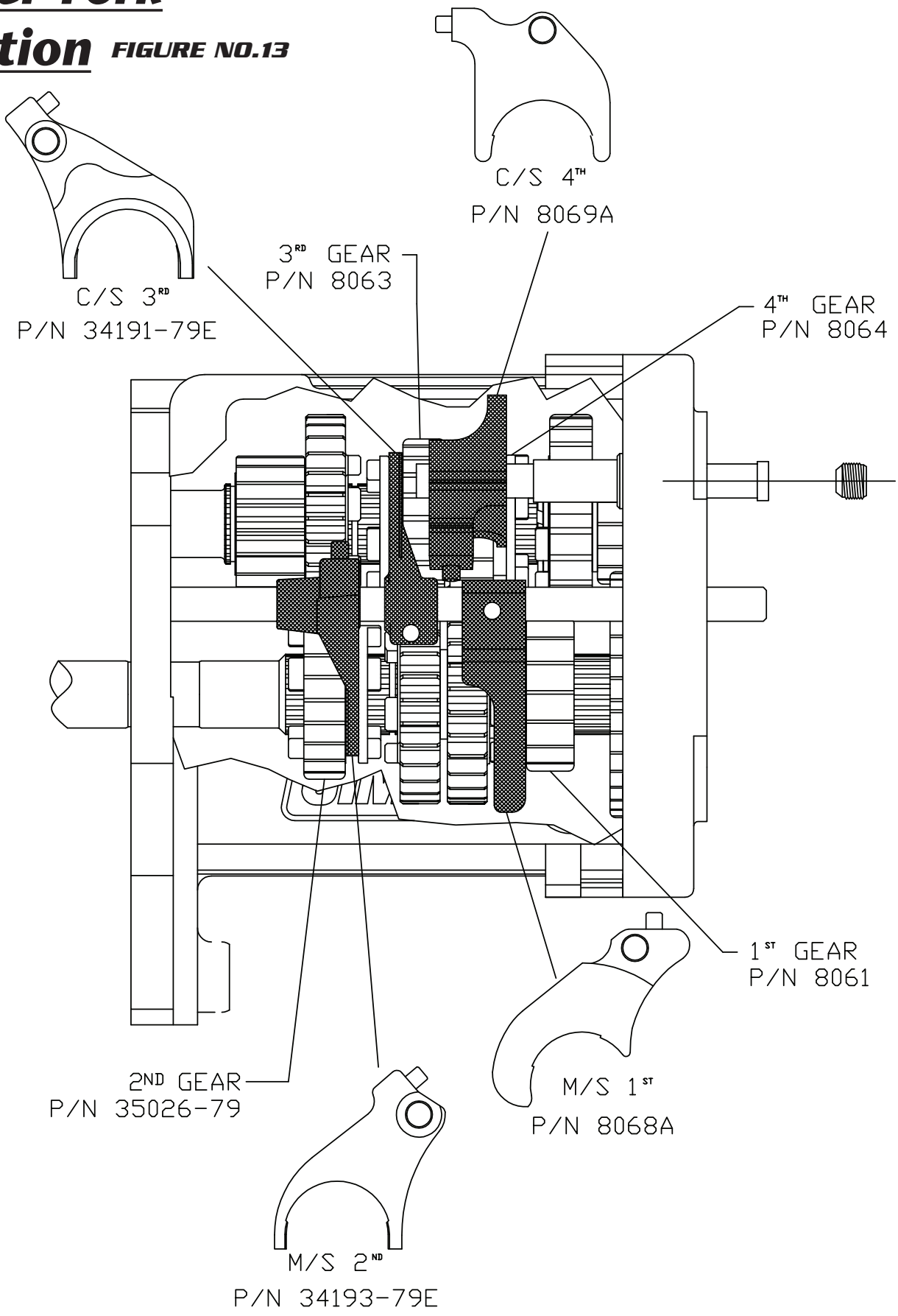
Shifter Fork Location FIGURE NO.13



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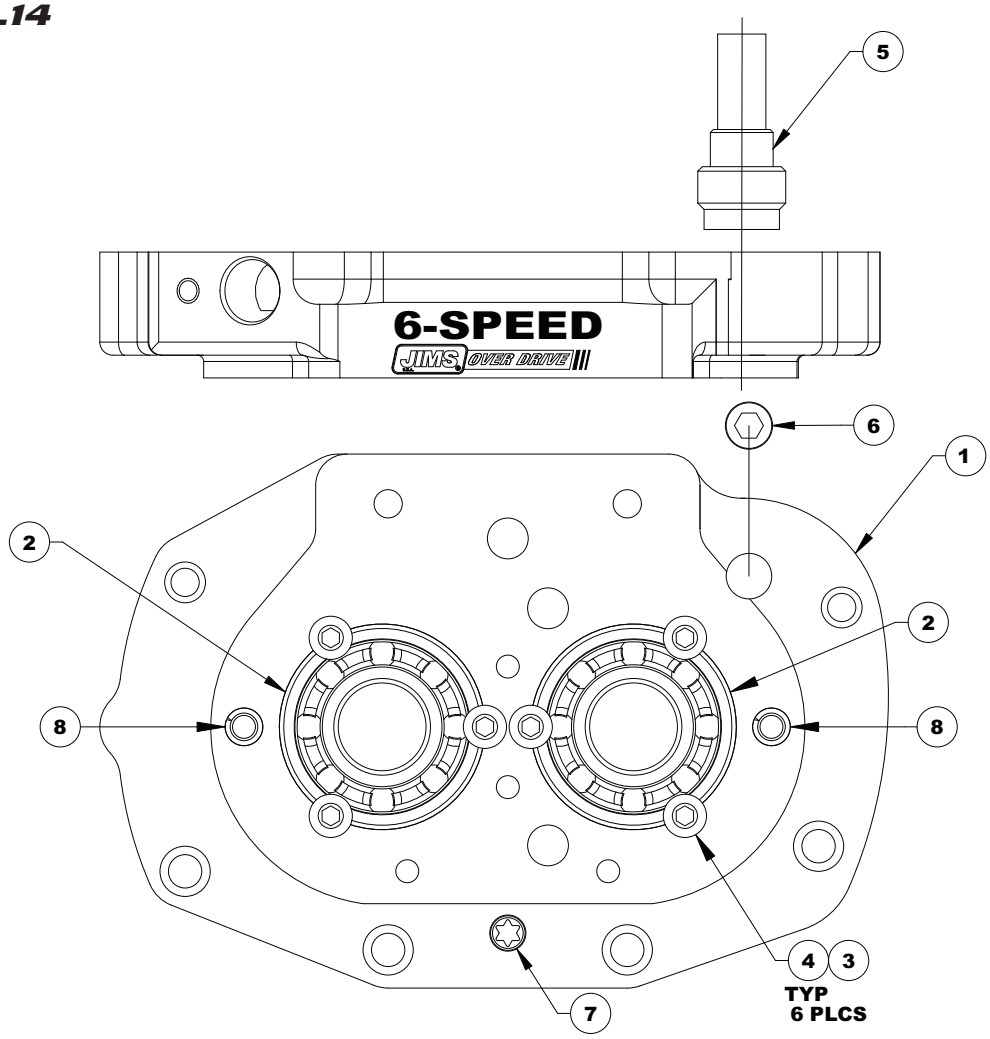
Trap Door Assembly

FIGURE NO.14

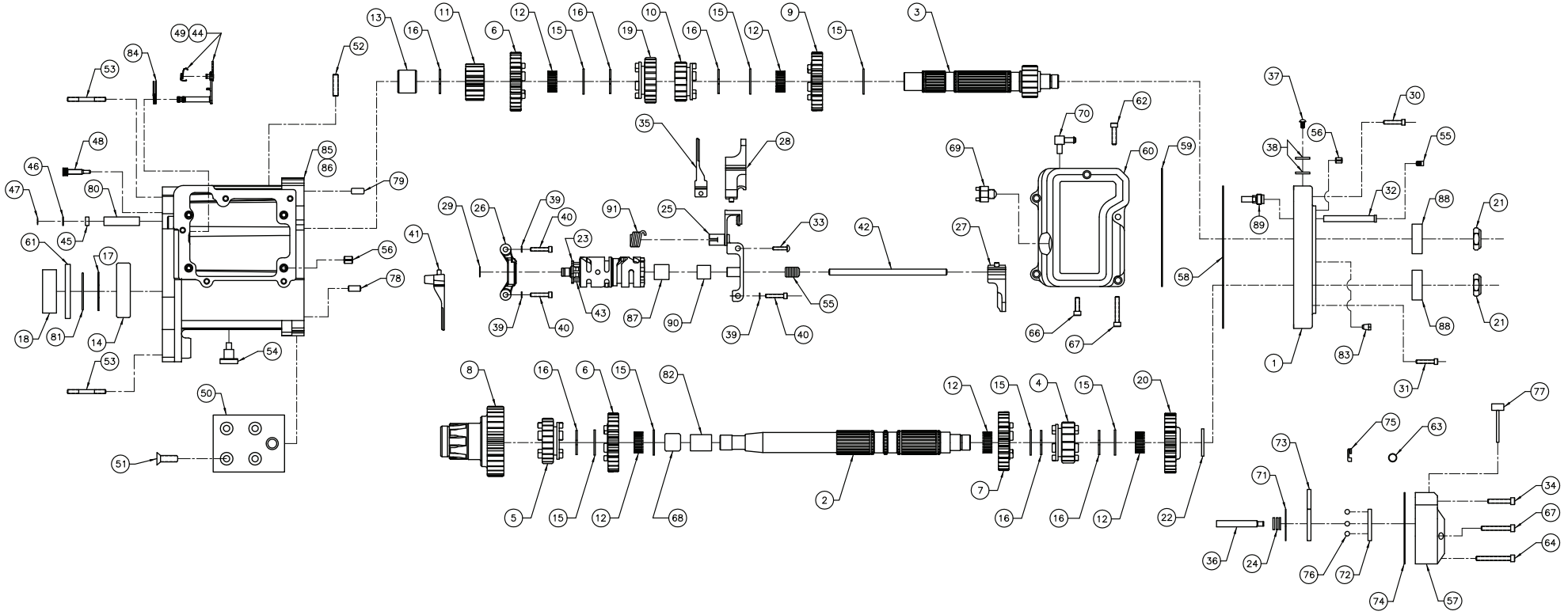


PARTS LIST			
NO.	QTY.	TITLE OR DESCRIPTION	PART NUMBER
1	1	CHROME BILLET TRAP DOOR	8097-1
2	2	DOOR BEARING	8992
3	6	WASHER	1216
4	6	SCREW, 1/4-20 x 1/2" BUTTON HEAD	8090
5	1	THREADED FORK ROD	8879
6	1	SET SCREW, CHROME, 1/2-20	3784C
7	1	PLUG	2389
8	2	SPLIT PIN	609

FIGURE NO.15

Exploded View
Clean-Cut

See Page13 For Parts List



PARTS LIST			
NO.	QTY.	TITLE OR DESCRIPTION	PART NUMBER
1	1	TRAP DOOR, CHROME, 4–5–6 SPEED W/SPEEDO HOLE	8097–1
2	1	MAINSHAFT, 4–5–6 SPEED	8072
3	1	COUNTERSHAFT COMBO 6th GEAR, 4–5–6 SPEED	8094
4	1	GEAR, 1st, MAINSHAFT CLOSE RATIO 6–SPEED	8289–1
5	1	GEAR, 2nd, MAINSHAFT	8291–1
6	2	GEAR, 3rd, MAINSHAFT, 2nd COUNTERSHAFT	8292–1
7	1	GEAR, 4th, MAINSHAFT	8294–1
8	1	GEAR, 5th, MAINSHAFT	8200–1
9	1	GEAR, 1st, CLOSE RAITO, COUNTERSHAFT, 6–SPEED	8290–1
10	1	GEAR, 4th, COUNTERSHAFT, 6–SPEED	8064
11	1	GEAR, 5th COUNTERSHAFT	8299–1
12	5	BEARING, MAINSHAFT & COUNTERSHAFT	8876A
13	1	BEARING, COUNTERSHAFT END	8048
14	1	BEARING, TRANSMISSION CASE	8996
15	7	THRUST WASHER, MAINSHAFT & COUNTERSHAFT	6003
16	6	RETIANING RING, MAINSHAFT & COUNTERSHAFT	11067
17	1	RETAINING RING, MAIN DRIVE GEAR BEARING	11161
18	1	SEAL, SPACER	8089
19	1	GEAR 3rd, COUNTERSHAFT, 6–SPEED	8293–1
20	1	GEAR, 6th, MAINSHAFT, 6–SPEED	8300–1
21	2	LOCKNUT, MAINSHAFT & COUNTERSHAFT	35078–79
22	1	THRUST WASHER (MAINSHAFT 6th GEAR)	8081
23	1	SHIFT DRUM, 6–SPEED, LATE	8083–1
24	1	THROW OUT BEARING KIT	2226
25	1	PILLOW BLOCK, RIGHT ASSEMBLY, 6–SPEED	8079W
26	1	PILLOW BLOCK ASSY, LEFT	33301–00A
27	1	SHIFT FORK, 1st GEAR MAINSHAFT, 6–SPEED	8068A
28	1	SHIFT FORK, 4th GEAR, COUNTERSHAFT, 6–SPEED	8069A
29	1	RETAINER, SHIFT DRUM	11342
30	4	SCREW, SHCS, CHROME, 5/16–18 x 1 1/4" (LOWER DOOR)	1118
31	2	SCREW, SHCS, CHROME, 1/4–20 x 1 1/4" (UPPER DOOR)	1258
32	1	ROD, SHIFT FORK, 4th, 6–SPEED	8075
33	1	SCREW, BHCS, 1/4–20 x 1" (PILLOW BLOCK)	1297
34	2	SCREW, SHCS, CHROME, 1/4–20 x 2 3/4" (END COVER)	1260
35	1	SHIFT FORK 3rd COUNTERSHAFT	34191–79E
36	1	RIGHT CLUTCH PUSHROD	8076
37	1	SCREW, SPEEDO BLOCK–OFF PLATE	1120
38	1	SPEEDO BLOCK–OFF PLATE W/GASKET	8042
39	3	WASHER, AN, 1/4" (PILLOW BLOCK)	1215
40	3	SCREW, SHCS, 1/4–20 1 1/4" (PILLOW BLOCK)	2135
41	1	SHIFT FORK, 2nd GEAR, MAINSHAFT	34193–79E
42	1	SHAFT, SHIFT FORKS	34088–87
43	6	DOWEL PIN, SHIFT DRUM	8356
44	1	LEVER SHAFT	8324
45	1	SEAL, SHAFT, SHIFTER LEVER	12045
46	1	WASHER, SHIFTER SHAFT	6497HW

PARTS LIST			
NO.	QTY.	TITLE OR DESCRIPTION	PART NUMBER
47	1	LOCK RING, SHIFTER SHAFT	11150
48	1	CENTERING PIN	34978–00A
49	1	SPRING, SHIFTER PAWL	34977–02A
50	1	MOUNT, TRANSMISSION	8049
51	4	SCREW, FLATHEAD, MOUNT	8054
52	4	STUD, BOTTOM, MOUNT	8052
53	4	STUD, PRIMARY, MOUNT	8053
54	1	PLUG, MAGNETIC, W/NYLON WASHER	60348–65B
55	2	SCREW, SET	3784C
56	6	ROLL PIN	609
57	1	COVER, END, CHROME	2371C
58	1	GASKET, DOOR	35652–79
59	1	GASKET, LID	34904–86
60	1	COVER, TOP LID, CHROME	8999C
61	1	SEAL, MAIN DRIVE GEAR	12067A
62	1	SCREW, SHCS, 1/4–20 x 1" (LID)	1115
63	1	O–RING, CLUTCH CABLE	11179
64	2	SCREW, SHCS, 1/4–20 x 1 3/4" (SIDE COVER)	1121
65	1	OIL, 1 QUART (Not Shown)	1230
66	3	SCREW, SHCS, 1/4–20 x 3/4" (LID)	1259
67	3	SCREW, SHCS, 1/4–20 x 1 1/2" (LID & SIDE COVER)	1261
68	1	CAP, PLASTIC	2401
69	1	SWITCH, NEUTRAL, LATE	34904–00
70	1	VENT, FITTING	62375–57
71	1	RETAINING RING, BALL RAMP	10998
72	1	RAMP, INNER	25452–87A
73	1	RAMP, OUTER	25453–87A
74	1	GASKET, END COVER	36801–87A
75	1	COUPLER, CABLE	34920–86
76	3	BALL BEARINGS, RAMP	8873
77	1	DIP STICK	37075–87
78	1	PIN, DOWEL	375
79	1	PIN, ROLL	634
80	1	BUSHING, SHIFTER SHAFT (34979–00)	7514
81	1	QUAD SEAL	11165
82	1	TUBING, SHRINK	8012
83	1	PLUG, MAGNETIC DRAIN	2389
84	1	SPRING, SHIFTER SHAFT	34064–00
85	1	CASE, PLAIN, ASSEMBLY	8096
86	1	CASE, POLISHED, ASSEMBLY	8096P
87	1	BEARING, SHIFT DRUM	35961–52
88	2	BEARING, TRAPDOOR	8992
89	1	THREADED FORK ROD	8879
90	1	RACE, INNER	8082
91	1	SPRING, DETENT	8079–2

CAUTION: WEAR SAFETY GLASSES. EXCESSIVE FORCE MAY DAMAGE PARTS! ,SEE JIMS® CATALOG FOR OVER 100 OTHER TOP QUALITY PROFESSIONAL TOOLS. THE LAST TOOLS YOU WILL EVER NEED TO BUY.

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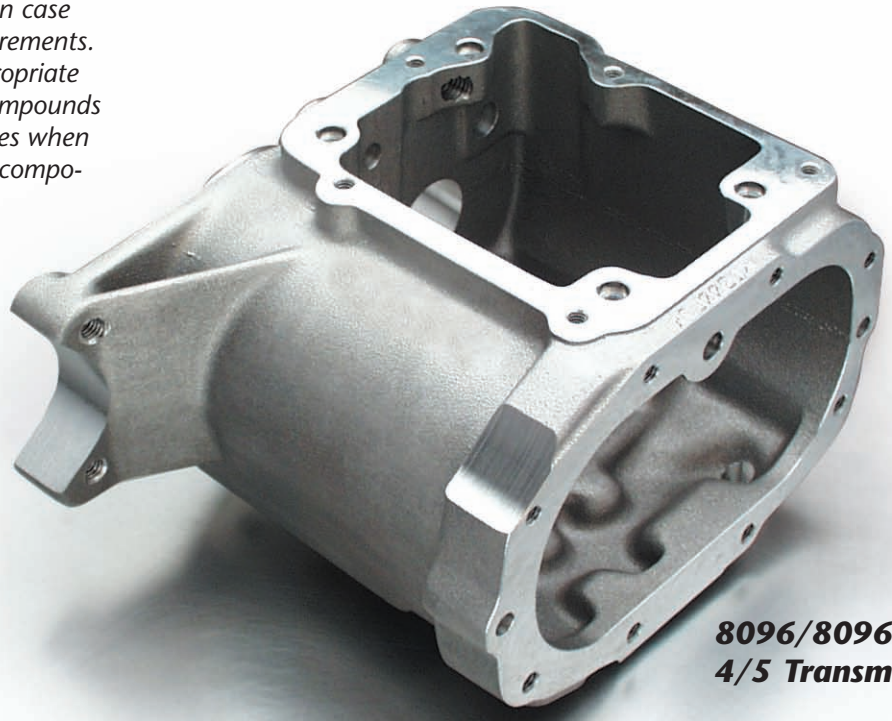
NOTE: *Please see page 1 for transmission case application requirements. Please use appropriate thread locking compounds and press fit lubes when installing these components.*



8096/8096P
4/5 Transmission Case

NO.	QTY.	DESCRIPTION	PART NO.
1	4	STUD, PRIMARY COVER	8053
2	1	BRACKET, BOTTOM	8049
3	1	DRAIN PLUG	60348-65B
4	1	ROLL PIN, F-DOOR	634
5	1	DOWEL PIN, R-DOOR	375
6	4	PIN, LID	609
7	4	SCREWS, BRACKET	8054

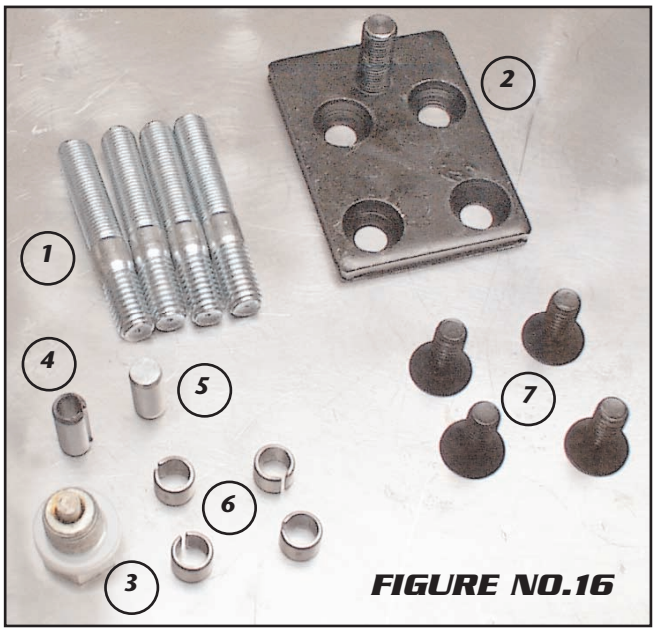


FIGURE NO.16