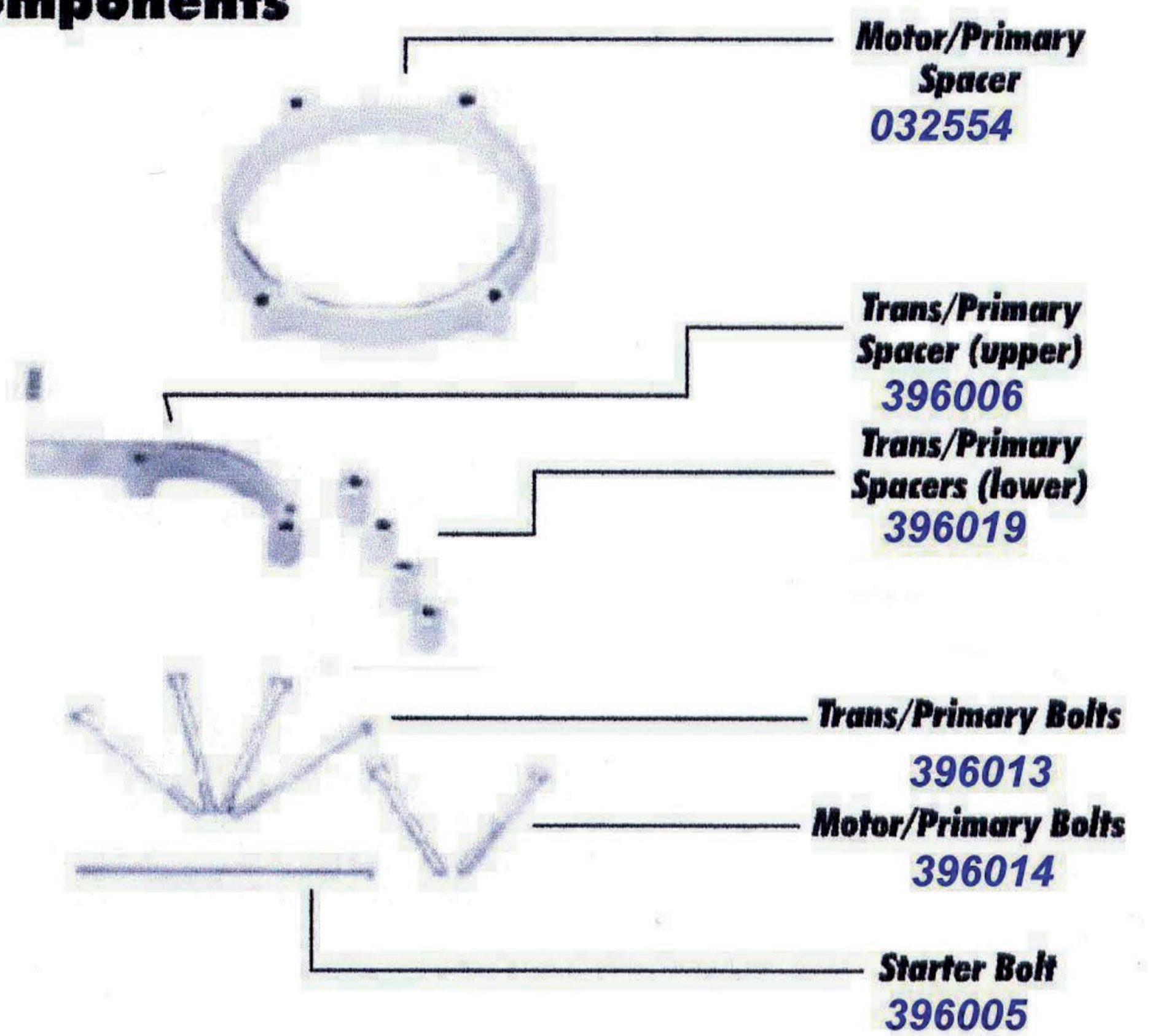
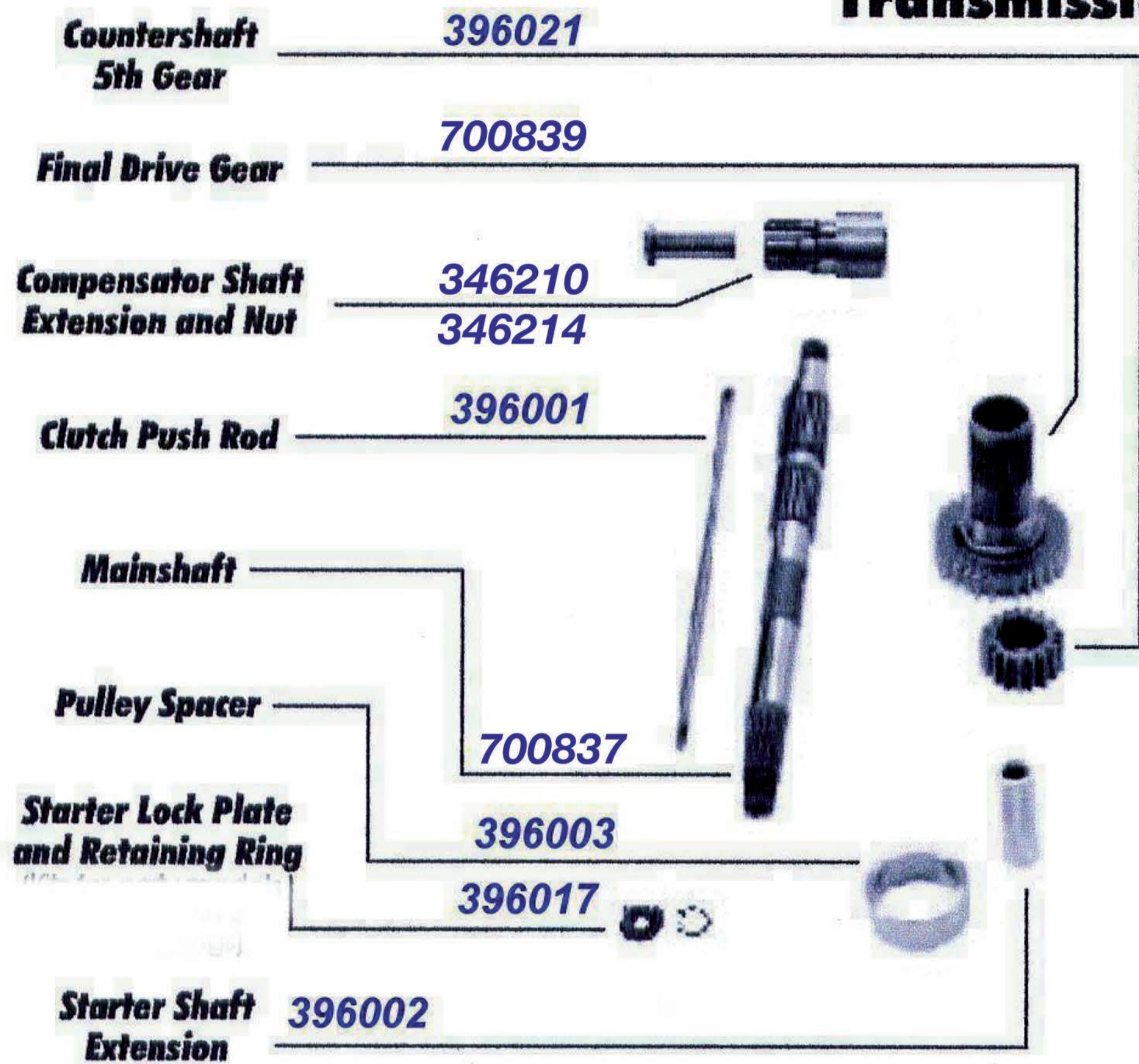


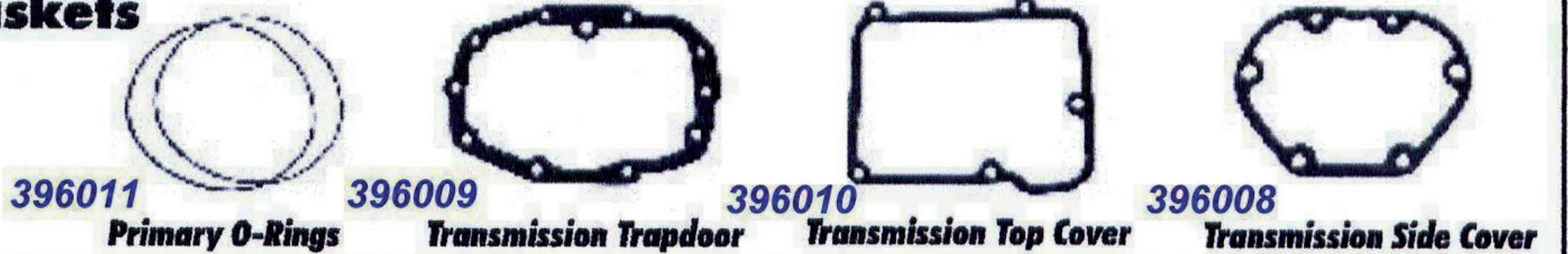
Transmission Components



Floorboard Spacer



Gaskets



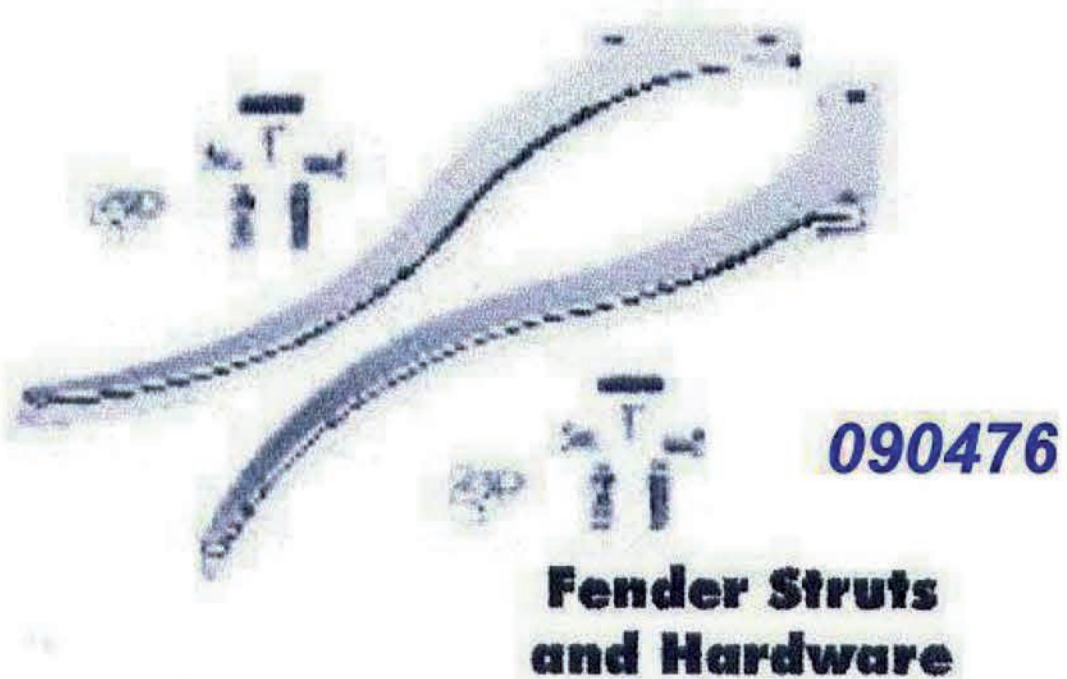
Swingarm & Fender Components

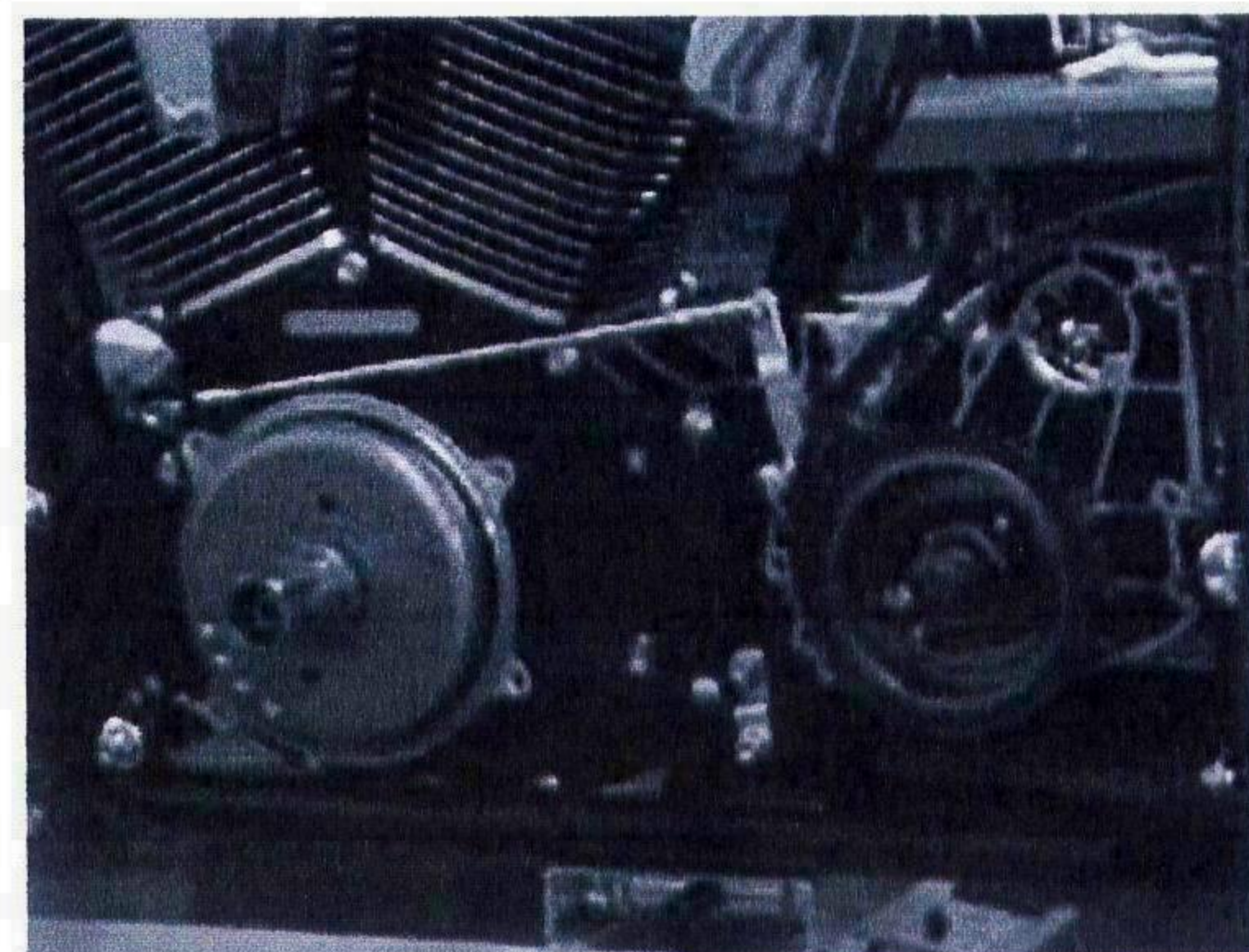
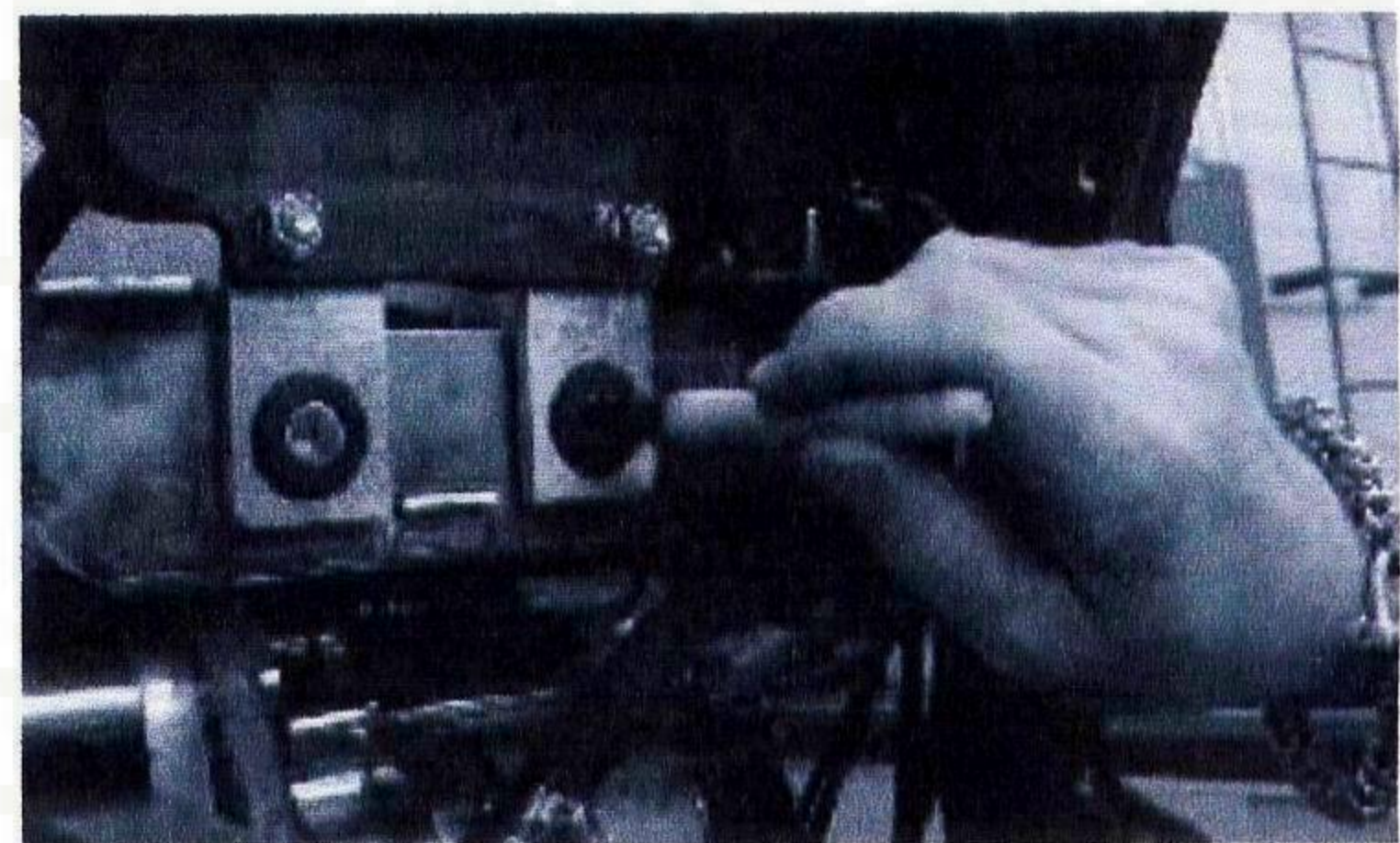
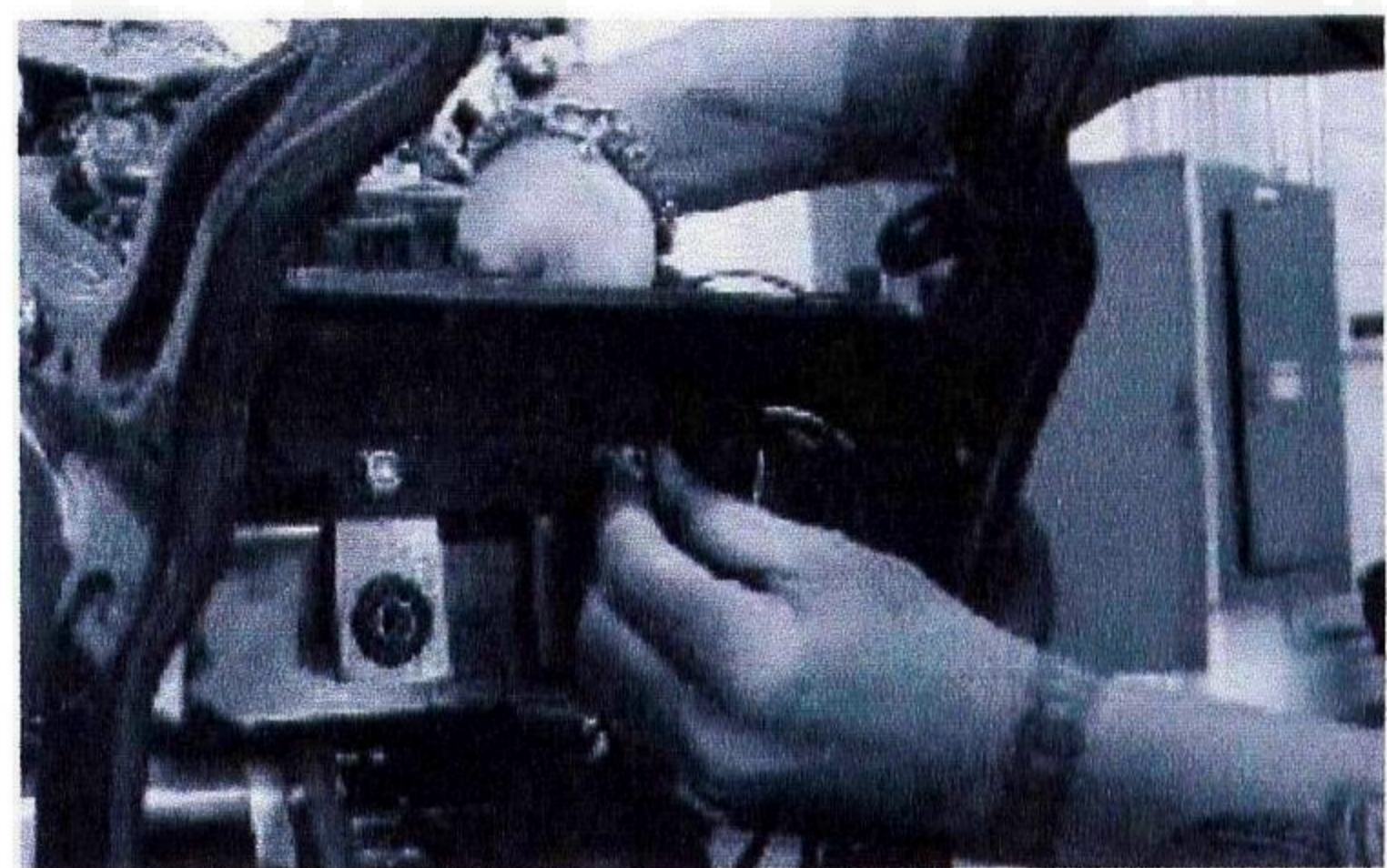
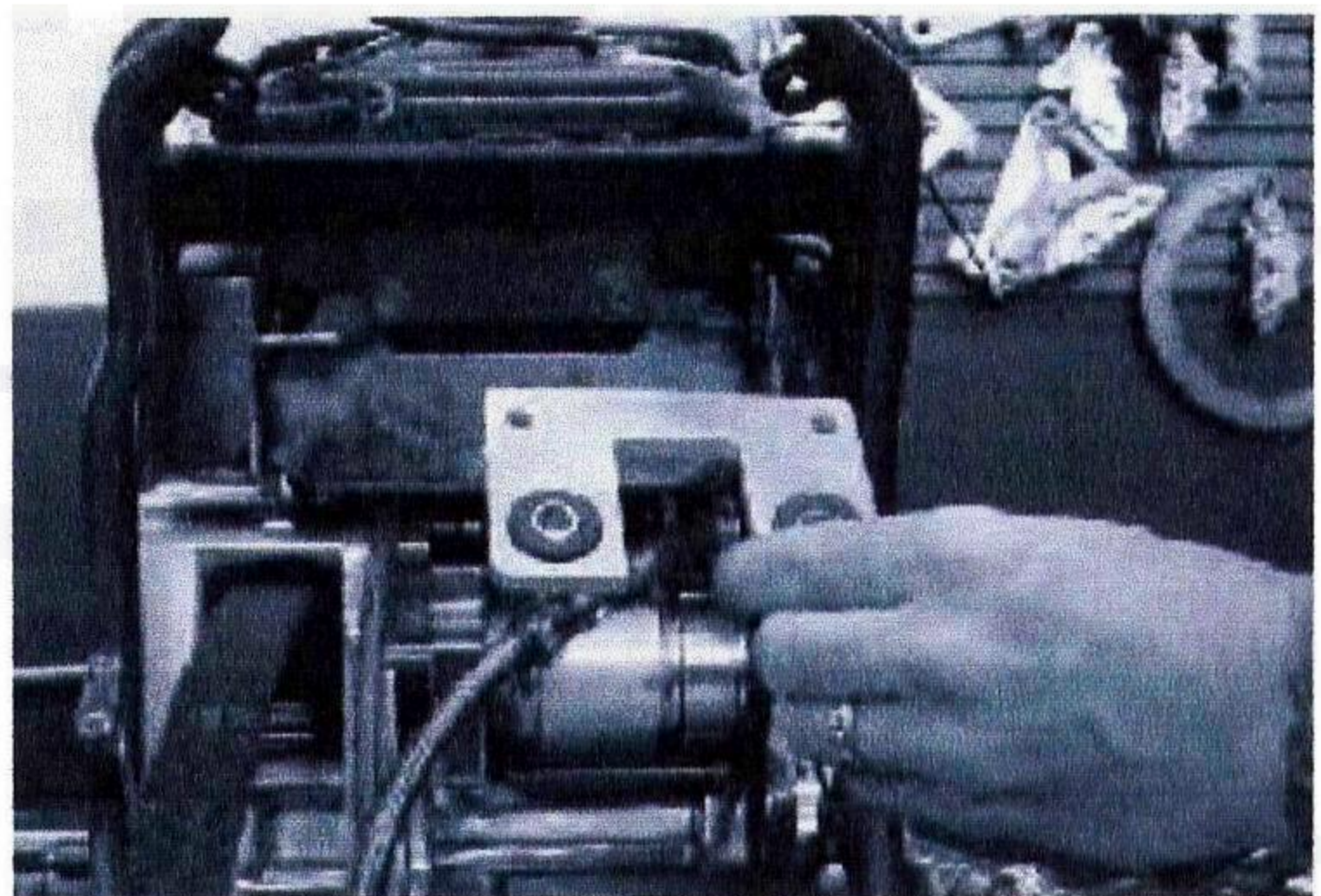
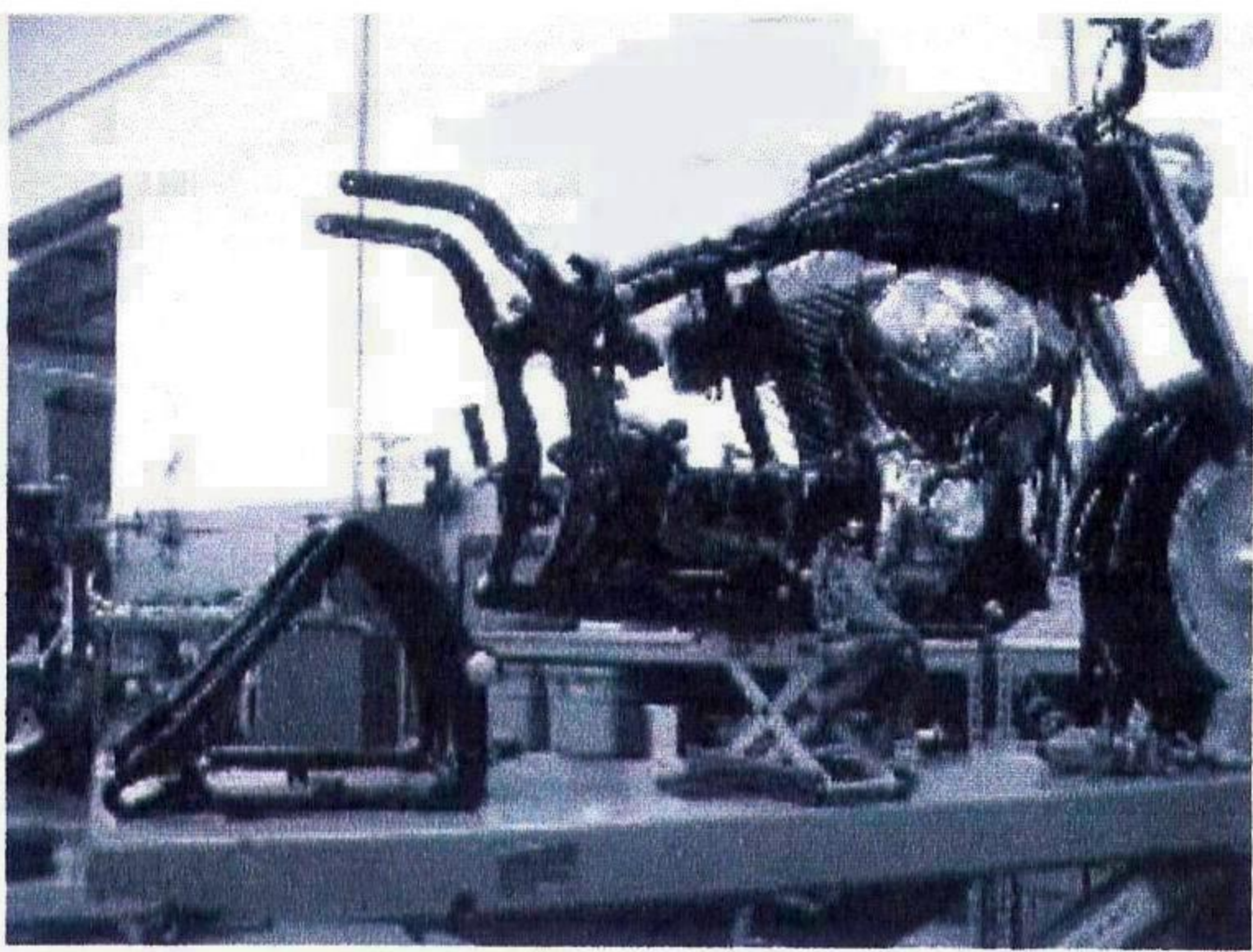


Late Model



Early Model





Recommended Tools

This is a complex installation and will require several specialized tools to complete correctly.

- 1) Sawzall (can substitute hack saw)
- 2) Inner bearing race remover/installer
- 3) Transmission pulley tool
- 4) Mainshaft locknut wrench
- 5) Main drive gear remover/installer

Stock Component Removal

To install the Kit it will be necessary to raise the motorcycle off the ground on a suitable lift.

Installation of the Kit begins with the disassembly and removal of the rear end of the bike. Start with the simplest and most obvious components. For detailed information on removal of these parts, consult your factory manual.

Disconnect the battery, Drain oil from Motor, Trans & Primary

- Remove:
- 3) Pipes & Mounting Brackets
 - 1) Seat
 - 4) Fender Struts, Fender & Lights
 - 2) Battery
 - 5) Rear Wheel & Brake
 - 6) Electronics from under seat and rear of oil tank
 - 7) Oil tank (careful not to damage clips)

Remove Stock Swingarm

The stock swingarm will be removed and discarded to make way for your new swingarm!

- 1) Remove rear shock absorbers.
- 2) Remove pivot shaft and spacers.
- 3) Remove swingarm from frame.

Keep all stock hardware & spacers, as some will be re-used.

Oil Tank Modifications (1991-1999 only)

In order to gain needed clearance for the wider swingarm, the 1991-1999 Softail oil tank will need to be modified. The process is relatively simple:

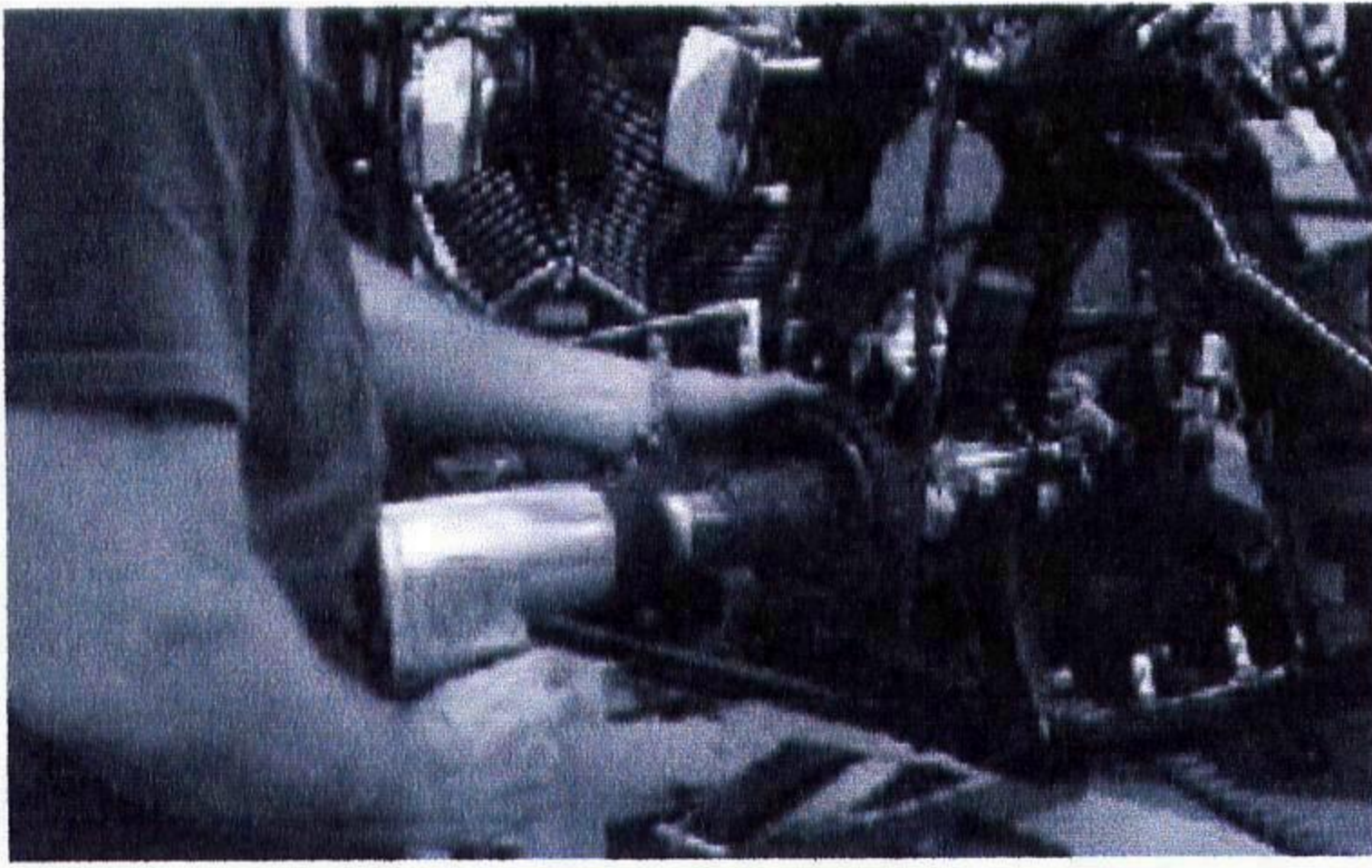
Mounting Bracket will require custom fabrication (not supplied)

- 1) Remove the rear oiltank bracket.
- 2) Using 5/16" socket head cap screws, bolt the oil tank bracket to frame as shown (screws & bracket not supplied in kit)
- 3) Mark lower holes on oil tank.
- 4) Remove oil tank and drill 5/16" holes where marked.
- 5) Cut original mounting tabs off of oil tank.

Stock Component Removal (continued)

The next stage involves the removal of the inner and outer primary. Please consult your factory manual for more detailed information.

- 1) Begin by removing the outer primary cover.
- 2) Remove center nut from chain tensioner
- 3) Remove retaining ring and release plate from clutch
- 4) Remove clutch hub mainshaft nut (**NOTE: Left Hand Threads!**)
- 5) Remove Compensating sprocket nut, spacer, sprocket cover and sliding cam.
- 6) Remove clutch assembly, primary chain tensioner, and sprocket as a single assembly.
- 7) Remove starter jackshaft (inspect primary case/jackshaft oil seal, replace if necessary).
- 8) Remove starter motor from primary case.



Recommended Tools

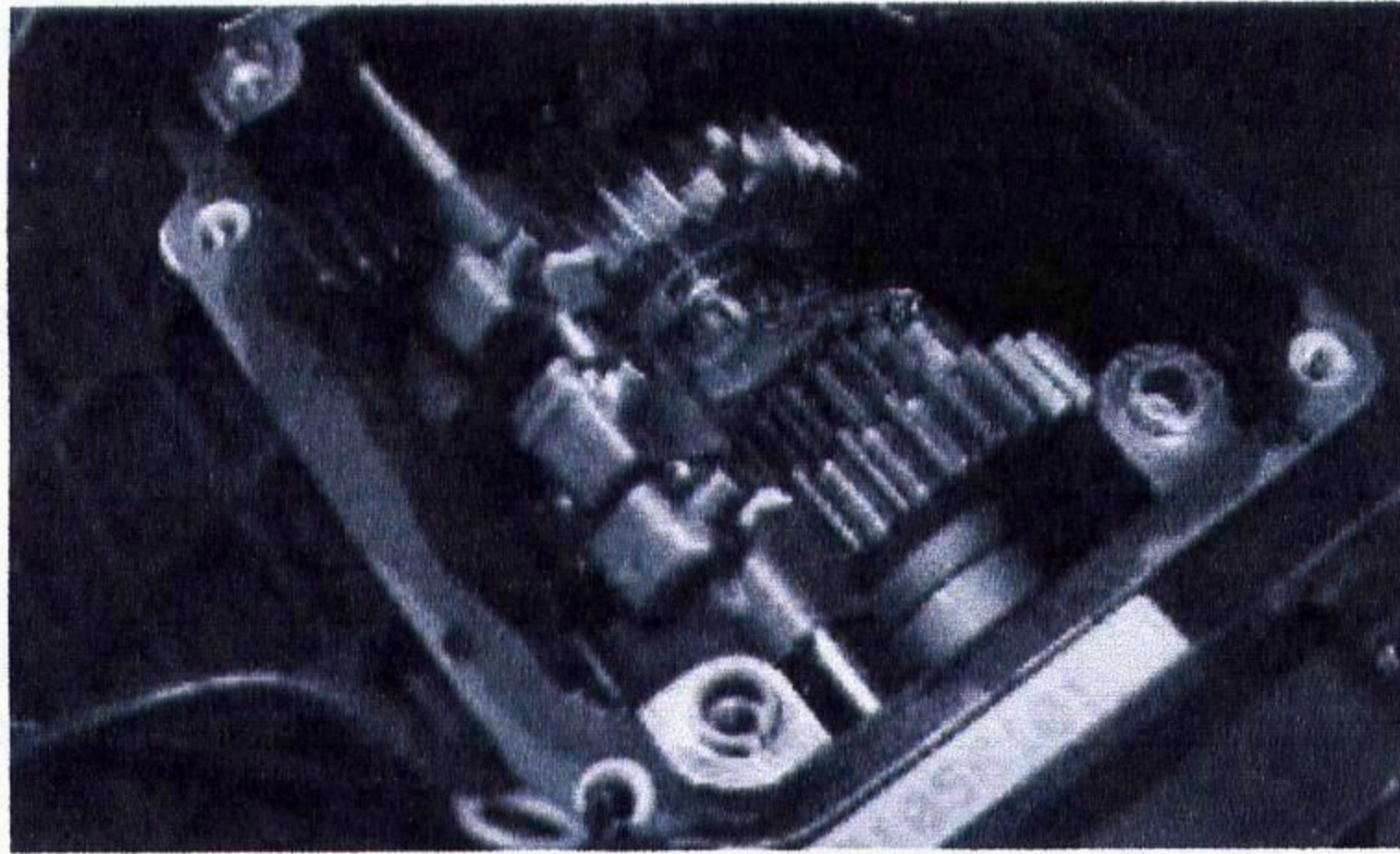
- 9) Remove inner primary (save original hardware and lock tabs)
- 10) Remove bolts and lockplate from front drive pulley.



- 11) Secure pulley using Transmission Pulley Tool and remove pulley nut with Mainshaft Locknut Tool. (NOTE: Left Hand Threads!)



- 12) Remove mainshaft bearing inner race using Bearing Race Remover/Installer Tool. See factory manual for detailed instructions.



- 13) Remove Tranny Top Cover

- 14) Remove Shift Drum.

- 15) Remove Clutch Side Cover

- 16) Remove Shift Forks

- 17) Remove clutch pushrod assembly (from right side of trans)

- 18) Lock trans in between gears and loosen mainshaft locknut.

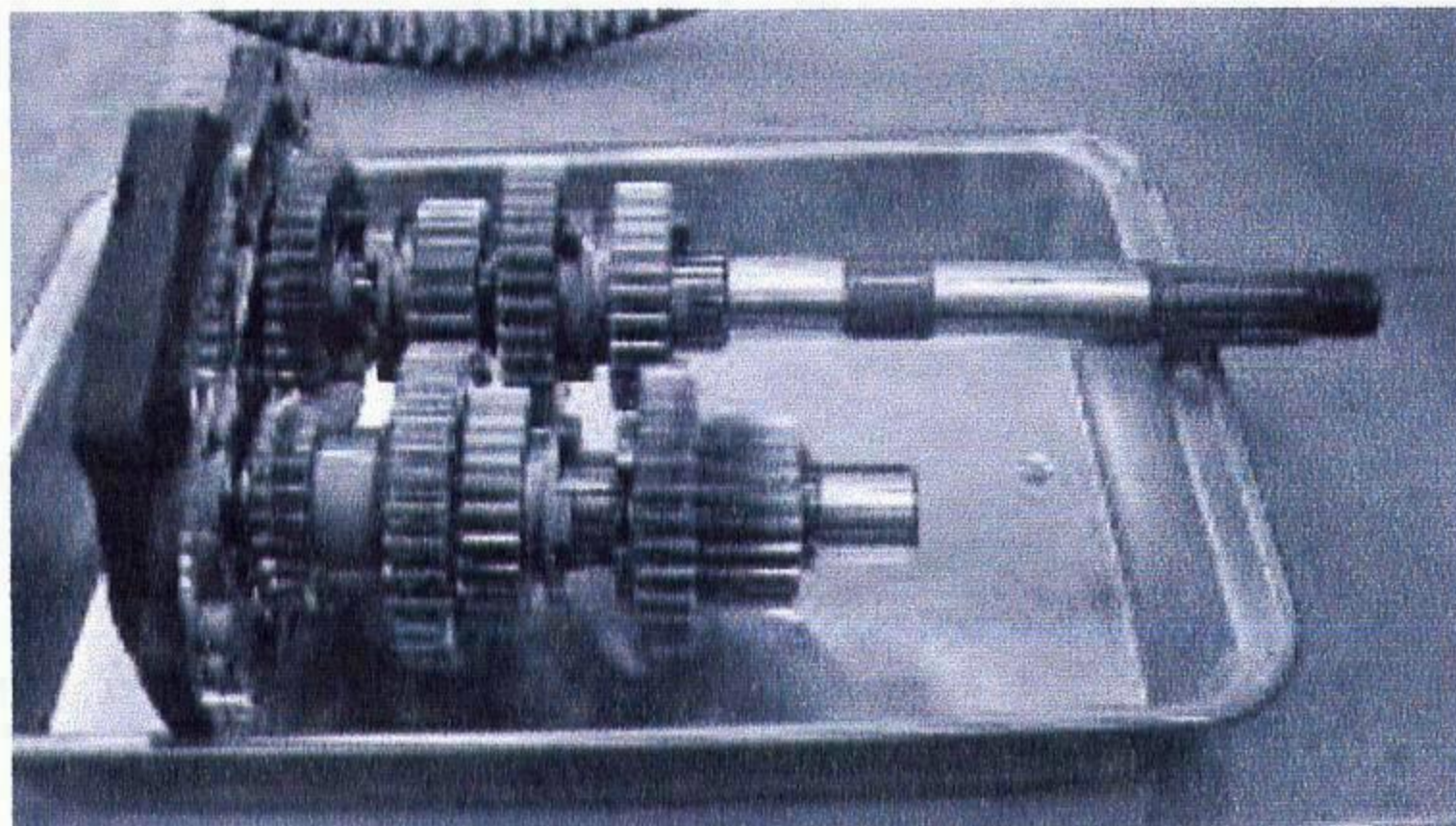
- 19) Remove trapdoor (trapdoor, mainshaft and countershaft will slide out as an assembly).

- 20) Remove gears from mainshaft (note order and inspect gears for any damage)

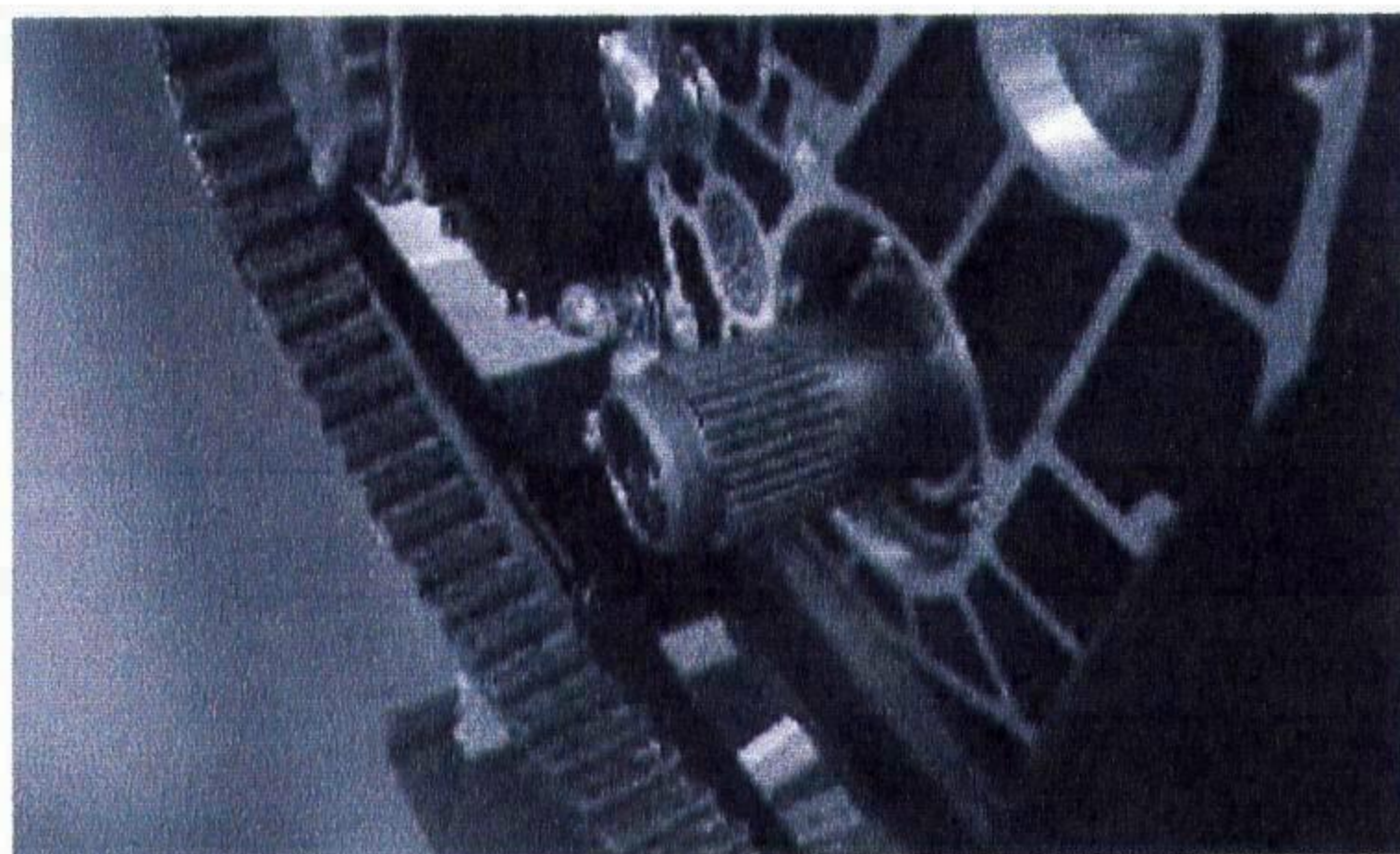
- 21) Remove Mainshaft from trapdoor.

- 22) Remove 5th gear from countershaft.

- 23) Remove Final Drive gear from transmission case.



We Strongly recommend utilizing the factory manual as a guide for disassembly as well as assembly of all primary and transmission components.



Transmission Re-Assembly

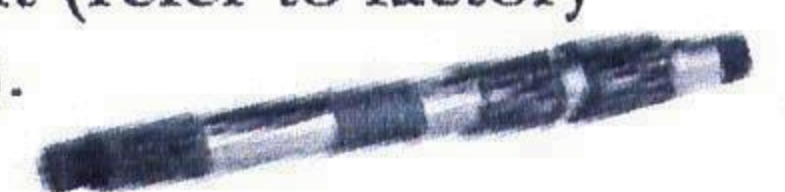
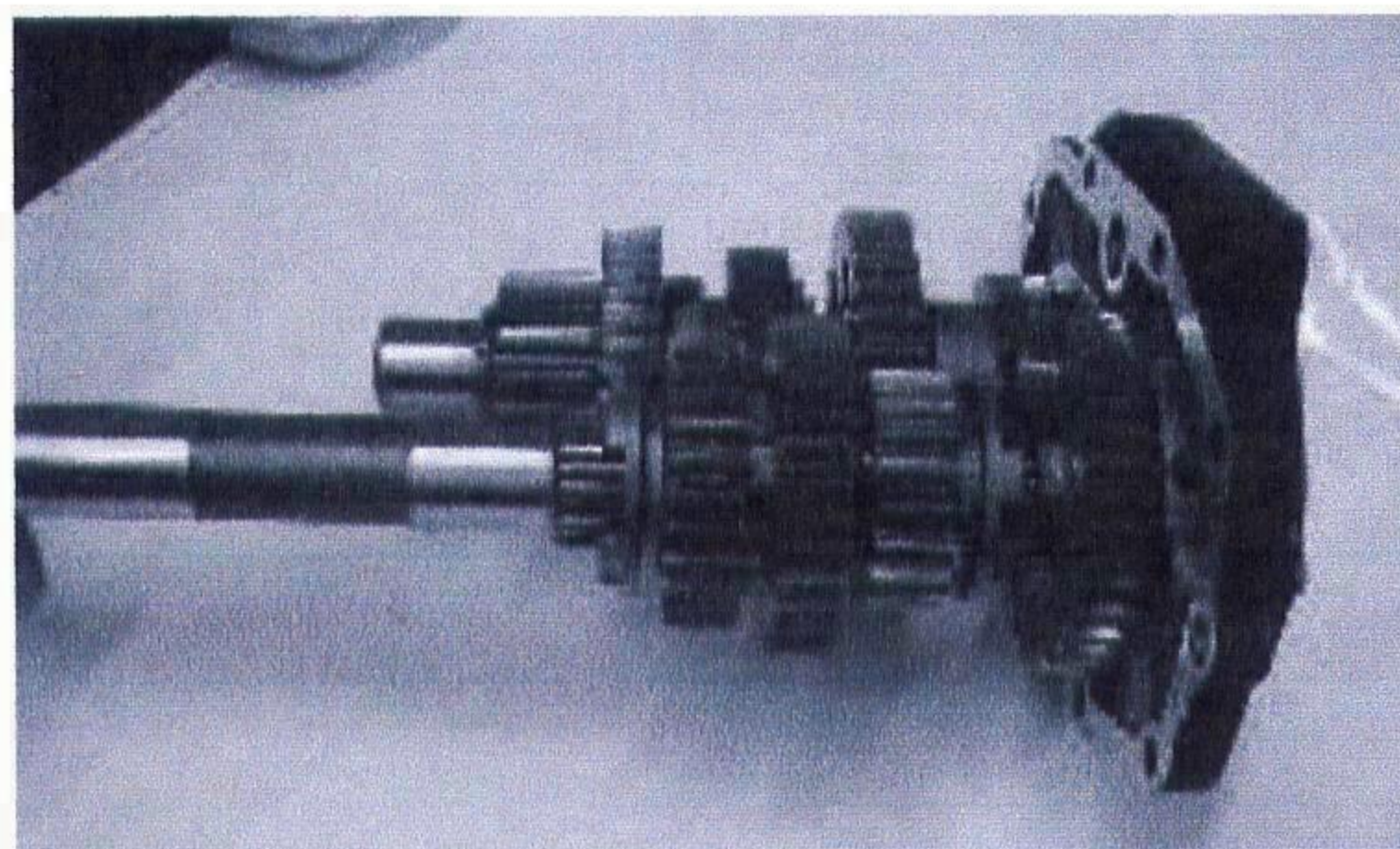


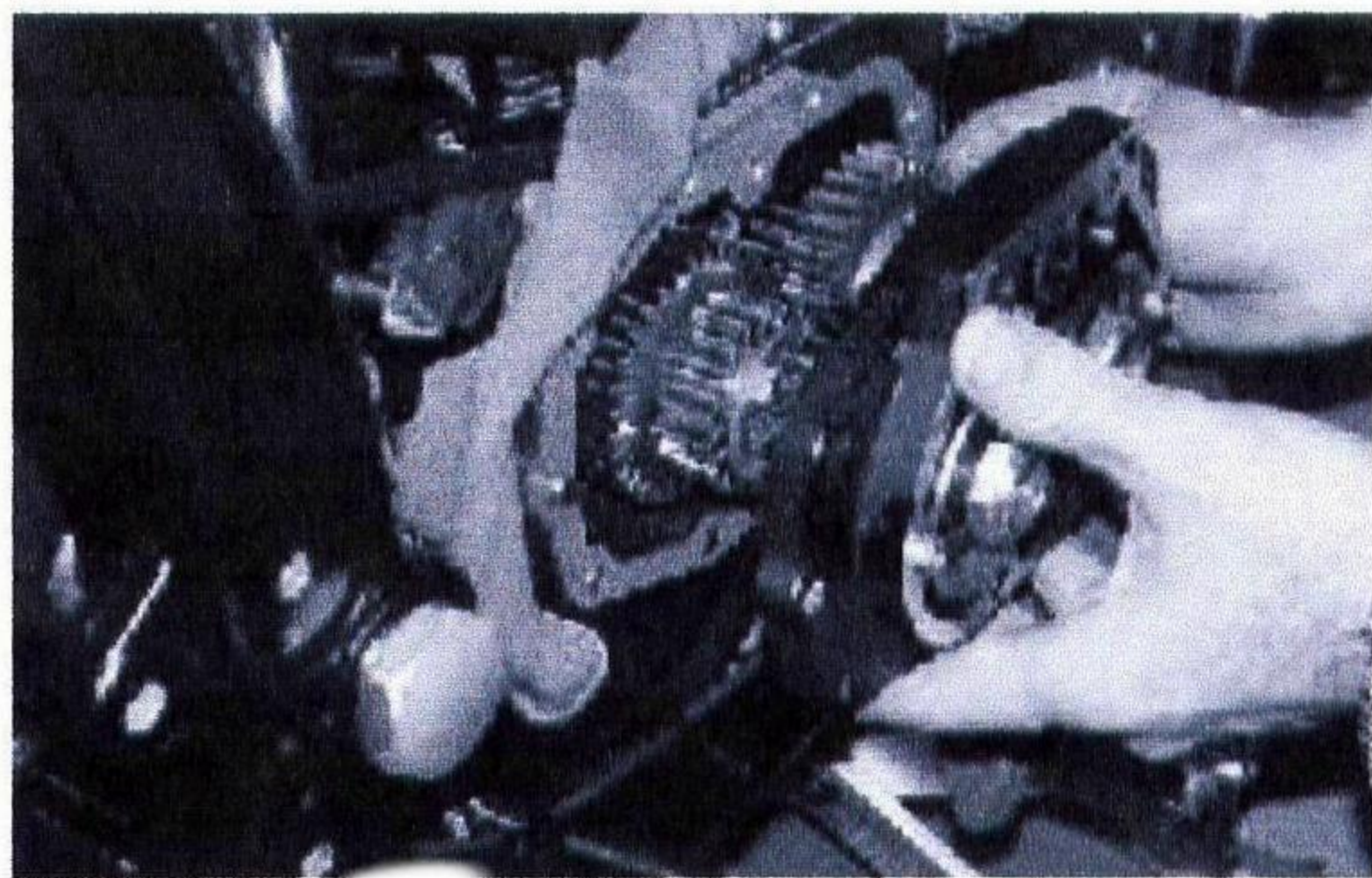
- 1) Install supplied Final Drive Gear into transmission case using Main Drive Gear Tool.

- 2) Install Supplied countershaft 5th gear.

- 3) Install stock gears onto supplied mainshaft (refer to factory manual for detailed installation instructions).

- 4) Install completed mainshaft assembly into trapdoor and torque mainshaft nut to factory specs.



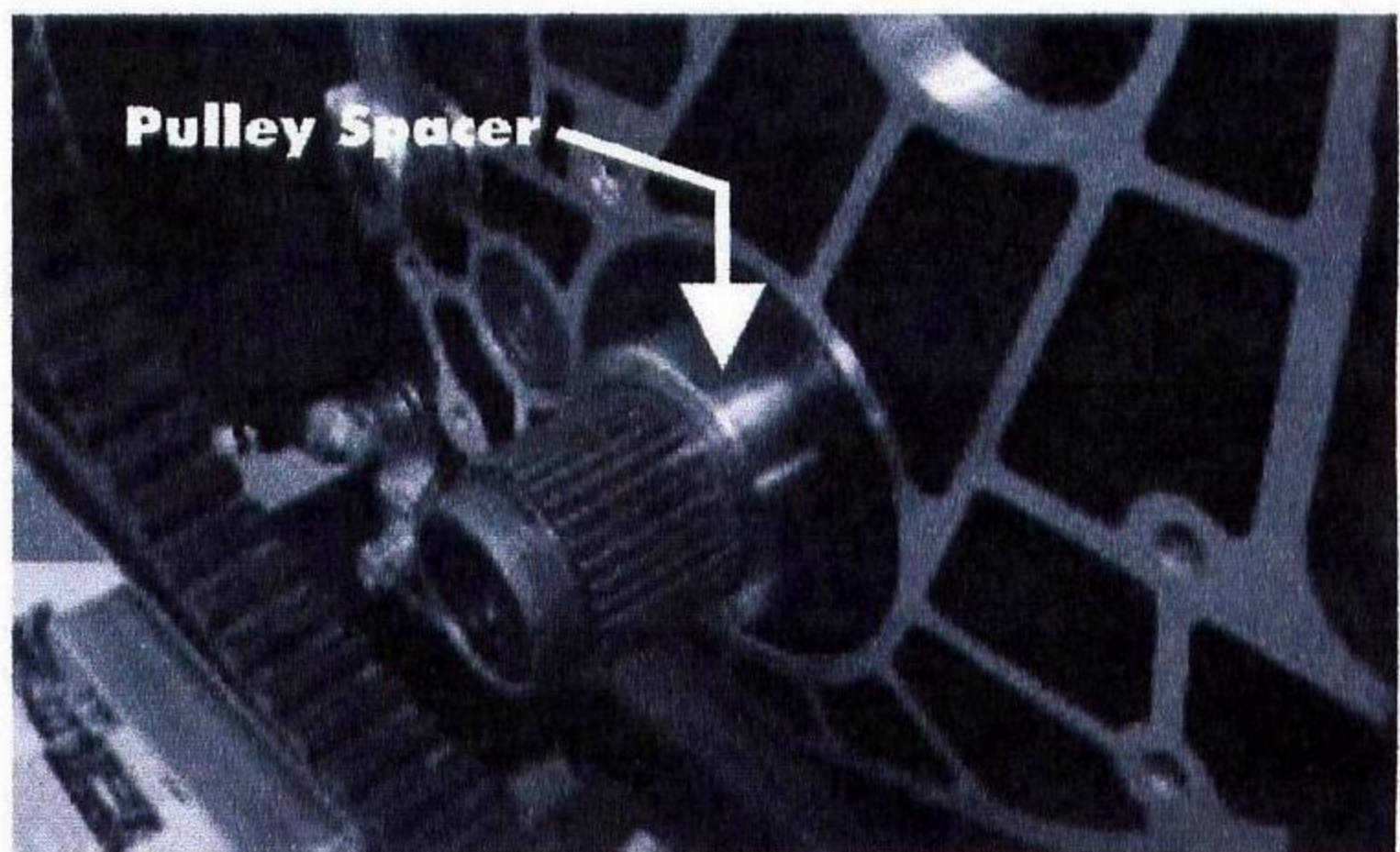


Transmission Re-Assembly (continued)

- 5) Install trapdoor/gear assembly into transmission case using supplied gasket.
- 6) Install shift forks and shift drum.
- 7) Install clutch pushrod assembly into mainshaft
- 8) Install transmission side cover using supplied gasket.
- 9) Install Transmission top cover using supplied gasket.

At this point, all internal transmission changes are completed.

- 10) Install supplied spacer onto main drive gear (stock spacer is also utilized).

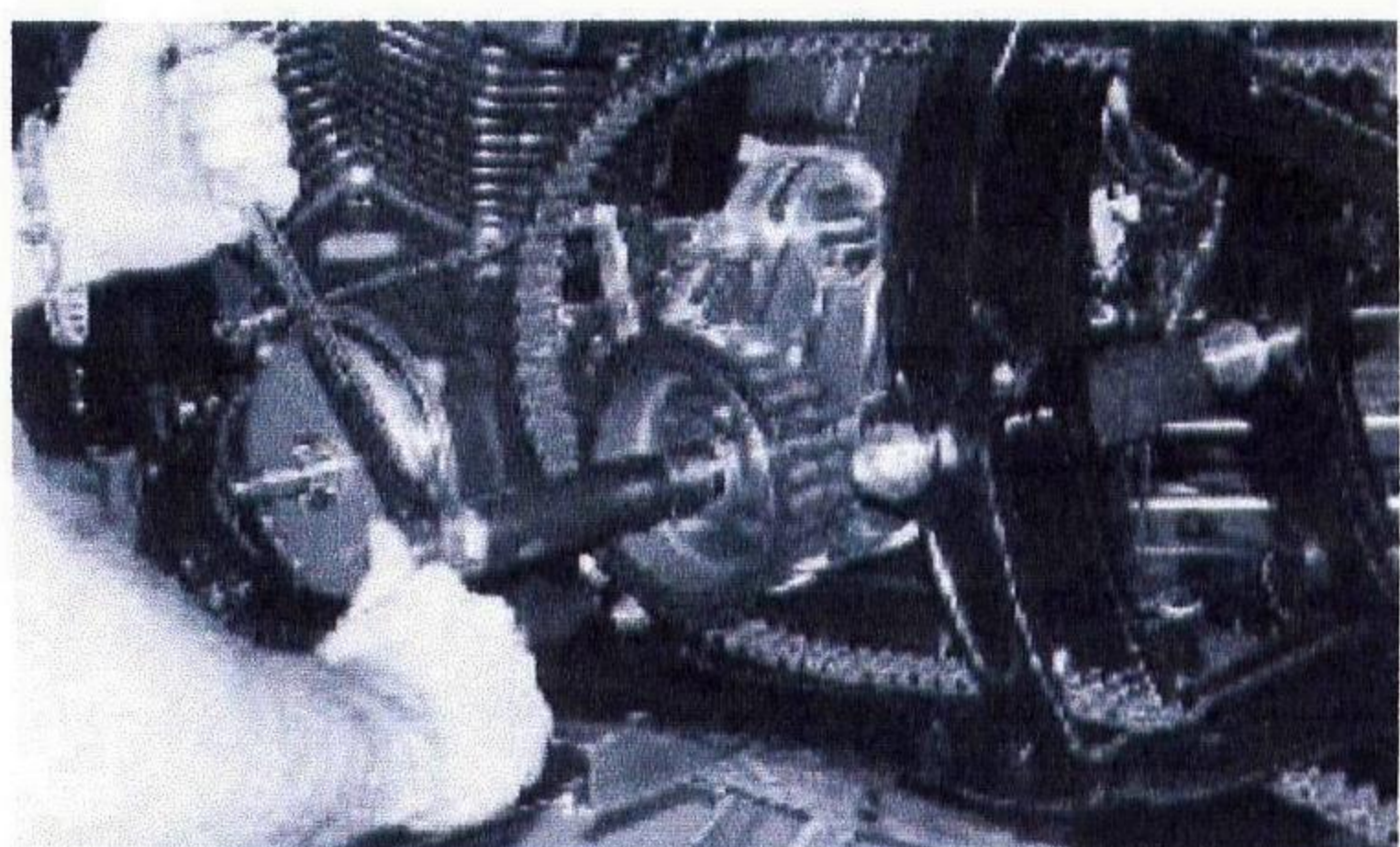


- 11) Secure pulley using Transmission Pulley Tool and install pulley nut with Mainshaft Locknut Tool. (NOTE: Left Hand Threads!)

- 12) Install Belt (1991-99 models use 1.125" wide belt)

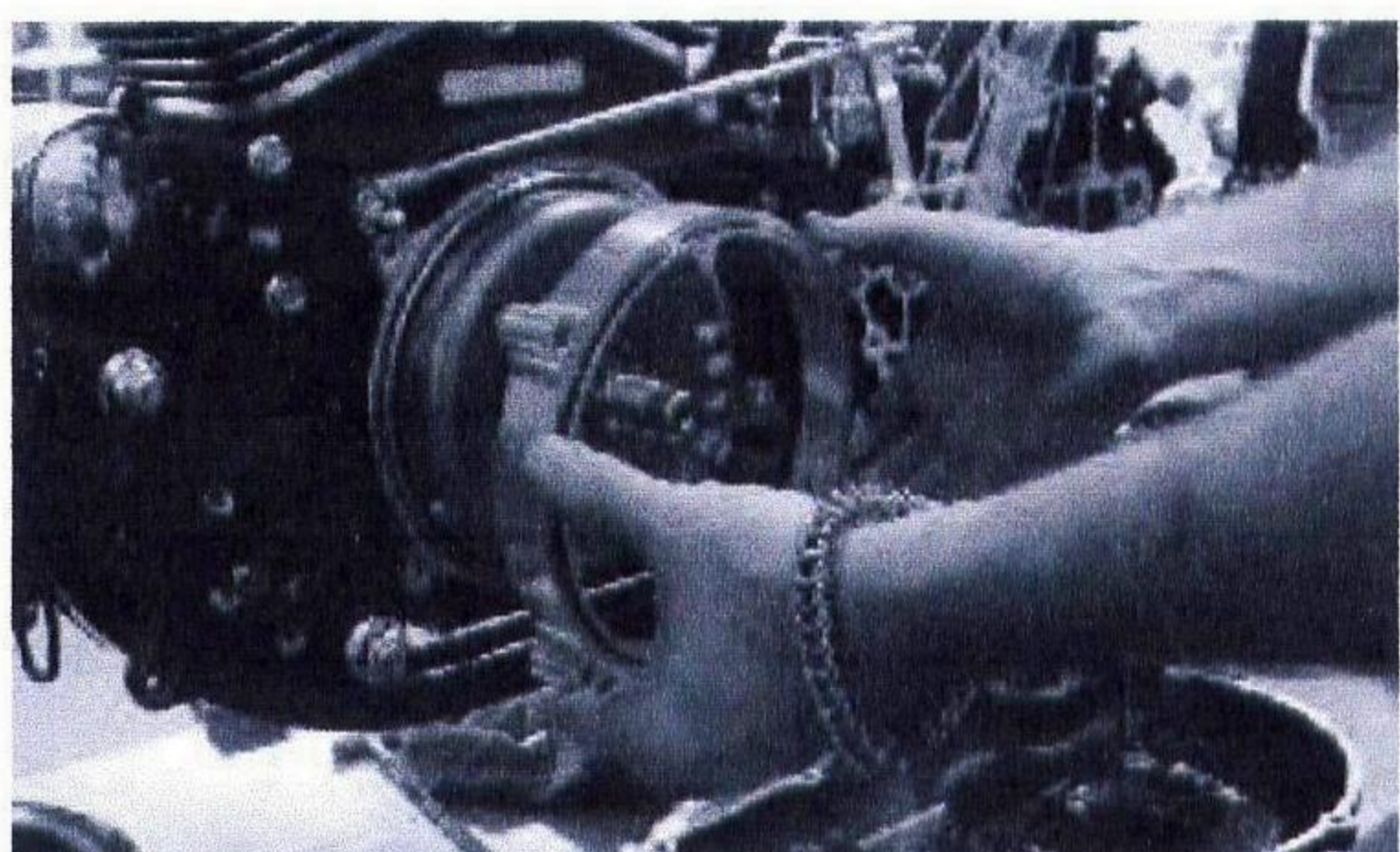
- 13) Install lockplate over pulley nut.

- 14) Refill transmission with fresh oil.



- 15) Install inner bearing race as specified in factory manual using Bearing Race Remover/Installer Tool.

Inner bearing race length and location is critical to proper function and must be installed to manufacturers specifications. Consult factory manual for correct installation.



The stock primary will now bolt to the motor and trans through a series of 1" spacers. Each of these 6 spacers is supplied with the kit.

Re-Install Primary

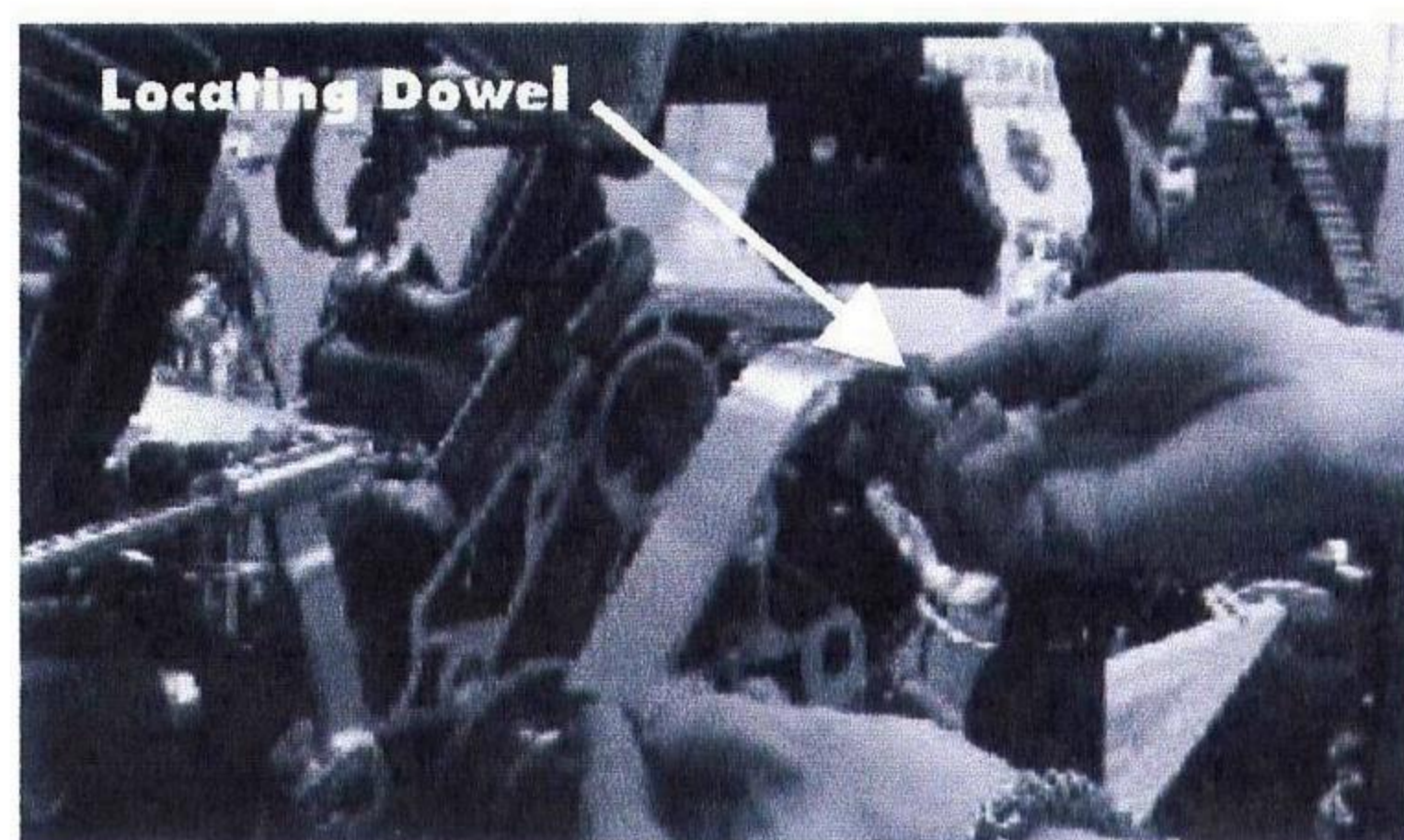
- 1) Install Motor/Primary spacer (coat all seal lips with oil) using supplied o-ring gaskets (one between motor and spacer and the other between spacer and inner primary).

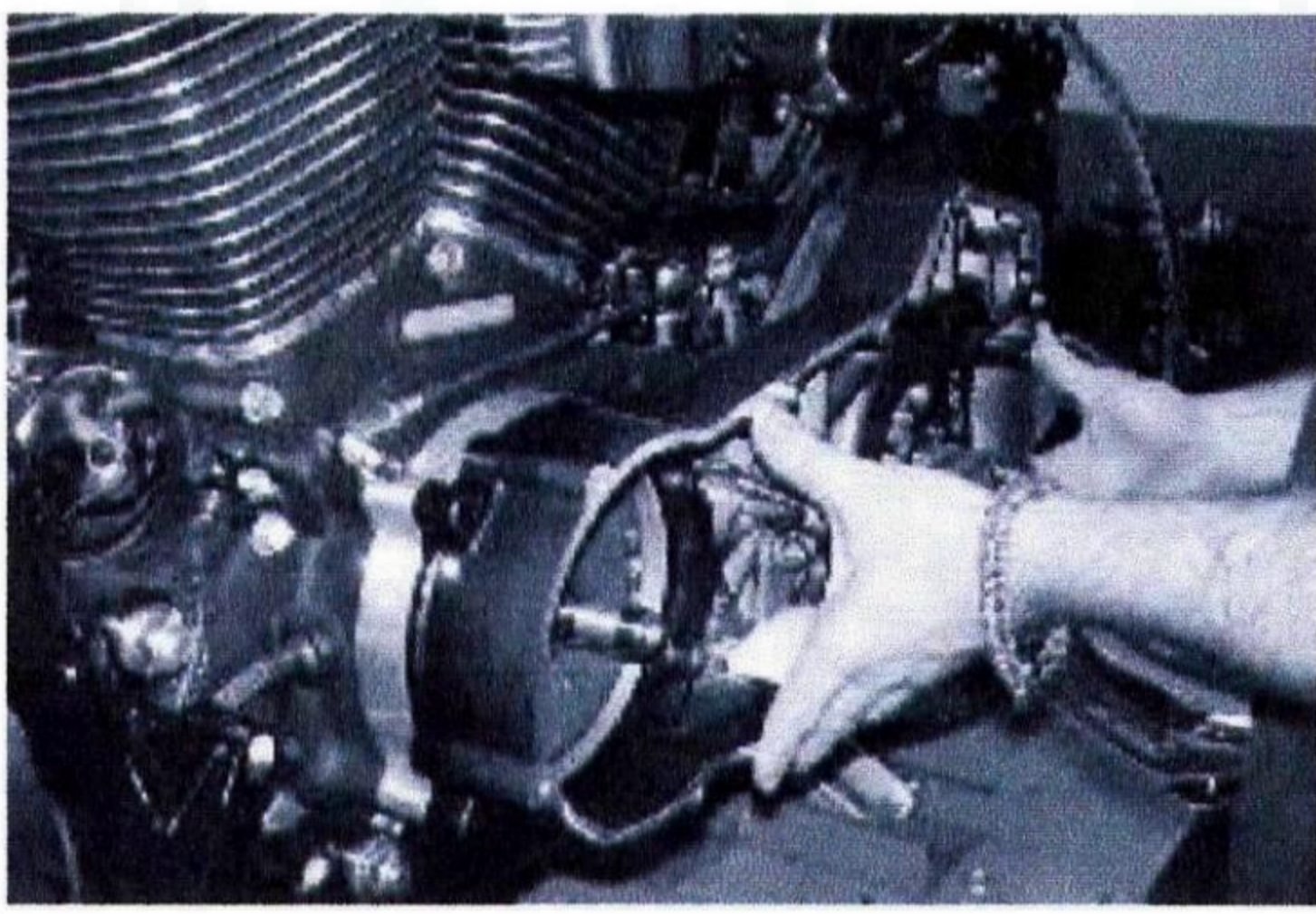
- 2) Install locating dowel in Trans/Primary upper spacer.

- 3) Place spacer onto transmission

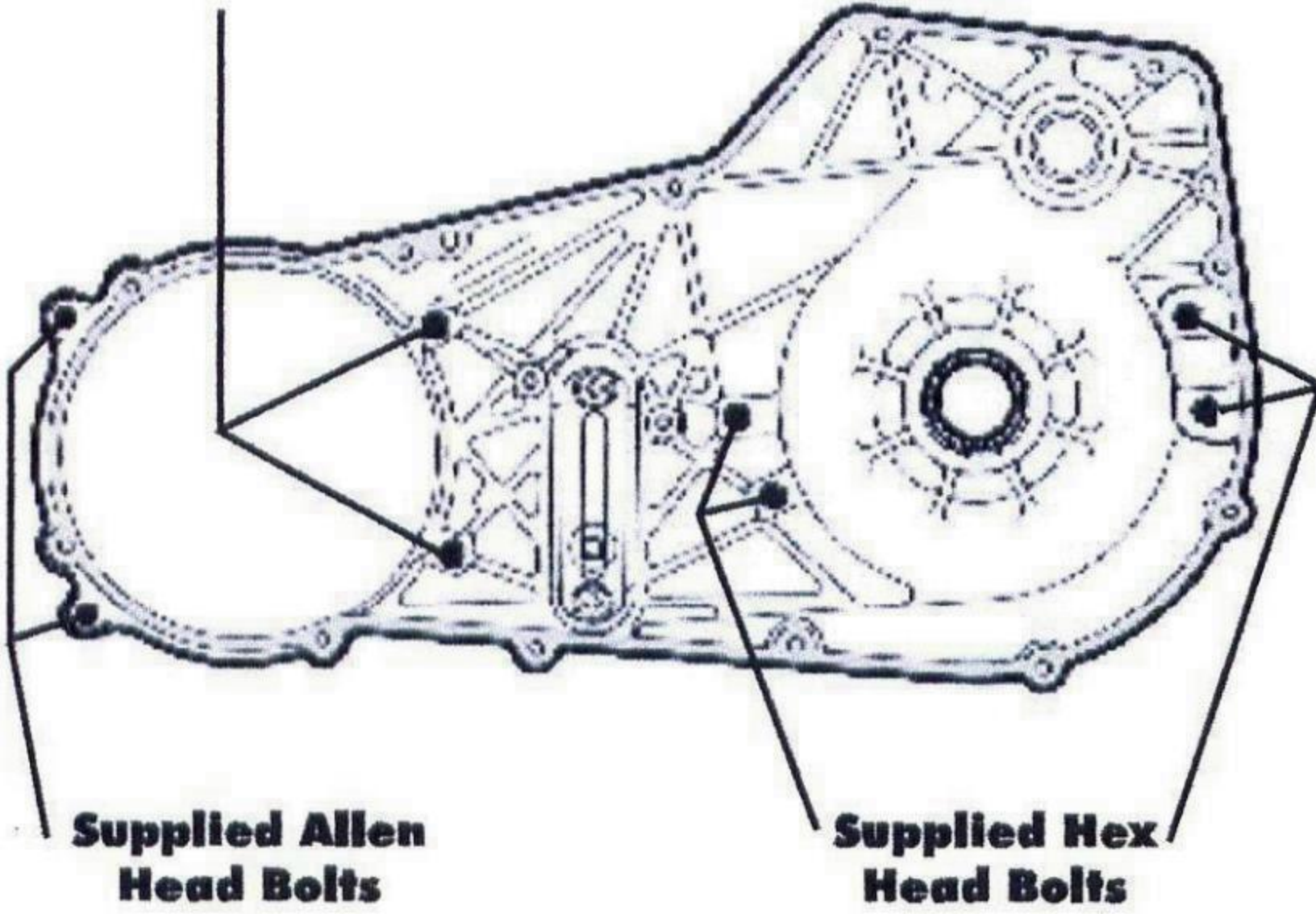
- 4) Locate stock trans/engine bolts and select two bolts. **These will now be used as motor/primary bolts.**

- 5) Confirm that drive belt is placed over transmission pulley.





**Stock Trans/Primary Bolts
Now used for Motor/Primary**



Re-Install Primary (continued)

6) Place inner primary over spacers and install supplied socket head cap screws on outside of primary. Use OEM trans/primary bolts and lock tabs on inside of primary (do not tighten bolts at this point).

7) Install 4 lower Trans/Primary spacers as shown in using supplied bolts and stock lock tabs.

8) Torque all inner primary case bolts down to factory specs and bend up the lock tabs.

The Inner Primary is now successfully installed!

9) Install supplied circlip inside starter shaft extension

10) Install supplied starter shaft extension (Counter bore towards jack shaft) onto starter.

11) Install starter motor using 5/16" x 2 3/4" bolts.

12) Install jackshaft assembly using supplied lock plate and bolt. See factory manual for detailed breakdown of jackshaft assembly. Torque jackshaft bolt to 7-9 ft-lbs and bend up locktab.

———— Note ————

13) Slide motor shaft extension onto engine output shaft. Using stock compensator assembly, install primary chain/compensator/clutch assembly to motor and trans. Use supplied extended compensator nut to retain compensator assembly. Reference harley manual for additional instructions and torque specs. Use threadlock and torque motor sprocket nut to 160 ft-lbs.

14) Install supplied clutch pushrod inside mainshaft and install release plate, retainer ring, adjuster screw and jam nut. Adjust clutch to factory specifications.

14) Adjust primary chain to factory specifications.

16) Using a new gasket (not supplied), install outer primary. Refill primary with fresh oil.

Remove Fender Struts

To accommodate the Kit, the OEM fender struts will have to be cut off of the frame. Cover all exposed motor parts to prevent contamination from metal chips. Remove the strut flush with the horizontal connector plate and grind smooth. We recommend painting the exposed metal to prevent corrosion.

*Fit Supplied Billet Fender Struts to frame to check fitment.
Remove additional material if necessary*

Final Re-Assembly

Re-install oil tank, oil lines and related parts. Fill oil tank and motor with factory prescribed amount of oil. (99 and earlier shown)

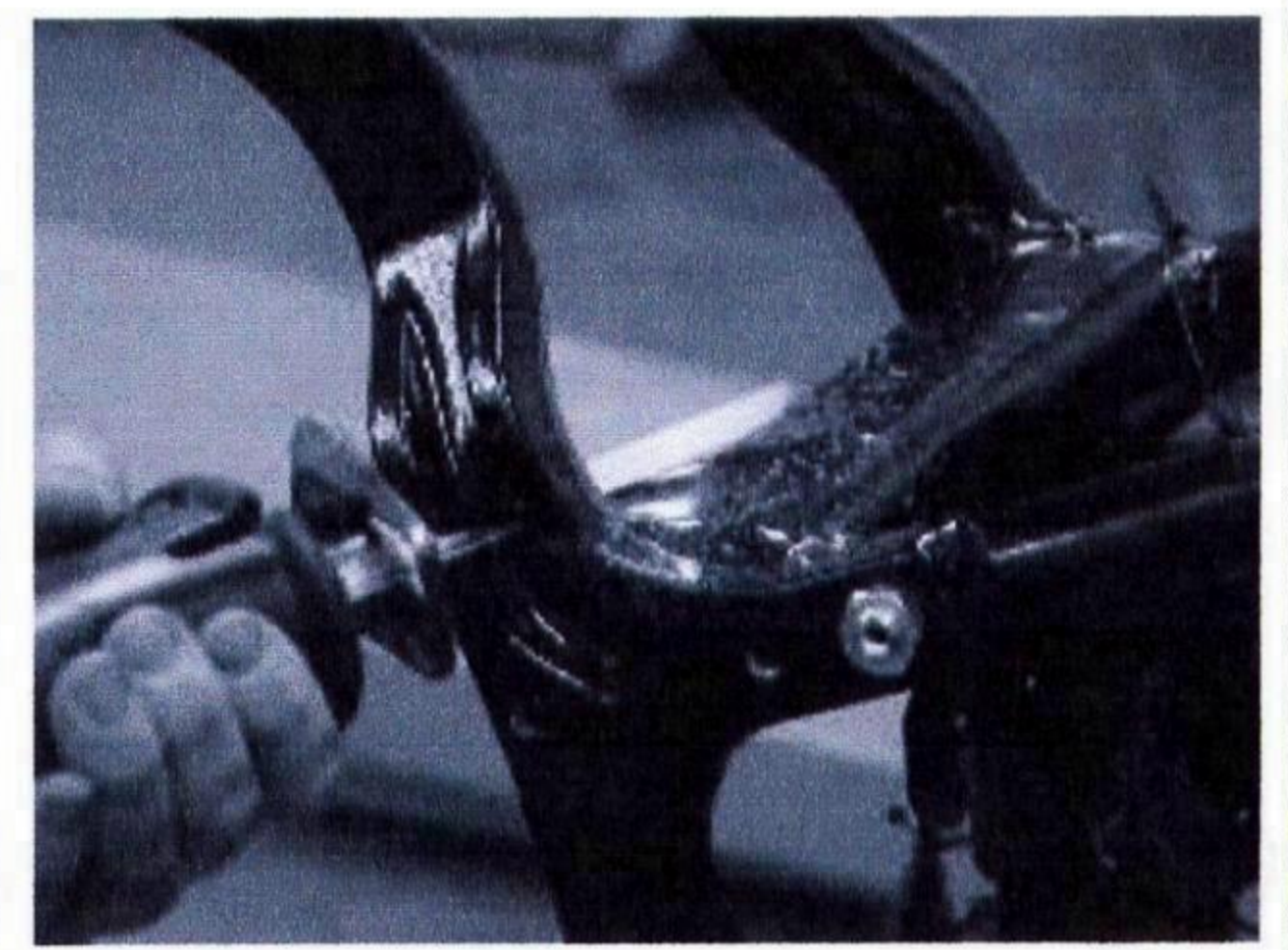
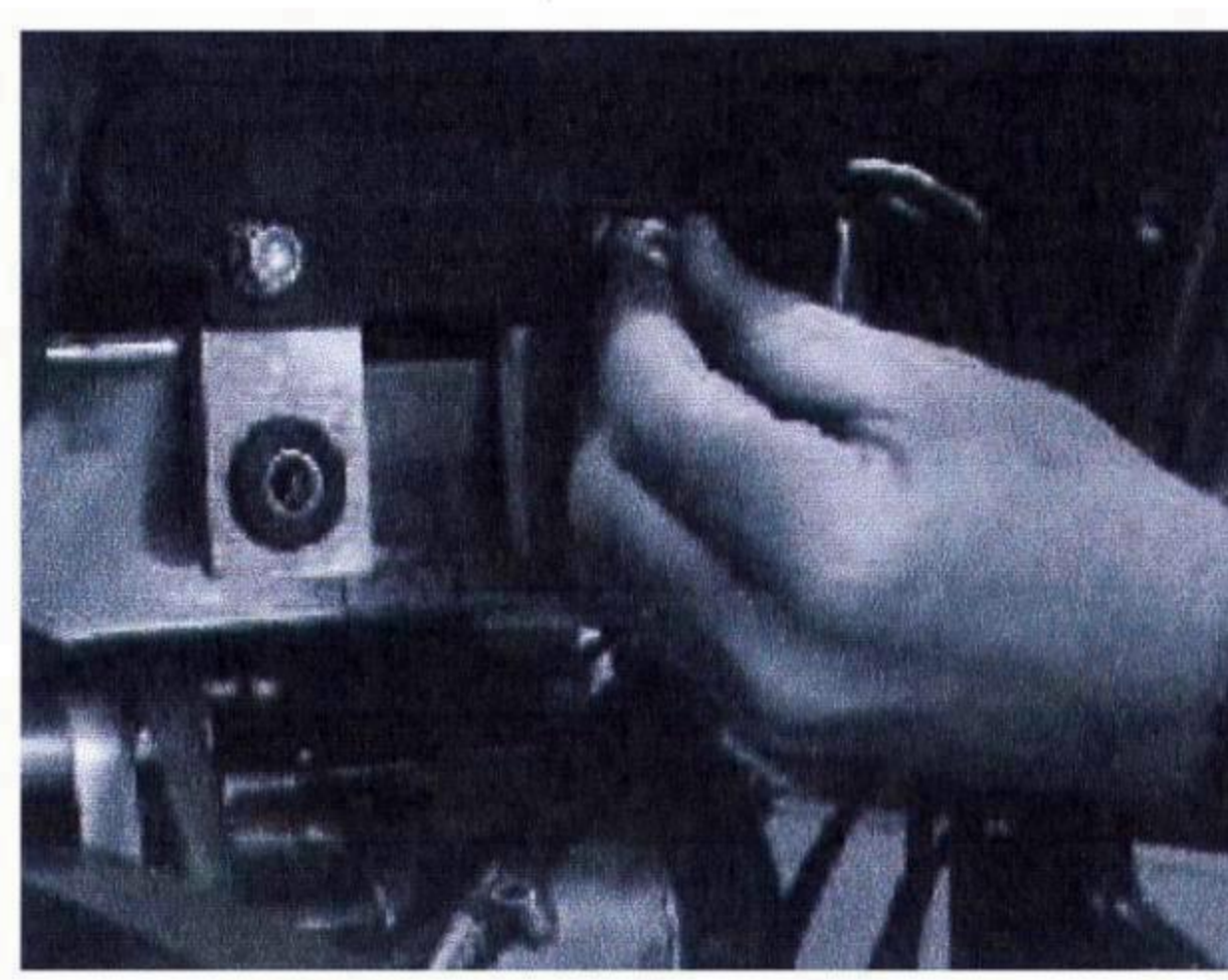
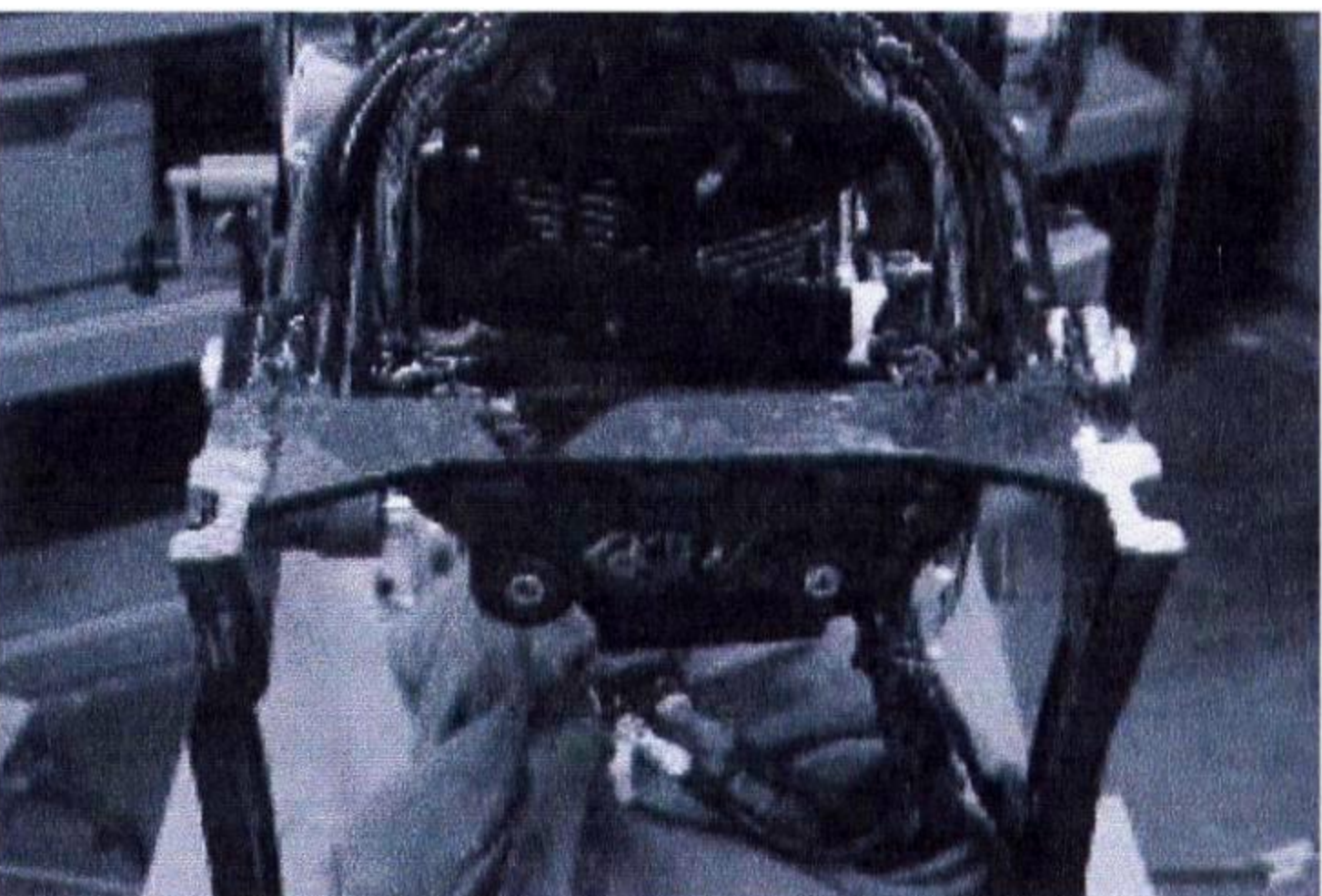
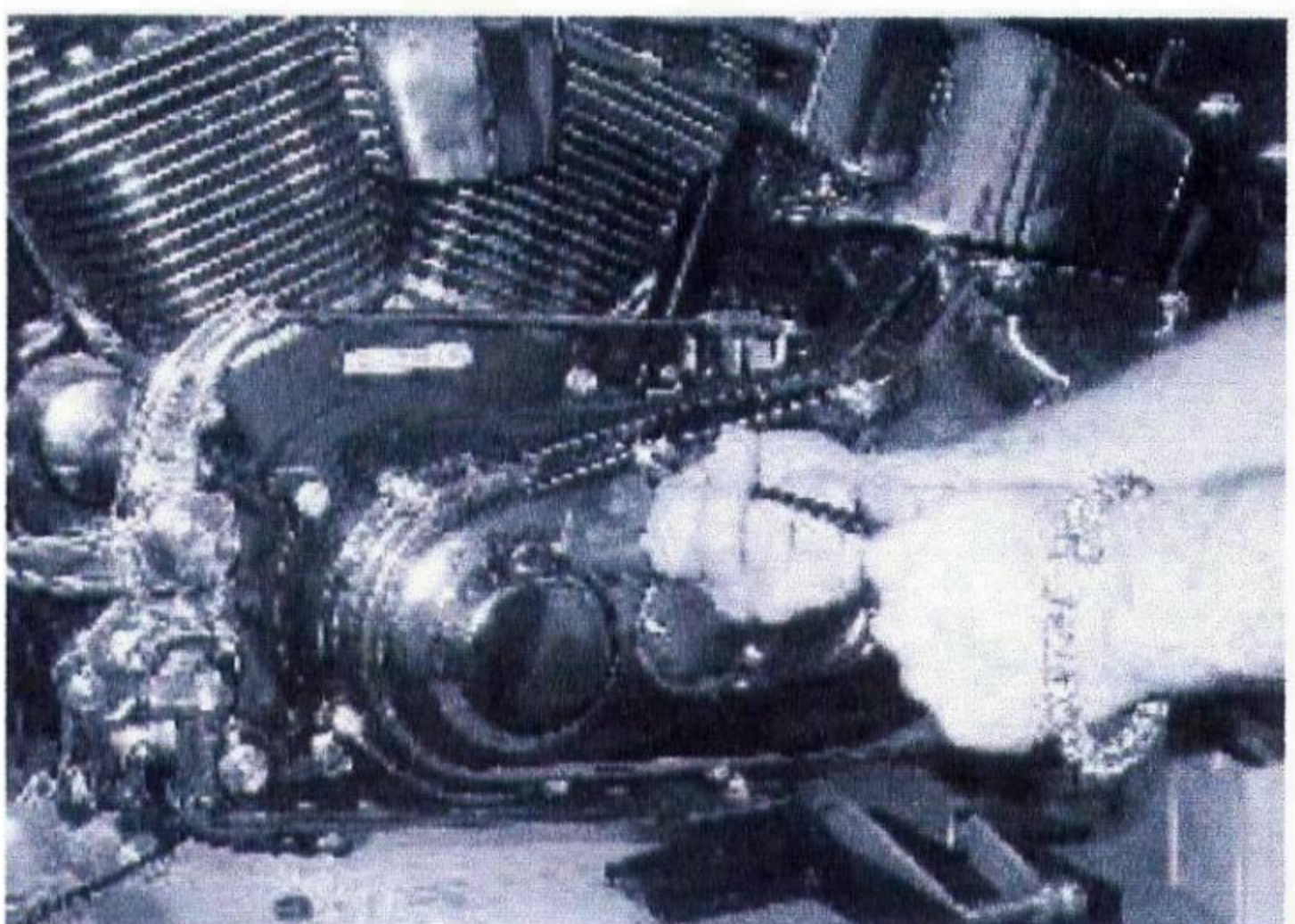
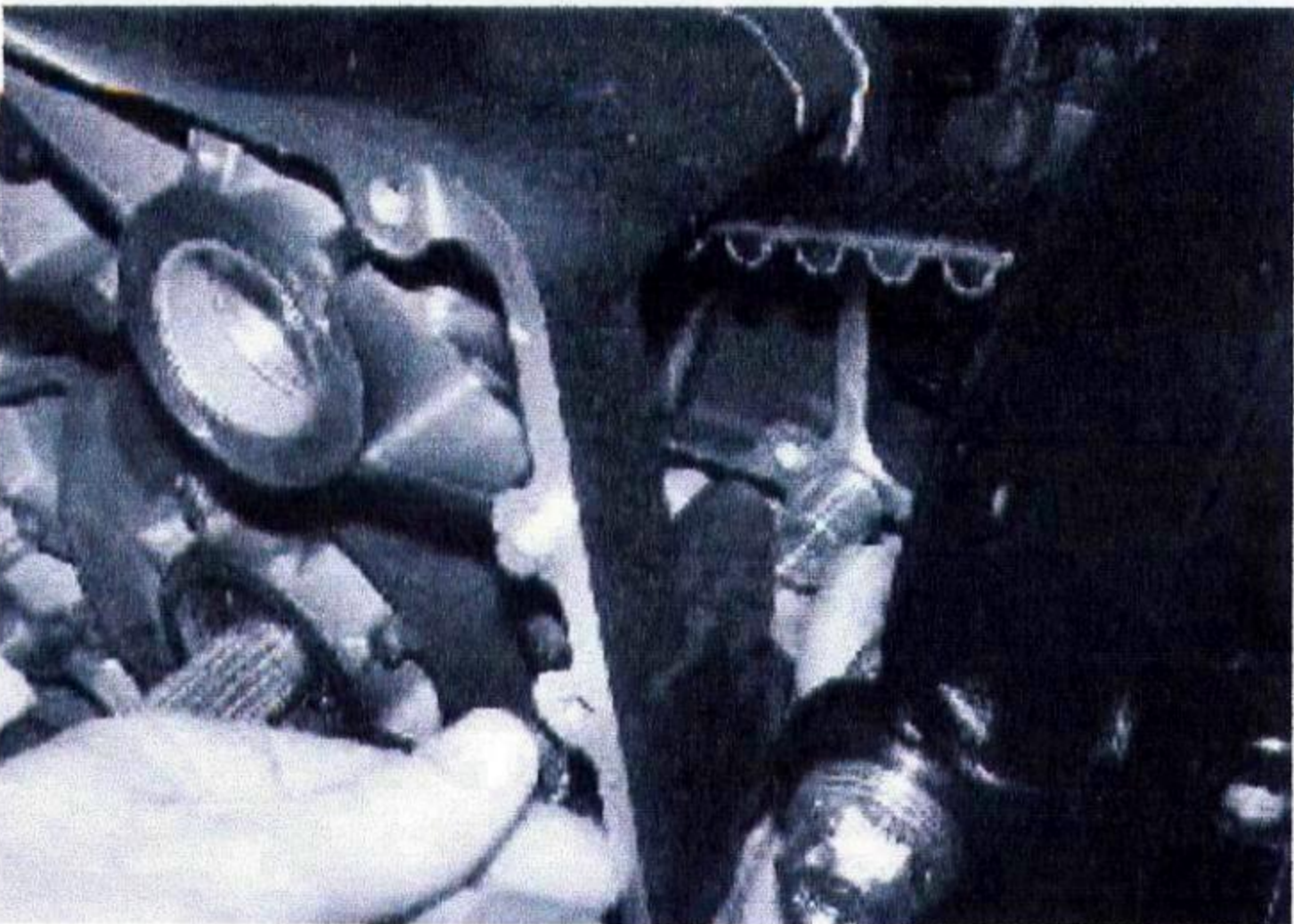
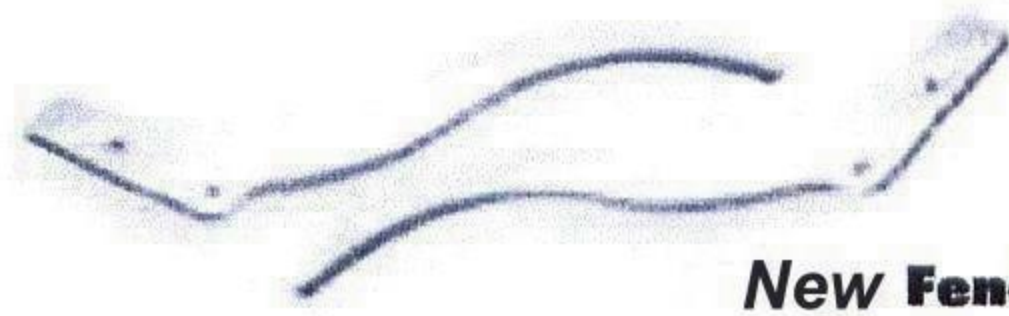
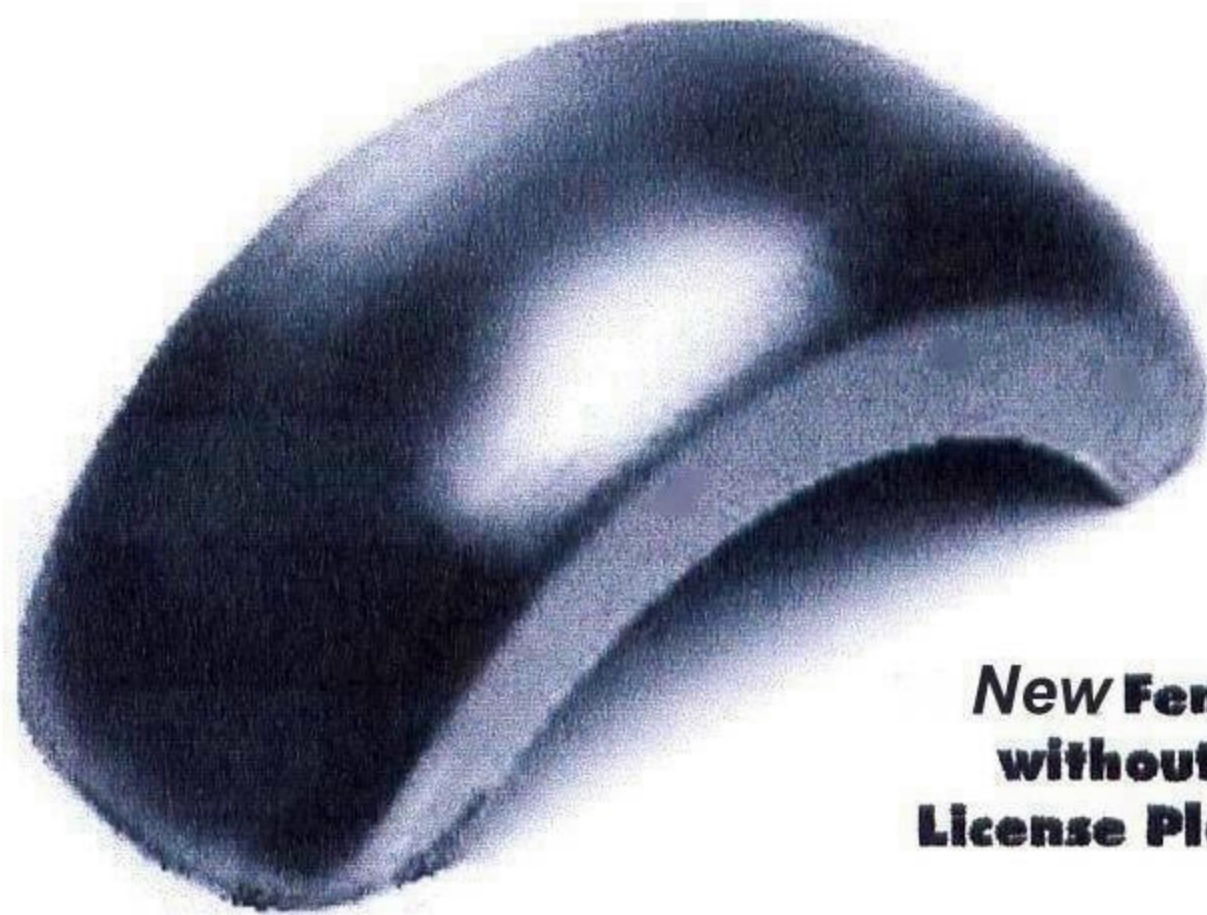




Photo 29



New Fender Struts



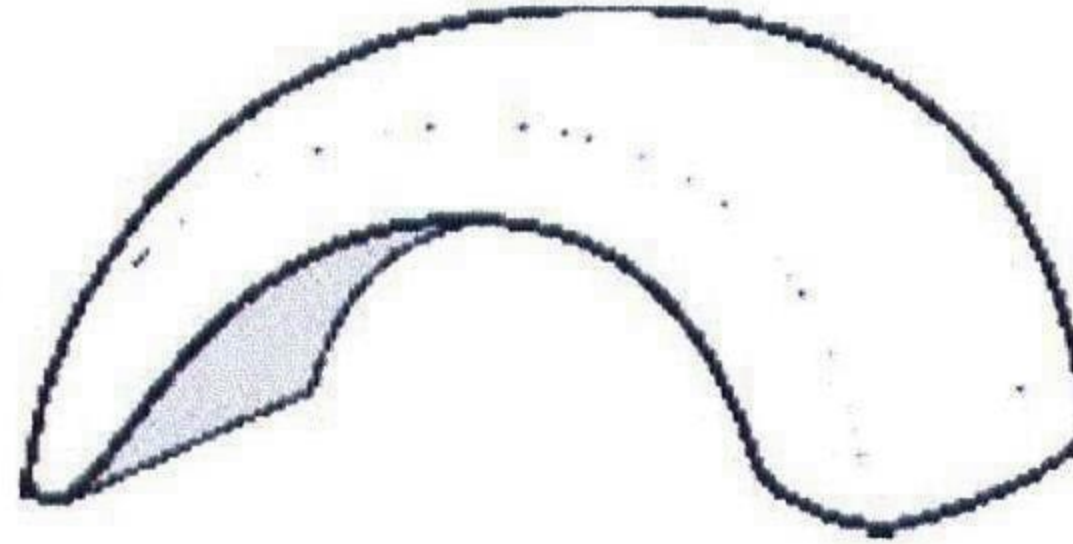
New Fender without License Plate

Install Rear Fender & Struts

Install supplied strut studs into frame (apply drop of Threadlock). Note step stud is NOT used for Duece frames. Install Supplied fender struts with acorn nuts. Install fender bolts (3/8" 16 x 3/4" button head with washer) from inside fender. Will not be accessible once wheel is mounted.

———— Note ————

Stock rear lights and license plate will not bolt directly to new fender. Will require custom fabrication or use of new fender with integrated light and license plate frame.



Drill holes in fender for ignition module (fit seat for proper clearance, before mounting ignition module)

We recommends any changes or modification to rear fender be done at this point, as fender can not be removed without removing rear wheel as well. Always test fit fender before painting.

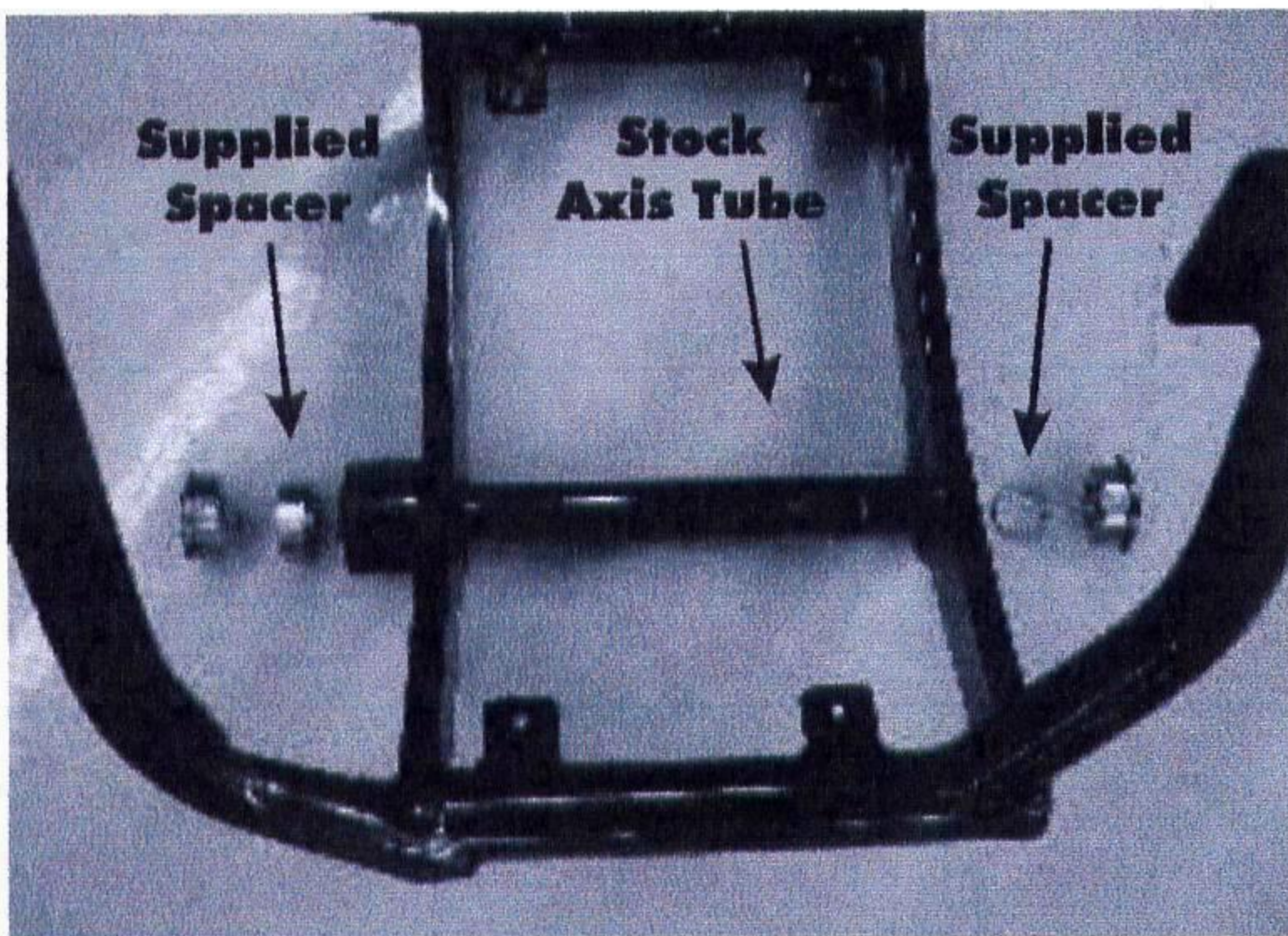
Install supplied splashguard into swingarm.

This is a good time to test fit your exhaust system, as some full length systems sill interfere with the wider Swingarm.

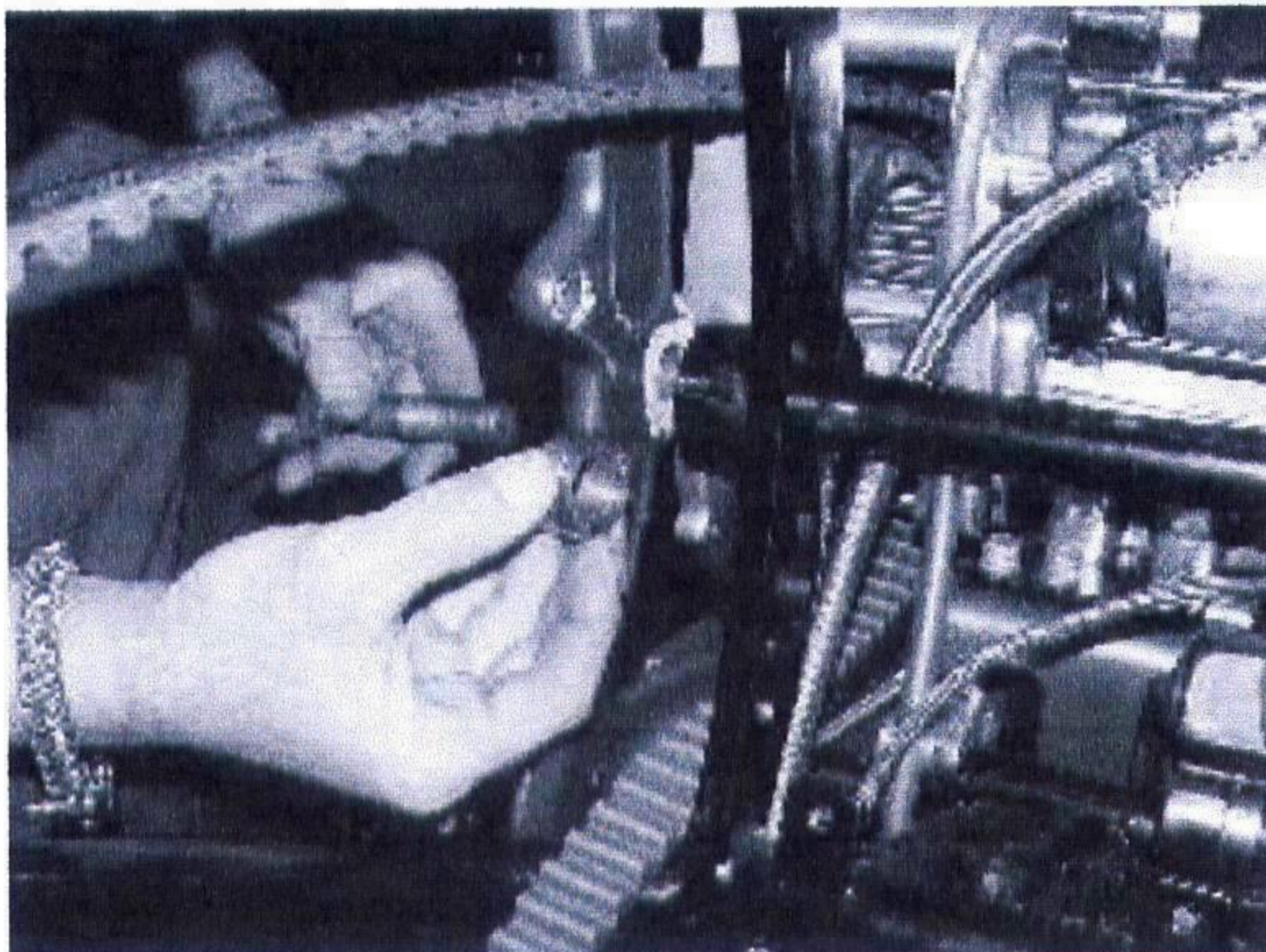
Install wide tire Swingarm (1991-99 Models)

The Kit for 1991-1999 Softails includes 2 swingarm spacers that are used in addition to the OEM Axis Tube.

- 1) Remove bearings and axis tube from stock swingarm and install in *new* swingarm from the outside on both bearings. (Axis tube MUST be in place before bearings are installed).
- 2) Locate swingarm into frame
- 3) Using stock pivot bolt and lockwasher, capture large spacer between chassis and swingarm on left side.
- 4) Place thin spacer between axis tube and bearing on right side.
- 5) Install stock pivot bolt and lockwasher on right side.
- 6) Tighten swingarm pivot bolts to factory specs.

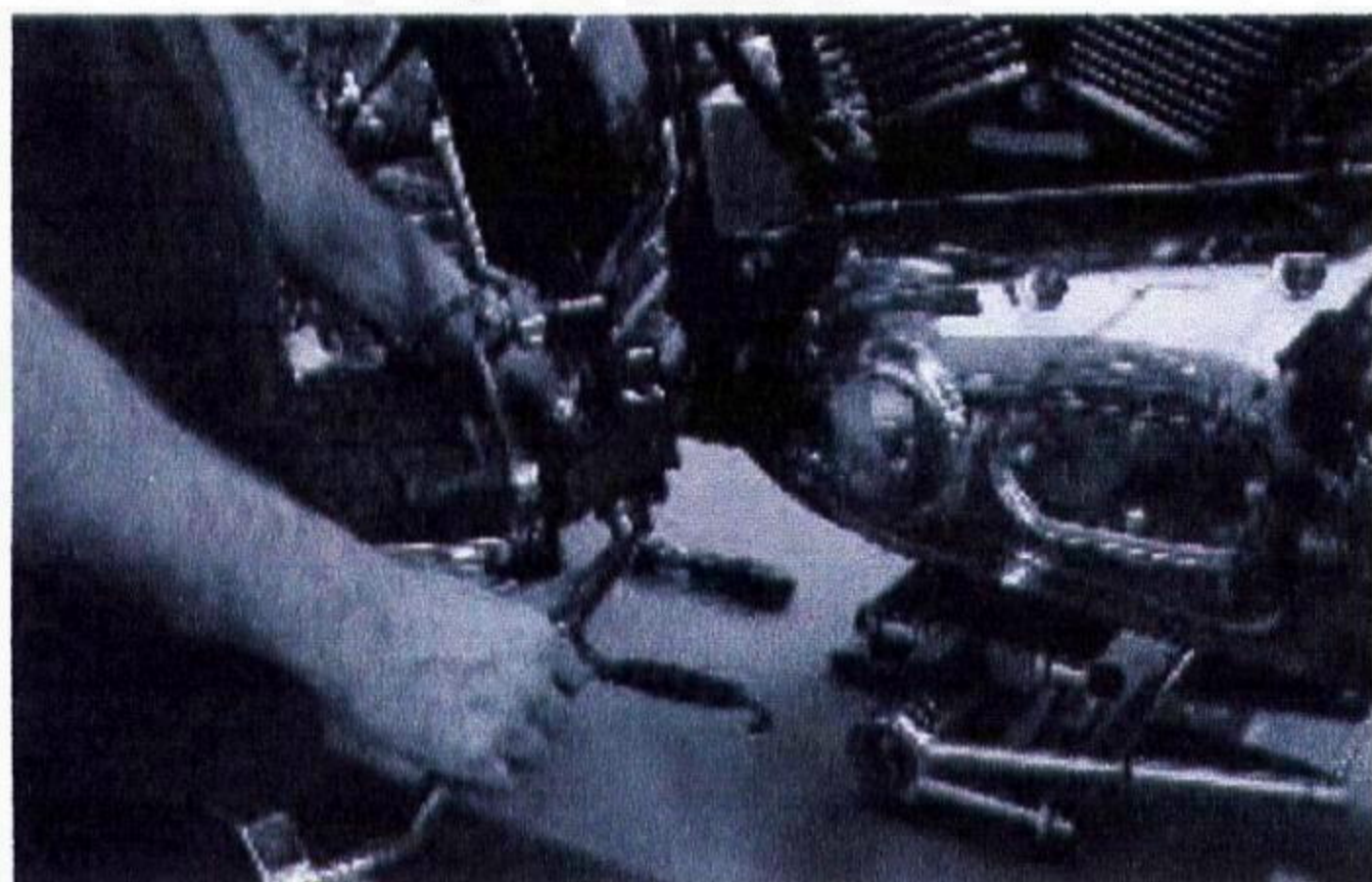


(As viewed from rear of swingarm)



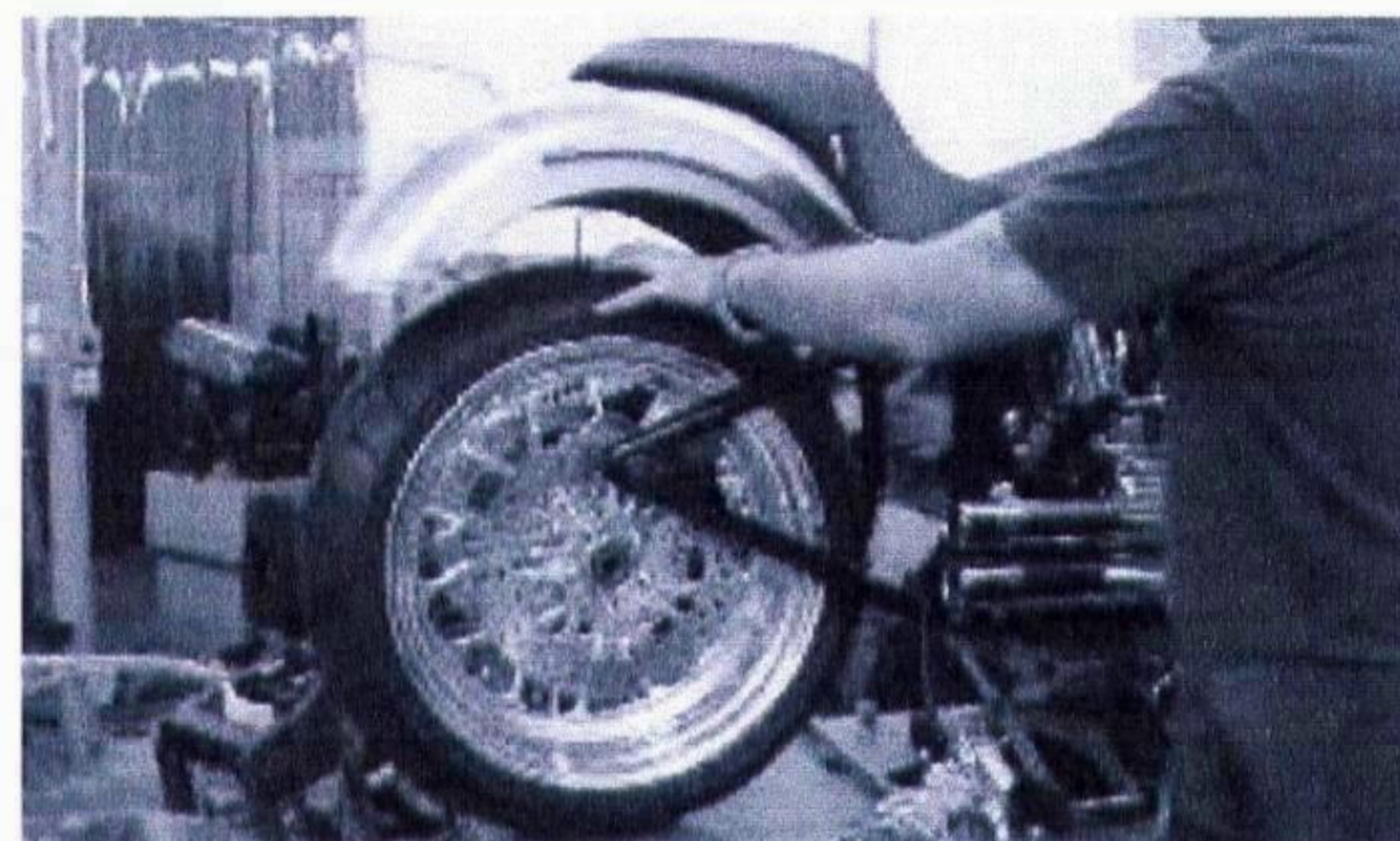
———— Note ————

Although lowering the suspension is not necessary, the Fender contour is best suited to a 1" lowered rear end.



Install Floorboards

Included with the Kit is a floorboard spacer plate and hardware. With the primary moved over 1" the foot control will have to be moved to regain clearance and properly align shift linkage. Spacer will work with stock floorboards as well as aftermarket forward controls. Mount floorboard assembly to frame, capturing supplied spacer between floorboard bracket and mounting plate on frame. Use supplied allen head screws and a drop of Threadlock, tighten to factory specs. Install Shift linkage and adjust if necessary.



Install Rear Brake & Wheel

Attach brake line to brake caliper (stock line can be used in most cases). Some brake systems require the caliper be bled off of the bike (do this now). for additional information covering brakes, see separate instruction sheet included with caliper.

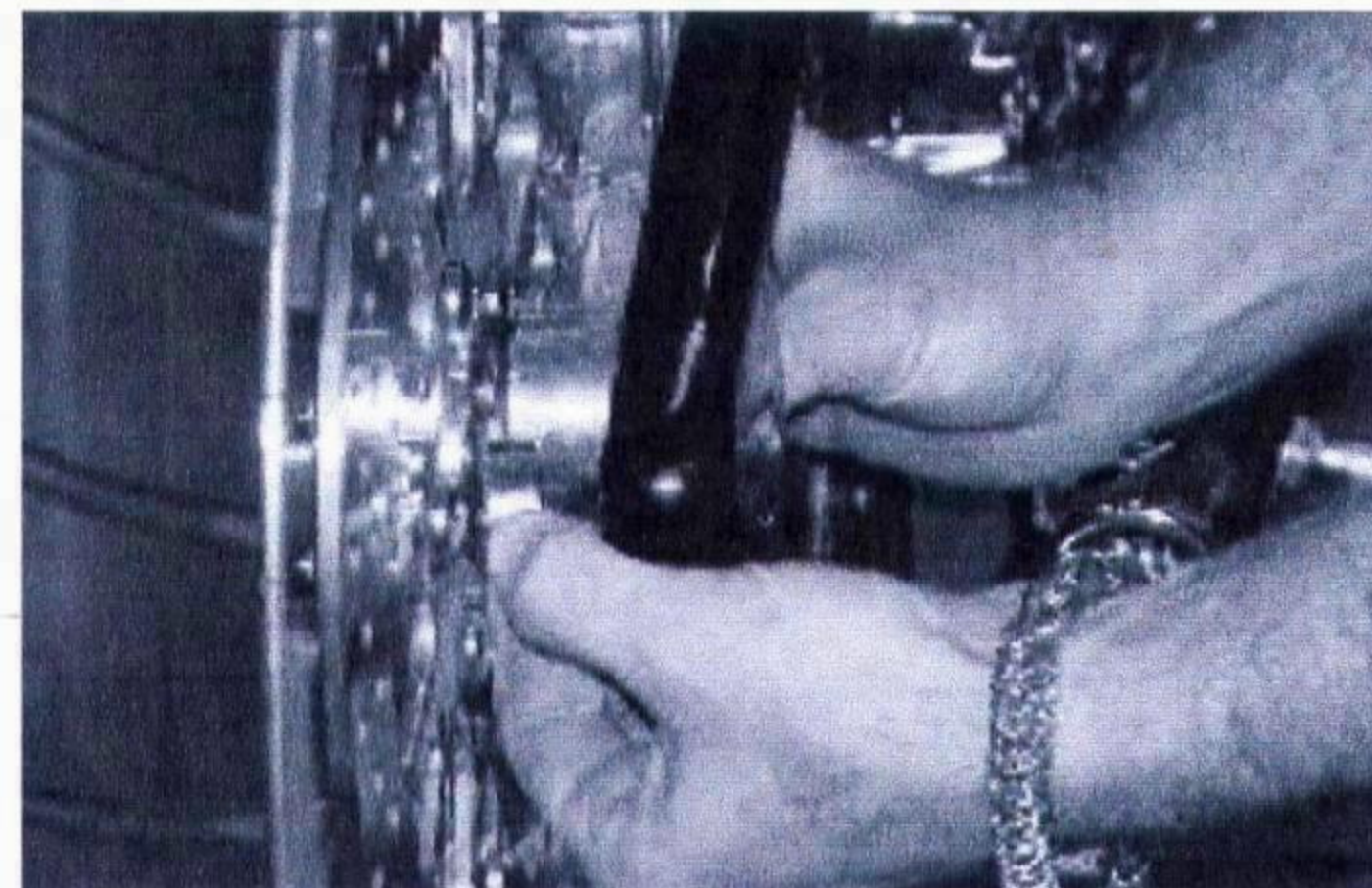
Raise rear of bike high enough to allow rear wheel to slide under. Locate wheel and slide drive belt over pulley.

Lower bike until swingarm axle holes line up with wheel. Before locating caliper bracket, wheel spacers

(*not supplied*) must be installed.

On right side, insert wheel spacer against wheel bearing and slide caliper bracket between spacer and swingarm.

All 1991-99 Softails will require a 2000 or newer rear brake system.



Install Rear Brake & Wheel (continued)

Install supplied axle (coat axle with thin layer of grease) and insert into swingarm from left side of bike. Do not force axle, slight movement of wheel and spacers will aid in axle insertion. Install supplied star washer and nut. Using allen head wrench, align wheel and adjust belt tension to factory specifications and torque axle to 60-65 ft-lbs.

Install supplied axle caps on both sides of swingarm.

Re-install exhaust system.

Stand back and gloat over a successful conversion as well as having one of the wildest HD framed custom bikes in your neck of the woods!

Exceeding 65ft. Lbs will damage wheel bearings.

After installing the Kit we strongly encourage you to do a systems check of your bike.

1. While bike is still on a stand, slowly rotate wheels watching for any potential interference (disc to caliper, caliper to wheel, wheel to fender).

2. After properly bleeding brakes, lever or pedal feel should be firm and consistent.

3. Test at slow speeds, checking brakes in short intervals. Visually inspect disc, caliper and wheel before and after road testing. For the first 100 miles break in disc and pads by using light to medium braking. Avoid unnecessary hard braking. Braking power will progressively increase with less effort as brake pads and disc break in.

