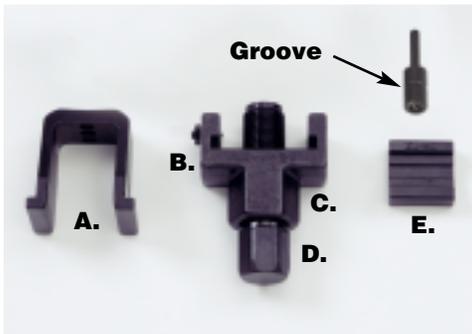




# CHAIN INSTALLATION AND MAINTENANCE INSTRUCTIONS



## Cutting & Riveting Instructions for D.I.D KM500R\* and KM501E\* tools

- A. U-shaped holder
- B. Tool body
- C. Hexagon part of tool body
- D. Bolt head
- E. Plate holder
- F. Cutting pin (with groove)\*

\* All of the KM500R tools are equipped with the KM500R Cutting pins which are required to rivet 525ZVM-X and 530ZVM-X chains. If you are using the older KM500 or the KM501E tools you need to upgrade to the new KM500R pins in order to rivet 525ZVM-X & 530ZVM-X chains. The KM500R pins are compatible with KM500 and KM501E tools. The KM500R pins have a groove around the larger diameter portion of the pins.



### KM500R PROFESSIONAL

Forged Steel Tool Designed for heavy volume dealer use



### KM501E SPORT

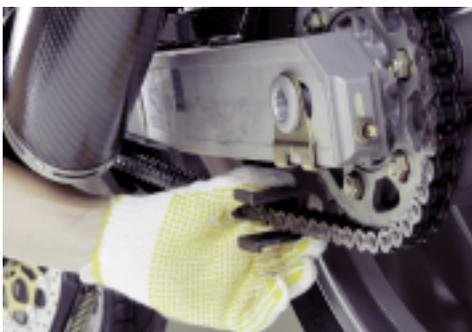
Machined Steel Tool Designed for moderate rider use

These unique tools are designed to cut chain, press fit connecting link side plates, and rivet pin heads. These tools are for use with D.I.D's ZJ rivet connecting link only.

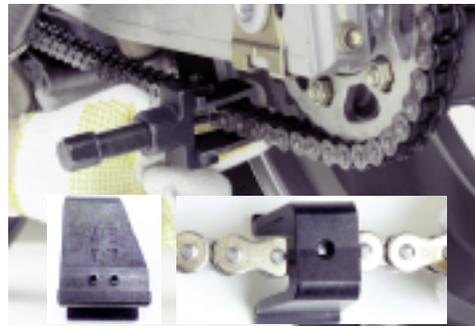
The KM500R and KM501E tools may be used to cut any 520, 525, 50(530) or 532 chains. They may also be used to press side plates on to FJ press fit clip type connecting links.

If your motorcycle came with an endless type chain, it is strongly recommend that you use a ZJ rivet type connecting link when replacing your chain. Also for sealed chains, you are strongly recommended to use ZJ connecting links. The operation of cutting, pressing and riveting work with the KM500R or KM501E tools must be performed with complete adherence to the instructions.

## Chain Cutting



**1a.** Before cutting your chain, loosen it using your motorcycle's rear wheel adjusters. Position your KM500R or KM501E over your chain on the bottom side of your swingarm; cut the pin on the right side of the link you choose first. If your chain has a master link, it is easier to cut the chain at the master link.



**2a.** Set the Cutting pin location on your chain tool's U-shaped holder to the point **A** position.



**3a.** To align the tool's Cutting pin with the chosen pin head, turn the tool's large bolt head clockwise "by hand" until the Cutting pin comes in contact with the pin head. At this point, make sure that the cutting pin is lined up with the center of the pin you wish to push out.



**4a.** Use a 27mm closed in wrench to hold firm the body of your chain tool while using a closed end 19mm wrench on the tool's hexagon bolt head to tighten. It will be easier to tighten the bolt if you position your wrenches 30° apart.



**5a.** Turn 19mm wrench clockwise on the tool's Hexagon bolt head to push the pin completely out.



**6a.** After pushing the pin out, disassemble the chain tool from the chain.

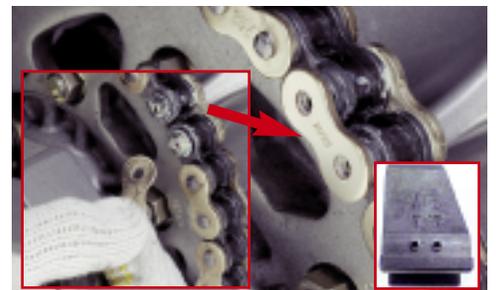
## Press Fitting Connecting Link Side Plates



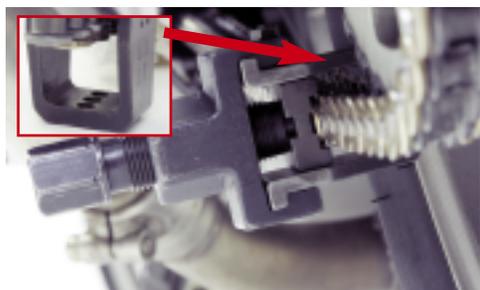
**7a.** Connect the new chain to the old chain using either a wire or connecting link. Shift transmission into neutral and slowly pull the old chain from under the swingarm toward the rear which then pulls the new chain from the top towards the countershaft sprocket. When new chain goes completely around the front sprocket and out under the swingarm, disconnect the old chain and pull both ends together under the center of the swingarm.



**8a.** Before installing the connecting link, be sure to put a **heavy coat** of the supplied grease into the holes of the bushings of the new chains' links, and on the surface of the connecting link's pins. If you are installing an O-Ring or X-Ring chain, don't forget to put **heavily greased** O-Rings or X-Rings on the pins between the sideplates on both sides of the chain.



**9a.** With the inside of the connecting link pushed into place holding the chain together with the pins sticking out the outside of the chain, slide the O-Rings/X-Rings into place and temporarily press the other side plate on the pins by hand. Set the Cutting pin location on your chain tool's U-shaped holder to the point **A** position.



**10a.** Slide the U-shaped portion of the tool over the inside of the connecting link. Carefully line up the dimples on the inside of the U-shaped holder with the pin heads of the connecting link. The Cutting pin also needs to be flipped over to where the rivet side is pointed out. Fit the Tool body together and position the Plate holder onto the sideplate that needs to be pressed on. (For FJ clip type links, flip Plate holder over.) Slide the pin's riveting side into the Plate holder and slide the pin side into the inside of the tool.



**11a.** Hold the hexagon part of the tool body with a 27mm closed end wrench and turn the bolt with a 19mm closed in wrench clockwise until the top of the pins make contact with the groove in the Plate holder.



**12a.** After pressing the sideplate on, disassemble the chain tool and remove it from the chain. The next step is to flare out the pins heads for ZJ (Rivet type) or installing the slide clip for the FJ (Cliptype) master link.

# Riveting ZJ Connecting Link Pin Heads



**13a.** Position the U-shaped holder as seen above.

**13b.** For clip type (FJ) install the open end of the clip so that it faces in the opposite direction of the chain drive direction.



**14a.** Set aside the Plate Holder and set the pin on the tool body to the **B** position to flare out the pin heads.



**15a.** Hold the hexagon part of the tool body by with a 27mm closed in wrench, and the bolt head with a 19mm closed end wrench; turn clockwise until the flare part of the pin head makes contact with the surface of the side plate.



**16a.** Example of proper flared pin head. If your pin heads are not flared to this extent, Realign chain tool and flare pin heads until they look like the above photo. If your pin heads have cracks or the connecting link is stiff when flexed, remove connecting link and install a new one.

## 16a. FLARE DIMENSIONS

0.213" to 0.220" .....520V

0.217" to 0.228" .....520ERV3

0.217" to 0.228" .....520ZVM2

0.217" to 0.228" .....525ZVM2

0.217" to 0.228" .....530ZVM2

0.217" to 0.228" .....520ZVM-X

0.217" to 0.228" .....520VM

0.217" to 0.228" .....525VM2

0.217" to 0.228" .....530VM

0.217" to 0.228" .....520ATV

0.217" to 0.228" .....520VT2

0.217" to 0.228" .....520NZ

0.217" to 0.228" .....525NZ

0.217" to 0.228" .....530NZ

0.224" to 0.236" .....\*525ZVM-X & 530ZVM-X

*\*Note: Make sure that the Cutting pin has a groove if you are riveting the 525ZVM-X or 530ZVM-X chains. These chains can not be riveted by the old Cutting pins.*



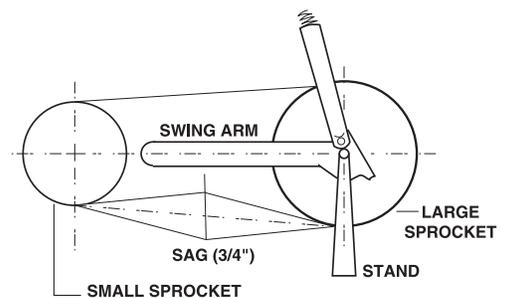
## SPROCKET ALIGNMENT

It is important to check sprockets for wear periodically. If wear occurs on the side of the teeth, it means there is misalignment, a condition which will result in greatly reduced chain life. Check sprocket alignment visually by sighting across them from the rear of the motorcycle or by placing a yard stick against them to see if they are in the same plane. Realign or replace as required. When new sprockets are installed, they should be carefully aligned on the shafts with a straight edge.

Misalignment increases drive noise level and also increases chain and sprocket wear. Chains operating on misaligned sprockets have a tendency to develop tight joints because sprocket teeth force the inside plates outward on the bushings, thus binding the joint.

## SAG ADJUSTMENT

A drive chain that is too tight speeds up wear by excessive pressure on the sprocket teeth, the chain joints and the shaft bearings. A chain that is too loose will wear quickly and may have a whip action that can cause it to snap. A chain that is too tight or too loose will result in excessive elongation. Normal sag (see diagram) is 3/4". To check, press down on the top strand of the drive chain with your fingers. Tighten or loosen to achieve 3/4".



# D.I.D Chain Cleaning and Lubrication Instruction Manual.

## Cleaning

To keep your chain in top condition it is recommended that you clean and lubricate your chain every 300 to 400 miles. Even O-Ring and X-Ring® chains require lubrication. Your O-Ring or X-Ring® chain is sealed with D.I.D's Specially Formulated Grease between the pins, bushings and seals only. Sealed chains require lubrication on the rollers and external parts to guard against corrosion, ozone damage and to extend the life of the chain's rubber seals. Never use volatile solvents to clean your chain and never soak your chain to clean it. It is recommended that you use a chain lube that is compatible with rubber O-Rings and X-Rings. O-Ring chains should be replaced after 10,000 miles while X-Ring® chains should be replaced after 20,000 miles.



**1a.** Items needed to clean your chain; chain cleaner, soft towel, tray and for Non-O-Ring chain ONLY a soft brush.



**2a.** Before applying chain cleaner, put a tray under the chain and hold a towel behind the chain to prevent overspraying. Put the motorcycle on stand to allow rotating the rear wheel. Spray on cleaner while rotating rear wheel by hand to clean the entire chain.



**3a.** For Non-O-Ring chain ONLY, you may brush away heavy dirt with a soft brush. Even a soft brush might damage O-Rings and X-rings, so please do NOT use a brush on sealed chains. And never use wire brush.



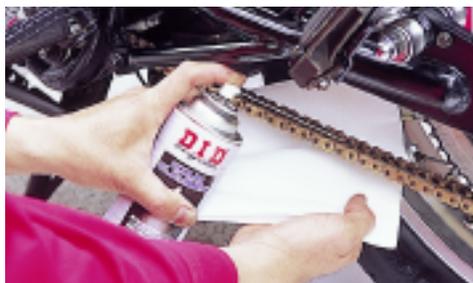
**4a.** After cleaning the chain, wipe the chain with a soft towel to remove any remaining dirt and chain cleaner. Rotate rear wheel by hand to clean the entire chain.



**5a.** Items needed to lubricate your chain; chain lube, soft towel and a tray.



**6a.** Shake the chain lube can a couple of times to mix up the ingredients.



**7a.** Before spraying on the chain lube, put a tray under the chain and hold a towel behind the chain to prevent overspraying on the motorcycle. Put the motorcycle on stand to allow rotating the rear wheel. When spraying on chain lube, keep the can nozzle a distance of between 2" to 4" away from the chain. While spraying, rotate the rear wheel by hand to coat the entire chain.



**8a.** After spraying on the chain lube, wipe the chain with a soft towel to remove excess chain lube. Rotate the rear wheel by hand and wipe the entire chain.

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