

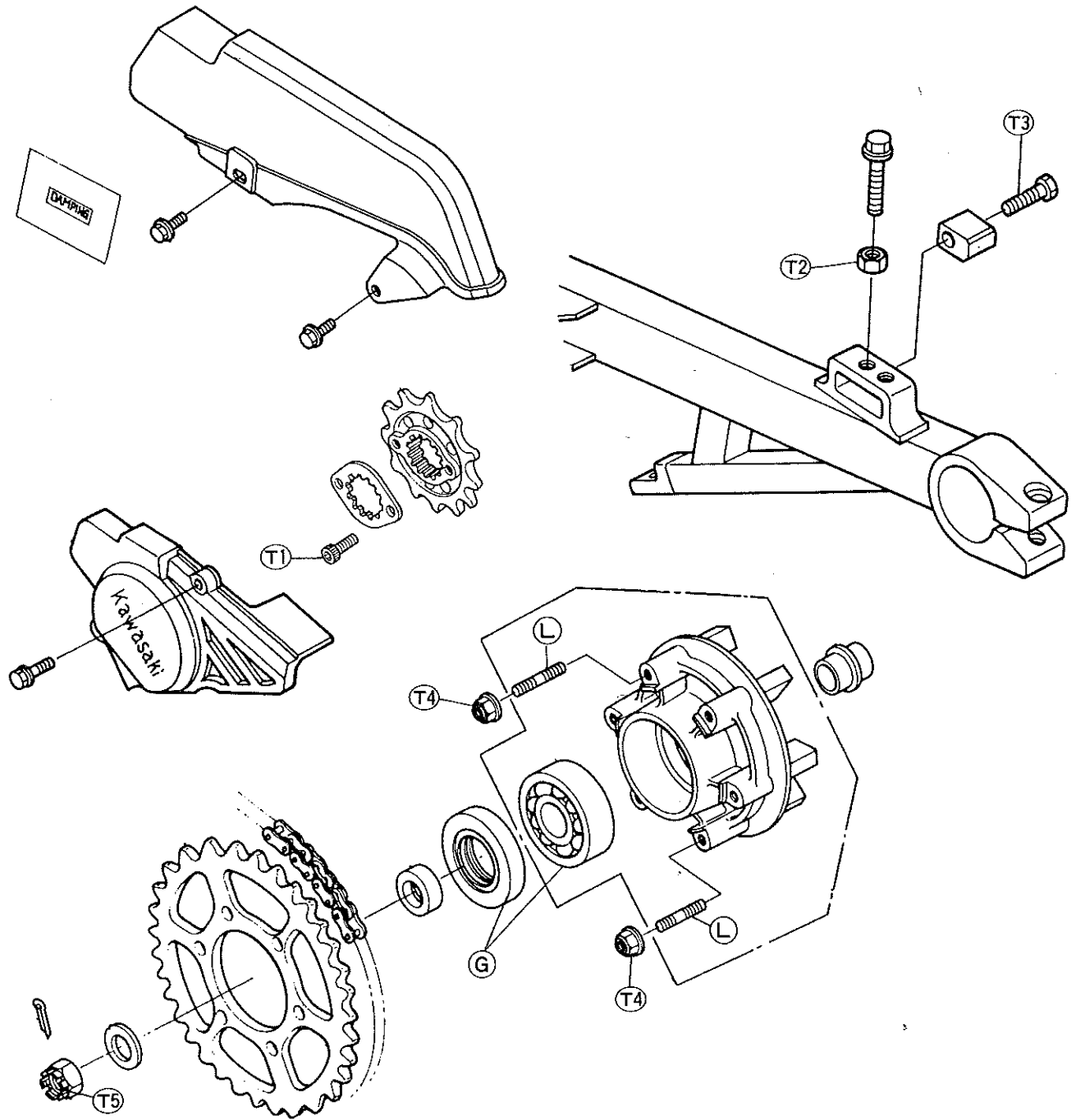
# Final Drive

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## 10-2 FINAL DRIVE

### Exploded View



- T1: 12 N-m (1.2 kg-m, 8.5 ft-lb)
- T2: 23 N-m (2.3 kg-m, 16.5 ft-lb)
- T3: 35 N-m (3.6 kg-m, 26 ft-lb)
- T4: 67 N-m (6.8 kg-m, 49 ft-lb)
- T5: 93 N-m (9.5 kg-m, 69 ft-lb)
- G : Apply grease to the internal surface.
- L : Apply a non-permanent locking agent.

.....  
Specifications  
.....

Item	Standard	Service Limit
Drive Chain: Make and type Chain slack: 20-link length	Enuma, EK520 HVDO 20 – 30 mm 317.0 – 317.7 mm	20 – 35 mm 323 mm

## 10-4 FINAL DRIVE

### Drive Chain

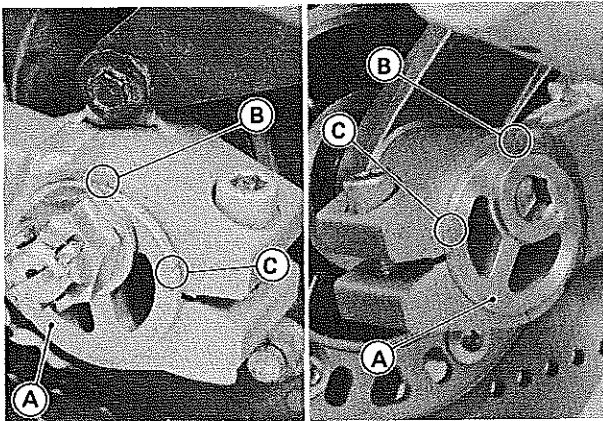
The drive chain must be checked, adjusted, and lubricated in accordance with the Periodic Maintenance Chart for safety and to prevent excessive wear. If the chain becomes badly worn or maladjusted — either too loose or too tight — the chain could jump off the sprocket or break.

#### WARNING

○A chain that breaks or jumps off the sprockets could snag on the engine sprocket or lock the rear wheel, severely damaging the motorcycle and causing it to go out of control.

#### Drive Chain Slack Inspection

- Set the motorcycle up on its side stand.
- Check to see if wheel alignment is properly adjusted. The left and right notches on the swing arm should point to the same marks or positions on the left and right chain adjusters. If they do not, adjust wheel alignment as described in the later paragraph—Wheel Alignment Adjustment.



A. Chain Adjusters  
B. Mark

C. Notch

#### NOTE

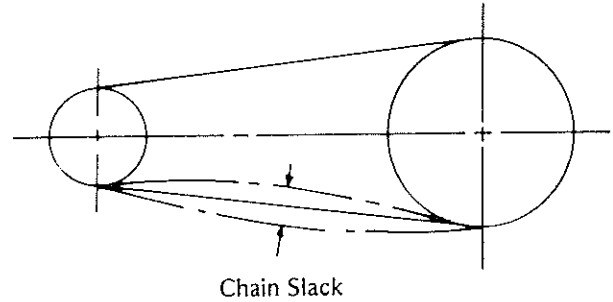
○Wheel alignment can also be checked using the straight-edge or string method.

#### WARNING

○Misalignment of the wheel will result in abnormal wear, and may result in an unsafe riding condition.

- Rotate the rear wheel to find the position where the chain is tightest, and measure the vertical movement midway between the sprockets.
- If the drive chain is too tight or too loose, adjust it so that the chain slack will be within the standard value.

#### Chain Slack Inspection

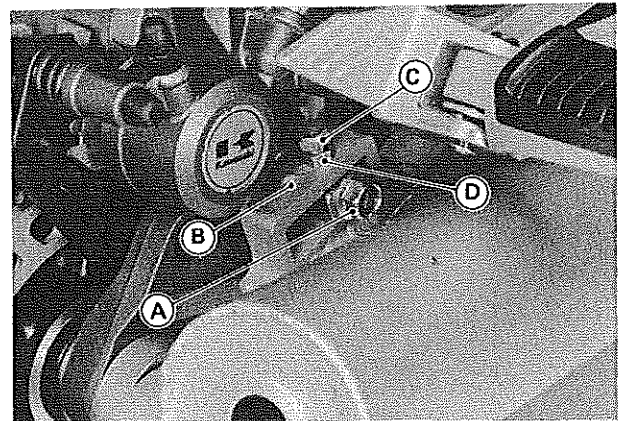


#### Drive Chain Slack

Standard:	20 – 30 mm
Too Tight:	Less than 20 mm
Too Loose:	More than 35 mm

#### Drive Chain Slack Adjustment

- Loosen the locknut and collar fixing bolt.
- Loosen the caliper fixing bolt.

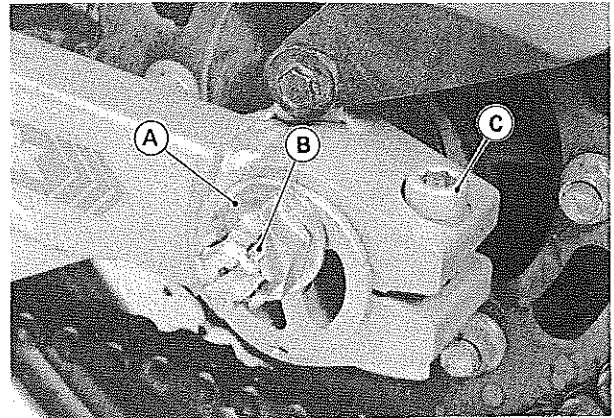
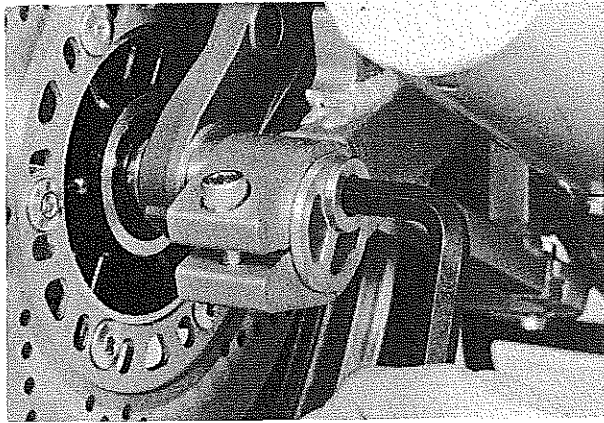


A. Caliper Fixing Bolt  
B. Tapped Hole

C. Collar Fixing Bolt  
D. Locknut

○Do not loosen the axle nut.

- Loosen the left and right chain adjuster clamp bolts.
- Turn the chain adjusters forward or rearward until the drive chain has the correct amount of chain slack.



A. Axle Nut  
B. Cotter Pin  
C. Clamp Bolt

- Tighten the chain adjuster clamp bolts to the specified torque.

**WARNING**

○If the clamp bolts are not securely tightened, an unsafe riding condition may result.

- Rotate the wheel, measure the chain slack again at the tightest position, and readjust if necessary.
- Tighten the caliper fixing bolt, collar fixing bolts and locknut securely.

**NOTE**

○After chain adjustment, check that the collar is under the collar fixing bolt. If it is not, move the fixing bolt to another hole in the swing arm.

- Check the rear brake effectiveness.

**Wheel Alignment Adjustment**

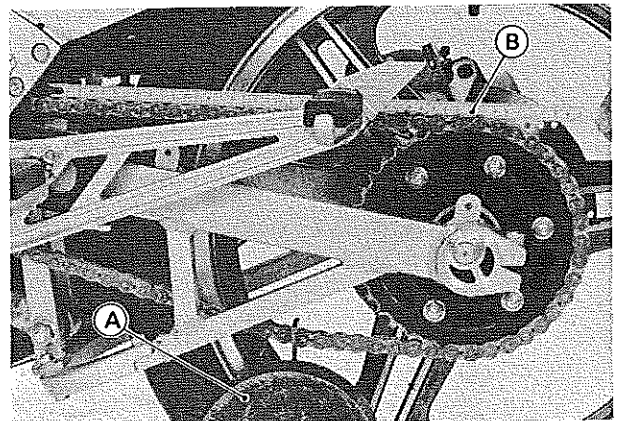
- ★If the wheel alignment is maladjusted, adjust it as follows.
- Remove the cotter pin from the axle nut, and loosen the nut.
- Loosen the collar and caliper fixing bolts.
- Loosen the left or right chain adjuster clamp bolt, and turn the chain adjuster so that the left and right notches on the swing arm point to the same marks or positions on the left and right adjusters.
- Inspect the chain slack.
- Tighten the collar and caliper fixing bolts.
- Tighten the clamp bolts and axle nut to the specified torque.
- Insert a new cotter pin through the axle nut, and spread its end.

**WARNING**

○If the axle nut and clamp bolts are not securely tightened, an unsafe riding condition may result.

**Drive Chain Wear Inspection**

- Rotate the rear wheel to inspect the drive chain for damaged rollers, and loose pins and links.
- Also inspect the sprockets for unevenly or excessively worn teeth, and damaged teeth.
- ★If there is any irregularity, replace the drive chain and both sprockets.
- Stretch the chain taut hanging a 98 N (10 kg, 20 lb) weight on the chain.
- Measure the length of 20 links on the straight part of the chain from pin center of the 1st pin to pin center of the 21st pin. Since the chain may wear unevenly, take measurements at several places.



A. Weight  
B. Measure

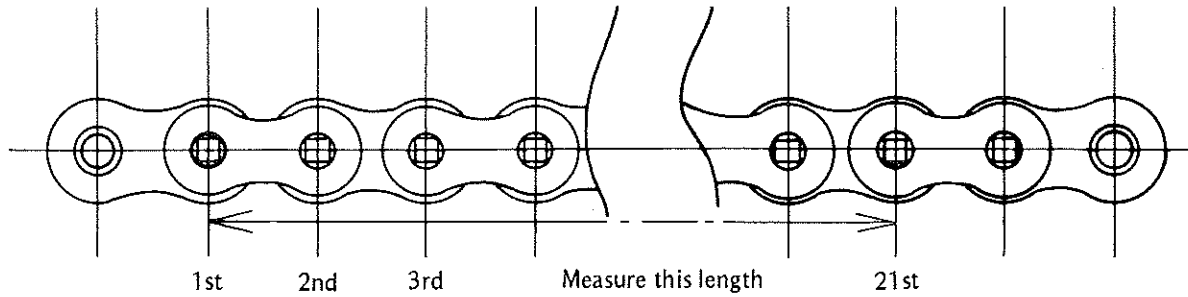
**Drive Chain 20 link Length**

Standard:	317.0 – 317.7 mm
Service Limit:	323 mm

- ★If any measurement exceeds the service limit, replace the chain. Also, replace the engine and rear sprockets when the drive chain is replaced.

## 10-6 FINAL DRIVE

### Drive Chain Length



### Drive Chain Lubrication

The chain should be lubricated with a lubricant which will both prevent the exterior from rusting and also absorb shock and reduce friction in the interior of the chain. An effective, good quality lubricant specially formulated for chains is best for regular chain lubrication.

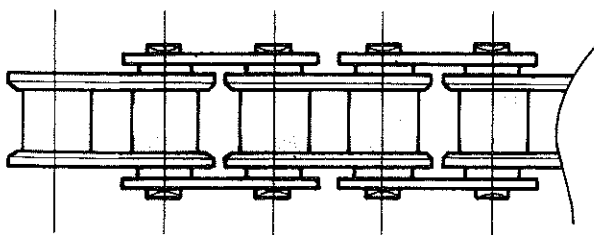
If special lubricant is not available, a heavy oil such as SAE 90 is preferred to a lighter oil because it will stay on the chain longer and provide better lubrication.

●If the chain appears especially dirty, it should be cleaned before lubrication.

### CAUTION

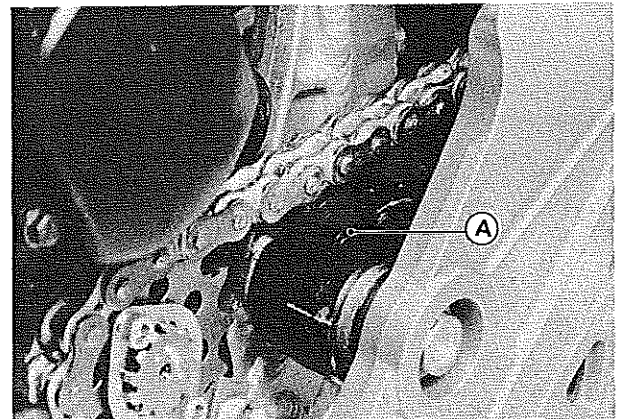
- The O-rings between the side plates seal in the lubricant between the pin and the bushing. To avoid damaging the O-rings and resultant loss of lubricant, observe the following rules.
- Use only kerosene or diesel oil for cleaning an O-ring drive chain. Any other cleaning solution such as gasoline or trichlorethylene will cause deterioration and swelling of the O-rings.
- Immediately blow the chain dry with compressed air after cleaning.
- Complete cleaning and drying the chain within 10 minutes.
  
- Apply oil to the sides of the rollers so that oil will penetrate to the rollers and bushings. Apply the oil to the O-rings so that the O-rings will be coated with oil.
- Wipe off any excess oil.

### Drive Chain



### Chain Guide Wear Inspection

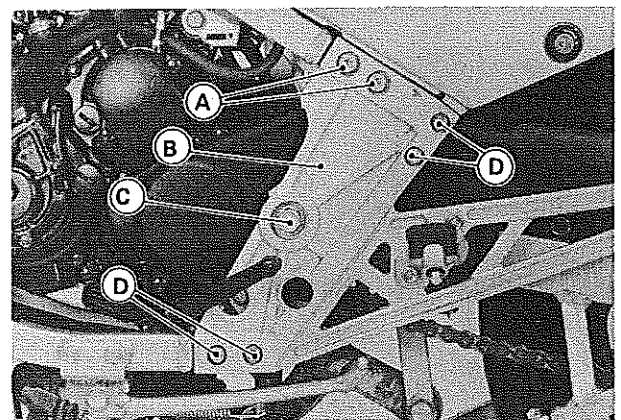
- Visually inspect the drive chain guide rubber.
- ★If the rubber protrusion is worn down halfway or more, or damaged, replace it.



A. Drive Chain Guide

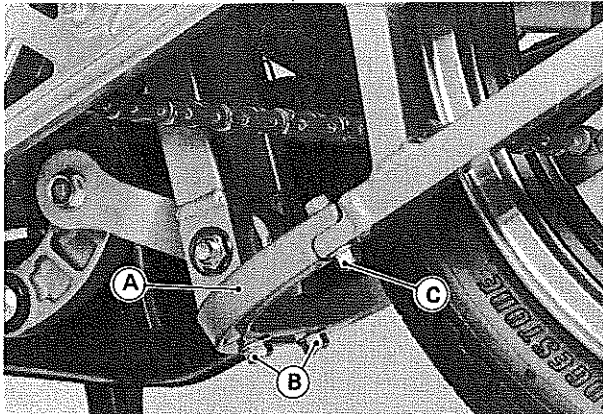
### Drive Chain Removal

- Remove the pivot shaft nut.
- Take off the left footpeg bracket by removing the mounting bolts and nuts.



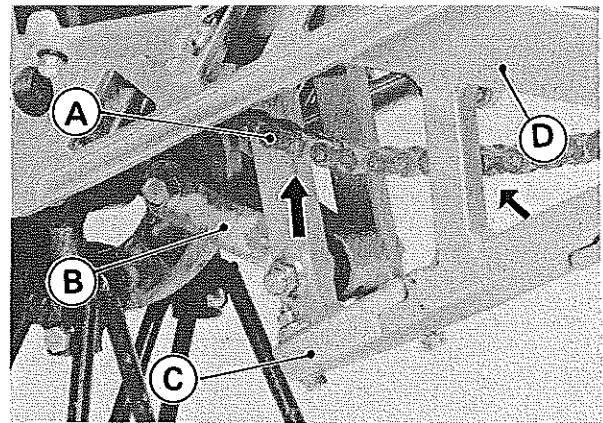
A. Bolts and Nuts  
B. Left Footpeg Bracket  
C. Pivot Shaft Nut  
D. Bolts

- Remove the drive chain cover.
- Remove the front muffler, and then the swing arm holder.



A. Swing Arm Holder  
 B. Holder Mounting Bolts  
 C. Holder Mounting Bolts and Nuts

- Turn the chain adjuster so that the chain is too loose.
- Remove the drive chain toward the left.



A. Drive Chain  
 B. Tie Rod  
 C. Swing Arm Holder  
 D. Swing Arm

- Adjust the chain slack.

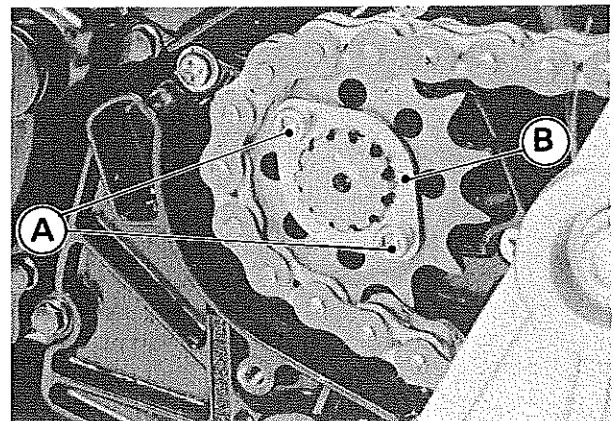
**WARNING**

- For safety, use only the standard chain. It is an endless type and should not be cut for installation.

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**Sprocket**  
 .....

*Engine Sprocket Removal*

- Remove the engine sprocket cover.
- Loosen the engine sprocket bolts.
- Loosen the locknut and caliper fixing bolt.
- Loosen the left and right chain adjuster clamp bolts.
- Turn the chain adjusters so that the chain is loose.



A. Sprocket Bolt  
 B. Holding Plate

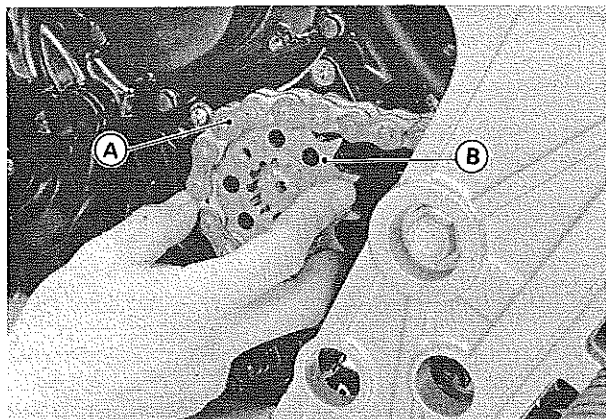
*Chain Installation Notes*

- After running the drive chain into the swing arm, install the swing arm holder (see Swing Arm Holder Installation in Suspension chapter).



## 10-8 FINAL DRIVE

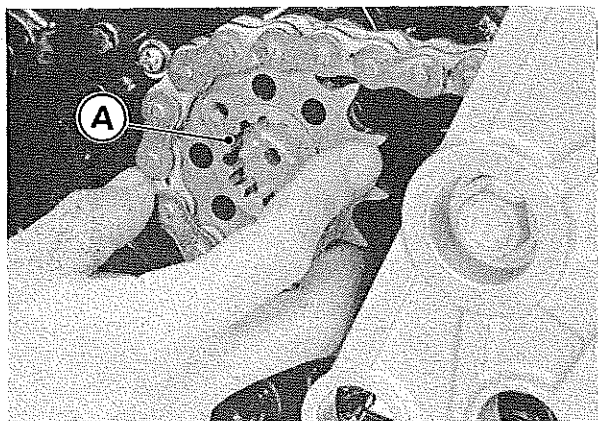
- Remove the sprocket holding plate and pull the engine sprocket off the output shaft with the drive chain.



A. Drive Chain      B. Engine Sprocket

### Engine Sprocket Installation

- Engage the sprocket with the drive chain so that the plate mating surface looks outwards.
- Install the sprocket onto the output shaft.
- Insert the holding plate.



A. Holding Plate Mating Surface

- Tighten the sprocket bolts to the specification.
- Adjust the chain slack.

### Rear Sprocket Removal Note

- Loosen the rear sprocket nuts (6).
- Remove the rear wheel (see Rear Wheel Removal in Wheel and Tires chapter).

### CAUTION

- Do not lay the wheel on the ground with the disc facing down. This can damage or warp the disc. Place blocks under the wheel so that the disc does not touch the ground.

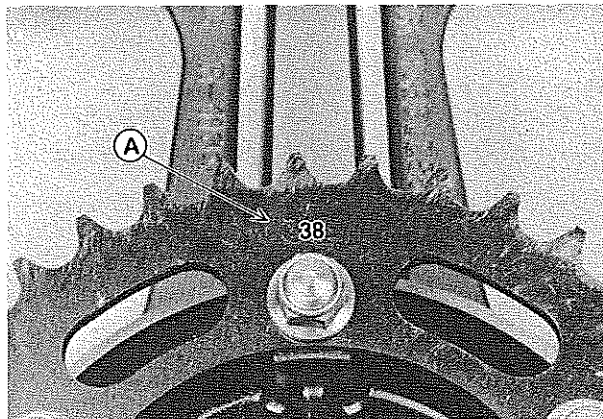
- Remove the rear sprocket nuts (6) to separate the rear sprocket from wheel coupling.

### Rear Sprocket Installation Note

- Install the rear sprocket facing the tooth number marking outward.

### WARNING

- By installing the sprocket this way, the chamfered hole side of the rear sprocket facing toward the flange. If not, the sprocket will not seat on the flange evenly, causing the drive chain to be thrown off by excessive sprocket runout during operation. This can result in rear wheel lockup and loss of control.



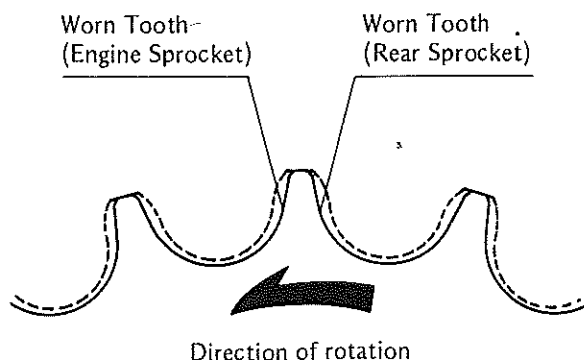
A. Tooth Number Marking

- Tighten the rear sprocket mounting nuts to the specified torque first, then loose them about ¼ turns.
- Again tighten them to the specified torque securely.

### Sprockets Inspection

- Visually inspect the sprocket teeth. If they are worn as illustrated, replace the sprocket.

### Sprocket Teeth



### NOTE

- If a sprocket requires replacement, the chain is provably worn also. Upon replacing a sprocket, inspect the chain.