# Supplement - 1990 Model

This "Supplement - 1990 Model" chapter is designed to be used in conjunction with the front part of this manual (up to P. 20-8). The maintenance and repair procedures described in this chapter are only those that are unique to the 1990 ZX900-A7 motorcycle. Most service operations for these models remain identical to those described in front of this chapter.

Complete and proper servicing of the 1990 ZX900-A7 motorcycle, therefore requires mechanics to read both this chapter and the text in front of this chapter.

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Whenever you see these WARNING and CAUTION symbols, heed their instructions! Always follow safe operating and maintenance practices.

**⚠WARNING**

**This warning symbol identifies special instructions or procedures which, if not correctly followed, could result in personal injury, or loss of life.**

**⚠CAUTION**

**This caution symbol identifies special instructions or procedures which, if not strictly observed, could result in damage to or destruction of equipment.**

# General Information

## General Specifications

| Item | | | ZX900-A7 |
|---|---|---|---|
| **Dimensions:** | | | |
| Overall length | | | 2 220 mm, (SA) 2 170 mm |
| Overall width | | | 730 mm |
| Overall height | | | 1 220mm |
| Wheelbase | | | 1 500 mm |
| Road clearance | | | 140 mm |
| Seat height | | | 790 mm |
| Dry weight | | | 234 kg |
| Curb weight: | Front | | 125 kg |
| | Rear | | 130 kg |
| Fuel tank capacity | | | 22.0 L |
| **Performance:** | | | |
| Minimum turning radius | | | 2.7 m |
| **Engine:** | | | |
| Type | | | 4-stroke, DOHC, 4-cylinder |
| Cooling system | | | Liquid-cooled |
| Bore and stroke | | | 72.5 x 55.0 mm |
| Displacement | | | 908 mL |
| Compression ratio | | | 11.0 |
| Maximum horsepower | | | 79.4 kW (108 PS) @9 500 r/min (rpm),<br>(SW) 65.5 kW (89 PS) @9 500 r/min (rpm),<br>(W) 73.6 kW (100 PS) @9 500 r/min (rpm)(DIN) |
| Maximum torque | | | 83.4 N-m (8.5 kg-m, 61.5 ft-lb) @8 500 r/min (rpm),<br>(SW) 71.6 N-m (7.3 kg-m, 52.8 ft-lb) @6 500 r/min (rpm),<br>(W) 78.5 N-m, (8.0 kg-m, 57.8 ft-lb)<br>@8 500 r/min (rpm)(DIN) |
| Carburetion system | | | Carburetors, Keihin CVK34 x 4 |
| Starting system | | | Electric starter |
| Ignition system | | | Battery and coil (transistorized) |
| Timing advance | | | Electronically advanced |
| Ignition timing | | | From 10° BTDC @1 000 r/min (rpm) to<br>35° BTDC @3 500 r/min (rpm) |
| Spark plug | | | NGK DR8ES or ND X27ESR-U |
| Cylinder numbering method | | | Left to right, 1-2-3-4 |
| Firing order | | | 1-2-4-3 |
| Valve timing: | Inlet: | Open | 45° BTDC |
| | | Close | 65° ABDC |
| | | Duration | 290° |
| | Exhaust: | Open | 65° BBDC |
| | | Close | 45° ATDC |
| | | Duration | 290° |
| Lubrication system | | | Forced lubrication (wet sump with cooler) |
| Engine oil: | Grade | | SE or SF class |
| | Viscosity | | SAE10W-40, 10W-50, 20W-40, or 20W-50 |
| | Capacity | | 4.0 L |

| Item | | | ZX900-A7 |
|---|---|---|---|
| **Drive Train:** | | | |
| Primary reduction system: | | | |
| | Type | | Gear |
| | Reduction ratio | | 1.732 (97/56) |
| Clutch type | | | Wet multi disc |
| Transmission: | Type | | 6-speed, constant mesh, return shift |
| | Gear ratios: | 1st | 2.800 (42/15) |
| | | 2nd | 2.000 (38/19) |
| | | 3rd | 1.590 (35/22) |
| | | 4th | 1.333 (32/24) |
| | | 5th | 1.153 (30/26) |
| | | 6th | 1.035 (29/28) |
| Final drive system: | Type | | Chain drive |
| | Reduction ratio | | 2.823 (48/17) |
| | Overall drive ratio | | 5.065 @Top gear |
| **Frame:** | | | |
| Type | | | Tubular, diamond |
| Caster (rake angle) | | | 29° |
| Trail | | | 118 mm |
| Front tire: | Type | | Tubeless |
| | Size | | 120/70V17-V250 or 120/70ZR17, (SA)(W) --- |
| Rear tire: | Type | | Tubeless |
| | Size | | 150/70V18-V250 or 150/70ZR18, (SA)(W) --- |
| Front suspension: | Type | | Telescopic fork |
| | Wheel travel | | 140 mm |
| Rear suspension: | Type | | Swing arm (uni-trak) |
| | Wheel travel | | 115 mm |
| Brake type: | Front | | Dual disc |
| | Rear | | Single disc |
| **Electrical Equipment:** | | | |
| Battery | | | 12 V 14 Ah |
| Headlight: | Type | | Semi-sealed beam |
| | Bulb | | 12 V 60/55 W (quartz-halogen) |
| Tail/brake light | | | 12 V 5/21 W x 2, (SA) 12 V 8/27 W x 2 |
| Alternator: | Type | | Three-phase AC |
| | Rated output | | 25 A @6 000 r/min (rpm), 14 V |

Specifications subject to change without notice, and may not apply to every country.

(SA) : South Africa Model
(SW) : Sweden Model
(W) : West Germany Model

## Periodic Maintenance Chart

The scheduled maintenance must be done in accordance with this chart to keep the motorcycle in good running condition. **The initial maintenance is vitally important and must not be neglected.**

| OPERATION \ FREQUENCY | Whichever comes first ➡ / Every ⬇ | †ODOMETER READING 800km | 5000km | 10000km | 15000km | 20000km | 25000km | 30000km | See Page |
|---|---|---|---|---|---|---|---|---|---|
| Spark plug -- clean | | | ● | ● | ● | ● | ● | ● | 16-23 |
| Spark plug -- check* | | | ● | ● | ● | ● | ● | ● | 16-23 |
| Valve clearance -- check* | | ● | | ● | | ● | | ● | 4-18 |
| Air cleaner element -- clean | | ● | | ● | | | | ● | 2-13 |
| Air cleaner element -- replace | 5 cleanings | | | | | ● | | | 2-13 |
| Throttle grip play -- check* | | ● | | ● | | ● | | ● | 18-10 |
| Idle speed -- check* | | ● | ● | ● | ● | ● | ● | ● | 2-7 |
| Engine vacuum synchronization -- check* | | ● | ● | ● | ● | ● | ● | ● | 2-7 |
| Fuel system -- check* | | | | ● | | ● | | ● | 2-9 |
| Cylinder head bolt tightness -- check* | | ● | | ● | | ● | | ● | 4-3 |
| Engine oil -- change | year | ● | | ● | | ● | | ● | 6-6 |
| Oil filter -- replace | | ● | | ● | | ● | | ● | 6-6 |
| Radiator hoses, connections -- check* | year | ● | | ● | | ● | | ● | 3-10 |
| Coolant -- change | 2 years | | | | | | | ● | 3-4 |
| Fuel hose -- replace | 4 years | | | | | | | | |
| Clutch fluid level -- check* | month | ● | ● | ● | ● | ● | ● | ● | 5-5 |
| Clutch fluid -- change | 2 years | | | | | ● | | | 5-5 |
| Clutch hose and pipe -- replace | 4 years | | | | | | | | 5-7 |
| Clutch master cylinder cup and dust seal -- replace | 2 years | | | | | | | | 5-7 |
| Clutch slave cylinder piston seal -- replace | 2 years | | | | | | | | 5-8 |
| Drive chain wear - check* | | | ● | ● | ● | ● | ● | ● | 10-5 |
| Drive chain -- lubricate | 300 km | | | | | | | | 10-5 |
| Drive chain slack -- check* | 800 km | | | | | | | | 10-4 |
| Brake lining wear -- check* | | | ● | ● | ● | ● | ● | ● | 21-16 |
| Brake fluid level -- check* | month | ● | ● | ● | ● | ● | ● | ● | 11-11 |
| Brake fluid -- change | 2 years | | | | | ● | | | 11-12 |
| Brake hose -- replace | 4 years | | | | | | | | 11-14 |
| Brake master cylinder cup and dust seal -- replace | 2 years | | | | | | | | 11-9 |

| OPERATION \ FREQUENCY | Whichever comes first — Every | †ODOMETER READING 800km | 5000km | 10000km | 15000km | 20000km | 25000km | 30000km | See Page |
|---|---|---|---|---|---|---|---|---|---|
| Caliper piston seal and dust seal -- replace | 2 years | | | | | | | | 11-6 |
| Brake light switch -- check* | | ● | ● | ● | ● | ● | ● | ● | 16-34 |
| Steering -- check* | | ● | ● | ● | ● | ● | ● | ● | 13-4 |
| Steering stem bearing -- lubricate | 2 years | | | | | ● | | | 13-6 |
| Front fork oil -- change | | | | | | | | ● | 21-19 |
| Tire wear -- check* | | | ● | ● | ● | ● | ● | ● | 9-9 |
| Swing arm pivot, uni-trak linkage -- lubricate | | | | ● | | ● | | ● | 12-14 |
| Battery electrolyte level -- check* | month | ● | ● | ● | ● | ● | ● | ● | 16-9 |
| General lubrication -- perform | | | ● | ● | ● | ● | ● | ● | 17-8 |
| Nut, bolt, and fastener tightness -- check* | | ● | | ● | | ● | | ● | 17-8 |

† : For higher odometer readings, repeat at the frequency interval established here.
* : Replace, add, adjust, clean, or torque if necessary.

# Fuel System

## Specifications

Refer to the front part of this manual, noting the following.

**Carburetor Specifications**

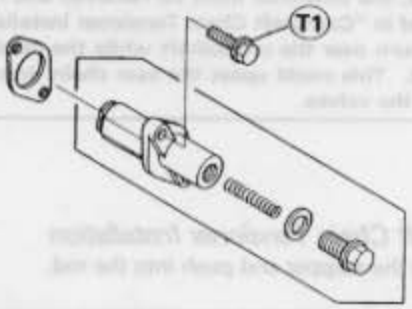
| | |
|---|---|
| Make/Type | Keihin/CVK34 |
| Main Jet | #100 |
| Main Air Jet | #100 |
| Jet Needle | N67I |
| Pilot Jet | #35 |
| Pilot Air Jet | #160 |
| Pilot Screw | 1⅛ turns out |
| Starter Jet | #42 |
| Fuel Level | − 0.5 mm |
| Float Height | 17.0 mm |



# Engine Top End

## Exploded View

Refer to the front part of this manual, noting the following.

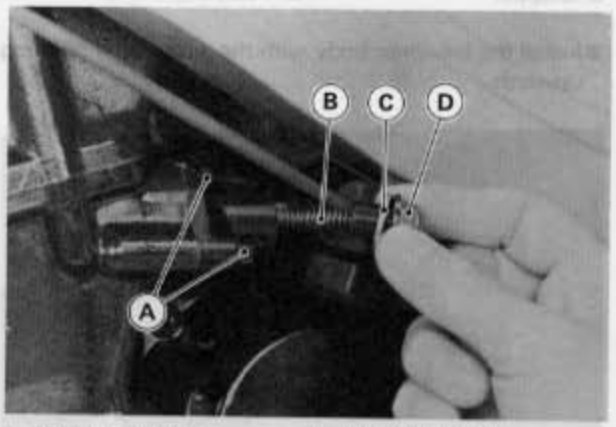



**T1 : 9.8 N-m (1.0 kg-m, 87 in-lb)**

## Camshaft Chain Tensioner

*Camshaft Chain Tensioner Removal*

● Remove the following.
Tensioner Cap Bolt
Copper Washer
Spring
Tensioner Mounting Bolts
Camshaft Chain Tensioner



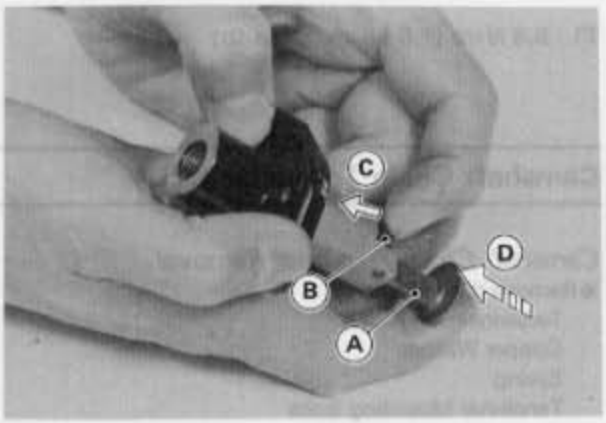

A. Mounting Bolts
B. Spring
C. Copper Washer
D. Cap Bolt

**⚠CAUTION**

**This is a non-return type cam chain tensioner. The push rod does not return to its original position once it moves out to take up cam chain slack. Observe all the rules listed below:**
**When removing the tensioner, do not take out the mounting bolts only halfway. Retightening the mounting bolts from this position could damage the tensioner and the camshaft chain. Once the bolts are loosened, the tensioner must be removed and reset as described in "Camshaft Chain Tensioner Installation."**
**Do not turn over the crankshaft while the tensioner is removed. This could upset the cam chain timing, and damage the valves.**

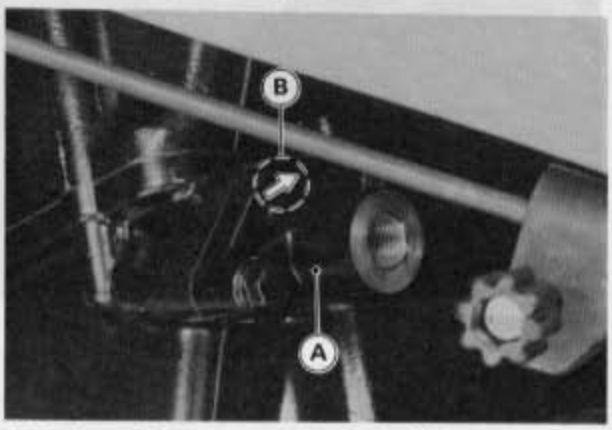
*Camshaft Chain Tensioner Installation*

● Release the stopper and push into the rod.




A. Push Rod
B. Stopper
C. Push.
D. Push into the rod.

● Install the tensioner body with the arrow on it pointing upwards.




A. Tensioner Body
B. Arrow Mark

● Torque the following (see Exploded View).
Tensioner Mounting Bolts

# Engine Lubrication System

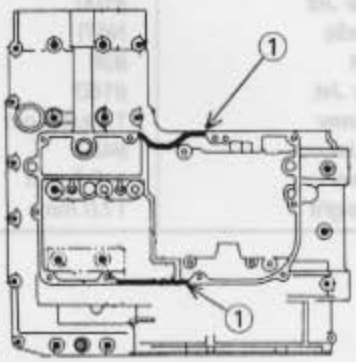
## Oil Pan

*Oil Pan Installation*

Refer to the front part of this manual, noting the following.

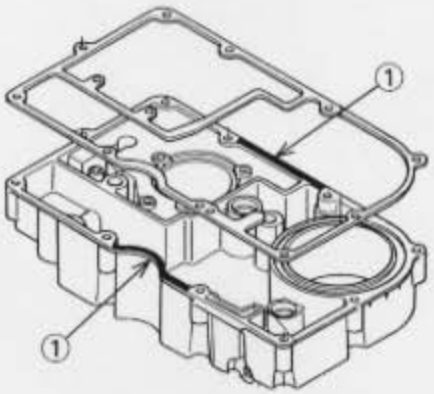
● Apply a silicone sealant to the following.

**Crankcase**




1. Silicone Sealant Applied Area

**Oil Pan**

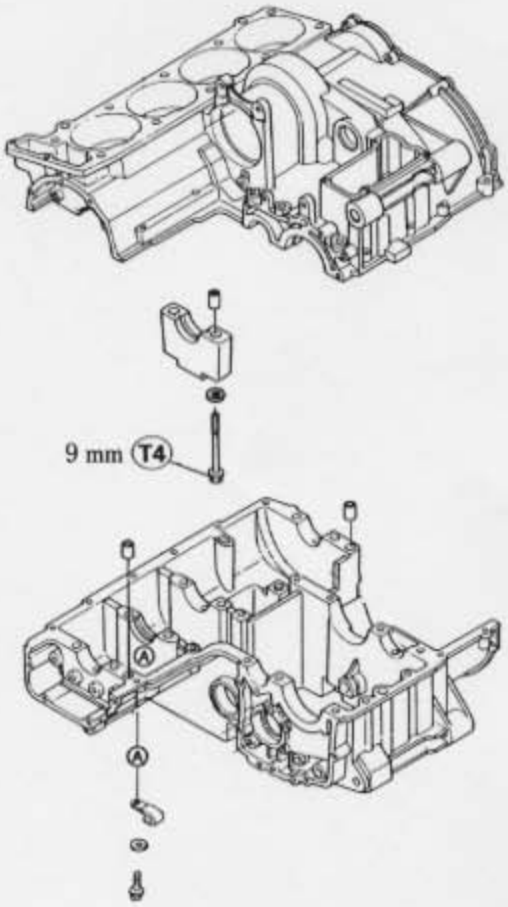



1. Silicone Sealant Applied Area

# Crankshaft/Transmission

## Exploded View ('90 Late Model)

Refer to the front part of this manual, noting the following.




1. Washer
2. "11" mark on the bolt head.

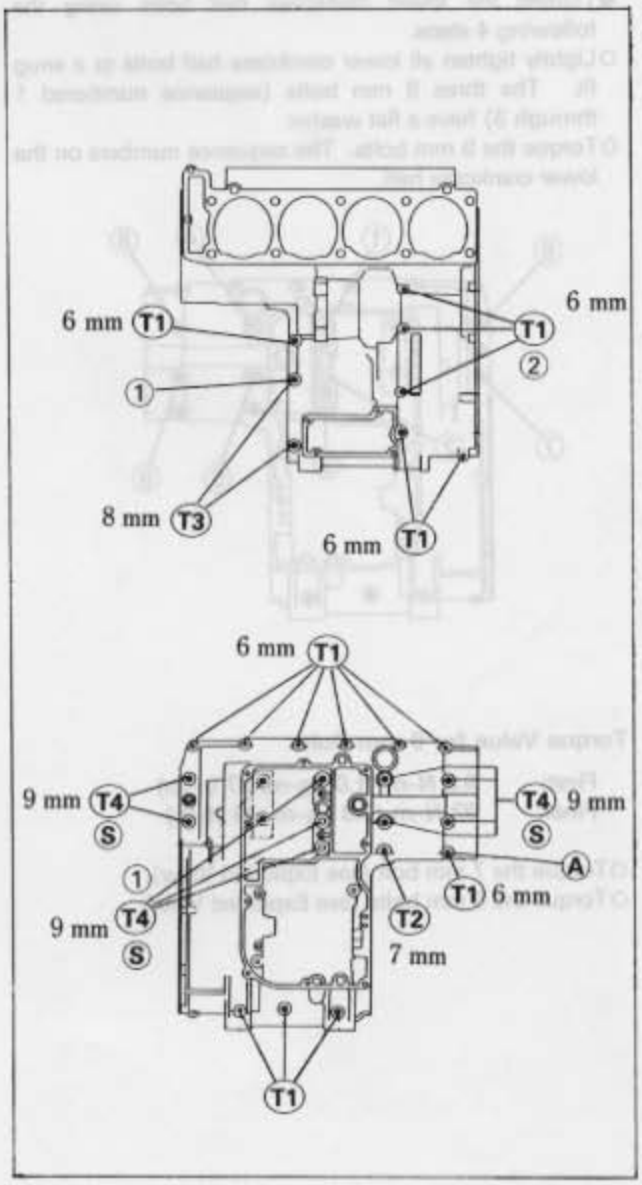
S : Follow the specified tightening sequence.

T1: 15 N-m (1.5 kg-m, 11.0 ft-lb)
T2: 18 N-m (1.8 kg-m, 13.0 ft-lb)
T3: 27 N-m (2.8 kg-m, 20 ft-lb)
T4: 32 N-m (3.3 kg-m, 24 ft-lb)

**NOTE**

- *The crankcases and crankcase bolts will be modified for larger diameter.*
- *When using the modified crankcases and crankcase bolts, refer to the following.*

**Engine No. ZX900AE045786 ~**



## Crankcase Splitting ('90 Late Model)

*Crankcase Assembly*

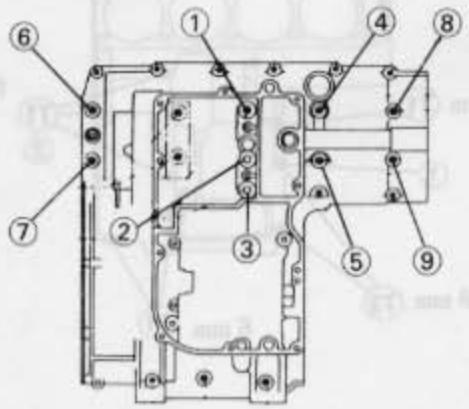
Refer to the front part of this manual, noting the following.

**NOTE**

- *The crankcases and crankcase bolts will be modified for larger diameter.*
- *When using the modified crankcases and crankcase bolts, refer to the following.*

**Engine No. ZX900AE056786 ~**

- Tighten the lower crankcase half bolts using the following 4 steps.
- Lightly tighten all lower crankcase half bolts to a snug fit. The three 9 mm bolts (sequence numbered 1 through 3) have a flat washer.
- Torque the 9 mm bolts. The sequence numbers on the lower crankcase half.



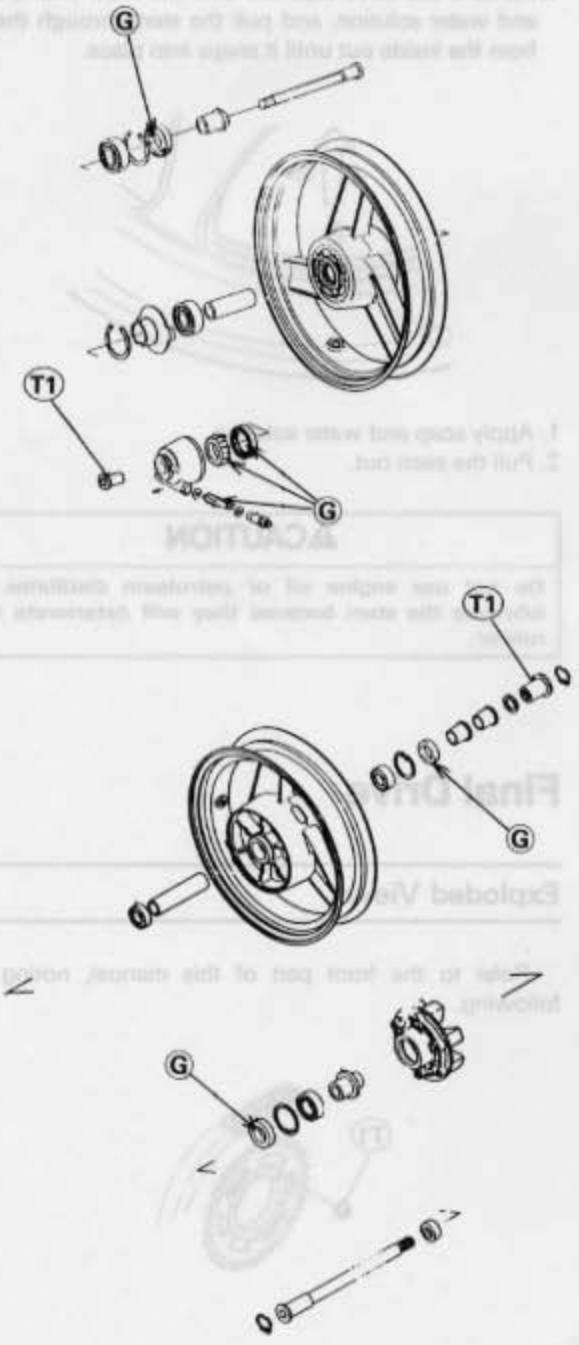

**Torque Value for 9 mm Bolts**

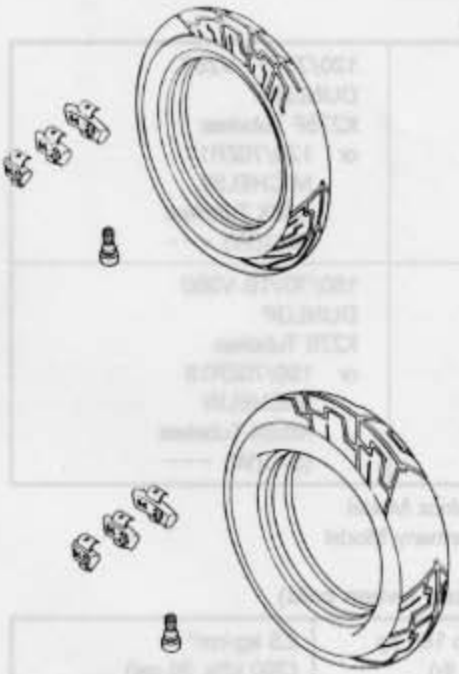
| | |
|---|---|
| **First:** | **9.8 N-m (1.0 kg-m, 87 in-lb)** |
| **Final:** | **32 N-m (3.3 kg-m, 24 ft-lb)** |

- Torque the 7 mm bolt (see Exploded View).
- Torque the 6 mm bolts (see Exploded View).

# Wheels/Tires

## Exploded View



G : Apply grease.

T1: 88 N-m (9.0 kg-m, 65 ft-lb)

## Specifications

Refer to the front part of this manual, noting the following.

**Standard Tire**

| | |
|---|---|
| Front | 120/70V17-V250<br>DUNLOP<br>K275F Tubeless<br>or 120/70ZR17<br>MICHELIN<br>A59X Tubeless<br>(SA)(W) --- |
| Rear | 150/70V18-V250<br>DUNLOP<br>K275 Tubeless<br>or 150/70ZR18<br>MICHELIN<br>M59X Tubeless<br>(SA)(W) --- |

(SA) : South Africa Model
(W) : West Germany Model

**Tire Air Pressure (when cold)**

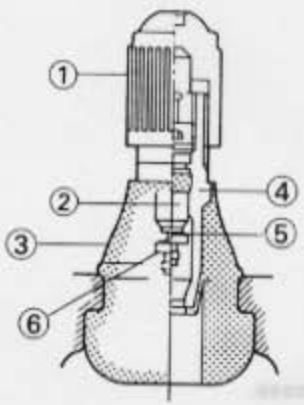
| | | |
|---|---|---|
| Front | Up to 180 kg (397 lb) | 2.5 kg/cm² (250 kPa, 36 psi) |
| Rear | Up to 180 kg (397 lb) | 2.9 kg/cm² (290 kPa, 41 psi) |

## Tires

*Tire Installation*

Refer to the front part of this manual, noting the following.

● Remove the air valve and discard it.

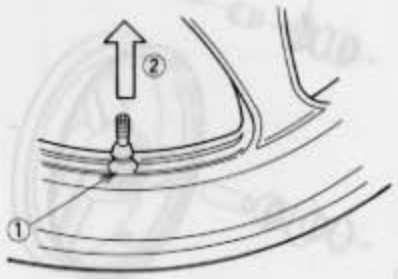



1. Plastic Cap
2. Valve Core
3. Stem Seal
4. Valve Stem
5. Valve Seat
6. Valve Opened

**⚠CAUTION**

**Replace the rubber-type air valve whenever the tire is replaced.**
**Do not reuse the air valve.**

● Install a new valve in the rim.
○ Remove the valve cap, lubricate the stem with a soap and water solution, and pull the stem through the rim from the inside out until it snaps into place.




1. Apply soap and water solution.
2. Pull the stem out.

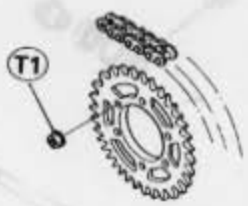
**⚠CAUTION**

**Do not use engine oil or petroleum distillates to lubricate the stem because they will deteriorate the rubber.**

# Final Drive

## Exploded View

Refer to the front part of this manual, noting the following.

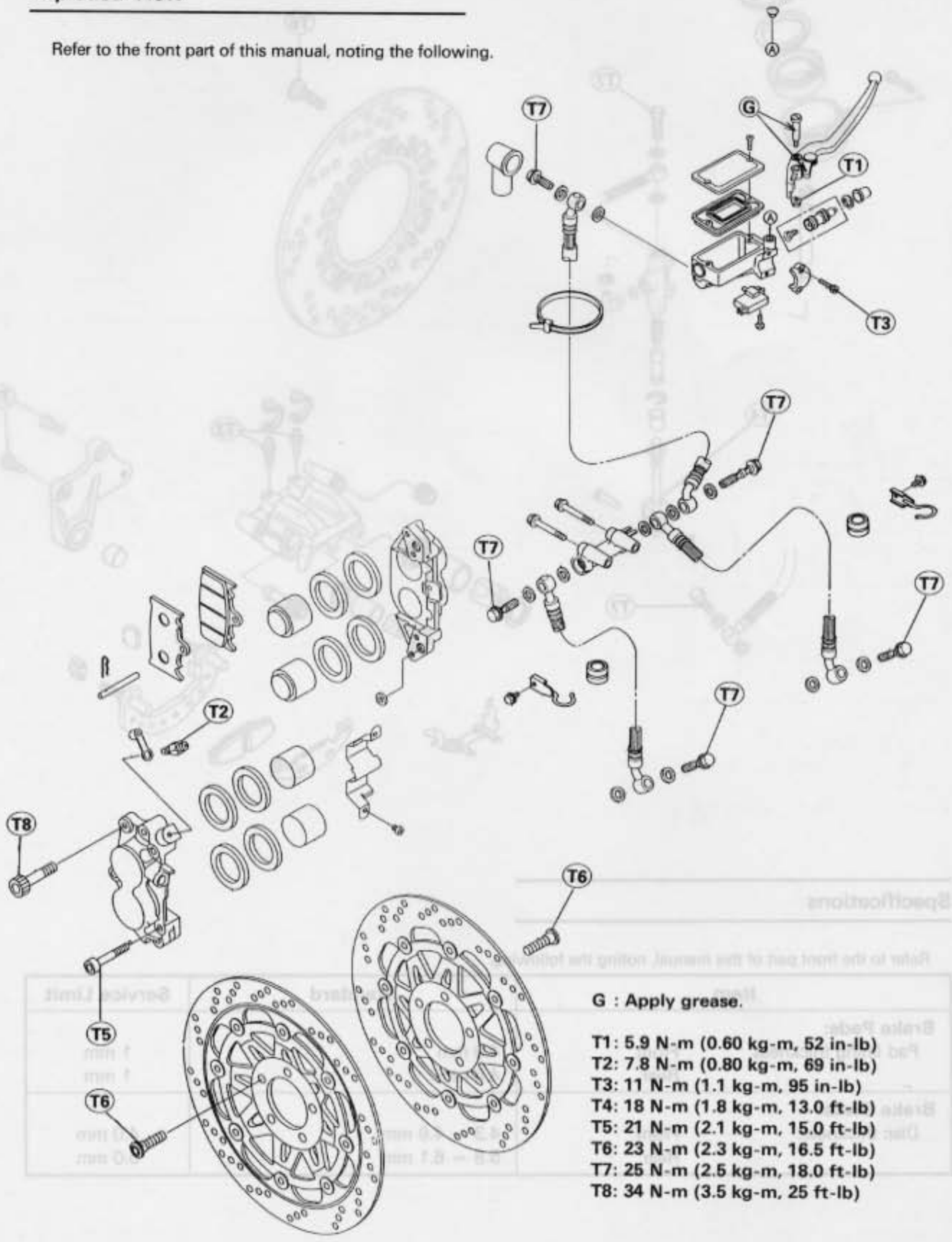



**T1 : 74 N-m (7.5 kg-m, 54 ft-lb)**

# Brakes

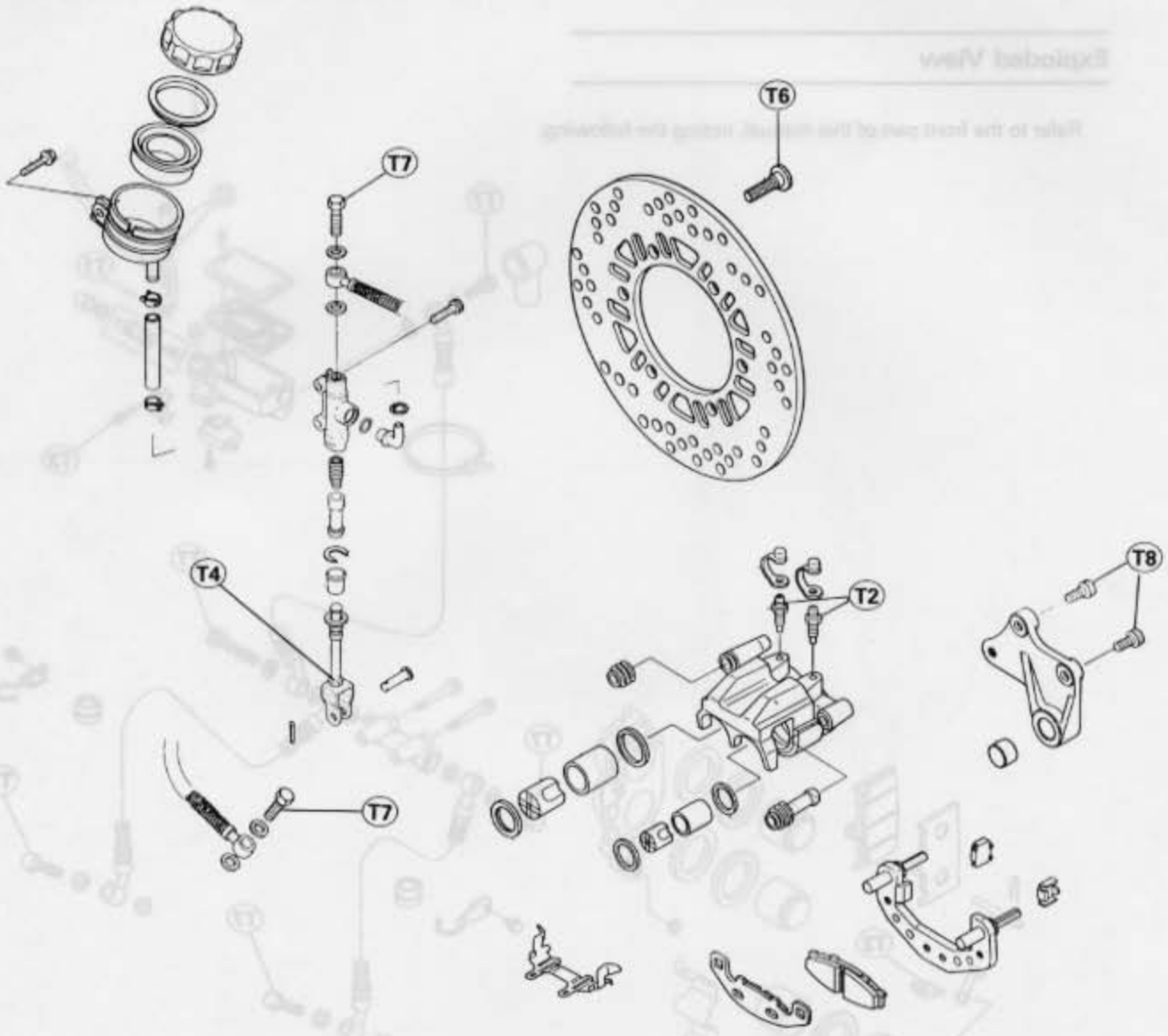
## Exploded View

Refer to the front part of this manual, noting the following.




**G : Apply grease.**

**T1: 5.9 N-m (0.60 kg-m, 52 in-lb)**
**T2: 7.8 N-m (0.80 kg-m, 69 in-lb)**
**T3: 11 N-m (1.1 kg-m, 95 in-lb)**
**T4: 18 N-m (1.8 kg-m, 13.0 ft-lb)**
**T5: 21 N-m (2.1 kg-m, 15.0 ft-lb)**
**T6: 23 N-m (2.3 kg-m, 16.5 ft-lb)**
**T7: 25 N-m (2.5 kg-m, 18.0 ft-lb)**
**T8: 34 N-m (3.5 kg-m, 25 ft-lb)**




## Specifications

Refer to the front part of this manual, noting the following.

| Item | | Standard | Service Limit |
|---|---|---|---|
| **Brake Pads:** | | | |
| Pad lining thickness: | Front | 4.0 mm | 1 mm |
| | Rear | 4.5 mm | 1 mm |
| **Brake Discs:** | | | |
| Disc thickness: | Front | 4.3 ~ 4.6 mm | 4.0 mm |
| | Rear | 5.8 ~ 6.1 mm | 5.0 mm |

## Calipers

### *Front Caliper Removal*

● Remove the following if the caliper is to be removed from the vehicle completely.
Brake Hose Banjo Bolt (at the caliper)

**⚠CAUTION**

**Immediately wipe up any brake fluid that spills.**

● Remove the following.
Caliper Mounting Bolts

**⚠CAUTION**

**Do not loosen the caliper bolts. Take out only the caliper mounting bolts for caliper removal. Loosening the caliper bolts will cause brake fluid leakage.**

### *Caliper Disassembly Notes*

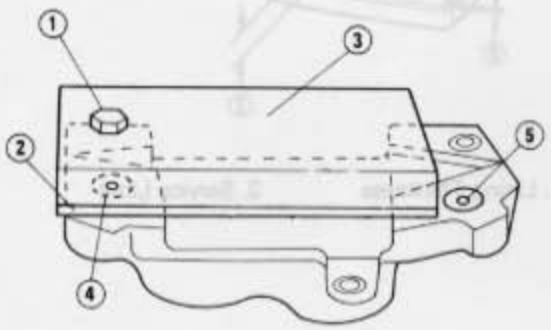
Refer to the front part of this manual, noting the following.

● To disassemble the front caliper, perform the following.

○ Remove the following.
Brake Pads
Caliper Bolts
Piston Insulators

○ Using compressed air, remove the pistons. One way to remove the pistons is as follows.

○ Install a wooden board more than 10 mm thick and a rubber gasket on the caliper half as shown. Leave one of the oil passages open.




1. Bolt and Nut
2. Rubber Gasket
3. Wooden Board
4. Oil Passage sealed by Rubber Gasket
5. Oil Passage

○ Lightly apply compressed air to the oil passage until the pistons hit the rubber gasket. Block the hose joint opening during this operation if the caliper half has opening.

**⚠WARNING**

**To avoid serious injury, never place your fingers or palm inside the caliper opening. If you apply compressed air into the caliper, the piston may crush your hand or fingers.**

### *Caliper Assembly Notes*

Refer to the front part of this manual, noting the following.

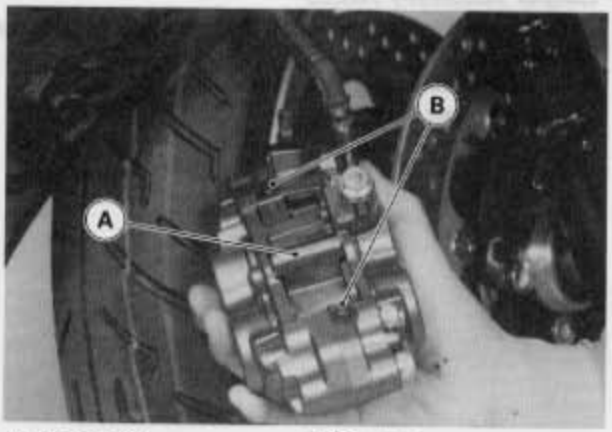
● Torque the following (see Exploded View).
Front Caliper Bolts

## Brake Pads

### *Pad Removal*

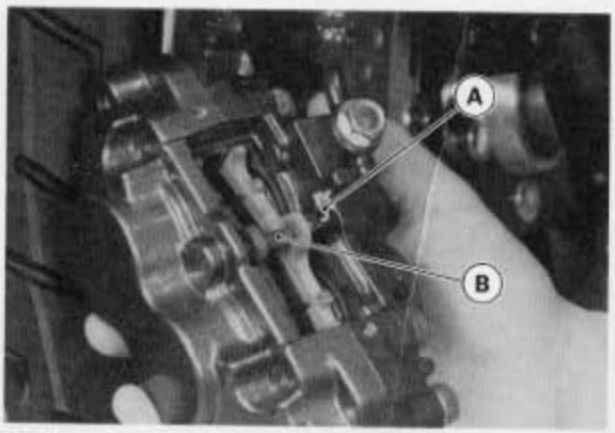
Refer to the front part of this manual, noting the following.

● Remove the following to remove the front caliper pads.
Caliper Mounting Bolts
Pad Spring




A. Pad Spring B. Screws

Clip
Pad Pin
Pads




A. Clip B. Pad Pin

### *Pad Installation Notes*

Refer to the front part of this manual, noting the following.

● For the front caliper, the pad pin clip must be "outside" of the pads.

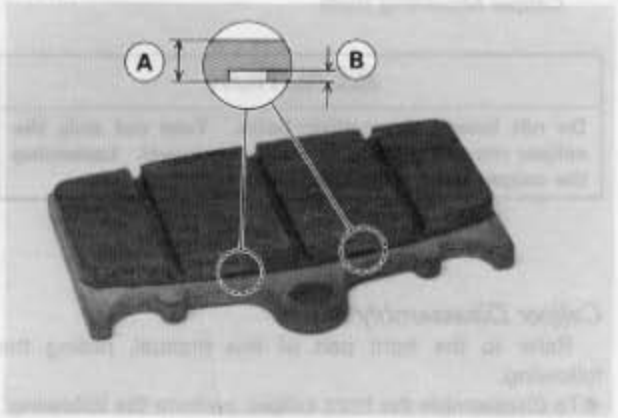
### *Lining Wear*

★ If the lining thickness of either pad is less than the service limit, replace both pads in the caliper as a set.

**Pad Lining Thickness**

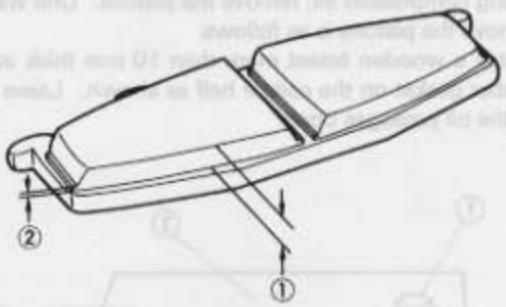
| | | |
|---|---|---|
| **Standard:** | **Front** | **4.0 mm** |
| | **Rear** | **4.5 mm** |
| **Service Limit:** | **1 mm** | |

**Front:**




A. Lining Thickness B. Service Limit

**Rear:**

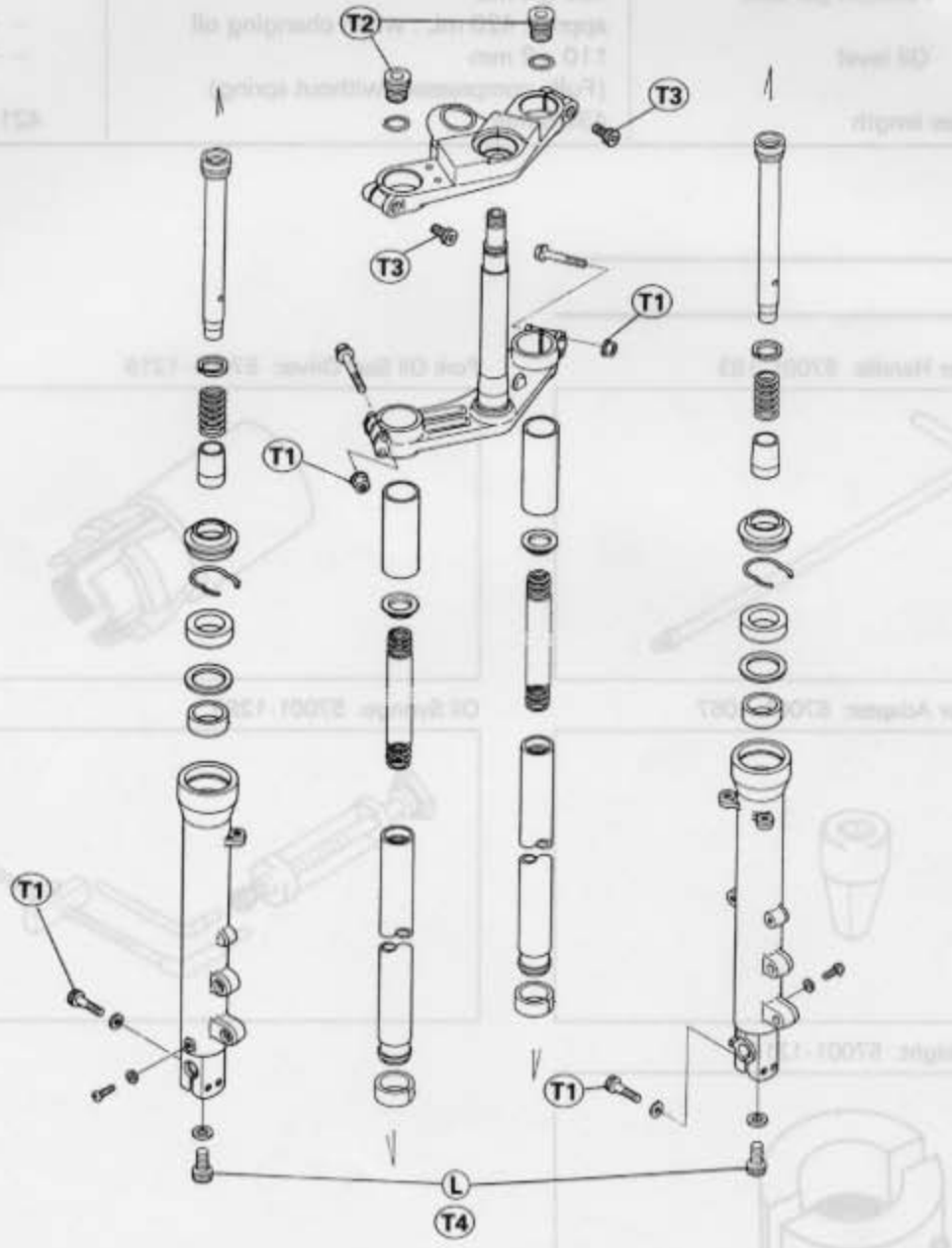



1. Lining Thickness 2. Service Limit

# Suspension

## Exploded View

Refer to the front part of this manual, noting the following.




**L : Apply non-permanent locking agent.**

**T1: 21 N-m (2.1 kg-m, 15.0 ft-lb)**
**T2: 23 N-m (2.3 kg-m, 16.5 ft-lb)**
**T3: 28 N-m (2.9 kg-m, 21 ft-lb)**
**T4: 61 N-m (6.2 kg-m, 45 ft-lb)**

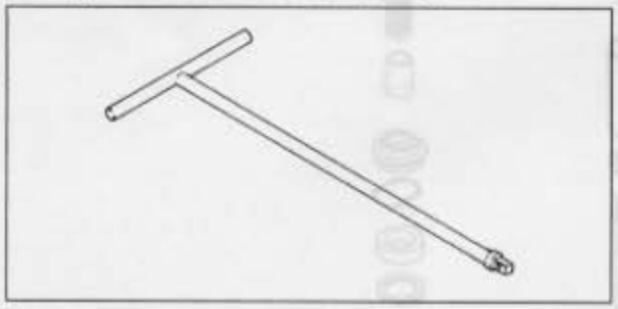
## Specifications

Refer to the front part of this manual, noting the following.

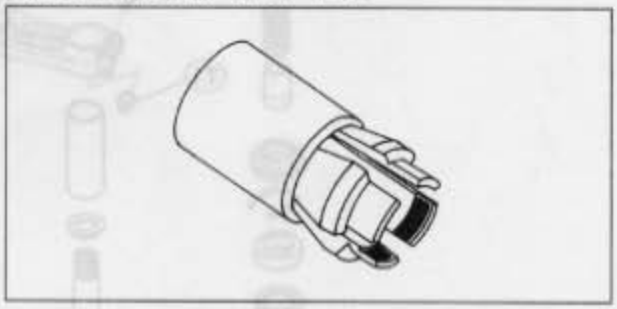
| Item | | Standard | Service Limit |
|---|---|---|---|
| **Front Fork:** | | | |
| Fork oil: | Viscosity | SAE 10W-20 | – – – |
| | Amount par unit | 496 ±4 mL | – – – |
| | | approx. 420 mL : when changing oil | – – – |
| | Oil level | 110 ±2 mm<br>(Fully compressed, without spring) | – – – |
| Fork spring free length | | 430.5 mm | 421 mm |

## Special Tools

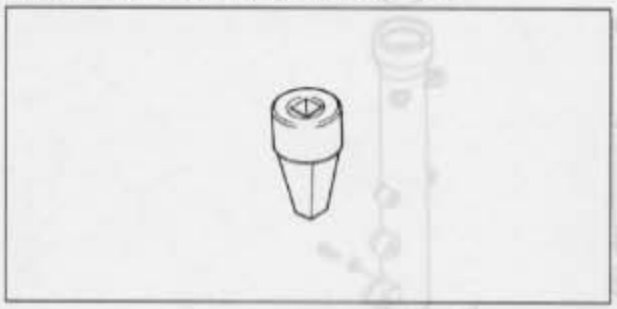
Fork Cylinder Holder Handle: 57001-183



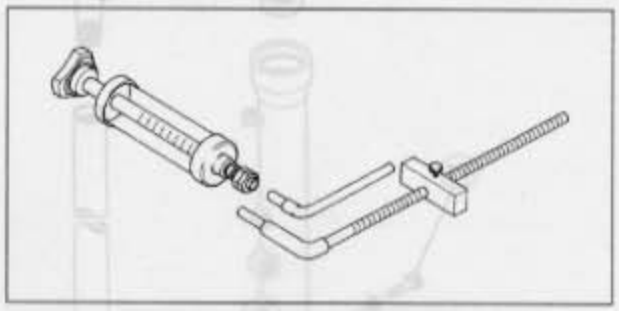
Fork Oil Seal Driver: 57001-1219



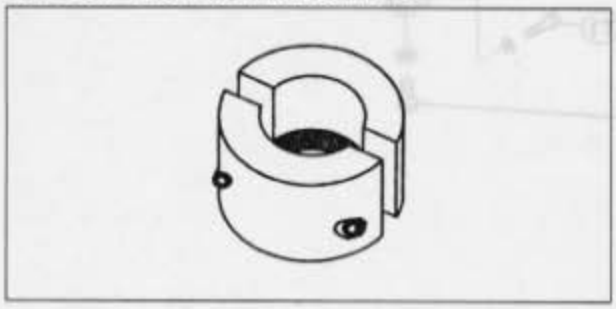
Fork Cylinder Holder Adapter: 57001-1057



Oil Syringe: 57001-1290



Fork Outer Tube Weight: 57001-1218



## Front Fork

### *Fork Oil Change*

- Remove the following.
  Drain Screw (left or right fork leg)
- Allow the oil to drain into a suitable container. If you pump the fork legs to force out the oil, be sure to catch the oil in a container as it squirts out.
- Raise the front wheel off the ground.
- Remove the following.
  Handlebar Holders
  Fork Upper Clamp Bolts (loosen)
  Fork Top Plugs
  Spacers
  Spring Seats
  Main Springs
- Install the drain screw with a new gasket.
- Pour in the type and amount of fork oil specified.

**Front Fork Oil**

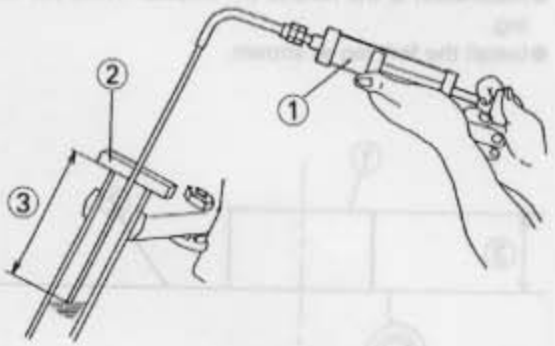
**Viscosity: SAE 10W-20**
**Amount per side:**
**When changing oil: approx. 420 mL**
**After disassembly and completely dry: 496 ±4 mL**

★If necessary, measure the oil level as following.
○Slowly compress the front fork fully by pushing up the outer tubes using a jack or other suitable means under the front wheel.
○Wait until the oil level settles.
○Insert a tape measure or rod into the inner tube, and measure the distance from the top of the inner tube to the oil.

**NOTE**

○*Fork oil level may also be measured using the oil syringe (special tool).*
○*The tape measure, rod, or oil syringe pipe should be in the middle of the inner tube, or the correct oil level can not be measured.*

○Set the oil syringe stopper so that its lower side shows the oil level distance specified.
○Put the gauge tube into the inner tube and position the stopper across the top end of the inner tube.




1. Oil Syringe: 57001-1290
2. Stopper
3. Oil Level Distance

**NOTE**

○*The gauge tube is graduated in 1 cm division.*
○*The syringe body is graduated in 10 mL divisions, excluding the gauge tube which is about 5 mL capacity.*

○Pull the handle slowly to draw out the excess oil until no more oil comes up the tube.
★If no oil is drawn out, there is not enough oil in the inner tube. Pour in some more oil, then draw out the excess.

**Fork Oil Level**
**(Fully compressed without spring)**
**110 ±2 mm**

★If the oil is above or below the specified level, remove or add oil and recheck the oil level.
- Change the oil of the other fork leg in the same manner.
- Install the parts removed.
- Torque the following (see Exploded View).
  Fork Top Plugs
  Fork Upper Clamp Bolts
  Handlebar Holder Bolts

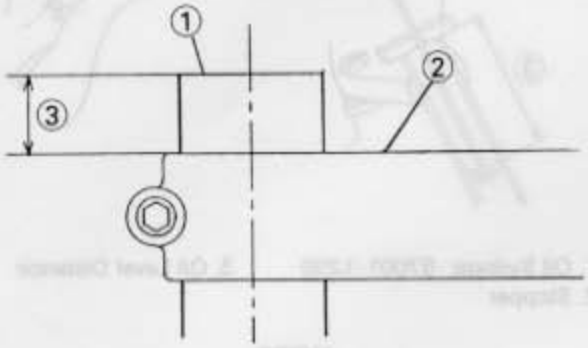
### *Front Fork Removal (each fork leg)*

- Loosen the fork top plug beforehand if the fork leg is to be disassembled.
- Remove the following.
  Handlebar Holder
  Brake Calipers
  Front Wheel
  Front Fender
  Fairing
- Remove the clamps and free the electrical wirings, brake hose, clutch hose, or throttle cables from the fork leg.
- Remove the following.
  Fork Clamp Bolts and Nuts (upper and lower, loosen)
- With a twisting motion, work the fork leg down and out.

*Front Fork Installation (each fork leg)*

● Installation is the reverse of removal. Note the following.

● Install the fork leg as shown.




1. Inner Tube Top
2. Steering Stem Head Surface
3. 15 mm

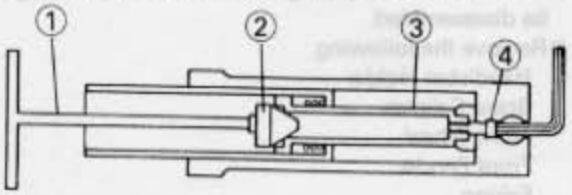
● Torque the following (see Exploded View).
Fork Top Plug (if loosened)
Fork Clamp Bolts and Nuts
Handlebar Holder Bolts

*Front Fork Disassembly*

● Remove the following.
Fork Oil (drain)
Fork Leg
Fork Top Plug
Spacer
Spring Seat
Main Spring
Dust Seal
Retainer

● Stop the cylinder from turning by using the front fork cylinder handle and adapter (special tools).

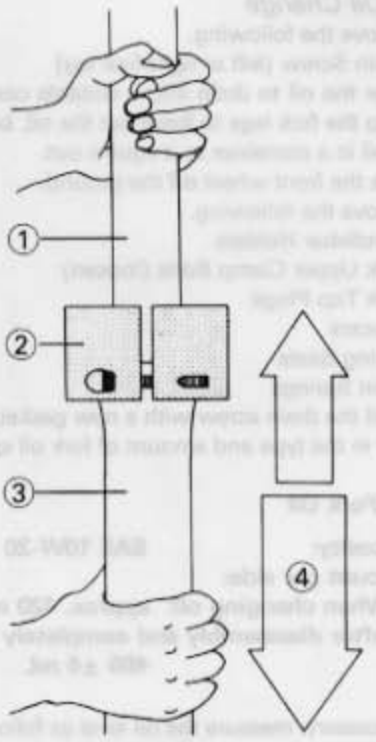
● Unscrew the Allen bolt, then take the bolt and gasket out of the bottom of the outer tube.




1. Cylinder Holder Handle: 57001-183
2. Cylinder Holder Adapter: 57001-1057
3. Cylinder
4. Allen Bolt

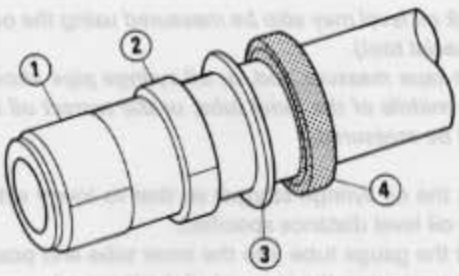
● Use the fork outer tube weight (special tool) to separate the inner tube from the outer tube.

○ Holding the inner tube by hand in a vertical position, pull down the outer tube several times to pull out the inner tube.




1. Inner Tube
2. Weight: 57001-1218
3. Outer Tube
4. Pull down.

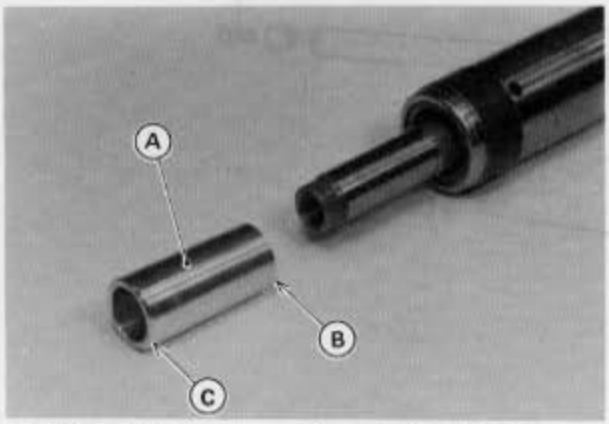
○ The oil seal, washer, and guide bushes come off with the inner tube.




1. Inner Tube Guide Bush
2. Outer Tube Guide Bush
3. Washer
4. Oil Seal

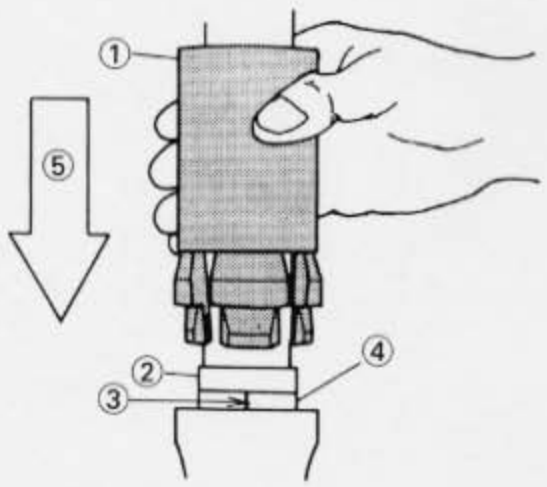
### *Front Fork Assembly*

- Assembly is the reverse of disassembly. Note the following.
- Check the top plug O-ring and replaced it with a new one if necessary.
- Replace the following parts removed with a new one.
  Guide Bushes
  Oil Seal
  Bottom Allen Bolt Gasket
- Install the cylinder base so that the small diameter end of it comes to the cylinder.




A. Cylinder Base
B. Small Diameter End
C. Large Diameter End

- Apply a non-permenent locking agent to the following.
  Bottom Allen Bolt Threads
- Torque the following (see Exploded View).
  Bottom Allen Bolt
  Fork Top Plug (after fork leg installation)
- Install the guide bush (with a used guide bush on it) by tapping the used guide bush with the fork oil seal driver (special tool) until it stops. The split of the bush must be faced toward the side of the vehicle.




1. Driver: 57001-1219
2. Used Guide Bush
3. Split (toward the right or left)
4. New Guide Bush
5. Tap.

### *Inner Tube Inspection*

★If the inner tube is damaged, replace it.

- Nicks or rust damage can sometimes be repaired by using a wet-stone to remove sharp edges or raised areas which cause seal damage.

★If the damage is not repairable, replace the inner tube. Since damage to the inner tube damages the oil seal, replace the oil seal whenever the inner tube is repaired or replaced.

**⚠CAUTION**

**If the inner tube is badly bent or creased, replace it. Excessive bending, following by subsequent straightening, can weaken the inner tube.**

### *Oil Seal and Dust Seal Inspection*

★If dust seal has any damage or wear, replace it.

- Replace the oil seal with a new one whenever it has been removed.

### *Spring Tension*

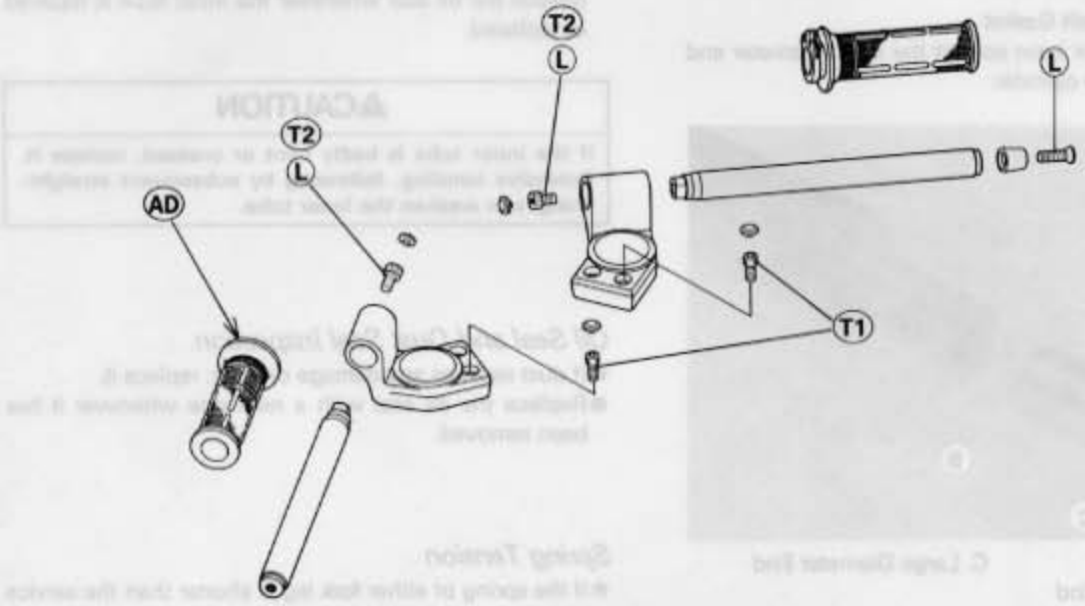
★If the spring of either fork leg is shorter than the service limit, it must be replaced. If the length of a replacement spring and that of the remaining spring vary greatly, the remaining spring should also be replaced in order to keep the fork legs balanced for motorcycle stability.

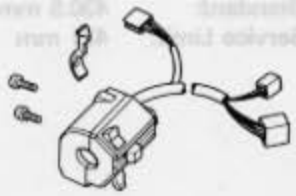
**Fork Spring Length**

| | |
|---|---|
| **Standard:** | **430.5 mm** |
| **Service Limit:** | **421 mm** |

# Controls

## Exploded View



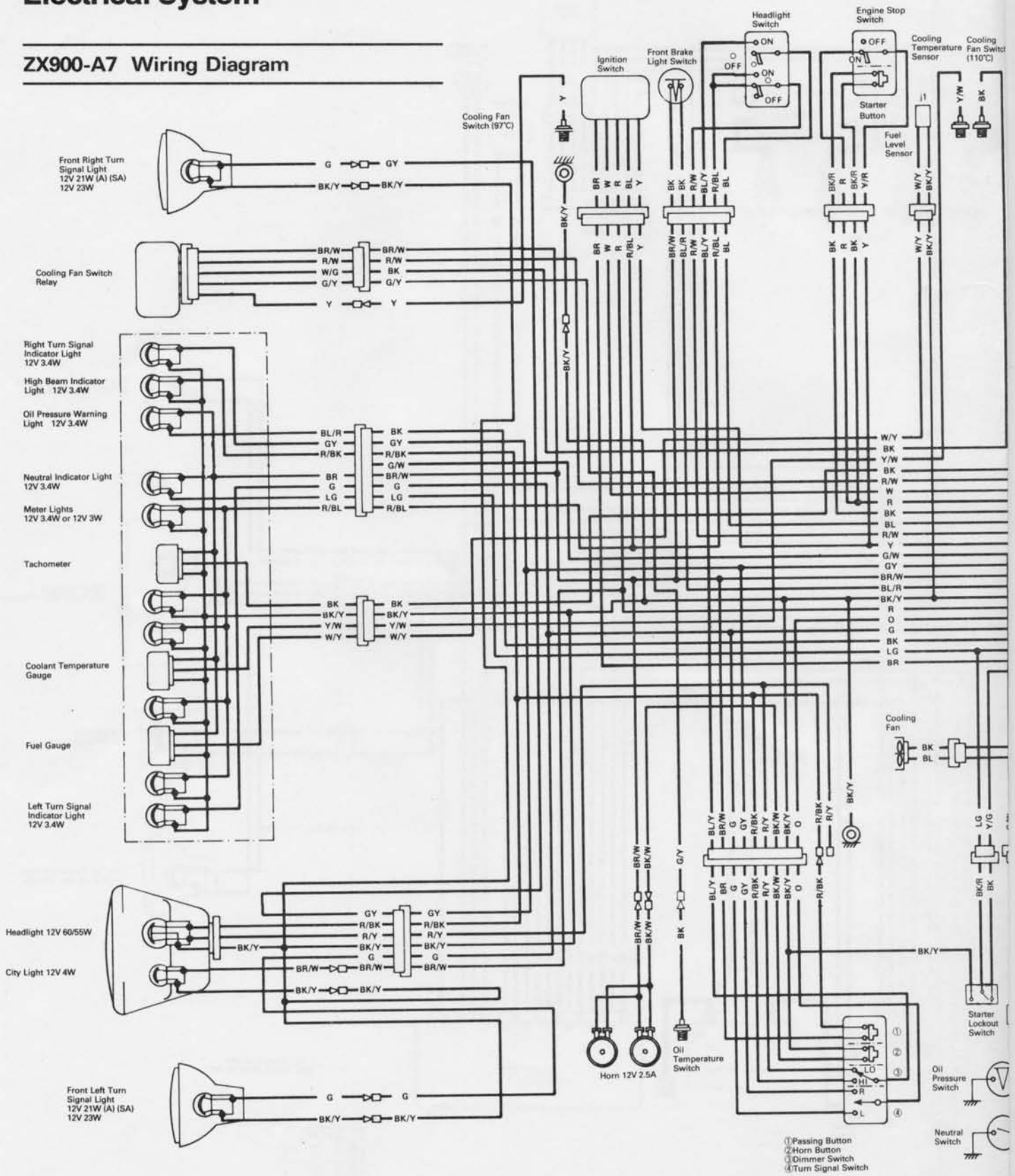


**AD : Apply adhesive agent.**
**L : Apply non-permanent locking agent.**

**T1 : 19 N-m (1.9 kg-m, 13.5 ft-lb)**
**T2 : 29 N-m (3.0 kg-m, 22 ft-lb)**

# Electrical System

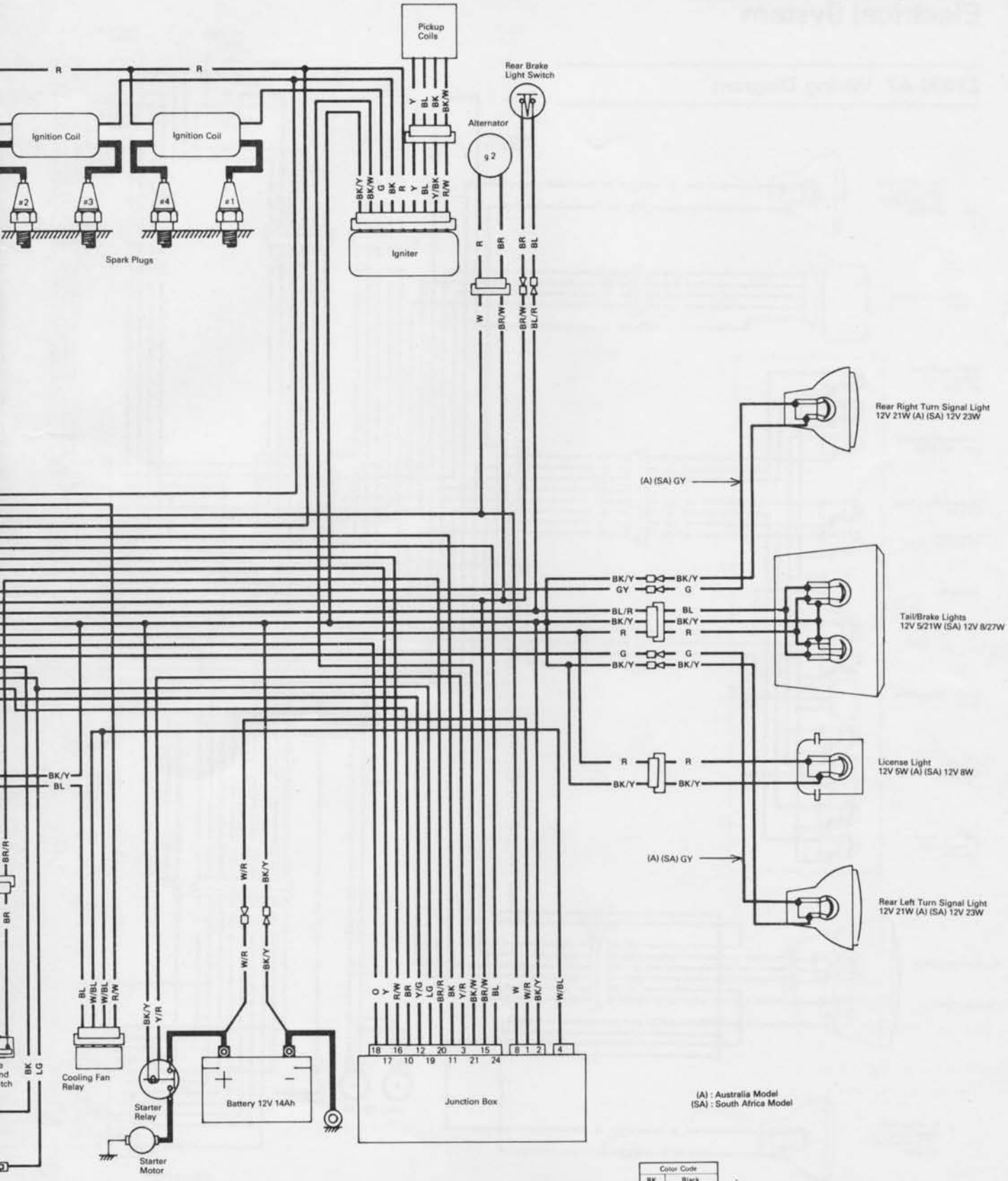
## ZX900-A7 Wiring Diagram




**LEFT HANDLEBAR SWITCH CONNECTIONS**

| Starter Lockout Switch | | | | Horn Button | | | Dimmer Switch | | | | Turn Signal Switch | | | | Passing Button | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Color | BK/Y | Y/G | LG | Color | BK/Y | BK/W | Color | R/BK | BL/Y | R/Y | Color | GY | O | G | Color | R/BK | BR |
| Released | | ○—○ | | | | | HI | ○—○ | | | R | ○—○ | | | | | |
| | | | | ON | ○—○ | | | | | | N | | | | ON | ○—○ | |
| Pulled in | ○—○ | | | (push) | | | LO | | ○—○ | | L | | ○—○ | | (push) | | |

| IGNITION | |
|---|---|
| | Lights |
| Color | BR |
| OFF, LOCK | |
| ON | ○—○ |
| P(PARK) | |




| Color Code | |
|---|---|
| BK | Black |
| BL | Blue |
| BR | Brown |
| GY | Gray |
| G | Green |
| LB | Light Blue |
| LG | Light Green |
| O | Orange |
| P | Pink |
| R | Red |
| W | White |
| Y | Yellow |

RIGHT HANDLEBAR SWITCH CONNECTIONS

| Engine Stop Switch | | | Headlight Switch | | | | | Starter Button | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Color | Y/R | R | Color | R/W | R/BL | BL | BL/Y | Color | BK/R | BK/R |
| OFF | | | OFF | | | | | | | |
| RUN | ○ | ○ | ○ | ○ | ○ | | | | | |
| | | | ON | ○ | ○ | ○ | ○ | Push | ○ | ○ |

TCH CONNECTIONS

| ry | Ignition | Tail 1 | Tail 2 |
|---|---|---|---|
| | Y | BL | R |
| | | | |
| ○ | ○ | | ○ |
| | | | ○ |

(1176A, 1177A, 1178A)