




































# INDEX

<b>GENERAL INFORMATION</b>	
	<b>GEN INFO 1</b>
<b>PERIODIC INSPECTION AND ADJUSTMENT</b>	
	<b>INSP ADJ 2</b>
<b>CHASSIS</b>	
	<b>CHAS 3</b>
<b>POWER TRAIN</b>	
	<b>POWR TR 4</b>
<b>ENGINE OVERHAUL</b>	
	<b>ENG 5</b>
<b>COOLING SYSTEM</b>	
	<b>COOL 6</b>
<b>CARBURETION</b>	
	<b>CARB 7</b>
<b>ELECTRICAL</b>	
	<b>ELEC 8</b>
<b>SPECIFICATIONS</b>	
	<b>SPEC 9</b>
<b>OPTIONAL KIT</b>	
	<b>OPT 10</b>

① GEN INFO 	② INSP ADJ 	
③ CHAS 	④ POWR TR 	
⑤ ENG 	⑥ COOL 	
⑦ CARB 	⑧ ELEC 	
⑨ SPEC 	⑩ OPT 	
⑪ 	⑫ 	
⑬ 	⑭ 	
⑮ 	⑯ 	
⑰ 	⑱ 	⑲ 
⑳ 	㉑ 	㉒ 
㉓ 	㉔ 	㉕ 

0E031

## ILLUSTRATED SYMBOLS (Refer to the illustration)

Illustrated symbols ① to ⑩ are designed as thumb tabs to indicate the chapter's number and content.

- ① General information
- ② Periodic inspection and adjustment
- ③ Chassis
- ④ Power train
- ⑤ Engine overhaul
- ⑥ Cooling system
- ⑦ Carburetion
- ⑧ Electrical
- ⑨ Specifications
- ⑩ Optional kit

Illustrated symbols ⑪ to ⑰ are used to identify the specifications which appear.

- ⑪ Filling fluid
- ⑫ Lubricant
- ⑬ Tightening
- ⑭ Wear limit, clearance
- ⑮ Engine speed
- ⑯ Special tool
- ⑰  $\Omega$ , V, A

Illustrated symbols ⑱ to ㉕ in the exploded diagram indicate grade of lubricant and location of lubrication point.

- ⑱ Apply locking agent (LOCTITE®)
- ⑲ Apply Yamabond No.5®
- ⑳ Apply engine oil
- ㉑ Apply gear oil
- ㉒ Apply molybdenum disulfide oil
- ㉓ Apply wheel bearing grease
- ㉔ Apply low-temperature lithium-soap base grease
- ㉕ Apply molybdenum disulfide grease

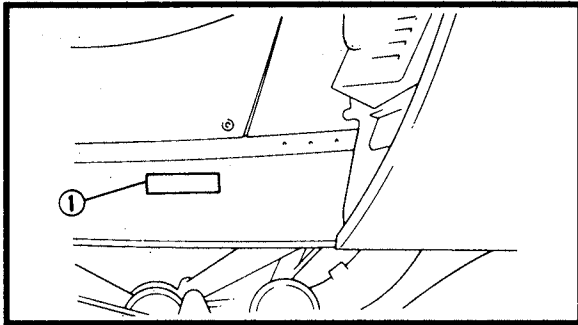
---

**CHAPTER 1.  
GENERAL INFORMATION**

**MACHINE IDENTIFICATION** ..... 1-1  
    FRAME SERIAL NUMBER ..... 1-1  
    ENGINE SERIAL NUMBER ..... 1-1

**IMPORTANT INFORMATION** ..... 1-2  
    PREPARATION FOR REMOVAL AND DIS-  
    ASSEMBLY ..... 1-2  
    ALL REPLACEMENT PARTS ..... 1-3  
    GASKETS, OIL SEALS, AND O-RINGS .... 1-3  
    LOCK WASHERS/PLATES AND COTTER  
    PINS ..... 1-3  
    BEARINGS AND OIL SEALS ..... 1-3  
    CIRCLIPS ..... 1-4

**SPECIAL TOOLS** ..... 1-4  
    FOR TUNE UP ..... 1-4  
    FOR ENGINE SERVICE ..... 1-5  
    FOR POWER TRAIN SERVICE ..... 1-6  
    FOR ELECTRICAL SERVICE ..... 1-7



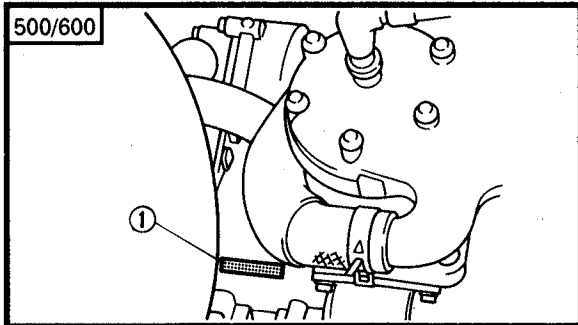
1E001

## GENERAL INFORMATION

### MACHINE IDENTIFICATION

#### FRAME SERIAL NUMBER

The frame serial number ① is located on the right-hand side of the frame (just below the front of the seat).

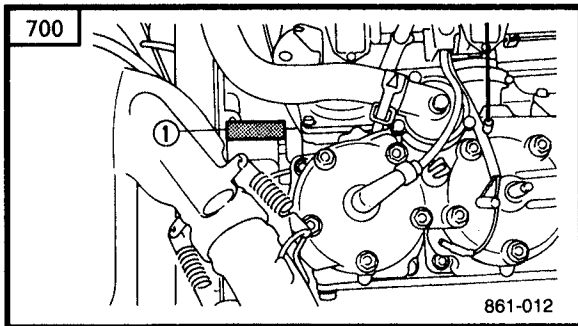


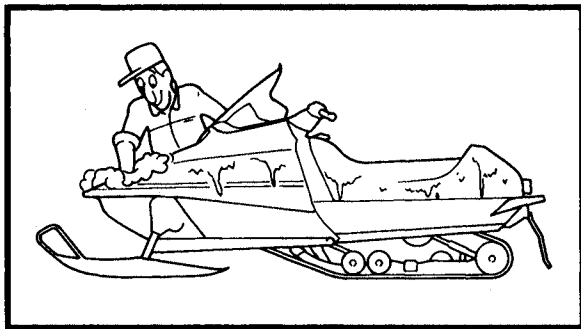
#### ENGINE SERIAL NUMBER

The engine serial number ① is located on the right-hand side of the crankcase.

#### NOTE:

Designs and specifications are subject to change without notice.

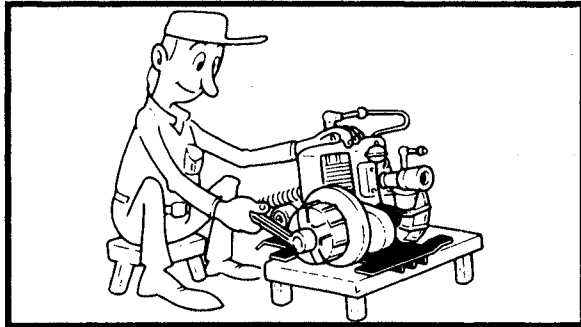




1E011

**IMPORTANT INFORMATION  
PREPARATION FOR REMOVAL AND DIS-  
ASSEMBLY**

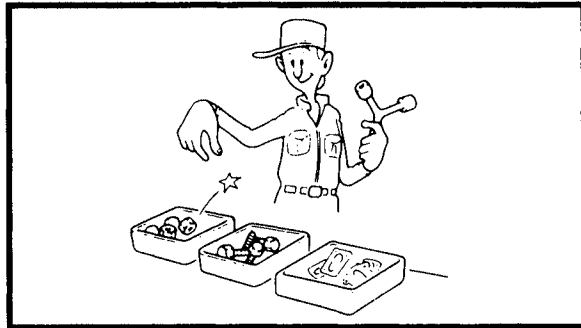
1. Remove all dirt, mud, dust, and foreign material before removal and disassembly. While cleaning, take care to protect the electrical parts, such as relays, switches, motor, resistors, controllers, etc., from high pressure water splashes.
2. Use proper tools and cleaning equipment. Refer to "SPECIAL TOOLS" .



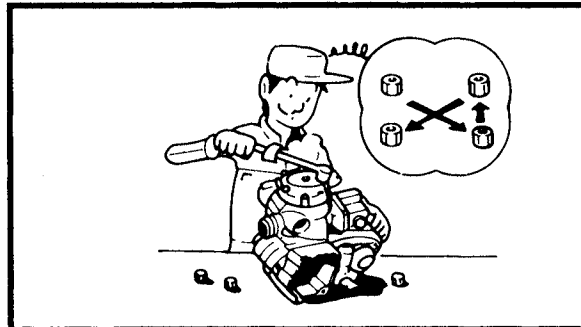
3. When disassembling the machine, keep mated parts together. This includes gears, cylinders, pistons, and other parts that have been "mated" through normal wear. Mated parts must be reused as an assembly or replaced.



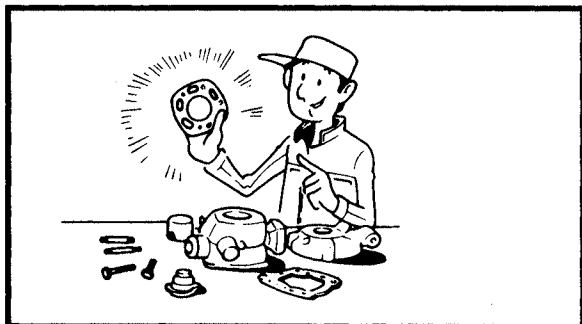
4. During disassembly of the machine, clean all parts and place them in trays in the order of disassembly. This will speed up assembly time and help ensure that all parts are reinstalled correctly.



5. Keep away from fire.



6. Be sure to keep to tightening torque specifications. When tightening bolts, nuts, and screws, start with larger-diameter pieces, and proceed from an inner-positioned one to an outer-positioned one in a criss-cross pattern.

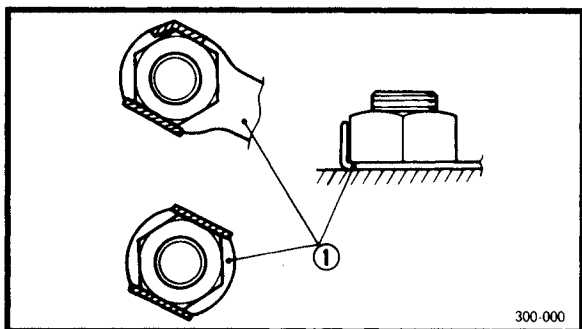


**ALL REPLACEMENT PARTS**

1. We recommend use of Yamaha genuine parts for all replacements. Use oil and/or grease recommended by Yamaha for assembly and adjustment.

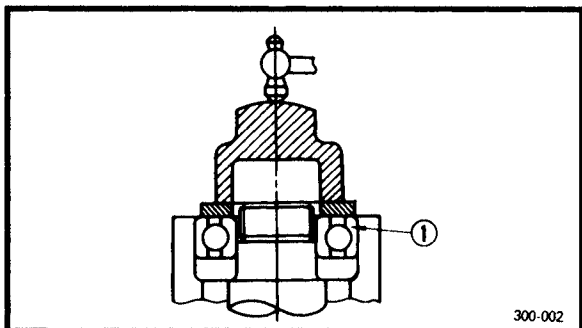
**GASKETS, OIL SEALS, AND O-RINGS**

1. All gaskets, seals, and O-rings should be replaced when an engine is overhauled. All gasket surfaces, oil seal lips, and O-rings must be cleaned.
2. Properly oil all mating parts and bearings during reassembly. Apply grease to the oil seal lips.



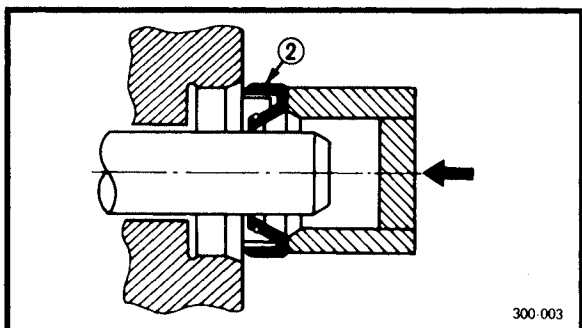
**LOCK WASHERS/PLATES AND COTTER PINS**

1. All lock washers/plates ① and cotter pins must be replaced when they are removed. Lock tab(s) should be bent along the bolt or nut flat(s) after the bolt or nut has been properly tightened.



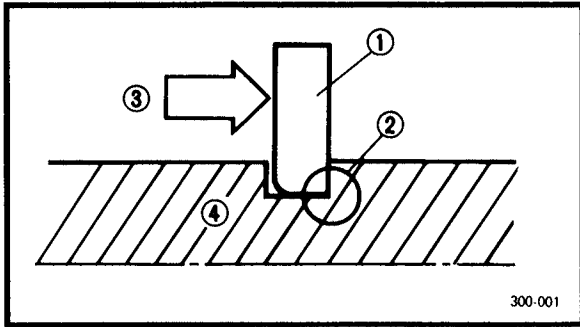
**BEARINGS AND OIL SEALS**

1. Install the bearing(s) ① and oil seal(s) ② with their manufacturer's marks or numbers facing outwards. (In other words, the stamped letters must be on the side exposed to view.) When installing oil seal(s), apply a light coating of lightweight lithium base grease to the seal lip(s). Oil the bearings liberally when installing.



**CAUTION:**

**Do not use compressed air to spin the bearings dry. This causes damage to the surface of the bearings.**



**CIRCLIPS**

1. All circlips should be inspected carefully before reassembly. Always replace piston pin clips after one use. Replace misshapen circlips. When installing a circlip ①, make sure that the sharp edged corner ② is positioned opposite to the thrust ③ it receives. See the sectional view.

④ Shaft

1E021

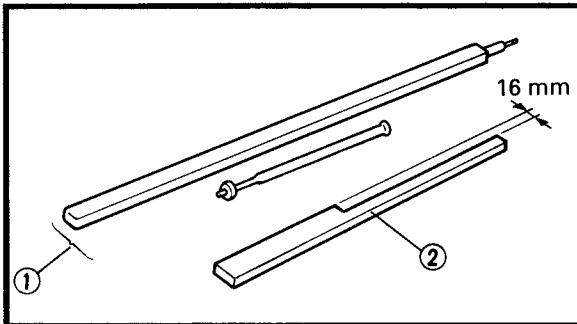
**SPECIAL TOOLS**

Some special tools are necessary for completely accurate tune-up and assembly. Using the correct special tool will help prevent damage that can be caused by the use of improper tools or improvised techniques.

**NOTE:**

Be sure to use the correct part number when ordering the tool, since the part number differs according to the area as shown below. The first part number is for Europe, and the second part is for the U.S.A. and Canada.

e.g. 90890 - \*\*\*\*\*, YU- \*\*\*\*\*



**FOR TUNE UP**

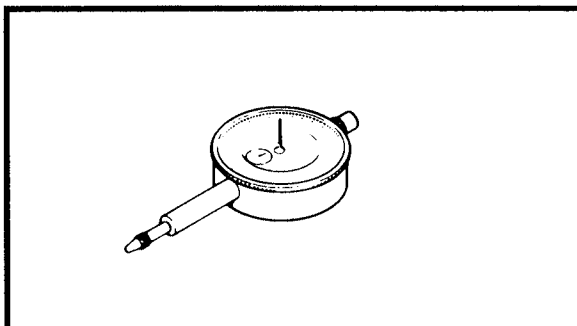
- Sheave gauge  
P/N YS-91047-3 ①, YS-39506-5 ②

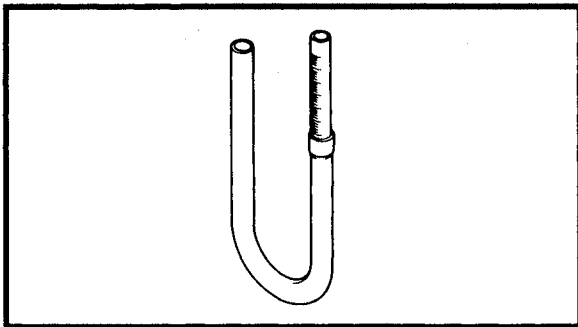
This gauge is used to measure sheave distance and for offset adjustment.

1E041

- Dial gauge  
P/N 90890-03097, YU-03097

This gauge is used for run out measurement.

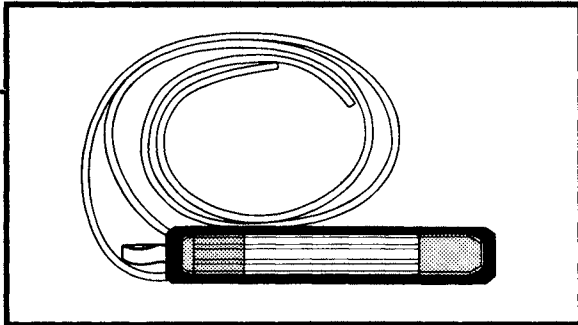




1E051

- Fuel level gauge  
P/N 90890-01312, YM-01312-A

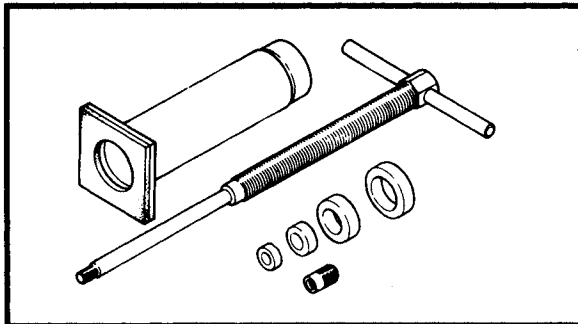
This gauge is used to measure the fuel level in the float chamber.



1E061

- Vacuum gauge  
P/N —, YS-33275

This gauge is used for carburetor synchronization.

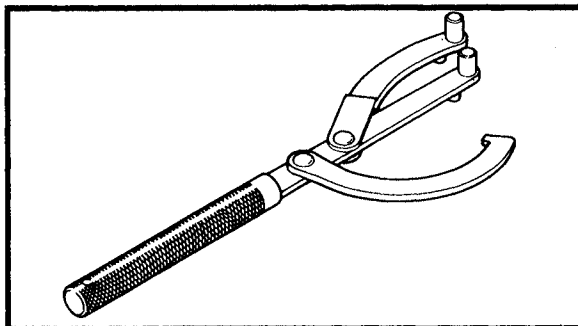


1E071

**FOR ENGINE SERVICE**

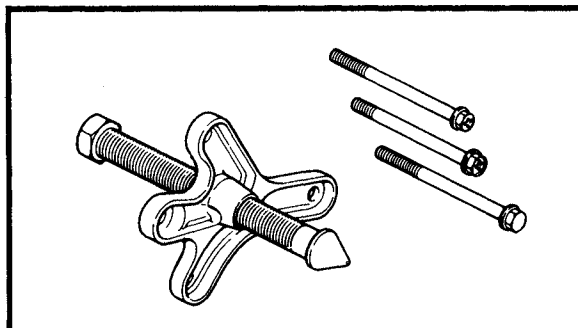
- Piston pin puller  
P/N 90890-01304, YU-01304

This tool is used to remove the piston pin.



- Rotor holding tool  
P/N 90890-01235, YU-01235

This tool is used to remove the starter pulley.

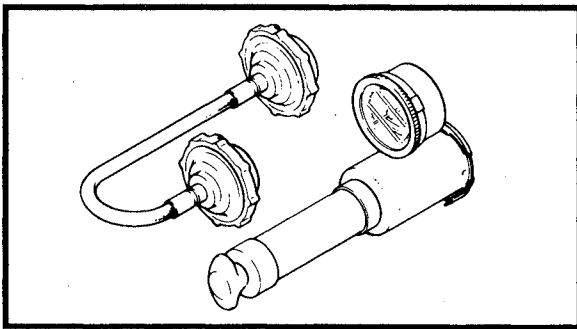


1E081

- Rotor holding puller  
P/N 90890-01362, YU-33270

This tool is used to remove the magneto rotor.

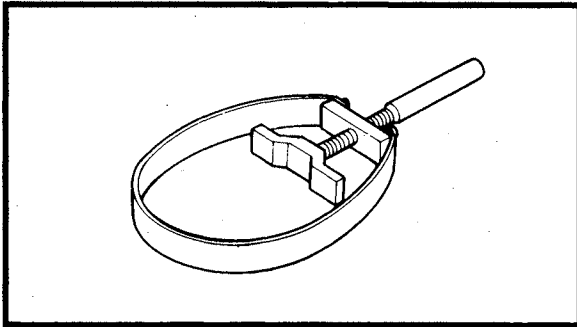




1E091

- Cooling system tester  
P/N 90890-01325, YU-24460-01

This tester is used for checking cooling system.

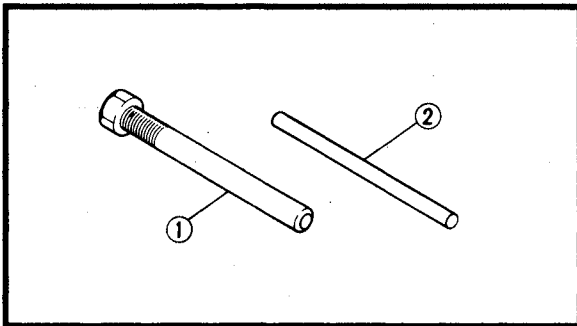


1E101

**FOR POWER TRAIN SERVICE**

- Primary sheave holder  
P/N 90890-01701, YS-01880

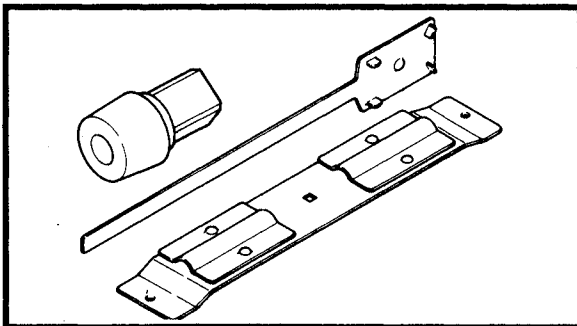
This tool is used to hold the primary sheave.



1E111

- Primary sheave puller (18 mm)  
P/N YS-01881-1①, YS-01882-1②

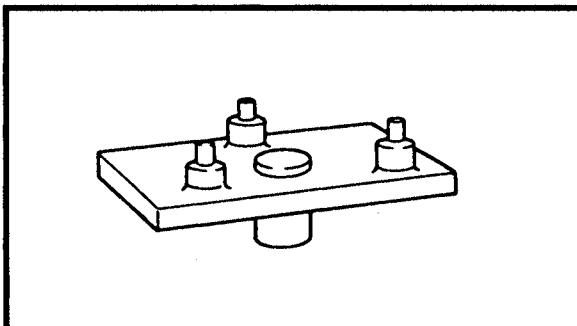
This tool is used for removing the primary sheave.



1E121

- Clutch spider separator  
P/N 90890-01711, YS-28890-B

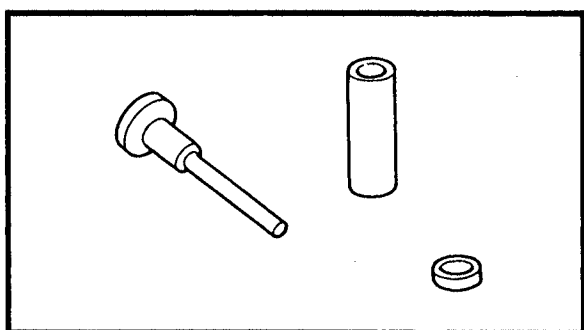
This tools are used when disassembling and assembling the primary sheave.



1E131

- Clutch separator adapter  
P/N 90890-01740, YS-34480

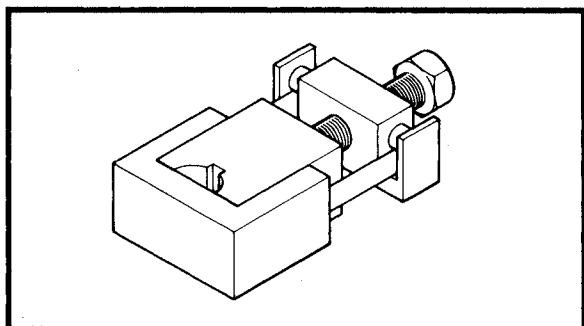
This tool is used when disassembling and assembling the primary sheave.



1E171

- Clutch bushing jig kit  
P/N YS-39752

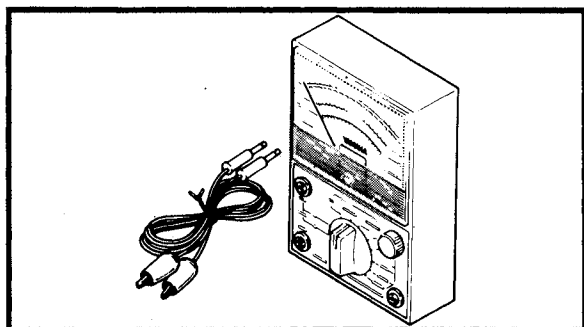
This tool is used when removing and installing the primary sheave bushing.



1E141

- Track clip installer  
P/N 90890-01721, YS-91045-A

This tool is used for installing the track clip.

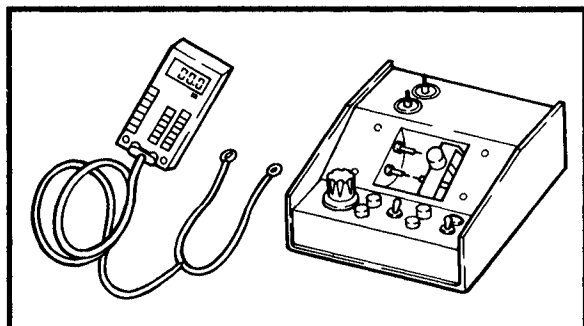


1E151

**FOR ELECTRICAL SERVICE**

- Pocket tester  
P/N 90890-03112, YU-03112

This instrument is necessary for checking the electrical components.



1E161

- Electro tester  
P/N 90890-03021, YU-33260-A

This instrument is invaluable for checking the electrical system.

---

## CHAPTER 2. PERIODIC INSPECTIONS AND ADJUSTMENTS

<b>INTRODUCTION</b> .....	2-1
<b>PERIODIC MAINTENANCE TABLE</b> .....	2-1
<b>ENGINE</b> .....	2-3
SPARK PLUGS .....	2-3
OIL PUMP .....	2-4
FUEL LINE INSPECTION .....	2-6
COOLING SYSTEM .....	2-6
CARBURETOR SYNCHRONIZATION .....	2-12
ENGINE IDLE SPEED ADJUSTMENT .....	2-13
THROTTLE CABLE ADJUSTMENT .....	2-13
THROTTLE OVERRIDE SYSTEM (T.O.R.S.) CHECK .....	2-14
STARTER (CHOKE) CABLE ADJUSTMENT .....	2-14
EXHAUST SYSTEM INSPECTION .....	2-15
<b>POWER TRAIN</b> .....	2-16
DRIVE V-BELT .....	2-16
ENGAGEMENT SPEED CHECK .....	2-18
PARKING BRAKE PAD INSPECTION .....	2-18
PARKING BRAKE ADJUSTMENT .....	2-18
BRAKE FLUID LEVEL INSPECTION .....	2-19
BRAKE PAD INSPECTION .....	2-19
BRAKE HOSE INSPECTION .....	2-20
AIR BLEEDING (HYDRAULIC BRAKE SYSTEM) .....	2-20
DRIVE CHAIN .....	2-21
TRACK TENSION ADJUSTMENT .....	2-23
SLIDE RUNNER INSPECTION .....	2-24
<b>CHASSIS</b> .....	2-25
SKI/SKI RUNNER .....	2-25
STEERING SYSTEM .....	2-25
LUBRICATION .....	2-26
<b>ELECTRICAL</b> .....	2-28
HEADLIGHT BEAM ADJUSTMENT .....	2-28

**TUNING** ..... 2-29  
    **CARBURETOR TUNING (Except for**  
    **VT600, MM600)** ..... 2-29  
    **CLUTCH TUNING** ..... 2-39  
    **GEAR SELECTION** ..... 2-43

**HIGH ALTITUDE TUNING** ..... 2-46  
    **FRONT SUSPENSION** ..... 2-47  
    **REAR SUSPENSION** ..... 2-48

2E007

## PERIODIC INSPECTIONS AND ADJUSTMENTS

### INTRODUCTION

This chapter includes all information necessary to perform recommended inspections and adjustments. These preventive maintenance procedures, if followed, will ensure more reliable machine operation and a longer service life. In addition, the need for costly overhaul work will be greatly reduced. This information applies to machines already in service as well as new machines that are being prepared for sale. All service technicians should be familiar with this entire chapter.

### PERIODIC MAINTENANCE TABLE

Item	Remarks	Pre-operation check (daily)	First month or first 800 km (500 mi) (40 hr)	Every season or 3,200 km (2,000 mi) (160 hr)
Spark plugs	Check the condition, adjust the gap and clean. Replace if necessary.			●
Engine oil	Check the oil level.	●		
	Air bleed the oil pump, if necessary.			●
Oil filter	Check the condition. Replace if necessary.			●
Fuel	Check the fuel level.	●		
Fuel filter	Check the condition. Replace if necessary.			●
Fuel lines	Check the fuel hose for cracks or damage. Replace if necessary.			●
Oil line	Check the oil hose for cracks or damage. Replace if necessary.			●
Engine coolant	Check the coolant level.	●		
	Air bleed the cooling system, if necessary.			●
Carburetors	Check the operation of the throttle lever.	●		
	Adjust the jets.	Whenever operating condition (elevation/temperature) is changed.		
Water pump belt (500/600)	Check for wear and damage. Replace if necessary.			●
	Adjust the water pump belt, if necessary.			●
Manual starter	Check the operation. Check for rope damage. Replace if necessary.	●		
Engine stop switch	Check the operation. Repair if necessary.	●		
Throttle override system	Check the operation. Repair if necessary.	●		
Throttle lever	Check the operation. Repair if necessary.	●		
Exhaust system	Check for leakage. Retighten or replace the gasket, if necessary.			●
Decarbonization	More frequently if necessary.			●
Drive V-belt guard	Check for cracks, bends or damage. Replace if necessary.	●		
Drive V-belt	Check for wear and damage. Replace if necessary.	●		
Drive track/idler wheels	Check deflection, wear and damage. Adjust/replace if necessary.	●		

**PERIODIC MAINTENANCE TABLE**

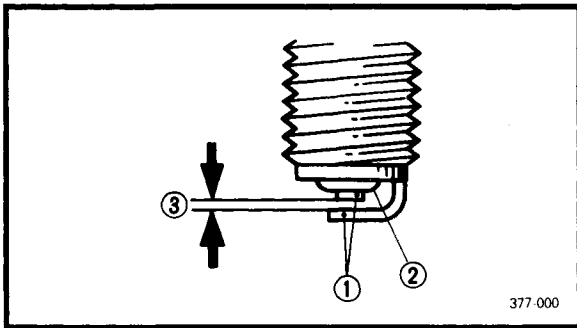


Item	Remarks	Pre-operation check (daily)	First month or first 800 km (500 mi) (40 hr)	Every season or 3,200 km (2,000 mi) (160 hr)
Slide runner	Check for wear and damage.	●		
	Replace if necessary.			●
Brake/parking brake	Check operation and fluid leakage.	●		
	Adjust free play and/or replace the brake pads, if necessary.			●
	Replace the brake fluid.	See NOTE.		
Drive chain oil	Check the oil level.		●	
	Replace.			●
Drive chain	Check the deflection. Adjust if necessary.	Initial 80 km (50 mi) and every 800 km (500 mi) thereafter.		
Ski/ski cover/ski runner	Check for wear and damage.	●		
	Replace if necessary.			●
Steering system	Check the operation.	●		
	Adjust toe-out if necessary.			●
Lights	Check the operation. Replace bulbs if necessary.	●		
Battery	Check the fluid level.	●		
	Check the specific gravity and the operation of the breather pipe. Charge/replace if necessary.			●
	Check the engagement and shift speed.			●
Primary sheave	Adjust if necessary.	Whenever operating elevation is changed.		
	Check for wear and damage. Replace if necessary.			●
	Lubricate with the specified grease.			●
	Lubricate with the specified grease.			●
Secondary sheave	Lubricate with the specified grease.			●
	Adjust if necessary.	Whenever operating elevation is changed.		
Steering column bearing	Lubricate with the specified grease.			●
Ski and front suspension	Lubricate with the specified grease.			●
Suspension component	Lubricate with the specified grease.			●
Parking brake cable end and lever end/ throttle cable end	Lubricate with the specified grease.			●
	Check for cable damage. Replace if necessary.			●
Shroud latches	Make sure that the shroud latches are hooked.	●		
Fittings/fasteners	Check for tightness. Repair if necessary.	●		
Service tools/spare parts	Check for proper placement.	●		

**NOTE:**

**Brake fluid replacement:**

1. When disassembling the master cylinder or caliper, replace the brake fluid. Regularly check the brake fluid level and add the fluid as required.
2. On the inner parts of the master cylinder and caliper, replace the oil seals every two years.
3. Replace the brake hoses every four years, or if cracked or damaged.




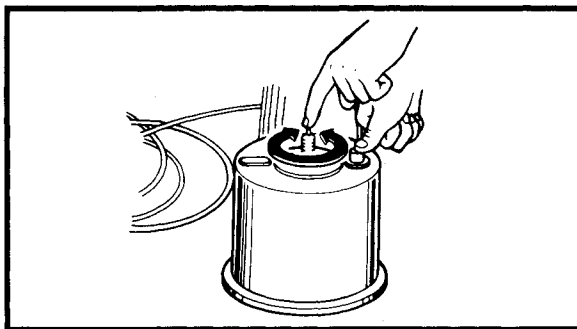
2E011

**ENGINE**

**SPARK PLUGS**

1. Remove:
  - Spark plugs
2. Inspect:
  - Electrodes ①  
Damage/wear → Replace the spark plug.
  - Insulator color ②
3. Measure:
  - Spark plug gap ③  
Out of specification → Regap.  
Use a wire thickness gauge.

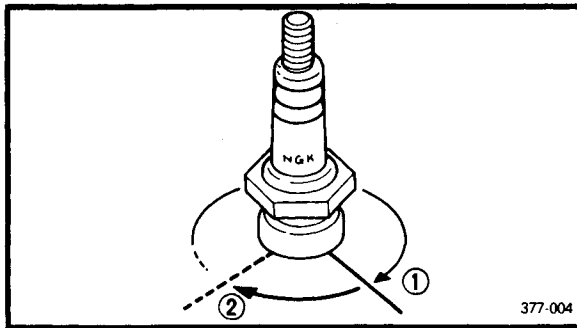
 **Spark plug gap:**  
0.7 ~ 0.8 mm (0.028 ~ 0.031 in)




If necessary, clean the spark plugs with a spark plug cleaner.

**Standard spark plug:**  
BR9ES (NGK)

Before installing a spark plug, clean the gasket surface and spark plug surface.



4. Install:
  - Spark plugs

 **Spark plug:**  
20 Nm (2.0 m • kg, 14 ft • lb)

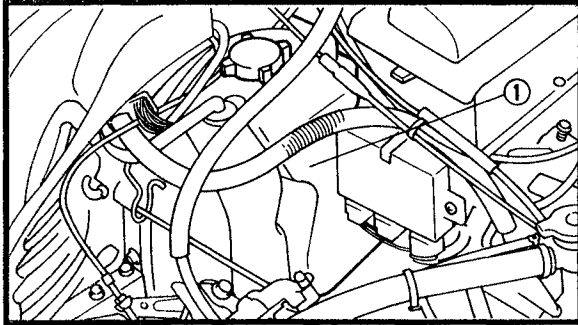
**NOTE:** \_\_\_\_\_  
Finger-tighten ① the spark plug before torquing ② to specification.

2E021

**OIL PUMP****Air bleeding****CAUTION:**


The oil pump and oil delivery line must be bled on the following occasions:

- When any portion of the oil system has been disconnected.
- When the machine has been turned on its side.
- Whenever the oil tank has been run empty.
- During pre-delivery.



## 1. Fill:

- Oil tank ①

	<b>Oil tank capacity:</b>
	2.4 L (2.1 Imp qt, 2.5 US qt)
	<b>Recommended oil:</b> YAMALUBE 2-cycle oil or equivalent

## 2. Remove:

- Carburetor (700)

3. Place a rag under the oil pump assembly to soak up any spilled oil.

## 4. Disconnect:

- Oil hose

5. Keep the oil running out until air bubbles disappear from the oil hose.

## 6. Connect:

- Oil hose

## 7. Disconnect:

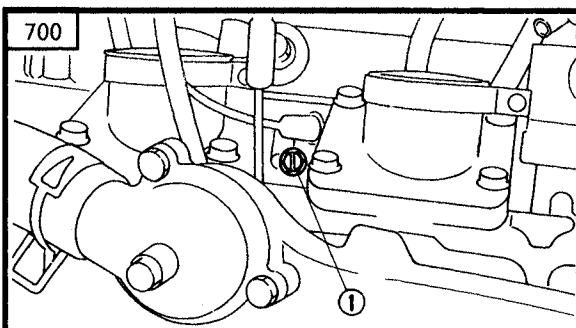
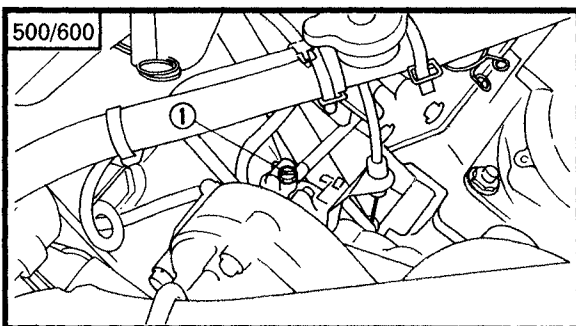
- Oil delivery hose

8. Feed the "YAMALUBE 2-cycle oil" into the oil delivery hose using an oil can for complete air bleeding.

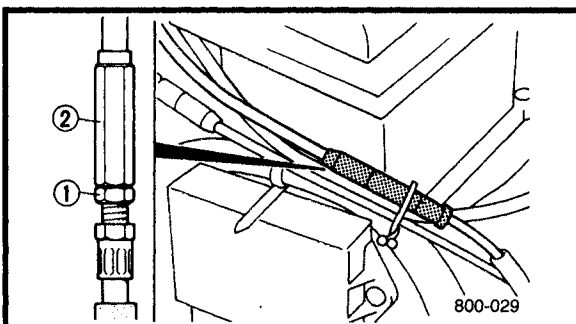
## 9. Connect:

- Oil delivery hose





10. Remove:
  - Bleed screw ①
  - Gasket (bleed screw)
11. Let the oil run out until all of the air bubbles disappear from the bleed hole.
12. Inspect:
  - Gasket (bleed screw)
  - Damage/wear → Replace.
13. Install:
  - Gasket (bleed screw)
  - Bleed screw

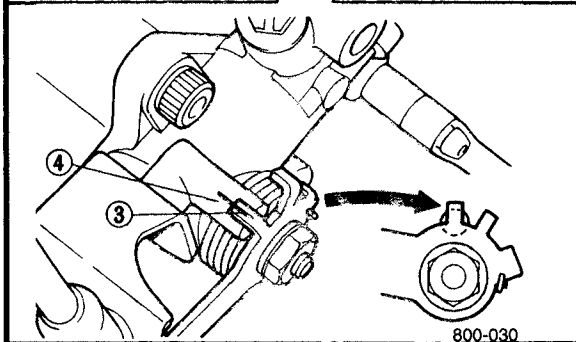
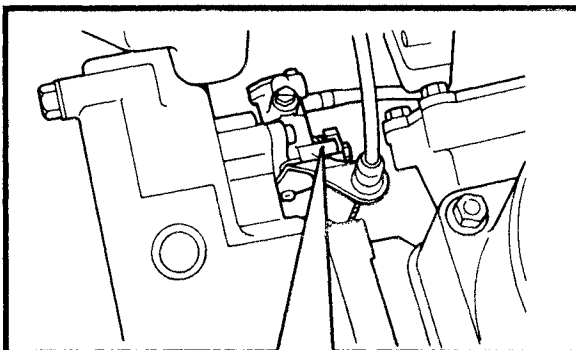


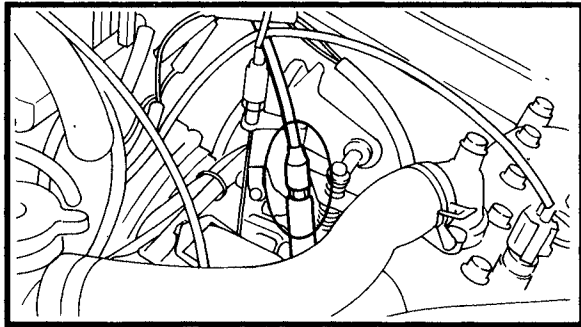
**Cable adjustment (500/600)**

**NOTE:** \_\_\_\_\_  
 Before adjusting the oil pump cable, the throttle cable free play should be adjusted.

**Adjustment steps:**

- Loosen the locknut ①.
- With the throttle lever in the full-throttle position, turn the adjuster ② in or out to align the mark on the control lever ③ with the mark on the pump boss ④.
- Tighten the locknut ①.





## Cable adjustment (700)

**NOTE:** \_\_\_\_\_

Before adjusting the oil pump cable, the throttle cable distance should be adjusted.

**Adjustment steps:**

- Loosen the locknut ①.
- Turn the adjuster ② in or out until the specified distance is obtained.



**Distance ③ :**

**19 ~ 21 mm (0.75 ~ 0.83 in)**

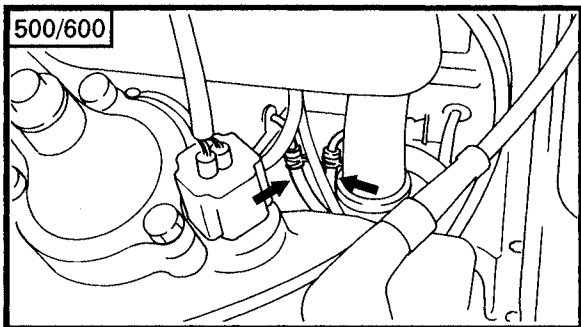
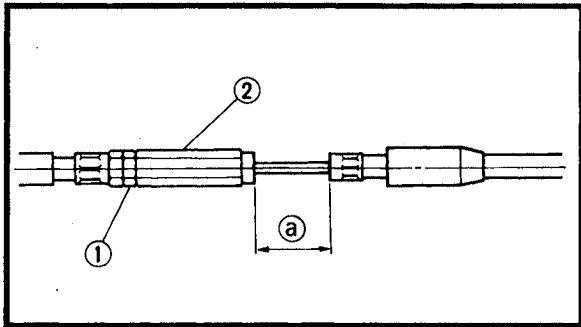
**Turning in**

**Distance ③ is increased.**

**Turning out**

**Distance ③ is decreased.**

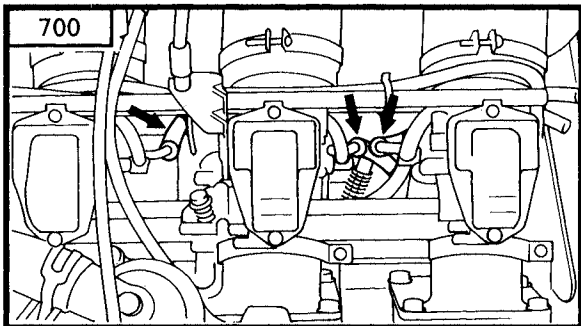
- Tighten the locknut and push in the adjuster cover.



## FUEL LINE INSPECTION

1. Inspect:

- Fuel hoses
- Fuel delivery hoses  
Cracks/damage → Replace.



2E061

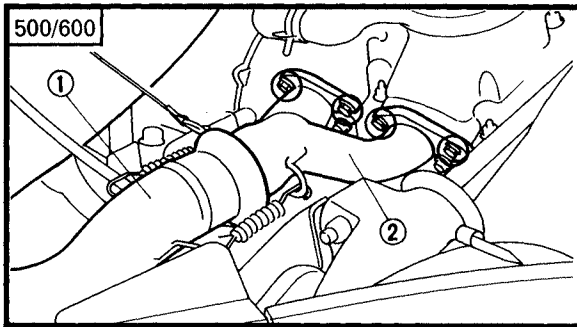
## COOLING SYSTEM

### Coolant replacement

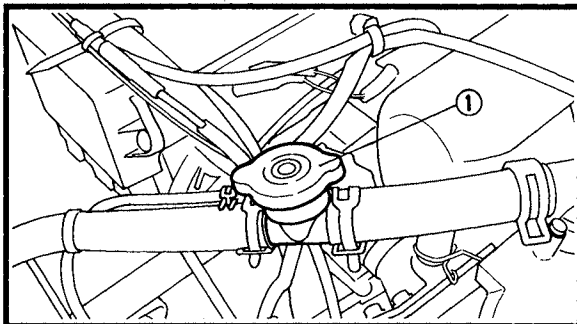
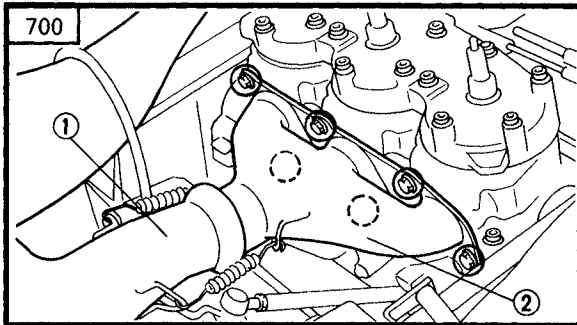
**NOTE:** \_\_\_\_\_

The coolant should be changed at least every season.

1. Place the machine on a level surface.



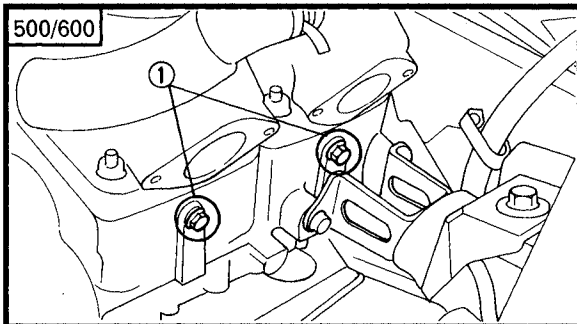
2. Remove:
- Muffler ①
  - Exhaust pipe ②



3. Remove:
- Coolant filler cap ①

**⚠ WARNING**

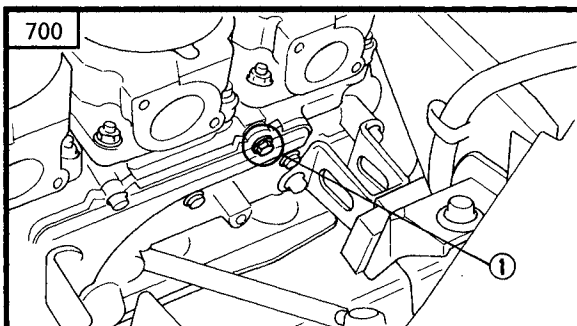
Do not remove the coolant filler cap ① when the engine is hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury. When the engine has cooled, place a thick rag or a towel over the coolant filler cap. Slowly rotate the cap counterclockwise to the detent. This allows any residual pressure to escape. When the hissing sound has stopped, press down on the cap while turning counterclockwise and remove it.



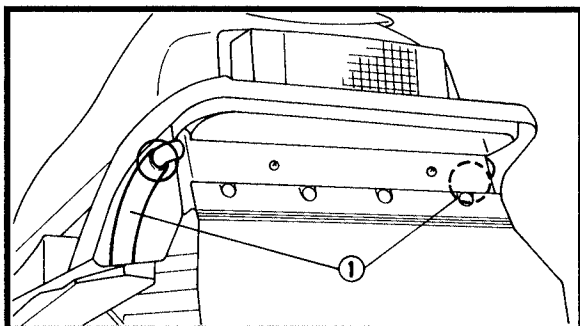
4. Place an open container under the coolant drain bolts ①.

5. Remove:
- Coolant drain bolts

6. Drain the coolant.



**NOTE:** Lift up the tail of the machine to drain the coolant.



7. Disconnect:
  - Coolant hoses (rear) ①
8. Drain the coolant.

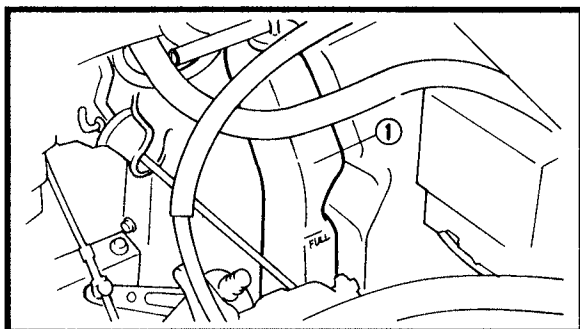
**NOTE:**

Lift up the front of the machine to drain the coolant completely.

**⚠ WARNING**


Coolant is poisonous. It is harmful or fatal if swallowed.

- If coolant is swallowed, induce vomiting immediately and get immediate medical attention.
- If coolant splashes in your eyes, thoroughly wash them with water and consult a doctor.
- If coolant splashes on your skin or clothes, quickly wash it away with soap and water.




9. Remove the reservoir tank ① and drain the coolant.
10. Install:
  - Reservoir tank

11. Inspect:
  - Gaskets (coolant drain bolts)  
Damage → Replace.
12. Install:
  - Gaskets
  - Coolant drain bolts
  - Exhaust pipe/gaskets
  - Muffler

	<b>Coolant drain bolt:</b>
	23 Nm (2.3 m • kg, 17 ft • lb) (500/600)
	13 Nm (1.3 m • kg, 9.4 ft • lb) (700)
	<b>Bolt (exhaust pipe):</b>
	30 Nm (3.0 m • kg, 22 ft • lb) (500/600)
	27 Nm (2.7 m • kg, 19 ft • lb) (700)

13. Fill:

- Cooling system



**Recommended coolant:**  
High quality ethylene glycol anti-freeze containing corrosion inhibitor

**Coolant and water mixed ratio:**  
60% : 40%

**Total amount:**

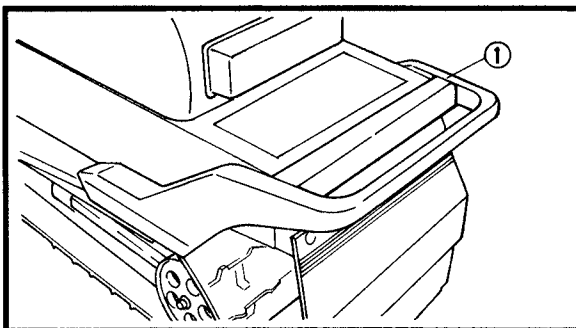
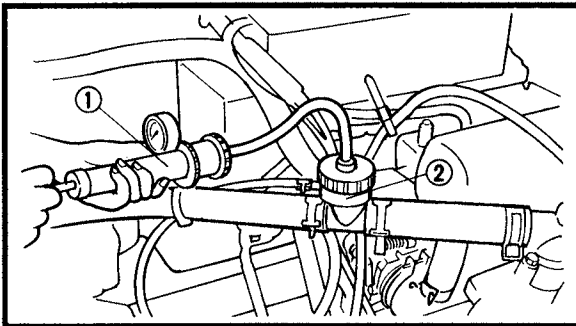
- 3.4 L (2.99 Imp qt, 3.59 US qt)  
(VT500/600, MM600)
- 3.3 L (2.90 Imp qt, 3.49 US qt)  
(VX500XT/XTC/XTCE/XTCR, VX600XT/XTC/XTCE/XTCR, VX600SX)
- 4.2 L (3.70 Imp qt, 4.44 US qt)  
(VX700SX)
- 4.5 L (3.96 Imp qt, 4.76 US qt)  
(MM700)

**Reservoir tank capacity:**

- 0.17 L (0.15 Imp qt, 0.18 US qt)
- From LOW to FULL level:  
0.13 L (0.11 Imp qt, 0.14 US qt)

**CAUTION**

- Hard water or salt water is harmful to engine parts. If soft water is not available, use boiled or distilled water.
- Do not use water containing impurities or oil.



14. Bleed the air from the cooling system.

15. Inspect:

- Cooling system  
Decrease of pressure (leaks) → Repair as required.

**Inspection steps:**

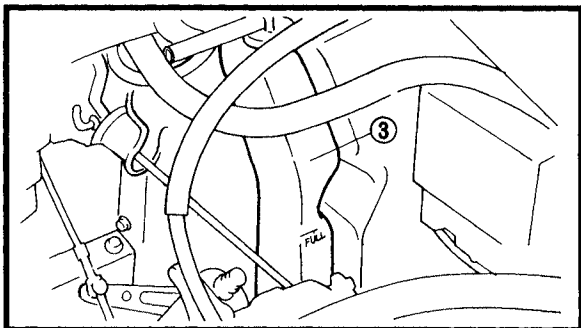
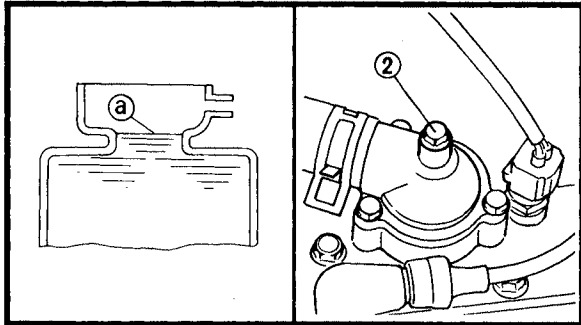
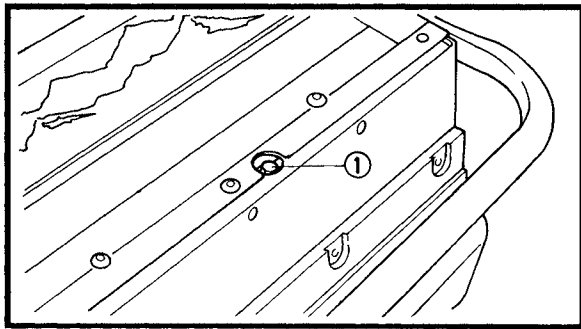
- Attach the cooling system tester ① (90890-01325, YU-24460-01) to the coolant filler ②.
- Apply 100 kPa (1.0 kg/cm<sup>2</sup>, 14 psi).
- Measure the pressure with gauge.

2E071

**Air bleeding**

1. Remove:

- Seat (except for VT500/600, MM600/700)
- Rear bumper cover ①



## 2. Bleed air from the cooling system.

**Air bleeding steps:**

- Lift up the tail of the machine.
- Remove the bleed bolt ① on the heat exchanger.
- While slowly adding coolant to the radiator, allow the coolant to drain until all of the air bubbles disappear.
- Tighten the bleed bolt.

**Bleed bolt:**

**13 Nm (1.3 m · kg, 9.4 ft · lb)**

- Add coolant to the specified level ②.
- Loosen the bleed bolt ② on the water pump housing.
- Keep the coolant running out until all of the air bubbles disappear.
- Tighten the bleed bolt.

**Bleed bolt:**

**7 Nm (0.7 m · kg, 5.1 ft · lb)**

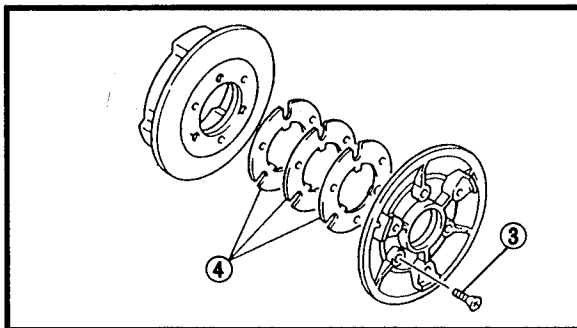
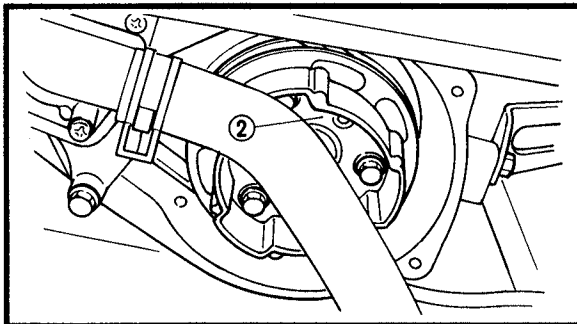
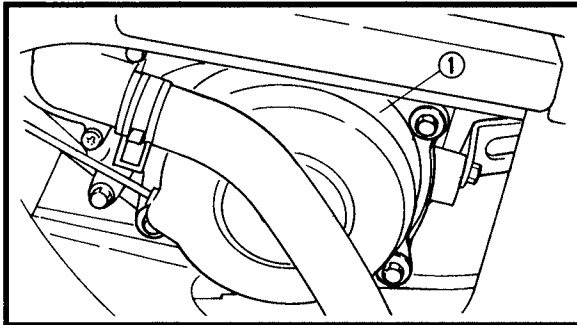
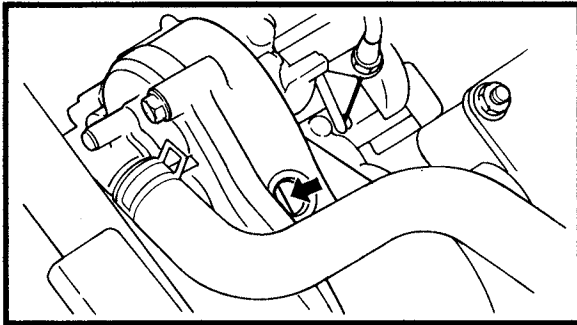
- Install the coolant filler cap.  
Apply and lock the parking brake. Start the engine and run it at approximately 2500 ~ 3000 rpm until the thermostat opens and the coolant circulates (approximately 3 ~ 5 minutes). The rear heat exchanger will be warm to the touch.

**⚠ WARNING**

**To avoid severe injury or death:**

- **Make sure the machine is securely supported with a suitable stand.**
- **Do not exceed 3000 rpm. The machine could unexpectedly move forward if the clutch engages, or drive line damage and excessive V-belt wear could occur.**
- **Operate the engine only in a well-ventilated area.**


- Remove the coolant filler cap and bleed air from the cooling system again, as shown in the steps above.  
No air bubbles → OK.
- Add coolant to the specified level.
- Pour coolant into the reservoir tank ③ until the coolant level reaches the "FULL" level mark.



2E081

**Water pump belt deflection adjustment (500/600)**

1. Remove:
  - Muffler
2. Check:
  - Drive belt deflection
 Out of specification → Adjust.

	<b>Drive belt deflection</b>
	8 mm (0.31 in)
	100 ~ 140 N (10~14 kg, 22.1 ~ 30.9 lb)
	<b>(NEW BELT)</b>
	8 mm (0.31 in)
	130 ~ 220 N (13 ~ 20 kg, 28.7 ~ 44.1 lb)

3. Adjust:
  - Drive belt deflection


- Adjustment steps:**
- Remove the recoil starter ①.
  - Use a primary sheave holder (90890-01701, YS-01880) to hold the primary sheave.
  - Remove the starter pulley ②.
  - Remove the screws ③ of the starter pulley.
  - Adjust the drive belt deflection by adding or removing a shim ④.

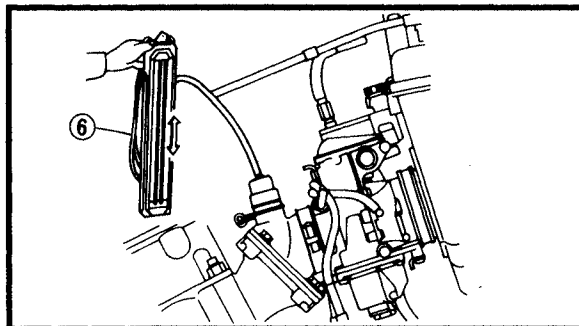
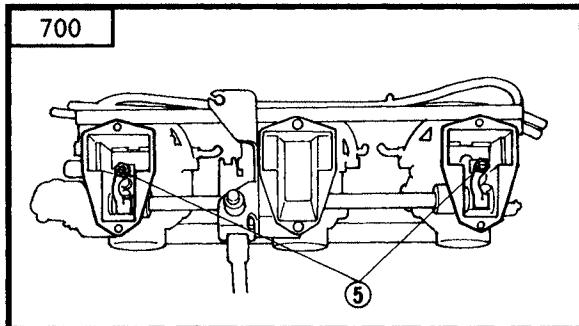
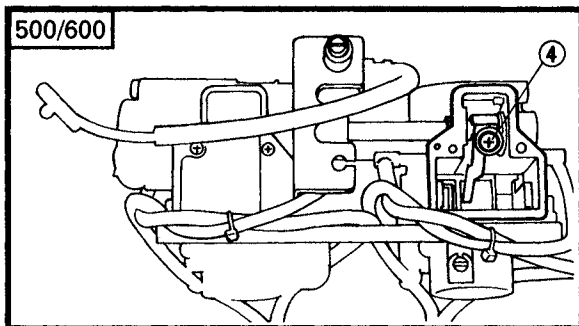
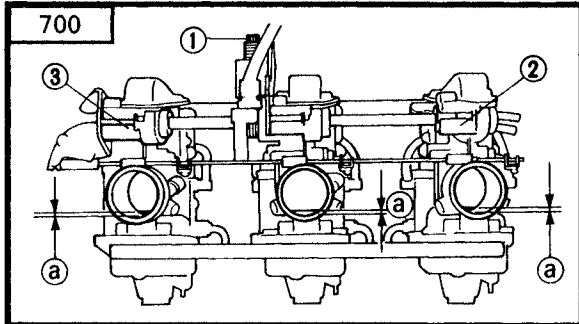
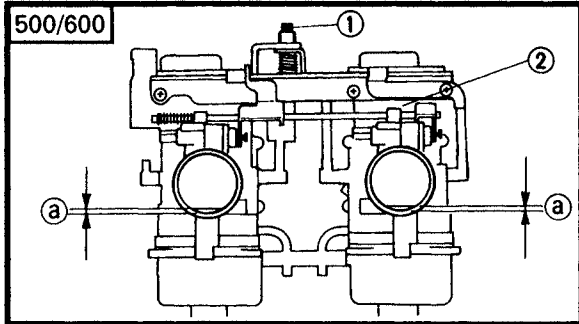
<b>Add shim</b>	<b>Tension decreases.</b>
<b>Remove shim</b>	<b>Tension increases.</b>

Shim size	
Part number	Thickness
8CA-15721-00	0.5 mm (0.02 in)
8CA-15722-00	1.0 mm (0.04 in)

- Install the starter pulley and drive belt.
- Recheck the drive belt deflection. If out of specification, readjust the drive belt deflection.
- Install the recoil starter.

**4. Tighten:**

	<b>Starter pulley bolt:</b>
	23 Nm (2.3 m · kg, 17 ft · lb)
	<b>Starter pulley screw:</b>
	7 Nm (0.7 m · kg, 5.1 ft · lb)
	<b>Recoil starter bolt:</b>
	10 Nm (1.0 m · kg, 7.2 ft · lb) (500,600) 12 Nm (1.2 m · kg, 8.7 ft · lb) (700)



2E094

## CARBURETOR SYNCHRONIZATION

1. Remove:
  - Carburetor assembly
2. Adjust:
  - Carburetor synchronization

### Adjustment steps:

- First, turn the throttle stop screw ① of carburetor #2 until the specified throttle valve height ② is obtained.



### Throttle valve height:

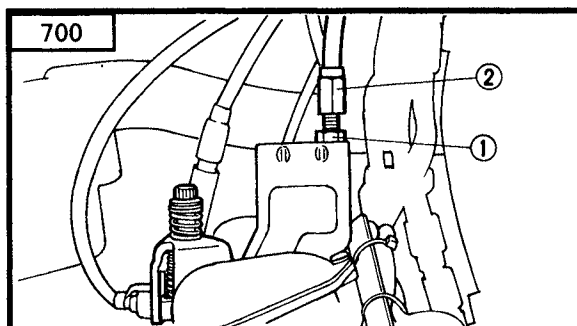
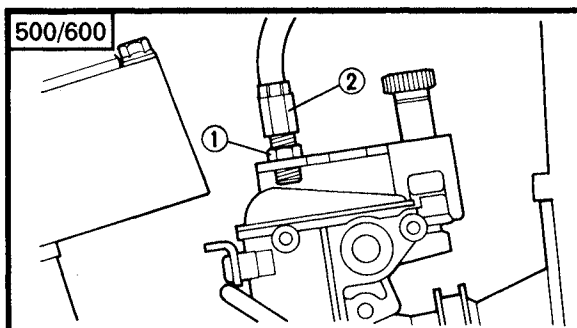
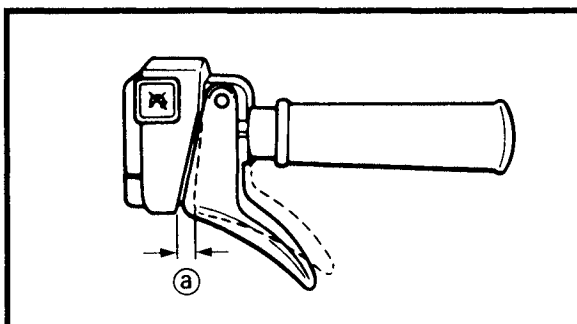
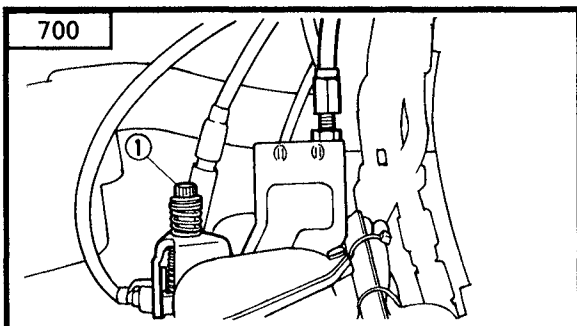
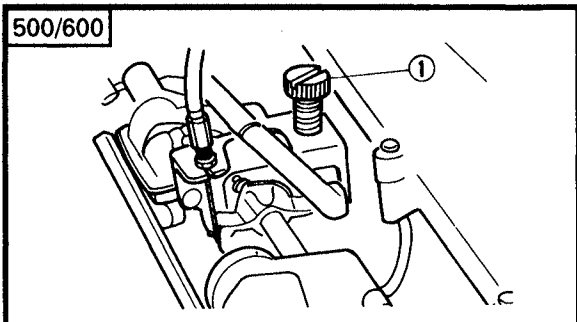
- 1.5 mm (0.059 in) (500/600)
- 1.3 mm (0.051 in) (700)

- Second adjust the throttle valve height ③ on carburetor #1 ④ and #3 ⑤ (700) with the adjusting eccentric nut ⑥ (500/600) or adjusting screw ⑦ (700).
- Move the throttle lever 2 ~ 3 times.
- Make sure that all of the carburetor throttle valves are at the same height.
- Install the carburetor.
- Remove the air chamber, plug the hole in the carburetor joint, and connect the vacuum gauge ⑧ (YS-33275) to the fitting. (500/600)
- Start the engine and let it warm up.
- If the vacuum readings are not the same, turn the adjusting eccentric nut ⑥ (500/600) or adjusting screw ⑦ (700) in or out so that the readings are equal.

### NOTE:

When reading the vacuum gauge, make sure that the carburetor covers are installed.





2E101

## ENGINE IDLE SPEED ADJUSTMENT

### 1. Adjust:

- Engine idle speed

#### Adjustment steps:

- Start the engine and let it warm up.
- Turn the throttle stop screw ① in or out to adjust the engine idle speed.

Turning in	Idle speed increases.
------------	-----------------------

Turning out	Idle speed decreases.
-------------	-----------------------



#### Engine idle speed:

- 1,450 ~ 1,650 r/min (600)
- 1,500 ~ 1,700 r/min (500, VT600, MM600)
- 1,500 ~ 1,700 r/min (700)

#### NOTE:

After adjusting the engine idle speed, the throttle cable free play should be adjusted.

2E131

## THROTTLE CABLE ADJUSTMENT

#### NOTE:

Before adjusting the throttle cable free play, the engine idle speed should be adjusted.

### 1. Measure:

- Throttle cable free play ①
- Out of specification → Adjust.



#### Throttle cable free play:

1.0 ~ 2.0 mm (0.04 ~ 0.08 in)

### 2. Adjust:

- Throttle cable free play

#### Adjustment steps:

- Loosen the locknut ①.
- Turn the adjusting nut ② in or out until the specified free play is obtained.

Turning in	Free play is increased.
------------	-------------------------

Turning out	Free play is decreased.
-------------	-------------------------

- Tighten the locknut.



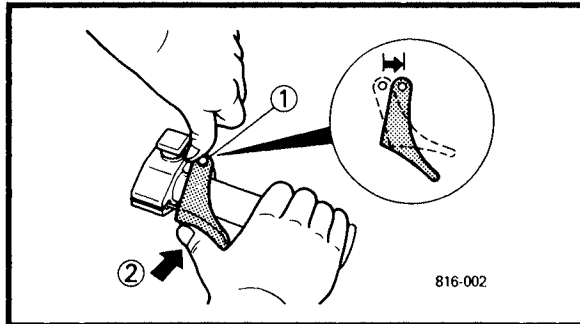
2E122

THROTTLE OVERRIDE SYSTEM (T.O.R.S.)  
CHECK

**⚠ WARNING**

When checking T.O.R.S.:

- Be sure the parking brake is applied.
- Be sure the throttle lever moves smoothly.
- Do not run the engine up to clutch engagement rpm. Otherwise, the machine could start moving forward unexpectedly, which could cause an accident.



1. Start the engine.
2. Hold the pivot point of the throttle lever away from the throttle switch ①.

3. Press ② the throttle lever gradually.

The water temperature warning light (VX600XT/XTC/XTC/XTCR/SX) or diagnosis indicator light (VT600, MM600) should turn on and off and the engine should run between 2,800 and 3,000 rpm.

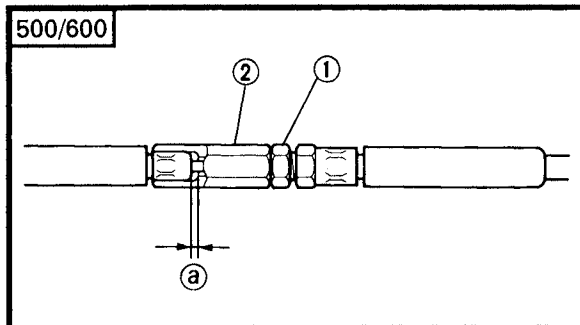
**⚠ WARNING**

If the engine does not run between 2,800 and 3,000 rpm, stop the engine by turning the main switch to the "OFF" position and check the electrical system.

2E131

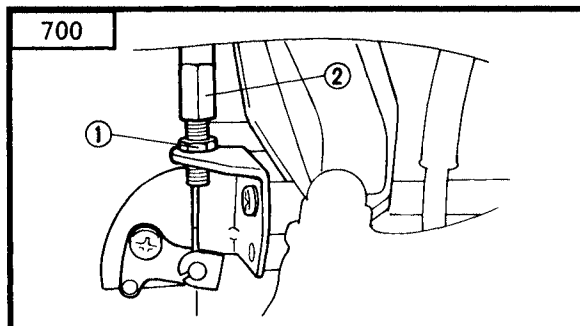
STARTER (CHOKE) CABLE ADJUSTMENT

1. Pull the outer tube of the starter cable ① up.
2. Measure:
  - Starter cable free play ②
 Out of specification → Adjust.



**Starter cable free play ②:**  
0.5 ~ 1.5 mm (0.02 ~ 0.06 in)

3. Adjust:
  - Starter cable free play



**Adjustment steps:**

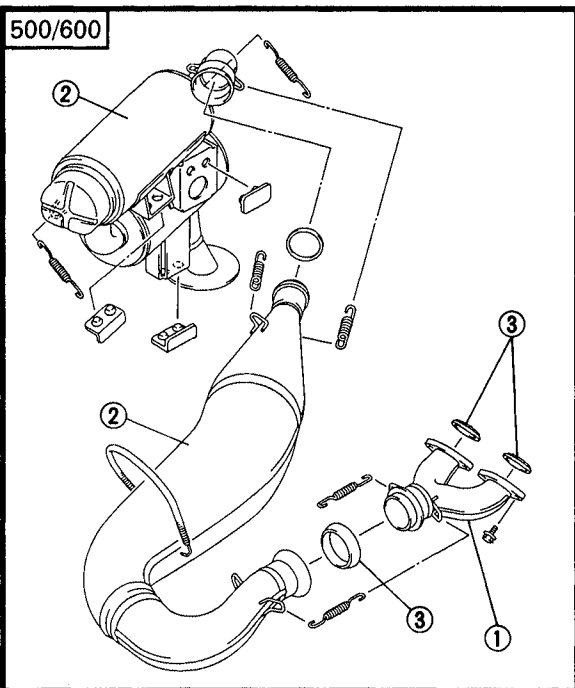
- Loosen the locknut ①.
- Turn the adjusting nut ② in or out until the specified free play is obtained.

Turning in	Free play is increased.
------------	-------------------------

Turning out	Free play is decreased.
-------------	-------------------------

- Tighten the locknut and push in the adjuster cover.

500/600



## EXHAUST SYSTEM INSPECTION

1. Open the shroud.
2. Remove:
  - Springs (exhaust pipe and muffler)
3. Inspect:
  - Exhaust pipes ①
  - Muffler ②
  - Cracks/damage → Replace.
  - Gaskets ③
  - Exhaust gas leaks → Replace.
4. Inspect:
  - Tightening torque

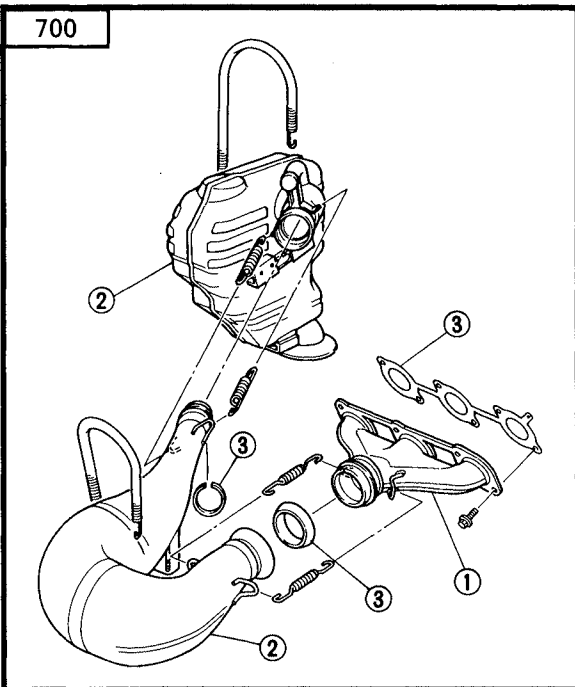


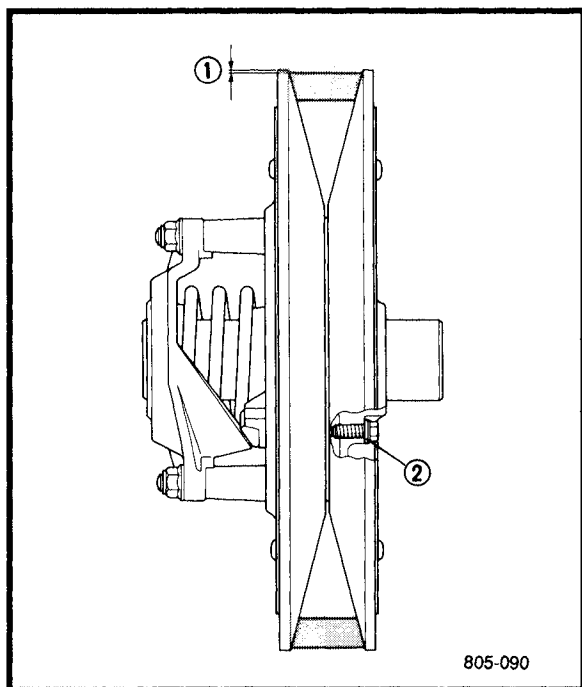
### Bolt (exhaust pipe):

**30 Nm (3.0 m · kg, 22 ft · lb) (500/600)**

**27 Nm (2.7 m · kg, 19 ft · lb) (700)**

700





**POWER TRAIN**

**DRIVE V-BELT**

**⚠ WARNING**

When installing the new belt, be sure the V-belt is positioned 0 ~ 2 mm (0 ~ 0.08 in) below the edge ① of the secondary sheave.

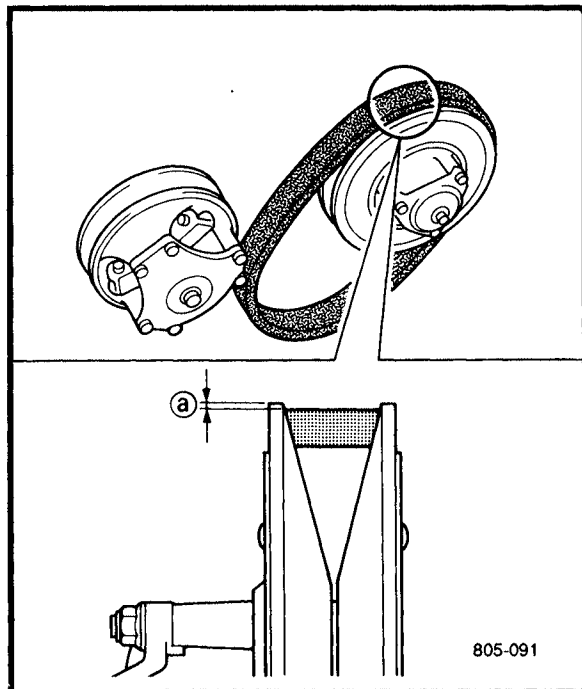
If the V-belt is not properly installed, the clutch engagement speed will be changed and the machine may move unexpectedly when the engine is started.

Adjust the V-belt position by removing or adding a spacer ② on each adjusting bolt.

**CAUTION:**

As the V-belt wears, adjustment may be necessary to ensure proper clutch performance. When the V-belt position reaches 3 mm (0.12 in), adjust its position by adding a spacer onto each adjusting bolt.

<b>New belt width</b>	<b>35 mm (1.38 in)</b>
<b>Belt wear limit width</b>	<b>32 mm (1.26 in)</b>




1. Measure:

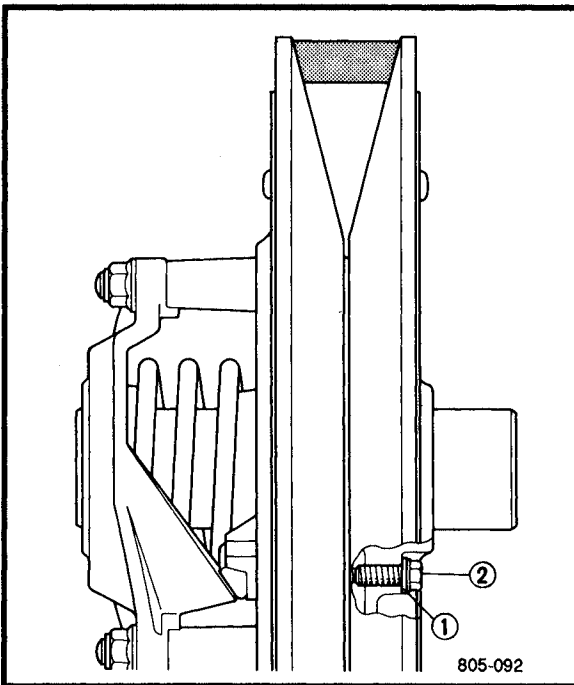
- V-belt position ①

**NOTE:**

Install the new V-belt onto the secondary sheave only. Do not force the V-belt between the sheaves; the sliding and fixed sheave must touch each other.



**Standard V-belt position:**  
0 ~ 2 mm (0 ~ 0.08 in)  
(below the edge of the sheave)



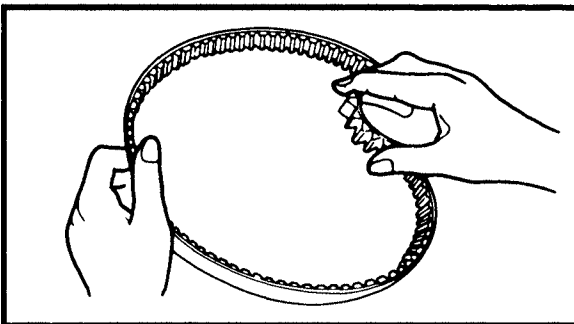
2. Adjust the position of the V-belt by removing or adding a spacer ① on each adjusting bolt ②.

V-belt position	Adjustment
Above the edge	Remove a spacer
Below the edge 0 ~ 2 mm (0 ~ 0.08 in)	Not adjustment is necessary
Below the edge more than 2 mm (0.08 in)	Add a spacer

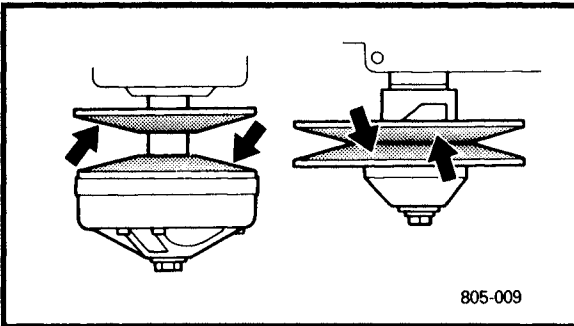
3. Tighten:  
• Adjusting bolt



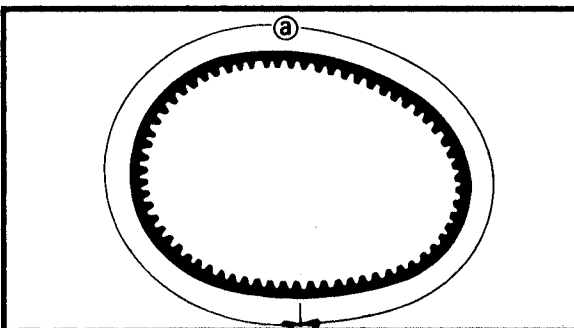
**Adjusting bolt:**  
10 Nm (1.0 m · kg, 7.2 ft · lb)




4. Inspect:  
• Drive V-belt  
Cracks/damage/wear → Replace.  
Oil or grease on the V-belt → Check the primary and secondary sheaves.



5. Inspect:  
• Primary sheave  
• Secondary sheave  
Oil or grease on the primary and secondary sheaves → Use a rag soaked in lacquer thinner or solvent to remove the oil or grease. Check the primary and secondary sheaves.



6. Measure:  
• Drive V-belt length ①  
Out of specification → Replace.



**Drive V-belt length:**  
1,119 ~ 1,129 mm (44.063 ~ 44.437 in)



2E201

**ENGAGEMENT SPEED CHECK**

1. Place the machine on a level surface of hard packed snow.
2. Check:
  - Clutch engagement speed

**Checking steps:**

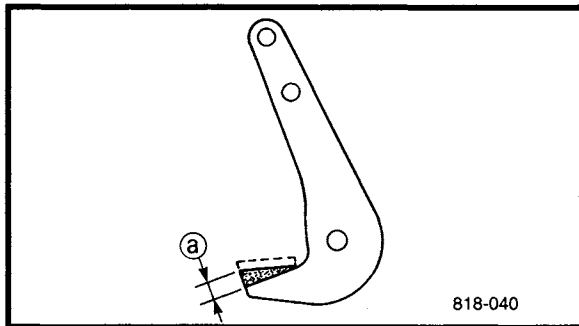
- Start the engine, and open the throttle lever gradually.
- Check the engine speed when the machine starts moving forward.

Out of specification → Adjust the primary sheave.



**Engagement speed:**

- 3,800 ~ 4,200 r/min (500/600/700)
- 4,000 ~ 4,400 r/min (MM600)
- 3,700 ~ 4,100 r/min (VX600SX)



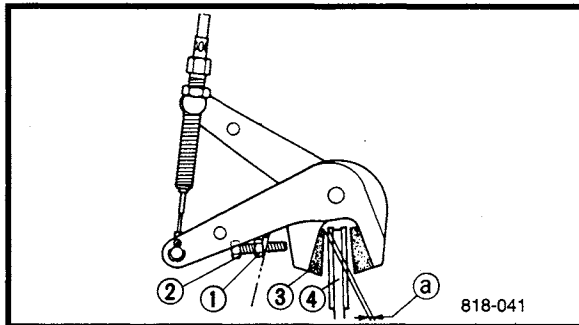
**PARKING BRAKE PAD INSPECTION**

1. Measure:
    - Parking brake pad thickness (a)
- Out of specification → Replace as a set.



**Wear limit:**

5.0 mm (0.2 in)



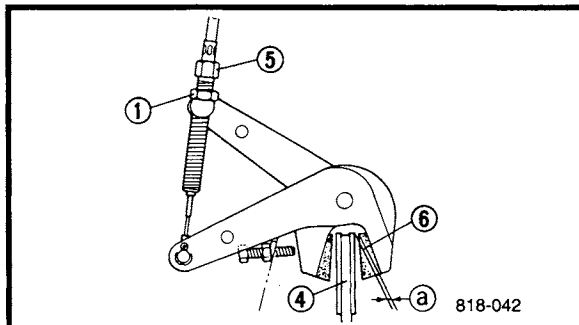
**PARKING BRAKE ADJUSTMENT**

1. Measure:
    - Clearance (a)
- Out of specification → Adjust.



**Clearance (a):**

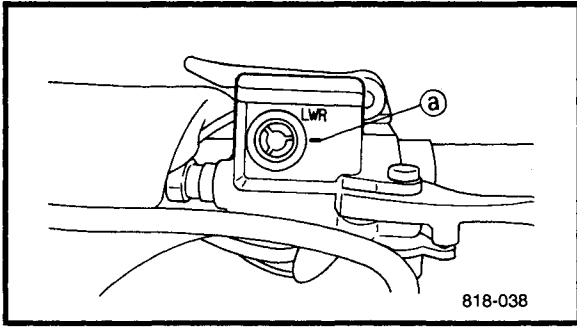
1.2 ~ 1.3 mm (0.047 ~ 0.051 in)



2. Adjust:
  - Clearance (a)

**Adjustment steps:**

- Loosen the locknut ①.
- Turn the brake pad adjusting bolt ② in or out to adjust the clearance between the brake pad ③ and disc ④.
- Turn the cable adjusting nut ⑤ in or out to adjust the clearance between the brake pad ⑥ and disc ④.
- Tighten the locknut.



**BRAKE FLUID LEVEL INSPECTION**

1. Place the machine on a level surface.
2. Inspect:
  - Fluid level  
Fluid level is under the "LOWER" level line  
Ⓐ → Fill to the proper level.

	<b>Recommended fluid:</b> <b>DOT 4</b>
---	---

**NOTE:** \_\_\_\_\_

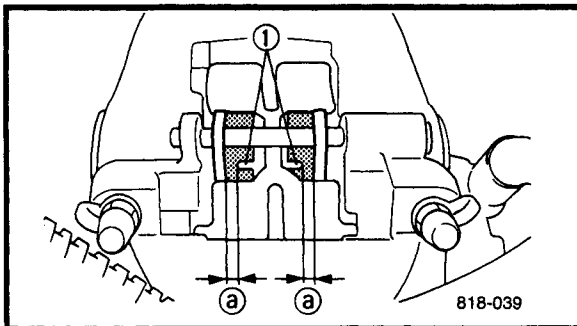
For a correct reading of the brake fluid level, make sure that the top of the handlebar brake master cylinder reservoir is horizontal.

**CAUTION:** \_\_\_\_\_

Brake fluid may corrode painted surfaces or plastic parts. Always clean up spilled fluid immediately.


**WARNING** \_\_\_\_\_

- Use only the designated brake fluid. Other fluids may deteriorate, the rubber seals, causing leakage and poor brake performance.
- Refill with the same type of fluid. Mixing fluids may result in a harmful chemical reaction leading to poor brake performance.
- When refilling be careful that water does not enter the brake master cylinder reservoir. Water will significantly lower the boiling point of the fluid and may cause vapor lock.



**BRAKE PAD INSPECTION**

1. Apply the brake lever.
2. Inspect:
  - Brake pad  
Wear indicator ① nearly contacts the brake disc → Replace the brake pads as a set.

	<b>Wear limit Ⓐ:</b> <b>1.0 mm (0.04 in)</b>
---	---

**BRAKE HOSE INSPECTION**

1. Inspect:
  - Brake hose  
Cracks/damage/wear → Replace.
2. Check:
  - Fluid leakage  
Apply the brake lever several times.  
Fluid leakage → Replace.

**AIR BLEEDING  
(HYDRAULIC BRAKE SYSTEM)**

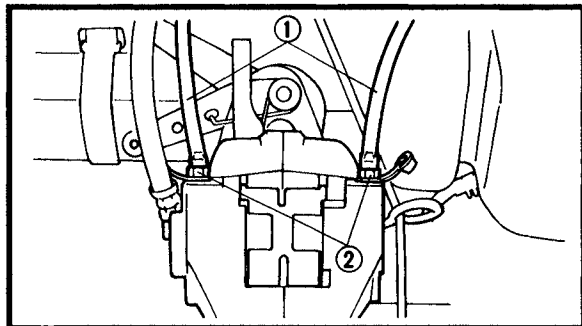
**⚠ WARNING**

**Bleed the brake system whenever:**

- The system has been disassembled.
- A brake hose is loosened or removed.
- The brake fluid has been very low.
- Brake operation is faulty.

**If the brake system is not properly bled a loss of braking performance may occur.**

1. Bleed:
  - Brake system



**Air bleeding steps:**

- a. Fill the brake master cylinder reservoir with the proper brake fluid.
- b. Install the diaphragm. Be careful not to spill any fluid or allow the brake master cylinder reservoir to overflow.
- c. Connect a clear plastic hose ① tightly to the brake caliper bleed screw ②.
- d. Place the other end of the hose into a container.
- e. Slowly apply the brake lever several times.
- f. Pull the lever in. Hold the lever in position.
- g. Loosen the bleed screw and allow the brake lever to travel towards its limit.
- h. Tighten the bleed screw when the brake lever limit has been reached, then release the lever.
- i. Repeat steps (e) to (h) until all of the air bubbles have disappeared from the fluid.
- j. Tighten the bleed screw.





**Bleed screw:**  
6 Nm (0.6 m • kg, 4.3 ft • lb)

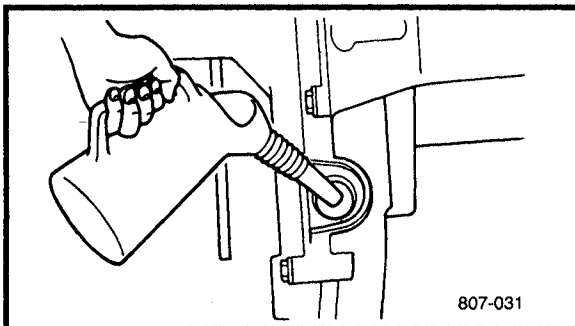
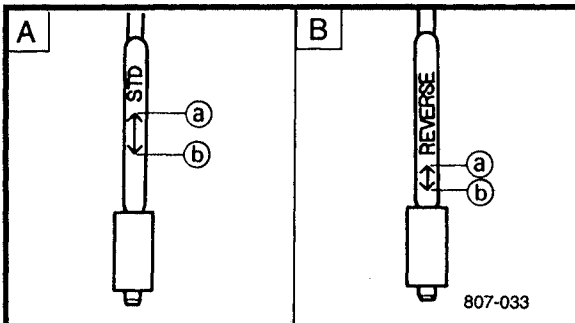
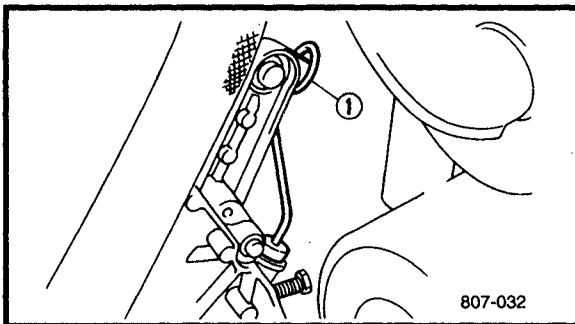
**NOTE:**

If bleeding is difficult, it may be necessary to let the brake fluid settle for a few hours. Repeat the bleeding procedure when the tiny bubbles in the system have disappeared.

k. Add brake fluid to the proper level.  
Refer to "BRAKE FLUID LEVEL INSPECTION".

**WARNING**

**After bleeding the brake system check the brake operation.**



**DRIVE CHAIN**

**Oil level inspection**

1. Place the machine on a level surface.
2. Check:
  - Oil level

**Checking steps:**

- Remove the dipstick ① and wipe it off with a clean rag. Reinstall the dipstick.

**NOTE:**

The end of the dipstick is equipped with a magnet. Be sure to wipe off the magnet to remove any metal particles.

- Remove the dipstick and check that the oil is between the upper and lower levels. If not, add oil to the upper level.

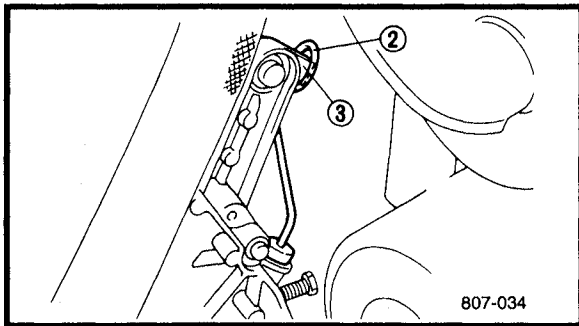
- Ⓐ Upper level
- Ⓑ Lower level
- A For models without reverse transmissions.
- B For models with reverse transmissions.



**Recommended oil:**  
Gear oil API GL-3 SAE #75 or #80

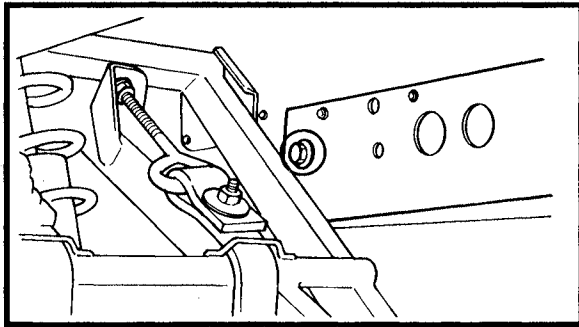
**CAUTION**

**Make sure that no foreign material enters the gear case.**



807-034

- Reinstall the dipstick and fit the loop ② of the dipstick handle onto the projection ③ of the gear case.



**Oil replacement**

**Oil replacement steps:**

- Place the oil pan under the drain hole.
- Remove the oil drain bolt and drain the oil.

**CAUTION:**

Be sure to remove any oil from the heat protector.

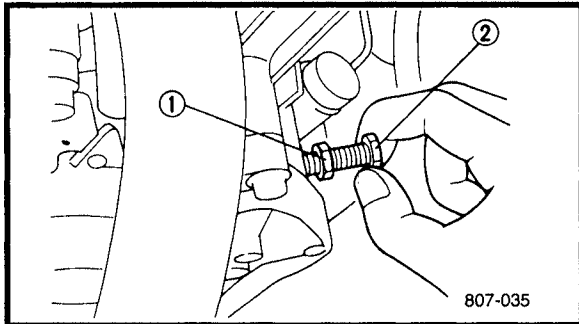
- Install the oil drain bolt.



**Oil drain bolt:**  
16 Nm (1.6 m · kg, 1.1 ft · lb)



**Recommended oil:**  
Gear oil API GL-3 SAE #75 or #80  
**Oil capacity:**  
250 cm<sup>3</sup> (8.8 Imp oz, 8.5 US oz)



807-035

2E182

**Chain slack adjustment**

1. Adjust:
- Drive chain slack

**Adjustment steps:**

- Loosen the locknut ①.
- Turn the adjusting bolt ② in until it is finger tight.
- Tighten the locknut.

2E151

## TRACK TENSION ADJUSTMENT

### **⚠ WARNING**

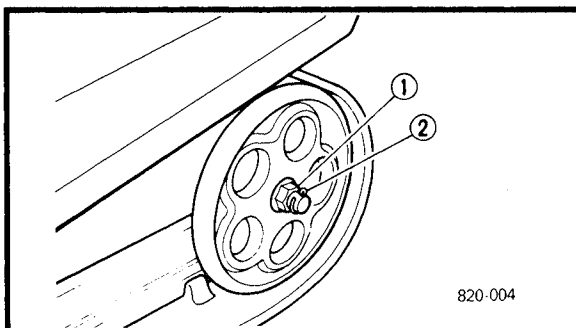
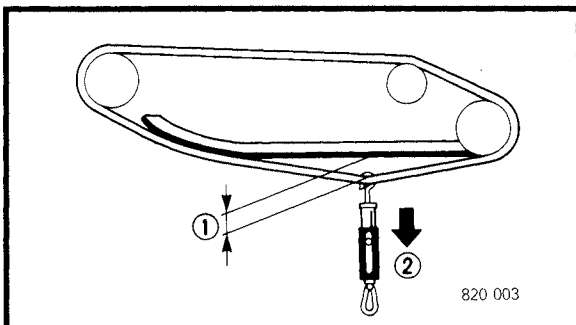
A broken track, track fittings, or debris thrown by the track could be dangerous to an operator or bystanders. Observe the following precautions.

- Do not allow anyone to stand behind the machine when the engine is running.
- When the rear of the machine is raised to allow the track to spin, a suitable stand must be used to support the rear of the machine. Never allow anyone to hold the rear of the machine off the ground to allow the track to spin. Never allow anyone near a rotating track.
- Inspect the condition of the track frequently. Replace the track if it is damaged to a level where the fabric reinforcement material is visible.
- Never install studs (cleats) closer than three inches to the edge of the track.

1. Place the machine with the right side facing down.

### **CAUTION**

If the machine is left on its left side for more than 80 minutes, the fuel may leak out from the fuel breather hose.



2. Measure:

- Track deflection ①  
Using a spring scale ② pull down on the center of the track. Use 10 kg (22 lb) of force. Out of specification → Adjust.

**Track deflection:**  
25 ~ 30 mm (0.98 ~ 1.18 in)

3. Adjust:

- Track deflection

#### **Adjustment steps:**

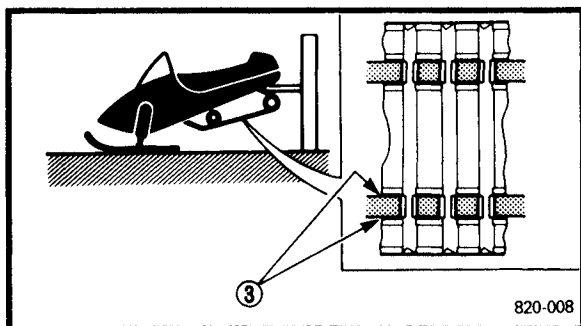
- Place the machine onto a suitable stand to raise the track off of the ground.
- Loosen the rear axle nut ①.

#### **NOTE:**

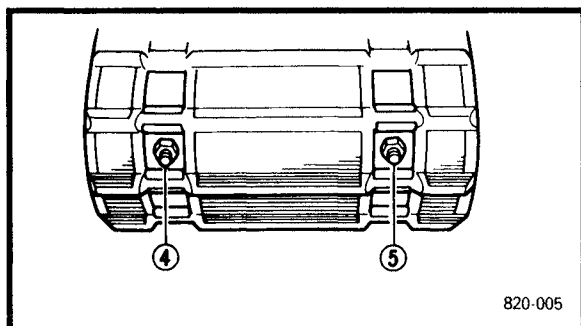
It is not necessary to remove the cotter pin ②.

# TRACK TENSION ADJUSTMENT/ SLIDE RUNNER INSPECTION

**INSP  
ADJ**



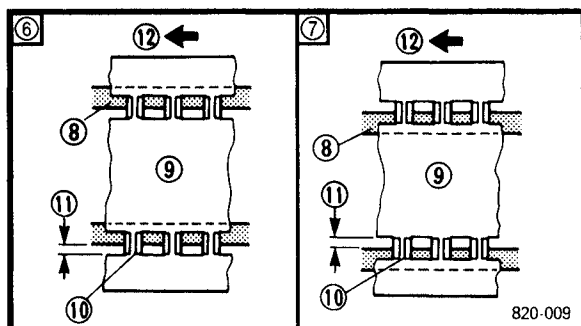
- a. Start the engine and rotate the track one or two turns. Stop the engine.
- b. Check the track alignment with the slide runner (3).  
If the alignment is incorrect, turn the left and right adjusters to adjust.



Track alignment	⑥ Shifted to right	⑦ Shifted to left
④ Left adjuster	Turn out	Turn in
⑤ Right adjuster	Turn in	Turn out

- ⑧ Slide runner ⑨ Track  
⑩ Track metal ⑪ Gap ⑫ Forward

- c. Adjust the track deflection to the specified amount.



Track deflection	More than specified	Less than specified
④ Left adjuster	Turn in	Turn out
⑤ Right adjuster	Turn in	Turn out

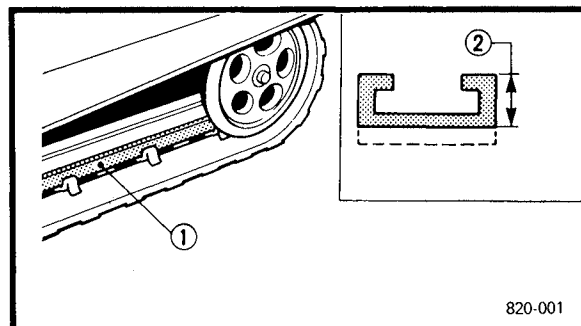
## CAUTION:

The adjusters should be turned an equal amount.

- Recheck the alignment and deflection. If necessary, repeat steps a to c until the proper adjustment is achieved.
- Tighten the rear axle nut.



**Nut (rear axle):**  
75 Nm (7.5 m · kg, 54 ft · lb)

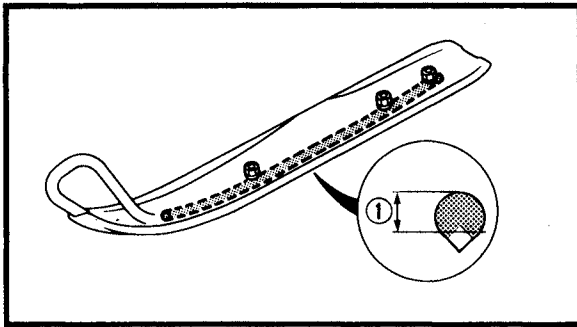


## SLIDE RUNNER INSPECTION

1. Inspect:
  - Slide runner (1)  
Cracks/damage/wear → Replace.
2. Measure:
  - Slide runner thickness (2)  
Out of specification → Replace.



**Slide runner wear limit:**  
10 mm (0.39 in)



2E212

**CHASSIS**

**SKI/SKI RUNNER**

1. Check:

- Ski
- Ski runner
- Ski cover

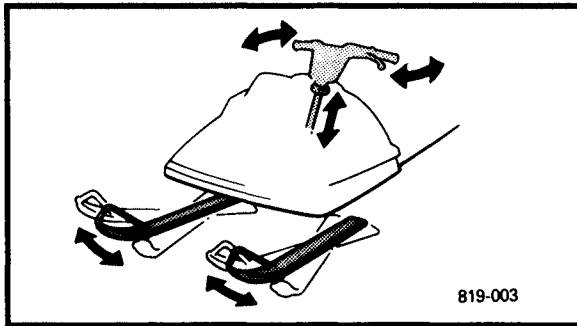
Damage/wear → Replace.



**Ski runner wear limit ①:**  
8 mm (0.31 in)

**CAUTION:**

**Do not operate the machine without the ski cover to prevent ski wear and damage.**



2E221

**STEERING SYSTEM**

**Free play check**

1. Check:

- Steering system free play  
Move the handlebar up and down and back and forth.  
Turn the handlebar slightly to the right and left.

Excessive free play → Check to be sure the handlebar, tie rod ends and relay rod ends are installed securely in position. If free play still exists, check the steering bearing, front suspension links and ski mounting area for wear. Replace if necessary.

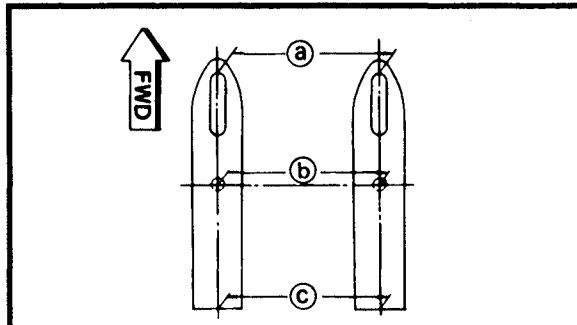
2E232

**Toe-out adjustment**

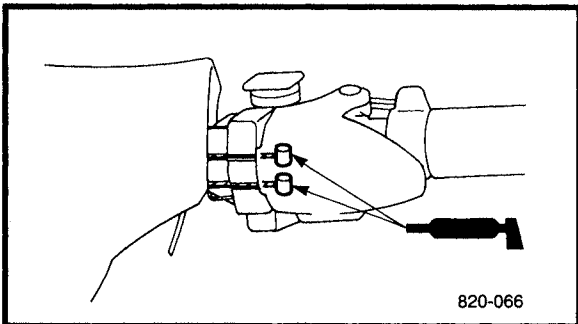
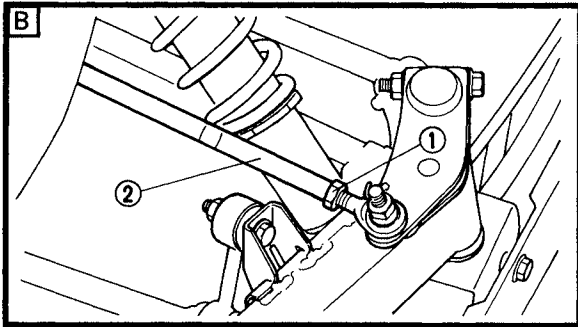
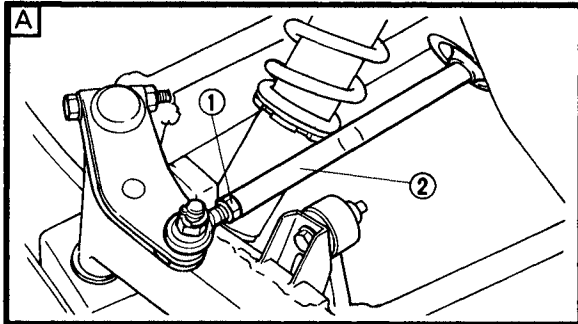
1. Place the machine on a level surface.

2. Check:

- Ski toe-out  
Point the skis forward.  
Out of specification → Adjust.



**Ski toe-out (a - c):**  
5 ~ 20 mm (0.20 ~ 0.79 in) (500, 600)  
3 ~ 18 mm (0.12 ~ 0.71 in)  
(VT600X/VX700SX, MM600/700)  
**Ski stance b (center to center):**  
1,070 mm (42.1 in) (500/600)  
1,040 mm (40.9 in) (VX600SX/  
VX700SX)  
980 mm (38.6 in) (MM600/700)



### 3. Adjust:

- Ski toe-out

#### Adjustment steps:

- Loosen the locknuts (tie-rod) ①.
- Turn the relay rod ② in or out until the specified toe-out is obtained.
- Tighten the locknuts (tie-rod) ①.



#### Locknut (rod end):

25 Nm (2.5 m · kg, 18 ft · lb)  
LOCTITE®

- Ⓐ Left side
- Ⓑ Right side

2E251

## LUBRICATION

### Brake lever, throttle lever and throttle cable end

1. Lubricate the brake lever pivot, throttle lever and the ends of the throttle cable.



#### Recommended lubricant:

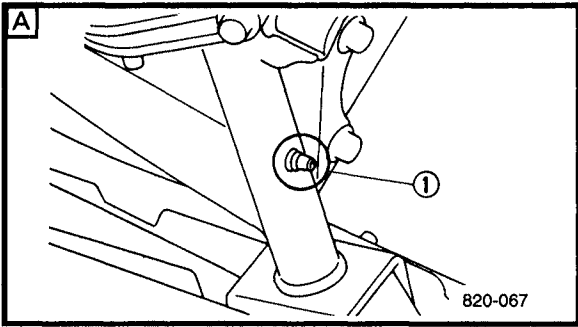
ESSO Beacon 325 Grease

### ⚠ WARNING

Apply a dab of grease onto only the end of the cable.

Do not grease the throttle cables.


They could freeze and cause a loss of control.



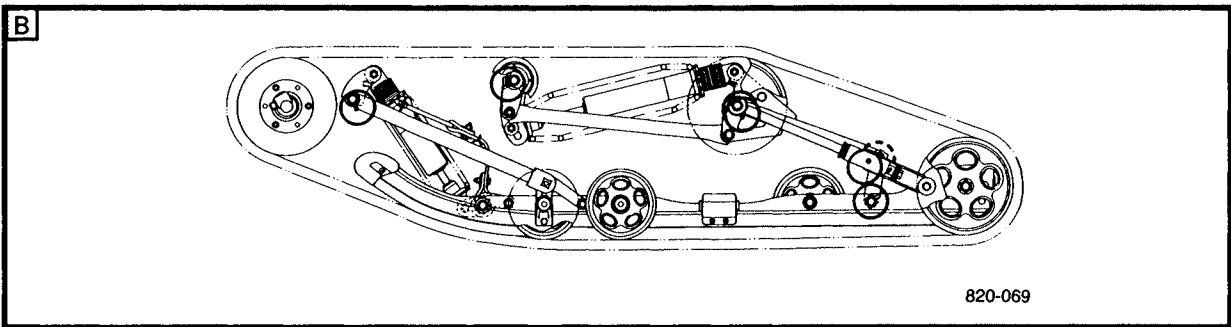
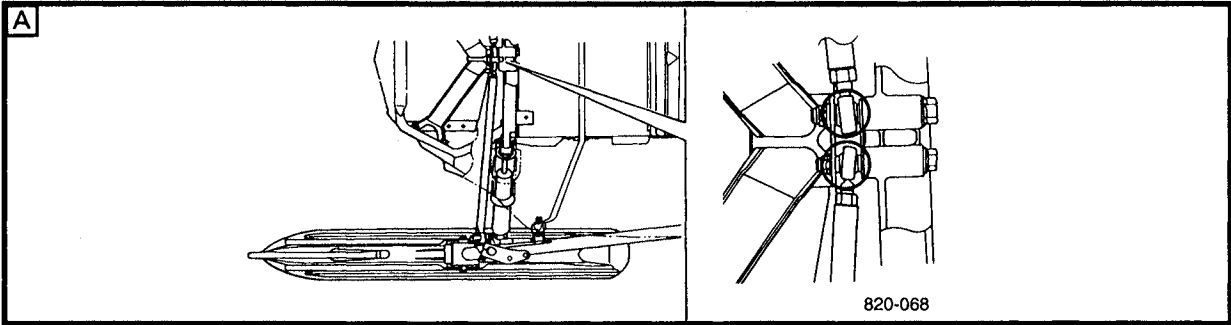
2E261

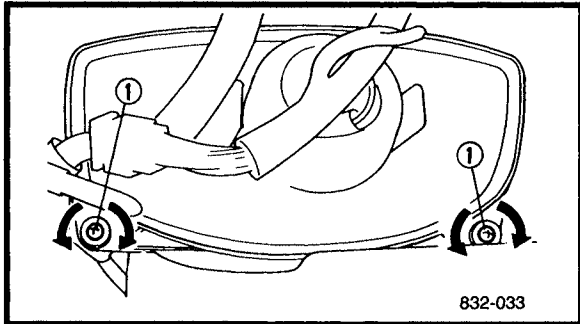
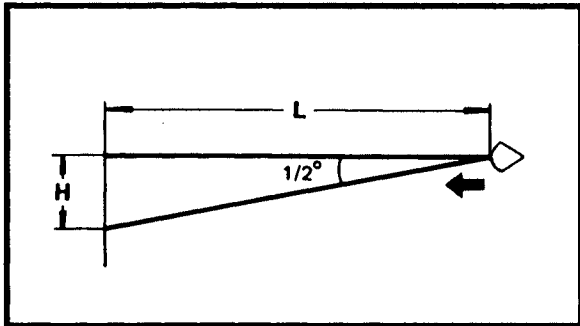
**Front and rear suspension**

1. Use a grease gun to inject grease into the nipples ①.

 **Recommended lubricant:**  
Esso Beacon 325 Grease or  
Aeroshell Grease #7A.

- A** Front
- B** Rear





## ELECTRICAL

2E241

### HEADLIGHT BEAM ADJUSTMENT

1. Place the machine on a level surface.
2. Inspect:

- Headlight beam  
The high beam should be aimed down ( $1/2^\circ$  below horizontal). Adjust the headlight beam if the angle is incorrect.

L	3.0 m (10 ft)	7.6 m (25 ft)
H	26 mm (1.0 in)	66 mm (2.6 in)

3. Adjust:

- Headlight beam  
Adjust the headlight beam by tightening or loosening the adjusting screws ①.



2E271

**TUNING****CARBURETOR TUNING (Except for VT600, MM600)**

The carburetor is set at the factory to run at temperatures of 0°C ~ -20°C (32°F ~ -4°F) at sea level. If the machine has to be operated under conditions other than those specified above, the carburetor must be properly adjusted. Special care should be taken in carburetor setting so that the piston will not be damaged or will not seize.

**CAUTION:**

The engine oil is mixed with the fuel just before the fuel enters the carburetors. During initial fuel flow to the carburetor it is not always possible to supply the optimum fuel/oil mixture depending on the throttle opening. Therefore, after the carburetors have been tuned or maintained, or after the float chambers are removed for cleaning or jet replacement, be sure to idle the engine for about three minutes in order to avoid engine trouble.

**CAUTION:**

Before performing the carburetor tuning, make sure that the following items are set to specification.

- Engine idle speed adjustment
- Throttle cable free play adjustment
- Carburetor synchronization
- Starter cable adjustment
- Oil pump cable free play adjustment



## Carburetor tuning data 1. Standard specifications

A MODEL	500	600	VT600, MM600	VX700SX, MM700
B Type	TM36	←	←	TM33
C Manufacturer	MIKUNI	←	←	←
D I.D. Mark	8CJ00	8CR00	8CW00	8CH00
E Main jet (M.J.)	#151.3	←	#160	#1:#145, #2,3:#143.8
F Pilot jet (P.J.)	#45	←	#65	#45
G Main airjet (M.A.J.)	Ø2.5	←	←	—
H Pilot screw (P.S.)	1-3/4 turns out	1-1/2 turns out	2 turns out	1-1/2 turns out
I Float height	20.3 ~ 24.3 mm (0.8 ~ 0.96 in)	←	←	11.3 ~ 15.3 mm (0.44 ~ 0.60 in)
J Idle speed	1,500 ~ 1,700 r/min	1,450 ~ 1,650 r/min	1,500 ~ 1,700 r/min	1,500 ~ 1,700 r/min

2E281

### Mid-range and high speed tuning

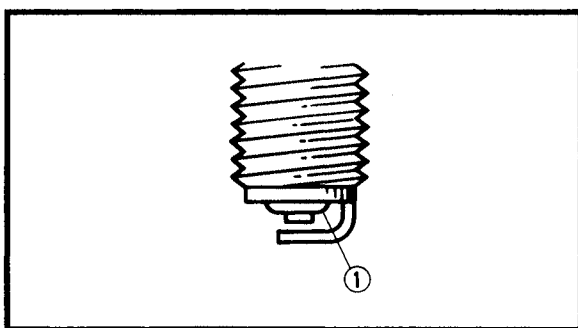
No adjustment is normally required, but adjustments may sometimes be necessary, depending on temperatures, altitude or both.

Mid-range speed and high speed tuning (from 1/4 to full-throttle) can be done by adjusting the main jet.

### CAUTION:

**The engine should never be run without the air intake silencer and air chamber installed. Severe engine damage may result.**

1. Start the engine and operate the machine under normal conditions to make sure that the engine operates smoothly. Stop the engine.
2. Remove:
  - Spark plugs



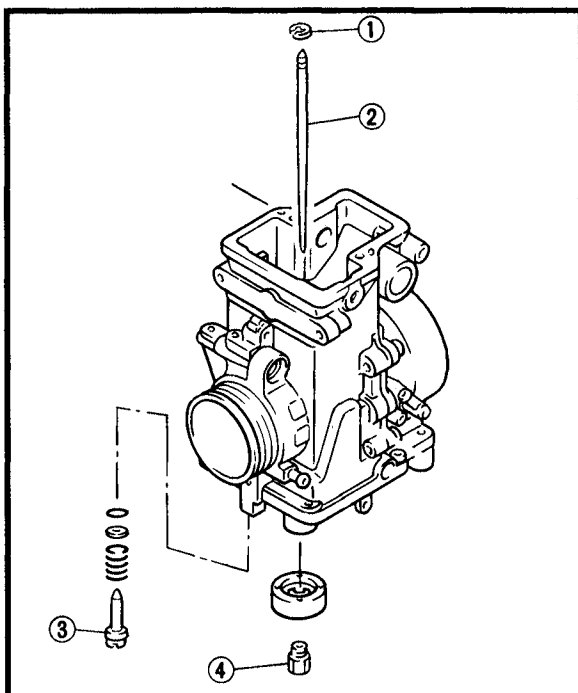
3. Check:

- Spark plug insulator ① color  
A medium to light tan color indicates normal conditions.  
Distinctly different color → Replace the main jet.

4. The main jet should be adjusted on the basis of the "Main jet selection chart".

**NOTE:** \_\_\_\_\_  
By checking the condition of the spark plugs, it is easy to get some idea of the condition of the engine. This may diagnose potential problems before engine damage occurs.

2E291  
**High altitude tuning**  
Use the chart in CHAPTER 9 to select main jets according to variations in elevation and temperature.

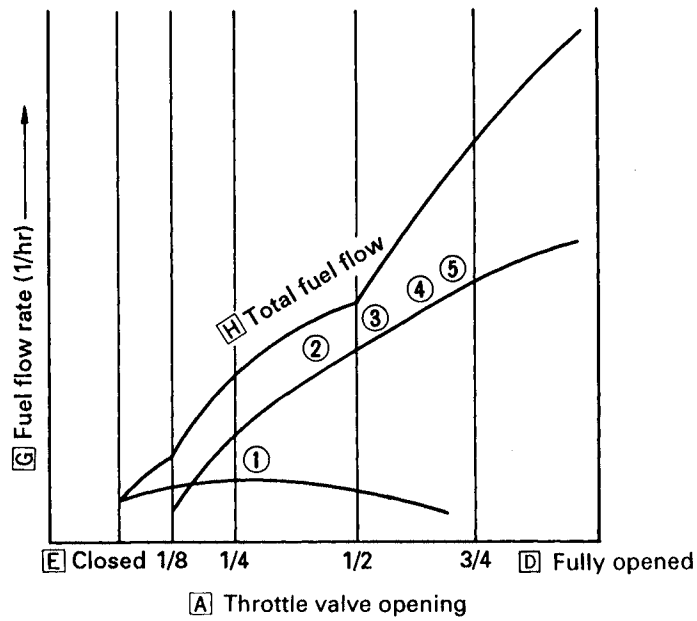
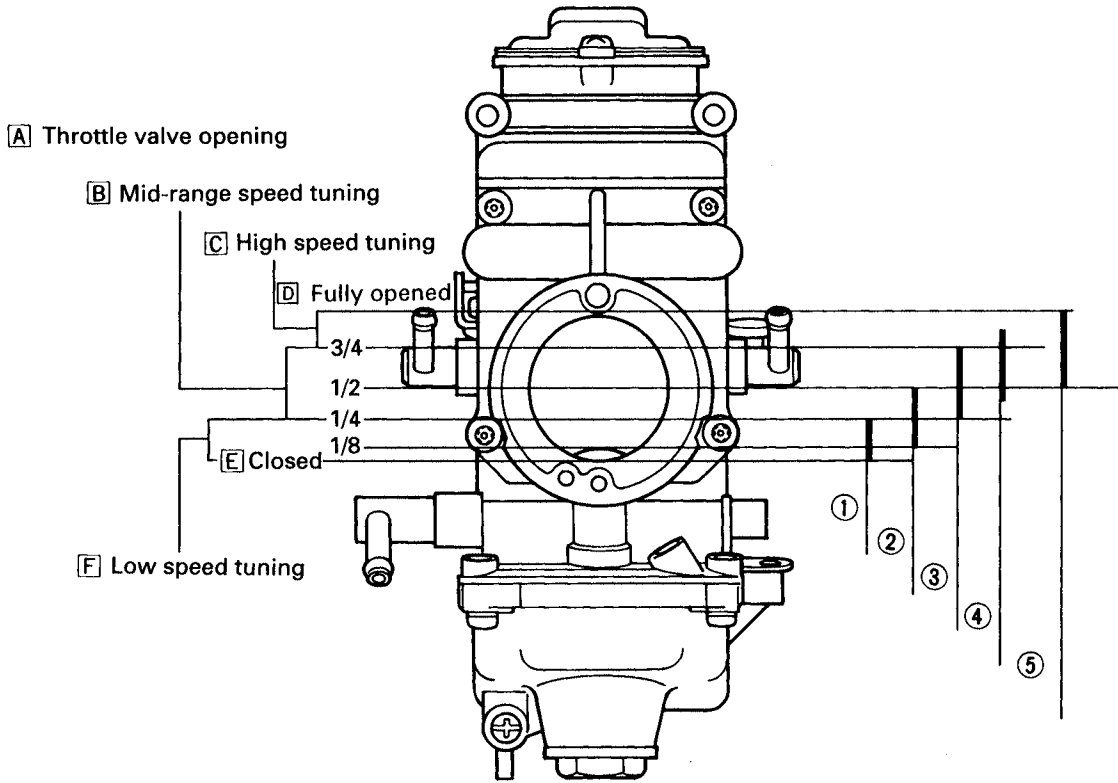


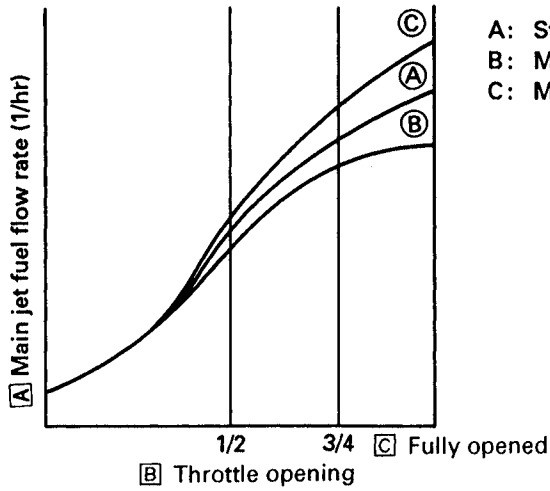
**NOTE:** \_\_\_\_\_  
These jetting specifications are subject to change. Consult the latest technical information from Yamaha to be sure you have the most up-to-date jetting specifications.

- ① Clip
- ② Jet needle
- ③ Pilot mixture screw
- ④ Main jet

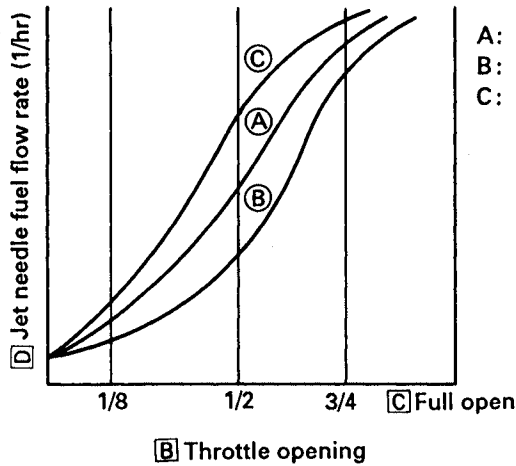
2E302

Guide for carburetion

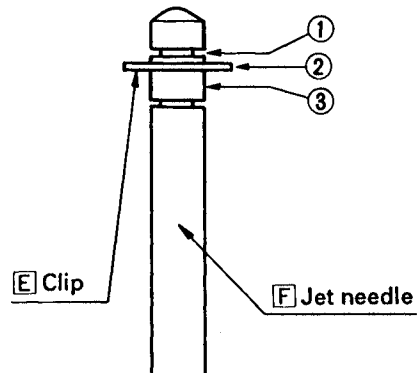




- A: Standard main jet
- B: Main jet whose diameter is 10% smaller than standard
- C: Main jet whose diameter is 10% larger than standard

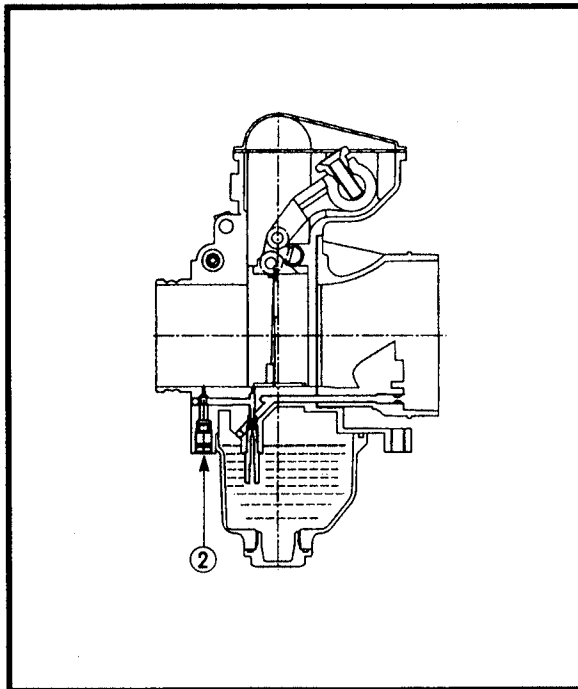
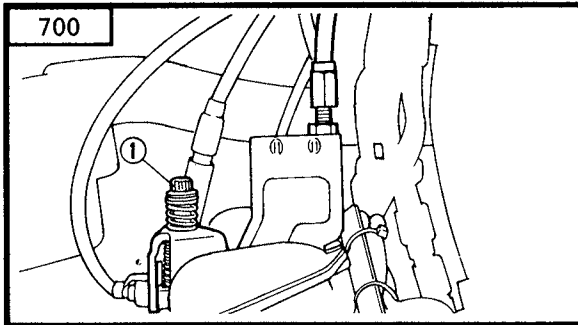
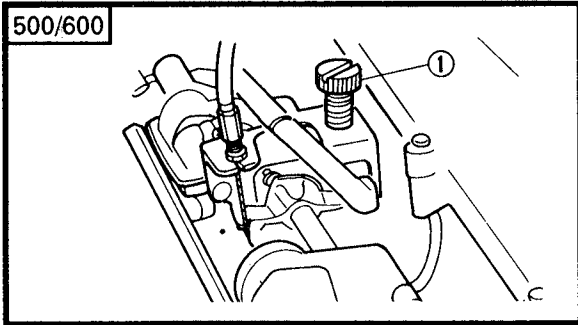


- A: No. 2 position
- B: No. 1 position
- C: No. 3 position



**CAUTION:**

If the air silencer box is removed from the carburetors, the change in pressure in the intake will create a lean mixture that may cause severe engine damage. The air silencer box has no effect on performance characteristics and must be secured to the carburetor during carburetor tuning and adjustment. Also, it must always be in place when the engine is operated. Regularly clean the silencer and keep it free from obstructions.



2E391

**Low speed tuning**

The carburetor is built so that low speed tuning can be done by adjusting the pilot mixture screw ② and throttle stop screw ①.

**CAUTION:**

The engine should never be run without the air intake silencer and air chamber installed. Severe engine damage may result.


1. Tighten the pilot mixture screw until it is lightly seated and then back it out the specified number of turns.

**Pilot mixture screw ②:**  
 1-3/4 (500) turns out  
 1-1/2 (600, 700) turns out  
 2 (VT600, MM600) turns out

Pilot mixture screw effects:

Turn in ←	STD setting	→ Turn out
Leaner Mixture ←	↔	Richer Mixture →

2. Set the engine idle speed by turning the throttle stop screw in (to increase engine speed) or out (to decrease engine speed).

	<b>Standard idle speed:</b> 1,450 ~ 1,650 r/min (600) 1,500 ~ 1,700 r/min (500/VT600/ MM600, 700)
---	--

3. If low speed performance is still poor at higher elevations under extreme conditions, the standard pilot jets may need to be replaced. This is so the proper air/fuel mixture is obtained.

**NOTE:** \_\_\_\_\_

In this case, use a larger numbered pilot jet to enrich the air/fuel mixture.

<b>Standard pilot jet:</b> #45 (500/600/700) #60 (VT600/MM600)
--



2E311

Main jet selection chart		
Spark plug color	Diagnosis	Remedy
Light tan or gray.	Carburetor is tuned properly.	
Dry black or fluffy deposits.	Mixture is too rich.	Replace the main jet with the next smaller size.
White or light gray.	Mixture is too lean.	Replace the main jet with the next larger size.
White or gray insulator with small black or gray brown spots and electrodes having a bluish-burnt appearance.	Mixture is too lean. The piston is damaged or seized.	Replace the piston and spark plug. Tune the carburetor again. Begin with low-speed tuning.
Melted electrodes and possibly a blistered insulator. Metallic deposits on insulator.	Mixture is too lean. The spark plug melted.	Check the piston for holes or seizure. Check the cooling system, gasoline octane rating and ignition timing. After replacing the spark plug with a colder type, tune the carburetor again. Begin with low-speed tuning.



2E321

**Troubleshooting**

Trouble	Diagnosis	Adjustment
Hard starting	Insufficient fuel	Add gasoline.
	<ul style="list-style-type: none"> <li>• Excessive use of the starter</li> <li>• Excessive use of the choke</li> </ul>	Return the starter lever to its seated position so that the starter valve is fully closed.
	Fuel passage is clogged or frozen	<ul style="list-style-type: none"> <li>• Check, and if necessary, clean the fuel tank air vent, the fuel filter and all of the fuel passages.</li> <li>• Check, and if necessary, clean the carburetor air vents, fuel passages and the float valve.</li> <li>• Clean the float chamber of any ice or water.</li> </ul>
	Overflow	Adjust the fuel level.
Poor idling: <ul style="list-style-type: none"> <li>• Poor performance at low speeds</li> <li>• Poor acceleration</li> <li>• Slow response to throttle</li> <li>• Engine tends to stall</li> </ul>	Improper idling speed adjustment	<ul style="list-style-type: none"> <li>• Adjust the engine idle speed. Refer to "Low speed tuning".</li> </ul>
	Damaged pilot screw	Replace the pilot screw.
	Clogged bypass hole	Clean the bypass hole.
	Clogged or loose pilot jet	<ul style="list-style-type: none"> <li>• Remove the pilot jet, clean it with compressed air and then install it.</li> <li>• Make sure that the pilot jet is fully tightened.</li> </ul>
	Air leaking into the carburetor joint	Retighten the clamp screws on the carburetor joints.
	Defective starter valve seat	Clean or replace the starter valve seat.
Poor performance at mid-range speeds: <ul style="list-style-type: none"> <li>• Momentary slow response to the throttle</li> <li>• Poor acceleration</li> </ul>	Clogged or loose pilot jet	<ul style="list-style-type: none"> <li>• Remove the pilot jet, clean it with compressed air and then install it.</li> <li>• Make sure that the pilot jet is fully tightened.</li> </ul>
	Lean mixture	Overhaul the carburetor.
	Clogged air vent	Remove the air vent hose and clean it.
Poor performance at normal speeds: <ul style="list-style-type: none"> <li>• Excessive fuel consumption</li> <li>• Poor acceleration</li> </ul>	Clogged or loose main jet	<ul style="list-style-type: none"> <li>• Remove the main jet, clean it with compressed air and then install it.</li> <li>• Make sure that the main jet is fully tightened.</li> </ul>
	Overflow	Check, and if necessary, clean the float and float valve.

# CARBURETOR TUNING



Trouble	Diagnosis	Adjustment
<b>Poor performance at high speeds:</b> • Power loss • Poor acceleration	Starter valve is left open	Return the starter lever to its seated position so that the starter valve is fully closed.
	Clogged air vent	Remove and clean the air vent.
	Clogged or loose main air jet	• Remove the main jet, clean it with compressed air and then install it. • Make sure that the main jet is fully tightened.
	Clogged fuel line	Clean or replace the fuel line.
	Dirty fuel tank	Clean the fuel tank.
	Air leaks into the fuel line	Tighten or replace the fuel line joint.
	Low fuel pump performance	Repair or replace the fuel pump.
	Clogged fuel filter	Replace the fuel filter.
<b>Abnormal combustion:</b> • Backfiring	Clogged intake	Remove any obstructions (i.e. ice).
	Lean mixture	Clean and adjust the carburetor.
	Dirty carburetor	Clean the carburetor.
<b>Overflow:</b> • Poor idling • Poor performance at low, mid-range, and high speeds • Excessive fuel consumption • Hard starting • Power loss • Poor acceleration	Dirty or clogged fuel line	Clean or replace the fuel line.
	Clogged air vent	Clean the air vent.
	Clogged float valve	• Disassemble and clean the float valve. • Do not scratch the valve seat.
	Scratched or unevenly worn float valve or valve seat	• Clean or replace the float valve and valve seat. • The valve seat and body must be replaced together.
	Broken float	Replace the float.
	Incorrect float level	Check, and if necessary, replace the following parts: • Float tang • The float (replace the entire float assembly). • The arm pin.

# CLUTCH TUNING



## CLUTCH TUNING

### High altitude tuning

W	White	S	Silver	L	Blue
P	Pink	R	Red	Go	Gold
Y	Yellow	G	Green	Sb	Sky blue

### Clutch setting data

A Item	VX500XT/XTC/XTCR/VT500			
	0 ~ 1,000 m 0 ~ 3,500 ft	900 ~ 1,500 m 3,000 ~ 5,000 ft	1,400 ~ 2,100 m 4,500 ~ 7,000 ft	2,000 ~ 3,000 m 6,500 ~ 10,000 ft
B Idle speed:	Approx. 1,600 r/min	←	←	←
C Clutch engagement:	Approx. 4,000 r/min	4,100 r/min	4,200 r/min	←
D Shift speed:	Approx. 7,800 r/min	←	←	←
E Gearing:	22/39 21/39 (VT500) 19/39 (VT500 EUR)	21/39 20/39 (VT500)	20/39 19/39 (VT500)	19/39 18/39 (VT500)
F Primary spring: G Color	W - P - W T - P - Y (VT500 EUR)	←	Y - P - Y	O - P - O
H Length	78.7 mm 77.4 mm (VT500 EUR)	←	← 77.4 mm	74.6 mm
I Pre-load rate	30 kg - 2.25 kg/mm 30 kg - 2.5 kg/mm (VT500 EUR)	←	30 kg - 2.5 kg/mm	30 kg - 3.25 kg/mm
J Wire diameter	ø5.5 mm ø5.8 mm (VT500 EUR)	←	ø5.8 mm	ø6.0 mm
K Outside diameter	ø60 mm	←	←	←
L Weight:	8AB 8CR (VT500 EUR)	←	←	← ←
M Weight rivet:	Steel 13.3 (OUT) None (IN) Aluminum 10.3 (OUT) (VT500 EUR) Steel 17.2 (IN) (VT500 EUR)	Aluminum 10.3 (OUT) None (IN)	None (OUT) None (IN)	None (OUT) None (IN)
N Weight bushing:	Duralon	←	←	←
O Roller bushing:	Duralon	←	←	←
P Pri. clutch shim:	None	←	←	←
Q Secondary spring: G Color	R	←	←	←
H Length	75 mm	←	←	← ←
I Pre-load rate	40° (1-3)	←	← 60° (3-3)(VT500)	←
J Wire diameter	ø 5.3 mm	←	←	←
K Outside diameter	ø69.5 mm	←	←	←
R Sec. torque cam:	45° 43° (VT500)	←	←	←
S Sec. clutch shim:	1.0 mm 0.5 mm (VT500)	←	←	←

# CLUTCH TUNING



[A] Item	VX600XT/XTC/XTCE/XTCR/SX			
	0 ~ 1,000 m 0 ~ 3,500 ft	900 ~ 1,500 m 3,000 ~ 5,000 ft	1,400 ~ 2,100 m 4,500 ~ 7,000 ft	2,000 ~ 3,000 m 6,500 ~ 10,000 ft
[B] Idle speed:	Approx. 1,550 r/min	←	←	←
[C] Clutch engagement:	Approx. 4,000 r/min Approx. 3,800 r/min (VX600SX)	4,100 r/min ←	4,200 r/min 4,000 r/min	← 4,200 r/min
[D] Shift speed:	Approx. 7,800 r/min Approx. 7,850 r/min (VX600SX)	← ←	← ←	← ←
[E] Gearing:	23/39 22/39 (VX600SX)	22/39	21/39	20/39
[F] Primary spring: [G] Color [H] Length [I] Pre-load rate [J] Wire diameter [K] Outside diameter	W - S - W 81.0 mm 35 kg - 2.25 kg/mm ø5.5 mm ø59.0 mm	←	←	←
[L] Weight: 8CR (VX600SX) [M] Weight rivet:	8AB ← Steel 13.9 (OUT) Steel 17.2 (IN) Steel 13.9 (OUT) (VX600SX) Steel 13.9 (IN) (VX600SX)	← ← Steel 10.3 (OUT) Steel 13.9 (IN) Steel 10.3 (OUT) (VX600SX) Steel 13.3 (IN) (VX600SX)	← ← Aluminum 10.3 (OUT) ← Aluminum 10.3 (OUT) (VX600SX) Fe 13.9 (IN) (VX600SX)	← ← ← Aluminum 10.3 (IN) ← Aluminum 10.3 (IN) (VX600SX)
[N] Weight bushing:	Duralon	←	←	←
[O] Roller bushing:	Duralon	←	←	←
[P] Pri. clutch shim:	None	←	←	←
[Q] Secondary spring: [G] Color [H] Length [I] Pre-load rate [J] Wire diameter [K] Outside diameter	R G (VX600SX) 75 mm 50° (2-3) 60° (3-3) (VX600SX) ø5.3 mm ø5.5 mm (VX600SX) ø69.5 mm	← ← ← ← ← ← ← ←	← ← ← ← 50° (2-3) ← ← ←	← ← ← ← 60° (3-3) ← ← ←
[R] Sec. torque cam:	47° 43° (VX600SX)	← ←	← ←	← ←
[S] Sec. clutch shim:	1.0 mm	←	←	←

# CLUTCH TUNING



A Item	VT600/MM600						
	0 ~ 1,000 m 0 ~ 3,500 ft	900 ~ 1,500 m 3,000 ~ 5,000 ft	1,400 ~ 2,100 m 4,500 ~ 7,000 ft	2,000 ~ 3,000 m 6,500 ~ 10,000 ft			
B Idle speed:	Approx. 1,600 r/min	←	←	←			
C Clutch engagement:	Approx. 4,000 r/min	4,100 r/min	4,200 r/min	←			
D Shift speed:	Approx. 7,800 r/min	←	←	←			
E Gearing:	22/39 20/39 (VT600 EUR)	21/39	20/39	19/39			
F Primary spring:	W - S - W Y - P - Y (VT600 EUR) 81.0 mm 77.4 mm (VT600 EUR) 35 kg - 2.25 kg/mm 30 kg - 2.5 kg/mm (VT600 EUR) ø5.5 mm ø5.8 mm (VT600 EUR) ø59.0 mm ø60.0 mm (VT600 EUR)	←	←	←			
G Color					←	←	←
H Length					←	←	←
I Pre-load rate					←	←	←
J Wire diameter					←	←	←
K Outside diameter					←	←	←
L Weight:	8CR	None (OUT) (VT600)	←	←			
M Weight rivet:	Steel 10.3 (OUT) (VT600)		←	←			
	Steel 17.2 (IN) (VT600)		←	←			
	Steel 13.3 (OUT) (MM600)		←	←			
	Steel 13.9 (IN) (MM600)		←	←			
N Weight bushing:	Duralon	←	←	←			
O Roller bushing:	Duralon	←	←	←			
P Pri. clutch shim:	None	←	←	←			
Q Secondary spring:	Br R (VT600 EUR) 75 mm 50° (2-3) (VT600, MM600) 80° (2-6) (VT600 EUR) ø5.0 mm ø5.3 mm (VT600 EUR) ø69.5 mm	←	R	←			
G Color					←	←	←
H Length					←	←	←
I Pre-load rate					←	←	←
J Wire diameter					←	←	←
K Outside diameter	←	←	←				
R Sec. torque cam:	47° 43° (VT600 EUR)	←	←	←			
S Sec. clutch shim:	1.0 mm	←	←	←			

A Item	VX700SX/MM700			
	0 ~ 1,000 m 0 ~ 3,500 ft	900 ~ 1,500 m 3,000 ~ 5,000 ft	1,400 ~ 2,100 m 4,500 ~ 7,000 ft	2,000 ~ 3,000 m 6,500 ~ 10,000 ft
B Idle speed:	Approx. 1,600 r/min	←	←	←
C Clutch engagement:	Approx. 4,000 r/min	←	←	←
D Shift speed:	Approx. 8,300 r/min	←	←	←
E Gearing:	23/40 (VX700SX) 22/40 (MM700)	← ←	← ←	← ←*(21/40)
F Primary spring:	W - S - W (VX700SX) G - P - G (MM700) 81.0 mm (VX700SX) 76.3 mm (MM700) 35 kg - 2.25 kg/mm (VX700SX) 30 kg - 2.75 kg/mm (MM700) ø5.5 mm (VX700SX) ø5.8 mm (MM700) ø60.0 mm (VX700SX) ø59.6 mm (MM700)	←	G - P - G	←
G Color		←	←	O - P - O
H Length		←	← 76.3 mm	←
I Pre-load rate		←	←	76.4 mm
J Wire diameter		←	30 kg - 2.75 kg/mm	←
K Outside diameter		←	←	30 kg - 3.25 kg/mm
L Weight:		8CH-00	←	←
M Weight rivet:	Steel 10.3 (OUT) (OUT) (VX700SX) Steel 13.3 (IN)	8CR-00 (MM700) Aluminum 10.3 (VX700SX) Steel 10.3 (IN) (VX700SX) Aluminum 10.3 (OUT) (MM700) Steel 13.3 (IN) (MM700)	← None (OUT) ← ← None (IN) (MM700)	← Aluminum 10.3 (IN) (VX700SX) None (OUT) (MM700) ←
N Weight bushing:	Duralon	←	←	←
O Roller bushing:	Duralon	←	←	←
P Pri. clutch shim:	None	←	←	←
Q Secondary spring:	G 75 mm 60° (3-3) (MM700) 70° (1-6) (VX700SX) ø5.5 mm ø69.5 mm	←	R (VX700SX)	←
G Color		←	←	←
H Length		←	←	←
I Pre-load rate		←	←	←
J Wire diameter		←	←	←
K Outside diameter		←	←	←
R Sec. torque cam:	45°	←	← (VX700SX) 43° (MM700)	←
S Sec. clutch shim:	0.5 mm	←	←	←

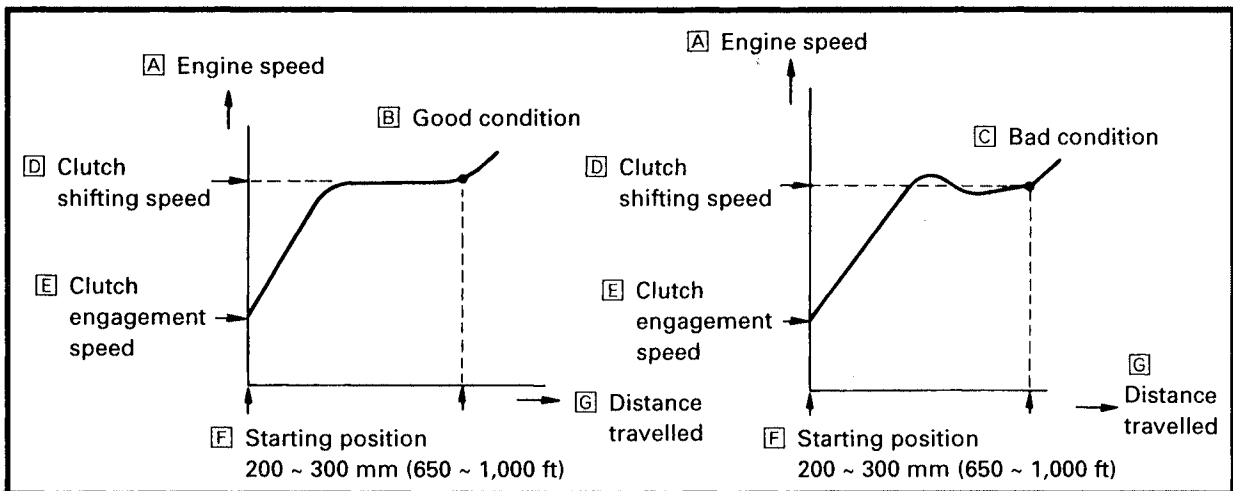
\*More than 2,700 m (9,000 ft)

2E331

The clutch may require tuning depending upon the area of operation and desired handling characteristics. The clutch can be tuned by changing engagement and shifting speed. Clutch engagement speed is defined as the engine speed where the machine first begins to move from a complete stop.

Shifting speed is when the machine has been started at full-throttle from a dead stop and has traveled 200 ~ 300m (650 ~ 1,000 ft).

Normally, when a machine reaches shifting speed, the vehicle speed increases but the engine speed remains nearly constant. Under unfavorable conditions (wet snow, icy snow, hills, or rough terrain), however, engine speed may decrease after the shifting speed has been reached.



**GEAR SELECTION**

The reduction ratio of the driven gear to the drive gear must be set according to the snow conditions. If there are many rough surfaces or unfavorable snow conditions, the drive/driven gear ratio should be increased. If the surfaces are fairly smooth or better snow conditions exist, decrease the ratio.

**Gear ratio chart**

The following drive and driven gears and chains are available as options. The figures in the upper lines represent the drive/driven gear ratios, while the number on the following line, followed by an "L", designates the number of chain links.

**NOTE:**

Do not set the gearing to any of the indicated (x) settings.

① Chain and sprocket parts number:

[A] Parts name	[B] Teeth&Links	[C] Parts No.	[D] Standard
[E] Drive sprocket	18T	89J-17682-80	
	19T	89J-17682-90	
	20T	89J-17682-00	
	21T	89J-17682-10	VT500
	22T	89J-17682-20	500, VX600SX, VT600, MM600, MM700
	23T	89J-17682-30	600, VX700SX
[F] Driven sprocket	39T	89J-47587-90	500, 600
	40T	89J-47587-00	700
	39T (REVERS)	8CW-47587-90	Reverse model
[G] Chain (links)	68L	94860-02068	VT500
	70L	94860-02070	500, 600, 700

② Gear ratio

[H] Drive gear \ [I] Driven gear	18T	19T	20T	21T	22T	23T
39T	2.167	2.053	1.950	1.857	1.773	1.696
70L	70L	70L	70L	*68L/70L	70L	70L
40T	2.222	2.105	2.000	1.905	1.818	1.739
70L	70L	70L	70L	70L	70L	70L

\* VT500

③ Secondary spring

[J] Parts No.	[K] Spring rate N•mm/rad (kgmm/rad)	[L] No. of coils	[M] Color	[N] Wire gauge (mm)	[O] Free length (mm)	[D] Standard
90508-536A9	7290 (729)	5.5	R	5.3	75	500, 600
90508-556A2	8480 (848)	5.5	G	5.5	75	VX600SX, 700
90508-500B1	6130 (613)	5.2	Br	5.0	75	VT600, MM600

④ Torque cam (secondary spring seat)

[P] Parts No.	[Q] Cam angle	[D] Standard
8BV-17604-50	45°	500, VX700SX, MM700
8BV-17604-30	43°	VT500, VX600SX
8BV-17604-70	47°	600, VT600, MM600



① Secondary spring twist angle  
90508-536A9 (R)/90508-556A2 (G)/90508-500B1(Br)

B Sheave	A Seat	0	3	6	9
1		10°	40°*3	70°*1*2	100°
2		20°	50°	80°*4	110°
3		30°	60°	90°	120°

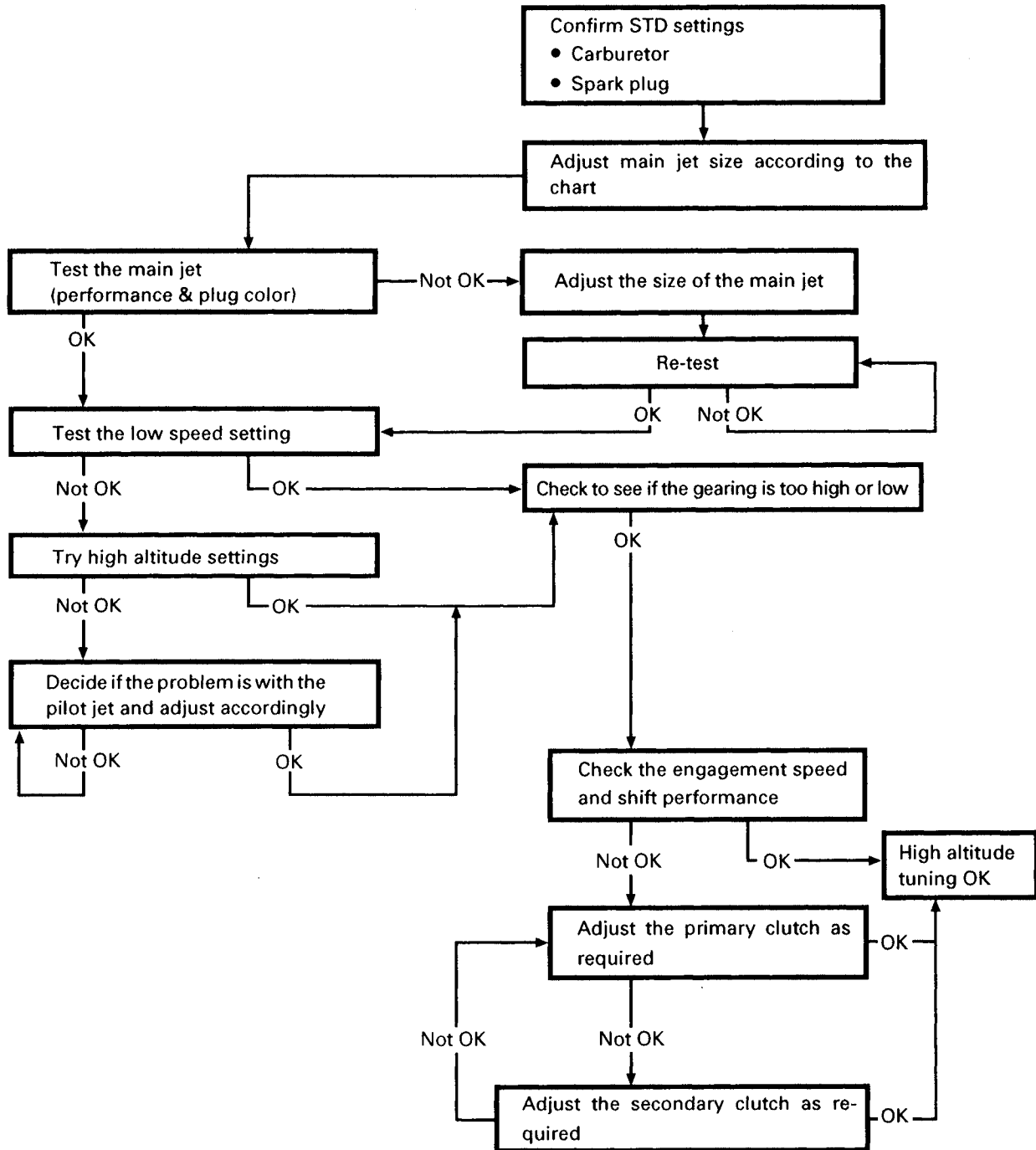
② Primary spring

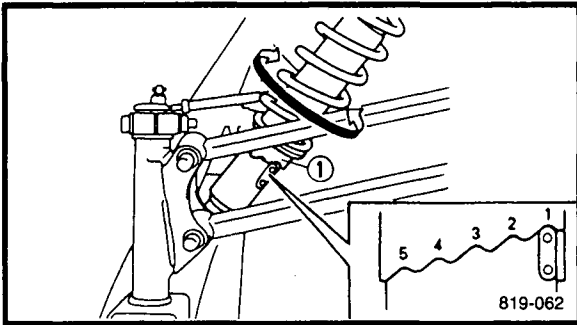
C Parts No.	D Spring rate N/mm (kg/mm)	E Preload (kg)	F Color	G Wire gauge (mm)	H Outside diameter (mm)	I No. of coils	J Free length (mm)	K Remarks
90501-481J 1	10(1.0)	20.0	S-L-S	4.8	60.0	5.16	85.4	
90501-487G 8	15(1.5)	15.0	Go	4.8	60.0	4.19	75.4	
90501-507G 2	15(1.5)	20.0	Go-L-Go	5.0	60.0	4.61	78.7	
90501-524G 5	15(1.5)	25.0	Go-Y-Go	5.2	60.0	5.08	82.1	
90501-501G 7	15(1.5)	25.0	Go-Y-Go	5.0	59.0	4.65	81.7	
90501-521J 6	15(1.5)	30.0	Go-P-Go	5.2	60.0	5.09	85.4	
90501-507G 7	17.5(1.75)	15.0	R-Go-R	5.0	60.0	4.24	74.0	
90501-527G 1	17.5(1.75)	20.0	R-L-R	5.2	60.0	4.65	76.8	
90501-524G 4	17.5(1.75)	25.0	R-Y-R	5.2	60.0	4.64	79.7	
90501-526G 4	20(2.0)	15.0	L-Go-L	5.2	60.0	4.32	72.9	
90501-556G 6	20(2.0)	20.0	L	5.5	60.0	4.95	75.4	
90501-553G 0	20(2.0)	25.0	L-Y-L	5.5	60.0	5.10	78.0	
90501-557G 6	22.5(2.25)	15.0	W-Go-W	5.5	60.0	4.62	72.1	
90501-556G 5	22.5(2.25)	20.0	W-L-W	5.5	60.0	4.62	74.3	
90501-553G 6	22.5(2.25)	25.0	W-Y-W	5.5	60.0	4.61	76.5	
90501-550J 8	22.5(2.25)	30.0	W-P-W	5.5	60.0	4.62	78.7	500
90501-557G 5	25(2.5)	15.0	Y-Go-Y	5.5	60.0	4.36	71.4	
90501-556G 7	25(2.5)	20.0	Y-L-Y	5.5	60.0	4.36	73.4	
90501-584G 2	25(2.5)	24.0	Y	5.8	60.0	4.95	75.0	
90501-555G 8	24.6(2.46)	24.0	Y	5.8	60.0	4.43	75.2	
90501-581J 7	25(2.5)	25.0	Y	5.8	60.0	4.96	75.4	
90501-582J 1	25(2.5)	30.0	Y-P-Y	5.8	60.0	4.96	77.4	
90501-607G 4	27.5(2.75)	15.0	G-Go-G	6.0	60.0	5.12	70.9	
90501-607G 0	27.5(2.75)	20.0	G-L-G	6.0	60.0	5.12	72.7	
90501-584G 1	27.5(2.75)	24.0	G-Y-G	5.8	60.0	4.70	74.1	
90501-605G 7	27.5(2.75)	25.0	G-Y-G	6.0	60.0	5.00	74.1	
90501-585J 3	27.5(2.75)	30.0	G-P-G	5.8	59.6	4.64	76.3	MM700
90501-607G 3	30(3.0)	15.0	P-Go-P	6.0	60.0	4.86	70.4	
90501-606G 9	30(3.0)	20.0	P-L-P	6.0	60.0	4.86	72.1	
90501-604G 0	30(3.0)	24.0	P-Y-P	6.0	60.0	4.80	73.3	
90501-602J 0	30(3.0)	30.0	P	6.0	60.0	4.74	75.4	
90501-605J 5	32.5(3.25)	30.0	O-P-O	6.0	60.0	4.53	74.6	
90501-555J 9	22.5(2.25)	35.0	W-S-W	5.5	59.0	4.66	81.0	600, VX700SX

2E341

**HIGH ALTITUDE TUNING**

To attain the best performance in high altitude conditions, carefully tune the snowmobile as outlined below.





**FRONT SUSPENSION**

**Spring preload**

- 1. Adjust:
  - Spring preload (VX500XT, VT500, VX600XT, VT600, MM600, MM700)

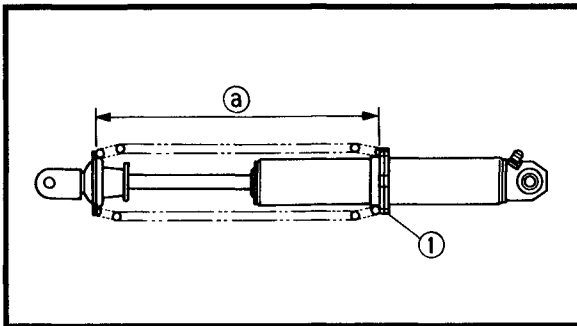
**Adjustment steps:**

- Turn the adjusting ring ① to the proper position.

<b>Spring adjuster Position</b>	1	2	3	4	5
<b>Preload</b>	Softer ← → Harder				
<b>Standard</b>	1 (VX500XT, VT500/600, VX600XT, MM600/700)				

**CAUTION:**

Be sure that the left and right spring preload is the same.



- Spring preload (VX500XTC/XTCE/XTCR, VX600XTC/XTCE/XTCR/SX, VX700SX)

**Adjustment steps:**

- Turn the spring seat ① in or out.

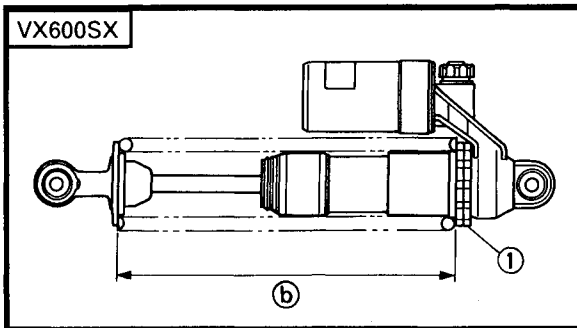
<b>Spring seat distance</b>	Standard Shorter ← → Longer		
<b>Preload</b>	Harder ← → Softer		
① Length	<b>Max.</b>	<b>Min.</b>	
	243 mm (9.57 in)	253 mm (9.96 in)	263 mm (10.35 in)
① Length (VX700SX)	<b>Max.</b>	<b>Min.</b>	
	213 mm (8.39 in)	223 mm (8.78 in)	233 mm (9.17 in)
② Length (VX600SX)	<b>Max.</b>	<b>Min.</b>	
	196 mm (7.72 in)	211 mm (8.31 in)	219 mm (8.62 in)

**CAUTION:**

Be sure that the left and right spring preload is the same.

**⚠ WARNING**

This shock absorber contains highly pressurized nitrogen gas. Do not tamper with or attempt to open the shock absorber assembly. Do not subject the shock absorber assembly to an open flame or high temperature, as this could cause it to explode.





**Download the full PDF manual instantly.**

**Our customer service e-mail:**

**[aservicemanualpdf@yahoo.com](mailto:aservicemanualpdf@yahoo.com)**