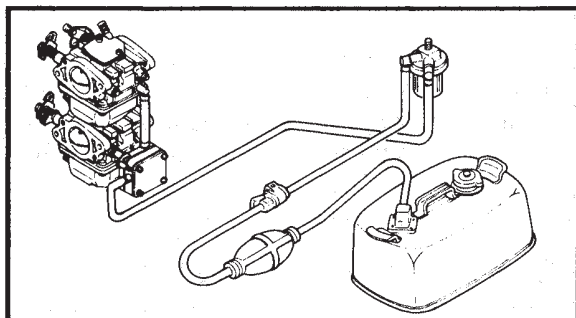




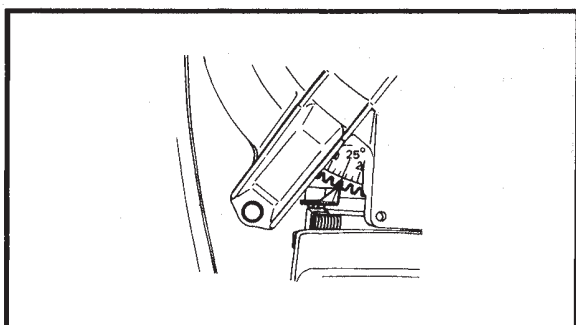
FUEL SYSTEM/CONTROL SYSTEM



PERIODIC SERVICE FUEL SYSTEM

Fuel line

1. Inspect:
 - Fuel line
 - Break/Leak/Damage → Replace.



CONTROL SYSTEM

Ignition timing adjustment

1. Check:
 - Full advanced ignition timing
 - Incorrect → Adjust.

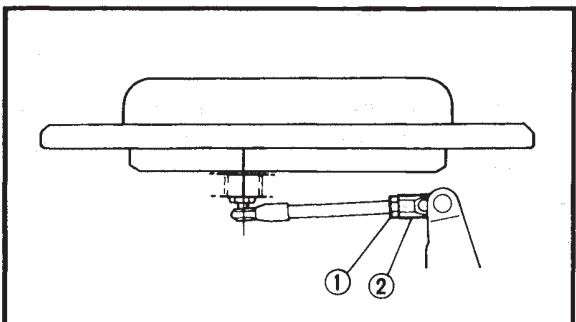
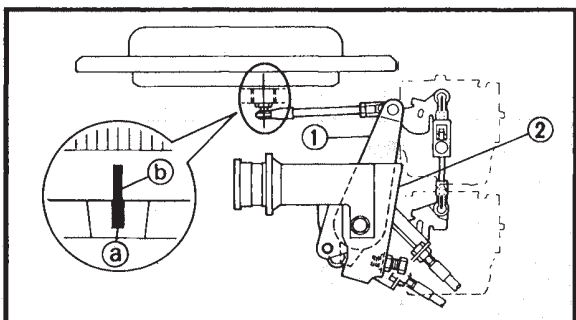
Checking steps:

- Turn the flywheel clockwise and align the timing plate and specified mark.



Flywheel position:
25° BTDC

- Turn the magneto control lever ① so that it contacts the full advanced stopper ②.
- Check the timing indicator ③ so that it aligns with the marking ④ on the flywheel.



2. Adjust:
 - Link joint

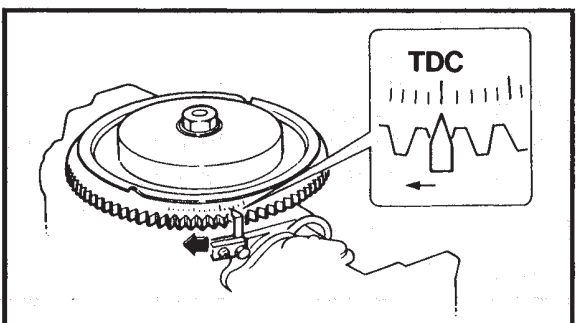
Adjustment steps:

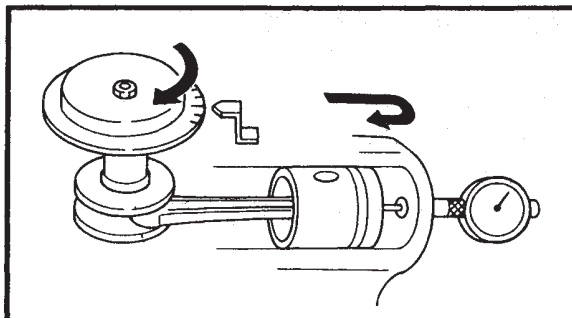
- Loosen the locknut ①.
- Disconnect the link joint ② from the magneto control lever.
- Remove the spark plug of cylinder #1.
- Attach the dial gauge to the spark plug hole.



Dial gauge:
YU-03097/90890-01252

- Slowly turn the flywheel clockwise until the piston reaches top dead center (TDC).

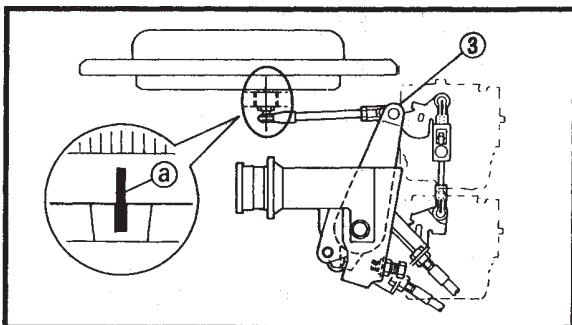




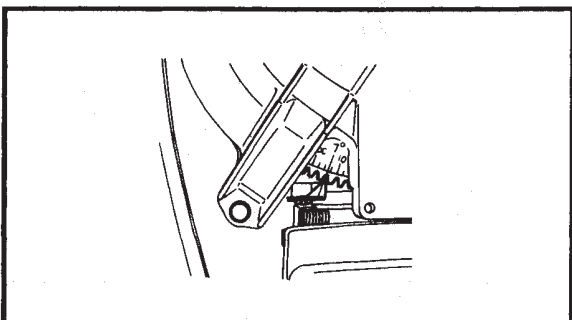
- Set the dial gauge to zero at TDC.
- Turn the flywheel counterclockwise until the dial gauge indicates that the piston position is at a specified distance from TDC.



Piston position:
3.34 mm (0.13 in) BTDC



- Turn the magneto control lever ③ to the full advanced position.
- Adjust the link joint length so that the timing indicator ③ aligns with the marking ③ on the flywheel.
- Connect the link joint.
- Tighten the locknut.



3. Check:

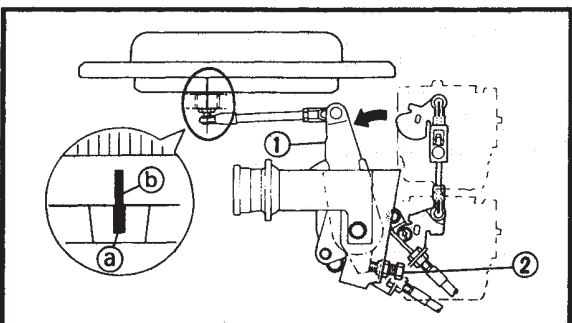
- Full retarded ignition timing
Incorrect → Adjust.

Checking steps:

- Turn the flywheel clockwise and align the timing plate and specified mark.



Flywheel position:
7° ATDC



- Turn the magneto control lever ① so that it contacts the full retarded stopper ②.
- Check the timing indicator ③ so that it aligns with the marking ③ on the flywheel.

4. Adjust:

- Full retarded screw

Adjustment steps:

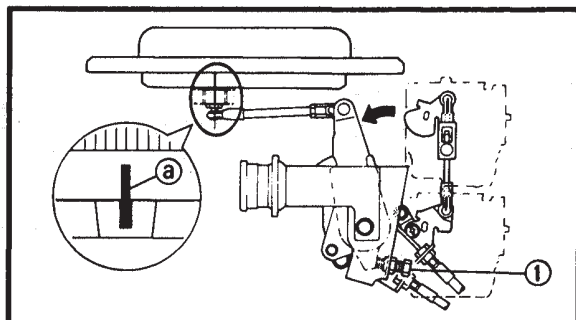
- Turn the flywheel clockwise and align the timing plate and specified mark.



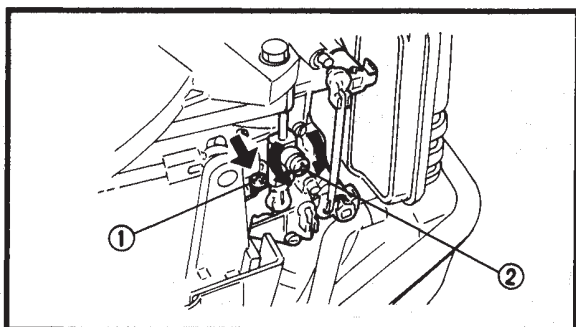
Full retarded position:
7° ATDC



CONTROL SYSTEM



- Turn the magneto control lever to the full retarded position.
- Adjust the full retarded screw ① so that the timing indicator aligns with the marking @ on the flywheel.



Carburetor link adjustment

1. Check:
 - Throttle valves closing
Not evenly → Adjust.
2. Adjust:
 - Link rod

Adjustment steps:

- Loosen the throttle stop screw ① to fully close the throttle valve.
- Loosen the link rod screw ②.
- Tighten the screw ② in condition for both of the throttle valves are fully closed.
- Reset the screw ① and adjust the idle speed if necessary.

NOTE:

Note the throttle stop screw turns value for reset the screw.

Carburetor pickup timing

NOTE:

Before adjusting the pickup timing, be sure to adjust the ignition timing and carburetor link.

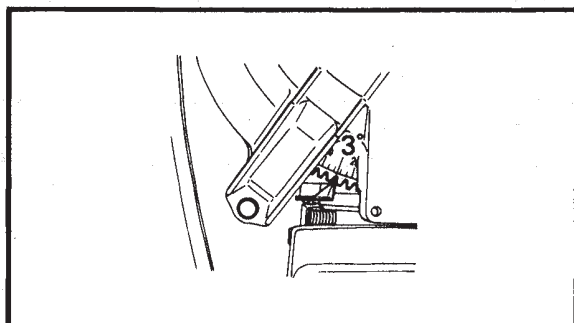
1. Check:
 - Pickup timing
Incorrect → Adjust.

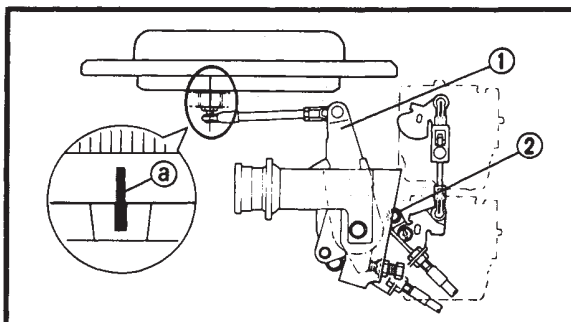
Checking steps:

- Turn the flywheel clockwise and align the timing plate and specified mark.

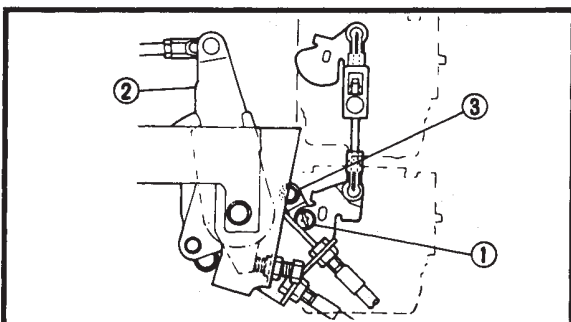


Flywheel position:
3° ATDC





- Turn the magneto control lever ① so that it contacts the throttle roller ②.
- Check that the timing indicator so that it aligns with the marking ③ on the flywheel.



2. Adjust:

- Pickup timing

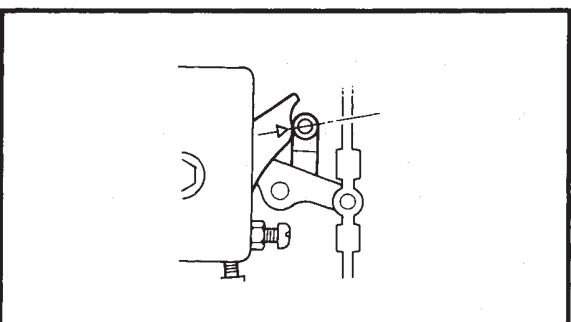
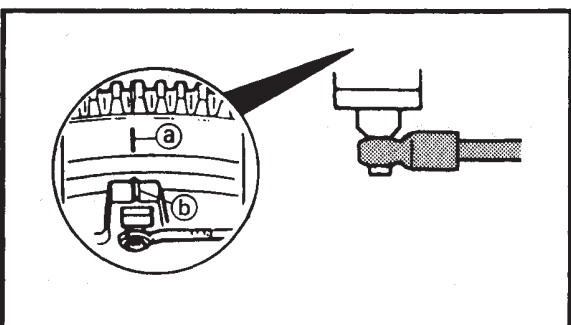
Adjustment steps:

- Loosen the throttle roller adjusting screw ①.
- Turn the flywheel clockwise and align the timing plate and specified mark.



Flywheel position:
3° ATDC

- Turn the magneto control lever ② so that the mark ④ on the flywheel align with the indicator mark ⑤.
- Set the throttle roller ③ until it contacts the magneto control lever.
- Tighten the throttle roller adjusting screw.



Throttle cable adjustment

1. Check:

- Indication position
Incorrect → Adjust.

Checking steps:

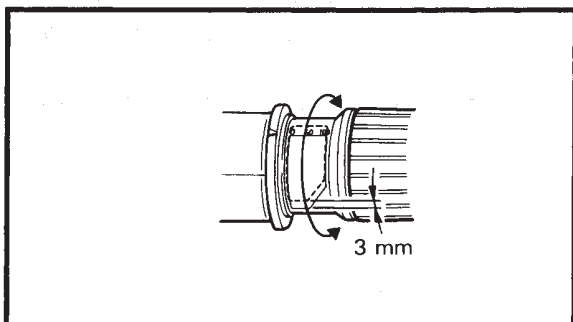
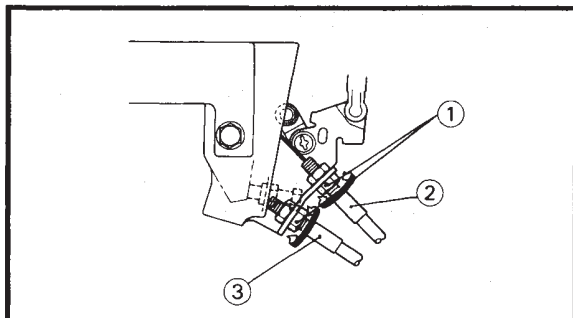
- Set the shift lever to forward position.
- Open the throttle fully.
- Check that the indicator mark and throttle roller are aligned in line.

2. Adjust:

- Throttle cable adjuster

Adjustment steps:

- Set the shift lever to forward position.
- Turn the magneto control lever to full advanced position.



- Loosen the locknuts ①.
- Adjust the cable adjuster ② and ③ until to the throttle roller aligned is obtained.
- Loosen the cable adjuster ③ on the "PUSH" throttle cable until there is specified free play ④.



Free play ④:
3.0 mm (0.12 in)

- Tighten the locknuts.

3. Check:

- Magneto control lever operation
Rough operation → Repair.

Diaphragm adjustment

1. Check:

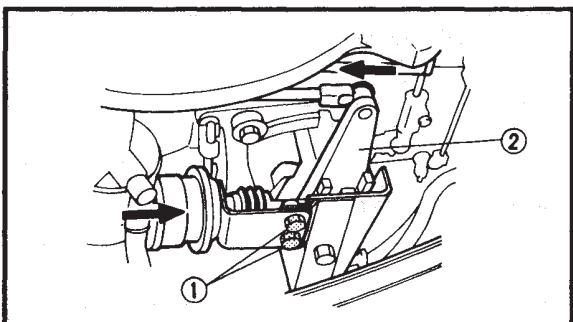
- Diaphragm operation
Rough operation → Adjust.

Checking steps:

- Close the throttle fully.
- Check that the diaphragm plunger is fully retracted, and that the throttle control lever is in the fully closed position.

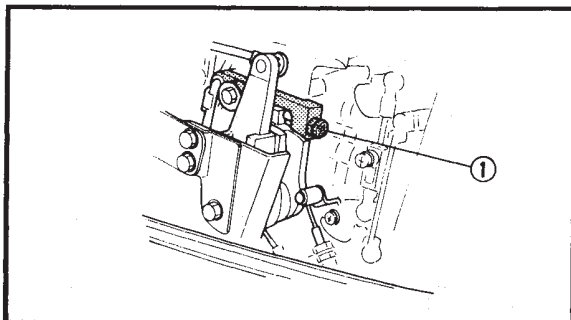
2. Adjust:

- Diaphragm position



Adjustment steps:

- Loosen the bolts ①.
- Place the lever ② to full retard.
- Secure the bolts ① with the condition that the diaphragm plunger is fully retracted.



Neutral opening adjustment

1. Measure:

- Upper limit engine speed in neutral
Out of specification → Adjust.



Controlled engine speed:
 $3,800 \pm 300$ r/min

2. Adjust:

- Neutral speed control screw ①

Turning in → Speed limit to be decreased

Turning out → Speed limit to be increased

Idle speed adjustment

NOTE:

- The carburetor link should be adjusted before carry this adjustment.
- The engine should be warmed up.

1. Measure:

- Idle speed
Out of specification → Adjust.



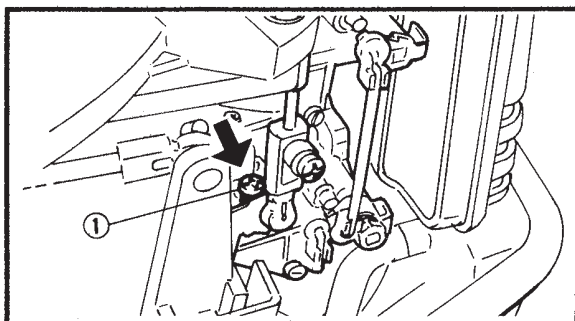
Idle speed:
 750 ± 50 r/min
For CANADA:
 780 ± 30 r/min

Measuring steps:

- Start the engine and allow it to warm up for a few minutes.
- Attach the tachometer to the high tension lead of the cylinder #1.



Tachometer:
YU-08036-A/90890-06760


2. Adjust:

- Pilot screw ①

Adjustment steps:

- Screw in the pilot screw until it is lightly seated.
- Back it out to specified number of turns.


Pilot screw turns out:
20hp: $2\frac{1}{2} \pm \frac{3}{4}$
25hp: $2 \pm \frac{3}{4}$

- Attach the tachometer to the high tension lead of cylinder #1.


Tachometer:
YU-08036-A/90890-06760

- Adjust the throttle stop screw in or out until the specified idle speed is obtained.

Turning in → Idle speed becomes higher.
Turning out → Idle speed becomes lower.

Idle speed:
 750 ± 50 r/min
For CANADA
 780 ± 30 r/min
Start-in-gear protection adjustment
1. Check:

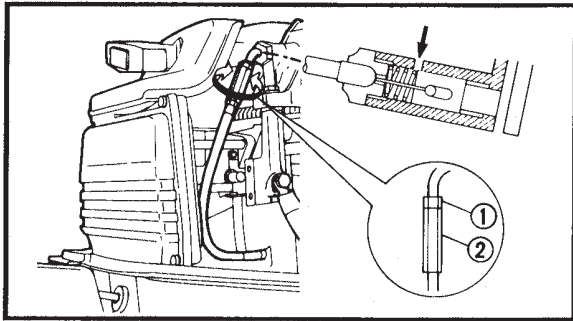
- Device position

Incorrect → Adjust.

Checking steps:

- Pull the recoil starter and check that the specified condition is obtained.

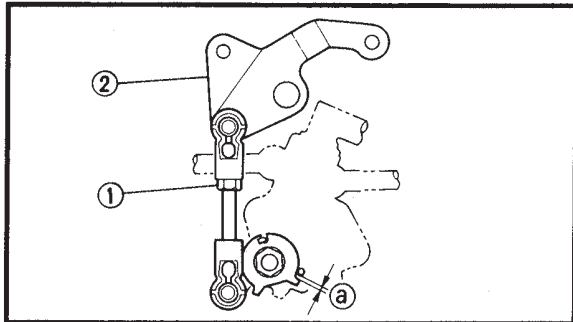
Shift position	Recoil starter
Neutral	Can be pulled
Forward	Blocked
Reverse	Blocked


2. Adjust:

- Start-in-gear protection plunger

Adjustment steps:

- Shift into neutral.
- Loosen the locknut ①.
- Adjust the nut ② to the starter stop plunger line is align with the center of the sight hole.
- Tighten the locknut ①.


OIL INJECTION SYSTEM
Oil pump link adjustment
1. Check:

- Clearance ①

Out of specification → Adjust.



Clearance ①:
0.5 mm (0.02 in)

Checking steps:

- Fully open the carburetor throttle valve.
- Check the clearance ① between the oil pump lever and full open side stopper.

2. Adjust:

- Oil pump link joint position

Adjustment steps:

- Loosen the locknut ①.
- Remove the oil pump link joint at the throttle control lever ②.
- Fully open the carburetor throttle valve.
- Set the oil pump lever 0.5 mm off the full open side stopper.
- Adjust the position of the link joint until its hole aligns with the oil pump set pin.
- Connect the link joint.
- Check that the throttle valve opens fully.
- Tighten the locknut.