

Installation Instructions Fit Kit Y2R V 10.2021

Tools Required:

#2 Phillips Screwdriver 10 mm Open End Wrench Heavy wire cutters

Step 1:

- Make sure motor is NOT running! **Put motor into NEUTRAL!** Remove lid from motor.
- **Place towel or rag under carburetor to catch parts that may be accidentally dropped!**

Step 2: See Fig. 1

- A: Use ink marker to mark Yamaha throttle rod position at brass carburetor (carb) fitting (A). This mark is used if you return motor to stock configuration.
- B: Remove rubber cap "B" (if present) from Yamaha rod.
- C: Use #2 Phillips screwdriver to remove set screw "C" on carb fitting.
- D: Remove Yamaha throttle rod from motor by popping forward end out of white plastic clip and then sliding it out of brass carb fitting.
- E: Keep stock throttle rod, set screw and rubber cap to allow motor to be returned to stock.

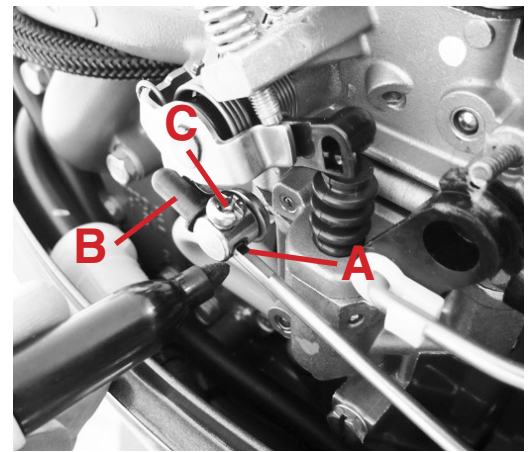


Fig. 1

Step 3: See Fig. 2

- Find iTroll pull rod, button bolt and washer (See Arrows).
- **Spin round brass fitting so that it is "Upside Down" from original orientation.**
- Thread button bolt from pull rod assembly into brass carb fitting with supplied 2.5 mm allen wrench. Do NOT fully tighten button bolt at this time.

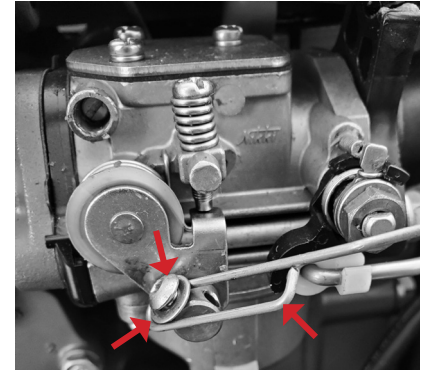


Fig. 2

Step 4: See Fig. 3

- Find iTroll throttle rod (A). Thread straight end of throttle rod through brass carb fitting (B).
- Snap hook end of iTroll throttle rod into white fitting (C).
- Tighten button bolt until you feel it contact throttle rod.
- **LOOSEN** button bolt 1/4 turn.
- Check to see if brass carb fitting can be moved towards REAR of motor. The button bolt should NOT be locking carb fitting to throttle rod. If carb fitting and throttle rod are locked together, loosen button bolt 1/4 turn and repeat test.
- **Note: Button bolt is coated with thread lock to prevent it from loosening.**

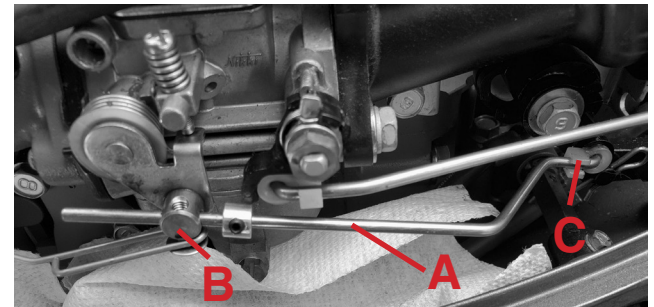


Fig. 3

Step 5: See Fig. 4

- You will notice that Yamaha has some "play" in the throttle rod fitting where the white clip is located. This is so the motor stays at idle when the motor is shifted in and out of gear.
- Push iTroll throttle rod towards REAR of motor (Arrow 1) until it stops moving. HOLD throttle rod in this position.
 - Slide collar (A) on throttle rod until it **LIGHTLY** touches the brass carb fitting.
 - Use supplied 1/16 Allen wrench (B) to tighten set screw of collar.

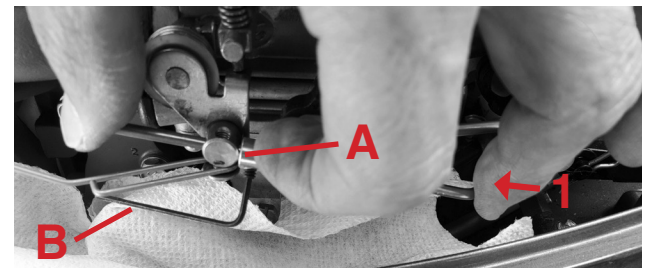


Fig. 4

Step 6:

- Pulling pull rod towards rear of motor should allow carb fitting to smoothly slide on throttle rod.

Step 7: See Fig. 5 & 6

- Use a dremel tool or utility knife to remove two vertical ridges from servo.
- Caution! - do not injure yourself.
- Install servo motor onto bracket with supplied screws and locking nuts.

Step 8: Mount servo bracket to motor

NOTE: Figure 7 shows a horn attached to servo. DO not attach servo horn at this time!

• TILLER motors:

Tiller motors do NOT have the electric choke box "A" in Fig 7. Use 10 mm wrench and supplied bolt & lock washer to secure bracket under rear most threaded post where choke box would be mounted.

- **REMOTE SHIFT motors:** Use 10 mm wrench or socket to secure bracket under factory bolt.

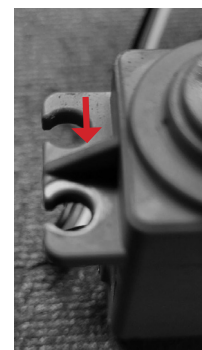


Fig. 5



Fig. 6

Step 9:

In this step, you are temporarily hooking iTroll's power module to your **12 Volt battery**:

- Connect Red wire to (+) battery terminal. 5 amp fuse has been installed at factory.
- Connect Black wire to (-) battery terminal.

Step 10:

- Plug servo motor into iTroll's servo control harness. Note that iTroll's 3 pin connector has a polarizing "DOT" on it. This dot corresponds to the servo's signal wire that is Orange, Yellow or White, depending on the brand of servo.

Step 11:

Use ink marker to make a mark on the servo's geared shaft so you can positively see the direction that the shaft is rotating.

Step 12:

- Plug data cable from iTroll into power module.
- Turn iTroll on (see owner's manual if required), then operate dial to turn servomotor.
- OBSERVE mark you made on servo's shaft. **If servo is turning CLOCKWISE as you advance the throttle with iTroll's knob, SKIP to Step 14.**

Step 13:

See "Reference 2" section of regular iTroll installation instructions. Follow programming instructions to set servo Travel and Rotation. Set servo travel for "S" (90 degrees). If the servo is rotating in the correct direction as determined in Step 13, leave rotation direction the same as the indicated "old" direction in the rotation set menu. If you need to reverse the servo's rotation, change it in the rotation set menu.

Step 14: See Fig. 7 & 8

- Find hose retainers (see arrows in Fig. 8).
- Bend hose retainers to bring hose as far inward as possible so iTroll's pull rod OVER the hose.
- Turn iTroll ON. After iTroll starts up, **press IDLE button to lock servo at idle position.** Confirm that iTroll is at idle by reading it's display.
- Slide free end of pull rod through brass fitting on servo arm.
- **Install servo arm exactly as shown in Fig. 7.** Install Phillips head screw in center of servo arm to fix it in place.
- Eliminate all slack between front end of oval loop in pull rod and carb fitting button bolt by pulling free end of pull rod towards rear of motor. Make sure that the throttle stays CLOSED (resting on stop).
- Tighten set screw in servo arm fitting with supplied 3/32 Allen wrench.

Step 15:

- Check throttle to confirm that it is FULLY CLOSED. If throttle is open, loosen set screw and readjust the pull rod.

Step 16:

- Push iTroll's Run button and operate dial. Check for movement of throttle without sticking or binding.
- Trim excess push rod from servo arm fitting - leave approximately 1/2 inch sticking out from servo fitting to allow for future adjustments.
- On some motors it may be necessary to trim servo horn if it hits inside of cover when it rotates to full throttle (Fig. 9).

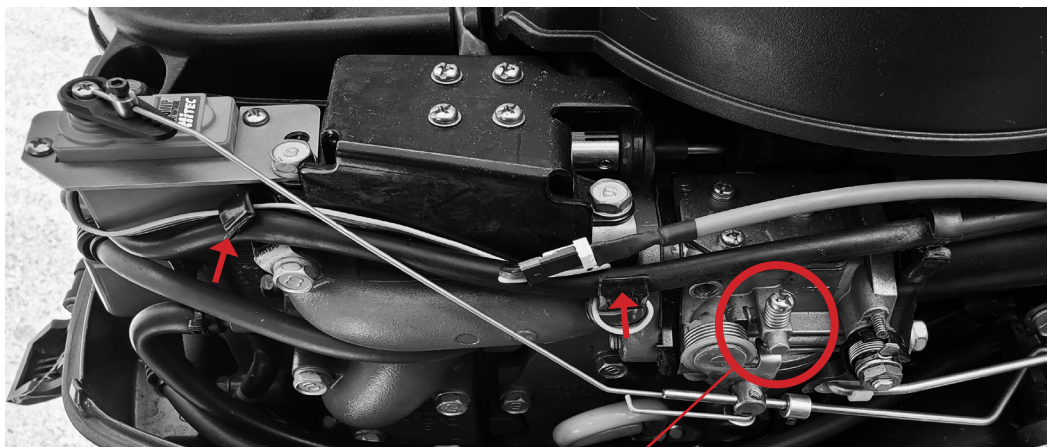
Step 17:

- Proceed with permanent installation of iTroll (see electronics installation manual).

Servo Horn



Fig 7: Servo horn position when iTroll is at Idle (0.0 %)



Throttle Fully Closed
Fig 8 - Complete Installation



Fig 9
End clipped from servo horn