iTroll
Precision Speed Controller
www.iTroll.us

Made in USA

Installation Instructions - Fit Kit M1

Step 1:
- Make sure motor is NOT running!
- Remove cowl (cover) from motor.

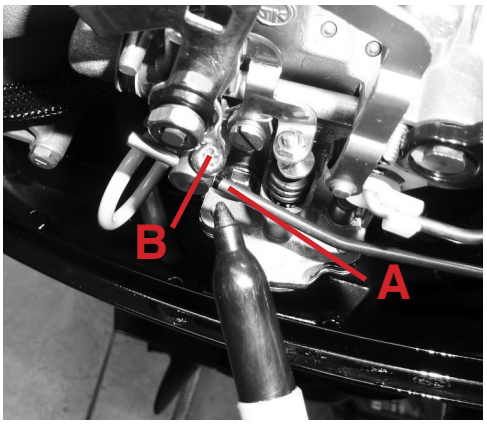

Figure 1

Step 2: See Figure 1
A: Use Ink Marker to mark stock throttle rod position at brass carburetor (carb) fitting.
B: Use #2 Phillips screwdriver to remove set screw on carb fitting. Save screw for later use.
- Remove stock throttle rod from carb fitting by pushing the fitting towards rear of motor.

Step 3:
- Find two "JT Link" slip connectors in hardware kit. Each slip connector has a LOCKING sleeve (small hole with set screw) and a SLIP sleeve (large hole, NO set screw).
- Slide slip connectors over stock throttle rod as shown in Fig. 2.
- Note: Do NOT tighten sleeves on slip connector rigidly together - make sure you can see a small gap between the sleeves.

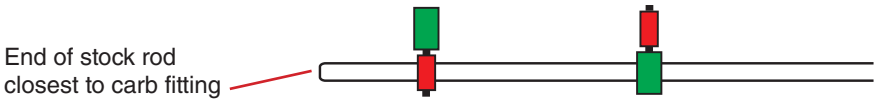

Figure 2

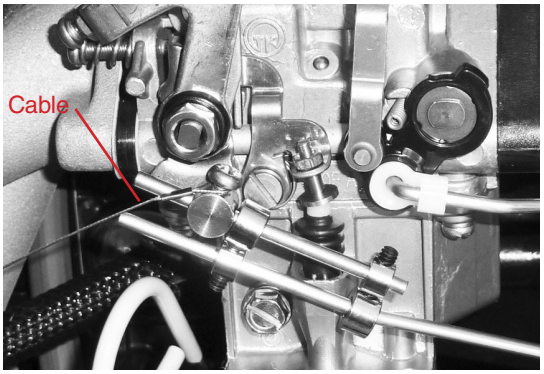

Figure 4

Step 4:
- Slip iTroll's stainless steel throttle rod through carb fitting and through slip connectors as shown in Fig. 3.

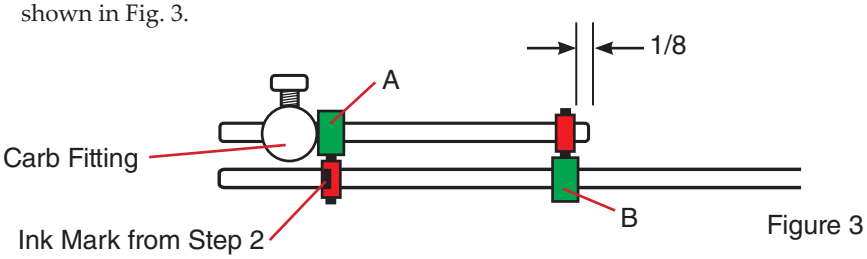

Figure 3

- Move slip connector "B" so approximately 1/8 inch of rod sticks out of it's right side. Use supplied 1/16 Allen wrench to tighten set screw on locking sleeve "B". Note: Slip connector set screws have thread locking compound PRE-APPLIED so they cannot loosen in the field.
- Put carb fitting set screw through looped end of supplied cable assembly. Install set screw into carb fitting - do not tighten. See Fig. 4.
- Reference Fig. 6 to see if the stock throttle rod has a bend in it as shown.
  - If bend is there, move iTroll throttle rod so slip connector "B" sits just LEFT of the bend in stock throttle rod (see Fig. 4).
  - If there is NO bend, move iTroll throttle rod so 1/8 inch is sticking out from the LEFT side of the brass carb fitting.
- Rotate iTroll throttle rod so that slip connector "B" is hanging straight down.
- Tighten carb fitting set screw.
- HOLD slip connector "A" in Fig 3 against brass carb fitting.
- MOVE stock throttle rod so that the ink mark you made in Step 2 sits just INSIDE the locking sleeve of slip connector "A".
- Tighten set screw on slip connector "A".

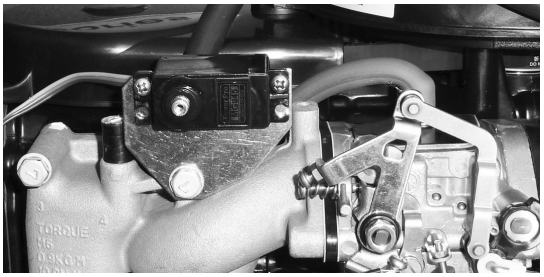
Figure 5

Step 5:
For motors with MANUAL choke, see Fig 5. For motors with ELECTRIC choke, see Fig 5A
DO NOT attach servo arm and cable until Steps 12 & 13!
- Install servomotor onto mounting bracket with stainless steel screws and locking nuts.
- Use 10 mm wrench or socket to secure bracket and servo under factory bolt.

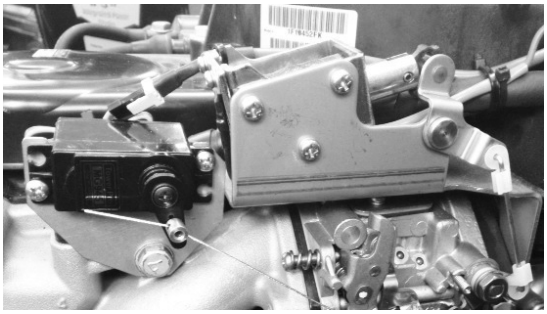
Figure 5A

Step 6:
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.

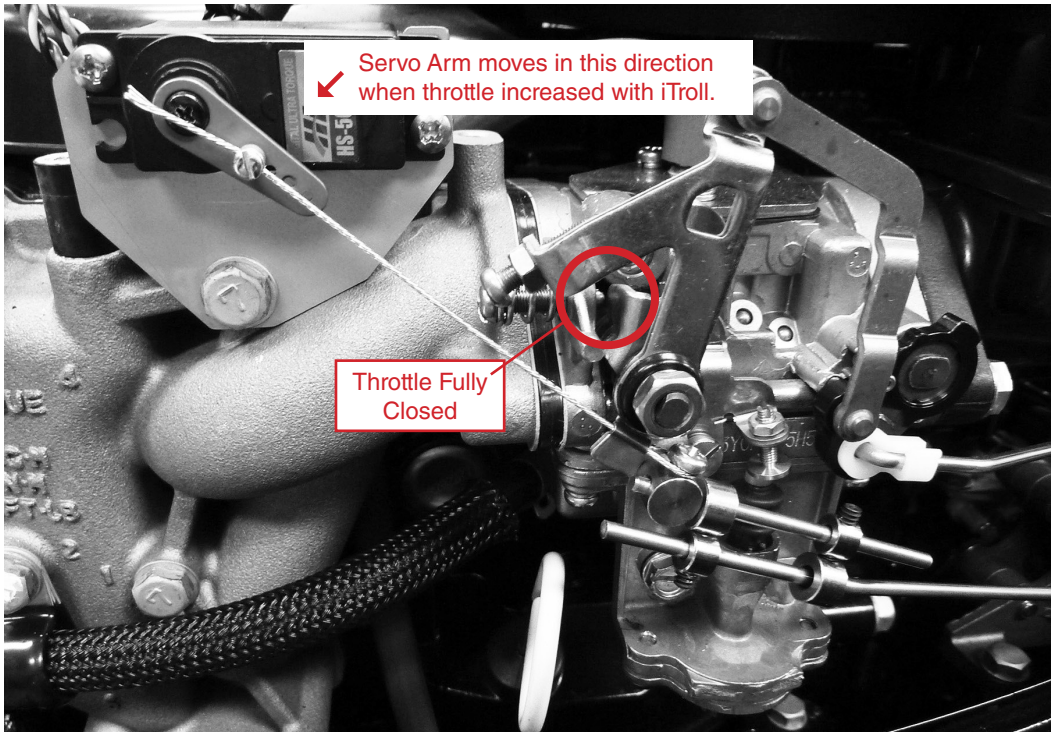

Figure 6 - Complete Installation
Note: Servo bracket reversed for electric choke motors - see Fig 5A

Step 7:
• 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 servo's signal wire that is Orange, Yellow or White, depending on the brand of servo.

Step 8:
Use an 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 9:
Plug data cable from iTroll into power module.

Step 10:
Turn iTroll on (see owner's manual if required), then operate dial to turn servomotor. OBSERVE mark you made on servo's shaft to see if servo is turning CLOCKWISE as you advance the throttle with iTroll's knob.

Step 11:
See "Reference 2" section on page 3 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 10, 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 12:
• Turn iTroll ON.
• After iTroll starts up, press IDLE button to put servo at idle position. Confirm that iTroll is at idle by reading it's display.
• Install servo arm as shown in Fig. 6.
• Slide end of cable through hole in brass fitting on servo arm.

Step 13:
• Take up slack on cable. MAKE SURE throttle is closed (see Fig. 6). Tighten set screw in servo arm fitting with a flat screwdriver.
Note: It may be necessary to have a helper hold the servo arm fitting with a pair of pliers when tightening set screw.
• Check throttle to confirm that it is FULLY CLOSED. If throttle is open, loosen set screw and readjust the cable.
• Trim excess cable from servo arm fitting - leave approximately 1/2 inch sticking out from servo fitting.

Step 14:
• Push iTroll's Run button and operate dial. Check for movement of throttle without sticking or binding.

Step 15:
• Proceed with permanent installation of iTroll (see electronics installation manual).