

# INSTALLATION INSTRUCTIONS

FTP05B

## WARNING

Improper installation of this product may lead to death or severe injury. Follow installation instructions carefully and read all warning labels thoroughly before installing this product. Install provided warning stickers on the throttle side of the vehicle in sight of the operator, so the operator is made aware of the modified throttle controls. Not installing these warning stickers can result in severe injury or death to the operator. If riding anywhere near the trees or in forested areas, a Munster throttle guard should be installed to help protect the throttle cable and lever from trees and branches. Use only our proprietary Munster throttle guard. Installing any other aftermarket or OEM throttle guard, hand guard, or wind deflector, can cause the snowmobile to accelerate uncontrollably due to damage of the throttle cable from the shifting of these components on your handle bar. If your machine is equipped with a hand guard or wind deflector, it should be removed before installing this product.

### IMPORTANT: Before Installation



Install the two provided warning stickers on the vehicle side panel to warn any operator of the modified throttle controls.

**WARNING:** Not installing these warning stickers can result in death or severe injury to the operator.

Install the stickers at the top of the right hand side panel of the snowmobile, below the finger throttle, so the stickers are easily visible by the operator. Ensure surface is clean and dry and that the stickers adhere properly to the side panel. If additional stickers are needed, please contact us through our website: [munstercanada.com](http://munstercanada.com), and we will provide new stickers.

### Thumb Throttle Removal



(1) Take off the side panels of your machine by undoing the latches and pulling the panels off. Using a small flat head screwdriver release the plastic rivets holding the hood and

console on by prying the centers out. Remove the hood.



(2) Undo the two bolts around the steering column. Remove the two plastic rivets holding the console to the intake and remove the console. Remove the remaining plastic rivets holding the plastic panel in front of the tank and remove the panel, being careful to disconnect the wiring harness plug to the panel switches.



(3) Undo the Velcro pouch to expose the harness plugs on the left side of the machine.



(4) Cut the zip ties holding the wires running from the throttle block to the harness plug in the Velcro pouch.



(5) Using a Philips screwdriver, undo the four screws to remove the backing plate on your thumb throttle block.



(6) With the backing plate off, undo the bolt on the clamping plate of the thumb throttle and slide it away from your grip to remove it.



(7) Remove the pivot pin from the thumb lever by removing the E-clip and sliding the pin out. Slide the throttle cable end out of the thumb lever to detach the thumb lever from the assembly.



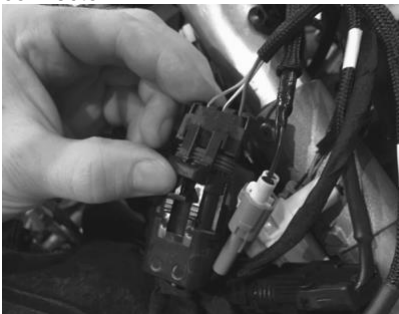
(8) Use a pick tool to remove the C-clip holding the throttle cable housing in. Pull the cable housing out and slide the cable through the slot to detach the housing.



(9) Remove the throttle safety switch from the throttle block and remove the throttle block from the handle bar.

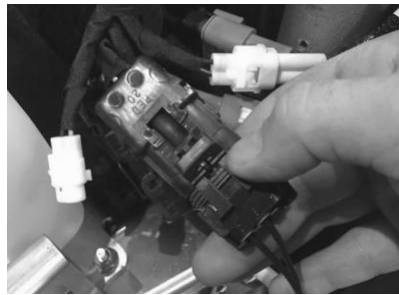


(10) Follow the wires from the throttle safety switch to the harness plug. Using your thumb, press down the lock tab to disconnect the plug connector.

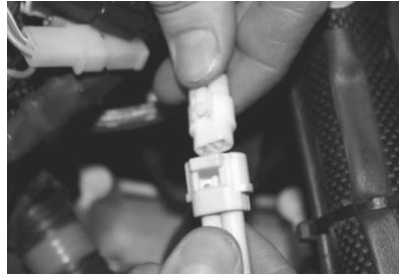


(11) Follow the wires from your thumb heater to the harness plug and disconnect the plug.

## Installation



(12) Plug your new finger throttle into the plug you disconnected the thumb heater from.



(13) Plug the white bypass connector provided with your finger throttle into the plug the throttle safety switch was disconnected from.

### WARNING!

This connector bypasses your throttle safety switch. If the throttle sticks open unintentionally while the machine is running, the machine will accelerate out of control, even if your finger is released from the throttle lever. A tether should be used at all times while operating the vehicle with a finger throttle. Always check that the throttle is functioning normally before start up and ensure the throttle cable is adjusted as specified in step (19)



(14) Undo the two clamp bolts on your new finger throttle using an Alan key. Route the wires from the heated grip through the slot in the throttle block. Clamp the finger throttle assembly to the handle bar and snug up the clamp bolts being sure not to pinch the wires.



(15) After routing the throttle cable in front of the handlebars, insert the throttle cable end into the finger lever slot.



(16) Pull on the cable housing. Slide the cable through the slot in the aluminum block and release the housing into place.



(17) Using the C-clip provided with your finger throttle, install it onto the end of the cable housing.



(18) Pull the rubber boot to expose the throttle cable adjuster. The Adjuster is located in front of the handlebars for Axys models, and under the engine cover for Matryx models. Undo the adjuster locking nut.



(19) With the throttle lever in the full throttle position, tighten the cable tension by unscrewing the plastic adjuster until you feel the finger lever

start to pull away from the bar. Screw the adjuster back in one full turn. The finger lever should contact against the grip firmly with no excess tension on the cable.

**IMPORTANT:** When the throttle is released make sure there is at least 1/8" of free play in the cable between the lever and the throttle cable housing. If the gap between the lever and the housing is too tight or touching, loosen off the cable adjuster to allow for proper clearance. Tighten the adjuster locking nut and slide rubber boot back over the cable adjuster. Check again for proper clearance.



(20) Cover up the harness plugs with the cloth boot and tuck them back into the machine.



(21) Fasten the wires with zip ties to the locations you previously cut. Put the dash panel, console and hood back on making sure to connect all the harness plugs that were disconnected earlier. Fasten console bolts and all plastic rivets, making sure to reconnect the air intake to the console. Install side panels.



(22) Adjust finger throttle position for rider preference and tighten clamp bolts.

# OPERATING MANUAL

## WARNING

Inexperienced operation of a finger throttle can lead to death or severe injury. Read the following operating manual before use.

## BE AWARE OF THE HAZARDS

- 1. ONLY USE ONE FINGER** - Never use more than one finger to activate the throttle lever at all times. Using more than one finger to activate the throttle can cause uncontrollable acceleration of the snowmobile, due to lack of grip on the handle bar. **ONLY** use your one index finger to activate the throttle. Your middle finger must remain on the handle bar for grip at all times. If your middle finger is used to activate the throttle, you will lack grip strength on the handle bar, which will cause you to pull the throttle in attempt to hold on. If you have any disability which limits the use of your middle finger, ring finger and/or pinky finger in your right hand, you should not attempt to operate a snowmobile with a finger throttle.
- 2. CAUTION WHEN LOADING** - Take special caution when loading the snowmobile onto a truck or trailer with a finger throttle. Loading a snowmobile is a dangerous task which requires good throttle control. Any error in throttle control, or incorrect hand placement can cause your machine to accelerate up the ramp out of your control. **DO NOT** attempt to load your snowmobile until you are competent using a finger throttle, and have good throttle control. **NEVER** let others load your snowmobile for you, unless they are competent using a finger throttle.
- 3. AVOID TREES AND BRANCHES** - If riding near trees or forested areas, the finger throttle should only be used with the added protection of a Munster throttle guard installed. The finger throttle is mounted in front of the handle bar which makes it susceptible to accidental throttle activation from foreign objects. An example of this would be if a tree or branch came into contact with the throttle lever to activate the throttle. Another example, and a much more dangerous scenario is if the throttle cable gets snagged by a tree branch. A snag can cause the throttle cable housing to stretch, which would result in the throttle sticking wide open and the snowmobile accelerating uncontrollably. Alternatively, a tree or branch can cause damage to any one of the throttle components resulting in uncontrollable acceleration of the snowmobile. Although a Munster throttle guard will help protect the lever and throttle cable, it will not ensure that accidental throttle activation will not occur. It is still possible to snag the throttle cable on a branch and/or damage other components of the finger throttle even with a Munster throttle guard installed. Use discretion if riding in the trees, and avoid trees and branches at all times.
- 4. THROTTLE SAFETY SWITCH BYPASS (POARIS AND ARCTIC CAT ONLY)** - On Polaris and Arctic Cat machines, the Throttle Safety Switch (TSS) has been bypassed and removed in order to use the finger throttle product. The throttle safety switch is an OEM safety mechanism which helps deactivate the machine if the throttle is stuck open unintentionally, either from damage to throttle components, or from something obstructing the throttle linkage. By bypassing this safety mechanism, the machine will not be deactivated in the event the throttle sticks open. This means that if the machine's throttle gets stuck open for any reason, the machine may accelerate uncontrollably, even if your finger is released from the throttle lever. This includes accidental throttle activation during start up. Always inspect and cycle the finger throttle to ensure it is functioning normally before start up. If for any reason the finger throttle doesn't cycle normally, **DO NOT START THE MACHINE**. Inspect further, and make sure the throttle linkage is functioning normally before start up. Always wear your tether before starting the vehicle.
- 5. "WHISKEY THROTTLE" AND THE IMPORTANCE OF MUSCLE MEMORY** - Throttle control, just like any other motor skill requires muscle memory to be done effectively and efficiently. When a movement is repeated over time, a long-term muscle memory is created for that task, eventually allowing it to be performed with little to no conscious effort. This process decreases the need for attention and creates efficiency within the memory system. When learning how to use a finger throttle, throttle control is often slow, stiff and easily disrupted without attention. This can make throttle control feel unnatural, but it can also pose a threat to the operator. If attention is drawn elsewhere, the operator can forget to let go of the throttle in a critical situation. Often times, an unexpected lurch in acceleration is enough to cause the operator to draw attention away from throttle control, and in turn lead to more acceleration. This is what is commonly known as "Whiskey throttle", and it can happen with any vehicle where there is an absence of muscle memory for a certain throttle control system. Make sure you understand your ability, and practice in a safe open area while learning to use a finger throttle.

## **OPERATING CONDITIONS**

If it's your first time using a finger throttle, find a safe wide open space to get familiar operating the vehicle with a finger throttle. It should be a flat area with no hazards in close proximity. Wear your tether, as well as your helmet and any appropriate safety gear. A tether should always be used while operating the vehicle with a finger throttle.

If a safe area isn't available, or if the vehicle needs to be transported first, it may be useful to flip your finger throttle around and use it as a thumb throttle when loading, or when riding in higher risk areas. The comfort and familiarity of using your thumb may be a good strategy when riding in higher risk areas. However, if flipping your throttle to use as a thumb throttle, pay close attention to your throttle cable routing, and make sure your throttle cable is clear of any pinch points. Check that your steering will not put tension on the throttle cable in either direction. Improper throttle cable routing can cause the machine to accelerate uncontrollably if the throttle cable is pinched or stretched by the steering linkage.

## **OPERATING PROCEDURE**

Before starting the snowmobile, visually inspect that the finger throttle has been installed correctly, and that your throttle lever functions normally. The finger lever should pull with ease activating the throttle all the way. When the lever is released, it should spring back to the same position without any resistance. The throttle cable should have about 1/8 inch of cable play in the lever at its rest position. It is good practice to inspect your throttle before every start up.

In a safe area and with your tether on, start the machine. With a firm grip on the handle bars, use **ONLY** your index finger to pull on the throttle lever to engage the throttle. Never use more than one finger to activate the throttle. Practice engaging and disengaging the throttle to rev up the motor without engaging the clutch to start. Once comfortable, try engaging the clutch and move the machine forward. Practice riding around in a safe area until you're comfortable enough progressing to the trail and so forth.

Throttle control with your index finger may feel weird at first, but take your time getting comfortable learning the new controls. Mid RPM throttle control tends to feel unnatural since it requires finesse, where as the full throttle and no throttle positions tend to be more predictable. For this reason, the finger throttle may feel less comfortable on the trail where mid throttle control is required, and more comfortable off the trail in deeper snow conditions where throttle control tends to be more off and on. Do not put yourself in any technical or dangerous situations while learning. Your finger throttle control should feel like second nature before riding in any higher risk areas. Loading your snowmobile onto a truck or trailer with a finger throttle should only be performed once fully competent and comfortable operating a finger throttle.

## **TIME FRAME FOR LEARNING**

The time that is required to feel comfortable using a finger throttle depends on the person. Some feel comfortable using a finger throttle right away, while others take weeks. The average person takes about 2-4 days of riding before the finger throttle starts to feel intuitive. It is important to gauge your comfort level, and progress at your own rate.

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For any questions regarding the safety, use, installation or warranty of any of our products, please contact us directly at the following contact information:

### Alpine Concepts Ltd.

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