

Congratulations on the purchase of your new BrakeAway Motorcycle Cruise Control. At BrakeAway Products, we are committed to your complete satisfaction. With proper installation, use, and periodic maintenance, this cruise control is built for the long haul in more ways than one. Please follow all of the instructions carefully to insure your riding safety and enjoyment.

**PROPER USE**, **AFTER INSTALLATION**. (The following information is to be shared with any person who will be riding or buying any Motorcycle equipped with a BrakeAway Cruise Control).

Always include your cruise control in your standard pre-ride inspection. Make sure the unit engages easily, throttle should turn with little effort but remain in position on it's own. The unit should effortlessly snap to the disengaged position with a slight pull of the brake lever or tap of the Manual Release Lever. The throttle should always turn freely when unit is disengaged. Check the Cam(8) (see diagram on next page) for wear at the point of contact with the brake lever or damage of any kind. All fasteners must be tight.

Warning! Never use this product with worn or damaged parts. All replacement parts are obtainable by contacting BrakeAway Products Inc at (503)372-9346 or e-mail customersevice@brakeawayproducts.com.

Once you're on the open road and ready to cruise, reach the speed you want to maintain and let your R.P.M.s level off. While holding the throttle still, reach with your right thumb only and push the engage button(20) until it snaps. Your bike should now maintain your set speed on it's own. You can make adjustments for up or downhill grades with a slight twist of the throttle while engaged.

To disengage the unit simply pull the front brake or push forward on the manual release lever(19) with your right thumb until the unit snaps to the disengaged position. Always keep your cruise control clean and free of debris, occasionally lubricate the catch pin(14) with a light grease or chain wax.

Never forget that you maintain control even when unit is engaged. Always be aware of your cruising speed and maintain safe distance from objects or vehicles in front of you. Never let go of your throttle. The BrakeAway cruise control is not intended for hands free or one handed riding, this unit was specifically designed to allow the rider to safely rest a cramping throttle hand on the throttle.

BrakeAway Products wishes you many years of cramp free cruising, ENJOY!!!

(8-32 X 1/4") Stainless Steel or Zinc Plated Set screw SET SCREWS (4) PLACES 2

CLAMP 0 4 10 0 V 10 V

PROTECTION STRIP

SWIVEL SLIDE

END BRACKET

CAM SUPPORT

(8-32 X 1/4") SS or Zinc Plated CAM SCREW/ LOCK WASHER Button head socket 10.

(4-40 X  $\sqrt[4]{4}$  SS or Zinc Plated Button head socket CLAMP TENSION ADJUSTMENT SCREWS

TENSION ADJUSTMENT HOLE

SPRING PLATE 12.

CATCH PIN 7

(1/4-20 X 1/2") SS or Zinc Plated Socket head cap screw SWIVEL LOCK SCREW 15.

SLIDE LOCK SCREW (8-32 X 1/2") SS or Zinc Plated Flat head socket 16.

END BRACKET LOCK SCREW (10-32  $\times$  3/8 SS or Zinc Plated Hex head machine screw 17.

CLAMP RING 18.

MANUAL RELEASE LEVER ENGAGE BUTTON

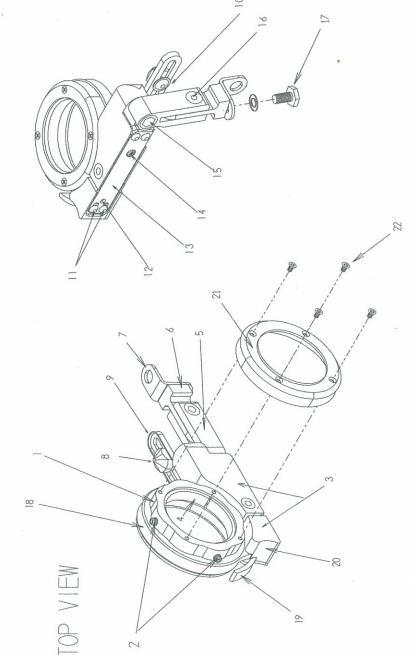
RING CAP 20.

(2-56 x 1.4") SS Flathead CAP SCREWS

4 Places

DIAGRAM

BOTTOM VIEW



Tools Required

Wen wrench (Induded in Kit) Wen wrnech (Induded in Kit) Alen wrench

is head sarewariver pen end wrench

Open and wrench to fit the brake pivot nut of your motorcycle. pen end wrench

# BrakeAway Motorcycle Cruise Control Installation instructions

Before you begin, Turn Fuel supply OFF to avoid flooding the carburetors (if applicable). Familiarize yourself with the action of your throttle return spring by turning your throttle and quickly releasing it. This action should not be effected by the installation of this cruise control. Also, correct any excessive play in the brake lever before installation. The brake lever should move no more than 1/4" up and down at the outside end. Detach the DIAGRAM from these instructions and place it in a visible location for easy reference. Remove the cruise control from the package and discard the white strip that is inserted into the ring, this is for shipping purposes only.

Important Note! If you are installing on a 2010 or newer Honda Sabre, Stateline or Interstate, you will need to have part number 5C23 turn limiter. This will keep the cruise control from coming in contact with your gas tank. Without this part you may damage your paint! Part # 5C23 is available on our website @ BrakeAwayProducts.com

#### **SECTION 1: SLIP RING ATTACHMENT**

- 1.1 Remove the four Phillips head Cap Screws(22) and put them in a safe place, you will need them later. Remove the Ring Cap(21) (Figure 1)
- 1.2 Back the four Set Screws(2) out until the end of the screws are flush with the inside of the Slip Ring(1) (Figure 2)
- 1.3 Insert the appropriate Rubber Protection Strip(4) into the back side of the slip ring(1) (Figure 3). Make sure that the angled ends meet flush as you wrap the strip into a circle. Position the ends between two of the four Set Screws(2). Push the strip all the way to the bottom of the pocket in the Slip Ring(1). The Protection Strip(4) should cover all four of the set screws on the inside of the Slip Ring(1). Use the thickest Protection Strip that your grip size will allow. (Grips with a larger diameter at the outside end may require you to insert the protection strip(4) after sliding the slip ring(1) over the oversized area).



1.4 Slip the entire unit over the throttle hand grip (Figure 4). Make sure the Protection Strip(4) stays in place. Leave a small gap between the back side of the Slip Ring(1) and the switch housing of the motorcycle (Figure 5). Snug all four Set Screws(2) equally (Figure 6), (use a one turn alternating pattern). It is very important that the Slip Ring(1) remains true to the throttle rotation and square to the switch housing as you turn the throttle. Continue to check for and correct any run out or wobble as you snug the screws. The screws need to be tight enough so the Rubber Protection Strip(4) gets a good bite on the grip, this will secure the Slip Ring(1) to the grip. However, do not Over-Tighten. You do not want to drive the screws all the way through the Rubber Protection Strip(4). All four screws must be below the outside surface of the Slip Ring(1).



Figure 1

Figure 4



Figure 5



Figure 6







Figure 7

Figure 8

Figure 9

**1.5** Replace the Ring Cap(21) so the four holes line up with the threaded holes in the face of the Slip Ring(1) (**Figure 7**). Replace the four Flathead Cap Screws(22), (**Figure 8**) Be vary careful not to cross thread or loose these tiny screws. They will go in easy when they're straight. Do Not force them in if they are not straight.

**Aftermarket Grips**: The BrakeAway will not fit over grips larger than 1 9/16" in diameter. Some grips have details such as rubber pads (**Figure 9**). These grips need to be lubricated with common dishwashing liquid. This will allow the slip ring with the thinnest Rubber Strip(4) to be worked on to the grip. Avoid pushing on the Clamp(3) during this step to avoid bending it.

When installing the Ring Cap(21), apply more dish soap, push the ring down into the rubber pad on one side and push forward on the opposite side, then up and forward. Alternate this action to walk the ring down the grip. Once the ring is installed, Rinse the grip and the cruise control thoroughly with water and dry with a towel to remove as much soap as possible before continuing the installation.

## **SECTION 2: CAM ADJUSTMENT**

- 2.1 Rotate the Clamp(3) until the Cam Support(9) is positioned directly under the bottom of the motorcycle brake lever. Carefully squeeze the clamp together as shown (Figure 10), until it snaps into the engaged position. Do not allow the Cam Support(9) to push up against the brake lever or it could bend the Spring Plate(13). Make sure the catch pin(14) is fully engaged into the hole of the spring plate(13) (See Diagram).
- 2.2 Hold the throttle and the engaged unit so the Cam Support(9) touches the bottom of the brake lever. Slide the Cam(8) against the back of the brake lever and tighten the Cam Screw(10) (Figure 11). Do not over tighten or you may strip the threads in the cam.

IMPORTANT!!!, MAKE SURE THE LOCK WASHER IS IN PLACE ON THE CAM SCREW (10) AND THE SCREW IS SECURE, AN UNSECURED CAM COULD CAUSE THE BRAKE RELEASE TO MALFUNCTION.

DO NOT ride your motorcycle with the Cam(8) out of adjustment. The BrakeAway cruise control is designed to release the instant you tap your brake, before braking actually takes place.

# Important note for Kawasaki wide brake lever application

Some Kawasaki models have a cut out or pocket area on the bottom back side of the brake lever. When adjusting the position of the Cam(8) (**Figure 11**), the Cam will slide right into that pocket area. The backside of the pocket will be what contacts the Cam(8) to actuate the brake release. The Cam(8) will be adjusted close to the outmost end of the adjustment slot. If the slot in the Cam Support(9) does not allow enough reach for the Cam(8) to contact the back side of the pocket, then your brake lever will need to be adjusted back using the brake lever position adjustment dial supplied on your motorcycle (see your owners manual).



Figure 10



Figure 11

## **SECTION 3: SECURING THE ASSEMBLY**

- 3.1 Release the cruise control to the off position by pushing the Manual Release Lever(19) forward. (Figure 12)
- 3.2 Remove the lock nut from the motorcycles brake pivot bolt. Attach the End Bracket(7) and replace the brake pivot lock nut. (Figure 13) Do Not allow the End Bracket(7) to turn while tightening the brake pivot nut. (Tighten the nut to manufacturers spec.) Note: If the End Bracket(7) is fully extended or will not reach your brake pivot bolt at all, you may need to move your brake lever mount closer to the switch housing. There is also an Extension Block and longer Screw(17) supplied in your kit. The extension block is a ½" aluminum cube with a hole thru it, use this to extend the Slide(6) if needed.



Figure 12



Figure 13

3.3 (It is very important that the clamp remains open or released during this step)

Pull the brake lever as to engage the front brake and hold it. Raise or lower the Cam height by sliding the End Bracket Screw(17) up or down in the slot provided. Position the top of the Cam(8) so it just touches the bottom of the brake lever (Figure 14), stop as soon as the Cam(8) touches and hold it there. Release the brake lever and slightly snug the End Bracket Screw(17) just enough to hold this position. (Do Not tighten until step 3.5)

NOTE: There are two reasons why top of the Cam(8) might be too low to achieve the cam position described above.

A: Thin brake levers or B: Contoured brake levers Please see the respective options below.

**Option A:** For thin brake levers. Flip the Slide(6) over 180 degrees. The hole in the end of the slide is off center, so when you flip it over, the Cam(8) will be higher when the End Bracket Lock Screw(17) is all the way up in the slot. To do this, remove the End Bracket Lock Screw(17) the Slide Lock Screw(16), Flip the Slide over and reinstall the screws.

Option B: For Contoured brake lever. This is when the thick part of the brake lever does not clear the Clamp(3) with the Cam(8) in the described position. In this case, you will need to add the Cam Riser and longer Cam Screw(1). The Cam riser is a small black oval shaped plastic piece 3/32" thick that will snap on to the bottom of the Cam(8) to raise it. The Cam Riser and longer screw are in the wrench bag supplied in your kit. To add the Riser; remove the brake pivot nut, loosen the Swivel Lock Screw(15) and move the Swivel to access and remove the Cam Screw(10) and the Cam(8). Snap the slotted side of the cam riser on to the bottom of the Cam(8) and reinstall it on the Cam Support(9) using the longer Cam Screw(10) supplied. Re-adjust the Cam(8) position as described in section 2.2. and the Cam(8) height in this section 3.3)

IMPORTANT! Use only the cam riser to raise the cam. Using other objects such as washers to raise the cam could allow the cam to work loose resulting in brake release failure. If the supplied riser is not thick enough for the Cam(8) to make proper contact with the brake lever, contact BrakeAway Products for details on P/N 5C18 Aluminum Cam Riser.

3.4 Tighten the Swivel Lock Screw(15). Hold the Clamp(3) to keep the Clamp Ring(18) centered and straight in the groove in the Slip Ring(1) while securing this screw. (Figure 15).



Figure 14



Figure 15

- 3.5 Place a 1/2" open end wrench on the square block end of the Slide(6) (**Figure 16**) to keep the slide from turning as you tighten the End Bracket Lock Screw(17). After tightening the screw, pull your brake lever to check for clearance, it should just touch the top of the Cam(8) and completely clear the back of the Clamp(3).
- 3.6 Check the operation of the throttle return at this time. It should return normally with no restrictions. Engage and disengage the cruise control 3 or 4 times by squeezing the Clamp together as shown (Figure 17) and then releasing it with the Manual Release Lever(19). Adjust the position of the Clamp Ring(18) until it is aligned and centered in the groove of the Slip Ring.



Figure 16



Figure 17

3.7 Tighten the Slide Lock Screw(16) in the front of the Swivel(5) (Figure 18). Make sure the Swivel(5) and the Slide(6) stay in position as you tighten the screw.

IMPORTANT NOTE!, Make sure the cruise control clears your tank!

Before you continue, very slowly and carefully turn your front wheel all the way to the right. Watch the entire cruise control including the end bracket. Make sure that no part of the cruise control can make contact with your paint.

Turn the throttle and engage the cruise control by pushing forward on the Engage Button(20) (Figure 19) The hole in the Spring Plate(13) should easily snap to full engagement with the Catch Pin(14). Be careful not to touch the Manual Release Lever(19) while engaging the cruise control.

(The cruise control may not hold the throttle in position at this time, the Clamp Tension will be adjusted in section 4)

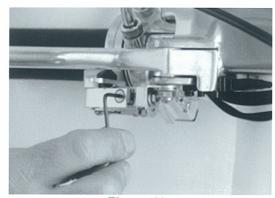


Figure 18



Figure 19

## **IMPORTANT NOTE!!!**

The Cam(8) or the Cam Support(9) should not make contact with the brake lever during engagement. This will interfere with the unit becoming fully engaged. The Cam Support(9) should rest just <u>under</u> the brake lever and the Cam(8) should rest just <u>behind</u> the brake lever when the cruise control is fully engaged.

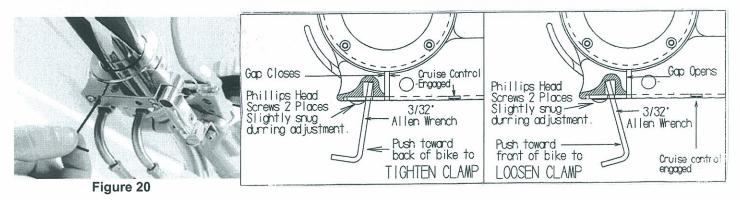
- 3.9 Pull the front brake lever, this should push down on the Cam(8) and release your cruise control easily and quickly without binding or hesitation. The space between the Cam(8) and your brake lever should not exceed 1/16". The brake lever should clear the Clamp even if you push down on it. The brake lever should release the cruise control even if you pull up on it.
  - **Warning!** If the brake lever is sharp where it makes contact with the Cam it may cut into the Cam causing the brake release to malfunction. If you experience this problem you will need to file a small radius on the bottom of your brake lever at the contact point of the cam. If you do not wish to file your brake lever, you may return the otherwise undamaged cruise control to BrakeAway Products for a full refund. DO NOT use this product without correcting this condition.
- 3.10 With the cruise control in the off position check the throttle return, it should return normally with no hesitation or bind. Binding of the throttle is usually caused by something in the installation being twisted or misaligned. The goal is to Have the disengaged Clamp(3) suspended loosely around the Slip Ring(1) when everything is tight.
  If the throttle return binds, even slightly follow the troubleshooting guide at the end of the instruction sheet.
- 3.11 Double check the Brake Pivot nut, Swivel Lock Screw(15), End Bracket Lock Screw(17) and the Slide Lock Screw(16) to make sure they are secure and tight.

## **SECTION 4: CLAMP TENSION ADJUSTMENT**

Clamp Tension refers to the amount of friction or resistance which is applied to the throttle when the cruise control is engaged. If your cruise control tension is too loose and will not hold reasonable throttle return spring tension, or if the factory setting ends up being too tight, follow these instructions carefully.

- 4.1 With cruise control in the **engaged** position, **one at a time**, loosen and very lightly snug the two clamp tension Adjustment screws(11) (See Diagram). Make sure the catch pin(14) remains fully engaged in the hole in the spring plate(13).
- 4.2 Insert the back side of a small Allen wrench into the tension adjustment hole(12). Pull the bottom of the wrench back in a prying motion, toward the back of the bike (Figure 20) to tighten, or push forward to loosen while turning the throttle to test the clamp tension. Stop as soon as the clamp will hold the throttle in place. Throttle should turn smoothly with moderate resistance.
- **4.3** Tighten the two clamp adjustment screws(11).

WARNING!!! NEVER OVER TIGHTEN THE CLAMP TENSION. THIS PRODUCT IS DESIGNED TO RESIST ONLY THE THROTTLE RETURN SPRING TENSION. THE RIDER SHOULD ALWAYS BE ABLE TO EASILY ADJUST THE THROTTLE POSITION. OVER TIGHTENING THE CLAMP COULD CAUSE THE THROTTLE TO BE UNMANAGEABLE AND HAS THE POTENTIAL TO CAUSE BRAKE RELEASE FAILURE.



### **SECTION 5: INSPECTION AND MAINTENANCE**

- 5.1 Check your cruise control for proper operation during your pre-ride safety inspection. Make sure all components are tight and functioning properly. Check the Cam(8) for wear or damage of any kind.
- 5.2 Occasionally lubricate the catch pin(14) with chain wax or WD-40; Annually remove the cruise control and wash it thoroughly with warm soapy water to remove road film and then dry thoroughly and re-lube the catch pin. Inspect the Cam(8) and all other components for wear or damage. Make sure that ALL screws are tight. Do Not use the BrakeAway Cruise Control with any Worn, loose or damaged parts. All components are obtainable from BrakeAway Products Inc. (503)372-9346 or e-mail customerservice@brakeawayproducts.com

# **Trouble shooting**

1. Problem: Throttle is binding with cruise control disengaged.

Cause: The Clamp(3) is positioned incorrectly so it is rubbing on the slip ring.

Solution: With cruise control disengaged, Please follow the instructions below in order until your throttle returns freely.

- A. **Gently, slowly and very slightly** turn the Slide(6) with a 1/2" open end wrench, clockwise first then counter clockwise while checking the throttle return. Try to find a position where the throttle returns freely. If this works, then hold the Slide(6) with the 1/2" open end wrench and retighten the End Bracket Lock Screw(17).
- B. Loosen the Swivel Lock Screw(15) and the Slide Lock Screw(16). Hold the clamp(3) so the Clamp Ring(18) remains straight and in the center of the groove in the slip ring while you retighten the Swivel Lock Screw(15). retighten the Slide Lock Screw(16).
- C. Loosen and retighten the Brake Pivot Nut. Hold the cruise control from turning when you tighten the nut.

2. Problem: Cruise control is hard to engage

Cause: The Clamp(3) is probably positioned too far forward (toward the front of the bike)

Usually happens because the end bracket(7) turns when the brake pivot nut is

tightened (section 3.1)

Solution: Reposition the clamp slightly toward the back of the bike. This will free up some

movement or travel in the push button(20). **To do this**, slowly turn the brake pivot nut as if to loosen it, watch the Clamp(3) as you turn the nut, at some point it should move toward the back of the bike. Stop as soon as you see it move. Retighten the brake pivot nut while holding the Clamp from moving

forward. your cruise control should now engage easily.

3. Problem: Cruise control will not stay engaged

Cause: The hole in the Spring Plate(13) is not fully engaging onto the Catch Pin(14)
There are three reasons why this might happen, see A.B.C respectively:

Reason: A. The Cam(8) or the Cam Support(9) is hitting the brake lever during engagement.

**Solution:** A. Readjust the Cam position or Cam height so it does not make contact the brake lever during engagement. See section 2.2 or 3.3.

**Reason B:** The Clamp Tension is too tight. Your throttle should not be hard to move with cruise control

engaged.

**Solution B:** See section 4 to readjust the Clamp tension

**Reason C:** The Spring Plate has been bent down away from the Catch Pin.

**Solution C:** Remove the two Clamp Tension Adjustment Screws(11). The Spring Plate, Cam Support and Cam will come down as an assembly. Place the slotted end of the Spring Plate about 5/8" down in a bench vise with the Cam support pointing straight up. The serial number should be facing you. Now push on the spring plate until you feel it bend just slightly, Approximately 2 degrees past flat. Reinstall the Spring Plate and readjust the Clamp Tension as described in section 4. If the cruise control is hard to release then the plate is bent too much.

Please contact BrakeAway Products tech support for additional assistance @ (503) 372-9346 or email techsupport@brakeawayproducts.com

# "WARNING!!!"

These instructions were designed as a guideline to install the BrakeAway Cruise Control. BrakeAway Products, Inc. assumes no responsibility for the competence level of the installer or the ability of the installer to determine the proper function of the BrakeAway Cruise Control. Proper installation, maintenance, and pre-ride inspection are essential to the safety of the BrakeAway Cruise Control, and are the sole responsibility of the installer and or user of the BrakeAway Cruise Control. If the installer and or user of the BrakeAway Cruise Control is unable to achieve function satisfactory to the user, or if the user is unable to maintain satisfactory function of the BrakeAway Cruise Control, it is the responsibility of the user to remove it or have it removed. You may return it to BrakeAway Products, Inc. under the terms of the warranty, within the warranty period.

Serious injury or death could result if the BrakeAway Cruise Control is installed improperly and or used irresponsibly. Hands free or one handed operation of a motorcycle is considered by BrakeAway Products Inc. to be dangerous and irresponsible and is not the intended function of this product.

Do Not install this product on any motorcycle which has not been tested and listed exclusively by BrakeAway Products Inc. for proper fit. See fit list on the back of package or at <a href="https://www.brakeawayproducts.com">www.brakeawayproducts.com</a>

BrakeAway Products, Inc. assumes no liability for the misuse, improper installation or application of this product.

#### WARRANTY STATEMENT

Our warranty covers any defect in material or workmanship to the original purchaser for one year after purchase date. We reserve the option to repair or replace the defective unit. Defective product should be packaged in the original carton and packing materials. Include in the package a copy of the sales receipt or other evidence of date of original purchase. Print your name and address, along with a description of the defect, and include this in the package. Include payment for any service not covered by warranty as determined by BrakeAway Products Inc., ship via. UPS Insured or equivalent. All returns require prior Return Authorization, contact us on the web at <a href="https://www.brakeawayproducts.com">www.brakeawayproducts.com</a>

BrakeAway Products Inc. 4191 SE Witch Hazel Rd Hillsboro, OR 97123 (503) 372-9346

BrakeAway Products Inc. assumes no responsibility for units sent without prior Return Authorization.

#### Warranty does not cover:

- \* Damage from misuse, neglect, lack of maintenance, accident, improper or careless installation.
- \* Products which have been modified in any way.
- \* Products purchased more than 12 months prior to the current date.

#### Returns, Exchanges, & Refunds for Internet Orders:

\* All returns/exchanges/refunds must be approved by www.brakeawayproducts.com customer service. A return /exchange /refund authorization will be issued to those with approval, and this Return Authorization number must be written on the outside of the package. All return / exchange/ refund claims must be made within fourteen (14) days of the customer receiving the order, and approved items must be received by BrakeAway Products, Inc., within thirty (30) days of the customer receiving the order, or return / refund will be refused, and no refund / exchange / return will be issued. All return / exchanges / refunds not due to a shipping or selling error of BrakeAway Products, Inc. are subject to a nonrefundable 15% restocking fee.

#### Returns, Exchanges & Refunds for Retail Purchases:

\* Refer to individual store policy

### Patent No. US 6,820,710 B2

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