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INSTALLATION INSTRUCTIONS FOR BROCK'S PERFORMANCE ZX-14R (12-16) ALIEN HEAD 2™ OR SHORTMEG 2™ FULL EXHAUST SYSTEM

To View Installation Video: BrocksPerformance.com > Customer Service > Product Information > Installation Instructions

The Alien Head 2™ or ShortMeg 2™ for the ZX-14R (12-16) is a high performance 4-2-1 exhaust system that replaces the stock headers, mid-pipes, and mufflers. It converts the stock dual-muffler design into a single-sided muffler mounted on the right side of the bike.

STEP 1: Check Package Contents: The Alien Head 2™ or ShortMeg 2™ System is shown (Figure 1). The package contents include:

1. Four Header Mounting Flanges
2. One Right Side And One Left Side Header
3. One Secondary Collector
4. One Mid-Pipe
5. Package Containing Springs, Spring Puller, and One Red PAIR Valve Block-Off Cap
6. One Alien Head 2™ or ShortMeg 2™ Muffler
7. One Tube of Permatex™ Ultra Copper® Sealant
8. One Packet Containing Instructions and Supplemental Information

If any parts are missing, please contact Brock's Performance.

Figure 1



Note: A slight ovaling of the tubing can occur during the manufacturing process, this is normal. A twisting motion may be required during assembly/disassembly.

STEP 2: Pre-Assemble Headers, Collector, and Mid-Pipe to Ensure Proper Fit Between All Parts: The pre-assembled system is shown (Figure 2). Pre-assembly helps to detect any potential shipping damage and ensures that all parts fit properly. Apply WD-40® to the pipe joints to ease assembly, adjustment, and especially disassembly.

Figure 2



Caution: During all steps below, the fairings should remove with ease. If you feel resistance, stop and assess the situation before continuing.

STEP 3: Remove ZX-14R Dashboards: The dashboards are held in place by three fasteners shown (Figure 3). Note that all dashboard and fairing fasteners have thin plastic washers located between the fastener head and the plastic bodywork. Save the plastic washers to be reused later. To avoid losing fasteners and washers, it is recommended that the installer place them in a container. With a two-handed grip on the inside of the dashboard, gently pull towards the forks to release the tabs holding the dashboard in place. Lift the dashboard upwards to remove.



Figure 3 ----->

STEP 4: Remove the Right and Left Fairing Grills:

- Remove fasteners and washers at positions 4, 5, and 6 (Figure 4) for the right side fairing grill.
- Note bolt tab on the fairing grill positioned under the tank cover at fastener 4, pull tank cover away slightly to release tab. Dotted line shows locations of hidden tab (Figure 4).
- The fairing grill is now held in place by two rubber snap grommets inserted into the mid-fairing. Pull the fairing grill away from the mid-fairing slightly and slide fairing to the rear to remove. Yellow circles show locations of hidden snap grommets (Figure 4).
- Repeat for left fairing grill.

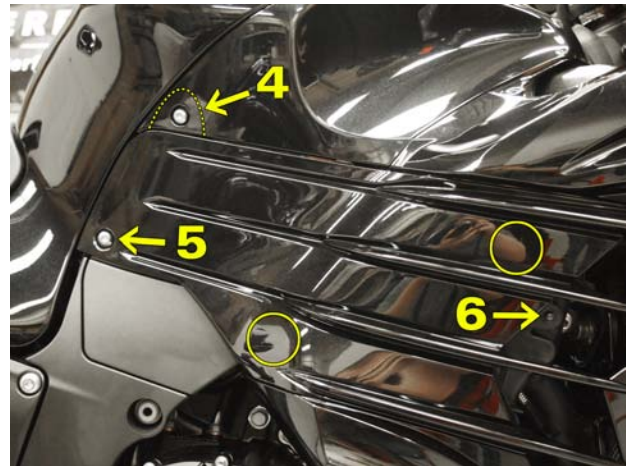


Figure 4 ----->

Caution: When performing the steps below use extreme care when releasing tank cover from side fairing grommets. The tab shown in (Figure 5 B) has been known to break easily.



Figure 5 A



Figure 5 B

STEP 5: Remove the Tank Cover: The tank cover is held in place by three fasteners (Figure 5 A). Fastener 7 is located on the right side, Fastener 8 on the left side, and Fastener 9 at the front of the tank cover. Remove Fastener 9. The tank cover is now held in place by pins in snap grommets. Pull the tank cover evenly in an outward direction on both sides to clear the grommets and hooks. Then lift the tank cover to remove it from the bike frame.

STEP 6: Remove Side Fairings: The locations of the bolts and quick rivets holding the fairings in place are illustrated (Figure 6 A, B, C, D, & E). Details are provided below:

- A quick rivet is located in the lower nose of front fairing, behind the front tire, and holds the left and right panels together. Using a thin blade screwdriver lift the center of the rivet head. Then pull the rivet from the bodywork. This will release the right panel from the left panel.
- Remove the quick rivet at location 10 (Figure 6 A). Use a pin or small hex head wrench to push the center of the quick rivet inward. Then remove the rivet using a small flat head screwdriver.
- Remove the 2 quick rivets at locations 11 and 12, next to the turn signal (Figure 6 B). Use a pin or small hex head wrench to push the center of the quick rivet inward. Then remove the rivet using a small flat head screwdriver.
- Remove the side fairing fasteners & washers at locations 13, 14, 15, & 16 (Figure 6 C) on the right fairing panel.
- Remove the fastener at location 17 (Figure 6 D).
- The side fairing is now connected to the front nose fairing with only hooks and slots (Figure 6 E). Gently slide the side fairing rearward to separate it from the front nose fairing.
- Note that the turn signal wiring is connected to the wiring harness using a quick disconnect. When removing the mid-fairing take care not to damage the connector.
- Repeat for the left side lower fairing.

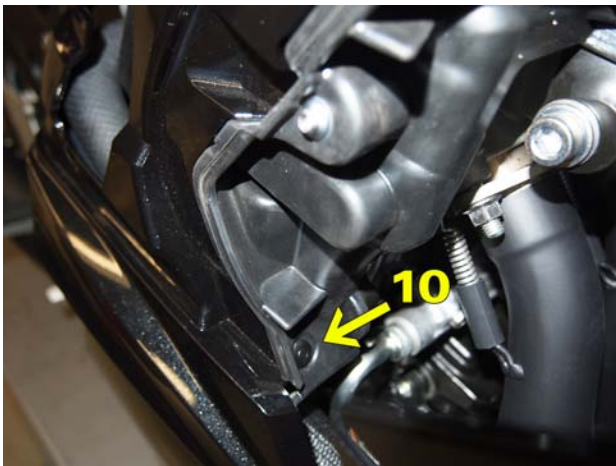


Figure 6 A



Figure 6 B

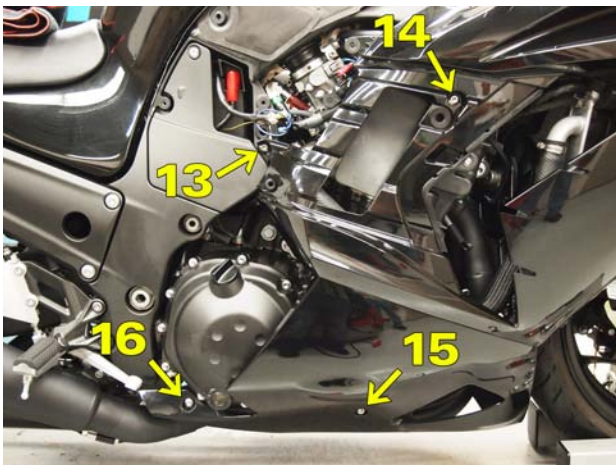


Figure 6 C

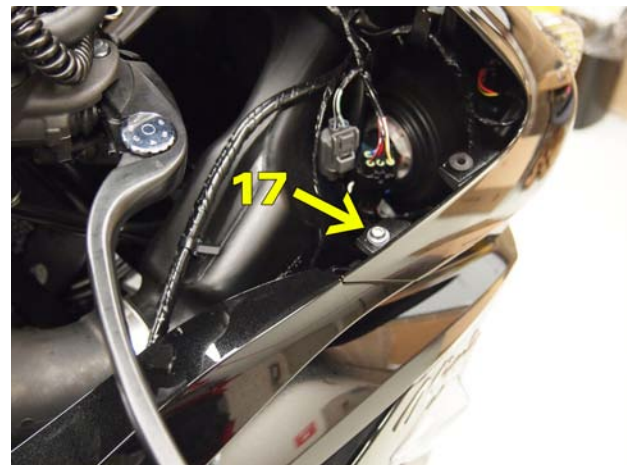


Figure 6 D

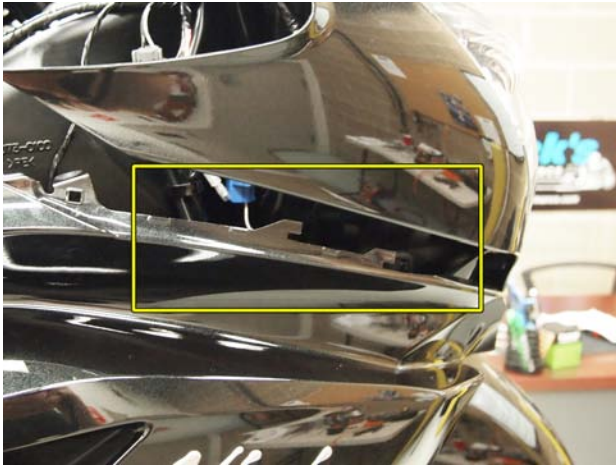


Figure 6 E



Figure 7

STEP 7: Remove the Stock Right and Left Muffler Bodies (Figure 7):

- Remove the belly pan by removing the 4 fasteners at location 18.
- Loosen the mid-pipe clamp at location 19.
- Remove the bolt at location 20.
- Remove the passenger rear foot peg bolt at location 21. This bolt will be reused on both sides to secure the bushing.
- Pull the muffler body to the rear to release it from the collector.
- Left side removal is the same except there is no bolt at location 20.

STEP 8: Remove the Stock Header Assembly (Figure 8): The procedure described below does not require removal of the radiator. However, the fit is tight, and care should be taken to avoid damage to the radiator.

- Locate the lower radiator bracket that connects the radiator to the center of the engine block. Remove the bolt (6 x 22mm) from the bracket supporting the lower portion of the radiator. This will allow you to gently ease the radiator forward for additional clearance when removing the headers.
- Remove the header nuts. Use of an extension will allow easier access to the header bolts. There are two bolts per header tube. Once the bolts are removed do not allow the header flange to fall and contact the radiator. Carefully move the flange to a position away from the radiator.
- Once all bolts are removed, carefully remove the header from the engine. Avoid contact with the radiator.



Figure 8 ----->

STEP 9: INSTALL THE HEADER MOUNT FLANGES:

Note that the spring mounting tabs are oriented on the bottom of the flange.

Install the four header mounting flanges and spigots using the OEM nuts as shown (Figure 9). We also reuse the OEM gaskets. Do not completely tighten the nuts. Leaving them finger tight will allow easier adjustment when the header pipes are fitted. The nuts will be fully tightened after the header pipes are installed.



Figure 9 ----->

STEP 10: Install the Headers and Collector (Figure 10):

Install the right side header, left side header, and secondary collector. With header assembly now installed onto the mounting flanges, tighten the mounting flange nuts enough to keep the flanges from moving. Remove the header assembly and torque the flange nuts. Do not over tighten. Max recommended torque is 10 ft-lb. Now attach the springs to the header mounting flanges as shown (Figure 9).

Prior to final installation of the headers, apply a very thin layer of Permatex™ Ultra Copper® to the inside of each head pipe, no further than 1/2" into the pipe. This will ensure a high temperature seal is created. **Be careful** to avoid contact with the radiator while installing the header pipes. Install head pipes onto flanges as far as they will go, then connect the springs to spring tabs on the headers using the spring puller supplied. 'Wiggling' the entire assembly with the springs installed will pull the pipes into their final location.

Do not attach the springs holding the secondary collector to the headers, yet. The following figure shows the properly installed assembly. The headers (22) are attached to the spigots by a spring (23). There is a tight fit between the bottom of the header assembly and the radiator (24,) but the two parts should have adequate clearance so that no contact is made. Adjust as required.

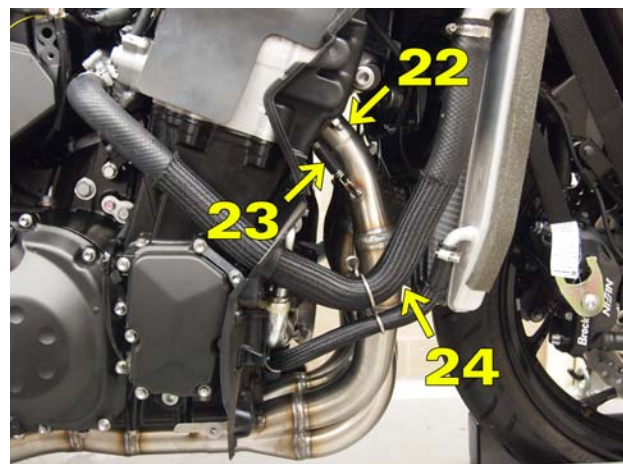


Figure 10 ----->

STEP 11: Install the Mid-Pipe and Muffler (Figure 11)

- Slip the large diameter end of the mid-pipe onto the collector. Adjust as necessary to ensure that the spring tabs align.
- Install the muffler onto the mid-pipe. Adjust as necessary to ensure that the mounting bracket lines up with the OEM mounting location. Insert the OEM muffler-mounting bolt through the bracket on the muffler and into the OEM mounting location (Location 28). Place the OEM washer then nut on the bolt and tighten enough to hold the system in place. Do not fully tighten until final adjustments have been made.
- Adjust the assembly by hand as required to ensure proper clearance between the belly pan and muffler, and then attach mount springs at locations 25, 26, and 27. Torque the muffler mount bolt at location 28 to 34 N-m or (25 ft-lb). Reattached the radiator to the lower radiator bracket with the OEM (6x22mm) bolt and torque to 9.8 Nm or (87 in-lb).
- Re-install the fairings in the reverse order that they were removed. (See Caution Below.)



Figure 11 ----->

Caution: Failing to follow the steps below may result in damage to your bike!

The right and left side fairing grills should be the last body panels installed, this will allow you to reach in behind and support the tank cover tab identified in (Figure 5 B - Page 3). Lubricate the rubber snap grommet. Using your finger support the backside of the tab as you gently push the pin into the rubber snap grommet. After the tank cover has been secured the side fairing grills can now be assembled in reverse order.

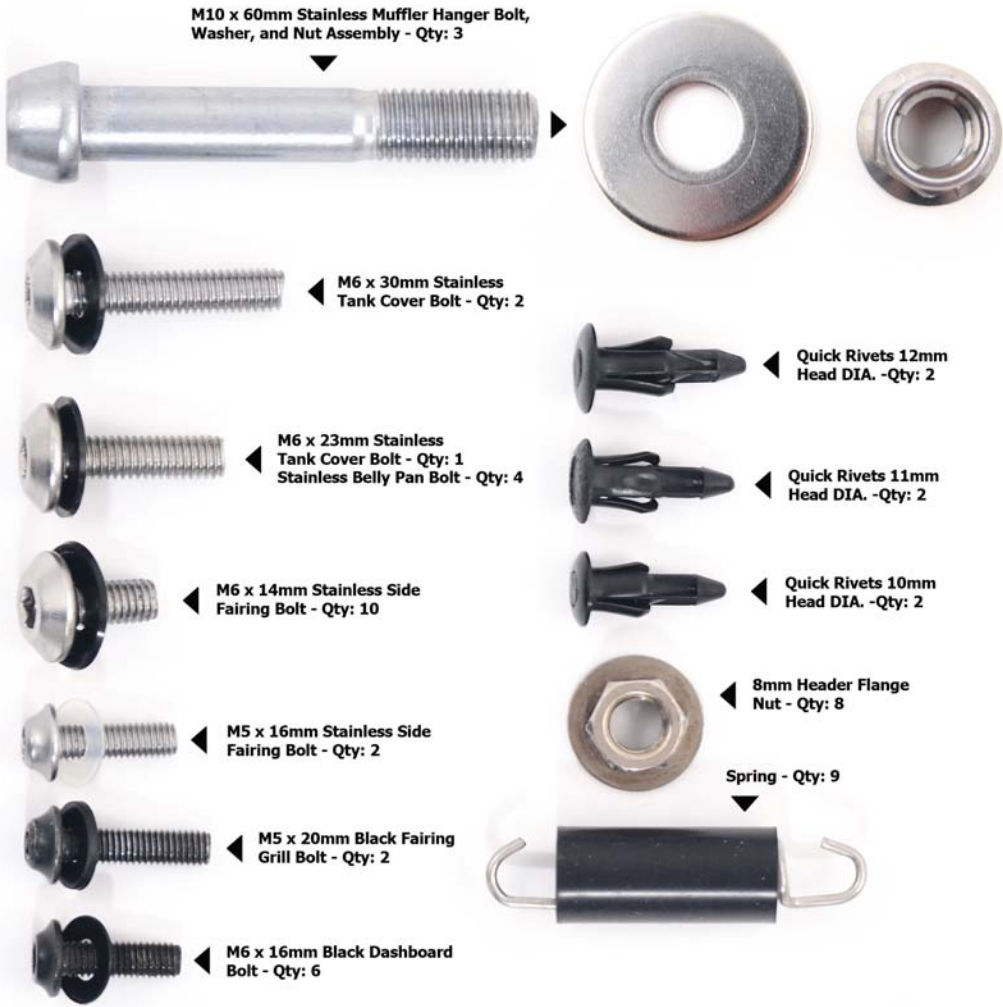
DO NOT START BIKE UNTIL FAIRINGS HAVE BEEN INSTALLED AND YOU HAVE ENSURED A MINIMUM ¼-INCH CLEARANCE BETWEEN THE EXHAUST COMPONENTS AND ALL BODYWORK.

Failure to ensure proper clearance may result in burned plastic. Brock's Performance exhaust systems are designed to provide appropriate clearances. If minimum clearances are not obtained, remove the springs on the exhaust system and adjust until proper clearance is achieved. It is also recommended that the entire exhaust system be wiped down with rubbing alcohol to remove oil and fingerprints before starting the bike. This will help prevent tarnishing of the finish after the bike has been started and the exhaust is heated up.

Fastener Identification & Torque Specifications

Any fastener that does not display a torque value does not have a factory torque recommendation. These fasteners thread into rubber nut wells or have plastic washers that will be damaged if over tightened. Always check fasteners for proper tightness as part of your pre-ride inspection.

Location	Fastener	Torque	Description	Tool
1 - Fig. 3	M5 x 16mm	Do Not Over Tighten	Black Dashboard Bolt	4mm Hex Wrench
2 - Fig. 3	M5 x 16mm	Do Not Over Tighten	Black Dashboard Bolt	4mm Hex Wrench
3 - Fig. 3	M5 x 16mm	Do Not Over Tighten	Black Dashboard Bolt	4mm Hex Wrench
4 - Fig. 4	M6 x 30mm	Do Not Over Tighten	Stainless Fairing Grill Bolt	5mm Hex Wrench
5 - Fig. 4	M6 x 14mm	Do Not Over Tighten	Stainless Fairing Grill Bolt	5mm Hex Wrench
6 - Fig. 4	M5 x 20mm	Do Not Over Tighten	Black Fairing Grill Bolt	4mm Hex Wrench
7 - Fig. 5A	M6 x 30mm	Do Not Over Tighten	Stainless Tank Cover Bolt	5mm Hex Wrench
8 - Fig. 5A	M6 x 30mm	Do Not Over Tighten	Stainless Tank Cover Bolt	5mm Hex Wrench
9 - Fig. 5A	M6 x 23mm	Do Not Over Tighten	Stainless Tank Cover Bolt	5mm Hex Wrench
10 - Fig. 6A	Quick Rivet	N/A	Black Rivet 12mm Head DIA.	Small DIA. Screwdriver
11 - Fig. 6B	Quick Rivet	N/A	Black Rivet 11mm Head DIA.	Small DIA. Screwdriver
12 - Fig. 6B	Quick Rivet	N/A	Black Rivet 10mm head DIA.	Small DIA. Screwdriver
13 - Fig. 6C	M6 x 14mm	Do Not Over Tighten	Stainless Side Fairing Bolt	5mm Hex Wrench
14 - Fig. 6C	M6 x 14mm	Do Not Over Tighten	Stainless Side Fairing Bolt	5mm Hex Wrench
15 - Fig. 6C	M6 x 14mm	Do Not Over Tighten	Stainless Side Fairing Bolt	5mm Hex Wrench
16 - Fig. 6C	M6 x 14mm	Do Not Over Tighten	Stainless Side Fairing Bolt	5mm Hex Wrench
17 - Fig. 6D	M5 x 16mm	Do Not Over Tighten	Stainless Side Fairing Bolt	4mm Hex Wrench
18 - Fig. 7	M6 x 23mm	Do Not Over Tighten	Stainless Belly Pan Bolt	5mm Hex Wrench
19 - Fig. 7	Clamp Bolt	Do Not Over Tighten	Muffler Clamp Bolt	12mm Socket
20 - Fig. 7	M10 x 60mm	34 Nm (25 ft-lb)	Stainless Muffler Hanger Bolt	6mm Hex Wrench/14mm Wrench
21 - Fig. 7	M10 x 60mm	34 Nm (25 ft-lb)	Stainless Muffler Hanger Bolt	6mm Hex Wrench/14mm Wrench
22 - Fig. 10	Headers	N/A	N/A	N/A
23 - Fig. 10	Spring	N/A	N/A	Spring Puller
24 - Fig. 10	Clearance	N/A	N/A	N/A
25 - Fig. 11	Spring	N/A	N/A	Spring Puller
26 - Fig. 11	Spring	N/A	N/A	Spring Puller
27 - Fig. 11	Spring	N/A	N/A	Spring Puller
28 - Fig. 11	M10 x 60mm	34 Nm (25 ft-lb)	Stainless Muffler Hanger Bolt	6mm Hex Wrench/14mm Wrench
N/A - Fig. 8	M6 x 22mm	9.8 Nm (87 in-lb)	Stainless Radiator Bolt	10mm Socket



Print to scale for best results.

CONGRATULATIONS! INSTALLATION IS COMPLETE.

All Brock's Performance products are designed for closed-course racetrack use ONLY!

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