



Single Pipe Stinger3 Upgrade Kit

PART# - RY1522-UK

APPLICATIONS: 2000-`02 GP1200R; 1999-`00 XL1200Ltd.; 2001-`03 XLT1200 equipped with Riva Stinger2.

NOTE:

Stinger3 Upgrade Kit is compatible with Riva Stinger2 Exhaust System only. Do not attempt to install if you have a Riva Stinger1 Exhaust System. This kit is compiled of the parts required for installation of Stinger3 billet flange only. No modifications are necessary for this installation. If you have any questions please contact our technical representative directly at (954) 247-0705 or via e- mail at tech_support@rivayamaha.com.

PARTS LISTING

<u>PART#</u>	<u>QTY</u>	<u>DESCRIPTION</u>
N/A	1	Stinger 3 Billet Flange
N/A	1	Stinger 3 Head Pipe
RY15-04/3.18	2	4"ID x 3-1/8"L Silicone Coupler
RY-AWAB-CLAMP-#64	4	#64 - 4-1/2" AWAB Hose Clamp
N/A	2	1/2" Barbed x 1/4" NPT 45° Brass Fitting
129-8-4	2	1/2" Barbed x 1/4" NPT 90° Brass Fitting
125-6-2	1	3/8" Barbed x 1/8" NPT 90° Brass Fitting
HBT1-664B	1	3/8" Barbed x 1/4" NPT x 3/8" Barbed "T" Fitting
N/A	1	1/2" Barbed "T" Fitting
RY068	1	3/8" Waterline, Synflex, Black
RY078	8	1/2" Waterline, Synflex, Black
COMCLP0015	6	#12 - 1/2" Hose Clamp
COMCLP0010	4	#06 - 3/8" Hose Clamp
RY804B	1	1/2" Water Bypass, Black
JW-WR01	1	Inline Water Restrictor

INSTALLATION INSTRUCTIONS

***WARNING!** DISCONNECT BATTERY AND TURN FUEL VALVE OFF BEFORE PERFORMING WORK!*

Removing Stinger2 Parts

1. Remove wrist lanyard; disconnect battery cables, spark plug wires and turn fuel valve to off position.
2. Loosen the two OE hose clamps that retain the large black exhaust boot/cooling coupler to billet flange and slide boot/coupler forward over OE exhaust head pipe. **(Refer to illustration #2)**
3. Loosen hose clamp on 3-1/2"ID X 1-5/8"L silicone coupler that retains the Stinger2 billet flange to OE head pipe.
4. Loosen hose clamps on 4"ID x 3-1/8"L silicone coupler that retain head pipe section of Stinger2 and slide coupler down onto tail pipe section.
5. Remove the 3/8"-16 flange nut and 3/8" washer securing head pipe section of Stinger2 to upper lord mount on cylinder head.
6. Disconnect 1/2" and 3/8" ID waterlines attached to Stinger2 billet flange.
7. Remove Stinger2 head pipe and billet flange section.

Prepping for installation of Stinger3

8. Install the included 1/2" barbed x 1/4" NPT 90 degree brass fitting, 3/8" barbed x 1/8" NPT 90 degree brass fitting and 3/8" barbed x 1/4" NPT x 3/8" barbed brass 'T' fitting into Stinger3 billet flange. **(Refer to illustration #1) Note: Use pipe thread sealant on threads. Do not over tighten.**
9. Install included Inline Water Restrictor on Stinger3 billet flange between the 3/8" barbed x 1/8"NPT 90 degree brass fitting and the 3/8" barbed x 1/4"NPT x 3/8" barbed brass 'T' fitting using two 2" long pieces of included 3/8"ID waterline. **(Refer to illustration #1) Secure using included 3/8" hose clamps. Do not over tighten clamps. WARNING: Do not remove washer between jam nut and valve. Overheat damage could occur if washer is removed and valve is closed completely. (See 'Recommendations & Tips' on page 3 for tuning using Inline Water Restrictor.)**
10. Install included 1/2" water bypass. **Note: We recommend installing bypass under grab handle at rear of craft as water exiting bypass is hot. Be sure to use silicone sealant when installing.** Secure one end of included 1/2"ID waterline to bypass using included 1/2" hose clamp. **Do not over tighten clamp.** Run waterline forward along left side of craft past bulkhead.
11. **For OEM Cylinder Head Applications:**
Splice the longer OE 1/2" waterline from exhaust head pipe to cylinder head. Install included 1/2" barbed 'T' Fitting and secure using supplied 1/2" hose clamps. Attach 1/2" waterline for previously installed 1/2" bypass to 'T' fitting and secure using included 1/2" hose clamp. **(Refer to illustration #5.) Do not over tighten clamps.**
For Riva Performance & Pro-Series Cylinder Head Applications:
Install one each of included 1/2" barbed X 1/4" NPT 45 degree brass fittings into front and center cylinder heads. Install included 1/2" barbed X 1/4" NPT 90 degree brass fitting into rear cylinder head. Replace OE 1/2" waterline from exhaust head pipe to cylinder head with included 1/2" waterline and secure using OE 1/2" hose clamps. Attach 1/2" waterline from previously installed 1/2" bypass to 1/2" barbed X 1/4" NPT 90 degree brass fitting on rear cylinder head and secure using included 1/2" hose clamp. **(Refer to illustration #6.) NOTE: Use pipe thread sealant on threads. Do not over tighten brass fittings or hose clamps.**

Installing Stinger3

**** DENOTES: Prior to installing we strongly recommend you thoroughly clean all couplers and mating surfaces with a non-residual cleaner such as PJ-1 Super Cleaner. (This is available through Riva Yamaha's parts department [part# 536003] and at most motorcycle dealerships.) Only use window cleaner to ease installation. DO NOT use any type of lubricant or solvent!**

12. Insert Stinger3 billet flange into 3-1/2"ID X 1-5/8"L silicone coupler on OE head pipe completely (The inner venturi sits inside OE exhaust head pipe.) and secure**. **(Refer to illustration #2) Do not over tighten clamps.**
13. Attach 1/2" waterline to 1/2" barbed x 1/4" NPT 90 degree brass fitting on Stinger³ billet flange and secure using one of the included 1/2" hose clamps. Attach 3/8" cooling line to 3/8" barbed x 1/4"NPT x 3/8" barbed brass 'T' fitting on Stinger3 billet flange using one of the included 3/8" hose clamps. **Do not over tighten clamps.**
14. Install included 4"ID x 3-1/8"L silicone coupler onto Stinger³ billet flange and secure using one of the included #64 hose clamps**. Loosely place second included #64 hose clamp over silicone coupler. **(Refer to illustration #2)**
15. Insert straight end of Stinger3 head pipe into 4"ID x 3-1/8"L silicone coupler on Stinger3 billet flange and onto upper Lord Mount on cylinder head **. Install 3/8"-16 flange nut and 3/8" lock washer onto Lord Mount. Loosely tighten flange nut and clamp at Stinger3 billet flange.
16. Slide silicone coupler on tail section up onto end of Stinger3 head pipe section splitting the distance between the two sections. Secure clamps at flat area of exhaust tube before bead roll.
17. Inspect all joints to ensure they are even, there is no binding and exhaust tubes aren't rubbing anywhere. Once you are certain everything lines up, tighten each hose clamp evenly. **Do not over tighten clamps.** Then tighten 3/8"-16 flange nut on upper lord mount. **Note: It may be necessary to loosen the OE exhaust bracket located on rear of engine to allow Stinger3 to line up evenly. If so, remove the two OE M10 X 50mm bolts completely, add Loc-Tite 271 and reinstall. Torque to 30Nm (3.9m/kgf • 28ft/lbs).**
18. Slide large black exhaust boot/cooling coupler Stinger3 billet flange and secure**. **(Refer to illustration #2) Do not over tighten clamps.**
19. Check bilge area for tools, loose lines and/or fittings. Reattach battery cables and turn fuel valve to on position.
20. Upon completing installation, run engine on flush kit and check for leaks. Go over all hose clamps to make sure they are seated properly. After your first test-ride we recommend you go over all hose clamps again to ensure they are tight and seated properly.

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INSTALLATION RECOMMENDATIONS & TIPS

- ✓ Carburetor mixture screws may need to be adjusted. Settings will vary due to altitude, climate and level of modification to craft. Tamper caps will need to be removed in order to make adjustments. We recommend the following at sea-level:
 - Stock: Stock settings
 - Stage I to Stage II: Stock low speed; 1-1/4 +/- high speed. Stock pop-off and needle & seat. Add .020" clearance between accelerator arm and cam. (These are starting points only. Always tune using an aftermarket tachometer and check spark plugs.)
 - Single Pipe Big Bore: Contact our technical department by phone; (954) 247-0705 or e-mail; tech_support@rivayamaha.com.
- ✓ Prior to installing any couplers we strongly recommend you thoroughly clean all couplers and mating surfaces with a non-residual cleaner such as PJ-1 Super Cleaner. This is available through Riva Yamaha's parts department (part# 536003) and at most motorcycle dealerships. Only use window cleaner to ease installation. **DO NOT** use any type of lubricant or solvent!
- ✓ If you aren't using an aftermarket ignition such as the Riva Digital CDI (part# RY11820) we recommend installing a Riva Cat Temp Sensor Chip (part# RY115-20). This will mimic the signal sent to the OE CDI by the catalytic converter's temperature probe preventing CDI flutters, warning devices and engine shut downs due removal of catalytic converter and sensor.
- ✓ To ensure hose clamps remain tight add Red Loc-Tite on the worm drive after tightening. This is available through Riva Yamaha's parts department (part# 538070) and at most motorcycle dealerships. For those hard to reach clamps, add Loc-Tite to clamp prior to installing.
- ✓ For added assurance we recommend using Squeeze-on Stainless Steel Clamps (aka Oetiker Clamps) when installing waterlines. These stepless clamps won't loosen or damage waterline like conventional hose clamps. This is available through Riva Yamaha's parts department in both 3/8" and 1/2" ID clamps as well as the tool required for installing. (Stepless clamps are not reusable.)
 - 3/8"ID Clamps – Part# C-48549042-QTY Available in pre-packs of 50 or 100.
 - 1/2"ID Clamps – Part# C-8904575-QTY Available in pre-packs of 50 or 100.
 - Oetiker Pliers – Part# C-48550347 Sold 1 each.
- ✓ Inline Water Restrictor can be adjusted to dry out exhaust system by restricting water flow at billet flange. Restrictor comes preset in fully open position. For increased mid-range and top-end speed, close restrictor 1/2-turn at a time. **WARNING: Do not remove washer between jam nut and valve. Overheat damage could occur if washer is removed and valve is closed completely.** For extended periods of use such as long distance riding or racing we advise against closing valve completely. Always tune using an aftermarket tachometer.

IMPORTANT: Technical Support

For answers to questions regarding installation or trouble shooting contact:

Riva Yamaha Tech Line @ (954) 247-0705 or online at tech_support@rivayamaha.com or you're local Riva Dealer.

Riva Yamaha Limited 1-Year Warranty

Riva Yamaha Exhaust Systems carry a one-year limited warranty to the original purchaser. They are warranted to be free of defects in materials and workmanship under normal use and service. Customer modified components will be void of warranty. This warranty is limited to defects in the primary aluminum components only. Anodized/painted finish, wear marks in or on aluminum parts, lord mounts, brass fittings and hardware are not covered under this warranty.

Riva Yamaha's liability is expressly limited to the repair or replacement of the primary aluminum components contained within or associated with this exhaust system. Riva Yamaha agrees to repair or at Riva Yamaha's option, replace any defective unit without charge, if product is returned to Riva Yamaha freight prepaid and accompanied by a copy of the original invoice within the warranty period. Any equipment returned which, in Riva Yamaha's opinion, has been subjected to misuse, abuse, overheating, accident or modification shall not be covered by this warranty.

Riva Yamaha shall have no liability for special, incidental or consequential damages or injury to persons or property from any cause arising from the sale, installation or use of this product.

No other warranty, express or implied, including, but not limited to the implied warranties of merchantability and fitness for a particular purpose, applies. Various states do not allow for the limitation of incidental or consequential damages and therefore the above exclusion or limitation may not apply to you.

Warranty does not include the expenses related to freight or transportation of parts or compensation for any inconvenience or loss of use while being repaired. A copy of the original invoice must accompany all warranty claims.

Warranted replacement parts will be returned freight collect.

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INSTALLATION ILLUSTRATIONS

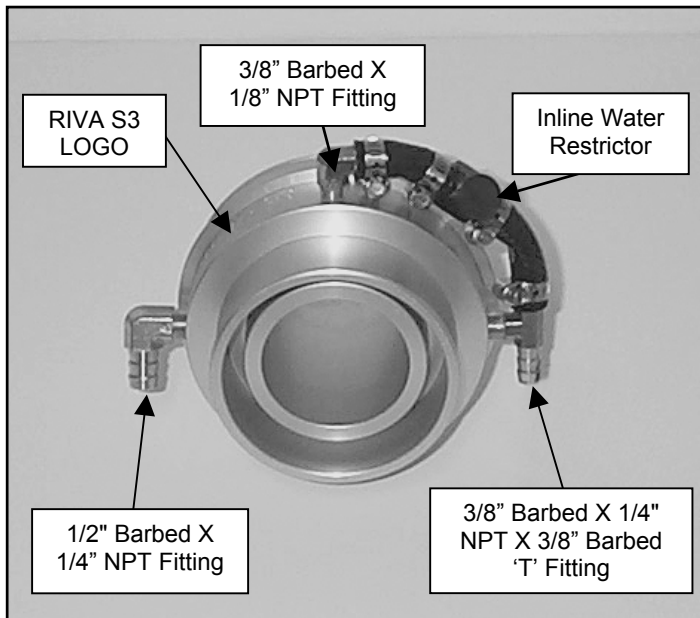


ILLUSTRATION #1

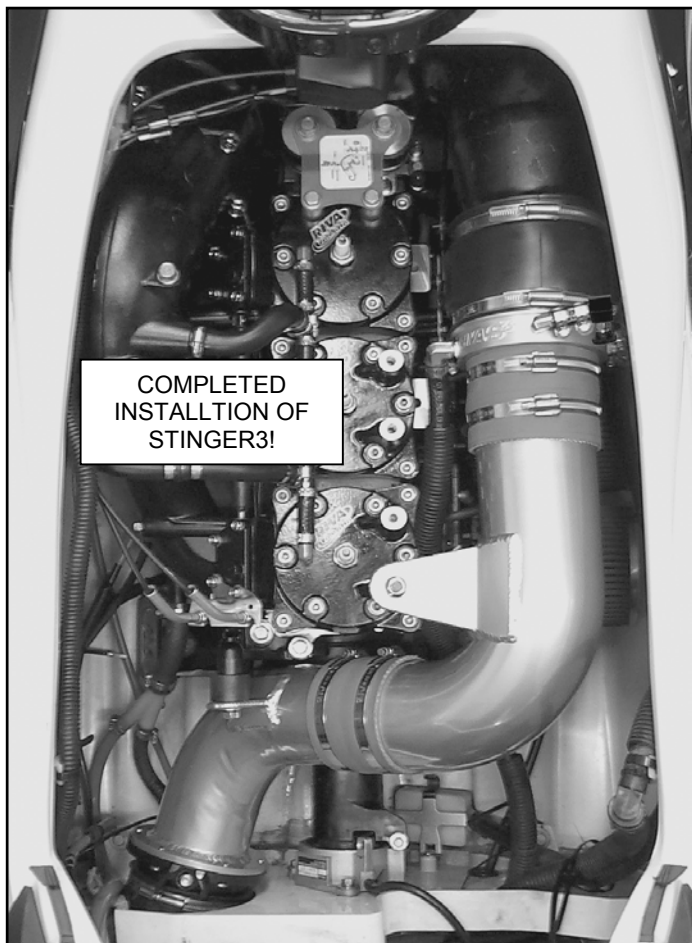


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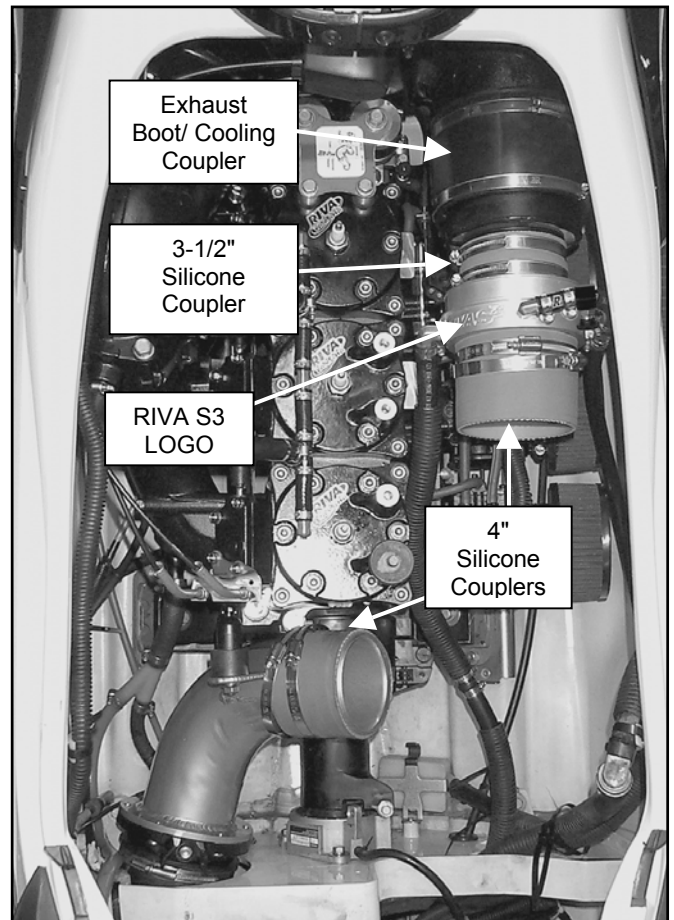


ILLUSTRATION #2

Single Pipe Stinger3 Upgrade Kit

PART# - RY1522-UK

INSTALLATION ILLUSTRATIONS

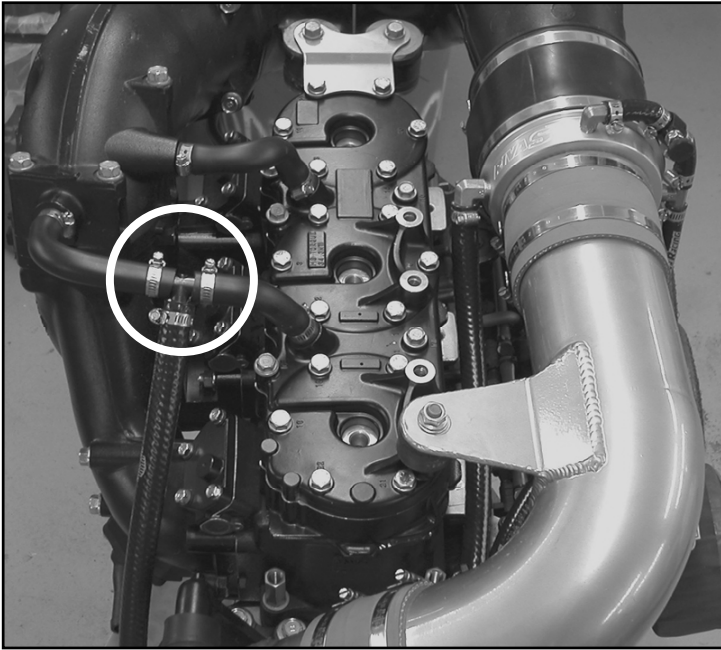


ILLUSTRATION #4

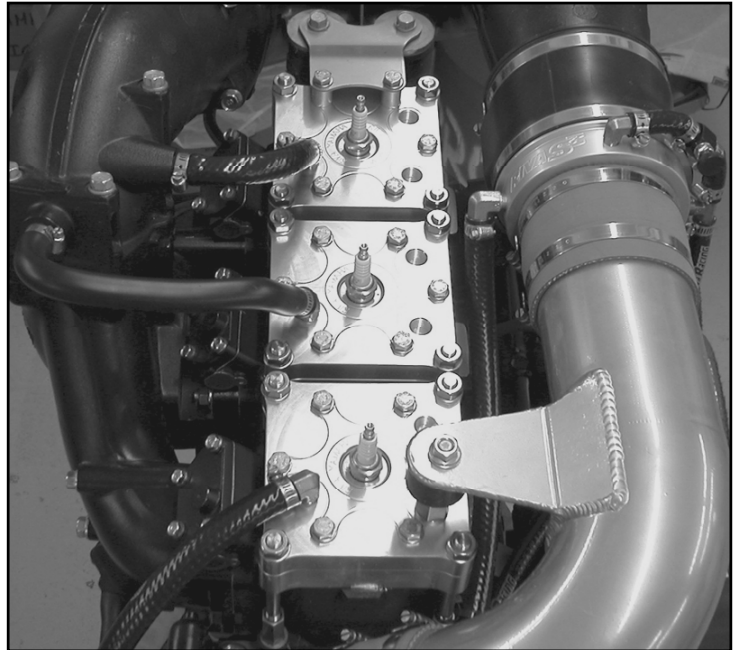


ILLUSTRATION #5