

2017 and Later M8 Crossback True Duals



Compatible with 2017-Later Harley Davidson Touring

Thank you for buying a Rinehart Racing® exhaust system. We are committed to providing premium products that with proper installation and care will last for many years to come. Please be sure to read the instructions fully and inspect all components of your new system before installation. If you need help removing your stock mufflers and/or head pipes, or how to install the Rinehart Racing exhaust system you should seek the advice and/or skill of a professional mechanic. Please keep all OEM parts as some may be used for the installation of the Rinehart Racing® exhaust system. If you are installing the system and are not the owner, please return these instructions to the owner as they contain important information that may be required at a later date. If you have questions pertaining to the installation, please contact our technical service department: 1.877.264.8282 or www.rinehart racing.com

Return and Refund Policy

No return of merchandise will be accepted without first securing a Return Merchandise Authorization (“RMA”) number provided by Rinehart Racing. Buyer must submit, in writing, evidence of purchase date, copy of invoice indicating goods purchased, reason for return, exchange or refund, and RMA number. At its sole discretion, Rinehart Racing may accept or deny the claim for return, exchange or damage. If accepted and if the goods have not be used and are in a resalable condition, Company shall provide refund within 30 days of purchase; subject to a fifteen percent (15%) restocking fee. If the product has been installed, no refund, return or exchange shall be allowed. No refund, return or exchange is allowed after 45 days from the date of invoice. Buyer is responsible for return freight, and must include all original packaging, materials, manuals, hardware and copy of invoice. All products returned must be securely packed and delivered to Company in an undamaged condition. Rinehart Racing may refuse or reject returned product for failure to follow the conditions set forth herein.

Emissions Notice

The State of California does not permit the use of aftermarket exhaust systems that remove original equipment catalysts unless a California Air Resources Board (CARB) Executive Order has been issued. Exhaust systems that remove original equipment catalysts are legal in California for racing use only. Replacing a catalyst equipped exhaust system with a non-catalyst exhaust system on a registered vehicle in the State of California is illegal and may subject the parties involved (including but not limited to the owner, driver, consumer, mechanic and dealership) to fines and penalties and such action is strictly prohibited by Rinehart Racing™.

Discoloration and Tuning

Discoloration of exhaust is generally a result of fuel calibration tuning. In addition, discoloration can be the result of electrical issues or engine malfunction. Discoloration is not a warrantable item.

Cleaning

Never use harsh chemicals or any type of abrasive material to clean the chrome or ceramic coating on this exhaust system. We recommend using a soft nonabrasive cloth with a mild detergent.

Limited Warranty

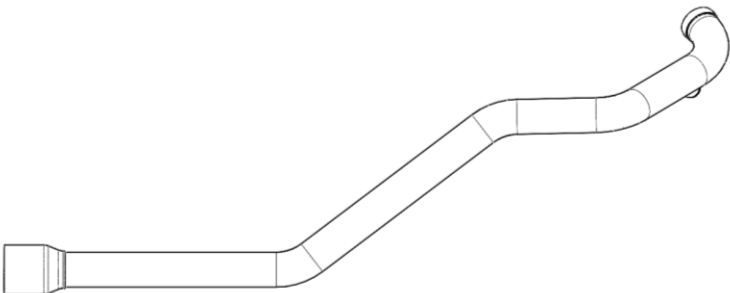
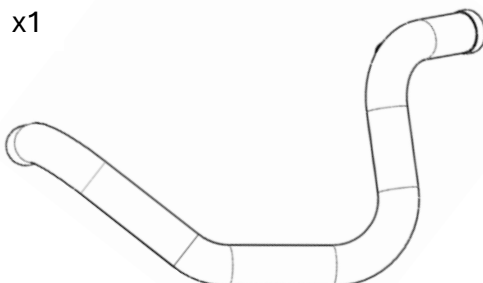
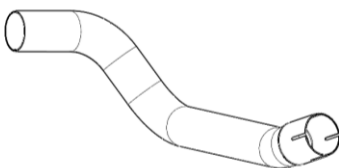
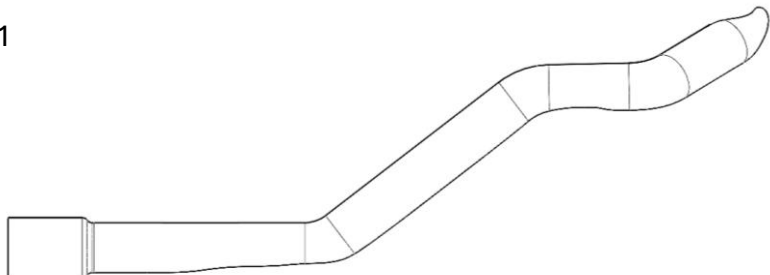
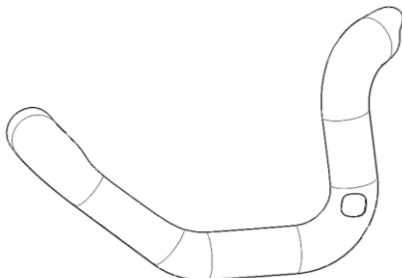
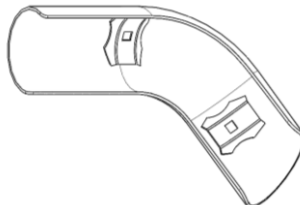
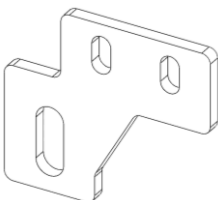
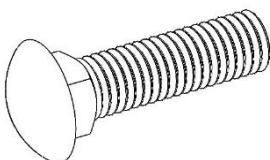
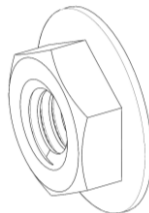
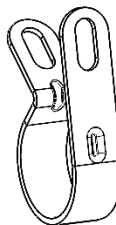
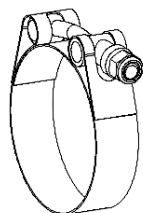
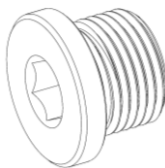
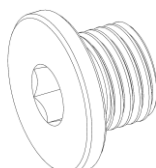
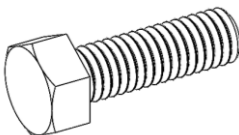
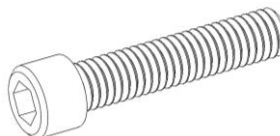
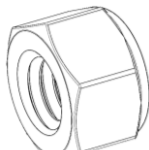
This Limited Warranty contains the sole express warranty made by Rinehart Racing® ("Company") in connection with exhaust products sold by Company ("Product"). BY PURCHASING OR ACCEPTING THE PRODUCT, THE BUYER ACKNOWLEDGES THAT THE LIMITATION OF LIABILITY IS PART OF THE TERMS OF SALE, CONSTITUTES A BINDING AGREEMENT, AND MAY BE ENFORCED AGAINST THE BUYER BY COMPANY. Any warranties, if separately provided in writing, are extended only to the Buyer whose name is shown on Company's invoice.

Rinehart Racing® exhaust products are warranted against defects in material or workmanship for a period of 18 months from the date of the original invoice. This does not cover finishes such as plating or painted surfaces with discoloration or rust. Discoloration is not a warrantable item and is a result of improper fuel calibration. This warranty shall be limited to the repair or replacement of the defective part, which may be proven defective under normal use. Rinehart Racing will not warranty any product that has been abused, misused, improperly installed, or modified. Any part that is repaired or replaced under this warranty will, itself, be warrantied only for the remainder of the warranty period of the original product being repaired or replaced. This warranty is non-transferable and is limited to the original retail purchaser.

BUYER'S SOLE AND EXCLUSIVE REMEDY AND RINEHART RACING'S SOLE LIABILITY FOR LOSS OR DAMAGE ARISING FROM PURCHASE OR USE OF THE PRODUCT SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE DEFECTIVE PART AT COMPANY'S SOLE DISCRETION. IN NO EVENT SHALL COMPANY BE LIABLE FOR ANY LOSS OF USE, REVENUES, OR ANTICIPATORY PROFIT, OR FOR ANY DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR CONNECTED WITH THE SALE, USE, OPERATION, OR INABILITY TO USE OF PRODUCTS PURCHASED FROM COMPANY TO THE EXTENT PERMITTED BY LAW, COMPANY MAKES NO OTHER REPRESENTATIONS OR WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ALL SUCH WARRANTIES ARE EXPRESSLY DISCLAIMED. IN NO EVENT SHALL COMPANY'S LIABILITY EXCEED THE AMOUNT OF THE PARTICULAR DEFECTIVE PRODUCT PAID BY THE PURCHASER. THIS LIMITATION OF LIABILITY SHALL BE APPLICABLE TO ANY CLAIM PRESENTED, WHETHER THE LEGAL THEORY FORMING THE BASIS OF SUCH CLAIM INVOLVES CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, STATUTE, REGULATION, CONSUMER PROTECTION LAWS OR OTHERWISE.

Proper Use of Product as Designed, Intended and Manufactured by Manufacturer

The Limited Warranty as described herein applies only when the Rinehart Racing™ system is installed correctly and used for its intended purpose. Warranty does not apply when damage is the result of normal wear and tear, improper use, neglect or incorrect engine calibration or tuning. Rinehart Racing™ mufflers are designed to be installed and used as originally assembled by the manufacturer. Modifying or removing the Rinehart Racing™ baffle may result in decreased performance and discoloration and furthermore, such action shall void the warranty. DO NOT remove the original baffle unless it is being replaced with an alternate Rinehart Racing™ baffle that is designed and intended for use on the specific model/make motorcycle being altered. UNDER NO CIRCUMSTANCES should a Rinehart Racing™ muffler be used without a proper baffle contained within the muffler. Doing so shall void the Limited Warranty as described herein. See Warranty Notice above for more information. Rinehart Racing™ Mufflers are designed and intended for use ONLY on Rinehart Racing™ head pipes. Use and installation of Rinehart Racing™ Mufflers on any alternate aftermarket head pipe is strictly prohibited and is likely to result in discoloration which is not a warrantable item. Improper use of Rinehart Racing™ product, including but not limited to head pipes and mufflers, is strictly prohibited and will void the Limited Warranty as described herein. See Warranty Notice above for more information.

x1  True Duals Front Header- RR100-2501		x1  True Duals Rear Header – RR100-2502		x1  Cross Under Tube - MR100-0431		
x1  True Duals Front Header Heat Shield MR100-0243		x1  True Duals Front Header- RR100-0244		x1  Cross Under Tube - MR100-0446		
x1  Slimline Bracket	x1  Transmission Bracket MR2516	x1  3/8"-16 x1-1/4" Carriage Bolt 35-00038	x8  Hose Clamp 16-00285	x1  3/8"-16 Serrated Flange Nut 35-00039	 P-Clamp 1.75 Clamp 11GA	 Barrel Clamp 16-0012S
x2  18mm O2 Bung Plug 35-00083BA	x2  12mm O2 Bung Plug 35-00085BA	x2  Exhaust Gasket 20-00003	x2  5/16"-18 x 1 Inch Bolt 35-00020	x2  5/16"-18 x 1-1/2" Inch Bolt 35-00023	x4  Flat Washer 35-00021	x2  5/16"-18 Nyloc Nut 35-00022

Removal of Stock Header System

1. Remove left and right saddlebags.
2. Remove right side front floorboard. (Figure 1)
3. Remove both stock mufflers. Make sure to set aside the muffler clamps for future use.
4. Loosen the exhaust clamp and remove the support clamp for the cross under tube. The support clamp is located under the transmission pan. (Figure 2)
5. Remove the cross under exhaust pipe and stock mounting bracket. Keep the OEM bolts for future use. (Figure 3)
6. Insert the provided carriage bolt into the slimline bracket such that the threads will face the back tire when installed (Figure 4). Install the bracket in the same location as the original using OEM bolts.
7. Remove the exhaust flange nuts and remove the OEM exhaust. Keep flange nuts for future use.
8. Carefully remove the O2 sensors from the OEM exhaust. **Remember to note which sensor came from which header.** The sensor with grey wire corresponds to the front header, while the sensor with black wire corresponds to the rear header.
9. Carefully remove OEM exhaust flanges and retaining rings. Do not damage or distort the retaining rings. If possible, use snap ring pliers. Replace damaged retaining rings.
10. Slide the exhaust flanges and retaining rings onto the new RINEHART exhaust headers. The machined recess should face the retaining ring.
11. Remove the OEM exhaust gaskets from the cylinder heads. It may be necessary to pry the exhaust gaskets from the head using a scribe or a small screwdriver. Do not damage the cylinder head!

Installation of 2017 to Later M8 True Duals

1. Install supplied exhaust gaskets; make sure new gaskets are seated into the cylinder head. Failure to use provided gaskets **will** alter the fitment of the system.
2. If applicable, install both OEM O2 sensors into the front and rear Rinehart pipes. Apply anti-seize lubricant (anti-seize is not provided) on O2 sensor threads before installing. Do not get any anti-seize on O2 sensor tips. Torque to 25 ft. lbs. Reconnect O2 sensor cables to appropriate terminals.
3. Install side transmission bracket with the provided 5/16"-18 x 1-1/2" bolts and two flat washers. (Figure 5, Figure 6)
4. Install 3 heat shield hose clamps into each of the header heat shields as depicted in Figures 7 and 8. Make sure to note the orientation and location of each clamp.
5. Slide the head of the provided 5/16-18 x 1" bolt head into the bracket on the rear header. Install the Rinehart True Duals rear header to the rear cylinder

using the OEM flange nuts. Finger tighten.

6. Connect the header bracket to the lower position on the side transmission bracket using a provided nyloc nut and flat washer. Finger Tighten.
7. Ensure that the header is parallel to the ground. Torque the rear cylinder flange nuts **evenly** to 10-12 lbs-ft. Failure to evenly tighten the flange nuts can result in incorrect fitment, such as the rear header pinching the clutch line. Torque the side transmission bracket nuts to 15-20 lbs-ft.
8. Install the Rinehart True Duals rear heat shield onto the rear header by aligning the heat shield with the bends of the header, then tightening the hose clamps around the header.
9. Slide the head of the provided 5/16"-18 x 1" bolt into the bracket on the front header. Install the Rinehart True Duals front header to the front cylinder using the OEM flange nuts. Finger Tighten.
10. Connect the header bracket to the upper position on the side transmission bracket using the remaining nyloc nut and a flat washer as before. Finger Tighten.
11. Ensure that the front header is parallel to the rear header. Torque the front cylinder flange nuts **evenly** to 10-12 lbs-ft. Torque the side transmission bracket nuts to 15-20 lbs-ft.
12. Install the Rinehart True Duals front heat shield onto the front header by aligning the heat shield with the bends of the header then tightening the heat shield hose clamps around the header.
13. On the cross under tube (not yet attached), slide the P-clamp onto the non-expanded end, making sure to orient the clamp according to Figure 9, ensuring that the flat face is nearest the front of the bike.
14. Slide the barrel clamp on the expanded end of the crossunder tube, making sure to orient it such that the bolt is located nearest the transmission and the head is pointed down. (Figure 10)
15. Slide the crossunder tube fully onto the rear header and snug the barrel clamp. (Figure 4)
16. On the crossunder tube, install the p-clamp onto the carriage bolt located underneath the motorcycle using the provided flange nut.
17. Install mufflers on the header and rear mounting brackets. Verify the muffler clamps are flush with the inlet to ensure a proper seal on the header.
18. IN THIS ORDER!!! Tighten the carriage bolt on the P clamp located at the cross under to 15-20 lbs-ft. Tighten the barrel clamp on the cross under tube, ensuring it is flush with the end of the crossunder tube. Tighten muffler clamps and rear mounting hardware on mufflers. Torque 8-10 lbs-ft.
19. After installing the mufflers, the crossunder heat shield is ready to be assembled and installed.
20. To assemble the heat shield, orient it such that you can look on the inside of the curve with the flat end to the left. Then, insert 2 hose clamps from the bottom up as in figure 11.

21. Install the crossunder heat shield. (Figure 12)
22. Reinstall the floorboard using OEM hardware.
23. After the installation of the exhaust system, make sure to use an appropriate cleaner and microfiber cloth and wipe the surface clean before starting. Any marks left on the exhaust system will be permanently etched into the surface of the system if left on during the first heat cycle.

Figures

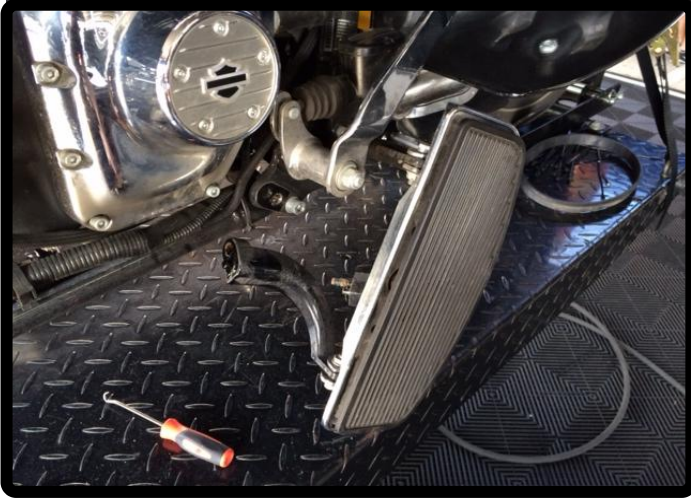


Figure 1

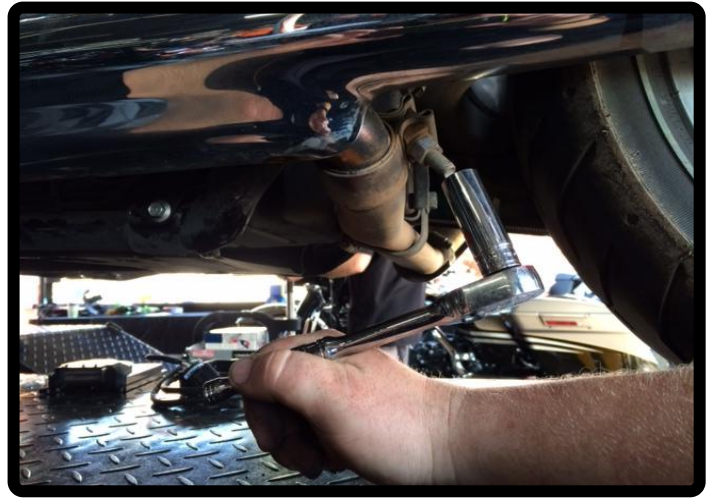


Figure 2

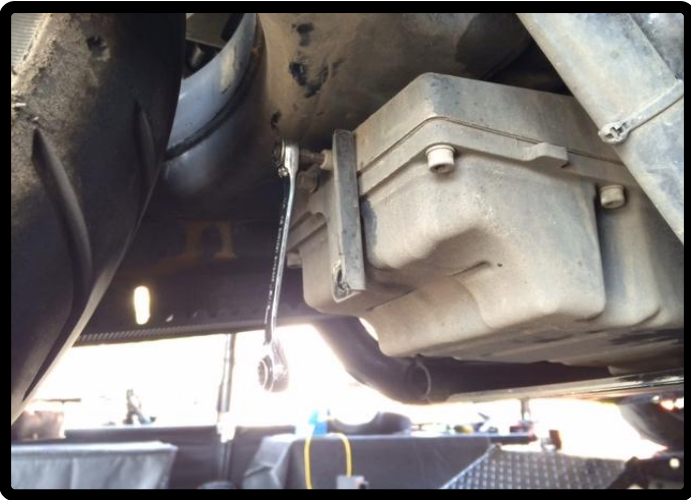


Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9



Figure 10

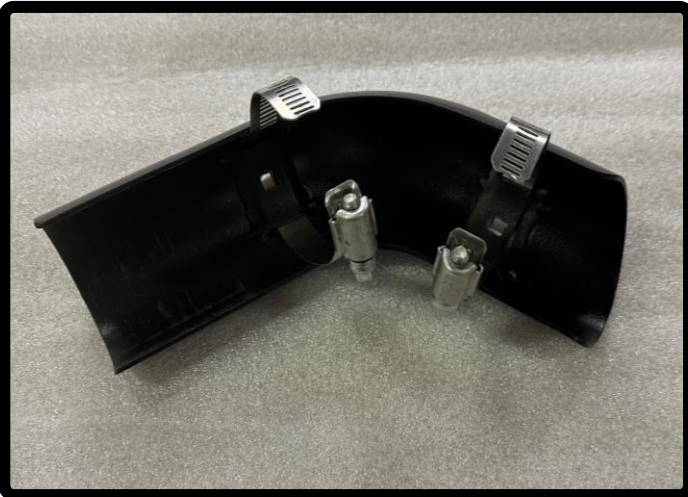


Figure 11



Figure 12