

Items Supplied >

1 - FRONT HEADPIPE AND HEATSHIELD
1 - REAR HEADPIPE AND HEATSHIELD
1 - COLLECTOR HEATSHIELD
1 - COLLECTOR HEATSHIELD FRONT PLATE
1 - MUFFLER ASSEMBLY WITH COLLECTOR
1 - EXHAUST BRACKET
2 - CLAMP, 27-61 MSC
6 - CLAMP, HOSE HS-24
1 - CLAMP, HOSE HS-32
1 - FLOORBOARD MOUNT SPACER PLATE
1 - THICK 3/8" WASHER
3 - 1/4-20 X 5/8" HEX FLANGED BOLTS

Application(s) >

HARLEY:	
FLHR	2009-2016
FLHRC	2009-2013
FLHTC	2009-2013
FLHTCU	2009-2016
FLHTK	2010-2016
FLHX/S	2009-2016
FLTRU/X	2010-2013

Instruction Manual >

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PRIOR TO INSTALLATION, MAKE SURE YOUR STOCK HEADPIPE GASKETS ARE IN GOOD CONDITION. IF YOU HAVE ANY DOUBTS AS TO THEIR CONDITION, REPLACE THEM.

*****NOTE:** This system is equipped with extra O₂ sensor bungs (M18 X 1.5 threads) towards the front of the headpipes, nearest the cylinders, for aftermarket tuning purposes. **DO NOT REMOVE** the bung plugs unless installing extra O₂ sensors for tuning purposes.

Read all instructions carefully and completely before installing your new exhaust system!

1. Remove the saddle bags, right side cover, and right front floorboard from the frame.
2. Unplug the O₂ sensors on the front and rear headpipes from the motorcycle wire harness.
3. Remove the stock exhaust system being careful not to damage the headpipe gaskets. If the headpipe gaskets are in good condition they do not need to be removed from the cylinders. Remove and save the flanges, nuts, retaining rings, and O₂ sensors from the stock exhaust. Label the O₂ sensors front and rear to ensure they will be installed on the proper headpipe. Also remove and discard the stock exhaust support bracket, crossover bracket on the transmission, crossover bracket bolts, muffler mounting sliders, muffler clamps, and muffler mount bolts.
4. Remove the (4) four lower rear bolts from the transmission case. See **FIGURE 1**.

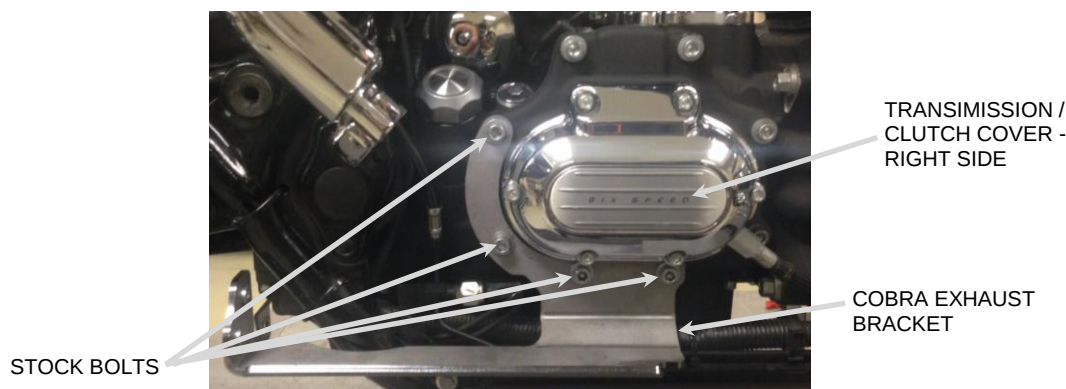
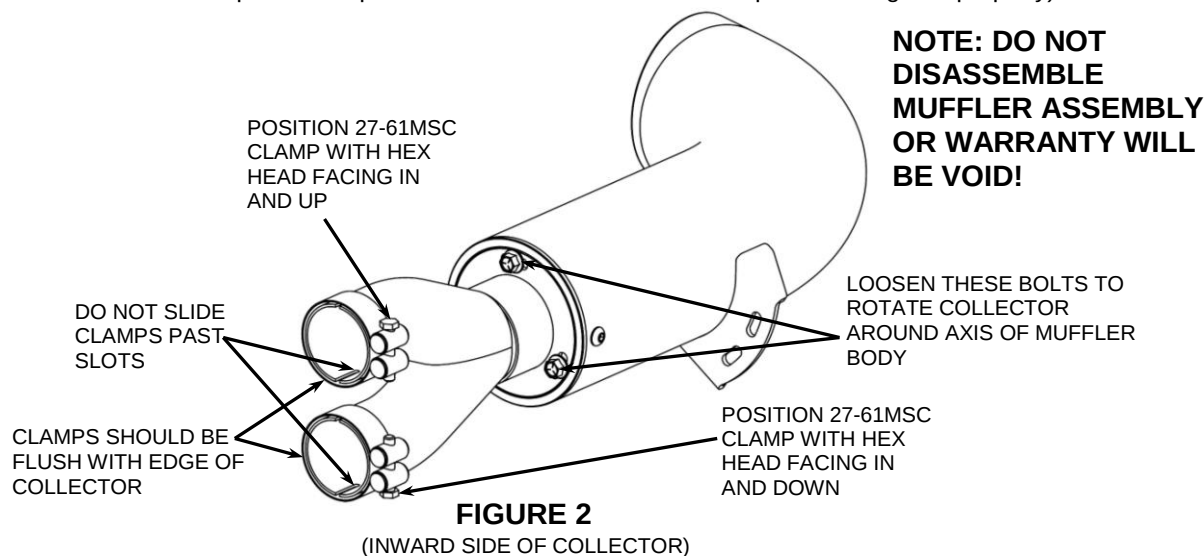


FIGURE 1

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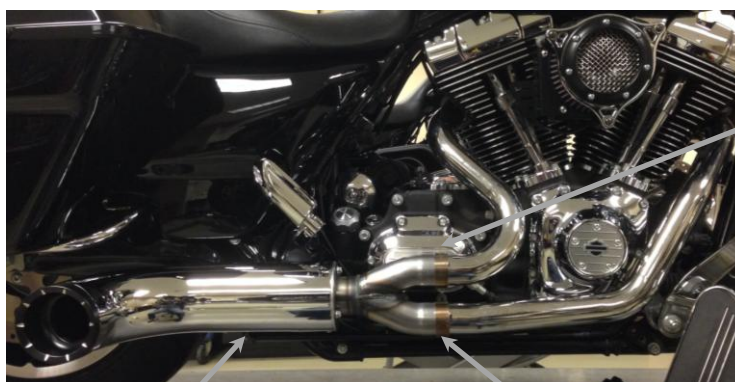
5. Install the supplied exhaust mount bracket to the transmission case using the stock bolts as shown in **FIGURE 1**. Make sure exhaust bracket is in a neutral position, not sagging or high. Tighten the bolts to factory specifications.
6. Install the stock flanges, retaining rings and O₂ sensors onto the supplied front and rear headpipes. Be sure to install the front O₂ sensor on the front headpipe and the rear O₂ sensor on the rear headpipe.
7. Install the front headpipe (with stock gasket in place) onto the front cylinder using the stock flange nuts. Snug the nuts but **DO NOT TIGHTEN** at this time. See **FIGURE 3**.
8. Install the rear headpipe (with stock gasket in place) onto the rear cylinder using the stock flange nuts. Snug the nuts but **DO NOT TIGHTEN** at this time. See **FIGURE 3**.
9. Position the supplied #27-61 MSC clamps onto the collector inlets on the muffler assembly. The hex head of the top clamp should be inward and up and the hex head of the bottom clamp should be inward and down. See **FIGURE 2**. (NOTE: The clamps should be flush with the end of the inlets when tightened. See **FIGURE 2**. If the clamps are slid past the slots on the inlets the clamps will not tighten properly).



10. Slide the muffler assembly with collector onto the front and rear headpipes. Make sure the headpipes are pushed in as far as possible into the collector assembly inlets and that the muffler bracket is forward enough that it is against the mounting surface of the exhaust mount bracket installed in Step 6. See **FIGURE 3 & 4**. Also make sure the headpipes and collector are pushed outward from the clutch cover (approximately 1/4 - 3/8"), enough to clear the clamps on the collector assembly.
11. Align the slotted holes in the muffler bracket with the threaded holes in the exhaust mount bracket and insert two 1/4-20 x 5/8" long hex flanged bolts. Rotate the muffler so the exhaust tip is facing outward/upward and snug the bolts but **DO NOT TIGHTEN** at this time. See **FIGURE 4**.
12. Make sure the front of the muffler assembly, collector, and headpipes are straight and parallel to one another. Look at the headpipes from the side of the bike and be sure the headpipes are parallel in the horizontal direction to one another where they enter the collector. Look at the headpipes from the top of the bike and be sure that the rear headpipe is straight in line with the front headpipe. If the headpipes are not aligned properly then the front and rear heatshields may not align properly with the collector heatshield. (NOTE: The collector may need to be rotated around the axis of the muffler to get the collector and headpipes to be straight in line. Loosen the three hex flanged bolts on the front of the muffler so the collector can be rotated separately from the muffler body. See **FIGURE 2**.)

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NOTE: Arrows point to the position of the hex head of the clamps.

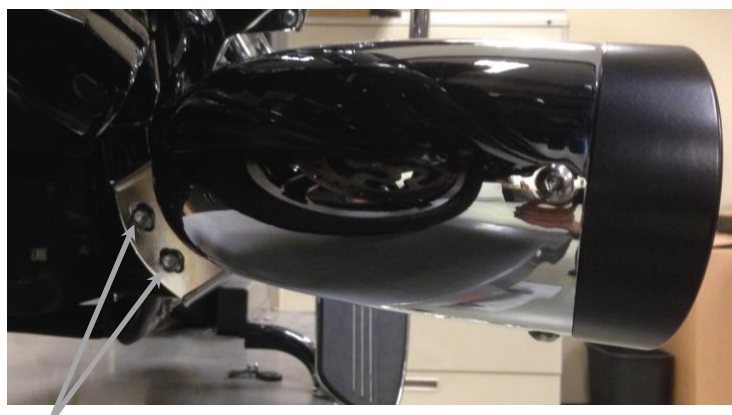


27-61 MSC
CLAMP

MUFFLER BRACKET TO
EXHAUST MOUNT
BRACKET MOUNTING
SURFACE

FIGURE 3

27-61 MSC
CLAMP



1/4-20 X 5/8" HEX
FLANGED BOLTS

FIGURE 4

13. When the system is aligned, tighten the three hex bolts on the front of the muffler and the two hex bolts on the muffler bracket. Make sure nothing shifts out of alignment when tightening.
14. Next, tighten the headpipe flanges to the cylinders (slowly tightening opposing nuts) and then tighten the collector clamps (27-61 MSC). (NOTE: The clamps should be flush with the end of the muffler or collector when tightened. See **FIGURE 3 & 4**. If the clamps are slid past the slots on the collector inlets the clamps will not tighten properly). Make sure the headpipes and muffler are still aligned properly after tightening.
15. Once the headpipes and collector clamps have been tightened, the muffler can be rotated so the exhaust tip points upward more if desired. Loosen the three hex flange bolts on the front of the muffler and the two bolts on the muffler bracket and rotate the muffler so the tip is tilted up to the desired angle, be sure tip and muffler body has adequate clearance to saddlebag and side cover for heat purposes. Once the muffler is in the desired position then tighten all the bolts on the bracket and on the front of the muffler.

Continued on Page 4

16. Plug the O₂ sensors back into the motorcycle wire harness and route the wires away from the exhaust in the same manner as stock.
17. Remove the heatshields and hose clamps from packaging. Unscrew the hose clamps and feed the tail end of the clamps through the clips on the inside of the heatshield so the screws are accessible with a screwdriver once the heatshield is installed. There are 4 clips on the front heatshield but only three of them will get clamps. Do not put a clamp on the lower clip near the rider footboard. See **FIGURE 6**. The large HS-32 hose clamp goes in the clip on the collector heatshield. See **FIGURE 6** for proper positioning of the clamps on the heatshields. (**NOTE: The arrows point to the positioning of the hex head of the clamps.** The hex head of the clamps should be accessible for tightening but not visible when the heatshields are mounted to the pipes.)
18. Install the rear heatshield over the rear headpipe. (Hint: Spread the hose clamps apart slightly to make it easier to slide them over the headpipes.) Snug the clamps but **DO NOT TIGHTEN** at this time. See **FIGURE 6**.
19. Install the right front heatshield over the right front headpipe. (Hint: Spread the hose clamps apart slightly to make it easier to slide them over the headpipes. When the heatshield is aligned properly snug the clamps but **DO NOT TIGHTEN** at this time. See **FIGURE 6**.
20. The collector heatshield will go over the outside of the rear portion of the headpipe heatshields and the front portion of the muffler assembly. Lightly apply masking tape to the front portion of the muffler and the rear portions of the headpipe heatshields to protect these areas from getting scratched while installing the collector heatshield. See **FIGURE 5**. Once the collector heatshield has been installed this masking tape will be removed.
21. Install the collector heatshield by first inserting the top-front portion of the collector heatshield over the rear headpipe heatshield. See **FIGURE 5**. Once the top-front portion of the collector heatshield has started to go over the rear heatshield the collector heatshield can be rotated down so the front center bracket on the inside of the collector heatshield goes between the collector inlets. Then push the back of the collector heatshield down so that the clip rests on the outlet of the collector area in front of the muffler body.
22. Remove the masking tape from the muffler body and the heatshields.
23. Adjust the heatshield fore and aft on the collector so there is a small and even gap between the rear of the collector heatshield and the front of the muffler body. Also be sure to rotate the front of the collector heatshield on the collector so that it sits on both the front and rear headpipe heatshields evenly. See **FIGURE 6**. **NOTE:** The headpipe heatshields may need to be adjusted fore and aft and or rotated on the headpipes to allow the collector heatshield to align properly. When the heatshield is aligned properly snug the clamps but **DO NOT TIGHTEN** at this time.

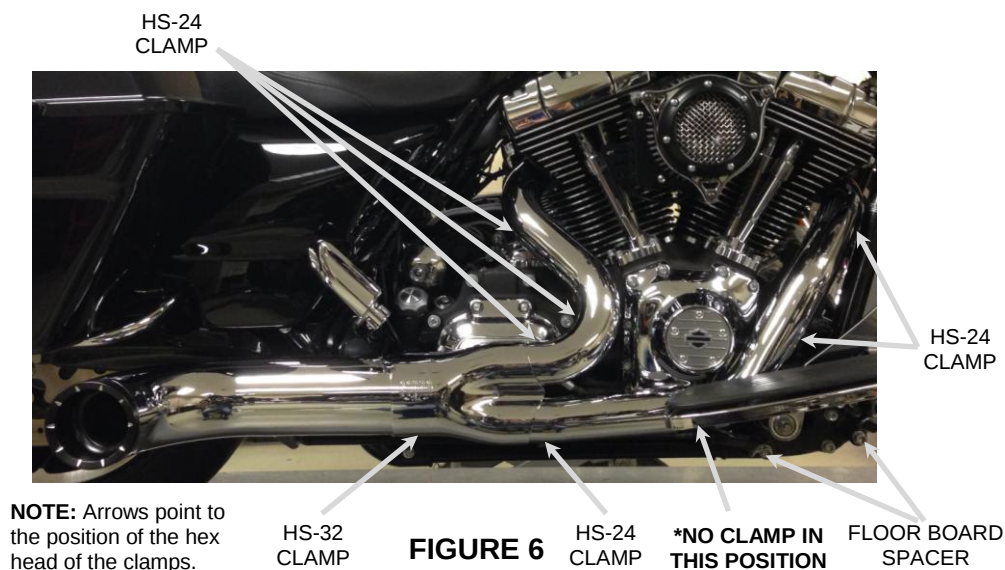
LIGHTLY APPLY
MASKING TAPE TO
HEATSHIELDS



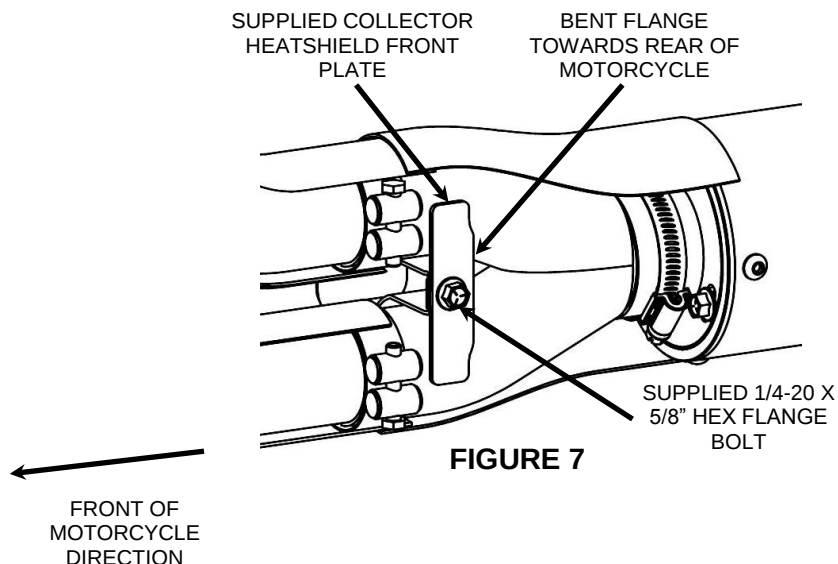
INSERT THE TOP
PORTION OF THE
COLLECTOR
HEATSHIELD OVER
THE REAR
HEATSHIELD FIRST

LIGHTLY APPLY
MASKING TAPE TO
HEATSHIELDS

FIGURE 5
Continued on Page 5



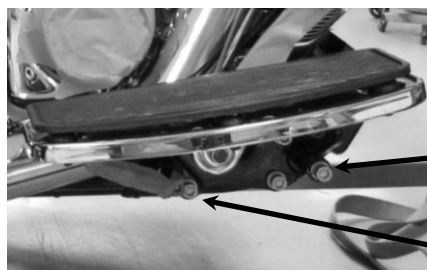
24. Position the collector heatshield front plate on the inside of the collector assembly so that the bent flange is facing towards the rear of the motorcycle and so the hole aligns with the threaded hole in the center bracket of the collector heatshield. See **FIGURE 7**.
25. Insert the supplied 1/4-20 x 5/8" hex flanged bolt through the front plate and into the threaded hole on the center bracket of the collector heatshield and snug the bolt but **DO NOT TIGHTEN** at this time. See **FIGURE 7**.



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26. Make sure all the heatshields are aligned properly and then tighten the clamps on the front and rear heatshields first. Then tighten the collector heatshield clamp followed by the hex bolt on the collector heatshield front plate. See **FIGURE 7**.
27. Insert the supplied floorboard spacer plate between the rear floorboard mount and the frame, then align the dowel pin and reinstall the allen bolt. Tighten to factory specifications. See **FIGURE 8**.

**FIGURE 8**

INSTALL THICK 3/8"
FLAT WASHER ON
FRONT MOUNT

INSTALL SPACER
PLATE ON REAR
MOUNT

28. Remove the allen bolt from the right front floorboard mount. Place the supplied thick washer between the front floorboard mount and the frame. Reinstall and tighten the allen bolt to factory specifications. See **FIGURE 8**.
29. Reinstall any other previously removed items that are needed in combination with new exhaust. Tighten to factory specifications.
30. Make sure all the hardware (brackets, headpipes, heatshields, mufflers and floorboards) have been tightened appropriately.
31. **IMPORTANT:** Before starting your engine remove all fingerprints from chrome with a quality wax or chrome polish. Failure to do so can cause chrome discoloration. Due to fluctuations in fuel delivery settings, timing, etc., Cobra Engineering does not warrant against chrome discoloration. Clean the black exhaust tip with a mild dishwashing soap and a soft cloth. Avoid abrasive cleaning methods such as granular or dry cleansers, simple green, scotch-brite or steel wool pads. Abrasives may breach the coating and shorten life.

IMPORTANT: It is recommended that a Cobra Fi2000® Closed Loop Digital Fuel Processor be installed with the Cobra exhaust system.

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