

### Items Supplied >

- FRONT HEADPIPE AND HEATSHIELD
- 1 REAR HEADPIPE AND HEATSHIELD 1 LEFT REAR CROSSOVER PIPE AND HEATSHIELD
- 1 BRACKET, FRONT HEADPIPE SUPPORT 1 BRACKET, CROSSOVER PIPE SUPPORT
- FLOORBOARD MOUNT SPACER PLATE
- 1 PINCH CLAMP, FRONT HEADPIPE SUPPORT TOP 1 PINCH CLAMP, FRONT HEADPIPE SUPPORT BOTTOM
- 8 CLAMP, HOSE HS-24 1 CLAMP, HOSE HS-36
- 2 5/16" X 5/8" HEX FLANGED BOLTS
- 1 THICK 3/8" WASHER
- 2 1/4 ALLEN BOLTS
- 1 THIN 3/8" WASHER 1 3/8" X 1" CARRIAGE BOLT
- 1 CLAMP, 27-61 MSC
- 2 1/4 FLAT WASHERS
- 1 3/8" NYLOCK NUT

# Application(s) >

HARLEY:

**DRESSER** 

17-20

### 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.
- Unplug the O<sub>2</sub> sensors on the front and rear headpipes from the motorcycle wire harness.
- 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, muffler clamps, muffler mount bolts, crossover bracket bolts, and O<sub>2</sub> sensors from the stock exhaust. Label the O<sub>2</sub> sensors front and rear to ensure they will be installed on the proper headpipe.
- Remove the stock exhaust mount bracket.
- Install the supplied headpipe support bracket using the stock nut. See FIGURE 1. Lightly snug the nut but DO NOT TIGHTEN so the bracket can be adjusted. The bracket should be positioned at a slight angle. See

FIGURE 1.



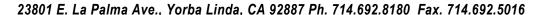
COBRA HEADPIPE SUPPORT BRACKET

STOCK NUT

## FIGURE 1

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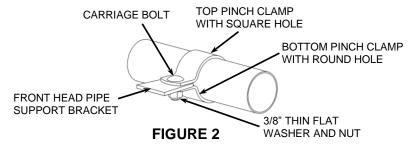


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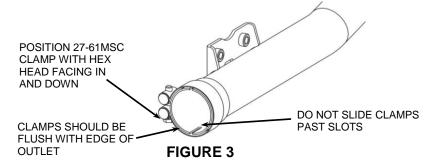
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- 6. Install the stock flanges, retaining rings and O<sub>2</sub> sensors onto the supplied front and rear headpipes. Be sure to install the front O<sub>2</sub> sensor on the front headpipe and the rear O<sub>2</sub> sensor on the rear headpipe.
- 7. Install the rear headpipe (with stock gasket in place) onto the rear cylinder using the stock nuts. Snug the nuts but **DO NOT TIGHTEN** at this time.
- 8. Install the right side muffler onto the rear headpipe and reinsert the (2) stock 5/16-inch bolts into the rear muffler mount. Make sure the stock clamp is positioned over the slip of the muffler so that the hex bolt is inward and down. See **FIGURE 4**. **Do not tighten** clamps or bolts.
- 9. Install the front headpipe (with stock gasket in place) onto the front cylinder using the stock nuts. Snug the nuts but **DO NOT TIGHTEN** at this time.
- 10. Align the bracket on the front headpipe with the bracket on the rear headpipe and insert the 2 supplied 5/16 x 5/8" long hex flanged bolts through the rear headpipe bracket into the threaded pems on the front headpipe bracket. See **FIGURE 4**. Snug the bolts but **DO NOT TIGHTEN** at this time.
- 11. Position the supplied top and bottom pinch clamps over the front headpipe making sure the square hole on the top clamp is facing up and towards the inside. Position the pinch clamps over the support bracket so that the pinch clamp captures both sides of the bracket. See **FIGURE 2**. Insert the supplied 3/8" carriage bolt through the top pinch clamp, support bracket, and the bottom pinch clamp. Install the 3/8" thin flat washer and nut onto the bottom of the carriage bolt but **DO NOT TIGHTEN** at this time. Leave the nut loose so the headpipe can be adjusted.



12. Position the supplied #27-61 MSC muffler clamp onto the outlet of the front headpipe. The hex head of the clamp should be inward and down. See **FIGURE 3**. (NOTE: The clamp should be flush with the end of the outlet when tightened. See **FIGURE 3**. If the clamp is slid past the slots on the outlet the clamp will not tighten properly).



13. Install the left rear crossover pipe onto the front headpipe making sure it slides into the outlet of the front headpipe outlet as far as possible. See **FIGURE 4**.

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

STOCK MUFFLER
CLAMP
REAR
CROSSOVER PIPE

27-61 MSC CLAMP **FIGURE 4**  SUPPLIED 5/16" X 5/8" HEX FLANGE BOLTS

14. Install the supplied crossover support bracket to the stock mounting location using the (2) stock allen bolts. Lightly snug the bolts but **DO NOT TIGHTEN** at this time. Adjust the crossover pipe fore and aft so the mount on the crossover assembly rests flush against the support bracket. Then push up lightly on the left side of the crossover assembly to align the bracket and insert the (2) supplied allen bolts with flat washers. Lightly snug the allen bolts but **DO NOT TIGHTEN** at this time. See **FIGURE 5**. *IMPORTANT*: **DO NOT** force the crossover pipe forward or backward or up and down to get it into position. If a lot of force is needed to align the crossover pipe and support bracket then adjust the front and rear headpipes until it will align with only enough force to counter act the weight of the left side of the crossover assembly. Also, Make sure the crossover pipe has clearance all around and does not make contact with the transmission pan. Adjust as needed while bolts are loose.



FIGURE 5

- 15. Reinstall the left side muffler onto the crossover headpipe and reinsert the (2) stock 5/16-inch bolts into each rear muffler mount. **Do not tighten** clamps or bolts.
- 16. Make sure the front headpipe, rear headpipe, left rear crossover pipe, and mufflers are aligned properly and tighten the (4) allen bolts on the crossover support bracket. See **FIGURE 5**.
- 17. Then fully tighten the flange nuts on the exhaust port studs, followed by the nut for the 3/8" carriage bolt on the front headpipe support clamp and the nut on the front headpipe support bracket. See **FIGURE 2**.
- 18. Then fully tighten the (2) 5/16 hex flange bolts on the front and rear headpipe brackets. See FIGURE 4.
- 19. Next fully tighten the 27-61MSC clamp on the front headpipe outlet. (NOTE: The clamp should be flush with the end of the front headpipe outlet when tightened. See **FIGURE 3**. If the clamp is slid past the slots on the front headpipe outlet the clamp will not tighten properly).

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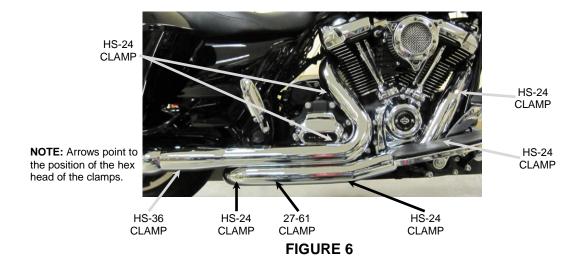


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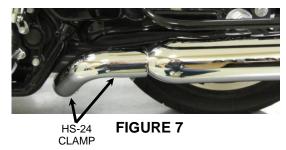
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- 20. Plug the O<sub>2</sub> sensors back into the motorcycle wire harness and route the wires away from the exhaust in the same manner as stock.
- 21. Remove the heatshields and hose clamps from packaging. Unscrew the hose clamps and feed the tail 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. The large HS-36 hose clamp goes on the rear clip on the rear heatshield. See FIGURE 6 & 7 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.)
- 22. Install the right rear heatshield over the rear headpipe. (Hint: Spread the hose clamps apart slightly to make it easier to slide them over the headpipes.) Align the heatshield with the headpipe and then snug the clamps but **DO NOT TIGHTEN** at this time. See **FIGURE 6**.
- 23. 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.) Align the heatshield with the headpipe and then snug the clamps but **DO NOT TIGHTEN** at this time. See **FIGURE 6**.



24. Place left rear heatshield in position on the crossover assembly on the left side of the motorcycle. (Hint: Spread the hose clamps apart slightly to make it easier to slide them over the headpipes.) Align the heatshield with the crossover assembly and snug the clamps but **DO NOT TIGHTEN** at this time. See **FIGURE 7.** 

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



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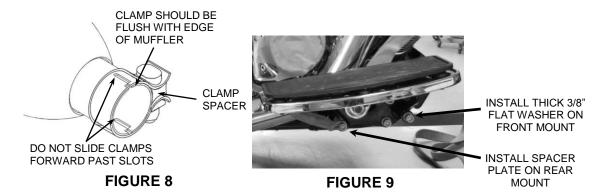


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- 25. Adjust the mufflers fore and aft to align the front of the mufflers with the rear of the heatshields. Make sure there is a small gap between the front of the mufflers and the heatshields. Rotate the mufflers so they are level with the ground and then tighten the muffler mounting bolts and the clamps. (NOTE: The clamps should be flush with the end of the muffler inlet when tightened. If the clamps are slid past the slots on the muffler inlet the clamps will not tighten properly). See **FIGURE 8**.
- 26. Make sure the heatshields are aligned properly and then tighten all hose clamps securing the heatshields.
- 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 9**.
- 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 10**.



- 29. Reinstall any other previously removed items. 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.

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