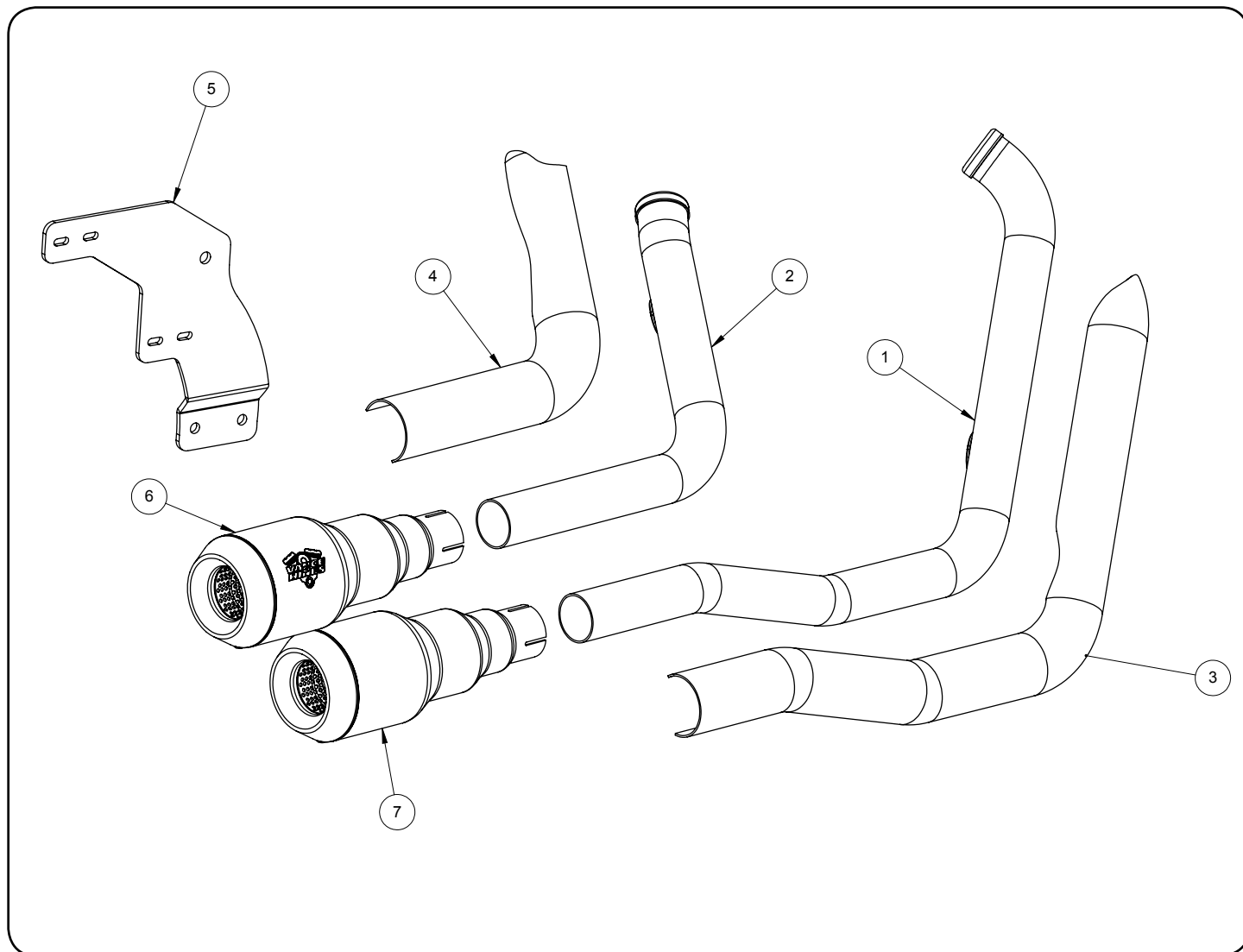


INSTALLATION INSTRUCTIONS: HARLEY-DAVIDSON SOFTAIL HI-OUTPUT GRENADES 2-INTO-2 PART# 16846/16848/46846/46848

Congratulations, you have purchased the finest exhaust system available for your motorcycle. Your Vance & Hines exhaust is designed and crafted for performance, quality, and style. Please follow the instructions below, check exhaust system for missing or damaged parts and if you need any assistance please contact our technical support line (562) 921-7461.

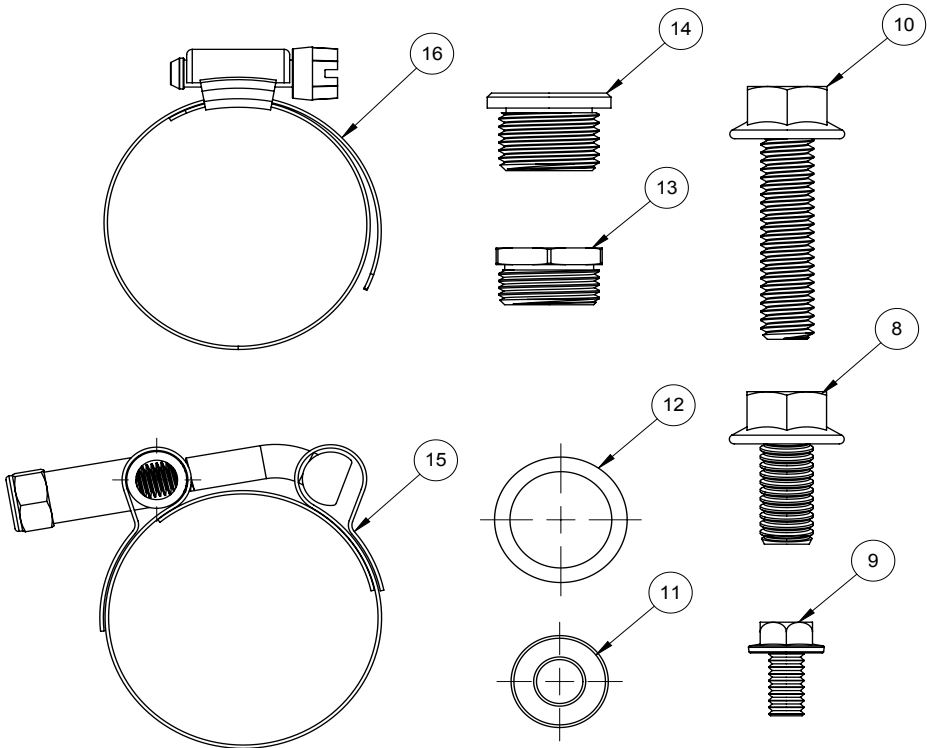


PARTS LIST

NO.	Description	Qty.
1	Front Head Pipe	1
2	Rear Head Pipe	1
3	Front Heat Shield	1
4	Rear Heat Shield	1
5	Mount Bracket	1
6	Muffler Front	1
7	Muffler Rear	1
8	3/8-16 X 3/4 IN. FHS	2

9	1/4-20 x 1/2 Flange Bolt	4
10	3/8-16 X 1 1/2 IN. FHCS	1
11	Bracket Spacer	1
12	18mm X 24mm Washer	2
13	18-12mm O2 Adapter	2
14	18mm X 1.5mm X10mm Plug	2
15	T-Bolt Clamp	2
16	#20 Hose Clamp	7

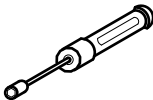
HARDWARE



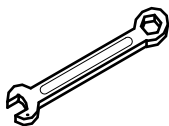
TOOLS REQUIRED



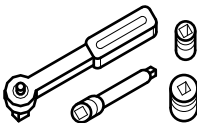
Flat blade Screwdriver
#3 Phillips Head



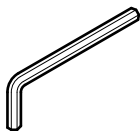
5/16" Nut Driver



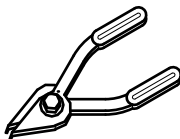
Combination Wrench:
1/2", 9/16", 7/8"
14mm, 22mm



3/8" Ratchet, extensions
19mm, 1/2" Socket
3/4" & 9/16" Deep Socket,
7/16" Deep Socket



Allen Wrenches: 5/16"
T45 & T50 Torx wrenches



Snapping Pliers

STOCK EXHAUST SYSTEM REMOVAL

1. On FLSTC, FLSTF, and FLSTN, loosen the right hand floor board mounting bolts to gain clearance for exhaust removal and installation.
2. Unbolt the carriage bolt and clamp attached to the bracket located under the right side transmission cover.
3. Loosen crossover pipe clamp located between front and rear head pipes and.
4. Loosen the heat shield clamps on both front and rear exhaust pipes.
5. Remove the two mounting nuts from each head pipe.
6. Remove the nuts attaching the exhaust mounting bracket to the frame.

O2 SENSOR EQUIPPED MODELS (2007-PRESENT)

7. Rear O2 Sensor, Locate the O2 sensor connector, unplug the connector from the main harness and feed the wire through the frame to free it from the motorcycle. Pay attention to wire routing for re- installation. NOTE: For 2007 to 2011 Models the connector is located under the oil tank, on the right side. For 2012 & later models the connector is located under the seat, remove both the seat and battery for access.
8. Front O2 sensor, Locate the O2 sensor connector at the front of the motorcycle, unplug connector from harness, and free the sensor lead from the motorcycle. NOTE: For 2007 to 2011 Models, Open the plastic cover above the rectifier to gain access to the sensor plug, cut the cable ties holding the sensor wire to frame. For 2012 & later models the connector is located behind the voltage regulator.
9. Remove the exhaust system and set it aside. Assistance may be required.
10. Remove the stock mounting bars, brackets and/or studs.
PRE 2000 Models: Remove the lower mounting bar. Remove the right side 1/4" bolt which holds the lower fender in place to allow removal of the right passenger foot peg. Place the motorcycle on its side stand and loosen the swing arm pivot bolt nut. Position a floor jack under the right hand frame tube just below the swing a pivot bolt. Using assistance, carefully raise the jack just enough to take the weight off the swing arm bolt and remove the swing arm pivot bolt and the stock upper mounting bar, Replace the swing arm pivot bolt and torque to 135 FT/LB.
2000 & Later Models: Using a T50 Torx driver, remove the three mounting bolts and mounting bar. Two of the T50 bolts are visible, the third also attaches the right hand passenger peg and is accessed by removing the right side passenger foot peg.
11. The right side passenger foot peg is not accessible when system is installed. Relocate right side passenger foot peg with P/N 16939.
12. Carefully remove the O2 sensors from the stock head pipes.
13. Carefully remove exhaust port flanges and circlips from the stock exhaust system using snapping pliers. NOTE: Replace bent or damaged circlips.
14. Check condition of exhaust gaskets and replace if worn or damaged.

VANCE & HINES EXHAUST INSTALLATION

1. Install and tighten the bracket (5) using the two lower holes in the frame below the right passenger footpeg, using two 3/8"x3/4" flange bolts. Install the 3/8-16 x 1 1/2 in. bolt and spacer in the top hole of the bracket. (**Figure 1**)
2. Remove header assembly and heat shields from protective packaging. Place each heat shield on a non-abrasive surface such as blanket or carpet. On chrome, use a felt tip pen and mark outside edge of each heat shield to show location of mounting clips that hose clamps will loop through (**Figure 2**). On black systems mark the outside with a pencil or a piece of tape.
3. Lay header assembly into heat shields and loosely install the #20 hose clamps (supplied) into mounting clips. NOTE: Screw heads should be accessible when the system is installed on motorcycle for adjustment purposes (**Figure 2**). Do not tighten at this time.
4. Apply a small amount of anti-seize compound to the threads of the oxygen sensors and install them into the new head pipe. NOTE: 2007 to 2011 models or models using 18mm wideband oxygen sensors install sensor directly into head pipe. 2012 to 2014 models install supplied 18mm to 12mm oxygen sensor adapter then install the 12mm oxygen sensors (Grey connector into front head pipe, Black connector into rear head pipe.) All models not using oxygen sensors install 18mm plug with copper crush washer.
5. Install circlips and flanges from stock system onto both new head pipes.
6. Using stock flange nuts, carefully install head pipes onto motorcycle. Finger tight only to insure collar is seated in the exhaust gasket.
7. Slide the T-bolt clamps onto each muffler. Make sure that the nut on the clamp is accessible when installed on the bike. Install mufflers on the head pipe assembly (V&H stamped logo on top, no logo on bottom)
8. Attach the muffler bodies to the bracket using the four 1/4-20 x 1/2 flange head bolts.
9. Route O2 sensor wires away from hot areas of the motorcycle. Plug the O2sensor wires back into the wiring harness: **For 2012 & Later**, feed wire for the rear O2 sensor (Black) around the frame and under the seat. Re-install battery, plug the sensor into the stock wiring connector. Feed connector for the front oxygen sensor (Gray) around the frame and into the holder on the frame behind rectifier. Plug the sensor into the stock wiring connector. **For 2007 to 2011 models**, feed wire for the front oxygen sensor around and into the plastic holder on the frame. Plug the sensor into the stock wiring connector. Snap the plastic holder closed to hold the connector in place. Install a new nylon cable tie to hold the wires onto the frame in the original location. Feed connector for the rear oxygen sensor around the frame under the oil tank on the right hand side. Plug the sensor into the stock wiring connector.
10. On floor board models, tighten the floor board mounting bolts.
11. Be sure to tighten all hardware before starting your motorcycle.
12. After installation and before starting the motorcycle, completely clean pipes and mufflers with soap and water and a clean soft cloth. NOTE: Any residue, oil, or fingerprints will stain the chrome when the metal heats up.

FIGURE 1

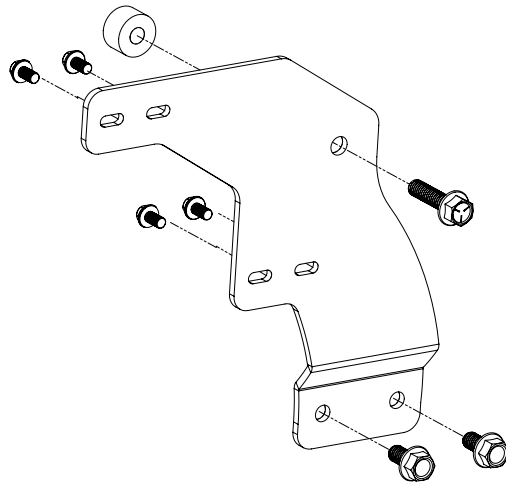
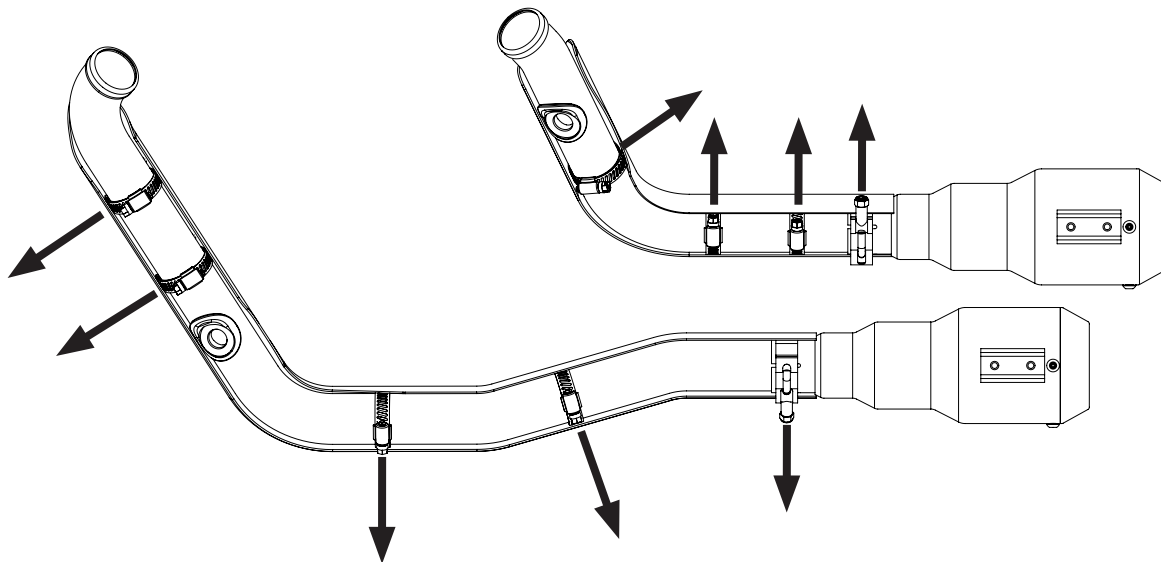


FIGURE 2



Emissions Notice:

In California, in order to meet Air Resources Board emissions requirements, certain aftermarket part applications have been identified as replacements, and others have received ARB Executive Orders. All other emissions related aftermarket parts are for competition use only. A list of replacement parts and EO parts, and corresponding fitment is provided at vanceandhines.com/california.

Warranty:

All Vance & Hines products are warranted against defects in material and workmanship for a period of 90 days. This warranty does not cover discoloration or rust. This warranty shall be limited to the repair or replacement of the product, which may be proven defective under normal use. Vance & Hines will not warranty any system that has been abused, misused, improperly installed or modified.

Dealers or distributors are not authorized to make dispositions binding upon Vance & Hines. Vance & Hines will not be responsible for any labor charges incurred in removing or replacing any system under warranty. A return authorization number and a copy of the original purchase invoice must accompany all returns. Parts returned without a return authorization may be refused.

THE NEXT GENERATION OF FUEL MANAGEMENT IS HERE

The Fuelpak FP3 will revolutionize fuel management for all new Harley-Davidson models now using the HDLAN (CAN Bus) system. Connecting wirelessly by Bluetooth to iPhone or Android Smartphones, Fuelpak FP3 uses Flash technology to recalibrate engine parameters and mapping for Vance & Hines exhaust systems downloaded from the expansive library of calibrations developed by Vance & Hines.

- Smartphone App User Interface (iOS and Android)
- Recalibrates ECM by Flash Tuning
- Autotune Feature for Added Tuning Precision
- Displays Live Sensor Data
- App Links Direct to Customer Service Site

FITMENT NOTES:

- FUELPK FP3 IS COMPATIBLE WITH CAN BUS MODELS ONLY (TOURING, SOFTAIL, DYNA & SPORTSTER)
- FUELPK FP3 IS NOT COMPATIBLE WITH V-ROD MODELS.
- MAPS ARE CURRENTLY AVAILABLE FOR: SPORTSTER, DYNA, SOFTAIL, TOURING AND TRIKE MODELS.
- MAPS FOR 110CI CVO MODELS COMING SOON.

EMISSIONS NOTICE:

FUELPK IS INTENDED FOR RACING USE ONLY, AND IS NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON POLLUTION-CONTROLLED VEHICLES.



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