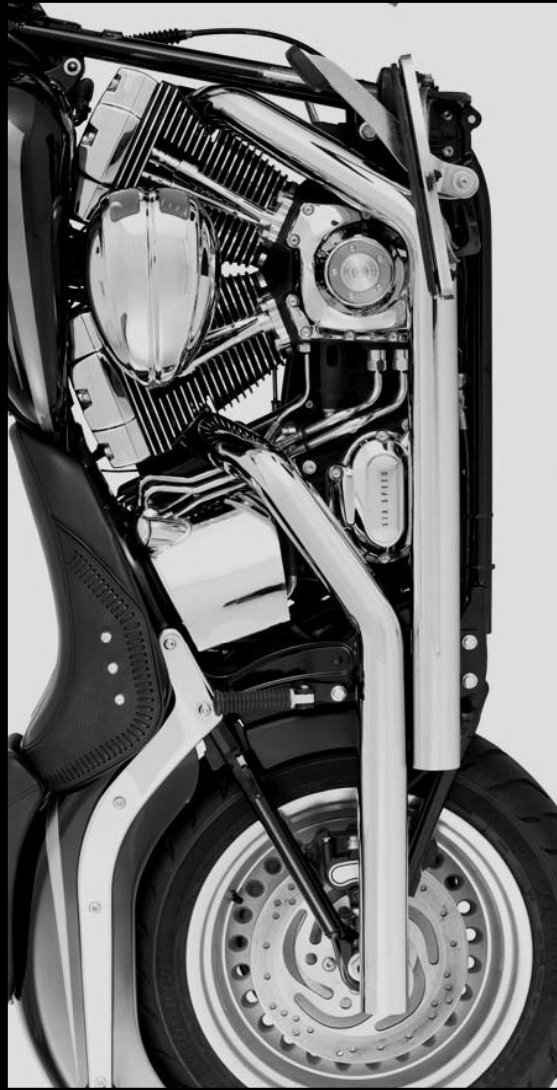


**HARLEY-DAVIDSON® SOFTAIL  
STRAIGHTSHOTS 2-2  
INSTALLATION INSTRUCTIONS  
PART# 17817**



Congratulations, you have purchased the finest exhaust system for your motorcycle on the market. Your Vance & Hines exhaust system is designed and crafted for maximum performance, a perfect fit, a great sound and unbeatable style. Please follow the installation instructions below and if you have any questions, please call our technical support line at (562) 926-5291.

Attention installer (if other than owner), please forward this instruction sheet to the owner of this product. These instructions contain valuable information to the end user.

**TOOLS  
REQUIRED**

Flat blade screwdriver  
Snapping Pliers  
5/16" Nutdriver  
1/2", 9/16" & 7/8" or 22mm Combination wrenches  
3/8" Ratchet & Extensions, 1/2" Socket  
3/16", 5/16" Allen Wrench  
145, T50 Torx Wrench

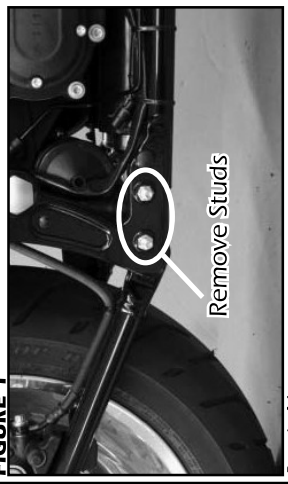
**MORE POWER : LESS NOISE**

**READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION**

- NOTE:** These instructions are written for late model motorcycles equipped with O2 sensors. Please contact our customer service department for all other applications. (Use sensor plug kit #16925).
- Under the oil tank on the right hand side, locate the rear O2 sensor connector. Unplug sensor and feed the end of wire through the frame freeing it from motorcycle. **NOTE:** Pay attention to wire routing for re-installation.
  - Open the plastic cover above the rectifier on front of the frame to gain access to the front O2 sensor connector. Unplug sensor from harness. Remove cable tie holding wire to frame and feed the end of the wire through, freeing it from motorcycle.
  - On FLSTC, FLSTF, FLSTN and FLTSC models, loosen the right hand floor board mounting bolts to gain clearance for exhaust removal and installation.
  - Loosen the heat shield clamps on both front and rear exhaust pipes.
  - Remove the two mounting nuts from each head pipe, located at the cylinder head.
  - Remove the nuts attaching the exhaust mount bracket to the frame.

- On FLSTN, FLSTF and FXSTD models, you will need to remove the right side passenger footpeg and hanger, as this is attached to the exhaust mount bracket. Remove hanger, and replace the passenger foot peg assembly using the 3/8" x 2 1/2" Allen bolt (supplied).
- If equipped, unbolt the carriage bolt and clamp attached to the bracket under the right side transmission cover.
- Remove the entire exhaust system and set it aside.
- If equipped, remove the bracket from under the right side transmission cover. Using a 7/8" or 22mm wrench, carefully remove the O2 sensors from the stock head pipes and save for re-use with the new system.
- Remove the two lower mounting studs from the frame (Figure 1).
- Carefully remove exhaust port flanges and circlips from the stock exhaust system using snapping pliers. **NOTE:** Replace bent or damaged circlips. Check exhaust port gasket condition. Recommended replacement exhaust port gaskets, Harley part number: 17048-98 or 65324-83A.

**FIGURE 1**



**FIGURE 2**



# MORE POWER : LESS NOISE

FIGURE 3



FIGURE 4

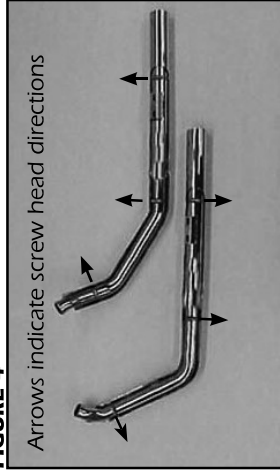


FIGURE 5

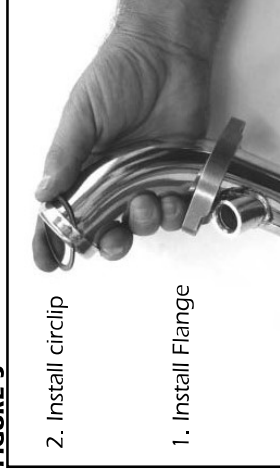
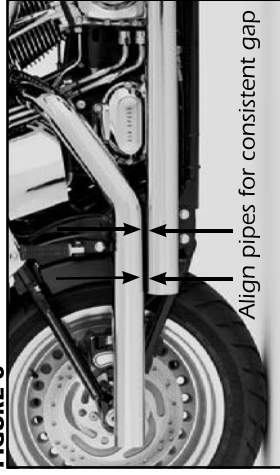


FIGURE 6



## VANCE & HINES EXHAUST SYSTEM INSTALLATION

1. Install, but do not tighten, mounting bracket (Stamped 554-P) to the lower holes in the frame below the right passenger foot peg, using two 3/8" x 3/4" flange head bolts [supplied] (Figure 2)
2. Remove header and heat shields from their protective packaging. Place each heat shield on a non-abrasive surface such as a blanket or carpet. Using a felt tip pen, mark outside edge of each heat shield to show location of mounting clips that hose clamps will loop through (Figure 3).
3. Slide header into heat shields tail end first and loosely install hose clamps by feeding the tail end of clamp into heat shields clips. Use #20 hose clamps [supplied] on head pipes and #28 hose clamps [supplied] on muffler sections. Take note of location of clamp screw head direction (Figure 4). Screw head must be accessible when system is installed on motorcycle for adjustment purposes.
4. Apply a small amount of anti-seize compound to the threads of the O2 sensors and install them into the new head pipe. NOTE: Be careful not to get anti-seize on sensor tip, it may affect sensor function.
5. Install circlips and flanges from stock system onto the new head pipes (Figure 5).
6. Beginning with the front cylinder, install the front head pipe (D585) into the exhaust port using stock flange nuts. Slide nut plate into bracket welded to muffler body and secure to mounting bracket using two 5/16" x 5/8" flange head bolts. Now repeat these steps with the remaining header assembly (D586)
7. Tighten the stock flange nuts at the cylinder head and the 5/16" x 5/8" flange head bolts at the bracket enough to hold the pipes in place but still allow some movement. Next align the front and rear headers so that the gap between them is consistent from front to rear (Figure 6). Fully tighten all the flange head bolts and nuts beginning with those securing the bracket (554-P) to frame.
8. Finally tighten the hose clamps securing the heat shields to the head pipes. Note: check alignment while tightening.
9. Feed wire for the front O2 sensor through the frame 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.
10. Install a new nylon cable tie [supplied] to hold the wires onto frame in the original location.
11. Feed connector for the rear O2 sensor through the frame under the oil tank on the right hand side. Plug the sensor into the stock wiring connector.
12. Re-tighten floor board mounting bolts on models so equipped.
13. Be sure to tighten all hardware before starting motorcycle.
14. After installation and before starting the motorcycle, completely clean pipes and mufflers with cleaning solvent and a clean soft cloth that will not leave a residue. NOTE: Any residue, oil, or fingerprints will stain the chrome when the metal heats up.

## EXHAUST CARE - HELPFUL HINTS TO AVOID DISCOLORATION OF EXHAUST SYSTEM

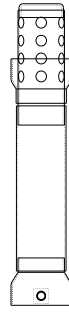
1. When installing a new set of chrome pipes, make sure your hands are clean and free of oil.
2. Avoid long periods of idling as this can cause discoloration.
3. Intake leaks can cause the engine to run lean and overheat, this could lead to discoloration. Make sure there are no exhaust leaks at the junction of the exhaust pipes and cylinder head. We recommend replacing gaskets if they are worn.
4. Before starting the motorcycle.

## VANCE & HINES OPTIONAL ACCESSORIES



**FUEL MANAGEMENT:**  
Take the guess work out of fuel injection with Fuelpak Fuel Management. Contact your local dealer or call (562) 921-0071 to order. Visit [fuelpakfi.com](http://fuelpakfi.com) for more information. Fuelpak is intended for racing or off-highway use only, and is not legal for sale or use in California on pollution-controlled vehicles.

### QUIET Baffle

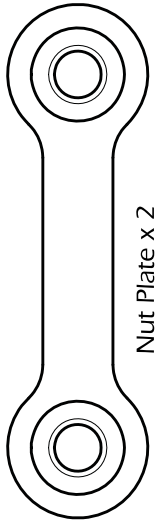


Quiet baffle P/N 21869 is available for this system. The quiet baffle will lower the sound level by 2-3db on average. Contact your local dealer to order.

PLEASE NOTE: Every effort is made for Vance & Hines Exhaust Systems to provide improved cornering clearance. However, due to design and space limitations on some motorcycle models, ground and cornering clearance may not be improved and in some cases may be reduced. Be sure to follow proper installation instructions.



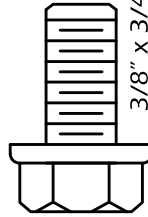
**PACKING LIST**



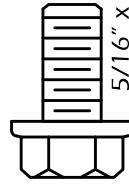
Nut Plate x 2



3/8" x 2 1/2" Allen Bolt x 1

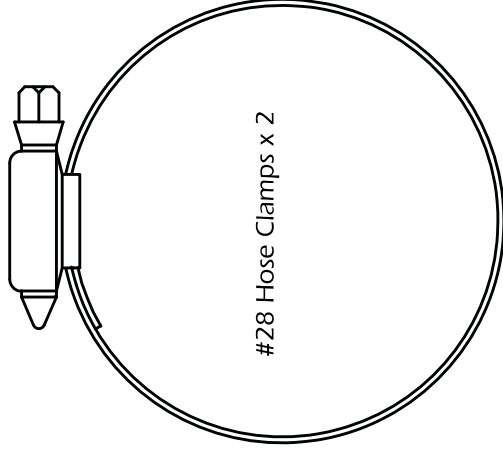


3/8" x 3/4" Flange Head Bolt x 2

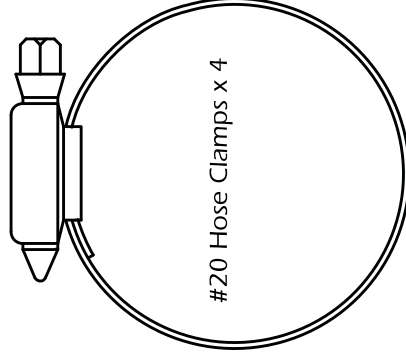


5/16" x 5/8" Flange Head Bolt x 4

ALL PARTS SHOWN ARE ACTUAL SIZE



#28 Hose Clamps x 2



#20 Hose Clamps x 4

**PARTS NOT SHOWN:**

554-P	Mounting Bracket	x1
D585FC	Front Header Assembly	x1
D586FC	Rear Header Assembly	x1
D585HC	Front Heatshield	x1
D586HC	Rear Heatshield	x1
A288HW	Nylon Cable Tie	x1

**WARRANTY**

Vance & Hines exhaust systems are warranted against defects in material and workmanship for a period of 90 days from the date of purchase from an authorized dealer. This warranty does not cover discoloration of chrome finishes. This warranty is limited to the repair or replacement of a product proven to be defective from normal use. Vance & Hines exhaust systems are designed to fit and operate on OEM motor and chassis. This warranty does not cover any product subject to abuse, misuse, improper installation or modification.

# MORE POWER : LESS NOISE

## FUEL MANAGEMENT

**GET THE MOST OUT OF YOUR RIDING EXPERIENCE...**  
AN AFTERMARKET EXHAUST SYSTEM IS ONLY YOUR FIRST STEP, NOW YOU NEED FUEL MANAGEMENT.

### **NOW YOU NEED FUELPAK.**

Your fuel injected Harley-Davidson® is equipped with an ECU (electronic control unit) that's programmed to deliver fuel to the motor based on an air/fuel ratio for a stock air filter and stock exhaust system. When you install a performance exhaust system, your airflow changes, so you need a fuel management system that adjusts your air/fuel ratio to match the changes. That fuel management system is Fuelpak. Fuelpak adds and takes away fuel, allowing for a more precise range of refinement in your air/fuel ratio. Get the perfect fuel management combination with your Vance & Hines exhaust system, get Fuelpak. For more information visit the tuning center at [fuelpakfi.com](http://fuelpakfi.com)



**NOTICE:** Fuelpak is intended for racing or off-highway use only, and is not legal for sale or use in California on pollution-controlled vehicles.

**13861 ROSECRANS AVENUE / SANTA FE SPRINGS, CA 90670**  
**SALES: (562) 921-5388 / TECHNICAL: (562) 926-5291 / FAX: (562) 802-0110**  
**VANCEANDHINES.COM**