

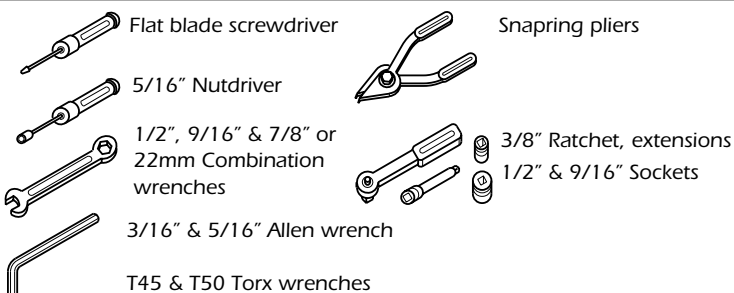
# HARLEY-DAVIDSON® SOFTAIL SHORTSHOT STAGGERED INSTALLATION INSTRUCTIONS PART# 17221



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

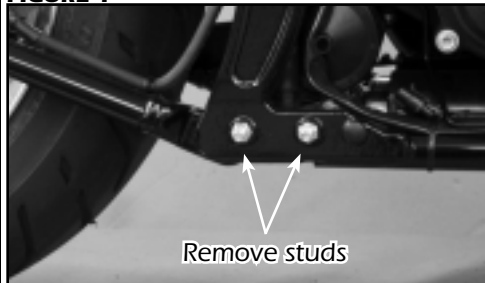


## READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION

### STOCK EXHAUST SYSTEM REMOVAL

1. Under the oil tank on the right hand side, locate the rear oxygen 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.
2. Open the plastic cover above the rectifier on front of the frame to gain access to the front oxygen 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.
3. On FLSTC, FLSTF, FLSTN and FLSTSC models, loosen the right hand floor board mounting bolts to gain clearance for exhaust removal and installation.
4. Loosen the heat shield clamps on both front and rear exhaust pipes.
5. Remove the two mounting nuts from each head pipe, located at the cylinder head.
6. If equipped, unbolt the carriage bolt and clamp attached to the bracket under the right side transmission cover.
7. Remove the nuts attaching the exhaust mount bracket to the frame.
8. On FLSTD and FLSTF models, you will need to remove the right side passenger footpeg and hanger, as this is attached to the exhaust mount bracket. Replace the passenger foot peg assembly using the 3/8" x 2 1/2" Allen bolt (supplied).
9. Remove the entire exhaust system and set it aside.
10. If equipped, remove the bracket from under the right side transmission cover.
11. 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.
12. Remove the two lower mounting studs from the frame (Figure 1).
13. 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



Remove studs

FIGURE 2



Mark mounting  
clip locations

FIGURE 3

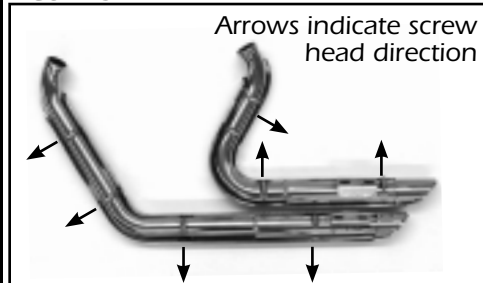


FIGURE 4

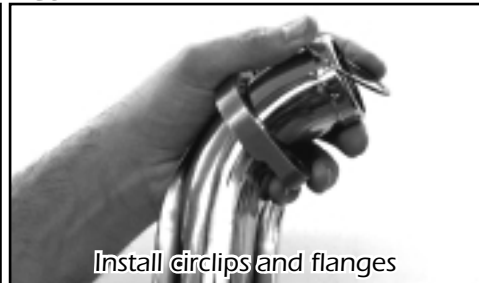


FIGURE 5



FIGURE 6



## VANCE &amp; HINES EXHAUST SYSTEM INSTALLATION

1. Remove head pipes and heat shields from 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 2).
2. Install each hose clamp by feeding tail end of clamps into heat shield clips. Take note of location of clamp screw head direction (Figure 2 & 3). Screw head must be accessible when system is installed on motorcycle for adjustment purposes. Use #20 hose clamps on head pipes and #28 hose clamps on mufflers (supplied).
3. Apply a small amount of anti-seize compound to the threads of the oxygen 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.
4. Install exhaust port flanges and circlips (from stock system) onto head pipes (Figure 4).
5. Attach mounting bracket 424-P using four 5/16"x5/8" flange bolts and two nut plates (supplied). Slide nut plates inside brackets that are welded to backside of each muffler (Figure 5). Leave them loose at this time. Use this procedure for mounting both upper and lower mufflers.
6. Install complete assembly into exhaust ports (rear port first). Use stock flange nuts, do not tighten at this time. Install two 3/8"x3/4" flange bolts (supplied) attaching exhaust bracket to the right side lower frame rail of motorcycle.
7. Tighten exhaust port flange nuts, bracket bolts and bolts mounting pipes to bracket while making sure pipes are parallel.
8. Tighten all hose clamps while making sure end tips stick out of the heat shields evenly (Figure 6).
9. Feed wire for the front oxygen 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 the frame in the original location.
11. Feed connector for the rear oxygen sensor through the frame under the oil tank on the right hand side. Plug the sensor into the stock wiring connector.
12. Tighten the floor board mounting bolts on models so equipped.
13. Check for adequate clearance of all exhaust system components and motorcycle accessories prone to heat damage.
14. Be sure to tighten all hardware before starting your motorcycle.

## 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. After installation, thoroughly clean pipes with a soft cloth and cleaning solvent that will leave no residue (chrome wax / polish, glass cleaner, alcohol, ammonia, etc...) before starting the motorcycle.
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.
4. 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.

## VANCE &amp; HINES OPTIONAL ACCESSORIES

## FUELPAK



**FUEL MANAGEMENT:**  
Take the guess work out of fuel injection with the new Fuelpak Fuel Management System, P/N 61001. Contact your local dealer or call (562) 921-7461 to order. Visit [vanceandhines.com](http://vanceandhines.com) for more information.

QUIET  
BAFFLE

Quiet baffle P/N 21301 is available for this system. The quiet baffle will lower the sound level by 2-3db on average. Contact your local dealer to order.

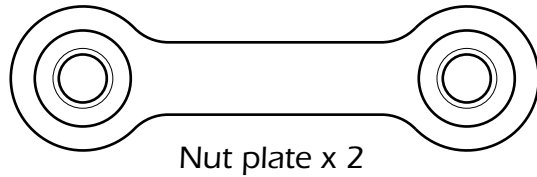
## PLEASE NOTE:

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

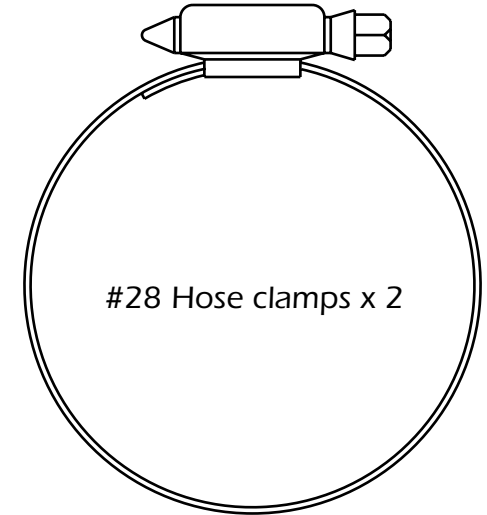
ALL PARTS SHOWN ARE ACTUAL SIZE



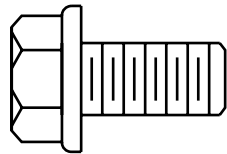
Nut plate x 2



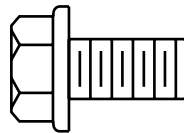
#20 Hose clamps x 5



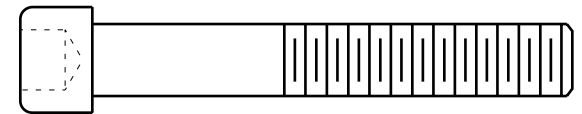
#28 Hose clamps x 2



3/8"x3/4" Flange bolts x 2



5/16"x5/8" Flange bolts x 4



3/8"x2-1/2" Allen bolt x 1



Nylon cable tie x 1

### PARTS NOT SHOWN:

- 424-P Bracket x1
- D475FC Front head pipe x1
- D476FC Rear head pipe x1
- D475HC Front heat shield x1
- D476HC Rear heat shield 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.

**FUELPAK****GET THE MOST OUT OF YOUR RIDING EXPERIENCE...**

AN AFTERMARKET EXHAUST SYSTEM IS ONLY YOUR FIRST STEP, NOW YOU NEED FUEL MANAGEMENT.

**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 [vanceandhines.com/fuelpak](http://vanceandhines.com/fuelpak).



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VANCEANDHINES.COM