SYSTEM REMOVAL

# HARLEY-DAVIDSON® DYNA SWITCHBACK MONSTER DUALS INSTALLATION INSTRUCTIONS PART# 16855





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.

1/2", 9/16", 7/16"& 14mm Combination wrenches

5/16" Nutdriver

7/32", 3/16", 1/4" Allen wrench

#3 Phillip Screw Driver

> Snap Ring pliers

3/8" Ratchet & Extentions Sockets- 1/2".Torx T45, 9/16" deep

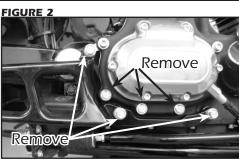
### **READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION**

- Remove both left and right saddlebags and set them aside.
- Remove seat to access and disconnect rear head pipe 02 sensor connector (black).
- Locate front head pipe 02 sensor (grey) and disconnect at plug. Feed the end of the wires through the frame so they are free from the motorcycle. NOTE: Pay attention to wire routing for re-installation.
- Loosen the band clamp on the front end of muffler body.
- Support the muffler (assistance may be required) while removing the 8mm flange nut and flange bolt securing the muffler body to the OE muffler mounting bar. (Figure 1) Slide muffler body away from head pipe. NOTE: It may be necessary to use a penetrating lubricant to loosen the muffler from the head pipe.
- Remove the two lower rear Torx head bolts and shoulder bolt on the right hand floor board and put aside. Save bolts for reinstallation.
- Remove front head pipe clamp, carriage bolt, and nut connecting front header to bracket under cam cover with 9/16" deep socket.
- 8. Loosen stock front and rear heat shield hose clamps. Will make easier for system

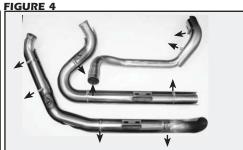
removal.

- Remove the two flange mounting nuts from each head pipe, located at the cylinder head. Carefully remove the stock head pipes and set them aside.
- 10. Using a 14mm wrench, carefully remove the O2 sensors from the stock head pipes and save for re-use with the new system.
- 11. Carefully remove the exhaust port flanges and circlips from the stock exhaust system using snap ring pliers. NOTE: If circlips look bent or twisted, replace them.
- 12. Remove hardware holding the stock muffler bracket and remove three additional bolts on transmission cover. (Figure 2)
- 13. Inspect OEM exhaust gaskets and replace if worn. Harley part #65324-83B.









D684IN Rev. 1.

HINES EXHAUST INSTALLATION

**45** 

VANCE SYSTEM

# A503HW 5/16"18 x 2" Cap Screw D115ST-P Spacer behind Brkt RANSMISSION COVERO 755-P Replace stock bolts with supplied hardware A345HW







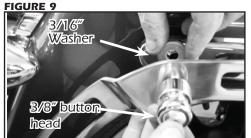
Locate the 5/16" x 2.0" (A503HW) hex bolt (supplied) and insert this bolt with a 5/16" washer (supplied) into the top hole in bracket 755-P <u>before</u> the bracket is attached to the transmission. Insert the 11/16" (D115ST-P) spacer between the bracket and transmission on the 5/16" x 2.0" hex bolt. Using the three remaining 5/16" x 1.5" (A345HW) hex bolts and 5/16" flat washer combinations 8. (supplied) attach the bracket to the transmission. Tighten hardware. (Figure 5)

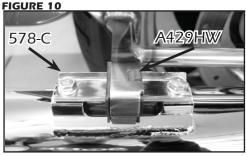
Remove right stock saddle bag bungs from fender with Torx 45 socket. Take note on which bung went where for reinstallation. (Figure 8)
 NOTE: Do not remove left and right fender bungs at same time. Doing so will allow the fender to fall.

- Install right side chrome muffler bracket (749-C) onto fender using supplied (3) 3/16" washers, (2) 3/8"-16x2.5", and (1) 5/16"-18x1.5" button head cap screws.
   Sandwich the 3/16" washers in between fender strut and 749-C bracket at all three saddle bag locations and tighten bolts. (Figure 9)
- 4. Follow same procedure as steps #2 and #3 for left side of motorcycle.
- Install rubber grommet #A429HW and chrome mounting bracket #578-C onto left and right chrome muffler bracket. (Figure 10) Spray Lube may make the Grommet/bracket installation easier.
- 6. Install heat shield tube (A518HW, supplied) over rear brake sensor wires, sliding forward to banjo fitting as far as possible. (Figure 12)
- 7. Remove headers and heat shields from protective packaging. Place each heat

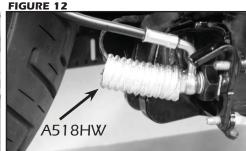
shield on a non-abrasive surface such as blanket or carpet. Using a felt tip pen, mark outside edge of each heat shield to show location of mounting clips that hose clamps will loop through (Figure 3).

- Apply a small amount of anti-seize compound to the threads of the O2 sensors and install them into the new headers (Grey connector into front headpipe, Black connector into rear headpipe). NOTE: Be careful not to get anti-seize on sensor tip, it may affect sensor function.
- 9. Install circlips and flanges from stock system onto the new header pipes (Figure 6).
- 10. Using stock flange nuts, carefully install the front header (D565FC) onto motorcycle and finger tighten only at this time.
- 11. Use one nut plate and two 5/16" x 5/8" flange bolts (supplied) to attach the front header to the lower two holes of bracket 755-P. Do not fully tighten.
- Install crosspipe (D567FC) by slipping expanded end over front header (D565FC)and SNUG with Torca band clamp, bolt facing down (Supplied).
   NOTE: Only tighten enough so crosspipe can hold itself up while allowing rotation for adjustment. (Figure 7)
- Position crosspipe level with floor and achieve a 1/2" gap between pipe and frame.





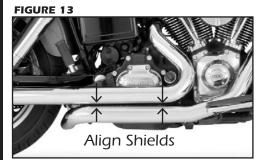




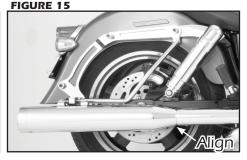
PLEASE NOTE: Every effort is made for Vance & Hines Exhaust Systems to provide improved cornering clearance. However, due to design and space limitations on some motorcycle models, ground and cornering clearance may not be improved and in some cases may be reduced. Be sure to follow proper installation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

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FUELPAK









- Remove Monster Round mufflers from protective packaging and slide Torca band clamp onto inlet end. Make sure bolt end of Torca clamp is towards the inside facing down, and accessible for tightening (Figure 11). NOTE: Install left side Monster Round only at this time with 578-C hanger bracket and two 5/16" x 5/8" flange bolts. (supplied) (Figure 10). Right Monster Round will be installed later during installation.
- 15. Install left side heat shield (D509HC) onto crosspipe (D567FC) with two hose clamps. Finger tighten.
- Install front heat shield (D507HC) onto front head pipe and crosspipe with supplied hose clamps. Take note of head screw direction. (Figure 4) Do not fully tighten. NOTE: Do not remove fiberglass shield (A115FG) that is attached to D507HC.
- 17. Lay rear head pipe (D566FC) onto heat shield (D508HC) and install hose clamps. Take note of head screw direction. (Figure 4) Do not fully tighten.
- Using stock flange nuts, carefully install the rear header (D566FC) and heat shield (D508HC) onto motorcycle and finger tighten only at this time.
- 19. Use remaining nut plate and two 5/16" x 5/8" flange bolts (supplied) to attach the 30. Be sure to tighten all hardware and fasteners before starting your motorcycle. header to two upper/rear holes of bracket 755-P. Do not fully tighten.
- Install Right Monster Round muffler onto rear head pipe and fasten to 578-C hanger bracket with two 5/16" x 5/8" flange bolts. (supplied) (Figure 10)
- 21. Tighten all four exhaust port flange nuts.

- 22. Adjust front and rear headers/heatshields until parallel with each other, then tighten the four 5/16" x 5/8" flange bolts at 755-P bracket first. (Figure 13)
- 23. Align header heat shields to Monster Round muffler bodies. (Figure 15)
- 24. Adjust Monster Rounds until ends are protruding out back of motorcycle evenly. (Figure 16)
- Tighten the all clamps securing the crossover pipe and the mufflers to the head pipes.
- Tighten all heat shield hose clamps to head pipes. NOTE: Be sure front heat shield is not touching rear brake sensor wires and heat shield tube (A518HW) after tightening.
- 27. Reroute 02 sensor wires in same path/location as stock and plug into connectors.
- Install two A527HW-P spacers (provided) between floor board and floor board mount. Install stock Torx screws and tighten. (Figure 14)
- 29. Reinstall seat
- 31. After installation and before starting the motorcycle, completely clean pipes and mufflers with cleaning solvent and a clean soft cloth that will not leave 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**

- 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.
- 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.

## **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 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.

#71007 - V02 Naked Air Intake Kit

#71013/71015- Skullcap Intake cover Chrome/ Black

#71017/71019- Skullcap Crown Intake cover Chrome/ Black

#70001/ 40001- Drak Intake Kit Chrome/ Black

#70005/ 40005- Duke Intake Kit Chrome/ Black

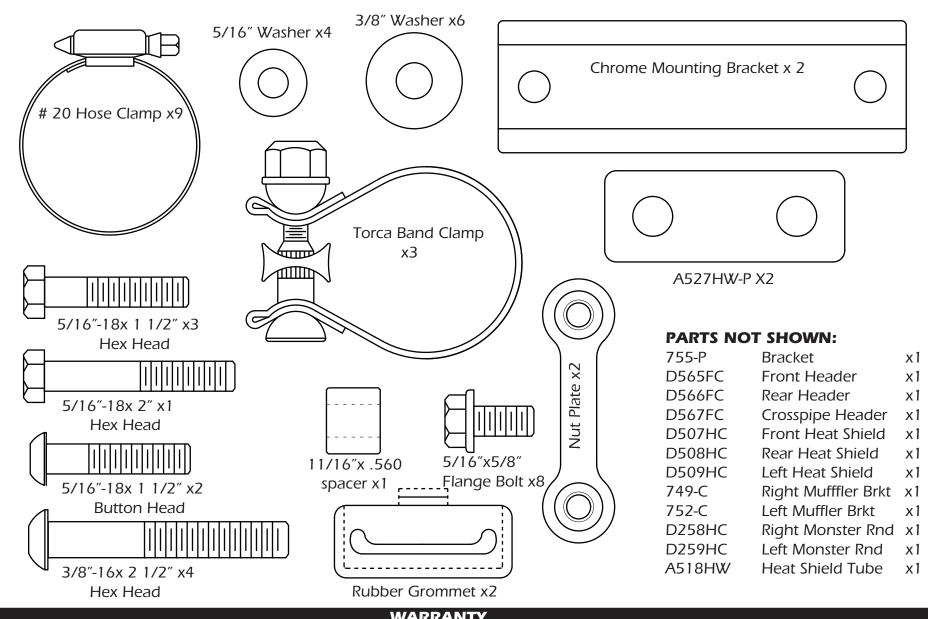
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Page 3 of 5 D684IN Rev. 1.1 **ARE ACTUAL SIZE** 

**ALL PARTS SHOWN** 



# **PACKING LIST**



#### **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.

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#### **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

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.



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