

# INSTALLATION INSTRUCTIONS

## DRAG SPECIALTIES PYTHON FISH-TAIL DUAL EXHAUST P/N 1800-1311

**ATTENTION INSTALLER** (if other than owner): Please forward this instruction sheet to the purchaser of this product. These instructions contain valuable information necessary to the end user.

**INTRODUCTION:** These instructions describe the procedure for properly installing the Python Fish-tail Dual Exhaust on 86-11 Softail models. Review instructions carefully before beginning, as they contain important information. Please retain for future reference.

The following notations distinguish particularly important information in the instructions.

**NOTE: A NOTE** provides key information to make procedures easier or clearer.

**CAUTION: A CAUTION** indicates special procedures that must be followed to avoid damage to the motorcycle and/or accessories.

**WARNING!: A WARNING** indicates special procedures that must be followed to avoid injury to a motorcycle operator or person inspecting or repairing the motorcycle.

### TOOLS REQUIRED:

Snap-ring pliers  
5/16" Nut driver  
3/8" Ratchet, extensions  
5/16", 1/2" & 9/16" Sockets  
1/2", 7/16", 9/16" and 22mm or 7/8" Combination wrenches  
5mm, 3/16" & 5/16" Allen wrenches  
T45 & T50 Torx wrenches

### PROCEDURE:

**NOTE:** These instructions are written for late-model motorcycles equipped with O<sub>2</sub> sensors. If you are installing these pipes on a bike which is not equipped with O<sub>2</sub> sensors, ignore all instructions which reference them. Additionally you will need to purchase an O<sub>2</sub> sensor block-off kit PART #1861-0464.

### REMOVAL OF OEM EXHAUST SYSTEM

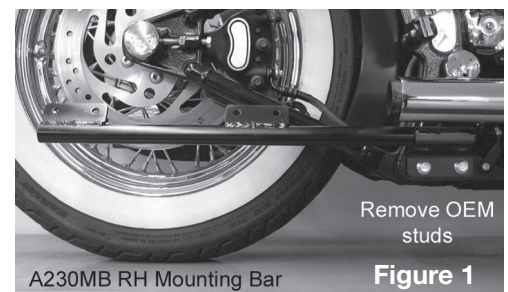
1. Under the oil tank on the right-hand side, locate the rear oxygen sensor connector. Unplug sensor and feed the end of the wire through the frame, freeing it from motorcycle.

**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 front 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 headpipe, located at the cylinder head.
6. Remove the nuts attaching the exhaust mount bracket to the frame.
7. On FLSTN, FLSTF, FLSTSB and FXSTD 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 footpeg assembly using the 3/8" x 2 1/2" Allen bolt (supplied).
8. If equipped, unbolt the carriage bolt and clamp attached to the bracket under the right-side transmission cover.
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 O<sub>2</sub> sensors from the stock headpipes 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 snap-ring pliers.

**NOTE:** Replace bent or damaged circlips. Check the exhaust port gasket condition. Recommended replacement exhaust port gaskets are Drag Specialties PART #DS-173220.

### LEFT HAND PIPE INSTALLATION

1. Attach mounting brackets A231MB on the left side and A230MB on the right side of the frame using two 3/8" x 3/4" flange head bolts on each one (supplied) (Figure 1).

**NOTE:** If plastic plugs are found in the 3/8" holes they must be removed.

2. Remove left footpeg and attach support bracket 428-P (Figure 1) using the stock bolt. Discard spacer if equipped. Do not tighten at this time.



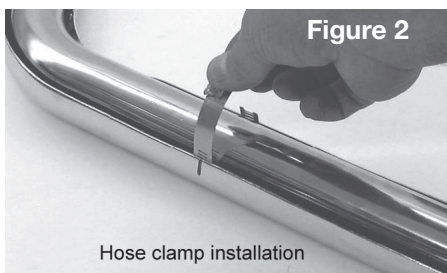
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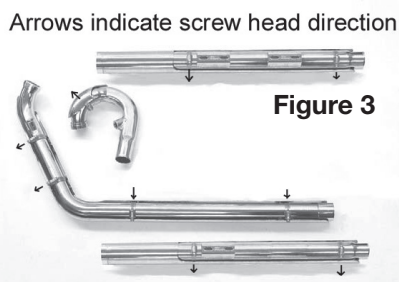
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**NOTE:** On FLSTN and FLSTSB models the passenger footpeg offset bracket should be removed.

3. Remove headpipes 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).



4. Lay front headpipe, rear headpipe and mufflers into their heat shields.
5. Install #20 hose clamps on heat shields and #28 on muffler heat shields by feeding tail end of clamps into heat shield clips (Figure 2). Install D486HC heat shield by using only one hose clamp, feeding tail clamp through the bigger clip. Take note of clamp screw head direction (Figure 3). Screw heads must be accessible when system is installed on motorcycle for adjustment purposes.



**NOTE:** Do not tighten at this time.

6. Install exhaust port flanges and circlips from stock system onto headpipes (Figure 4).
7. Apply a small amount of anti-seize compound to the threads of one of the oxygen sensors and install it into front headpipe.



**NOTE:** Be careful not to get anti-seize on sensor tip, it may affect sensor function. Do not install rear sensor at this time.

8. Disconnect front mount on shift lever rod to allow installation of rear headpipe (See Figure 7).
9. Using stock flange nuts, carefully install headpipes into exhaust ports. assistance may be required.

**NOTE:** Do not tighten at this time.

10. Remove ignition coil cover to have open access to install rear sensor.
11. Install rear sensor using same instructions as step 7. Feed connector for rear oxygen sensor through frame and under the oil tank. Plug the sensor into the stock wiring connector.

12. Slide a #59 T-bolt clamp (supplied) onto slotted end of left pipe. Slide slotted end onto headpipe tail (Figure 5). Align pipe with bracket 428-P previously installed in Step 2. Install a #60 T-bolt clamp (supplied) by removing the nut and feeding the tail end through bracket hole (Figure 5).

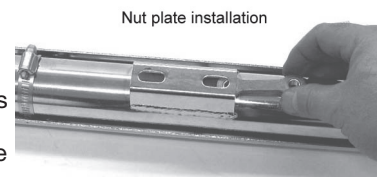
**NOTE:** Orient the clamp so that you can get to the nut after installation. Do not tighten at this time.

13. Slide a Barrel band clamp (supplied) onto the nose of each muffler body (Figure 5).

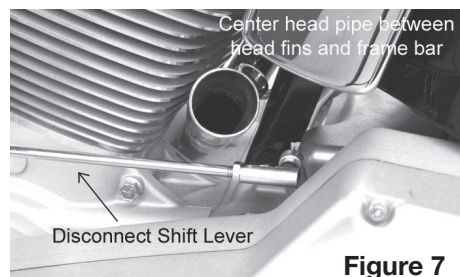


**NOTE:** Orient the clamp so that you can get to the nut after installation.

14. Install right and left muffler onto tail end of right headpipe and left pipe. Slide nut plate (supplied) inside bracket that is welded to backside of muffler (Figure 6). Loosely install two  $\frac{5}{16}$ " x  $\frac{5}{8}$ " flange head bolts (Supplied). Align mufflers with their brackets so they sit level. Tighten the muffler mounting bolts, then the bracket mounting bolts.
15. Tighten rear exhaust port flange nuts.



**NOTE:** Be sure to center headpipe between head fins and frame bar. Also make sure there is sufficient clearance to the oil lines (Figure 7). Tighten T-bolt clamp on the header. Tighten cylinder port exhaust flange nuts on front cylinder.



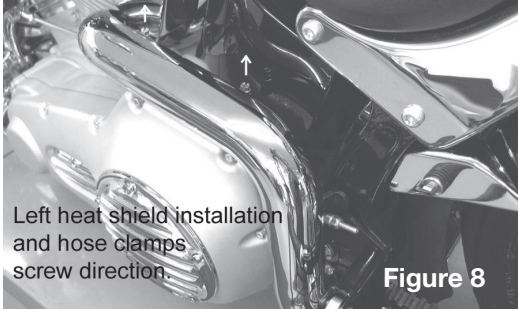
16. Tighten bracket 428-P and T-bolt clamp attached to this bracket, making sure that left pipe is aligned to bracket.



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17. Lay left pipe heat shield on left hand pipe and install #20 hose clamps. Take note of clamp screw head direction (Figure 8).



Left heat shield installation and hose clamps screw direction.

Figure 8

18. Tighten all Barrel band clamps, T-bolt clamps and all heat shield clamps.
19. Reinstall and tighten ignition coil cover and front mount on shift rod.
20. 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.
21. Install a new nylon cable tie (supplied) to hold the wires onto the frame in the original location.
22. Tighten the floor board mounting bolts on models so equipped.
23. Check for adequate clearance of all exhaust components and motorcycle accessories prone to heat damage.
24. Be sure to tighten all hardware before starting your motorcycle.
25. After installation and before starting motorcycle, completely clean pipes and mufflers with cleaning solvent and a clean, soft cloth that will not leave residue.

### HELPFUL HINTS TO REDUCE DISCOLORATION OF EXHAUST:

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 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.

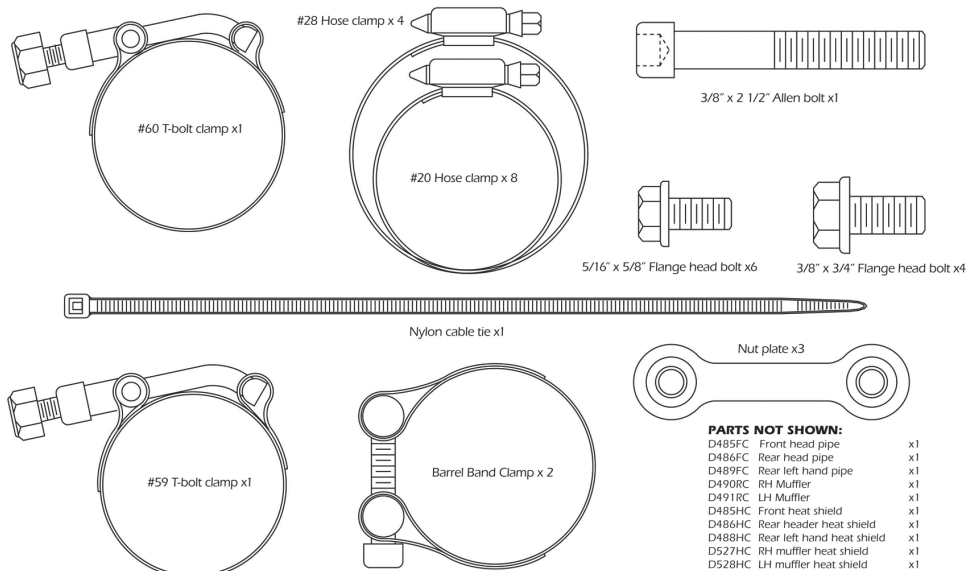
### QUIET BAFFLE:

Quiet baffle PART #V21869 is available for this system. The quiet baffle will lower the sound level by 2-3db on average. Contact your local dealer to order.

**WARNING!** Before operating motorcycle, be sure all hardware is tight.

**CAUTION:** Any residue, oil or fingerprints will stain the chrome when the metal heats up.

### Packing List



**PARTS NOT SHOWN:**

D485FC	Front head pipe	x1
D486FC	Rear head pipe	x1
D489FC	Rear left hand pipe	x1
D490RC	RH Muffler	x1
D491RC	LH Muffler	x1
D485HC	Front heat shield	x1
D486HC	Rear header heat shield	x1
D488HC	Rear left hand heat shield	x1
D527HC	RH muffler heat shield	x1
D528HC	LH muffler heat shield	x1
*428-P	Left hand support bracket	x1
A230MB	RH Mounting Bar	x1
A231MB	LH Mounting Bar	x1
D579RC	Tail Fish Tail Tips	x2



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