

# INSTALLATION INSTRUCTIONS

## DRAG SPECIALTIES PYTHON RAYZER P/N 1800-1664/1665

**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 Rayzer exhaust on 2007-2014 FLHT, FLTR, FLHR and FLHX models.

Review these instructions carefully before beginning, as they contain important information. Please retain for future reference.

Particularly important information is distinguished in these instructions by the following notations:

**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:

1. Flat blade screwdriver
2. Nut driver – 5/16"
3. Combination wrench – 1/2", 3/4", 7/8", 14 mm
4. In/lbs. torque wrench
5. Allen wrench
6. Ratchet and extensions
7. Sockets – 1/2", 9/16" deep, 3/4", 5/8" deep
8. Snap ring pliers

### PROCEDURES:

#### STOCK REMOVAL:

1. Remove both left and right saddlebags and set them aside. Remove the right side cover.
  2. Loosen the pinch bolt on the front end of the muffler(s).
- NOTE:** On OEM two-into-one right side only exhaust systems, there is no left side removal of mufflers required.
3. Remove the 5/16" bolts and washers that mount the muffler(s) to the saddlebag support.
  4. Remove the stock muffler(s).
  5. Remove the sliding hangers (these will not be reused). Rubber mount (for slider hanger) removal is recommended, but not required.
  6. Remove the right hand driver and passenger floorboards/footpegs.
  7. Locate and unplug the O<sub>2</sub> sensor wires from the wiring harness (gray and black connectors are located behind the right side panel) and remove the cable ties holding the wires to the frame. Feed the end of the wires through the frame so they are free from the motorcycle.



**NOTE:** Pay attention to wire routing for reinstallation.

8. Loosen the headpipe clamp connecting the left side muffler to the header and the mount bracket on the backside on the oil pan. Remove the crossover section of the headpipe and headpipe clamp (OE dual muffler systems only). Remove the crossover mounting bracket.
9. Loosen the heat shield clamps on both the front and rear exhaust pipes to gain access to the exhaust mounting nuts.
10. Remove the nut and carriage bolt holding the front headpipe to the bracket on the transmission housing.
11. Remove the two mounting nuts from each headpipe, located at the cylinder head. Carefully remove the headpipes and set them aside.
12. Carefully remove the O<sub>2</sub> sensors from the stock head pipes and save them for reuse with the new system.
13. Replace the bracket on the transmission housing with the new bracket (stamped 869-P) and torque to 13-16 ft.-lbs. (Fig. 1)

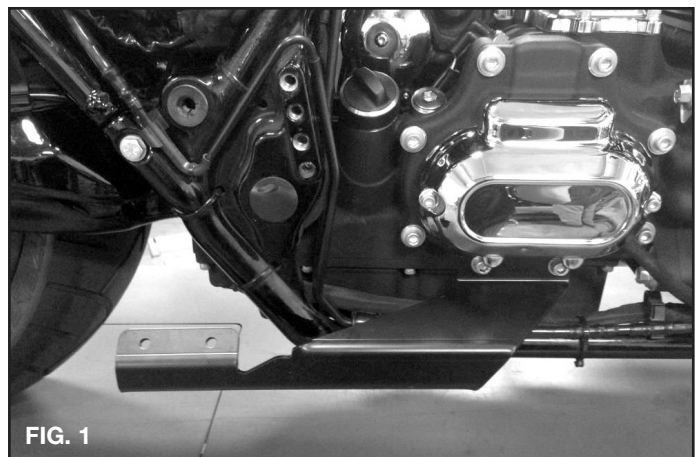


FIG. 1

14. 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.



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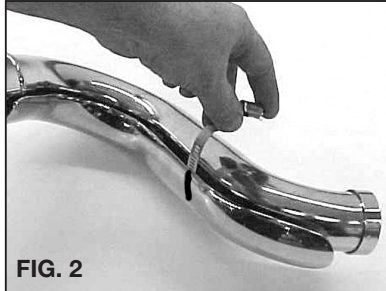
## DRAG SPECIALTIES PYTHON RAYZER P/N 1800-1664/1665

### STOCK REMOVAL: (CONT)

15. Check the condition of the exhaust gaskets and replace them if they are worn or damaged.

### PYTHON EXHAUST INSTALLATION:

1. Remove the header/muffler assembly and heat shields from the protective packaging. Place each heat shield on a non-abrasive surface, such as a blanket or carpet. Using a felt tip pen, mark the outside edge of each heat shield to show the location of the mounting clips that the hose clamps will loop through. (Fig. 2)
2. Lay the headpipe assembly into the header heat shields. Install the hose clamps into the heat shield mounting clips. Take note of the clamp screw head direction. (Fig. 3)



**NOTE:** Screw head must be accessible when the system is installed on the motorcycle for adjustment purposes. Do not tighten at this time.

3. O<sub>2</sub> Sensor Installation: Apply a small amount of anti-seize compound to the threads of the O<sub>2</sub> sensors and install them into the new headpipes.

**NOTE:** Be careful not to get anti-seize on the sensor tip; it may affect the sensor function.

OE 12mm O<sub>2</sub> – install the 18-12mm O<sub>2</sub> adapter (supplied) into the O<sub>2</sub> sensor port. Then, install the 12mm O<sub>2</sub> sensor. (Gray connector into the front headpipe, black connector into the rear headpipe).

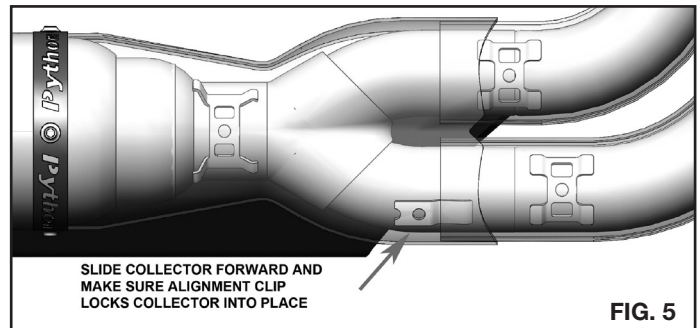
18-12mm O<sub>2</sub> sensors – install the O<sub>2</sub> sensor directly into the O<sub>2</sub> port.

All models not using oxygen sensors require O<sub>2</sub> plug kit P/N 1861-0464.

4. Install the circlips and flanges from the stock system onto both of the new headpipes. (Fig. 4)
5. Using the stock flange nuts, carefully install the headpipes onto the motorcycle. Do not tighten at this time.
6. Use the nut plate and 5/16" x 5/8" flange bolts (supplied) to attach the header/muffler assembly to the bracket.
7. Tighten the exhaust port flange nuts first, then the rear bolts, securing the muffler to the exhaust bracket.
8. Install the collector heat shield onto the collector by sliding it on from the rear.



**CAUTION:** Ensure the collector heat shield tab engages front cylinder heat shield. (Fig. 5)



Use extreme caution when installing the collector heat shield that the rear section of the collector heat shield does not damage the muffler heat shield. Do not force the collector heat shield. Do not force the collector heat shields directly onto the headpipe assembly from the side, damage to the collector heat shield will result.

9. Adjust the collector heat shield rearward and align with the edge of the muffler heat shield. Tighten the hose clamps to secure the collector heat shield. (Fig. 6)



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### PYTHON EXHAUST INSTALLATION: (CONT)

10. Tighten the header heat shields.
11. Route the front O<sub>2</sub> sensor wire (gray) along the OEM path and plug into the gray connector.
12. Route the rear O<sub>2</sub> sensor wire (black) rearward behind the frame and connect to the black connector.
13. Reinstall the right side cover.
14. Reinstall the rider floorboard.
15. Reinstall the floorboard/footpeg and both saddlebags.

**NOTE:** Passenger floorboards/footpegs can be installed in three positions. Install both the passenger floorboards/footpegs at the middle or upper position.

16. Check for adequate clearance between all exhaust system components and motorcycle accessories prone to heat damage.

17. Be sure to tighten all hardware before starting your motorcycle.

18. After installation and before starting the motorcycle, completely clean the pipes and muffler with cleaning solvent and a clean, soft cloth that will not leave any residue.

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

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

### PARTS LIST

| ITEM # | PART # | PARTS LIST                            | QTY. |
|--------|--------|---------------------------------------|------|
| 1      | P245FC | 2-1 Header/muffler assembly           | 1    |
| 2      | P245HC | Front cylinder header heat shield     | 1    |
| 3      | P246HC | Rear cylinder header heat shield      | 1    |
| 4      | P250HC | Collector heat shield                 | 1    |
| 5      | 869-P  | Exhaust mounting bracket              | 1    |
| 6      | A272HW | 1.31-2.25" SS hose clamp no. 28       | 1    |
| 7      | A270HW | .81-1.75" SS hose clamp no. 20        | 6    |
| 8      | A195HW | Dogbone nutplate                      | 1    |
| 9      | A240HW | 5/16"-18 Flange bolt                  | 2    |
| 10     | A644ST | 18-22mm O <sub>2</sub> sensor adapter | 2    |

