



**2017+ HD TOURING W/ GHOST PIPE**  
 2-1 w/ Ghost Pipe  
 Part # 005-46402/005-46802



**BILL OF MATERIALS**

1	HD floorboard spacer	005-464-S
2	O2 sensor plug kit	005-92-22KIT
6	1 1/16" – 2" heat shield clamp	005-HC-64024
2	2 1/16" – 3" heat shield clamps	005-HC-64040
2	45mm swivel hook spring	005-S45
2	3/8" - 16 x 1 1/2" cap screws	005-SH38112
2	10mm Flat Washer	005-WF10
1	Spring puller	005-SP
1	TBR sticker kit	015-10212
1	HD Touring Front Header	005-46401HF
1	HD Touring Rear Header	005-46401HR
1	HD Touring Merge Collector	005-464MC
1	HD Touring Front Heat Shield	005-46401H-HS1
1	HD Touring Rear Heat Shield	005-46401H-HS2
1	HD Touring Merge Collector Heat Shield	005-46401H-HS3
2	HD Touring Muffler	--
1	HD Touring Ghost Slip-Tube	005-46402S

**INSTALLATION INSTRUCTIONS**

1. Make sure the motorcycle is completely cool before installation. Make sure the motorcycle is secure on a stand or service lift.
2. Remove both saddlebags. **(Reference image 1)**
3. Loosen band clamps on the front of both mufflers. **(Reference image 2)**



4. Remove muffler mounting bolts where mufflers are fastened to saddlebag supports, and then remove OEM mufflers (Penetrating lubricant may be necessary to slide mufflers off). **(Reference image 3)**
5. Remove right side floorboard, and rear floorboard mount. **(Reference image 4)**



6. Remove OEM heat shields from head pipes.
7. Remove crossover pipe mounting clamp underneath bike where it bolts to transmission housing.
8. Loosen band clamp where crossover pipe connects to right side exhaust, and remove crossover pipe. **(Reference image 5)**
9. Remove crossover pipe mounting bracket. **(Reference image 6)**



10. Remove both front and rear O2 sensors, and label them according to which cylinder they were removed from. Next, remove the bracket holding front head pipe to engine. **(Reference images 7 & 8)**



**IMPORTANT - PLEASE READ CAREFULLY:** We recommend that this performance part be installed by a qualified motorcycle technician. If you have any doubts as to your ability to install this performance part, please consult with your local motorcycle dealer. Read all instructions first before starting installation. Make sure the motorcycle and exhaust system are completely cool before starting the installation. Also, make sure the bike is secure on a center stand or ideally a service lift during installation. Be sure to save all stock components for possible use later.

**WARRANTY:** Two Brothers Racing products are intended for closed course competition purposes only, and therefore are sold "as is" without warranty. Two Brothers Racing specifically disclaims any warranties of merchantability or fitness for a particular purpose and disclaims all responsibility for consequential and incidental damages or any other losses arising from the use of these products or parts.

- Remove flange nuts holding head pipes to cylinders, and remove head pipes. (Reference image 9)
- Remove header flanges and circlips from OEM head pipes, and reinstall them on the TBR head pipes. then loosely install new headers onto the motorcycle (Reference image 10)



- Install O2 sensors into TBR head pipes using supplied O2 sensor adapters, copper sealing washers and anti-seize.
- Slide merge collector onto head pipes, and install supplied retention springs using supplied spring puller. (Reference image 11)
- Slide OEM band clamp onto merge collector. Then slide TBR muffler onto merge collector, install muffler using OEM hardware (leave band clamp loose for now). (Reference image 12)
- Install OEM heat shields onto front and rear head pipes, but do not install TBR header collector heat shield at this time.



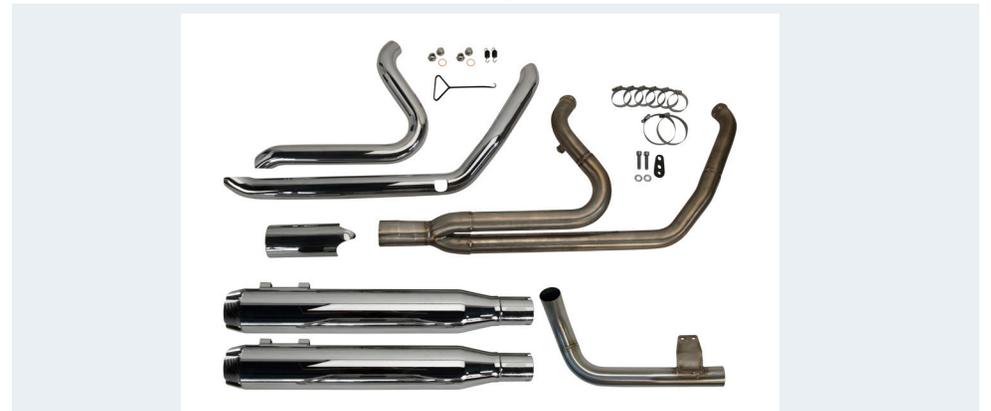
- Install floorboards using the supplied spacers and 3/8" x 1 1/2" bolts (only install bolt finger tight at this point). (Reference image 13 & 14)
- Tighten down front header flange while making sure head pipe has sufficient clearance and is centered between floorboard mount and cam cover.
- Now tighten down rear header flange, making sure rear head pipe is parallel with front head pipe and has sufficient clearance from transmission cover.
- Align TBR muffler with TBR head pipes and tighten band clamp that was left loose in step 17.



- Install merge collector heat shield.
- Moving on to the left hand side of the motorcycle, install the supplied ghost pipe slip-tube to the OEM crossover position, reusing the OEM bolts (Reference image 15)
- Loosely install the OEM barrel clamp onto the inlet side of the muffler



- Loosely install New TBR Muffler to the Ghost slip-tube using the OEM muffler mounting bolts
- Align the left and right hand side muffler
- Tighten the ghost pipe slip-tube, barrel clamp and muffler
- Install the OEM heat shield to your new ghost pipe slip-tube using the OEM mounting clamps. (Reference image 16)
- Reinstall saddlebags.
- Double check your work to make sure everything is secure
- Before you run the bike, clean off all fingerprints and dirt, as any oily residue will etch the metal and become somewhat permanent when the system gets hot. Run the bike and enjoy. It is normal for some white smoke to appear the first time you start the bike. This is packing/manufacturing oil from inside the pipe burning off. Check for gaps or leaks. If you find a leak, a little high temperature silicon sealant should fix it. After 50 to 100 miles, recheck all fasteners for tightness.



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#### Care & Cleaning

Keep system free of dirt and moisture. Store in a cool, dry place. Make sure vehicle is completely cool before maintenance.

**Stainless Header System:** Polished stainless steel pipes will turn a light golden hue after a few heat cycles, this is a normal characteristic of high quality stainless steel. Clean using a mild water based spray cleaner. Always apply cleaner or polish with a soft, clean cloth.

**Titanium Header System:** Polished titanium pipes will experience color shift ranging from deep blue/purple through amber after a few heat cycles. This is a normal characteristic of high quality titanium. Clean using a mild water based spray cleaner. Always apply cleaner or polish with a soft, clean cloth.

**Polished Aluminum Canisters:** Use an aluminum or mag wheel polish to restore the bright finish to factory spec.

Repack all road canisters at the first signs of packing material deterioration. Part #005-10038

NEVER dyno test your bike with carbon fiber or titanium canisters installed - the intense heat and lack of cooling air can quickly burn through the canister material. Two Brothers Racing does not provide a warranty for burned canisters.