



## 2004-13 HD SPORTSTER

Comp-S Full System Part # 005-4110199



### BILL OF MATERIALS

1	HD Sportster Muffler	005-377-M
1	HD Sportster Header	005-37701H
1	HD Sportster Heat Shield	005-377-HS1
1	HD Sportster Heat Shield	005-377-HS2
2	45mm Spring	005-S45
<b>2</b>	<b>02 Sensor Plug Kit</b>	<b>005-92-22KIT</b>
7	Hose Clamps	005-HC-64024
2	Flange Bolt 5/16"x 3/4"	005-FB51634
2	HD Clip Nut	005-10-516CN
1	Bracket	005-411-B

## INSTALLATION INSTRUCTIONS

1. Make sure the bike is completely cool before starting the installation and secure on a service lift.
2. Unplug O2 sensor connectors from wiring harness. Note: Pay attention to wire routing for reinstallation. (Reference images 1 & 2)



3. Loosen heat shield clamps and remove heat shields from both the front and rear head pipes. (Reference image 3)
4. Remove exhaust header nuts located at cylinder head. Keep these for use with TBR Comp-S system. (Reference image 4)



5. Remove rear head pipe clamp bolt. (Reference image 5)
6. Remove bolts that attach mufflers to mounting bracket. Then remove rear exhaust pipe. (Reference image 6)



7. Remove pulley cover and front exhaust pipe. (Reference images 7 & 8)



8. Remove bolt from rear end of brake rod bolt to gain access for next step. (Reference image 9)
9. Remove 3 bolts that support muffler bracket. Keep the front two for use with TBR bracket. Remove OEM bracket. (Reference image 10)



**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.



10. Install TBR bracket as shown. Reinstall pulley cover and brake rod. (Reference image 11)
11. Using snapping pliers, carefully remove the circlips and flanges from the stock exhaust system. Install the stock flanges to the new TBR head pipes. Check the condition of the circlips, we recommend replacing them with new ones if they are bent or twisted. (Reference image 12)



12. Install O2 sensors onto TBR headers if applicable, otherwise install plugs. Apply anti-seize to threads. (Reference image 13)
13. Install TBR head pipes onto cylinder using OEM nuts and gaskets. (Reference image 14)



14. Install clip nuts onto muffler and install muffler onto head pipes. Attach with supplied hook springs.



15. Install and tighten muffler mounting flange bolts 5/16" x 3/4".
16. Tighten cylinder/header nuts.



17. Feed clamps through head shield retainers. Install heat shields onto header pipes and tighten clamps.



18. Re-route O2 sensor wires and plug into main harness.
19. 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.

## 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.

**Brushed Aluminum Canisters:** Clean using a mild water based spray cleaner. Always apply cleaner or polish with a soft, clean cloth.

**Carbon Fiber Canisters:** Clean using a mild water based spray cleaner. Always apply cleaner or polish with a soft, clean cloth. Always make sure the fiberglass packing inside is in good condition and not burned out, as exhaust heat inside an empty canister will deteriorate the carbon fiber sleeve. TBR sells repack kits (Road - #005-10038, Offroad - #005-10038MX) that include everything you need to easily do it yourself.

**Titanium Mufflers:** For cleaning use a mild water based spray cleaner. Always apply cleaner or polish with a soft, clean cloth. Always make sure the fiberglass packing inside is in good condition and not burned out, as exhaust heat inside an empty canister will deteriorate the carbon fiber sleeve. TBR sells repack kits (Road - #005-10038, Offroad - #005-10038MX) that include everything you need to easily do it yourself.

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

Repack all offroad canisters after every 10 hours of use. Part #005-10038MX

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.



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