VANCE & HINES AIR INTAKE

# DRAK AIR FILTER KIT
# PART # 40003

MORE POWER : LESS NOISE

Congratulations, you have purchased the finest air intake system for your motorcycle on the market. Your Vance & Hines Air Intake system is designed and crafted for maximum performance and a perfect fit. 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 end user.

This kit fits 2008-later Touring models with 50mm Fly-By-Wire throttle bodies.

NOTE: For all other Twin-Cam motors use Vance & Hines Kit number 40001.

## TOOLS REQUIRED

- 3/8" Combination wrench
- 5/16" Allen wrench
- 3/16" Allen wrench
- 5/32" Allen wrench
- T27 Torx wrench
- 3/8" Drive ratchet
- 3/8" Hex socket
- 7/16" Hex socket
- 1/2" Hex socket
- 5/16" Allen socket
- 3/16" Allen socket
- 5/32" Allen socket
- Inch-pound Torque wrench
- Loctite 243 (blue)

## READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION

## OEM SYSTEM REMOVAL

1. Take off the Air filter cover by removing the Button head cap screw in the center.
2. This will expose the Filter element, which is then removed by taking out the three Torx head cap screws.
3. Also remove the Breather hoses from the Cylinder head breather bolts by pulling on them.
4. Now remove the Backing plate and Gasket by unbolting the Cylinder head breather bolts. NOTE: Be sure that the gasket surface is clean and dry and that no gasket material remains stuck to it.
5. Finally remove the Throttle body mount bracket by unbolting the two 1/4-20 Cap screws that attach it to the Throttle body. NOTE: These Cap screws will be reused for this installation.

## INSTALLATION OF VO2 AIR FLTER KIT

1. For a clear understanding of this installation it is best to refer to the Exploded view diagram while reading these instructions.
2. When installing or servicing the air cleaner, apply Loctite 243 (blue) to threads of all fasteners.
3. Install the Throttle body mount bracket (1) using the two OEM Cap screws, the two Cylinder head breather bolts (2) and Cylinder head O-rings (3) NOTE: Make sure the bracket sits flush against both Cylinder heads before tightening the OEM mount bolts into the Throttle body.
4. Now tighten the Cylinder head breather bolts (2) to 120-144 in-lbs (13.6-16.3 Nm) being careful not to pinch the Cylinder head O-rings (3).
5. Using the three 1/4"-20 x 1" Socket head cap screws (9) install the Gasket (5) Backing plate stiffener (4) Filter backing plate (6) and Aluminum venturi (7) to the Throttle body. Make sure the Inside edges of all of these parts are aligned before tightening to 55-60 in-lbs (6.2-6.8 Nm). NOTE: The Filter backing plate must be installed so that the nut is to the back side nearest the Cylinders.
6. Install the Breather hoses (16 & 17) onto the nipples on the Cylinder head breather bolts and through the back of the Filter backing plate (6) NOTE: Make sure that the Breather hoses engage at least 1/2" through the Filter backing plate.
7. Next install the Filter mount bracket (8) to the Aluminum Venturi (7) and Filter

backing plate (6) using the washer (11) and two of the 1/4"-20 x 1/2" Button head cap screws (10). NOTE: The washer is used on the screw which attaches to the Venturi (see diagram).

8. Using the remaining three 1/4"-20 x 1/2" Button head cap screws (10) install the Air filter element (12) and torque to 55-60 in-lbs (6.2-6.8 Nm). NOTE: The Vance & Hines logo should be at the bottom. The filter is pre-oiled and does not need to be oiled prior to installation, please see the maintenance section for servicing guidelines.

9. Thread the 5/16"-18 x 1/2" Button head cap screw (13) into the center of the Air filter element (12) NOTE: This screw acts only as a plug and has no other function in this installation.

10. Finally using the four 1/4"-20 x 1/2" Flange bolts (14) install the "Drak" air filter cover (15), after 100 miles check to be sure that these bolts are still tight. Periodically ensure that these screws remain tight.

## CLEANING AND MAINTENANCE

### BLACK COVER

When installing the black air filter cover, make sure your hands are clean and free of oil. After installation, thoroughly clean cover with warm soapy water and a clean soft cloth, taking care not to wet the filter element. Dry with clean towel to remove any residue before starting the motorcycle. Do NOT use anything abrasive to clean cover.

## VANCE & HINES OPTIONAL ACCESSORIES

FUELPAK

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.

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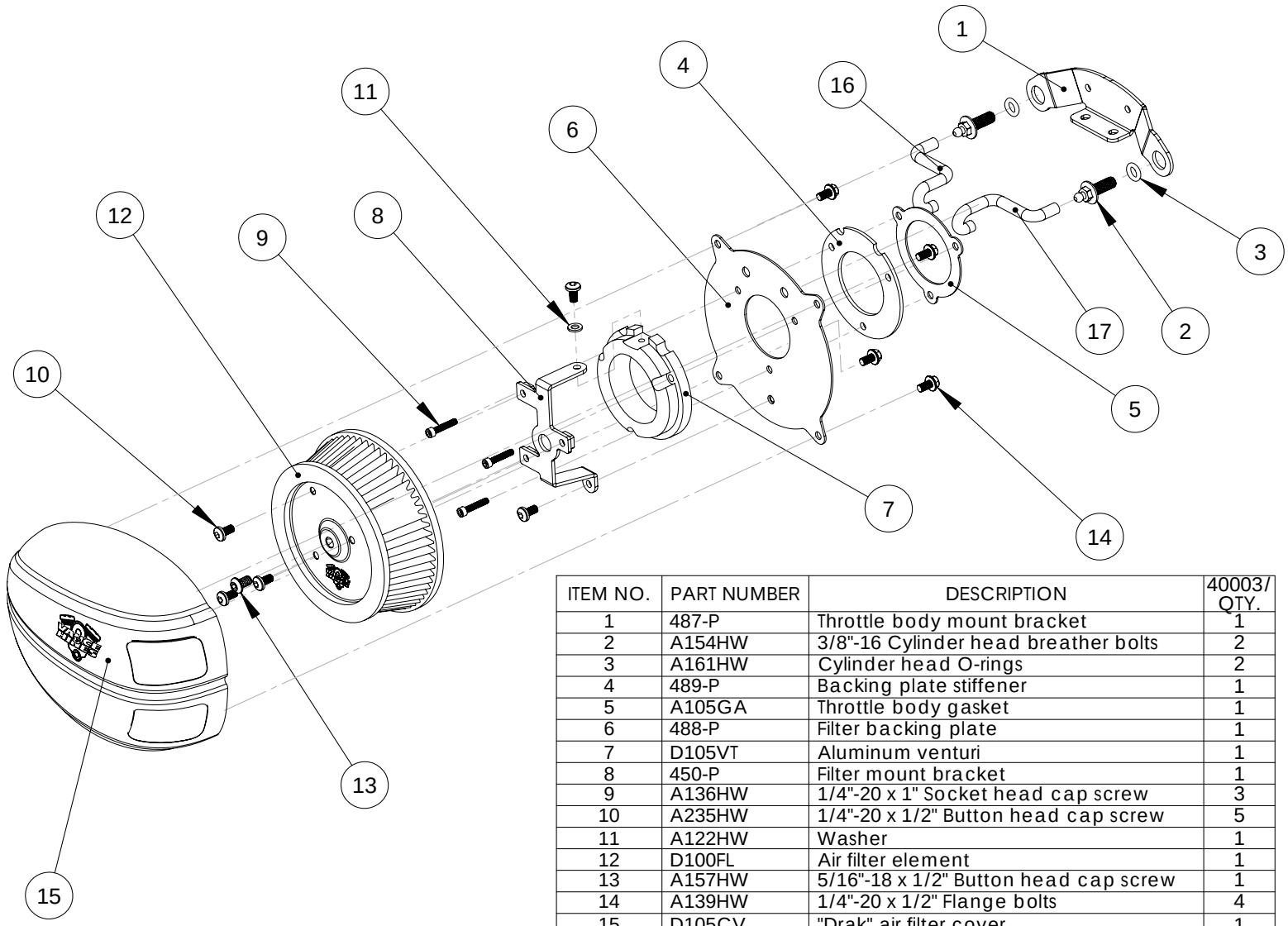
## EXPLODED VIEW DIAGRAM




| ITEM NO. | PART NUMBER | DESCRIPTION | 40003/ QTY. |
|---|---|---|---|
| 1 | 487-P | Throttle body mount bracket | 1 |
| 2 | A154HW | 3/8"-16 Cylinder head breather bolts | 2 |
| 3 | A161HW | Cylinder head O-rings | 2 |
| 4 | 489-P | Backing plate stiffener | 1 |
| 5 | A105GA | Throttle body gasket | 1 |
| 6 | 488-P | Filter backing plate | 1 |
| 7 | D105VT | Aluminum venturi | 1 |
| 8 | 450-P | Filter mount bracket | 1 |
| 9 | A136HW | 1/4"-20 x 1" Socket head cap screw | 3 |
| 10 | A235HW | 1/4"-20 x 1/2" Button head cap screw | 5 |
| 11 | A122HW | Washer | 1 |
| 12 | D100FL | Air filter element | 1 |
| 13 | A157HW | 5/16"-18 x 1/2" Button head cap screw | 1 |
| 14 | A139HW | 1/4"-20 x 1/2" Flange bolts | 4 |
| 15 | D105CV | "Drak" air filter cover | 1 |
| 16 | A164HW | Rear breather hose | 1 |
| 17 | A163HW | Front breather hose | 1 |

## WARRANTY

*Vance & Hines products 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 products 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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# 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 air filter kit, 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 air filter kit, 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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