



IEBACA4

Integrated Engineering MK IV Oil Catch Can Installation Guide

In this DIY, we will be covering the installation of Integrated Engineering MK IV Oil Catch Can. This kit needs to be installed by a professional or by an experienced technician. Integrated Engineering is not responsible for any damage caused by incorrect installation. Serious engine damage can occur from incorrect installation.



Kit contents:

- (1) Catch Can w/Filter
- (2) -10 Catch Can Hoses
- (1) Stainless Mounting Tab
- (1) Billet Red Breather Adapter
- (1) -10 Red AN Valve Cover Bung
- (1) 30mm M6 Bolt
- (1) Nylon Locknut
- (1) 3/4" Aluminum Spacer
- (1) 3/4" Black Aluminum Plug
- (1) Vacuum Cap
- (1) Crimp Clamp
- (1) Worm Gear Clamp

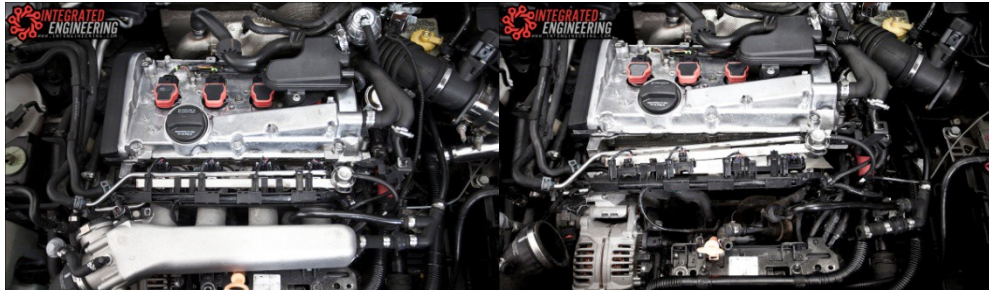
Tools Needed:

- 5mm allen wrench
- 4mm allen wrench
- 10mm combination wrench
- Small flat blade screw driver
- Wire cutters
- Oetiker clamp pliers
- Adjustable AN fitting wrench
- Teflon tape

- Rubber Mallet
- Heat gun
- Pliers

Before beginning the installation, unpack and inventory all components on a flat surface and verify that all pieces necessary are there before proceeding.

1. Park your vehicle on a level surface and apply the parking brake.
2. For the ease of installation we have removed our intake manifold from the engine. You are more than welcome to do the same, but installation is possible with the manifold still installed.



3. Start by removing the MAF from the turbo inlet hose. After the MAF has been removed, unclip the MAF wiring retainer located on the relay box (Figure 1 and 2).



Figure 1

Figure 2

4. Remove the top cover of the relay box by pressing on the tabs located on both sides of the top half of the box (Figure 3). Remove the whole relay box by pulling forward on the tap located on the firewall and lifting up on the box (Figure 4).



Figure 3

Figure 4

5. Remove the upper half of the relay box and both relays 100 and 428 (Figure 5 and 6).



Figure 5

Figure 6

6. Release the connector ends that are housed in the top half of the relay box by pressing on the securing tab and pressing down on the connector end at the same time (Figure 7).



Figure 7

7. Pull the wiring harness and grommet out of the lower half of the relay box and discard the box. The box will no longer be used any more (Figure 8).

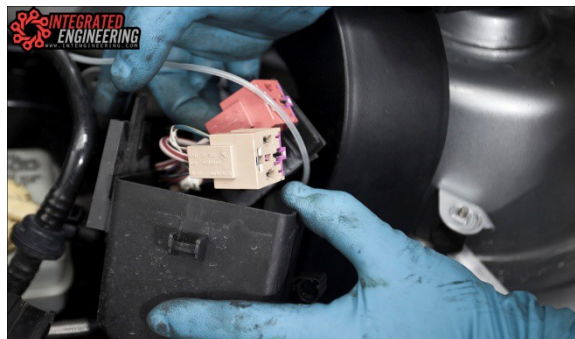


Figure 8

- Remove the weather strip that runs along the rain tray. Remove the main wiring harness cover by releasing the mounting tabs located at the top of the cover. Use a small screwdriver and gently pry the tabs apart on both sides of the cover as shown (Figure 9). Lift the rain tray up and gently pull the cover out from underneath the rain tray (Figure 10). Remove the cover from the vehicle.



Figure 9



Figure 10

- Install the corresponding relays back into their correct colored housings (Figure 11).



Figure 11

- In this step, great attention and detail must be taken as to not damage any of the wiring. Carefully with a razor knife cut away the electrical tape that attaches the grommet that was removed from the relay box (Figure 12). After the tape has been removed, carefully cut the grommet off of the harness and remove (Figure 13).



Figure 12

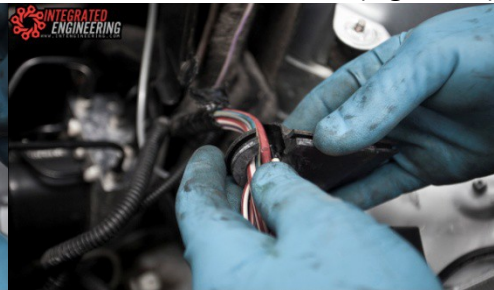


Figure 13

- Install the two relays into the main wiring harness channel as shown and then reinstall the cover. The relays make installing the cover tight fit, but with a little finesse and patience it is possible (Figure 14 and 15).



Figure 14



Figure 15

12. Remove the diverter valve from the inlet boot to gain access to the pressure regulating valve. Cut both of the factory crimp clamps from the pressure regulating valve and remove the valve from the inlet boot (Figure 16). Install the supplied hose clamp and then the plug which eliminates the need for this valve (Figure 17). Tighten the clamp so that the plug is firmly secured in the turbo inlet boot.

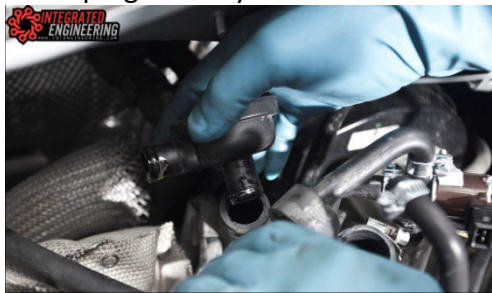


Figure 16



Figure 17

13. Remove the rubber PCV hose that connects to the valve cover and the hard plastic PCV hose (Figure 18).



Figure 18

14. There are three ports on the suction jet pump located under the intake manifold. There are two straight barbed ends on each end of the pump and one that branches off at a 45 degree angle. Cut the clamp that secures the hose on the suction jet pump that runs in the 45 degree direction (Figure 19).



Figure 19

15. Locate the grey crank position sensor connector end, mounted on the oil breather housing and remove from the bracket by lifting up (Figure 20).



Figure 20

16. Remove the green U clip that secures the breather hose coming from the oil filter housing. Remove all of breather hoses as shown in the illustration below. There is an o-ring that is located in the top of the breather housing. Make sure you do not lose this o-ring, as you will need it upon reinstallation. Clean the breather opening with a clean rag (Figure 21).



Figure 21

17. Using the supplied red breather adapter and the supplied hose with the 90 degree -10 AN fitting, hold the adapter in your hand so that the flats on the adapter are grasped

between your index finger and thumb. Position the fitting at a 90 degree position and tighten (Figure22). Install the o-ring onto the adapter as shown (Figure23).



Figure 22



Figure 23

18. Install the adapter back into the breather housing with the catch can hose pointed to the driver side. Install the green U clip around the breather adapter and place the crank position sensor back into the connector holder (Figure 24 and 25).



Figure 24



Figure 25

19. Place the supplied vacuum cap on the suction jet pump and use the supplied crimp clamp to secure the cap (figure 26).



Figure 26

20. Assemble the bracket, bolt and spacer as shown (Figure 27).



Figure 27

21. Install the bracket in the location of the relay box as seen below. You will need a 5mm allen wrench and 10mm wrench (Figure 28 and 29).

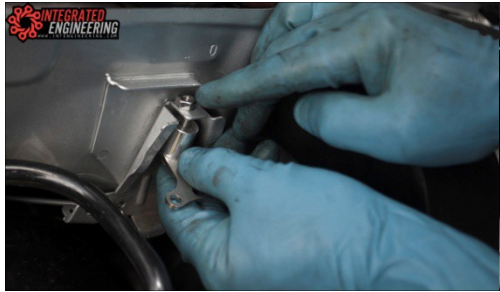


Figure 28



Figure 29

22. Remove both of the -10 AN to 1/2" pipe fittings from the hose ends. Apply a light layer of Teflon tape to the hose ends and install onto the catch can until the fittings are snug. Point the fittings at a downward angle (Figure 30).



Figure 30

23. Install the catch can onto the bracket that is mounted to the firewall using the three supplied bolts with a 4mm allen wrench. Tighten the straight AN fitting on the hose coming from the block breather to the catch can (Figure 31 and 32).



Figure 31



Figure 32

24. Remove the bung that is connected to the valve cover. Using a pair of pliers rotate the bung in a clockwise and counter clockwise fashion, while pulling the bung to the driver fender. Once the stock bung is removed, use a heat gun to heat the area of the valve cover where the new bung is going to be installed. If a heat gun is not available you can freeze the fitting. Place the fitting in the hole located in the valve cover and gently tap in the new bung with a rubber mallet (Figure 33 and 34).

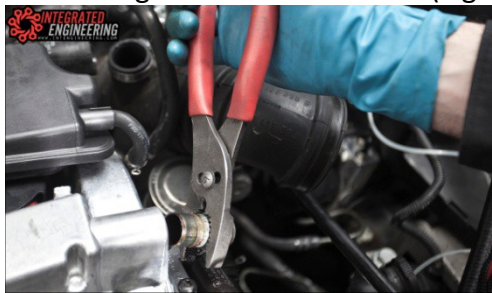


Figure 33



Figure 34

25. Install the last remaining line with the 45 degree fitting going to the valve cover, and tighten so that the fitting is in the downward position. Route the breather hose under the turbo inlet hose and connect the straight AN fitting to the catch can. At this time tighten the fittings to the catch can (Figure 35 and 36).

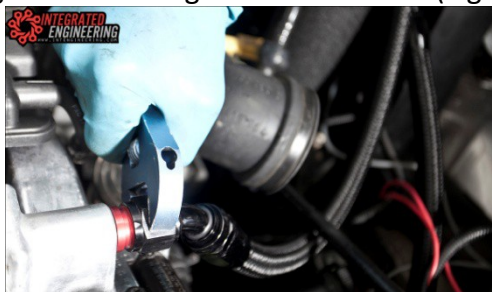


Figure 35



Figure 36

26. Install the supplied catch can filter (Figure 37).



Figure 37

27. Reinstall the MAF, diver valve and air box/CAI. Make sure that the MAF is installed in the correct position so that drivability problems are not an issue. If everything is installed correctly the engine compartment should look as follows. Make sure that the catch can hoses do not impede the travel of the shift tower or linkages. If this is the case make minor adjustments to the hoses (Figure 38).

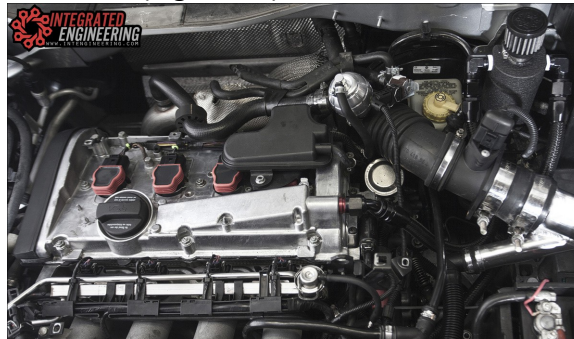


Figure 38

Thank you for purchasing another Integrated Engineering product. We are dedicated to serving your VW/Audi engine and performance needs. Please check our website frequently for new product releases. If you have any questions or concerns about this product please do not hesitate to contact us.

Integrated Engineering

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