



INSTALLATION INSTRUCTIONS

Dual Catch Can Kit

02-14 Subaru Turbo and 2015+ STi

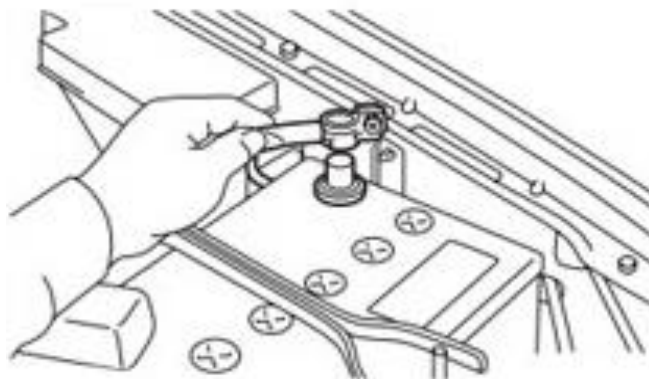
Document# 19-0099

Support: info@radiumauto.com

Instructions are based on a vehicle with an OEM turbocharger and top-mount intercooler. If a front-mount intercooler or rotated turbo are used, some steps may not apply and the installation may have to be modified accordingly. Furthermore, please know the Subaru engine code as this document is split into 3 sections based on engine type: **EJ205** **EJ257** and **04-07 EJ255** **08-14 EJ255**

1. **SUBARU EJ205 ENGINE**

Using a 10mm wrench, remove the negative terminal from the battery.



2. **SUBARU EJ205 ENGINE**

Remove the intercooler by loosening 1 hose clamp on the throttle body and 1 on the small coupler coming off the turbocharger outlet. Remove the bolts from the mounts on each side of the intercooler. Unbolt the recirculation valve from the intercooler (leave it connected to the hose).

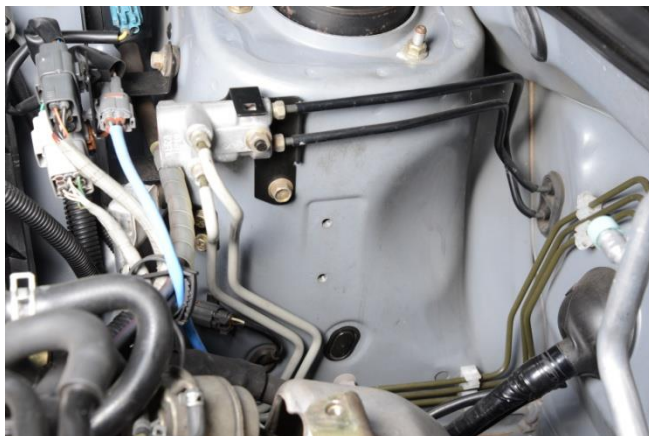
Unbolt the hard black crank breather tube from the bottom of the intercooler. Carefully lift out the intercooler and set aside.



3. **SUBARU EJ205 ENGINE**

Locate the two threaded holes on the RH strut tower. These are the threaded bosses that the catch can kit will use for mounting.

See note below if these holes are used for some other parts.



4. SUBARU EJ205 ENGINE

NOTE: If the mounting bosses in step 2 are already being used, these parts will need to be relocated.

As shown in the picture, the resistor pack would need to be relocated out of the way of the catch cans as well as the buzzer and bracket.

If the cruise control module is still present on the vehicle, please purchase Radium P/N: 13-0110, Cruise Control Relocation Bracket (sold separately).



5. SUBARU EJ205 ENGINE

Lineup the included mounting bracket to the 2 threaded holes. NOTE: There is a chance that the lower brake line will need to be slightly adjusted for bracket fitment. Gently pull the hard brake line upwards until the bracket fits without chaffing.



6. SUBARU EJ205 ENGINE

Secure the Radium mounting bracket in place using the two included M6 bolts using a 4mm Allen wrench.

Next, lubricate the O-rings found on the two included -6AN adapter fittings with light engine oil. Assemble and tighten each fitting into a catch can.

This catch can will be used for the PCV valve hose. Mount it in the location closest to the firewall. Apply medium strength thread locker to two flat-head countersink M5 screw threads. Using a 3mm Allen wrench, fasten the catch can in the bracket's two countersink holes, as shown.

Do not install any other mounting screws at this time.



7. SUBARU EJ205 ENGINE

Repeat the process using the other catch can and the -8AN adapter fittings. Install into the other location on the mounting bracket.

If you will be using the optional remote drain kit(s), this is the time to install them. Cut the hose(s) to length and place the quick drain valve(s) in a convenient location.

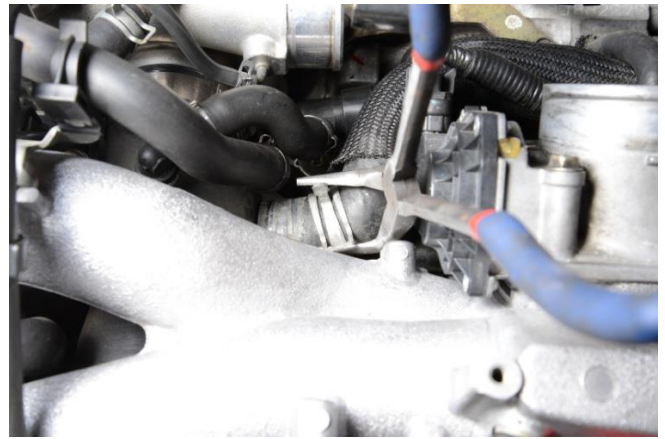


8. SUBARU EJ205 ENGINE

Disconnect the recirculation hose from the turbo air inlet pipe.

Remove the hose with the recirculation valve still attached and set aside.

Next, remove the throttle body by loosening and removing the four mounting bolts. If the gasket is not damaged, it can be reused.



9. SUBARU EJ205 ENGINE

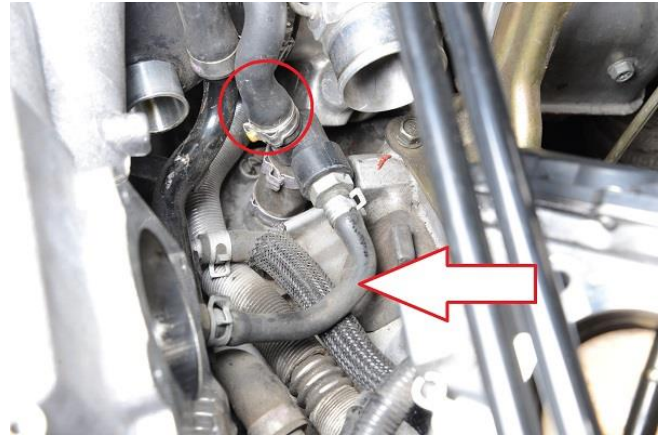
The early model PCV valve is screwed into the intake manifold port (not shown). Also, it has a large 5/8" barb diameter. The diagram shows how the PCV system works from the factory (not with the catch can installed).



10. SUBARU EJ205 ENGINE

Disconnect and remove the hose (arrow) that routes from the 3-way TEE to the intake manifold. This hose will not be reused.

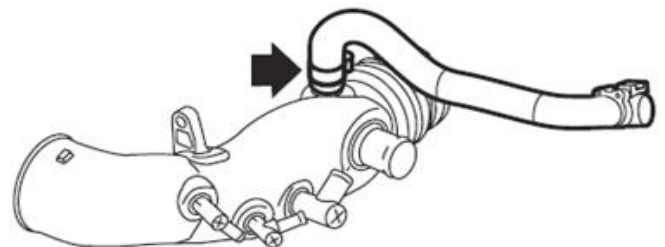
Also, remove the connection going from the 3-way TEE to the turbo inlet pipe (circled). Follow the next step regarding this same hose.



11. SUBARU EJ205 ENGINE

Follow the hose to the turbo inlet pipe. This OEM hose will not be reused.

Remove the clamp (shown). Install the provided 1/2" rubber cap onto the now vacant barb nipple on the turbo inlet pipe.



12. SUBARU EJ205 ENGINE

The associated large barbs found on the PCV valve and the 3-way TEE will need to be converted to 3/8" barbs in order to work with the provided 6AN hose end fittings.

First, insert the large side of the included barb to barb reducing couplers into each end of the provided 5/8" hose (as shown). These connections do NOT require clamps. Continue to the following step.



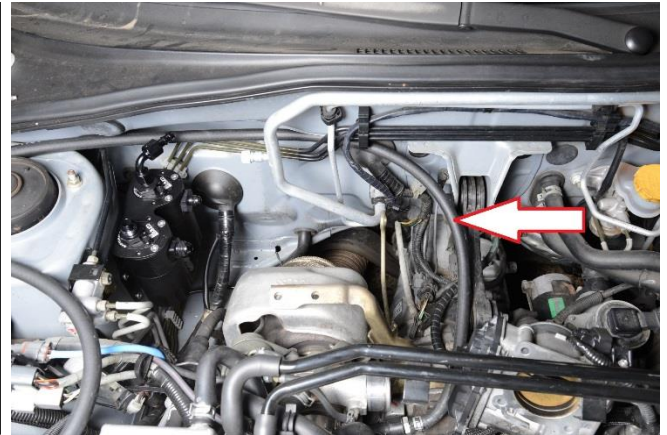
13. SUBARU EJ205 ENGINE

Cut the 5/8" hose in half.

As shown, attach one section of hose to the PCV valve (this will be screwed into the intake manifold). Attach the other section of hose to the large 3-way TEE barb.

NOTE: strategically cut the 5/8" hose for best fitment if added length is necessary for the specific application.

To secure these two connections, reuse the OEM spring clamp. This will now permit 6AN hose end fittings.



14. SUBARU EJ205 ENGINE

Attach one end of the provided 3/8" hose to the plastic reducing barb fitting from the previous step. A clamp is not necessary for this connection. Route the hose back toward the firewall.



15. SUBARU EJ205 ENGINE

Loosely install one of the provided 90 degree push-lok hose ends to the top fitting of the catch can closest to the firewall, as shown.

Run the hose from the previous step along the firewall underneath the brake lines and piping over to the catch can, as shown. Measure and cut the hose to the proper length. Ensure the hose is not kinked or pinched.



16. SUBARU EJ205 ENGINE

Using light lubrication, install the push-lok hose end into the 3/8" hose until all barbs are fully engaged.

Orient the hose end on the top catch can fitting and tighten down. The hose routing should resemble this picture.

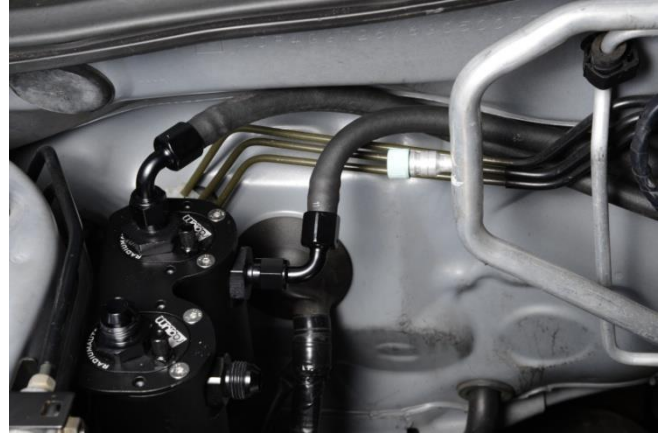


17. SUBARU EJ205 ENGINE

Loosely install another 90 degree push-lok hose end onto the side fitting of the catch can closest to the firewall.

Attach the included 3/8" hose to the plastic reducing barb fitting. A clamp is not necessary for this connection. Route this hose in a similar manner to the other. Cut to length. Install the hose fully on the hose end.

The hose end in the side port of this catch can should be horizontal and pointing toward the firewall. This will ensure proper fitment for the heat shield in later steps. Tighten all fittings in place.



18. SUBARU EJ205 ENGINE

As shown, use the included cable zip-ties to keep the hoses away from moving and/or hot engine parts such as the downpipe and turbocharger.



19. SUBARU EJ205 ENGINE

Install a section of 1/2" hose onto the 3-way TEE in the location shown. This connection to the 3-way TEE fitting is a tight fit, so light lubrication will be necessary. No clamp is required on this hose.

Leave this hose disconnected at the other end as it will connect to the included TEE fitting near the coolant tank in later steps.



20. SUBARU EJ205 ENGINE

Reinstall the recirculation hose back onto the turbo air inlet pipe and route it as it was originally.

As shown, the throttle body can be reinstalled.

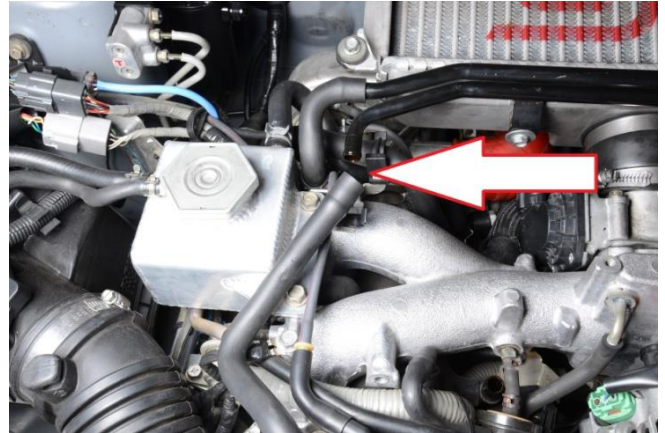
NOTE: Before reinstalling the intercooler, it is a good idea to clean the inside to get rid of any previous oil build up.



21. SUBARU EJ205 ENGINE

As shown, disconnect and remove the hose that runs from the black metal crossover tube to the turbo air inlet pipe. This hose will NOT be reused.

NOTE: the OEM hoses that connect from the vertical valve cover breather ports to the crossover tube will remain connected and unmodified.



22. SUBARU EJ205 ENGINE

Loosely install both 90 degree 8AN push-lok hose ends to the top and side fittings of the front-most catch can.

Connect one end of the provided ½" hose to the crossover tube. Next, route the hose over to the catch can top port hose end. Cut the hose to length and install onto the hose end, as shown in blue.

Click the hose end for best fitment and tighten.



23. SUBARU EJ205 ENGINE

Connect one end of the provided ½" hose to the turbo inlet pipe hose barb. Next, route this hose to the catch can side port. Cut the hose to length and install on the hose end, as shown in red.

Orientate this hose end horizontally pointing towards the front of the vehicle for proper fitment with the heat shield.

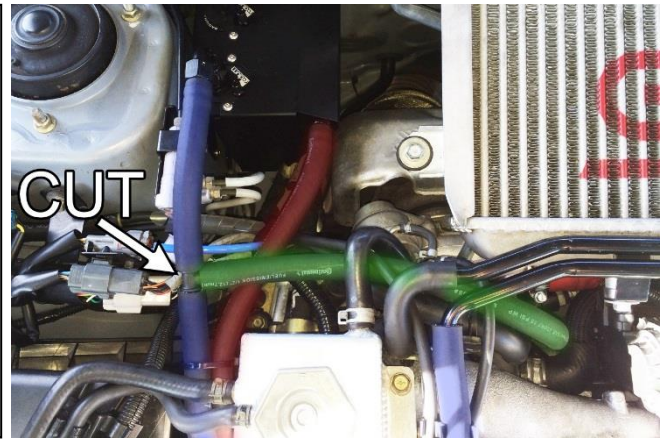
Secure the hoses together with the included zip ties, as shown.



24. SUBARU EJ205 ENGINE

Cut a ½" section out of the hose shown. This cut should be made just behind the coolant tank. Next, install the provided TEE fitting in line with the branch of the TEE pointing toward the throttle body.

Route the loose ½" hose under the hoses in the area, as depicted in green. Cut it to length and secure to the included TEE fitting. A clamp is not required on these connections.



25. SUBARU EJ205 ENGINE

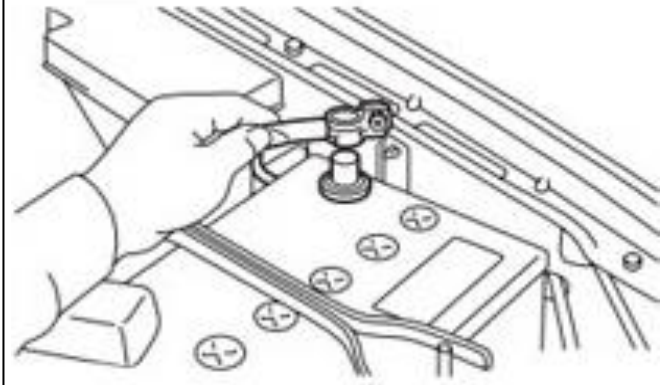
Slide the heat shield into position. Using a 3mm Allen wrench, secure the heat shield in place using the four M5 button-head screws, as shown. Do NOT use thread locker on these screws. **Installation complete. NOTE: Because of engine variances, it is normal to have left over parts that will not be used.**

Check the oil level in the catch cans regularly by simply unscrewing the dipsticks. To drain, service, or clean out the catch cans, simply remove the heat shield and unscrew the lower half of the catch can bodies. The condensing filtration media can be cleaned with any standard degreaser.



1. SUBARU EJ257 / 04-07 EJ255 ENGINE

Using a 10mm wrench, remove the negative terminal from the battery.



2. SUBARU EJ257 / 04-07 EJ255 ENGINE

Remove the intercooler by loosening 1 hose clamp on the throttle body and 1 on the small coupler coming off the turbocharger outlet. Remove the bolts from the mounts on each side of the intercooler. Unbolt the recirculation valve from the intercooler (leave it connected to the hose).

Unbolt the hard black crank breather tube from the bottom of the intercooler. Carefully lift out the intercooler and set aside.

NOTE: If removing the 2015+ STi "sound generator tube" to increase accessibility, see Subaru intake hose P/N: 46013AG020 (if still using the OEM intake).



3. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

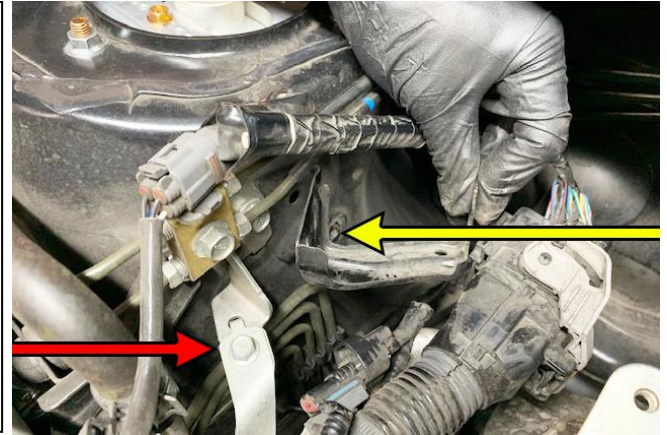
Find the large engine harness on the RH strut tower. The large connector will first need to be separated from the mounting bracket. Using a flat blade, simultaneously push the internal locking tab and pull apart to separate.



4. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Using a 10mm socket, remove the engine harness mount (yellow arrow). This bracket and bolt will not be reused. Some vehicles will use 2 bolts in this location. These are the threaded bosses that the catch can kit will use for mounting.

Using a 10mm socket, temporarily unscrew the mounting bracket bolt (red arrow) from the power steering mount.



5. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Using needle nose pliers, dislodge the O2 sensor connector plastic stay from the brake hard line mount shown.

Unplug the O2 sensor connector.



6. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Using a 10mm socket, temporarily remove the two M6 bolts that secure the power steering reservoir.



7. SUBARU EJ257 / 04-07 EJ255 ENGINE

Using a flat blade, carefully push the engine harness connector tab inwards while simultaneously rotating the large swinging lock to separate the connectors.

Pull the front portion of the engine harness forward and around the brake and power steering bracket and brake hard line mount. Reconnect the large engine harness connectors. Make sure the connectors are fully engaged and the lever is closed.

To gain the required clearance for the catch cans, position the large engine connectors lower than the power steering hose on the RH strut tower.



7. SUBARU EJ257 / 04-07 EJ255 ENGINE

Lineup the included mounting bracket to the 2 threaded holes. NOTE: There is a chance that the lower brake line will need to be slightly adjusted for bracket fitment. Gently pull the hard brake line upwards until the bracket fits without chaffing.



8. SUBARU EJ257 / 04-07 EJ255 ENGINE

Secure the Radium mounting bracket in place using the two included M6 bolts using a 4mm Allen wrench. NOTE: Mounting bracket shown may be different.

Next, lubricate the O-rings found on the two included -6AN adapter fittings with light engine oil. Assemble and tighten each fitting into a catch can.

This catch can will be used for the PCV valve hose. Mount it in the location closest to the firewall. Apply medium strength thread locker to 2 flat-head M5 screw threads. Using a 3mm Allen wrench, fasten the catch can to the bracket, as shown.

Do not install any other mounting screws at this time.



9. SUBARU EJ257 / 04-07 EJ255 ENGINE

Repeat the process using the other catch can and the -8AN adapter fittings. Install into the other location on the mounting bracket.

If you will be using the optional remote drain kit(s), this is the time to install them. Cut the hose(s) to length and place the quick drain valve(s) in a convenient location.

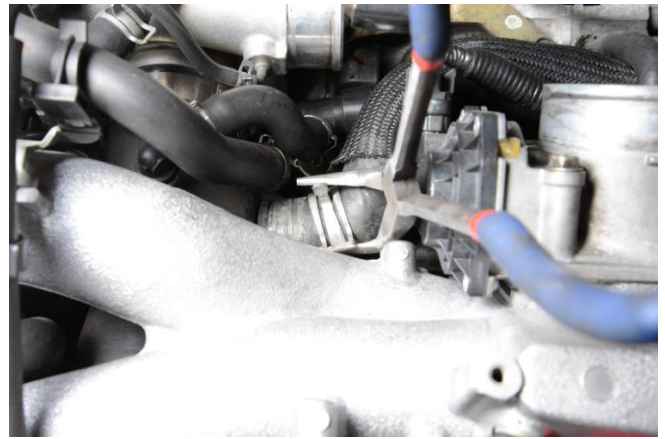


10. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Disconnect the recirculation hose from the turbo air inlet pipe.

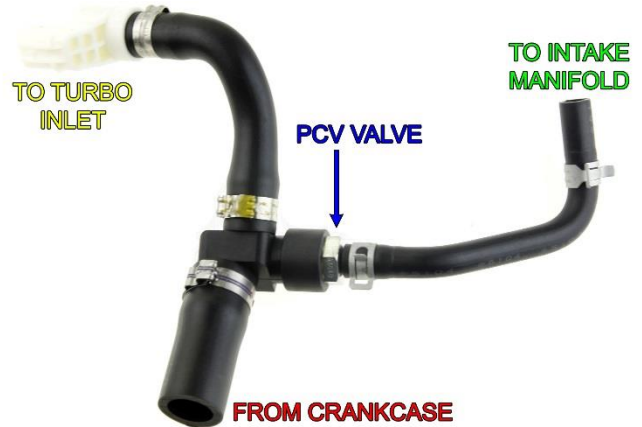
Remove the hose with the recirculation valve still attached and set aside.

Next, remove the throttle body by loosening and removing the four mounting bolts. If the gasket is not damaged, it can be reused.



11. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

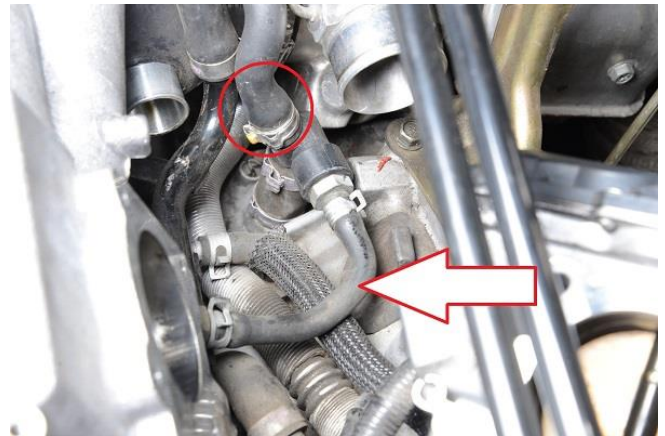
The 3-way TEE and PCV valve for the crankcase hoses will now be visible. The PCV valve is screwed into the 3-way TEE (shown). It has a 3/8" barb diameter. The diagram shows how the PCV system works from the factory (not with the catch can installed).



12. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Disconnect and remove the hose (arrow) that routes from the 3-way TEE to the intake manifold. This hose will not be reused.

Also, remove the connection going from the 3-way TEE to the turbo inlet pipe (circled). This hose may be held on with a crimp-style clamp. Peel back the banding to undo the crimp. Follow the next step regarding this same hose.



13. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Follow the hose to the turbo inlet pipe. This OEM hose will not be reused.

These engines will have an electrical connector tube on the OEM hose on the turbo inlet pipe. This PCV leak detection plug is used to communicate to the computer for diagnostic purposes. In particular, for cases when the PCV system is mistakenly disconnected.

For OEM and aftermarket turbo inlets that support this diagnostic connector, leave it attached to the turbo inlet pipe. Install the provided 1/2" rubber cap onto the now vacant barb nipple of the diagnostic connector.

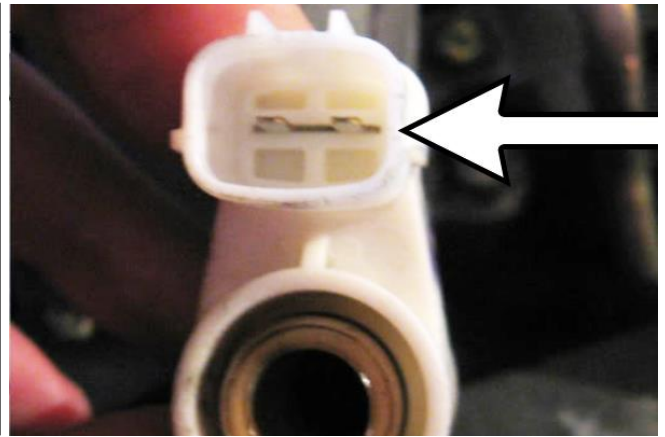


14. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

For aftermarket turbo inlets that do NOT support the OEM diagnostic connector, extra parts may need to be purchased. All that matters is that this port on the turbo inlet must be blocked off or plugged in some manner.

To eliminate the diagnostic connector, simply separate it from its post using a flat blade. It will pop off as it has an internal O-ring seal.

Using needle nose pliers, carefully pull to dislodge the small metal jumper shunt (shown) inside the PCV leak detection diagnosis connector. It is not a resistor.



15. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Attach this piece to the wiring harness female terminals, as shown.



16. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Insulate this wiring junction with electrical tape to prevent accidental shorting. The mating connector should be tucked out of the way.



17. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

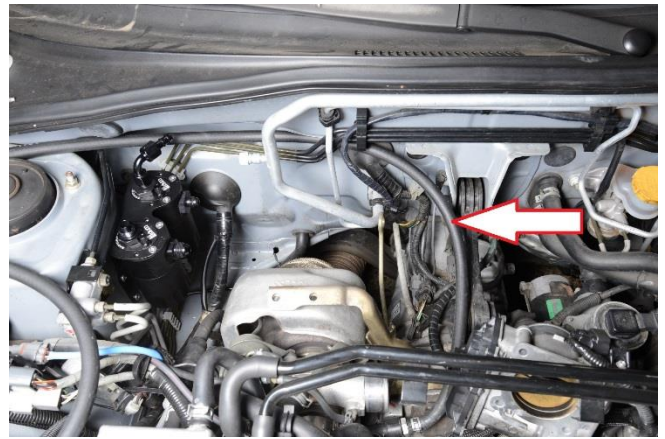
Attach one end of the provided 3/8" hose to the 3/8" barb on the 3-way TEE. Reference the picture to know which barb to use for the specific 3-way TEE installed. Secure using one of the OEM spring hose clamps. Route the hose back toward the firewall.



18. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Loosely install one of the provided 90 degree push-lok hose ends to the top fitting of the catch can closest to the firewall, as shown.

Run the hose from the previous step along the firewall underneath the brake lines and piping over to the catch can, as shown. Measure and cut the hose to the proper length. Ensure the hose is not kinked or pinched.



19. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Using light lubrication, install the push-lok hose end into the 3/8" hose until all barbs are fully engaged.

Orient the hose end on the top catch can fitting and tighten down. The hose routing should resemble this picture.



20. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Attach the included 3/8" hose to the intake manifold's barb fitting.

Use either the OEM hose clamp or one of the included clamps depending on which secures best for the specific application.



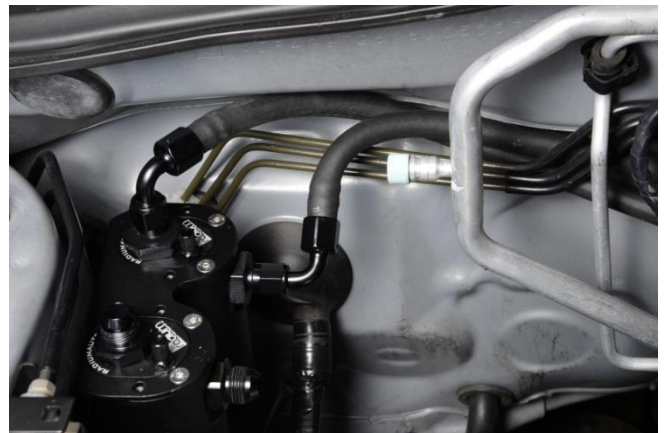
21. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Route this hose in a similar manner to the other.

Loosely install another 90 degree push-lok hose end onto the side fitting of the catch can closest to the firewall.

Route the second hose, measure, and cut. Install the hose fully on the hose end.

The hose end in the side port of this catch can should be horizontal and pointing toward the firewall. This will ensure proper fitment for the heat shield in later steps. Tighten all fittings in place.



22. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

As shown, use the included cable zip-ties to keep the hoses away from moving and/or hot engine parts such as the downpipe and turbocharger.



23. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Install a section of $\frac{1}{2}$ " hose onto the 3-way TEE in the location shown. This connection to the 3-way TEE fitting is a tight fit, so light lubrication will be necessary. No clamp is required on this hose.

Leave this hose unconnected at the other end as it will connect to the included TEE fitting near the coolant tank in later steps.



24. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

Reinstall the recirculation hose back onto the turbo air inlet pipe and route it as it was originally.

As shown, the throttle body can be reinstalled.

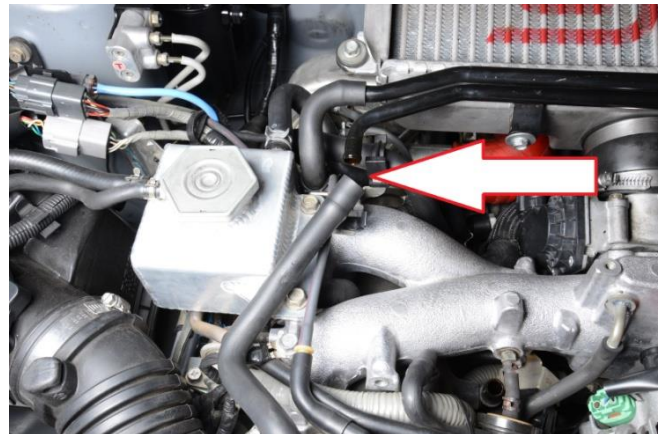
NOTE: Before reinstalling the intercooler, it is a good idea to clean the inside to get rid of any previous oil build up.



25. [SUBARU EJ257 / 04-07 EJ255 ENGINE](#)

As shown, disconnect and remove the hose that runs from the black metal crossover tube to the turbo air inlet pipe. This hose will NOT be reused.

NOTE: the OEM hoses that connect from the vertical valve cover breather ports to the crossover tube will remain connected and unmodified.



26. SUBARU EJ257 / 04-07 EJ255 ENGINE

Loosely install both 90 degree 8AN push-lok hose ends to the top and side fittings of the front-most catch can.

Connect one end of the provided ½" hose to the crossover tube. Next, route the hose over to the catch can top port hose end. Cut the hose to length and install onto the hose end, as shown in blue.

Clock the hose end for best fitment and tighten.



27. SUBARU EJ257 / 04-07 EJ255 ENGINE

Connect one end of the ½" hose to the turbo inlet barb. Route this hose to the catch can side port. Cut the hose to length and install on the hose end as shown in red. Orientate this hose end horizontally pointing towards the front of the vehicle for proper fitment. Secure the hoses together with the zip ties, as shown.

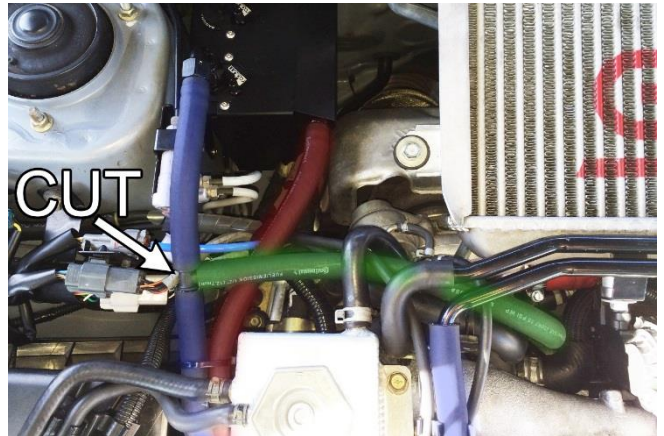
NOTE: For late model EJ257 engines, there is a white connector (not shown) on the "RED" line. This white tube is a PCV leak detection plug. Using a flat head, remove the grey connector from the black tube. Using needle nose pliers, dislodge the small metal jumper inside the connector. It is not a resistor. Attach this piece to the wiring harness female terminals. Insulate this wiring junction with electrical tape to prevent shorting. Tuck the mating connector out of the way. Next, remove and discard this same hose from the turbo inlet pipe.



28. SUBARU EJ257 / 04-07 EJ255 ENGINE

Cut a ½" section out of the hose. This cut should be made just behind the coolant tank. Next, install the provided TEE fitting in line with the branch of the TEE pointing toward the throttle body.

Route the loose ½" hose under the hoses in the area, as depicted in green. Cut it to length and secure to the included TEE fitting. A clamp is not required on these connections.



29. SUBARU EJ257 / 04-07 EJ255 ENGINE

Slide the heat shield into position. Using a 3mm Allen wrench, secure the heat shield in place using the four M5 button-head screws, as shown. Do NOT use thread locker on these screws. **Installation complete. NOTE: Because of engine variances, it is normal to have left over parts that will not be used.**

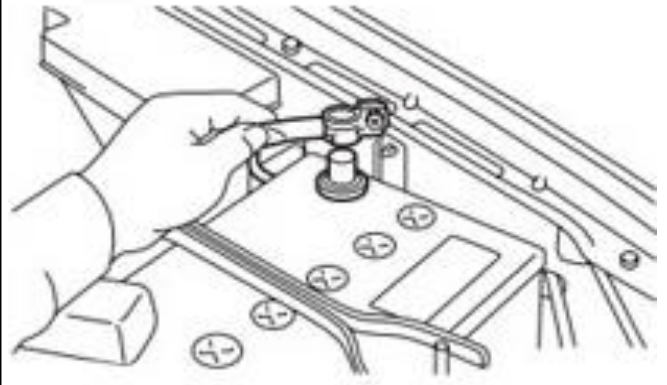
Check the oil level in the catch cans regularly by simply unscrewing the dipsticks. To drain, service, or clean out the catch cans, simply remove the heat shield and unscrew the lower half of the catch can bodies. The condensing filtration media can be cleaned with any standard degreaser.



1. 08-14 SUBARU EJ255 ENGINE

NOTE: IF THE VEHICLE HAS THE EARLY MODEL EJ255 ENGINE WITH AN ALUMINUM INTAKE MANIFOLD, USE THE EJ257 INSTRUCTIONS LISTED ABOVE.

Using a 10mm wrench, remove the negative terminal from the battery.



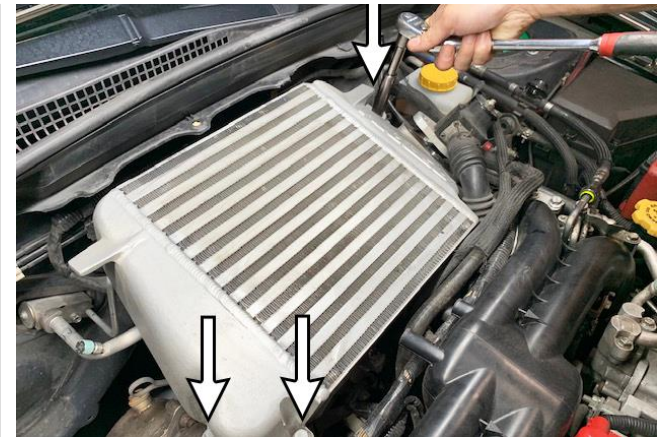
2. 08-14 SUBARU EJ255 ENGINE

Using a 10mm socket wrench, remove two M6 bolts from the bypass valve.



3. 08-14 SUBARU EJ255 ENGINE

Using a 12mm socket remove the three M8 bolts that secure the intercooler.



4. 08-14 SUBARU EJ255 ENGINE

Using a flat head screwdriver, loosen the intercooler outlet hose clamp.



5. 08-14 SUBARU EJ255 ENGINE

Remove the LH side intercooler bracket. Move the intercooler back and forth to dislodge. Do not lose the turbo outlet gasket on the intercooler inlet. Carefully pull the intercooler upwards and remove from the vehicle.



6. 08-14 SUBARU EJ255 ENGINE

Find the large engine harness on the RH strut tower. The large connector will first need to be separated from the mounting bracket. Using a flat blade, simultaneously push the internal locking tab and pull apart to separate.



7. 08-14 SUBARU EJ255 ENGINE

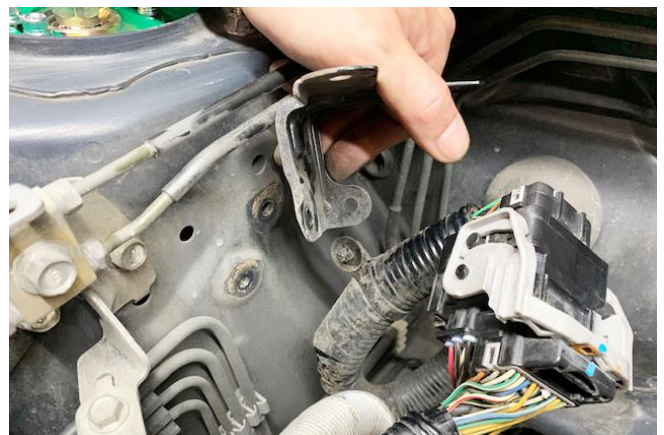
Using a 10mm socket, remove the engine harness mount. These bolts and bracket will not be reused.

These are the threaded bosses that the catch can kit will use for mounting.



8. 08-14 SUBARU EJ255 ENGINE

Using needle nose pliers, dislodge the wiring loom's plastic stay, as shown.



9. 08-14 SUBARU EJ255 ENGINE

Unlatch the grey lock on the engine harness connector.



10. 08-14 SUBARU EJ255 ENGINE

Pully pivot the grey latch. This will disconnect the electrical plug.



11. 08-14 SUBARU EJ255 ENGINE

Using a 10mm socket, temporarily unscrew the mounting bracket bolt from the power steering mount.

Pull the front portion of the engine harness forward and around the brake and power steering bracket and brake hard line mount. Reconnect the large engine harness connectors. Make sure the connectors are fully engaged and the lever is closed.

To gain the required clearance for the catch cans, position the large engine connectors lower than the power steering hose on the RH strut tower.



12. 08-14 SUBARU EJ255 ENGINE

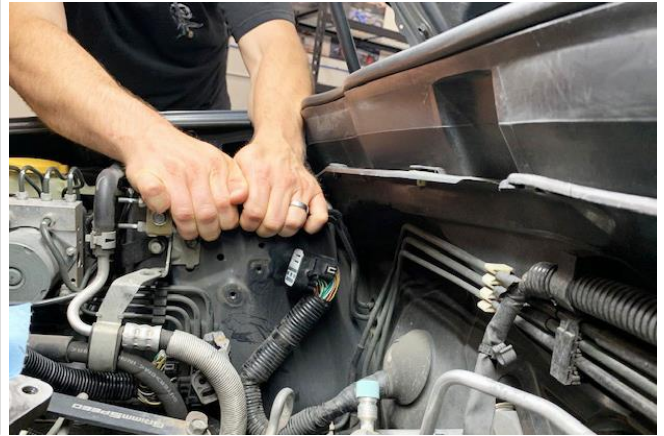
Pull the front portion of the engine harness forward and around the brake and power steering bracket and brake hard line mount. Reconnect the large engine harness connectors. Make sure the connectors are fully engaged and the lever is closed.

To gain the required clearance for the catch cans, position the large engine connectors lower than the power steering hose on the RH strut tower.



13. 08-14 SUBARU EJ255 ENGINE

Lineup the included mounting bracket to the 2 threaded holes. NOTE: There is a chance that the lower brake line will need to be slightly adjusted for bracket fitment. Gently pull the hard brake line upwards until the bracket fits without chaffing.



13. 08-14 SUBARU EJ255 ENGINE

Secure the Radium mounting bracket in place using the two included M6 bolts using a 4mm Allen wrench. NOTE: Mounting bracket shown may be different.

Next, lubricate the O-rings found on the two included -6AN adapter fittings with light engine oil. Assemble and tighten each fitting into a catch can.

This catch can will be used for the PCV valve hose. Mount it in the location closest to the firewall. Apply medium strength thread locker to 2 flat-head M5 screw threads. Using a 3mm Allen wrench, fasten the catch can to the bracket, as shown.

Do not install any other mounting screws at this time.



14. 08-14 SUBARU EJ255 ENGINE

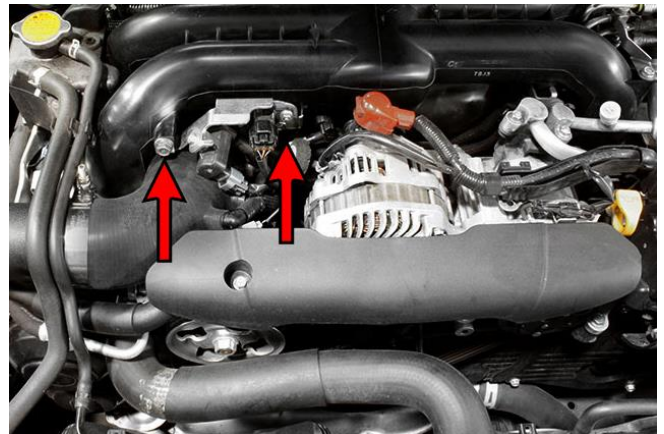
Repeat the process using the other catch can and the -8AN adapter fittings. Install into the other location on the mounting bracket.

If you will be using the optional remote drain kit(s), this is the time to install them. Cut the hose(s) to length and place the quick drain valve(s) in a convenient location.



15. 08-14 SUBARU EJ255 ENGINE

For accessibility, remove the bolts (shown) that hold the wastegate solenoid bracket. Temporarily move the wastegate solenoid assembly to the side.



16. 08-14 SUBARU EJ255 ENGINE

Using pliers, disconnect and remove the hose that runs from the black plastic molded crossover tube to the turbo air inlet pipe. This hose will NOT be reused.

NOTE: after this hose is removed, use the provided vacuum cap to plug this port on the turbo inlet pipe.



17. 08-14 SUBARU EJ255 ENGINE

On each side of the engine there are 2 vertical crankcase vent ports on the valve covers (4 total). The rearward port crankcase hoses will NOT be modified. For the frontmost ports, leave the hoses connected to the valve covers.

Using pliers, disconnect and remove the OEM spring clamps on each side of the black plastic molded crossover tube.



18. 08-14 SUBARU EJ255 ENGINE

Prior to removing the black plastic molded crossover tube, the throttle body connector and the knock sensor will need to be disconnected.



19. 08-14 SUBARU EJ255 ENGINE

Remove the M6 bolts that secure the black plastic molded crossover tube using a 10mm socket wrench. This will NOT be reused. Reinstall the single bolt for the blow-off recirculation valve and reconnect the knock sensor and throttle body connectors.

Install the included vacuum cap to the turbo inlet port.

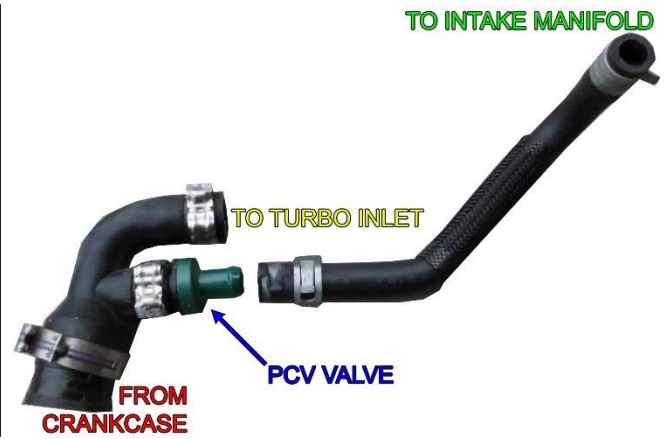


20. 08-14 SUBARU EJ255 ENGINE

After unplugging the secondary injection connector, you will find the 3-way junction behind the intake manifold. This includes the crankcase vent which send vapors to the turbo inlet pipe as well as the PCV valve which routes vapors to the intake manifold.

The next step is to remove the connection going from the 3-way junction to the turbo inlet pipe.

NOTE: The diagram shows how the PCV system works from the factory (not with the catch can installed).



21. 08-14 SUBARU EJ255 ENGINE

This hose that connects to the 3-way junction that routes to the turbo inlet pipe may be held on with a crimp-style clamp. Peel back the banding to undo the crimp.



22. 08-14 SUBARU EJ255 ENGINE

Separate the white connector from the 3-way junction, as shown.



23. 08-14 SUBARU EJ255 ENGINE

Press the grey connector thumb tab to unlock and release the white connector, as shown.

NOTE: This white electrical connector tube is a PCV leak detection plug. It is used to communicate to the computer for diagnostic purposes. In particular, for cases when the PCV system is mistakenly disconnected.



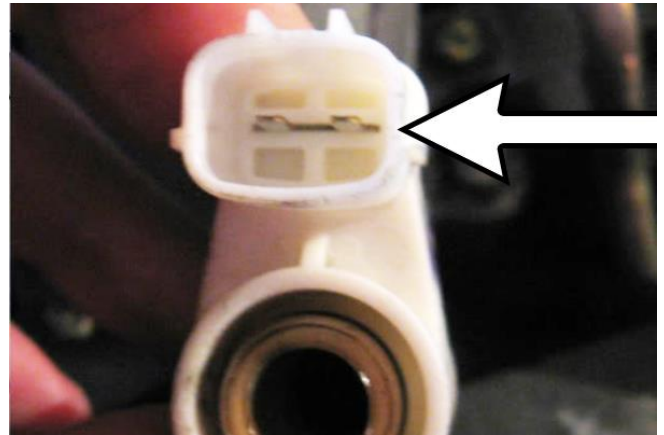
24. 08-14 SUBARU EJ255 ENGINE

Using a flat head screwdriver, remove the grey wiring connector from the black tube, as shown.



25. 08-14 SUBARU EJ255 ENGINE

Using needle nose pliers, carefully pull to dislodge the small metal jumper shunt (shown) inside the PCV leak detection diagnosis connector. It is not a resistor.



26. 08-14 SUBARU EJ255 ENGINE

Attach this piece to the wiring harness female terminals, as shown.



27. 08-14 SUBARU EJ255 ENGINE

Insulate this wiring junction with electrical tape to prevent accidental shorting. The mating connector should be tucked out of the way.



28. 08-14 SUBARU EJ255 ENGINE

Next, remove this same hose connection from the turbo inlet pipe. This hose will NOT be reused.



29. 08-14 SUBARU EJ255 ENGINE

This PCV valve has no threads. Instead it simply pushes into the 3-way junction and has a 3/8" barb diameter. Gently pull it out of the 3-way junction.

Follow the PCV valve hose to the intake manifold. Using pliers remove the hose from the intake manifold barb. This OEM hose will not be reused.



30. 08-14 SUBARU EJ255 ENGINE

Install the provided 3/8" hose to the OEM PCV valve. Secure with the included spring clamp.



31. 08-14 SUBARU EJ255 ENGINE

Push the PCV valve back into the 3-way junction.

Loop the hose around towards the firewall.



32. 08-14 SUBARU EJ255 ENGINE

Loosely install one of the provided 90 degree push-lok hose ends to the top fitting of the catch can closest to the firewall. Cut the hose from the previous step to the proper length. Ensure the hose is not kinked or pinched.

Using light lubrication, install the push-lok hose end into the 3/8" hose until all barbs are fully engaged.

Orient the hose end on the top catch can fitting and tighten using a 11/16" non marring wrench. The hose routing should resemble this picture.



33. 08-14 SUBARU EJ255 ENGINE

Attach the remaining 3/8" hose to the intake manifold's barb fitting and secure with a spring clamp, as shown.



34. 08-14 SUBARU EJ255 ENGINE

Route this hose in a similar manner to the other.

Loosely install another 90 degree push-lok hose end onto the side fitting of the catch can closest to the firewall. Cut the hose and install it fully on the hose end using oil lubrication.

The hose end in the side port of this catch can should be horizontal and pointing toward the firewall. This will ensure proper fitment for the heat shield in later steps. Tighten all fittings in place.

Keep the hoses away from moving parts and hot areas. Secure them with the included zip ties.



35. 08-14 SUBARU EJ255 ENGINE

On the RH side of the engine, follow the short frontmost valve cover hose up until it mates to the diagnostic connector. Attach the included 1/2" hose to the barb on the opposing side of the connector. Secure with a spring clamp.



36. 08-14 SUBARU EJ255 ENGINE

Install the provided plastic 90 degree elbow into the top portion of the 3-way junction. Point it directly upwards. Run a short section of ½" hose up towards the new crossover hose. Merge the 2 hoses using the included TEE fitting, as shown.



37. 08-14 SUBARU EJ255 ENGINE

Next, install a section of ½" hose on the turbo inlet tube and secure with a spring clamp.

NOTE: of the 2 ports that have been modified on the turbo inlet pipe, this port is closest to the turbocharger. The front turbo inlet pipe port should be capped with a vacuum plug.



38. 08-14 SUBARU EJ255 ENGINE

Run this hose to the front catch can side port.

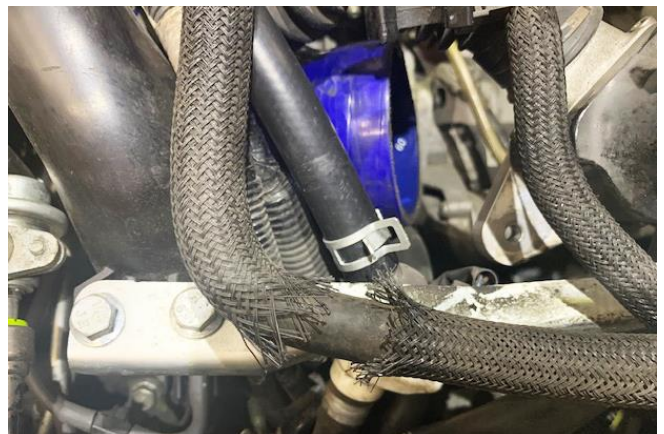
Loosely install a 90 degree 8AN push-lok hose end to the side fitting of the front-most catch can.

Cut the hose to length. Using oil lubrication install the hose end to the hose. As shown, tighten the hose to the catch can using a 11/16" non marring wrench.



39. 08-14 SUBARU EJ255 ENGINE

On the LH side of the engine, follow the short frontmost valve cover hose up until it mates to the diagnostic connector. Attach the remaining ½" hose to the barb on the opposing side of the connector. Secure with a spring clamp.



40. 08-14 SUBARU EJ255 ENGINE

Run the hose towards the TEE fitting and cut to length. Using oil lubrication install the hose to the TEE fitting, as shown.



41. 08-14 SUBARU EJ255 ENGINE

To install the provided plastic "Y" fitting to the new crossover hose, a section of the crossover hose will need to be removed. Put the Y- as close to the catch can as possible. This will require the end portion of the crossover hose to be cut 1.75" long.

Loosely install a 90 degree 8AN push-lok hose end to the top fitting of the front-most catch can.

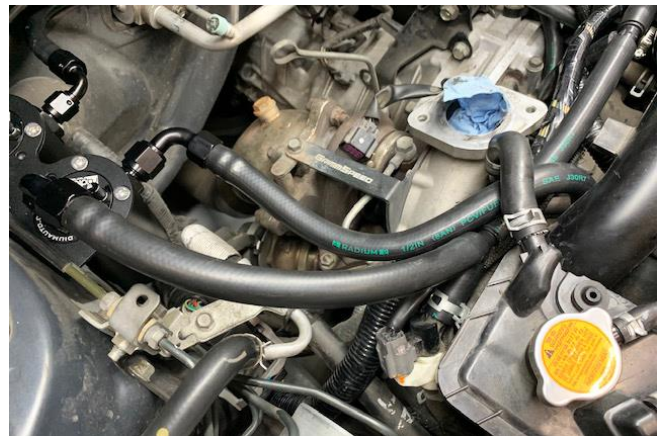
Run this hose to the front catch can top port and cut to length. Using oil lubrication install the hose end to the hose. Tighten the hose to the catch can using a 11/16" non marring wrench.



42. 08-14 SUBARU EJ255 ENGINE

Loosely install a 90 degree 8AN push-lok hose end to the top fitting of the front-most catch can.

Run this hose to the front catch can top port and cut to length. Using oil lubrication install the hose end to the hose. Tighten the hose to the catch can using an 11/16" non-marring wrench.



43. 08-14 SUBARU EJ255 ENGINE

Make sure all of the hose ends are positioned correctly and tight.



44. 08-14 SUBARU EJ255 ENGINE

Attempt to slide the heat shield into position. Depending on the vehicle, there is a chance the power steering hose may be contacting the heat shield. If this is the case, the OEM bracket will need to be tweaked slightly for added clearance.



45. 08-14 SUBARU EJ255 ENGINE

Slide the heat shield into position. Using a 3mm Allen wrench, secure the heat shield in place using the four M5 button-head screws, as shown. Do NOT use thread locker on these screws.



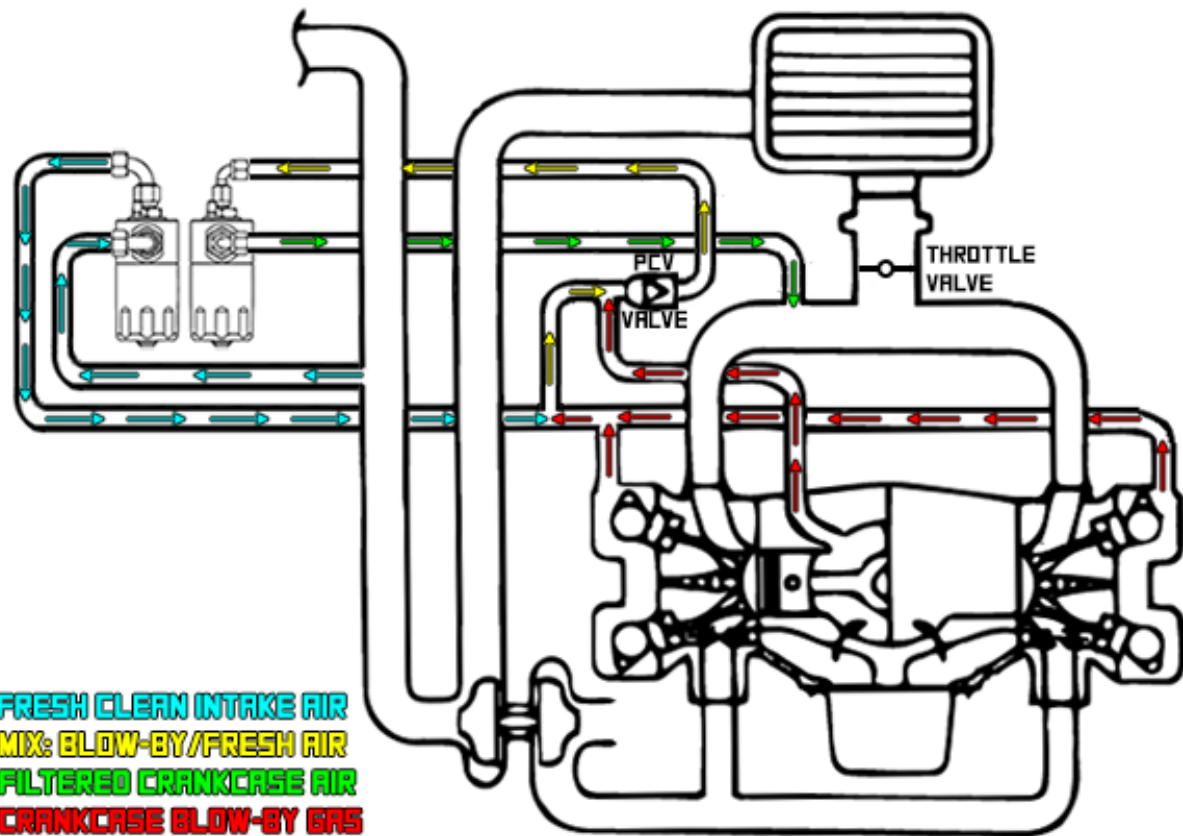
46. 08-14 SUBARU EJ255 ENGINE

Install everything in reverse order. Be sure the front-most turbo inlet port is plugged, as shown. **Installation Complete. NOTE: Because of engine variances, it is normal to have left over parts that will not be used.**

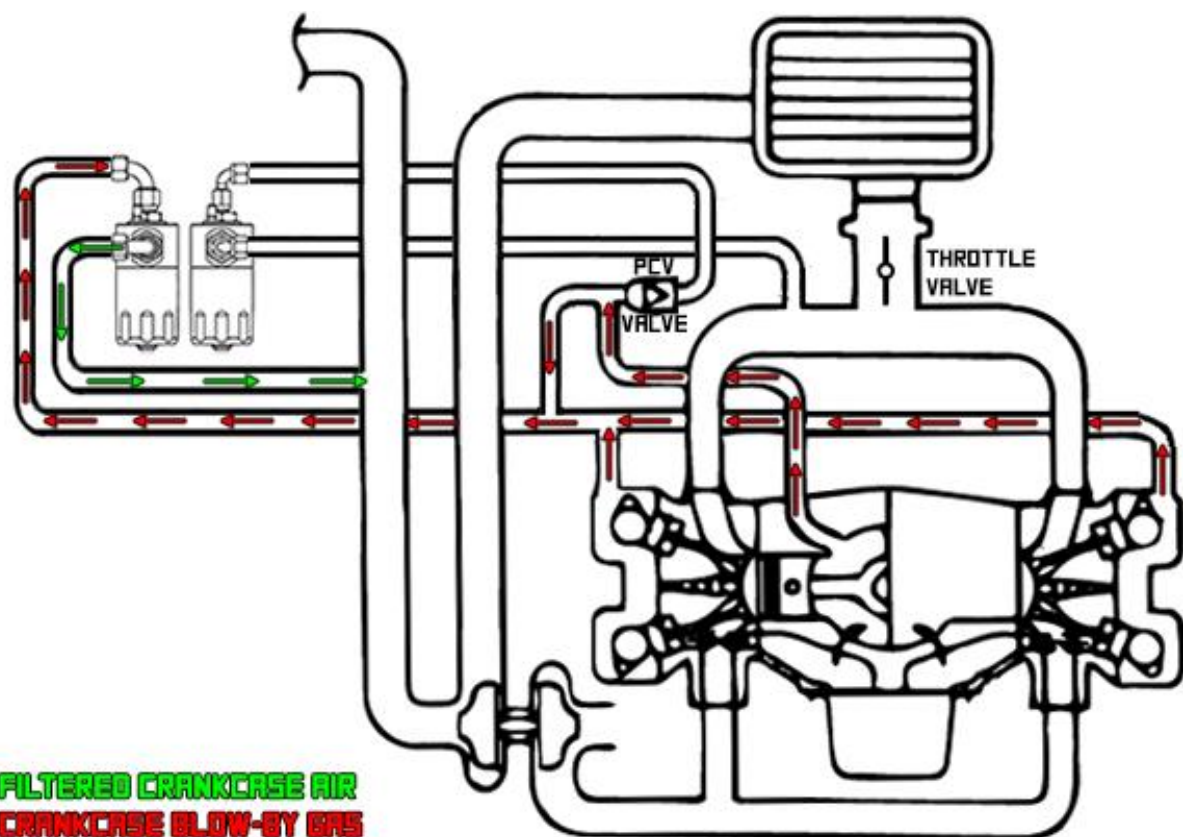
Check the oil level in the catch cans regularly by simply unscrewing the dipsticks. To drain, service, or clean out the catch cans, simply remove the heat shield and unscrew the lower half of the catch can bodies. The condensing filtration media can be cleaned with any standard degreaser.



The diagrams below illustrate how routing works with the PCV valve open and closed.



FRESH CLEAN INTAKE AIR
MIX: BLOW-BY/FRESH AIR
FILTERED CRANKCASE AIR
CRANKCASE BLOW-BY GAS



FILTERED CRANKCASE AIR
CRANKCASE BLOW-BY GAS