U.S. BASED SUPPORT

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IAG Universal AOS

General Guide

IAG-ENG-7193, IAG Universal AOS General Guide

Congratulations on the purchase of your Universal AOS, and thank you for choosing IAG Performance. This Guide shows generic routing and assembly, specific routing, connections, and mounting is up to the end user.

For Customer Support concerns relating to the contents of the Kit, contact our support team at 410-840-3555 or email us at support@iagperformance.com.

Tools Needed:

Allen Wrench Sizes:

- 3mm, 4mm, 10mm, 12mm, 3/8"

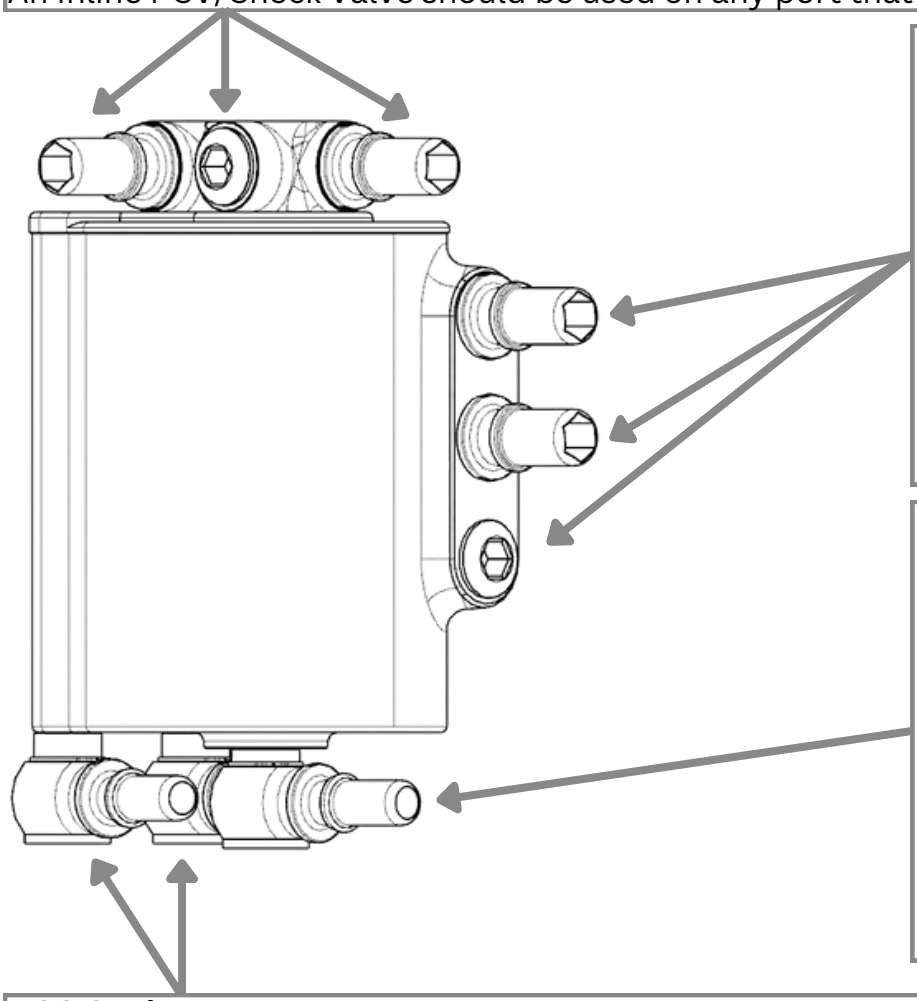
Other Tools:

- Hose Clamp Pliers
- Hose Cutters

Please read through the entire instruction manual before beginning work on your vehicle. Due to the universal nature of this kit we are unable to provide specific technical support or instructions for every engine model. A basic installation diagram highlighting the general hose routing is included. Additional fittings or hoses (sold separately) may be required for your specific application.

Part 1: AOS Feature Identification

AOS Breather/Atmosphere Ports:
The three top ports of the AOS assembly are routed into the Intake System POST Air Filter. This allows the AOS to “breathe” and recirculate air into the system without effecting sensor data.
An Inline PCV/Check Valve should be used on any port that sees pressure (Boost).



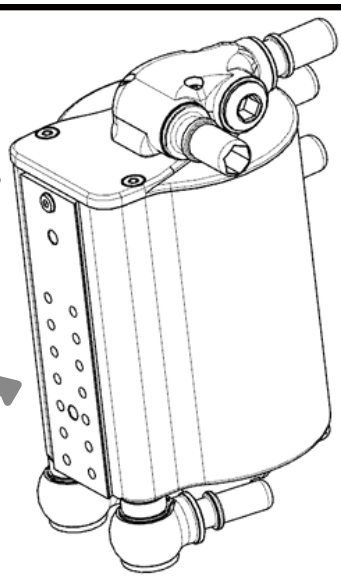
AOS Vent/Crankcase Ports:
The side three ports of the AOS assembly are routed to various Crankcase Ventilation Ports on the Engine, such as the Valve Cover or a Block Breather.
These prevent excessive pressure from building up in the Crankcase, while also allowing for the separation of Air and Oil.

AOS Oil Drain:
The bottom center port of the AOS assembly is the Oil Drain.
This allows the separated Oil to flow back into the Oil Pan.
The Oil Drain hose should drain into the oil pan below the oil level to prevent back pressure.
The Hose needs to flow downhill to prevent oil pooling.

AOS Coolant Ports:
The two bottom rear ports of the AOS assembly are routed inline with coolant hoses, on the hot side of the coolant system. The hot coolant keeps the AOS at operating temperature to prevent condensation/moisture build up in the can.

AOS Coolant Bleeder Screw:
This Screw on the backside of the AOS Assembly is intended to aid in the filling of the coolant system.
With vehicle running and at operating temperature, crack open the Bleeder Screw until coolant steadily flows from the Screw.

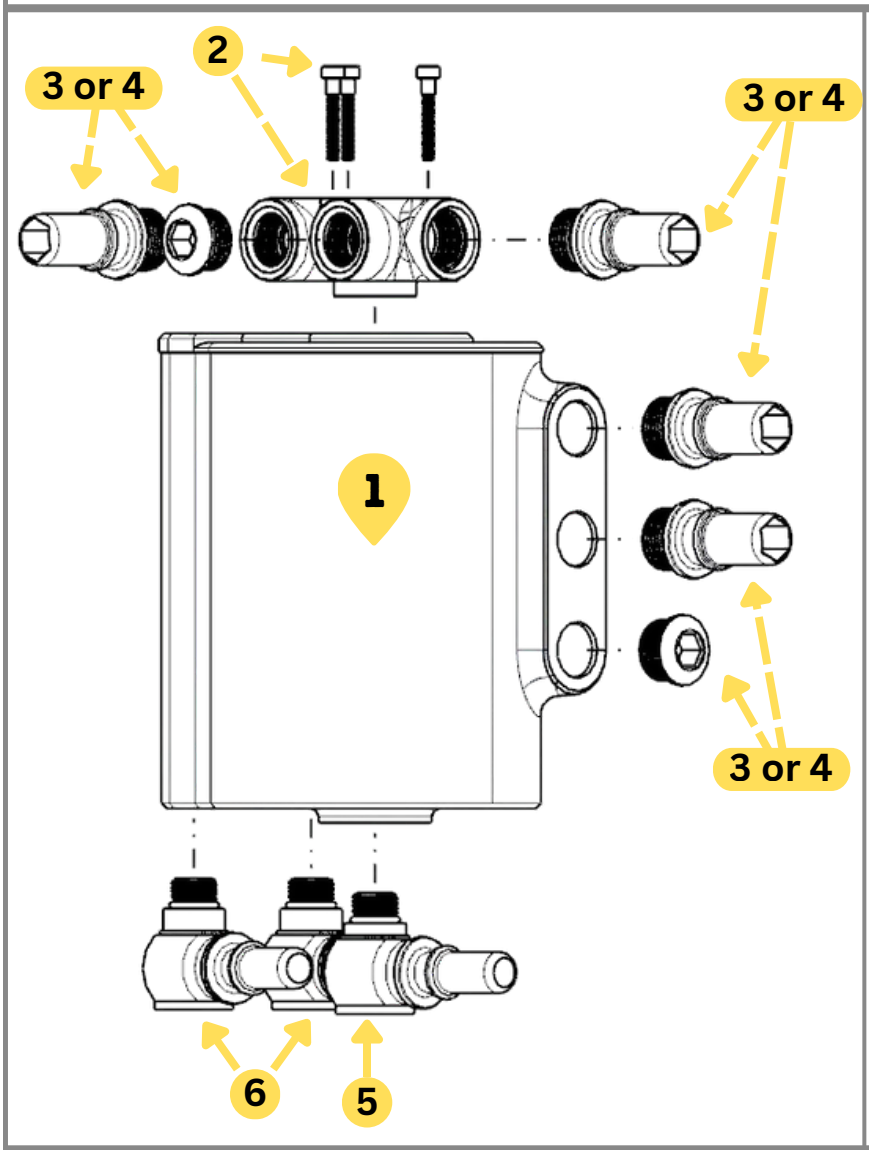
AOS Mounting Surface:
The flat side of the AOS Assembly has been machined and threaded to accept multiple methods of attachment.
Two Brackets have been provided to help create a mounting solution.
Use a Vise and Hammer to bend the Brackets as needed.



Part 2: Assembling the AOS

AOS Assembly:

1. **AOS Can**
2. **AOS Cap**
   (X3) 3mm Allen Bolts
3. **(X6) AOS Port Fittings**
   (5/8 Quick Connect Fitting)
4. **(X3) AOS Port Block Off**
5. **AOS Oil Drain Fitting**
   (Plastic Body) (1/2" Quick Connect)
6. **(X2) AOS Coolant Fittings**
   (Metal Body) (1/2" Quick Connect)
7. **AOS Bracket**
   (X4) 4mm Allen Bolts



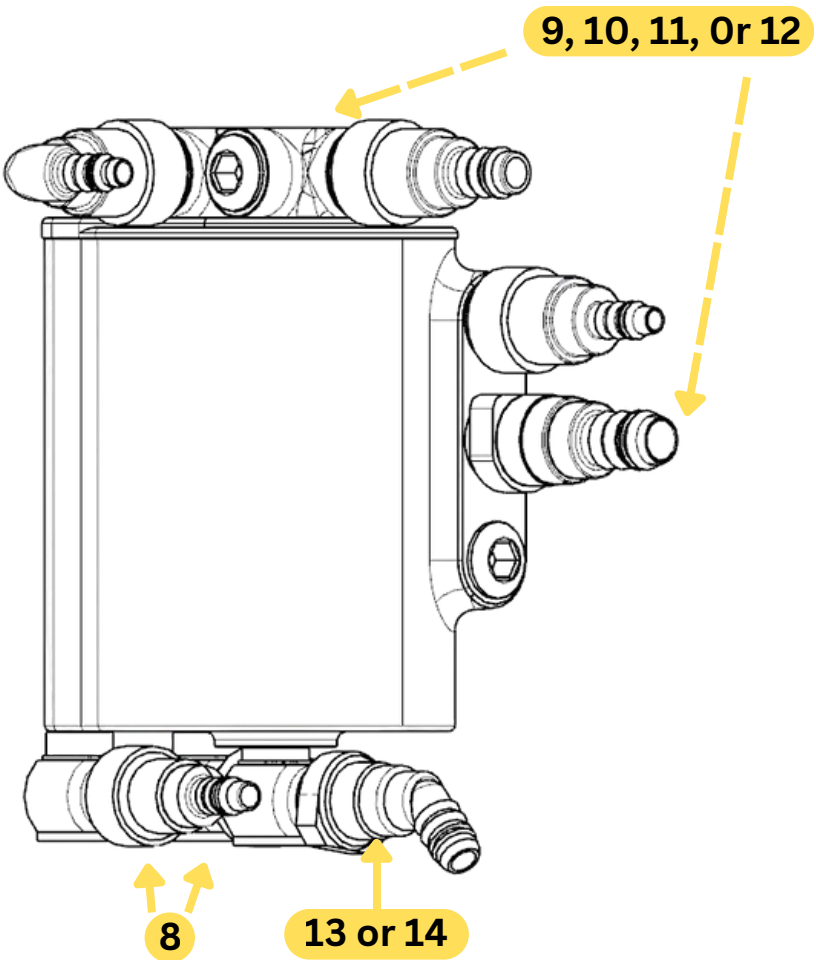
Note: Configuration of the Breather/Vent Ports may change based on vehicle. Use fittings or Block Offs as deemed necessary.

- Assemble the AOS cap to the AOS can. Rotate the cap to desired orientation. Using a 3mm Allen wrench tighten the provided bolts (3.5 Nm).
- Configure the AOS Port Fittings as desired, on the Breather/Vent Ports. Using a 12mm Allen wrench tighten until snug.
- Install the AOS Port Block Offs in remaining Breather/Vent Ports, using a 3/8" Allen wrench tighten until snug.
- Install the AOS Coolant Fittings (Metal) into the bottom AOS Coolant Ports. Using a 10mm Allen wrench tighten (8Nm). (Do not overtighten, designed to swivel.)
- Install the AOS Oil Drain Fitting (Plastic) into the bottom raised AOS Oil Drain Port. Using a 10mm Allen Wrench tighten (8Nm). (Do not overtighten, these are designed to swivel.)

Part 3: Quick Connect Fittings

Quick Connect Fittings:

- **8** (X2) 1/2" to 3/8" Fitting (AOS Coolant Fittings)
- **9** (X3) 5/8" to 5/8" Fitting
- **10** 5/8" to 3/8" Fitting
- **11** 5/8" to 3/8" 90° Fitting
- **12** (X3) 5/8" to 1/2" Fitting
- **13** 1/2" to 1/2" Fitting (Oil Drain Fitting)
- **14** 1/2" to 1/2" 45° Fitting (Oil Drain Fitting)

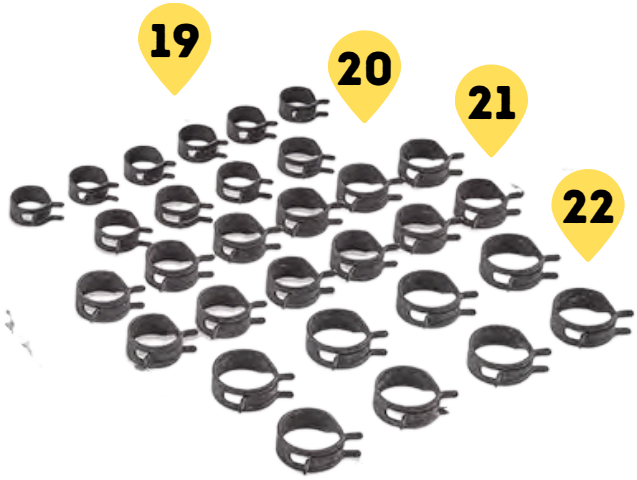


Note: Lubricate the O-Ring of ALL quick connect fittings with a synthetic multi-purpose grease to ensure a good seal.

- The Quick Connect fittings are designed for attaching the hoses to the AOS Assembly. The Fittings should click into place with minimal effort.
- Fittings **9, 10, 11, or 12** are to be used on the top AOS Breather Ports. Any size Fuel Hose may be used for the Breather System.
- Fittings **9, 10, 11, or 12** are to be used on the side AOS Vent Ports. Any size Fuel Hose may be used for the Vent System.
- Fitting **8** is to be used on the AOS Coolant Ports. 3/8" Heater Hose should be used for the Coolant System.
- Fittings **13 or 14** are to be used on the AOS Drain Port. 1/2" Fuel Hose should be used for the Oil Drain Hose.

Part 4: Hoses, Fittings, and Clamps

Hoses and Clamps:



15 5/8 Fuel Hose
(Use for Vent/Breather)

16 1/2 Fuel Hose
(Use for Oil Drain and Vent/Breather)

17 3/8 Heater Hose
(Use for Coolant Hose)

18 3/8 Fuel Hose
(Use for Vent/Breather)

19 (X6) ⅜ Constant Tension Clamps

20 (X4) ⅜ Constant Tension Clamps (Coolant)

21 (X12) ½ Constant Tension Clamps

22 (X8) ⅝ Constant Tension Clamps

Hose Fittings:

23 (X2) 1/2" 90° Elbow

24 (X2) 3/8" 90° Elbow

25 (X2) 5/8" 90° Elbow

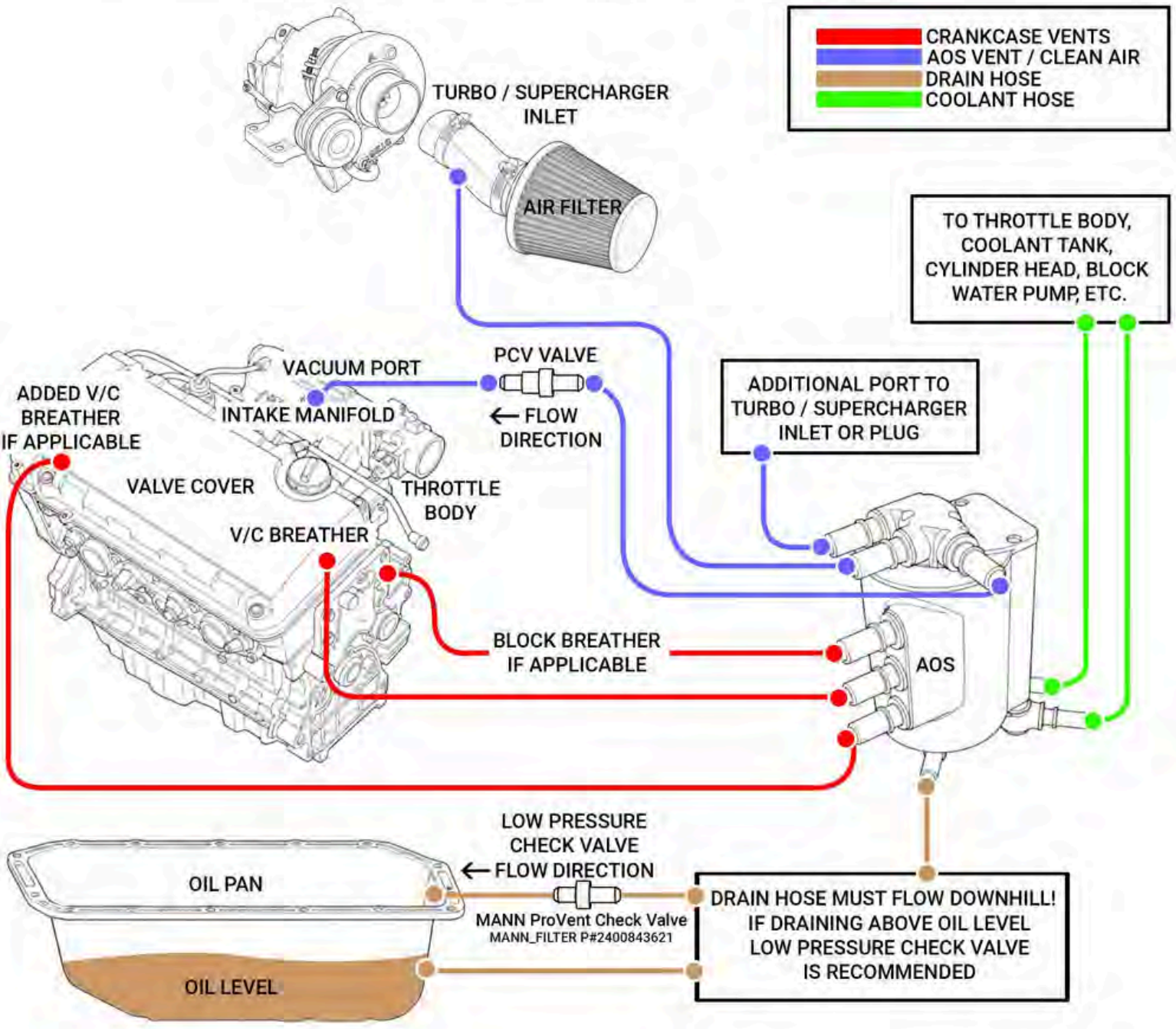
26 1/2” to 5/8” Reducer

27 1/2" to 3/8” Reducer

28 5/8" to 3/8" Reducer

29 1/2" to 3/8" PCV Valve
(3/8 Hose towards Intake Manifold)

Inline Motor Forced Induction Diagram

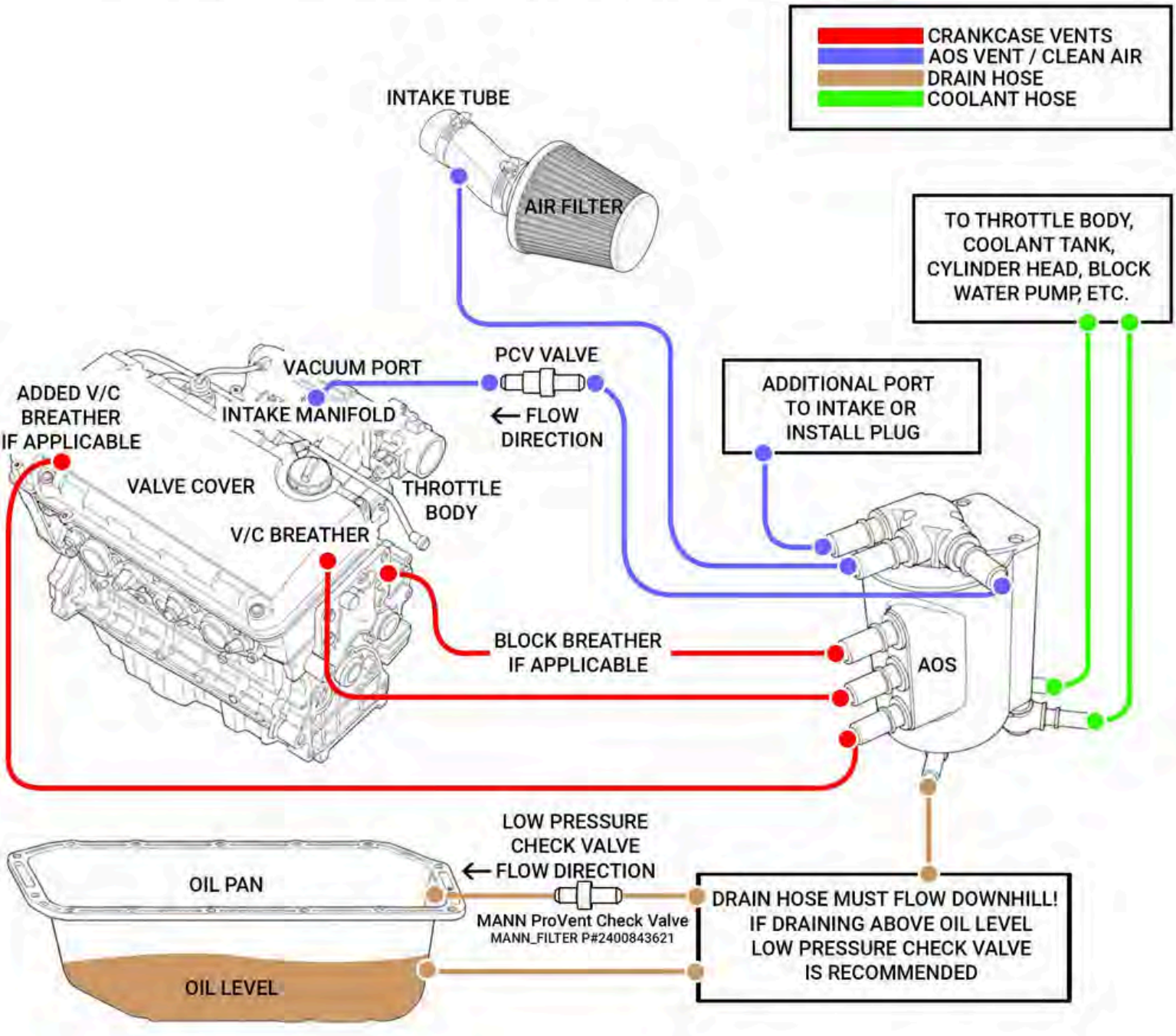


Note:

This is an approximate visualization of AOS Hose Connections, and Routing.

Actual Connections and Routing will change based on vehicle.

Inline Motor Naturally Aspirated Diagram



Note:

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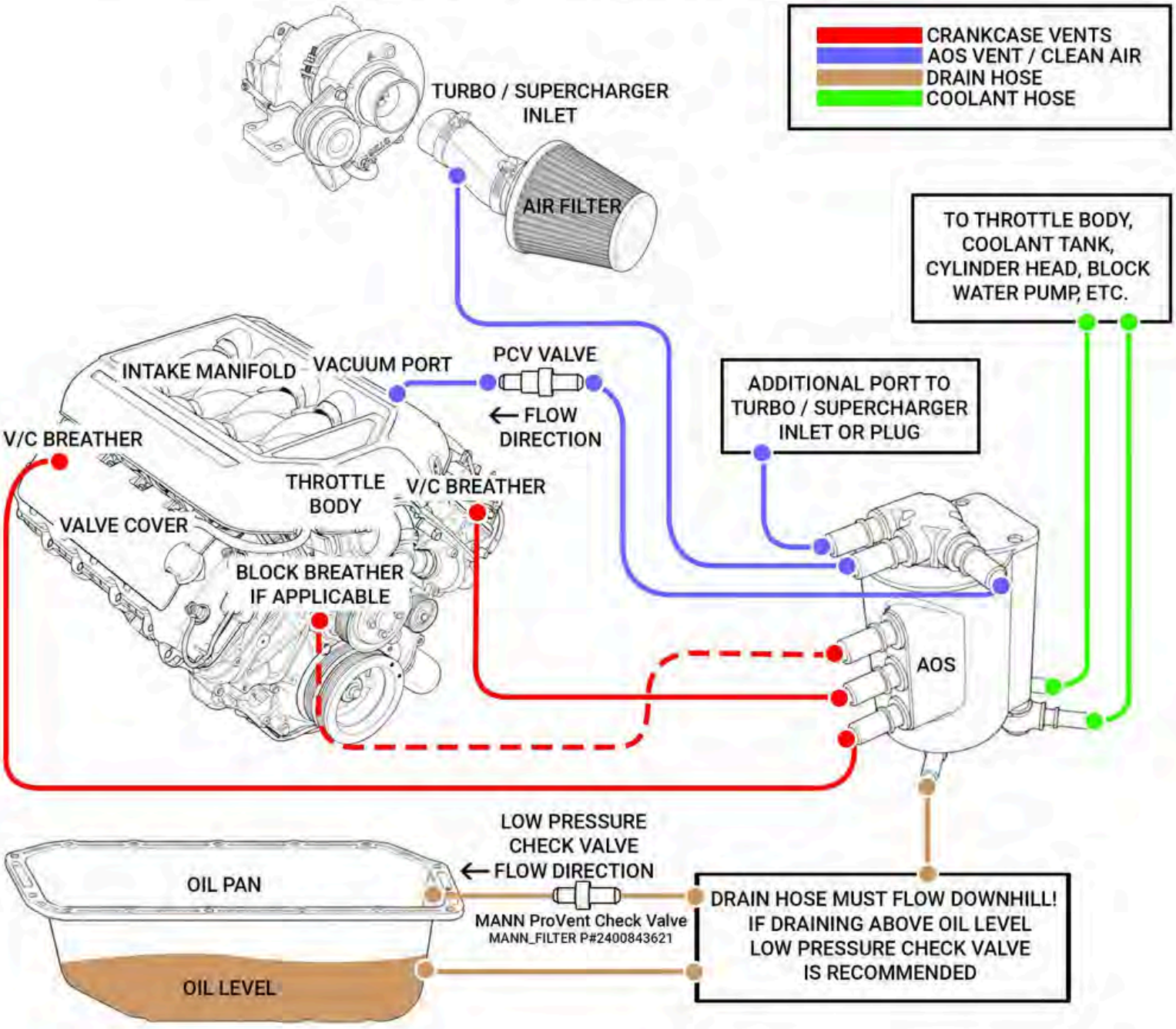
V Motor Forced Induction Diagram



Note:

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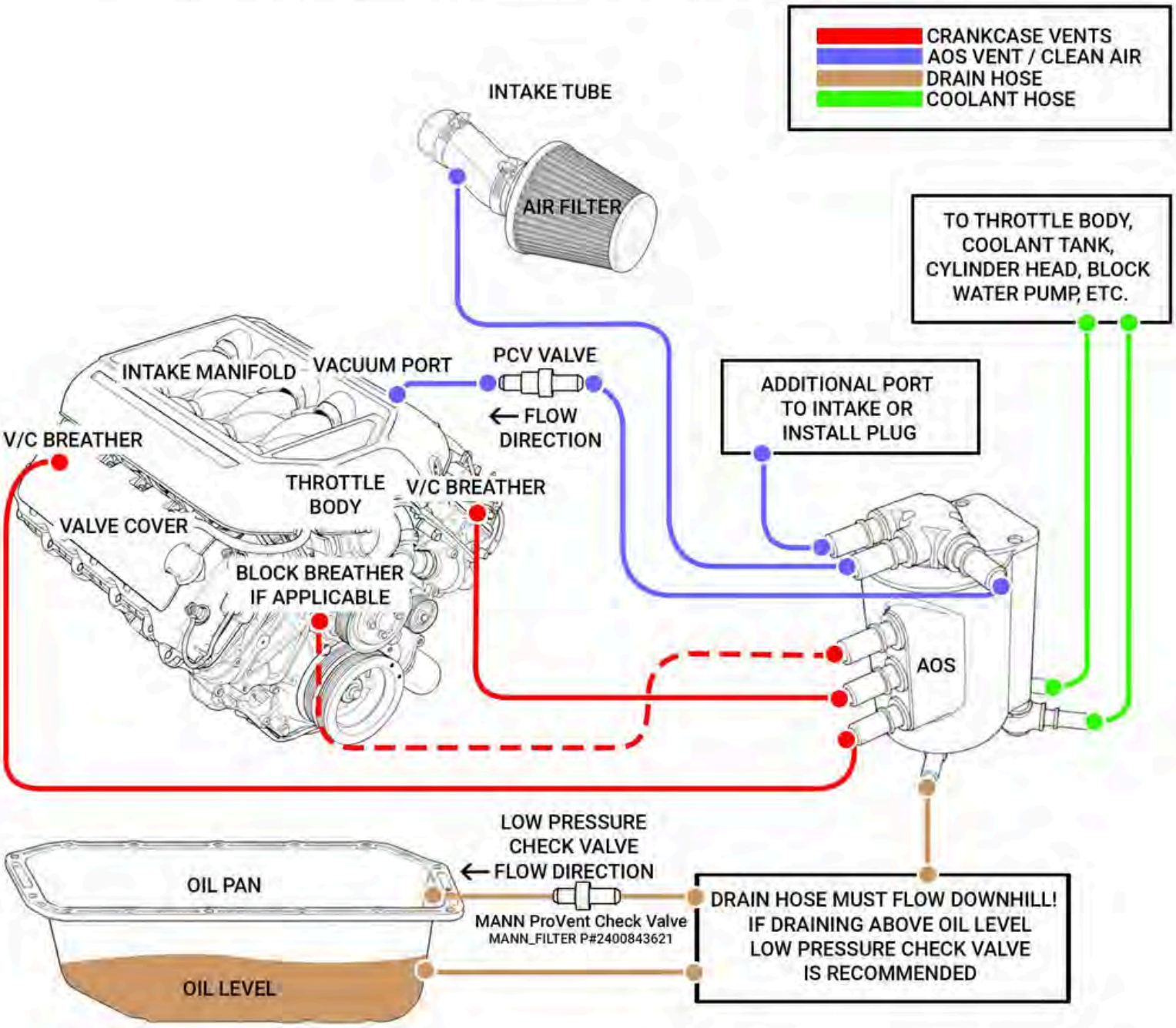
V Motor Naturally Aspirated Diagram



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