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# INSTALLATION MANUAL

## AEROFLOW PERFORMANCE

### CAST 4150 THROTTLE BODY

## WARNING!

BEFORE PROCEEDING WITH INSTALLATION PLEASE READ INSTRUCTIONS CAREFULLY. THIS PRODUCT REQUIRES DETAILED KNOWLEDGE OF AUTOMOTIVE SYSTEMS. WE RECOMMEND THAT THIS INSTALLATION BE CARRIED OUT BY A QUALIFIED AUTOMOTIVE TECHNICIAN.

### INTRODUCTION

Congratulations on your purchase of Aeroflow Performance throttle body. Aeroflow Performance products cannot and will not be responsible for any damage, or other conditions resulting from misapplication of the parts described herein. However, it is our intention to provide the best possible products for our customer, products that perform properly and satisfy your expectations. Should you have any questions? Please call technical support at +61 2 8825 1979 and have the product part number on hand when calling.

The Aeroflow Performance 4-barrel throttle body is the perfect complement for your fuel injection system. This high-quality diecast finished component is an affordably priced option compared to our billet version. This 1000 CFM throttle body utilizes a 4150-pattern flange to suit a variety of intake manifolds with 4150-style square-bore carburettor flange and standard bolt spacing. Each 44.45mm (1-3/4") bore is designed with a special radius which promotes maximum air flow and minimum turbulence with a 6.3mm (1/4") thread in center for the air filter stud. This throttle body will accept a standard air cleaner with a 5-1/8" flange and includes a GM style idle air control (IAC) motor with a GM style throttle position sensor (TPS) and GM LS3 style MAP sensor. Multiple vacuum ports are also provided on the throttle body (2x 3/8", 2x 1/4", 2x 3/16")

### Kit Includes:

- 1 x Cast 4150 Throttle Body
- 1 x Square Bore Carburettor Gasket (also sold separately AF57-4155)
- 1 x Map Sensor (GM LS3 style)
- 1 x Idle Air Control Motor (IAC) (GM Style)
- 1 x Throttle Position Sensor (TPS) (GM Style)
- Mounting Hardware Various for IAC, TPS
- 1 x Billet 1/8" Vacuum Tee Piece (3.2mm barbs) (also sold separately AF64-4200BLK)
- 1 x 1/4" NPT Allen Key Plug (also sold separately AF932-02BLK)
- 1 x Throttle Ball with Washer and Nut (10-32UNF) (also sold separately AF3500-1001)



## Installation Guideline

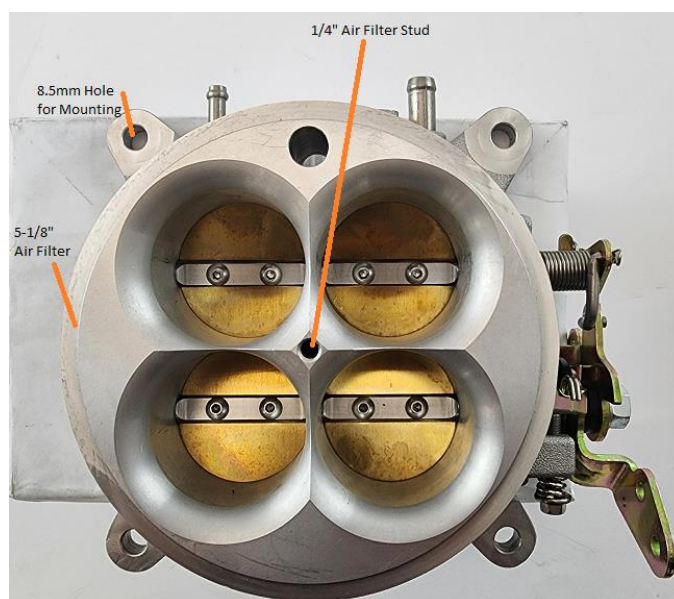
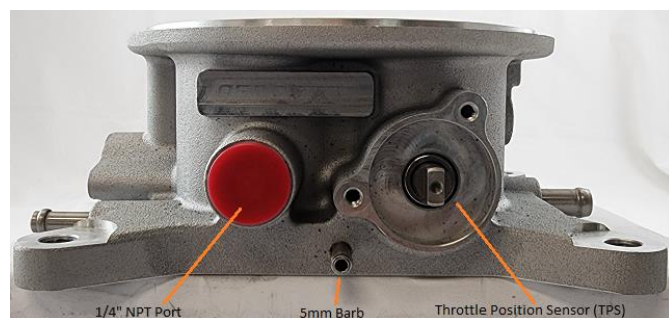
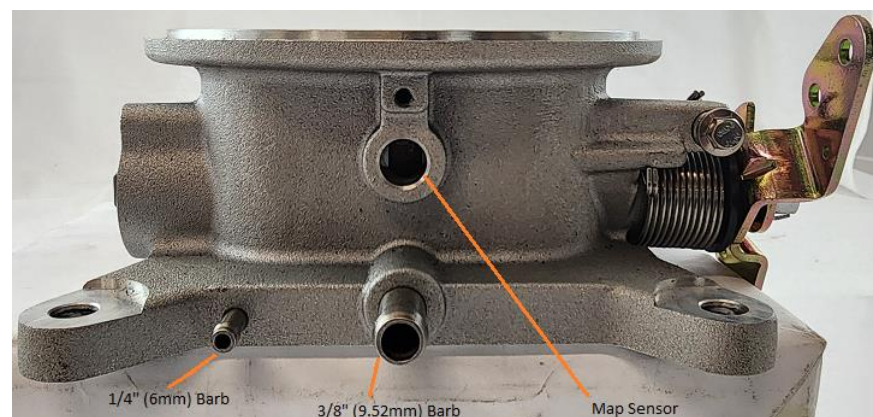
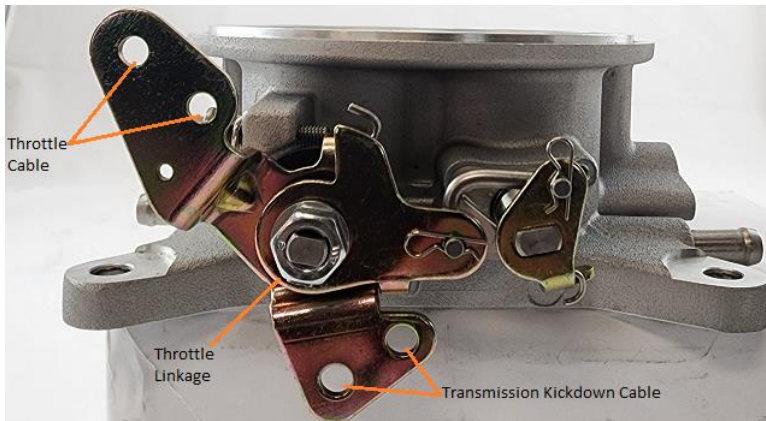
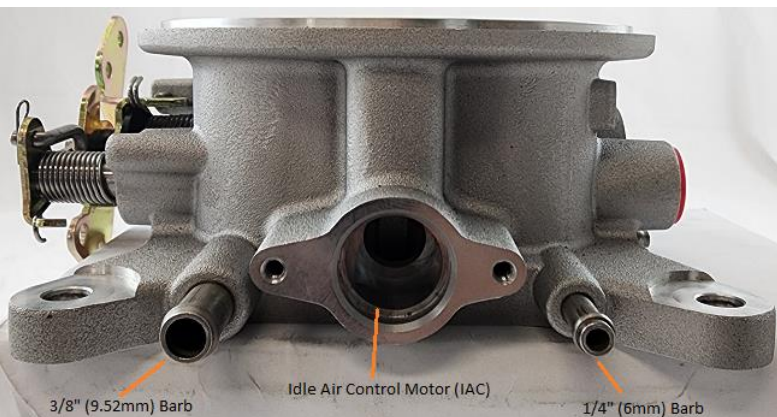
For a complete installation of the Aeroflow Performance universal throttle body you will require some extra components as well as the original parts that must be purchased separately.

The following list is a guideline of suggested parts that may or may not need to be purchased;

- Intake manifold to suit 4150 pattern
- Air Cleaner to suit your application. 5-1/8" Flange or Carburettor Hat (AF2045-1000)
- Carburettor Studs (1/4"-20)
- Throttle Cable / Bracket
- Kickdown Cable / Bracket
- Throttle Springs

1. Install the universal throttle body to the manifold with the barbs facing towards the rear of the car.
  - I. The intake manifold must have a 4150 flange on it for this throttle body to work.
  - II. The map sensor will be facing the front of the engine in this configuration.
  - III. This universal throttle can also be installed in any direction depending on your application.
2. Install the Map Sensor into the correct port shown on the photos at the bottom of these instructions.
  - I. Ensure to use the appropriate lubricate on the orange rubber seal before installing.
  - II. The wiring plug must be purchased separately if your wiring harness being used does not included them.
3. Install the Idle Air Control Motor (IAC) into the correct port shown on the photos at the bottom of these instructions.
  - I. We recommend to first remove the orange O-ring from the motor itself and place this O-ring inside the hole in the throttle body. Then install the IAC into the throttle body ensuring to push into the throttle even to avoid pinching the O-ring and causing it to leak if damaged.
  - II. Ensure to use the appropriate lubricate on the orange rubber seal before installing.
  - III. The wiring plug must be purchased separately if your wiring harness being used does not included them.
  - IV. Torx mounting bolts are included with this IAC motor for installation.
4. Throttle Position Sensor (TPS) into the correct port shown on the photos at the bottom of these instructions.
  - I. When installing this TPS sensor you must ensure it is located onto the shaft correctly.
  - II. You will be required to turn the TPS clockwise to bolt it into position.
  - III. Allen key socket cap mounting screws are included with this IAC motor for installation.
5. The throttle lever for this throttle body is designed for a universal application so many throttle cables can be used. Ensure it is attached to the primary lever.
  - I. A throttle ball is included that is designed for this linkage. Aftermarket ones may also be used.
  - II. An aftermarket throttle cable and bracket must be purchased separately
  - III. See image at the end of these instructions of the throttle lever.
6. Once the throttle linkage is attached, have an assistant get in the vehicle and fully actuate the throttle controls. Make the necessary adjustments to the throttle linkage to ensure that the throttle plates are vertical when the throttle control is wide open. Work the throttle linkage back and forth several times to ensure it operates smoothly with no binding or sticking.
  - I. **DANGER! A sticking throttle may result in uncontrolled engine or vehicle speed. This could cause property damage, personal injury, or death. A sticking throttle may be caused by improperly installed throttle cables, lack of clearance for any of the throttle linkage, or by a binding throttle linkage. Check all throttle cables for proper installation and alignment and actuate the throttle to check for any potential binding or clearance problems. Repair any problems before continuing.**
7. Install external throttle return springs that you previously removed from the carburettor or throttle body. If your previous application did not include these return springs they can be purchased separately (AF42-1105). These external springs should be used in addition to the springs on the throttle body itself.
8. Have an assistant get in the vehicle and fully depress the accelerator pedal. Make the necessary adjustments to the throttle linkage to ensure that the throttle reaches wide-open position when the accelerator is depressed. Work throttle linkage back and forth several times to ensure that it operates smoothly with no binding or sticking.
  - I. **DANGER! A sticking throttle may result in uncontrolled engine or vehicle speed. This could cause property damage, personal injury, or death. A sticking throttle may be caused by improperly installed throttle cables, lack of clearance for any of the throttle linkage, or by a binding throttle linkage. Check all throttle cables for proper installation and alignment and actuate the throttle to check for any potential binding or clearance problems. Repair any problems before continuing.**

9. There are several barbs located on the throttle body that can be used for various applications such as brake booster, map sensor etc. For all unused barbs ensure to block these off with silicone vacuum caps (sold separately AF9291-016-01) to stop all air leaks. They are listed below and also in the photos at the end of these instructions:
- 2 x 10mm Barbs
  - 1 x 6mm Barb
  - 2 x 5mm Barbs
10. The Throttle body as has one 1/4" NPT female port that can also be used as a vacuum source. An NPT allen key plug is provided if this port is not being used.
- I. Ensure to use an appropriate thread sealant (such as AeroSeal AF98-2023) when installing this NPT plug.



*For more information or technical enquires*

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