

# Installation Instructions for 14506

## Throttle Body

### LS1/LS6

This throttle body is intended for use on vehicles that use a mechanical throttle cable, and will not work on OE applications with a drive-by-wire throttle system. This throttle body features the factory design where the throttle butterfly has a staged opening so that under light throttle application you do not get an excessive amount of air entering the manifold. This will provide for smooth takeoffs under light throttle. The butterfly also opens at the bottom first which is the optimum way.

#### Kit Contents:

- Throttle body Assembly
- Tapered Adapter Plate
- Gasket – Adapter to T.B. Gasket
- Linkage Plate
- (3) Washers M6
- (2) Socket Head Screws M6 x 45mm
- Socket Head Screw M6 x 55mm
- (2) Socket Head Screws M6 x 35mm
- Socket Head Screw M6 x 40mm
- (2) Machine Screws M4 x 10mm

1. Review the kit contents shown above and make sure you have all the necessary parts.
2. This throttle body comes with two different style linkage plates. Note the style used on your stock throttle body. If the new throttle body doesn't have the proper linkage plate, you will need to change it. Remove the nut on the end of the throttle shaft. Remove the linkage plate being careful not to allow the inner plate to come off which will release in the tension spring. Slide new plate on the throttle shaft and secure with nut & lock washer.
3. Let engine cool. Disconnect negative battery cable.
4. Disconnect the linkage and any wiring connections to the old throttle body. Disconnect the air inlet hose to the throttle body. Disconnect the rubber coolant hoses from the bottom of the throttle body. **Caution: Engine coolant must be cold. Loosen radiator cap to relieve any pressure in the cooling system.** Disconnect the vacuum hose from the top passenger side. Remove the three screws holding the throttle body to the manifold. Remove the throttle body from the manifold.
5. If you are using the new throttle body on a stock intake manifold, you will need to use the supplied adapter plate which funnels the inlet air to the smaller intake manifold. The tapered adapter may not be needed on many aftermarket intake manifolds that have a larger inlet. If using the adapter plate, position it on the intake manifold and install the gasket & throttle body using the 3 long M6 screws and flat washers. Note that one of the screws is longer & it goes in the top center hole. Tighten the screws lightly with an Allen head wrench. Open the throttle blade & move the throttle body around to confirm that the blade doesn't hit anything and clears the adapter plate & manifold. Tighten the three screws.
6. If using the new throttle body on an aftermarket intake manifold with a large opening, install the gasket & throttle body with the shorter M6 screws & washers. Tighten the screws lightly with an Allen head wrench. Open the throttle blade & move the throttle body around to confirm that the blade doesn't hit anything and clears the manifold. Tighten the three screws. On some application, you might need to do some minor grinding on the opening to clear the throttle blade.
7. Remove the throttle position sensor and idle air control valve from your old throttle body. **Important Note: Using the screws you removed from your idle air control valve, attach the throttle position sensor to the new throttle body. Then use the two small screws supplied to attach the idle air control valve to the throttle body.**
8. Reconnect the linkage, wiring connections, vacuum line, and coolant hoses to the throttle body. Do not connect the air inlet hose yet. Refill any coolant that may have been lost.
9. Your new throttle body has two linkage stops with adjustable stop screws. One stop is for full throttle and the other is for idle. Have someone fully depress the accelerator pedal and visually make sure the butterfly is opening to the exact center position. If it is not, adjust the screw so the butterfly is fully open. Lock the stop screw with the jam nut. The preset condition as supplied on the idle adjustment should be the correct setting, so it shouldn't require any adjustment. If the engine is heavily modified, adjustment may be required to admit more air at idle.
10. Replace the air inlet duct.
11. Start the engine and let it idle without revving it up until the vehicle reaches full operating temperature giving the computer time to adjust the correct idle settings. Once the computer run-up is completed, if the vehicle idles lower than stock, a small clockwise adjustment of the idle stop screw can be made.
12. Check all aspects of the installation to make sure the coolant hoses are not leaking and all screws are tight.



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