



Installation Instructions LS Valve Covers

131001	FiTech Plus, LS, Valve Covers, w/Coil Mounts, Satin
131002	FiTech Plus, LS, Valve Covers, w/Coil Mounts/Finned Covers, Satin
131003	FiTech Plus, LS, Valve Covers, w/Coil Mounts/Smooth Covers, Satin
131101	FiTech Plus, LS, Valve Covers, w/Coil Mounts, Polished
131102	FiTech Plus, LS, Valve Covers, w/Coil Mounts/Finned Covers, Polished
131103	FiTech Plus, LS, Valve Covers, w/Coil Mounts/Smooth Covers, Polished
131201	FiTech Plus, LS, Valve Covers, w/Coil Mounts, Black
131202	FiTech Plus, LS, Valve Covers, w/Coil Mounts/Finned Covers, Black
131203	FiTech Plus, LS, Valve Covers, w/Coil Mounts/Smooth Covers, Black

CONGRATULATIONS on your purchase of this **FiTech LS Valve Covers** and **Thank You** for choosing us for your aftermarket performance needs! Should you need any information or parts assistance, please contact our Technical Service Department at 951-340-2624 Monday through Friday, 8 a.m. to 5 p.m. PST or go online to www.fitechfi.com under "tech center". Please have the part number of the product you purchased on hand when you call.

INTRODUCTION:

This instruction sheet has all the information needed to install FiTechs valve covers. Please read all the **WARNINGS** and **NOTES**, as they have valuable information that can save you time and money. FiTech cannot and will not be responsible for any alleged or actual engine damage and/or any other damage, and/or other conditions resulting from misapplication or misuse of the valve covers described here. However, it is our intent to provide the best possible products for our customer; products that perform properly and satisfy your expectations. Failure to follow these instructions may result in poor performance, vehicle damage, personal injury, or death. If these instructions are not fully understood, installation should not be attempted.



SAFETY GUIDELINES



These instructions must be read and fully understood before beginning installation. Failure to follow these instructions may result in poor performance, vehicle damage, personal injury, or death. If these instructions are not fully understood, installation should not be attempted.

If you lack the skills, tools and equipment, or a suitable workplace for any procedure described in these instructions, we suggest you leave such repairs to an authorized dealer service department or other qualified shop.

Do not attempt to work on your car if you do not feel well. If you are tired, injured, not fully alert, or not feeling up to working on your vehicle, choose another time to perform the service. You increase the danger of injury to yourself and others if you are tired, upset or have taken medication or any other substance that may keep you from being fully alert.

Never work under the car while the engine is running. Disconnect the battery negative (-) terminal (ground strap) to prevent others from starting the car while you are under it.

Make sure that the ground is level. Block the wheels to keep the car from rolling. Never work under a lifted car unless it is solidly supported on stands designed for the purpose. Do not support a car on cinder blocks, hollow tiles or other props that may crumble under continuous load. Never work under a car that is supported solely by a jack. Place jack stands only at locations specified by the vehicle manufacturer. A heavy-duty floor jack should be used to lift vehicle before installing jack stands.

Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond or lake. Dispose of it in accordance with Federal, State and Local laws. Catch draining fuel, oil, or brake fluid in suitable containers. Do not use food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously. Be mindful of the environment and ecology.



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OVERVIEW AND APPLICATIONS:

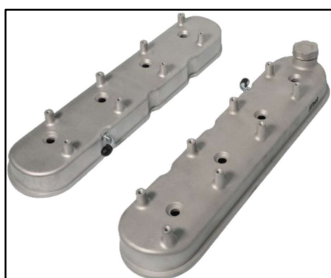
Although specific to the LS platform, all valve covers are universal in design and not designed for any exact application.

NOTE: The FiTech LS Valve Covers with coil covers will not fit applications with high-mounted driver's side alternators.

NOTE: The FiTech LS Tall Valve Covers are designed to be used with stock rocker arms/lift ratios and most high lift (<0.700") valve train options. It is recommended to ensure there is no rocker arm contact with valve covers during their travel. If using aftermarket valve train components, refer to the manufacturer's instructions for compatibility and requirements before installing valve covers.

NOTE: Some applications have internal PCV restrictions inside the valve cover assembly. If your application utilizes this type, an external inline PCV valve must be added inline on the hose. If needed, most automotive shops should be able to source/cross reference universal PCV valves similar to part numbers Beck/Arnley #0450299 or Fram P/N FV340.

P/N 131001(Satin), 131101(Polished), and 131201(Black) - FiTech Plus, LS, Valve Covers, Tall, w/Coil Mounts



- Designed to fit LS based engines
- Offered in Satin(raw), Polished, and Black Painted Finishes
- Coils when mounted will be angle mounted
- Includes o-ringed oil filler cap, gaskets, and mounting hardware for covers and coils
- Tall design clears most high lift (<0.700") valve train options
- Coil Mounting bosses for Gen 5 LS3 bolt spacing 72mm



P/N 131002(Satin), 131102(Polished), and 131202(Black) - FiTech Plus, LS, Valve Covers, w/Coil Mounts w/Finned Coil Covers



- Designed to fit LS based engines
- 2-piece design includes classic finned top style coil covers
- Offered in Satin(raw), Polished, and Black Painted Finishes
- Coils when mounted will be angle mounted or straight depending on coil type
- Includes o-ringed oil filler cap, gaskets, and mounting hardware for covers and coils
- Tall design clears most high lift (<0.700") valve train options
- Coil Mounting bosses for both Gen 5 LS3 bolt spacing 72mm (angle mounted) and Gen 1 LS1 bolt spacing 65mm (straight mounted)



P/N 130003(Satin), 130103(Polished), and 130203(Black) - FiTech Plus, LS, Valve Covers, w/Coil Mounts w/Smooth Coil Covers



- Designed to fit LS based engines
- 2-piece design includes smooth top style coil covers
- Offered in Satin(raw), Polished, and Black Painted Finishes
- Coils when mounted will be angle mounted or straight depending on coil type
- Includes o-ringed oil filler cap, gaskets, and mounting hardware for covers and coils
- Tall design clears most high lift (<0.700") valve train options
- Coil Mounting bosses for both Gen 5 LS3 bolt spacing 72mm (angle mounted) and Gen 1 LS1 bolt spacing 65mm (straight mounted)





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REQUIRED TOOLS FOR INSTALL

- 3/8" Drive Ratchet
- Torque Wrench
- Flat Head Screwdrivers
- 10mm 3/8" Drive Socket (for coil mounting bolts)
- 7mm 3/8" Drive Socket (for 12-point coil cover bolts)
- 8mm 3/8" Drive Socket (to remove OE LS valve cover bolts)

REPLACEMENT PARTS IF REQUIRED

- Valve cover gaskets: Fel-Pro PN VS50504R
- Mounting bolt grommets (set of 8): Fel-Pro PN ES71044

REMOVAL:

1. Before beginning, it is recommended to blow any loose debris off the engine using compressed air/air hose.
2. Disconnect the battery negative (-) terminal (ground strap).
3. Remove any cosmetic engine/coil covers. Refer to the vehicle's service manual for proper removal procedure. If these covers mount to the original valve covers, they will not be reinstalled.
4. Disconnect the plug wire from each coil by twisting and pulling on each spark plug wire boot. **Never pull from wire only.**
5. Disconnect the main coil sub harness plug.
6. Remove the coils, coil brackets, coil harnesses, PCV hose, and existing valve covers from the vehicle.
7. Install the supplied gaskets by working them into the grooves on the valve covers. The gaskets will be long compared to the grooves and will need to be evenly worked around the cover distributing the extra length. Press firmly to properly seat gasket ensuring gasket is inserted all the way around the perimeter of the valve cover base.
8. Install the supplied bolts and grommets by carefully working them into the valve covers. A light coat of oil can assist in allowing them to slide into sealing position.
9. Install the valve covers on the engine making certain the gaskets remain seated in the valve cover grooves.

NOTE: The valve covers are designed to be used with rocker arms/lift ratios and most high lift (<0.700") valve train options. It is recommended to ensure there is no rocker arm contact with valve covers during their travel. If using aftermarket valve train components, refer to the manufacturer's instructions for compatibility and requirements.

10. Using the Evenly torque the cover bolts to 106 **lb/in** or 9 **ft/lbs**.

NOTE: DO NOT OVERTIGHTEN BOLTS AS YOU CAN STRIP THE THREADS

11. Remove the corresponding rubber caps on the internally baffled breather ports of the valve covers and reconnect the PCV hoses.
12. Remove the individual coils from the original bracket(s) and install each onto the corresponding mounting posts on each valve cover.

NOTE: If utilizing valve covers with coil covers, there are two coil mounting options depending on what coils are being used. If using FiTech or Gen 5 LS3 style coils, the bolt spacing is 72mm and the coils will use the bosses that angle mount the coils. If using Gen 1 LS1 coils with the bolt spacing of 65mm, the coils will be straight mounted and should use the appropriate mounting bosses. Plastic spacers are supplied. Be sure to use the correct coil-specific spacers for your application and the included coil retention bolts.



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13. Torque the coil bolts to 106 **lb/in** or 9 **ft/lbs**.

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14. Remove the coil harnesses from the original brackets and plastic conduits. Reconnect the coil harnesses to the individual coils that were mounted onto each valve cover base. **Make sure** the coil harnesses are not switched to the opposing sides and that each corresponds to the same coil that it was removed from. If harnesses are accidentally switched, the firing order will be wrong. Neatly tuck the wires around the mounted coils and route the main harness so that it will fit through the hole in the valley side of the coil covers if used.
15. When installing valve covers with coil covers with FiTech or Gen 5 LS3 style coils, first carefully slide the ends of the coils through the plug wire holes in the cover, and then rotate the cover lengthwise to route it around the coils and wiring harness. Be sure to check that the main coil harness clears the valley side exit hole and is not being pinched.
16. Torque the cover bolts to 106 **lb/in** or 9 **ft/lbs**.

NOTE: DO NOT OVERTIGHTEN BOLTS AS YOU CAN STRIP THE THREADS

17. Reinstall the spark plug wires and rotate the boots for maximum exhaust clearance and visual appeal.
18. Make sure all electrical connections are secure and reconnect the battery negative cable.
19. Start the vehicle and verify that there are no oil leaks.

OIL FILL CAP:

The billet cap threads into the valve cover and should be turned clockwise to install and counter-clockwise to remove.

NOTE: Oiling the billet fill cap's O-ring will ease the cap removal/reinstallation process and is recommended.



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3-Year Limited Warranty on FiTech EFI Systems

WARRANTY ON THIS EFI SYSTEM IS SOLELY HANDLED BY FITECH FUEL INJECTION.

DO NOT CONTACT THE SELLER.

3-Year Limited Warranty on FiTech EFI Systems

FiTech extends the following limited warranty to the original purchaser of a FiTech EFI system purchased after November 1, 2022. FiTech warrants its products against defects in materials and workmanship, under normal use and service for 3 years from the date of original purchase. Please note, however, that it does not extend to issues that arise as a result of normal wear and tear. This means that typical degradation from regular use, which can occur over time, is not covered under our warranty terms. This applies only to the original purchaser and the parts must remain installed on the original vehicle for which they were purchased. This warranty is void if the product was improperly installed, was installed on a vehicle for which it was not designed, if it was modified in any manner, or was removed from the original vehicle and reinstalled on another vehicle. Coolant temperature sensors, oxygen sensors, distributor caps, and distributor rotors are not covered under this warranty.

This warranty shall not apply to any product installed improperly, or contrary to FiTech's instructions, altered, misused, repaired or damaged from an accident, collision, or willful or negligent act. To make a claim under the terms of this Warranty, the original purchaser must contact FiTech tech support. If FiTech tech support deems the product in need of warranty service, proof of original purchase will be required. Purchaser must **call FiTech Technical Support (951-340-2624) option 2 or email: Techmail@fitechefi.com**, to obtain a Returned Material Authorization (RMA). Proof of purchase must clearly show the place of purchase, purchase price, product purchased, and date of purchase. Purchaser needs to register their product here: <https://fitechefi.com/warranty-registration> or using the mail-in registration form found in the product box.

FiTech's 3-Year Limited Warranty does not cover factory refurbished parts, this warranty is only valid for new purchases from an authorized dealer.

FiTech's liability is expressly limited to replacing or repairing the defective part or parts (refunds are not covered under FiTech's 3-year Limited Warranty). FiTech will have no liability for the cost of installation or removal of the defective product or for the cost of labor or any additional parts required to complete the installation of the replacement product. FiTech is not responsible for any shipping charges accrued during the warranty process/claim.

In no event will FiTech be liable for any indirect, special, incidental, or consequential losses or damages (including but not limited to interruption of business or loss of business or profit) resulting from the use or inability to use the product, any breach of warranty, or any defect in the product, even if FiTech shall have been advised of the possibility of such potential damages or losses. Some states do not allow the exclusion or limitations of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

If the product is in the FiTech facility for repair, the amount of time the product is in repair will be added to the existing warranty period.

In the event that your EFI System that is under warranty is in for repair and FiTech has authorized a replacement, and if that EFI System has been discontinued, FiTech will replace it with a similar product for the same application. The replacement EFI System will maintain the existing warranty period of the original EFI System.

What is not covered under FiTech's 3-Year Limited Warranty:

- Offboard Sensors (oxygen sensors, and temperature sensors, are subjected to a 1-year limited warranty).
- Fuel pumps (Fuel pumps are subjected to a 1-year limited warranty. The customer must send photos of filters used in application. If the filter is completely clogged or contaminated, the fuel pump will not be covered under any FiTech warranty).
- Ignition Cap and Rotor on Go Spark Distributors.
- Normal wear and tear over time
- Fire Damage.
- Cracked footings or flanges on the base of EFI units due to over-tightening or improper installation.
- Removal or replacement costs.
- Shipping costs.
- Damage to related components.
- Costs incurred due to downtime of a vehicle.
- Vehicle transport or storage costs.
- Any product used in marine applications unless specifically stated for marine usage.
- Any product purchased from an unauthorized third party (for example: Amazon, eBay, Craigslist, etc.)