

ICT Billet LS1, LM7, LR4, LQ4, LS6, L59, LQ9, LM4, L33 Compatible Engines

ICT Billet LS Turnbuckle Alternator Relocation Bracket Kit Instruction Manual

Model: LS1, LM7, LR4, LQ4, LS6, L59, LQ9, LM4, L33 Compatible Engines

1. PRODUCT OVERVIEW

The ICT Billet LS Turnbuckle Alternator Relocation Bracket Kit is designed to reposition the alternator on various LS series engines. This kit is particularly useful for applications where the original alternator mounting interferes with other engine components, such as power steering pumps or specific intake manifolds. Constructed from high-quality aluminum, this bracket kit ensures durability and precise fitment, providing a clean and efficient accessory drive layout.

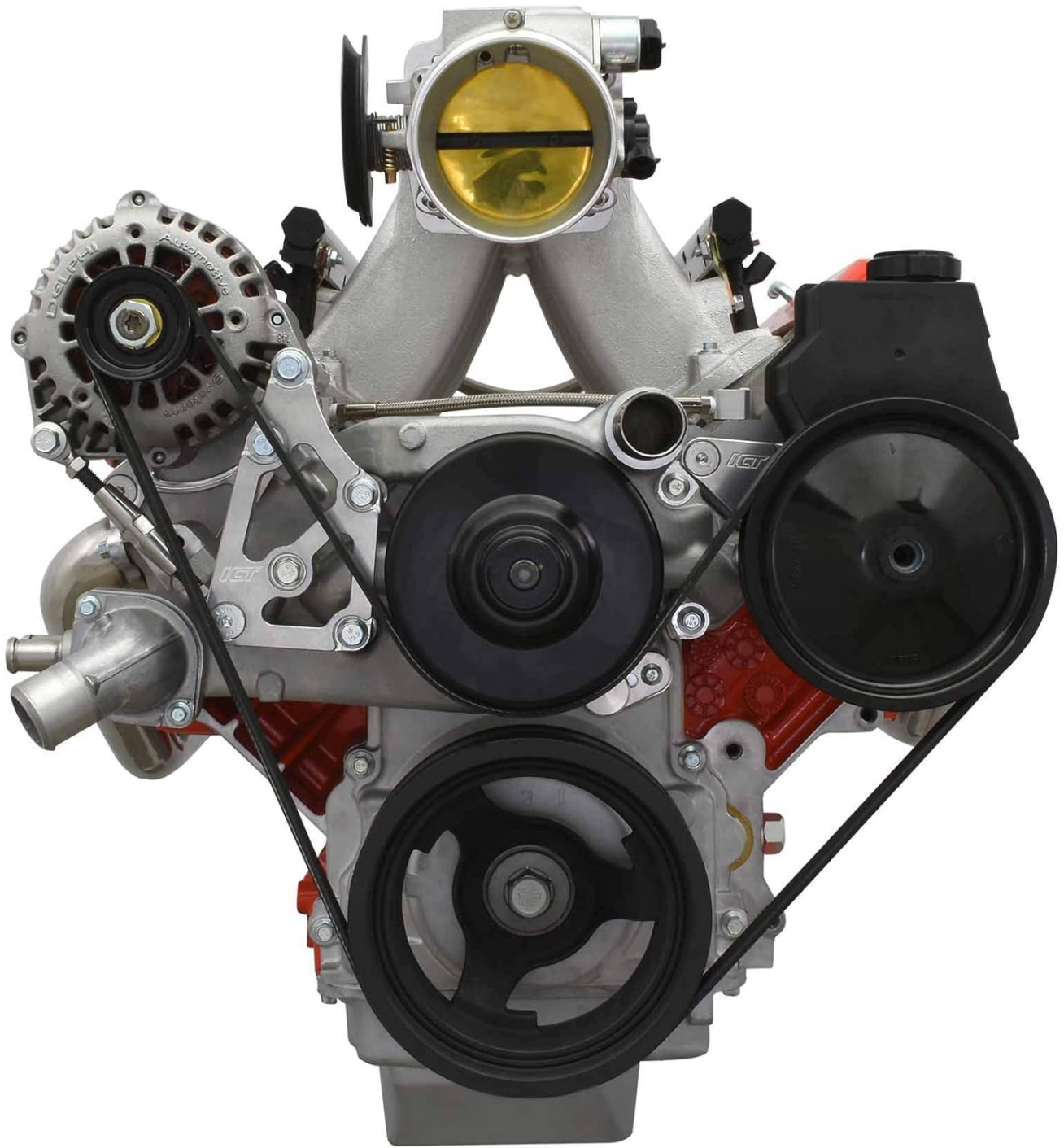


Figure 1: The ICT Billet LS Turnbuckle Alternator Relocation Bracket Kit shown installed on an LS engine, demonstrating the relocated alternator and power steering pump.

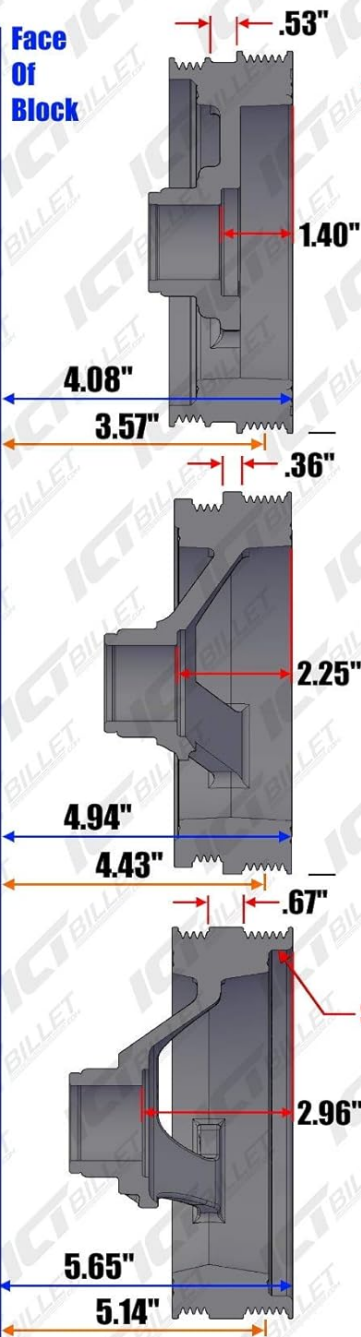
2. COMPATIBILITY

This bracket kit is compatible with a wide range of GM LS series engines, including but not limited to LS1, LM7, LR4, LQ4, LS6, L59, LQ9, LM4, and L33. It is specifically designed to work with LS1 Camaro power steering setups. Proper fitment is dependent on the specific crank pulley spacing of your LS engine.

2.1 LS Crank Spacing Guide

It is crucial to identify your engine's crank pulley spacing to ensure correct bracket selection and installation. Refer to the guide below to determine your crank spacing type (Corvette/CTS-V/SS/G8, 98-02 Camaro/GTO, or Truck/SUV/2010-Up Camaro).

LS Crank Spacing Guide



Part #'s Ending In
-1
Corvette/CTS-V/SS/G8



Part #'s Ending In
-2
98-02 Camaro/GTO



Part #'s Ending In
-3
Truck/SUV/2010-Up Camaro



Figure 2: LS Crank Spacing Guide illustrating the three common crank pulley offsets and their corresponding part number endings. This guide is essential for verifying compatibility.

3. KIT CONTENTS

Before beginning installation, verify that all components listed below are present in your kit. If any parts are missing or damaged, please contact ICT Billet customer support.

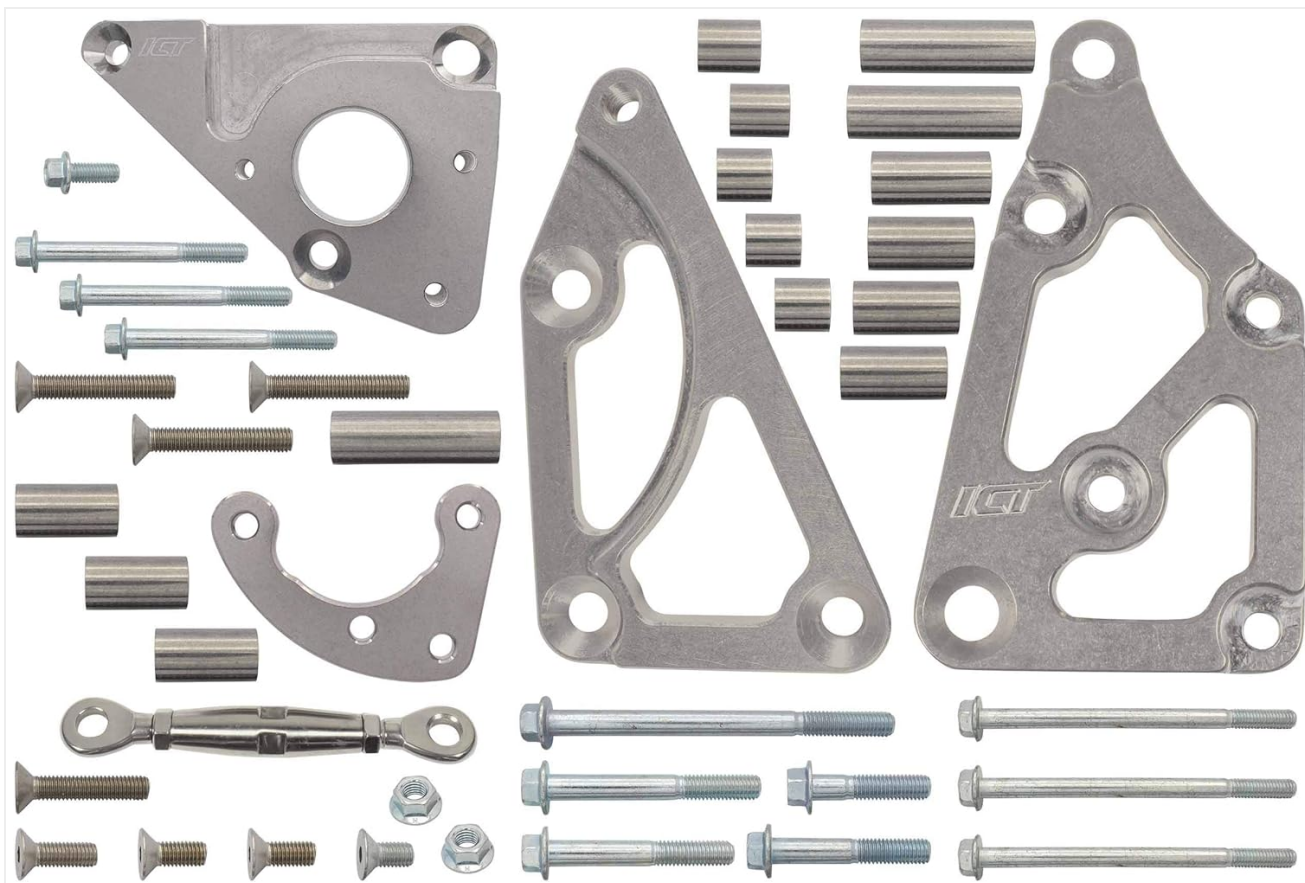


Figure 3: All components included in the ICT Billet LS Turnbuckle Alternator Relocation Bracket Kit, including the main brackets, turnbuckle, and various bolts and spacers.

- Main Alternator Bracket
- Power Steering Pump Bracket
- Turnbuckle Tensioner
- Assorted Spacers
- Mounting Hardware (Bolts, Nuts)

4. INSTALLATION (SETUP)

Installation of the ICT Billet LS Turnbuckle Alternator Relocation Bracket Kit requires mechanical aptitude and appropriate tools. If you are not comfortable performing this installation, it is recommended to seek professional assistance. Always ensure the engine is cool and the battery is disconnected before beginning work.

4.1 Pre-Installation Checks

- Verify engine compatibility and crank spacing using the guide in Section 2.1.
- Ensure all kit components are present and undamaged (refer to Section 3).
- Gather necessary tools (sockets, wrenches, torque wrench, etc.).

4.2 Installation Steps

1. Disconnect the negative terminal of the vehicle's battery.
2. Remove the existing serpentine belt and any components that obstruct access to the alternator and power steering pump.
3. Carefully remove the original alternator and power steering pump from their mounting locations.
4. Mount the new ICT Billet brackets to the engine block using the provided hardware and appropriate spacers.

Ensure all bolts are hand-tightened initially.

5. Attach the alternator and power steering pump to their new positions on the ICT Billet brackets.
6. Install the turnbuckle tensioner between the alternator and its mounting point, allowing for belt tension adjustment.
7. Route the new serpentine belt according to your engine's accessory drive configuration. Ensure the belt is properly seated on all pulleys.
8. Adjust the turnbuckle to achieve the correct belt tension. The belt should have minimal deflection when pressed firmly.
9. Torque all mounting bolts to the manufacturer's specifications (refer to your vehicle's service manual for specific torque values for accessory mounts).
10. Reconnect the battery and start the engine to check for proper operation, belt alignment, and any unusual noises.

551498LS0-3/551498LS0WP-3 BRACKET KIT

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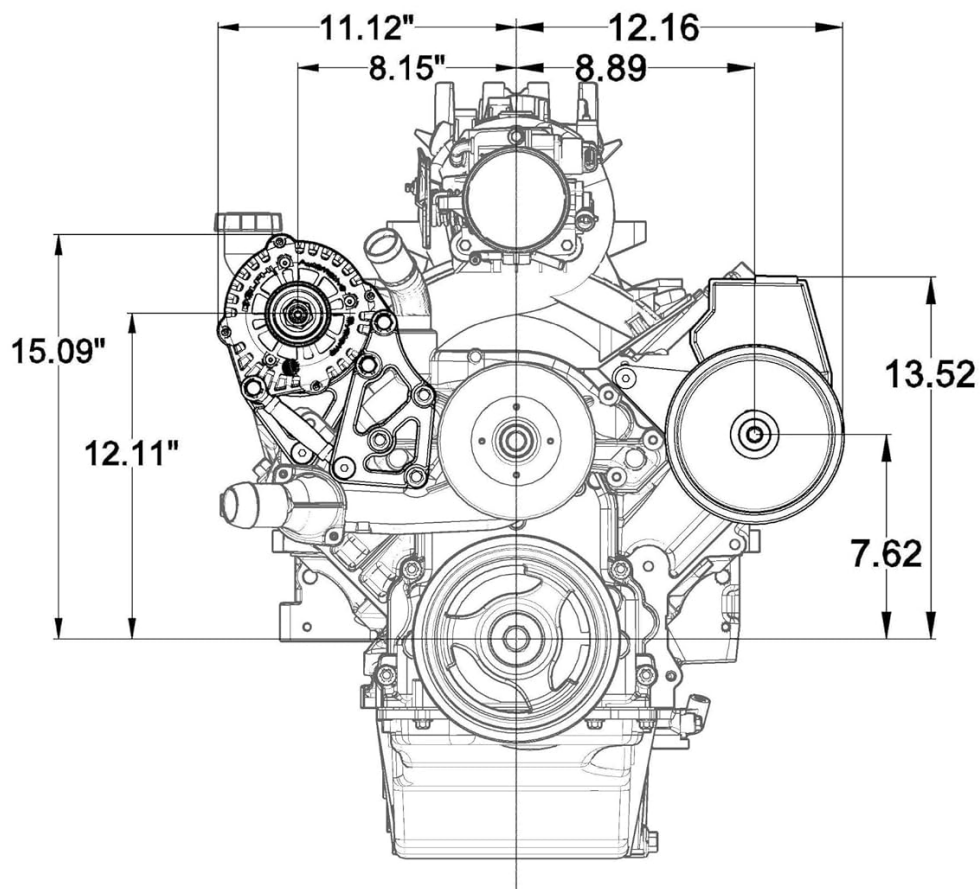


Figure 4: Technical drawing providing key dimensions of the bracket kit when installed, useful for clearance checks and custom applications.

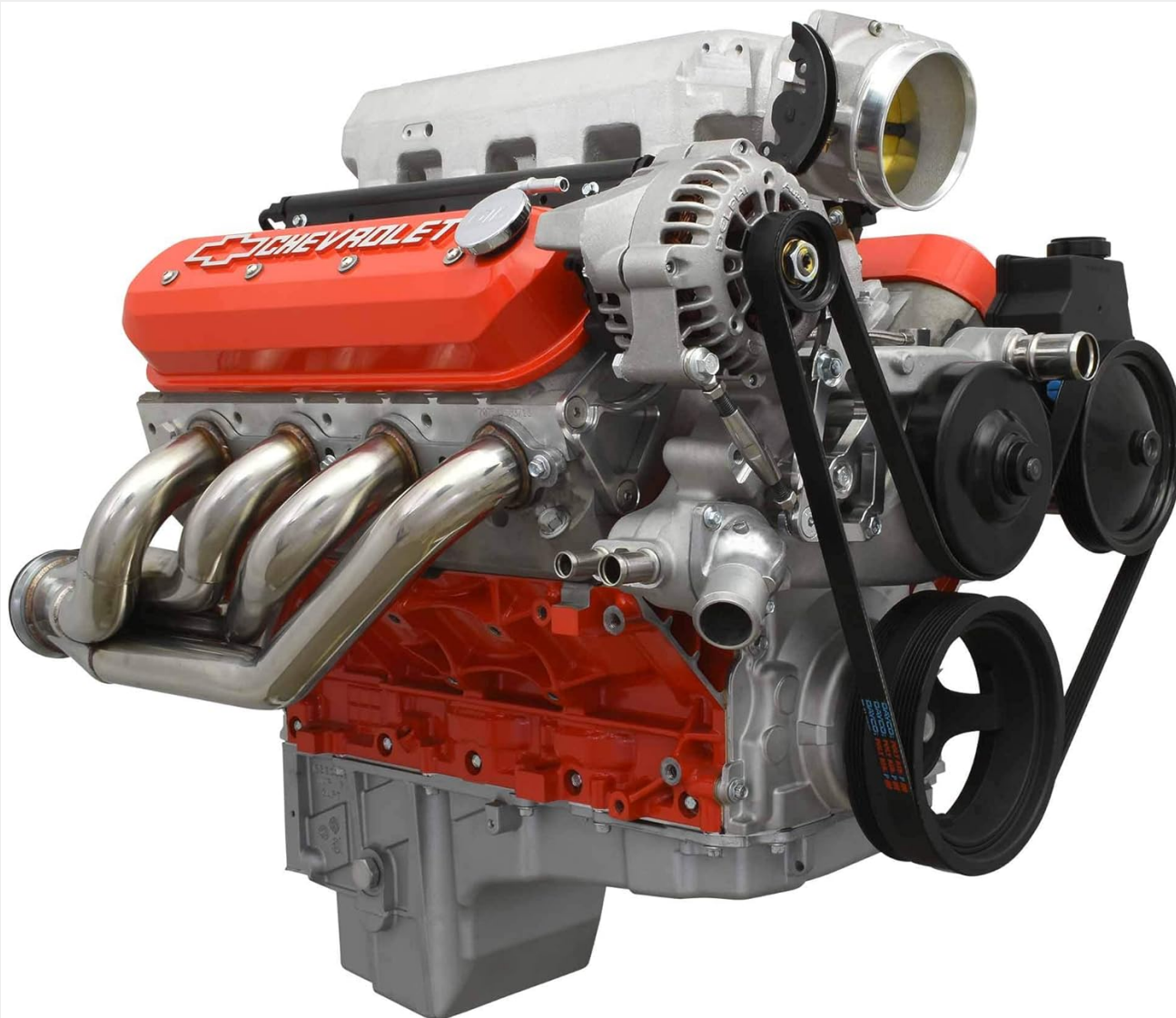


Figure 5: Side view of an LS engine showcasing the installed alternator relocation bracket and the new position of the alternator and power steering pump.

5. OPERATION

Once correctly installed, the ICT Billet LS Turnbuckle Alternator Relocation Bracket Kit functions as a static mounting solution. Its primary role is to securely hold the alternator and power steering pump in their new, optimized positions, ensuring proper belt alignment and tension. There are no operational controls for the bracket itself; its "operation" is passive, facilitating the correct function of the relocated accessories.

6. MAINTENANCE

To ensure the longevity and continued performance of your ICT Billet bracket kit and the associated accessories, periodic maintenance is recommended:

- **Bolt Tightness:** Periodically check all mounting bolts for tightness, especially after the first few hundred miles of operation. Vibrations can sometimes cause bolts to loosen.
- **Belt Inspection:** Regularly inspect the serpentine belt for signs of wear, cracking, fraying, or glazing. Replace the belt if any damage is observed.
- **Belt Tension:** Verify that the belt tension remains optimal. Adjust the turnbuckle if the belt feels loose or exhibits excessive deflection.

- **Alignment Check:** Visually inspect the alignment of all pulleys. Misalignment can lead to premature belt wear and accessory failure.
- **Cleaning:** Keep the brackets clean from excessive dirt, oil, and debris. A simple wipe-down with a clean cloth is usually sufficient.

7. TROUBLESHOOTING

This section addresses common issues that may arise after installation of the bracket kit. Always ensure the engine is off and cool before performing any troubleshooting steps.

Symptom	Possible Cause	Solution
Belt Squeal	Incorrect belt tension (too loose or too tight), pulley misalignment, worn belt.	Adjust turnbuckle for proper tension. Check pulley alignment. Inspect and replace belt if worn.
Excessive Belt Wear	Misaligned pulleys, incorrect belt type, improper tension.	Verify pulley alignment. Ensure correct belt length and type. Adjust tension.
Loose Components	Mounting bolts not torqued correctly or have loosened over time.	Re-torque all mounting bolts to specifications. Use thread locker if necessary (consult professional).
Alternator Not Charging	Electrical connection issue, faulty alternator, belt slippage.	Check all electrical connections to the alternator. Verify belt tension. Test alternator function.

8. SPECIFICATIONS

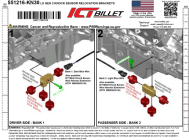
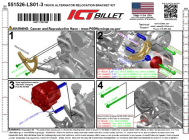
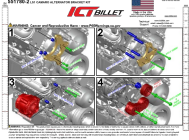
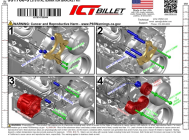
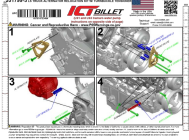
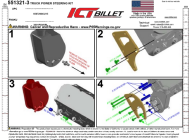
Attribute	Detail
Brand	ICT Billet
Manufacturer	ICT Billet
Material	Aluminum
Mounting Type	Chassis Mount
Item Depth	5 to 6 inches
Compatible Engines	LS1, LM7, LR4, LQ4, LS6, L59, LQ9, LM4, L33
Compatible Vehicles	GM Chevy LS, LS1 Camaro Power Steering

9. WARRANTY AND SUPPORT

Specific warranty information for the ICT Billet LS Turnbuckle Alternator Relocation Bracket Kit was not provided in the product data. For details regarding warranty coverage, returns, or technical support, please contact ICT Billet directly through their official website or customer service channels. It is recommended to retain your proof of purchase for any warranty claims.

You can visit the ICT Billet Store for more information:[ICT Billet Store on Amazon](#)

Related Documents - LS1, LM7, LR4, LQ4, LS6, L59, LQ9, LM4, L33 Compatible Engines

	<p>ICT Billet 551216-KN30 LS Gen 3 Knock Sensor Relocation Brackets</p> <p>Detailed information on ICT Billet's 551216-KN30 LS Gen 3 Knock Sensor Relocation Brackets, including installation guidance for driver and passenger sides, part numbers, and California Proposition 65 warnings.</p>
	<p>ICT Billet 551526-LS01-3 Truck Alternator Relocation Bracket Kit Installation Guide</p> <p>Installation guide for the ICT Billet 551526-LS01-3 Truck Alternator Relocation Bracket Kit, detailing parts and assembly for LS Truck, LS1 Camaro, and LS3 Camaro applications. Includes important safety warnings.</p>
	<p>ICT Billet 551780-2 LS1 Camaro Alternator Bracket Kit Installation Guide</p> <p>Comprehensive installation guide for the ICT Billet 551780-2 LS1 Camaro Alternator Bracket Kit. Features detailed step-by-step instructions, component descriptions, and critical safety information regarding Proposition 65 warnings for lead, aluminum, and steel components. Includes contact details for technical support.</p>
	<p>ICT Billet 551780-3 LS S10 Alternator Bracket Kit Installation Guide</p> <p>Detailed instructions for installing the ICT Billet 551780-3 LS S10 Alternator Bracket Kit, compatible with LS1, LS3, LSX, LQ4, LQ9, 4.8L, 5.3L, and 6.0L engines. Includes part identification and assembly steps.</p>
	<p>ICT Billet 551799-3 LS Truck Alternator Relocation Kit Installation Guide</p> <p>Detailed installation instructions for the ICT Billet 551799-3 LS Truck Alternator Relocation Kit with Turnbuckle Tensioner, compatible with LS1 and LS3 Camaro water pumps. Includes parts list and safety warnings.</p>
	<p>ICT Billet 551321-3 Truck Power Steering Kit Installation Guide</p> <p>Detailed installation instructions and safety information for the ICT Billet 551321-3 Truck Power Steering Kit, including parts list and warnings.</p>