



Do NOT remove any of the QC or Serial# decals on the bottom of the battery, nor cover the bottom with the supplied foam. Install any needed bottom foam into the BATTERY BOX, not the battery bottom, please! REQUIRED for warranty coverage.

See <http://www.shoraidirect.com> for install guides, product manuals, and specifications.

CAUTIONS

- Do not short terminals together!
- Do not short, nor attach anything to the 5-pin, BMS port except Shorai BMS01 Chargers.
- Do not open or damage the battery case
- Use anti-corrosion spray or grease on terminals during use in salty and/or wet environments
- Keep batteries away from pets and children
- **Do not allow over discharge** (minimum 13.0V for 12V types, 6.5V for 6V types)
- Do not allow charge voltage in excess of 14.8V (7.4V for 6V types)
- Standard lead-acid chargers with peak charge voltage of 14.8V or less may be used.
- Fully discharge before disposal

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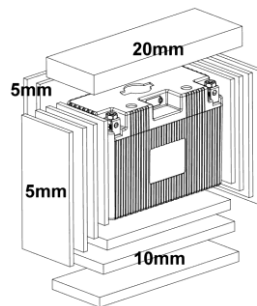
- LFX Starter Battery, with one set terminal screws/nuts and one set spares
- Type#3 Only: Series Bar, 2xM6 screws, cover, 4x cover screws. "L" Terminals, with 2 ea. M2.5 & M6 screws
- Shorai Decals (+1 reflective helmet decal)
- Various sheets of high-density, adhesive-backed foam sheets for LFX fitment to stock
- battery box (if needed)
- Outer packaging, with battery specifications and dimensions listed

INSTALLATION

First, remove the original lead-acid battery from your vehicle, according to the maker's guidelines.

Compare the original battery side-by-side with the new LFX battery. First check that the Polarity (+/-) arrangement is the same on both. If not, contact us directly for advice. Next check that the LFX battery does not **exceed** the size of the original in any dimension (length, width, height). If the LFX is larger in any dimension, and therefore will not fit into the stock battery box, please contact us.

Now compare the original battery to find any dimension in which it is **larger** than the LFX replacement. For example, the two may have the same width, but the original is 25mm taller, etc. For any such difference, apply the appropriate thickness of the included adhesive-backed foam pieces to the **vehicle's battery box**, so the LFX battery fits snugly inside and can attach to the battery cables. (never remove or cover the decals on bottom of battery!)

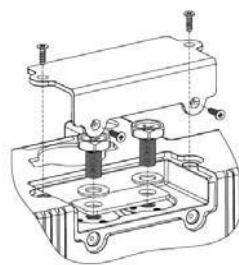


The LFX batteries can bolt cable eyelets to either the top or front sides of the terminals. Choose whichever allows best cable fit. Max torque for the terminal screws (all but case #3 type) is 30kg/cm (27 inch/lb.). Do not over-tighten. Apply anti-corrosion spray or grease to the terminals if used in salty or wet environment.

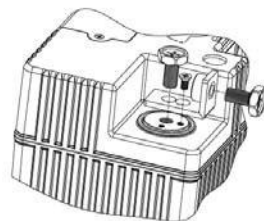
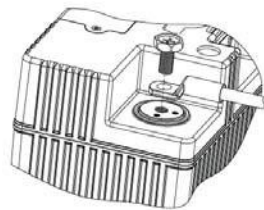
Check that the positive terminal of the LFX battery cannot short against any part of the vehicle; and be sure that the original positive terminal cover, if any, is re-installed on the LFX battery before the battery box cover is fitted.

CASE TYPE #3 SETUP

Required: The LFX #3 series battery hardware pack contains the items pictured at left: A "series" bar, 2x washers, 2x M6 bolts, plastic cover, and 4x screws for the cover. The Series bar remains disconnected during shipping, which allows the LFX batteries to be legally shipped. **You must assemble the series bar as shown, and torque the bolts to 75kg/cm (7.3nm, 68 inch/lb).**



The LFX #3 batteries can bolt cable eyelets to either the top of the terminals directly, or top using the supplied Z-brackets (not pictured), or vertically using the "L" brackets, as shown (pic below). Note: for the L or Z terminals the small taper-head screw is installed first, and then the M6 bolt. The adapters can face forward or to the sides. Install the Positive Cable first, then the Negative. Max torque for the M6 terminal screws is 75kg/cm (7.3nm, 68 inch/lb.).



USAGE

The most damaging two conditions for any starter battery are prolonged storage at high temperatures, or allowing the battery to be deeply discharged.

Compared to lead-acid batteries, LFX have less than 1/4 the average self-discharge rate, and therefore can be stored much longer without a charge. In fact, if there is no current flow in the system when your vehicle's key is OFF, Shorai LFX can be stored one year or more, without damage.

Vehicles which do have a current drain while turned off will need the battery periodically charged, depending on the rate of current drain. If you ride at least two hours per month year-round, that is usually sufficient.

For storage in excess of a month, the Shorai BMS01 Battery Management System is highly recommended, as it has a dedicated STORE mode which monitors battery voltage levels and automatically restores ideal voltage levels for best battery life, while also balancing the internal cells and monitoring battery condition. Seasonal storage can also be achieved by disconnecting the negative battery cable, to eliminate any key-off draw on the battery.

High temperatures accelerate aging for any battery type. If you know that your vehicle will be unused for an extended period of time - and during that time it will be exposed to high temperatures - you may remove the LFX and store it in a cool place - even a refrigerator. If so, do be sure that the terminals are taped and the battery bagged in plastic to avoid possibility of shorting or corrosion.

Again, these temperature notes generally apply to batteries of any type. This storage advice is for those who want the longest possible lifespan from their new Shorai LFX batteries.

WARRANTY (ShoraiDirect.com)

All warranty claims for products sold via SHORAI DIRECT are handled directly and ONLY by Shorai Direct, and WILL NOT be serviced by any other seller or provider of Shorai Products.

For online submission of warranty claims visit:

www.shoraidirect.com/rma

The Serial# and QC decals on the bottom of your LFX battery MUST be retained in order to receive warranty service according to the purchased warranty level. **Do not remove or cover these decals, please.**

Please do NOT return any product without an RMA#, or before Shorai Direct has contacted you to perform some simple diagnostics. In many cases issues can be solved prior to return.

Conditions which may not be covered

- Physical Damage to the battery after purchase
- Over-voltage or over-current charging
- Other errors by charger or user setting of charger
- Current draw in excess of CCA specification
- Cranking cycles >10 sec duration
- Short circuit of main terminals or BMS port
- Improper connections to the 5-pin BMS port
- Damage due to OVER DISCHARGE

SHIPPING DAMAGE

Any item damaged in transit must be reported to the SHIPPER IMMEDIATELY upon opening of the package, and also Shorai Direct. All original packaging must be retained until further notice.

Shorai Direct will respond with instructions after consultation with the shipping agent.

Thank you for choosing Shorai LFX! We hope and expect that you'll be pleased with the performance of our products, for years to come.

General inquiries: shop@shoraidirect.com

Tech questions: tech@shoraidirect.com

BMS01 Charger/Storage System

The BMS01 Charger connects via the 5-Pin Data Port on the LFX Batteries, allowing Charge, Balance, Maintenance and Diagnostic modes. Users who ride frequently may never need any charger, but vehicles which sit unused for long periods may benefit greatly from the Store (maintenance, trickle) and Advanced Charge modes of the BMS01 charger.

