Durst

T-REX BJT-520B

12 VOLT & 24 VOLT GROUND POWER UNIT

Data Sheet & Operating Instructions

BJT-520B Series: BJT-520B-A | BJT-520B-C | BJT-520B-N



Made in Australia by Durst Industries (Aust.) Pty Ltd

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Introduction

Read this manual before charging or using the T-Rex. Keep it with the unit.

The T-Rex BJT-520B is a high-capacity mobile jump starter designed for 12V or 24V systems. It is suitable for a wide range of applications: cars, trucks, buses, defence vehicles, mining and aviation. The heavy-duty steel enclosure, large pneumatic wheels and integrated safety features make it ideal for demanding industrial and commercial environments.

Models

Model	Output port	Slave lead options
BJT-520B-A	Anderson	LS-3Al-95 or LS-6Al-95 (Anderson to Clamp)
BJT-520B-C	CAT	LS-3CC-70 or LS-6CC-70 (CAT to CAT)
BJT-520B-N	NATO	LS-3NN-95 or LS-6NN-95 (NATO to NATO)

IMPORTANT: Choose the slave lead configuration that matches your vehicle or aircraft connector type. Always confirm the correct slave lead before connecting, to ensure compatibility and a safe start procedure.

Part numbers

Item	Part number	Description
Slave lead, BJT-520B-A	LS-3Al-95	3 m, 95 mm², Anderson to Clamp
Slave lead, BJT-520B-A	LS-6Al-95	6 m, 95 mm², Anderson to Clamp
Slave lead, BJT-520B-C	LS-3CC-70	3 m, 70 mm², CAT to CAT
Slave lead, BJT-520B-C	LS-6CC-70	6 m, 70 mm², CAT to CAT
Slave lead, BJT-520B-N	LS-3NN-95	3 m, 95 mm², NATO to NATO
Slave lead, BJT-520B-N	LS-6NN-95	6 m, 95 mm², NATO to NATO
Battery	512-86	6 x 130 Ah, 12V, 900 CCA AGM lead acid deep cycle
Fuse pack	BJF-500-TREX	T-Rex fuse pack

Key features and specifications

Specification	Value
Voltage output	12V or 24V, selectable with the main switch
Cranking amps (CA)	5,400 A (12V) / 2,700 A (24V)
Cold cranking amps (CCA)	4,800 A (12V) / 2,400 A (24V)
Peak amps (estimated)	Approx. 24,000 A (12V) / 12,000 A (24V)
Batteries	6 x 130 Ah, 12V, 900 CCA AGM lead acid deep cycle (part number 512-86)
Charger	Automatic built-in SwitchMode BCS-WSC-1280 (12V, 80 A)
Enclosure	Powder-coated steel with large pneumatic wheels. Vented (do not seal or cover the vents).
Weight	Approx. 257 kg. Use mechanical assistance to move the unit.
Dimensions	L 1170 mm x W 720 mm x H 670 mm
Protection	Reverse polarity protection, anti-spike protection and fuse protection
Output connector	Anderson (BJT-520B-A), CAT (BJT-520B-C) or NATO (BJT-520B-N)

BUILT-IN PROTECTION: Each unit includes built-in reverse polarity protection, anti-spike protection and fuse protection for safe operation.

Important safety information

No smoking or open flames

- Batteries can emit explosive gases. Operate and charge the unit in a well-ventilated area, away from sparks or flames.

Authorised personnel only

- Make sure operators have training or prior experience with high-current jump starters or ground power units (GPUs).

Correct voltage

- The T-Rex BJT-520B can supply 12V or 24V. Check your vehicle or aircraft manual for the correct voltage setting.

OEM guidelines

- Always follow the manufacturer's recommended procedure for external jump-start connections on ground vehicles or aircraft.

Handling

- The unit weighs approx. 257 kg. Use mechanical assistance to move it.
- Keep the lid closed during use. Open it only for maintenance or service, with the unit switched off and isolated.

Charging the T-Rex BJT-520B

1. **Switch OFF.** Always set the main switch to OFF before charging.

2. **Connect AC power.** Plug the AC power lead into the IEC socket labelled “AC IN”.
   A red charge indicator lights when the unit is connected to mains power.

3. **Check the battery optimisation display (if equipped).** It monitors charging voltage, current and temperature in real time.
   It shows faults or error codes if charging is interrupted.

4. **Keep it charged.** The remote indicator shows the charging status. When the batteries are full, the charger changes to float mode.

5. **Leave it on AC power.** Keep the T-Rex on AC power whenever possible to keep the batteries at full capacity.

Operating instructions

1. Pre-connection checks

1. **Confirm the unit is OFF.** The main isolation switch must be set to OFF before handling connections.
2. **Check the emergency switch indicator.** Make sure any emergency or safety switch is in the OFF/SAFE position before attaching cables or leads.
3. **Select the correct slave lead.** Attach the slave lead that matches your T-Rex BJT-520B version (A, C or N): Anderson to Clamp, CAT to CAT, or NATO to NATO.

2. Connect to the vehicle or aircraft

1. **Attach the slave lead.** Connect the lead from the OUTPUT connector on the T-Rex to the matching slave connector on the vehicle or aircraft.

   Using clamps (BJT-520B-A with Anderson to Clamp leads)? Connect the BLACK (-) clamp to the negative terminal or an unpainted vehicle ground. Connect the RED (+) clamp to the positive battery terminal.
2. **Check for alarms.** If a buzzer sounds or a warning light shows reverse polarity, STOP immediately and check the connections.
3. **Read the voltmeter.** With the T-Rex switch still OFF, the voltmeter shows the standing voltage of the vehicle or aircraft battery.

3. Activate the T-Rex

1. **Select the voltage.** Turn the MAIN SWITCH to 12V or 24V to suit the vehicle or aircraft.
2. **Confirm the output.** The voltmeter changes to show the T-Rex output voltage.
   A green LED confirms the active voltage: the 12V LED for 12V, or the 24V LED for 24V.
3. **Know where the emergency switch is.** If anything goes wrong during operation, press the emergency switch. Its built-in red light shows when the switch is ON.

4. Start the engine (load)

Start the vehicle or aircraft as per normal procedures. Once it is running, switch the T-Rex back to OFF before removing the leads.

5. Monitor during use

- Watch the voltmeter continuously to confirm a stable voltage.
- If the battery or the T-Rex shows irregular readings, switch OFF and inspect.

6. Disconnect

1. **Switch OFF.** Turn the main switch to OFF.
2. **Remove the leads.** Disconnect the slave connector or clamp leads from the vehicle or aircraft.
3. **Stow the leads.** Store the leads securely on the T-Rex to prevent damage. Then put the unit back on charge.

General maintenance

Regular care keeps the T-Rex ready to start and helps the batteries last. Carry out these checks as part of normal use.

Keep it clean and dry

- Wipe down the unit with a soft cloth. Avoid high-pressure water jets or harsh chemical cleaners.
- Keep the lid closed during use. Open it only for maintenance or service.
- Keep the vents clear. The batteries need ventilation, so never cover, block or seal the vents.
- Do not store or charge the unit where water can pool, drip or spray onto it.
- If water gets into the unit, switch it off and isolate it. Have a qualified person check it before you use it again.

Charging and battery care

The T-Rex contains six 12V AGM lead acid deep cycle batteries. AGM batteries do not need topping up with water. Keeping them charged is the most important part of battery care.

- Check the charge level and recharge as needed. Operating the T-Rex at low battery voltage can reduce performance.
- Recharge the unit fully after each use.
- Keep the T-Rex on AC power whenever possible. The built-in charger keeps the batteries at full capacity in float mode.
- Do not leave the unit flat. Lead acid batteries left discharged can be permanently damaged.
- Always set the main switch to OFF before charging. Charge in a well-ventilated area away from sparks or flames.
- If the charger shows a fault or error code (if equipped), or the batteries will not hold their charge, contact Durst.

Leads, clamps and connectors

- Before each use, inspect the leads for frayed insulation, loose connectors or corrosion.
- Check the output connector and slave lead plugs (Anderson, CAT or NATO, depending on your model) for cracks, heat damage, loose housings and bent, pitted or burnt contacts.
- On Anderson to Clamp leads, check that the clamp jaws are clean, the springs work and the lead is secure in each clamp.
- With the unit switched OFF, clean any corrosion using a mild solution (for example, bicarb soda and water) and a wire brush. Dry the part fully before use.
- After use, store the leads securely on the T-Rex to prevent damage.
- Do not use a damaged lead. Replace it with the correct Durst slave lead for your model (see Part numbers).

Switches, meter and terminals

- Check that the main switch turns smoothly and sits firmly in the OFF, 12V and 24V positions.
- Check that the emergency switch, the indicator LEDs and the voltmeter work.
- When the unit is open for service, a qualified person should check that the battery terminals and internal connections are tight, clean and free of corrosion.

Fuses

- Use only fuses approved by Durst (fuse pack part number BJF-500-TREX).
- If you are unsure about fuse specifications, contact an authorised Durst service centre.

Enclosure, wheels and handle

- Check the pneumatic tyres for damage and keep them inflated to the pressure marked on the tyre.
- Check the wheels, handle and lifting points for damage or looseness.
- Check the powder-coated enclosure for damage or rust, and touch up bare metal.

Storage

- Store the T-Rex in a clean, dry, covered area with the lid closed and the main switch OFF.
- Keep it on AC power during storage where possible.
- If it is stored without AC power, check the charge level regularly and recharge it before it runs low.

Who should service the unit

- Operators can carry out the external checks in this section.
- Only a qualified person, trained to work on high-current DC battery equipment, should open the unit or work on internal parts, battery terminals or wiring.
- Replace batteries only with the Durst-approved battery (part number 512-86). For battery replacement or repairs, contact Durst or an authorised Durst service centre.
- Do not modify the unit. Durst is not liable for damage due to unauthorised modifications.

Extreme environment maintenance

For mining, iron ore, coal and quarry sites, and any other dusty, wet or hot site. Follow this section in addition to General maintenance.

WHY DUST MATTERS

The T-Rex contains AGM batteries, so the enclosure is vented. It cannot be sealed.

Fine dust, such as red iron ore dust or coal dust, gets in through the vents. This dust is conductive. A build-up inside the unit damages switches, relays and electronics.

Keep the lid closed and the vents clear

- Use the unit with the lid closed. Open it only for maintenance or service.
- Never cover, tape or seal the vents to keep dust out. The batteries need ventilation.
- Keep the vents clear of dust, mud and debris.

Store and charge in a covered, low-dust area

- When the unit is not in use, store and charge it in a covered, low-dust area, such as a workshop or crib room.
- Keep it out of rain, washdown bays and standing water.
- Where possible, keep it out of direct sun and away from hot plant and exhausts.
- Do not leave the unit in high-dust areas for longer than the job needs.

Keeping it clean in dusty conditions

The T-Rex is designed to be used with the lid closed. Open it only for maintenance or service. In dusty environments such as mine sites, keep the unit and its vents as clean as possible.

- Clean the unit regularly using whatever method suits your site and the equipment you have on hand, for example vacuuming or blowing out with low-pressure air. Always follow your site's own rules.
- Before cleaning inside the unit, switch it off and isolate it. Only a qualified person should open the unit.
- Set a regular inspection and cleaning schedule to suit your conditions.
- Conductive dust, such as iron ore or coal dust, left to build up inside the unit can cause faults. Contamination is not covered as normal use under warranty.

VENT VALVES: For very dusty sites, one-way vent valves can be fitted at the factory on request. Contact Durst or your reseller.

Wet and hot conditions

- Never hose down or pressure-wash the unit. Wipe it with a soft cloth.
- If water, mud or chemicals get into the unit, remove it from service. Switch it off, isolate it and have a qualified person inspect it before use.
- In hot conditions, park the unit in the shade where possible and keep the vents clear. After extended high-load use, switch OFF and allow the unit to cool.
- Heat, sun and rough ground wear leads faster. Check leads, clamps and connectors for heat damage, cracking and abrasion more often.

Set a maintenance schedule for your site

- Operators are responsible for setting a maintenance schedule that suits their site conditions and use.
- Treat the intervals in this manual as a starting point. Check and clean more often where there is more dust, water or heat.
- Add the T-Rex to your site plant inspection system, and record every check and service in the maintenance log.

WARRANTY

Damage caused by contamination (such as dust, water or chemicals), or by a lack of maintenance in harsh environments, is not normal use. It is not covered by warranty.

Maintenance checklist and log

Use this checklist as a starting point and adjust it to suit your site. Copy the log page as needed.

Maintenance checklist

Check	Who	When
Unit charged and charge indicator working	Operator	Before and after each use
Leads, clamps and connectors free of frays, cracks, corrosion and heat damage	Operator	Before each use
Main switch, emergency switch, indicator LEDs and voltmeter working	Operator	Before each use
Vents clear, lid closed, enclosure, wheels and tyres in good condition	Operator	Before each use
Stored and charging in a covered, low-dust area, on AC power	Operator	After each use
Inside cleaned using a method that suits your site (unit off and isolated)	Qualified person	As per your site schedule
Switches, relays, terminals and leads inside the unit checked for dust build-up, corrosion and wear	Qualified person	Each time the unit is opened
Repairs, battery replacement, or any fault you cannot clear	Durst or authorised Durst service centre	As needed

Maintenance log

Date	Check or service done	Findings and action taken	Name and signature

Troubleshooting

Issue	Possible cause	Suggested action
Buzzer or warning light	Reverse polarity or incorrect lead connection	Disconnect and re-check the clamp or connector.
Low or no output power	T-Rex battery undercharged, or fuse blown	Recharge fully. Replace the fuse if necessary.
Vehicle won't start	Insufficient capacity or large load draw	Confirm the vehicle battery health. Fully charge the T-Rex.
Overheating	Extended high-load operation or poor ventilation	Switch OFF and allow the unit to cool. Make sure the vents are clear.
Voltmeter inactive	Main switch OFF, or cables disconnected	Check the switch and cable connections, then re-test.
Switches, relays or indicators faulty or intermittent	Dust or moisture inside the unit	Switch OFF and isolate. Have a qualified person clean and inspect the unit (see Extreme environment maintenance).

Disclaimer, warranty and support

Intended use. The T-Rex BJT-520B jump starter is engineered for professional applications requiring high cranking current at 12V or 24V. Consult the vehicle or aircraft manufacturer for instructions on external GPU use.

Liability. Durst Industries (Aust.) Pty Ltd is not liable for damage due to misuse, unauthorised modifications or improper handling.

Warranty. Damage caused by contamination (such as dust, water or chemicals), or by a lack of maintenance in harsh environments, is not normal use and is not covered by warranty. Keep your maintenance log as a record of care.

Contact Durst

Contact	Details
Company	Durst Industries (Aust.) Pty Ltd
Address	1/11 Packard Ave, Castle Hill NSW 2154, Australia
Website	durst.com.au
Email	sales@durst.com.au
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Your T-Rex record

Fill this in and keep it with your proof of purchase.

Item	Details
Model (A, C or N)	
Serial number	
Date of purchase	
Purchased from	
Slave lead part number	