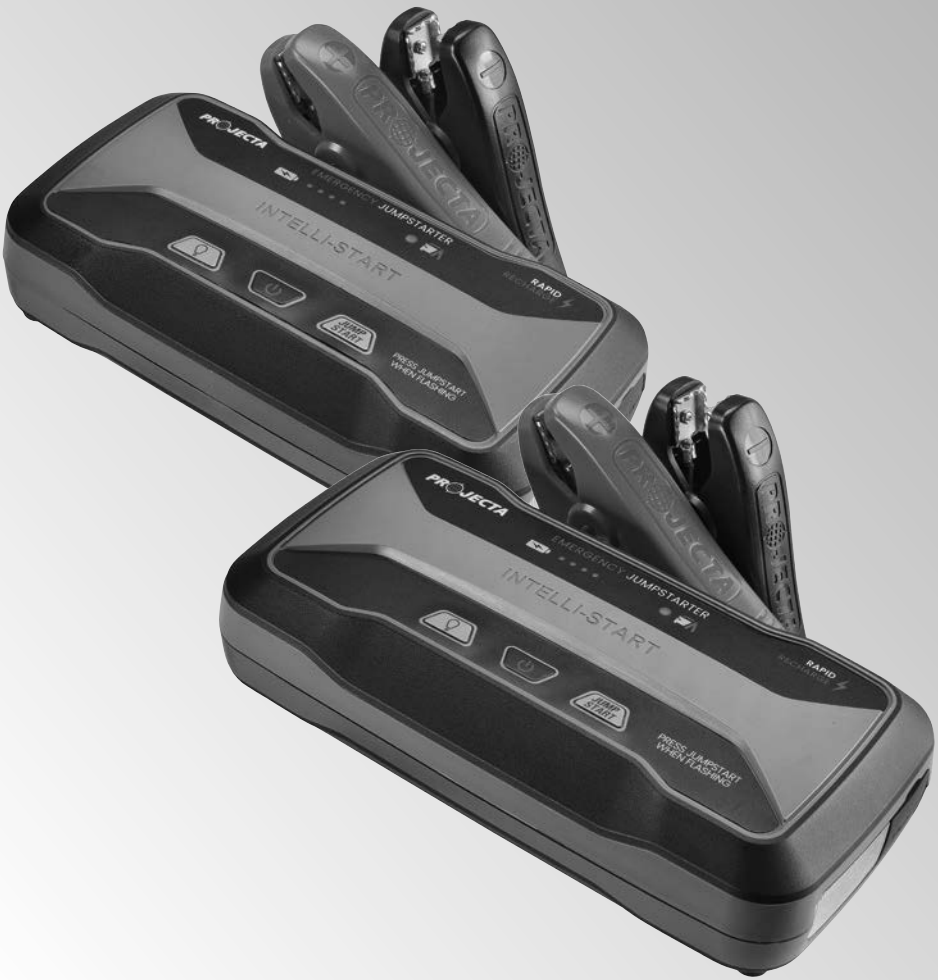
PROJECTA

## INTELLI-START

# LITHIUM EMERGENCY JUMP STARTER

## and Portable Power Bank




P/No. IS920C, IS1220C

Intelli-Start.com

## IMPORTANT SAFETY INFORMATION

Please read this manual thoroughly before use and store in a safe place for future reference.

## WARNINGS

- This unit has been designed for 12V vehicles only.
- Risk of explosive gas. Working in the vicinity of car batteries can be dangerous. Batteries release explosive gases during normal operation, charging and while jump starting a battery. Before using this Jump Starter, read and follow the instructions carefully. Follow all manufacturer's instructions and warnings of the vehicle's battery and other equipment being used.
- Jump start 12V DC automotive lead acid batteries only. Do not use to jump start dry cell batteries commonly found in household appliances. These batteries may burst and cause injury and/or property damage.
- Do not smoke, use matches, use a cigarette lighter, or allow a spark or flame near the battery.
- Do not allow metal to come in contact with the battery posts. It may spark or short-circuit the battery and cause an explosion/fire.
- Remove rings, bracelets, necklaces, and watches when working at the vehicle and/or jump starting a vehicle.
- The Jump Starter contains a sealed non-spillable Lithium Iron Phosphate battery ($LiFePO_4$). This must be disposed of properly.
- Ensure correct polarity when connecting clamps to vehicle.
- The Jump Starter is not designed to be left outside for extended periods of time or submerged in water.
- Do not store the Jump Starter in temperatures above 45˚C or below -10˚C, as this can affect the health of the battery.
- Always wear eye protection when operating the Jump Starter.
- Although the Jump Starter has been designed to protect the battery, do not drop the Jump Starter or attempt to pierce it in anyway. This can result in an explosion and/or fire.
- If the Jump Starter is physically damaged in any way, it should not be used.
- Not intended for people (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction - children being supervised not to play with the appliance.
- Only to be used with the power supply unit provided and it must only be supplied at SELV (Safety Extra Low Voltage: less than 60V DC).

- Do not attempt to charge via the USB output as this will damage the Jump Starter and the USB output.
- Do not allow the positive (red) clamp and the negative (black) clamp to touch each other during jump starting.
- Make sure to have strong clamp connection to starting battery to maximise jump starting current.
- The EMF (electromagnetic field) during jump starting might interfere with medical devices. For example, implanted pacemakers and defibrillators might contain sensors that respond to magnets and radios when in close contact. To avoid any potential interactions with these types of medical devices, please keep a safe distance away from the jump starter. Consult with a physician and the medical device manufacturer for specific guidelines.
- The clamps may get hot during jump starting; heat resistant gloves are recommended to prevent burns.

**IMPORTANT CHARGING INFORMATION**

- Charge the Jump Starter prior to first use, using the supplied 12V DC socket charger ISEUSB. This may take up to 4 to 8 hours depending on the model.
- Fully recharge the Jump Starter after every use to ensure your Jump Starter is ready for use in case of an emergency.
- The Jump Starter has a USB-C charging port. This allows the user to charge the Jump Starter using a USB-C cable.
- To extend the life of the Jump Starter, do not let the battery charge level fall below 20%.
- To extend the life of the Jump Starter battery, do not charge in an environment above 45˚C or below 0˚C.

## FEATURES

### RAPID RECHARGE TECHNOLOGY (RRT)

- The Lithium Iron Phosphate ($LiFePO_4$) battery can rapidly recover charge from the vehicle's alternator following a successful jump start. Leaving the clamps connected to the vehicle's battery for 40 seconds will recharge the Jump Starter to 100% of the original charge status. Once the Jump Starter is fully charged, the RRT will shut off avoiding overcharging.

### LITHIUM SAFE

- Intelli-Start Lithium Iron Phosphate ($LiFePO_4$) batteries are specifically designed for cranking therefore purpose built for jump starting and are safer than Lithium Cobalt ($LiCoO_2$) battery types. The $LiFePO_4$ batteries provide more starts and have an operational life of up to 1800 battery cycles.

### JUMP STARTING PERFORMANCE

### IS920C

- The IS920C is suitable for starting most 12V petrol vehicles up to 6.0 litres.
- A fully charged IS920C can do up to 9 petrol starts (with a flat vehicle battery).
- With 40 seconds of Rapid Recharge after each jump start, the IS920C will not need to be recharged during the working day.

### IS1220C

- The IS1220C is suitable for starting most 12V petrol vehicles up to 7.0 litres and diesel vehicles up to 4.5 litres.
- A fully charged IS1220C can do up to 11 petrol starts (with a flat vehicle battery) and 34 diesel starts (with a flat vehicle battery).
- With 40 seconds of Rapid Recharge after each jump start, the IS1220C will not need to be recharged during the working day.

### INBUILT LED FLOOD LIGHT

- Provides illumination for safer and more convenient operation at night.
- The flood light is not on a timer and will continue to operate until the battery reaches 20% of its state of charge, then it will shut down. Users should take care to turn off flood light when not used to preserve battery life.

### POWER BANK WITH 2.1A USB OUTPUT

- Allowing charging of phones, tablets, and other small portable devices.

### USB INPUT CHARGING

- Allows the Jump Starter to be charged from the vehicle USB socket or cigarette socket.

### PREMIUM SPARK FREE CLAMPS

- Ensures safe jump starting.

### EASY TO READ BATTERY STATUS INDICATOR

- Shows battery status and when recharge is required.

### CONNECTION INDICATION

- Confirms clamp connectivity and status.

## UNPARALELLED SAFETY AND RELIABILITY

### REVERSE POLARITY PROTECTION & ALARM

- Prevents sparking from accidental reverse connection. The alarm sounds when the Jump Starter clamps are connected incorrectly.

### OVER-TEMPERATURE & UNDER-TEMPERATURE PROTECTION

- The Jump Starter has different layers of temperature protection in respect to environmental conditions. The Jump Starter will not allow:
  - Charging over 45°C
  - Charging below 0°C
  - Jump starting over 60°C
  - Jump starting below -20°C
- Should the unit overheat by continuous or numerous jump starts, the unit will shut off automatically and restart once the over-temperature condition subsides.

### OVER-VOLTAGE & UNDER-VOLTAGE PROTECTION

- The Jump Starter will deactivate and sound an alarm if connected to a vehicle battery which is higher than 14.6V, or if the internal battery is discharged to a level whereby the battery might be damaged.

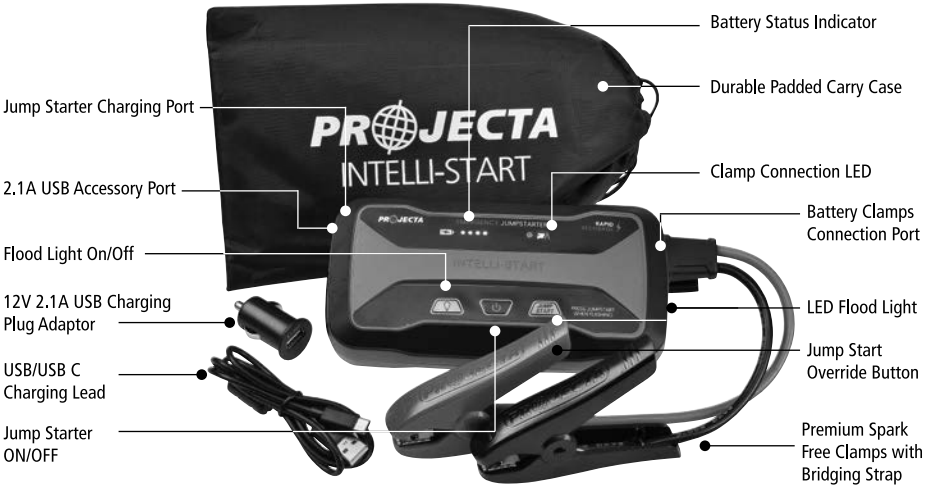
### SURGE PROTECTION

- Features built in surge protection so you can safely jump start vehicles with Electronic Fuel Injection (EFI) and computer management systems.

### TOTAL SAFEGUARD PROTECTION

- The IS920C and IS1220C Jump Starters offer total safeguard protection including additional protections like Battery & Switch Short Circuit Protection, Over Current Protection, Over Cranking Protection, Low Voltage Indication.

## PRODUCT OVERVIEW*




*IS920C Pictured - IS1220C has the same features

# SPECIFICATIONS

| P/No. | IS920C | IS1220C |
|---|---|---|
| **Battery** | | |
| Battery Capacity | 1.6Ah at 12.8V<br>6,400mAh at 3.2V<br>20.48Wh | 3.0Ah at 12.8V<br>12,000mAh at 3.2V<br>38.4Wh |
| Battery Chemistry | Lithium Iron Phosphate ($LiFePO_4$) | Lithium Iron Phosphate ($LiFePO_4$) |
| Peak Amps | 900A | 1200A |
| Clamp Power | 240A | 400A |
| Voltage | 12V only | 12V only |
| Number of Emergency Jump start[1] (with a vehicle flat battery) | Up to 9 times | Up to 11 times |
| Battery Cycles | 1800 | 1800 |
| **Jump Starter Leads** | | |
| Length | Positive: 310mm<br>Negative: 270mm | Positive: 310mm<br>Negative: 270mm |
| Cable | $8mm^2$ – 8AWG | $8mm^2$ – 8AWG |
| Polarity Protection | MCU controlled<br>with electronic switch | MCU controlled<br>with electronic switch |
| Overload Protection | MCU controlled<br>with electronic switch | MCU controlled<br>with electronic switch |
| **Recharging** | | |
| Cable | 1m long USB to Type C | 1m long USB to Type C |
| USB-C Charging port | 2.1A Type C charging port<br>3rd party 10W 240V AC USB adaptors can be used. (Not provided) | 2.1A Type C charging port<br>3rd party 10W 240V AC USB adaptors can be used. (Not provided) |
| 12V DC Charging | 12V to 5V 2.1A USB charger (provided) | 12V to 5V 2.1A USB charger (provided) |
| DC Charging | 4 hours | 8 hours |
| **Jump start Connection Voltages** | | |
| Vehicle Voltage Range | 0V to 15V | 0V to 15V |
| **USB Output** | | |
| USB Output | 2.1A, 5.0V | 2.1A, 5.0V |
| USB Low Voltage Disconnect | Battery voltage at 10.5V | Battery voltage at 10.5V |
| **Dimensions, Weight & Environmental** | | |
| Length | 178mm | 197mm |
| Width | 92mm | 98mm |
| Height | 48mm | 52mm |
| Weight | ~ 0.56kg | ~ 0.78kg |
| Operating Temperature | -20˚C to 60˚C | -20˚C to 60˚C |
| Operating Temperature (charging) | 0˚C to 45˚C | 0˚C to 45˚C |
| Storage Temperature (long term) | -10˚C to 60˚C | -10˚C to 60˚C |
| Ingress Protection | IP53 (Rain Proof) with covers over the ports | IP53 (Rain Proof) with covers over the ports |

1. Tested on a Ford Ranger 3.2L Diesel and Ford Territory 4.0L Petrol with a flat battery in good condition

# JUMP STARTER INSTRUCTIONS

Notes:
- Instructions for negatively earthed vehicles only. (Most vehicles after 1970 are negatively earthed).
- Before jump starting a vehicle, it is recommended to ensure the Jump Starter is fully charged.

## JUMP STARTING

| Step | Instruction | Display |
|---|---|---|
| 1 | The Jump Starter should be charged for around 8 hours prior to first use and as soon as possible after each use. | |
| 2 | Before making any connections, check the Jump Starter battery status by turning the Jump Starter ON. The Jump Starter's battery capacity should be at least 50% charged (2 bars). | **BATTERY STATUS INDICATOR**<br>When Jump Starter is turned on battery gauge LEDs are displayed.<br>State of Charge / Battery Gauge LED Display<br><20% – Red flashing<br>20–25% – Red<br>25–50% – Yellow<br>50–75% – Green<br>75–100% – Green |
| 3 | Before connecting the Jump Starter's clamps to the vehicle turn the vehicle's ignition to OFF. | |
| 4 | Connect the Red positive (+) clamp to the positive (+) terminal of the vehicle battery, then connect the Black negative (-) clamp to the negative (-) terminal of the battery or a non-moving metal part of the engine block. Ensure you have a good clamp connection; this will guarantee optimal jump starting.<br>DO NOT CONNECT TO FUEL LINE. Always double check you have proper connections. | |
| 5 | The "Jump Start" button should begin to flash. Press the "JUMP START" button. The clamp LED should turn on to green. |   |
| 6 | If the "JUMP START" button does not flash, it would indicate the battery is less than 3.0V. The user will need to press and hold the "JUMP START" button for 3 seconds. The JUMP START button will have a double flash. The clamp LED will now be illuminated and the Jump Starter is ready to use. The override will timeout after 60 seconds. |   |
| 7 | Turn the vehicle's ignition to ON and start the vehicle. After the engine has started, leave the Jump Starter connected for a minimum of 40 seconds to allow the Jump Starter to rapidly recover charge from the vehicle's alternator. Once the Jump Starter is fully charged, the Rapid Recharge Technology (RRT) will shut off and avoid overcharging.<br>If the Jump Starter fails to start your vehicle refer to the clamp connection LED table on page 8 to review the error. Additionally, check that the clamps are connected correctly with good contact. | |
| 8 | Turn the Jump Starter off using the power button. |  |

Note: In general, with the use of Rapid Recharge Technology (RRT) the Jump Starter does not require charging. However, while not in use it is recommended to check the Jump Starter's charge status via the **BATTERY STATUS INDICATOR**. If required, charge the Jump Starter using the supplied 12V USB charger or a 3rd party 10W 240VAC USB adaptor (not provided). This will ensure the Jump Starter is ready when required.

## UNDERSTANDING YOUR JUMP STARTER

### CLAMP CONNECTION LED 

| Jump Start Status | LED |
|---|---|
| Jump Starter clamps connected to vehicle and ready to jump start | Green solid |
| Jump starting for more than 5 seconds | Yellow flash twice, pause & repeat |
| Battery or Jump Starter switch, over-temperature | Red / Green alternate flashing |
| Battery charging temperatures >45°C or <0°C | Red / Green alternate flashing & siren |
| Short circuit | Red flashing & beeping siren |
| Clamps reverse connected to battery | Red solid & siren on |
| Jump Starter input voltage (EC5 connector) > 15.0V | Red / Yellow alternate flashing & siren on |
| Low voltage indication | Red flashing, no beeping siren |
| Hardware failure | Red fast flash, steady siren on |

### BATTERY STATUS INDICATOR

When Jump Starter is turned on the battery gauge LEDs are displayed as follows:

| State of Charge | Battery Gauge LED Display |
|---|---|
| <20% | – Red flashing |
| 20–25% | – Red |
| 25–50% | – Yellow |
| 50–75% | – Green |
| 75–100% | – Green |

When Jump Starter is charging the battery gauge LEDs are displayed as follows:

| State of Charge | Battery Gauge LED Display |
|---|---|
| <20% | – Scrolling |
| 20–50% | – Red with Yellow & Green scrolling |
| 50–75% | – Yellow with Green scrolling |
| 75–99% | – Green with Green flashing |
| 100% | – All solid Green |

## CHARGING

The Jump Starter is shipped partially charged. Therefore, you should charge the Jump Starter before using it for the first time. It is recommended to fully charge the Jump Starter after each use to ensure it is ready to use when required using one of the methods below:

| Option | Detail | Method |
|---|---|---|
| 1 | Plug the 12V-to-5V/2.1A USB charge adaptor into a 12V socket. Use the provided USB to USB-C cable and connect the USB end into the 12V USB socket. Connect the USB-C end to the Jump Starter. (Note: Ensure you use the provided USB to USB-C cable provided, using other cables does not guarantee charging performance.)<br>The Jump Starter will now turn ON and start charging. The BATTERY STATUS INDICATOR will now start to scroll in the following ways depending on its state of charge. See battery status indicator table on page 8.<br>When the Jump Starter is fully charged, after 4 hours for the IS920C and 8 hours for the IS1220C. Simply disconnect the leads and put the Jump Starter away. | 12V to 2.1A USB charge adaptor |
| 2 | After a successful jump start, the Jump Starter can rapidly recover charge from the vehicle's alternator. Leaving the clamps connected to the vehicle battery for at least 40 seconds (max. 10 min) after starting the vehicle will recharge the Jump Starter to 100% of the original charge status.<br>Once the Jump Starter is fully charged the RRT will shut off and the user can disconnect the Black clamp and then the Red clamp. The clamps can also be disconnected before the RRT completes, should it be required. | Rapid Recharge Technology (RRT) |
| 3 | Plug the 3rd party charger into a mains 240V AC socket.<br>Use the provided USB to USB-C cable and connect the USB end into the charger. Connect the USB-C end to the Jump Starter.<br>The Jump Starter will now turn ON and start charging. The BATTERY STATUS INDICATOR will now start to scroll in the following ways depending on its state of charge. See battery status indicator table above on page 8.<br>When the Jump Starter is fully charged, after 4 hours for the IS920C and 8 hours for the IS1220C. Simply disconnect the leads and put the Jump Starter away. | 3rd party 10W USB 240V AC charger |

Note: To prolong the life of your Jump Starter battery it is recommended to charge the Jump Starter after each use. If the Jump Starter is not being used, it is recommended to leave the Jump Starter permanently on charge. This ensures the battery is always maintained, fully charged, and ready for use. It is recommended to charge the Jump Starter before the first use, as the Jump Starter is shipped only partially charged.

The Jump Starter will use an audible warning (beep) to indicate a low battery status. If the internal battery of the Jump Starter falls below 10.5V, the Jump Starter will automatically switch off and prevent further discharge which could damage the internal battery.

## FLOOD LIGHT

| Step | Detail | Display |
|---|---|---|
| 1 | Press the light button and the light will turn on. Press the light button again to turn the light off when you are finished.<br>Note: If the Jump Starter is off and the light button is pressed, the button will need to be pressed for at least half a second before the light will turn on. |  |

## POWER BANK

The Jump Starter has a 2.1A USB output. It is suitable to charge phones, tablets, cameras, and GPS devices. The Jump Starter will turn off after 5 minutes of no activity or the USB device has been fully charged.

If the USB output becomes overloaded (stops working), remove the device, and check it. Turn the Jump Starter off and back on again, the USB output should work again.

**WARNING:** Charging devices from the Jump Starter will drain the battery. This can cause the Jump Starter to fail in starting your vehicle in an emergency. Recharge the Jump Starter as soon as possible.

## FREQUENTLY ASKED QUESTIONS

**Q. Why didn't my Jump Starter start my vehicle?**

A. There could be a number of reasons why the Jump Starter did not start your vehicle.

**Check the following:**

1. Ensure the Jump Starter battery is fully charged. Refer to page 8 ('Battery Status Indicator') for further information.

2. Ensure you have followed the correct operating procedure.
Refer to page 7 ('Jump Starter Instructions').

3. Ensure the vehicle operates on 12V DC.

4. Ensure the vehicle being jump started is in the specified vehicle engine size of the Jump Starter. For IS920C up to most 6.0 litre petrol vehicles and for IS1220C up to most 7.0 litre petrol vehicles and 4.5 litre diesel vehicles.

**Q. Can I leave my Jump Starter connected to the car after it has started?**

A. Yes. The Jump Starter is using Rapid Recharge Technology (RRT) that can rapidly recover charge from the vehicle's alternator. Leaving the clamps connected to the vehicle for at least 40 seconds after starting the vehicle will recharge the Jump Starter to 100%[2] of the original charge status. Once the Jump Starter is fully charged the RRT will shut off and the user can disconnect the Black clamp and then the Red clamp.

**Q. How often should I charge my Jump Starter?**

A. The Jump Starter uses Lithium technology which self-discharges only a very small amount. To be safe the Jump Starter should be charged at least every year to be sure it is ready in case of an emergency.

**Q. Can I charge the Jump Starter and use the USB output at the same?**

A. Yes, the USB output can be used at the same time as charging via the USB input However, the USB output is disabled if the Jump Starter is charging using RRT.

**Q. What is Peak Amps?**

A. Peak amps is the maximum current the battery in the Jump Starter can produce.

**Q. What is Clamp Power?**

A. Clamp power is the maximum current available at the clamps to start the vehicle.

**Q. Why isn't my Jump Starter charging?**

A. The Jump Starter will not charge or perform Rapid Recharge above 45°C. If the alternator is above 14.6V or faulty, Rapid Recharge will not work.

[2] Tested on a Ford Ranger 3.2L Diesel and Ford Territory 4.0L Petrol with a flat battery in good condition

# WARRANTY STATEMENT

Brown & Watson International Pty Ltd ("BWI") of 1500 Ferntree Gully Road, Knoxfield, Vic., telephone (03) 9730 6000, fax (03) 9730 6050, warrants that all products described in its current catalogue will under normal use and service be free of failures in material and workmanship for a period of two (2) years from the date of the original purchase by the customer as marked on the invoice. This warranty does not cover ordinary wear and tear, abuse, alteration of products or damage caused by the purchaser. To make a warranty claim the consumer must deliver the product at their cost to the original place of purchase or to any other place which may be nominated by either BWI or the retailer from where the product was bought in order that the warranty assessment may be performed. The consumer must also deliver the original invoice evidencing the date and place of purchase together with an explanation in writing as to the nature of the claim.

In the event that the claim is determined to be for a minor failure of the product then BWI reserves the right to repair or replace it at its discretion. In the event that a major failure is determined the consumer will be entitled to a replacement or a refund as well as compensation for any other reasonably foreseeable loss or damage.

This warranty is in addition to any other rights or remedies that the consumer may have under State or Federal legislation.

**IMPORTANT NOTE**

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

**Distributed by**

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