

SAFETY INSTRUCTIONS



This manual contains safety and operating instructions. Please read it carefully before using the device for the first time and keep it in a safe place for future reference. Read and understand the following safety recommendations before using or servicing the unit. Any change or servicing that is not specified in the instruction manual must not be undertaken. The manufacturer is not liable for any injury or damage caused due to non-compliance with the instructions featured in this manual. In the event of problems or uncertainties, please consult a qualified person who can handle the device correctly.. This machine should only be used for starting operations comprised within the limits indicated on the machine and in the instruction manual. The operator must observe the safety precautions. In case of inadequate or unsafe use, the manufacturer cannot be held liable for damage or injury.



Device suitable for indoor use only. Do not expose to rain or excessive moisture.

This unit can be used by children aged 8 or over and by people with reduced physical, sensory or mental capabilities or lack of experience or knowledge, if they are properly monitored or if instructions for using the equipment safely have been read and risks made aware of. Children must not play with the product. Cleaning and maintenance should not be performed by an unsupervised child.

Do not use to charge small batteries or non rechargeable batteries.

Do not operate the device with a damaged power supply cord or a damaged mains plug.

Never use on a frozen or damaged battery.

Do not cover the device.

Do not place the unit near a heat source/direct sunlight and durably high temperatures (above 50 ° C)

Do not obstruct the machine's air intake, which facilitates air circulation. Check the installation chapter before using the device.

The operating of the device and the applicable restrictions to its use are explained below in this manual.



Fire and explosion risks!

A charging battery can emit explosive gases.

- During the charge, the battery must be placed in a well ventilated area.



- Avoid flames and sparks. Do not smoke near the device.

- Protect the battery's electrical contact surfaces against short-circuits



Risk of acid dispersion!



- Wear protective goggles and gloves.
- In case of contact with the eyes or the skin, rinse with water immediately and seek medical attention as soon as possible.



Connection / disconnection:

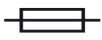


- Disconnect the power supply before connecting/disconnecting the device to/from the battery.
- The terminal of the battery that is not connected to the car frame must be connected first. The other connection must be made on the car frame, far from the battery and the fuel line. The battery charger must be connected to the power supply network.



Connection:

- Class III (booster)
- This charger is fuse protected



Maintenance:



- Service should be performed by a qualified person
- Warning! Always remove the power plug from the wall socket before carrying out any work on the device.
- If the internal fuse is melted, it must be replaced by the manufacturer or an equally qualified person to prevent danger.
- Do not use solvents or any aggressive cleaning products.
- Clean the device's surfaces with a dry cloth.



Regulations :



- The Machine is compliant with European directives.
- The declaration of conformity is available on our website.



- EAC Conformity marking (Eurasian Economic Community).



- Equipment in compliance with British requirements. The British Declaration of Conformity is available on our website (see home page).



- Equipment in conformity with Moroccan standards. The declaration C_m (CMIM) of conformity is available on our website (see cover page).



Waste management:

- This product should be disposed of at an appropriate recycling facility. Do not throw away in a domestic bin.



- This device's battery is recyclable. Please comply with the applicable waste management laws.

- The battery must be removed from the booster before being thrown away

- The device must absolutely be disconnected from the power supply network before removing the battery.


DESCRIPTION

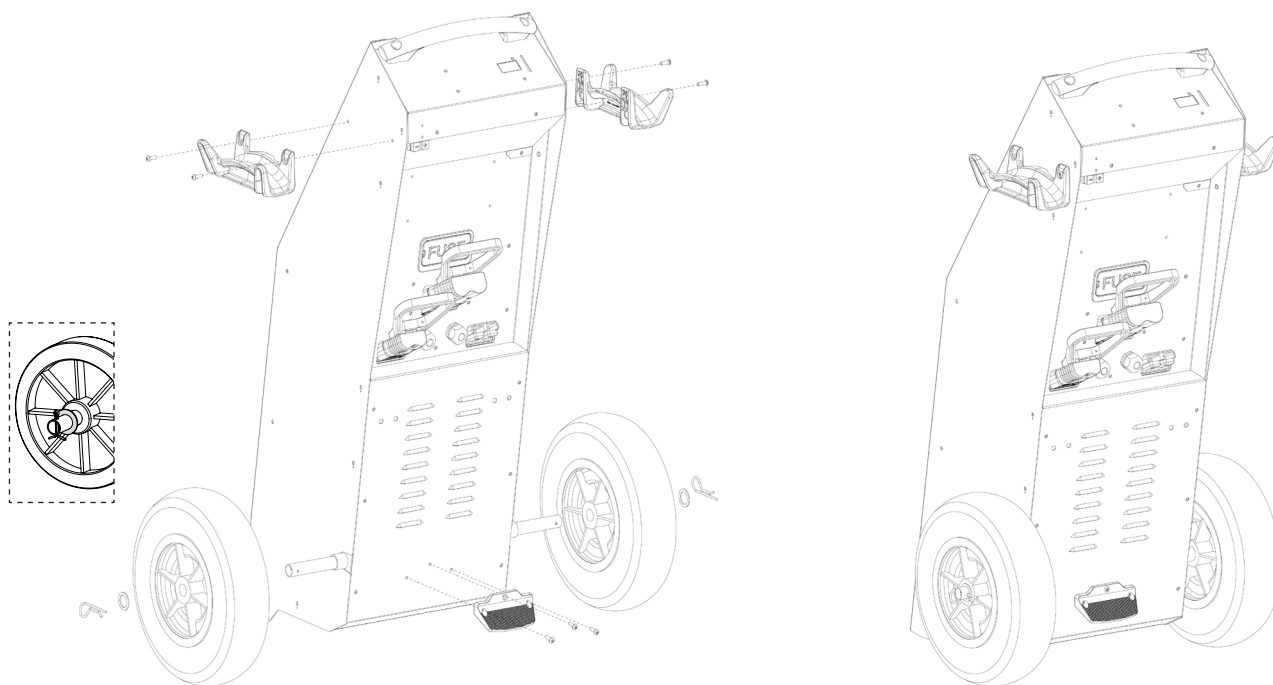
This booster pack is designed to start all common batteries including lead-acid , electrolyte or gel batteries, 12V and 24V. The STARTPACK PRO 12.24 XL works with two 12V high performance batteries.

For the best performance from the device and to preserve the internal batteries, it is recommended to connect the STARTPACK PRO 12.24 XL to the mains via the GYSFLASH 6.12 XL and to set the voltage connector to 12V after each use.

ASSEMBLY



1

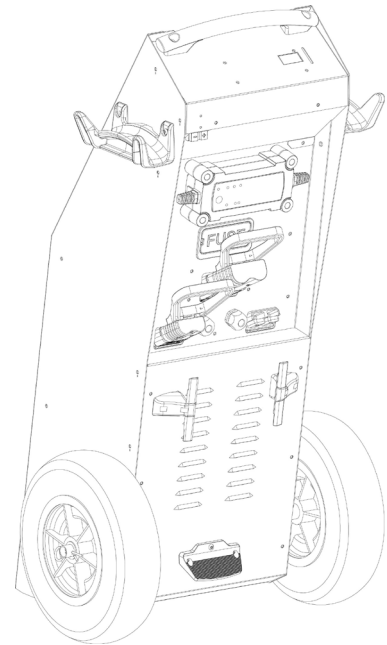
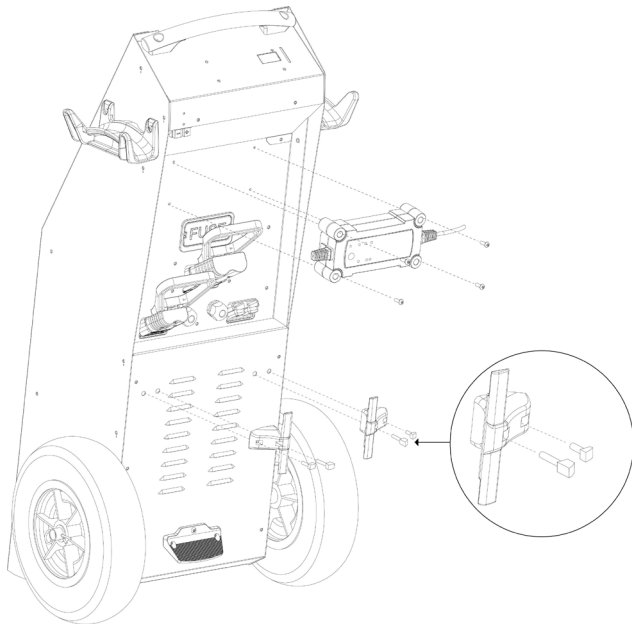
	M5x16	x7
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2 The GYSFLASH 6.12 XL and the power supply cable can be fitted on the STARTPACK PRO 12.24 XL or kept separated (screws included).

! When using the STARTPACK PRO 12.24 XL outdoors, the power supply cable is not weather proof.

	M4x20	x4		-	x4
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USE IN STARTER MODE

VERIFICATION OF THE INTERNAL BATTERIES STATE OF HEALTH



- Disconnect the power supply cable.

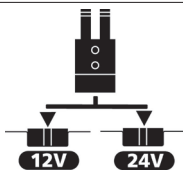


- Check the internal batteries by pressing the power button for 10 seconds.



- The state of the internal batteries is displayed for 10 secs.
- The batteries are fully charged when the green led switches on.
- Green led : The start is possible.
- Orange led : The start is possible but not recommended. Perform a charge.
- Red led : The start is impossible. Perform a charge.

START



- Plug the selector on 12V or 24V depending on the vehicle to start.



- Connect the red clamp to the positive terminal (+) and the black clamp to the negative terminal (-) of the battery.

! In case of polarity inversion, the STARTPACK PRO 12.24 XL will signal it by :
ERROR buzzer + red LED light on.



- Switch the STARTPACK PRO 12.24 XL on by pressing the power button for 3 secs.



- The digital display shows the voltage of the vehicle's battery.

For a 12 V vehicle :

- If the voltage > 11 V, the STARTPACK PRO 12.24 XL is ready to start :
➔ Proceed to the next step described below.

- If the voltage is < 11 V, the STARTPACK PRO 12.24 XL signals a voltage error :
 - The vehicle battery is in a poor state of health.
 - 6V or 24 V battery.
 - Voltage selector is not properly connected.
 ➔ See page 17.



If the vehicle battery voltage is still < 11 V after checking :
➔ Refer to «Functions of the 'SOS' mode».

For 24 V vehicle :

- If the voltage is > 22 V, the STARTPACK PRO 12.24 XL is waiting to start :
➔ Proceed to the next step described below.

- If the voltage is < 22 V, the STARTPACK PRO 12.24 XL signals a voltage error :
 - The vehicle battery is in a bad state of health.
 - 6V or 12 V battery.
 - Voltage selector is not properly connected.
 ➔ See page 17.

If the vehicle battery voltage is still < 22 V after checking :
➔ Refer to «Functions of the 'SOS' mode».



6 s max

Turn the vehicle's ignition (6 s max), to close the contactor and activate the start function.

nb : if your engine doesn't start, wait 3 minutes between each attempt .

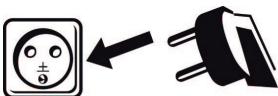
A vehicle that does not start after the third attempt may have a problem other than a faulty battery: e.g. alternator, glowplug...



- Once the vehicle has started, switch the STARTPACK PRO 12.24 XL off.
After a start or heavy battery consumption, the red led switches on to signal that the batteries must be recharged.



- Disconnect the black clamp then the red clamp from the vehicle.



- Plug the machine, using the GYSFLASH 6.12 XL, on a 230V 50/60Hz plug to charge the STARTPACK PRO 12.24 XL's internal batteries.

SOS' MODE FUNCTIONS

The 'SOS' mode has two functions:

1. Starting vehicles with deeply discharged batteries.

The STARTPACK PRO 12XL indicates a voltage error and after checking the vehicle battery voltage is always < 11 V (12 V) or < 22 V (24 V). In this case a forced start must be carried out:



- Press the 'SOS' button. The 'SOS' LED lights up.



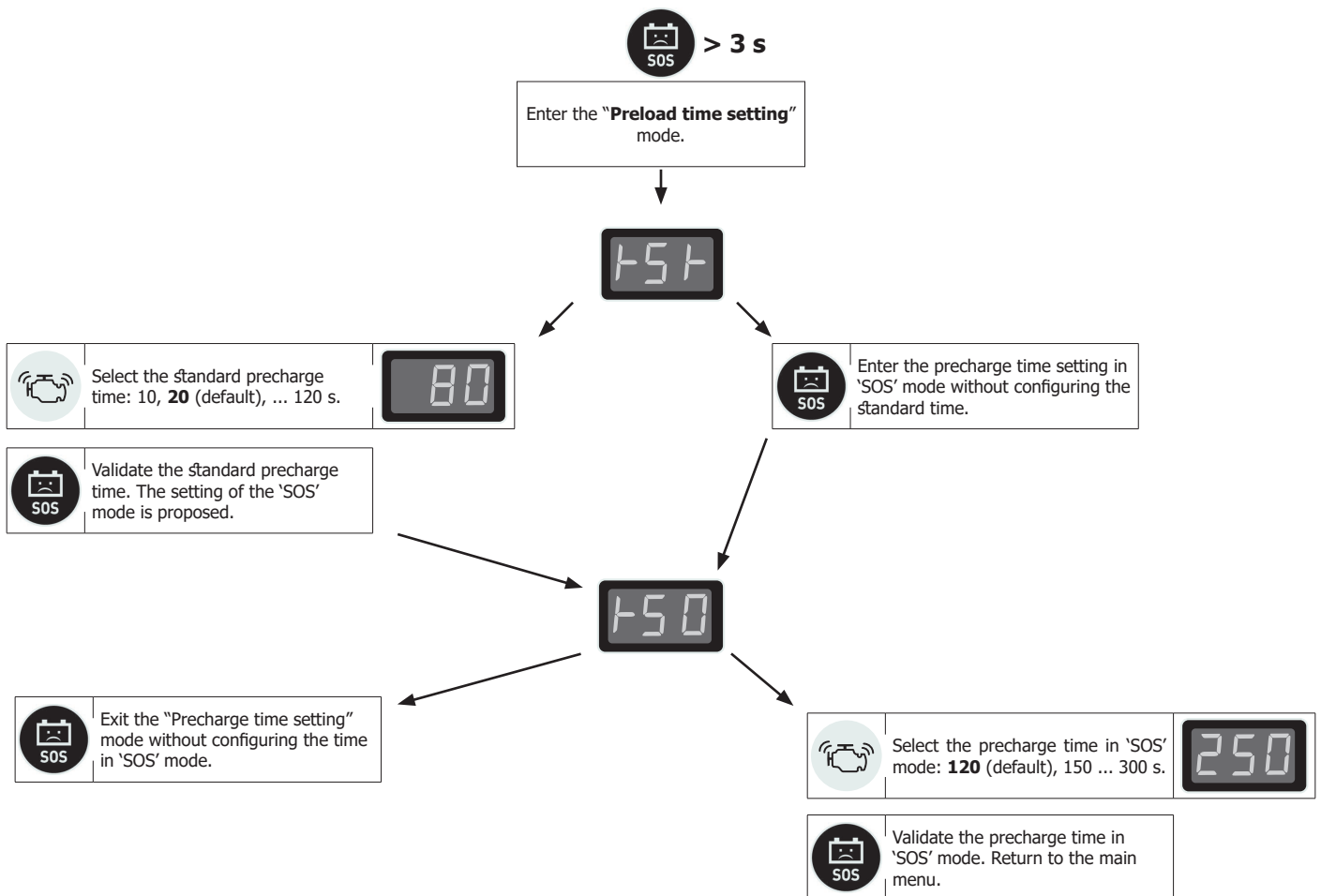
- Press the START button. The STARTPACK starts a 120 s countdown.



- Turn the key to your vehicle within this time (6 s max).
nb : if your engine doesn't start, wait 3 minutes between each attempt .
 A vehicle that does not start after the third attempt may have a problem other than a battery in poor condition: alternator, glow plug, etc.

2. Starting vehicles that require a lot of running time

Some vehicles need a very long time before starting up (helicopter, bio-gas buses...). It is necessary to increase the start times beforehand (by default they are set to 20 s and 120 s in 'SOS' mode).



	<p>In SOS mode, there are no more protections (on the 12 V / 24 V voltage, in case of polarity reversal...). The time setting can damage the battery: - if the preheating time is too long, the battery can be deeply discharged. - in the event of too violent a start due to a defect other than the battery.</p>
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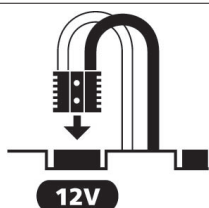
IN THE EVENT OF A PROBLEM

Some more modern vehicles, equipped with highly sensitive ECUs, will not start when using this product. The voltage drop caused by the starting current can potentially trigger ECU safety devices, and prevent the vehicle from starting.

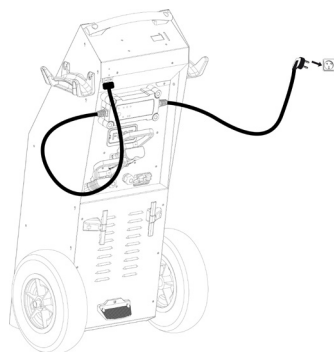
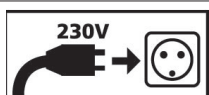
USE IN CHARGER MODE (CHARGE INTERNAL BATTERIES)

For the STARTPACK PRO 12.24 XL to be always operational and deliver maximum starting power, it is recommended to charge it after each use and to keep on charge until next used.

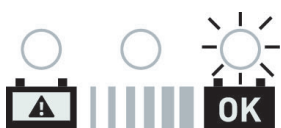
The STARTPACK PRO 12.24 XL is fitted with an autonomous charger which charges and maintains the internal batteries at 100% and without the need for monitoring (Floating System).



- Put the voltage selector on 12V.



- Connect the GYSFLASH 6.12 XL cable to the STARTPACK PRO 12.24 XL.
- Connect the GYSFLASH 6.12 XL to a 230V 50/60Hz mains socket.
- The charge starts automatically.



- The STARTPACK PRO 12.24 XL displays the state of charge :
 - Red indicator : the batteries are damaged ;
 - Orange indicator : the batteries are charging;
 - Green indicator : the batteries are charged.
- After the charge, keep the machine connected to the mains.

i For further details about the charge, see the GYSFLASH 6.12 XL instruction manual.

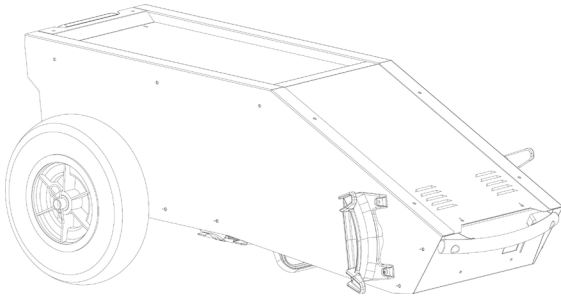
INTERNAL BATTERIES : RECOMMENDATIONS AND MAINTENANCE

These high performance batteries require the user to be extra careful. Observing the following recommendations will lengthen the batteries' lifetime.

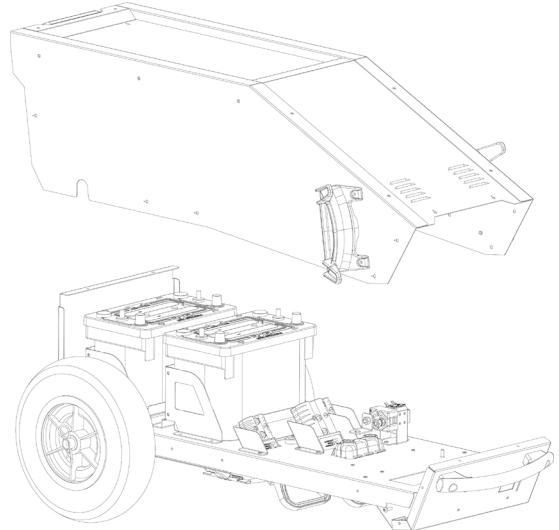
- Charge the machine after each use.
- Do not use an external charger other than the one supplied with the machine.
- Set the voltage selector on 12V during the charge.
- Never connect the red clamp to a battery's negative terminal and the black clamp (-) on the engine. This would short circuit the STARTPACK PRO 12.24 XL's batteries.
- Wait 3 minutes before each start attempt. This allows the device to cool down and the batteries' voltage to recover. Not waiting long enough between each attempt reduces the chances of a successful start at the next attempt (power loss).

INTERNAL BATTERIES REPLACEMENT

1 Position the product horizontally :

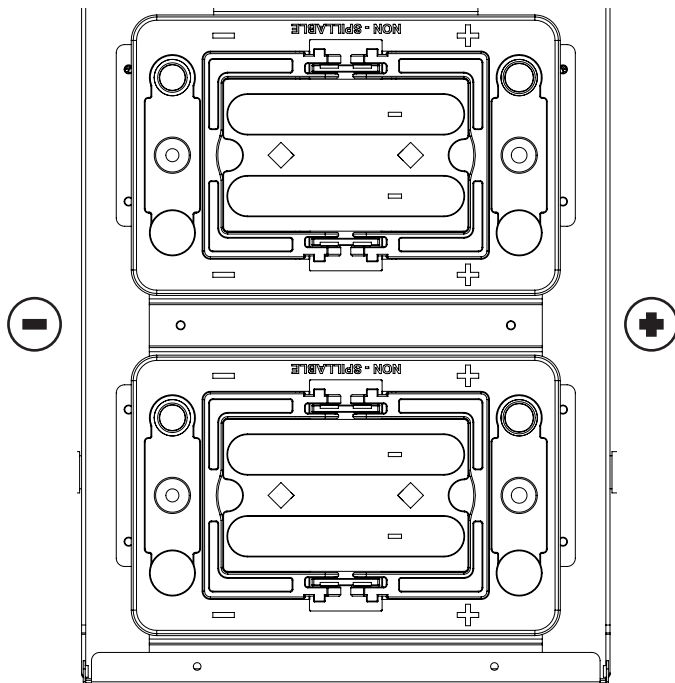


2 Unscrew the 16 metal casing screws marked with a dash :



3 Once the casing is removed, disconnect the batteries. Disconnect the cables using a 3/8 and 5/16 nut wrench with a 15 Newton torque wrench.

Batteries polarity :



4 The batteries must be recycled in accordance with local laws and regulations. Place the new batteries and connect the cable with respect to the polarity using a torque wrench (15 N tightening torque).



When installing new batteries, please ensure the correct polarity is observed in the following order:

- 1. Connect the black cable to the negative terminal (-).**
- 2. Connect the red cable to the positive terminal (+).**

Battery characteristics

Battery	STARTPACK PRO 12.24 XL
Reference	EP450-12V-50Ah
Type	Lead- acid battery
Voltage (V)	12 V
Capacity (Ah)	50 Ah
Dimensions cm)	260 x 170 x 207
Article code	53075

TROUBLESHOOTING

	Symptoms	Causes	Remedies
STARTER MODE	The STARTPACK PRO 12.24 XL does not start : The red led is on. Alarm beep.	The voltage selector is unplugged.	Plug the selector on 12V or 24V depending on the vehicle to start.
		The selected voltage is not adapted to the vehicle.	
		Polarity reversal	Check the battery polarity. Red clamp to the battery's (+) and black clamp to the battery's (-).
	The STARTPACK PRO 12.24 XL does not start : No led is on. No alarm beep.	The battery voltage is < 4V.	Put the STARTPACK PRO 12.24 XL on charge.
		The vehicle requires too much starting current.	
The batteries are faulty.		Put the STARTPACK PRO 12.24 XL on charge to attempt a battery recovery.	
Several start attempts without waiting between each attempt.		Wait 3 minutes between each start attempt. Let the batteries rest.	
	Polarity reversal.	Check the battery polarity.	
CHARGER MODE	The GYSFLASH 6.12 XL's green led is on. The GYSFLASH 6.12 XL's orange led is on.	The charge is in progress.	Wait for the STARTPACK PRO 12.24 XL's green led to switch on.
	The voltage selector's leds blink alternatively.	The voltage selector is unplugged.	Set the voltage selector on 12V for an optimal charge.
	The GYSFLASH 6.12 XL's green led is on. The STARTPACK PRO 12.24 XL does not enter charge mode.	The connection is interrupted.	Check the GYSFLASH 6.12 XL's power supply as well as the charging cable connected to the STARTPACK PRO 12.24 XL.

BATTERY NOT COVERED BY THE WARRANTY

The STARTPACK PRO 12.24 XL works with two 12V high performance batteries which MUST be recharged after each use. If this recommendation is not followed, the batteries may permanently deteriorate. For this reason, the STARTPACK PRO 12.24 XL batteries are not covered by the warranty.

WARRANTY

The warranty covers faulty workmanship for 2 years from the date of purchase (parts and labour).

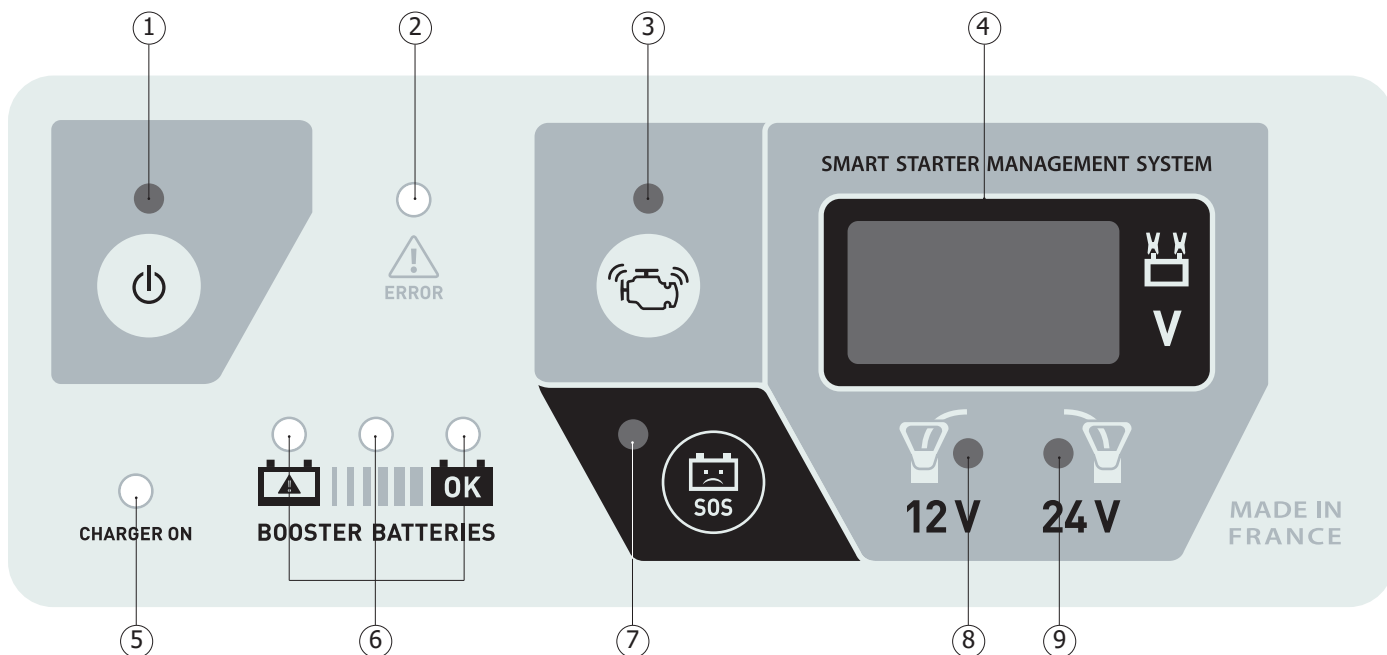
The warranty does not cover:

- Transit damage.
- Normal wear of parts (eg. : cables, clamps, etc..).
- Damages due to misuse (power supply error, dropping of equipment, disassembling).
- Environment related failures (pollution, rust, dust).

In case of failure, return the unit to your distributor together with:

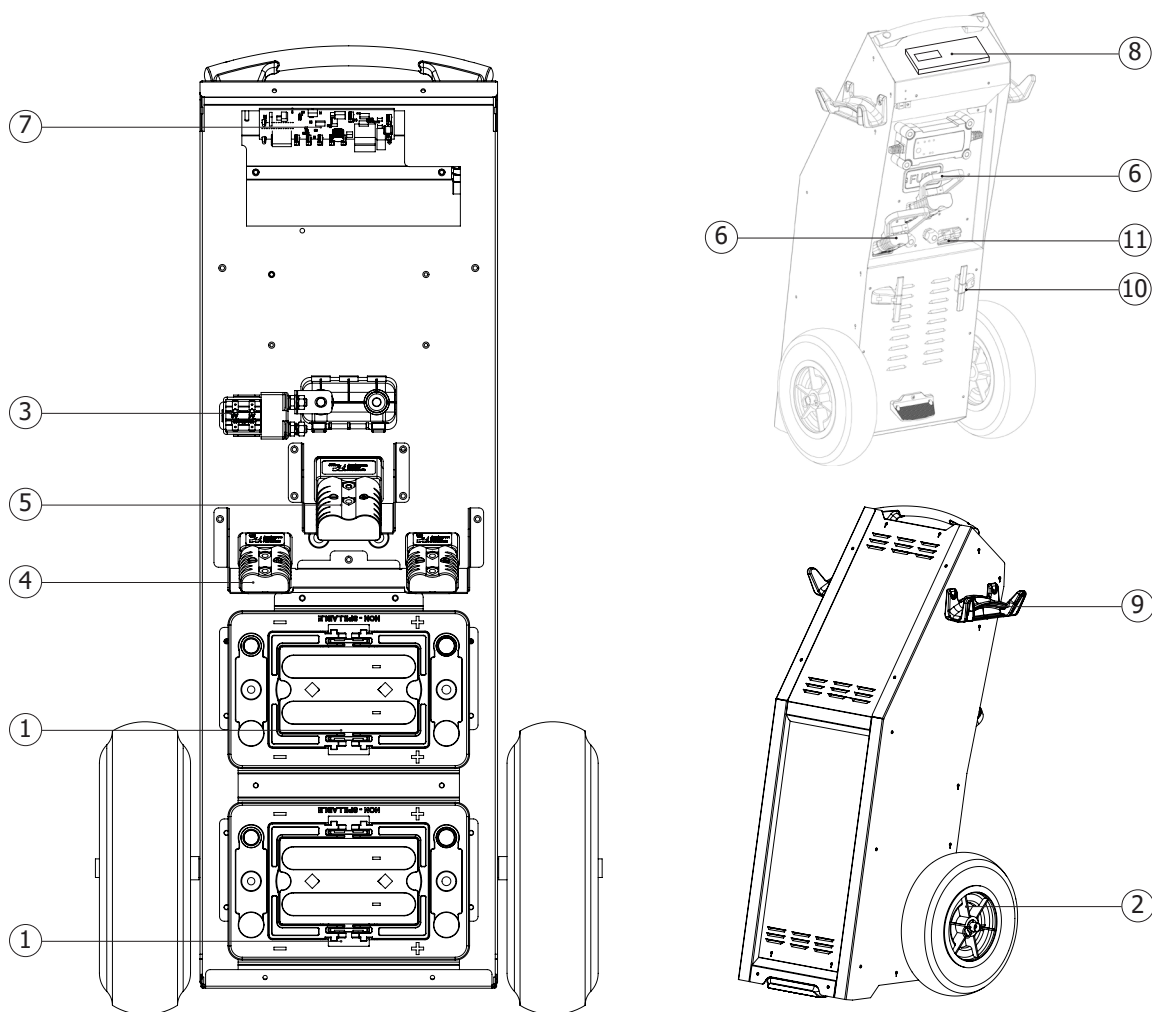
- The proof of purchase (receipt etc ...)
- A description of the fault reported

PLASTRON / CONTROL PANEL STICKER / FRONTSEITE / TECLADO / ПАНЕЛЬ УПРАВЛЕНИЯ / VOORS-TUK / TASTIERA DI COMMANDO



N°	FR	EN	DE	ES	RU	NL	IT
1	Bouton power	Power button	Ein/Aus-Taste	Botón power	Кнопка power	Knop power	Tasto power
2	Voyant erreur	Error indicator	Fehler-Warnleuchte	Indicador error	Индикатор ошибки	Lampje error	Spia errore
3	Bouton start	Start button	Start-Taste	Botón start	Кнопка Start	Knop start	Tasto start
4	Écran digital	Digital display	Digitalanzeige	Pantalla digital	Цифровой дисплей	Digitaal scherm	Schermo digitale
5	Présence chargeur	Charger on	Ladegerät auf	Cargador	зарядное устройство на	Lader op	Caricabatterie su
6	Voyants état de charge	Charging state indicators	Batterielades-tand-Anzeige	Indicadores de estado de carga	Индикаторы состояние зарядки	Lampje laadstatus	Spia stato di carica
7	Bouton SOS (démarrage forcé)	SOS button (Forced start)	SOS-Taste (Erzwungener Start)	Botón SOS (arranque forzado)	Кнопка SOS (принудительный запуск)	Knop SOS (geforceerd opstarten)	Tasto SOS (avviamento forzato)
8	Voyant sélecteur 12 V	12 V voltage selector indicator	12V-Anzeige	Indicador seleccionador 12V	Индикатор переключателя 12 В	Lampje keuzeschakelaar 12 V	Spia selettore 12 V
9	Voyant sélecteur 24 V	24 V voltage selector indicator	24V-Anzeige	Indicador seleccionador 24V	Индикатор переключателя 24 В	Lampje keuzeschakelaar 24 V	Spia selettore 24 V

PIÈCES DÉTACHÉES / SPARE PARTS / ERSATZTEILE / PIEZAS DE RECAMBIO / ЭЛЕКТРИЧЕСКАЯ СХЕМА / RESERVE ONDERDELEN / PEZZI DI RICAMBIO

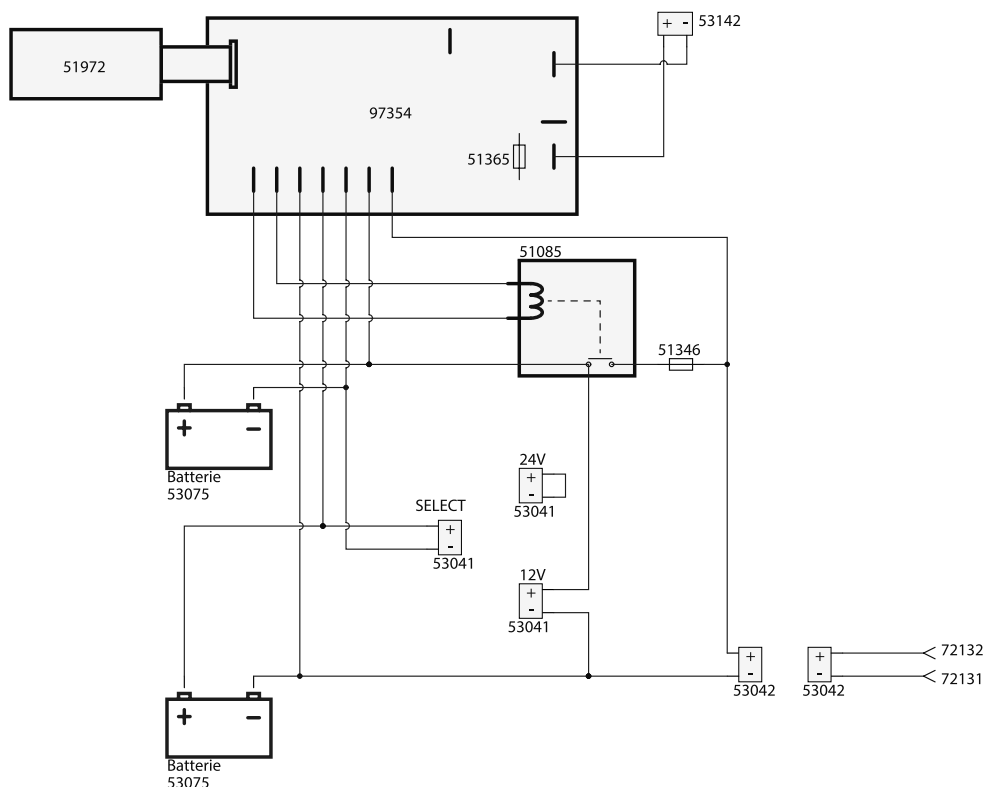


N°	FR	EN	DE	ES	RU	NL	IT	Reference
1	Batteries	Batteries	Batterien	Baterías	Аккумуляторные батареи	Accu's	Batterie	53075
2	Roues	Wheels	Rad	Ruedas	Колёса	Wielen	Ruote	71379
3	Contacteur	Contacteur	Schalter	Interruptor	Замыкатель	Schakelaar	Contattore	51085
4	Connecteur Jaune 175 A	Yellow connector 175 A	gelber Anschlussstecker 175A	Conector Amarillo 175A	Желтый коннектор 175 A	Gele schakelaar 175 A	Connettore Giallo 175 A	53041
5	Connecteur Gris 350 A	Grey connector 350 A	grauer Anschlussstecker 350A	Conector Gris 350A	Серый коннектор 350 A	Grijze schakelaar 350 A	Connettore Grigio 350 A	53042
6	Poignée	Handle	Griff	Mango	Ручка	Handvat	Impugnatura	53047
7	Carte électronique	Electronic board	Platine	Tarjeta electrónica	Электронная плата	Elektrische circuit	Carta elettronica	97354
8	Clavier	Keypad	Bedienfeld	Teclado	Панель управления	Bedieningspaneel	Tastiera	51972
9	Enrouleur de câbles	Cable reel	Kabelhalterung	Enrollador de cables	Наматыватель для кабелей	Haspel voor kabels	Avvolgitore cavo	56131
10	Accessoires câbles chargeur	Charger cable accessories	Zubehör Ladekabel	Accesorios cables de cargador	Аксессуары для кабелей зарядного устройства	Accessoires kabels oplader	Accessori cavi caricabatterie	72053
11	Cache noir de protection	Protective cover	Schwarze Schutzabdeckung	Protector negro	Черный защитный колпак	Zwarte beschermkap	Coperchio nero di protezione	56140

SPECIFICATION TECHNIQUES / TECHNICAL SPECIFICATIONS / TECHNISCHE DATEN / ESPECIFICACIONES TÉCNICAS / ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ / TECHNISCHE SPECIFICATIES / SPECIFICHE TECNICHE

FR	EN	DE	ES	RU	NL	IT	
Tension de charge	Charging voltage	Ladespannung	Tensión de carga	Напряжение зарядки	Laadspanning	Tensione di carica	14,6 V à 25°C
Courant de charge	Charging current	Ladestrom	Corriente de carga	Ток зарядки	Laadstroom	Corrente di carica	10 A max.
Capacité nominale de charge	Nominal charge capacity	Nominal Ladekapazität	Capacidad nominal de carga	Номинальная емкость заряда	Nominale laad capaciteit	Capacità nominale di carica	2 x 50 Ah
Courbe de charge des batteries internes	Internal batteries charging curve	Ladekurve für interne Batterien	Curva de carga de las baterías internas	Кривая зарядки встроенных АКБ	Laadcurve interne accu's	Curva di carica delle batterie interne	IUoU
Température de fonctionnement / stockage	Functioning/ Storage temperature	Betriebstemperatur	Temperatura de funcionamiento / almacenaje	Рабочая температура / температура хранения	Werktemperatuur / Opslagtemperatuur	Temperatura di funzionamento / stoccaggio	-20°C à 50°C
Poids de l'appareil (cables compris)	Machine's weight (cables included)	Gerätgewicht (einschließlich Kabeln)	Peso del aparato (cables incluidos)	Вес аппарата (включая кабели)	Gewicht van het toestel (inclusief kabels)	Peso del dispositivo (cavi compresi)	71 kg
Dimension (L x l x H) cm	Dimension (L x l x H) cm	Maße (L x B x H) cm	Dimensiones (L x A x A) cm	Размеры (Д x Ш x В) см	Afmetingen (L x l x H) cm	Dimensioni (L x l x H) cm	45 x 55 x 103

SCHÉMA ÉLECTRIQUE / ELECTRICAL DIAGRAM / STROMLAUFPLAN / ESQUEMA ELÉCTRICO / ЭЛЕКТРИЧЕСКАЯ СХЕМА / ELECTRISCHE SCHEMA / SCHEMA ELETTRICO





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