

**SG365A91-5400-02**

**Arriel engine sling**

**Instruction Manual**



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# 1 About this documentation

## 1.1 Validity of the documentation

This documentation is valid for the following products:


- **SG365A91-5400-02 Arriel engine sling**


This documentation is intended for maintenance and service engineers.

This documentation contains important information on the safe and appropriate installation, commissioning, operation, maintenance and simple troubleshooting of the unit.

- ▶ Read this documentation completely and in particular the chapter "Safety instructions" and "General instructions on damage the property and the product" before you start work with this unit.

## 1.2 Required and supplementary documentation


- ▶ Only commission this tool if the documentation marked with the book symbol  is available to you and you have understood and observed it.

Title	Document type
 Arriel engine OEM's operation instructions manual	Manual

### 1.3 Display of information




Standardized safety instruction, symbols, terms and abbreviations are used throughout this documentation so that you can work quickly and safely with your product. To give you a better understanding they are explained in the section below.

Safety instructions are set out as follows:


 <b>SIGNAL WORD</b>
<b>Type and source of danger!</b> Consequences of noncompliance ► Measures to prevent danger

- **Warning sign:** draws attention to the danger.
- **Signal word:** identifies the degree of the danger.
- **Type and source of danger:** indicates the type and source of the danger.
- **Consequences:** describes what occurs if the safety instructions are not complied with.
- **Precautions:** states how the danger can be avoided.

Hazard classes as defined in ANSI Z535.6

Warning sign, signal word	Meaning
 <b>DANGER</b>	Identifies a dangerous situation that will result in death or serious injuries if it is not avoided.
 <b>WARNING</b>	Identifies a dangerous situation that may result in death or serious injuries if it is not avoided.
 <b>CAUTION</b>	Identifies a dangerous situation that may result in minor to moderate injuries if it is not avoided.
<b>NOTICE</b>	Property damage: The product or the environment may become damaged.

The following symbol indicate information that is not safety-relevant but increases understanding of documentation.

Symbol	Meaning
	If this information is disregarded, the product cannot be used and/or operated to the optimum extent.

## 2 Safety instructions

### 2.1 About this chapter

This unit has been manufactured according to the generally accepted rules of current technology. There is, however, still a danger of personal injury or damage to equipment if this chapter and safety instructions in this documentation are not complied with.

- ▶ Read this documentation completely and thoroughly before working with this unit.
- ▶ Keep this documentation in a location where it is accessible to all users at all time.
- ▶ Always include the required documentation when you pass this unit on to third parties.

### 2.2 Intended use

SG365A91-5400-02 Arriel engine sling has been designed to safely move the arriel engine inside the workshop for maintenance purposes.

### 2.3 Improper use

Any use other than described as intended us shall be considered as improper and is therefore impermissible.

Squirrel's Garage Special Tools is not liable for damages resulting from improper use. The user bears all risks from improper use.

The following forms of foreseeable use are also considered to be improper (this list does not claim to be exhaustive):

- Use outside the operating parameters approved in the data sheet or in the order confirmation (unless specifically approved by the customer).
- Change to factory settings by unauthorized persons.
- Use of add-ons not in combination with the specified Squirrel's Garage components.
- Use of this unit in a corrosive atmosphere.

## 2.4 Personnel qualifications

The activities described in this documentation require basic mechanical expertise, as well as knowledge of the associated technical terms. For transporting and handling the product, additional knowledge is necessary regarding working with lifting devices and their slings. In order to ensure safe use, these activities should only be performed by qualified personnel or an instructed person under the direction and supervision of qualified personnel.

Skilled persons are those who can recognize possible dangers and institute the appropriate safety measures due to their professional training, knowledge, and experience, as well as their understanding of the relevant regulation pertaining to the work to be done. Qualified personnel must follow the rules relevant to their field and have the necessary expertise.



Squirrel's Garage offers support and special instructions of how to operate the tools.

## 2.5 General safety instructions

- Observe the applicable accident prevention and environmental protection regulations.
- Observe the safety regulations and provisions of the country in which the product is used/operated.
- Use Squirrel's Garage products only when they are in good working order.
- Observe all notices on the product.
- Persons who install, operate, remove or maintain Squirrel's Garage products may not be under influence of alcohol, drugs or medication that may affect their reaction time.
- Only use genuine Squirrel's Garage accessories and spare parts to ensure there is no risk to personnel from unsuitable spare parts.
- Observe the technical data and ambient conditions specified in the product documentation.
- Use tools appropriate for the work being performed and wear appropriate protective clothing to prevent punctures and cuts.

## 2.6 Product-specific safety instructions



### WARNING

#### **Danger from suspended loads.**

Risk of death or injury, or property damage.

Improper transportation may cause the engine to fall down and result in injury, e.g., crushing, fractures or damage to the product and engine.

- ▶ Make sure that the load capacity of the lifting gear is sufficient to safely bear the weight of the unit.
- ▶ Never stand or put your hands under a suspended load.
- ▶ Make sure the unit remains stable during transport.
- ▶ Wear your personal protective equipment (eg., safety goggles, safety gloves, suitable working clothes, safety shoes).
- ▶ Use suitable lifting gear for transportation.
- ▶ Observe the prescribed position of the lifting strap.
- ▶ Observe the national laws and regulations on work and health protection and transportation.

## 2.7 Personal protective equipment

Personal protective equipment is responsibility of the user of the product. Observe the safety regulations and provisions in your country.

All pieces of personal protective equipment must be intact.

### 3 General instructions on damage to property and the product

#### ***NOTICE***

**Danger from improper handling.**

Product or engine can be damaged.

- ▶ Do not expose the engine to excessive mechanical load.
- ▶ Never grab or climb onto the engine.
- ▶ Do not place/lay any object on the engine.
- ▶ Do not set/place the unit on assembled parts.

**Improper cleaning.**

Product can be damaged.

- ▶ Never use solvents or corrosive cleaning agents. Use only water and, if necessary, a mild cleaning agent to clean the unit.
- ▶ Do not use a high-pressure cleaner.
- ▶ Use lint-free cloths for cleaning.

The warranty only applies to the delivered configuration.

The entitlement to warranty cover will be rendered void if the product is incorrectly installed, commissioned, operated or it is used/handled improperly.



## 4 About this product

### Technical data

Max Load	200 Kg
Weight	2,5 Kg

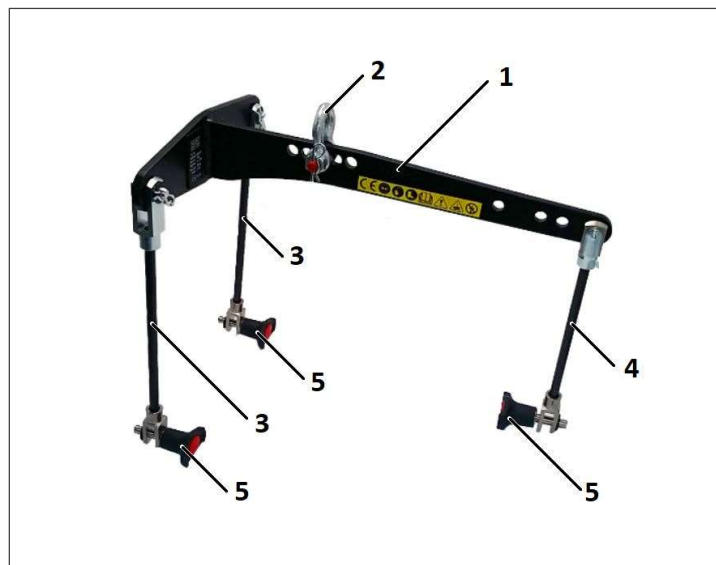
### 4.1 Performance description

SG365A91-5400-02 Arriel engine sling has been designed to safely lift the arriel engine.

### 4.2 Product description

The SG365A91-5400-02 Arriel engine sling is a frame with two fixed links and one adjustable link to adapted according to the engine model to be lifted.

#### 4.2.1 Layout of the unit

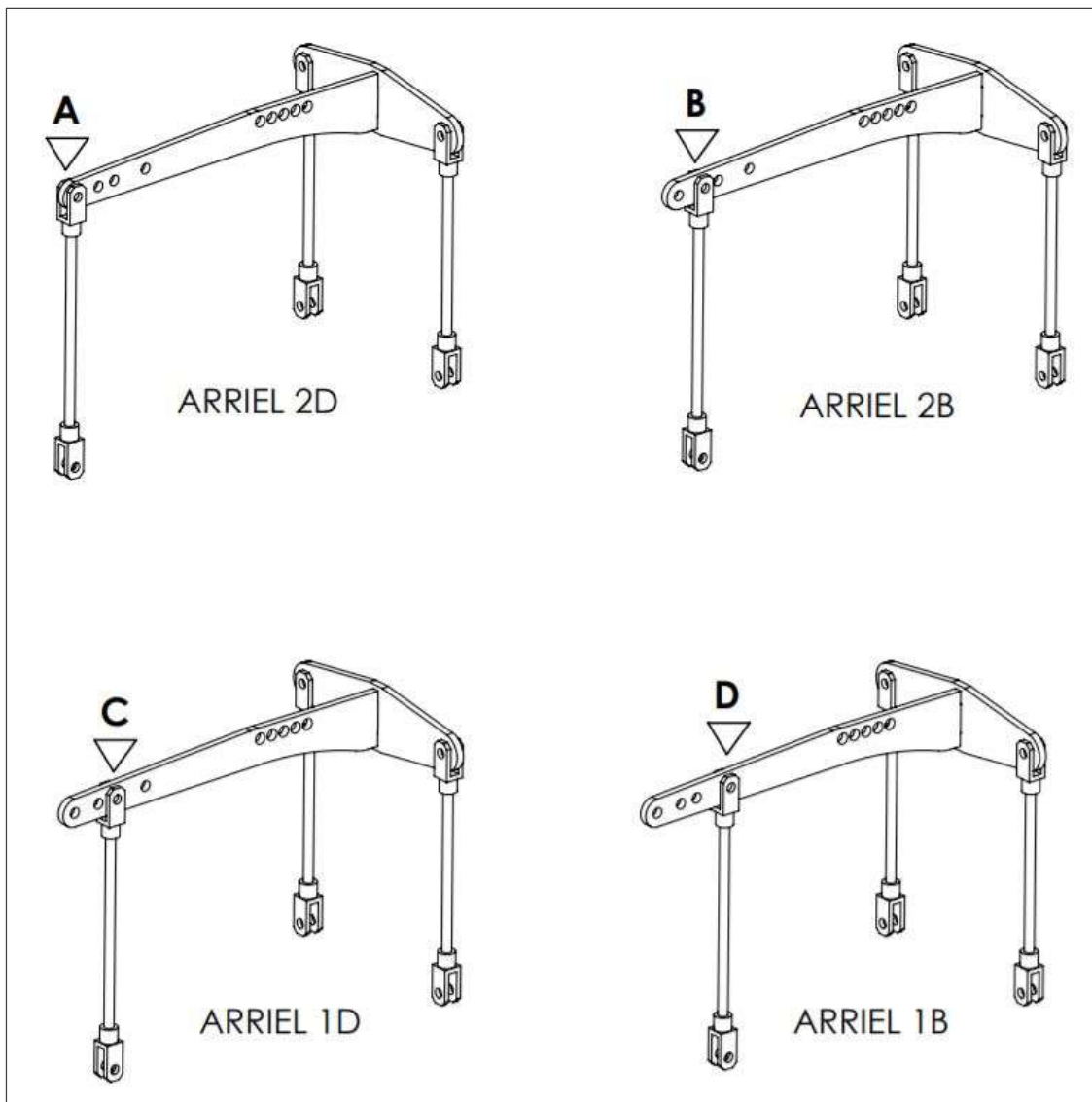


- 1 Frame
- 2 Adjustable hoist ring
- 3 Fixed link
- 4 Adjustable link
- 5 Clamping pin

### 4.2.2 Function description

1. Place the adjustable link (4) on hole required according to images below.
2. Attach the SG365A91-5400-02 on the engine using the clamping pins (5).
3. Adjust the hoist ring on appropriate hole where better balance is reached.

### 4.3 Dimensions



## 5 Transport and storage

### 5.1 Transporting by hand

According to the nominal weight of this unit (aprox. 2,5 Kg), transport by hand is permitted with no special requirement.

### 5.2 Transporting with a lifting device

The unit can be transported with a lifting strap or hook.

WARNING Danger from suspended loads.

- ▶ Make sure that the unit is securely fixed with the lifting gear.
- ▶ Only guide the unit by hand for fine positioning and avoid oscillations.
- ▶ Never stand or put your hands under a suspended load.

### 5.3 Storing the unit

#### Requirements

- The storage areas must be free of corrosive materials and gases.
- The storage areas must be dry. Recommended relative humidity  $\leq 60\%$ .
- Ideal storage temperature:  $+5^{\circ}\text{C}$  to  $+20^{\circ}\text{C}$ .
- Minimum storage temperature:  $-50^{\circ}\text{C}$ .
- Maximum storage temperature:  $+60^{\circ}\text{C}$ .
- Keep out of direct sunlight.
- Do not stack the unit and store it in a shock-proof manner.



Warranty is void if the requirements and storage conditions are not observed.

## 6 Operation

The product requires no settings or changes during operation. For this reason, this chapter of the manual does not contain any information on adjustment option. Use the product only within the performance range specified in the technical data. The operator is responsible for the proper use.

## 7 Maintenance

The unit is low-maintenance when used properly.

### 7.1 Inspection

For the unit to be reliable and long-lasting, Squirrel's Garage recommends testing this product in a regular basis, and documenting and archiving the following operating conditions:

Inspection schedule

Task to be performed	Interval
Check frame condition	Every use
Check all bolts subjected to an effort	Every use
Check alignment marks on links	Every use

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The data specified within only serves to describe the product. No statements concerning a certain condition or suitability for certain application can be derived from our information. The information given does not release the user from the obligation of own judgement and verification. It must be remembered that our products are subject to a natural process of wear and aging.

The cover shows an example application. The product delivered may differ from the image on the cover.

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