EVOLUTION®

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Original Assembly Guide

Read these instructions carefully

Guide d'assemblage d'origine

Lisez attentivement ces instructions

Original-Montageanleitung

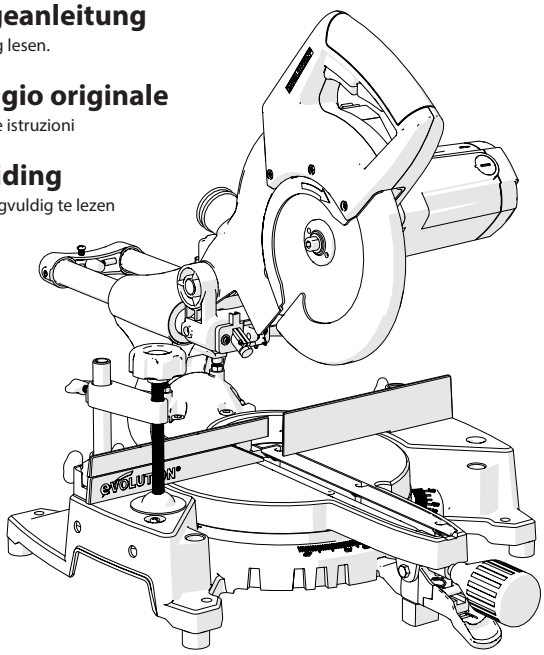
Diese Anweisungen sorgfältig lesen.

Guida al montaggio originale

Leggere attentamente queste istruzioni

Montagehandleiding

Gelieve deze handleiding zorgvuldig te lezen



Original written in UK English

Date Published: 16 / 11 / 2016

TABLE OF CONTENTS

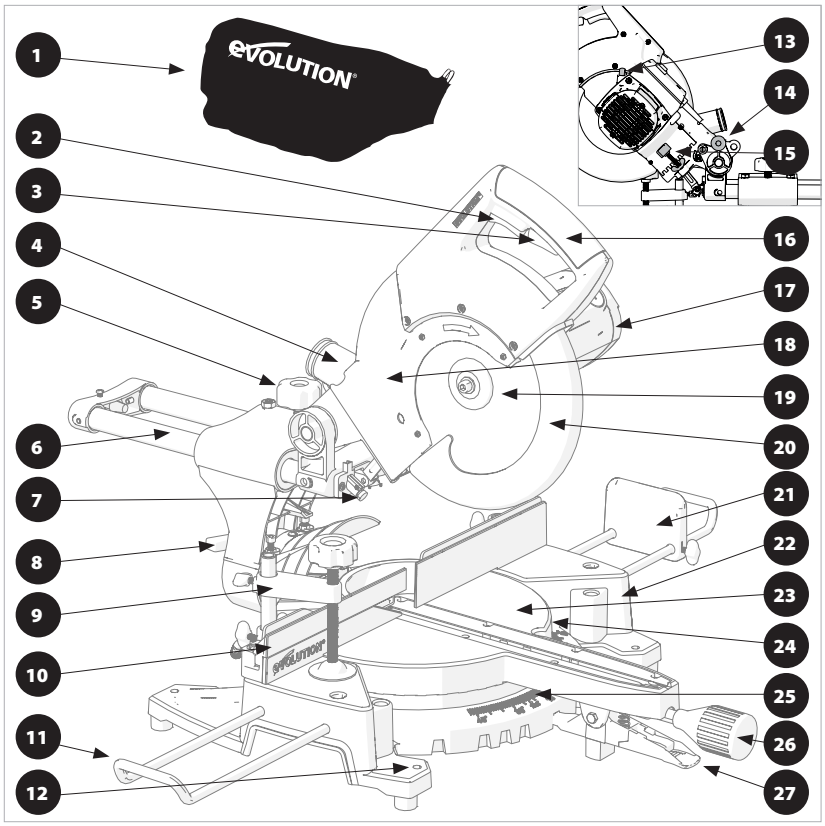
Carefully remove all of the parts from the packaging and check that all parts are present and correct.

ITEMS SUPPLIED
BLADE PACKAGING SUMMARY INSTRUCTIONS
INSTRUCTION MANUAL (Assembly)
INSTRUCTION MANUAL (Operations)
ROTARY BASE AND NECK
CUTTING HEAD (with Moulded Plug)
CARRIAGE SLIDES (colour coded)
BLADE
MITRE LOCKING HANDLE
POSITIVE STOP LOCKING LEVER
HOLD DOWN CLAMP
HEX KEYS(s) (assembly and blade change)

MARKET SPECIFIC ACCESSORIES (Not supplied as standard in all markets. Available as a customer cost optional accessory. See Operation manual for full application details)
BLANKING PLUG (To blank extraction port when cutting Steel)
ADAPTOR TUBE (For connecting extraction port to commercial extraction equipment)
LENS CAP (For laser protection)

- Identify the parts and note that some of the main parts are colour coded to aid assembly.

OVERVIEW OF MITRE SAW

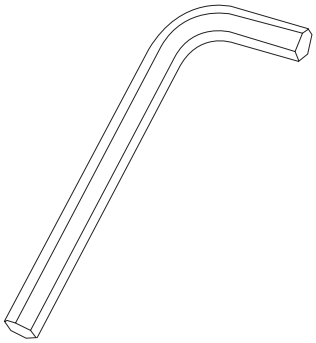


1. **Dust Bag ***
2. On/Off Trigger Switch
3. Blade Guard Release Trigger (EU Models)/Lock-Off Button (Canadian Model)
4. Extraction Port
5. Slide Carriage Locking Screw
6. Carriage Slides
7. Laser Guide
8. Bevel Lock Lever
9. Hold Down Clamp
10. Sliding Fence
11. **Work piece Support ***
12. Mounting Hole (X4)
13. Arbor Lock Button
14. Head Latching Pin
15. Depth Gauge
16. Handle
17. Motor
18. Upper Blade Guard
19. Blade (Housed Inside Blade Guard)
20. Retractable Lower Blade Guard
21. **Repeat End Stop ***
22. Base
23. Table Top
24. Rotary Table
25. Mitre Angle Scale
26. Mitre Locking Handle
27. Positive Stop Locking Lever

***Supplied as original equipment on the RAGE3+ and RAGE3-S+ and RAGE3-S300.**

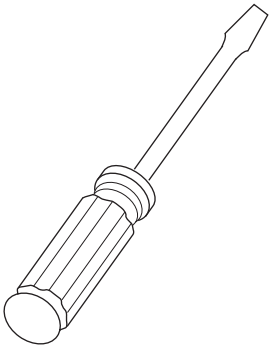
TOOLS NEEDED FOR ASSEMBLY & ADJUSTMENTS

SUPPLIED



6mm Hex Key
(Blade Change)

NOT SUPPLIED



Flat Bladed
Screwdriver
(See Fig. 9 Page 11)

INSTANTLY WATCH THE ASSEMBLY VIDEO ON YOUR SMART PHONE

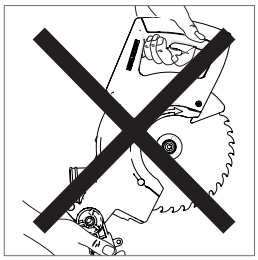
Make sure the HD setting is on.

QR CODE

DOWNLOAD A FREE QR READER APP AND SCAN THE QR CODE (ABOVE).

You can also view the Assembly Video online located in the 'Evolution Support Videos' section at:

www.evolutionpowertools.com/videos/setups/



ASSEMBLY GUIDE

Mitre Saws Assembly Instructions.

Your Mitre Saw is supplied as 3 major component parts which need assembling.

THE ASSEMBLY PROCESS IS A 'ONE TIME ASSEMBLY'.

Once assembly is successfully completed no attempt to disassemble the machine should be made. The blade and some other smaller parts also need to be fitted by the operator. A safety check must be carried out once assembly is completed and before the machine is used.

The Cutting Head is supplied with an approved power cable and plug fitted for its intended country of use.

Do not under any circumstances plug the Cutting Head into the power supply and try to use it as a hand held circular saw.

WARNING: Do not connect this machine to the mains power supply until assembly has been completed and a complete safety check is carried out.

See Final Safety Checks list on page 17.

KNOW THE PARTS

The 3 main component parts to be assembled are:

- The Base and Bevel Neck. **(Fig. 1a)**
- The Carriage Slides. **(Fig. 1b)**
- The Cutting Head in the locked down position. **(Fig. 1c)**

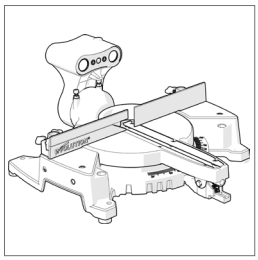


Fig. 1a

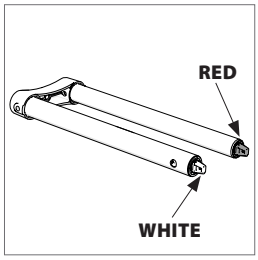


Fig. 1b

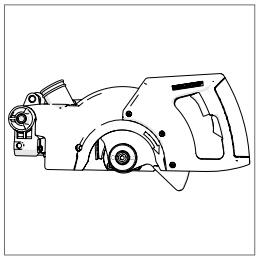


Fig. 1c

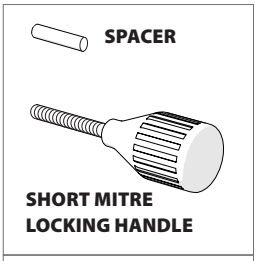


Fig. 2a

Also to be fitted are:

- The Mitre Locking Handle. **(Fig. 2a)**
- The Positive Stop Locking Lever. **(Fig. 2b)**
- The Slide Locking Screw and anti-vibration spring **(Fig. 2c)**
- The Blade. **(Fig. 2d)**

Note: One of two types of Mitre Locking Handle will be supplied, according to the machine purchased. Only the short mitre locking handle requires the spacer.

(Fig. 2a) Fit the spacer over the threaded mitre locking handle before installation. (Short mitre locking handled machines only)

WARNING: The blade is the last part to be fitted. It must only be fitted after the assembly process is completed and the mitre saw has passed the Assembly Safety Checks.

See Assembly Safety Checks list on page 16.

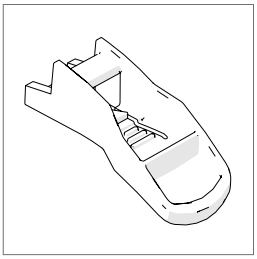


Fig. 2b

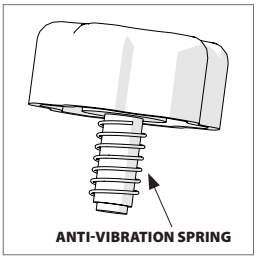


Fig. 2c

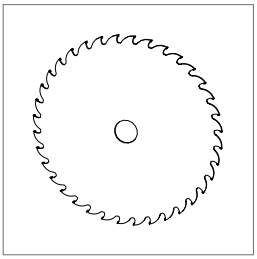


Fig. 2d

ASSEMBLY PROCEDURE

Select the Carriage Slide and Rotary Base and Bevel Neck.

Fitting the Mitre Locking Handle

The threaded rod of the Mitre Locking Handle slides into a tunnel, or screws into a boss (according to type of machine purchased) located just above the Positive Stop Locking Lever.

- Carefully insert the Mitre Locking Handle fully into the Rotary Table Extension.
- Turn the Mitre Locking Handle clockwise to engage and draw the Handle into the locking mechanism. **(Fig. 3a)**
- Tighten the Mitre Locking Handle securely to lock the Rotary Table.

Fitting the Positive Stop Locking Lever

The Positive Stop Locking Lever pushes onto the lever mechanism found just below the Mitre Locking Handle **(Fig 3b)**

Adjusting the Bevel Neck to 0^0

The Bevel Neck is supplied fitted to the rotary base and tilted at a 45^0 angle to the left. Before the carriage slides are inserted into the Bevel Neck, the Bevel Neck must be adjusted to the vertical position (0^0).

- Slacken the Bevel Locking Handle. **(Fig. 4)**
- Rotate the Bevel Neck to the vertical position so that it is against the 0^0 stop.
- Tighten the Bevel Locking Handle.

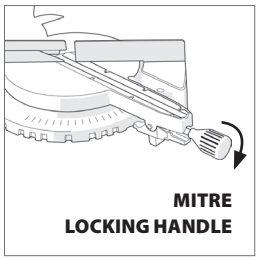


Fig. 3a

Fig. 3b

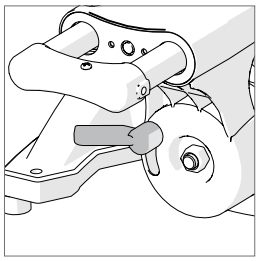


Fig. 4

INSERTING THE CARRIAGE SLIDE

The Carriage Slides two arms should be inserted into the two linear bearings in the Bevel Neck. From the **BACK** of the machine the red lug should be to the left and the white lug should be to the right. **(Fig. 5)**

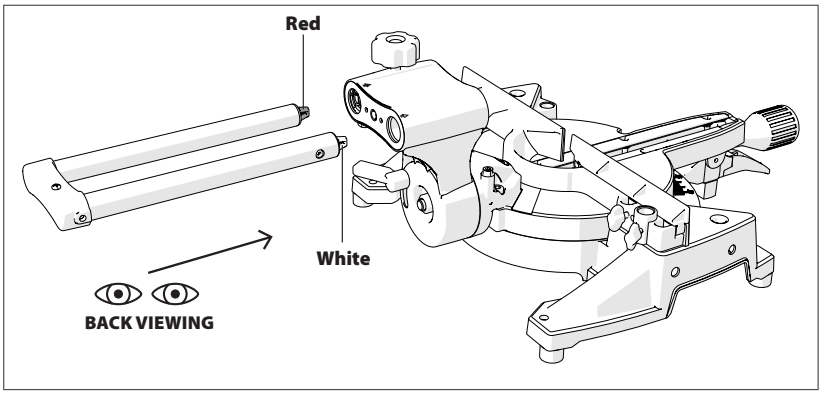


Fig. 5

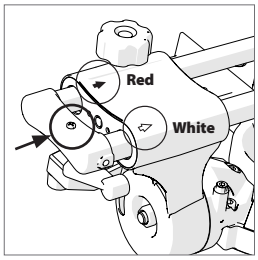


Fig. 6

To aid correct assembly note that the individual arms of the slide are colour coded, **red** for the Left Hand arm **(as seen from the back of the machine)** and white for the Right Hand arm. The linear bearings are likewise colour coded.

WARNING: Read steps associated with **Figs 4, 5, 6 and 7 before proceeding.**

For accuracy of assembly the two (2) arms of the Carriage Slide are not the same diameter. Each arm has a dedicated linear bearing in the Bevel Neck.

Ensure that the Carriage Slide is inserted into the Bevel Neck the correct way round with the cable clip attachment position on the back support bracket pointing upwards. **(Fig. 6)**

- Slide the Sliding Carriage arms through the Bevel Neck for approximately half of their length.
- Insert the Sliding Carriage Locking Screw into the threaded hole in the Bevel Neck, ensuring that the anti-vibration spring is fitted underneath the hand knob.

- Lock the Sliding Carriage Arms into position using the Sliding Carriage Locking Screw. **(Fig. 7)**

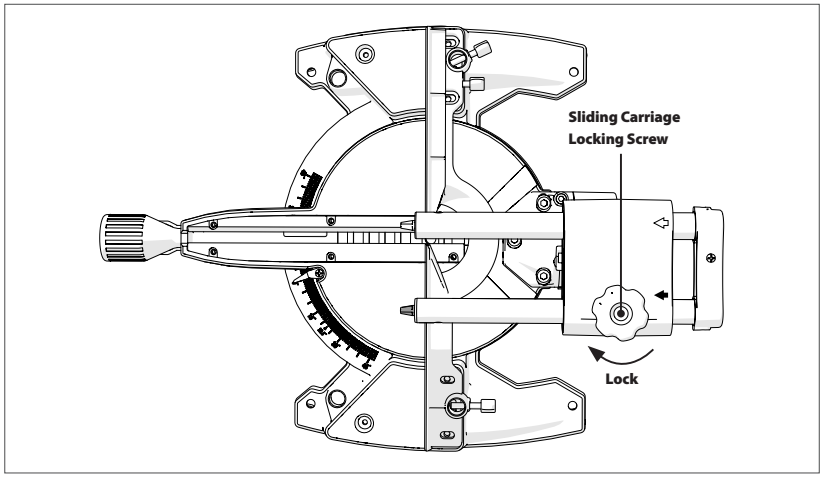


Fig. 7

Note: If for any reason (transit damage, unpacking error, operator mistake etc.) the locating lugs have been tripped **(Fig. 8)** the Sliding Carriage cannot be fitted into the Bevel Neck or onto the Cutting Head until they are reset.

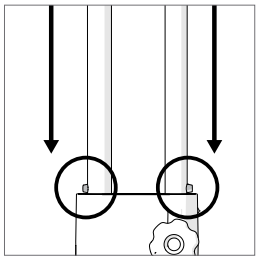


Fig. 8

To reset the locating lugs:

- Gently push down on the tripped locating lug.
- Gently ease the locating lug deployment plunger forward using a flat bladed screwdriver (not supplied). **(Fig. 9)**

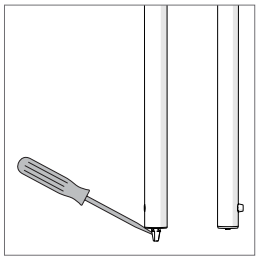


Fig. 9

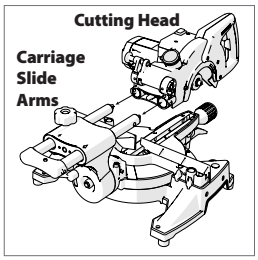


Fig. 10a

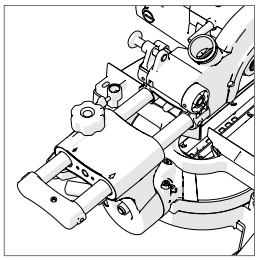


Fig. 10b

ATTACHING THE CUTTING HEAD

WARNING: The power cable must not be allowed to fall through or between the two arms of the Slide Carriage. The cable could be damaged if it becomes trapped by any of the machines moving parts.

Align the Cutting Head with the two Carriage Slide arms. Push the Head onto the Carriage arms firmly until the 'click' of the Locating Lugs deploying is heard. **(Fig. 10a & 10b)**

Check the integrity of the installation.

The deployed Green Locating Lugs must be fully visible when viewed from the sides of the Cutting Head. **(Fig. 11)**

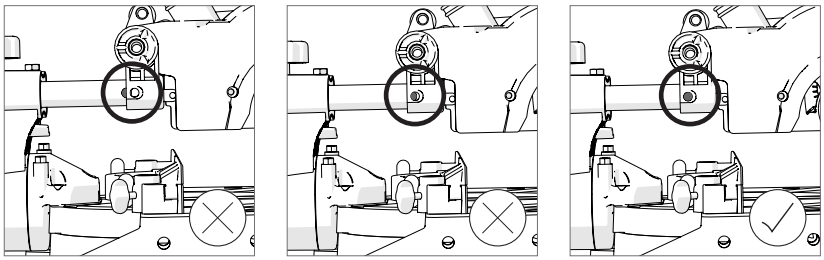


Fig. 11

ROUTING THE POWER CABLE

WARNING: The power cable must not be allowed to fall through or between the two arms of the Slide Carriage. The cable could be damaged if it becomes trapped by any of the machines moving parts.

Ensure that the Cutting Head is in the locked down position with the Cutting Head Latching Pin fully engaged in its socket. **(Fig. 12)**

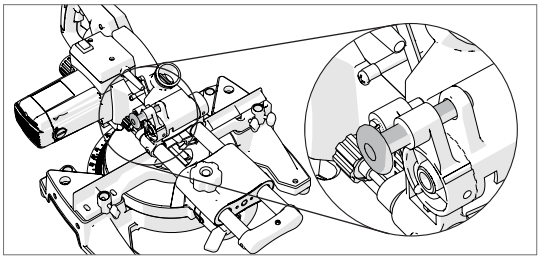


Fig. 12

Attach the power cord to the back support bracket using the screw, washer and cable clip (found on the power cable). **(Fig. 13)**

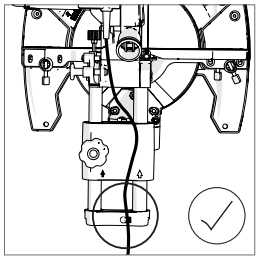


Fig. 13

The power cable must not be stretched or taut between the Cutting Head and the attached rear cable clip.

Deflection at the midpoint of the cable should be 50-60mm. **(Fig. 14)** This will give sufficient 'slack' in the cable to allow the Cutting Head to rise and lower and still retain correct and safe cable routing.

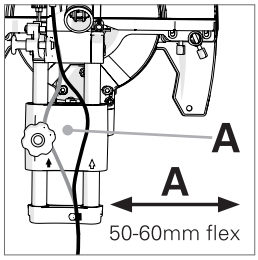


Fig. 14

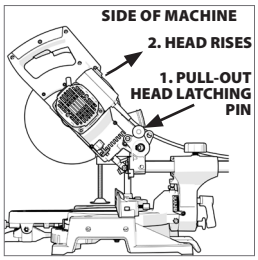


Fig. 15

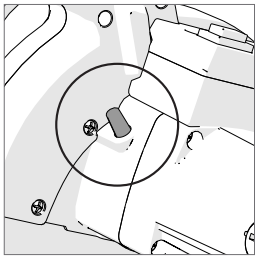


Fig. 16

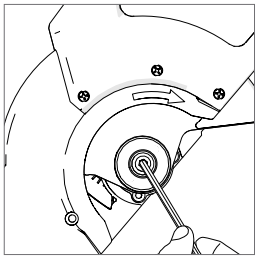


Fig. 17

UNLATCHING & RAISING THE CUTTING HEAD

Ensure the Cutting Head is in its upper position, by pulling out the Head Latching Pin whilst holding the cutting head handle **(1. Fig. 15)**, allowing the Head to rise slowly to its upper position **(2. Fig. 15)**. More instruction on this can be found in the 'Original Instruction Manual', in the section titled 'Unlatching & Raising The Cutting Head'.

FITTING THE BLADE

WARNING: Only carry out this operation with the machine disconnected from the mains supply.

WARNING: Only fit the blade after the assembly process and the Assembly Safety Checks are completed.

See Assembly Safety Checks list on page 16.

Note: It is recommended that the operator wears protective gloves when handling the blade during installation or when changing the machines blade.

WARNING: Only use genuine Evolution blades or those blades specifically recommended by Evolution Power Tools and which are designed for this machine. Ensure that the maximum speed of the blade is higher than the speed of the machine's motor.

Note: Blade Bore Reducing Inserts should only be used in accordance with the manufacturers instructions.

WARNING: The arbor screw has a LH thread. Turn clockwise to loosen. Turn counterclockwise to tighten.

Press & keep pressing the arbor lock button on the motor housing while turning the arbor screw using the supplied Hex Key until the button locates fully into the shaft and locks the shaft **(Fig. 16)** and continue to remove the arbor screw, washer and outer blade flange. **(Fig. 17)**

Release the arbor lock button.

- Ensure that the blade and blade flanges are clean and free from any contamination.
- The inner-blade flange should be left in place (except for North American models supplied with the silver dual-sided inner-flange), but if it is removed for cleaning it must be replaced the same way round as it was removed from the machine.

To insert the blade Press the Lower Blade Guard Release Trigger **(A)** rotate the lower blade guard **(B)** up into the upper blade guard and hold the lower blade guard in that position. **(Fig. 18)**

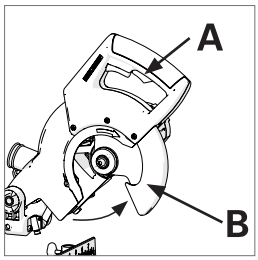


Fig. 18

Install the new blade onto the inner flange ensuring it is seated properly on the flange shoulder and then slowly release the lower blade guard back to its original closed position. Make sure the rotation arrow on the blade **(A)** matches the clockwise rotation arrow on the upper guard **(B)**. **(Fig. 19)**

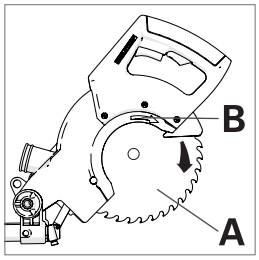


Fig. 19

Note: The blade teeth should always point downward at the front of the saw.

Install the outer flange (1) (flat face onto the machine), washer (2) and arbor screw (3). (Fig. 20)

Press & keep pressing the arbor lock button on the motor housing while tightening the arbor screw using the supplied Hex Key until the button locates fully into the shaft and locks the shaft. **(Fig. 16)**

Tighten the arbor screw using moderate force, but do not overtighten. Ensure the Hex Key is removed and the arbor lock button has released before operating. Ensure the blade guard is fully functional before using the machine.

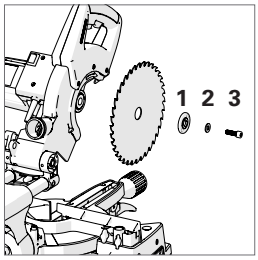


Fig. 20

REAR SUPPORT ARM

For extra stability in use, a rear support arm is incorporated into the base of the machine just below the Bevel Neck Pivot mechanism.

Deploy this arm by pulling it fully out from the base of the machine before moving onto the Final Safety Checks.

See Final Safety Checks on page 17

ASSEMBLY SAFETY CHECKS

Part	Condition	Yes
Slides	Inserted through the bevel neck and connected to the cutting head. Locating lugs successfully deployed.	
Slide Carriage Locking Screw	Inserted into threaded hole in the Bevel Neck. Anti-vibration spring fitted beneath the Locking Screw Hand Knob.	
Positive stop locking lever	Installed onto locking mechanism.	
Mitre locking handle	Installed onto locking screw.	
Power cable	Routed correctly and fastened to back slide bracket. 50-60mm max deflection at the midpoint.	

ALL THE YES BOXES MUST BE TICKED BEFORE THE MACHINE CAN BE USED.
ANY 'NO' = **DO NOT USE**. STOP, CHECK AND REASSEMBLE BEFORE PROCEEDING.

IMPORTANT: Only use the dust bag* when cutting wood. Remove when cutting metallic materials.

Can be purchased as an accessory.

FINAL SAFETY CHECKS

Part	Condition	Yes
Blade	Blade installed with the rotation arrows on the blade matching the rotation arrows on the upper blade guard. Outer blade flange and arbor screw and washer correctly fitted.	
Safety guards	Retractable lower blade guard fully operational. Cutting Head Locks in upper position with blade covered. The Cutting head can only be lowered when the blade guard release trigger is operated.	
Assembly	Repeat the Assembly Safety Checks.	
Operation	With the machine switched OFF and disconnected from the mains supply carry out the following: When all adjustments have been made, set the machine at each of the maximum settings. Lower the blade to its lowest position and rotate the blade by hand, (it is advisable to wear gloves whilst doing this), and ensure that the blade does not foul on any part of the machine, castings or guards.	
Power Supply	Supply matches specification found on machine rating plate. Plug matches power source outlet.	

ALL THE YES BOXES MUST BE TICKED BEFORE THE MACHINE CAN BE USED.
ANY 'NO' = **DO NOT USE**. STOP, CHECK AND REASSEMBLE BEFORE PROCEEDING.

BEFORE CONNECTING TO THE MAINS POWER SUPPLY REFER TO THE ORIGINAL INSTRUCTION MANUAL INCLUDED WITH THIS PRODUCT FOR INSTRUCTIONS ON HOW TO OPERATE THE SAW.

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