MODEL

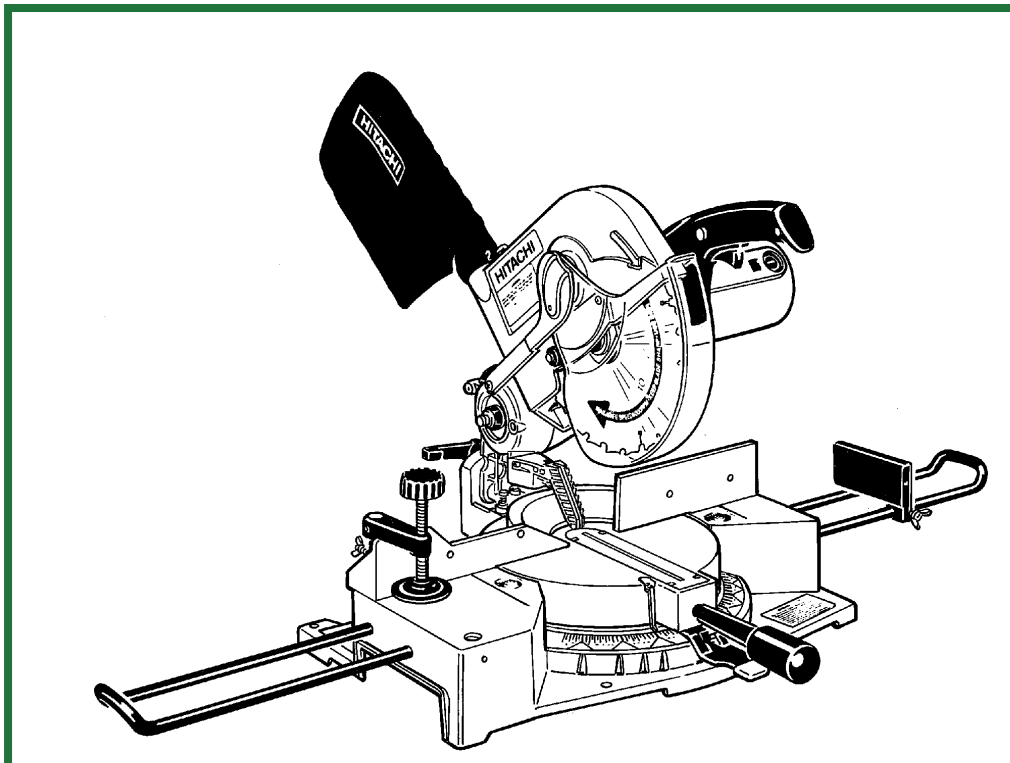
C 10FC2

HITACHI
POWER TOOLS

C

COMPOUND SAW
C 10FC2

TECHNICAL DATA
AND
SERVICE MANUAL



LIST No. E927 May 1999

REMARK:

Throughout this TECHNICAL DATA AND SERVICE MANUAL, a symbol(s) is(are) used in the place of company name(s) and model name(s) of our competitor(s). The symbol(s) utilized here is(are) as follows:

Symbols Utilized	Competitors	
	Company Name	Model Name
Z	DELTA	36-220
C	MAKITA	LS1040

CONTENTS

1. PRODUCT NAME

Hitachi Compound Saw, Model C 10FC2

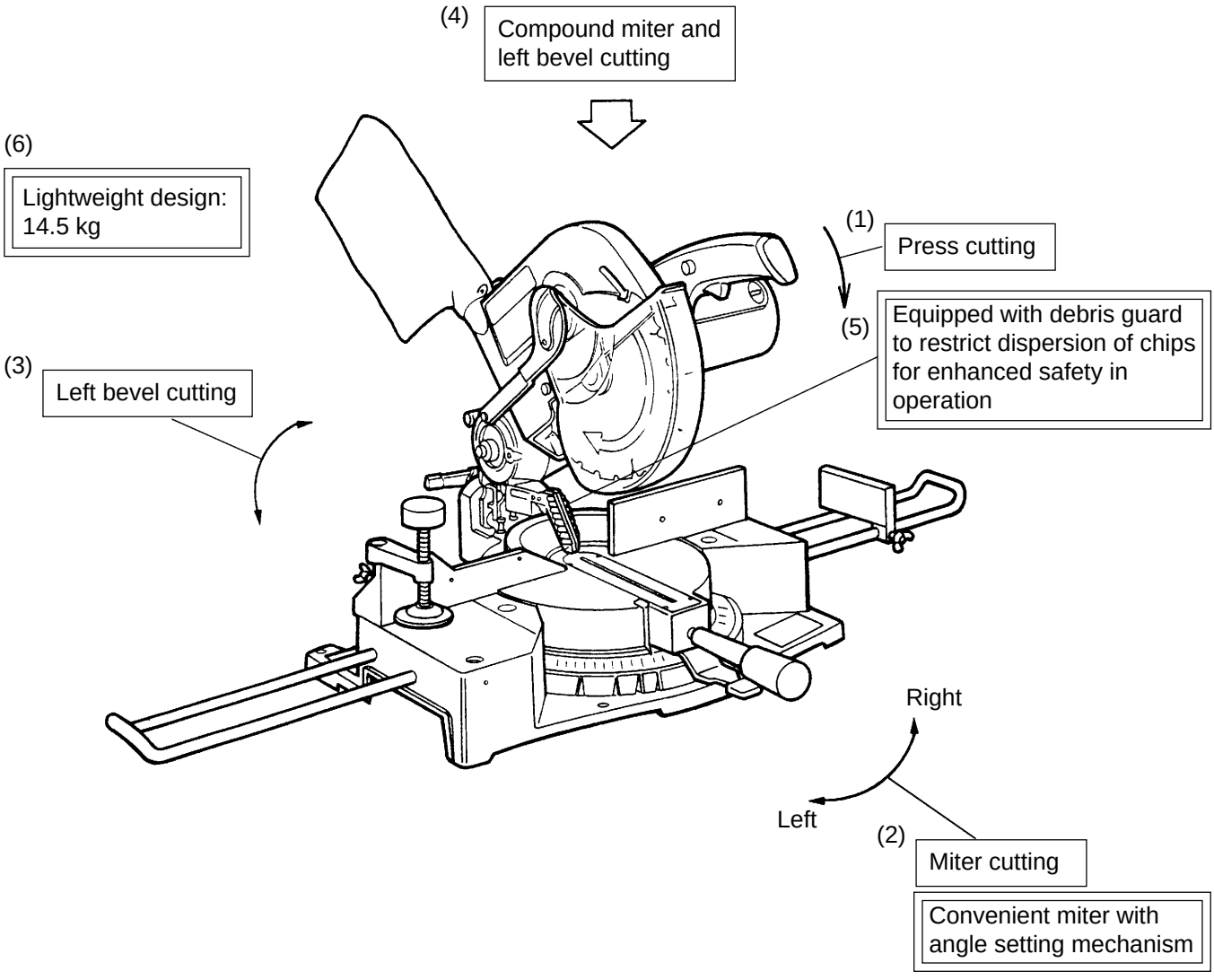
2. MARKETING OBJECTIVE

The Model C 10FC2 was developed to upgrade and replace the current Model C 10FC. The major difference between new model and current one is that the new model has a convenient miter angle setting mechanism for quick and easy. Only rotate the miter handle to clockwise which is equipped with the turn table, miter angle can be set (up to 60° right and 45° left). Of course, there are 10 positive miter stops: 0°, 15°, 22.5°, 31.6°, 45° (right and left), and 60° (right) as well as current Model C 10FC. The basic structure of the product is the same as that of the Model C 10FC.

3. APPLICATIONS

- Cutting various types of wood workpieces
- Cutting workpieces of plywood, decoration panels, soft fiverboard and hardboard
- Cutting aluminum sashes

4. SELLING POINTS



(Note) Numerals in ( ) are identical with item numbers in "4-1. Selling Point Descriptions"

4-1. Selling Point Descriptions

(1) Press cutting

Table 1 (Unit: mm)

Maker model / Max. cutting dimension	HITACHI C 10FC2
Height x Width (H x W)	67 x 146 (2-5/8" x 5-3/4") 89 x 92 (3-1/2" x 3-5/8") with aux. board width 17 mm (11/16")

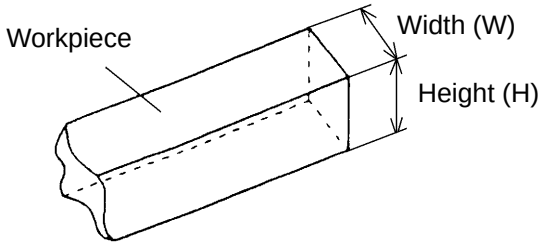


Fig. 1

Press cutting with the head swiveling enables cutting square workpieces as large as shown in Table 1 in a single sawing operation. (See Fig. 1)

(2) Miter cutting facility

Table 2 (Unit: mm)

Maker model / Max. cutting dimension	HITACHI C 10FC2
Right 60° Height x Width (H x W)	70 x 73 (2-3/4" x 2-7/8")
Right and left 45° Height x Width (H x W)	70 x 89 (2-3/4" x 3-1/2")

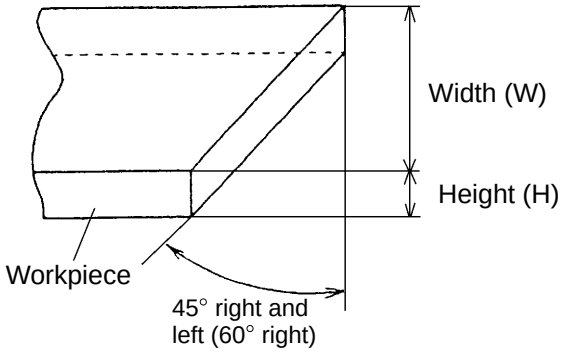


Fig. 2

By tuning the table to the right or left as desired, the Model C 10FC2 is capable of miter cutting of up to 45° to the left, or 60° to the right. The miter angle setting mechanism enables easy cutting-angle setting.

(3) Left bevel cutting facility

Table 3 (Unit: mm)

Maker model / Max. cutting dimension	HITACHI C 10FC2
Left bevel 45° Height x Width (H x W)	44 x 130 (1-3/4" x 5-1/8")

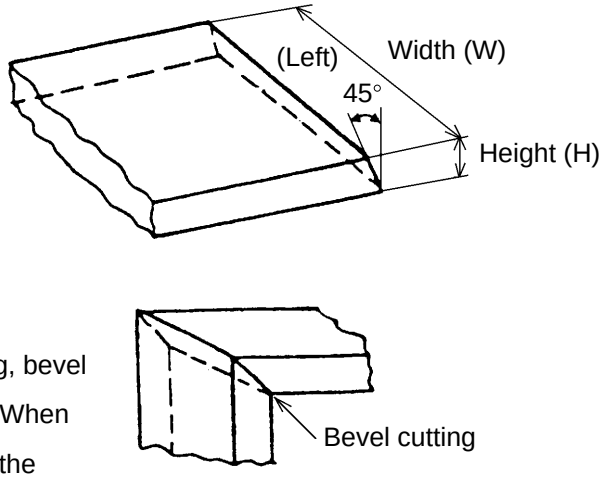


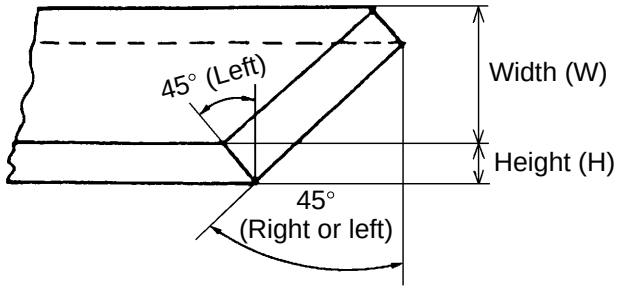
Fig. 3

By inclining the saw blade section (head) on its swivel mounting, bevel cutting of up to a maximum of 45° to the left can be obtained. (When the machine is shipped from the factory, the swivel stoppers of the head are precisely adjusted for 0° and 45° [for further details, please refer to Paragraph 9-1, Bevel Angle Adjustment.

(4) Compound cutting through use of miter and bevel cutting functions

Table 4 (Unit: mm)

Maker model / Max. cutting dimension	HITACHI C 10FC2
Left bevel 45° Right/Left miter 45° Height x Width (H x W)	44 x 89 (1-3/4" x 3-1/2")



* When the saw blade section (head) is inclined 45° to the left, the maximum possible angle setting of the table is restricted to 45° to either the left or right.

Fig. 4

By turning the table to the right or left and inclining the saw blade section (head) to the left, the Model C 10FC2 is capable of compound cutting (bevel and miter, see Fig.4) of workpieces with the maximum dimension shown in Table 4.

(5) Equipped with debris guard to restrict dispersion of chips for enhanced safety in operation.

A debris guard has been adopted to prevent wood chips from adhering to the saw blade at the end of the cutting operation. The debris guard tilts together with the saw blade during bevel cutting, thereby enhancing safe operation.

(6) Lightweight design

14.5 kg in weight, for easy transport in a workshop

5. SPECIFICATIONS

Maximum cutting dimensions Height x Width (H x W)	0° (Right angle)	67 mm (2-5/8") x 146 mm (5-3/4") 89 mm (3-1/2") x 92 mm (3-5/8") [with aux. board width 17 mm (11/16")]
	Miter right/left 45°	70 mm (2-3/4") x 89 mm (3-1/2")
	Bevel left 45°	44 mm (1-3/4") x 130 mm (5-1/8") [Right 60°: 10 mm (2-3/4") x 73 mm (2-7/8")]
	Miter right/left 45° + Bevel left 45°	44 mm (1-3/4") x 89 mm (3-1/2")
Miter cutting ranges		Right 0° ─ 60° , Left 0° ─ 45°
Bevel cutting range		Left 0° ─ 45°
Compound (miter + bevel) cutting ranges		Miter: right and left 0° ─ 45°, Bevel: left 0° ─ 45°
Angle stopper positions		Right and left 0°, 15°, 22.5°, 31.6°, 45°, Right 60°
Applicable saw blade		255 mm (10") external dia. x 15.9 mm (5/8") bore
Power source type and voltage		AC single phase 60 Hz, 115 V
Type of motor		AC single phase commutator series motor
Full-load current		15 A (115 V)
No-load rotation speed		4,900 /min
Max. output		2,200 W
Main body dimensions (Width x Depth x Height)		535 mm x 600 mm x 489 mm (21-1/16" x 23-1/2" x 19-1/4")
Weight		14.5 kg (32 lbs), gross weight 22.3 kg (49 lbs)
Coating		Metallic silver green
Packaging		Corrugated cardboard box
Cord		Type: 2-Conductor cabtire cable Nominal cross-sectional area: 2 mm^2 Length: 2.4 m (7.8 ft) External dia: 9 mm with mold plug
Standard accessories		• 255 mm (10") TCT saw blade (24 teeth, Code No. 790004) ····· for wood and aluminum cutting • Dust bag • Vise ass'y • Wrench
Optional accessories		• Holder ass'y (Code No. 311495) • 255 mm (10") TCT saw blade (70 teeth, Code No. 976473) ····· for normal cutting

6. COMPARISONS WITH SIMILAR PRODUCTS

Item \ Maker/Model		HITACHI C 10FC2/C 10FC	Z	C
Max. cutting dimensions Height x Width (H x W)	0° (Right angle)	67 mm x 146 mm (2-5/8" x 5-3/4") 89 mm x 92 mm (3-1/2" x 3-5/8") [with aux. board width 17 mm (11/16")]	70 mm x 146 mm (2-3/4" x 5-3/4")	69 mm x 130 mm (2-3/4" x 5-1/8")
	Miter right/left 45°	70 mm x 89 mm (2-3/4" x 3-1/2") {Right 60° 70 mm x 73 mm (2-3/4" x 2-7/8")}	70 mm x 105 mm (2-3/4" x 4-1/8")	69 mm x 92 mm (2-3/4" x 3-1/8")
	Bevel left 45°	44 mm x 130 mm (1-3/4" x 5-1/8")	44 mm x 146 mm (1-3/4" x 5-3/4")	35 mm x 130 mm (1-3/8" x 5-1/8")
	Miter right/left 45° + Bevel left 45°	44 mm x 89 mm (1-3/4" x 3-1/2")	44 mm x 105 mm (1-3/4" x 4-1/8")	35 mm x 92 mm (1-3/8" x 3-5/8")
Miter cutting ranges		Right 0° – 60° Left 0° – 45°	Right and left 0° – 45°	Right 0° – 52° Left 0° – 45°
Bevel cutting ranges		Left 0° – 45°	Left 0° – 45°	Left 0° – 45°
Compound (miter + left bevel) cutting ranges		Miter: Right and left 0° – 45° Bevel: Left 0° – 45°	Miter: Right and left 0° – 45° Bevel: Left 0° – 45°	Miter: Right and left 0° – 45° Bevel: Left 0° – 45°
Angle stopper position		Right and left 0°, 15°, 22.5°, 31.6°, 45° Right 60°	Right and left 0°, 15°, 22.5°, 30°, 45°	Right and left 0°, 15°, 22.5°, 30°, 45° Right 52°
Saw blade outer diameter (mm)		255 (10")	255 (10")	255 (10")
Motor	Full-load current (A)	15 (115 V)	15 (115 V)	15 (115 V)
	No-load revolution (/min)	4,900	4,900	4,600
	Max. output (W)	2,200	–	–
Insulation structure		Double insulation	Double insulation	Double insulation
Base size Width x Depth (mm)		525 x 150 (20-11/16" x 5-29/32")	455 x 125 (17-15/16" x 4-15/16")	460 x 135 (18-3/32" x 5-5/16")
Debris guard		Provided (fixed)	Non	Non
Dust bag size (mm)		300 x 190 (11-13/16" x 7-15/32")	300 x 190 (12-19/32" x 7-15/32")	300 x 150 (11-13/16" x 5-15/16")
Main unit dimensions Width x Depth x Height (mm)		535 x 600 x 489 (21-1/16" x 23-1/2" x 19-1/4")	455 x 595 x 535 (17-29/32" x 23-13/32" x 21")	476 x 530 x 532 (18-3/4" x 20-7/8" x 20-15/16")
Product weight (kg)		14.5 (32 lbs)	22 (49 lbs)	11 (24.2 lbs)

Item \ Maker/Model	HITACHI C 10FC2/C 10FC	Z	C
Standard accessories	• 255 mm (10") TCT saw blade (24 teeth) for wood and aluminum cutting • Dust bag • Vise ass'y • Wrench	• 255 mm (10") combination saw blade (104 teeth) • Dust bag • Vise ass'y (horizontal type) • Holder ass'y • Wrench	• 255 mm (10") TCT saw blade • Dust bag • Auxiliary plate • 13 mm socket wrench • Wrench • Triangular rule
Optional accessories	• Holder ass'y • 255 mm (10") TCT saw blade (70 teeth) for normal cutting		• Safety goggles

7. PRECAUTIONS IN SALES PROMOTION

In the interest of promoting the safest and most efficient use of the Model C 10FC2 Compound Saw by all of our customers, it is very important that at the time of sale the salesperson carefully ensures that the buyer seriously recognizes the importance of the contents of the Instruction Manual, and fully understands the meaning of the precautions listed on the various Caution Plates attached to each machine.

7-1. Instruction Manual

Although every effort is made in each step of design, manufacture and inspection to provide protection against safety hazards, the dangers inherent in the use of any power saw cannot be completely eliminated. Accordingly, general precautions and suggestions for the use of electric power tools, and specific precautions and suggestions for the use of the compound saw are listed in the Instruction Manual to enhance the safe, efficient use of the tool by the customer. Salespersons must be thoroughly familar with the contents of the Instruction Manual to be able to offer appropriate guidance to the customer during sales promotion.

(1) Precautions on the Name Plate

Each Model C 10FC2 is furnished with a Name Plate that lists the following precautions.

CAUTION

- **For safe operation, see instruction manual.**
- **Do not expose to rain or use in damp locations.**

Instruct the customer to thoroughly read the Instruction Manual prior to attempting to operate the machine.

(2) Waring Label (A)

⚠ WARNING

For Your Own Safety Read Instruction Manual Before Operating Miter Saw.

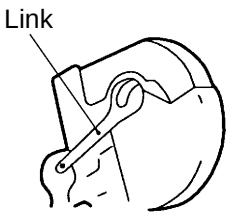
1. Wear eye protection.
2. Keep hands out of path of saw blade.
3. Do not operate saw without guards in place.
4. Do not perform any operation freehand.
5. Never reach around saw blade.
6. Turn off tool and wait for saw blade to stop before moving workpiece or changing settings.
7. Disconnect power before changing blade or servicing.
8. Saw blade diameter is 10" (255 mm).
9. No load speed is 4900 rpm.

H393374

The Warning Label (A) specified by the UL is affixed on the upper righthand portion of the base. Please instruct users to strictly observe the contents in 1 to 9 in the Warning Label (A) shown at left.

(3) Warning Lavel (B)

⚠ WARNING



Make sure that link is securely placed before operation.
Read instruction manual carefully to place the link.

H391362

The Warning Label (B) is affixed on the front left side of the blade guard (metal).
The link indicated here is removed at the time of shipment from the factory. Please instruct users to install the link as shown in the Warning Lavel (B) at left to ensure smooth movement of the blade guard (plastic) before putting the tool into use.

(4) Warning Lavel (C)

⚠ WARNING

1. Only operate the tool after ensuring the workpiece is fixed properly with vise assembly.

2. Never remove guard (including link, blade guard (metal), vlade guard (plastic), plate and so on) from the tool body when you operate it.

H393377

The Warning Label (C) is affixed on the rear face of the blade guard (metal).

Please instruct users to strictly observe the contents in 1 and 2 on the Warning Label (C).

8. ADJUSTMENT AND OPERATIONAL PRECAUTIONS

8-1. Confirmation of Saw Blade Lower Limit Positioning

The lower limit of the saw blade cutting depth is factory-adjusted so that when the saw blade is fully lowered, its cutting edge is 24 mm to 29 mm (1" to 1-1/8") below the upper surface of the table insert. Lower the saw blade and confirm that it stops at the correct position.

If it is necessary to adjust the saw blade lower limit, loosen the 10 mm lock nut on the 10 mm depth adjustment screw, and turn the 10 mm depth adjustment screw if necessary. (See Fig.5)

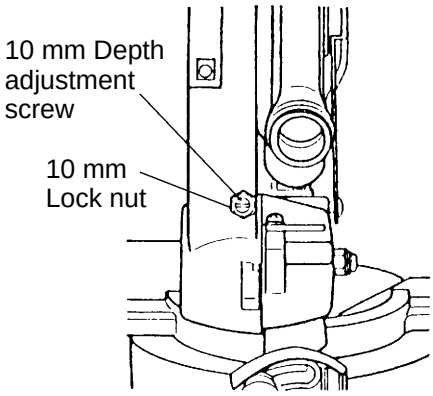


Fig. 5

[Caution] Perform the adjustment carefully to ensure that the saw blade does not cut into the table. Also, on completion of adjustment, ensure without fail that the 10 mm lock nut is securely tightened.

8-2. How to Use the Vise Ass'y

(1) The vise ass'y can be mounted on the left side of the base, and can be raised or lowered according to the height of workpiece.

① Insert the support of the vise ass'y into the hole located on the front of the base.

② Then tighten the 5 mm wing bolt, as shown in Fig. 6.

③ Turn the knob to thoroughly clamp the workpiece.

[NOTE] The support has two locking grooves into which the tip of the 5 mm wing bolt is designed to fit, to lock the vise ass'y in the desired position.

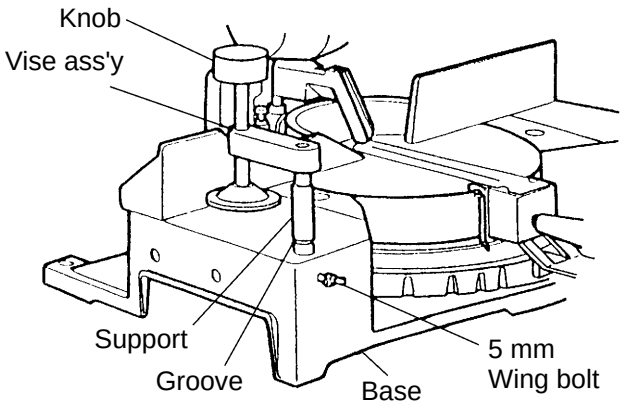


Fig. 6

(2) The vise ass'y can be mounted on either the left side fence or the right side fence, and can be raised or lowered according to the height of the workpiece.

① Insert the support of the vise ass'y into the hole located on either the left side fence or the right side fence.

② Then tighten the 5 mm wing bolt, as shown in Fig. 7.

③ Turn the knob to thoroughly clamp the worikpiece.

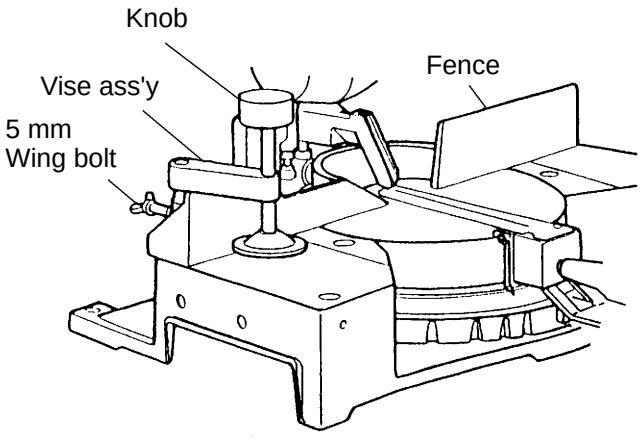


Fig. 7

[Caution] Always confirm that the motor head does not contact the vise ass'y when it is lowered for cutting. If there is any danger that it may do so, loosen the 5 mm wing bolt slightly and move the vise ass'y to a position where it will not contact the saw blade.

Also, always confirm that the vise ass'y is mounted on the right side fence before using the saw for compound cutting operations (miter + bevel cutting).

8-3. Cutting Operation

(1) Cutting efficiency will be reduced if a dull saw blade is used, if an excessively long extension cord id used, or if the wire gauge of the extension cord is too small. (For details on extension cords, please refer to the Instruction Manual.) This is particularly important when cutting materials with dimensions which are at or near the maximum capacity for the machine.

(2) The customer should be advised to thoroughly inspect the workpiece to ensure that there are no metallic objects (nails in particular), sand, or other foreign matter in or on the workpiece. Saw blade contact with such foreign matter will not only shorten the service life of the saw blade, but could cause serious accident. Should the saw blade tips be broken off, the tips may fly toward the operator.

(3) Press cutting

Like Model C 10FC can be used for press cutting of workpieces up to 67 mm x 146 mm (2-5/8" x 5-3/4") in a single operation by simply pushing the saw blade section (head) downward. The customer should be cautioned that excessive pressure on the handle will not increase the cutting speed. On the contrary, excessive pressure may result in reduced cutting efficiency (irregular or rough cutting of the workpiece), and could also cause overload and subsequent burnout of the motor.

On completion of the cutting operation, turn the switch OFF and wait for the saw blade to come to a complete stop before raising the saw blade section (head) to its original position. Raising the saw blade section (head) while the saw blade is rotating may cause unwanted cutting marks on the workpiece.

Techniques to avoid unwanted cutting marks

Uneven and unwanted cutting marks can be avoided throughout the cutting operation by gently and smoothly pressing down on the handle, so that the entire cutting operation is accomplished in a single uninterrupted motion.

(4) Miter cutting

Miter cutting is accomplished by turning the table. (For details, please refer to the Instruction Manual.)

(5) Bevel cutting

Bevel cutting of 0 – 45° to the left is accomplished by inclining the saw blade section (head). (For details, please refer to the Instruction Manual.)

[Caution] When the workpiece is secured on the left side, the cut-off portion comes to rest on the side of the saw blade as illustrated in Fig. 8. If the handle is raised before the saw blade rotation comes to a complete stop, there is a chance that the cut-off portion of the workpiece could become jammed against the saw blade, causing a hazardous condition. Instruct the customer to ensure without fail that the saw blade comes to a complete stop before attempting to raise the handle.

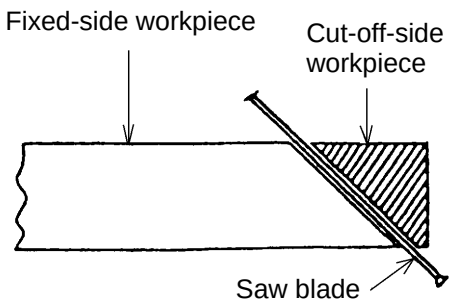


Fig. 8

(6) Compound (miter + bevel) cutting

Compound cutting can be accomplished by combining the miter cutting and bevel cutting operations described in paragraphs (4) and (5) above. (For details, please refer to the Instruction Manual.)

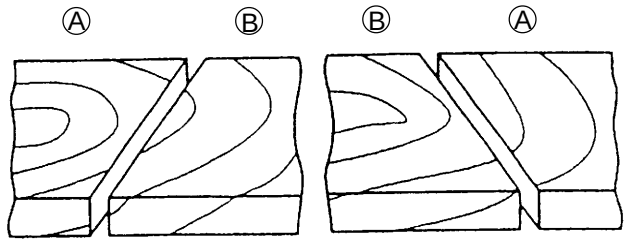
When the saw blade section (head) is inclined 45° to the left, the table can be turned up to 45° to the right and left.

(7) Cut surface quality during miter/bevel cutting

The quality of the cut surface depends on the type of cutting operation (miter or bevel), the type and sharpness of the saw blade, whether the workpiece is cut to the right or left, and various other factors. In miter and bevel cutting in particular, cutting is performed across the wood grain, so the condition of the cut surface depends on whether the wood is cut with or against the grain. This is the sames as when using electric portable planers. Customers should be advised of these phenomena so that they understand that in cases when the cut surface may not be as smooth as expected or hoped for, it is not caused by the performance of the saw blade or the Model C 10FC2.

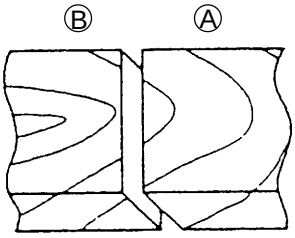
In the cutting examples illustrated in Fig. 9, the cut surfaces on the sides marked Ⓐ are better than those on the sides marked Ⓑ.

[Miter cutting]



Better Better

[Left bevel cutting]



Better

Fig. 9

9. ADJUSTMENT OF COMPONENTS

9-1. Bevel Angle Adjustment

When shipped from the factory, the heights of 6 mm bolt (A) and 6 mm bolt (B) are adjusted so that the saw blade section (head) will stop at 0° (right-angle) and 45° to the left. To change the head stop positions, instruct the customer to adjust the height of 6 mm bolt (A) and 6 mm bolt (B) as described below.

As illustrated in Fig. 10 and Fig. 11, adjustment of the bevel angle can be accomplished by loosening the 6 mm nut (lock nut) and turning 6 mm bolt (A) or 6 mm bolt (B) to raise it or lower it by an appropriate dimension to change the position at which it comes in contact with angle regulator.

[Caution] On completion of adjustment, ensure that the 6 mm nut (lock nut) is securely tightened.

Adjustment of the squareness of the saw blade with relation to the table can also be accomplished by adjusting the stopper bolts as described above.

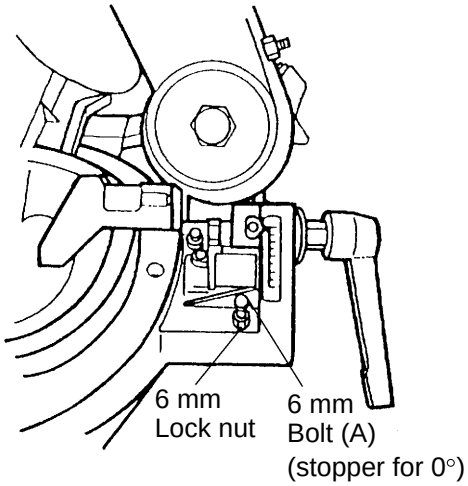


Fig. 10

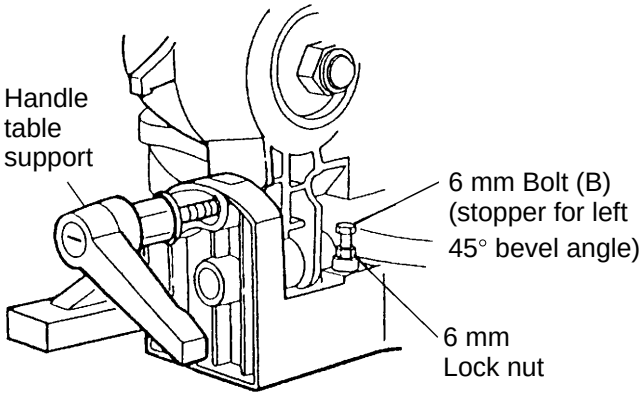


Fig. 11

10. PACKING

The main body of the Model C 10FC2 is sandwiched between packing (A) and packing (B) made of styrofoam. This system makes the packaging work easier.

(1) Preparation

Remove the vise ass'y, and remove the dust bag from the main unit. Remove the truss hd. screw (1/4" x 1/2") which fixes the link to the angle regulator and set the link free. Mount the truss hd. screw (1/4" x 1/2") to the angle regulator again. Then swivel the table through 60° toward the right. Fix the angle regulator securely with the handle table support. Position the handle table support vertically to keep it from contact with packing (A) when putting the main unit on packing (A). Push down the head section and move the lock plate to the lock position to secure the head section in the lower position.

(2) How to install packing (A)

Put packing (A) in the carton box.

Put the main unit in packing (A).

(3) How to install packing (B)

Put packing (B) on the main unit. Put the vise ass'y and the dust bag in the carton box on top of packing (B). Close the lids of the carton box and bind them together.

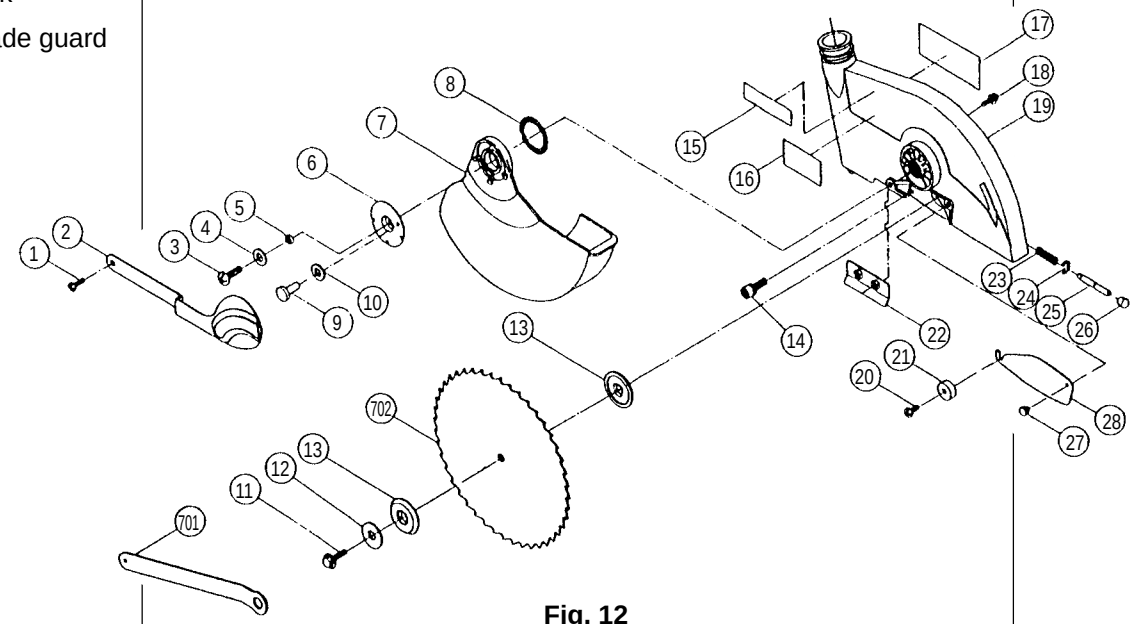
11. PRECAUTIONS IN DISASSEMBLY AND REASSEMBLY

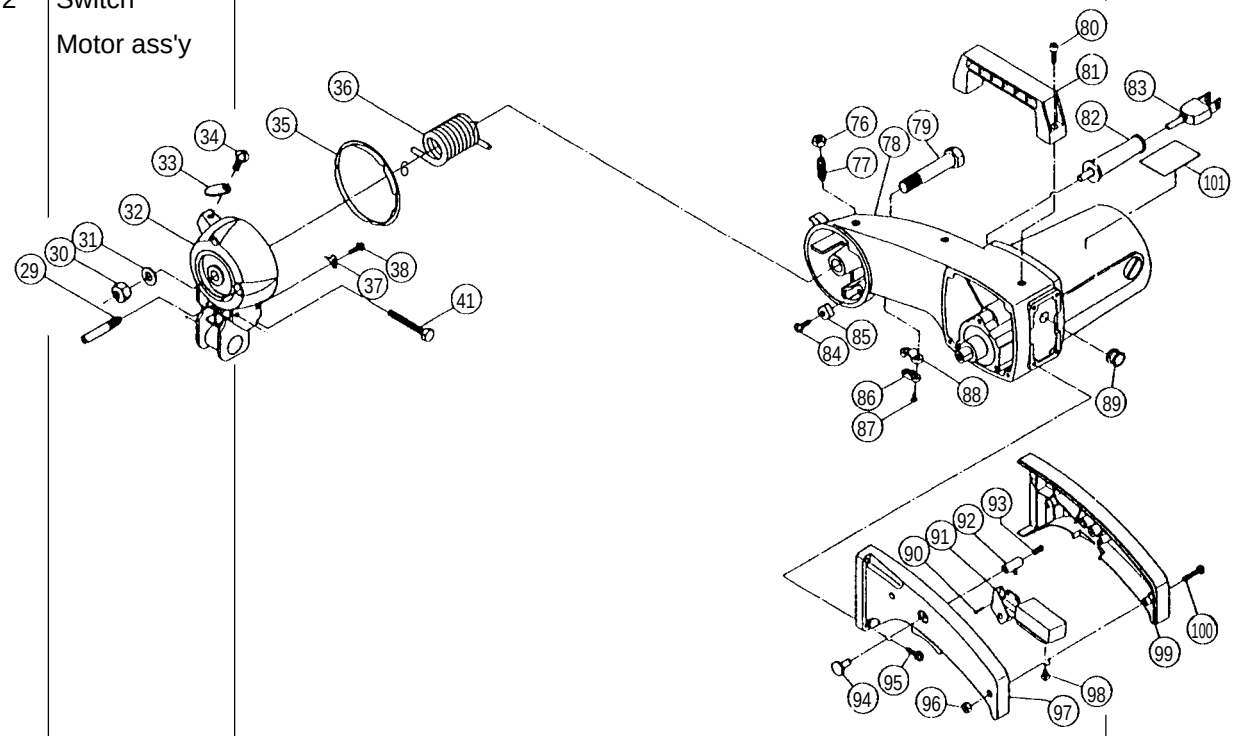
11-1. Disassembly

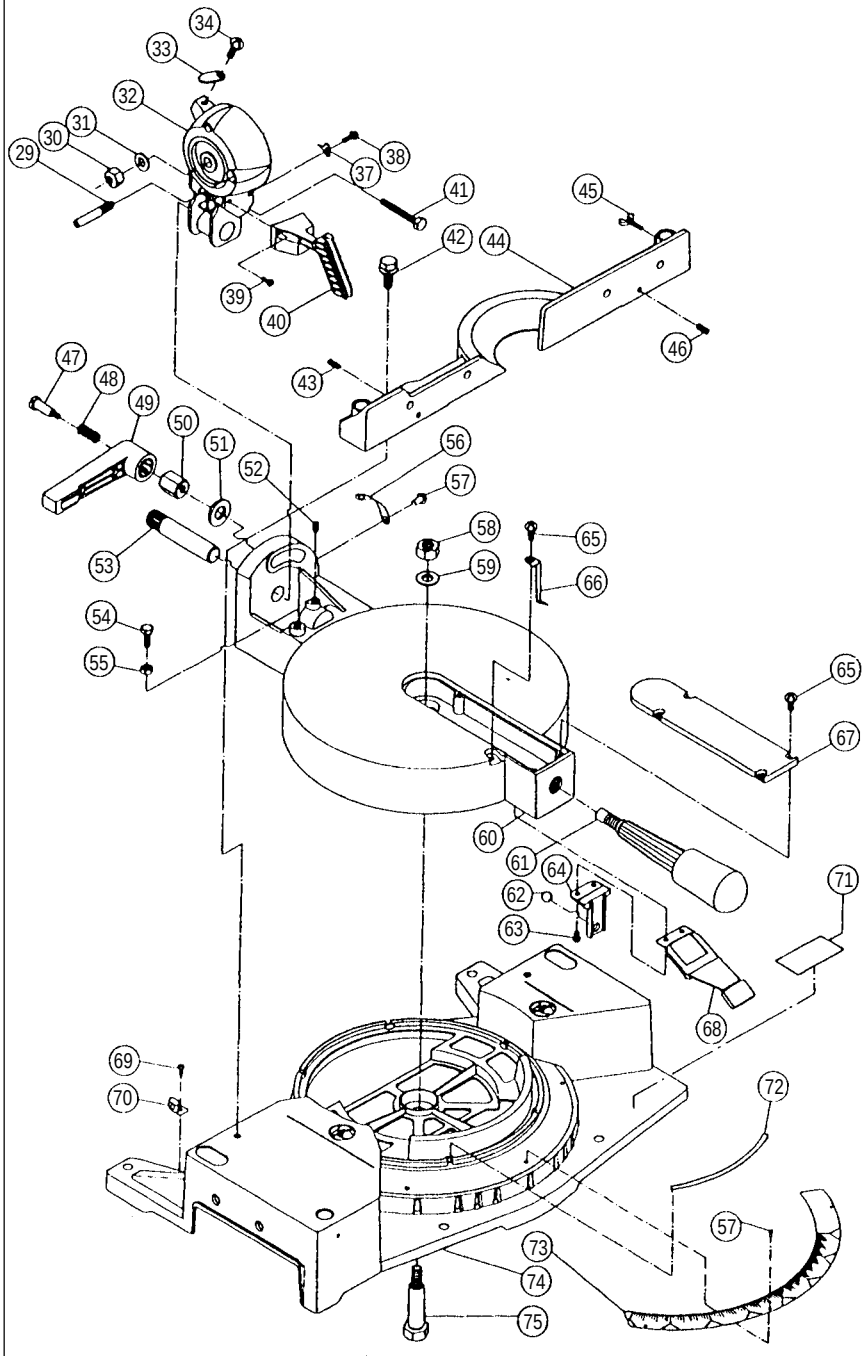
Special attention in disassembly should be given to the following items.

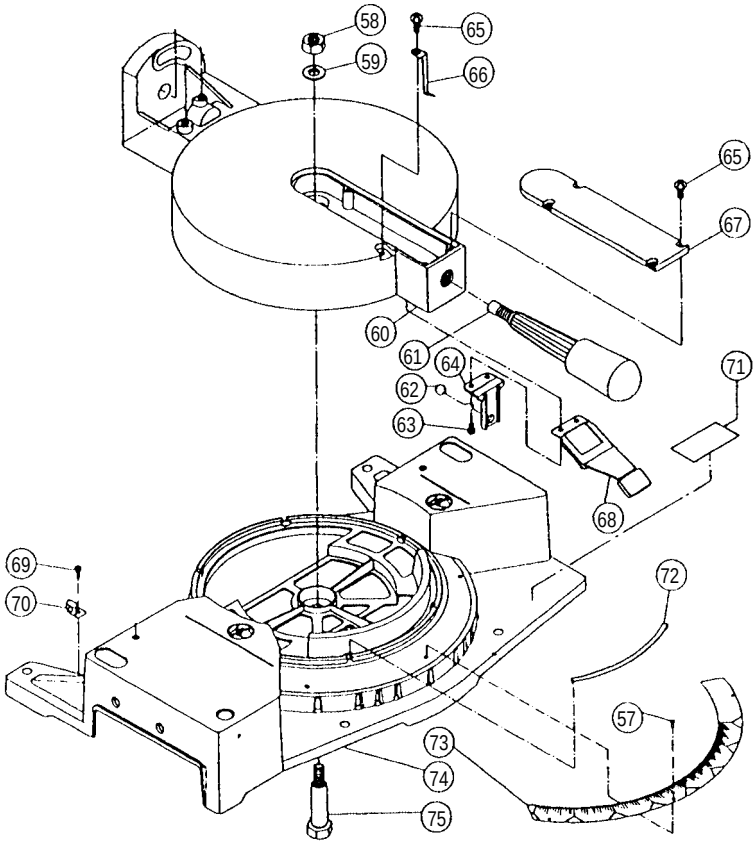
The circled numbers in the following figures and the **[Bold]** numbers in the descriptions below correspond to the item numbers in the Parts List and the exploded assembly diagram.

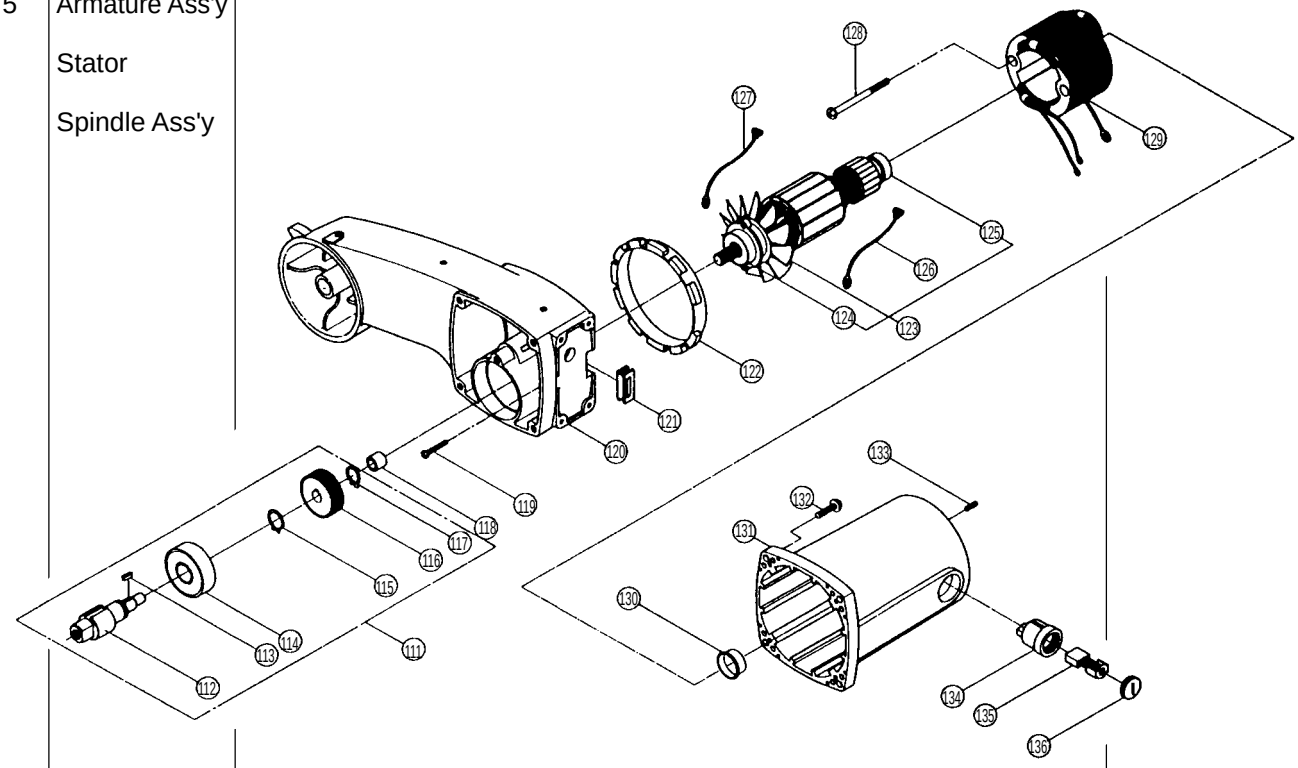
Be sure to first disconnect the power plug when performing disassembly and replacement of the saw blade.

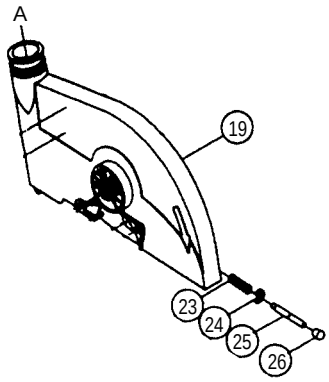
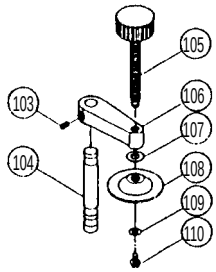
Item No.	Disassembly spots	Disassembly procedure	Necessary tools
1	Link Blade guard	 **Fig. 12**	
		1. Remove the Truss Hd. Screw 1/4" x 1/2" **[1]** and then remove the Link **[2]**.	Phillips Screwdriver
		2. Remove the Machine Screw M5 x 16 **[3]** and remove the washer 3/16" x 3/4" **[4]**, the Collar **[5]**, the Guard Retainer **[6]**, the Blade Guard (Plastic) **[7]** and the Spring Guard **[8]**.	
		3. Loosen the Flat Hd. Screw 32 UNF x 13/16" **[20]** and rotate the Cutter Shaft Guard **[28]** until the Bolt (Left Hand) W/Washer M8 x 20 **[11]** can be seen.	
		4. Put the Wrench **[701]** on the Bolt (Left Hand) W/Washer M8 x 20 **[11]** and turn the Wrench **[701]** until the Bracket Stop **[25]** is aligned with the groove of the Shaft Arbor **[112]** (See Fig. 16) while pushing the Bracket Stop **[25]**. Then, loosen the Bolt (Left Hand) W/Washer M8 x 20 **[11]** and remove the Bolt (Left Hand) W/Washer M8 x 20 **[11]**, the Washer **[12]**, the outside Arbor Collar **[13]**, the TCT Saw Blade **[702]** and the inside Arbor Collar **[13]**.	Wrench
		5. Remove the three Hex. Socket Hd. Bolts M5 x 20 **[14]** and the Blade Guard (Metal) **[19]**.	4 mm Hex. bar wrench

Item No.	Disassembly spots	Disassembly procedure	Necessary tools
2	Switch Motor ass'y	 **Fig. 13** 1. Remove the two Tapping Screws (W/Washers) D5 x 20 **[95]** at the right and the two Machine Screws M4 x 20 **[100]**. Remove the Handle (Right) **[99]** from the Handle (Left) **[97]** with the Switch **[91]** mounted. 2. Remove the two Truss Hd. Tapping Screws D4 x 12 **[90]** which fix the Switch **[91]** to the Handle (Right) **[99]**, and remove the Switch **[91]**. 3. Disconnect the internal wires of the Cord **[83]** and the Stator **[129]** (See Fig. 16) from the Switch **[91]**. 4. Remove the two Tapping Screws (W/Washers) D5 x 20 **[95]** at the left to remove the Handle (Left) **[97]**. 5. Remove the Chuck Nut M16 **[30]** by turning it with a 24 mm wrench. Pull out the Special Bolt **[79]** by tapping it with a plastic hammer. Separate the Motor Ass'y **[78]** from the Angle Regulator **[32]**.	Phillips Screwdriver 24 mm wrench Plastic hammer D5 metal bar

Item No.	Disassembly spots	Disassembly procedure	Necessary tools
3	Fence Angle regulator	 **Fig. 14** 1. Remove the two Machine Screws (W/Washer) M5 x 14 **[39]** and the Chip Deflector **[40]** (debris guard). 2. Remove the two Hex. Bolts (W/Washers) M10 x 35 **[42]** and the Fence **[44]**. 3. Turn the Handle Table Support **[49]** counterclockwise and remove it. Remove the Hex. Bolt M10 x 65 **[41]**. 4. Remove the Hex. Socket Set Screw M6 x 12 **[52]** which fixes the Pivot Shaft **[53]** to the Table **[60]**, then gently strike the Pivot Shaft **[53]** from the Table **[60]** side by using a plastic hammer and a metal bar (5 mm dia.) to extract it. Then, the Angle Regulator **[32]** can be removed.	Phillips Screwdriver 21 mm wrench 3 mm Hex. bar wrench D5 Metal bar plastic hammer

Item No.	Disassembly spots	Disassembly procedure	Necessary tools
4	Table Base	 **Fig. 15** 1. Remove the four Machine Screws M4 x 8 **[65]** and the Table Insert **[67]**. 2. Turn the Handle Bar **[61]** counterclockwise and remove it. 3. With a 13 mm box wrench, remove the Chuck Nut M8 **[58]** and the Flat Washer M8 **[59]** from the insert space of the Table **[60]**. Extract the Center Shaft **[75]** which fixes the Table **[60]** to the Base **[74]** by lifting the Table **[60]** upward. Be careful not to lose the Steel Ball D8 **[62]** as it can be removed from the Base **[74]** after removing the Table **[60]**.	Phillips Screwdriver 13 mm box wrench

Item No.	Disassembly spots	Disassembly procedure	Necessary tools
5	Armature Ass'y Stator Spindle Ass'y	 **Fig. 16** 1. Disassembly of the Armature Ass'y (1) Remove the two Brush Caps **[136]** and the two Carbon Brushes **[135]**. (2) Remove the four Tapping Screws (W/Washers) D5 x 25 **[132]** to remove the Motor Housing **[131]** (including the Stator **[129]**). (3) Remove the two Machine Screws M5 x 12 (W/Sp. Washers) **[119]**. (4) Facing the mounting surface of the Motor Housing **[131]** to the Arm **[120]** slightly downward, tap it with a plastic hammer and pull out the Armature Ass'y **[123]** and the Internal Wire Holder **[122]**. 2. Disassembly of the Stator (1) Remove the two brush terminals of the Stator **[129]** from the Brush Holder **[134]**. (2) Remove the two Tapping Screws M5 x 60 (W/Washers) **[128]** fixing the Stator **[129]** and pull out the Stator **[129]** by gently tapping the Arm **[120]** mounting surface of the Motor Housing **[131]** with a plastic hammer.	Flat-blade screwdriver Phillips screwdriver Plastic hammer Flat-blade screwdriver Phillips screwdriver Plastic hammer

Item No.	Disassembly spots	Disassembly procedure	Necessary tools
5	(continued)	3. Disassembly of the Spindle Ass'y Remove the Spindle Ass'y **[111]** by gently tapping the Arm **[120]** with a plastic hammer.	Plastic hammer
6	Bracket stop	 **Fig. 17** Remove the E-Ring **[24]** from the Bracket Stop **[25]**. Remove the Bracket Stop **[25]** and the Spring **[23]** from the Blade Guard (Metal) **[19]**.	Pliers
7	Vise ass'y	 **Fig. 18** 1. Remove the Hex. Socket Set Screw M6 x 8 **[103]** to remove the Post **[104]**. 2. Remove the Machine Screw (W/Washer) M5 **[110]**, the Washer (3/16" x 1/2") **[109]**, the Flange **[108]** and the Washer M10 x 19 **[107]**. 3. Turn the Handle Bar **[105]** counterclockwise and remove it from the Support Seat **[106]**.	3 mm Hex. bar wrench Phillips screwdriver

11-2. Reassembly

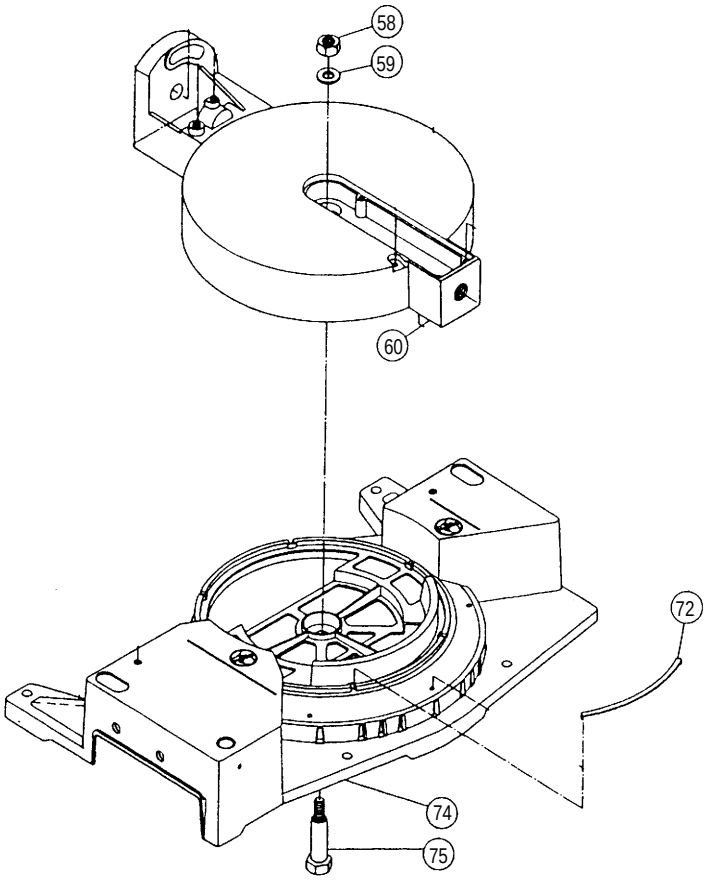
Reassembly can be accomplished by following the disassembly procedures in reverse. However, special attention should be given to following items.

(1) Prior to reassembly, measure the insulation resistance of the armature, stator, switch and other electrical components and confirm that the insulation resistance of each part is more than 7 MΩ.

(2) When assembling the Angle Regulator **[32]** and the Arm **[120]**, apply 2 grams of Hitachi Motor Grease to the oil groove of the Angle Regulator **[32]**.

(3) When replacing the Torsion Spring **[36]**, apply approximately 2 grams of Hitachi Motor Grease to the inner circumference of the new Torsion Spring **[36]** prior to reassembly.

(4) When replacing the Rotation Slide Plate **[72]**, assemble it into the unit as illustrated in Fig. 19. During reassembly, apply 6 grams of Hitachi Motor Grease to the Rotation Slide Plate **[72]** against the sliding surface of the Base **[74]**.



Ensure that the Rotation Slide Plate **[72]** fits into the groove portion of the Base **[74]**.

Fig. 19

(5) If the Center Shaft **[75]** at the bottom of the Base **[74]** is tightened excessively, the movement of the Table **[60]** will become sluggish and heavy. If the bolt is loose, it will cause vibration and looseness of the Table **[60]** which will reduce cutting accuracy. Adjust the Chuck Nut M8 **[58]** so that the Table **[60]** moves smoothly with minimum play and vibration.

11-3. Wiring Diagram

Carefully ensure that wiring is accomplished as illustrated below. As incorrect wiring will result in lack of rotation, reverse rotation or other malfunctions, close attention is absolutely necessary.

① Wiring diagram

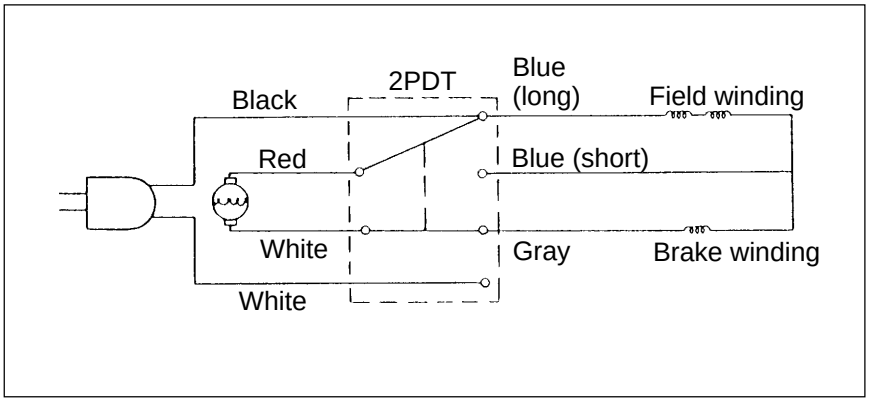


Fig. 20

② Actual wiring diagram

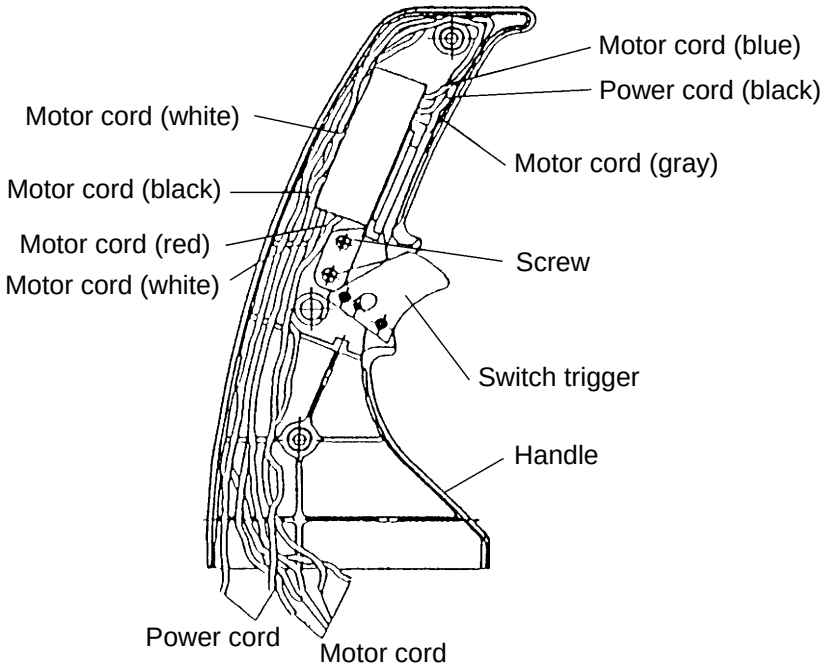


Fig. 21

11-4. Lead Wire Precautions

When connecting lead wires, be very careful not to remove the insulation covering of each lead wire more than needed. Exposed cores of lead wires from connectors, for example, are extremely dangerous. Also, ensure that the lead wires are not pinched between the mating surfaces of the Handle (Right) **[99]** and the Handle (Left) **[97]**.

11-5. No-load Current

After no-load operation for 30 minutes, the no-load current values should be as follows.

Voltage, Freauency	115 V, 60 Hz
No-load current	7.4 A Max.

11-6. Reassembly Requiring Adjustment

(1) Adjustment of squareness between the saw blade (dummy disc) and the fence

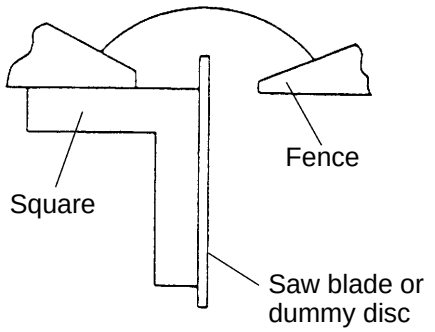


Fig. 22

After disassembly/reassembly or replacement of the Base **[74]**, the Table **[60]**, the Fence **[44]** or the Angle Regulator **[32],** it is necessary to check the squareness between the saw blade (or dummy disc) and the Fence **[44]**, and perform adjustment as necessary if they are not at an exact right angle with relation to each other. Adjustment procedure is as follows.

First, position the saw blade (or dummy disc) so that it is in the exact center of the groove on the Table **[60]** which houses the Table Insert **[67]**. Next, as illustrated in Fig. 22, place a square so that it is flush against the side surface of the saw blade (or dummy disc), and move the Fence **[44]** as necessary so that it is in an exact right angle with relation to the saw blade (or dummy disc). Finally, tighten the two Hex. Bolts M10 x 35 (W/Washers) **[42]** to fix the Fence **[44]** in position.

*Dummy disc: A dummy disc is a toothless disc with the same external diameter as a saw blade, and is used to perform accurate inspection and adjustments.

(2) Confirmation of saw blade height

The lower limit of the saw blade cutting depth is factory-adjusted so that when the saw blade is fully lowered, its cutting edge is 24 to 29 mm (1" to 1-1/8") below the upper surface of the Table Insert **[67]**. Lower the saw blade and confirm that it stops at the correct position.

(3) Adjustment of saw blade lower limit position

When adjusting the lower limit of the saw blade, be sure to use a saw blade with an external diameter of 255 mm. Failure to properly adjust the lower limit position of the saw blade may result in the following problems.

① Inability to obtain the maximum cutting capacities of the machine

② There is a danger that the saw blade may come in contact with and cut into the Table **[60]**.

The lower limit of the saw blade cutting depth is adjusted at the factory so that when the saw blade is fully lowered, its cutting edge is 24 mm to 29 mm (1" to 1-1/8") below the upper surface of the Table Insert **[67]**.

If this position is lower than the specified values, confirm without fail that it does not come in contact with the Table **[60]**.

If it is necessary to adjust the saw blade lower limit, loosen the Nut M10 **[76]** on the Adjust Screw M10 **[77]**, and turn the Adjust Screw M10 **[77]** if necessary.

By turning the Adjust Screw M10 **[77]** clockwise, the saw blade lower limit is raised.

By turning the Adjust Screw M10 **[77]** counterclockwise, the saw blade lower limit is lowered.

On completion of adjustment, ensure that the Nut M10 **[76]** is properly tightened.

[Caution]

Perform the adjustment carefully to ensure that the saw blade does not cut into the Table [60].

(4) Reassembly of the Table **[60]**

When reassembling the Table **[60]** and the Base **[74]**, tighten the Chuck Nut M8 **[58]** so that the Table **[60]** turns smoothly without excessive play or vibration.

During reassembly, liberally apply grease (Hitachi Motor Grease No. 29, Code No. 930035 is recommended.) at the point marked A in Fig. 23.

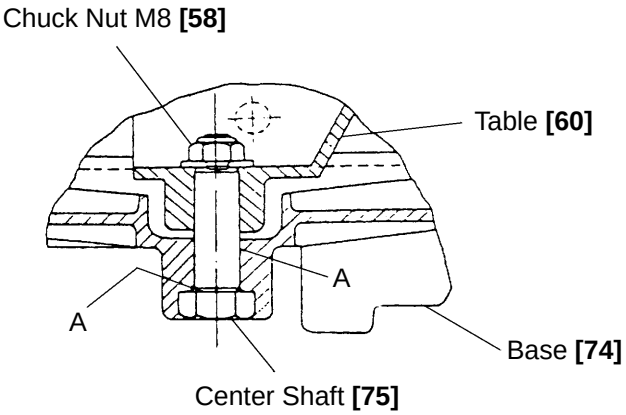


Fig. 23

11-7. Lubrication

Advise the customer to lubricate the machine as indicated below at least once a month. Also, prior to applying lubrication, any sawdust, dirt or other foreign matter should be thoroughly wiped away with a soft cloth.

(1) Swiveling section of the Arm **[120]** and the Angle Regulator **[32]**

Coat the swiveling portion of the Arm **[120]** and the Angle Regulator **[32]** with machine oil.

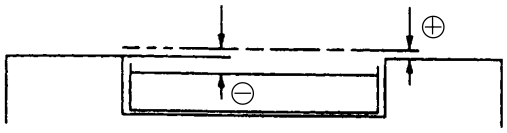
(2) Vise ass'y section

Coat the screw threads portion of the Handle Bar **[105]** of the Vise Ass'y **[102]** with machine oil.

11-8. Product Precision

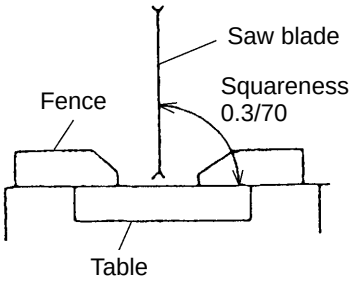
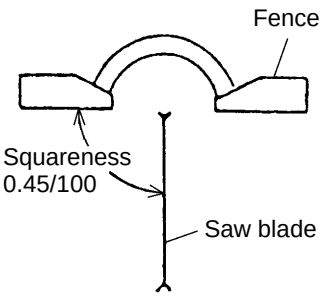
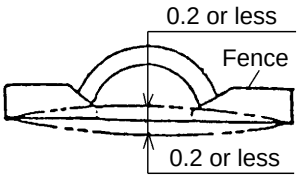
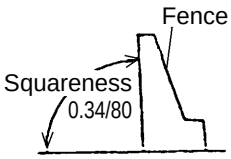
On completion of reassembly, confirm precision tolerances.

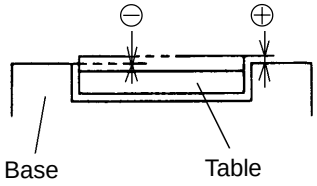
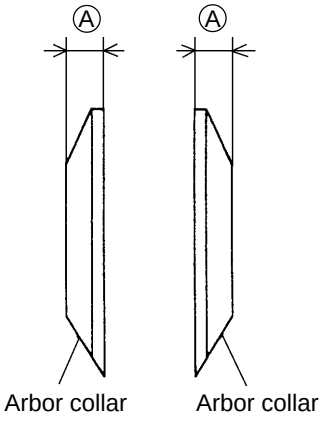
Unit : mm

Item	Tolerance
Run-out of saw blade (or dummy disc)	0.38/220 (0.015" / 8-21/32")
Perpendicularity between base and fence	0.34/80 (0.013" / 3-5/32")
Perpendicularity between saw blade (or dummy disc) and fence	0.45/100 (0.018" / 4")
Perpendicularity between saw blade (or dummy disc) and table	0.3/70 (0.012" / 2-3/4")
Surface alignment of base and table (Use the upper surface of the base as a reference). 	⊕0.45 (⊕0.018") ⊖0

12. REPAIR GUIDE

Unit : mm

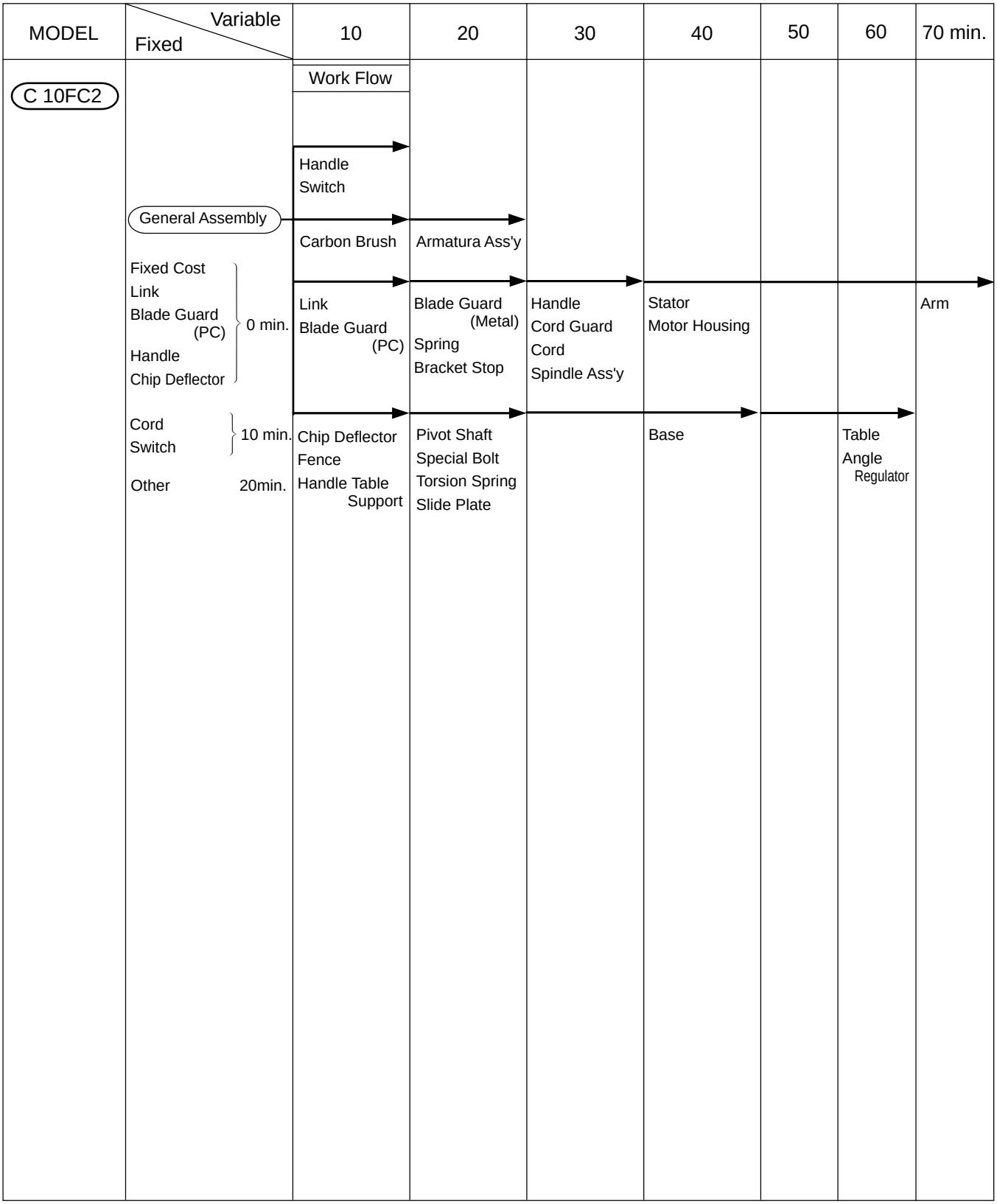
Item	Phenomenon	Cause (s)	Factory standard	Inspection · Repair · Adjustment
1	Inaccurate cutting ...Inaccurate spuareness of cut surface ...Cut surfaces do not fit together properly.  **Fig. 24**	ⓐ Inaccurate squareness between the table and the saw blade causes the saw blade to cut into workpiece at an angle.	0.3/70 (Dummy disc) (Fig. 24)	• Adjust squareness with the Bolt M6 x 25 **[54]**. • Adjust the Chuck Nut M16 **[30]** to eliminate looseness between the Arm **[120]** and the Angle Regulator **[32]**. • Replace the Arm **[120]** and/or the Angle Regulator **[32]**. (If deformed.)
		ⓑ Excessive deflection of the saw blade (Excessive vibration)	0.38/220 (Dummy disc)	• Replace the Saw Blade **[702]**. • Check for surface defects on the Arbor Collar **[13]**, and repair with a file as necessary. • Replace the Arbor Collar **[13]** as necessary.
	 **Fig. 25**	ⓒ Inaccurate squareness between the fence and the saw blade	0.45/100 (Fig. 25)	• Loosen the Hex. Bolt M10 x 35 (W/Washer) **[42]** and adjust as necessary. • Replace the Fence **[44]** as necessary.
	 **Fig. 26**	ⓓ Inaccurate surface flatness of the fence causes workpiece to move irregularly, causing poor squareness of cut surface.	0.2 or less (Fig. 26)	• Replace the Fence **[44]** as necessary.
		ⓔ Inaccurate surface flatness of the table	0.2/500	• Replace the Table **[60]**.
	 **Fig. 27**	ⓕ Inaccurate squareness between the fence and the table and/or the base causes the workpiece to tilt at an angle and prevent accurate cutting.	0.34/80 (Fig. 27)	• Replace the Fence **[44]** as necessary.

Item	Phenomenon	Cause (s)	Factory standard	Inspection · Repair · Adjustment
1	(Continued)  **Fig. 28**	ⓖ Excessive misalignment of the base and the table causes the saw blade to cut into the workpiece at an angle.	⊕0.45 ⊖0 (Fig. 28)	• Replace the Base **[74]** and/or Table **[60]** if deformed.
		ⓗ Loose fitting of swiveling portion of the arm and the angle regulator or sluggish movement. As a result, components may be deformed because of unstable arm or because the operator must apply excessive pressure during operation.	–	• Check the fitting surfaces of the Arm **[120]**, Angle Regulator **[32]** and the Pivot Shaft **[53]** for any foreign substance (such as cutting dust), and remove it as necessary.
		ⓘ Excessively fast cutting speed causes deflection of the saw blade and inaccurate cutting.	–	• Reduce cutting speed. Appropriately 10 seconds for a square wood workpiece of 60 mm (2-3/8").
		ⓙ Excessive cutting force (pressure) is required because of dull saw blade.	–	• Sharpen the Saw Blade **[702]** again.
		ⓚ The workpiece moves during cutting because it is bent or deformed.	–	• Correct bend, flex or other deformation by planing and try cutting.
2	Rough cut surface Parallelism Ⓐ = 0.025/54  **Fig. 29**	ⓐ Large deflection of the saw blade. (It causes rough cut surface)	0.38/220 (Dummy disc)	• Same as the Item 1- ⓑ .
		ⓑ Each surface parallism of the arbor collar is inaccurate due to surface defects (such as impact marks and scratches).	0.025/54 (Fig. 29)	• Repair impact marks or scratches at the Arbor Collar **[13]** or replace it if necessary.
		ⓒ Inaccurate squareness between the table and the saw blade, causing the saw blade to cut at an improper angle and make cutting marks.	0.3/70 (Fig. 24)	• Same as the Item 1- ⓐ .

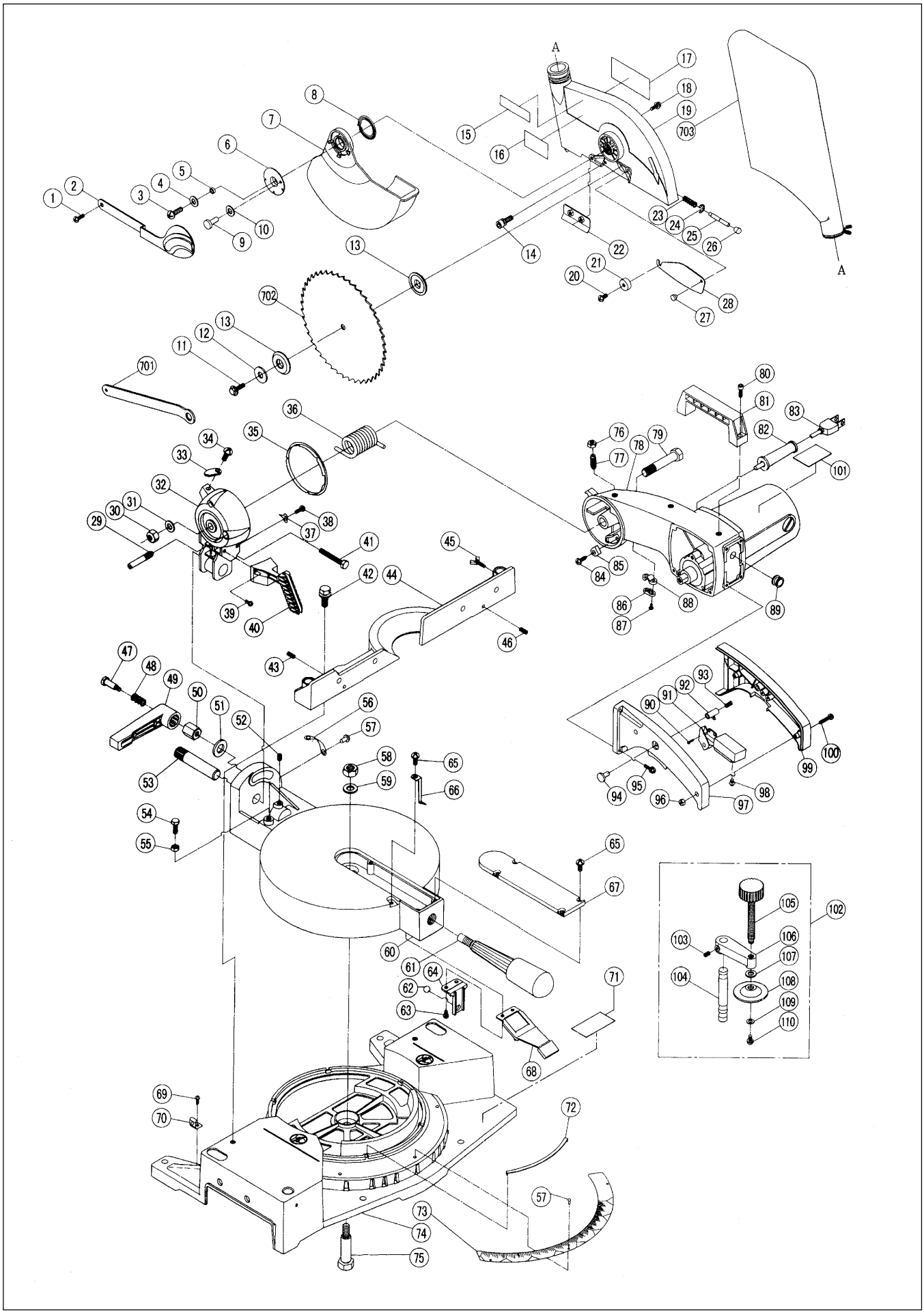
<table>
<tr><th>Item</th><th>Phenomenon</th><th>Cause (s)</th><th>Factory standard</th><th>Inspection · Repair · Adjustment</th></tr>
<tr><td rowspan="6">2</td><td rowspan="6">(Continued)</td><td>ⓓ Excessively fast cutting speed</td><td>—</td><td>• Reduce cutting speed.</td></tr>
<tr><td>ⓔ Improper clamping of workpiece</td><td>—</td><td>• Properly clamp workpiece with the Vise Ass'y [102].</td></tr>
<tr><td>ⓕ The table is not fixed with the handle bar.</td><td>—</td><td>• During cutting, fix the Table [60] in position with the Handle Bar [61] without fail.</td></tr>
<tr><td>ⓖ Loose fitting of swiveling portion of the arm and the angle regulator, or sluggish movement</td><td>—</td><td>• Same as the item 1-ⓗ.</td></tr>
<tr><td>ⓗ Cutting operation becomes sluggish because workpiece is warped or bent.</td><td>—</td><td>• Correct warp or bend with planer.</td></tr>
<tr><td>ⓘ Excessive vibration</td><td>—</td><td>• Recheck the items a, b, c, d, f and g.</td></tr>
<tr><td rowspan="5">3</td><td rowspan="5">Saw blade is locked.</td><td>ⓐ Excessively fast cutting speed</td><td>—</td><td>• Reduse cutting speed.</td></tr>
<tr><td>ⓑ Core diameter of extension cord is too small.</td><td>—</td><td>• Use a thicker and shorter extension cord.<table><tr><th>Extension cord length</th><th>Wire gauge size</th></tr><tr><td>7.5 m
15 m
30 m</td><td>2.0 mm^2
3.5 mm^2
Not recommended</td></tr></table></td></tr>
<tr><td>ⓒ Excessive cutting force is applied due to dull saw blade.</td><td>—</td><td>• Resharpen the saw blade.</td></tr>
<tr><td>ⓓ Incorrect saw blade is used.</td><td>—</td><td>• Use a suitable Hitachi-supplied saw blade.
• An increased number of teeth on the saw blade increases the cutting resistance. When using a saw blade with a large number of teeth, reduce the cutting speed.</td></tr>
<tr><td>ⓔ The saw blade binds in workpiece during cutting because workpiece is warped or bent.</td><td>—</td><td>• Correct workpiece deformation with planer.</td></tr>
</table>

Item	Phenomenon	Cause (s)	Factory standard	Inspection · Repair · Adjustment
4	Saw blade does not rotate when switch is triggered.	ⓐ The power cord is not connected to power supply.	–	• Check power supply voltage. • Connect the power cord to power supply.
		ⓑ The carbon brush wear exceeds allowable limit (6 mm)	–	• Chech the Carbon Brushes **[135]** for wear. • Replace the Carbon Brushes **[135]**.
		ⓒ Contact failure of the switch.	–	• Check the Switch **[91]** for conductivity. • Replace the Switch **[91]**.
5	Saw blade runs too slow. (Not within 4,400 – 4,900 /min)	ⓐ Power supply voltage is lower than rated voltage.	–	• Check for power supply voltage. • Check that extension cord is appropriate. See the Instruction Manual for appropriate extension cords.

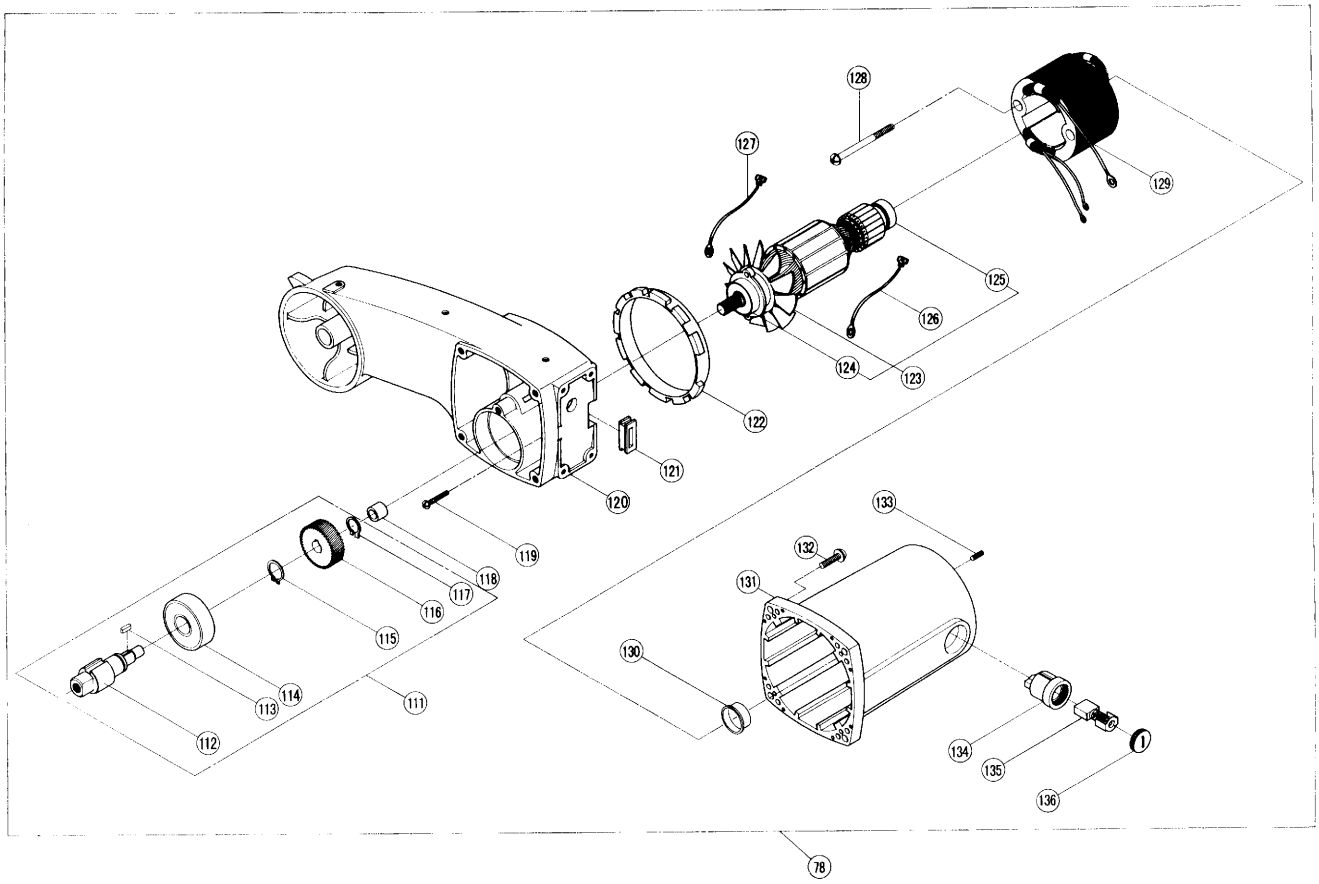
11. STANDARD REPAIR TIME (UNIT) SCHEDULES



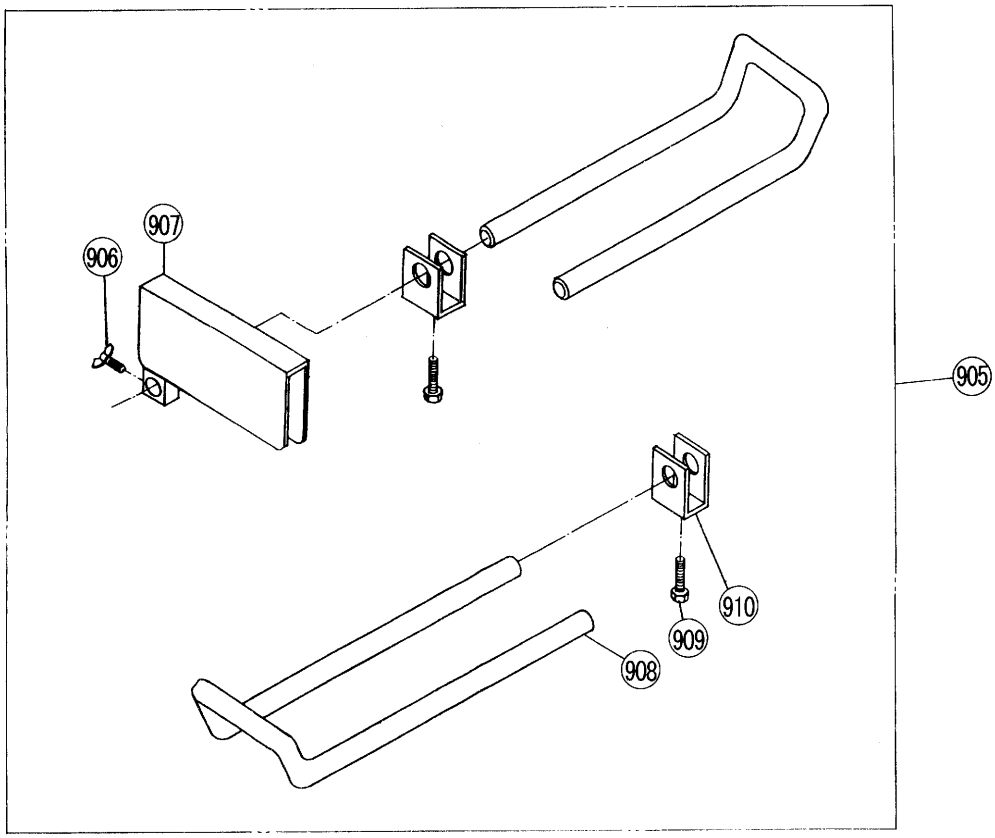
Assembly Diagram for C 10FC2



MOTOR ASS'Y



HOLDER ASS'Y



ITEM No.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
1	311-024	TRUSS HD. SCREW 1/4''X1/2''	1		
2	311-025	LINK	1		
3	317-345	MACHINE SCREW M5X16	1		
4	311-026	WASHER 3/16''X3/4''	1		
5	311-027	COLLAR	1		
6	317-346	GUARD RETAINER	1		
7	315-118	BLADE GUARD (PLASTIC)	1		
8	317-359	SPRING GUARD	1		
9	311-023	RIVET	1		
10	311-022	WASHER 3/16''X3/8''	1		
11	314-348	BOLT (LEFT HAND) W/WASHER M8X20	1		
12	311-014	WASHER	1		
13	317-428	ARBOR COLLAR	2		
14	317-068	HEX. SOCKET HD. BOLT M5X20	3		
15	311-031	HITACHI LABEL	1		
16		WARNING LABEL(B)	1		
17		WARNING LABEL(C)	1		
18	949-237	MACHINE SCREW M5X12 (10 PCS.)	2		
19	315-119	BLADE GUARD (METAL)	1		
20	311-021	FLAT HD. SCREW 32UNFX13/16''	1		
21	311-020	SLEEVE RUBBER	1		
22	311-037	REAR LOWER GUARD	1		
23	311-019	SPRING	1		
24	311-018	E-RING	1		
25	311-017	BRACKET STOP	1		
26	311-016	CAP RUBBER	1		
27	311-036	RIVET 3/16''X17/32''	1		
28	311-035	CUTTER SHAFT GUARD	1		
29	311-062	SCREW STOP	1		
30	311-063	CHUCK NUT M16	1		
31	311-064	WASHER M16X30	1		
32	311-066	ANGLE REGULATOR	1		
33	311-067	PLATE LOCK	1		
34	317-475	CR. RE. PAN HD. ROUND NECK SCREW M6X12	1		
35	311-109	SLIDE PLATE	1		
36	311-068	TORSION SPRING	1		
37	311-061	ANGLE POINTER	1		
38	949-214	MACHINE SCREW M4X6 (10 PCS.)	1		
39	317-376	MACHINE SCREW (W/WASHER) M5X14	2		
40	311-110	CHIP DEFLECTOR	1		
41	311-108	HEX. BOLT M10X65	1		
42	317-069	HEX. BOLT M10X35 (W/WASHER)	2		
43	952-384	HEX. SOCKET SET SCREW M5X10	2		
44	311-058	FENCE	1		
45	311-125	WING SCREW M5X20	2		
46	952-384	HEX. SOCKET SET SCREW M5X10	2		
47	317-362	SCREW	1		
48	317-363	COMPRESSION SPRING	1		
49	317-364	HANDLE TABLE SUPPORT	1		
50	317-365	HANDLE COLLAR	1		
51	311-052	WASHER 3/8''X29/32''	1		

	ITEM No.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
	52	311-129	HEX. SOCKET SET SCREW M6X12	1		
	53	311-065	PIVOT SHAFT	1		
	54	949-616	BOLT M6X25 (10 PCS.)	2		
	55	949-556	NUT M6 (10 PCS.)	2		
	56	311-055	TILT BRACKET	1		
	57	311-042	DRIVE SCREW D2.3X5	5		
	58	311-048	CHUCK NUT M8	1		
	59	311-047	FLAT WASHER M8	1		
	60	317-347	TABLE	1		
	61	317-348	HANDLE BAR	1		
	62	311-049	STEEL BALL D8	1		
	63	317-349	MACHINE SCREW M5X10	2		
	64	317-350	LOCATION SEAT	1		
	65	949-215	MACHINE SCREW M4X8 (10 PCS.)	5		
	66	311-056	TILT POINTER	1		
	67	311-046	TABLE INSERT	1		
	68	317-351	PLATE SPRING	1		
	69	317-352	TAPPING SCREW D5X10	1		
	70	317-353	FOLLOWER PLATE	1		
	71		WARNING LABEL(A)	1		
	72	311-043	ROTATION SLIDE PLATE	3		
	73	317-354	TILTING SCALE	1		
	74	317-355	BASE	1		
	75	311-039	CENTER SHAFT	1		
	76	949-560	NUT M10 (10 PCS.)	1		
	77	311-071	ADJUST SCREW M10	1		
*	78	317-473	MOTOR ASS'Y 115V	1	INCLUD.101,111,118-123,126-136 FOR USA	
*	78	317-474	MOTOR ASS'Y 115V	1	INCLUD.101,111,118-123,126-136 FOR CAN	
	79	311-094	SPECIAL BOLT	1		
	80	949-656	HEX. SOCKET HD. BOLT M8X20 (10 PCS.)	2		
	81	311-095	SEGMENT HANDLE	1		
	82	311-096	CORD GUARD	1		
	83	312-385	CORD	1		
	84	949-241	MACHINE SCREW M5X20 (10 PCS.)	1		
	85	311-069	CUSHION	1		
	86	311-070	CORD CLAMP	1		
	87	317-377	TAPPING SCREW D4X20	2		
	88	317-071	CORD CLAMP	1		
	89	317-367	STRAIN RELIEF	1		
	90	311-103	TRUSS HD. TAPPING SCREW D4X12	2		
	91	317-368	SWITCH	1		
	92	311-101	STOPPER	1		
	93	311-100	SPRING	1		
	94	311-105	LOCK-OFF BUTTON	1		
	95	316-439	TAPPING SCREW (W/WASHERS) D5X20	4		
	96	949-554	NUT M4 (10 PCS.)	2		
	97	311-104	HANDLE (LEFT)	1		
	98	317-070	MACHINE SCREW	6		
	99	311-099	HANDLE (RIGHT)	1		
	100	949-221	MACHINE SCREW M4X20 (10 PCS.)	2		
	101		NAME PLATE	1		

* : ALTERNATIVE PARTS

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
102	317-382	VISE ASS'Y	1	INCLUD.103-110	
103	967-079	HEX. SOCKET SET SCREW M6X8	1		
104	311-119	POST	1		
105	311-124	HANDLE BAR	1		
106	311-123	SUPPORT SEAT	1		
107	311-122	WASHER M10X19	1		
108	311-121	FLANGE	1		
109	311-126	WASHER 3/16"X1/2"	1		
110	311-120	MACHINE SCREW (W/WASHER) M5	1		
111	311-494	SPINDLE ASS'Y	1	INCLUD.112-117	
112	311-074	SHAFT ARBOR	1		
113	317-369	KEY	1		
114	630-4VV	BALL BEARING 6304VVCMAV2S	1		
115	311-076	C-RING	1		
116	311-077	GEAR	1		
117	317-074	C-RING	1		
118	311-078	NEEDLE BEARING NK1210	1		
119	317-378	MACHINE SCREW M5X12 (W/SP. WASHER)	2		
120	311-079	ARM	1		
121	311-080	WIRE PROTECTOR	1		
122	311-084	INTERNAL WIRE HOLDER	1		
123	317-381	ARMATURE ASS'Y 115V	1	INCLUD.124,125	
124	620-0VV	BALL BEARING 6200VVCMPS2S	1		
125	600-2DD	BALL BEARING 6002DDUCMPS2S	1		
126	311-083	INTERNAL WIRE	1		
127	311-082	MOTOR LEAD	1		
128	317-072	TAPPING SCREW M5X60 (W/WASHER)	2		
129	317-372	STATOR 115V	1		
130	317-075	BEARING BUSHING	1		
131	317-373	MOTOR HOUSING	1		
132	316-440	TAPPING SCREW (W/WASHERS) D5X25	4		
133	966-292	HEX. SOCKET SET SCREW M5X12	2		
134	317-374	BRUSH HOLDER	2		
135	311-089	CARBON BRUSH	2		
136	311-090	BRUSH CAP	2		

* : ALTERNATIVE PARTS

STANDARD ACCESSORIES

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
701	311-013	WRENCH	1		
702	311-128	TCT SAW BLADE 255MM-D15.88 HOLE-NT24	1		
703	311-034	DUST BAG	1		

OPTIONAL ACCESSORIES

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS	
901	976-472	TCT SAW BLADE CROSS-CUT 255MM-D15.9 HOLE	1		
902	977-671	TCT SAW BLADE (A) 255MM-D15.88 HOLE-NT24	1		
903	976-473	TCT SAW BLADE 255MM-D15.9 HOLE	1		
904	977-673	TCT SAW BLADE (B) 255MM-D15.88 HOLE-NT60	1		
905	311-495	HOLDER ASS'Y	1	INCLUD.906-910	
906	317-375	WING BOLT 1/4''X3/4''	1		
907	311-115	STOCK STOP	1		
908	311-116	EXTENSION WING	2		
909	311-117	BOLT 1/4''X5/8''	2		
910	311-118	U-BRAKCKET	2		

* : ALTERNATIVE PARTS

Printed in Japan 12 – 98
(981210 N)