



## MODEL C 8FS

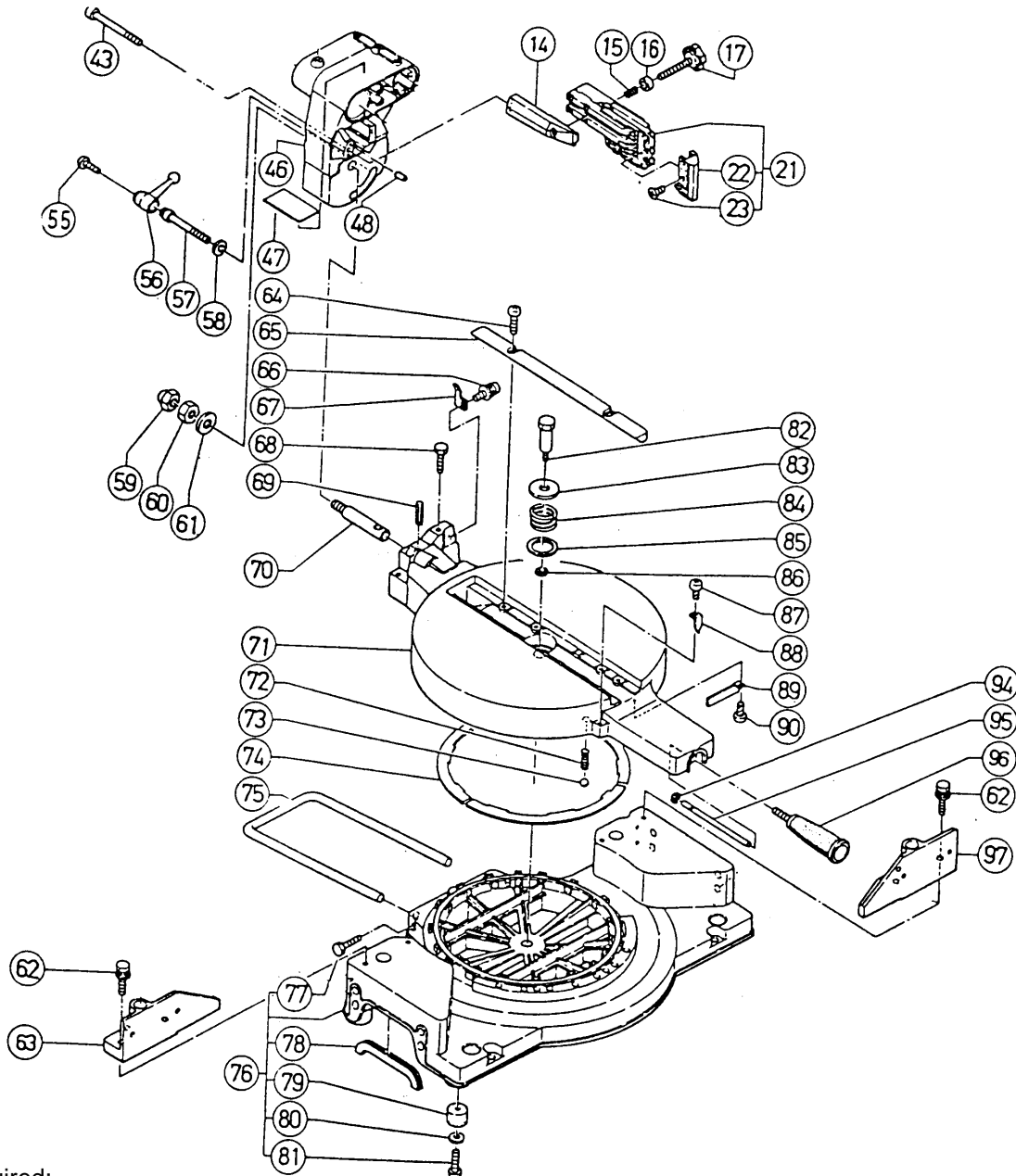
### 1. PRECAUTIONS IN DISASSEMBLY AND REASSEMBLY:

Points requiring particular attention in disassembly and reassembly are described below. The circled numbers in the descriptions correspond to the item numbers in the Parts List and exploded assembly diagrams.

**[CAUTION]** Prior to attempting disassembly (including replacement of the saw blade), ensure that the machine is turned OFF and the plug is disconnected from the power source.

#### 1-1. Disassembly:

A. Disassembly of the Turntable and Base Sections:

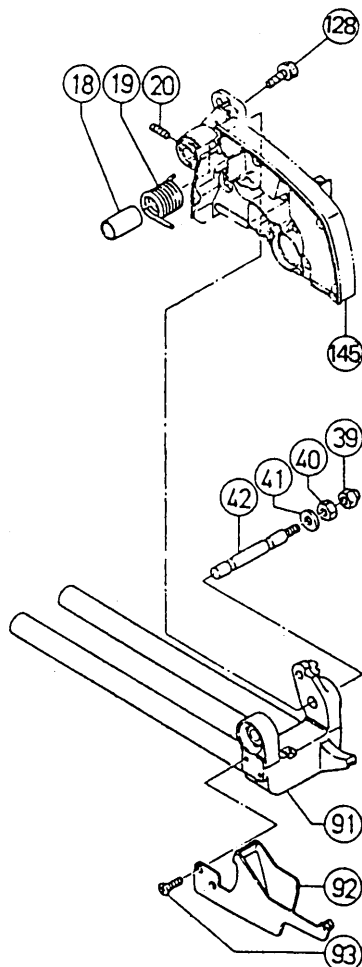


#### Tools Required:

- Plus Head Screwdriver
- 10 mm (.394") Box Wrench (standard accessory)
- 19 mm (3/4") Wrench
- 13 mm (.512") Wrench
- Roll Pin Remover
- Wooden or Plastic Hammer
- Pliers

- (1) Loosen the M8 x 60 Knob Bolt [17], and take off the Guard Ass'y [21].
- (2) Loosen the Clamp Lever [56], remove the M6 x 10 Machine Screw [55], and turn the left-hand threaded M10 Bolt [57] to remove it from the Turntable [71]. Then, remove the M12 Cap Nut [59] and M12 Nut [60] which fix the Holder Shaft [70], and disassemble Holder (A) [46] from the Holder Shaft [70]. At this time, the saw blade and slide sections are disassembled from the Turntable [71] together with Holder (A) [46].
- (3) Remove the four M8 x 35 Bolts [62] (w/washers and spring lock washers), and disassemble Fence (A) [97] and Fence (B) [63].
- (4) Remove the four M6 x 30 Machine Screws [64], and disassemble the two Table Inserts [65].
- (5) Remove Shaft (A) [82], and disassemble the Turntable [71] from the Base Ass'y [76].
- (6) Apply an appropriate roll pin remover to the end of the D8 x 30 Slotted Pin [69], and tap it lightly with a wooden or plastic hammer to remove the Pin from the Turntable [71]. The Holder Shaft [70] can then be extracted from the Turntable [71].
- (7) Disassemble the Side Handle [96], extract the D7 E-Type Retaining Ring [94], and extract the Shaft [95].
- (8) The rear Indicator [67], front Indicator [88] and Spacer [89] can be disassembled from the Turntable [71] by removing their retaining screws.
- (9) The Holder [75] and five Base Rubbers [79] can be disassembled from the Base Assembly [76] by removing their retaining bolts and screws.

#### B. Disassembly of the Hinge Shaft and Spring Section.



##### Tools Required

- Plus Head Screwdriver
- 3 mm (.118") Hex. Bar Wrench
- 4 mm (.157") Hex. Bar Wrench
- 19 mm (3/4") Wrench
- Wooden or Plastic Hammer

- (1) Loosen the two M6 x 16 Flat Hd. Screws [93], and remove the Hinge Arm [92].

- (2) Remove the two M6 x 15 Set Screws [20] and the M5 x 10 Socket Bolt [128] from the Gear case [145].

##### **[CAUTION]**

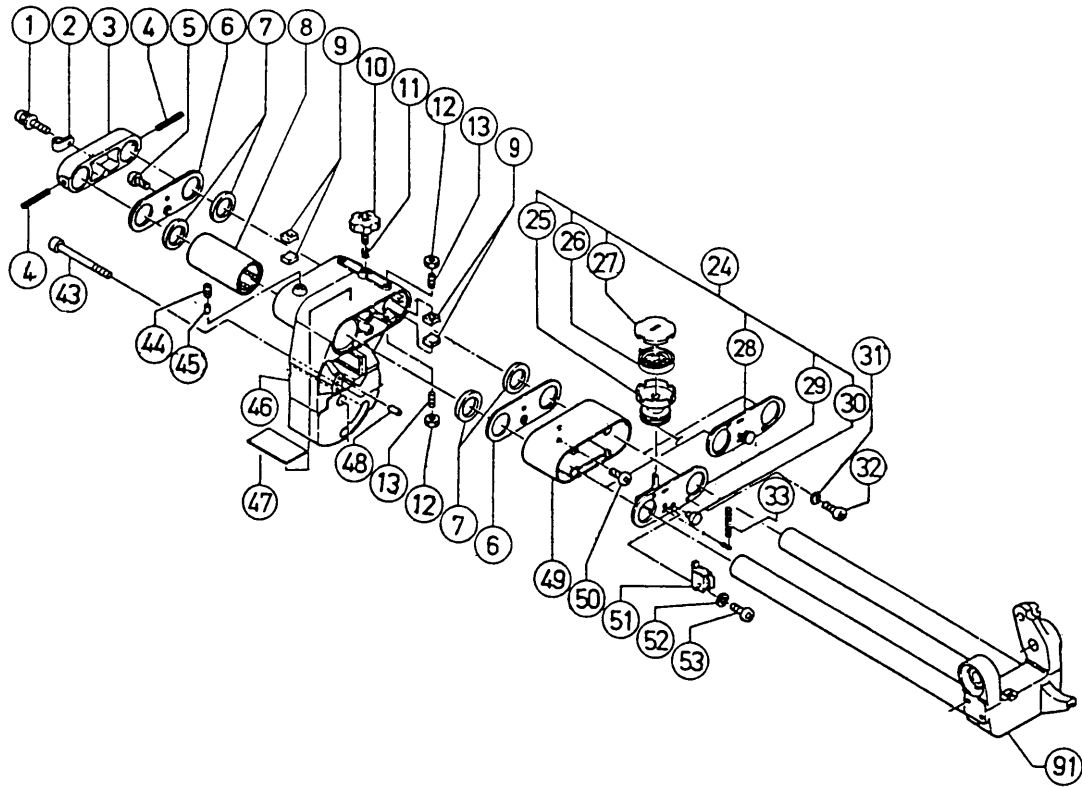
**As the M5 x 10 Socket Bolt [128] acts as a stopper for the Gear Case [145], be very careful to prevent the Gear Case from springing upward suddenly when the bolt is removed.**

**Remove the M12 Cap Nut [39] and the M12 Nut [40], and tap gently on the end of the Hinge Shaft [42] with a wooden or plastic hammer to extract it while supporting the Gear Case [145]. At this time, the Gear Case [145] can be taken off, and the Spring [19] and Sleeve [18] can be removed.**

C. Disassembly of the Holder, Hinge Assembly, Ball Bushing, Bushings, and Related parts:

Tools Required

- Roll Pin Remover
- Wooden or Plastic Hammer
- Plus Head Screwdriver
- 4 mm (.157") Hex. Bar Wrench.



- (1) Apply an appropriate roll pin remover to the end of each of the two D6 x 40 Roll Pins [4], and tap them gently inward with a wooden or plastic hammer to disengage them. Then use the wooden or plastic hammer to lightly tap the Support [3] outward to remove it from Slide Pipes (A) and (B). Next, loosen the M8 Knob Bolt [10], and slide the Hinge [91] to extract it from Holder (A) [46].
- (2) Remove the two M5 x 10 Machine Screws [32] which fix Cover (A) [28] to the Case [49]. Then remove the two M5 x 12 Machine Screws [50]. The Case [49] and Packing Cover [6] [Case mounting side only] can then be disassembled.  
Remove the M5 x 12 Machine Screw [5] which fixes the Packing cover [6] to the rear side of Holder (A) [46], and remove the four Felts [7]. Then, loosen the M8 x 8 Hex. Socket Set Screw [44], and tap gently on the Ball Bushing [8] to remove it from Holder (A) [46].
- (3) On completion of the above procedures, the four Bushings [9] can be disassembled. (When reassembling the four Bushings, carefully refer to the instructions and precautions listed in Paragraph 1-5-(4), Assembly of the Bushings.)

For Machines Shipped to West Germany Only
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Machines destined for the West German market are equipped with a Spring in the Case **[49]** which serves to keep the saw blade section (head) retracted to the rear of the Turntable **[71]**. Spring (B) **[26]** replacement procedures are described below.

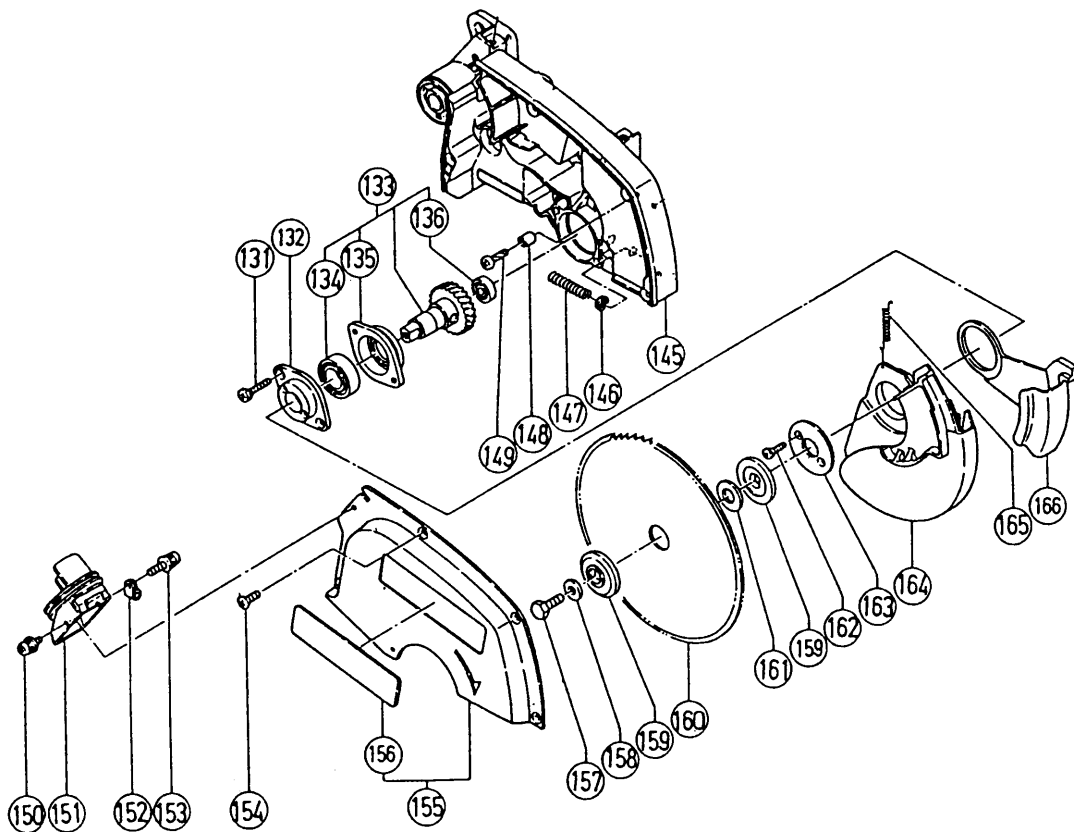
- (1) Apply an appropriate roll pin remover to the end of each of the two D6 x 40 Roll Pins **[4]**, and tap them gently inward with the wooden or plastic hammer to disengage them. Then tap the Support **[3]** gently outward to remove it from Slide Pipes (A) and (B).

With a roll pin remover and the hammer, tap the D5 x 50 Roll Pin **[33]** which fixes the Hinge **[91]** upward, and remove the wire from Spring Case (B) **[25]**. At this time, because the pressure of the spring is applied to the wire, carefully grip the hook portion of the wire with pliers or a similar tool and, while drawing it back, engage the hook portion of the wire into the long groove on the Spring Cover **[29]**. In this condition, slide out and disassemble the Hinge **[91]**.

- (2) Remove the two M5 x 10 Machine Screws **[32]** which fix Holder (A) **[46]**. Spring Case (B) **[25]**, connected to the Spring Cover **[29]**, can then be removed. During removal, hold Cap (B) **[27]** by hand to ensure it does not come off. Next, while continuing to support Cap (B) **[27]** with one hand, disengage the hook portion of the wire from the Spring Cover **[29]**, and slowly turn Cap (B) **[27]** little by little to release the spring pressure. Cap (B) **[27]** and Spring Case (B) **[25]** can then be disassembled.

- (3) Remove the M5 x 12 Machine Screw **[50]** which fixes the Case **[49]**, and disassemble the Case **[49]** and the Packing Cover **[6]** [Case mounting side only]. The Ball Bushing **[8]** and Bushings **[9]** can then be removed as described in Paragraph C-(2), above.

D. Disassembly of the Saw Cover, Safety Cover, Spindle Assembly, and Washers (C):

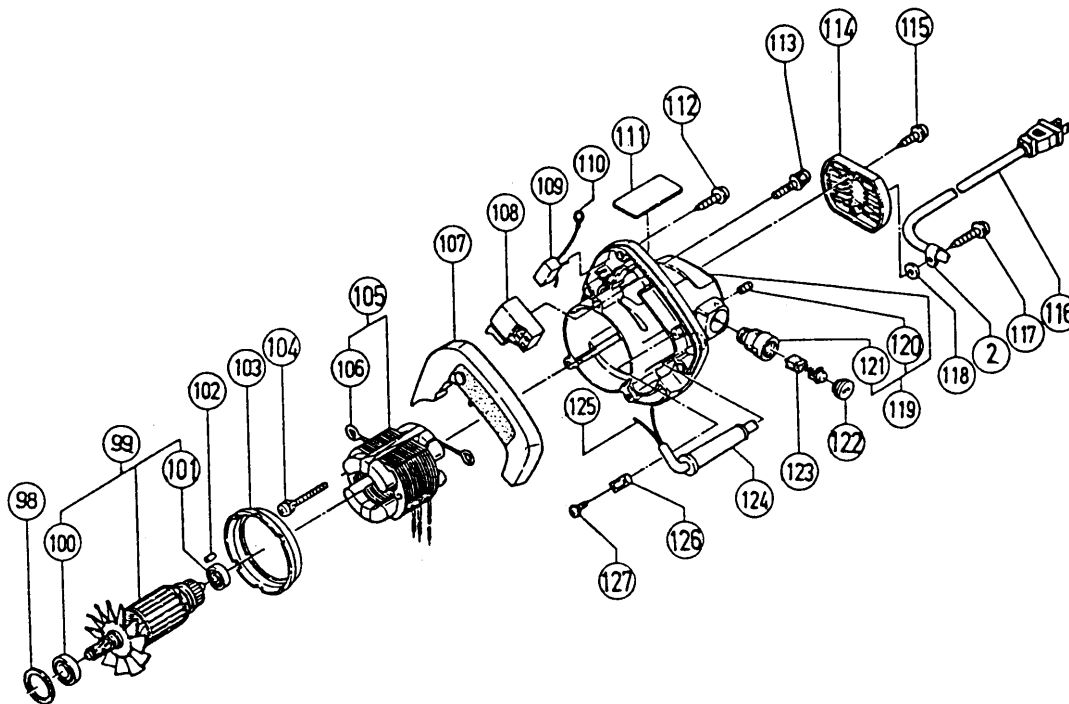


Tools Required

- Plus Head Screwdriver
- 10 mm (.393") Box Wrench (standard accessory)
- Wooden or Plastic Hammer

- (1) Remove the M5 x 8 Machine Screw **[150]** (w/washer and spring washer) that fixes the Duct **[151]**. Then remove the four M5 x 10 Pan Head Screws **[154]**, and take off the Saw Cover Ass'y **[155]**.
- (2) With the box wrench, remove the left-hand threaded M7 x 17.5 Bolt **[157]**. Washer (C) **[159]**, the Saw Blade **[160]**, Collar (A) **[161]**, and Washer (C) **[159]** can then be taken off in that order.
- (3) Remove the two M4 x 12 Flat Head Screws **[162]**, and take off the Safety Cover **[164]**, Sub Cover **[166]**, and Return Spring **[165]**.
- (4) Remove the two M5 x 35 Flat Head Screws **[131]**, and remove the Cover Holder **[132]** from the Gear Case **[145]**. Then lightly tap on the end surface of the Gear Case **[145]** with the wooden or plastic hammer to loosen and remove the Spindle Ass'y **[133]**.

E. Disassembly of the Housing Assembly, Switch, Armature Assembly, and Stator Assembly:



Tools Required

- Minus Screwdriver
- Plus Head Screwdriver
- Nippers
- Wooden or Plastic Hammer

(1) Disassembly of the Armature:

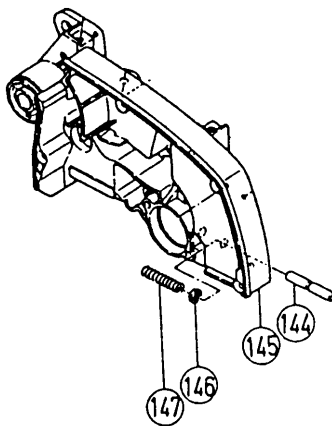
- ① Remove the Brush Caps [122], and take out the Carbon Brushes [123]. Then, remove the three M5 x 50 Machine Screws [113]. The Housing Assembly [119] together with the Handle Cover [107] can then be disassembled from the Gear Case [145].
- ② Extract the Armature Assembly [99] from the Housing Assembly [119].

- (2) Remove the three D4 x 25 Tapping Screws [112], and take off the Handle Cover [107]. The Switch [108] can be removed after disconnecting the leadwires from the Stator Assembly [105] and Cord [116].

(3) Disassembly of the Stator Assembly:

- ① Remove the D4 x 20 Tapping Screw **[115]** (w/washer) and the D4 x 25 Tapping Screw **[117]** (w/washer), and disassemble the Tail Cover **[114]** from the Housing Assembly **[119]**.
- ② Disconnect the two Brush Terminals **[106]** of the Stator Ass'y **[105]** from the Brush Holders **[121]**. Then, with nippers or a similar tool, cut off the leadwire from the Stator Ass'y **[105]** and the leadwire from the Noise Suppressor **[109]** which are pressure connected by Tube (D) **[125]**.
- ③ Loosen the two M5 x 60 Machine Screws **[104]** which secure the earth wires of the Stator Ass'y **[105]** and Noise Suppressor **[109]**, and disassemble the Noise Suppressor **[109]**. Then, tap gently on the Gear Case mounting surface of the Housing Ass'y **[119]** with the wooden or plastic hammer to loosen and remove the Stator Ass'y **[105]**.

F. Disassembly of the Stopper Pin:

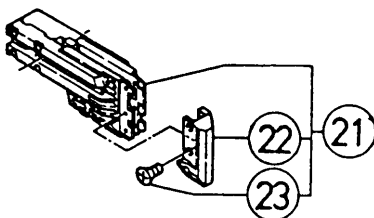


Tools Required

- Pliers

- (1) First take off the Safety Cover **[164]** by following the disassembly procedures in Paragraph 1-1-D.
- (2) With the pliers, extract the D7 E-Type Retaining Ring **[146]**, and disassemble the Stopper Pin **[144]** and the Spring **[147]**.

G. Disassembly of the Guard Assembly:

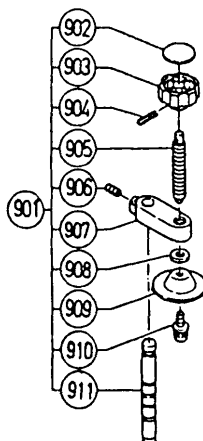


Tools Required

- Plus Head Screwdriver

- (1) Remove the Guard Ass'y **[21]** as described in Paragraph 1-1-A.
- (2) Remove the six brass Flat Head Screws **[23]**, and pull Guard (C) **[22]** forward to remove it.

H. Disassembly of the Vise Assembly (Optional Accessory):



Tools Required

- 4 mm (.157") Hex. Bar Wrench
- Roll Pin Remover
- Plus Head Screwdriver

- (1) Remove the M8 x 16 Set Screw **[906]**, and extract the Vise Shaft **[911]** from the Screw Holder **[907]**.
- (2) Finally, remove the D4 x 25 Roll Pin **[904]** and the M6 x 10 Machine Screw **[901]**, and take off the Knob **[903]** and the Vise Plate **[909]**.

## 1-2. Reassembly

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

- (1) Prior to reassembly, measure the insulation resistance of the Armature Assembly, Stator Assembly, Switch and other electrical components with a 500V DC Megohm Tester, and confirm that the insulation resistance of each part is more than 5 MΩ. If the insulation resistance of any component is less than 5 MΩ, that component must be replaced with a new one.
- (2) If the M12 Nut [40] and M12 Cap Nut [39] of the Hinge Shaft [42] are fastened too tightly, it will interfere with the smooth movement of the Gear Case [145]; if they are fastened too loosely, there will be excessive play and vibration between the Gear Case [145] and the Hinge [91] which will result in uneven and inefficient cutting. Carefully adjust the M12 Nut and M12 Cap Nut so that the Gear Case moves smoothly without excessive play or vibration.
- (3) If the M12 Nut [60] and M12 Cap Nut [59] of the Holder Shaft [70] are fastened too tightly, it will interfere with the smooth movement of Holder (A) [46], and will result in inefficient beveling of the saw blade. Carefully adjust the M12 Nut and M12 Cap Nut so that Holder (A) slides smoothly without excessive play or vibration.
- (4) When replacing the Spring [19], apply approximately 3 grams (.11 oz) of grease (Hitachi Motor Grease, Code No. 930035, is recommended) to the inner circumference of the new Spring prior to assembly.
- (5) When replacing or reassembling the Liner [74], ensure it is positioned and assembled as illustrated in Fig. 1. In addition, coat approximately 8 grams (.28 oz) of grease (Hitachi Motor Grease, Code No. 930035, is recommended) on the Liner sliding portion of the Turntable [71].

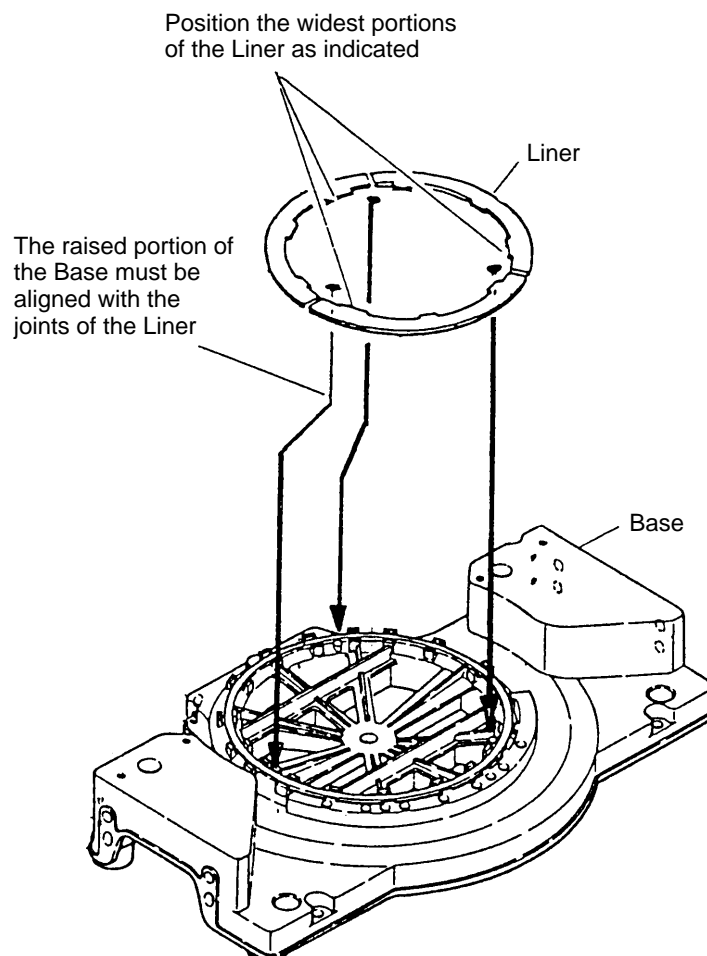


Fig. 1



(6) For Machines Shipped to West Germany Only

Spring (B) must be reassembled as described below. Assemble Spring (B) [26] into Spring Case (B) [25] so that the outer hook of Spring (B) is at the top, as illustrated in Fig. 2. Next, wind the wire into Spring Case (B) [25]. (The winding will be to the left when viewed from the upper side of Spring case (B) [25].) Then, fit Spring Case (B) [25] onto the spring shaft of the Spring Cover Ass'y [29]. (At this time, ensure that the grooved (notched) portion of the spring shaft is aligned with and fitted to the inner hook of Spring (B) [26].) Next, cover Spring Case (B) [25] with Cap (B) [27], being careful to ensure that the outer hook of Spring (B) [26] is properly fitted into one of the notched portions of Cap (B) [27]. Then, wind Spring (B) [26] two full turns, and secure the looped end of the wire in the slotted portion of the Spring Cover [29].

Finally, while holding Cap (B) [27] securely with one hand to keep it from coming out, fit the Spring Case (B) [25] portion into the Case [49].

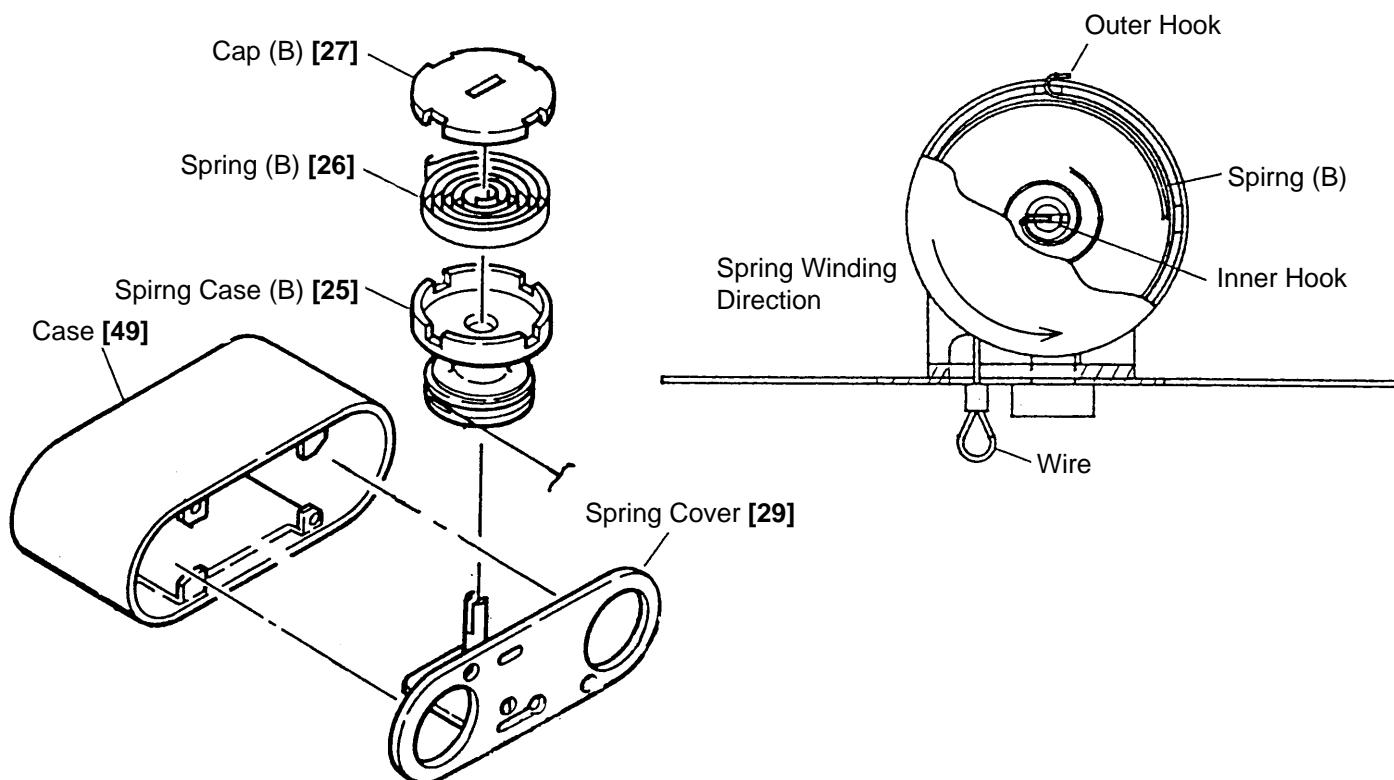


Fig. 2

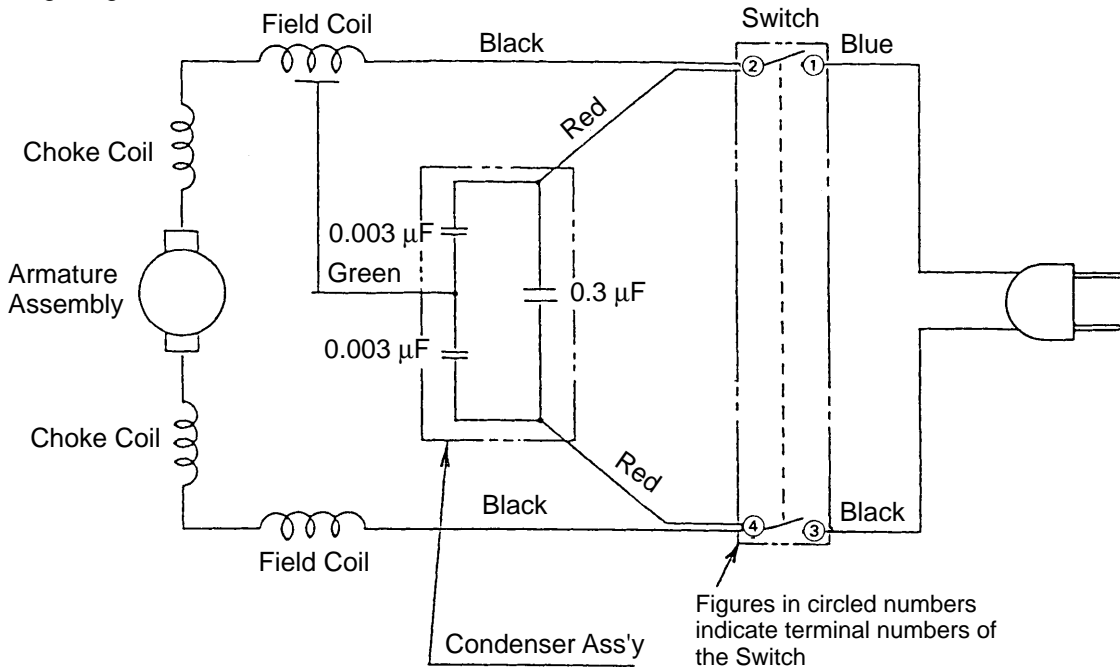
### 1-3. Wiring Diagrams and Leadwire Arrangements:

The diagram and leadwire arrangement illustrated below are for 220 V products.

Carefully ensure that wiring is accomplished exactly 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:



#### (2) Leadwire Arrangements:

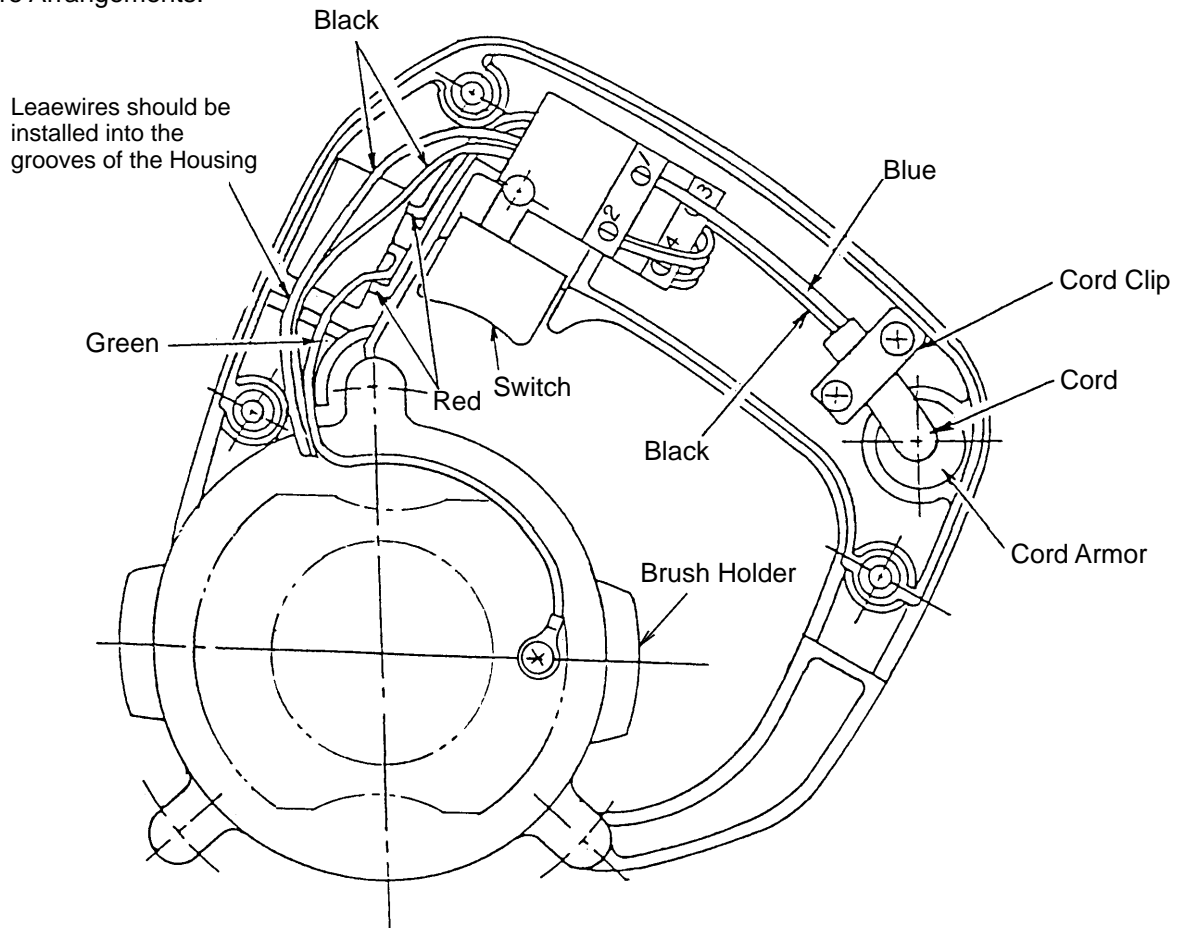


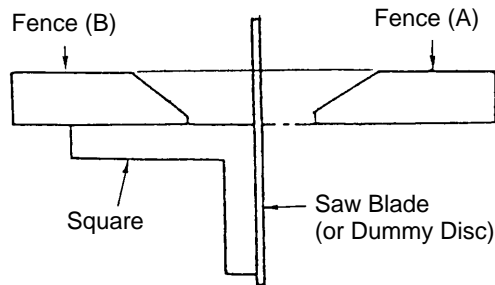
Fig. 3

#### 1-4. Wiring Precautions:

When connecting leadwires, be very careful not to remove any more of the insulation coating of each leadwire than is absolutely necessary. Exposed cores of wires leading from the connectors, for example, are extremely hazardous. In particular, ensure that the leadwires are NOT pinched between the joint of the Handle Cover.

#### 1-5. Assembly Adjustments Requiring particular Attention:

##### (1) Adjustment to Ensure Perpendicularity of the Saw Blade (or Dummy Disc) and the Fences:

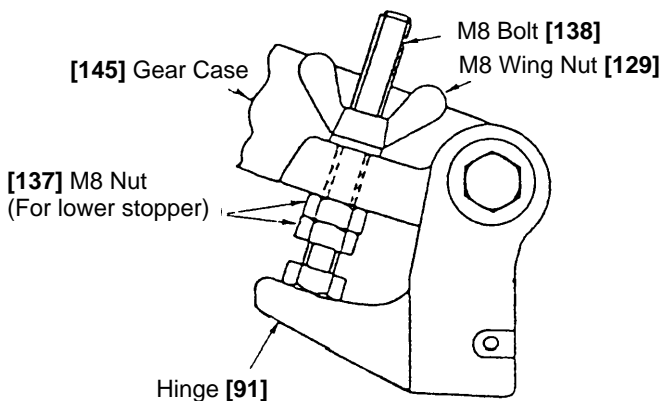


**Fig. 4**

After disassembly/reassembly or replacement of the Base Assembly [76], Turntable [71], Fence (A) [97], Fence (B) [63], Holder (A) [46], or the Hinge [91], or after disassembly/reassembly or adjustment of the Bushing [9], it is necessary to perform necessary adjustments to ensure that the fences are positioned at exact right angles to the saw blade (or, for adjustment purposes only, a dummy disc). As illustrated in Fig. 4, place a square so that it is flush against the side

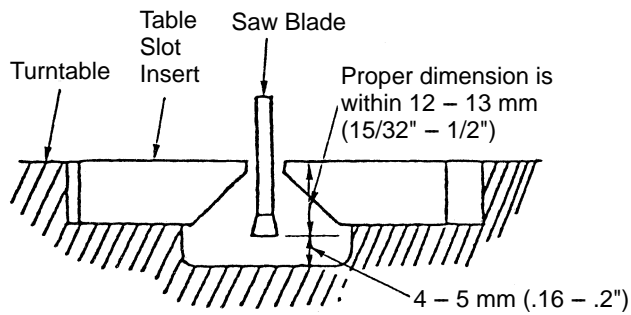
surface of the saw blade (or dummy disc), and move the fence as necessary to adjust it to an exact right angle in relation to the saw blade (or dummy disc). Once one of the fences (either Fence (A) or Fence (B)) has been adjusted, use that fence as a standard to adjust the other fence. In this case, simply place a straightedge against the surfaces of both fences, and adjust the remaining fence so that it is exactly aligned with the adjusted fence. Finally, confirm that the second fence is properly adjusted by using the square to check the perpendicularity of the fence with the saw blade (or dummy disc).

##### (2) Adjustment of the Lower Limit Position of the Saw Blade:



**Fig. 5**

The saw blade lower limit position must be adjusted so that the cutting edge of the saw blade projects 12 – 13 mm (15/32 – 1/2") below the upper surface of the base (or the upper surface of the table inserts) (see Fig. a). To perform the adjustment, loosen the M8 Wing Nut [129] and the two M8 Nuts [137], and turn the M8 x 100 Bolt [138] as necessary to raise or lower the Gear Case [145] with relation to the upper M8 Nut [137]. Raising the Gear Case raises the lower limit position of the saw blade, while lowering the Gear Case lowers the lower limit position of the saw blade. When the positioning adjustment is completed, securely tighten the two M8 Nuts [137] against the lower surface of the Gear Case, and thoroughly tighten the M8 Wing Nut [129].



**Fig. a**

(3) Assembly of the Ball Bushing (Linear Ball Bearing):

The Ball Bushing [8] fits very closely into Holder (A) [46], and must be inserted very carefully. When inserting the Ball Bushing, gently tap it with a wooden or plastic hammer, being very careful to ensure that it is kept horizontally aligned with Holder (A) throughout the insertion. After it has been fully inserted, tighten the M8 x 8 Set Screw [44] so that the Ball Busing is properly locked in position. In addition, apply approximately 2 grams (.07 oz) of grease (Hitachi Motor Grease, Code No. 930035, is recommended) on the steel balls within the Ball Bushing, and coat machine oil on Slide Pipes (A) and (B).

### Steel Ball Positioning

When assembling the Ball Bushing into Holder (A), insert it so that the steel balls within the Ball Bushing are positioned as illustrated on side (A) in Fig. 6. Visual alignment of the steel balls during assembly is acceptable. As shown in Fig. 6, the load is more evenly distributed when the steel balls are aligned as in side (A). The side (A) alignment is approximately 30 % more efficient than the alignment illustrated in side (B).

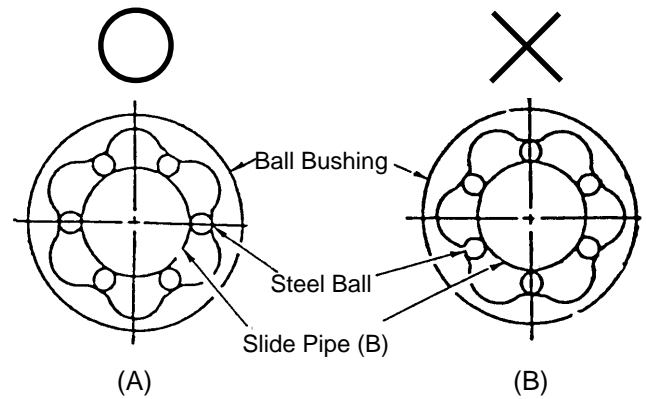


Fig. 6

#### (4) Assembly of the Bushings:

For play adjustment, please refer to APPENDIX 1 (Next page). Prior to inserting Slide Pipe (A) into Holder (A), position the four Bushings [9] so that they will not come in contact with Slide Pipe (A) during its insertion. At this time, place a little grease on the ends of the M8 x 16 Set Screws [13] so that the Bushing will stick in position and not drop off. On completion of the assembly, tighten the M8 x 16 Set Screws [13] as described in Paragraph 1-2 to eliminate any excessive play or vibration in the movement of Slide Pipe (A). After completing adjustment, confirm that the thrust (force) required to slide the unit is within 2 – 3 kg (4.4 – 6.6 lbs), that the perpendicularity of the saw blade with relation to the upper surface of the base is within a tolerance of 0.15/100 mm (.006"/4"), that the perpendicularity of the fences with relation to the saw blade is within 0.15/100 mm (.006"/4"), and that the parallelism of the slide pipes with relation to the turntable is within a tolerance of 0.15/100 mm (.006"/4").

#### (5) Assembly of the Turntable: (See Fig. 8)

When reassembling the Turntable [71] and the Base Ass'y [76], ensure that Shaft (A) [82] is properly tightened.

During assembly, liberally apply grease (Hitachi Motor Grease, Code No. 930035, is recommended) on the portions marked (A) in Fig. 8.

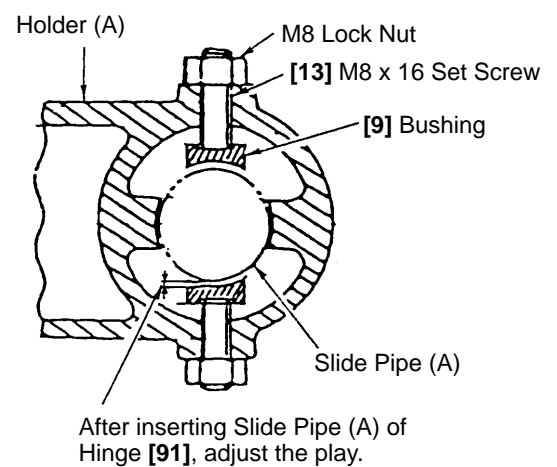


Fig. 7

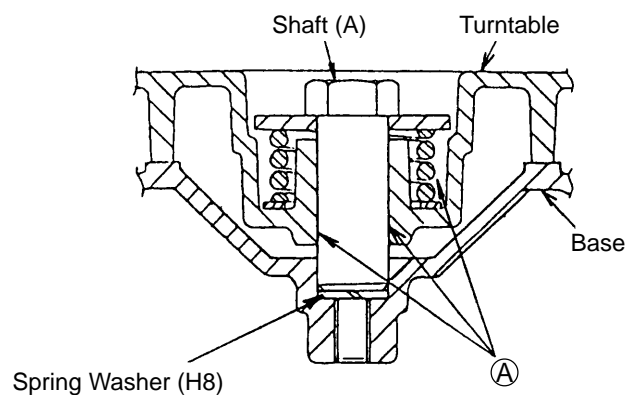


Fig. 8

## APPENDIX 1.

### Adjustment of Play (Irregular Movement) of the Slide Section:

After long use of the machine, there will inevitably be wear of the Bushings (slide linings constructed of resin material) which come into contact with the Slide Pipe (A) portion of the Hinge section. If excessive play or vibration of the slide portion is noted, loosen the M8 Nuts (lock nuts) and tighten the M8 x 16 Set Screws as necessary to eliminate the play. At this time, ensure that the unit is adjusted so that the thrust (force) required to slide the unit is within 2 – 3 kg (4.4 – 6.6 lbs.).

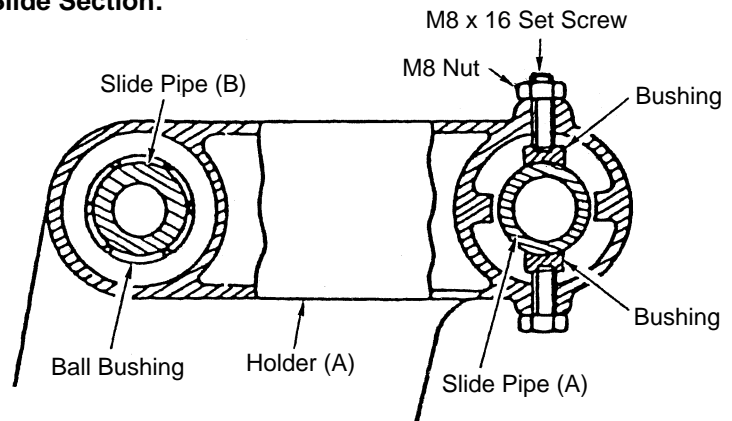


Fig. b

[Bush Adjustment Procedures] (See Fig. C)

- (1) Loosen the four M8 Nuts (lock nuts), and loosen each of the four M8 x 16 Set Screws one full turn. This will free Slide Pipe (A) so that it comes to rest on the lower surface of the 30.3 mm dia. (1.18") retainer hole of Holder (A).
- (2) Then, gently tighten Set Screw [1] until it lightly contacts Slide Pipe (A), turn it an additional one-eighth of a turn clockwise, and lock it in position with the M8 Nut.  
(This positions Slide Pipe (A) in the center of the retainer hole of Holder (A).)
- (3) Next, tighten and adjust Set Screw [2] so that Slide Pipe (A) will slide smoothly.  
(The force required to slide Slide Shaft (A) should be within 2 – 3 kg [4.4 – 6.6 lbs]).
- (4) Finally, tighten and adjust Set Screws [3] and [4] to eliminate any excessive play or vibration. At this time, check the perpendicularity of the saw blade with relation to the upper surface of the base, and confirm that it is within a tolerance of 0.15/100 mm (.006"/4"). If it is not within tolerance, adjust the positioning stopper bolts to bring perpendicularity within tolerance.

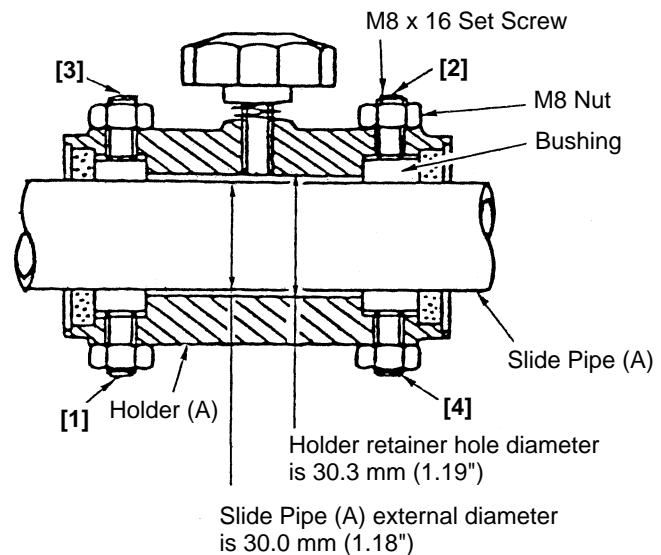


Fig. c

### 1-6. Lubrication:

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

#### (1) Swiveling Section of the Gear Case:

Coat machine oil on the swiveling and sliding portions of the Gear Case and Hinge.

#### (2) Vise Section:

Coat machine oil on the Screw [905] portion of the Vise [901].

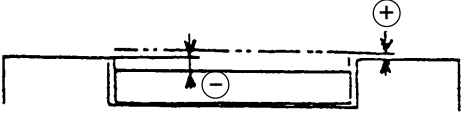
[NOTE] The Vise Assembly and related parts are optional accessories.

#### (3) Slide Pipe Section:

Coat machine oil on the sliding portions of Slide Pipe (A), Slide Pipe (B), and the Hinge [91].

### 1-7. Machine Accuracy:

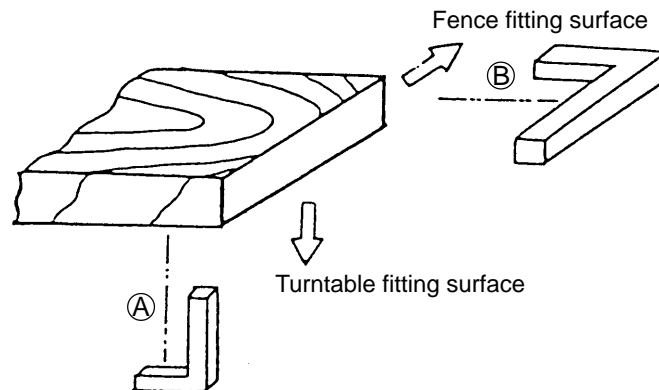
On completion of assembly confirm the accuracy of the product as listed below standard.

Item	Accuracy
Deflection of the Saw Blade (or dummy disc)	0.15/200 mm (.006"/8")
Perpendicularity between the Base and Fences (A) and (B)	0.1/40 mm (.004"/1.574")
Flatness of Fences (A) and (B)	0.1 mm (.004")
Perpendicularity between the Saw Blade (or Dummy Disc) and Fences (A) and (B)	0.15/100 mm (.006"/4")
Parallelism between the Turntable and Slide Pipe	0.15/100 mm (.006"/4")
Perpendicularity between the Saw Blade (or Dummy Disc) and Turntable	0.15/100 mm (.006"/4")
Difference between Base Ass'y and Turntable 	$\oplus$ 0.1 mm (.004") $\ominus$ 0.2 mm (.008")

(1) Miter Cutting:

Cutting Conditions:

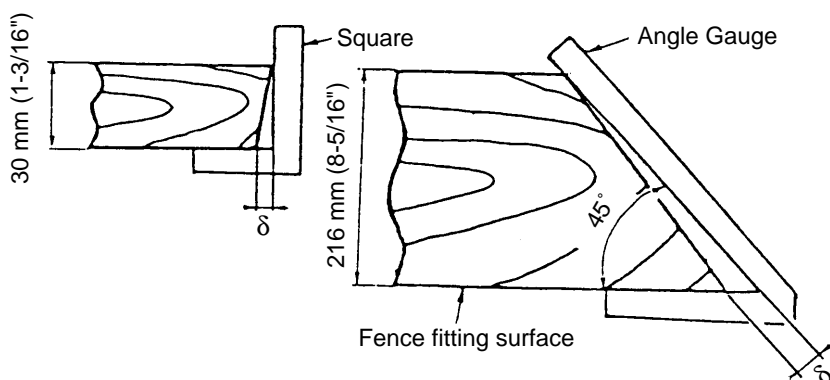
- ① Test piece: Yellow Pine 30 mm (1-3/16") – Height x 210 mm (8-5/16")  
– Width Piece ..... All surfaces are planed rectangularly.
- ② Saw Blade: 216 mm (8-1/2") TCT Saw Blade (No. of Teeth 24)
- ③ Cutting Time: 10 sec.
- ④ Measuring points:



⑤ Cutting Accuracy:

[A Direction]

[B Direction]



Angle \ Accuracy	$\delta$
(A)	0.06 mm (.0025")
(B)	0.6 mm (.025")

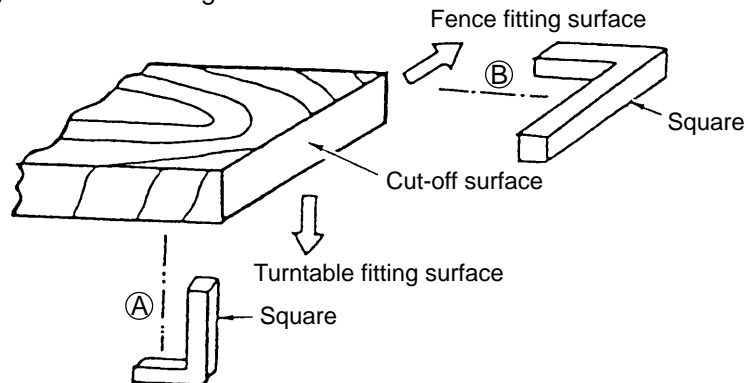
Fig. 9



(2) Bevel Cutting:

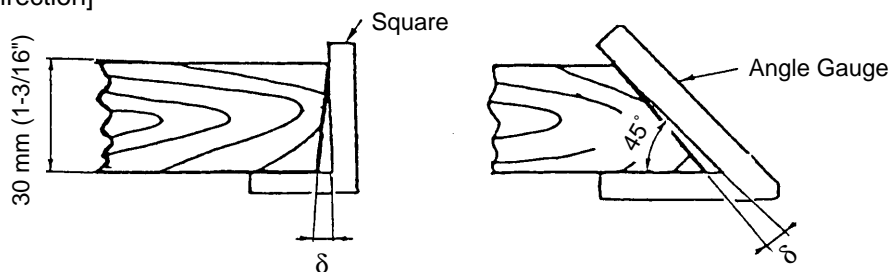
Cutting Conditions:

- ① Test piece: Yellow Pine 30 mm (1-3/16") – Height x 240 mm (9-7/16") – Width Piece ..... All surfaces are planed rectangularly.
- ② Saw Blade: 216 mm (8-1/2") TCT Saw Blade (No. of Teeth 24)
- ③ Cutting Time: 0° ..... 10 sec., 45° Bevel Cutting ..... 15 sec.
- ④ Measuring Points:

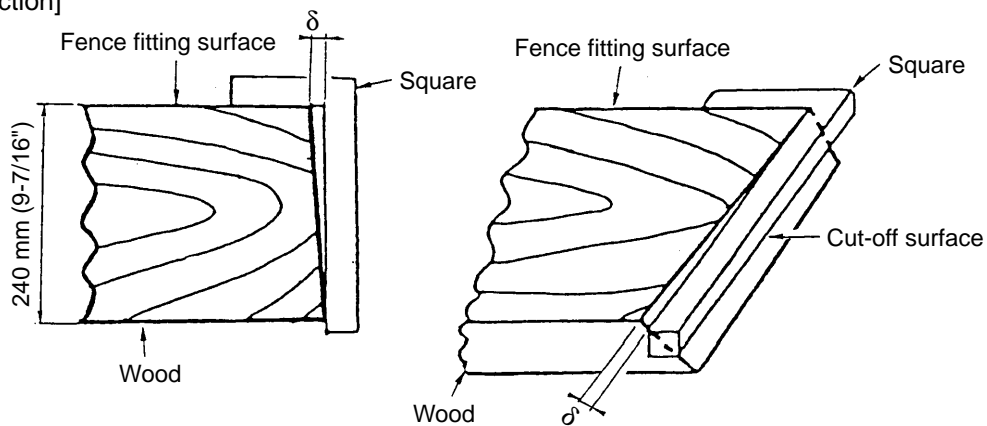


⑤ Cutting Accuracy:

[A Direction]



[B Direction]

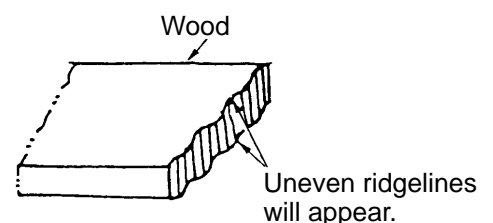


Accuracy		δ
Angle	0°	0.06 mm (.0025")
	45°	0.085 mm (.0035")
⑥	0°	0.5 mm (.02")
	Bevel Surface	0.5 mm (.02")

Fig. 10

[CAUTION]

If the test workpiece has uneven surfaces, the cutting surface obtained through bevel cutting will also clearly be uneven. Therefore, it is particularly necessary to carefully measure the test piece before performing the cutting test. Test workpieces which are cut with a bandsaw are particularly apt to have uneven surfaces.



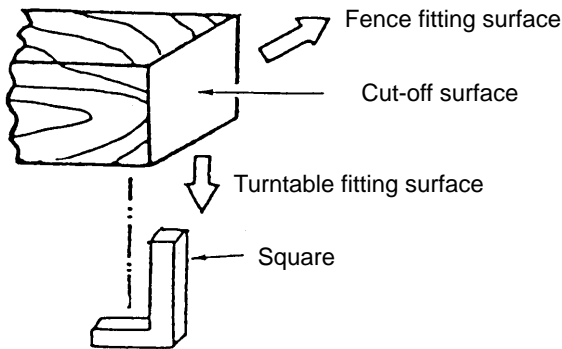
1-8. Cutting Accuracy:

Prepare appropriate test workpieces, cut them as described, and measure cutting accuracy with a square or other standard measuring device to ensure they are within listed tolerances.

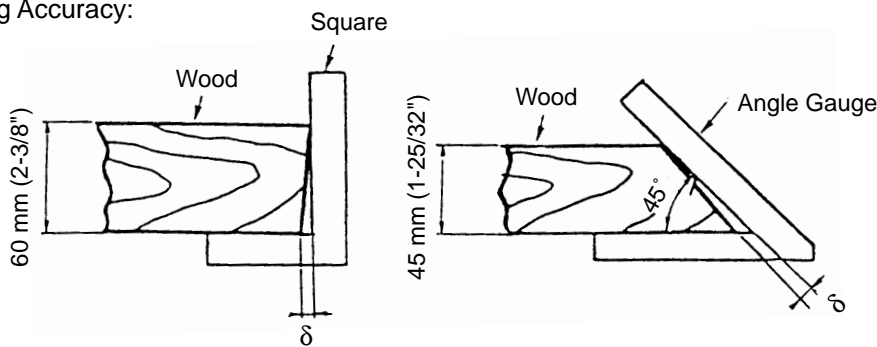
**[CAUTION]** The test workpieces should be processed with a jointer, and their dimensions and accuracy should be carefully checked prior to cutting tests. Test pieces which are manually and/or inaccurately prepared are useless to check the cutting accuracy of the Model C 8FS.

(2) Press Cutting:  
Cutting Conditions:

- ① Test piece: Yellow Pine 60 mm (2-3/8") Square Piece ..... All surfaces planed squarely.  
(for 45° Bevel Cuttig: 60 x 45 mm [2-3/8" x 1-25/32"])
- ② Saw Blade: 216 mm (8-1/2") TCT Saw Blade (No. of Teeth 24)
- ③ Cutting Time: 0° (Plunge Cutting) ..... 6 sec.  
45° (Bevel Cutting) ..... 9 sec.
- ④ Measuring Points:



⑤ Cutting Accuracy:



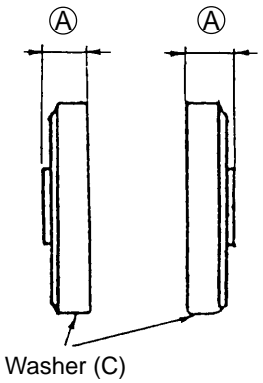
Accuracy Angle	$\delta$
0°	0.12 mm (.005") or Less
45°	0.17 mm (.007") or Less

Fig. 11

## 2. REPAIR GUIDE:

The circled numbers in the table below correspond to the item numbers in the Parts List and exploded assembly diagrams.

Item	Phenomenon	Possible Cause (s)	Standard	Inspection, Repair and Adjustment
1	<p>Inaccurate cutting</p> <p>* Inaccurate perpendicularity of the cutting surface.</p> <p>* Inaccurate miter cutting</p> <p><b>Fig. 12</b></p> <p><b>Fig. 13</b></p> <p><b>Fig. 14</b></p> <p><b>Fig. 15</b></p> <p><b>Fig. 16</b></p>	<p>a. Inaccurate perpendicularity causes inclined cutting of the Saw Blade into the workpiece.</p> <p>b. Excessive deflection of the Saw Blade. (Excessive vibration)</p> <p>c. Inaccurate perpendicularity of the Saw Blade with Fences (A) (B).</p> <p>d. Due to inaccurate alignment of Fences (A) (B), the workpiece traces, and this causes inaccurate perpendicularity.</p> <p>e. Inaccurate surface flatness of the Turntable.</p> <p>f. When slid, the perpendicularity between the Saw Blade and Turntable varies.</p> <p>g. Inaccurate perpendicularity of Fences (A) (B), Turntable and Base causes inaccurate cutting angle when miter cutting is accomplished.</p> <p>h. There is a play in the swivel sliding portion between the Hinge [91] and Gear case [145], or swivel resistance is heavy. For above reasons, the Gear Case swivels, or excessive force applied causes deformation on each part.</p> <p>i. Excessively fast cutting speed causes deflection of the Saw Blade, and this causes inaccurate cutting.</p> <p>j. Excessive pressing force is required due to a dull or damaged Saw Blade.</p> <p>k. Deformation of the workpiece (deflected, bent, etc.) causes movement of the workpiece during cutting operation.</p>	<p>0.15/100 (.006\"/4\") with use of a Dummy Disc (Fig. 12) When fully slid, deflection of the tip of the Dummy Disc must be within 0.25/100 (.01\"/4\")</p> <p>0.15/200 (.006\"/8\") [Dummy Disc]</p> <p>0.15/100 (.006\"/4\") (Fig. 13)</p> <p>Within 0.1 (.004\") (Fig. 14)</p> <p>Within 0.1 (.004\")</p> <p>Same as Item a (Fig. 15)</p> <p>0.1/40 (.004\"/1.57\") (Fig. 16)</p> <p>—</p> <p>—</p> <p>—</p> <p>—</p>	<ul style="list-style-type: none"> <li>Readjust the perpendicularity with M8 Bolt [68].</li> <li>Readjust the play between the Hinge [91] and Gear Case [145] with M12 Cap Nut [39] and M12 Nut [40].</li> <li>Readjust the gap between the Bushing [9] and slide Pipe (A) of Hinge [91] with M8 Set Screw [13].</li> <li>If deformed, replace the Hinge [91], Gear Case [145], or Turntable [71].</li> <li>Replace the TCT Saw Blade [160].</li> <li>Check for damage on Washer (C) [159], smooth minor defects with a file.</li> <li>Replace Washer (C) if excessively damaged or deformed.</li> <li>Loosen the M8 Bolt [62], and readjust it.</li> <li>Replace Fences (A) (B).</li> <li>Readjust alignment of Fences (A) (B) by loosening M8 Bolt [62].</li> <li>Replace Fences (A) and (B) if damaged.</li> <li>Replace the Turntable.</li> <li>Confirm the precision after press fitting Slide Pipes (A) and (B) of Hinge [91], replace the Hinge component if precision is inaccurate. (Fig. 15)</li> <li>Adjust the play between the Bushings [9] and Slide Pipe (A) with M8 Set Screws [13]. The saw blade section should slide smoothly. Slide thrust should be within 2 – 3 kg (4.4 – 6.6 lbs).</li> <li>Replace Fences (A) and (B).</li> <li>Confirm foreign matter (sawdust, chips etc.) are not on the fitting surfaces of the Hinge, Gear Case of Hinge Shaft [42].</li> <li>Readjust the play between the Hinge and the Gear Case with M12 Cap Nut [39] and M12 Nut [40].</li> <li>Reduce the cutting speed. (An appropriate cutting speed of 65 mm (2-9/16\") square wood workpiece is 6 – 9 sec.).</li> <li>Resharpen or replace the Saw Blade.</li> <li>Try cutting operation after correcting the deflection, bending of the workpiece with a planer.</li> </ul>

Item	Phenomenon	Possible Cause (s)	Standard	Inspection, Repair and Adjustment
2	Rough Cutting Surface: Parallelism (A) = 0.03/44 (.001"/1.73")  Washer (C) <b>Fig. 17</b>	a. Large deflection of the Saw Blade. (Large deflection causes rough cutting surface.)	0.15/200 (.006"/8") [Dummy Disc]	Same as Item 1-(b).
		b. Irregular or heavy sliding resistance of Slide Pipe(s) prevent smooth cutting.	Appropriate sliding thrust is 2 – 3 kg (4.4 – 6.6 lbs).	<ul style="list-style-type: none"> <li>• Coat machine oil on Sliding Pipes.</li> <li>• Check for damage on the Slide Shafts, and repair or replace as necessary.</li> </ul>
		c. Excessive play of the Slide Pipes.	—	<ul style="list-style-type: none"> <li>• Readjust the Bushings [9].</li> <li>• Replace the Hinge component and Ball Bushing [9].</li> </ul>
		d. Damage of Washers (C) causes inaccurate parallelism.	0.03/44 (.001"/1.73") (Fig. 17)	<ul style="list-style-type: none"> <li>• Remove damage on Washers (C), or replace if beyond repaired.</li> </ul>
		e. Incorrect slide cutting method.	—	<ul style="list-style-type: none"> <li>• Refer to <a href="#">Slide Cutting</a> on the next page. Slide cutting should be accomplished by sliding smoothly with minimal thrust.</li> </ul>
		f. Inaccurate perpendicularity between the Turntable and Saw Blade causes tilted approach of the Saw Blade, and this causes uneven cutting surface.	0.15/100 (.006"/4") (Fig. 12)	<ul style="list-style-type: none"> <li>• Same as Item 1-(a).</li> </ul>
		g. Excessively fast Cutting Speed.	—	<ul style="list-style-type: none"> <li>• Reduce the cutting speed.</li> </ul>
		h. Improper fixing of the workpiece.	—	<ul style="list-style-type: none"> <li>• Properly fix the workpiece with Vise Assembly.</li> </ul>
		i. Turntable is not fixed with Side Handle.	—	<ul style="list-style-type: none"> <li>• When carrying out cutting operation, without fail fix the Turntable [71] with Side Handle [96].</li> </ul>
		j. There is play in the swivel sliding portion between the Hinge and Gear Case, or swivel resistance is excessive.	—	Same as Item 1-(h).
		k. Deformation of the workpiece (deflected, bent, etc.) causes movement of the workpiece during cutting operation.	—	<ul style="list-style-type: none"> <li>• Try cutting operation after correcting the deflection, bending of the workpiece with a planer.</li> </ul>
		l. Excessive vibration.	—	<ul style="list-style-type: none"> <li>• Recheck Items (a), (c), (d) and (j).</li> </ul>
3	Saw Blade is Locked	a. Excessively fast cutting speed.	—	<ul style="list-style-type: none"> <li>• Reduce cutting speed.</li> </ul>
		b. Nominal sectional area of Extension Cord is too small.	—	<ul style="list-style-type: none"> <li>• Use larger diameter and/or shorter Extension Cord.</li> </ul>
		c. Excessive cutting thrust is applied due to a dull or damaged Saw Blade.	—	<ul style="list-style-type: none"> <li>• Reasharpen or replace the Saw Blade.</li> </ul>
		d. Incorrect Saw Blade.	—	<ul style="list-style-type: none"> <li>• Use genuine Hitachi TCT Saw Blade. Increase of No. of teeth of Saw Blade causes increased cutting resistance. When using a saw blade with more than 24 teeth, reduce the cutting speed.</li> </ul>
		e. Workpiece binds the Saw Blade during cutting operation due to deflection, bending, etc. of the workpiece.	—	<ul style="list-style-type: none"> <li>• Plane the workpiece, and remove the deflection, bending, etc.</li> </ul>

## Slide Cutting

Ensure that the customer is thoroughly familiar with the following cutting procedures and precautions which require particular attention.

- (1) Ensure that the Knob Bolt which fixes the sliding section is properly loosened.
- (2) Grasp the handle firmly, and pull the saw blade section (head) outward in the direction indicated by the arrow mark (toward the operator).
- (3) Gently push down the handle so that the saw blade cuts smoothly into the workpiece. (Same as in press cutting.)

[CAUTION] If the handle is pushed down forcibly and excessively fast, it could cause saw blade vibration and partial sliding which would leave an unwanted cutting mark in the workpiece (see the portion indicated by (A) in Fig. d).

Instruct the customer to gently and carefully press down the handle at the beginning of the cutting operation.

- (4) After the handle has been fully pushed down, push it in the direction indicated by the arrow mark (away from the operator) so that the saw blade section (head) slides back, and the saw blade cuts smoothly through the workpiece. (Slide cutting.)

[CAUTION]

- Instruct the customer to gently slide the head to complete the cutting in a single smooth operation. Avoid interrupting the cutting operation part way through the material, as this will cause unwanted cutting marks in the material.

Standard cutting time for a workpiece 50.8 mm (2") in height by 305 mm (12") in width is 10 – 15 seconds.

- While it is possible to perform slide cutting in the opposite direction from that described above (i.e., sliding the head outward toward the operator), it is very hazardous in that the striking of the saw blade teeth against the surface of the workpiece may cause recoil that could cause the head to kick upward unexpectedly. Accordingly, it is important to caution the customer to ensure without fail that the slide cutting operation is carried out by pushing the head away from the operator, as described above and as indicated by arrow mark [4] in Fig. d.

- (5) On completion of the cutting operation, turn OFF the switch and, after the saw blade rotation has come to a complete stop, raise the handle to return the saw blade section (head) to its original position.

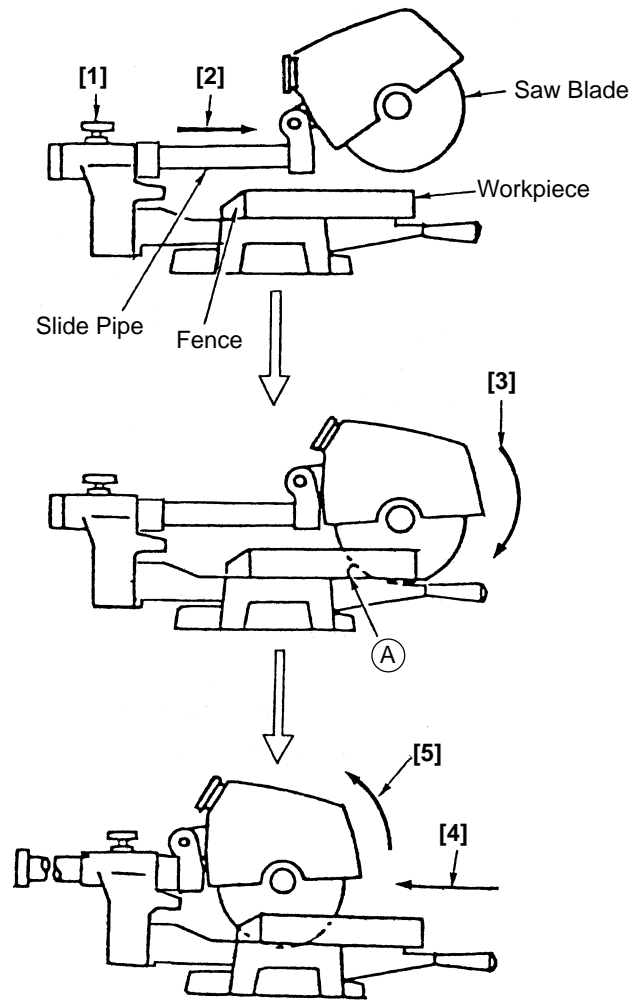


Fig. d