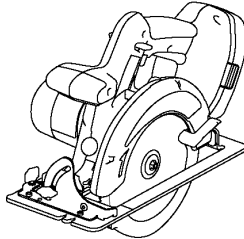


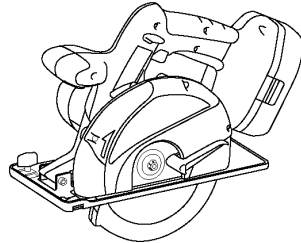
# Service Manual

Cordless Wood Saw / Cordless Metal Cutter

<EY3551>



<EY3552>



**EY3551-U1**

**EY3552-U1**

## SPECIFICATIONS

### MAIN UNIT

Model		EY3551	EY3552
Motor		DC Motor 18V	
Blade speed		2900/min (rpm)	
Blade size	Outside diameter	165mm (6-1/2")	
	Arbor size	20mm (25/32")	
Maximum cutting depth		3 ~ 56mm (1/8" ~ 2-7/32") (Ø165mm blade)	
		* 50° angle cutting --- 32mm (1-9/32")	-
Dimensions (L X W X H)		375 X 200 X 264 mm (14-3/4" X 7-7/8" X 10-13/32")	345 X 198 X 264 mm (13-37/64" X 7-51/64" X 10-25/64")
Cutting angle adjustment		0 ~ 50°	-
Weight (with battery pack)		4kg (8.82lbs.) with EY9251	4kg (8.82lbs.) with EY9251

### **⚠ WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

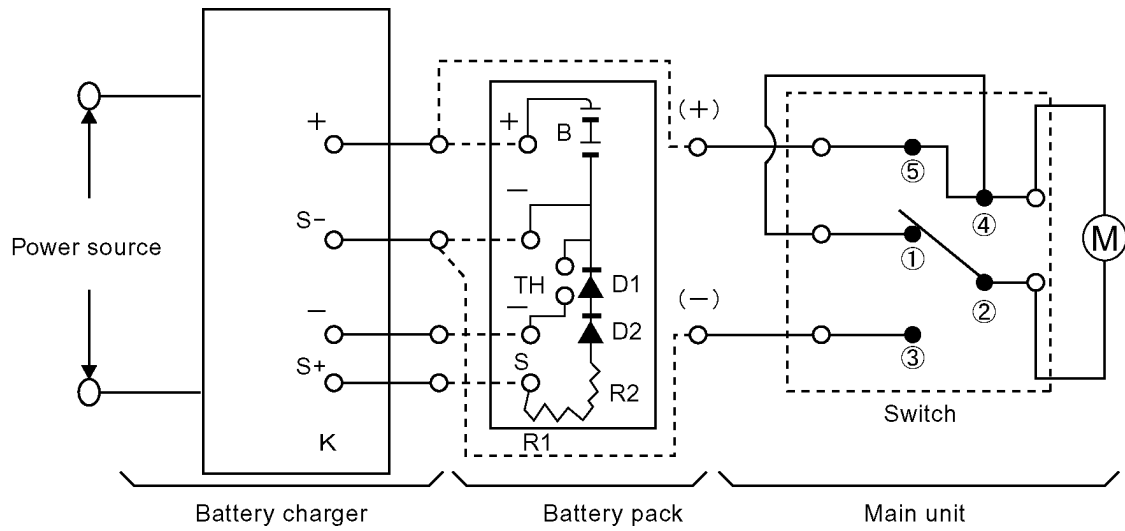
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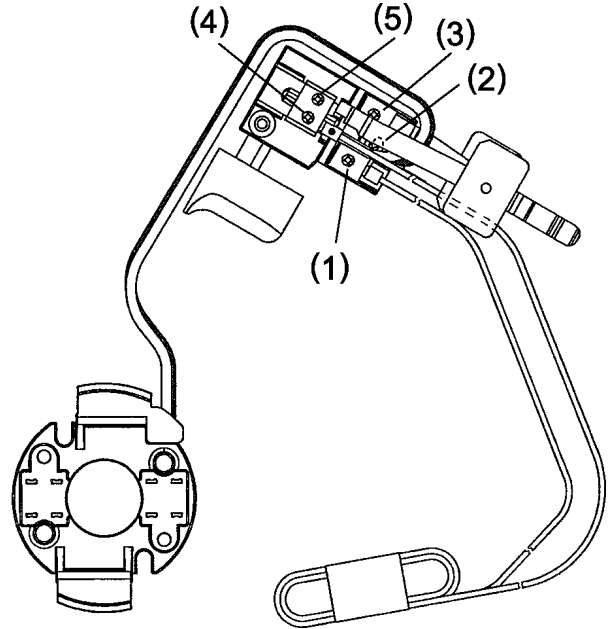
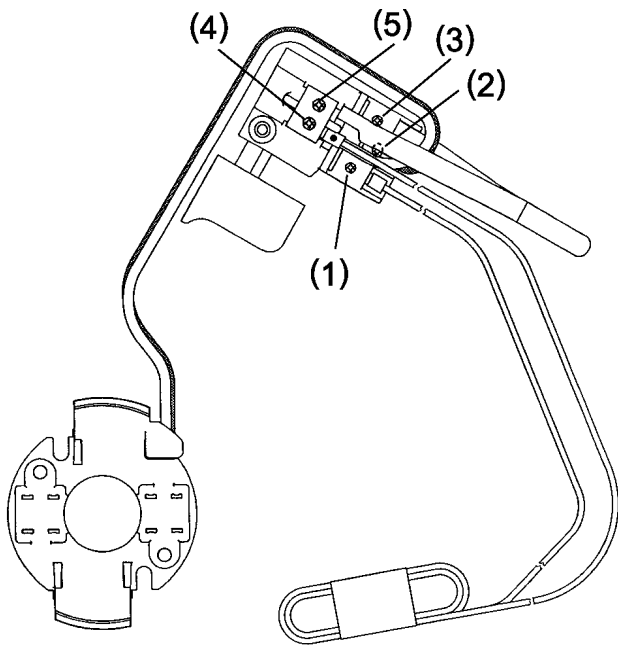
# 1 SCHEMATIC DIAGRAM



# 2 WIRING CONNECTION DIAGRAM

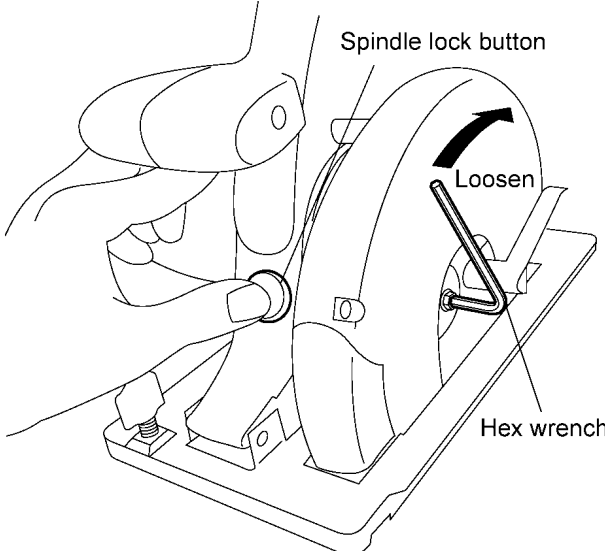
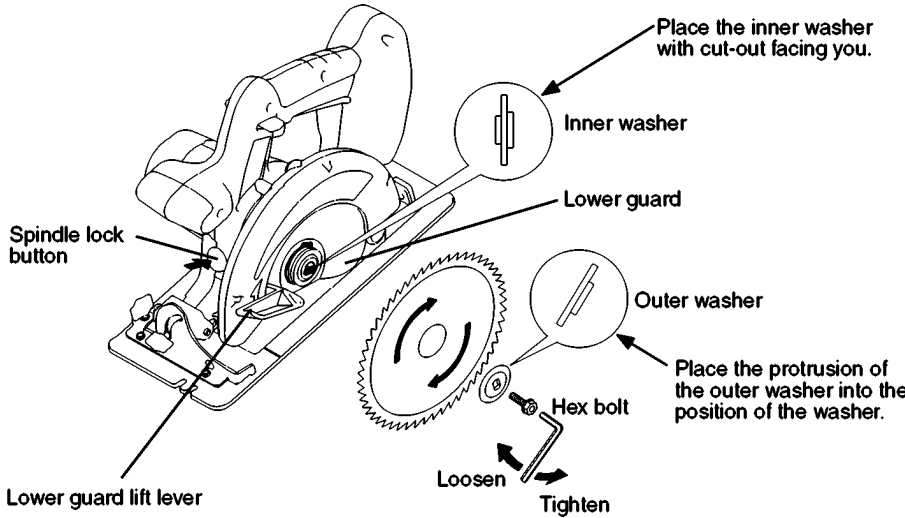
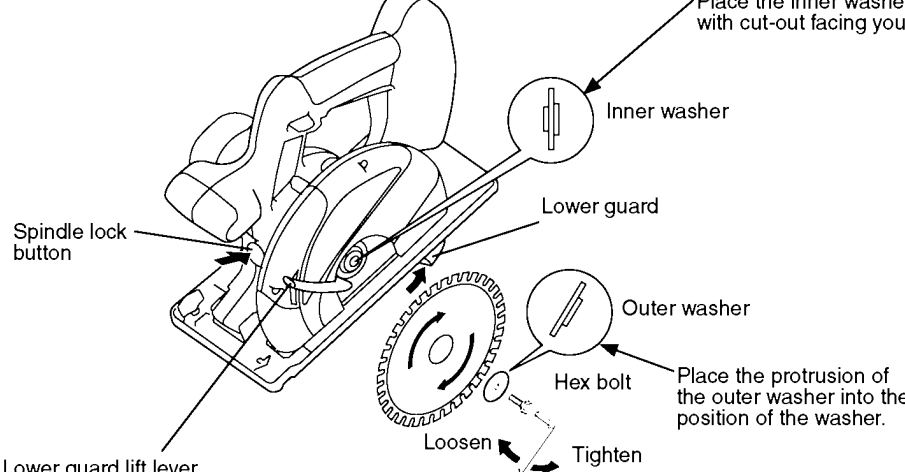
<EY3551>

<EY3552>



# 3 DISASSEMBLY INSTRUCTIONS

## ■BLADE REMOVAL.

Ref. No. 1A	Procedure 1A	Blade removal.
	 <p>Spindle lock button</p> <p>Loosen</p> <p>Hex wrench</p>	<p><b>NOTE :</b> Make sure that the battery pack is removed from the saw prior to servicing.</p> <p>The blade will be hot right after cutting. Be sure to let the blade cool down before removing it.</p> <ol style="list-style-type: none"> <li>1. Hold the spindle lock button down. This prevents the blade from rotating.</li> <li>2. Use the provided hex wrench to loosen the hex bolt.</li> </ol> <p><b>NOTE :</b> Keep the hex wrench in the storage slot on the body when not using it.</p> <ol style="list-style-type: none"> <li>3. Remove the hex bolt and outer washer.</li> <li>4. Use the lower guard lift lever to open the lower guard.</li> <li>5. Carefully remove the blade.</li> </ol> <p><b>CAUTION:</b> Be careful to avoid cutting your hands on the blade.</p>
<EY3551>	 <p>Place the inner washer with cut-out facing you.</p> <p>Inner washer</p> <p>Lower guard</p> <p>Spindle lock button</p> <p>Lower guard lift lever</p> <p>Outer washer</p> <p>Place the protrusion of the outer washer into the position of the washer.</p> <p>Hex bolt</p> <p>Loosen</p> <p>Tighten</p>	
<EY3552>	 <p>Place the inner washer with cut-out facing you.</p> <p>Inner washer</p> <p>Lower guard</p> <p>Spindle lock button</p> <p>Lower guard lift lever</p> <p>Outer washer</p> <p>Place the protrusion of the outer washer into the position of the washer.</p> <p>Hex bolt</p> <p>Loosen</p> <p>Tighten</p>	

■MAIN UNIT DISASSEMBLY. (The main unit can be opened without removing the shoe.)

Ref. No. 2A

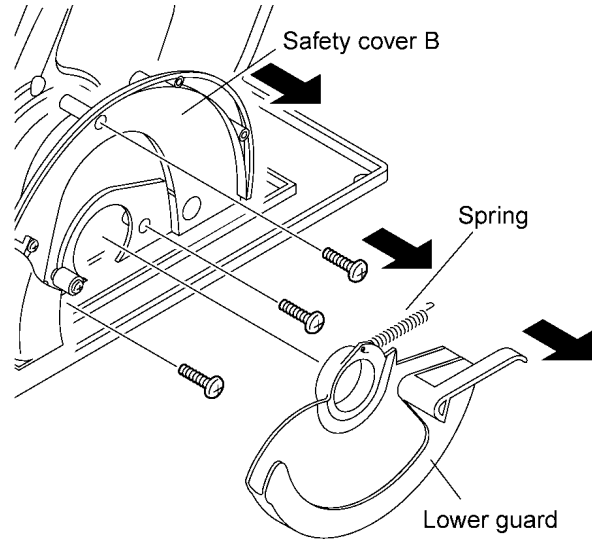
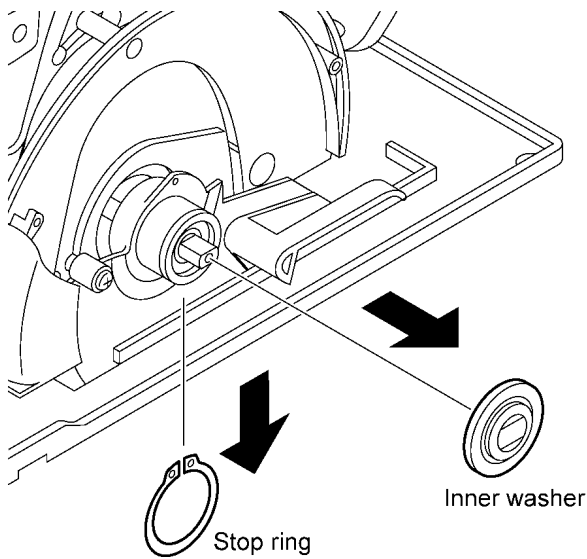
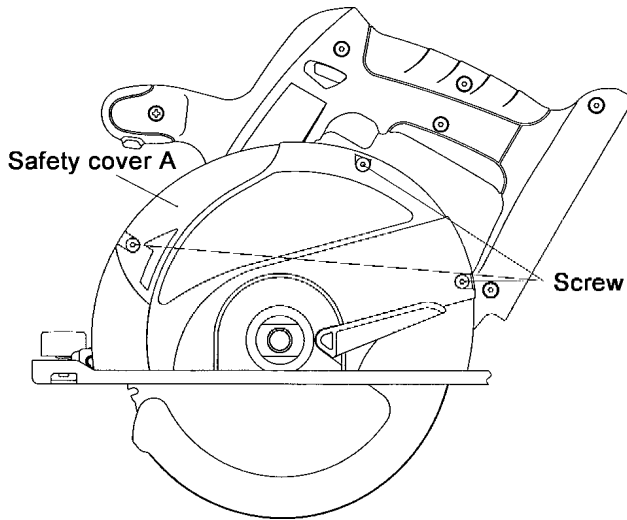
Procedure 2A

## Removal of the safety cover and lower guard.

1. Loosen the base depth adjustment lever where located under the grip of main unit and push the shoe down.
2. Remove the 3 screws securing the safety cover A. Take out the safety cover A.
3. Remove the inner washer and the stop ring.
4. Remove the lower guard with connecting the spring.
5. Loosen the 3 screws and take out the safety cover B.

**NOTE :**

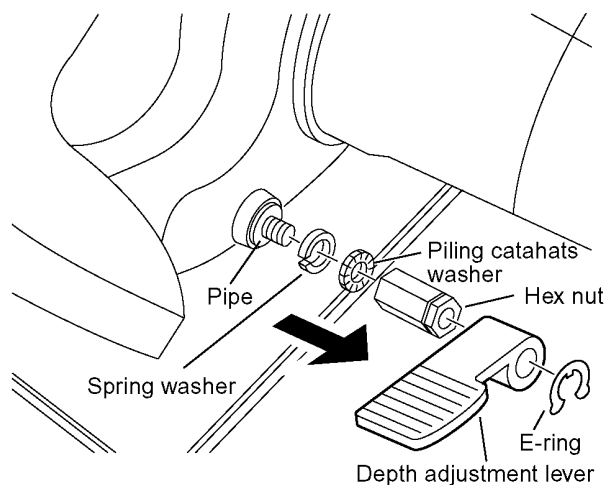
When removing the lower guard from the main unit, do not stretch the spring.



Ref. No. 2B

Procedure 2A → 2B

Removal of the shoe.

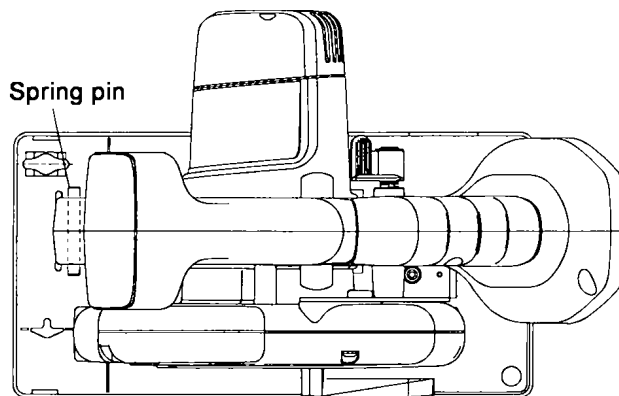
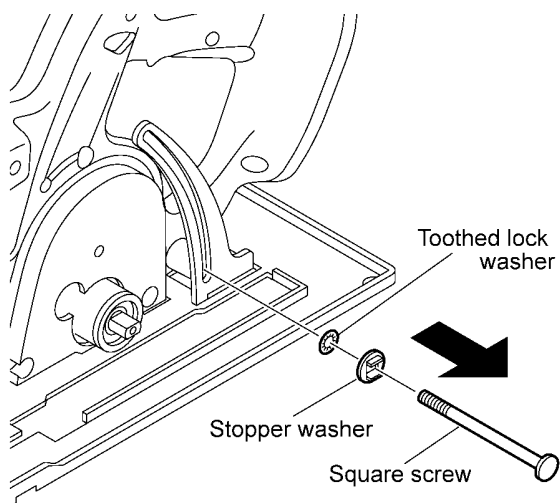
**NOTE:**

It is possible to disassemble the main unit without removing the shoe.

1. Take out the E-ring and the depth adjustment lever.
2. Unscrew the hex nut.
3. Take out the spring washer and piling cathais washer.
4. Pull out the square screw and pipe.
5. Take out the stopper washer and toothed lock washer.
6. Push out the spring pin with a rod having a diameter of 5mm.

**NOTE:**

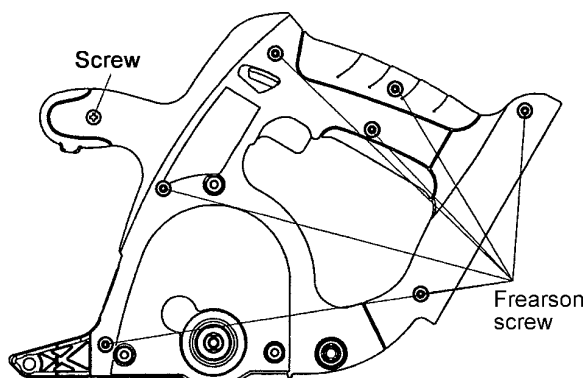
Do not tap the spring pin strongly. If to do so, the supporting metal plates on both side of housing may cause the deformation.



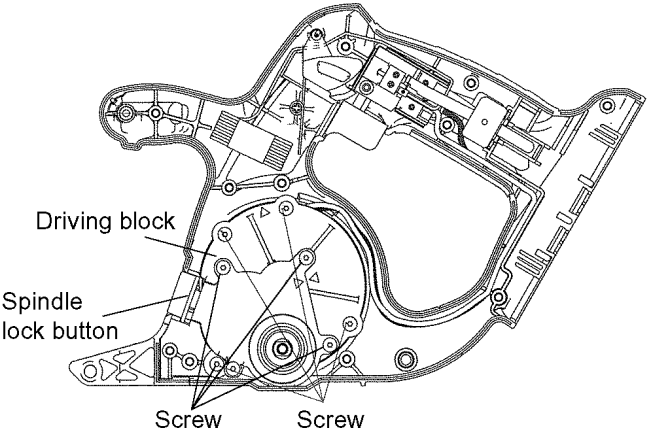
Ref. No. 2C

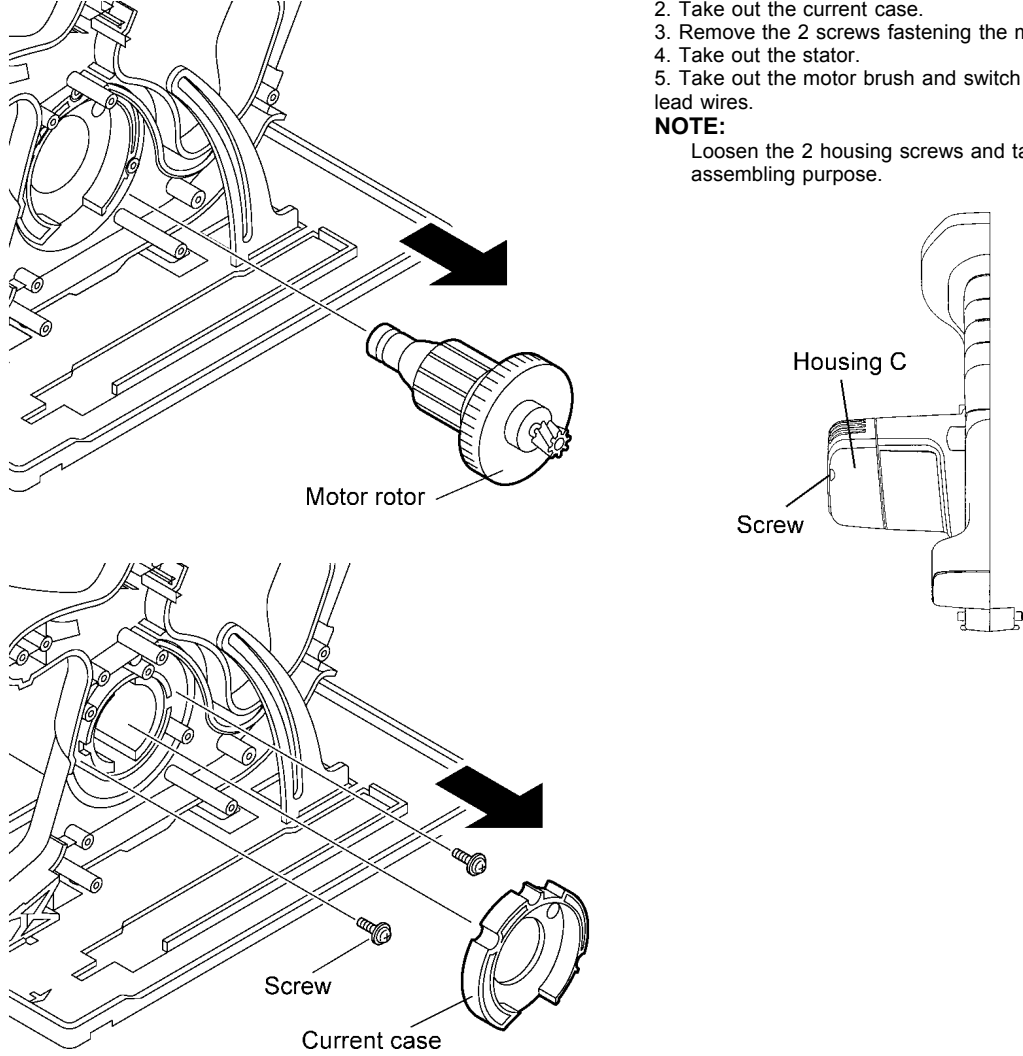
Procedure 2A → 2C

Removal of the Housing.



1. Loosen 7 housing screws (frearson type) and 1 (+) head screw. It is then possible to disassembly the main unit or to check the switch block and motor.

Ref. No. 2D	Procedure 2A → 2C → 2D	Removal of the gear box block.
		<ol style="list-style-type: none"> <li>1. Loosen the 4 screws where securing the driving block with the housing in order to take out the gear box block from the main unit.</li> <li>2. Remove the 4 screws and carefully open the gear box housing.</li> </ol> <p><b>NOTE:</b> The internal parts of gear box block can be removed one after another.</p> <p><b>NOTE:</b> The spring of spindle lock button may pop out.</p>

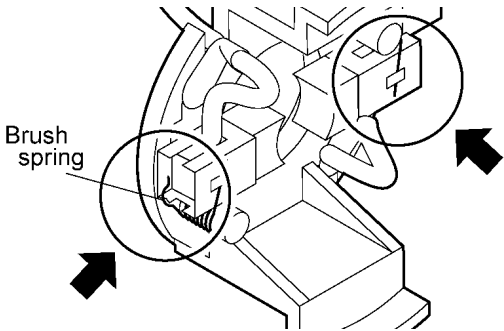
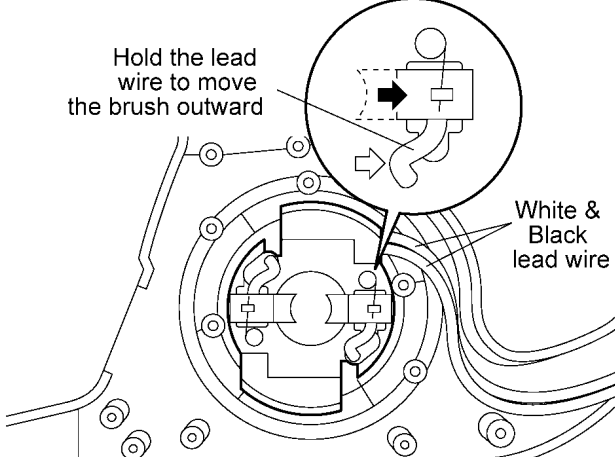
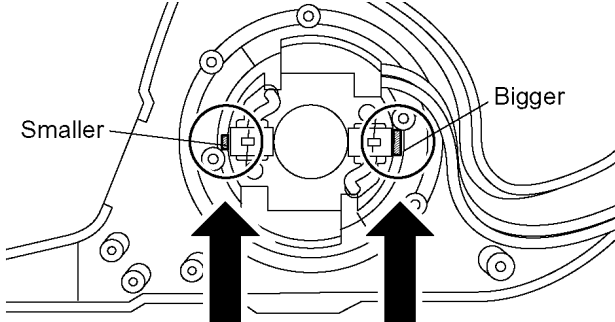
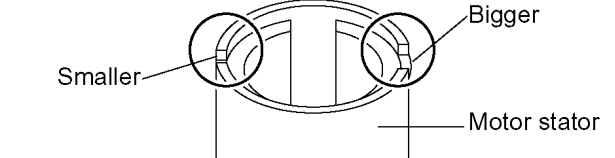
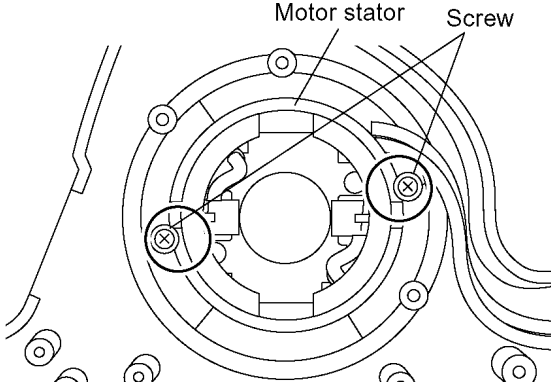
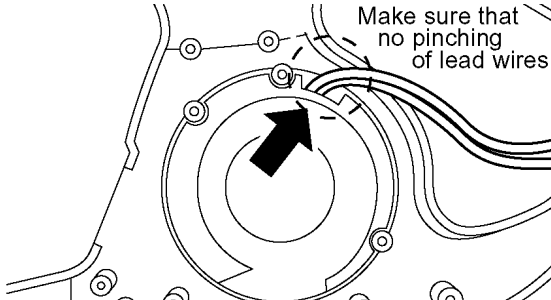
Ref. No. 2E	Procedure 2A → 2C → 2D → 2E	Assembly of the motor assembly.
		<ol style="list-style-type: none"> <li>1. Take out the motor rotor assembly from the motor stator.</li> <li>2. Take out the current case.</li> <li>3. Remove the 2 screws fastening the motor stator.</li> <li>4. Take out the stator.</li> <li>5. Take out the motor brush and switch assembly connected with lead wires.</li> </ol> <p><b>NOTE:</b> Loosen the 2 housing screws and take the housing C out for re-assembling purpose.</p>

# 4 ASSEMBLY INSTRUCTIONS

## CAUTION:

The proper operation of the "off lock lever" is critical for the safe use and operation of the saw/cutter. Be extra careful in re-assembling the unit and ensure that the "off lock lever" is properly positioned. Verify the operation of the "off lock lever" upon completing the re-assembly procedure. Ensure that the power switch can only be activated after depressing the "off lock lever".

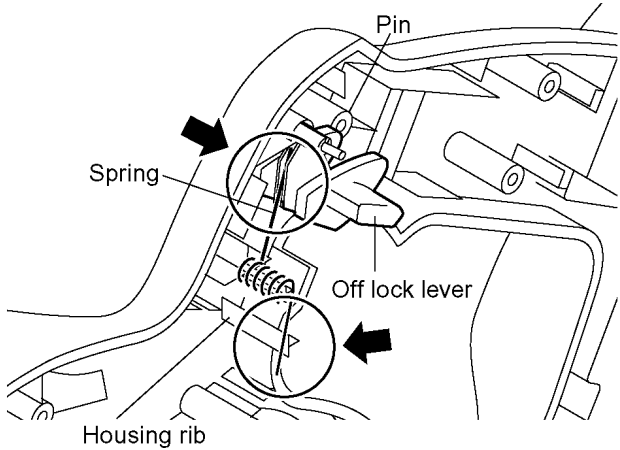
## ■ MAIN UNIT ASSEMBLY.

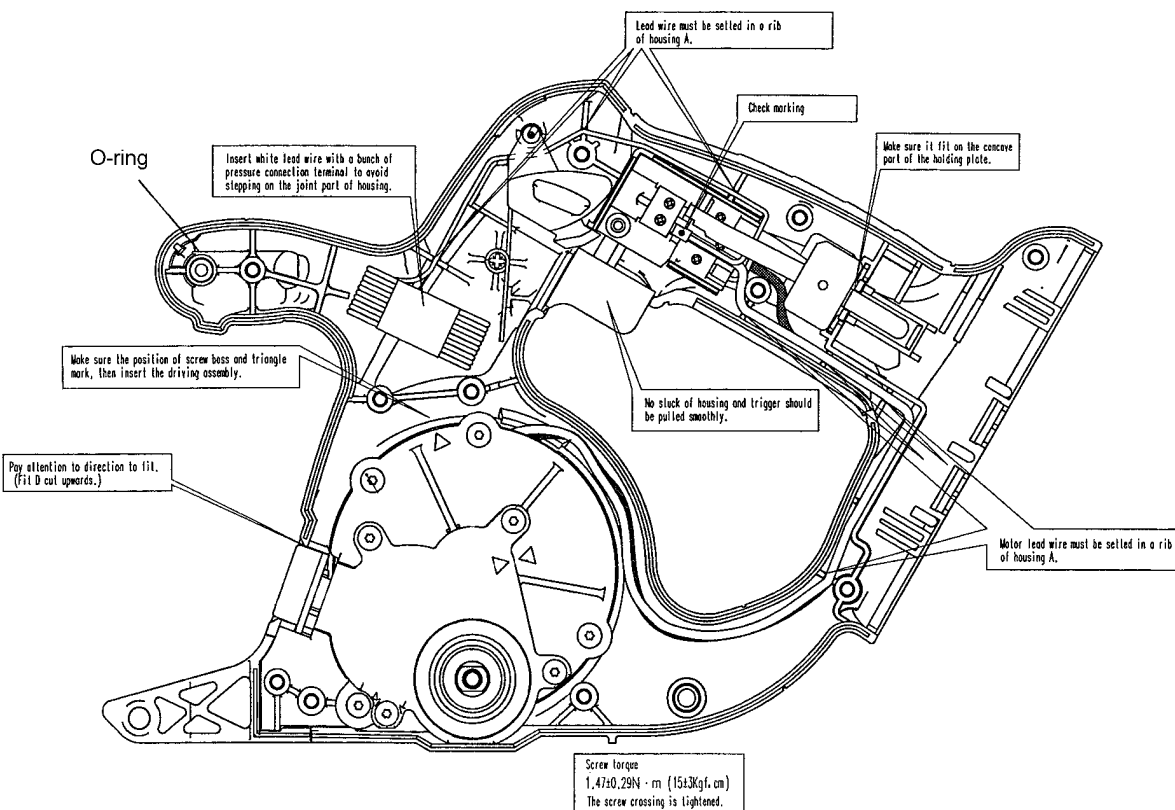
Ref. No. 3A	Procedure 3A	Assembly of the motor assembly.
 <p>Brush spring</p>	 <p>Hold the lead wire to move the brush outward</p> <p>White &amp; Black lead wire</p>  <p>Smaller</p> <p>Bigger</p>  <p>Smaller</p> <p>Bigger</p> <p>Motor stator</p>	<ol style="list-style-type: none"> <li>Hitch the brush spring to the frame by something like forceps.</li> <li>Set the motor brush assembly into the housing.</li> </ol> <p><b>NOTE:</b> Make sure that the white and black lead wire are set on upper right position.</p> <ol style="list-style-type: none"> <li>Put the motor brush in the case by sliding the lead wires outside on both sides.</li> <li>Set the motor stator.</li> </ol> <p><b>NOTE:</b> The motor stator has its own proper direction for assembly. Make sure to align the cut with the housing rib on both right and left side.</p> <ol style="list-style-type: none"> <li>Tighten the 2 screws.</li> </ol> <p><b>NOTE:</b> Make sure that the both screws may bite the motor stator on both sides slightly.</p> <ol style="list-style-type: none"> <li>Set the current plate into the housing.</li> </ol> <p><b>NOTE:</b> Make sure of the position of lead wires to prevent pinching.</p> <ol style="list-style-type: none"> <li>Insert the motor rotor and lightly tapping it to set firmly.</li> </ol>  <p>Motor stator</p> <p>Screw</p>  <p>Make sure that no pinching of lead wires</p>

<b>Ref. No. 3B</b>	<b>Procedure 3A → 3B</b>	<b>Assembly of the spindle lock button and gear box.</b>
<p style="margin-left: 20px;">D-cut Spring Spindle lock button</p> <p style="margin-left: 20px;">Triangle mark Screw Screw Gear box black</p>		<ol style="list-style-type: none"> <li>1. Push and hold the spindle lock button while inserting the gearbox block.</li> </ol> <p><b>NOTE:</b> Confirm the direction of the spindle lock button. Place D-cut on top.</p> <p>In case of the spindle lock button hardly insert into the gearbox block, rotate the shaft of gearbox slowly by hand.</p> <p>Make sure that the spring is set in the circle properly.</p> <ol style="list-style-type: none"> <li>2. Tighten the 4 screws crossing.</li> </ol> <p><b>NOTE:</b> Make sure to align the triangle mark of the gearbox with the housing.</p>
		<p style="margin-left: 20px;">Grease is applied to Pinion insertion part. Coating amount: One side 2g</p> <p style="margin-left: 20px;">Grease is applied to two tooth surface of the Power gear. Coating amount: One side 0.5g</p> <p style="margin-left: 20px;">Each points of the sticker in this area. less than 3.0</p>

<b>Ref. No. 3C</b>	<b>Procedure 3A → 3B → 3C</b>	<b>Assembly of the switch.</b>
<p style="margin-left: 20px;">White (thin &amp; thick) Battery terminal Switch Battery terminal White (thin) SW connection detail Black</p> <p style="margin-left: 20px;">Battery terminal</p> <p style="margin-left: 20px;">① White ② Black ③ White ④ White ⑤ Battery terminal</p>		<ol style="list-style-type: none"> <li>1. Wiring the thin white lead wire and the black motor lead wire on the proper positions.</li> <li>2. Attach the battery terminals.</li> <li>3. Wiring the white motor lead wire together with the thin white lead wire.</li> <li>4. Place the white lead wires (for braking) passes through between the black and white motor lead wires.</li> <li>5. Press fit the thin white lead wire (for braking) between screw bosses firmly.</li> </ol> <p><b>NOTE:</b> Be certain the lead wires are mounted in the proper position. Make sure that they are not set on the screw bosses or over the housing ribs.</p>
		<p style="margin-left: 20px;">Set lead wire in the groove.</p>



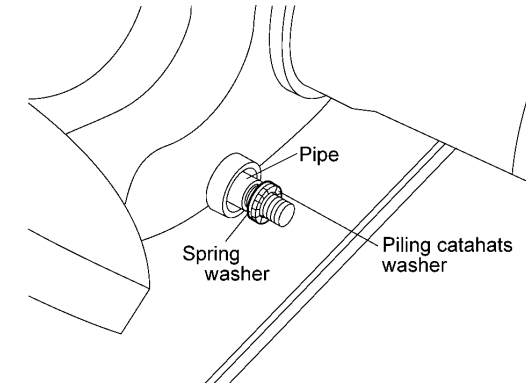
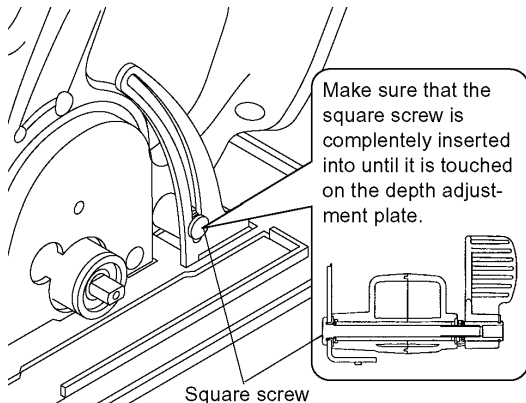
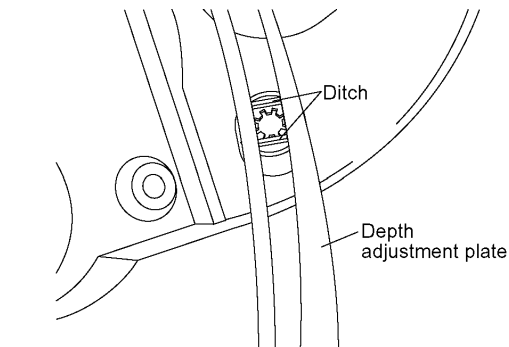
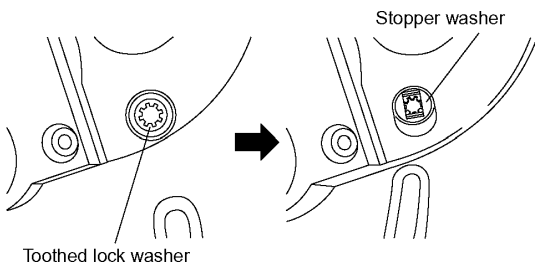
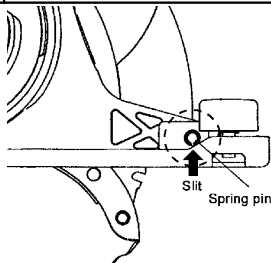
Ref. No. 3D	Procedure 3A → 3B → 3C → 3D	Assembly of the off lock lever.
		<ol style="list-style-type: none"> <li>1. Put the off lock lever into the housing boss.</li> <li>2. Insert the one side of lever spring into the groove of the off lock lever. And Hitch the other side of lever spring on the housing rib.</li> <li>3. Greasing (Shell Alvania) on top of pin and insert it into housing boss.</li> </ol>

Ref. No. 3E	Procedure 3A → 3B → 3C → 3D → 3E	Assembly of the housing.
		<ol style="list-style-type: none"> <li>1. Tighten the 7 frearson housing screws and 1 (+) head screw.</li> </ol> <p><b>NOTE:</b> Before closing the housing A and B, make sure that the O-ring is set properly.</p> <p>Make sure if battery terminals are set on housings.</p>

Ref. No. 3F

Procedure 3A → 3B → 3C → 3D → 3E → 3F

Assembly of the shoe.



1. Insert the spring pin with a rod having a diameter of 5mm.

**NOTE:**

Make sure that the slit part of spring is placed downward. And protrusion of spring pin should be uniform on both side.

2. Place the toothed lock washer inside and the stopper washer to the housing B.

3. Sliding the depth adjustment plate up with placing the stopper washer into the ditch of the depth adjustment plate.

4. Pass the square screw through.

5. Insert the pipe and place the spring washer and piling catharts washer from housing A side with holding the square screw by hand.

6. Insert the hex nut and the shoe up (parallel to the main body).

7. Tighten the hex nut with the depth adjustment lever at 30kgfcm.

8. Set the depth adjustment lever.

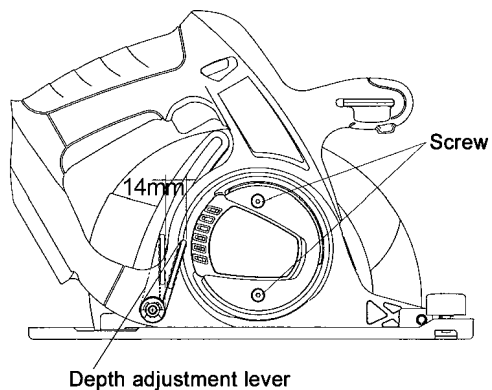
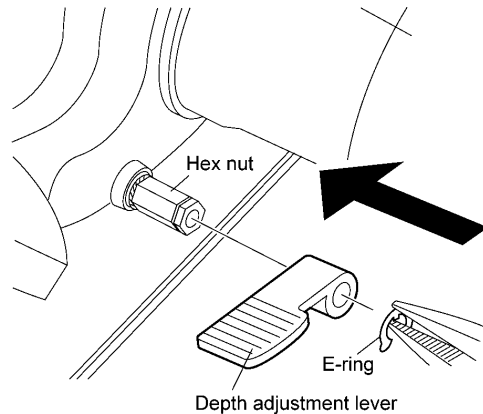
**NOTE:**

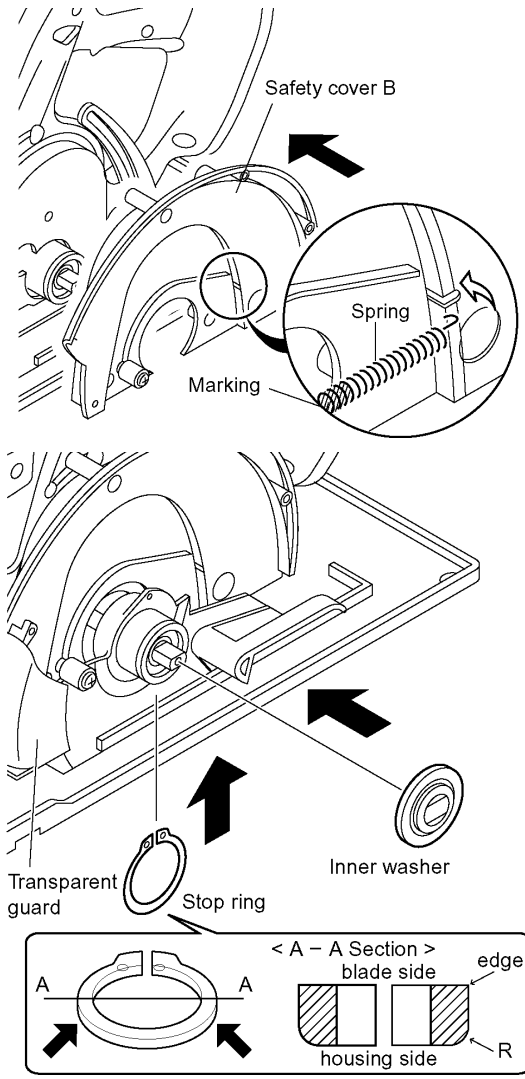
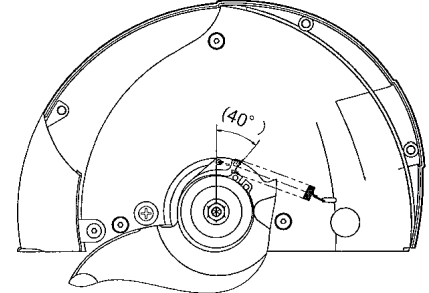
Make sure that the depth adjustment lever is set about 14mm away from housing. If the gap between housing and lever is less than 14mm, take the lever out and turn 30degree toward your side and try to set again.

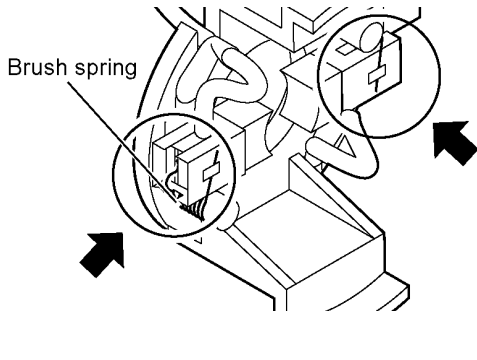
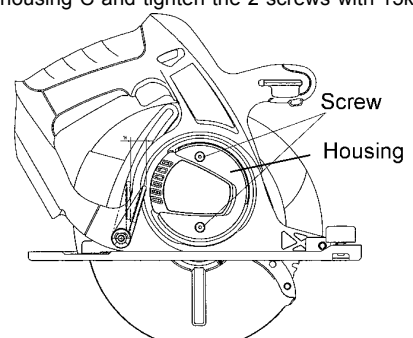
9. Attach the NEW E-ring with pliers.

**NOTE:**

Please use the new E-ring every time disassembling the depth adjustment lever assembly.

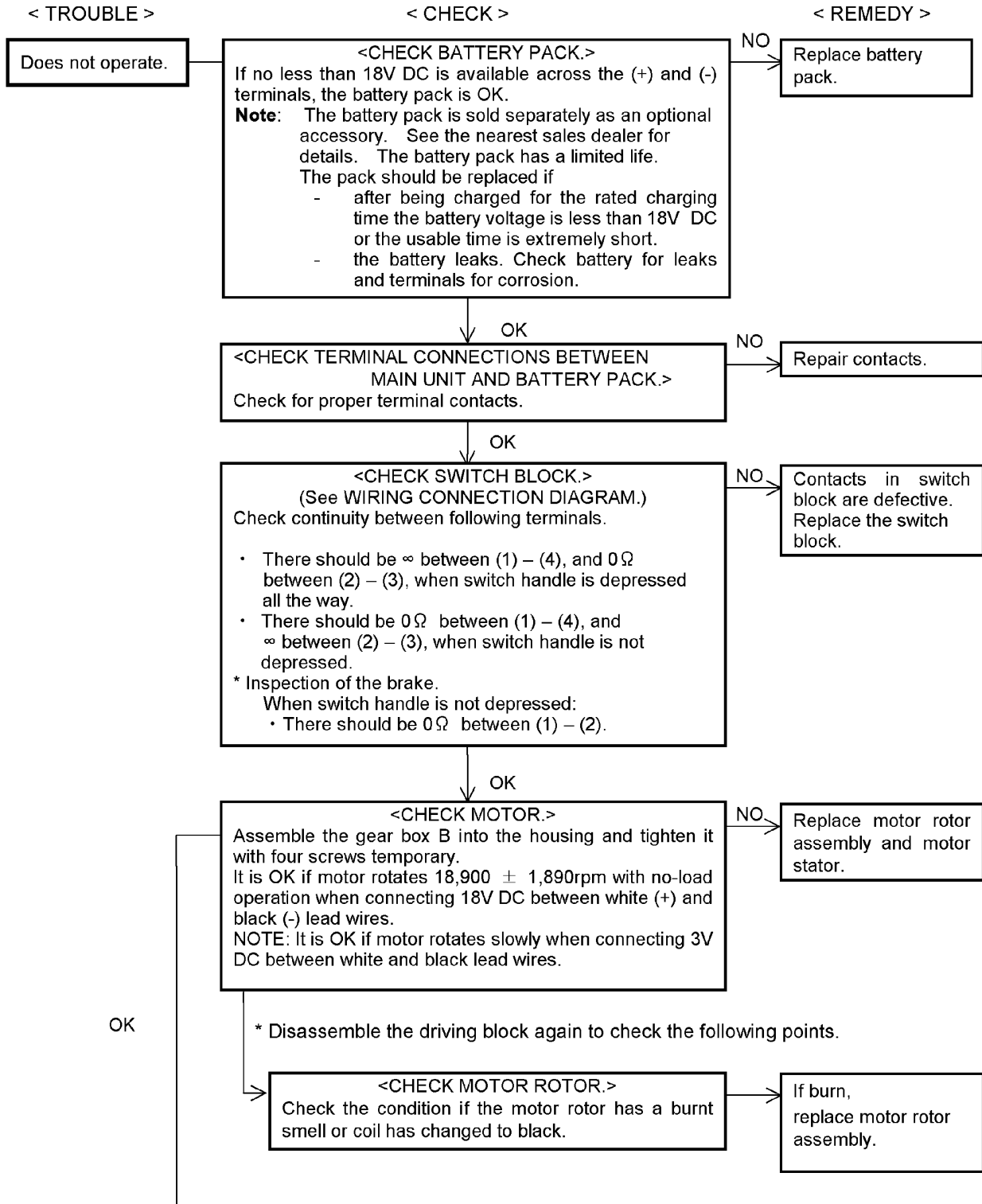


Ref. No. 3G	Procedure 3A → 3B → 3C → 3D → 3E → 3F → 3G	Assembly of the blade guard assembly.
		<ol style="list-style-type: none"> <li>1. Set the safty cover B with connecting the transparent guard and tighten the 3 screws. (EY3552)</li> <li>2. Hang the one side of spring (without marking side) on the safety cover B.</li> <li>3. Lightly greasing (ALVANIA) around the internal diameter and the external diameter on the rear side of the lower guard.</li> <li>4. Hang the other side of spring on the lower guard and set it to the main unit.</li> <li>5. Set the stop ring.</li> </ol> <p><b>NOTE:</b></p> <p>The stop ring has its own direction for assembly. Make sure that the rounded side faces housing.</p> <p>And make sure that 2 holes of stop ring should be placed upper right.</p> <ol style="list-style-type: none"> <li>6. Set the safety cover A and tighten the 3 screws with 25kgfcm.</li> <li>7. Set the inner washer and carefully set the blade.</li> <li>8. Set the outer washer and tighten the hex bolt using the provided hex wrench with holding the spindle lock button.</li> </ol> 

Ref. No. 3H	Procedure 3A → 3B → 3C → 3D → 3E → 3F → 3G → 3H	Assembly of the motor housing.
		<ol style="list-style-type: none"> <li>1. Return the brush spring into the groove of the motor brush on both sides.</li> <li>2. Attach the housing C and tighten the 2 screws with 15kgfcm.</li> </ol> 

# 5 TROUBLESHOOTING GUIDE

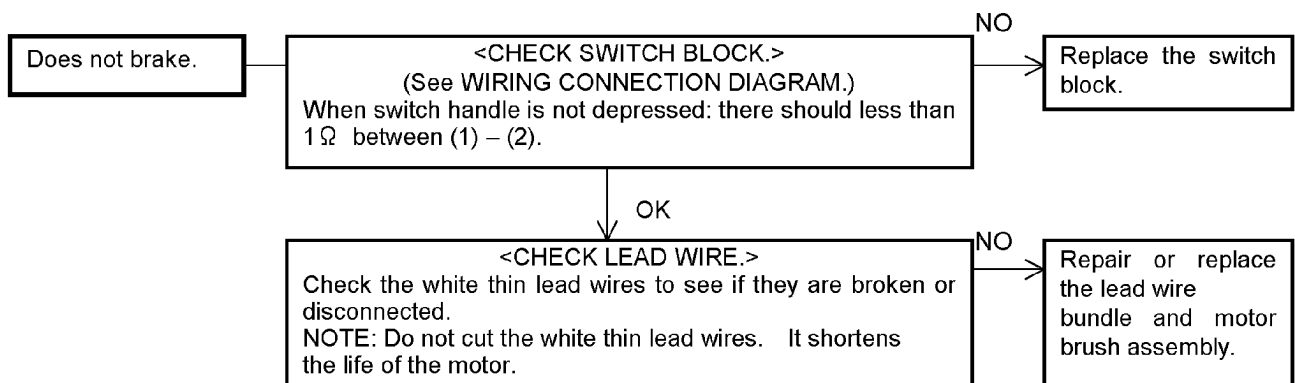
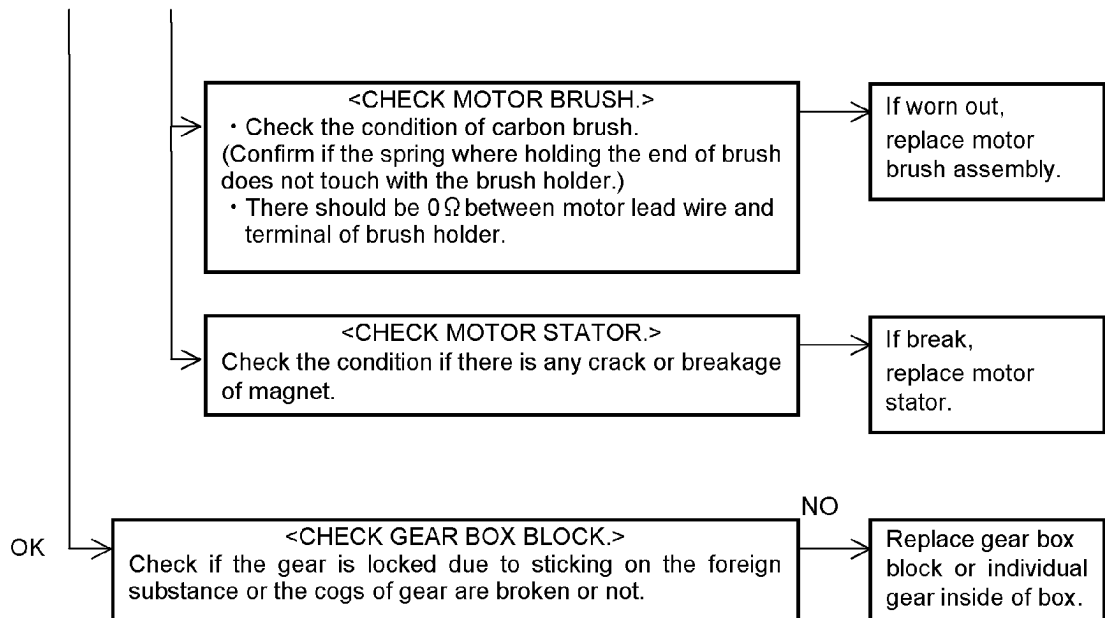
(Refer to WIRING CONNECTION DIAGRAM)



&lt; TROUBLE &gt;

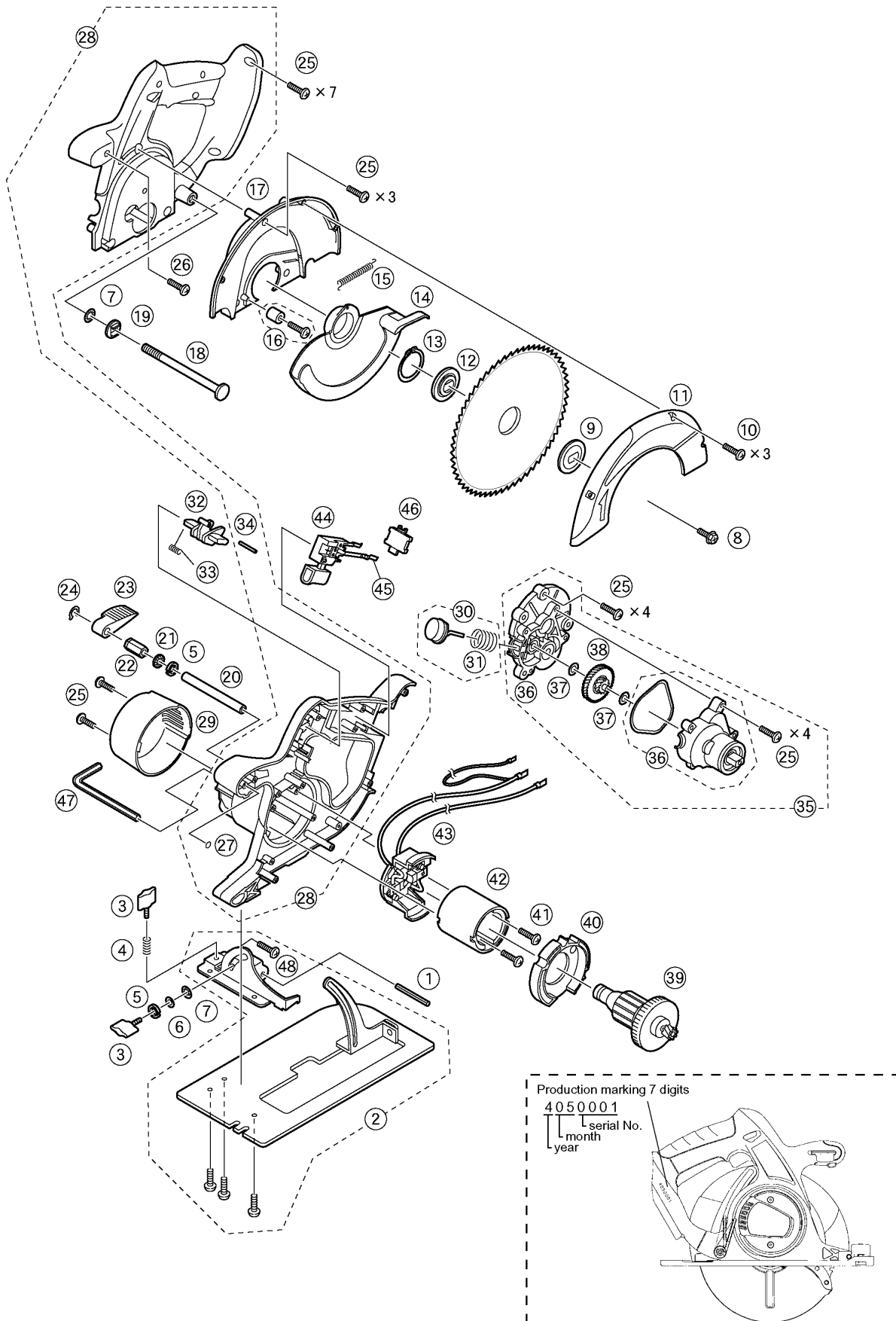
&lt; CHECK &gt;

&lt; REMEDY &gt;



# 6 EXPLODED VIEW & REPLACEMENT PARTS LIST

## 6.1. EXPLODED VIEW for EY3551



## 6.2. REPLACEMENT PARTS LIST for EY3551

### NOTE:

\*B=only available as set

\*C=available individually

Ref.No.	Part No.	Part Name & Description	Remarks	Per Unit
1	EY3500K0357	SPRING PIN	Φ 6-45	1
2	WEY3551S3428	BASE	▲	1
3	EY3503K6487	ADJUSTING BOLT	*C M5*10	2
4	EY3503K0197	SPRING	Φ 7.6*15	1
5	WEY3552S6388	SPRING WASHER	*C Φ 5	2
6	WEY3551S6398	PLAIN WASHER	Φ 5	1
7	WEY3552K6648	TOOTHED LOCK WASHER	*C	2
8	WEY3552S6258	FLANGE SOCKET	M5*12	1
9	WEY3552K1178	OUTER WASHER		1
10	WEY3552K6208	ALUMINUM TIGHT SCREW	*C 4*16	3
11	WEY3551S3108	SAFETY COVER A		1
12	WEY3552L1168	INNER WASHER		1
13	EY3503L0427	STOP RING		1
14	WEY3551Y1198	LOWER GUARD		1
15	WEY3552L0928	SPRING	Φ 5.9*49	1
16	WEY3552K0398	LOWER GUARD STOPPER		1
17	WEY3551S3118	SAFETY COVER B		1
18	WEY3503L6537	SQUARE SCREW		1
19	WEY3552S6688	STOPPER WASHER		1
20	WEY3552L0078	PIPE	Φ 8	1
21	WEY3552K6698	PILING CATAHATS WASHER		1
22	WEY3552S6348	DEPTH ADJUSTING NUT		1
23	WEY3552Y0897	DEPTH ADJUSTMENT LEVER		1
24	WEY3552S0168	E RING		1
25	EY3503K6208	FREARSON SCREW	*C K4*20	20
26	WEY3552K9078	TAPPING SCREW	K4*25	1
27	EY3530L0977	O RING		1
28	WEY3551K3078	HOUSING AB SET		1
29	WEY3551K3088	HOUSING C		1
30	WEY3552Y0368	SPINDLE LOCK BUTTON		1
31	WEY3552L0168	LOCK BUTTON SPRING	16.6*19.8	1
32	WEYT502Y1587	OFF LOCK LEVER		1
33	WEYT502L0917	OFF LOCK SPRING		1
34	WEY3552L0508	PIN	Φ 1.5	1
35	WEY3552L1458	GEAR BOX ASSEMBLY		1
36	WEY3552L1768	GEAR BOX		1
37	EY3503L0847	THRUST PLATE	*C	2
38	WEY3552L1438	MID GEAR		1
39	WEY3552L1468	MOTOR ROTOR ASSEMBLY		1
40	WEY3552L0448	CURRENT PLATE		1
41	WEY3552S9038	P TIGHT SCREW	*B K3*20 (2PCS/PK)	2
42	WEY3552L1188	STATOR		1
43	WEY3552L2308	BRUSH ASSEMBLY		1
44	WEY3551Y2008	SWITCH		1
45	WEY3551S0068	BATTERY CONTACTS		1
46	EY6230L0207	DUST PREVENTIVE PLATE		1
47	WEY3552K7868	HEX WRENCH		1
48	WEY3551S6298	SET SCREW		1
-	WEY3552K7018	TOOL CASE		1
-	WEY3551K8008	INDIVIDUAL BOX		1
-	WEY3551K8108	OPERATING INSTRUCTIONS		1

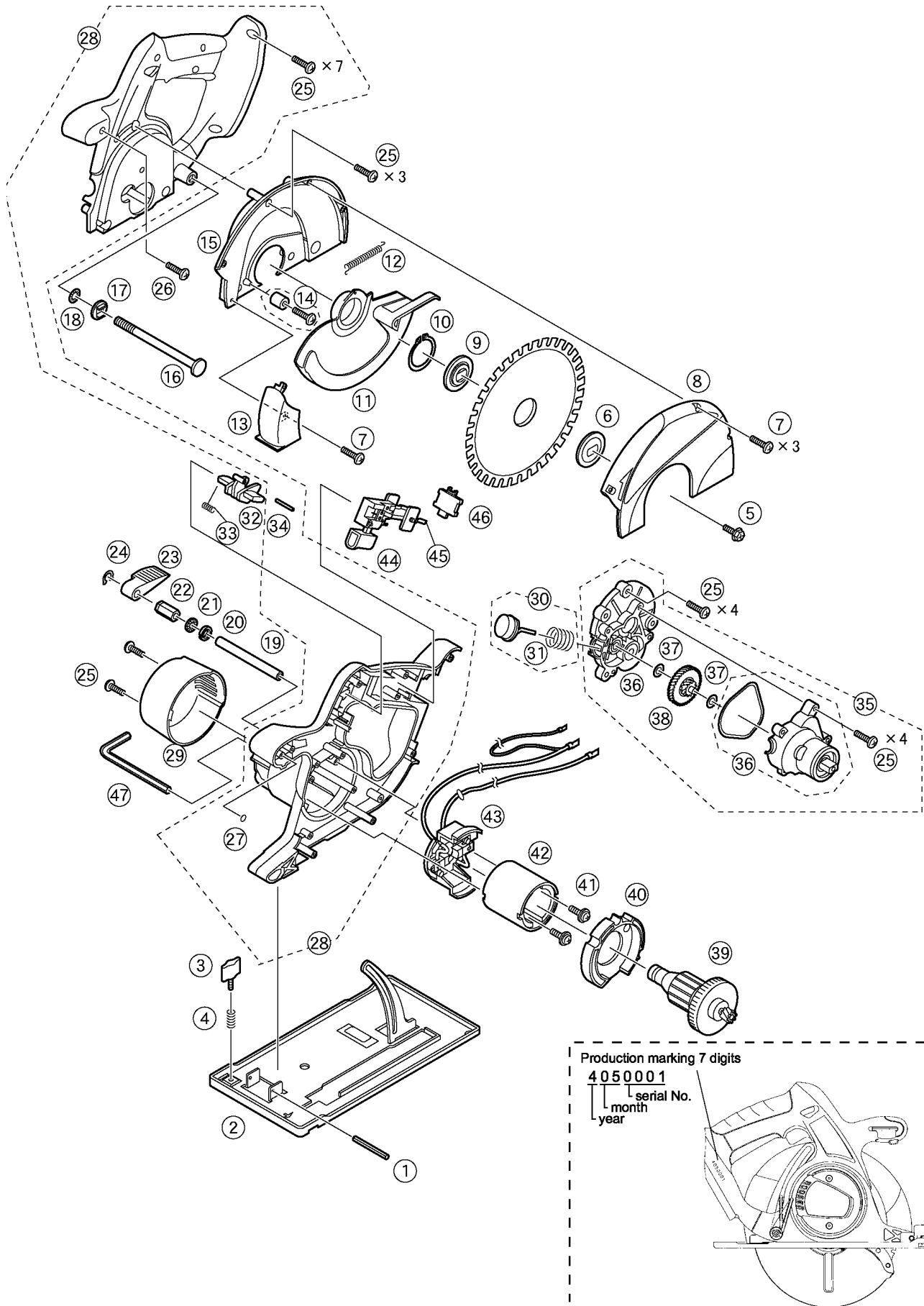
\*\*Battery Pack, and Tool Case are available as an optional accessory.

See the nearest sales dealer for details.

\*\*\*For replacement parts of charger, see the charger service manual.

Charger complete set is available as an optional accessory. See the nearest sales dealer for details.

### 6.3. EXPLODED VIEW for EY3552





## 6.4. REPLACEMENT PARTS LIST for EY3552

### NOTE:

\*B=only available as set

\*C=available individually

Ref.No.	Part No.	Part Name & Description	Remarks		Per Unit
1	EY3500K0357	SPRING PIN	∅ 6-45		1
2	WEY3552S3428	BASE		▲	1
3	EY3503K6487	ADJUSTING BOLT	M5*10		1
4	EY3503K0197	SPRING	∅ 7.6*15		1
5	WEY3552S6258	FLANGE SOCKET	M5*12	▲	1
6	WEY3552K1178	OUTER WASHER		▲	1
7	WEY3552K6208	ALUMINUM TIGHT SCREW	*C 4*16	▲	4
8	WEY3552S3108	SAFETY COVER A		▲	1
9	WEY3552L1168	INNER WASHER		▲	1
10	EY3503L0427	STOP RING			1
11	WEY3552Y1198	LOWER GUARD		▲	1
12	WEY3552L0928	SPRING	∅ 5.9*49	▲	1
13	WEY3552X3118	TRANSPARENT COVER		▲	1
14	WEY3552K0398	LOWER GUARD STOPPER		▲	1
15	WEY3552S3118	SAFETY COVER B		▲	1
16	WEY3503L6537	SQUARE SCREW		▲	1
17	WEY3552S6688	STOPPER WASHER		▲	1
18	WEY3552K6648	TOOTHED LOCK WASHER	∅ 5	▲	1
19	WEY3552L0078	PIPE	∅ 8	▲	1
20	WEY3552S6388	SPRING WASHER	∅ 5	▲	1
21	WEY3552K6698	PILING CATAHATS WASHER		▲	1
22	WEY3552S6348	DEPTH ADJUSTING NUT		▲	1
23	WEY3552Y0897	DEPTH ADJUSTMENT LEVER		▲	1
24	WEY3552S0168	E RING		▲	1
25	EY3503K6208	FREARSON SCREW	*C K4*20		20
26	WEY3552K9078	TAPPING SCREW	K4*25	▲	1
27	EY3530L0977	O RING			1
28	WEY3552K3078	HOUSING AB SET		▲	1
29	WEY3552K3088	HOUSING C		▲	1
30	WEY3552Y0368	SPINDLE LOCK BUTTON		▲	1
31	WEY3552L0168	LOCK BUTTON SPRING	16.6*19.8	▲	1
32	WEYT502Y1587	OFF LOCK LEVER		▲	1
33	WEYT502L0917	OFF LOCK SPRING		▲	1
34	WEY3552L0508	PIN	∅ 1.5	▲	1
35	WEY3552L1458	GEAR BOX ASSEMBLY		▲	1
36	WEY3552L1768	GEAR BOX		▲	1
37	EY3503L0847	THRUST PLATE	*C		2
38	WEY3552L1438	MID GEAR		▲	1
39	WEY3552L1468	MOTOR ROTOR ASSEMBLY		▲	1
40	WEY3552L0448	CURRENT PLATE		▲	1
41	WEY3552S9038	P TIGHT SCREW	*B K3*20 (2PCS/PK)	▲	2
42	WEY3552L1188	STATOR		▲	1
43	WEY3552L2308	BRUSH ASSEMBLY		▲	1
44	WEY3552Y2008	SWITCH		▲	1
45	WEY3552S0068	BATTERY CONTACTS		▲	1
46	EY6230L0207	DUST PREVENTIVE PLATE		▲	1
47	WEY3552K7868	HEX WRENCH		▲	1
-	WEY3552K7018	TOOL CASE		▲	1
-	WEY3552K8008	INDIVIDUAL BOX		▲	1
-	WEY3552K8108	OPERATING INSTRUCTIONS		▲	1

\*\*Battery Pack, and Tool Case are available as an optional accessory.

See the nearest sales dealer for details.

\*\*\*For replacement parts of charger, see the charger service manual.

Charger complete set is available as an optional accessory. See the nearest sales dealer for details.