

MODELS

C 12LDH

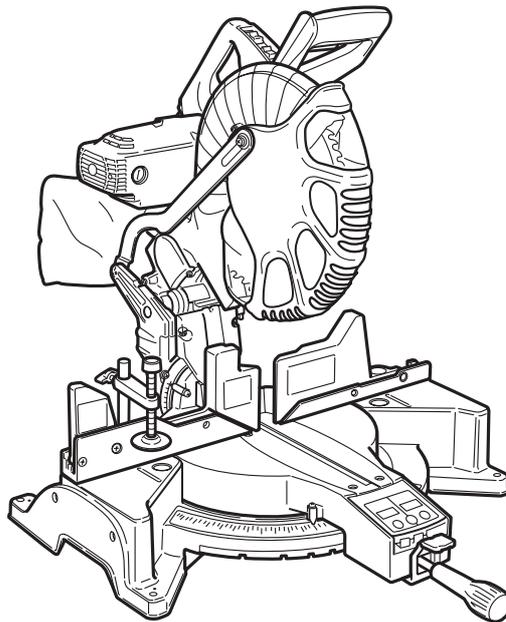
C 12FDH

Hitachi Power Tools

C

**COMPOUND MITER SAW
C 12LDH
C 12FDH**

**TECHNICAL DATA
AND
SERVICE MANUAL**



LIST Nos. C 12LDH: E943
C 12FDH: E944

Oct. 2005

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:

Symbol Utilized	Competitor	
	Company Name	Model Name
B	BOSCH	4212L
P	DEWALT	DW716
Q	DELTA	36-412

CONTENTS



	Page
1. PRODUCT NAME	1
2. MARKETING OBJECTIVE	1
3. APPLICATIONS	1
4. SELLING POINTS	1
4-1. Selling Point Descriptions	2
5. SPECIFICATIONS	4
6. COMPARISONS WITH SIMILAR PRODUCTS	6
7. PRECAUTIONS IN SALES PROMOTION	7
7-1. Instruction Manual	7
7-2. Warning Labels and Caution Labels	7
7-3. Relative Standards	9
7-4. Laser Marker	9
7-5. Ambient Illuminance and Visibility of Laser Line	10
8. ADJUSTMENT AND OPERATION PRECAUTIONS	11
8-1. Position Adjustment of Laser Line	11
8-2. Before Cutting	13
8-3. How to Use the Vise Assembly	14
8-4. Confirmation for Use of Sub Fence	15
8-5. Cutting Operation	17
8-6. Digital Display Panel (For Model C 12LDH)	22
9. ADJUSTMENT OF COMPONENTS	23
9-1. Bevel Angle Fine Adjustment	23
10. PACKING	24
11. PRECAUTIONS IN DISASSEMBLY AND REASSEMBLY	25
11-1. Precautions in Disassembly and Reassembly of the Laser Marker	25
11-2. Disassembly	25
11-3. Reassembly	35
11-4. Wiring Diagram	36
11-5. No-load Current	40
11-6. Reassembly Requiring Adjustment	40

Page

11-7. Lubrication41

11-8. Product Precision41

11-9. Adjustment of Laser Marker Accuracy42

11-10. Tightening Torque45

12. REPAIR GUIDE 46

13. STANDARD REPAIR TIME (UNIT) SCHEDULES 51

 Assembly Diagram for C 12LDH

 Assembly Diagram for C 12FDH

1. PRODUCT NAME

Hitachi Compound Miter Saw, Models C 12LDH and C 12FDH

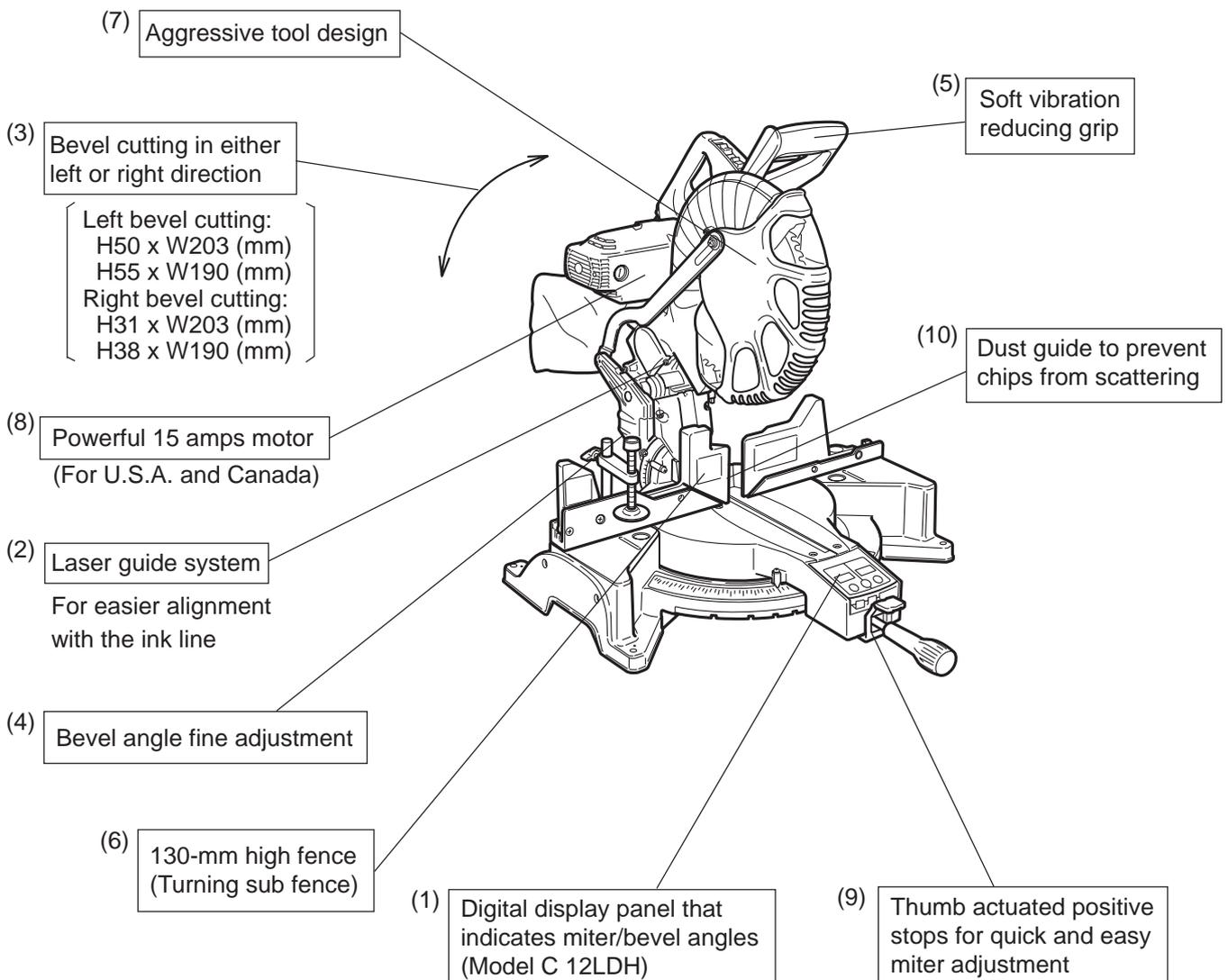
2. MARKETING OBJECTIVE

Following the 12" compound miter saw Model C 12LCH equipped with the laser marker, we introduce the new two 12" compound miter saws Models C 12LDH and C 12FDH. The Model C 12LDH is equipped with the class-first digital display panel that indicates miter/bevel angles. In addition, the Models C 12LDH and C 12FDH can perform bevel cutting at 45° in either left or right direction efficiently without moving the workpiece. With the new Models C 12LDH and C 12FDH, we aim to expand our market share.

3. APPLICATIONS

- Cutting various types of wood workpieces
- Cutting workpieces of plywood, decoration panels, soft fiberboard and hard board
- Cutting aluminum sashes

4. SELLING POINTS



4-1. Selling Point Descriptions

(1) Digital display panel that indicates miter/bevel angles (Model C 12LDH)

Use the digital display panel when cutting a workpiece at an optional angle. The class-first digital display panel indicates a miter/bevel cutting angle with a numeric value. There is no reading error caused by visual check between the indicator and the scale. The digital display indicates a miter angle or a bevel angle in increments of 0.5°. The digital display is equipped with the convenient back light ON/OFF switch that makes the display easily readable even in a dimly lit place.

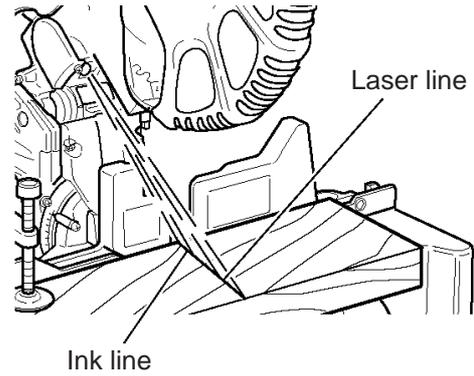


Fig. 1

(2) Laser guide system

Use the laser marker for aligning with the ink line on the workpiece.

- ① Cutting position can be properly adjusted by aligning the positioning ink line with the laser line. There is no need to make a long ink line on the workpiece.
- ② There is no need to lower the motor head to align with the ink line because the laser marker makes a laser line on the workpiece. In addition, cutting position can be easily adjusted because the operator can hold the workpiece with both hands to move.
- ③ Cutting position can be easily adjusted because the laser line can be aligned with an optionally angled ink line.
- ④ Even the workpieces such as crown moldings and base boards that have decorative surfaces and are difficult to be made an ink line can be cut just by aligning the laser line with the ink line on the fence side. The laser line is adjusted to the width of the saw blade at the time of factory shipment. Depending upon the user's cutting choice, the laser line can be aligned with the left side of the cutting width (saw blade) or the ink line on the right side. Adjust the position of the laser line according to "8-1. Position Adjustment of Laser Line" on page 11.

(3) Bevel cutting in either left or right direction

① Maximum cutting dimensions

Table 1

Maximum cutting dimensions	Maker • Model	Hitachi C 12LDH
Bevel left 45° Height x Width		50 x 203 [55 x 190]
Bevel right 45° Height x Width		31 x 203 [38 x 190]

The Models C 12LDH and C 12 FDH can perform bevel cutting for the workpieces shown in Table 1 by inclining the saw blade section in either left or right direction.

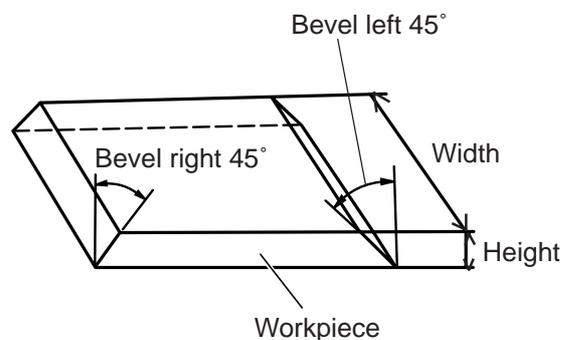


Fig. 2

(4) Bevel angle fine adjustment

The Models C 12LDH and C 12FDH are easily and finely adjustable to an optional bevel angle. Pulling the plate allows the bevel angle to be adjusted by about 48° to the left or about 48° to the right with one-touch simple operation.

(5) Soft, vibration reducing grip

The handle grip is comfortable and slip-resistant thanks to the integrally molded rubber. In addition, it reduces vibration transmitted to the operator's hand. The Models C 12LDH and C 12FDH are easier to operate.

(6) 130-mm high fence (Turning sub fence)

The Models C 12LDH and C 12FDH realize stable cutting thanks to the widely supportable high fence.

(7) Aggressive tool design

The tool color is gunmetallic silver to give a sturdier image. The circular saw portion is of a powerful, original and aggressive design.

(8) Powerful 15 amps motor

The Models C 12LDH and C 12FDH are equipped with a 15-ampere motor. The Models C 12LDH and C 12FDH can cut workpieces as quickly as the Model C 12LCH.

(9) Thumb actuated positive stops for quick and easy miter adjustment

The positive stops are provided to adjust the turn table position for miter cutting securely. These stops can be actuated (fixed or released) with thumb quickly and easily holding the side handle.

(10) Dust guide to prevent chips from scattering

A dust guide is provided to prevent wood chips from adhering to the saw blade and scattering when cutting the edge of the workpiece.

5. SPECIFICATIONS

Maximum cutting dimensions Height x Width	0° (Right angle)	70 mm (2-3/4") x 203 mm (8") 89 mm (3-1/2") x 190 mm (7-1/2")
	Miter right/left 45°	70 mm (2-3/4") x 140 mm (5-1/2")
	Miter right/left 52°	70 mm (2-3/4") x 120 mm (4-3/4")
	Bevel left 45°	50 mm (1-31/32") x 203 mm (8")
	Bevel right 45°	31 mm (1-7/32") x 203 mm (8")
	Miter right/left 45° + Bevel left 45°	50 mm (1-31/32") x 140 mm (5-1/2")
	Miter right/left 45° + Bevel right 45°	31 mm (1-7/32") x 140 mm (5-1/2")
Miter cutting ranges		Right and left 0° – 52°
Bevel cutting ranges		Right and left 0° – 48°
Compound (miter + bevel) cutting ranges		Miter: Right and left 0° – 45°, Bevel: Right and left 0° – 45°
Angle stopper positions		Right and left 0°, 15°, 22.5°, 31.6°, 45°
Saw blade outer diameter		305 mm (12") external dia.
Digital display (For Models C 12LDH)		Precision ± 0.5° (It is not the actual precision when cutting a wood workpiece.)
Laser marker	Maximum output	< 1 mW (CLASS II)
	Wave length	400 nm – 700 nm
	Laser medium	Laser diode
Power source type and voltage		AC single phase 60 Hz, 120 V
Type of motor		AC single phase commutator series motor
Full-load current		15 A
No-load rotation speed		4,000 min ⁻¹
Max. output		1,950 W
Main unit dimensions Width x Depth x Height		625 mm x 780 mm x 685 mm (24-5/8" x 30-23/32" x 27")
Weight	C 12LDH	21.5 kg (47.4 lbs.), gross weight 28 kg (61.7 lbs.)
	C 12FDH	21.0 kg (46.3 lbs.), gross weight 27.5 kg (60.6 lbs.)
Coating		Gunmetallic silver
Packaging		Corrugated cardboard box
Cord		Type: 2-conductor cable Length: 2.0 m (6.7 ft)
Standard accessories		<ul style="list-style-type: none"> • 305 mm (12") TCT saw blade (32 teeth, Code No. 323522) for wood cutting • Dust bag • Vise ass'y • 17 mm box wrench • 4 mm hex. bar wrench

Optional accessories	<ul style="list-style-type: none">• 305 mm (12") TCT saw blade (60 teeth, Code No. 305546)• Extension holder and stopper (Code No. 323523)• Crown molding vise ass'y (including crown molding stopper (L)) (Code No. 323545)• Crown molding stopper (L) (Code No. 323546)• Crown molding stopper (R) (Code No. 323547)
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6. COMPARISONS WITH SIMILAR PRODUCTS

Maker/Model		HITACHI C 12LDH/C 12FDH	P	Q	B
Max. cutting dimensions Height x Width	0° (Right angle)	70 mm x 203 mm (2-3/4" x 8") 89 mm x 190 mm (3-1/2" x 7-1/2")	74 mm x 201 mm (2-29/32" x 7-29/32") 89 mm x 188 mm (3-1/2" x 7-13/32")	63.5 mm x 235 mm (2-1/2" x 9-1/4") 89 mm x 165 mm (3-1/2" x 6-1/2")	63.5 mm x 200 mm (2-1/2" x 7-7/8") 100 mm x 155 mm (3-15/16" x 6-3/16")
	Miter right/left 45°	70 mm x 140 mm (2-3/4" x 5-1/2")	74 mm x 142 mm (2-29/32" x 5-19/32")	63.5 mm x 165 mm (2-1/2" x 6-1/2")	63.5 mm x 140 mm (2-1/2" x 5-1/2")
	Bevel left 45°	50 mm x 203 mm (1-31/32" x 8")	48 mm x 201 mm (1-7/8" x 7-29/32")	43 mm x 235 mm (1-11/16" x 9-1/4")	55 mm x 200 mm (2-3/16" x 7-7/8")
	Bevel right 45°	31 mm x 203 mm (1-7/32" x 8")	30 mm x 201 mm (1-3/16" x 7-29/32")	24 mm x 235 mm (15/16" x 9-1/4")	27 mm x 155 mm (1-1/16" x 6-3/16")
	Miter right/left 45° + Bevel left 45°	50 mm x 140 mm (1-31/32" x 5-1/2")	48 mm x 142 mm (1-7/8" x 5-19/32")	43 mm x 165 mm (1-11/16" x 6-1/2")	40 mm x 140 mm (1-9/16" x 5-1/2")
	Miter right/left 45° + Bevel right 45°	31 mm x 140 mm (1-7/32" x 5-1/2")	30 mm x 142 mm (1-3/16" x 5-19/32")	— (—)	— (—)
Miter cutting ranges		Right and left 0° – 52°	Right and left 0° – 50°	Right and left 0° – 48°	Right and left 0° – 52°
Bevel cutting ranges		Right and left 0° – 48°	Right and left 0° – 48°	Right and left 0° – 48°	Right and left 0° – 47°
Compound (miter + bevel) cutting ranges		Miter: Right and left 0° – 45° Bevel: Right and left 0° – 45°	Miter: Right and left 0° – 45° Bevel: Right and left 0° – 45°	Miter: Right and left 0° – 48° Bevel: Right and left 0° – 45°	Miter: Right and left 0° – 47° Bevel: Right and left 0° – 52°
Angle stopper position		Right and left 0°, 15°, 22.5°, 31.6°, 45°	Right and left 0°, 10°, 15°, 22.5°, 31.6°, 45°	Right and left 0°, 15°, 22.5°, 31.6°, 45°	Right and left 0°, 15°, 22.5°, 31.6°, 45°, 60°
Saw blade outer diameter (mm)		305 (12") (32 teeth)	305 (12") (60 teeth)	305 (12") (60 teeth)	305 (12") (40 teeth)
Digital display		Provided (Models C 12LDH)	None	None	None
Motor	Full-load current (A)	15	15	15	15
	No-load revolution (min ⁻¹)	4,000	4,000	4,200	3,800
	Power input (W)	1,520	—	—	—
	Max. output (W)	1,950	—	—	—
Laser marker		Provided	Provided	Not provided	Provided (Laser tracking)
Laser output		< 1 mW	—	—	—
Insulation structure		Double insulation	Double insulation	Double insulation	Double insulation
Dust guide		Provided (fixed)	None	None	None
Dust bag size (mm)		250 x 160 (9-27/32" x 6-5/16")	—	220 x 180 (8-21/32" x 7-3/32")	300 x 200 (11-13/16" x 7-7/8")
Main unit dimensions Width x Depth x Height		625 x 780 x 685 (24-5/8" x 30-23/32" x 27")	625 x 690 x 655 (24-5/8" x 27-5/32" x 25-25/32")	630 x 670 x 735 (24-13/16" x 26-3/8" x 28-15/16")	645 x 760 x 730 (25-13/32" x 29-15/16" x 28-3/4")
Product weight (kg)		C 12LDH 21.5 (47.4 lbs.) C 12FDH 21 (46.3 lbs.)	20.5 (45.1 lbs.)	24.0 (52.8 lbs.)	26.0 (57.2 lbs.)
Standard accessories		<ul style="list-style-type: none"> • 305 mm (12") TCT saw blade (32 teeth) for wood cutting • Dust bag • Vise ass'y • 17 mm box wrench • 4 mm hex. bar wrench 	<ul style="list-style-type: none"> • 305 mm (12") saw blade (60 teeth) • Dust bag • Blade wrench 	<ul style="list-style-type: none"> • 305 mm (12") saw blade (60 teeth) • Dust bag • Dust spout • Blade shroud • 1/2 Arbor wrench • M4 pan head screw • Open end 7/16" wrench 	<ul style="list-style-type: none"> • 305 mm (12") saw blade (40 teeth) • Vise Ass'y • Crown molding stopper ass'y • Dust bag • Multi purpose tool • 3 mm hex. bar wrench • 10 mm/17 mm wrench • Combination square
Optional accessories		<ul style="list-style-type: none"> • 305 mm (12") TCT saw blade (60 teeth) for normal cutting • Extension holder and stopper • Crown molding vise ass'y (including crown molding stopper (L)) • Crown molding stopper (L) • Crown molding stopper (R) 	<ul style="list-style-type: none"> • Extension kit • Length stop • Crown stops • Material clamp 		

7. PRECAUTIONS IN SALES PROMOTION

In the interest of promoting the safest and most efficient use of the Models C 12LDH and C 12FDH Compound Miter Saws 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 Warning Labels and Caution Labels 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 compound miter 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 miter saw are listed in the Instruction Manual to enhance the safe, efficient use of the tool by the customer. Salespersons must be thoroughly familiar with the contents of the Instruction Manual to be able to offer appropriate guidance to the customer during sales promotion.

7-2. Warning Labels and Caution Labels

(1) Precautions on the name plate

Each Model C 12LDH/C 12FDH is furnished with a Name Plate that lists the following precautions.

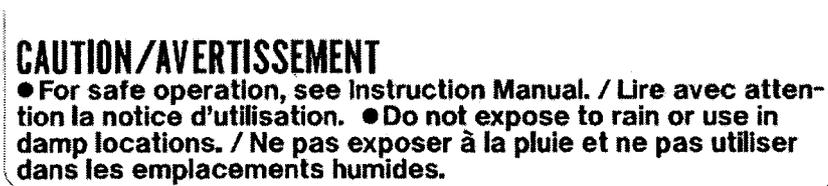


Fig. 3

(2) Warning label (A)

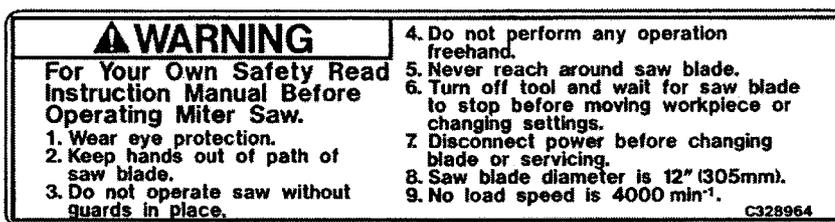


Fig. 4

Warning label (A) specified by the UL is affixed on the right side of the base. Please instruct users to strictly observe the contents 1 to 9 in warning label (A) shown above.

(3) Caution label (B) (at the side of the gear case)

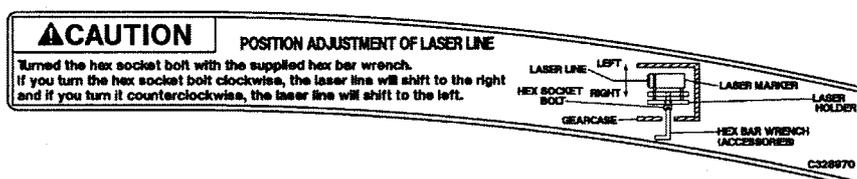


Fig. 5

(4) Caution label (A) (at the front of the hinge) and caution label (C) (at the front of the base)

Do not stare into laser beam. If your eye is exposed directly to the laser beam, it can be hurt. Caution label (A) and caution label (C) are adhered to each machine to comply with the standards for the safe use of laser equipment.

- Caution label (A) (at the front of the hinge)

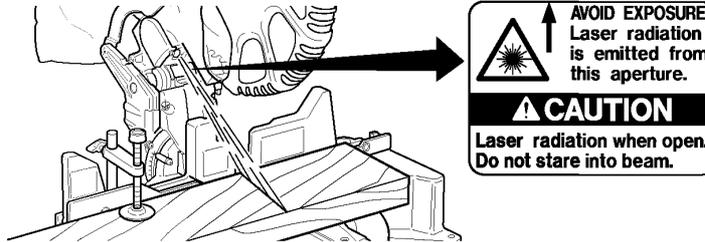


Fig. 6

- Caution label (C) (at the front of the base)

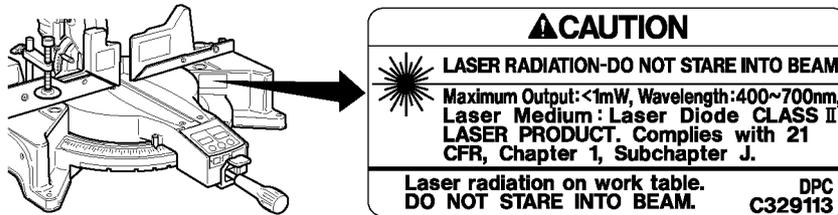


Fig. 7

(5) Warning label (M) (at the front of sub fence (A) (standard accessory))



Fig. 8

(6) Caution label (L) (at the front of sub fence (B) (standard accessory))

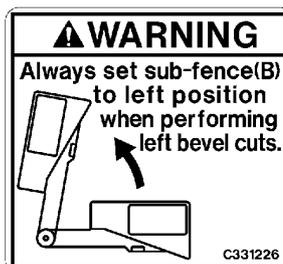


Fig. 9

(7) Warning label (O) (at the front of sub fence (C) (standard accessory))

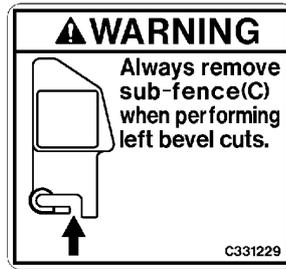


Fig. 10

7-3. Relative Standards

Standards, regulations and guidelines for the safe use of laser equipment.

[The U. S. A.]

There is a standard "Complies with 21 Code of Federal Regulation (21 CFR), Chapter 1, Subchapter J, Part 1010 and 1040" established by the Center for Devices and Radiological Health (CDRH) of the Food and Drug Administration (FDA). Standards, regulations and guidelines of the other countries are under investigation.

7-4. Laser Marker

The Models C 12LDH and C 12FDH are equipped with the laser marker that complies with the U. S. A. standard, FDA Complies with 21 CFR, Food and Drugs, Part 1040 "Performance Standard for Light-emitting Products", Class II. The Class II laser is defined as follows:

- The laser power is low and it is safe by the protective measures such as blinking. However, it is dangerous if the operator's eyes are exposed directly to the laser for a protracted period.
- The operator can use the laser equipment without particular training and instruction.
- The amount of light exposure (output) is 1 mW or less at the position where the operator can be exposed to the laser radiation during operation.

Table 2

Wave length (nm)	Emission duration (s)	Class II accessible emission limit		
		(Threshold value)	(Unit)	(Amount)
> 400 ≤ 710	> 2.5 x 10 ⁻¹	1.0 x 10 ⁻³	W	Radiant power

The saw blade unit prevents access of the operator's eye to the laser emitting aperture less than 65 mm. In addition, the amount of light exposure (output) is 1 mW or less (about 0.4 mW) at this position. Thus the Models C 12LDH and C 12FDH satisfy the Class II requirements adequately. There is no ill effect on the operator's body if looking at the laser line on the workpiece during operation.

CAUTION: (1) Be sure to disconnect the power cord plug from the receptacle before removing the laser marker for repair. If it is unavoidable to check the operation of the removed laser marker with the power turned on, face the laser emitting aperture to the ground to show the laser line on the ground.

(2) Laser radiation when open. DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.

The lifespan of the laser marker in the Models C 12LDH and C 12FDH are about 2,160 hours. (About three years: 4 hours of use/day x 180 days/year)

7-5. Ambient Illuminance and Visibility of Laser Line

The visibility of the laser line on the workpiece changes depending on the brightness of the working environment. Instruct the customer to consider the brightness of the working environment when using the laser marker referring to the following table.

Table 3 Ambient illuminance and visibility of laser line

Illuminance (lux)		3000 or more	3000 or more	3000 - 2500	800 - 600	300 - 200	150 - 80	30 or less
Ambient conditions (reference)	Outdoor	Under direct sunlight of fine weather	Shaded area in fine weather	Cloudy weather	Shaded area in cloudy weather	Just before the sunset in cloudy weather	—	Ink line is invisible.
	Indoor	—	Near the window under fine weather	Indoor under fine weather	Near the window under cloudy weather	Indoor under cloudy weather	Near the window under cloudy weather, just before the sunset	
Laser line		Invisible	Visible	Visible	Visible	Visible	Glaring	Glaring

(The working environment where the illuminance is 200 luxes or less is dark and difficult to operate the Models C 12LDH and C 12FDH.)

The laser line is invisible under direct sunlight of fine weather. Prepare a shaded area or relocate to a shaded area to operate the Models C 12LDH and C 12FDH .

8. ADJUSTMENT AND OPERATION PRECAUTIONS

8-1. Position Adjustment of Laser Line

The Models C 12LDH and C 12 FDH are equipped with the laser marker for easy alignment with the ink line on the workpiece. Turn on the digital display switch first then turn on the laser marker switch. In the case of the Model C 12LDH, the laser marker does not light if the digital display switch is turned off.

The laser line is adjusted to the width of the saw blade at the time of factory shipment. Depending upon the cutting choice, align the laser line with the left side of the cutting width (saw blade) or the right side according to the following procedure. First, make a right-angle ink line on the workpiece that is about 38 mm (1-1/2") in height and 89 mm (3-1/2") in width. To cut the right side of the ink line with the saw blade as shown in Fig. 14, align the left side of the saw blade with the ink line on the workpiece and make a groove of about 5 mm deep on the workpiece to the middle. Hold the grooved workpiece by the vise as it is and do not move it. Light up the laser marker. Then insert a 4 mm hex. bar wrench in the 12 diameter hole on the side of the gear case, turn the hex. socket set screw to move the laser line. (If you turn the hex. socket screw clockwise, the laser line will shift to the right and if you turn it counterclockwise, the laser line will shift to the left.) (Fig. 13)

Thus the cutting position matches the laser line position. Align the ink line on the workpiece with the laser line. When aligning the ink line, slide the workpiece little by little and secure it by vise at a position where the laser line overlaps with the ink line (Fig. 14). Work on the grooving again and check the position of the laser line. When the ink line and the laser line are overlapped, the strength and weakness of light will change, resulting in a stable cutting operation because you can easily discern the conformity of lines. This ensures the minimum cutting errors.

⚠ WARNING:

- Make sure before plugging the power plug into the receptacle that the main body and the laser marker are turned off.
- Exercise utmost caution in handling a switch trigger for the position adjustment of the laser line, as the power plug is plugged into the receptacle during operation. If the switch trigger is pulled inadvertently, the saw blade can rotate and result in unexpected accidents.
- Do not remove the laser marker to be used for other purposes.

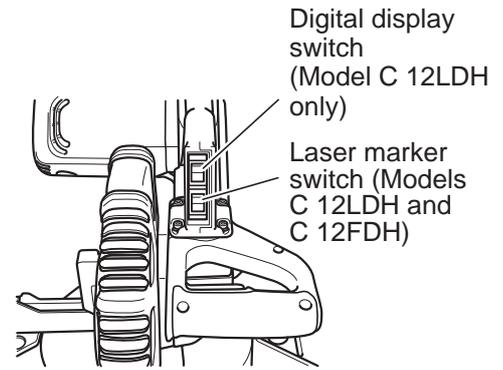


Fig. 11

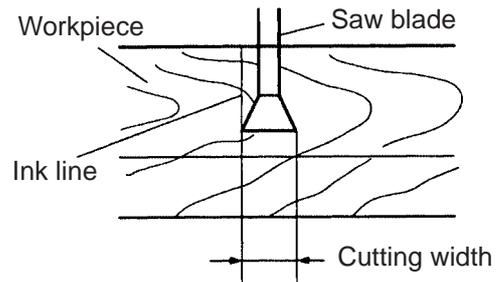


Fig. 12

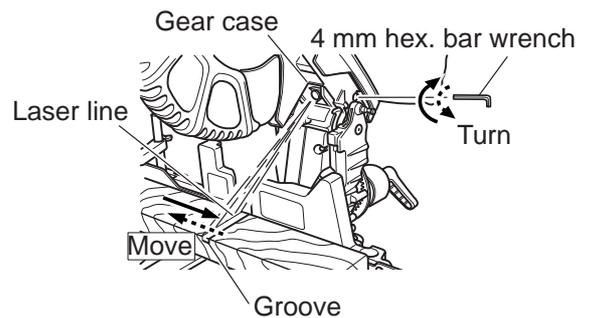


Fig. 13

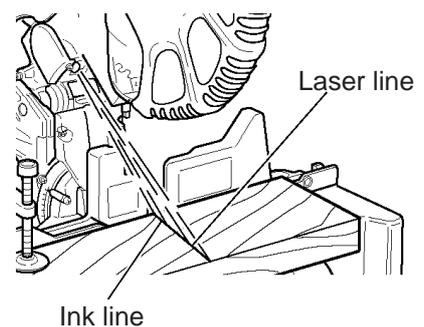


Fig. 14

⚠ CAUTION:

- **Laser radiation - Do not stare into beam.**
- **Laser radiation on work table. Do not stare into beam. If your eye is exposed directly to the laser beam, it can be hurt.**
- **Do not dismantle it.**
- **Do not give strong impact to the laser marker (main body of tool); otherwise, the position of a laser line can go out of order, resulting in the damage of the laser marker as well as a shortened service life.**
- **Keep the laser marker lit only during a cutting operation. Prolonged lighting of the laser marker can result in a shortened service life.**
- **Use of controls adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.**

NOTE:

- **Perform cutting by overlapping the ink line with the laser line. When the ink line and the laser line are overlapped, the strength and weakness of light will change, resulting in a stable cutting operation because you can easily discern the conformity of lines. This ensures the minimum cutting errors.**
- **In outdoor or near-the-window operations, it may become difficult to observe the laser line due to the sunlight. Under such circumstances, move to a place that is not directly under the sunlight and engage in the operation.**
- **Do not tug on the cord behind the motor head or hook your finger, wood and the like around it; otherwise, the cord may come off and the laser marker may not be lit up.**
- **The laser marker will not light up if the digital display switch is turned off. (Only Model C 12LDH)**

Instruct the above precautions on the laser marker to the customers.

8-2. Before Cutting

(1) Oblique angle

Before the power tool is shipped from the factory, it is adjusted for 0°, right angle, left 45° bevel cutting angle and right 45° bevel cutting angle with 8 mm bolt (A), 8 mm bolt (B) and 8 mm bolt (C). When changing the adjustment, change the height of 8 mm bolt (A), 8 mm bolt (B) or 8 mm bolt (C) by turning them.

When changing the bevel angle to the right 45°, pull the set pin on the direction shown in Fig. 8-b and incline the motor head to the right.

When adjusting the motor head to 0°, always return the set pin to its initial position as shown in Fig. 15-a.

NOTE: Do not adjust the 8 mm bolt with bevel plates (Fig. 15-a) pulled.

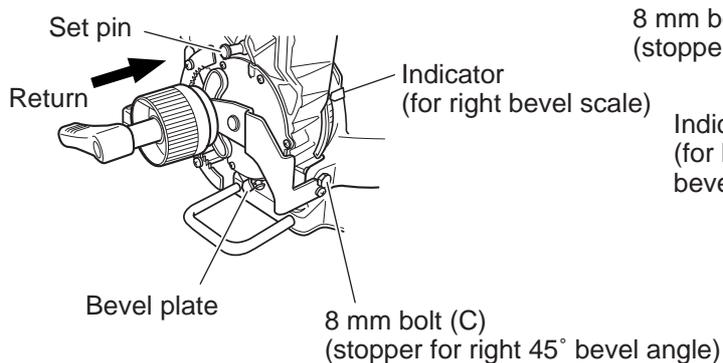


Fig. 15-a

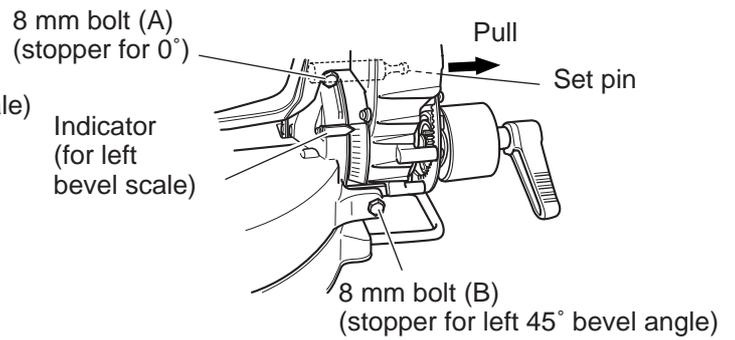


Fig. 15-b

(2) Securing the workpiece

⚠ WARNING: Always clamp or vise to secure the workpiece to the fence; otherwise the workpiece might be thrust from the table and cause bodily harm.

(3) Installing the holders (Optional accessory)

The holders help keep longer workpieces stable and in place during the cutting operation.

(1) As indicated in Fig. 16, use a steel square for aligning the upper edge of the holders with the base surface. Loosen the 6 mm wing nut. Turn a height adjustment bolt 6 mm, and adjust the height of the holder.

(2) After adjustment, firmly tighten the wing nut and fasten the holder with the 6 mm wing bolt (optional accessory). If the length of the height adjustment bolt 6 mm is insufficient, spread a thin plate beneath. Make sure the end of the height adjustment bolt 6 mm does not protrude from the holder.

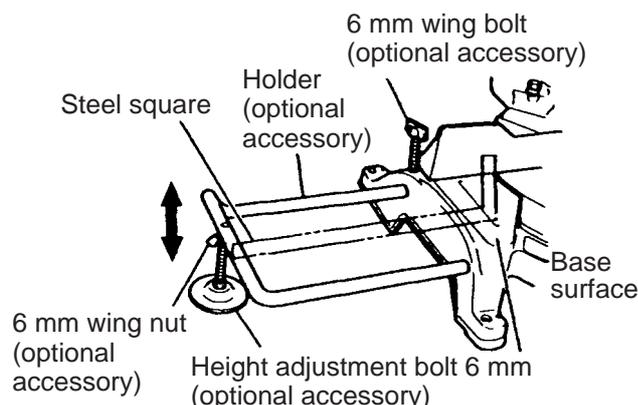


Fig. 16

- (4) Stopper for precision cutting (Stopper and holder are optional accessory)

The stopper facilitates continuous precision cutting in lengths of 11" to 17-3/4" (280 mm to 450 mm).

To install the stopper, attach it to the holder with the 6 mm wing bolt as shown in Fig. 17.

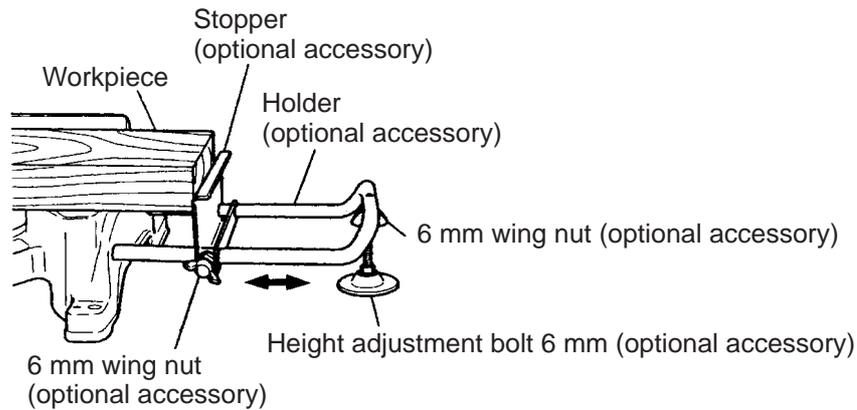


Fig. 17

8-3. How to Use the Vise Assembly

- (1) The vise assembly can be mounted on either the left fence (fence (B)) or the right fence (fence (A)) by loosening 6 mm wing bolt (A).
- (2) The screw holder can be raised or lowered according to the height of the workpiece by loosening 6 mm wing bolt (B). After the adjustment, firmly tighten 6 mm wing bolt (B) and fix the screw holder.
- (3) Turn the upper knob and securely fix the workpiece in position (Fig. 18).

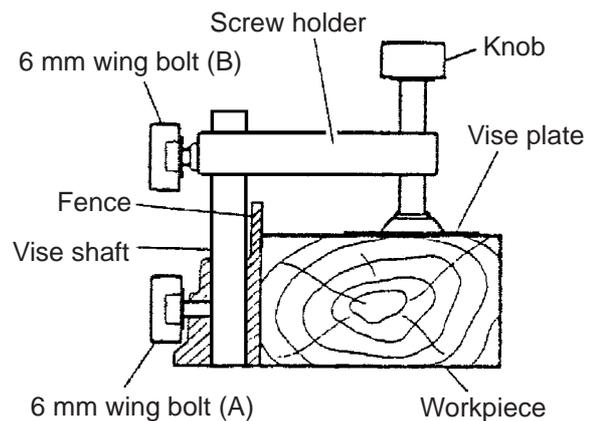


Fig. 18

⚠ WARNING: Always firmly clamp or vise to secure the workpiece to the fence; otherwise the workpiece might be thrust from the table and cause bodily harm.

⚠ CAUTION: Always confirm that the motor head does not contact the vise assembly when it is lowered for cutting. If there is any danger that it may do so, loosen 6 mm wing bolt (B) and move the vise assembly to a position where it will not contact the saw blade.

8-4. Confirmation for Use of Sub Fence

(1) Confirmation for use of sub fence (A)

⚠ WARNING: In the case of right bevel cutting, turn sub fence (A) clockwise. Unless it is turned clockwise, the main body or saw blade may contact sub fence (A), resulting in an injury.

This power tool is equipped with sub fence (A).
In the case of direct angle cutting and left bevel angle cutting, use sub fence (A). Then you can realize stable cutting of the material with a wide back face.
In the case of right bevel cutting, raise sub fence (A) up as illustrated in Fig. 19 and then turn it clockwise.

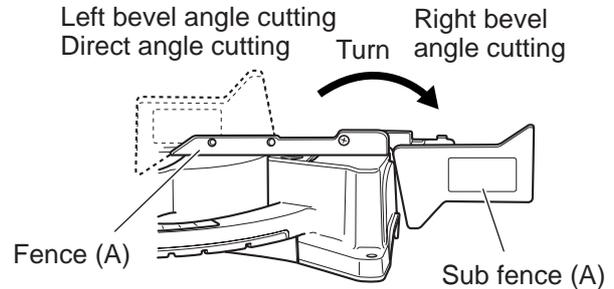


Fig. 19

(2) Confirmation for use of sub fence (B)

⚠ WARNING: In the case of left bevel cutting, turn sub fence (B) counterclockwise. Unless it is turned counterclockwise, the main body or saw blade may contact sub fence (B), resulting in an injury.

This power tool is equipped with sub fence (B). In the case of direct angle cutting and right bevel angle cutting, use sub fence (B). Then you can realize stable cutting of the material with a wide back face.
In the case of left bevel cutting, raise sub fence (B) up as illustrated in Fig. 20 and turn it counterclockwise.

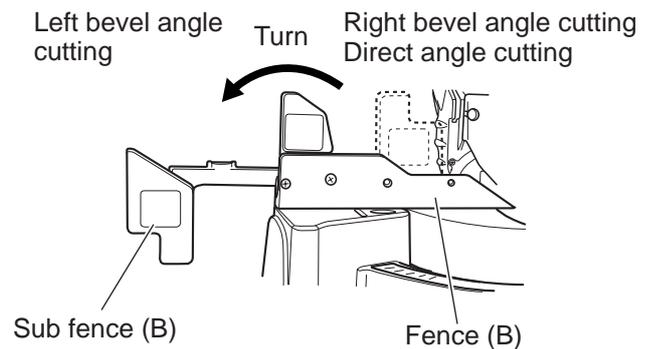


Fig. 20

(3) Confirmation for use of sub fence (C)

⚠ WARNING: In the case of left bevel angle cutting, remove sub fence (C). If sub fence (C) is not removed, sub fence (C) will contact the main unit or the saw blade and result in injury.

This power tool is equipped with sub fence (C). In the case of direct angle cutting and right bevel angle cutting, use sub fence (C). (Fig. 21)
Then you can realize stable cutting of the material with a wide back face.

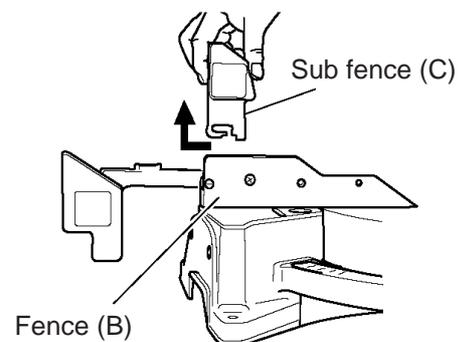


Fig. 21

In the case of left bevel angle cutting, remove sub fence (C) by sliding to the side and removing from the top as shown in Fig. 21. Loosen knob (B) then remove sub fence (C) (Fig. 22).

⚠ WARNING: To attach sub fence (C), insert then securely tighten knob (B). If knob (B) is loose, sub fence (C) may move during cutting and result in injury.

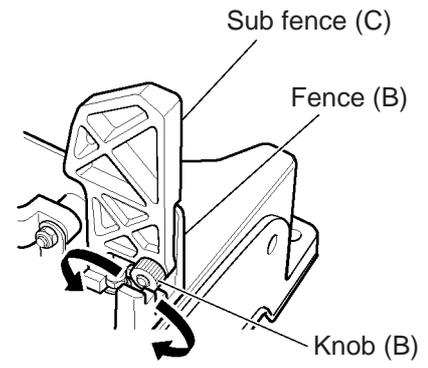


Fig. 22

8-5. Cutting Operation

- (1) Cutting efficiency will be reduced if a dull saw blade is used, if an excessively long extension cord is 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) Direct current cannot be used. The switch can be faulty if used.

(4) Press cutting

The Models C 12LDH and C 12FDH can be used for press cutting of workpieces up to 70 mm x 203 mm (2-3/4" x 8") 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.

(5) Miter cutting

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

(6) Bevel cutting

Bevel cutting of 0 – 45° to the left/right 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. 23. 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.

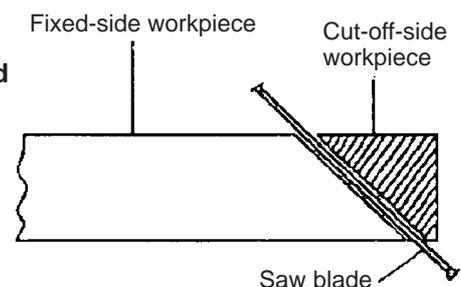


Fig. 23

(7) **Compound (miter + bevel) cutting**

Compound cutting can be accomplished by combining the miter cutting and bevel cutting operations described in paragraphs (5) and (6) above. (For details, please refer to the Instruction Manual.) When the saw blade section (head) is inclined 45° to the right and left, the table can be turned up to 45° to the right and left.

(8) **Crown molding cutting**

This machine can cut two types of crown molding workpieces by combining the miter and bevel cutting operations (for USA).

Figure 24 shows two common crown molding types having angles of (θ) 38° and 45°. For the typical crown molding fittings, see Fig. 25.

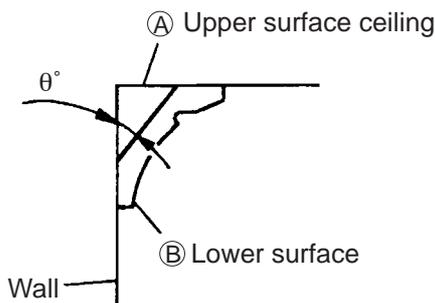


Fig. 24

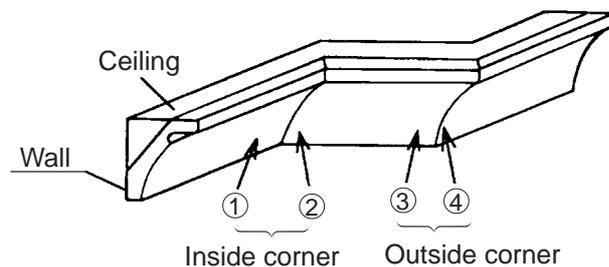


Fig. 25

The table below shows the miter angle and the bevel angle settings that are ideal for the two crown molding types.

NOTE: For convenience, positive stops are provided for both the miter setting (left and right 31.6°) and the bevel setting positions.

For miter cut setting

If the turn table has been set to either of the angles described, move the turn table adjusting the side handle a little to the right and left to stabilize the position and to properly align the miter scale and the tip of the indicator before the operation starts.

For bevel cut setting

Move handle on miter section to the right and left and check that the position is stable and the angle scale and the tip of the indicator are properly aligned. Then tighten the clamp lever.

Table 4

Type of crown molding	To process crown molding at positions ① and ④ in Fig. 24		To process crown molding at positions ② and ③ in Fig. 24	
	Miter angle setting	Bevel angle setting	Miter angle setting	Bevel angle setting
45° type	Right 35.3° (● mark)	Left 30° (● mark)	Left 35.3° (● mark)	Left 30° (● mark)
38° type	Right 31.6° (▲ mark)	Left 33.9° (▲ mark)	Left 31.6° (▲ mark)	Left 33.9° (▲ mark)

(1) Setting to cut crown molding at positions ① and ④ in Fig. 25 (See Fig. 26; tilt the head to the left.):

- ① Turn the turn table to the right and set the miter angle as follows:
 - For 45° type crown moldings: 35.3° (● mark)
 - For 38° type crown moldings: 31.6° (▲ mark)
- ② Turn the head to the left and set the bevel angle as follows:
 - For 45° type crown moldings: 30° (● mark)
 - For 38° type crown moldings: 33.9° (▲ mark)
- ③ Position the crown molding so that the lower surface (A in Fig. 24) contacts the fence as indicated in Fig. 28.

(2) Setting to cut crown moldings at positions ② and ③ in Fig. 25 (See Fig. 27; tilt the head to the left.):

- ① Turn the turn table to the left and set the miter angle as follows:
 - For 45° type crown moldings: 35.3° (● mark)
 - For 38° type crown moldings: 31.6° (▲ mark)
- ② Tilt the head to the left and set the bevel angle as follows:
 - For 45° type crown moldings: 30° (● mark)
 - For 38° type crown moldings: 33.9° (▲ mark)
- ③ Position the crown molding so that the lower surface (B in Fig. 24) contacts the fence as indicated in Fig. 29.

⚠ CAUTION: In the case of left bevel angle cutting, remove sub fence (C) before operation.

(Figs. 26 and 27)

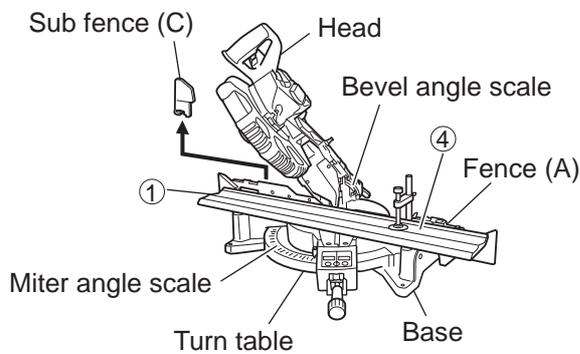


Fig. 26

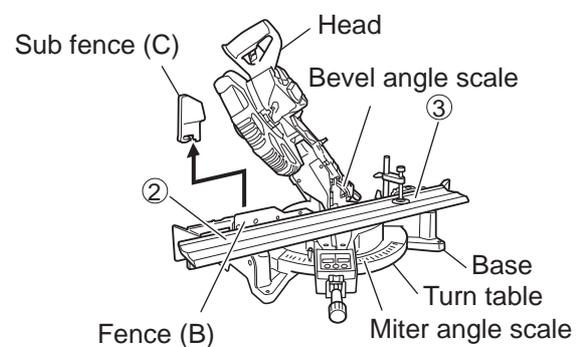


Fig. 27

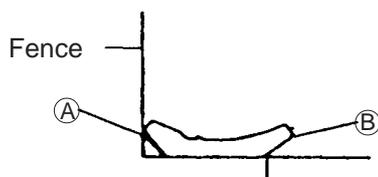


Table on base

Fig. 28

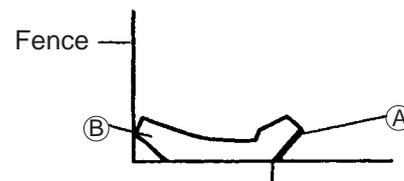


Table on base

Fig. 29

(3) Setting to cut crown moldings at positions ① and ④ in Fig. 25 (See Fig. 30; tilt the head to the right.):

- ① Turn the turn table to the right and set the miter angle as follows:
 - For 45° type crown moldings: 35.3° (↓ mark)
 - For 38° type crown moldings: 31.6° (▲ mark)
- ② Tilt the head to the right and set the bevel angle as follows:
 - For 45° type crown moldings: 30° (↓ mark)
 - For 38° type crown moldings: 33.9° (▲ mark)
- ③ Position the crown molding so that the lower surface (Ⓑ in Fig. 24) contacts the fence as indicated in Fig. 32.

(4) Setting to cut crown moldings at positions ② and ③ in Fig. 25 (See Fig. 31; tilt the head to the right.):

- ① Turn the turn table to the left and set the miter angle as follows:
 - For 45° type crown moldings: 35.3° (↓ mark)
 - For 38° type crown moldings: 31.6° (▲ mark)
- ② Tilt the head to the right and set the bevel angle as follows:
 - For 45° type crown moldings: 30° (↓ mark)
 - For 38° type crown moldings: 33.9° (▲ mark)
- ③ Position the crown molding so that the lower surface (Ⓐ in Fig. 24) contacts the fence as indicated in Fig. 33.

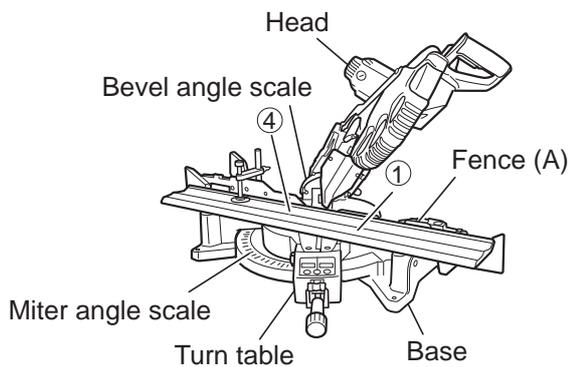


Fig. 30

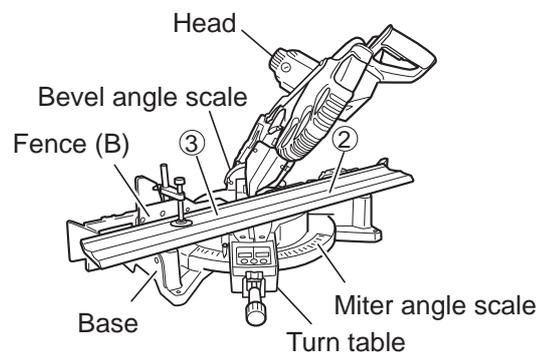


Fig. 31

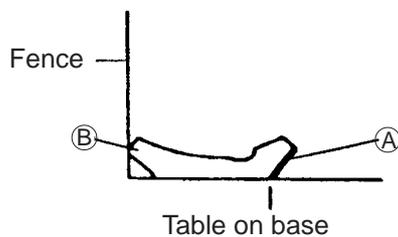


Fig. 32

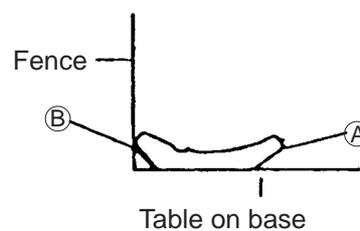


Fig. 33

Cutting method of crown molding without tilting the saw blade

(1) Crown molding stoppers (L) and (R) (optional accessories) allow easier cuts of crown molding without tilting the saw blade. Install them to both sides of the base as shown in Figs. 34-a and 34-b. After inserting, tighten the 6 mm knob bolts to secure the crown molding guides.

[Optional accessories used]

- Crown molding vise ass'y (including crown molding stopper (L))
- Crown molding stopper (L)
- Crown molding stopper (R)

(2) The crown molding vise ass'y (optional accessory) can be mounted on either the left fence (fence (B)) or the right fence (fence (A)). It can unite with the slope of the crown molding and vise can be pressed down. Then turn the upper knob, as necessary, to securely attach the crown molding in position. To raise or lower the vise assembly, first loosen the 6 mm knob bolt.

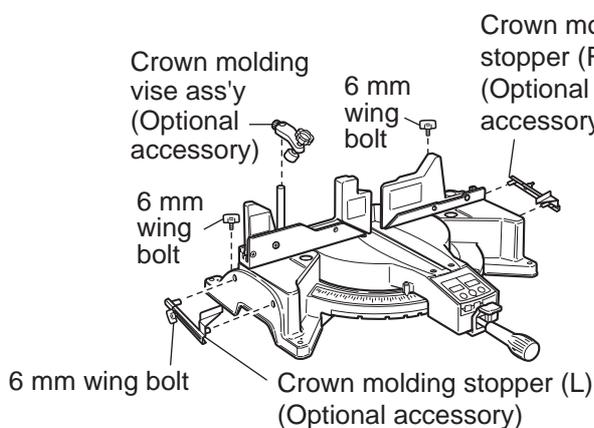


Fig. 34-a

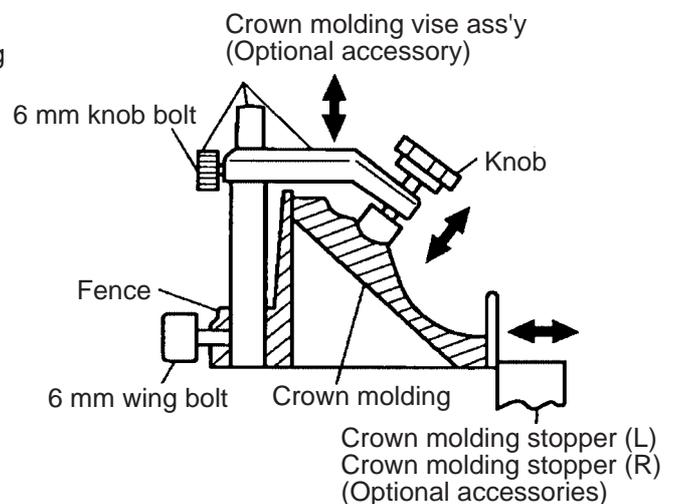


Fig. 34-b

After adjusting the height, firmly tighten the 6 mm wing bolt; then turn the upper knob, as necessary, to securely attach the crown molding in position. (See Figs. 34-a and 34-b.)

⚠ WARNING: Always firmly clamp or vise to secure the crown molding to the fence; otherwise the crown molding might be thrust from the table and cause bodily harm. Do not perform bevel cutting. The main body or saw blade may contact the sub fence, resulting in an injury.

⚠ CAUTION: Always confirm that the motor head does not contact the crown molding vise ass'y when it is lowered for cutting. If there is any danger that it may do so, loosen the 6 mm knob bolt and move the crown molding vise ass'y to a position where it will not contact the saw blade.

Position crown molding with its WALL CONTACT EDGE against the guide fence and its CEILING CONTACT EDGE against crown molding stoppers as shown in Figs. 34-a and 34-b. Adjust the crown molding stoppers according to the size of the crown molding. Tighten the 6 mm wing bolt to secure the crown molding stoppers.

8-6. Digital Display Panel (For Model C 12LDH)

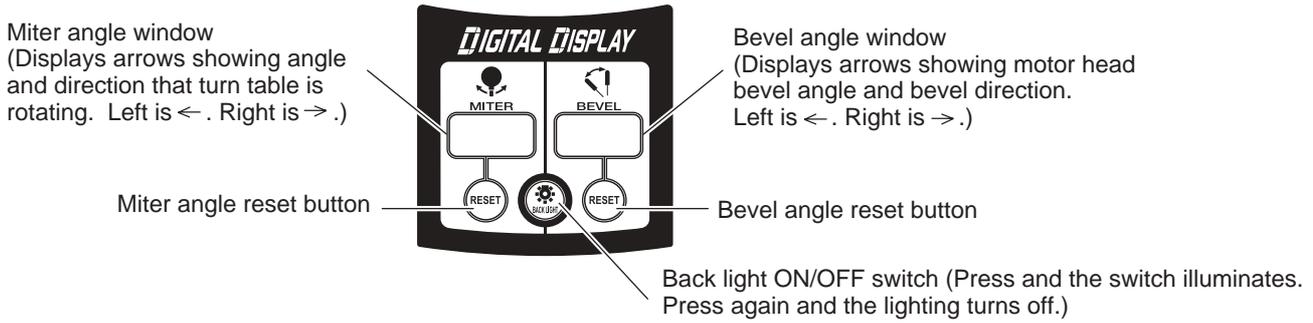


Fig. 35

- (1) Turning on the digital display switch shows 0° for both miter and bevel angle, regardless of main unit angle.
- (2) Align the main unit angle with the tilt angle (0°) and miter angle (0°) and hold down their reset buttons for at least 0.2 second.
- (3) Turning on the laser marker switch while the digital display switch is on, lights up the laser marker.
(On the Model C 12FDH, only the laser marker switch.)

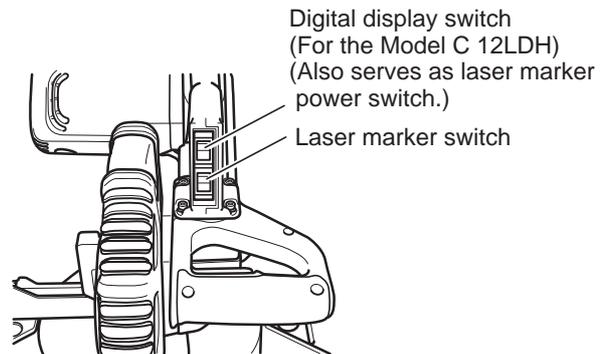


Fig. 36-a

⚠ CAUTION: When operating the digital panel, have the motor head section at the top limit position and the blade stopped.

NOTE:

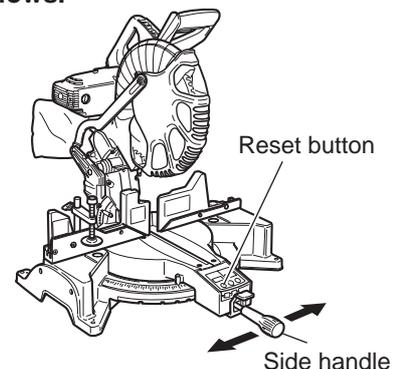
- Before starting to cut, align the main unit to the miter angle 0° and the bevel angle 0° and hold down their reset buttons for at least 0.2 second. If you press the digital display switch to ON without aligning the main unit to 0° , then the figures appearing on the digital display and the main unit angle will not match.

- The laser marker will not light up if the digital display switch is turned off (only the Model C 12LDH). Do not use the main unit near equipment that generates electrical noise such as generators.
- Electrical noise might cause faulty readings or operation on the digital display.

⚠ CAUTION: When operating the digital panel, have the motor head section at the top limit position and the blade stopped.

⚠ CAUTION: If the figure shown on the miter angle digital display is different from the positive stop angle (for example, $45.0^\circ \rightarrow 45.5^\circ$, $31.6^\circ \rightarrow 32.0^\circ$) then the positive stop has probably deviated slightly from its correct position. If this happens, do as follows.

- (1) Move the turn table left and right with the side handle loosened, and set the turn table to the correct position.
- (2) If the figures on the display and positive stop still do not match, then return the turn table to the 0° position. Next move the turn table left and right with the side handle loosened as shown in Fig. 36-b. After setting it to the correct position 0° , press the reset button again.



Move the turn table left and right with the side handle loosened and set it to the correct position. **Fig. 36-b**

9. ADJUSTMENT OF COMPONENTS

9-1. Bevel Angle Fine Adjustment

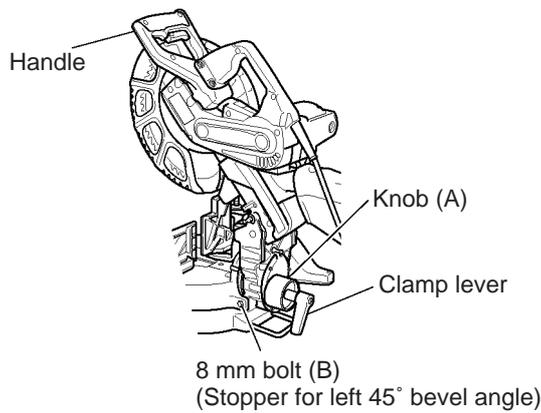


Fig. 37-a

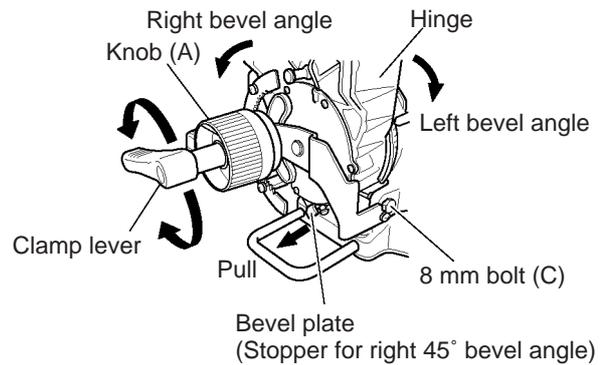


Fig. 37-b

(1) Grip the handle on the motor head and position it at the bevel angle you need. Temporarily tighten the clamp lever.

⚠ CAUTION: If not tightened firmly enough the motor head might suddenly move or slip, causing injuries. Be sure to tighten the motor head section enough so it will not move.

(2) Make fine adjustment to the bevel angle by gripping the handle and moving knob (A).

NOTE: Turning knob (A) clockwise allows fine adjustment of the main unit to the left (as seen from front). Turning knob (A) counterclockwise allows fine adjustment of the main unit to the right (as seen from front).

If you wish to cut left bevel angle 48° or right bevel angle 48°, pull the bevel plate backwards until the hinge contacts either 8 mm bolt (C) or 8 mm bolt (B) then cut diagonally left or right.

Setting to cut left bevel angle 48° or right bevel angle 48° can be done easily.

(3) After adjusting to the desired angle, tighten the clamp lever and clamp the motor head.

⚠ CAUTION: Always check that the clamp lever is secured and the motor head is clamped. If you attempt angle cutting without clamping the motor head, then the motor head might shift unexpectedly causing injuries.

10. PACKING

(1) Preparation before packing

- (i) Remove the dust bag from the main body.
- (ii) Turn the turn table 48° clockwise and remove the side handle. Secure the turn table with the attached hex. socket head bolt M10.

(2) Mounting packing (C)

- (i) Place packing (C) under the gear case and lower the head section. Pressing on packing (C), insert the stopper pin of the gear case to secure the head section. (At this time, check that the clamp lever for bevel angle fixation is securely locked.)

(3) Mounting packing (D)

- (i) Fold packing (D) in two at the center and insert it between the gear case and the protective cover.

(4) Mounting packing (E)

- (i) Insert packing (E) between sub fence (B) and the gear case.

(5) Mounting packings (A) and (B)

- (i) Place the base packing and the sleeve in the carton box and place the power tool on them aligning with the concave portion of the base packing.
- (ii) Place packing (B) aligning the hole of packing (B) with the housing.
- (iii) Place packing (A) in the carton box.

(6) Mounting upper packing

- (i) Place the upper packing on packings (A) and (B). Close the carton box. See Figs. 38, 39 and 40 for detail.

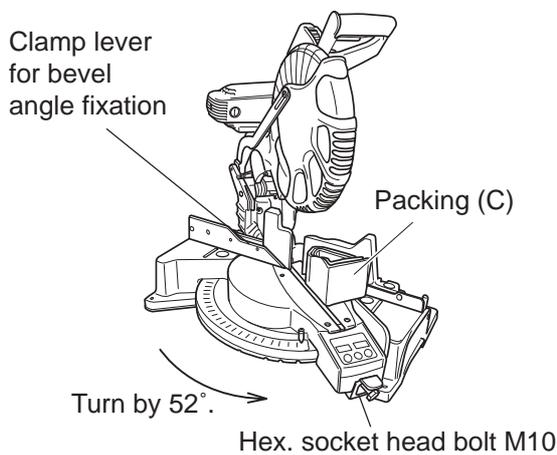


Fig. 38

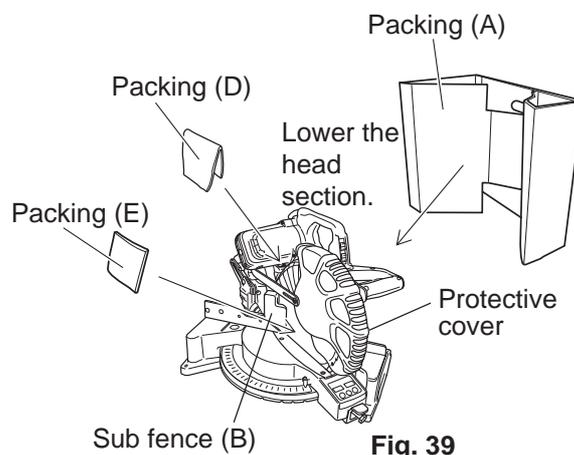


Fig. 39

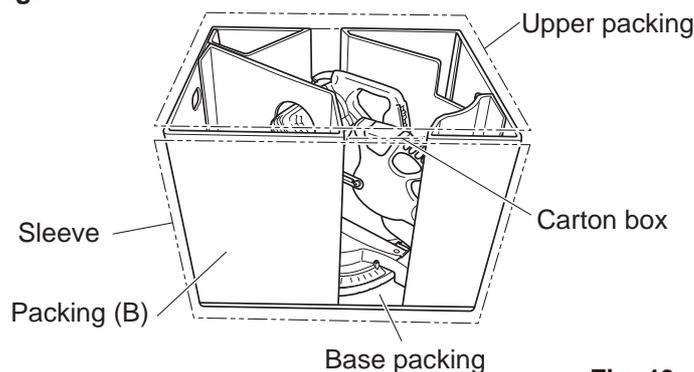


Fig. 40

11. PRECAUTIONS IN DISASSEMBLY AND REASSEMBLY

11-1. Precautions in Disassembly and Reassembly of the Laser Marker

Do not stare into the laser emitting aperture during disassembly and reassembly of the laser marker. Do not observe beam directly with an optical instrument. Use of controls or adjustments or performance of procedures other than those specified in this TECHNICAL DATA AND SERVICE MANUAL and the Instruction Manual may result in hazardous radiation exposure.

11-2. Disassembly

Special attention in disassembly should be given to the following items. The circled numbers in the figures and the **[Bold]** numbers in the descriptions below correspond to the item numbers in the parts list and exploded assembly diagram of the Model C 12LDH. For the Model C 12FDH, refer to the parts list separately.

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

A. Turn table ass'y, base ass'y and hinge ass'y

Tools required:

- Phillips screwdriver
- Flat-blade screwdriver
- Snap ring pliers (For C type axis)
- Box wrench 13 mm
- Box wrench 17 mm
- Box wrench 19 mm
- Wrench 10 mm
- Hex. bar wrench 4 mm
- Hex. bar wrench 6 mm
- Nipper

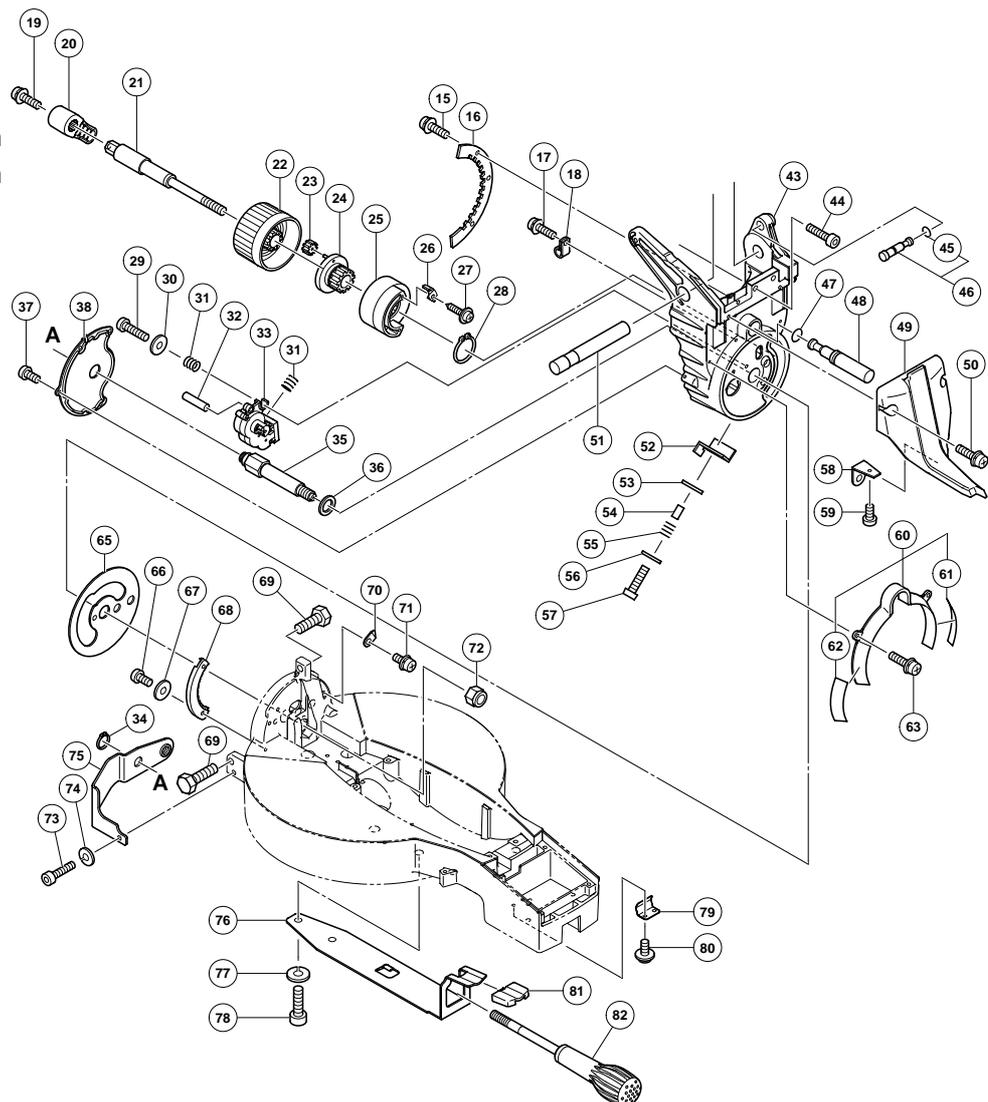


Fig. 41

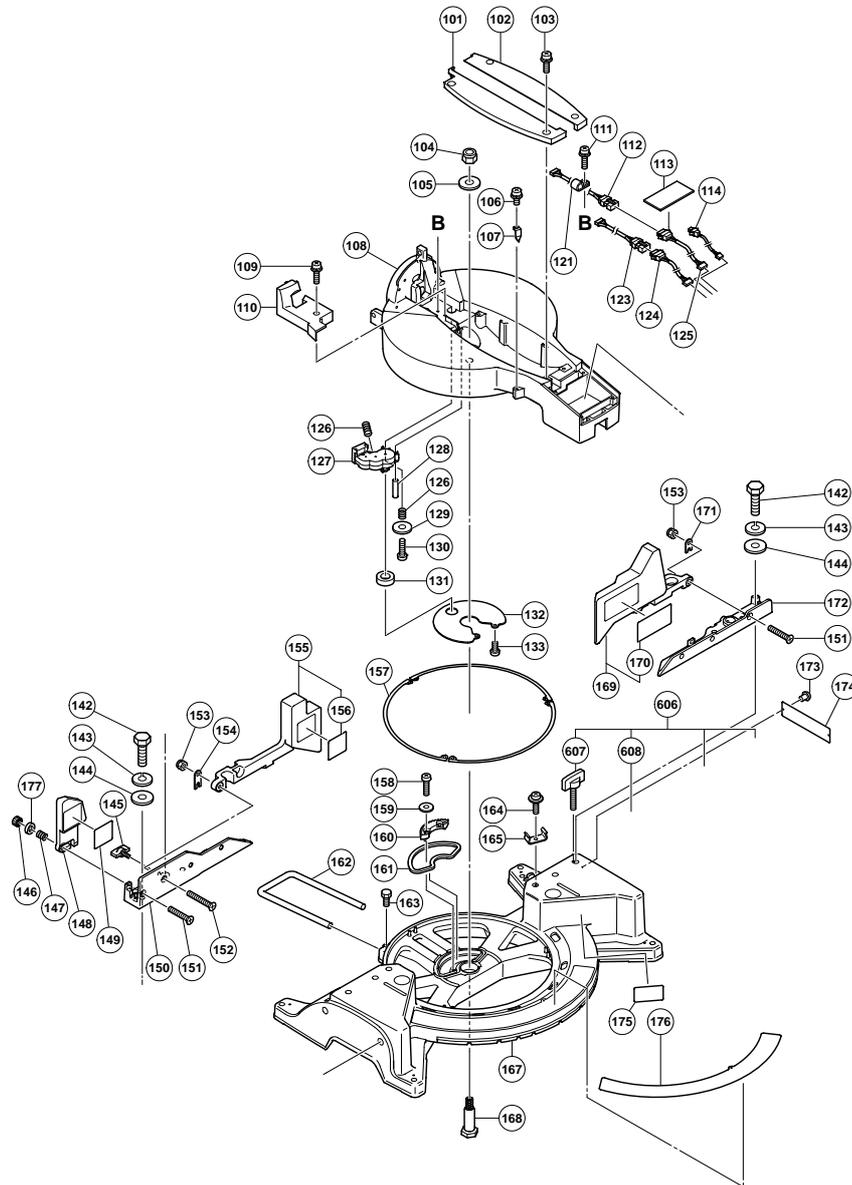


Fig. 42

1. Remove the two Machine Screws (W/Washers) M4 x 10 (Black) **[71]** to remove two Indicators (B) **[70]**.
Remove the two Machine Screws (W/Washers) M5 x 16 **[50]** to remove the Dust Guide Ass'y **[49]**.
2. Remove the Machine Screw (W/Washers) M4 x 16 **[63]** to remove the Scale Plate Ass'y **[60]**.
3. Remove the Flat Hd. Screw M6 x 25 **[151]** by turning the Nylon Nut M6 **[153]** with a wrench 10 mm. Remove Sub Fence (A) Ass'y **[169]** and Plate (D) 24.5 mm **[171]**. Remove the Flat Hd. Screw M6 x 35 **[152]** by turning the Nylon Nut M6 **[153]** with a wrench 10 mm. Remove Sub Fence (B) Ass'y **[155]** and Plate (D) 35 mm **[154]**. Loosen Knob (B) **[146]** and remove the Flat Hd. Screw M6 x 25 **[151]**. Remove Sub Fence (C) Ass'y **[148]**, Bolt Washer M6 **[177]** and Spring (C) **[147]**.
4. Remove the four Bolts M8 x 35 **[142]**, Spring Washers M8 **[143]** and Bolt Washers M8 **[144]** to remove Fence (A) **[172]** and Fence (B) **[150]**.
5. Loosen the Clamp Lever **[20]** and remove the Machine Screw (W/Washers) M6 x 20 (Black) **[19]**. Turn the Bolt (Left Hand) M10 **[21]** and remove it from the Hinge Ass'y **[43]** together with Knob (A) **[22]**, Planet Gear **[23]**, Pinion (A) **[24]**, Ring Gear **[25]**, Plate (H) **[26]**, Tapping Screw (W/Flange) D4 x 16 (Black) **[27]** and Retaining Ring for D28 Shaft **[28]**.

7. Remove the Retaining Ring for D12 Shaft [34], Hex. Socket Hd. Bolt M5 x 16 [73] and Spring Washer M5 [74]. Then the Hinge Plate [75] can be removed.

8. Remove the four Machine Screws M4 x 10 [37] to remove the Hinge Cover [38]. Remove the Machine Screw (W/Washers) M4 x 12 (Black) [17] and the Nylon Clip [18]. Press the Encoder [33] turning clockwise and secure it with the Machine Screw M5 x 20 [29].

NOTE: When reinstalling the Hinge Ass'y [43] to the Turn Table Ass'y [108], loosen the Machine Screws M5 x 20 [29] securing the Encoder [33] (about one turn) and move the Encoder [33] to engage with Gear (B) [68].

9. Remove the four Machine Screws (W/Washers) M5 x 16 [103] to remove Table Insert (B) [102] and Table Insert (A) [101] from the Turn Table Ass'y [108].

10. Remove the Machine Screw (W/Washers) M4 x 16 [109] to remove Cord Cover (A) [110]. Disconnect the connector between Cord (A) 310 mm [123] and Cord (C) 300 mm [124]. Then it can be drawn out toward the rear of the Hinge Ass'y [43]. Remove Shaft (D) [35] from the Nylon Nut M12 [72]. Then the Washer M6 [36], Hinge Ass'y [43] and Liner (B) [65] can be removed from the Turn Table Ass'y [108].

11. Disconnect the connector of Cord (A) 310 mm [123] from the Encoder [127]. Remove the Machine Screw M5 x 20 [29] and Bolt Washer M6 [30]. Remove Spring (C) [31] with a flat-blade screwdriver. Then the Encoder [33] can be removed from the Hinge Ass'y [43].

12. Remove the two Hex. Socket Hd. Bolts M8 x 16 [78] and two Spring Washers M8 [77]. Remove the Side Handle [82]. Remove the Spring Plate [76] from the Turn Table Ass'y [108].

NOTE: When reassembling after removal of the Spring Plate [76], adjust the squareness of the TCT Saw Blade 305 mm-D25.4 Hole-NT32 [250] to Fence (A) [172] and Fence (B) [150].

13. Press the Encoder [127] turning clockwise onto the back of the Turn Table Ass'y [108] and secure it with the Machine Screw M5 x 20 [130].

NOTE: When reinstalling the Turn Table Ass'y [108] to the Base Ass'y [167], loosen the Machine Screw M5 x 20 [130] securing the Encoder [127] (about one turn) and move the Encoder [127] to engage with Gear (A) [160]. Adjust the squareness of the TCT Saw Blade 305 mm-D25.4 Hole-NT32 [250] to Fence (A) [172] and Fence (B) [150].

14. Remove the Nylon Nut M8 [104] and Washer (F) [105] to remove the Turn Table Ass'y [108] from the Base Ass'y [167].

15. Remove the Machine Screw M4 x 8 [133] to remove the Dust Cover [132].

16. Disconnect the connector of Cord (A) 100 mm [112] from the Encoder [127]. Remove the Machine Screw M5 x 20 [130] and remove Spring (C) [126] with a flat-blade screwdriver. Then the Encoder [127] can be removed from the Turn Table Ass'y [108].

B. Armature ass'y

Belt, pinion ass'y and spindle ass'y

Tools required:

- Phillips screwdriver
- Plastic hammer

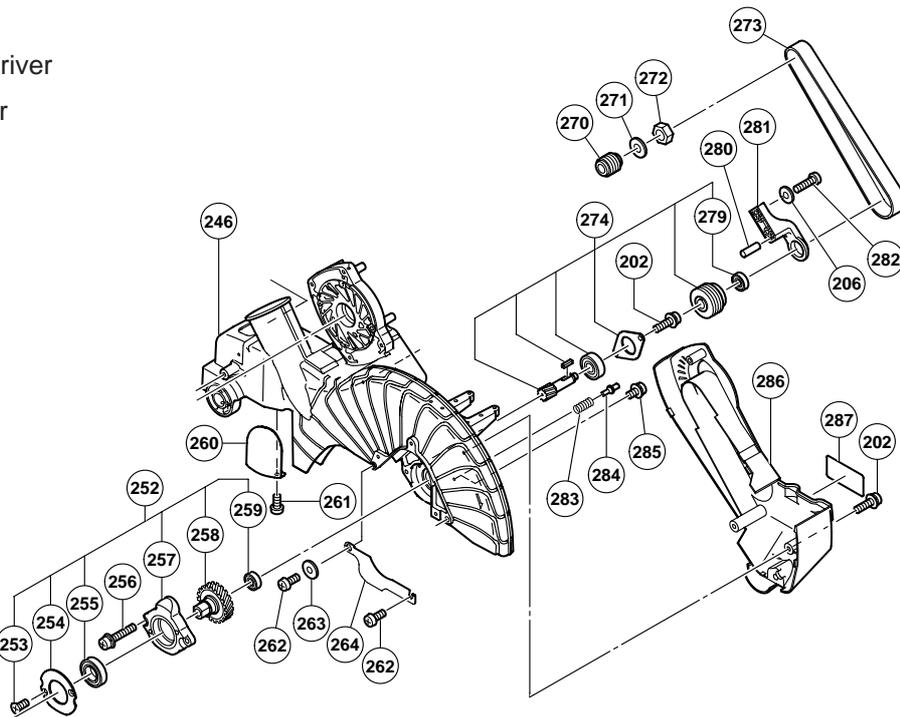


Fig. 43

1. Remove the three Machine Screws (W/Washers) M5 x 16 [202] to remove the Pulley Cover [286].
2. Pull the Belt (200H10) 16 x 508 [273] outward and turn it to remove from Pulley (A) [270] and the Pinion Ass'y [274].
3. Remove the two Machine Screws M5 x 20 [282] and Spring Washers M5 [206]. Remove Bearing Holder (B) [281] by lightly tapping the Gear Case [246] with a plastic hammer.
4. Pull out the Pinion Ass'y [274] by lightly tapping the Gear Case [246] with a plastic hammer.
5. Remove the two Machine Screws (W/Washers) M6 x 20 (Black) [256] and remove the Spindle Ass'y [252] by lightly tapping the Gear Case [246] with a plastic hammer.
6. Remove the Machine Screw (W/Washers) M4 x 10 (Black) [285] to remove Stopper Pin (B) [284] and the Spring [283].

NOTE: Be careful when removing the Machine Screw (W/Washers) M4 x 10 (Black) [285] because Stopper Pin (B) [284] and Spring [283] pop out.

C. Armature ass'y

Switch, switching power supply, stator ass'y, armature ass'y and pulley (A)

Tools required:

- Phillips screwdriver
- Flat-blade screwdriver
- Hex. bar wrench 4 mm
- Nipper
- Plastic hammer
- Box wrench 13 mm

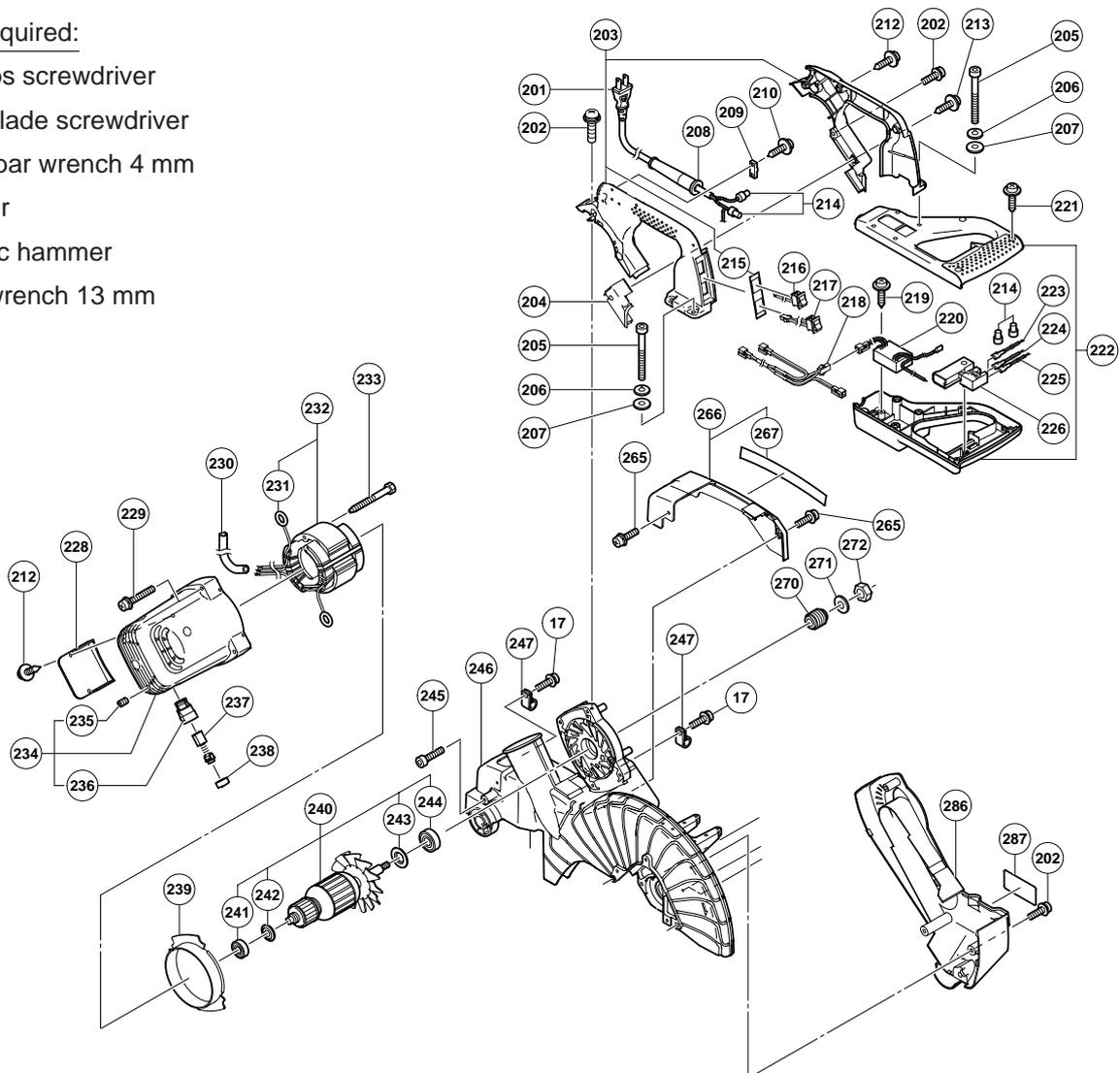


Fig. 44

1. Remove the three Machine Screws(W/Washers) M5 x 16 [202] to remove the Pulley Cover [286].
2. Remove the Tapping Screw (W/Flange) D4 x 16 (Black) [213] to remove Cord Cover (B) [204].
3. Remove the three Machine Screws (W/Washers) M5 x 16 [202], Tapping Screws (W/Flange) D4 x 16 (Black) [212] and two Hex. Socket Hd. Bolts M5 x 70 [205] to remove the right side of the Handle Ass'y [203].
4. Cut off the Connector 50092 [214] that crimps the internal wires coming from the Cord [201], Stator Ass'y 120V [232] and Switching Power Supply [220] at the root of the internal wires.
5. Cut off the Connector 50092 [214] that crimps the internal wires coming from the Cord [201], Internal Wire (A) (Black) [225] and Switch (A) [216] at the root of the internal wires. Cut off the two Connectors 50092 [214] that crimp the internal wires coming from the Stator Ass'y 120V [232], Internal Wire (A) (Yellow) [224] and Internal Wire (A) (Blue) [223] at the root of the internal wires.
6. Disconnect the faston that connects the Switching Power Supply [220] with Switch (A) [216]. Disconnect the connector that connects Switch (B) [217] with Cord (B) [218].

7. Removal of the Switch (3P Faston Type) [226] and the Switching Power Supply [220]

- (a) After the above steps from 1 to 5, remove the two Machine Screws (W/Washers) M5 x 16 [202] and Hex. Socket Hd. Bolts M5 x 70 [205] to remove the left side of the Handle Ass'y [203].
- (b) Remove the three Tapping Screws (W/Flange) D4 x 20 (Black) [221] and remove the upper part of Switch Handle (A).(B) Set [222].
- (c) Remove the Switch (3P Faston Type) [226] and disconnect the connected Internal Wire (A) (Blue) [223], Internal Wire (A) (Yellow) [224] and Internal Wire (A) (Black) [225].

NOTE: The Switch (3P Faston Type) [226] is connected to Internal Wires (A) [223][224][225] with the lock-type faston. Pull out the faston while pressing the lock lever.

- (d) Disconnect the connector that connects Cord (B) [218] to the Switching Power Supply [220]. Remove the Tapping Screw (W/Flange) D4 x 16 [219]. Then the Switching Power Supply [220] can be removed.

8. Removal of the Stator Ass'y 120V [232]

- (a) After the above steps from (1) to (5), remove the Brush Cap [238], Carbon Brush [237] and four Machine Screws (W/Washers) M5 x 40 (Black) [229]. Then the Housing Ass'y [234] can be removed from the Gear Case [246].
- (b) Remove the two Hex. Hd. Tapping Screws D5 x 55 [233] that secure the Stator Ass'y 120V [232]. Remove the two Brush Terminals [231] from the Brush Holder [236].
- (c) Pull out the Stator Ass'y 120V [232] by lightly tapping the Housing Ass'y [234] at the surface where the Gear Case [246] is mounted with a plastic hammer.

9. Removal of the Armature Ass'y 120V [240] (including the ball bearing)

- (a) Remove the Housing Ass'y [234] from the Gear Case [246] according to the procedure of the above step 8-(a).
- (b) Remove the Armature Ass'y 120V [240] (including the ball bearing) by lightly tapping the Gear Case [246].

10. Removal of Pulley (A) [270]

- (a) Loosen the Nut M10 [272] of the Armature Ass'y 120V [240] that was removed in the above step (9) and remove the Super Lock Washer [271] and Pulley (A) [270].

D. Safety cover and link

Safety cover and link

Tools required:

- Phillips screwdriver
- Box wrench 17 mm (standard accessory)

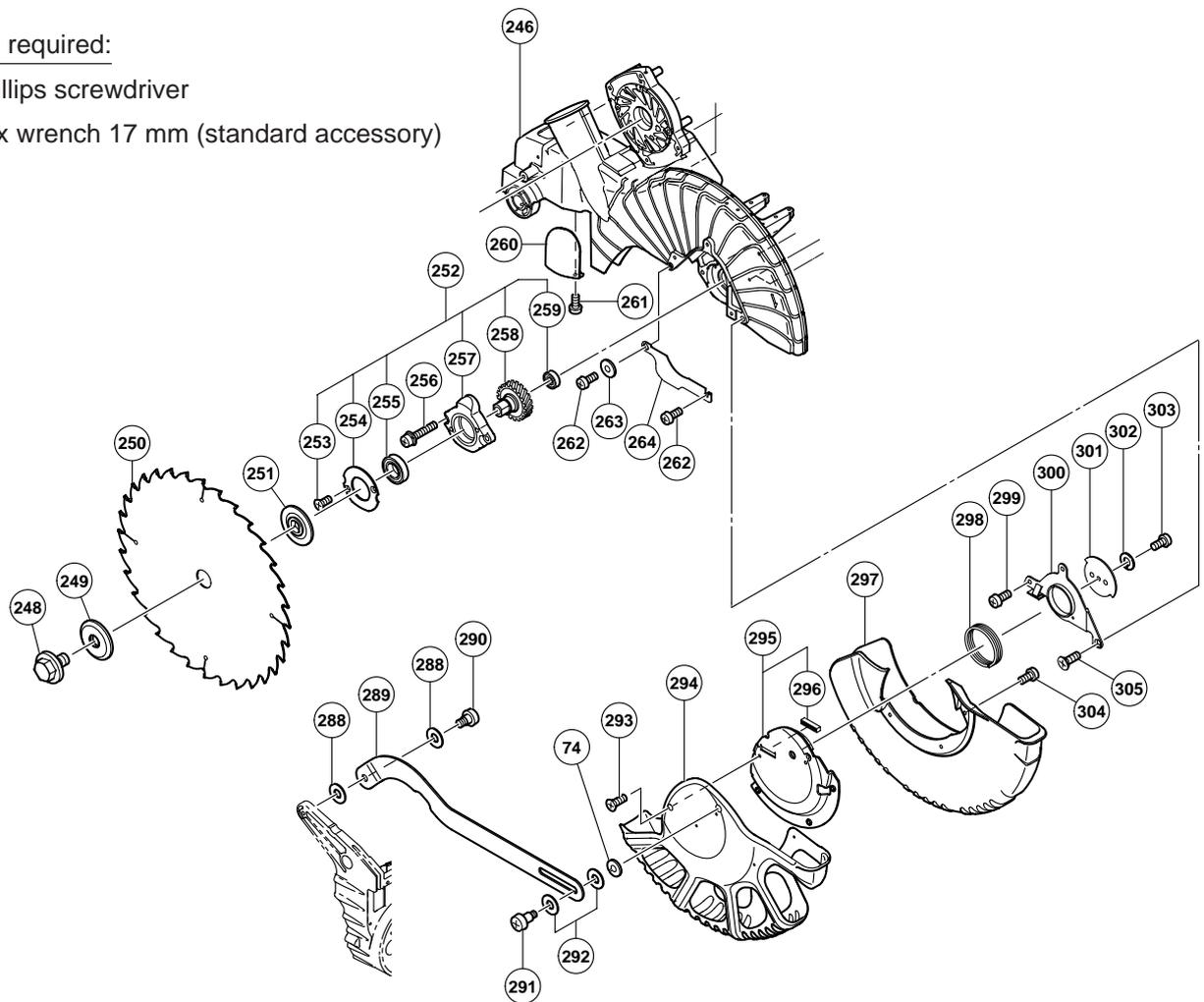


Fig. 45

1. Remove the two Machine Screws M5 x 10 [262]. Then the Spindle Cover [264] and the Bolt Washer M5 [263] can be removed.
2. Remove Bolt (A) M10 [248] with the attached 17-mm box wrench. Remove Washer (B) [249], TCT Saw Blade 305 mm-D25.4 Hole-NT32 [250] and Washer (A) [251] in this order.
3. Remove Special Screw (C) M5 [291] and Special Screw M6 [290]. Then the Link [289], Washer M10 [292] and Washer M7 [288] can be removed.
4. Remove the two Machine Screws M5 x 10 [299] and one Flat Hd. Screw M5 x 10 (Black) [305]. Then the protective cover can be removed entirely from the Gear Case [246]. Remove the Flat Hd. Screw M4 x 10 (Black) [293] to remove Protective Cover (B) [294].
5. Remove the three Machine Screws M4 x 8 [304] to remove Protective Cover (A) [297].

E. Laser module (A) and spring

Laser module (A) and spring

Tools required:

- Phillips screwdriver
- Hex. bar wrench 5 mm
- Hex. bar wrench 3 mm
- Hex. bar wrench 2.5 mm
- Plastic hammer
- Hammer
- Long-nose pliers

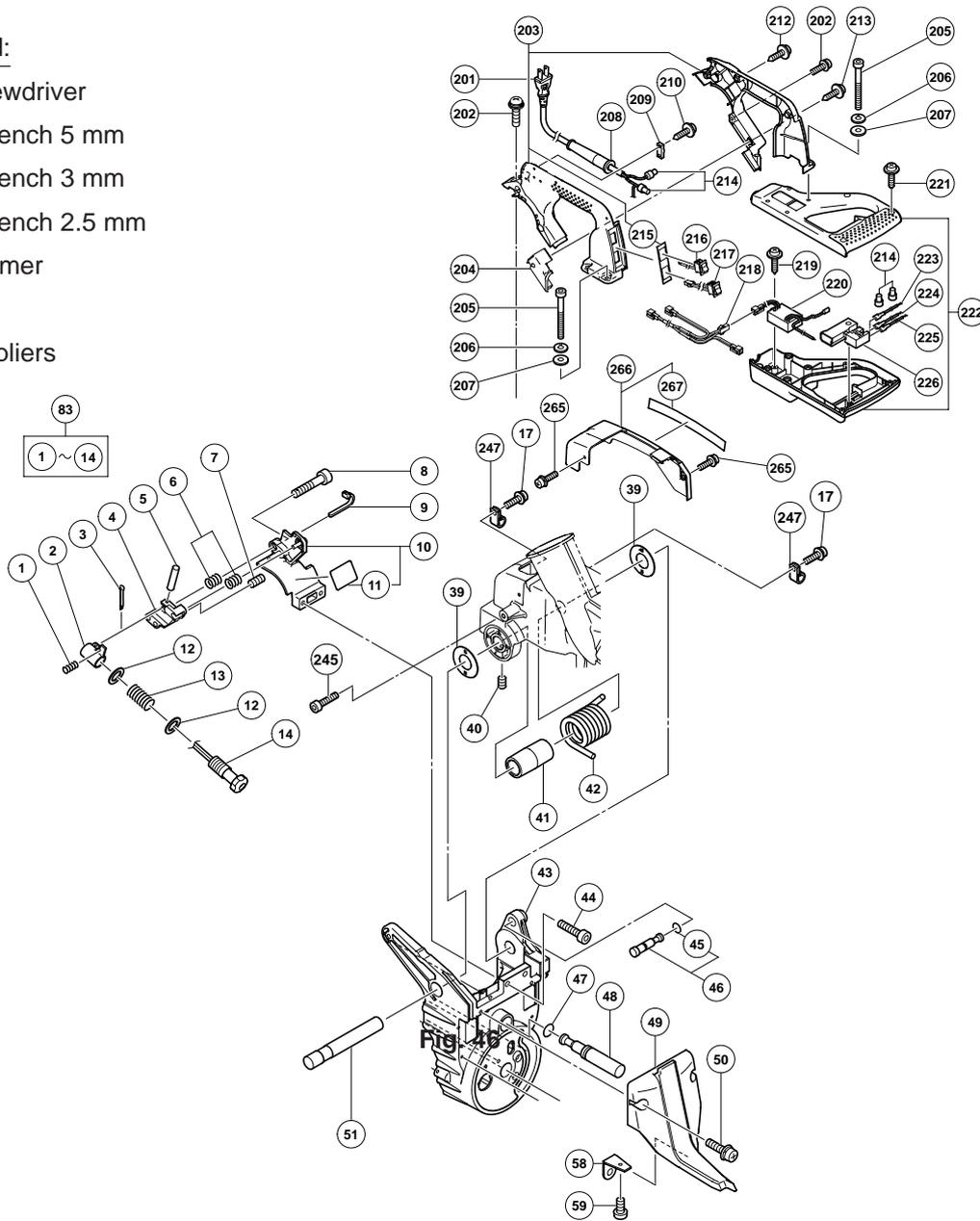


Fig. 46

1. Removal of Laser Module (A) [14]

- Remove the Tapping Screw (W/Flange) D4 x 16 (Black) [213] to remove Cord Cover (B) [204].
- Disconnect the connector that connects Cord (B) [218] to Laser Module (A) [14].
- Remove the two Machine Screws (W/Washers) M4 x 16 [265] to remove the Gear Case Cover Ass'y [266].
- Remove the two Machine Screws (W/Washers) M4 x 12 (Black) [17] and two Nylon Clips [247] to disconnect the internal wire of Laser Module (A) [14].
- Remove the two Machine Screws (W/Washers) M5 x 16 [50] and remove the Dust Guide Ass'y [49] from the Hinge Ass'y [43].

- (f) Remove the two Hex. Socket Hd. Bolts M6 x 20 [44] to remove the Laser Holder Ass'y [83].
- (g) Remove the Split Pin D2 x 12 [3] with long-nose pliers. Loosen the Special Bolt M5 [8] and lightly tap the Roll Pin D3 x 14 [5] with a hammer to remove it. Then the Laser Base Ass'y [10], two Springs (C) [6], Laser Holder (A) [2], Laser Holder (B) [4] and Laser Module (A) [14] can be removed.
- (h) Turn Laser Module (A) [14] mounted to Laser Holder (A) [2] counterclockwise to remove Laser Module (A) [14] from Laser Holder (A) [2].

NOTE: Before mounting Laser Module (A) [14] to Laser Holder (A) [2], apply Super X No. 8080 (Cemedine Co., Ltd.) to the threaded portion of Laser Holder (A) [2].

2. Removal of Spring (A) [42]

- (a) After the above steps from 1-(a) to (f), remove the Hex. Socket Hd. Bolt M6 x 16 [245].

NOTE: Note that the Gear Case [246] moves upward when the Hex. Socket Hd. Bolt M6 x 16 [245] is removed because the Hex. Socket Hd. Bolt M6 x 16 [245] acts as an upper limit stopper of the Gear Case [246].

- (b) Remove the Seal Lock Hex. Socket Set Screw M6 x 10 [40]. Holding the Gear Case [246], slightly tap Shaft (C) [51] with a plastic hammer to remove it. Then remove Spring (A) [42] and the Sleeve [41].

F. Vise ass'y

Tool required:

- Phillips screwdriver

1. Remove the Wing Bolt M6 x 15 [136] to remove the Vise Shaft [141].
2. Remove the Machine Screw M4 x 10 [140] to remove the Vise Plate [139].
3. Remove the Knob Bolt [135] from the Screw Holder [137].

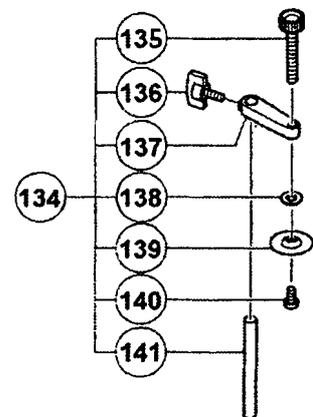


Fig. 47

G. Digital display (Models C 12LDH)

Tool required:

- Phillips screwdriver

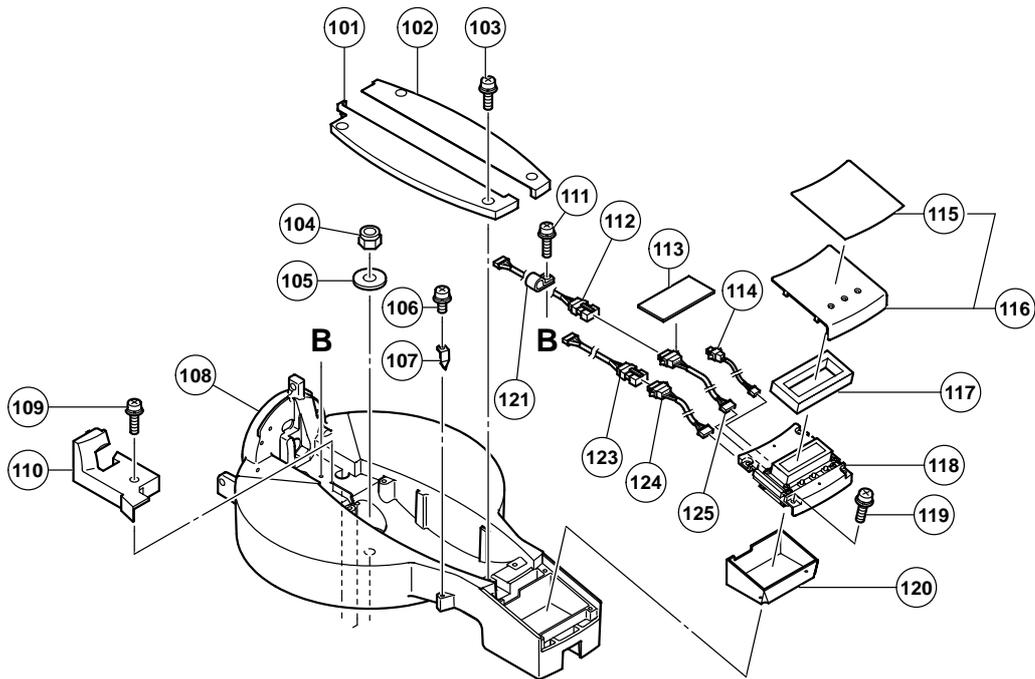


Fig. 48

1. Remove the two Machine Screws (W/Washers) M5 x 16 [103] securing Table Insert (A) [101] and remove Table Insert (A).
2. Remove the Machine Screw (W/Washers) M4 x 16 [109] to remove Cord Cover (A) [110].
3. Press the four claws of the Indication Panel Ass'y [116] to remove the Indication Panel Ass'y [116] and Packing (D) [117]. Remove the four Machine Screws (W/Washers) M4 x 16 [119].
4. Remove Cord (C) 300 mm [124], Cord (C) 330 mm [125] and Cord (D) [114] from the Monitor Ass'y [118]. Then the Monitor Ass'y [118] can be removed from the Turn Table Ass'y [108].

NOTE: Be careful not to disconnect the cable connected to the Monitor Ass'y [118] when removing from the Turn Table Ass'y [108].

11-3. 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, stator, switch and other electrical components and confirm that the insulation resistance of each part is more than 5 M Ω .
- (2) When replacing Spring (A) **[42]**, apply 5 grams of Hitachi Motor Grease to the inner circumference of new Spring (A) **[42]** prior to reassembly.
- (3) When replacing Liner (A) **[157]**, apply Hitachi Motor Grease to the sliding surface of the Base Ass'y **[167]** prior to reassembly.
- (4) When replacing the Return Spring **[298]**, apply 2 grams of Hitachi Motor Grease to the inner circumference of the new Return Spring **[298]** prior to reassembly.
- (5) When replacing Liner (B) **[65]**, apply 5 grams of Hitachi Motor Grease to the sliding surface of the Turn Table Ass'y **[108]** prior to reassembly.

11-4. 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.

⚠ WARNING: Be sure to turn off Switch (A) [216] at the front of the handle ass'y and unplug the power cord plug from the receptacle before replacing Laser Module (A) [14] and the Switching Power Supply [220]. Do not stare into beam while the laser marker is lighting.

Wiring diagram (C 12LDH)

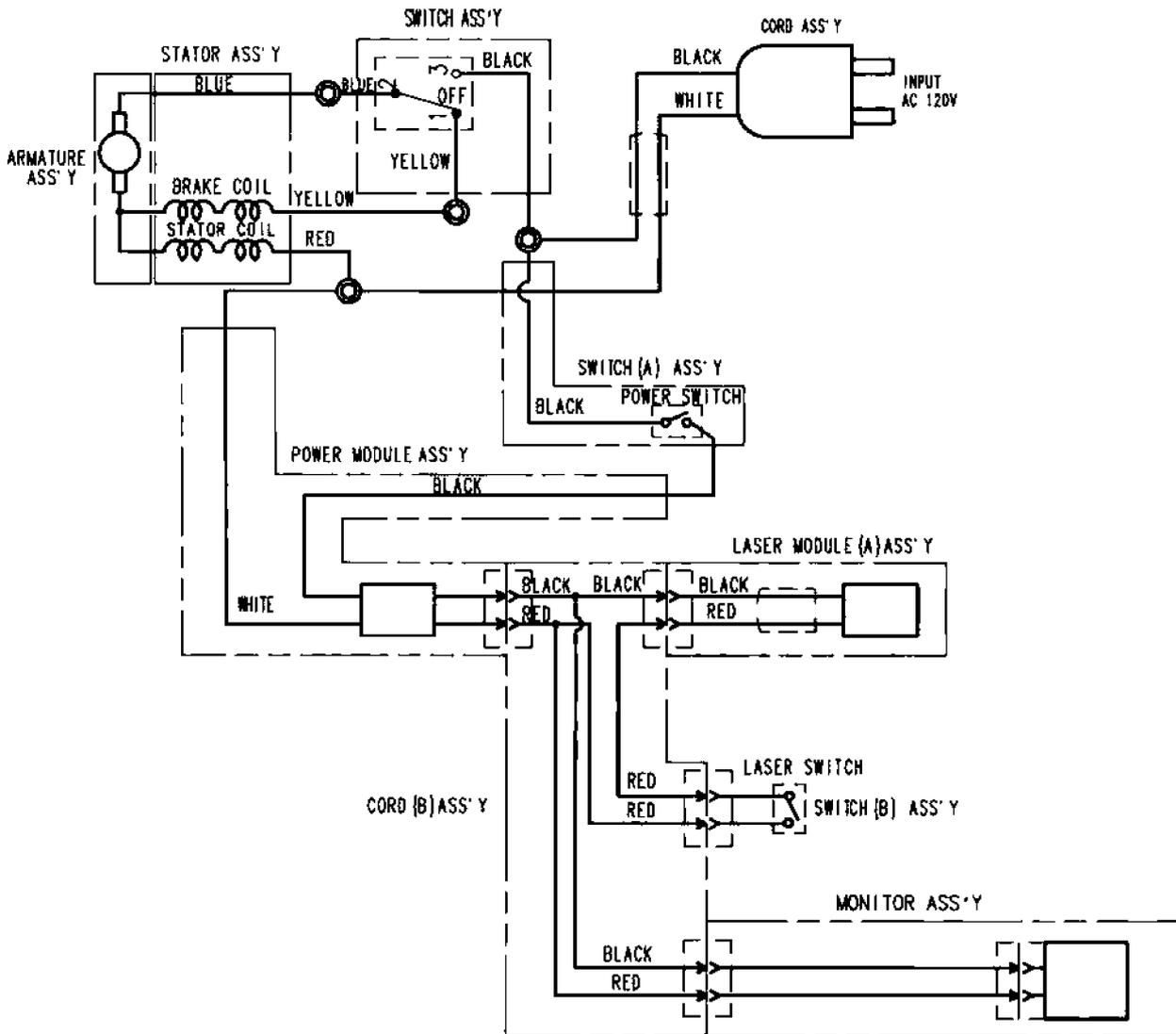


Fig. 49

Wiring diagram (C 12LDH)

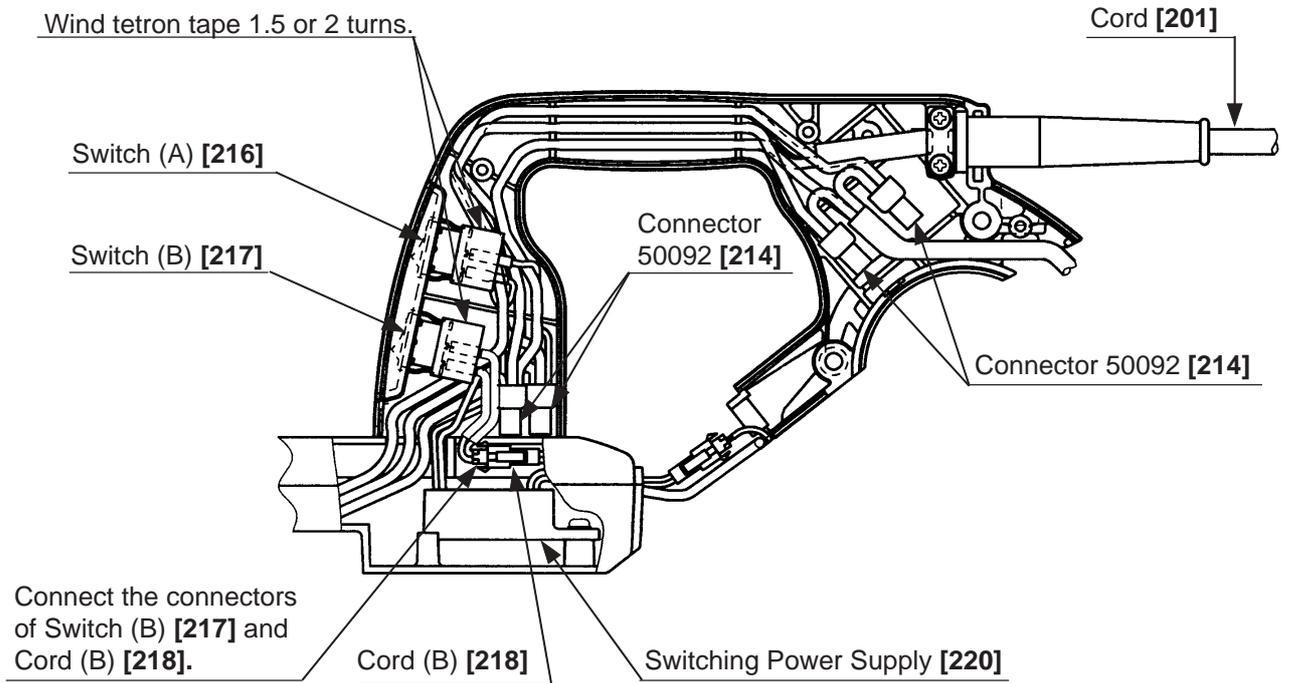


Fig. 50

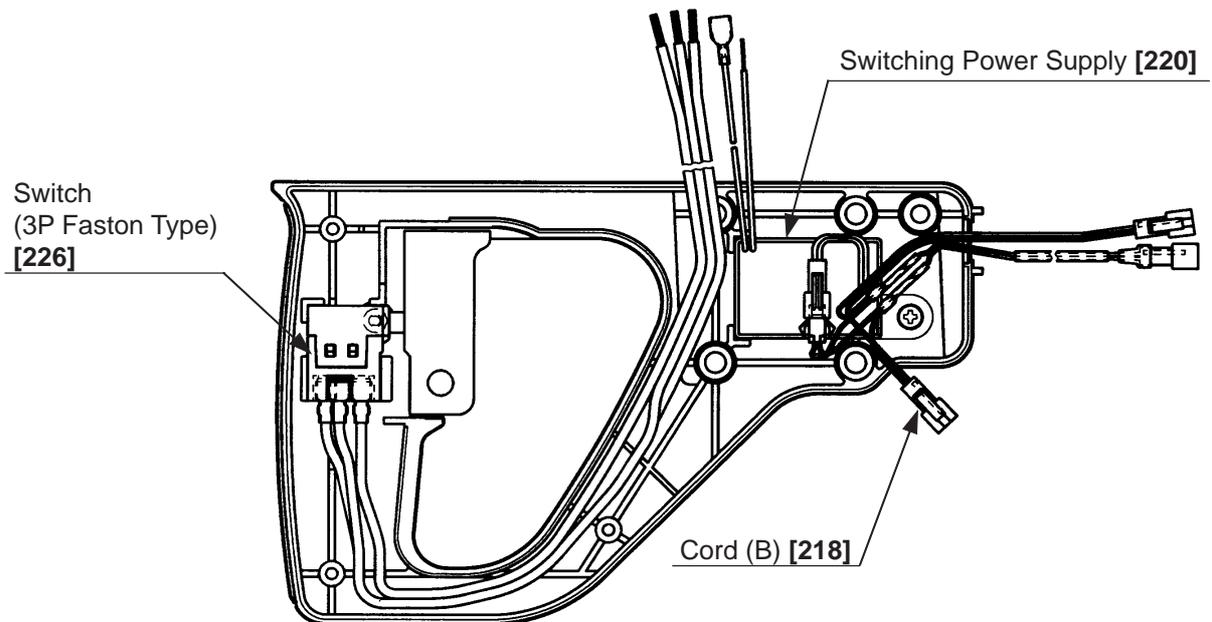


Fig. 51

Wiring diagram (C 12FDH)

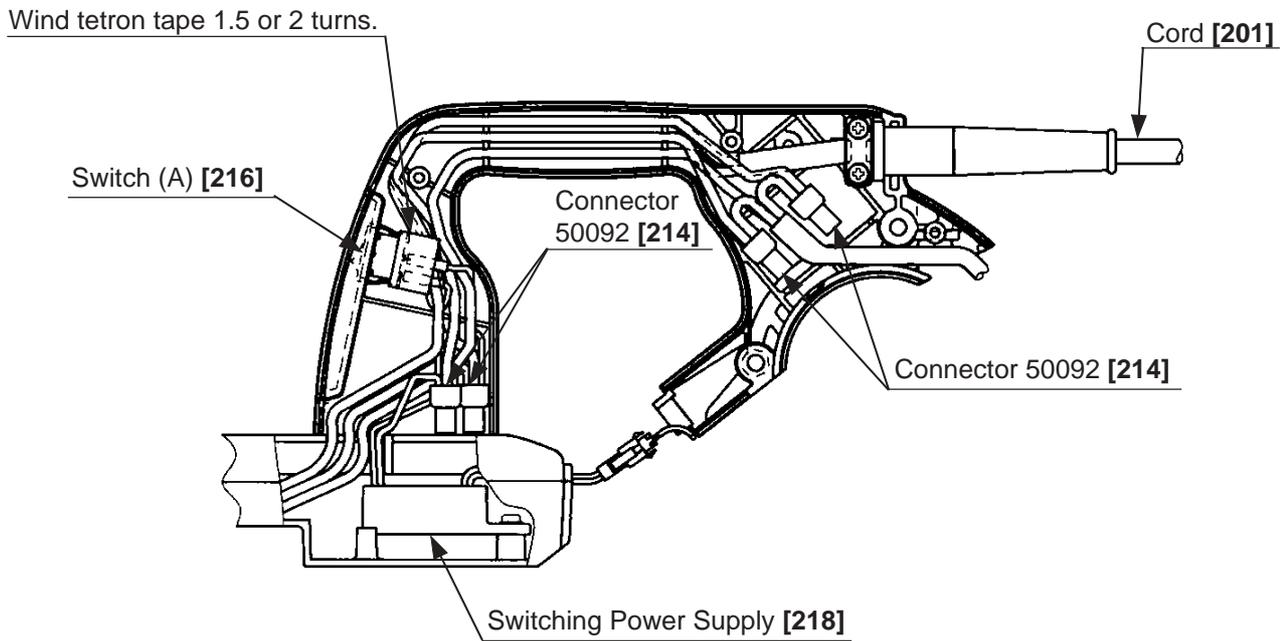


Fig. 53

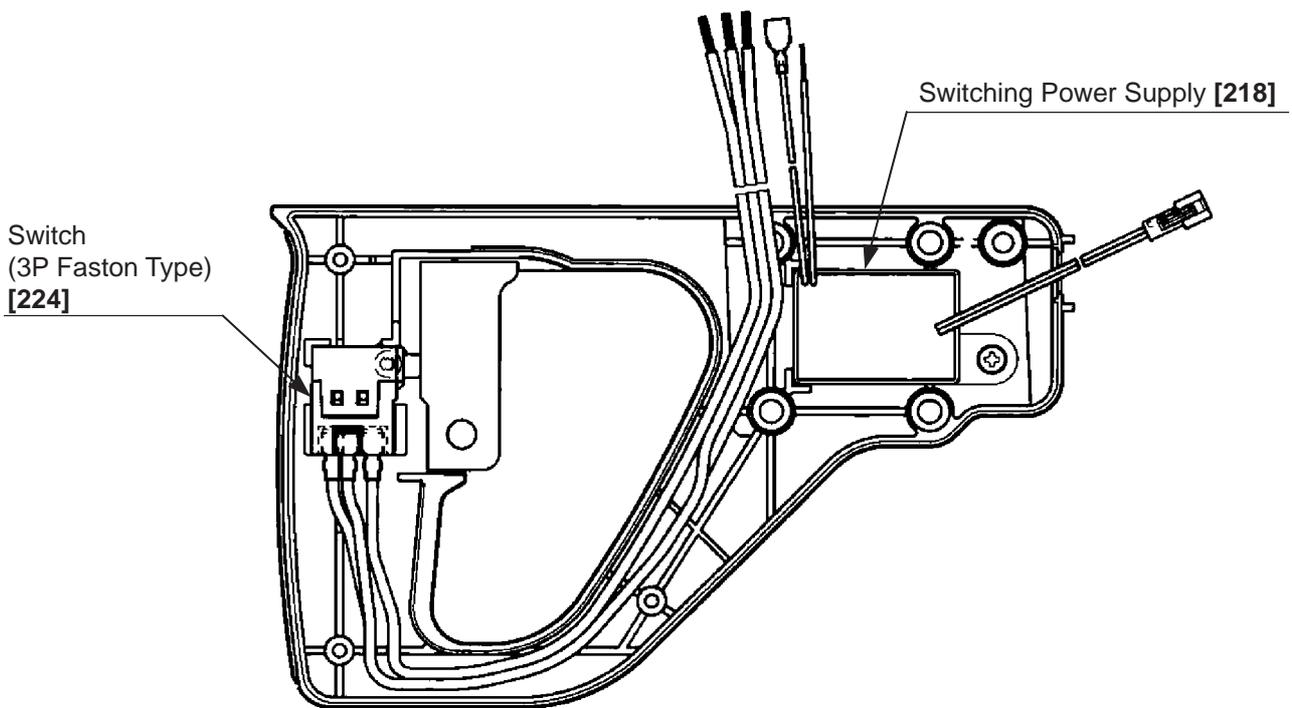


Fig. 54

Wiring diagram (C 12FDH)

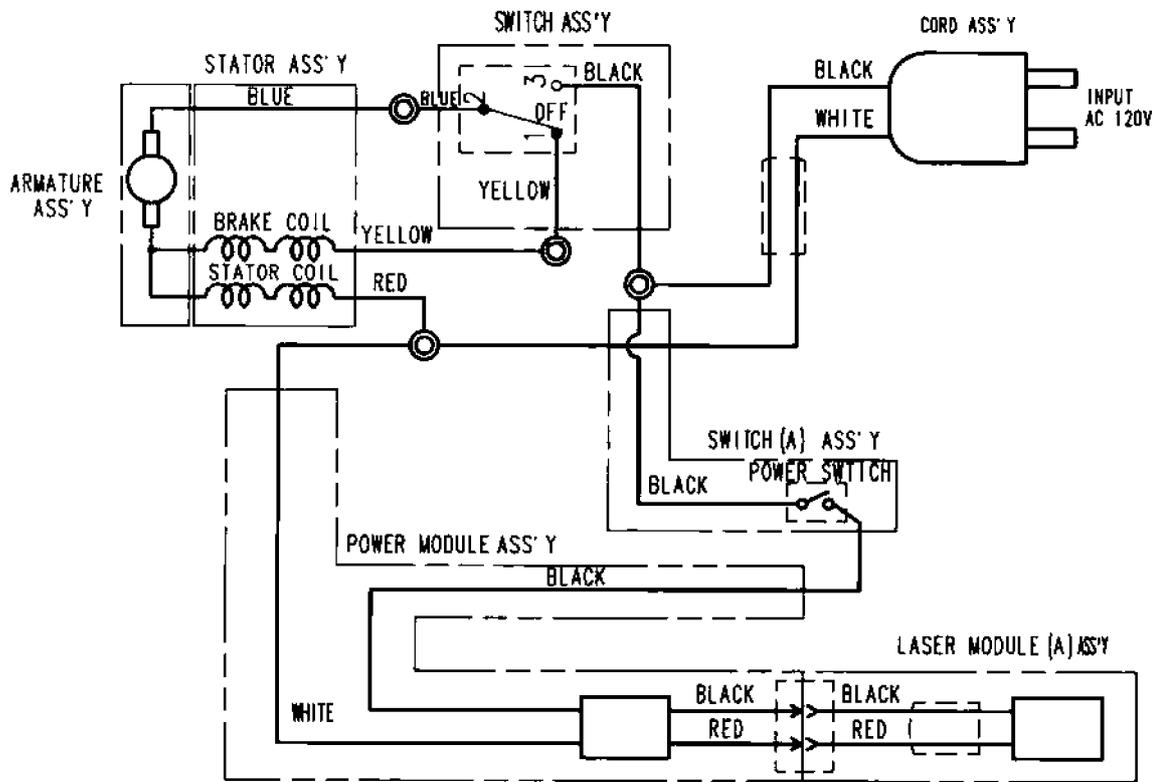


Fig. 52

11-5. No-load Current

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

Voltage, frequency	120 V
No-load current	7.9 ± 0.5 A

11-6. Reassembly Requiring Adjustment

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

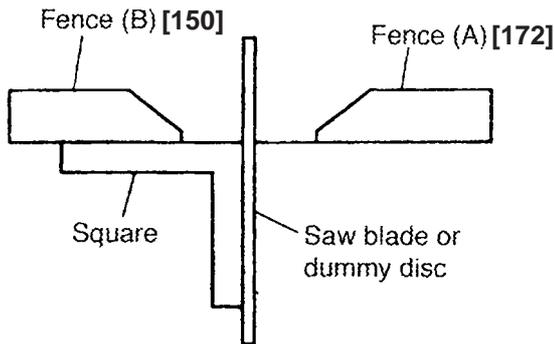


Fig. 55

After disassembly or replacement of the Base Ass'y [167], Turn Table Ass'y [108], Fence (A) [172], Fence (B) [150] or Hinge Ass'y [43], it is necessary to perform necessary adjustment to ensure that the fences are positioned at precise right angles with relation to the saw blade (or dummy disc). Align fence (B) with the saw blade (or dummy disc), and adjust them as necessary to ensure squareness (tolerance: 100 mm). As shown in Fig. 55, use a square to adjust fence (B) so that it is square with the saw blade. Next, use a straight edge to adjust fence (A) so that it is exactly aligned with fence (B). Finally, use the square to confirm squareness of fence (A) with the saw blade (tolerance: 0.4/100 mm).

(2) Reassembly of the Turn Table Ass'y [108]

When reassembling the Turn Table Ass'y [108] and the Base Ass'y [167], tighten the Nylon Nut M8 [104] so that the Turn Table Ass'y [108] turns smoothly without excessive play or vibration. During reassembly, liberally apply grease (Hitachi Motor Grease) at the point marked "A" in Fig. 56.

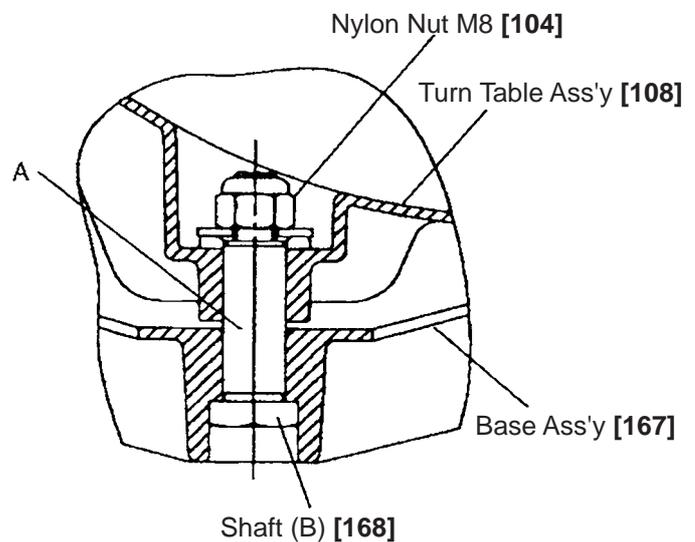


Fig. 56

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 Gear Case [246] and the Hinge Ass'y [43]

Coat the swiveling and sliding portion of the Gear Case [246] and the Hinge Ass'y [43] with machine oil.

(2) Vise ass'y section

Coat the screw thread portion of the Knob Bolt [135] of the Vise Ass'y [134] with machine oil.

(3) Swiveling section of the Turn Table Ass'y [108] and the Hinge Ass'y [43]

Coat the swiveling and sliding portion of the Turn Table Ass'y [108] and the Hinge Ass'y [43] with machine oil.

(4) Turning section of Fence (A) [172] and Sub Fence (A) Ass'y [169]

(5) Turning section of Fence (B) [150] and Sub Fence (B) Ass'y [155]

11-8. Product Precision

On completion of reassembly, confirm precision tolerances.

(Unit: mm)

Item	Tolerance
Run-out of dummy disc	0.2/280 (0.008"/11")
Squareness between base and fences (A) and (B)	0.2/height of fence (0.008"/height of fence)
Flatness between fence (A) and fence (B)	0.2 (0.008")
Squareness between dummy disc and fences (A) and (B)	0.2/100 (0.008"/4")
Squareness between dummy disc and turn table	0.2/100 (0.008"/4")
Surface alignment of base and turn table (Use the upper surface of the base as a reference.)	$\oplus 0.2 (\oplus 0.008")$ $\ominus 0.1 (\ominus 0.004")$

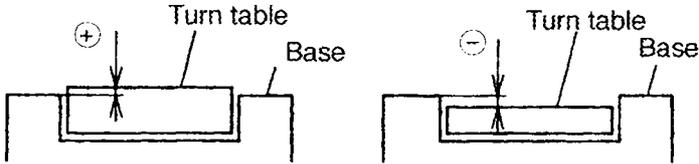


Fig. 57

11-9. Adjustment of Laser Marker Accuracy

(1) Construction of laser marker and functions of each component

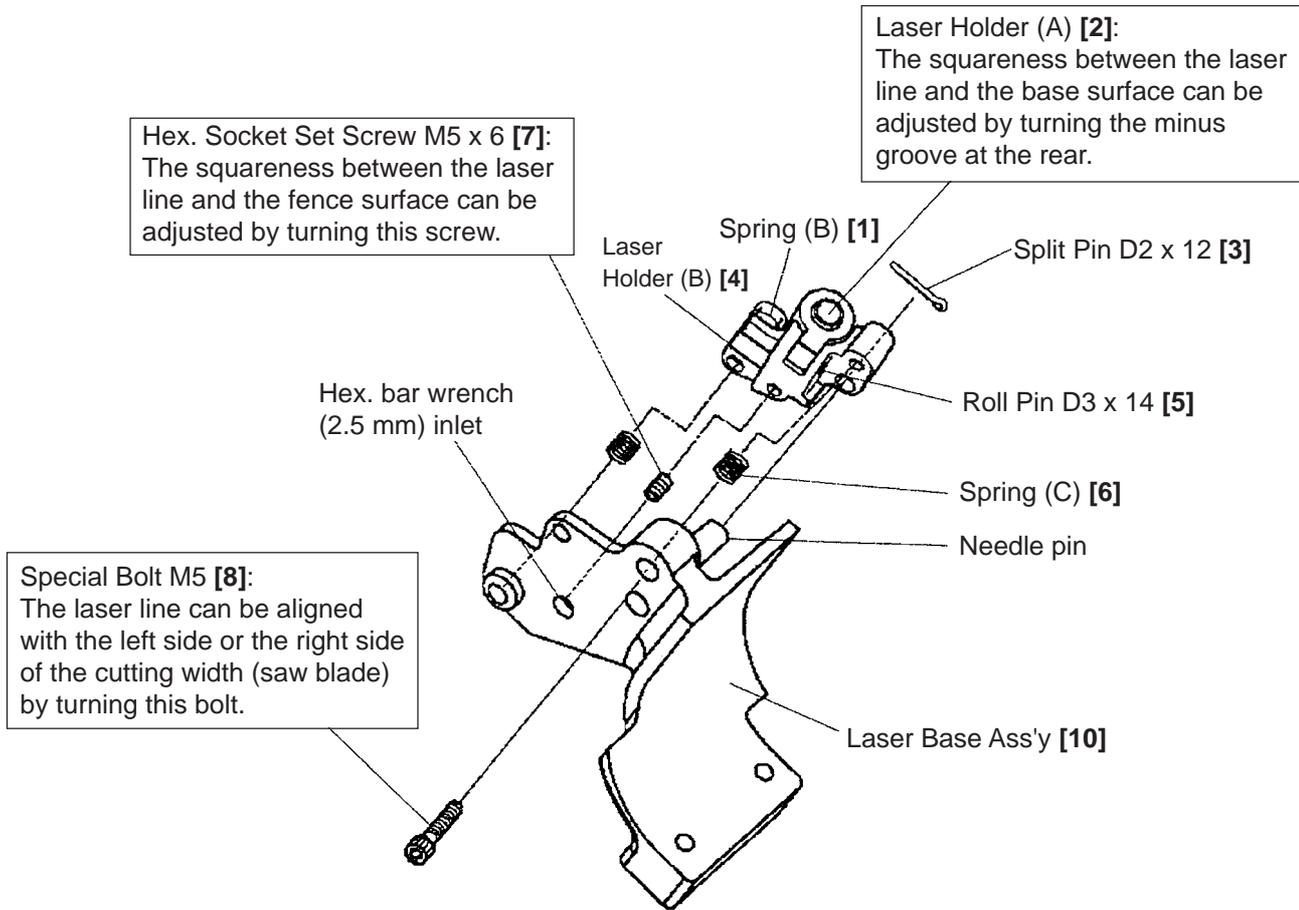


Fig. 58

⚠ CAUTION: Exercise utmost caution in handling a switch trigger for the position adjustment of the laser line, as the power plug is plugged into the receptacle during operation. If the switch trigger is pulled inadvertently, the saw blade can rotate and result in unexpected accidents. Do not stare into beam while the laser marker is lighting. Do not observe beam directly with an optical instrument. If your eye is exposed directly to the laser beam, it can be hurt. Instruct the customer not to stare into beam. In addition, instruct the customer not to give strong impact to the laser marker (main body of tool) and not to dismantle the laser marker. Use of controls or adjustments or performance of procedures other than those specified in this TECHNICAL DATA AND SERVICE MANUAL and the Instruction Manual may result in hazardous radiation exposure.

(2) Adjustment of squareness with the fence surface

The laser line inclines to the left by turning the Hex. Socket Set Screw M5 x 6 [7] clockwise and inclines to the right by turning counterclockwise.

The squareness of the laser line with the fence surface can be adjusted in this manner.

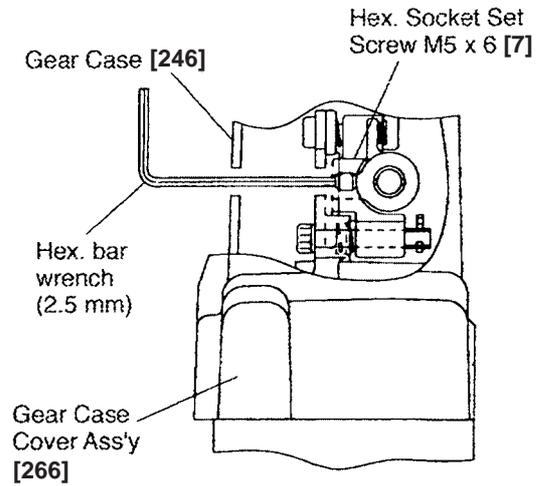


Fig. 59

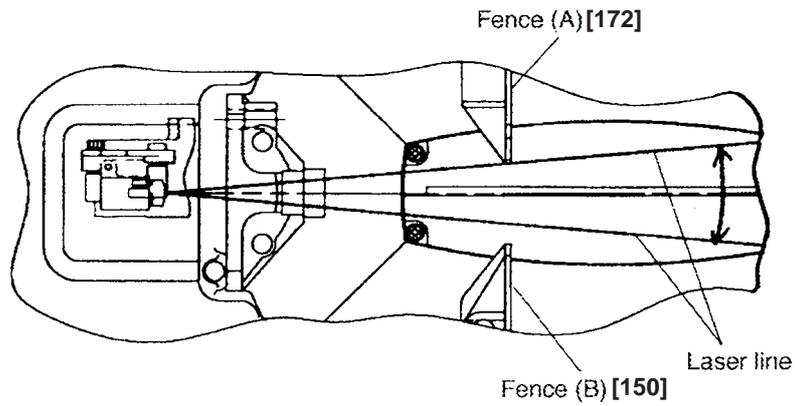


Fig. 60

(3) Adjustment of squareness with the base surface

The laser line inclines to the right by turning the minus groove clockwise and inclines to the left by turning counterclockwise. The squareness of the laser line with the base surface can be adjusted in this manner.

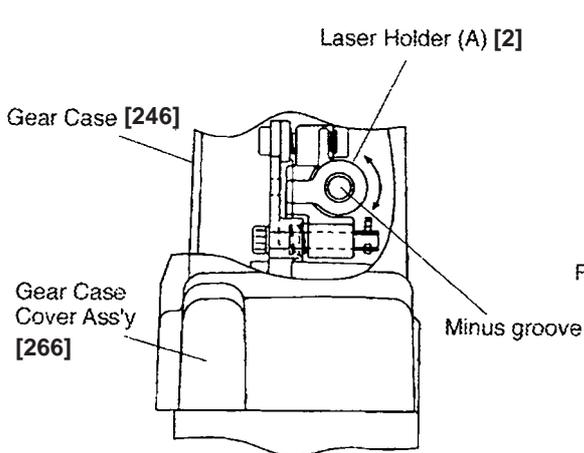


Fig. 61

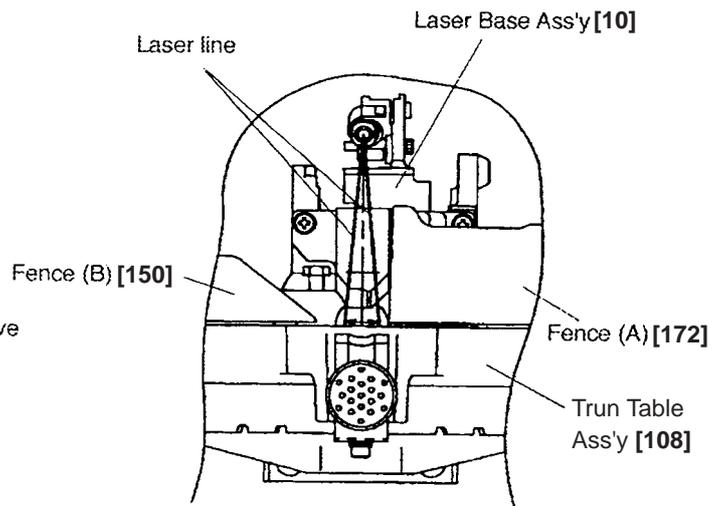


Fig. 62

(4) Adjustment of the laser marker

Adjust the laser marker according to the following steps from ① to ⑤ .

Adjust the product accuracy first because the accuracy of the laser marker is adjusted aligning the cut surface of the workpiece.

- ① First, hold a workpiece of 38 mm in height and 89 mm in width with the vise and perform right-angle cutting.
- ② Light up the laser marker with the workpiece held in the vise. Turn the Special Bolt M5 [8] to shift the laser line onto the cutting surface, top edge or rear edge of the cutting surface.

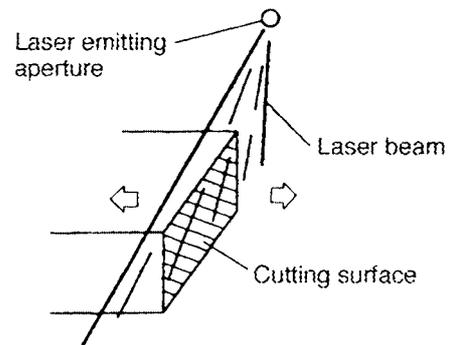
- ③ Turn the Hex. Socket Set Screw M5 x 6 [7] and the minus groove at the rear of Laser Holder (A) [2] so that laser beam is applied to the entire cutting surface of the workpiece.

If the laser line gets out of the cutting surface during the laser line adjustment, turn the Special Bolt M5 [8] to shift the laser line onto the cutting surface, top edge or rear edge of the cutting surface then adjust the accuracy of the laser line.

(Repeat this operation 3 or 4 times depending on the adjusting conditions of the laser marker.) Refer to the above (2) and (3) for the relation between the Hex. Socket Set Screw M5 x 6 [7] and the laser line, and the relation between the minus groove at the rear of Laser Holder (A) [2] and the laser line.

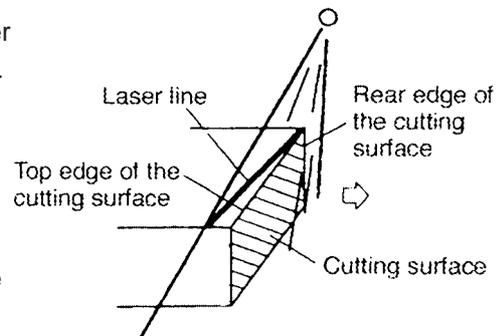
- ④ To check the accuracy of the laser marker, move the laser marker horizontally using the Special Bolt M5 [8] again and check that the laser beam is applied to the entire cutting surface. If the laser beam is applied to the cutting surface in parallel, the fine fuzz reflects the laser beam and the entire cutting surface becomes bright.

- ⑤ Make a right-angle ink line on the workpieces of 38 mm in height and 89 mm in width. Adjust the laser marker and perform cutting. If the ink line matches the cutting position, the accuracy adjustment is completed. (Visually check that the laser marker accuracy is 0.5/100 or less for both the squareness with the base surface and the squareness with the fence surface.)



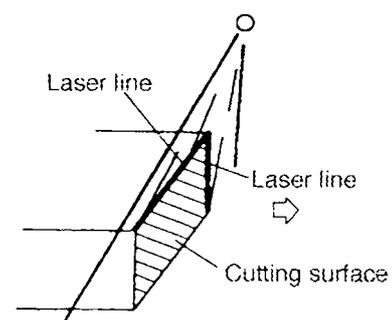
- Cut the workpiece and light up the laser marker.

Fig. 63



- Turn the Special Bolt M5 [8] to shift the laser line onto the cutting surface, top edge or rear edge of the cutting surface.

Fig. 64



- Adjust the Hex. Socket Set Screw M5 x 6 [7] and the minus groove at the rear of Laser Holder (A) [2] or the Special Bolt M5 [8] to apply laser beam to the entire cutting surface.

Fig. 65

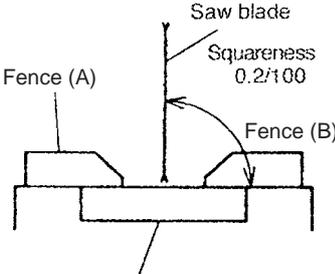
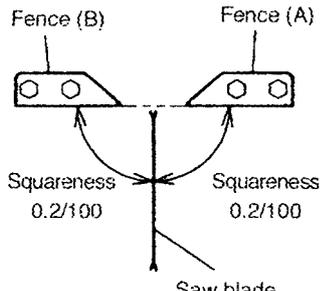
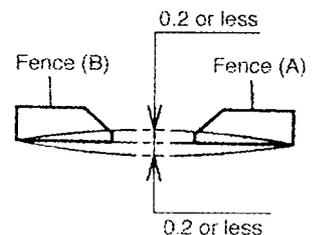
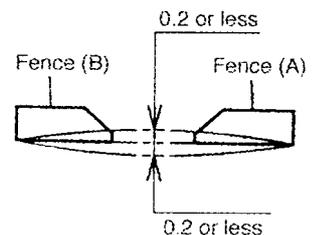
11-10. Tightening Torque

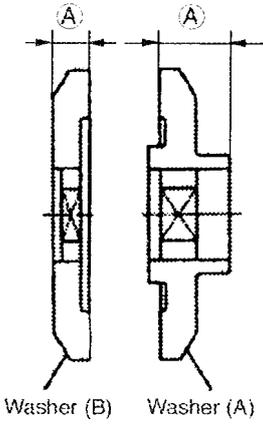
(1) Model: C 12LDH

• Machine Screw (W/Washers) M5 x 16 [15] [103] [202]	43.4 in-lbs. (4.9 N•m, 35 kgf•cm)
• Machine Screw (W/Washers) M4 x 12 (Black) [17]	10.4 in-lbs. (1.2 N•m, 12 kgf•cm)
• Machine Screw (W/Washers) M6 x 20 (Black) [19]	43.4 in-lbs. (4.9 N•m, 35 kgf•cm)
• Tapping Screw (W/Flange) D4 x 16 [27] [210] [212] [213] [219]	17.4 in-lbs. (2 N•m, 20 kgf•cm)
• Machine Screw M5 x 20 [29] [130]	30.4 in-lbs. (3.4 N•m, 35 kgf•cm)
• Machine Screw M4 x 10 [37] [66]	15.6 in-lbs. (1.8 N•m, 18 kgf•cm)
• Seal Lock Hex. Socket Set Screw M6 x 10 [40]	43.4 in-lbs. (4.9 N•m, 35 kgf•cm)
• Hex. Socket Hd. Bolt M6 x 20 [44]	86.8 in-lbs. (9.8 N•m, 100 kgf•cm)
• Machine Screw (W/Washers) M5 x 16 [50]	28.4 in-lbs. (3.3 N•m, 34 kgf•cm)
• Machine Screw M4 x 20 [57]	15.6 in-lbs. (1.8 N•m, 18 kgf•cm)
• Machine Screw M4 x 6 [59]	3.4 in-lbs. (0.39 N•m, 4 kgf•cm)
• Machine Screw (W/Washers) M4 x 16 [63] [109] [265]	15.6 in-lbs. (1.8 N•m, 18 kgf•cm)
• Machine Screw (W/Washers) M4 x 10 (Black) [71] [106]	15.6 in-lbs. (1.8 N•m, 18 kgf•cm)
• Hex. Socket Hd. Bolt M5 x 16 [73]	60.8 in-lbs. (5.8 N•m, 60 kgf•cm)
• Hex. Socket Hd. Bolt M8 x 16 [78]	195.3 in-lbs. (22 N•m, 225 kgf•cm)
• Machine Screw (W/Sp. Washers) M4 x 10 [80]	15.6 in-lbs. (1.8 N•m, 18 kgf•cm)
• Machine Screw (W/Washers) M4 x 16 [111]	10.4 in-lbs. (1.2 N•m, 12 kgf•cm)
• Machine Screw (W/Washers) M4 x 16 [119]	12.2 in-lbs. (1.37 N•m, 14 kgf•cm)
• Machine Screw M4 x 8 [133]	15.6 in-lbs. (1.8 N•m, 18 kgf•cm)
• Machine Screw M4 x 10 [140] [261]	15.6 in-lbs. (1.8 N•m, 18 kgf•cm)
• Bolt M8 x 35 [142]	86.8 in-lbs. (9.8 N•m, 100 kgf•cm)
• Flat Hd. Screw M6 x 25 [151]	13 in-lbs. (1.47 N•m, 15 kgf•cm)
• Machine Screw M5 x 16 (Black) [158]	30.4 in-lbs. (3.4 N•m, 35 kgf•cm)
• Bolt M6 x 10 [163]	43.4 in-lbs. (4.9 N•m, 50 kgf•cm)
• Machine Screw (W/Sp. Washer) M5 x 16 [164]	30.4 in-lbs. (3.4 N•m, 35 kgf•cm)
• Hex. Socket Hd. Bolt M5 x 70 [205]	17.4 in-lbs. (2 N•m, 20 kgf•cm)
• Tapping Screw (W/Flange) D4 x 20 (Black) [221]	17.4 in-lbs. (2 N•m, 20 kgf•cm)
• Machine Screw (W/Washers) M5 x 40 (Black) [229]	30.4 in-lbs. (3.4 N•m, 35 kgf•cm)
• Hex. Hd. Tapping Screw D5 x 55 [233]	26 in-lbs. (2.9 N•m, 30 kgf•cm)
• Hex. Socket Set Screw M5 x 8 [235]	8.7 in-lbs. (1 N•m, 10 kgf•cm)
• Hex. Socket Hd. Bolt M6 x 16 [245]	43.4 in-lbs. (4.9 N•m, 35 kgf•cm)
• Bolt (A) M10 [248]	130.2 in-lbs. (14.7 N•m, 150 kgf•cm)
• Flat Hd. Screw M4 x 10 (Black) [253] [293]	15.6 in-lbs. (1.8 N•m, 18 kgf•cm)
• Machine Screw (W/Washers) M6 x 20 (Black) [256]	43.4 in-lbs. (4.9 N•m, 35 kgf•cm)
• Machine Screw M5 x 10 [262] [299] [303]	30.4 in-lbs. (3.4 N•m, 35 kgf•cm)
• Machine Screw M5 x 20 [282]	30.4 in-lbs. (3.4 N•m, 35 kgf•cm)
• Machine Screw (W/Washers) M4 x 10 (Black) [285]	15.6 in-lbs. (1.8 N•m, 18 kgf•cm)
• Special Screw M6 [290]	43.4 in-lbs. (4.9 N•m, 35 kgf•cm)
• Special Screw (C) M5 [291]	30.4 in-lbs. (3.4 N•m, 35 kgf•cm)
• Machine Screw M4 x 8 [304]	15.6 in-lbs. (1.8 N•m, 18 kgf•cm)
• Flat Hd. Screw M5 x 10 (Black) [305]	30.4 in-lbs. (3.4 N•m, 35 kgf•cm)

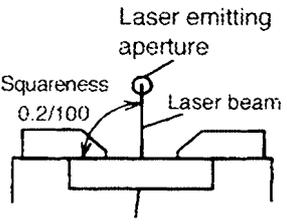
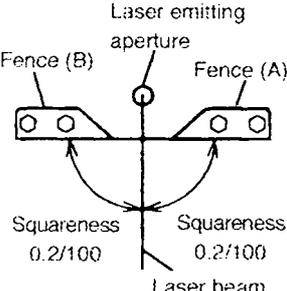
12. REPAIR GUIDE

Unit: mm

Item	Phenomenon	Cause	Factory standard	Inspection, repair or adjustment
1	<p>Inaccurate cutting ...Inaccurate squareness of the cut surface ...Cut surfaces do not fit together properly.</p>	<p>(a) Inaccurate squareness between the turn table and the saw blade causes the saw blade to cut into the workpiece at an angle.</p>	<p>0.2/100 (Dummy disc) (Fig. 66)</p>	<ul style="list-style-type: none"> • Adjust squareness with the Nylock Hex. Socket Hd. Bolt M8 x 20 [69]. • Replace the Hinge Ass'y [43], Gear Case [246] or the Turn Table Ass'y [108] (if deformed).
	 <p>Fig. 66</p>	<p>(b) Excessive deflection of the saw blade (Excessive vibration)</p>	<p>0.2/280 (Dummy disc)</p>	<ul style="list-style-type: none"> • Replace the TCT Saw Blade 305 mm-D25.4 Hole-NT32 [250]. • Check Washers (A) [251] and (B) [249] for dents, and replace them if dented.
	 <p>Fig. 67</p>	<p>(c) Inaccurate squareness between the fence (A), fence (B) and the saw blade</p>	<p>0.2/100 (Fig. 67)</p>	<ul style="list-style-type: none"> • Loosen the Bolt M8 x 35 [142] and adjust the squareness. • Replace Fence (A) [172] or Fence (B) [150].
	 <p>Fig. 68</p>	<p>(d) Inaccurate surface flatness of the fence (A) and fence (B) causes workpiece to move irregularly, causing poor squareness of cut surface.</p>	<p>0.2 or less (Fig. 68)</p>	<ul style="list-style-type: none"> • Loosen the Bolt M8 x 35 [142] and adjust the squareness. • Replace Fence (A) [172] or Fence (B) [150].
	 <p>Fig. 68</p>	<p>(e) Loose fitting of swiveling portion of the hinge and the gear case or sluggish movement. As a result, components may be deformed because of unstable gear case or because the operator applies excessive pressure during operation.</p>	<p>—</p>	<ul style="list-style-type: none"> • Check the fitting surfaces of the Hinge Ass'y [43], Gear Case [246] and Shaft (B) [168] for any foreign substances (such as cutting dust), and remove it as necessary.
	<p>(f) The workpiece moves during cutting because it is bent or deformed.</p>	<p>—</p>	<p>—</p>	<ul style="list-style-type: none"> • Correct bend, flex or other deformation by planing and try cutting.

Item	Phenomenon	Cause	Factory standard	Inspection, repair or adjustment
2	Rough cut surface Parallelism (A)  Washer (B) Washer (A) Fig. 69	(a) Large deflection of the saw blade (It causes rough cut surface.)	0.2/280 (Dummy disc)	• Same as the Item 1- (b) .
		(b) Each surface parallelism of washers (A) and (B) is inaccurate due to surface defects such as impact marks and scratches.	(Fig. 69)	• Replace Washers (A) [251] and (B) [249].
		(c) Inaccurate squareness between the turn table and the saw blade causes the saw blade to cut at an improper angle and make cutting marks.	0.2/100 (Fig. 66)	• Same as the Item 1- (a) .
		(d) Loose fitting of swiveling portion of the hinge and the gear case or sluggish movement.	—	• Same as the Item 1- (e) .
		(e) Cutting operation becomes sluggish because workpiece is warped or bent.	—	• Correct warp or bend with planer.
		(f) Excessive vibration	—	• Recheck the items (a) and (b) .
3	Saw blade is locked.	(a) Excessively fast cutting speed	—	• Reduce cutting speed.
		(b) Core diameter of extension cord is too small.	—	• Use a thicker and shorter extension cord.
		(c) Excessive cutting force is applied due to dull saw blade.	—	• Replace the saw blade.
		(d) Incorrect saw blade is used.	—	• Use a suitable Hitachi-supplied saw blade. • If the saw blade has a large number of teeth, the cutting resistance will be increased. When using a saw blade with a large number of teeth, reduce the cutting speed.
		(e) The saw blade binds in workpiece during cutting because workpiece is warped or bent.	—	• Correct workpiece deformation with a planer.

Item	Phenomenon	Cause	Factory standard	Inspection, repair or adjustment
4	Saw blade does not rotate when switch is triggered.	(a) The power cord is not connected to power supply.	—	<ul style="list-style-type: none"> • Check power supply voltage. • Connect the power cord to power supply.
		(b) The carbon brush wear exceeds allowable limit (5 mm).	—	<ul style="list-style-type: none"> • Check the Carbon Brushes (1 Pair) [237] for wear. • Replace the Carbon Brushes (1 Pair) [237].
		(c) Contact failure of the micro switch	—	<ul style="list-style-type: none"> • Check the Switch (3P Faston Type) [226] for conductivity. • Replace the Switch (3P Faston Type) [226].
5	Saw blade runs too slow (not within 3,600 — 4,400 min ⁻¹).	(a) Power supply voltage is lower than rated voltage.	—	<ul style="list-style-type: none"> • Check power supply voltage. • Check if extension cord is appropriate.
6	Laser marker does not light.	(a) Improper wiring	—	<ul style="list-style-type: none"> • Check the wiring.
		(b) Switch (B) failure	—	<ul style="list-style-type: none"> • Check Switch (B) (1P Type) [217] for conductivity. • Replace Switch (B) (1P Type) [217].
		(c) Switch (A) failure (Only Model C 12LDH)	—	<ul style="list-style-type: none"> • Check Switch (A) (1P Type) [216] for conductivity. • Replace Switch (A) (1P Type) [216].
		(d) Switching power supply failure	—	<ul style="list-style-type: none"> • Check the Switching Power Supply [220] for conductivity, input and output referring to "11-4. Wiring Diagram". • Replace the Switching Power Supply [220].
		(e) Laser module ass'y failure	—	<ul style="list-style-type: none"> • Replace Laser Module (A) [14].
7	Laser light is poor or strong.	(a) Switching power supply failure	—	<ul style="list-style-type: none"> • Same as item 6-(d).
		(b) Laser module ass'y failure	—	<ul style="list-style-type: none"> • Same as item 6-(e).

Item	Phenomenon	Cause	Factory standard	Inspection, repair or adjustment
8	<p>Laser line does not match the ink line.</p>  <p>Fig. 70</p>  <p>Fig. 71</p>	(a) Ink line is not right angle.	—	<ul style="list-style-type: none"> • Make a correct ink line again.
		(b) Laser marker accuracy is not adjusted properly.	0.2/100 (Figs. 70 and 71)	<ul style="list-style-type: none"> • Readjust the accuracy of the laser marker. (Refer to "11-9. Adjustment of Laser Marker Accuracy".)
		(c) Product accuracy is not good.	—	<ul style="list-style-type: none"> • Readjust the accuracy of the product and the laser marker.
9	Laser line does not match the cutting position.	(a) Laser marker is horizontally deviated from the saw blade.	—	<ul style="list-style-type: none"> • Adjust the position of the laser line. (Refer to "8-1. Position Adjustment of Laser Line".)
		(b) Laser marker accuracy is not adjusted properly.	—	<ul style="list-style-type: none"> • Same as item 8-(b).
10	Digital display does not indicate anything. (Model C 12LDH)	(a) Improper wiring	—	<ul style="list-style-type: none"> • Check the wiring.
		(b) Monitor failure	—	<ul style="list-style-type: none"> • Replace the Monitor Ass'y [118].
		(c) Monitor ass'y failure	—	<ul style="list-style-type: none"> • Check the Monitor Ass'y [118] for conductivity. • Replace the Monitor Ass'y [118].
		(d) Switching power supply failure	—	<ul style="list-style-type: none"> • Check the Switching Power Supply [220] for conductivity. • Replace the Switching Power Supply [220].

Item	Phenomenon	Cause	Factory standard	Inspection, repair or adjustment
11	Digital display does not indicate properly. (Model C 12LDH)	Ⓐ Same as item 10- Ⓐ to Ⓓ .		• Same as item 10- Ⓐ to Ⓓ .
	(Miter angle)	Ⓑ Encoder failure		• Replace the Encoder [127].
	(Bevel angle)			• Replace the Encoder [33].
	(Miter angle)	Ⓒ Cord (D), cord (C) 330 mm, cord (A) 100 mm, cord (C) 330 mm and cord (A) 310 mm are disconnected.		• Replace Cord (D) [114], Cord (C) 330 mm [125] or Cord (A) 100 mm [112].
	(Bevel angle)			• Replace Cord (D) [114], Cord (C) 300 mm [124] or Cord (A) 310 mm [123].
		Ⓓ Deformation of spring plate		• Adjust the squareness of the miter angle of the main body and replace the Spring Plate [76].
	Ⓔ Loose spring plate		• Adjust the squareness of the miter angle of the main body and replace the Spring Plate [76].	
12	Angle indicated on the digital display can not be reset.	Ⓐ Monitor failure		• Replace the Monitor Ass'y [118].
13	Back light of digital display can not be turned on/off. (Model C 12LDH)	Ⓐ Monitor failure	—	• Replace the Monitor Ass'y [118].

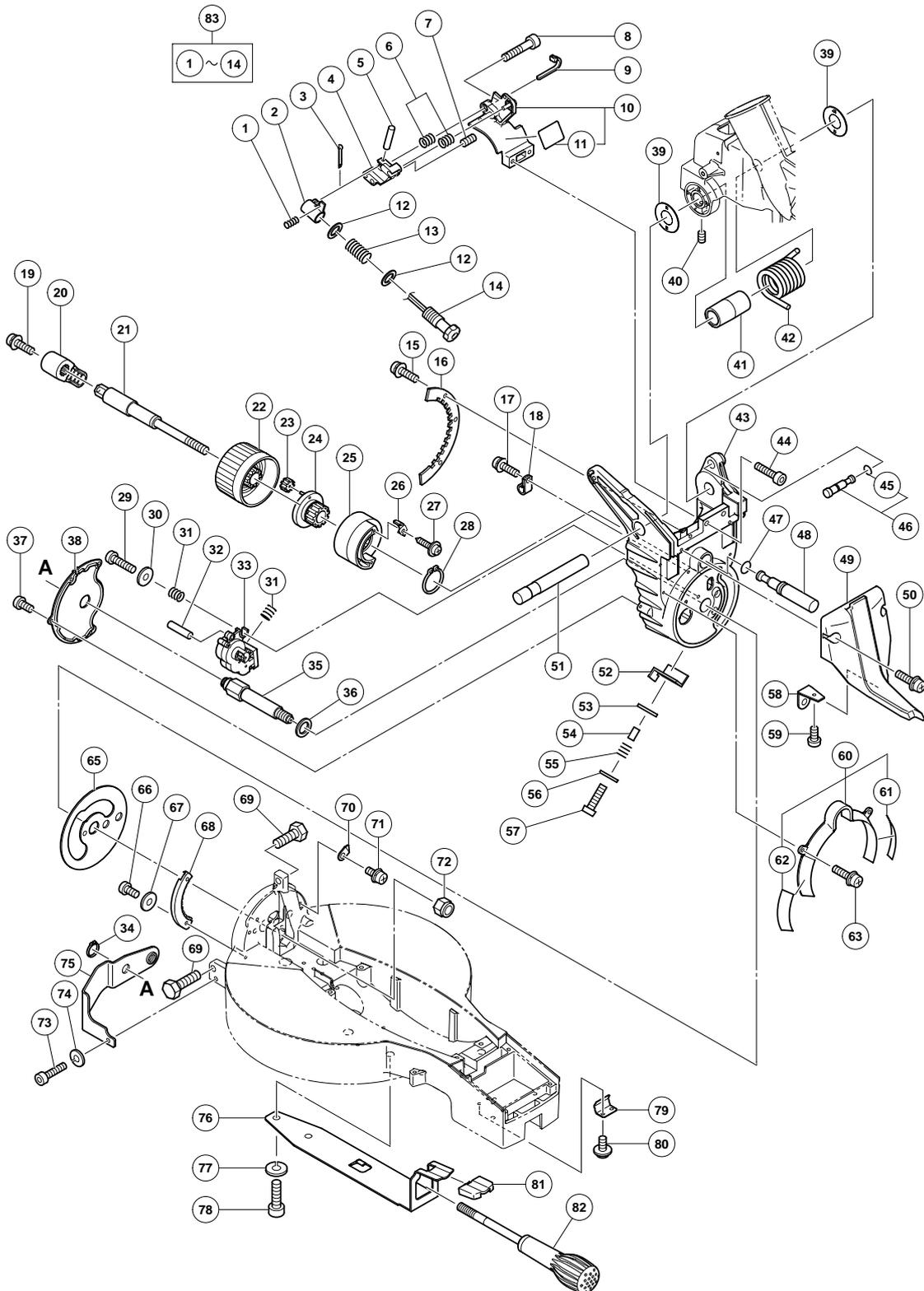
13. STANDARD REPAIR TIME (UNIT) SCHEDULES

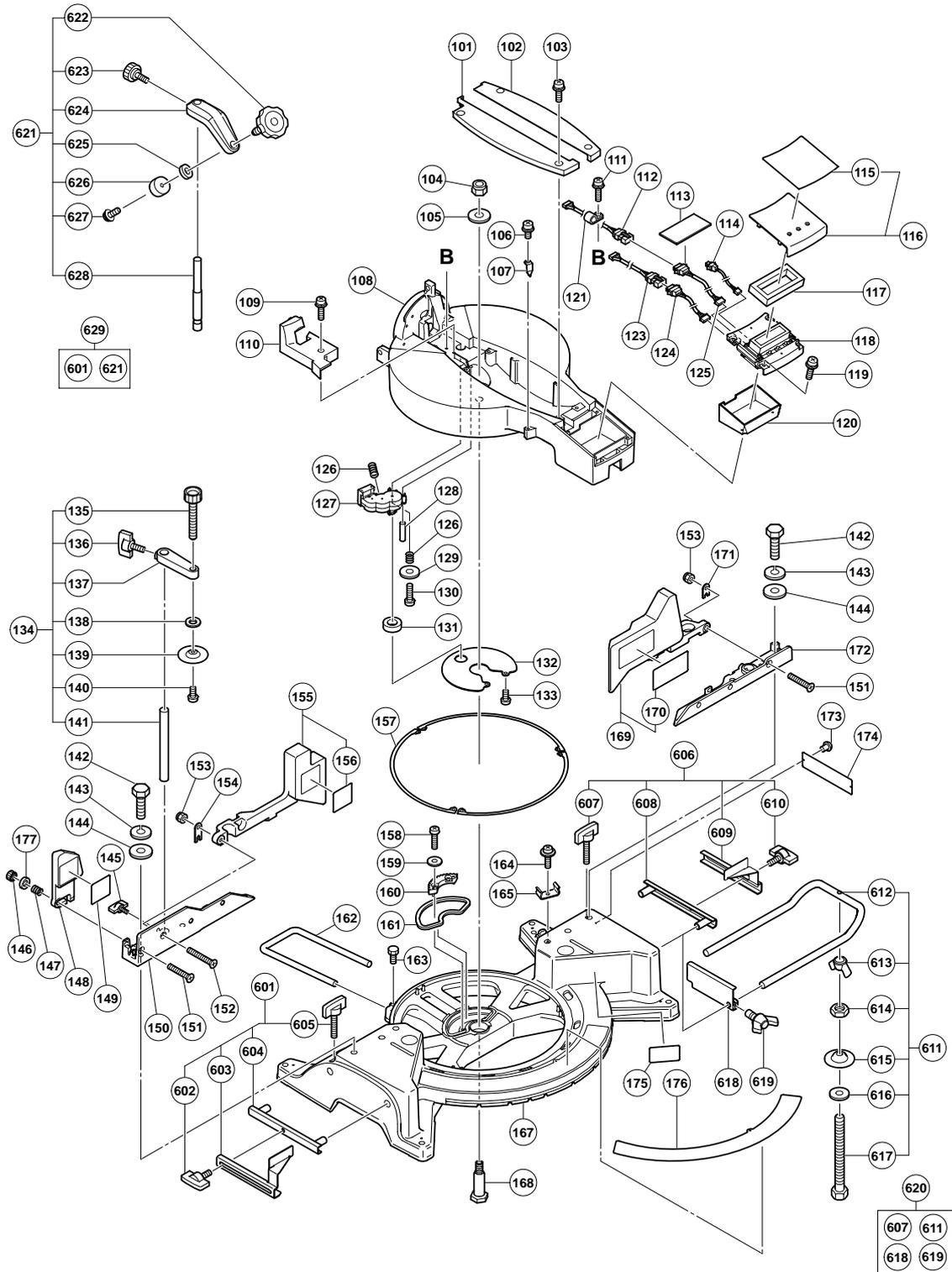
MODEL	Variable		10	20	30	40	50	60	70 min.
	Fixed								
<div style="border: 1px solid black; border-radius: 10px; padding: 2px; display: inline-block;">C 12LDH</div> <div style="border: 1px solid black; border-radius: 10px; padding: 2px; display: inline-block;">C 12FDH</div>	<div style="border: 1px solid black; border-radius: 10px; padding: 2px; display: inline-block;">General Assembly</div>	Work Flow							
		Cord Cover (B) Pulley Cover	Handle Ass'y	Switching Power Supply Switch (A) [C 12LDH] Switch (B) Switch Switch Handle Ass'y	Housing Ass'y Stator Ass'y Housing Cover				
			Armature Ass'y Ball Bearing (6201VV) Ball Bearing (6000VV) Belt Pulley (A)	Cord Cord Armor Bearing Holder (B) Pinion Ass'y Ball Bearing (608VV)					
		Link Protective Cover (B) Protective Cover (A) Return Spring Cover Plate (B) Ass'y Cover Plate (A)	Stopper Pin (B)	Spindle Ass'y Ball Bearing (6904DD) Ball Bearing (608VV) Bearing Holder (A) Spindle Gear Set					Gear Case
		Dust Guide Ass'y Clamp Lever Vise Ass'y Sub Fence (C) Table Insert (A) Table Insert (B) Hinge Cover Cord Cover (A) Scale Plate Ass'y Rack Hinge Plate Left-hand Bolt D10	Fence (B) Fence (A) Shaft (C) Spring (A) Sub Fence (A) Ass'y Sub Fence (B) Ass'y Ring Gear Knob (A) Pinion (A) Shaft (D)	Shaft (B) Liner (B) Monitor [C 12LDH]	Base Ass'y Liner (A) x 3 Gear (A) [C 12LDH] Gear (B) [C 12LDH] Encoder [C 12LDH]				Turn Table Ass'y Hinge Ass'y
		Gear Case Cover Ass'y Laser Holder Ass'y							

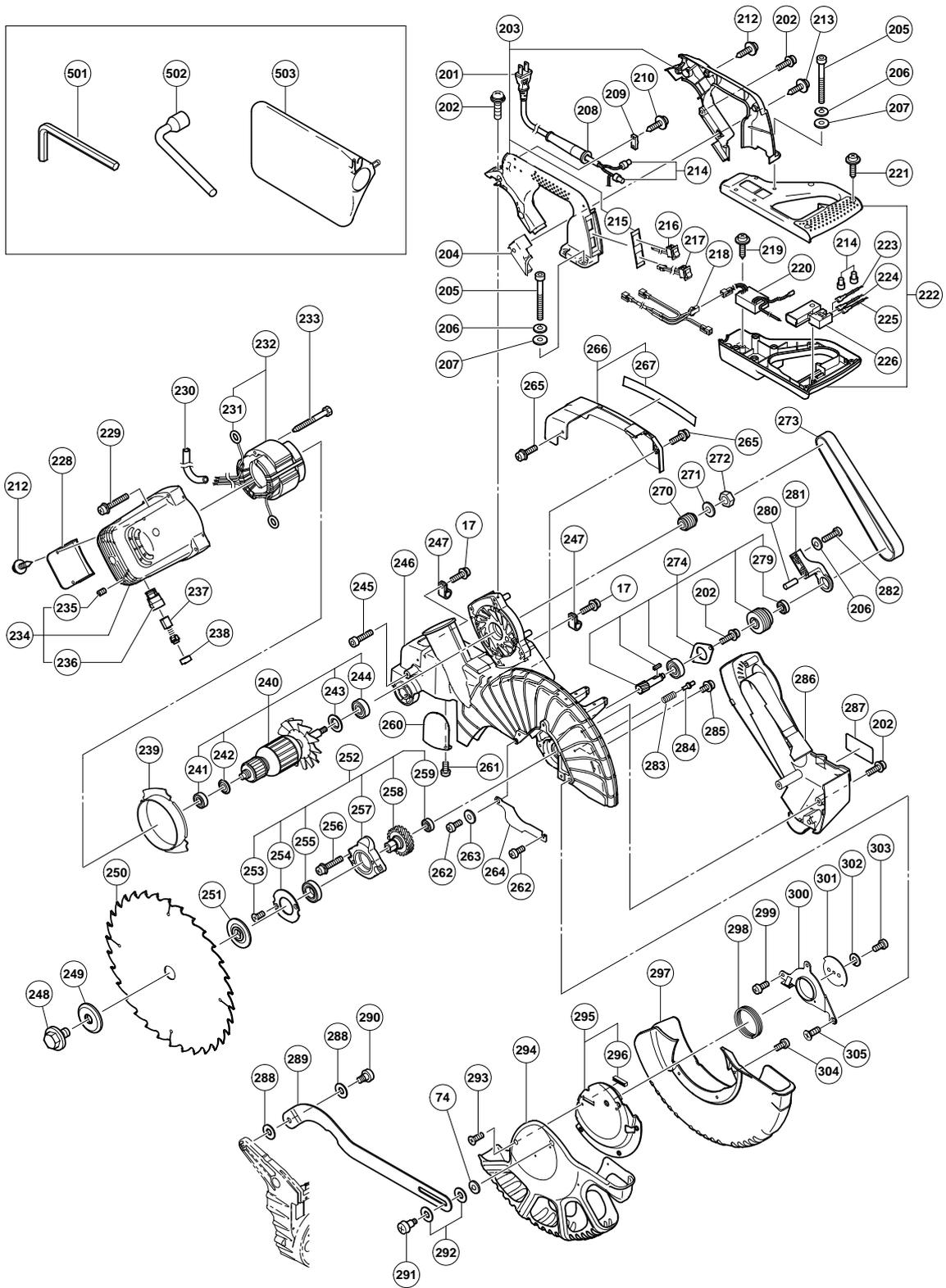
ELECTRIC TOOL PARTS LIST

COMPOUND MITER SAW
Model C 12LDH

2005 • 10 • 5
(E1)







PARTS

C 12LDH

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS
1	323-141	SPRING (B)	1	
2	323-137	LASER HOLDER (A)	1	
3	949-531	SPLIT PIN D2X12 (10 PCS.)	1	
4	323-138	LASER HOLDER (B)	1	
5	949-900	ROLL PIN D3X14 (10 PCS.)	1	
6	323-142	SPRING (C)	2	
7	962-782	HEX. SOCKET SET SCREW M5X6	1	
8	323-144	SPECIAL BOLT M5	1	
9	975-144	CABLE TIE	1	
10	323-139	LASER BASE ASS'Y	1	INCLUD. 11
11		CAUTION LABEL (A)	1	
12	323-143	WASHER	2	
13	323-140	SPRING (A)	1	
14	324-711	LASER MODULE (A)	1	
15	990-541	MACHINE SCREW (W/WASHERS) M5X16	3	
16	324-971	RACK	1	
17	935-196	MACHINE SCREW (W/WASHERS) M4X12 (BLACK)	3	
18	973-313	NYLON CLIP	1	
19	323-208	MACHINE SCREW (W/WASHERS) M6X20 (BLACK)	1	
20	322-935	CLAMP LEVER	1	
21	325-032	BOLT (LEFT HAND) M10	1	
22	325-033	KNOB (A)	1	
23	325-035	PLANET GEAR	3	
24	325-036	PINION (A)	1	
25	325-034	RING GEAR	1	
26	325-037	PLATE (H)	2	
27	307-811	TAPPING SCREW (W/FLANGE) D4X16 (BLACK)	2	
28	962-553	RETAINING RING FOR D28 SHAFT	1	
29	949-241	MACHINE SCREW M5X20 (10 PCS.)	1	
30	949-432	BOLT WASHER M6 (10 PCS.)	1	
31	323-142	SPRING (C)	2	
32	305-592	NEEDLE D5X19.8	1	
33	323-619	ENCODER	1	
34	939-542	RETAINING RING FOR D12 SHAFT (10 PCS.)	1	
35	325-030	SHAFT (D)	1	
36	322-934	WASHER M16	1	
37	949-216	MACHINE SCREW M4X10 (10 PCS.)	4	
38	324-972	HINGE COVER	1	
39	323-684	LINER (D)	2	
40	307-956	SEAL LOCK HEX. SOCKET SET SCREW M6X10	1	
41	323-594	SLEEVE	1	
42	323-595	SPRING (A)	1	
43	325-027	HINGE ASS'Y	1	INCLUD. 32
44	949-660	HEX. SOCKET HD. BOLT M6X20 (10 PCS.)	2	
45	984-528	O-RING (P-6)	1	
46	302-518	STOPPER PIN ASS'Y	1	INCLUD. 45
47	996-407	O-RING (1AP-12)	1	
48	325-028	SET PIN	1	
49	324-973	DUST GUIDE ASS'Y	1	INCLUD. 58, 59
50	990-541	MACHINE SCREW (W/WASHERS) M5X16	2	
51	323-593	SHAFT (C)	1	

PARTS

C 12LDH

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS
52	325-029	BEVEL PLATE	1	
53	949-432	BOLT WASHER M6 (10 PCS.)	1	
54	303-006	SPACER D4X10	1	
55	323-142	SPRING (C)	1	
56	949-423	WASHER M4 (10 PCS.)	1	
57	949-221	MACHINE SCREW M4X20 (10 PCS.)	1	
58	322-963	DUST GUIDE HOLDER	1	
59	949-214	MACHINE SCREW M4X6 (10 PCS.)	1	
60	324-968	SCALE PLATE ASS'Y	1	INCLUD. 61, 62
61	324-969	SCALE (B)	1	
62	324-970	SCALE (C)	1	
63	993-539	MACHINE SCREW (W/WASHERS) M4X16	2	
65	324-978	LINER (B)	1	
66	949-216	MACHINE SCREW M4X10 (10 PCS.)	2	
67	949-423	WASHER M4 (10 PCS.)	2	
68	324-977	GEAR (B)	1	
69	325-019	NYLOCK HEX. SOCKET HD. BOLT M8X20	3	
70	324-974	INDICATOR (B)	2	
71	304-043	MACHINE SCREW (W/WASHERS) M4X10 (BLACK)	2	
72	680-418	NYLON NUT M12	1	
73	949-821	HEX. SOCKET HD. BOLT M5X16 (10 PCS.)	1	
74	949-454	SPRING WASHER M5 (10 PCS.)	2	
75	325-031	HINGE PLATE	1	
76	323-627	SPRING PLATE	1	
77	949-457	SPRING WASHER M8 (10 PCS.)	2	
78	949-655	HEX. SOCKET HD. BOLT M8X16 (10 PCS.)	2	
79	323-609	SPACER (A)	1	
80	307-635	MACHINE SCREW (W/SP. WASHER) M4X10	2	
81	324-987	PLATE CAP	1	
82	323-680	SIDE HANDLE	1	
83	323-646	LASER HOLDER ASS'Y	1	INCLUD. 1-10, 12-14
101	325-046	TABLE INSERT (A)	1	
102	323-649	TABLE INSERT (B)	1	
103	990-541	MACHINE SCREW (W/WASHERS) M5X16	4	
104	975-348	NYLON NUT M8	1	
105	318-929	WASHER (F)	1	
106	304-043	MACHINE SCREW (W/WASHERS) M4X10 (BLACK)	1	
107	318-927	INDICATOR (A)	1	
108	324-976	TURN TABLE ASS'Y	1	INCLUD. 128
109	993-539	MACHINE SCREW (W/WASHERS) M4X16	1	
110	325-021	CORD COVER (A)	1	
111	993-539	MACHINE SCREW (W/WASHERS) M4X16	1	
112	324-986	CORD (A) 100MM	1	
113	324-984	PACKING (E)	1	
114	324-983	CORD (D)	1	
115	323-616	PANEL SHEET (A)	1	
116	323-615	INDICATION PANEL ASS'Y	1	INCLUD. 115
117	323-608	PACKING (D)	1	
118	324-979	MONITOR ASS'Y	1	INCLUD. 114, 124, 125
119	993-539	MACHINE SCREW (W/WASHERS) M4X16	4	
120	324-985	INSULATING CASE	1	

PARTS

C 12LDH

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS
121	980-523	NYLON CLIP	1	
123	325-026	CORD (A) 310MM	1	
124	324-981	CORD (C) 300MM	1	
125	324-982	CORD (C) 330MM	1	
126	323-142	SPRING (C)	2	
127	323-619	ENCODER	1	
128	305-592	NEEDLE D5X19.8	1	
129	949-432	BOLT WASHER M6 (10 PCS.)	1	
130	949-241	MACHINE SCREW M5X20 (10 PCS.)	1	
131	323-622	PACKING (B)	1	
132	323-623	DUST COVER	1	
133	949-215	MACHINE SCREW M4X8 (10 PCS.)	1	
134	323-677	WISE ASS'Y	1	INCLUD. 135-141
135	323-678	KNOB BOLT	1	
136	301-806	WING BOLT M6X15	1	
137		SCREW HOLDER	1	
138	949-432	BOLT WASHER M6 (10 PCS.)	1	
139	302-532	WISE PLATE	1	
140	949-216	MACHINE SCREW M4X10 (10 PCS.)	1	
141	322-954	WISE SHAFT	1	
142	949-678	BOLT M8X35 (10 PCS.)	4	
143	949-457	SPRING WASHER M8 (10 PCS.)	4	
144	949-433	BOLT WASHER M8 (10 PCS.)	4	
145	301-806	WING BOLT M6X15	1	
146	324-995	KNOB (B)	1	
147	323-142	SPRING (C)	1	
148	324-993	SUB FENCE (C) ASS'Y	1	INCLUD. 149
149		WARNING LABEL (O)	1	
150	325-049	FENCE (B)	1	
151	949-342	FLAT HD. SCREW M6X25 (10 PCS.)	2	
152	949-795	FLAT HD. SCREW M6X35 (10 PCS.)	1	
153	963-837	NYLON NUT M6	2	
154	324-994	PLATE (D) 35MM	1	
155	325-271	SUB FENCE (B) ASS'Y	1	INCLUD. 156
156		WARNING LABEL (L)	1	
157	323-625	LINER (A)	3	
158	302-317	MACHINE SCREW M5X16 (BLACK)	2	
159	949-431	BOLT WASHER M5 (10 PCS.)	2	
160	324-975	GEAR (A)	1	
161	323-603	PACKING (A)	1	
162	322-910	HOLDER	1	
163	949-610	BOLT M6X10 (10 PCS.)	1	
164	987-512	MACHINE SCREW (W/SP. WASHER) M5X16	1	
165	323-605	HOOK	1	
167	325-264	BASE ASS'Y	1	INCLUD. 173-176
168	323-626	SHAFT (B)	1	
169	325-270	SUB FENCE (A) ASS'Y	1	INCLUD. 170
170		WARNING LABEL (M)	1	
171	324-990	PLATE (D) 24.5MM	1	
172	324-988	FENCE (A)	1	
173	949-510	RIVET D2.5X4.8 (10 PCS.)	2	

PARTS

C 12LDH

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS
174		WARNING LABEL (A)	1	
175		CAUTION LABEL (C)	1	
176	323-656	SCALE (A)	1	
177	949-432	BOLT WASHER M6 (10 PCS.)	1	
201	325-048	CORD	1	
202	990-541	MACHINE SCREW (W/WASHERS) M5X16	7	
203	325-013	HANDLE ASS'Y	1	INCLUD. 215
204	325-022	CORD COVER (B)	1	
205	949-828	HEX. SOCKET HD. BOLT M5X70 (10 PCS.)	4	
206	949-454	SPRING WASHER M5 (10 PCS.)	6	
207	949-431	BOLT WASHER M5 (10 PCS.)	4	
208	940-778	CORD ARMOR D10.7	1	
209	937-631	CORD CLIP	1	
210	984-750	TAPPING SCREW (W/FLANGE) D4X16	2	
212	307-811	TAPPING SCREW (W/FLANGE) D4X16 (BLACK)	5	
213	307-811	TAPPING SCREW (W/FLANGE) D4X16 (BLACK)	1	
214	959-141	CONNECTOR 50092 (10 PCS.)	4	
215	325-014	SWITCH LABEL (A)	1	
216	323-634	SWITCH (A) (1P TYPE)	1	
217	323-635	SWITCH (B) (1P TYPE)	1	
218	324-999	CORD (B)	1	
219	984-750	TAPPING SCREW (W/FLANGE) D4X16	1	
220	322-911	SWITCHING POWER SUPPLY	1	
221	301-653	TAPPING SCREW (W/FLANGE) D4X20 (BLACK)	3	
222	325-043	SWITCH HANDLE (A).(B) SET	1	
223	325-261	INTERNAL WIRE (A) (BLUE)	1	
224	325-262	INTERNAL WIRE (A) (YELLOW)	1	
225	325-263	INTERNAL WIRE (A) (BLACK)	1	
226	324-998	SWITCH (3P FASTON TYPE) W/O LOCK	1	
228	325-002	HOUSING COVER	1	
229	322-123	MACHINE SCREW (W/WASHERS) M5X40 (BLACK)	4	
230	325-000	VINYL TUBE	1	
231	937-623	BRUSH TERMINAL	2	
232	340-648D	STATOR ASS'Y 120V	1	INCLUD. 231
233	953-174	HEX. HD. TAPPING SCREW D5X55	2	
234	325-045	HOUSING ASS'Y	1	INCLUD. 235, 236
235	938-477	HEX. SOCKET SET SCREW M5X8	2	
236	938-241	BRUSH HOLDER	1	
237	999-038	CARBON BRUSH (1 PAIR)	2	
238	945-161	BRUSH CAP	2	
239	322-915	FAN GUIDE	1	
240	360-743U	ARMATURE ASS'Y 120V	1	INCLUD. 241-244
241	600-0VV	BALL BEARING 6000VVCMP2L	1	
242	302-428	WASHER (A)	1	
243	325-003	DUST WASHER (B)	1	
244	620-1VV	BALL BEARING 6201VVCMP2L	1	
245	949-755	HEX. SOCKET HD. BOLT M6X16 (10 PCS.)	1	
246	325-004	GEAR CASE	1	
247	980-523	NYLON CLIP	2	
248	988-101	BOLT (A) M10	1	
249	323-652	WASHER (B)	1	

PARTS

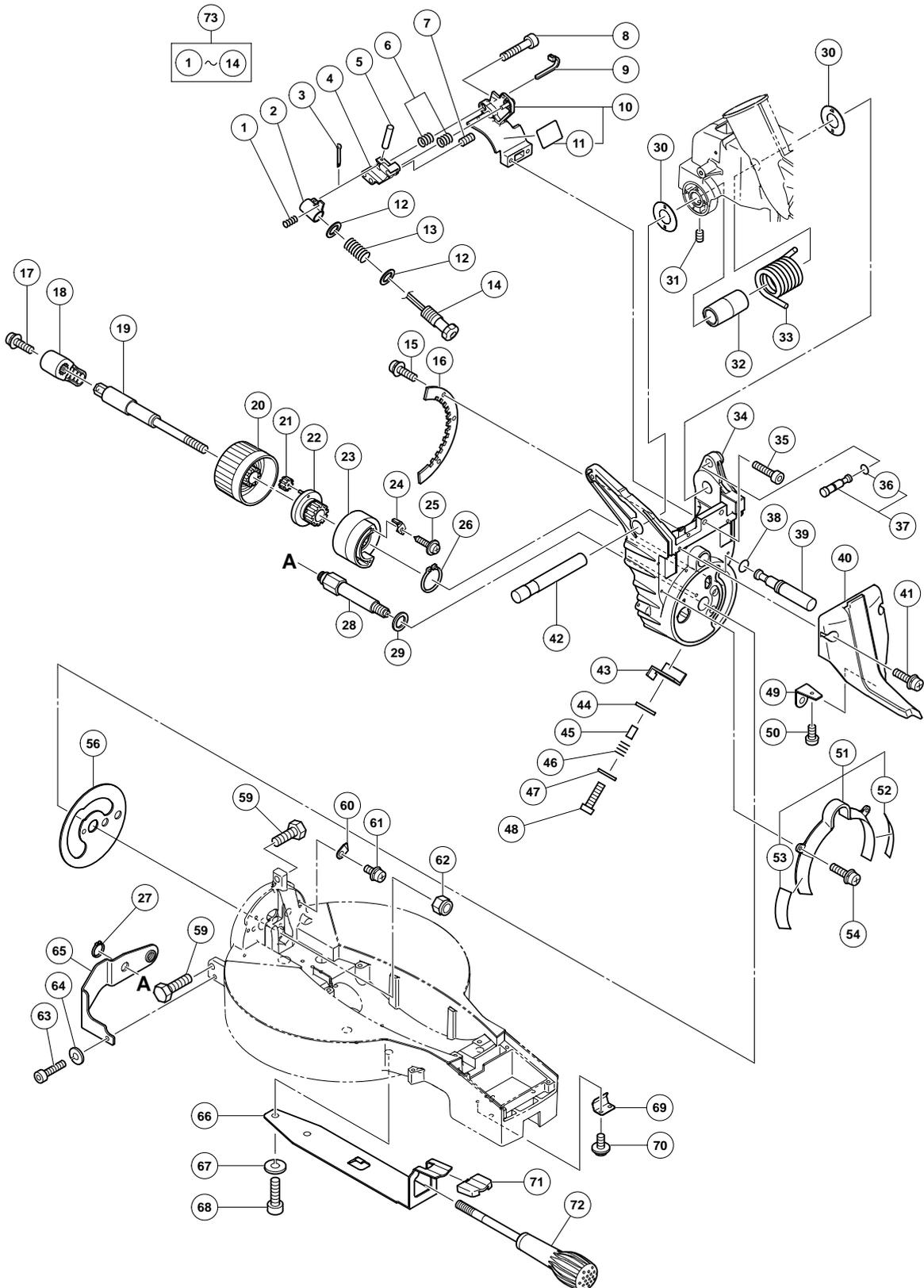
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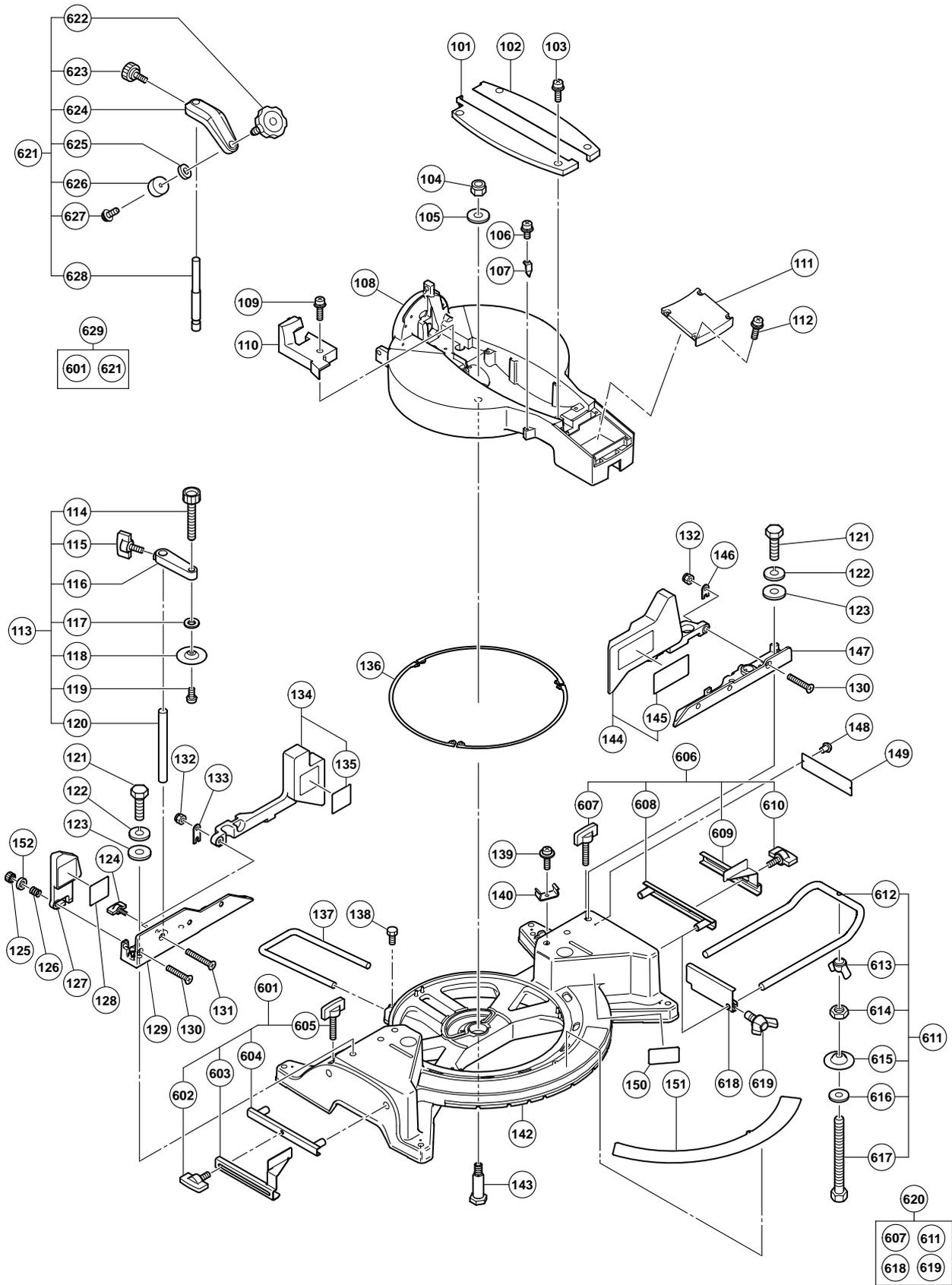
ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS
250		TCT SAW BLADE 305MM-D25.4 HOLE-NT32	1	
251	325-023	WASHER (A)	1	
252	325-005	SPINDLE ASS'Y	1	INCLUD. 253-255, 257-259
253	318-363	FLAT HD. SCREW M4X10 (BLACK)	2	
254	325-008	BEARING COVER (A)	1	
255	690-4DD	BALL BEARING 6904DDPS2L	1	
256	323-208	MACHINE SCREW (W/WASHERS) M6X20 (BLACK)	2	
257	325-007	BEARING HOLDER (A)	1	
258	325-006	SPINDLE AND GEAR SET	1	
259	608-VVM	BALL BEARING 608VVC2PS2L	1	
260	322-926	LASER COVER (A)	1	
261	949-216	MACHINE SCREW M4X10 (10 PCS.)	1	
262	949-236	MACHINE SCREW M5X10 (10 PCS.)	2	
263	949-431	BOLT WASHER M5 (10 PCS.)	1	
264	323-675	SPINDLE COVER	1	
265	993-539	MACHINE SCREW (W/WASHERS) M4X16	2	
266	325-047	GEAR CASE COVER ASS'Y	1	INCLUD. 267
267	323-654	CAUTION LABEL (B)	1	
270	324-443	PULLEY (A)	1	
271	961-157	SUPER LOCK WASHER	1	
272	949-560	NUT M10 (10 PCS.)	1	
273	324-427	BELT (200H10) 16X508	1	
274	325-009	PINION ASS'Y	1	INCLUD. 279
279	608-VVM	BALL BEARING 608VVC2PS2L	1	
280	983-545	NEEDLE ROLLER	2	
281	325-259	BEARING HOLDER (B)	1	
282	949-241	MACHINE SCREW M5X20 (10 PCS.)	2	
283	325-018	SPRING	1	
284	325-017	STOPPER PIN (B)	1	
285	304-043	MACHINE SCREW (W/WASHERS) M4X10 (BLACK)	1	
286	325-016	PULLEY COVER	1	
287		NAME PLATE	1	
288	322-948	WASHER M7	2	
289	325-041	LINK	1	
290	322-950	SPECIAL SCREW M6	1	
291	322-947	SPECIAL SCREW (C) M5	1	
292	322-938	WASHER M10	2	
293	318-363	FLAT HD. SCREW M4X10 (BLACK)	1	
294	325-039	PROTECTIVE COVER (B)	1	
295	323-672	COVER PLATE (B) ASS'Y	1	INCLUD. 296
296	323-673	CUSHION	1	
297	323-667	PROTECTIVE COVER (A)	1	
298	323-671	RETURN SPRING	1	
299	949-236	MACHINE SCREW M5X10 (10 PCS.)	2	
300	325-040	COVER PLATE (A)	1	
301	323-670	COVER WASHER	1	
302	949-454	SPRING WASHER M5 (10 PCS.)	1	
303	949-236	MACHINE SCREW M5X10 (10 PCS.)	1	
304	949-215	MACHINE SCREW M4X8 (10 PCS.)	3	
305	325-038	FLAT HD. SCREW M5X10 (BLACK)	1	

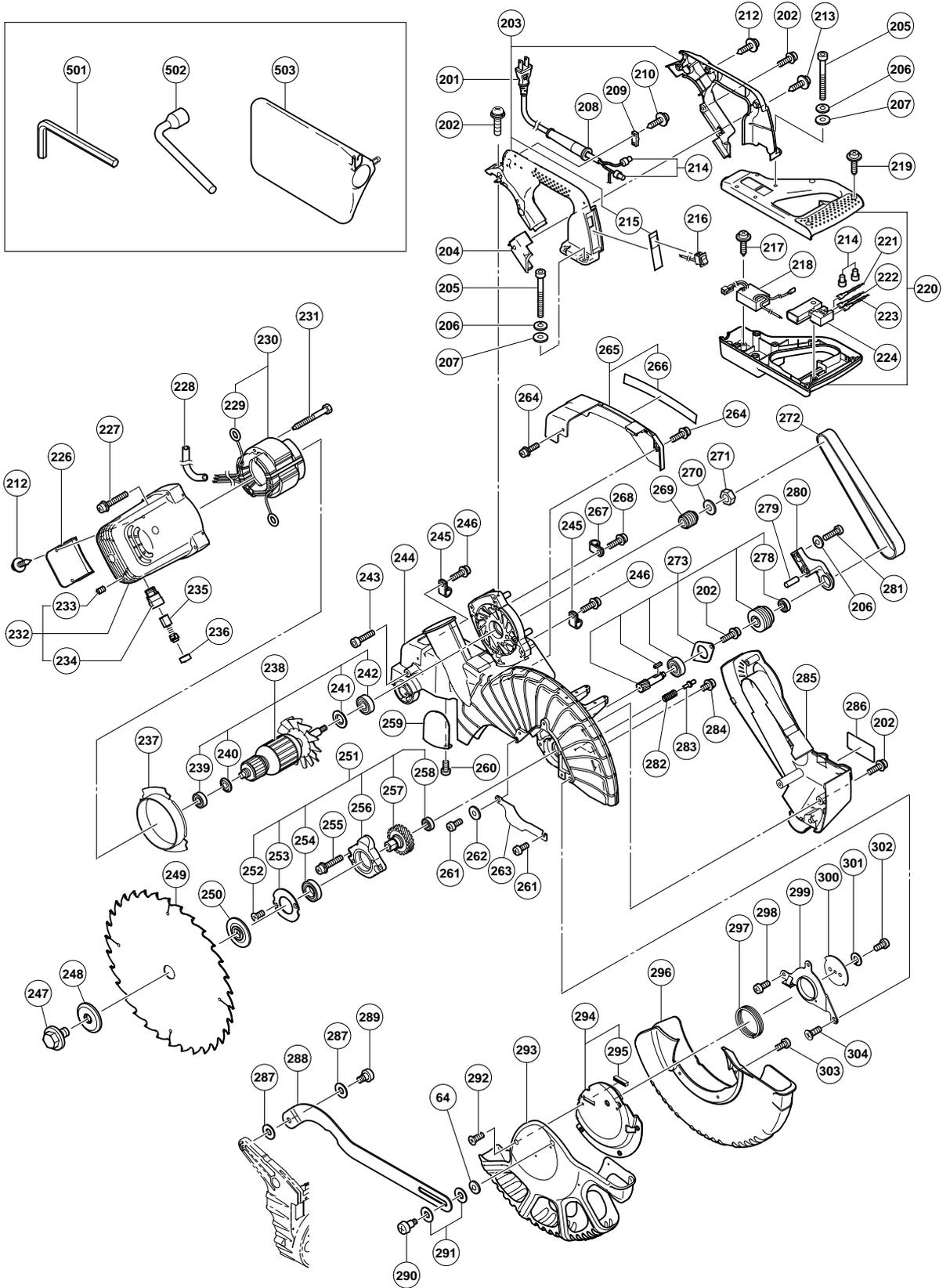
ELECTRIC TOOL PARTS LIST

COMPOUND MITER SAW
Model C 12FDH

2005 • 10 • 5
(E1)







PARTS

C 12FDH

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS
1	323-141	SPRING (B)	1	
2	323-137	LASER HOLDER (A)	1	
3	949-531	SPLIT PIN D2X12 (10 PCS.)	1	
4	323-138	LASER HOLDER (B)	1	
5	949-900	ROLL PIN D3X14 (10 PCS.)	1	
6	323-142	SPRING (C)	2	
7	962-782	HEX. SOCKET SET SCREW M5X6	1	
8	323-144	SPECIAL BOLT M5	1	
9	975-144	CABLE TIE	1	
10	323-139	LASER BASE ASS'Y	1	INCLUD. 11
11		CAUTION LABEL (A)	1	
12	323-143	WASHER	2	
13	323-140	SPRING (A)	1	
14	324-711	LASER MODULE (A)	1	
15	990-541	MACHINE SCREW (W/WASHERS) M5X16	3	
16	324-971	RACK	1	
17	323-208	MACHINE SCREW (W/WASHERS) M6X20 (BLACK)	1	
18	322-935	CLAMP LEVER	1	
19	325-032	BOLT (LEFT HAND) M10	1	
20	325-033	KNOB (A)	1	
21	325-035	PLANET GEAR	3	
22	325-036	PINION (A)	1	
23	325-034	RING GEAR	1	
24	325-037	PLATE (H)	2	
25	307-811	TAPPING SCREW (W/FLANGE) D4X16 (BLACK)	2	
26	962-553	RETAINING RING FOR D28 SHAFT	1	
27	939-542	RETAINING RING FOR D12 SHAFT (10 PCS.)	1	
28	325-030	SHAFT (D)	1	
29	322-934	WASHER M16	1	
30	323-684	LINER (D)	2	
31	307-956	SEAL LOCK HEX. SOCKET SET SCREW M6X10	1	
32	323-594	SLEEVE	1	
33	323-595	SPRING (A)	1	
34	325-279	HINGE	1	
35	949-660	HEX. SOCKET HD. BOLT M6X20 (10 PCS.)	2	
36	984-528	O-RING (P-6)	1	
37	302-518	STOPPER PIN ASS'Y	1	INCLUD. 36
38	996-407	O-RING (1AP-12)	1	
39	325-028	SET PIN	1	
40	324-973	DUST GUIDE ASS'Y	1	INCLUD. 49, 50
41	990-541	MACHINE SCREW (W/WASHERS) M5X16	2	
42	323-593	SHAFT (C)	1	
43	325-029	BEVEL PLATE	1	
44	949-432	BOLT WASHER M6 (10 PCS.)	1	
45	303-006	SPACER D4X10	1	
46	323-142	SPRING (C)	1	
47	949-423	WASHER M4 (10 PCS.)	1	
48	949-221	MACHINE SCREW M4X20 (10 PCS.)	1	
49	322-963	DUST GUIDE HOLDER	1	
50	949-214	MACHINE SCREW M4X6 (10 PCS.)	1	
51	324-960	SCALE PLATE ASS'Y	1	INCLUD. 52, 53

PARTS

C 12FDH

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS
52	324-961	SCALE (D)	1	
53	324-962	SCALE (E)	1	
54	993-539	MACHINE SCREW (W/WASHERS) M4X16	2	
56	324-978	LINER (B)	1	
59	325-019	NYLOCK HEX. SOCKET HD. BOLT M8X20	3	
60	324-974	INDICATOR (B)	2	
61	304-043	MACHINE SCREW (W/WASHERS) M4X10 (BLACK)	2	
62	680-418	NYLON NUT M12	1	
63	949-821	HEX. SOCKET HD. BOLT M5X16 (10 PCS.)	1	
64	949-454	SPRING WASHER M5 (10 PCS.)	2	
65	325-031	HINGE PLATE	1	
66	323-627	SPRING PLATE	1	
67	949-457	SPRING WASHER M8 (10 PCS.)	2	
68	949-655	HEX. SOCKET HD. BOLT M8X16 (10 PCS.)	2	
69	323-609	SPACER (A)	1	
70	307-635	MACHINE SCREW (W/SP. WASHER) M4X10	2	
71	324-987	PLATE CAP	1	
72	323-680	SIDE HANDLE	1	
73	323-646	LASER HOLDER ASS'Y	1	INCLUD. 1-10, 12-14
101	325-046	TABLE INSERT (A)	1	
102	323-649	TABLE INSERT (B)	1	
103	990-541	MACHINE SCREW (W/WASHERS) M5X16	4	
104	975-348	NYLON NUT M8	1	
105	318-929	WASHER (F)	1	
106	304-043	MACHINE SCREW (W/WASHERS) M4X10 (BLACK)	1	
107	318-927	INDICATOR (A)	1	
108	325-277	TURN TABLE	1	
109	993-539	MACHINE SCREW (W/WASHERS) M4X16	1	
110	325-021	CORD COVER (A)	1	
111	323-693	MONITOR CASE (B)	1	
112	993-539	MACHINE SCREW (W/WASHERS) M4X16	4	
113	323-677	WISE ASS'Y	1	INCLUD. 114-120
114	323-678	KNOB BOLT	1	
115	301-806	WING BOLT M6X15	1	
116		SCREW HOLDER	1	
117	949-432	BOLT WASHER M6 (10 PCS.)	1	
118	302-532	WISE PLATE	1	
119	949-216	MACHINE SCREW M4X10 (10 PCS.)	1	
120	322-954	WISE SHAFT	1	
121	949-678	BOLT M8X35 (10 PCS.)	4	
122	949-457	SPRING WASHER M8 (10 PCS.)	4	
123	949-433	BOLT WASHER M8 (10 PCS.)	4	
124	301-806	WING BOLT M6X15	1	
125	324-995	KNOB (B)	1	
126	323-142	SPRING (C)	1	
127	324-993	SUB FENCE (C) ASS'Y	1	INCLUD. 128
128		WARNING LABEL (O)	1	
129	325-049	FENCE (B)	1	
130	949-342	FLAT HD. SCREW M6X25 (10 PCS.)	2	
131	949-795	FLAT HD. SCREW M6X35 (10 PCS.)	1	
132	311-144	NYLON NUT M6	2	

PARTS

C 12FDH

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS
133	324-994	PLATE (D) 35MM	1	
134	325-271	SUB FENCE (B) ASS'Y	1	INCLUD. 135
135		WARNING LABEL (L)	1	
136	323-625	LINER (A)	3	
137	322-910	HOLDER	1	
138	949-610	BOLT M6X10 (10 PCS.)	1	
139	987-512	MACHINE SCREW (W/SP. WASHER) M5X16	1	
140	323-605	HOOK	1	
142	324-965	BASE ASS'Y	1	INCLUD. 148-151
143	323-626	SHAFT (B)	1	
144	325-270	SUB FENCE (A) ASS'Y	1	INCLUD. 145
145		WARNING LABEL (M)	1	
146	324-990	PLATE (D) 24.5MM	1	
147	324-988	FENCE (A)	1	
148	949-510	RIVET D2.5X4.8 (10 PCS.)	2	
149		WARNING LABEL (A)	1	
150		CAUTION LABEL (C)	1	
151	323-692	SCALE (A)	1	
152	949-432	BOLT WASHER M6 (10 PCS.)	1	
201	325-048	CORD	1	(CORD ARMOR D10.7)
202	990-541	MACHINE SCREW (W/WASHERS) M5X16	7	
203	324-964	HANDLE ASS'Y	1	INCLUD. 215
204	325-022	CORD COVER (B)	1	
205	949-828	HEX. SOCKET HD. BOLT M5X70 (10 PCS.)	4	
206	949-431	BOLT WASHER M5 (10 PCS.)	4	
207	949-454	SPRING WASHER M5 (10 PCS.)	6	
208	940-778	CORD ARMOR D10.7	1	
209	937-631	CORD CLIP	1	
210	984-750	TAPPING SCREW (W/FLANGE) D4X16	2	
212	307-811	TAPPING SCREW (W/FLANGE) D4X16 (BLACK)	5	
213	307-811	TAPPING SCREW (W/FLANGE) D4X16 (BLACK)	1	
214	959-141	CONNECTOR 50092 (10 PCS.)	4	
215	324-966	SWITCH LABEL (B)	1	
216	323-634	SWITCH (A) (1P TYPE)	1	
217	984-750	TAPPING SCREW (W/FLANGE) D4X16	1	
218	325-280	SWITCHING POWER SUPPLY	1	
219	301-653	TAPPING SCREW (W/FLANGE) D4X20 (BLACK)	3	
220	325-043	SWITCH HANDLE (A).(B) SET	1	
221	325-261	INTERNAL WIRE (A) (BLUE)	1	
222	325-262	INTERNAL WIRE (A) (YELLOW)	1	
223	325-263	INTERNAL WIRE (A) (BLACK)	1	
224	324-998	SWITCH (3P FASTON TYPE) W/O LOCK	1	
226	325-002	HOUSING COVER	1	
227	322-123	MACHINE SCREW (W/WASHERS) M5X40 (BLACK)	4	
228	325-000	VINYL TUBE	1	
229	937-623	BRUSH TERMINAL	2	
230	340-648D	STATOR ASS'Y 120V	1	INCLUD. 229
231	953-174	HEX. HD. TAPPING SCREW D5X55	2	
232	325-045	HOUSING ASS'Y	1	INCLUD. 233, 234
233	938-477	HEX. SOCKET SET SCREW M5X8	2	
234	938-241	BRUSH HOLDER	1	

PARTS

C 12FDH

ITEM NO.	CODE NO.	DESCRIPTION	NO. USED	REMARKS
235	999-038	CARBON BRUSH (1 PAIR)	1	
236	945-161	BRUSH CAP	1	
237	322-915	FAN GUIDE	1	
238	360-743U	ARMATURE ASS'Y 120V	1	INCLUD. 239-242
239	600-0VV	BALL BEARING 6000VVCMP2L	1	
240	302-428	WASHER (A)	1	
241	325-003	DUST WASHER (B)	1	
242	620-1VV	BALL BEARING 6201VVCMP2L	1	
243	949-755	HEX. SOCKET HD. BOLT M6X16 (10 PCS.)	1	
244	325-004	GEAR CASE	1	
245	980-523	NYLON CLIP	2	
246	935-196	MACHINE SCREW (W/WASHERS) M4X12 (BLACK)	2	
247	988-101	BOLT (A) M10	1	
248	323-652	WASHER (B)	1	
249		TCT SAW BLADE 305MM-D25.4 HOLE-NT32	1	
250	325-023	WASHER (A)	1	
251	325-005	SPINDLE ASS'Y	1	INCLUD. 252-254, 256-258
252	318-363	FLAT HD. SCREW M4X10 (BLACK)	2	
253	325-008	BEARING COVER (A)	1	
254	690-4DD	BALL BEARING 6904DDPS2L	1	
255	323-208	MACHINE SCREW (W/WASHERS) M6X20 (BLACK)	2	
256	325-007	BEARING HOLDER (A)	1	
257	325-006	SPINDLE AND GEAR SET	1	
258	608-VVM	BALL BEARING 608VVC2PS2L	1	
259	322-926	LASER COVER (A)	1	
260	949-216	MACHINE SCREW M4X10 (10 PCS.)	1	
261	323-040	MACHINE SCREW M5X10 (BLACK)	2	
262	949-431	BOLT WASHER M5 (10 PCS.)	1	
263	323-675	SPINDLE COVER	1	
264	993-539	MACHINE SCREW (W/WASHERS) M4X16	2	
265	325-047	GEAR CASE COVER ASS'Y	1	INCLUD. 266
266	323-654	CAUTION LABEL (B)	1	
269	324-443	PULLEY (A)	1	
270	961-157	SUPER LOCK WASHER	1	
271	949-560	NUT M10 (10 PCS.)	1	
272	324-427	BELT (200H10) 16X508	1	
273	325-009	PINION ASS'Y	1	INCLUD. 278
278	608-VVM	BALL BEARING 608VVC2PS2L	1	
279	983-545	NEEDLE ROLLER	2	
280	325-259	BEARING HOLDER (B)	1	
281	949-241	MACHINE SCREW M5X20 (10 PCS.)	2	
282	325-018	SPRING	1	
283	325-017	STOPPER PIN (B)	1	
284	304-043	MACHINE SCREW (W/WASHERS) M4X10 (BLACK)	1	
285	325-016	PULLEY COVER	1	
286		NAME PLATE	1	
287	322-948	WASHER M7	2	
288	325-041	LINK	1	
289	322-950	SPECIAL SCREW M6	1	
290	322-947	SPECIAL SCREW (C) M5	1	
291	322-938	WASHER M10	2	

