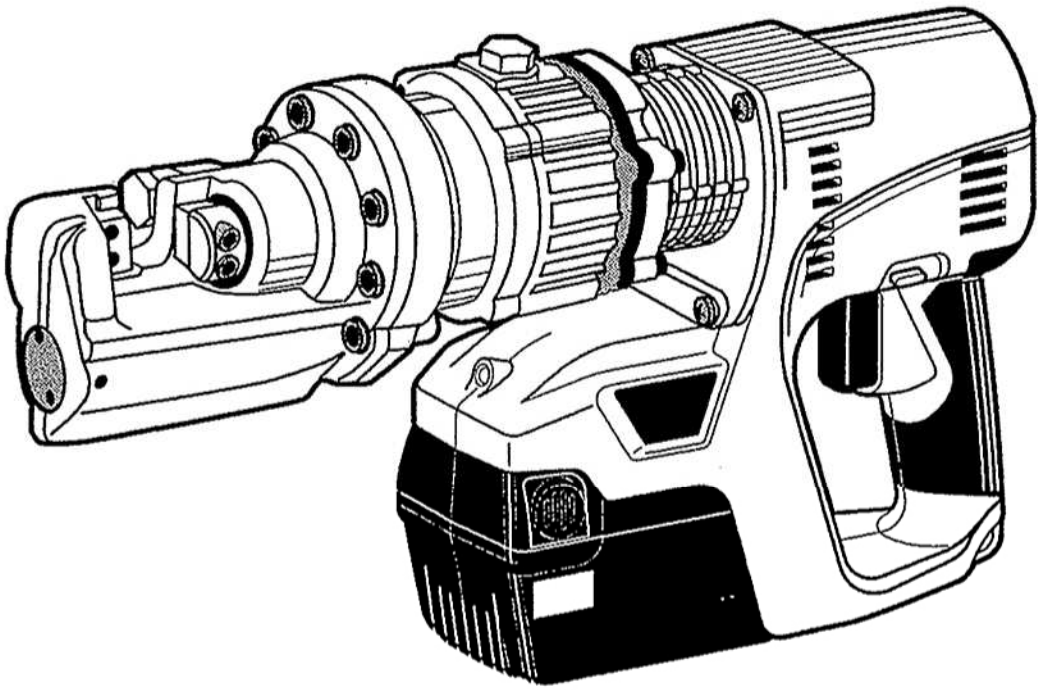
MAX®

PJRC160

CORDLESS RE-BAR CUTTER



OPERATING AND MAINTENANCE MANUAL

November 2012

WARNING

BEFORE USING THIS TOOL, STUDY THIS MANUAL TO ENSURE SAFETY WARNING AND INSTRUCTIONS.
KEEP THESE INSTRUCTIONS WITH THE TOOL FOR FUTURE REFERENCE.

Fig.A

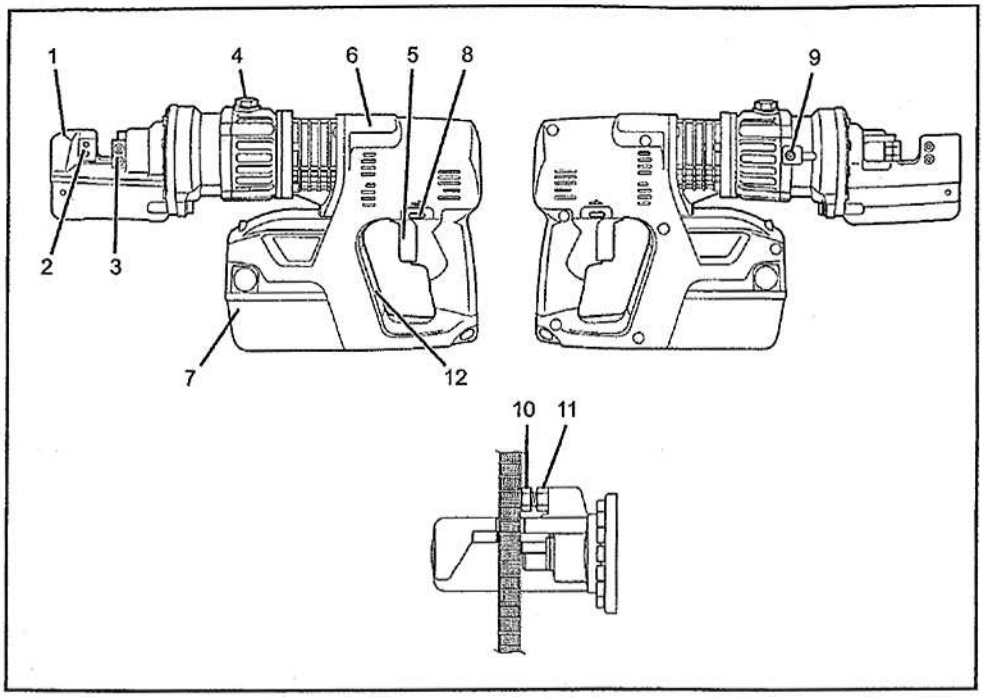


Fig.B

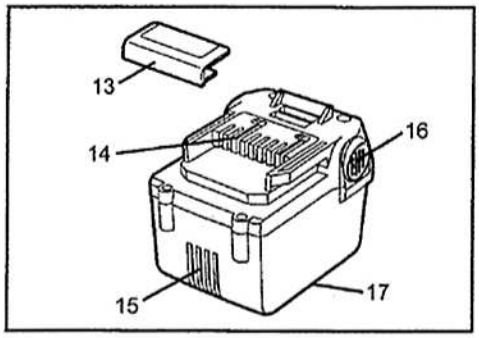
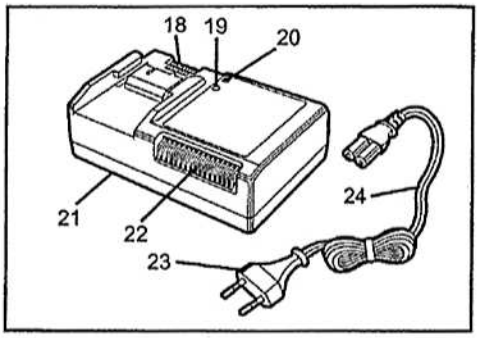


Fig.C



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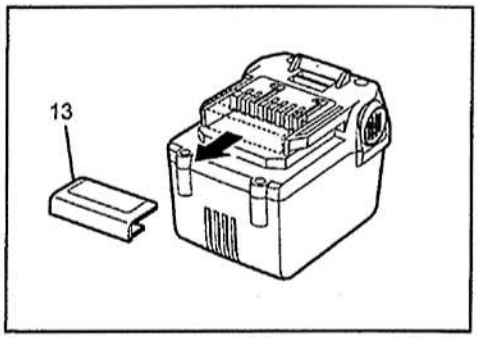

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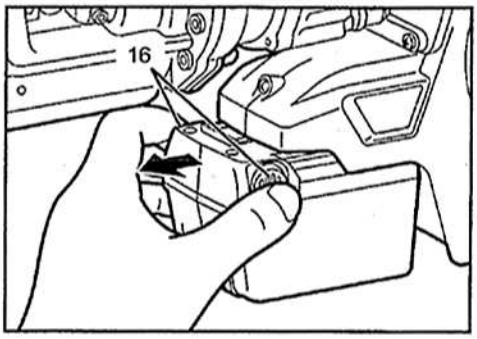

Fig.F

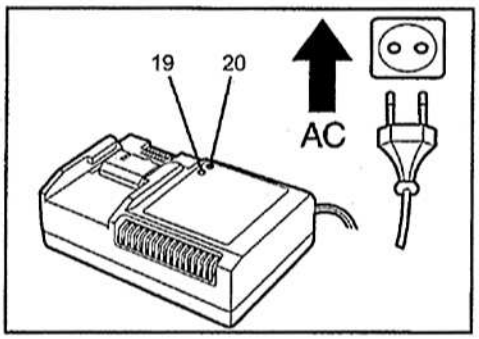

Fig.G

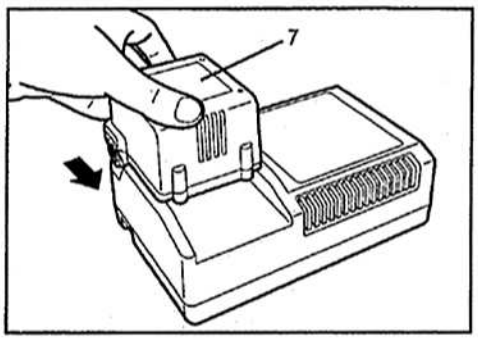

Fig.H

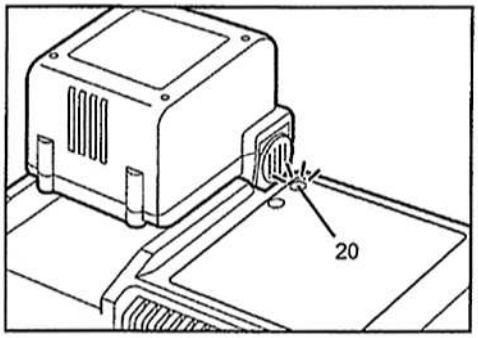

Fig.I

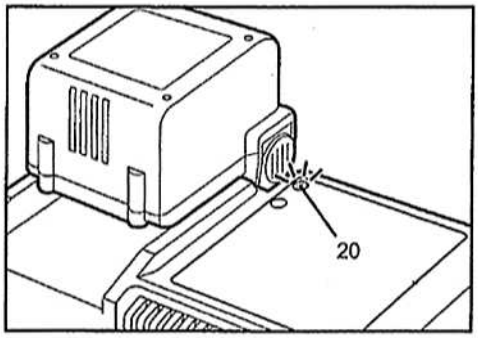

Fig.J

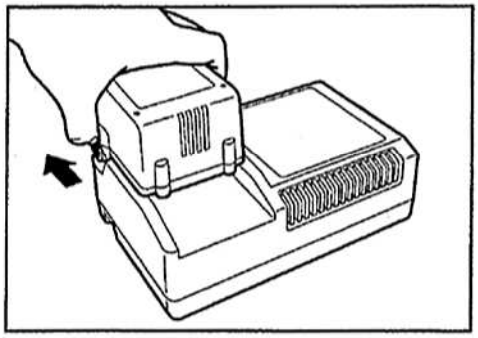

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Fig.K

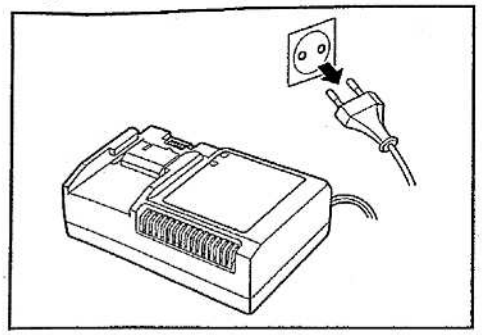


Fig.L

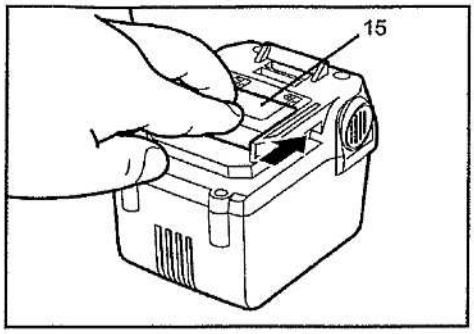


Fig.M

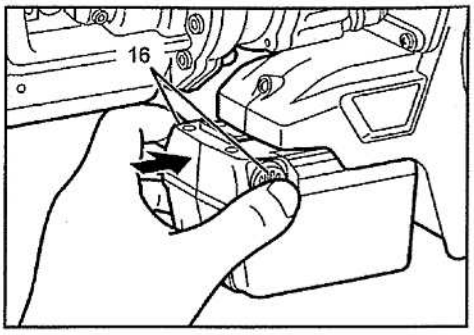


Fig.O

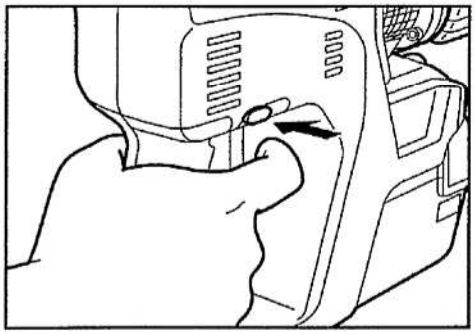


Fig.P

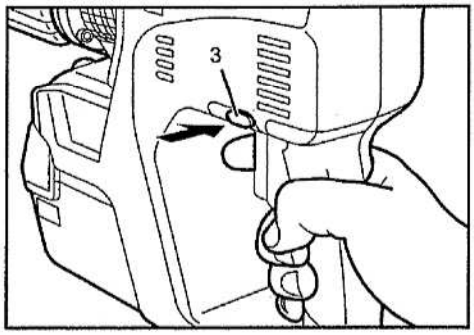


Fig.Q

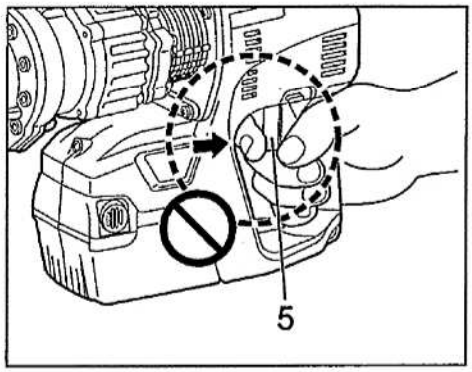


Fig.R

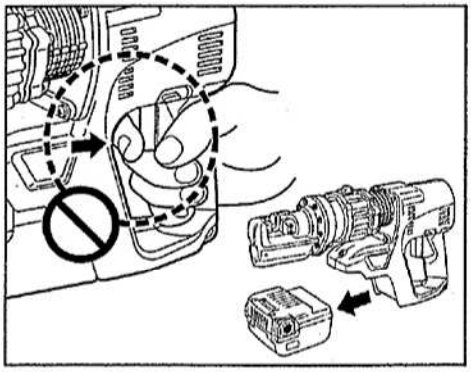


Fig.S

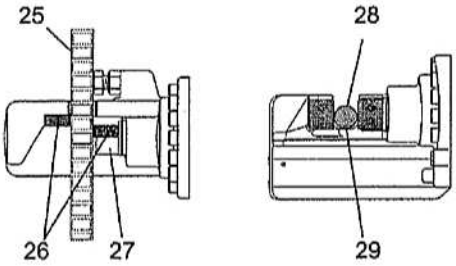


Fig.T

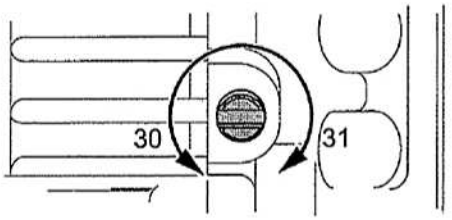


Fig.U

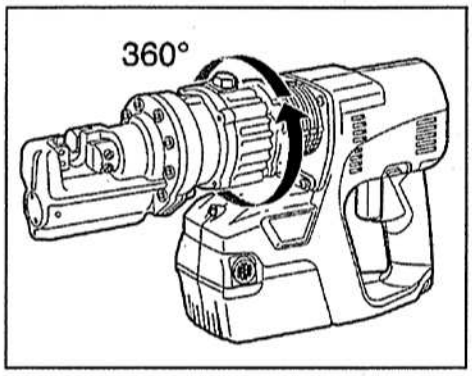


Fig.V

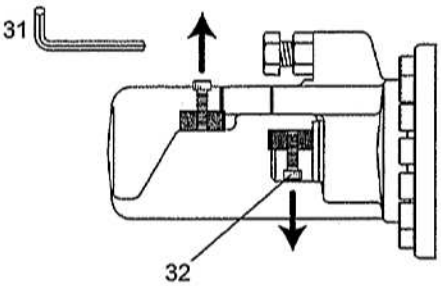
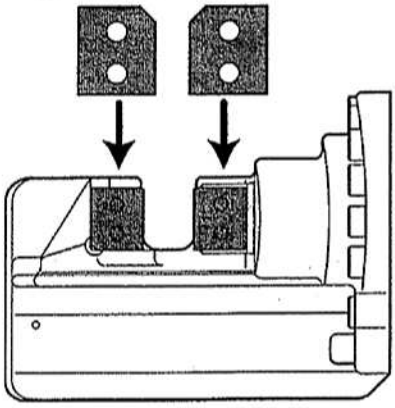


Fig.W



3. TECHNICAL DATA

1. NAME OF PARTS (See Fig. A, B and C)

Fig. A	1	HEAD
	2	BLADE
	3	CUTTER ROD
	4	OILING BOLT
	5	TRIGGER SWITCH
	6	MOTOR
	7	BATTERY PACK JPL925
	8	SAFETY LOCK SWITCH
	9	VALVE BOLT
	10	ADJUST BOLT
	11	LOCK NUT
	12	SPECIFICATION LABEL

Fig. B	13	PACK CAP
	14	TERMINAL
	15	VENTILATION WINDOW
	16	LATCH
	17	SPECIFICATION LABEL
Fig. C	18	BATTERY PACK ENTRY POINT
	19	LED LAMP (ORANGE) CHARGING STATUS INDICATOR LAMP
	20	LED LAMP (RED / GREEN) CHARGING STATUS INDICATOR LAMP
	21	SPECIFICATION LABEL
	22	VENTILATION WINDOW
	23	POWER CORD
	24	CE (VDE) POWER PLUG

2. TOOL SPECIFICATIONS

PRODUCT NO.	**PJRC160**
WEIGHT	7.6kg(16.8lbs.)(Battery included)
HEIGHT	228mm (9")
WIDTH	100mm (4")
LENGTH	389mm (15-3/8")
HYDRAULIC OIL	ISO VG46
VOLTAGE (BATTERY)	25.2V, Li-ion Battery pack JPL925
MAXIMUM CUTTING DIAMATER	ϕ16mm (#5)
MOTOR	Brushless DC Motor
OPERATING TEMPERATURE	-5°C to 40°C (14°F to 104°F)
OPERATING HUMIDITY	80% RH or less

<Battery charger>

PRODUCT NAME	MAX lithium ion battery charger
PRODUCT NO.	JC928(CE)
INPUT	AC100-240V 50/60Hz 1.62-0.68A
OUTPUT	DC 7.2/10.8/14.4V 7A DC 18/21.6/25.2/28.8V 3.9A
WEIGHT	1.6kg (3.5lbs.)
OPERATING TEMPERATURE	5°C to 40°C (41°F to 104°F)
OPERATING HUMIDITY	80% RH or less

<Battery pack>

PRODUCT NAME	MAX lithium ion battery pack
PRODUCT No.	JPL925
BATTERY TYPE	Lithium ion battery
NOMINAL VOLTAGE	DC25.2 V
NOMINAL CAPACITY	3.0 Ah (3,000 mAh)
CHARGING TIME (USE WITH JC928(CE))	Quick charging - Approximately 35 minutes (Apprx. 90% of capacity) Full charging - Approximately 45 minutes at 25°C(77°F) (100% of capacity)
ACCESSORIES	Pack cap (For preventing short circuit)
WEIGHT	0.9 kg (2.4lbs.)
CHARGING TEMPERATURE	5°C to 40°C (41°F to 104°F)
OPERATING TEMPERATURE	-5°C to 40°C (14°F to 104°F)
OPERATING HUMIDITY	80% RH or less

BATTERY CHARGER:
Use only an authorized Battery charger, MAX JC928.

3. TECHNICAL DATA

① NOISE
The typical A-weighted noise level determined according to EN60745-2-6:
- Sound pressure level (L_{pA}): 91dB (A)
- Sound power level (L_{WA}): 80dB (A)
- Uncertainty (K): 3dB (A)

Wear ear protection

② VIBRATION
The vibration total value (tri-axial vector sum) determined according to EN60745-1:
- Vibration emission: ($a_{h,\ HD}$): ≤2.5m/s^2
- Uncertainty (K): 1.5m/s^2

③ RADIATED EMISSION 30-1000 MHZ
Class B

④ Overvoltage category

PRODUCT	Overvoltage category
PJRC160 CORDLESS RE-BAR CUTTER	Category 1 according to IEC 60664-1
JC928(CE) BATTERY CHARGER	Category 2 according to IEC 60664-1

⑤ Pollution degree
Pollution degree : degree 4 according to IEC 60664-1 (Both of PJRC160 and JC928(CE)).

4. APPLICATIONS
Cutting of the following materials
- Rebar
- Bolt
- Mesh Wire

5. ABOUT PRODUCTION YEAR
This product bears production number in the body. The two digits of the number from left indicates the production year.

(Example)
0 8 8 2 6 0 3 5 D
T
Year 2008

November 2012

BATTERY INSTRUCTIONS

1. CHARGING

WHEN THE ORANGE STANDBY LIGHT IS LIT

When the Battery pack is hot (after continuous use or exposure to direct sunlight) the Charger will automatically switch to standby to protect the Battery. The orange standby light will be lit until the Battery's temperature lowers to a safe level, The Battery will then be charged automatically.

WHEN THE BATTERY PACK IS AT LOW TEMPERATURE

When the Battery pack is at low temperature, its charging is automatically suspended until its temperature increases (higher than 5°C (41°F)), in order to protect it, even if it is set in the Charger.
Leave the Battery pack at normal temperature in the room for some time, and then, charge it again.

WHEN THE ORANGE STANDBY LIGHT BLINKS

This indicates the Battery cannot be charged. Unplug the Charger and check the charging receptacle. If there are any foreign objects, remove them with a soft dry cloth. If the orange light still blinks or there are no foreign objects, there may be a problem with the battery or charger. Return to dealer for service.

③ **(Fig. G) Charge the Battery pack.**

(1) Fully insert the Battery into the receptacle on the Charger until it sits securely on the end.

(2) Charging will start automatically and will be indicated by the red charging light with beeps.

(3) Charging time is approximately 35 minutes (90% capacity). This will vary by temperature and source voltage.

(4) For batteries those are at low temperatures (10°C (50°F) or lower), charging time must be extended longer. When charging at low temperatures, both of the red and the orange charging light will be lit.

④ **(Fig. H) When the battery pack has been recharged, the "red" lamp turns off and the "green" lamp blinks.**
The "green" LED lamp(Fig. H 20) blinks slowly and a long beep sounds for approximately 2 seconds. Now, the battery has been recharged to approximately 90% of its capacity. Quick charging takes approximately 35 minutes (however, the recharging time and capacity slightly change depending on the ambient temperature and power voltage).

(Fig. I) You can use the battery pack when quick charging is complete. However, if you leave the battery pack on the charger, recharging will continue. When the battery is fully recharged (to 100% capacity), the "green" LED lamp lights up (and a long beep sounds for approximately 2 seconds).

(1) (Fig. J) After you have recharged the battery pack, remove it from the charger.

(2) (Fig. K) Unplug the charger power cord from the wall socket.

BATTERY PACK BREAKDOWNS

If the following conditions occur, bring the Battery and Charger to your dealer.

- The red charging lamp does not flash when the charger plug is inserted into main power source outlet (When the Battery pack is not inserted in the charger.)
- Neither the red charging lamp nor the orange standby lamp lights or flashes when the Battery pack is inserted in the charger.
- The orange standby lamp does not change to the red charging lamp even after more than 1 hour. (except at low temperatures)
- The red charging lamp does not change from constant to flashing light even after more than 90 minutes.

SERVICE LIFE OF BATTERY PACK

If any condition described below is observed, the battery pack is at the end of its service life. Replace it with a new one.

- Although the battery pack has been properly charged (fully charged), a great drop in operating time has been noticed.

RECYCLING A LI-ION BATTERY

The MAX battery pack uses a Li-ion battery, it may be illegal to dispose of this battery into the municipal waste system. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

5. OPERATING INSTRUCTIONS

1. HOW TO MOUNT / REMOVE THE BATTERY PACK

① (Fig. M) When mounting the Battery pack, insert the Battery pack in the tool so that the rails of the Battery and the tool fit each other. Slide the Battery pack to the end, until the click is heard. The Latches(Fig. M 16) must be returned to the original position.

② (Fig. E) When removing the Battery pack, remove it from the tool by pushing on its latches (Fig. E 16) from both sides while firmly holding the grip of the tool.

2. HOW TO CUT THE MATERIAL

① Loosen the lock nut with the included wrench. (Fig.A 11)

② Use the adjusting bolt so that the rebar is set at a right angle to the tool. (Fig.A 10)

③ Tighten the lock nut with the wrench.

④ Insert the rebar (Fig.S 25) to be cut between the blades. (Fig.S 26)

⑤ Set the rebar at the position you want to cut, pull the trigger and operate the Cutter Rod (Fig.S 27). Keep the trigger pulled until cutting is complete. The Cutter Rod automatically returns to the start position when the Cutter Rod cuts the rebar and arrives at the stroke end.

⑥ Release the switch to remove the rod bar.

3. HOW TO USE THE VALVE BOLT

① To withdraw the Cutter Rod halfway through cutting, loosen the Valve Bolt. (Fig. T)
Loosening the bolt by about one turn in the counterclockwise direction (Fig.T 30) with a coin or screwdriver returns the Cutter Rod to the start position.

② To resume cutting, securely tighten the bolt in the clockwise direction (Fig.T 31). If the bolt is loose, the rebar cannot be cut.

4. ROTATION MECHANISM OF THE HEAD

① The head can be rotated by 360° (Fig.U)

5. HOW TO CHANGE THE BLADES

① Loosen the hexagon bolts (2 for each blade) that lock the blade in place with the hexagon wrench #4 and remove the old blade.

② Set the new blade as shown in the Fig. W and securely tighten the hexagon bolts.

6. MAINTENANCE

① **Regularly inspect the tool**
In order to maintain the performance of the tool, periodically clean up and inspect the tool.
Examine the screws regularly to make sure they are securely tightened.
Incomplete tightening may result in an accident or breakage. If a screw is loose, retighten it completely.

② **Do not lubricate the equipment**
Absolutely do not lubricate this equipment. Applying lubrication will remove the grease inside of the tool, and cause problem on the tool.

③ **Do not soak the tool to any liquids. Do not put any liquid except the specified oil in the tool.**

7. STORAGE

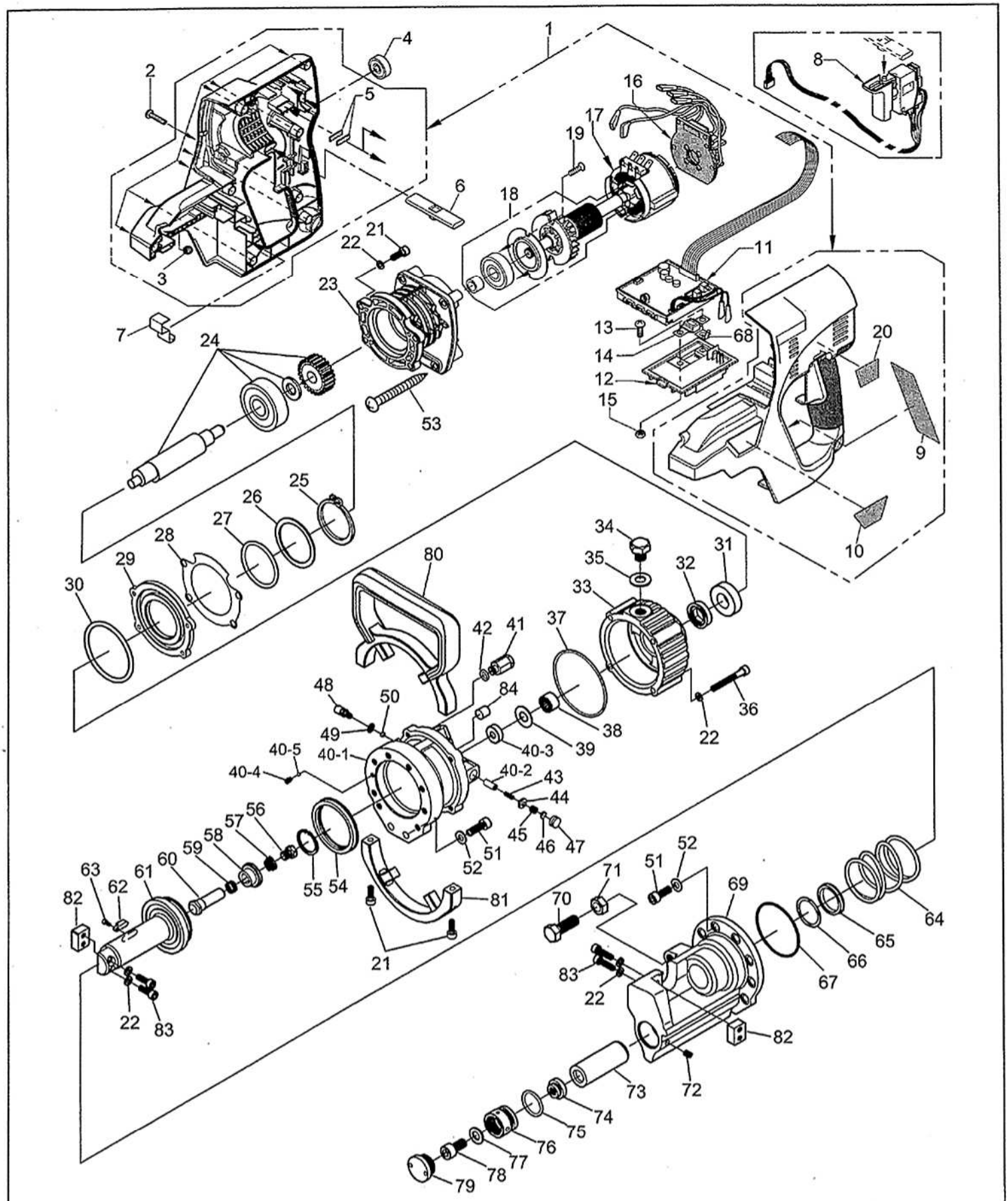
Do not store the tool in a cold weather environment. Keep the tool in a warm area.
When not in use, the tool should be stored in a warm and dry place. Keep out of reach of children. All quality tools will eventually require servicing or replacement of parts because of wear from normal use.

STORE THE TOOL

When you have finished using the tool or when the tool will not be used for a while, remove the battery pack from the tool. Tool, attachments and accessories should be stored in a well-ventilated dry place where the temperature will not exceed 40°C (104°F) and not become less than -20°C (-4°F).
The battery pack, with a pack cap installed on the pack's terminal to prevent short circuits, should be stored in a well-ventilated dry place where the temperature will not exceed 30°C (86°F) and not become less than -20°C (-4°F).

PJRC160(CE)

EXPLODED VIEW AND SPARE PARTS LIST



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ITEM NO.	PART NO.	MATERIAL	ENGLISH
1	PJ70381		MOTOR HOUSING SET (L&R) (CE)
2	AA05590		TAP TIGHT(B)4X20 CF (PAN-HEAD)
3	PJ10922	PC	LED LENS
4	LL11730	Steel	BALL BEARING 608DD
5	PJ10948	Rubber	SPONGE SEAL
6	PJ10910	ABS	CHANGE LEVER
7	PJ10921	Steel	SPRING
8	PJ70077		TRIGGER SW
9	PJ13144	PET	SPECIFICATION LABEL(CE)
10	PJ13143	PET	PANEL LABEL(CE)
11	PJ70359		MAIN CIRCUIT BOARD UNIT
12	PJ70084	PBT+BRASS	BATTERY CONNECTOR UNIT
13	AA21176	Steel	PHILLIPS PAN HEAD SCREW 5X8 MEC
14	YU39103		FUSE 31500001 RTO
15	CC41101	Steel	HEX NUT 1-5
16	PJ70086		POWER CIRCUIT BOARD UNIT
17	PJ70087	Steel+Copper	STATOR UNIT
18	PJ70095	Steel+Magnet	ROTOR ASSY
19	AA22105	Steel	OVAL COUNTER-SUNK SCREW 4X10
20	PJ13142	PET	LOCK LABEL(CE)
21	PJ13877	Steel	HEXAGON SOCKET HEAD CAP SCREW M5X15
22	PJ13718	Steel	CONICAL SPRING WASHER D5
23	PJ13716	Aluminum	JOINT
24	PJ70350	Steel	SHAFT UNIT
25	PJ13726	Steel	RETAINING RING (INTERNAL) D42
26	PJ13725	Steel	WASHER 10635-SC19L
27	PJ13724	Rubber	O-RING P42
28	PJ13722	Fiber	PACKING
29	PJ13713	Steel	BRACKET
30	PJ13723	Rubber	O-RING V56
31	PJ13728	Steel	BALL BEARING 6002ZZ
32	PJ13729	Rubber+Steel	OIL SEAL AD15257
33	PJ13727	Aluminum	PUMP CASE
34	PJ13730	Steel	OILING BOLT M10X12
35	PJ13731	Steel+Rubber	STEEL BALL 4MM
36	PJ13732	Steel	HEXAGON SOCKET HEAD CAP SCREW M5X12
37	PJ13734	Rubber	O-RING S67
38	PJ13735	Steel	MACHINED RING NEEDLE ROLLER BEARING
39	PJ13736	Steel	NEEDLE.ROLLER BACKUP
40	PJ70366	Steel	CYLINDER ASSY
40-1		Steel	CYLINDER
40-2		Steel	PLUNGER
40-3		Steel	BALL BEARING 606ZZ
40-4		Steel	HEXAGON SOCKET SET SCREW M4X6
40-5		Steel	STEEL BALL 3MM
41	PJ70367	Steel	PRESSURE CONTROL VALVE
42	PJ13843	Rubber	O-RING P7
43	PJ13737	Steel	PISTON RETURN SPRING
44	PJ13738	Steel	CHECK VALVE
45	PJ13739	Steel	CHECK VALVE SPRING
46	PJ13740	Steel	SPRING BACKUP 110014
47	PJ13841	PP	CAP-TYPE PACKING
48	PJ13844	Steel	VALVE BOLT
49	PJ13845	Rubber	O-RING P5
50	PJ13846	Steel	STEEL BALL 4MM
51	PJ13862	Steel	HEXAGON SOCKET HEAD CAP SCREW M6X18
52	PJ13863	Steel	CONICAL SPRING WASHER D6
53	AA35601	Steel	CROSS RECESSED TRUSS SCREW 1.5X50 CF
54	PJ13856	Rubber	PISTON SEAL
55	PJ13855	Steel	RETAINING RING (INTERNAL) D24
56	PJ13854	Steel	SPRING BACKUP
57	PJ13853	Steel	FLOAT SPRING
58	PJ13852	Steel	STOPPER
59	PJ13851	Steel	KICK SPRING
60	PJ13850	Steel	VALVE SHAFT
61	PJ13847	Steel	CUTTER ROD
62	PJ13849	Steel	KEY
63	PJ13848	Steel	KEY LOCK BOLT
64	PJ13857	Steel	RETURN SPRING
65	PJ13858	Rubber	ROD SEAL
66	PJ13859	Steel	BACKUP SPRING 25X33X2
67	PJ13860	Rubber	O-RING S56
68	PJ10907	Phosphor Bronze	RELAY TERMINAL
69	PJ13861	Steel	CUTTER HEAD
70	PJ13872	Steel	ADJUST BOLT M10X30
71	PJ13873	Steel	LOCK NUT M10
72	PJ13871	Steel	HEXAGON SCCKET SET SCREW M5X6
73	PJ13870	Rubber	AIR PACK
74	PJ13869	Steel	NUT 10288-BP18
75	PJ13868	Rubber	O-RING P21
76	PJ13867	Steel	AIR PACK HOLDER
77	PJ13866	Steel	CONICAL SPRING WASHER D8
78	PJ13865	Steel	SOCKET HEAD CAP SCREW 10167-BP18
79	PJ13864	Steel	CAP 10226-SC16L
80	PJ13711	Aluminum	SIDE HANDLE
81	PJ13712	Aluminum	SIDE HANDLE MOUNT
82	PJ13717	Steel	BLADE
83	PJ13876	Steel	HEXAGON SOCKET HEAD CAP SCREW M5X12
84	PJ13842	Magnet	MAGNET