

Service Manual

Cordless Hammer Drill & Driver

Model No. EY79A3

Europe



⚠ WARNING

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

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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Panasonic

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1 Warning

Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70 °F (30 - 40 °C) higher. Please use a soldering iron with temperature control and adjust it to 750 ± 20 °F (400 ± 10 °C). In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F / 600 °C).

2 Specifications

NOTE:

Weight indication

- Greater than or equal to 1 kg : indicated by 0.05 kg (0.11 lbs).
- Less than 1 kg : indicated by 0.01 kg (0.02 lbs).

MAIN UNIT

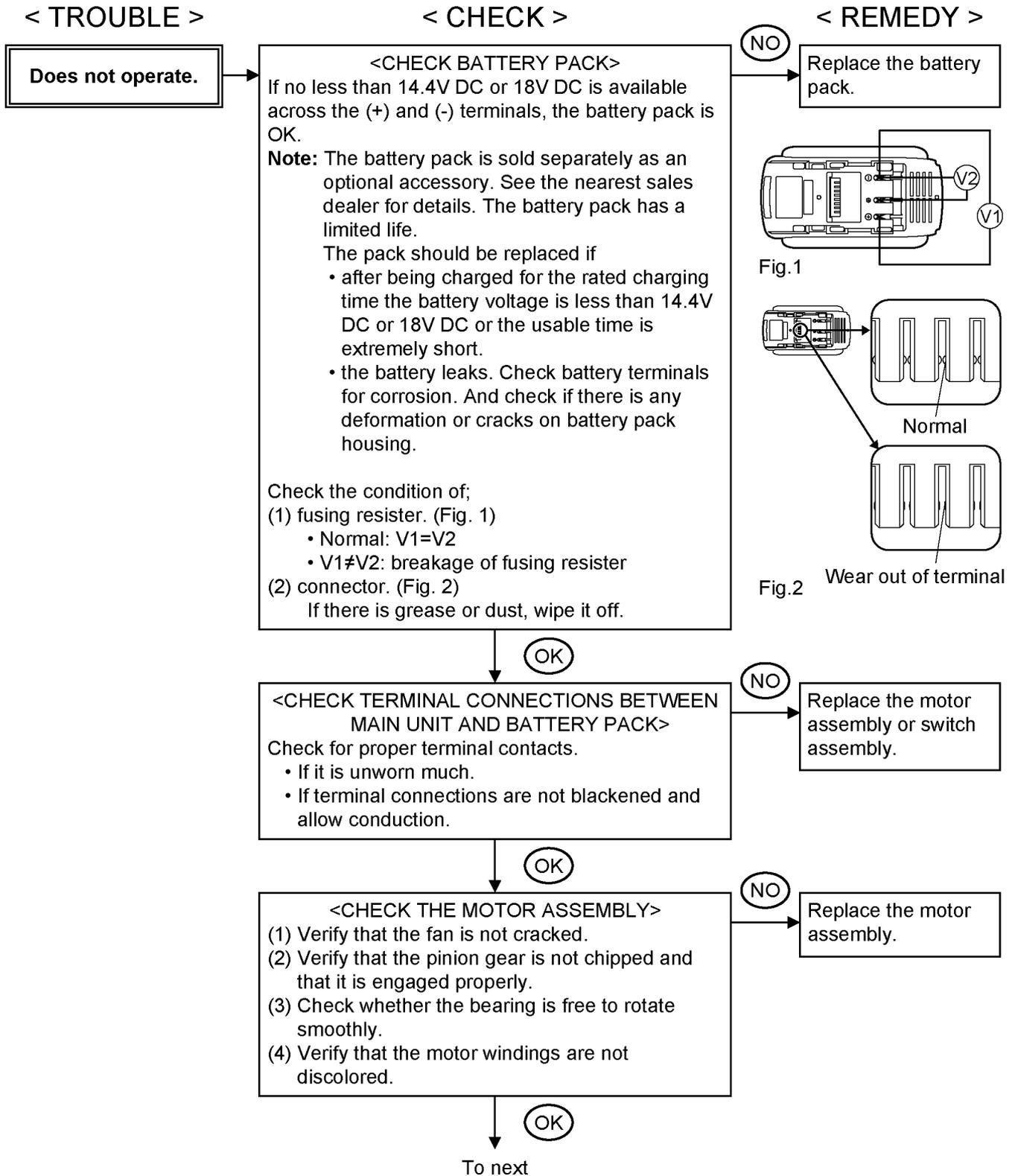
Model No.		EY79A3	
Motor voltage		14.4 V DC	18 V DC
No load speed	Low	20 – 430 min ⁻¹ (rpm)	20 – 530 min ⁻¹ (rpm)
	High	70 – 1450 min ⁻¹ (rpm)	70 – 1800 min ⁻¹ (rpm)
Chuck capacity		Φ 1.5 mm – Φ 13 mm	
Clutch torque		Approx. 1.0 N•m – 4.4 N•m	
Impact per minute	Low	380 – 7700 min ⁻¹ (ipm)	400 – 9500 min ⁻¹ (ipm)
	High	1260 – 26000 min ⁻¹ (ipm)	1260 – 32300 min ⁻¹ (ipm)
Overall length		192 mm	
Weight	EY9L45	1.90 kg	—
	EY9L47	1.70 kg	—
With battery pack:	EY9L51	—	2.05 kg
	EY9L52	—	1.80 kg
	EY9L53	—	1.85 kg
	EY9L54	—	2.05 kg

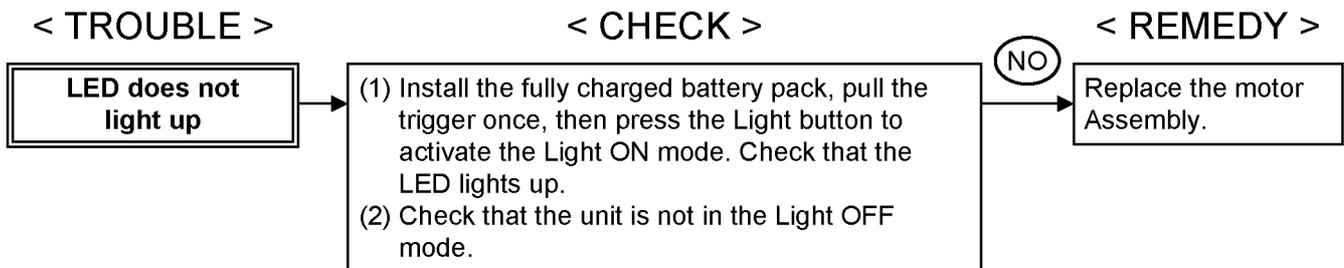
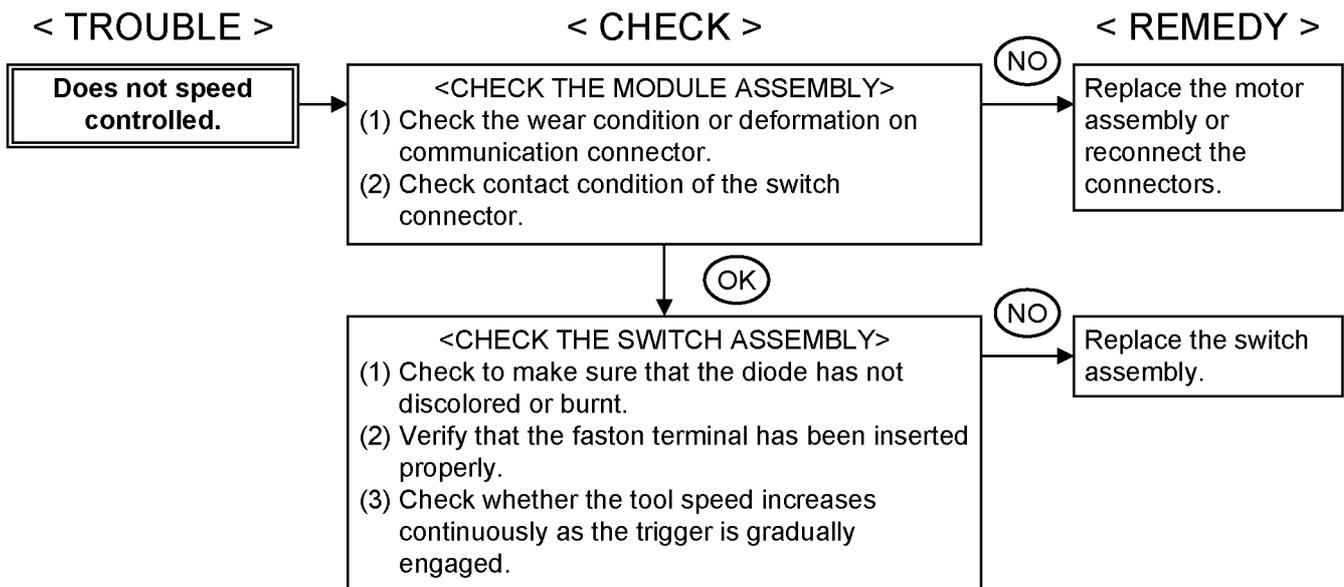
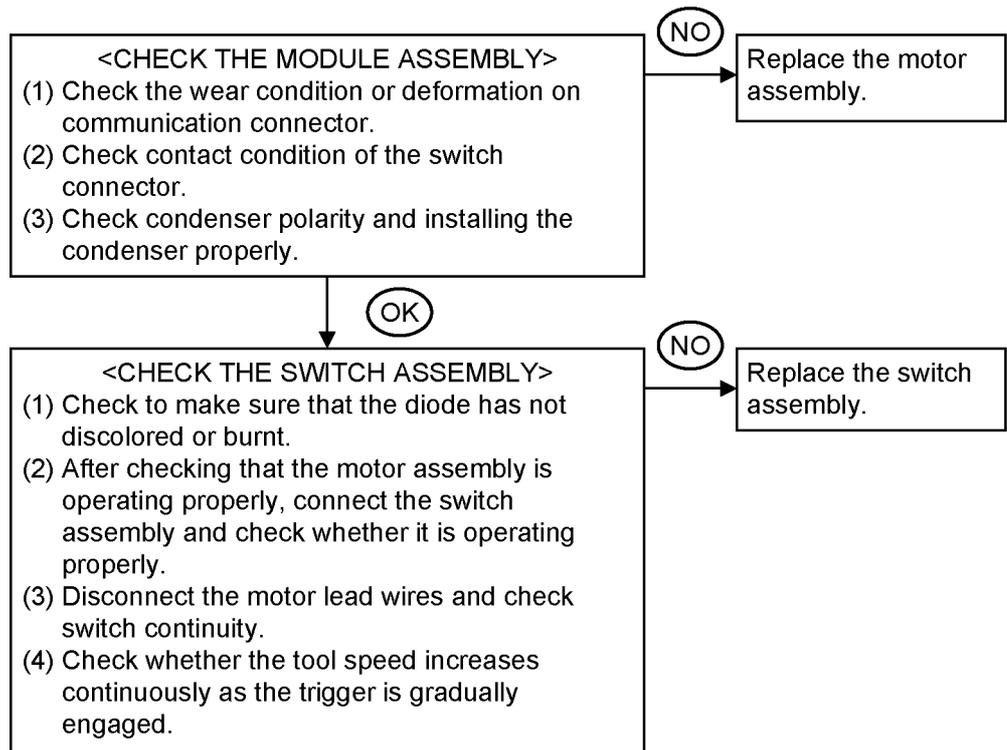
MAXIMUM RECOMMENDED CAPACITIES

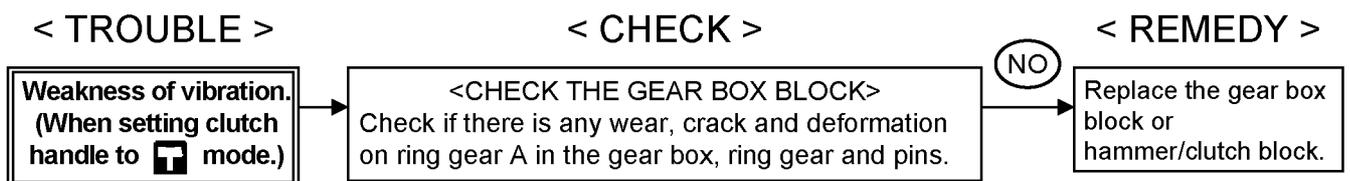
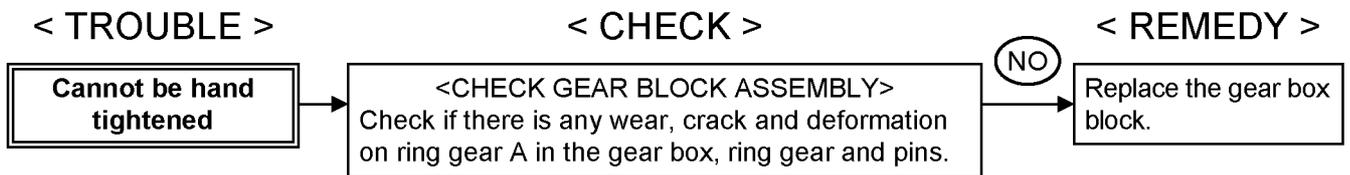
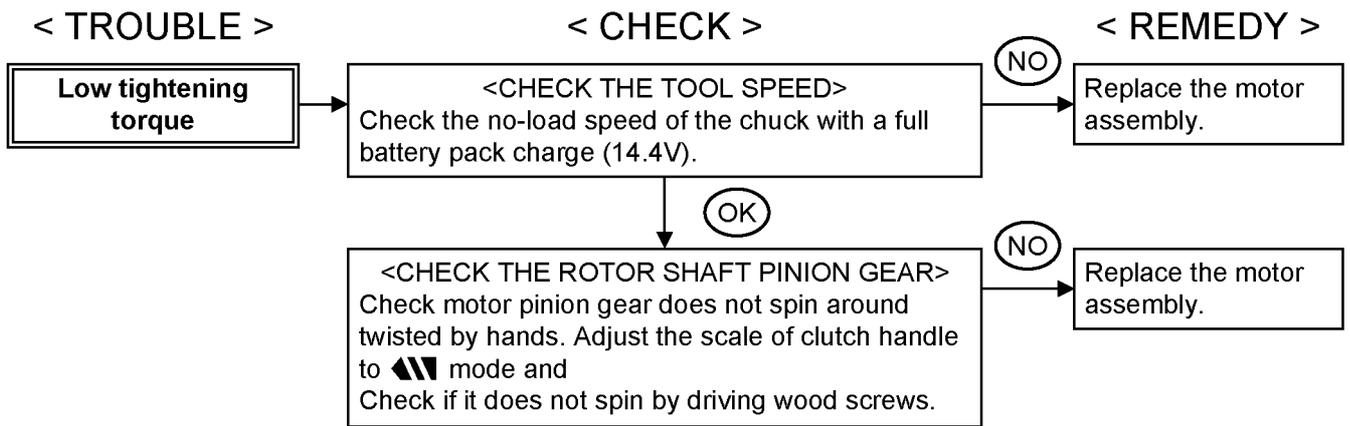
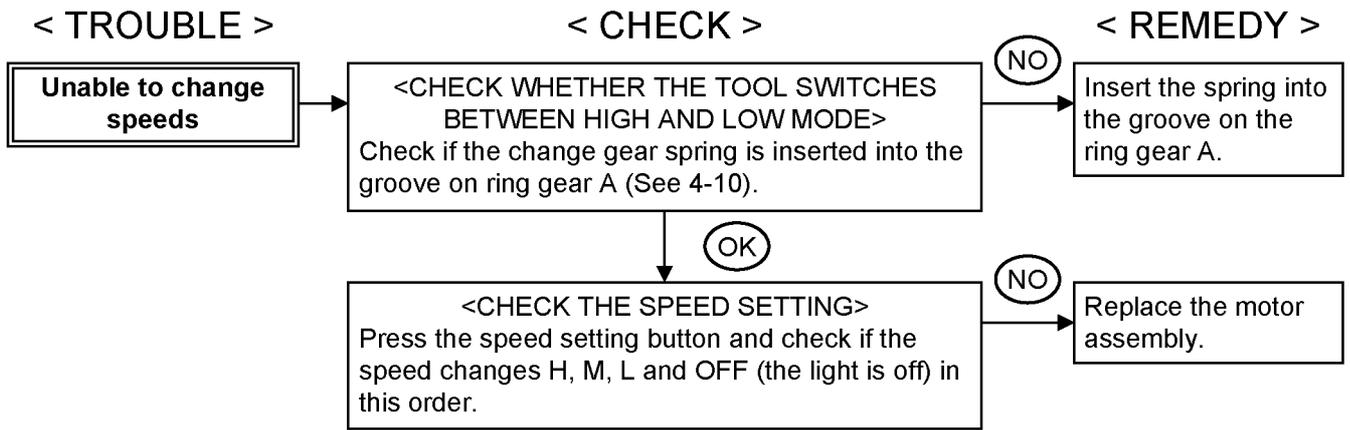
Model No.		EY79A3	
Motor voltage		14.4 V DC	18 V DC
Screw driving	Machine screw	M5	
	Wood screw	Φ 6.8 mm	Φ 8 mm
Drilling	Self-drilling screw	Φ 6 mm	
	For Wood	Φ 35 mm	Φ 38 mm
	For Metal	Φ 13 mm	
	For Masonry	Φ 13 mm	

3 Troubleshooting Guide

3.1. Troubleshooting Guide







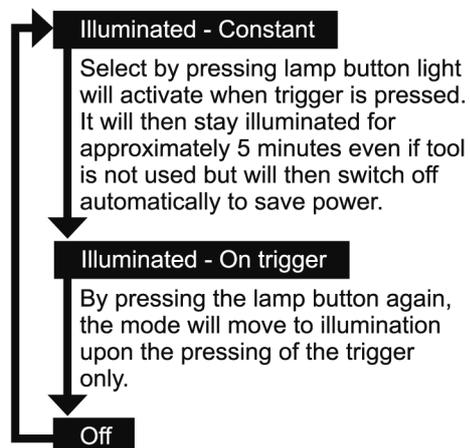
3.2. Trial Operation (after checking Troubleshooting Guide).

3.2.1. Assembly

- Confirm if there is no gap between housing A, B and C by pinching lead wires.
- There is no dust or deformation on battery terminals.

3.2.2. Operation

- Check whether the tool operates properly in both the forward and reverse directions.
- Press the light button on the operation panel to confirm that the LED lights up.



- Check whether the tool speed increases continuously as the trigger is gradually engaged.
- Rotate the clutch handle and check whether the clutch switches properly.
- Check if the rotation speed is normal rated value.
High: 1800/min (rpm) at 18V, 1450/min (rpm) at 14.4V
Low: 530/min (rpm) at 18V, 430/min (rpm) at 14.4V
- Press the speed setting button and check whether the speed changes to H, M, L and off (the light is off) in this order.
- Pull the trigger all the way back and check whether the tool stops rotating immediately when it is released.
- Set the clutch handle to the [] mark and check whether the tool rotates without any clutch operation.
- Operate (rotate) the keyless chuck and check whether the chuck's three jaws move smoothly.
- Attach a bit to the tip of the driver and verify that the driver can be rotated by hand to tighten a screw.

3.2.3. Integrity

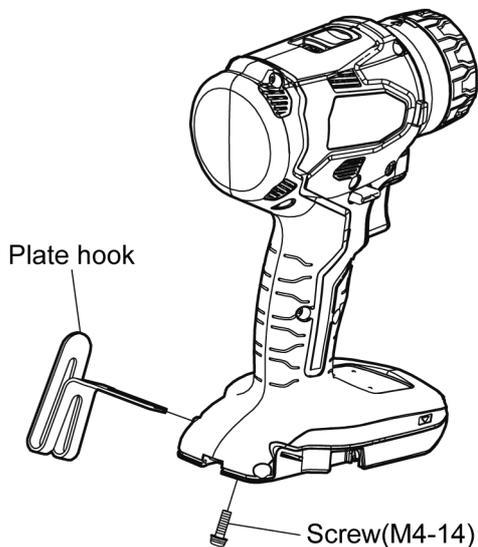
- With the switch activated, shake the tool back and forth and up and down and verify that its sound does not change excessively.
- Check for the presence of any dirt or foreign matter from the repair process on the outside of the tool.

4 Disassembly and Assembly Instructions

* To reduce the risk of injury, always remove battery pack before removing/installing the tool.

* To assemble the tool, start with 4-9 and proceed to 4-1.

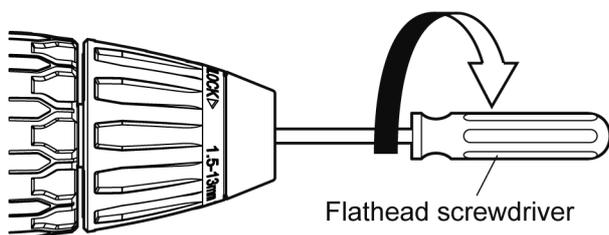
4.1. Removing the Plate Hook.



1. Remove the M4-14 screw.

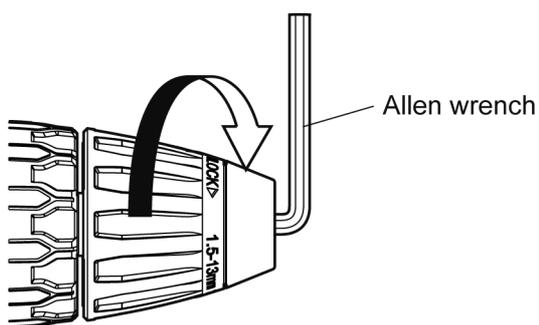
2. Remove the plate hook.

4.2. Removing the Keyless Chuck.



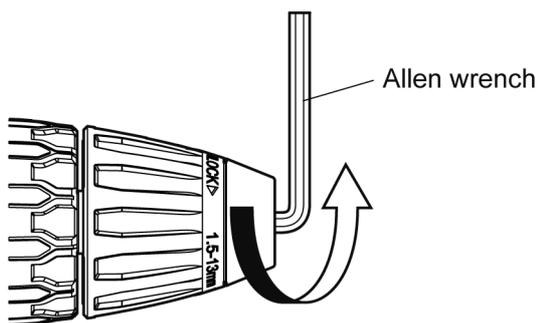
1. Use a screwdriver to turn the chuck fastening screw inside the chuck clockwise direction, and remove the screw.

* in case of the chuck does not come loose;



NOTE:

If the chuck fastening screw will not come loose, insert the allen wrench into the chuck and lightly tap in the clockwise direction to tighten the chuck, and then loosen the chuck fastening screw.

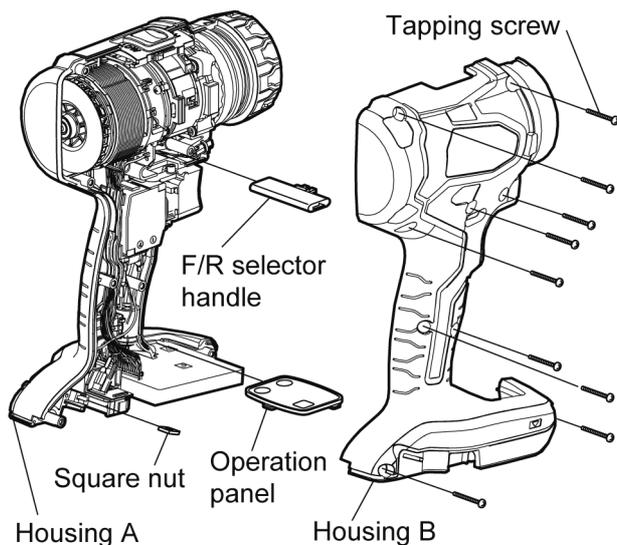


2. Insert the allen wrench into the chuck, and turn counterclockwise direction with holding the unit by the vise to remove the chuck.

NOTE:

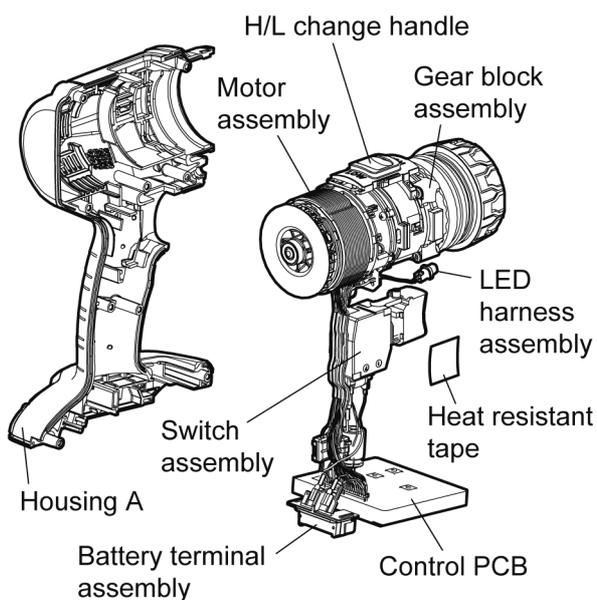
If the chuck is broken, use a allen wrench and turn counterclockwise direction to remove the chuck.

4.3. Removing the Housing.



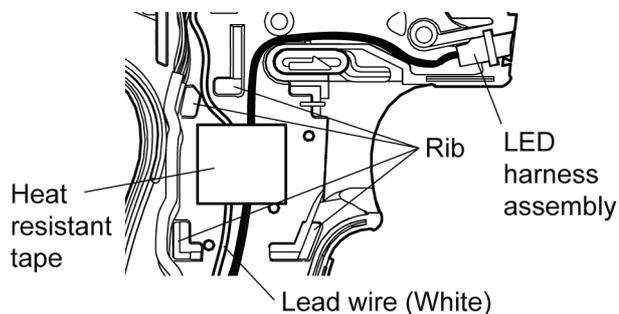
1. Remove nine screws.
2. Remove housing B.
3. Remove the F/R selector handle.
4. Remove the operation panel.
5. Remove the square nut.

4.4. Removing the Interior Components.

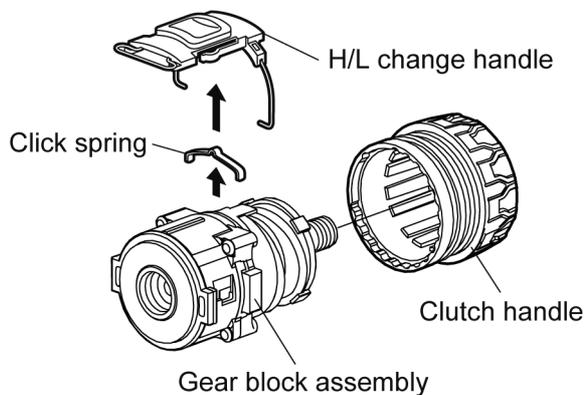


1. Remove the heat resistant tape and remove the interior components from the housing A.

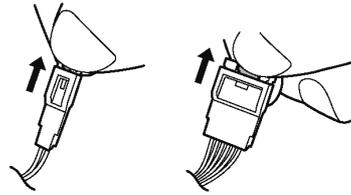
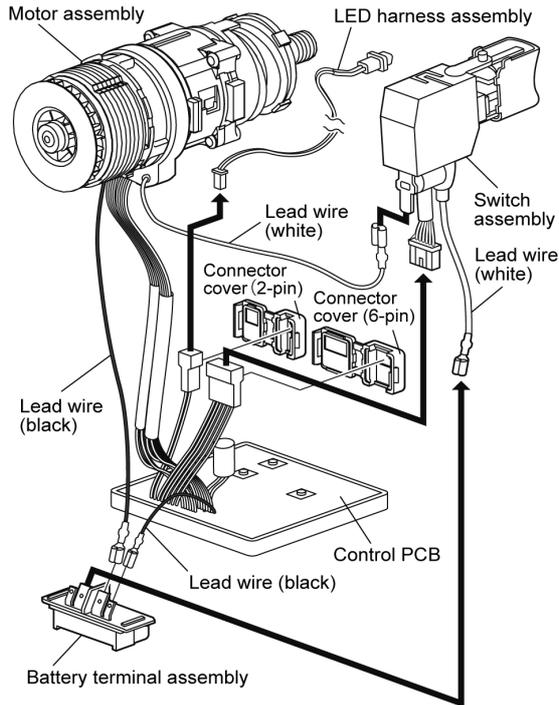
* Precautions when securing LED harness assembly in place using the resistant tape.
Attach the heat resistant tape at the location shown in the figure below.



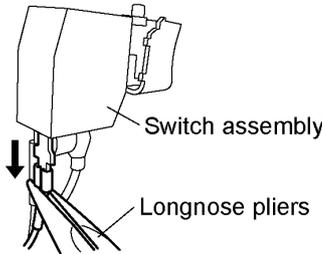
2. Remove the clutch handle, H/L change handle and click spring from the gear block assembly.



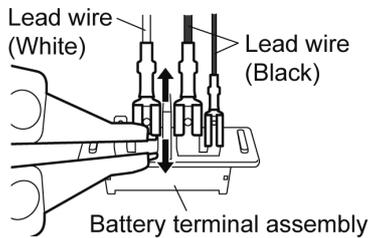
4.5. Removing the Switch Assembly, LED Assembly and Battery Terminal.



1. Remove the 2-pin connector.
2. Remove the 6-pin connector.



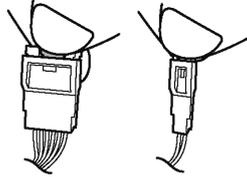
3. Pull the faston terminal directly out from the switch assembly.
- * Exercise care not to bend the terminal fitting.



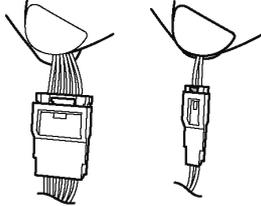
4. Remove the lead wires from the battery terminal.

Connecting and disconnecting the connector

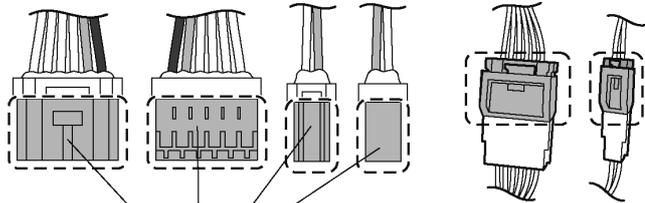
- Press the claw on the connector to disconnect.



- ✗ Pulling on the lead wires will break the wires.

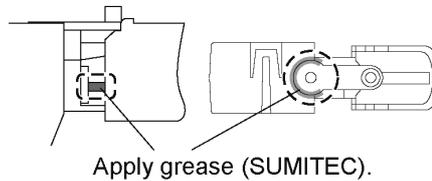


* Precautions when attaching the connectors



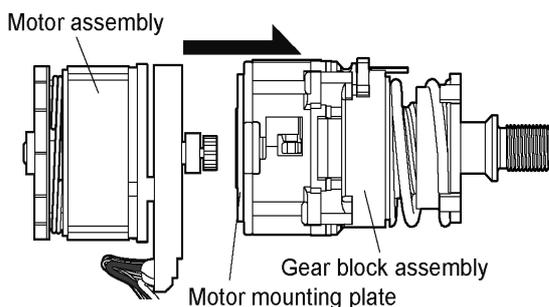
Apply grease (SUMITEC).

Apply the grease (SUMITEC) to the 2-pin and 6-pin male connectors and the outer surfaces of the connectors.



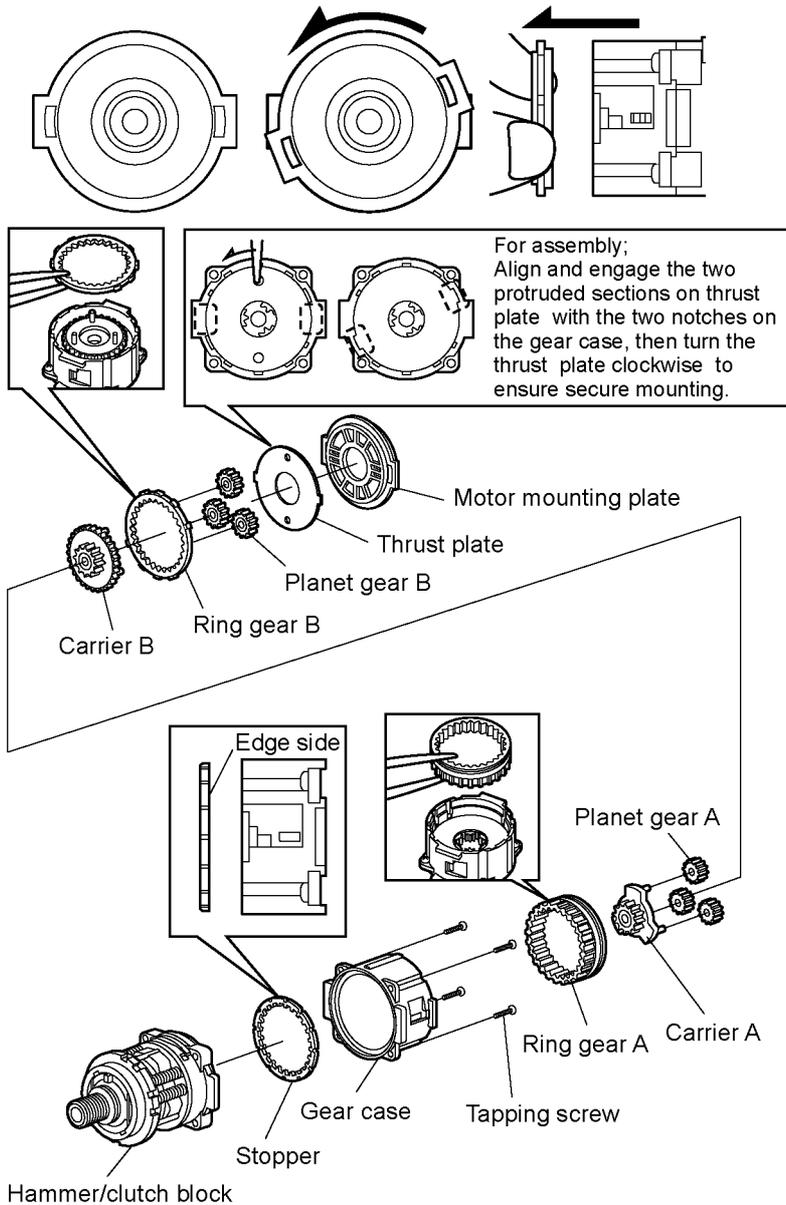
Apply grease (SUMITEC).

4.6. Removing the Gear Case Assembly from the Module Assembly.



Holding the motor assembly, remove the entire motor mounting plate, including the gear box assembly from the motor assembly.

4.7. Removing the Gear Box Block.



1. Rotate the motor mounting plate to the left and remove it from the gear case.

* When installing the motor mounting plate to the gear case, align and engage the two protruded sections on motor mounting plate with the two notches on the gear case, then turn the motor mounting plate clockwise until a clicking sound is produced to ensure secure mounting.

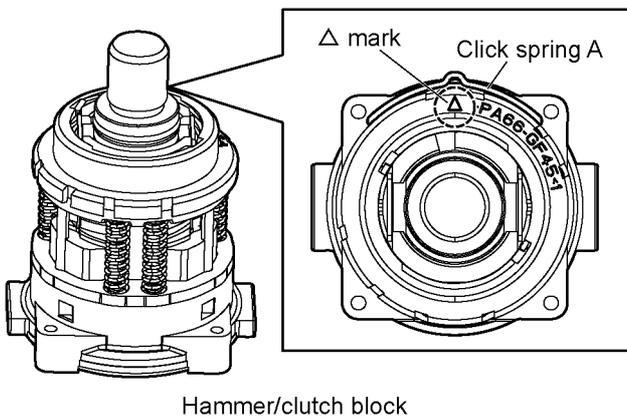
2. Remove the thrust plate, planet gear B, ring gear B and the carrier B (in that order).

3. Remove the planet gear A, carrier A, tapping screws, gear case, and the stopper (in that order) from the hammer/clutch block.

* The tapping screws cannot be reused after being repaired or otherwise adjusted.

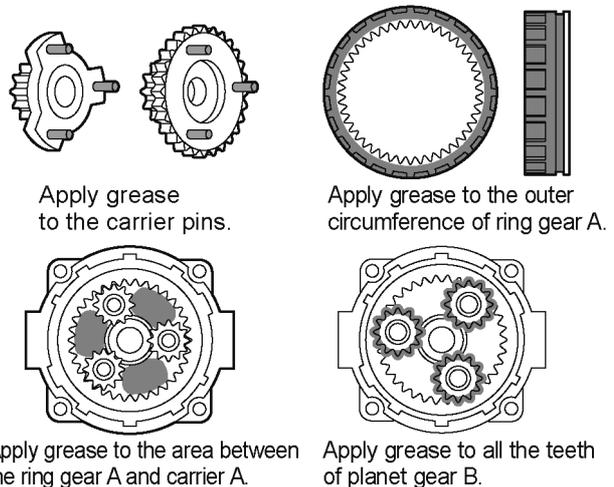
* Exercise care when attaching the ring gear A, ring gear B and stopper to align them in the proper orientation (as shown in the left figure).

* Precautions when attaching the Gear Box Block.



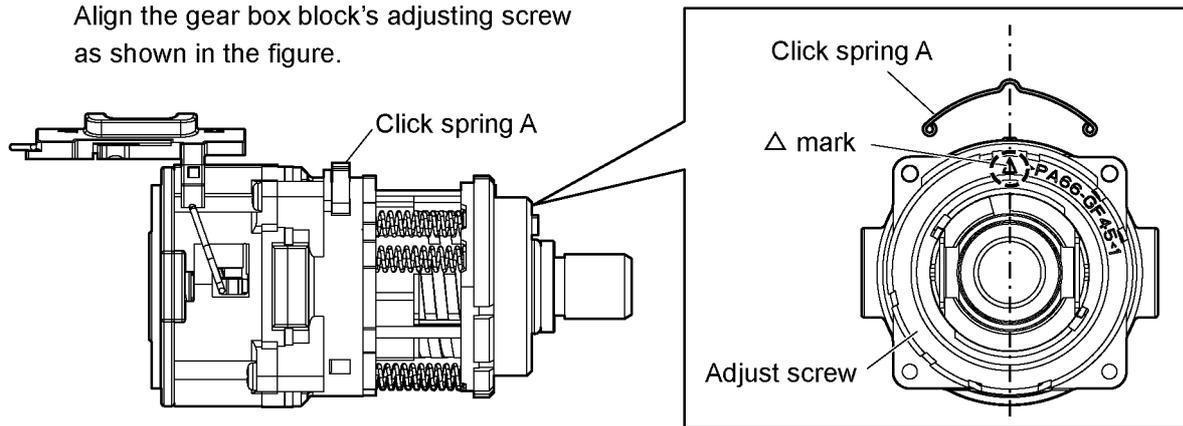
Set the adjust screw as shown in the above figure.

* Precautions when attaching the grease (ALVANIA).

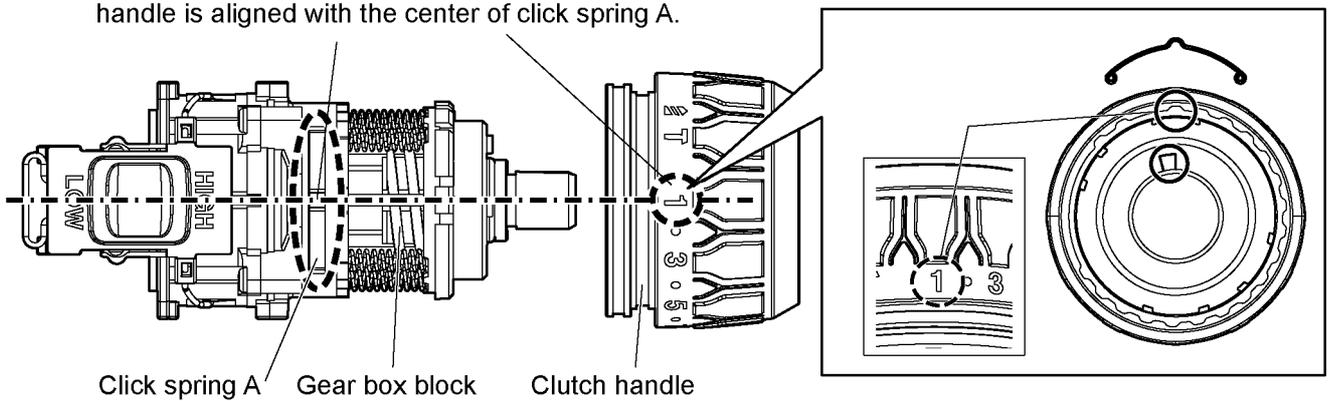


4.8. Assembly of the Gear Box Block and the Clutch Handle.

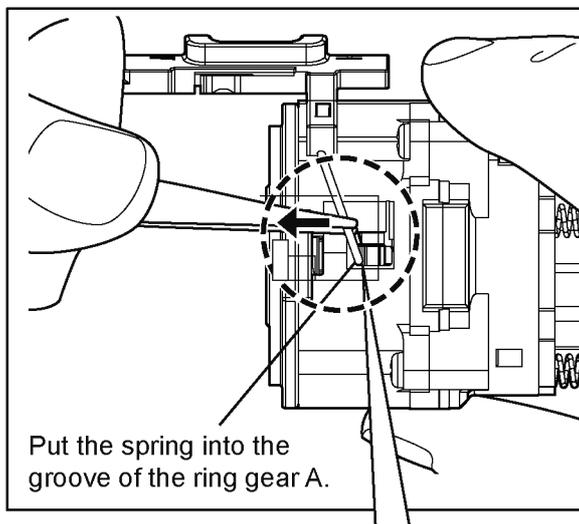
Align the gear box block's adjusting screw as shown in the figure.



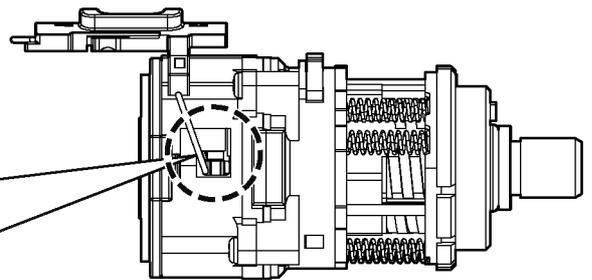
Position so that the "1" mark on the clutch handle is aligned with the center of click spring A.



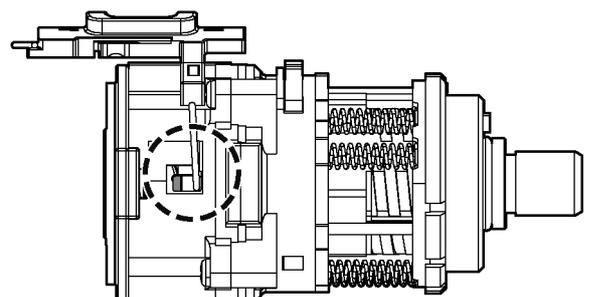
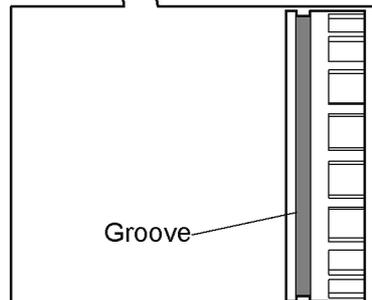
4.9. Assembly of the H/L Change Handle.



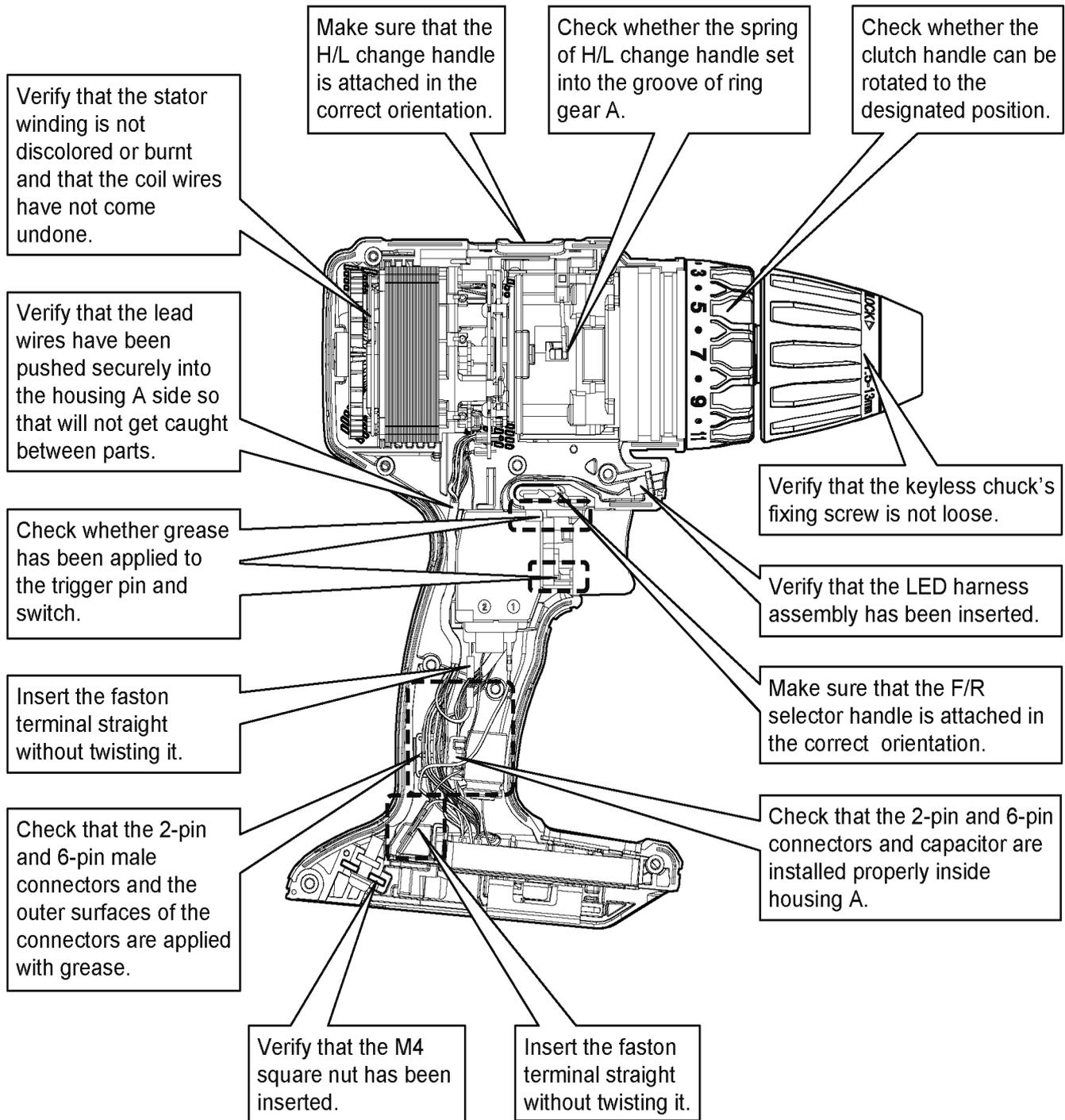
 Spring is in the groove of the ring gear A properly.



 Spring is out of the groove of the ring gear A.

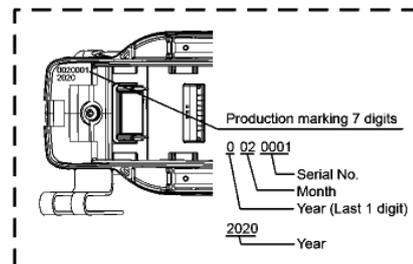
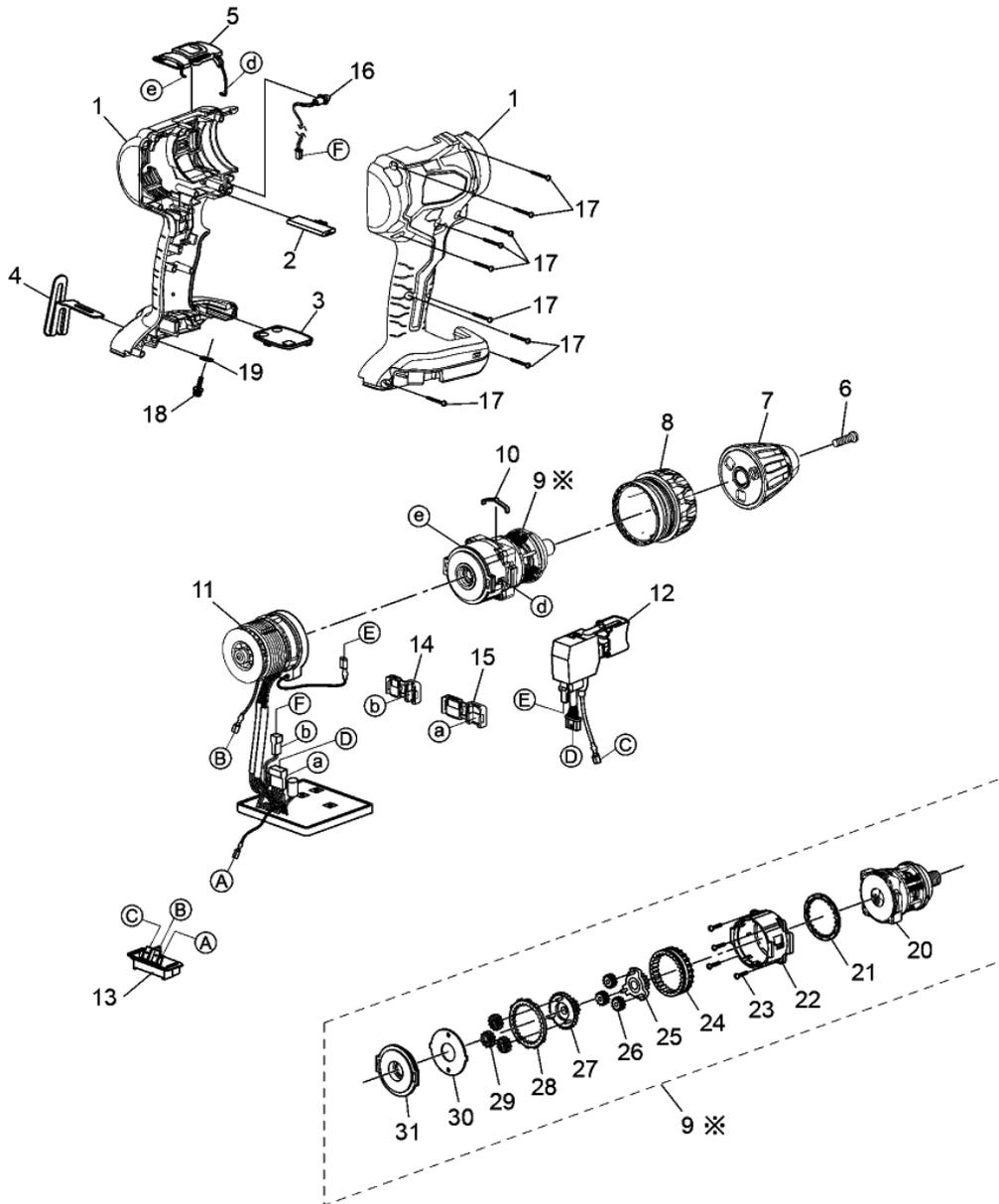


4.10. Wiring and Assembly Points.



5 Exploded View and Replacement Parts List

Model No. : EY79A3 Exploded View



Model No. : EY79A3 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		1	WEY79A3K3102	HOUSING AB SET	1	
		2	WEY75A7H3247	F/R SELECTOR HANDLE	1	
		3	WEY74A3L3202	OPERATION PLATE	1	
		4	WEY7543K3187	PLATE HOOK	1	
		5	WEY74A2H3237	H/L CHANGE HANDLE	1	
		6	WEY6450L6806	CHUCK FASTENING SCREW	1	
		7	WEY79A3L0101	CHUCK	1	
		8	WEY79A3L0201	CLUTCH HANDLE	1	
		9	WEY79A2H4057	GEAR BLOCK ASSEMBLY	1	
		10	WEY74A1L0178	CLICK SPRING A	1	
		11	WEY74A3L1201	MOTOR ASSEMBLY	1	
		12	WEY75A8L2007	SWITCH ASSEMBLY	1	
		13	WEY75A7K2157	BATTERY TERMINAL ASSEMBLY	1	
		14	WEY75A8W3117	2-PIN CONNECTOR COVER	1	
		15	WEY75A8W3127	6-PIN CONNECTOR COVER	1	
		16	WEY75A8L2337	LED HARNESS ASSEMBLY	1	
		17	WEY7441K9038	TAPPING SCREW	9	(K3-20)
		18	WEY7441K6217	SCREW	1	(4*14)
		19	WEY7441L6487	NUT	1	(M4)
		20	WEY79A2K4127	HAMMER/CLUTCH BLOCK	1	
		21	WEY74A2S0397	STOPPER	1	
		22	WEY74A2F1767	GEAR CASE	1	
		23	WEY79A2K9037	SCREW	4	(3*12), (4PCS/PK)
		24	WEY74A2L1467	RING GEAR A	1	
		25	WEY74A2L1417	CARRIER A	1	
		26	WEY74A2L1368	PLANET GEAR A	3	
		27	WEY74A2L1457	CARRIER B	1	
		28	WEY74A2L1487	RING GEAR B	1	
		29	WEY74A2L1397	PLANET GEAR B	3	
		30	WEY74A2K0857	THRUST PLATE	1	
		31	WEY74A2F0027	MOTOR MOUNTING PLATE	1	
		-	WEY79A3L8102	OPERATING INSTRUCTIONS	1	
		-	WEY003W8957	GREASE (PERMALUB)	1	
		-	WEY001T8907	GREASE (ALVANIA)	1	