

PRODUCT NAME

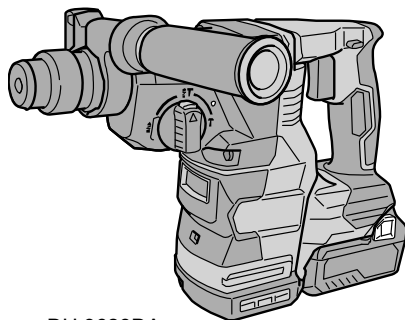
Cordless Rotary Hammer

Models 36 V DH 3628DA, DH 3628DC

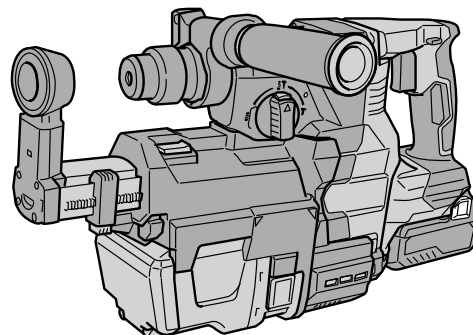
18 V DH 1826DA, DH 1826DC

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CONTENTS	Page
TROUBLESHOOTING GUIDE	1
REPAIR GUIDE	2
1. Precautions on disassembly and reassembly	2
• Disassembly	2
• Reassembly	11
• Checking after reassembly	25
• Tightening torque	26
• No-load current	26
• Lubrication points and types of lubricant	27
• Wiring diagram	30
2. Precautions on disassembly and reassembly of the charger	31



DH 3628DA



DH 3628DA
(with dust extractor system)

TROUBLESHOOTING GUIDE

Be sure to wipe off all dust, water, and other foreign matter from the internal parts and then dry the parts adequately before conducting the following troubleshooting.

Trouble	Possible cause	Checking method	Corrective action
(1) Motor does not run.	• Faulty insertion of the connector cable of the switch	• Check the connector cable for its fitting condition.	• Connect the connector cable properly.
	• Switch failure	• Check the condition of the metallic terminal (pin) in the switch connector for corrosion.	• Replace the switch.
	• Wiring ass'y (A) failure	• Check the condition of the board surface for peeling urethane, missing element, and any indication of being dropped in the past.	• Replace wiring ass'y (A).
	• Faulty fuse (DH 3628DA/DC)	• Check for continuity between the terminals of the fuse. • Check whether the battery mount of housing (A).(B) ass'y is cracked or worn.	• Replace wiring ass'y (A). • Replace housing (A).(B) ass'y.
(2) Rotation cannot be reversed.	• Faulty insertion of the connector cable of the switch	• Check the connector cable for its fitting condition.	• Connect the connector cable properly.
	• Switch connector failure	• Check the conductor (connector) of the connector cable for corrosion. • Check the condition of the metallic terminal (pin) in the switch connector for corrosion.	• Replace the switch or wiring ass'y (A).
	• Faulty contact in the switch	• Check the connector of wiring ass'y (A) and the switch connector for any abnormality.	• Replace the switch.
(3) Rotation speed cannot be increased or changed.	• Wiring ass'y (A) failure	• Check the condition of the board surface for peeling urethane, missing element, and any indication of being dropped in the past.	• Replace wiring ass'y (A).
	• Faulty insertion of the connector cable of the switch	• Check the connector cable for its fitting condition.	• Connect the connector cable properly.
	• Switch connector failure	• Check the conductor (connector) of the connector cable for corrosion. • Check the condition of the metallic terminal (pin) in the switch connector for corrosion.	• Replace the switch or wiring ass'y (A).
	• Faulty contact in the switch	• Check the connector cable of wiring ass'y (A) and the switch connector for any abnormality.	• Replace the switch.
(4) LED light does not turn on.	• Wiring ass'y (A) failure	• Turn on the switch and check whether the LED light turns on using a fully charged battery.	• Replace wiring ass'y (A).

REPAIR GUIDE

WARNING: Be sure to remove the battery from the main body before starting repair or maintenance work. If the switch is activated inadvertently with the battery still mounted on the main body, the motor may turn unexpectedly and could cause serious injury.

1. Precautions on disassembly and reassembly

[**Bold**] numbers in the description below correspond to the item numbers in the parts list and exploded assembly diagram for the Model DH 3628DA, {**Bold**} numbers to those for the Model DH 3628DC, <**Bold**> numbers to those for the Model DH 1826DA, and (**Bold**) numbers to those for the Model DH 1826DC.

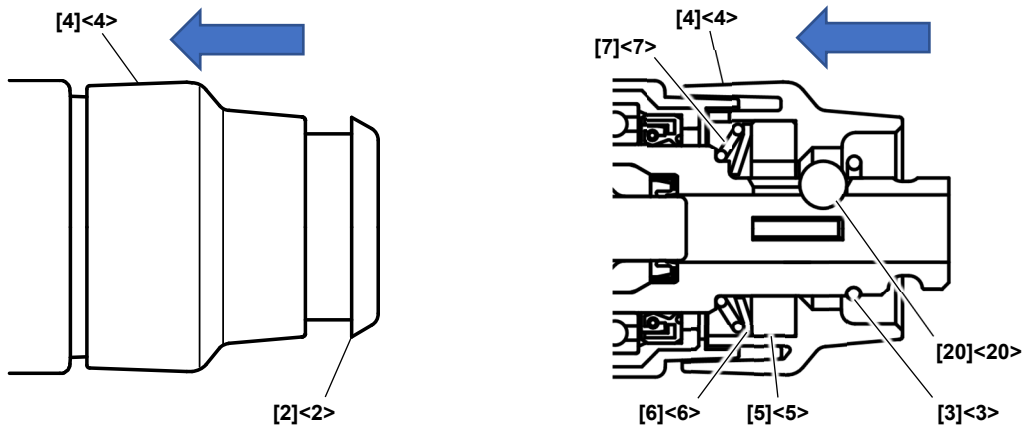
Disassembly

<Disassembly of the main body of the rotary hammer>

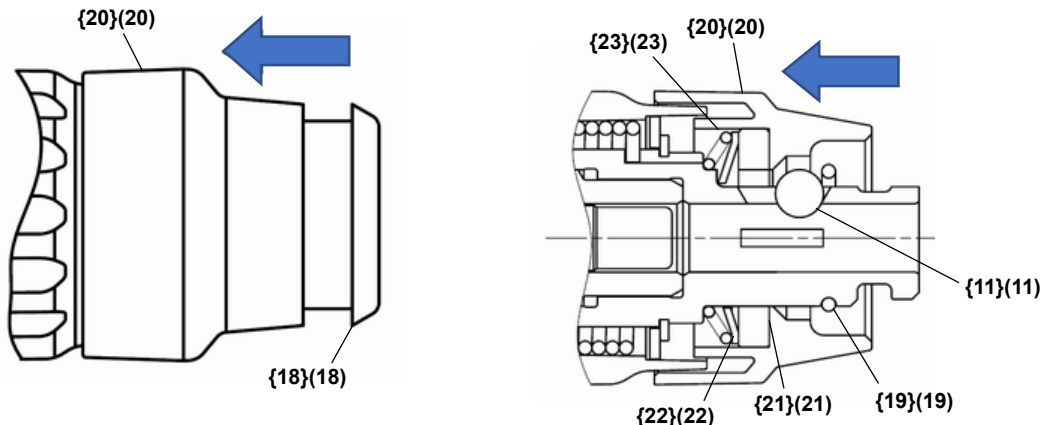
1-1. Disassembly of the tool retainer ass'y

- (1) Fully pull the Grip [4]{20}<4>(20) in the arrow direction and remove the Front Cap [2]{18}<2>(18).
- (2) Remove the Stopper Ring [3]{19}<3>(19) with a retaining ring puller while pulling the Grip [4]{20}<4>(20) in the arrow direction.
- (3) Remove the Grip [4]{20}<4>(20), Ball Holder [5]{21}<5>(21), Steel Ball D7.0 [20]{11}<20>(11), Holder Plate [6]{22}<6>(22), and Holder Spring [7]{23}<7>(23) from the Cylinder [21]<21> or Bit Holder (A) {24}(24).

• Disassembly of the tool retainer ass'y (DH 3628DA and DH 1826DA only)



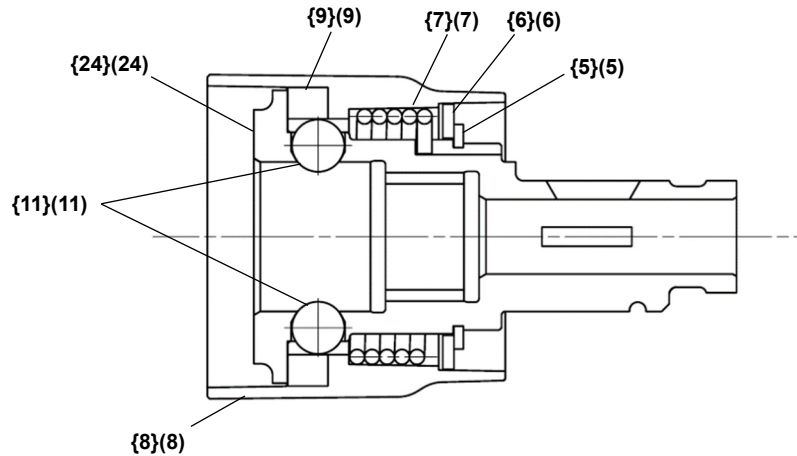
• Disassembly of the tool retainer ass'y (DH 3628DC and DH 1826DC only)



1-2. Disassembly of bit holder (A) ass'y (DH 3628DC and DH 1826DC only)

- (1) Remove the parts around the grip and the Retaining Ring for D25 Shaft {5}{5}.
- (2) Remove Washer (B) {6}{6}, Spring {7}{7}, Lock Grip {8}{8}, Lock Ring {9}{9}, and Steel Ball D7.0 {11}{11} from Bit Holder (A) {24}{24}.

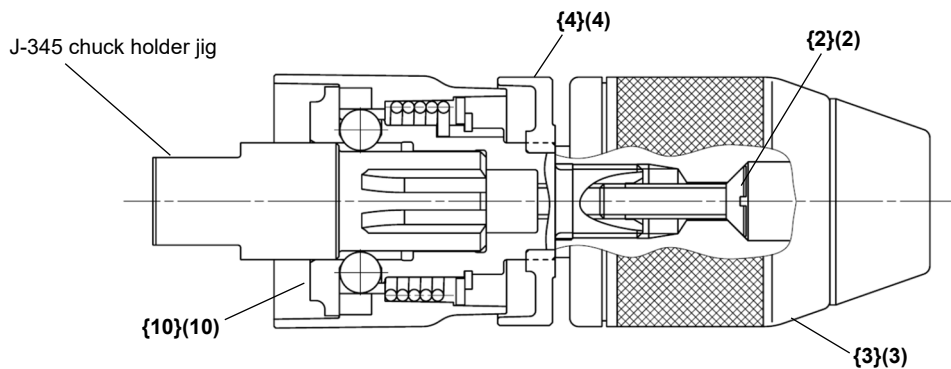
• Disassembly of bit holder (A) ass'y (DH 3628DC and DH 1826DC only)



1-3. Disassembly of the chuck holder ass'y (DH 3628DC and DH 1826DC only)

- (1) Engage the J-345 chuck holder jig (Code No. 327062) with the spline as shown in the figure below.
- (2) Hold the width-across-flats portion in a vise and remove Flat Hd. Screw (A) (Left Hand) M6 x 25 {2}{2}.
- (3) Put a hexagonal bar in the Drill Chuck 13VLRU-N (W/O Chuck Wrench) {3}{3} then loosen and remove it using a torque wrench.
- (4) Remove the Stopper {4}{4}. Then Chuck Holder (A) {10}{10} can be removed in the same manner as the disassembly of bit holder (A) ass'y.

• Disassembly of chuck holder (A) ass'y (DH 3628DC and DH 1826DC only)



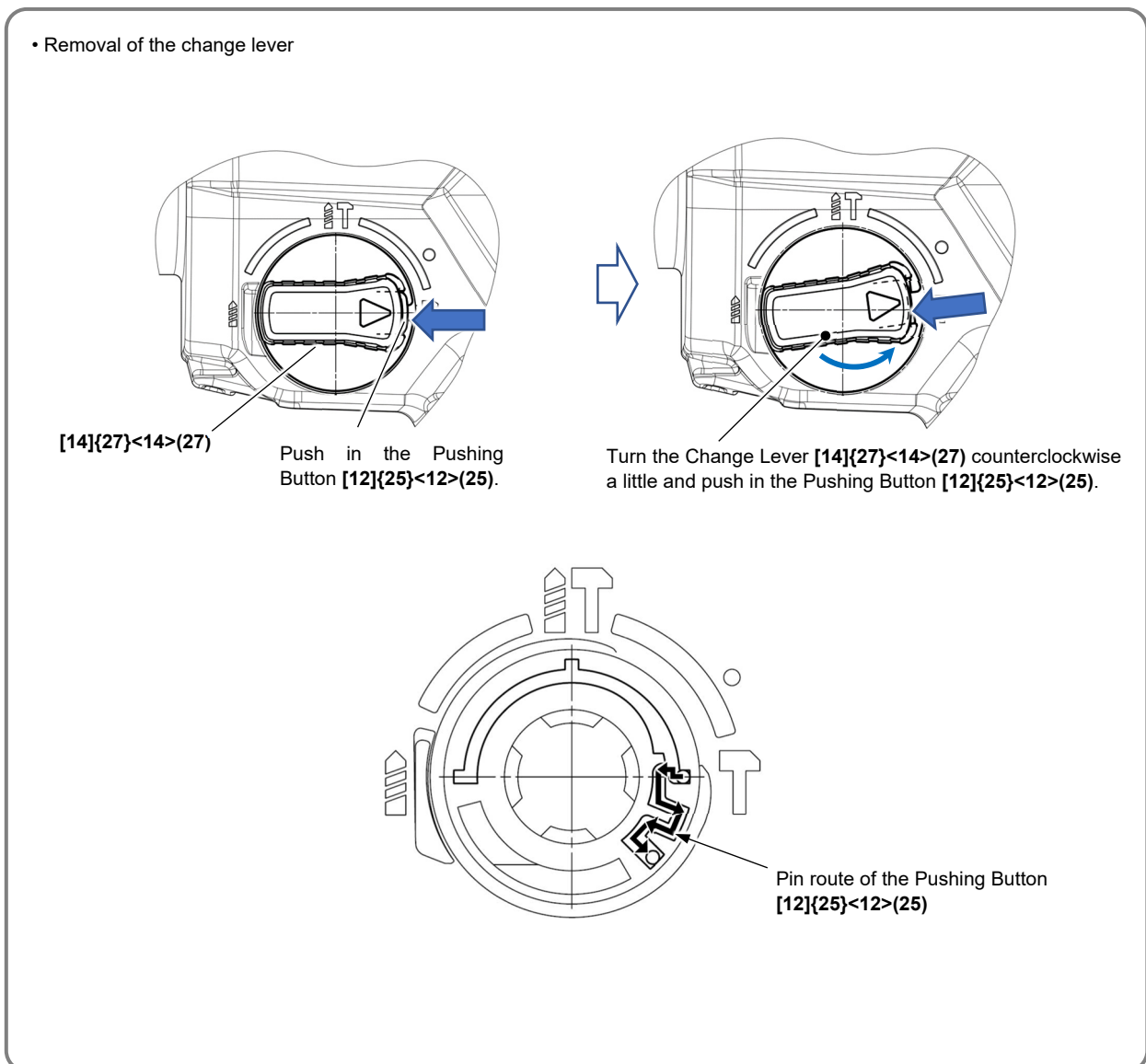
2. Removal of the change lever

- (1) Push in the Pushing Button [12]{25}<12>(25) at the "Hammering only" (T mark) position.
- (2) Turn the Change Lever [14]{27}<14>(27) counterclockwise a little and fully push in the Pushing Button [12]{25}<12>(25).
- (3) In this state, turn the Change Lever [14]{27}<14>(27) clockwise. When the Change Lever [14]{27}<14>(27) stops, release the Pushing Button [12]{25}<12>(25) so that the Pushing Button [12]{25}<12>(25) protrudes from the Change Lever [14]{27}<14>(27) and then turn the Change Lever [14]{27}<14>(27) clockwise until it stops.

NOTE: If the Pushing Button [12]{25}<12>(25) does not protrude from the Change Lever [14]{27}<14>(27), hold the Change Lever [14]{27}<14>(27) and move it from side to side slightly.

- (4) Fully push in the Pushing Button [12]{25}<12>(25) and turn the Change Lever [14]{27}<14>(27) clockwise until it stops. At this position, pry the Change Lever [14]{27}<14>(27) off.

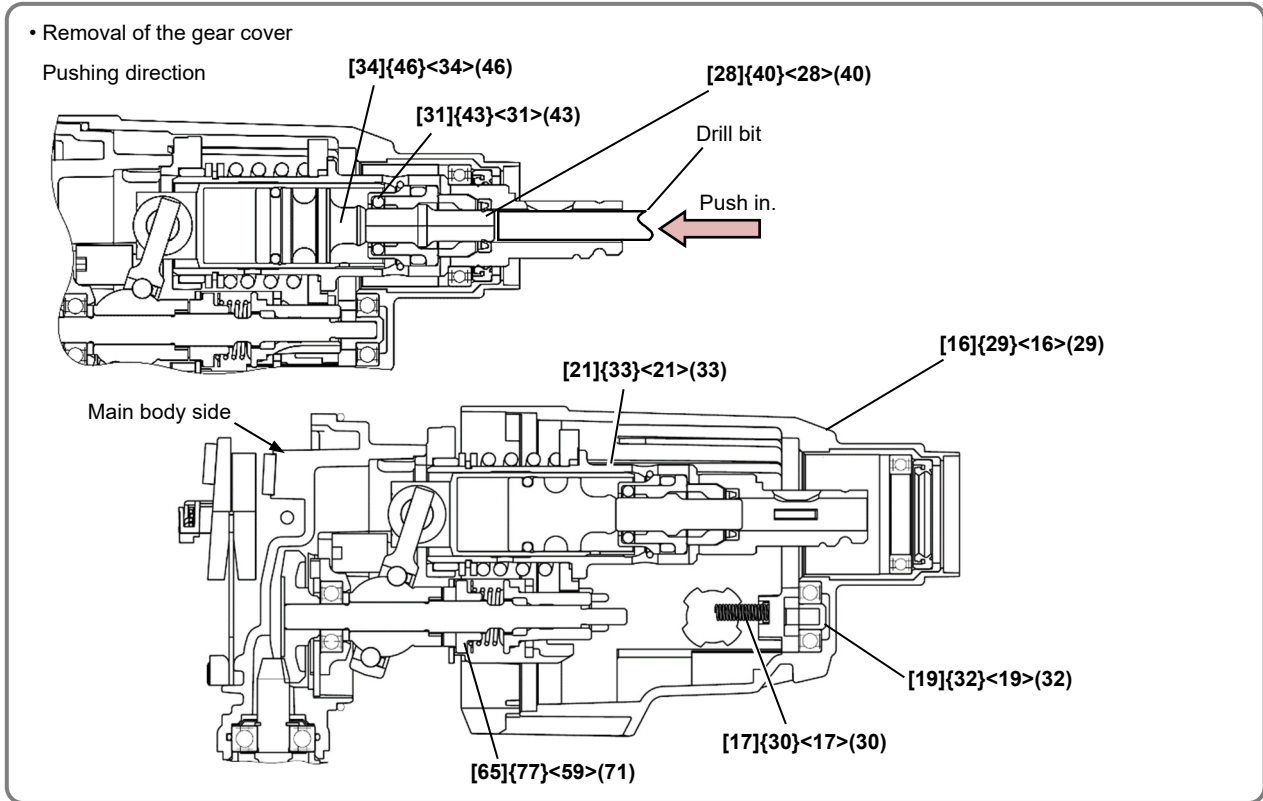
NOTE: Be careful not to let the Pushing Button [12]{25}<12>(25) pop out.



3. Disassembly of the hammering mechanism

(1) Removal of the gear cover

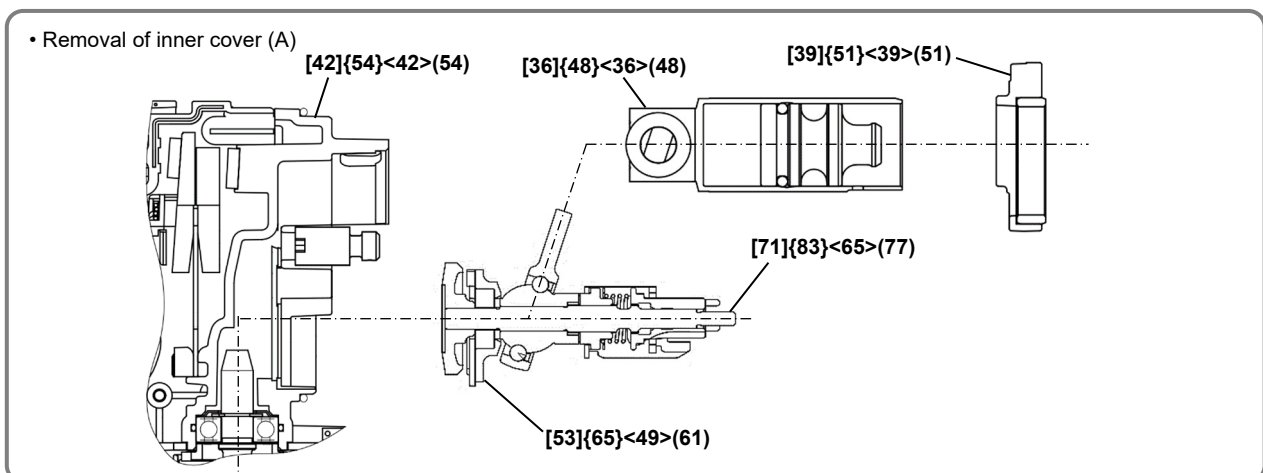
- Use a drill bit or screwdriver to push the Second Hammer [28]{40}<28>(40) into the front end, and then remove the Striker [34]{46}<34>(46) that is chucked by O-ring (C) [31]{43}<31>(43).
- Remove the Tapping Screw (W/Flange) D5 (Black) [8]{12}<8>(12) and then detach the Gear Cover Ass'y [16]{29}<16>(29).
- After removing the Gear Cover Ass'y [16]{29}<16>(29), Spring (E) [17]{30}<17>(30) and Shaft Holder (B) [19]{32}<19>(32) remain at the Gear Cover Ass'y [16]{29}<16>(29) side.



(2) Removal of the piston

- Remove the two Seal Lock Hex. Socket Hd. Bolts M5 x 16 [38]{50}<38>(50) from Inner Cover (B) [39]{51}<39>(51) and remove the two Seal Lock Hex. Socket Hd. Bolts M5 x 16 [38]{50}<38>(50) from the Bearing Holder (B) [53]{65}<49>(61).
- Remove the Second Shaft [71]{83}<65>(77) and the Piston [36]{48}<36>(48) from Inner Cover (A) [42]{54}<42>(54).

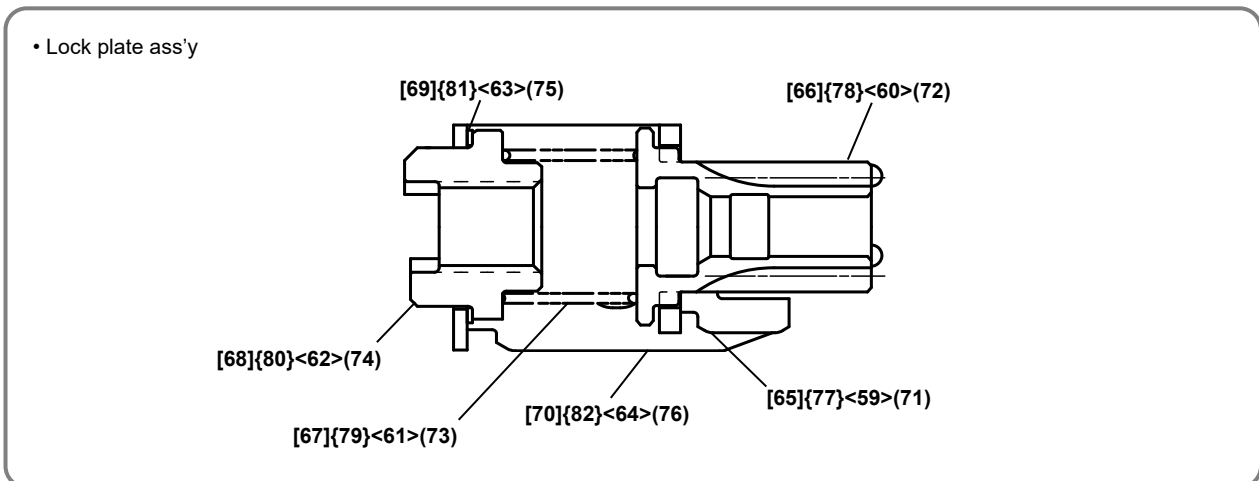
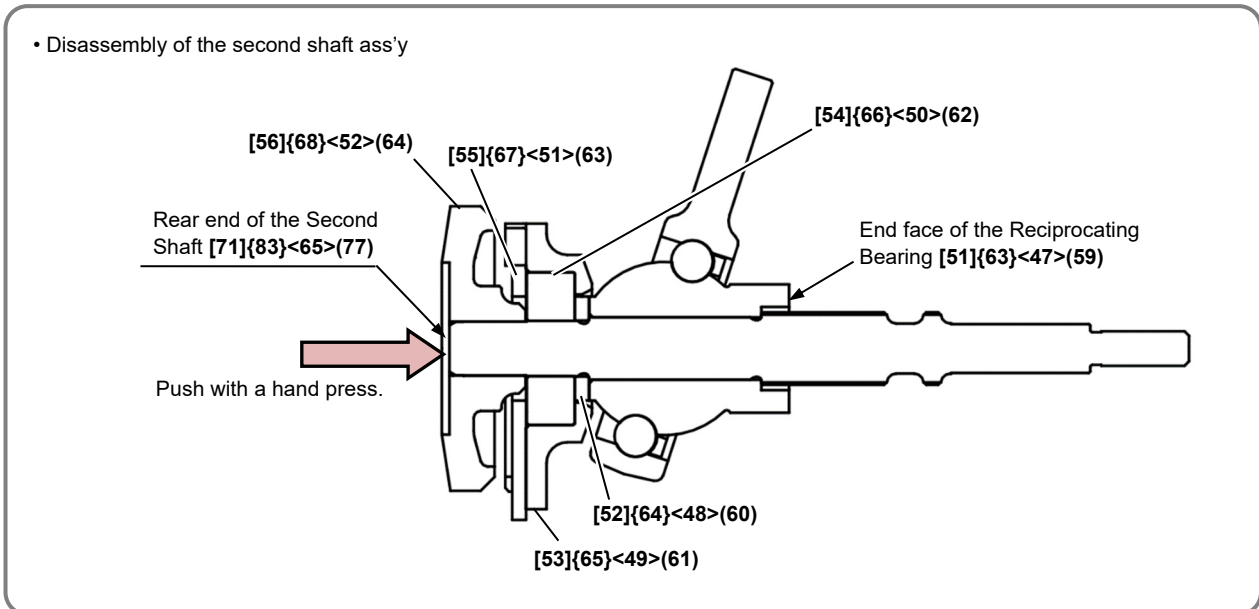
NOTE: The Seal Lock Hex. Socket Hd. Bolt M5 x 16 [38]{50}<38>(50) loses its bonding force if removed. Use the new Seal Lock Hex. Socket Hd. Bolt M5 x 16 [38]{50}<38>(50) at reassembly.



(3) Disassembly of the second shaft ass'y

- Remove the Lock Plate [65]{77}<59>(71) ass'y from the Second Shaft [71]{83}<65>(77).
- Support the end face of the Reciprocating Bearing [51]{63}<47>(59). Push the rear end of the Second Shaft [71]{83}<65>(77) with a hand press to push out the Bevel Gear [56]{68}<52>(64), Bearing Cover (A) [55]{67}<51>(63), Ball Bearing 608VV [54]{66}<50>(62), Bearing Holder (B) [53]{65}<49>(61), Bearing Washer [52]{64}<48>(60), and Reciprocating Bearing [51]{63}<47>(59) from the Second Shaft [71]{83}<65>(77).

NOTE: Note that the Bevel Gear [56]{68}<52>(64) is press-fitted to the end of the 7.8 mm dia. shaft of the Second Shaft [71]{83}<65>(77) for alignment.



4. Disassembly of the cylinder ass'y

(1) Disassembly of the slip clutch ass'y

- After removal of the tool retainer ass'y or Bit Holder (A) Ass'y {16}{16} or Chuck Holder Ass'y {1}{1}, pull out the Cylinder [21]{33}<21>(33) ass'y from the Gear Cover Ass'y [16]{29}<16>(29).
- Remove Washer (A) [24]{36}<24>(36) from the Cylinder [21]{33}<21>(33) and use a retaining ring puller to pull out the Retaining Ring for D30 Shaft [25]{37}<25>(37). Then remove Washer (A) [24]{36}<24>(36), Spring (B) [23]{35}<23>(35), and Second Gear [22]{34}<22>(34) from the Cylinder [21]{33}<21>(33).

NOTE: Be careful not to let the Retaining Ring for D30 Shaft [25]{37}<25>(37) and Washer (A) [24]{36}<24>(36) pop out.

(2) Removal of the parts from the inside of the cylinder

- Use the special repair tools specified in the table for removal of the parts from the inside of the Cylinder [21]{33}<21>(33).

Special repair tool		Code No.
J-341	Stopper ring jig (A)	324202
	Ring puller jig (B)	324203
	Punch (C)	324204

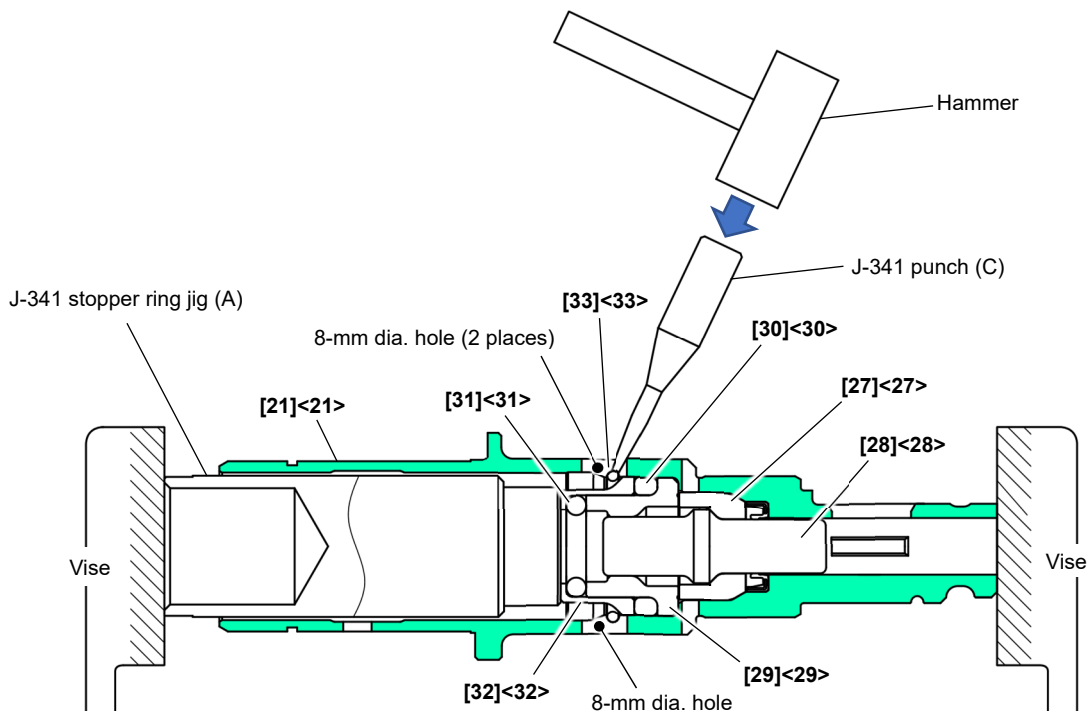
- Insert the non-hole side of J-341 stopper ring jig (A) into the Cylinder [21]{33}<21>(33) as shown in the figure below until it contacts the end of the Damper Holder [32]{44}<32>(44). Clamp the Cylinder [21]{33}<21>(33) and the end of J-341 stopper ring jig (A) with a vise to compress Damper (A) [30]{42}<30>(42). (Push the Stopper Ring [33]{45}<33>(45) with J-341 punch (C) and make sure it moves a little.)
- In this state, insert J-341 punch (C) into the 8 mm dia. hole (2 places) on the Cylinder [21]{33}<21>(33). Hammer the punch head to give force to the periphery of the Stopper Ring [33]{45}<33>(45) in order to detach the ring from the bore groove of the Cylinder [21]{33}<21>(33). Fully hammer along the periphery of the Stopper Ring [33]{45}<33>(45) until the Stopper Ring [33]{45}<33>(45) disappears from the two 8 mm dia. holes.
- Unclamp the Cylinder [21]{33}<21>(33) from the vise and use J-341 ring puller jig (B) to pull out the Stopper Ring [33]{45}<33>(45) from the inside of the Cylinder [21]{33}<21>(33).

NOTE: Be careful not to let the Stopper Ring [33]{45}<33>(45) pop out.

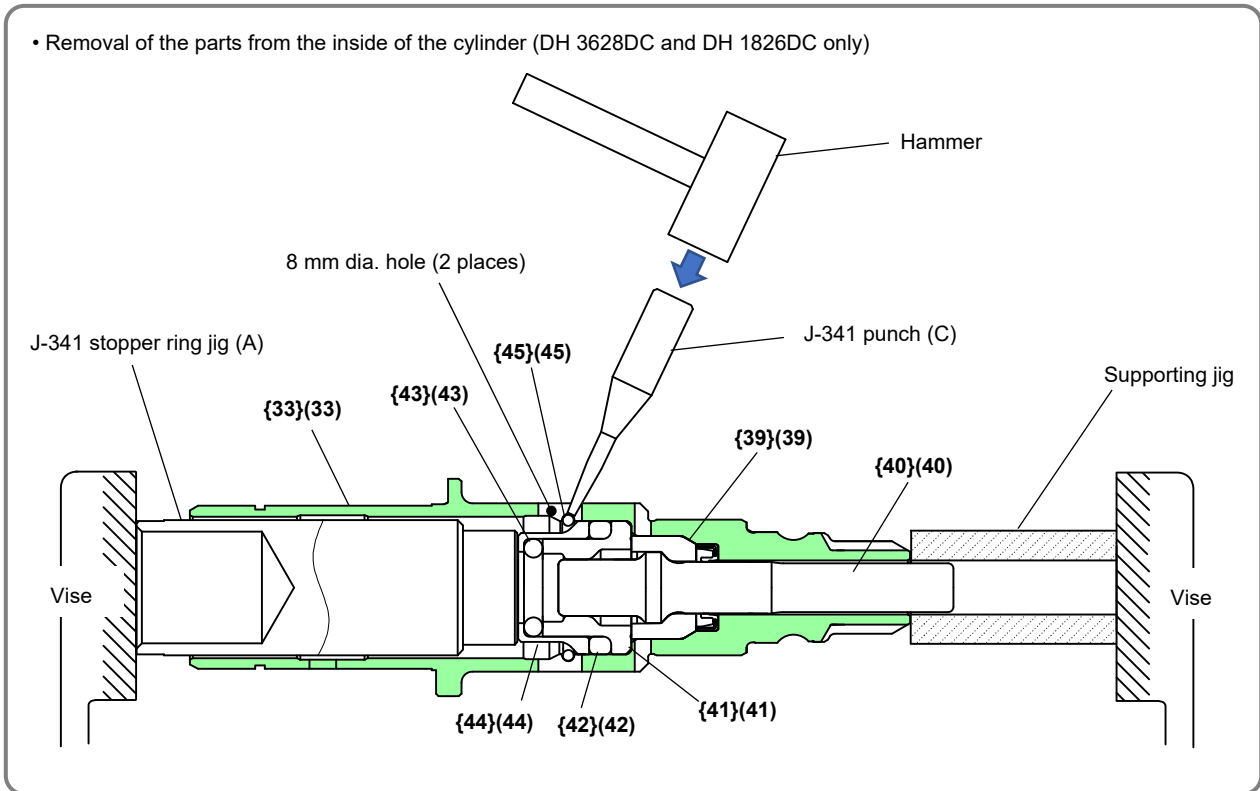
- Once the Stopper Ring [33]{45}<33>(45) is detached from the Cylinder [21]{33}<21>(33), Hammer Holder (D) [27]{39}<27>(39), Second Hammer [28]{40}<28>(40), Hammer Holder (A) [29]{41}<29>(41), Damper (A) [30]{42}<30>(42), O-ring (C) [31]{43}<31>(43), and Damper Holder [32]{44}<32>(44) can be removed from the Cylinder [21]{33}<21>(33).

NOTE: The Stopper Ring [33]{45}<33>(45) is deformed by disassembly and must be replaced with a new one at reassembly. Replace O-ring (C) [31]{43}<31>(43) with a new one at reassembly to prevent idle-hammering.

- Removal of the parts from the inside of the cylinder (DH 3628DA and DH 1826DA only)

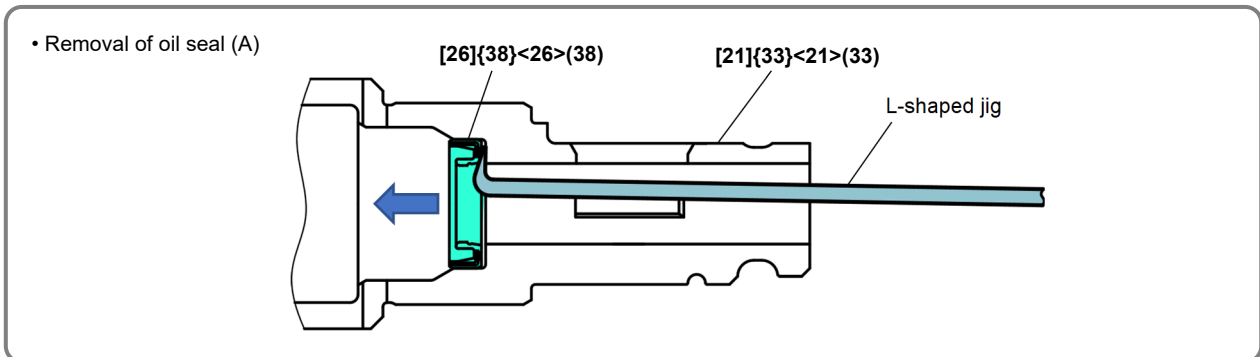


- Removal of the parts from the inside of the cylinder (DH 3628DC and DH 1826DC only)



- To remove Oil Seal (A) [26]{38}<26>(38) from the Cylinder [21]{33}<21>(33), insert an L-shaped jig between Oil Seal (A) [26]{38}<26>(38) and Cylinder [21]{33}<21>(33) and push it backward.

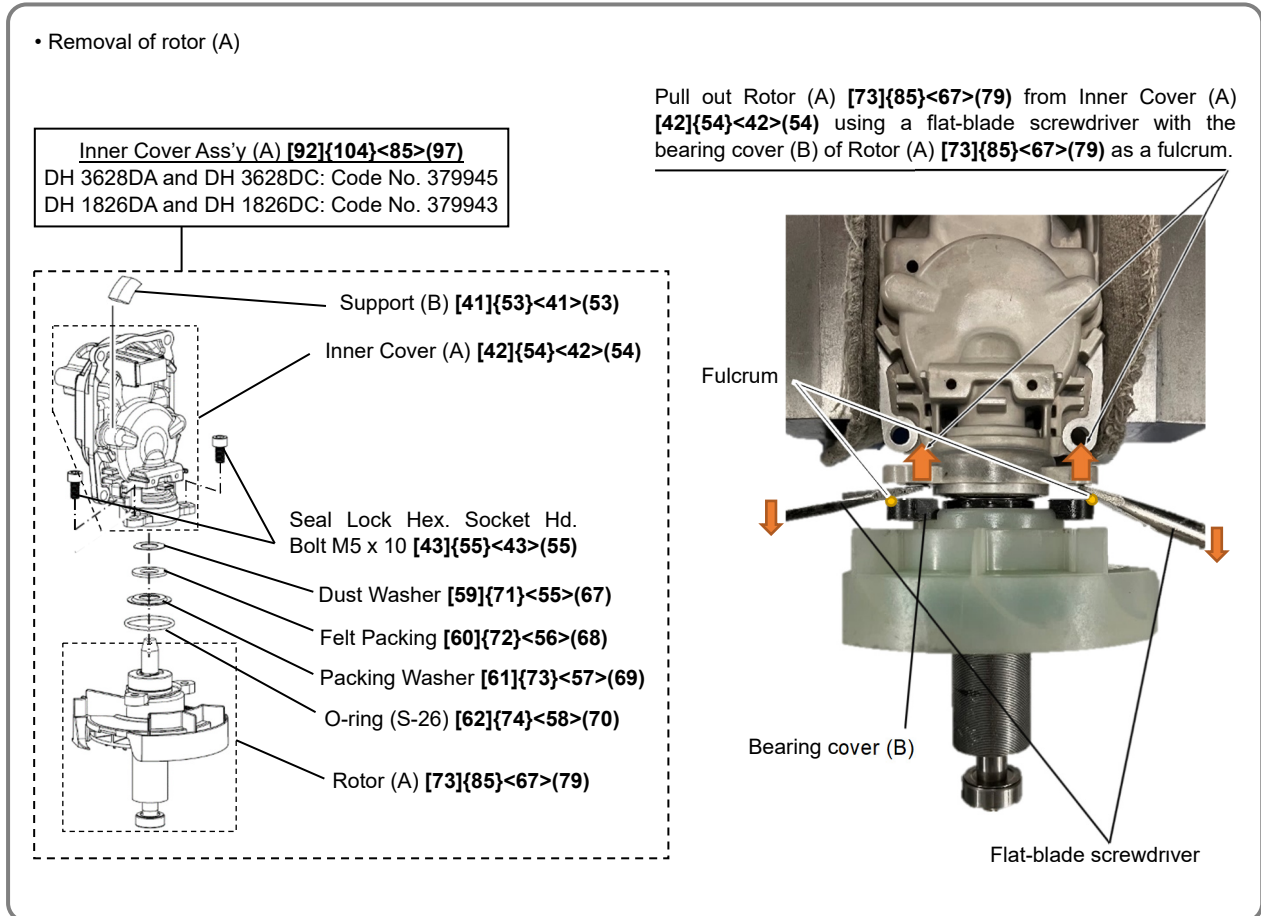
NOTE: Oil Seal (A) [26]{38}<26>(38) is deformed by disassembly and must be replaced with a new one at reassembly.



5. Removal of rotor (A)

When replacing Inner Cover (A) [42]{54}<42>(54) or Rotor (A) [73]{85}<67>(79), replace it with Inner Cover Ass'y (A) [92]{104}<85>(97). Perform disassembly according to the following steps if it is necessary to disassemble.

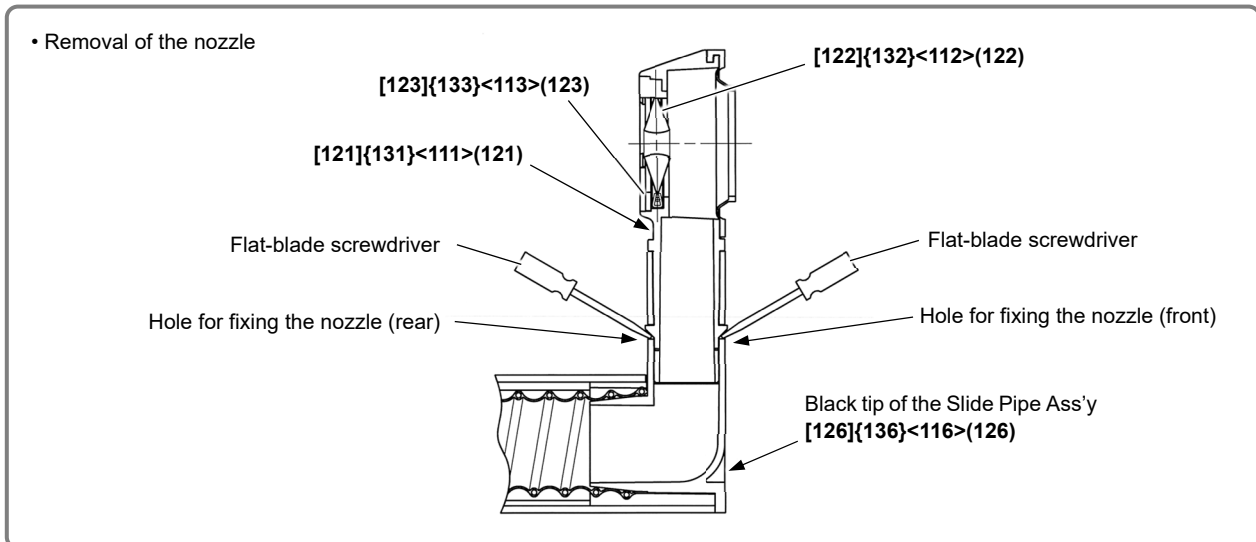
- Remove the twelve Tapping Screws (W/Flange) D4 x 20 (Black) [82]{94}<74>(86) and three Tapping Screws (W/Flange) D4 x 40 (Black) [78]{90}<70>(82) from Housing (A).(B) Set [72]{84}<66>(78) and Handle (A).(B) Ass'y [85]{97}<77>(89).
- Remove Inner Cover (A) [42]{54}<42>(54) together with Rotor (A) [73]{85}<67>(79). Remove the two Seal Lock Hex. Socket Hd. Bolts M5 x 10 [43]{55}<43>(55). Fix Inner Cover (A) [42]{54}<42>(54) and insert a flat-blade screwdriver between Inner Cover (A) [42]{54}<42>(54) and bearing cover (B) of Rotor (A) [73]{85}<67>(79) to pull out Rotor (A) [73]{85}<67>(79).



<Disassembly of the dust extractor system>

1. Removal of the nozzle

- (1) Insert a flat-blade screwdriver into one of the two holes for fixing the Nozzle [121]{131}<111>(121) on the black tip of the Slide Pipe Ass'y [126]{136}<116>(126) and another flat-blade screwdriver into the other hole simultaneously to remove the Nozzle [121]{131}<111>(121).
- (2) Remove the Retaining Ring D35 [123]{133}<113>(123) using pliers and take out the Brush Cap [122]{132}<112>(122).

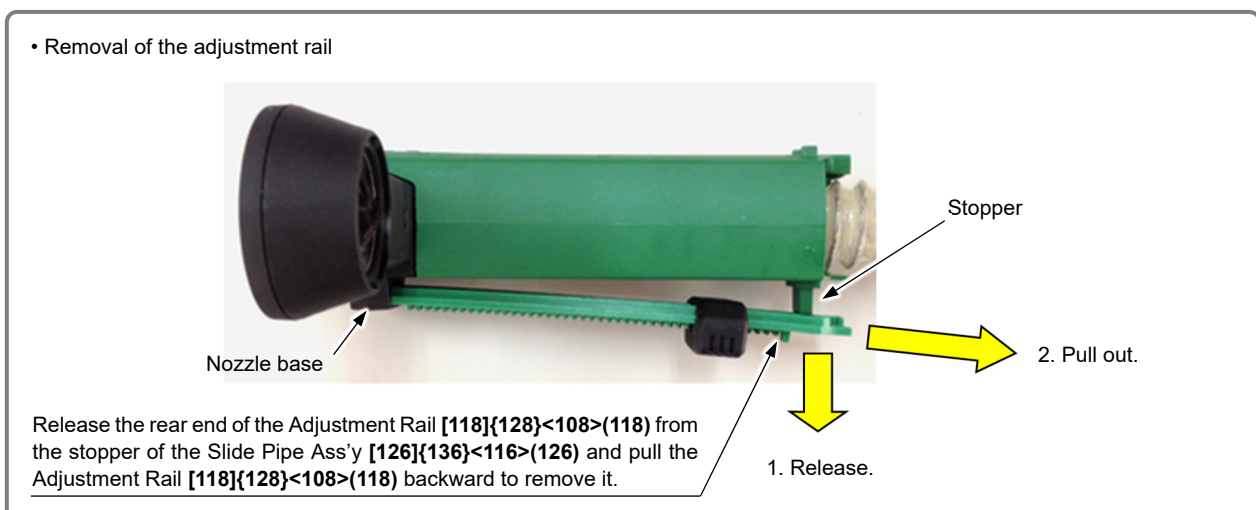


2. Removal of the adjustment rail

- (1) Remove three Tapping Screws (W/Flange) D4 x 16 (Black) [124]{134}<114>(124) and two Tapping Screws (W/Flange) D4 x 40 (Black) [125]{135}<115>(125) from Dust Housing (A).(B) Set [129]{139}<119>(129) and remove Dust Housing (A).(B) Set [129]{139}<119>(129). Then, remove the Slide Pipe Ass'y [126]{136}<116>(126), Stopper [113]{123}<103>(113), Button (B) [112]{122}<102>(112), and Spring (A) [111]{121}<101>(111).

NOTE: Be careful not to let the Stopper [113]{123}<103>(113), Button (B) [112]{122}<102>(112), and Spring (A) [111]{121}<101>(111) pop out.

- (2) Release the rear end of the Adjustment Rail [118]{128}<108>(118) from the stopper of the Slide Pipe Ass'y [126]{136}<116>(126) and pull the Adjustment Rail [118]{128}<108>(118) backward to remove it from the claw of the nozzle base.
- (3) While pressing Button (A) Set [116]{126}<106>(116), slide the Adjuster [115]{125}<105>(115) on the Adjustment Rail [118]{128}<108>(118) forward to remove Button (A) Set [116]{126}<106>(116) and Spring (A) [111]{121}<101>(111) from the Adjuster [115]{125}<105>(115).



Reassembly

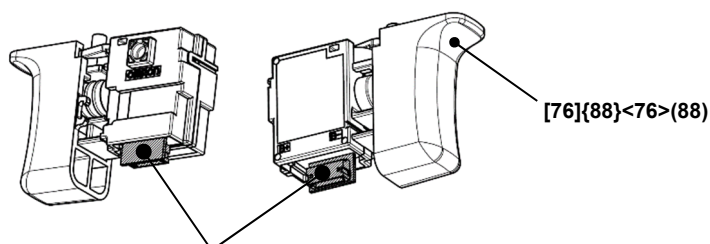
Reassembly can generally be conducted by reversing the disassembly procedure. However, special attention should be given to the following items.

NOTE: The retaining rings, stopper rings, and oil seals are deformed by disassembly and must be replaced with new ones at reassembly.

<Reassembly of the main body of the rotary hammer>

1. Mounting the switch

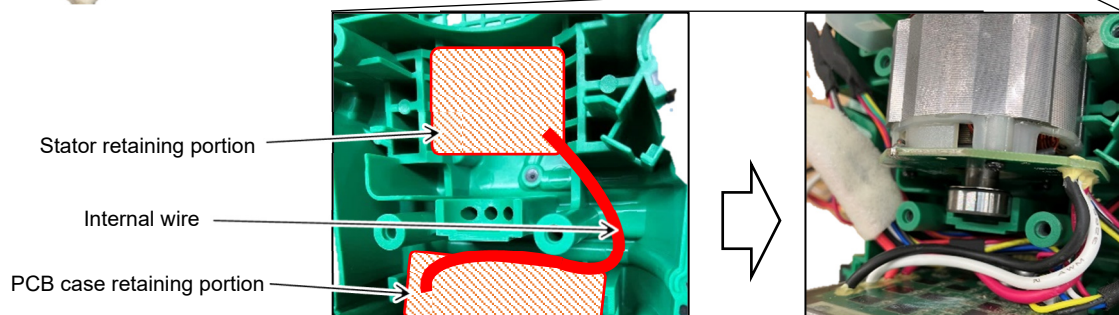
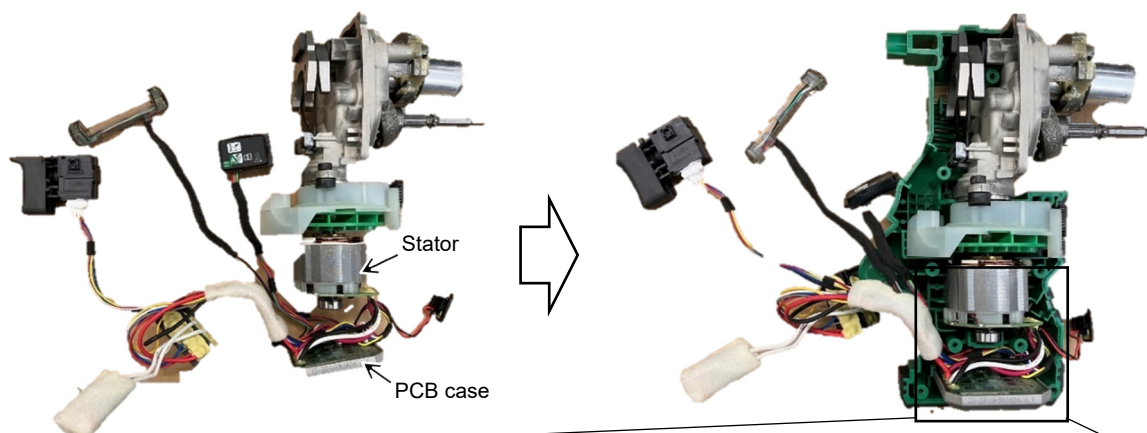
(1) Connect the Speed Control Switch [76]{88}<76>(88) to Wiring Ass'y (A) [74]{86}<68>(80). Then, apply silicone (Shin-Etsu Chemical KE-348-W, commercially available) to the connecting portions as shown below.



Apply silicone to the shaded portions after connecting the connectors.

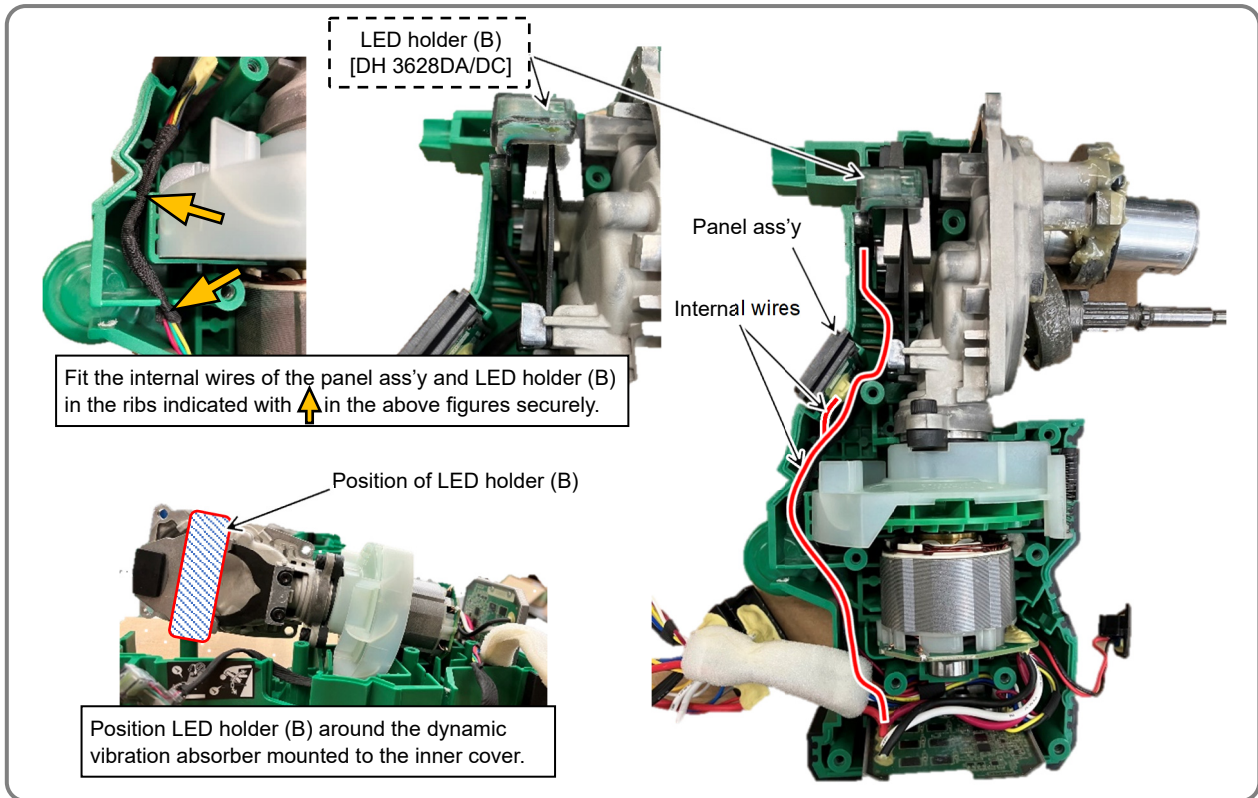
2. Wiring of the wiring ass'y (A) in the housing

(1) Assemble the stator and the rotor of Wiring Ass'y (A) [74]{86}<68>(80) as shown in the figure below. Then, put the stator and the PCB case in housing (A) positioning the internal wires of the stator and the PCB as shown in the figure below.

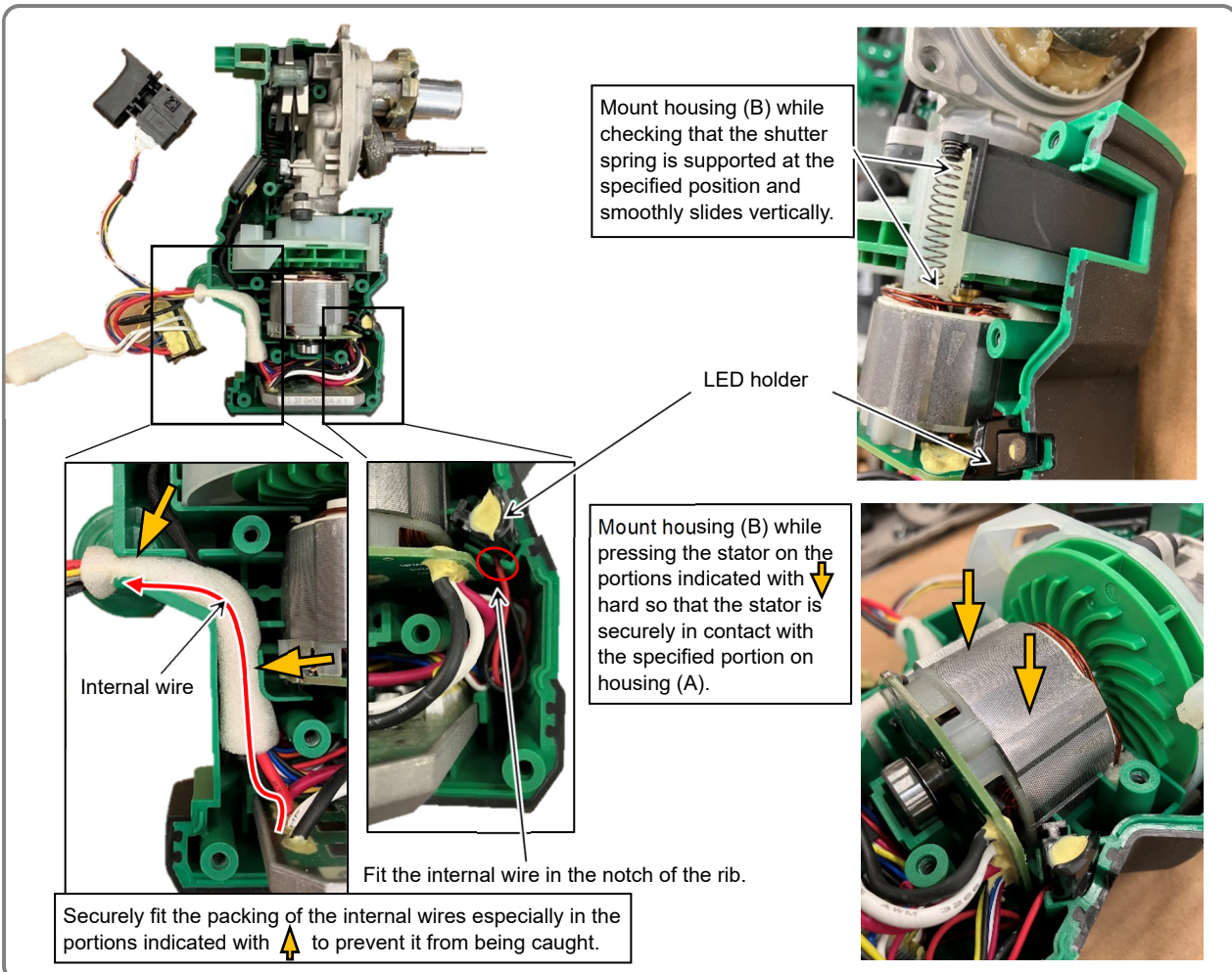


Put the stator in housing (A) so that the internal wire coming from the stator PCB is positioned to the front of the main body. Put the PCB case in housing (A) so that the internal wire connecting to the stator PCB is positioned to the rear of the main body.

(2) Fit the internal wires of the panel ass'y and LED holder (B) in the ribs. Then, mount the panel ass'y and LED holder (B) to housing (A) positioning the internal wires as shown below.



(3) Position the internal wires wrapped with the packing as shown in the figure below. Mount housing (B) to housing (A) paying attention to the following instructions.



3. Wiring of the wiring ass'y (A) in the handle

(1) Mount the Handle Spring [80]{92}<72>(84), Handle Plate [81]{93}<73>(85), Housing Plate [79]{91}<71>(83), Handle Guide [86]{98}<78>(90), Handle Damper [89]{101}<81>(93), Handle Collar [88]{100}<80>(92), and Handle Washer [87]{99}<79>(91) as shown in the figures below. Then, mount Battery Rubber (B) [90]{102}<83>(95) and battery terminal to handle (A).

After mounting the Housing Plate [79]{91}<71>(83) and Handle Plate [81]{93}<73>(85), fit the boss of the handle in the hole of the housing while compressing the Handle Spring [80]{92}<72>(84). At this time, check that the Handle Guide [86]{98}<78>(90) is mounted to the handle in the proper direction as shown in the exploded assembly diagram of the parts list.

Mount the Handle Damper [89]{101}<81>(93) and Handle Collar [88]{100}<80>(92) to the cylindrical portion of housing (A), and mount the Handle Washer [87]{99}<79>(91) to the cylindrical portion of housing (B) in the same manner.

(2) Mount the Speed Control Switch [76]{88}<76>(88) and Pushing Button (B) [77]{89}<75>(87) as shown below.

- DH 3628DA/DC: Fit the fuse in between the retaining ribs as shown below.
- DH 1826DA/DC: Mount the Handle Cover <82>(94) in front of the battery terminal retaining portion as shown below.

After mounting the above, mount handle (B) to handle (A).

Mount the Handle Cover <82>(94).

4. Mounting the oil seals

When mounting the Oil Seal [10]{14}<10>(14) and Oil Seal (A) [26]{38}<26>(38), apply grease to the inner circumferences of both seals, but do not apply grease along their peripheries. Be careful not to skew the Oil Seal [10]{14}<10>(14) and Oil Seal (A) [26]{38}<26>(38) when press-fitting them.

5. Reassembly of the cylinder ass'y

NOTE: Use the special repair tool specified in the table for mounting the parts to the inside of the Cylinder [21]{33}<21>(33).

Special repair tool		Code No.
J-341	Stopper ring jig (A)	324202

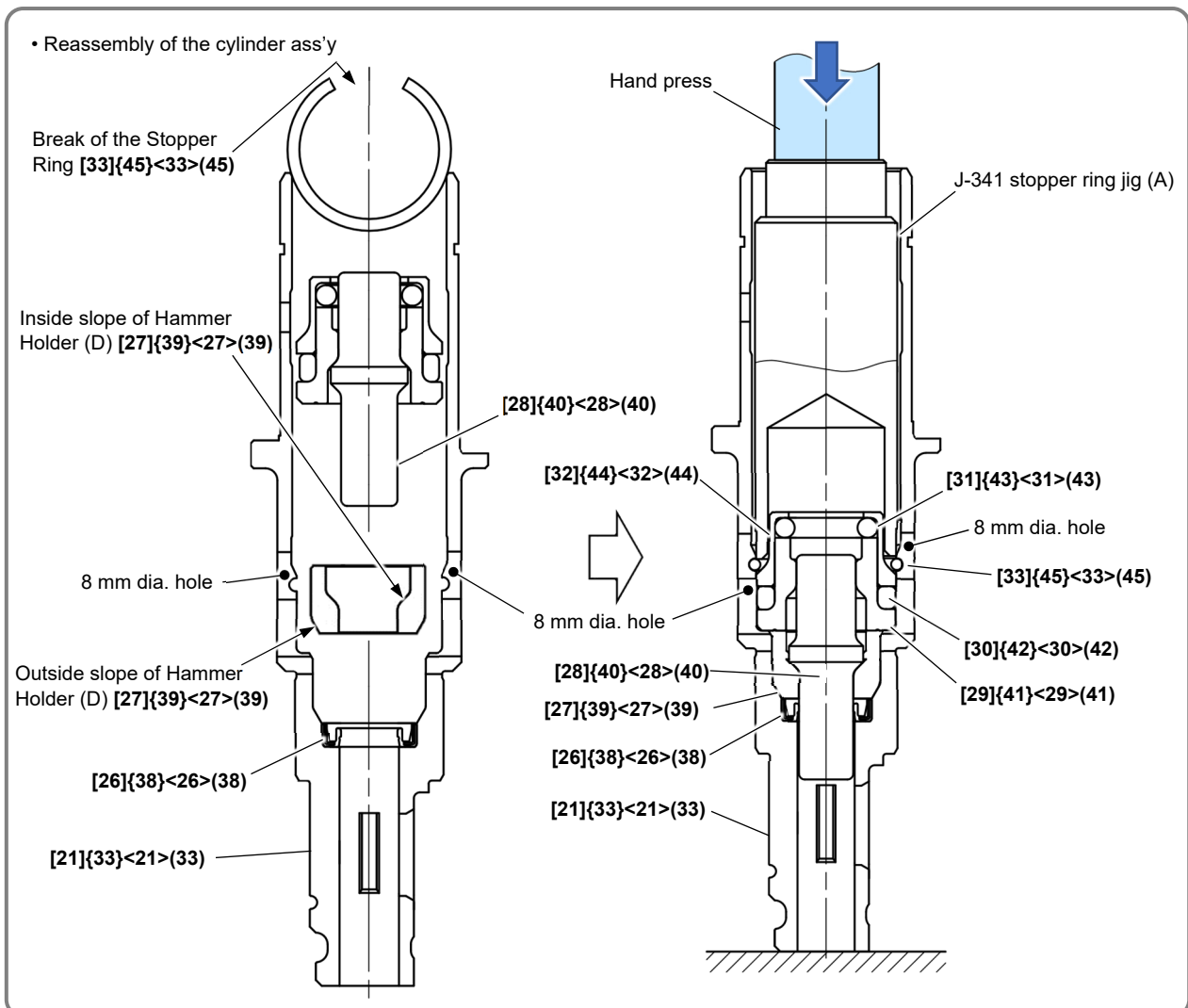
(1) Press-fit Oil Seal (A) [26]{38}<26>(38) into the Cylinder [21]{33}<21>(33).

NOTE: Do not reverse the orientation of Oil Seal (A) [26]{38}<26>(38).

(2) Insert the assembly of Hammer Holder (D) [27]{39}<27>(39), Second Hammer [28]{40}<28>(40), Hammer Holder (A) [29]{41}<29>(41), Damper (A) [30]{42}<30>(42), O-ring (C) [31]{43}<31>(43), and Damper Holder [32]{44}<32>(44) into the Cylinder [21]{33}<21>(33) as shown in the figure below.

(3) Push a new Stopper Ring [33]{45}<33>(45) into the Cylinder [21]{33}<21>(33) with the break of the Stopper Ring [33]{45}<33>(45) facing away from the 8 mm dia. holes on the Cylinder [21]{33}<21>(33) as shown in the figure below. If the Stopper Ring [33]{45}<33>(45) is mounted with the ring break aligning with the 8 mm dia. holes, it becomes difficult to disassemble the cylinder ass'y.

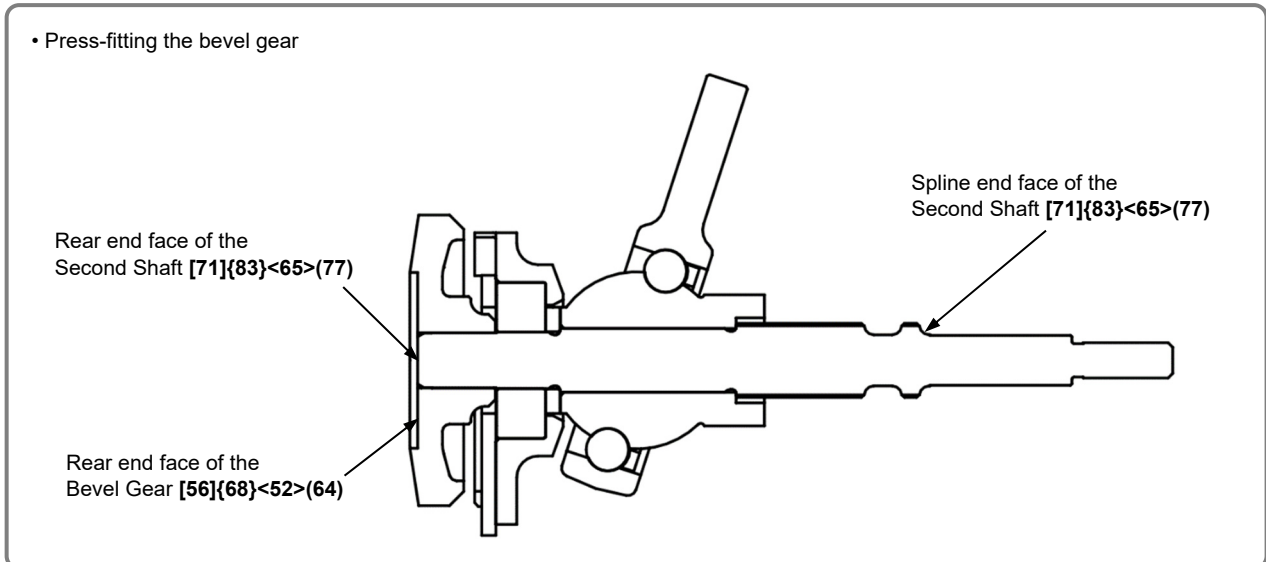
(4) Insert J-341 stopper ring jig (A) into the Cylinder [21]{33}<21>(33) as shown in the figure below. Use a hand press to press against the upper end of the jig until the Stopper Ring [33]{45}<33>(45) is fitted into the bore groove of the Cylinder [21]{33}<21>(33). Check that the Stopper Ring [33]{45}<33>(45) is securely fitted into the bore groove of the Cylinder [21]{33}<21>(33) through the two 8 mm dia. holes on the periphery of the Cylinder [21]{33}<21>(33).



6. Press-fitting the bevel gear

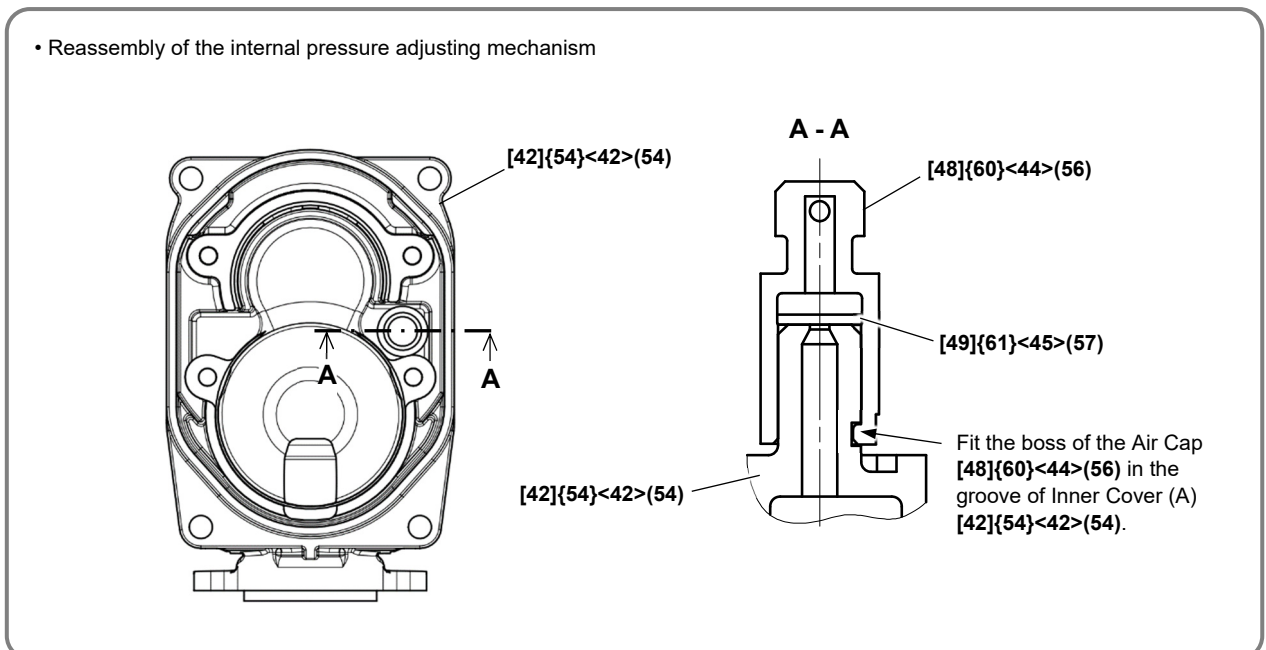
Support the spline end face of the Second Shaft [71]{83}<65>(77) and press-fit the Bevel Gear [56]{68}<52>(64) by pressing on the rear end face of the Bevel Gear [56]{68}<52>(64) with a hand press so that the rear end face of the Bevel Gear [56]{68}<52>(64) aligns with the rear end face of the Second Shaft [71]{83}<65>(77).

NOTE: After press-fitting the Bevel Gear [56]{68}<52>(64), check that the inner ring of the Reciprocating Bearing [51]{63}<47>(59) rotates smoothly.



7. Reassembly of the internal pressure adjusting mechanism

Insert Felt Packing (A) [49]{61}<45>(57) into the hole on the Air Cap [48]{60}<44>(56) and put the Air Cap [48]{60}<44>(56) over the shaft of Inner Cover (A) [42]{54}<42>(54). Fit the boss inside the Air Cap [48]{60}<44>(56) hole in the groove on the shaft of Inner Cover (A) [42]{54}<42>(54).

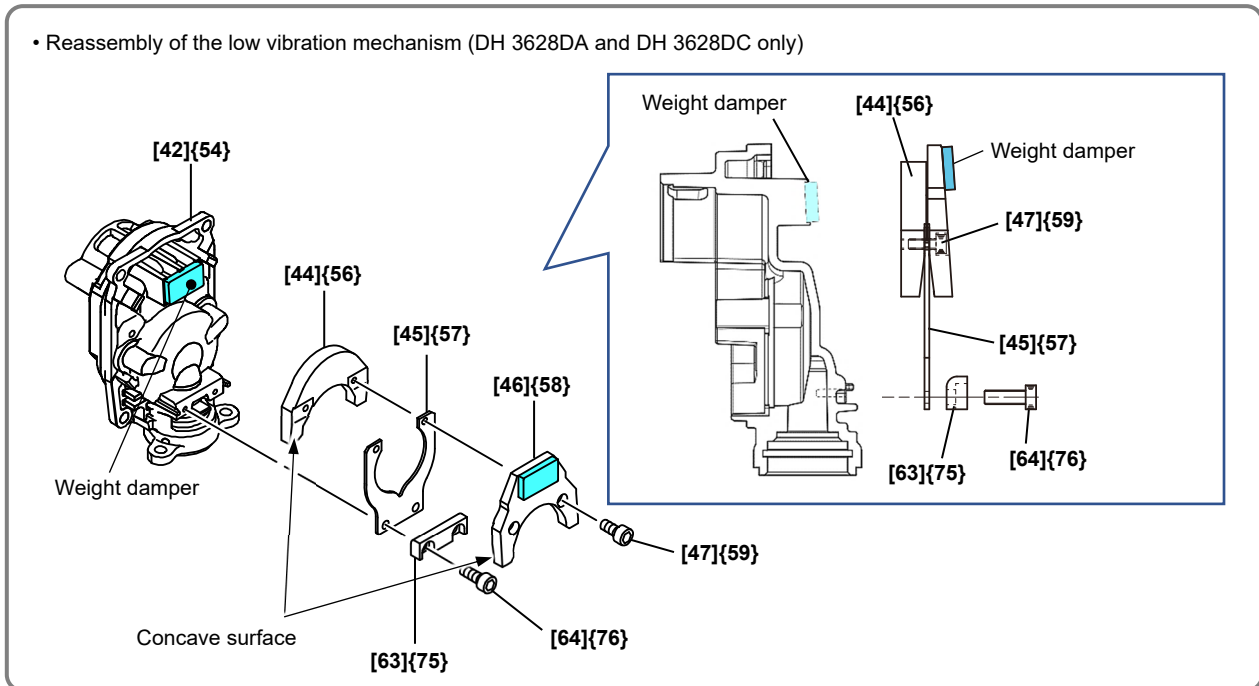


8. Reassembly of the low vibration mechanism (DH 3628DA and DH 3628DC only)

- (1) Degrease the threaded portion of Weight (A) [44]{56}. Secure Weight (B) [46]{58} and Leaf Spring [45]{57} to Weight (A) [44]{56} with the two Seal Lock Hex. Socket Hd. Bolts M3 x 8 [47]{59} facing the concave surfaces as shown in the figure below.

NOTE: Check that the weight damper is adhered to Weight (B) [46]{58}.

- (2) Check that the weight damper is adhered to Inner Cover (A) [42]{54}. Degrease the threaded portion of Inner Cover (A) [42]{54} and secure the Leaf Spring [45]{57} and Spring Holder [63]{75} to Inner Cover (A) [42]{54} with the two Seal Lock Hex. Socket Hd. Bolts M4 x 12 [64]{76} facing Weight (A) [44]{56} to Inner Cover (A) [42]{54} and Weight (B) [46]{58} to Housing (A).(B) Set [72]{84}.

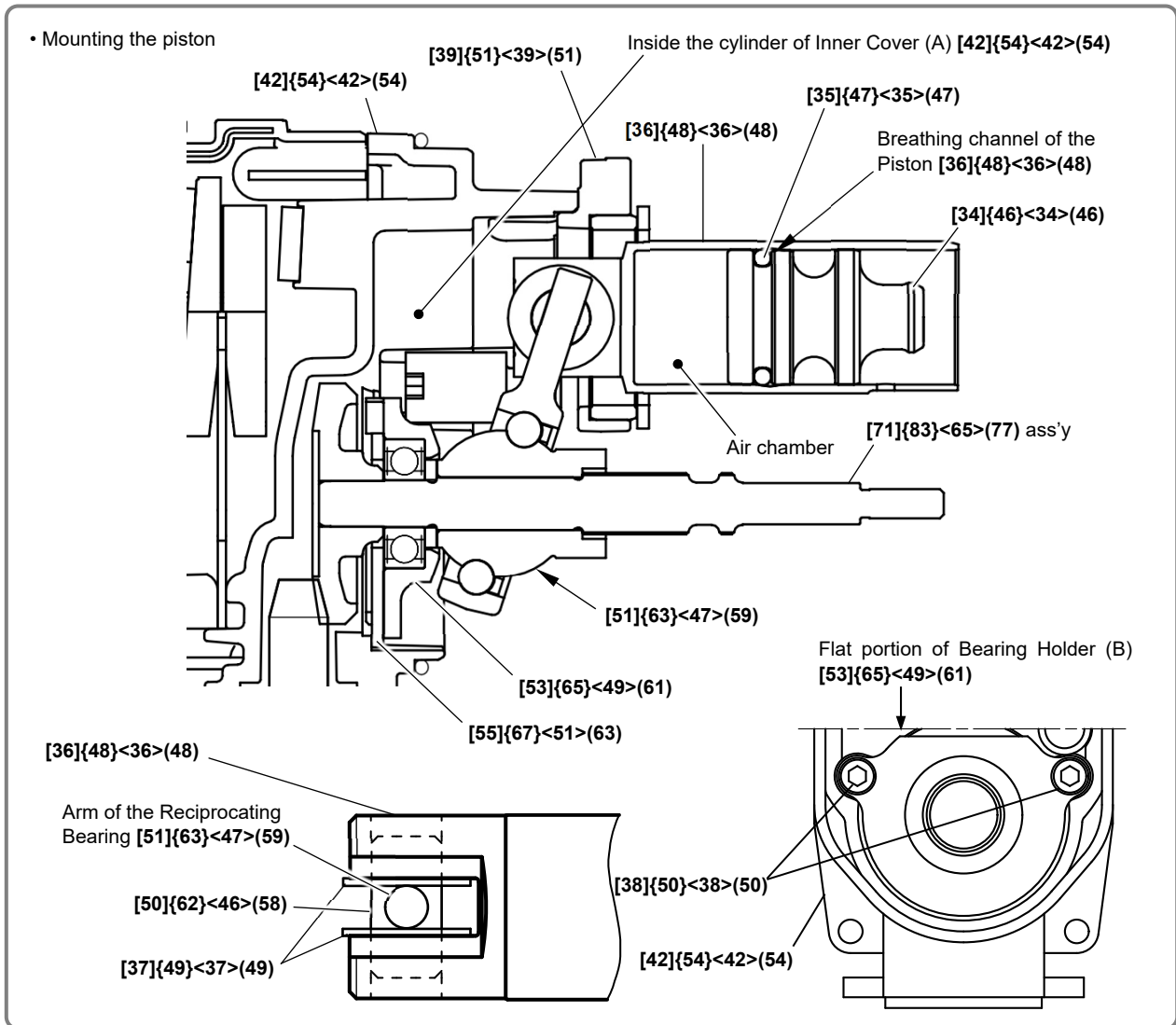


9. Mounting the piston

NOTE: Degrease the M5 screw hole on Inner Cover (A) [42]{54}<42>(54) using the parts cleaner before mounting the piston. Otherwise, the screw may be loosened and it may cause troubles.

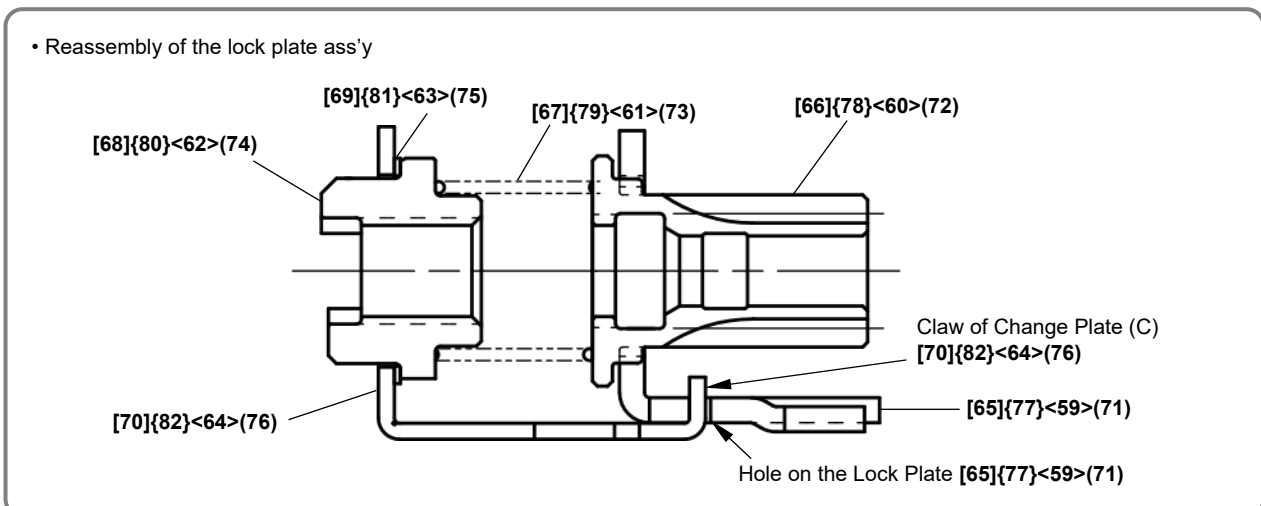
- (1) Apply the specified grease to the inner and outer circumferences of the Piston [36]{48}<36>(48). Also apply grease to the inner and outer circumferences of the Piston Pin [50]{62}<46>(58) and Piston Washer [37]{49}<37>(49).
- (2) Mount the Piston Washer [37]{49}<37>(49) on the Piston [36]{48}<36>(48) and then insert the Piston Pin [50]{62}<46>(58).
- (3) Insert the arm of the Reciprocating Bearing [51]{63}<47>(59) of the Second Shaft [71]{83}<65>(77) ass'y into the Piston Pin [50]{62}<46>(58). After inserting the arm, press Bearing Holder (B) [53]{65}<49>(61) against Inner Cover (A) [42]{54}<42>(54) aligning the holes of Bearing Cover (A) [55]{67}<51>(63) and Bearing Holder (B) [53]{65}<49>(61) with the thread portions of Inner Cover (A) [42]{54}<42>(54) ass'y, then tighten the Seal Lock Hex. Socket Hd. Bolt M5 x 16 [38]{50}<38>(50).
- (4) Fit Inner Cover (B) [39]{51}<39>(51) ass'y in Inner Cover (A) [42]{54}<42>(54) and tighten the Seal Lock Hex. Socket Hd. Bolt M5 x 16 [38]{50}<38>(50).
- (5) Allow the Reciprocating Bearing [51]{63}<47>(59) to make one rotation and check that the Piston [36]{48}<36>(48) makes one reciprocation. Pull the Piston [36]{48}<36>(48) to check that it does not come off.
- (6) Pushing the Striker [34]{46}<34>(46) into the Piston [36]{48}<36>(48) compresses air in the air chamber. The compressed air is released when the O-ring [35]{47}<35>(47) passes over the breathing channel of the Piston [36]{48}<36>(48).

(7) Push in the Striker [34]{46}<34>(46) until the O-ring [35]{47}<35>(47) passes over the breathing channel of the Piston [36]{48}<36>(48). (Listen for the sound of air being released when the O-ring [35]{47}<35>(47) passes over the breathing channel of the Piston [36]{48}<36>(48).)



10. Reassembly of the lock plate ass'y

Put Change Plate (C) [70]{82}<64>(76), Washer [69]{81}<63>(75), Clutch [68]{80}<62>(74), Clutch Spring [67]{79}<61>(73), and Second Pinion [66]{78}<60>(72) together and mount this ass'y to the Lock Plate [65]{77}<59>(71). Fit the claw of Change Plate (C) [70]{82}<64>(76) in the hole on the Lock Plate [65]{77}<59>(71).

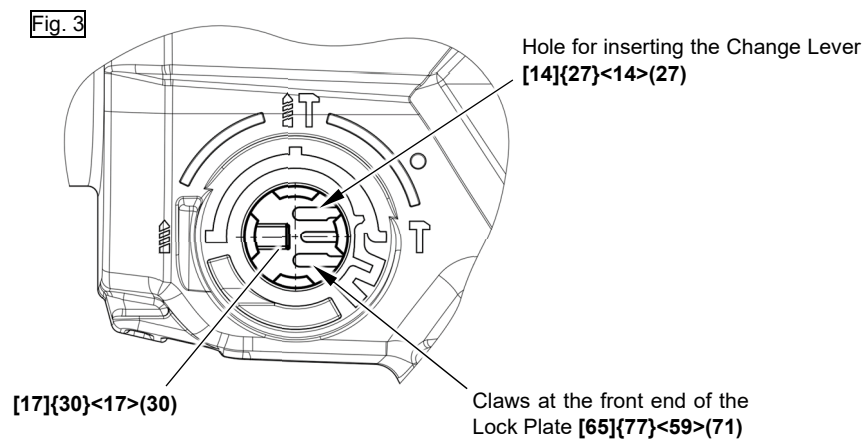
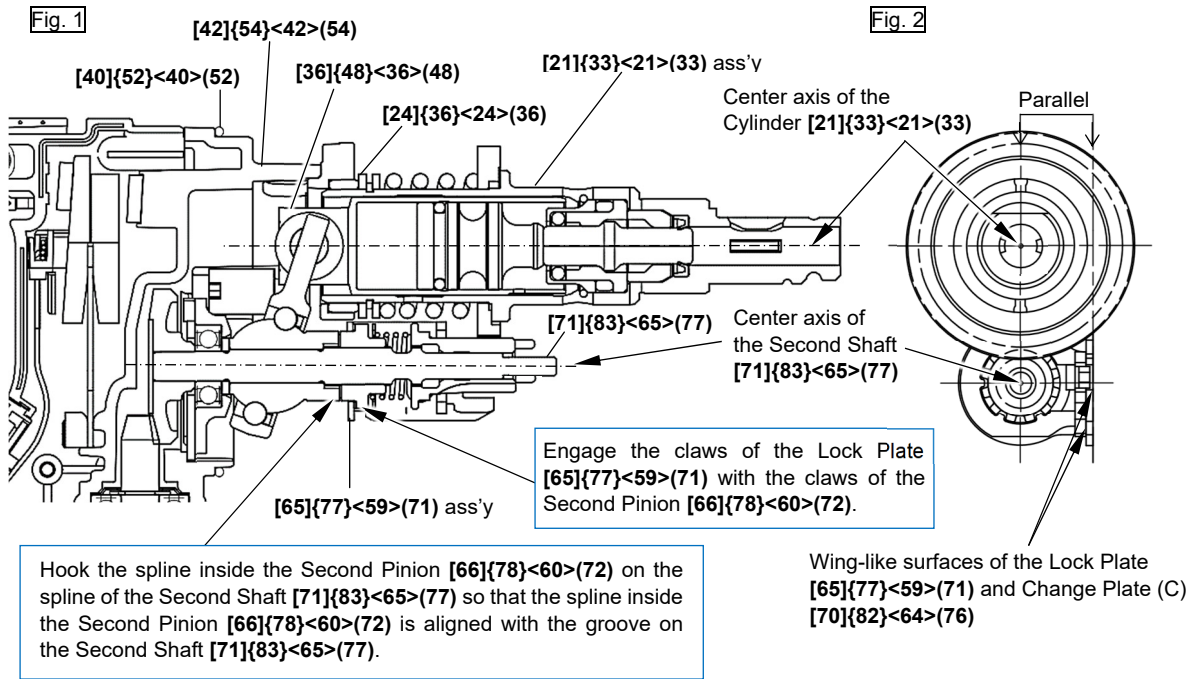


11. Reassembly of the gear cover ass'y

- (1) Mount the O-ring [40]{52}<40>(52) to Inner Cover (A) [42]{54}<42>(54).
- (2) Mount the Lock Plate [65]{77}<59>(71) ass'y to the Second Shaft [71]{83}<65>(77) inserted in Inner Cover (A) [42]{54}<42>(54).
- (3) Mount Washer (A) [24]{36}<24>(36) and Cylinder [21]{33}<21>(33) ass'y to Inner Cover (B) [39]{51}<39>(51) ass'y mounted with the Piston [36]{48}<36>(48).
- (4) Press down the Second Pinion [66]{78}<60>(72) until the spline inside the Second Pinion [66]{78}<60>(72) is aligned with the groove at the rear of the spline of the Second Shaft [71]{83}<65>(77). Hook the spline inside the Second Pinion [66]{78}<60>(72) on the spline of the Second Shaft [71]{83}<65>(77) and secure the Second Pinion [66]{78}<60>(72) as shown in Fig. 1.
- (5) Engage the claws of the Lock Plate [65]{77}<59>(71) with the claws of the Second Pinion [66]{78}<60>(72) so that the center axis of the Lock Plate [65]{77}<59>(71) is parallel with the center axis of the Second Shaft [71]{83}<65>(77) as shown in Fig. 1. Then, secure the Lock Plate [65]{77}<59>(71) ass'y so that the wing-like surfaces of the Lock Plate [65]{77}<59>(71) and Change Plate (C) [70]{82}<64>(76) are parallel with the plane made by the center axis of the Cylinder [21]{33}<21>(33) and the center axis of the Second Shaft [71]{83}<65>(77) as shown in Fig. 2. At this time, push the claw of Change Plate (C) [70]{82}<64>(76) in as far as it will go to bring the wing-like surface of the Lock Plate [65]{77}<59>(71) into contact with the wing-like surface of Change Plate (C) [70]{82}<64>(76).
- (6) Insert the Ball Bearing 6805 [11]{15}<11>(15) into the Gear Cover Ass'y [16]{29}<16>(29) in which the Oil Seal [10]{14}<10>(14) is press-fitted.
- (7) Fill Shaft Holder (B) [19]{32}<19>(32) with the specified grease and insert it into the Ball Bearing 608VV [18]{31}<18>(31) press-fitted in the Gear Cover Ass'y [16]{29}<16>(29). Insert Spring (E) [17]{30}<17>(30) into the hole beside the bearing chamber inside the Gear Cover Ass'y [16]{29}<16>(29).
- (8) Adjust the position of the Gear Cover Ass'y [16]{29}<16>(29) so that the wing-like portion of Change Plate (C) [70]{82}<64>(76) is inserted into the rail portion of the Gear Cover Ass'y [16]{29}<16>(29). Put the Gear Cover Ass'y [16]{29}<16>(29) over until the front end of the Lock Plate [65]{77}<59>(71) can be seen from the insertion hole for the Change Lever [14]{27}<14>(27) (position indicated in Fig. 3).
- (9) Inserting the center claw among the three claws at the front end of the Lock Plate [65]{77}<59>(71) into Spring (E) [17]{30}<17>(30), mount the Gear Cover Ass'y [16]{29}<16>(29) to Housing (A).(B) Set [72]{84}<66>(78).

NOTE: Be careful not to get the O-ring [40]{52}<40>(52) caught in the Gear Cover Ass'y [16]{29}<16>(29).

• Reassembly of the gear cover ass'y (1)



<Reassembly of the gear cover ass'y without disassembling the tool retainer ass'y>

When reassembling the Gear Cover Ass'y [16]{29}<16>(29) with the Cylinder [21]{33}<21>(33) mounted in the Gear Cover Ass'y [16]{29}<16>(29) without disassembling the tool retainer ass'y, follow the steps below.

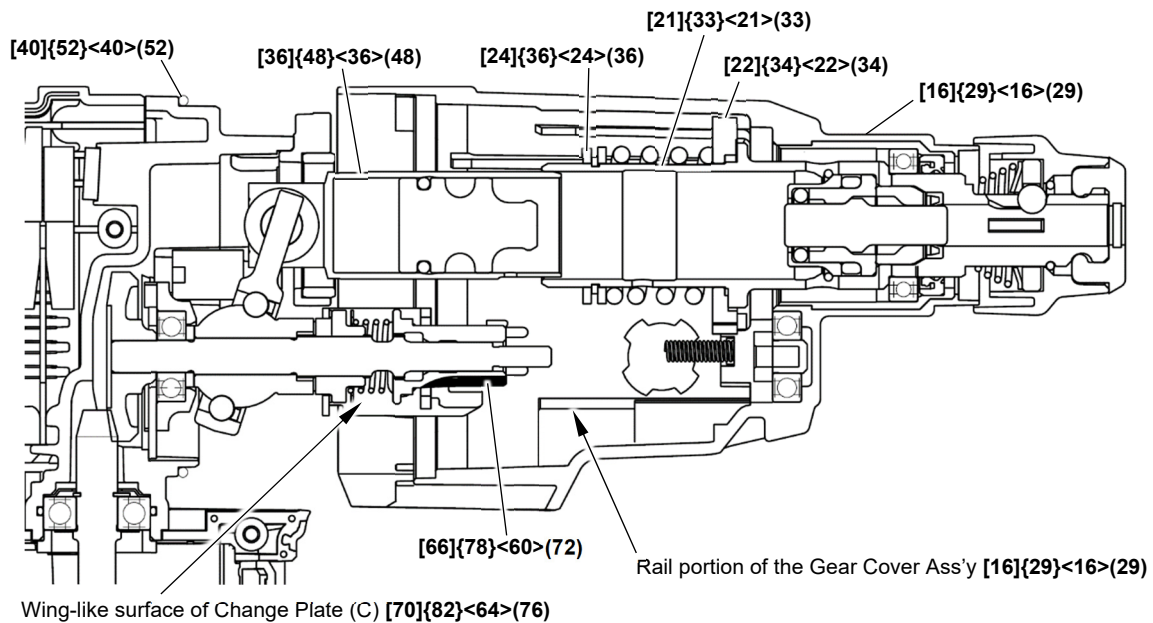
- (1) Move the Piston [36]{48}<36>(48) to the bottom dead point.
- (2) Put the Gear Cover Ass'y [16]{29}<16>(29) over until the front end of the Piston [36]{48}<36>(48) is inserted into the Cylinder [21]{33}<21>(33).

NOTE: Do not forget to mount Washer (A) [24]{36}<24>(36) behind the Retaining Ring for D30 Shaft [25]{37}<25>(37).



- (3) Put the Gear Cover Ass'y [16]{29}<16>(29) over until the wing-like portion of Change Plate (C) [70]{82}<64>(76) is inserted into the rail portion of the Gear Cover Ass'y [16]{29}<16>(29) in the same manner as described in page 16. When the Second Pinion [66]{78}<60>(72) contacts the Second Gear [22]{34}<22>(34), insert the SDS plus bit into the Cylinder [21]{33}<21>(33) and then rotate the Cylinder [21]{33}<21>(33). This action will engage the Second Pinion [66]{78}<60>(72) and the Second Gear [22]{34}<22>(34), and the Gear Cover Ass'y [16]{29}<16>(29) can be mounted to Housing (A).(B) Set [72]{84}<66>(78).

NOTE: Be careful not to get the O-ring [40]{52}<40>(52) caught in the Gear Cover Ass'y [16]{29}<16>(29).

• Reassembly of the gear cover ass'y (2)

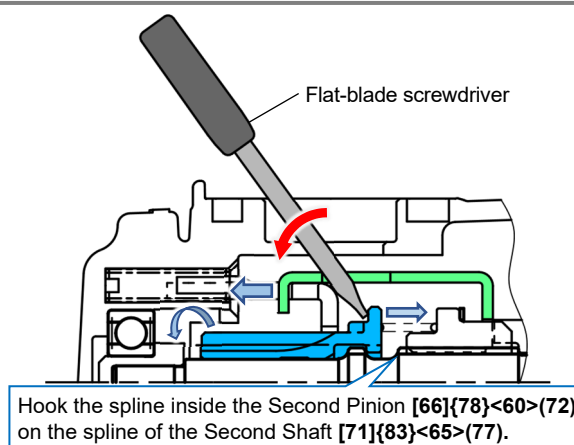
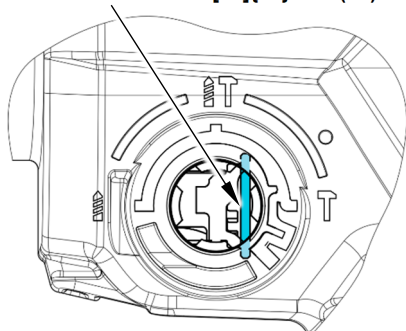


12. Mounting the change lever

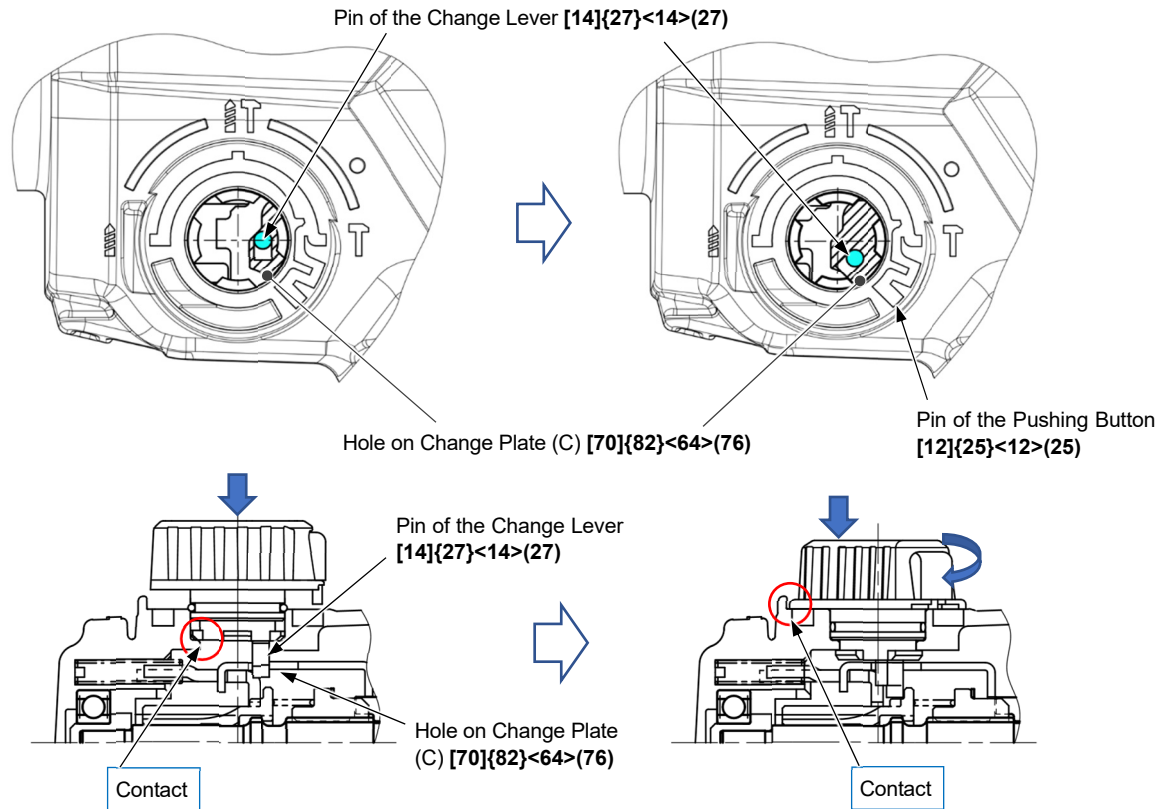
- (1) Check that the flange portion of the Second Pinion [66]{78}<60>(72) is positioned as shown in the figure below.
- (2) When the Second Pinion [66]{78}<60>(72) is positioned near the front end, insert a flat-blade screwdriver into the clearance between Change Plate (C) [70]{82}<64>(76) and the flange of the Second Pinion [66]{78}<60>(72), and raise Change Plate (C) [70]{82}<64>(76) to the front and the Second Pinion [66]{78}<60>(72) to the rear. In this state, turn the Second Pinion [66]{78}<60>(72) or the Cylinder [21]{33}<21>(33) a little. Then, the spline inside the Second Pinion [66]{78}<60>(72) hooks on the spline of the Second Shaft [71]{83}<65>(77), and the Second Pinion [66]{78}<60>(72) is secured as shown in the figure.
- (3) After adjusting the position of the Second Pinion [66]{78}<60>(72), insert the Change Lever [14]{27}<14>(27) mounted with the Pushing Spring [13]{26}<13>(26), Pushing Button [12]{25}<12>(25), and O-ring (S-18) [15]{28}<15>(28) into the Gear Cover Ass'y [16]{29}<16>(29) until the Change Lever [14]{27}<14>(27) pin is inserted into the hole of Change Plate (C) [70]{82}<64>(76) with the Change Lever [14]{27}<14>(27) set to "Hammering only" ( mark) position. While pushing the Pushing Button [12]{25}<12>(25) into the hole on the Change Lever [14]{27}<14>(27), turn the Change Lever [14]{27}<14>(27) clockwise until the Pushing Button [12]{25}<12>(25) pin is positioned as shown in the figure below. Then, push the Change Lever [14]{27}<14>(27) in as far as it will go.
- (4) Operate the Change Lever [14]{27}<14>(27) by reversing the disassembly procedure to set to the "Rotation + Hammering" ( mark) position.

• Adjustment of the second pinion position

Flange of the Second Pinion [66]{78}<60>(72)



- Mounting the change lever

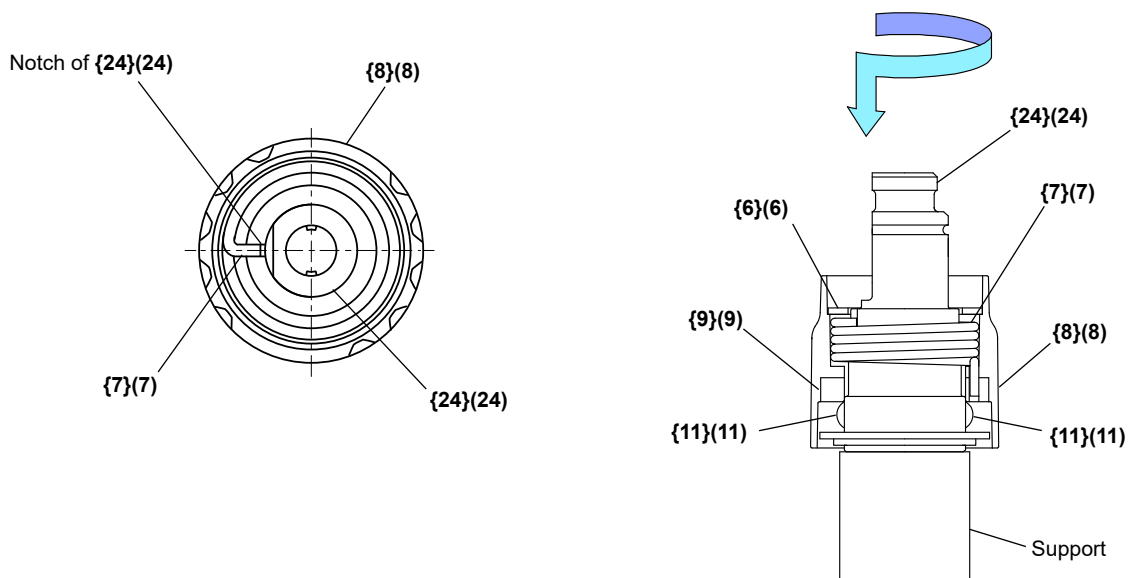


13. Mounting the lock grip (DH 3628DC and DH 1826DC only)

- Mount the Spring {7}(7) and the Lock Ring {9}(9) to the Lock Grip {8}(8). Mount the Steel Balls D7.0 {11}(11) to Bit Holder (A) {24}(24). Insert Bit Holder (A) {24}(24) into the Lock Grip {8}(8) aligning the Spring {7}(7) with the notch of Bit Holder (A) {24}(24).
- Place Bit Holder (A) {24}(24) on a suitably-sized support (Cylinder {33}(33) etc.) and mount Washer (B) {6}(6). Push in the Lock Grip {8}(8) turning in the arrow direction indicated on the Lock Grip {8}(8) as shown in the figure below and fix it with the Retaining Ring for D25 Shaft {5}(5).







NOTE: If it is impossible to mount Washer (B) {6}(6) to the fixing position of the Retaining Ring for D25 Shaft {5}(5), remove Washer (B) {6}(6) and check that the Spring {7}(7) is inserted to the proper position.

- Mounting the lock grip (DH 3628DC and DH 1826DC only)



14. Operation check

The components may be damaged if the motor runs with the tool main body improperly reassembled. Check the following to ensure that the tool main body is properly reassembled.

- (1) After reassembly, turn the Change Lever [14]{27}<14>(27) from "Rotation + Hammering" ( mark) to "Rotation only" ( mark) and "Hammering only" ( mark) and check that it is switched normally.
- (2) Set the Change Lever [14]{27}<14>(27) to the "Rotation + Hammering" ( mark) position. Insert the SDS plus bit into the Cylinder [21]<21> or Bit Holder (A) Ass'y {16}(16) and let the Cylinder [21]{33}<21>(33) make one rotation. Check that Rotor (A) [73]{85}<67>(79) rotates.
- (3) Set the Change Lever [14]{27}<14>(27) to the "Rotation only" ( mark) position and check that the rotor ass'y rotates in this state.
- (4) Set the Change Lever [14]{27}<14>(27) to the "Hammering only" ( mark) position and check that the Cylinder [21]{33}<21>(33) does not rotate in this state.
- (5) Check that the battery terminal moves smoothly between handles (A) and (B).

<Reassembly of the dust extractor system>

1. Mounting the adjustment rail

(1) Insert Spring (A) [111]{121}<101>(111) into Button (B) [112]{122}<102>(112). Pass it through the mounting hole on dust housing (A) and fit it in the groove on dust housing (A). Mount the Stopper [113]{123}<103>(113).

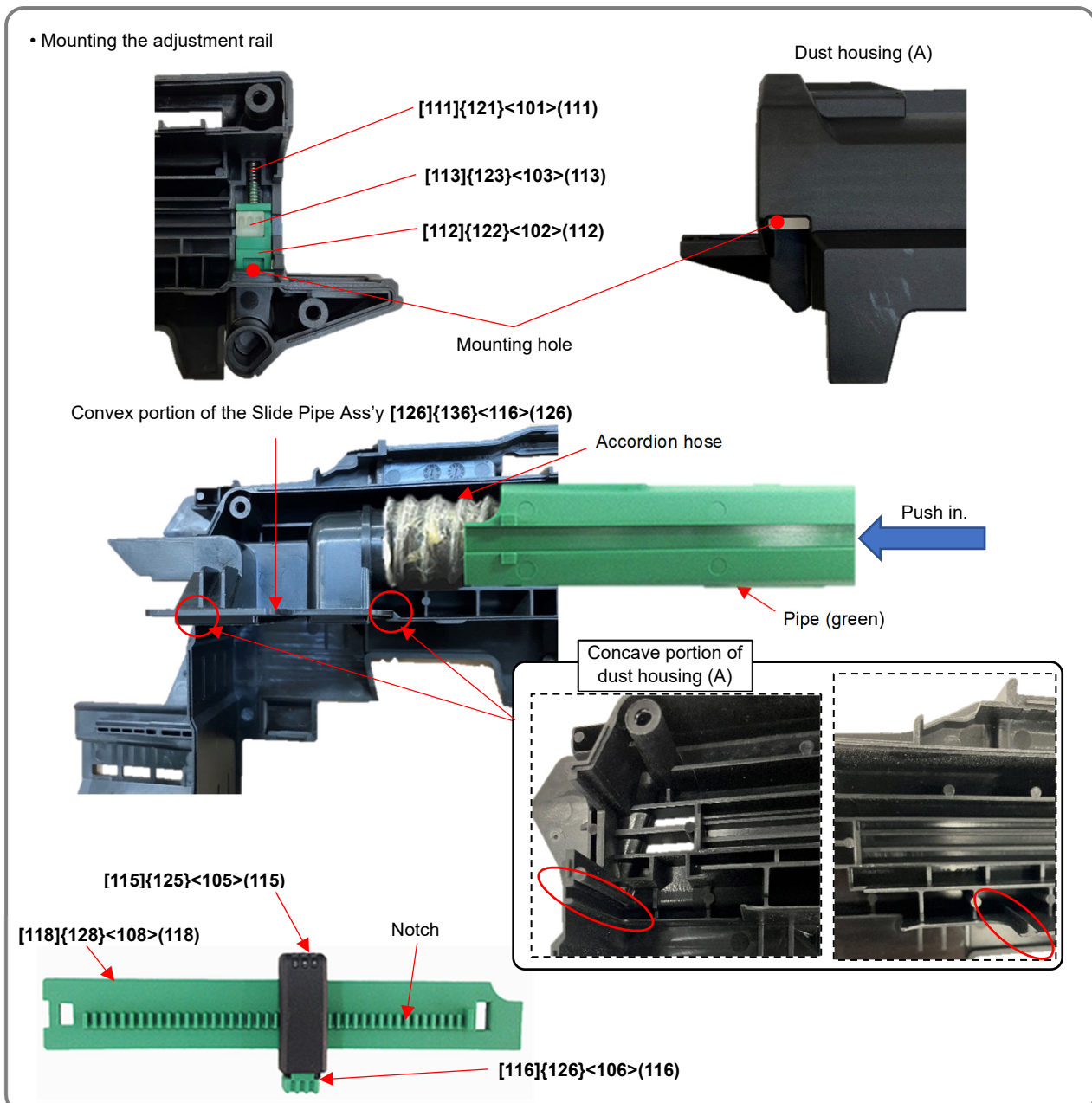
NOTE: Insert Spring (A) [111]{121}<101>(111) into Button (B) [112]{122}<102>(112) as far as it will go without bending.

(2) Insert Spring (A) [111]{121}<101>(111) and Button (A) Set [116]{126}<106>(116) into the Adjuster [115]{125}<105>(115). Mount the Adjustment Rail [118]{128}<108>(118) to the Adjuster [115]{125}<105>(115) while pressing Button (A) Set [116]{126}<106>(116). Insert the Adjustment Rail [118]{128}<108>(118) into the nozzle base of the Slide Pipe Ass'y [126]{136}<116>(126).

(3) Fit the convex portion of the Slide Pipe Ass'y [126]{136}<116>(126) in the concave portion of dust housing (A).

(4) Mount the Slide Pipe Ass'y [126]{136}<116>(126) to dust housing (A) while shrinking the accordion hose and pressing the pipe (green) in the arrow direction shown in the figure below.

NOTE: Check that the Stopper [113]{123}<103>(113) fits in the notch of the Adjustment Rail [118]{128}<108>(118) securely.



2. Operation check

The components may be damaged if the motor runs with the dust extractor system improperly reassembled. Check the following to ensure that the dust extractor system is properly reassembled.

(1) Checking the slide pipe ass'y

Check whether the Slide Pipe Ass'y [126]{136}<116>(126) can smoothly slide in and out of Dust Housing (A).(B) Set [129]{139}<119>(129).

(2) Checking the nozzle adjustment button

Press Button (B) [112]{122}<102>(112) with the nozzle put in the fully extended position. Check whether the position of the Slide Pipe Ass'y [126]{136}<116>(126) can be adjusted.

(3) Checking the depth adjustment button

Check whether the position of the Adjuster [115]{125}<105>(115) can be adjusted on the Adjustment Rail [118]{128}<108>(118).

(4) Checking for attaching and detaching the dust extractor system




Check whether the dust extractor system can be attached to the tool main body securely by aligning the convex portion of the dust extractor system with the groove on the tool main body and pressing each other. Check whether the dust extractor system can be detached from the tool main body by pulling the dust extractor system while pressing Latch (HG) [114]{124}<104>(114).

Checking after reassembly

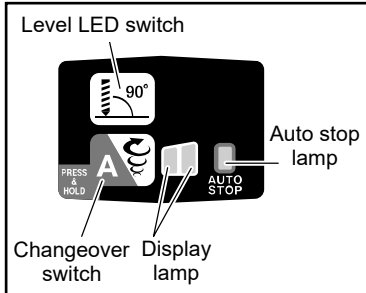
After completing reassembly, install the battery in the cordless rotary hammer and check the following.

- (1) Check that the LED light turns on while pulling the Speed Control Switch [76]{88}<76>(88) and automatically turns off in about ten seconds when you release your finger from the Speed Control Switch [76]{88}<76>(88).
- (2) Insert the SDS-plus bit into the Cylinder [21]{33}<21>(33) and pull the Speed Control Switch [76]{88}<76>(88) to check that the SDS-plus bit rotates in the direction as indicated on Pushing Button (B) [77]{89}<75>(87). When you press the "R" side of Pushing Button (B) [77]{89}<75>(87), the SDS-plus bit rotates clockwise as viewed from the rear of the tool body.
- (3) Check that the rotation speed is changed between the Low mode and Normal mode by pressing the changeover switch. Also check that the auto stop function is selected by pressing the changeover switch.
- (4) Insert the SDS-plus bit into the Cylinder [21]{33}<21>(33) and hold the tip of the SDS-plus bit with a vise. Holding the handle and the side handle securely, pull the Speed Control Switch [76]{88}<76>(88) to check that the slip clutch operates.

NOTE: Sometimes the slip clutch may not be activated but the RFC feature may be activated first. In such a case, repeat the above procedure until the slip clutch activates.

- (5) Check that the Change Lever [14]{27}<14>(27) turns smoothly and the operating mode properly switches between "Rotation only" ( mark), "Rotation + Hammering" ( mark), and "Hammering only" ( mark) according to the operation of the Change Lever [14]{27}<14>(27).
- (6) Press the level LED switch to check for the LED level function. Check that the level LED lights in green when the tool is horizontal or vertical. Check that the level LED changes from lighting in green to blinking in green by tilting the tool body gradually. Check that the level LED changes from blinking in green to lighting in red by tilting the tool body further. Tilt angles are shown in the following figure as a rough indication.

- Display panel and the level LED

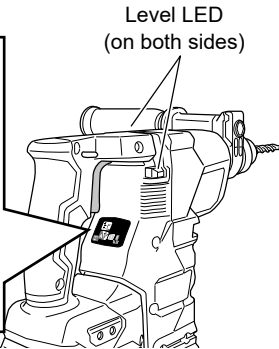


Level LED switch

Changeover switch

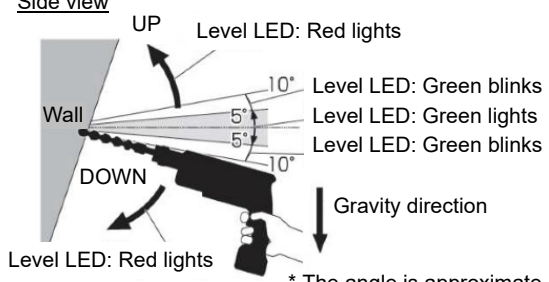
Display lamp

Auto stop lamp



Level LED (on both sides)
- Tilt angles and indication of the level LED (DH 3628DA and DH 3628DC)

Side view



Level LED: Red lights

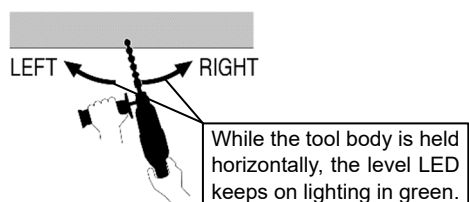
Level LED: Green blinks

Level LED: Green lights



Level LED: Green blinks

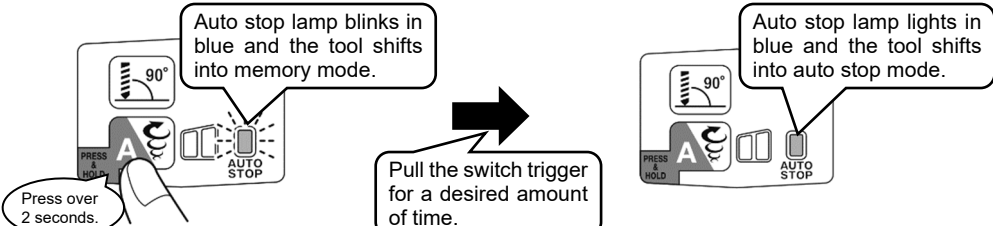
* The angle is approximate.

Top view



While the tool body is held horizontally, the level LED keeps on lighting in green.
- Changing the speed mode by pressing the changeover switch

Display lamp	Low mode	Normal mode
		
No-load speed	700 min ⁻¹	950 min ⁻¹
Full-load impact rate	3,170 min ⁻¹	4,300 min ⁻¹
- Auto stop function by pressing the changeover switch



Press over 2 seconds.

Auto stop lamp blinks in blue and the tool shifts into memory mode.

Pull the switch trigger for a desired amount of time.

Auto stop lamp lights in blue and the tool shifts into auto stop mode.

Tightening torque

- Main body of the cordless rotary hammer

Item No.	Part name	Tightening torque	
		N•m	kgf•cm
[8]{12}<8>(12)	Tapping Screw (W/Flange) D5 (Black)	3.0 ± 0.5	30 ± 5
[38]{50}<38>(50)	Seal Lock Hex. Socket Hd. Bolt M5 x 16	5.9 to 7.4	60 to 75
[43]{55}<43>(55)	Seal Lock Hex. Socket Hd. Bolt M5 x 10	5.9 to 7.4	60 to 75
[47]{59}	Seal Lock Hex. Socket Hd. Bolt M3 x 8	2.5 ± 0.5	25 ± 5
[64]{76}	Seal Lock Hex. Socket Hd. Bolt M4 x 12	3.4 ± 0.5	35 ± 5
[78]{90}<70>(82)	Tapping Screw (W/Flange) D4 x 40 (Black)	2.0 ± 0.5	20 ± 5
[82]{94}<74>(86)	Tapping Screw (W/Flange) D4 x 20 (Black)	2.0 ± 0.5	20 ± 5

- Dust extractor system

Item No.	Part name	Tightening torque	
		N•m	kgf•cm
[124]{134}<114>(124)	Tapping Screw (W/Flange) D4 x 16 (Black)	2.0 ± 0.5	20 ± 5
[125]{135}<115>(125)	Tapping Screw (W/Flange) D4 x 40 (Black)	2.0 ± 0.5	20 ± 5
[119]{129}<109>(119)	Tapping Screw D2.6	0.5 ± 0.1	5 ± 1

No-load current

The no-load current should be as follows after no-load operation for 5 minutes in "Rotation + Hammering" mode.

- DH 1826DA and DH 1826DC: 12.6 ± 3 A (DC 19.8 V — equivalent to the voltage of a fully charged battery)
- DH 3628DA and DH 3628DC: 6.4 ± 1.5 A (DC 39.6 V — equivalent to the voltage of a fully charged battery)

Lubrication points and types of lubricant

Apply grease for rotary hammer to the following portions.

- Periphery of the Second Hammer [28]{40}<28>(40) (Fig. 1), O-ring (C) [31]{43}<31>(43), and Damper (A) [30]{42}<30>(42)
- Oil Seal (A) [26]{38}<26>(38) lip in the Cylinder [21]{33}<21>(33)
- Clutch claws of the Second Gear [22]{34}<22>(34) and Cylinder [21]{33}<21>(33) (Fig. 2)
- Inner circumference of the Cylinder [21]{33}<21>(33) (sliding portion of the Piston [36]{48}<36>(48)) (Fig. 3)
- Washer (A) [24]{36}<24>(36) and tooth plane of the Second Gear [22]{34}<22>(34) (Fig. 3)
- Bore surface and arm of the Reciprocating Bearing [51]{63}<47>(59) (Fig. 4)
- Reciprocating Bearing [51]{63}<47>(59) rotating shaft, Second Pinion [66]{78}<60>(72) rotating shaft, and spline (Fig. 5)
- Clutch [68]{80}<62>(74), Washer [69]{81}<63>(75), and Change Plate (C) [70]{82}<64>(76) contact portion (Fig. 6)
- Metal inner circumference of Inner Cover (B) [39]{51}<39>(51)
- Inner and outer surfaces of the Piston [36]{48}<36>(48), inner and outer surfaces of the Piston Pin [50]{62}<46>(58), and Piston Washer [37]{49}<37>(49) (Fig. 7)
- Periphery of the Striker [34]{46}<34>(46) and O-ring [35]{47}<35>(47) for the Striker [34]{46}<34>(46) (Fig. 8)
- Oil Seal [10]{14}<10>(14) lip in the Gear Cover Ass'y [16]{29}<16>(29), ball portion of the Ball Bearing 6805 [11]{15}<11>(15), and Spring (E) [17]{30}<17>(30) (Fig. 12)
- Inner circumference of the 20 mm dia. hole of the Gear Cover Ass'y [16]{29}<16>(29) and the O-ring (S-18) [15]{28}<15>(28) for the Change Lever [14]{27}<14>(27)
- Steel Ball D7.0 [20]{11}<20>(11)

Put specified amount of grease for rotary hammer in the following portions.

- Ball portion of the Reciprocating Bearing [51]{63}<47>(59) (Fig. 4) 3 g
- Inside the cylinder of Inner Cover (A) [42]{54}<42>(54) (Fig. 11) 14 g
- Hollow on abutted surface for the Ball Bearing 608VV [18]{31}<18>(31) of the Gear Cover Ass'y [16]{29}<16>(29) (Fig. 12) 0.3 g
- Inner circumference of Shaft Holder (B) [19]{32}<19>(32) (Fig. 9)
- Inside of the Gear Cover Ass'y [16]{29}<16>(29) (Fig. 13) 38 g

NOTE: Be careful not to let grease run into the Cylinder [21]{33}<21>(33).

Apply grease SEP-3A (Code No. 930035 (100 g) or 930038 (2.5 kg)) to the following portions.

- Tooth plane of the Bevel Gear [56]{68}<52>(64) (Fig. 10) 2 g
- Pinion of Rotor (A) [73]{85}<67>(79) and the Bevel Gear [56]{68}<52>(64) mounting portion of Inner Cover (A) [42]{54}<42>(54) (Fig. 11) 3 g

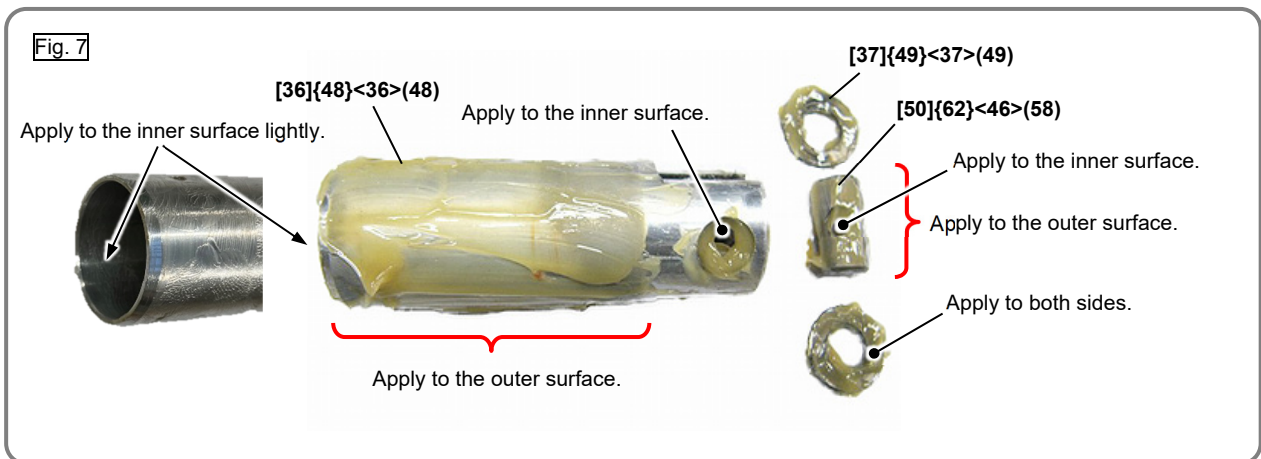
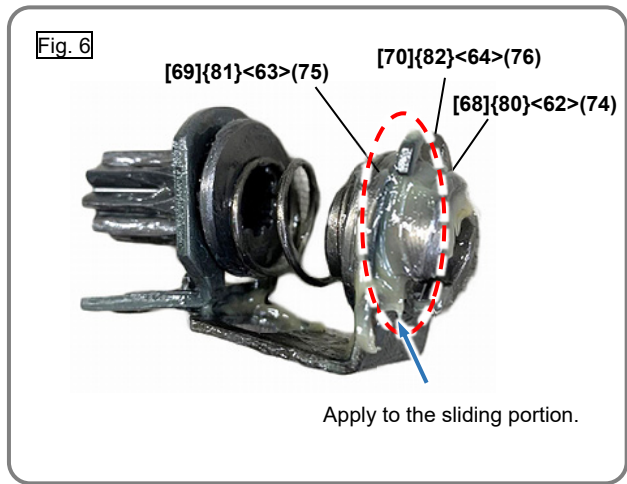
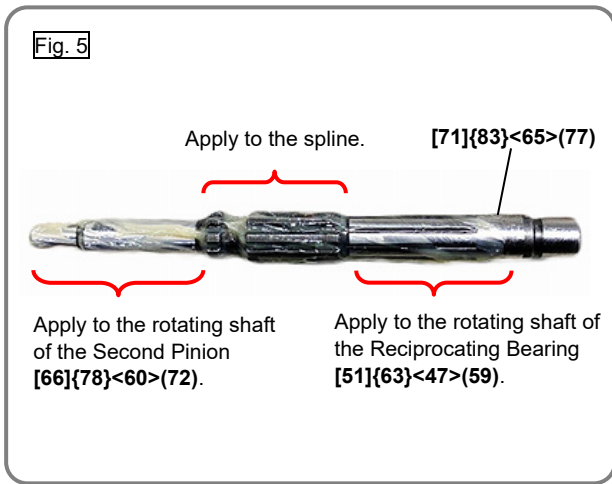
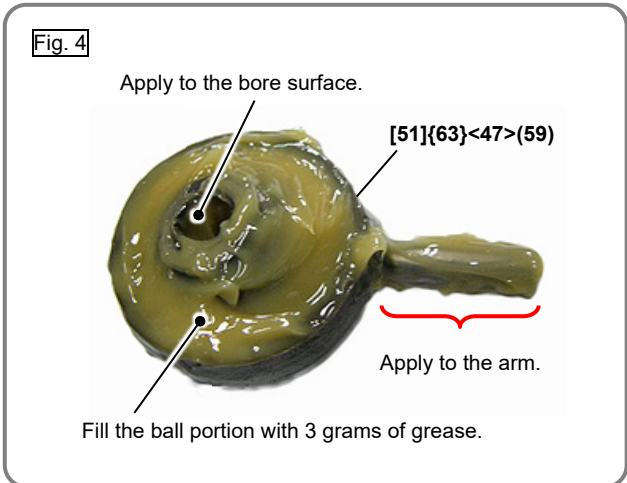
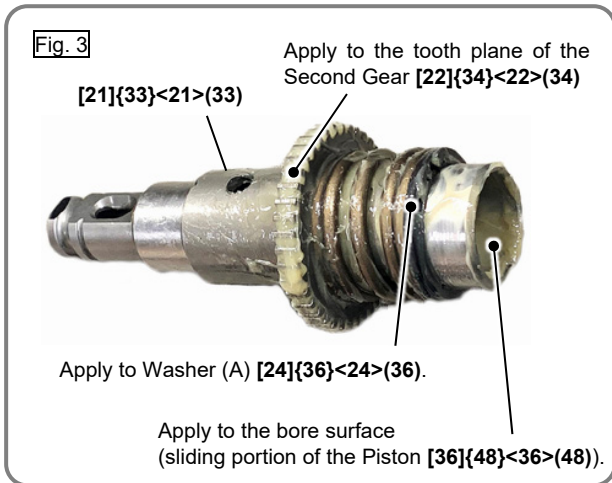
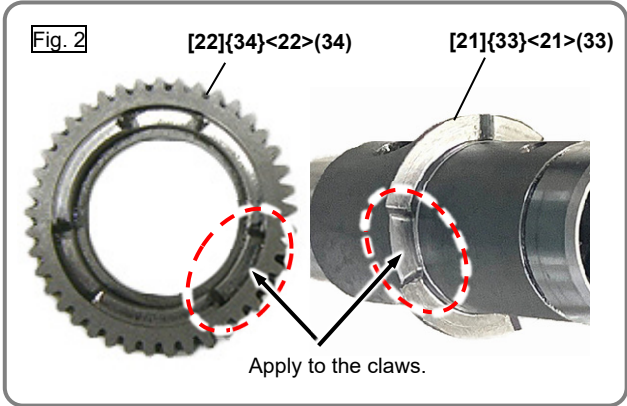
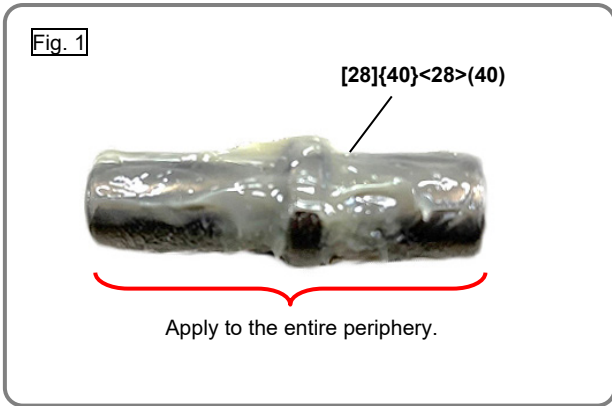
• Grease for rotary hammer

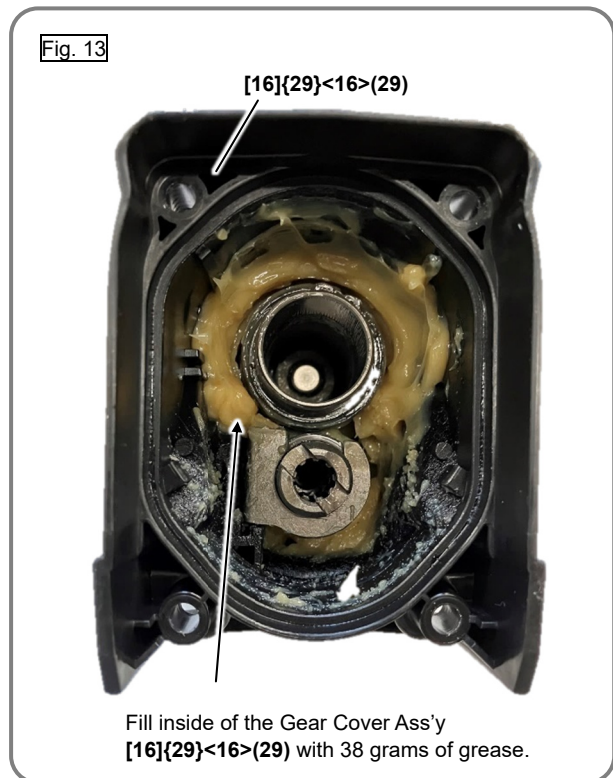
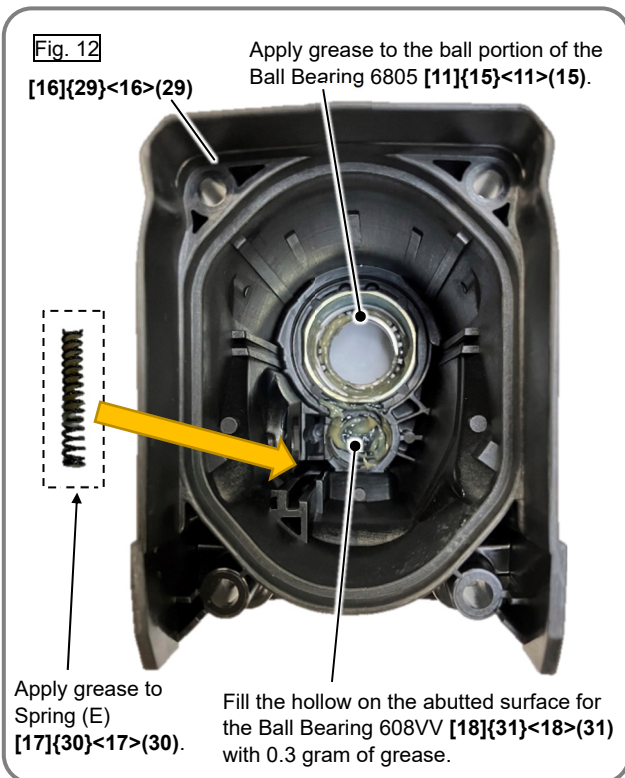
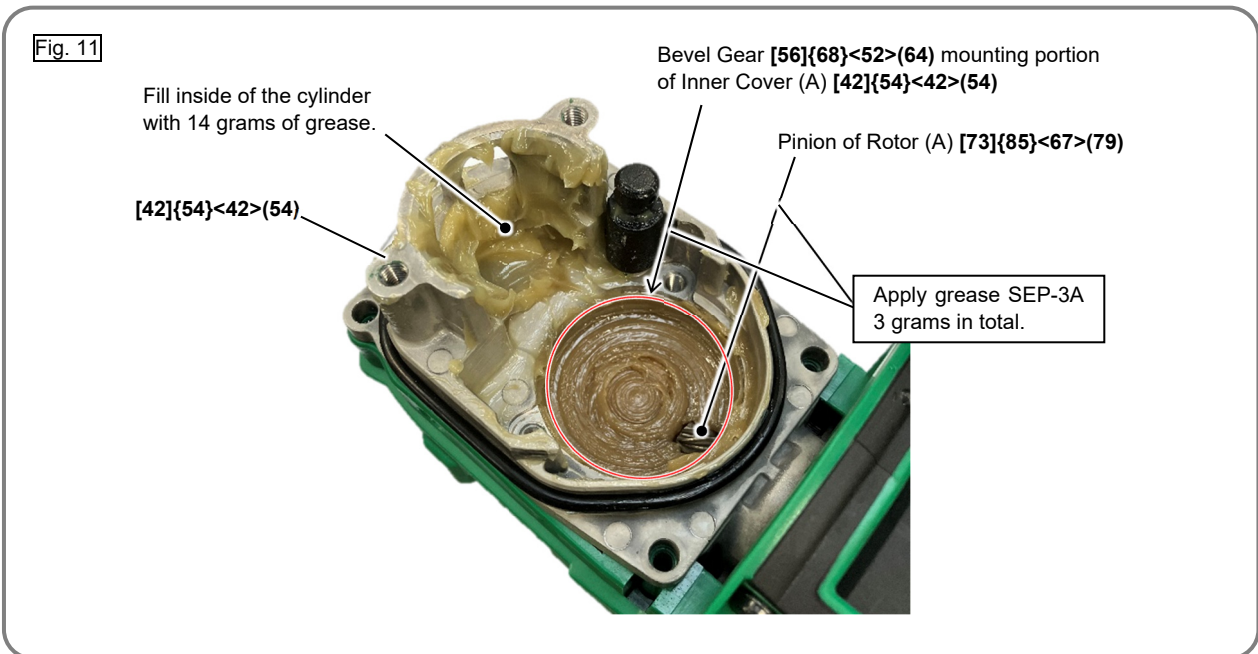
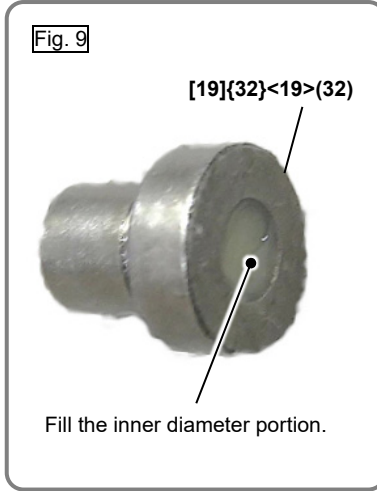
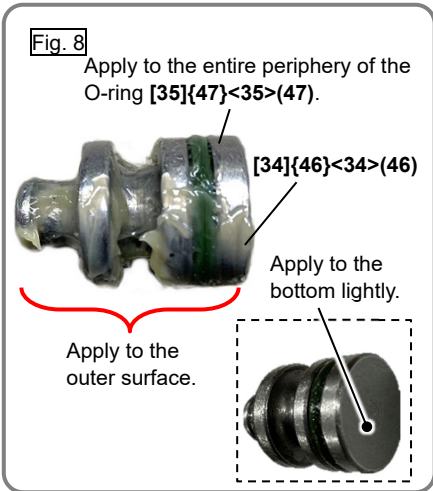


Net weight	Code No.
500 g	335781
60 g	335782

CAUTION: The viscosity and consistency of this grease are optimized for our rotary hammers in order to prolong the service life. Therefore, applying other grease to the Models DH 3628DA, DH 3628DC, DH 1826DA, and DH 1826DC may significantly shorten the service life.

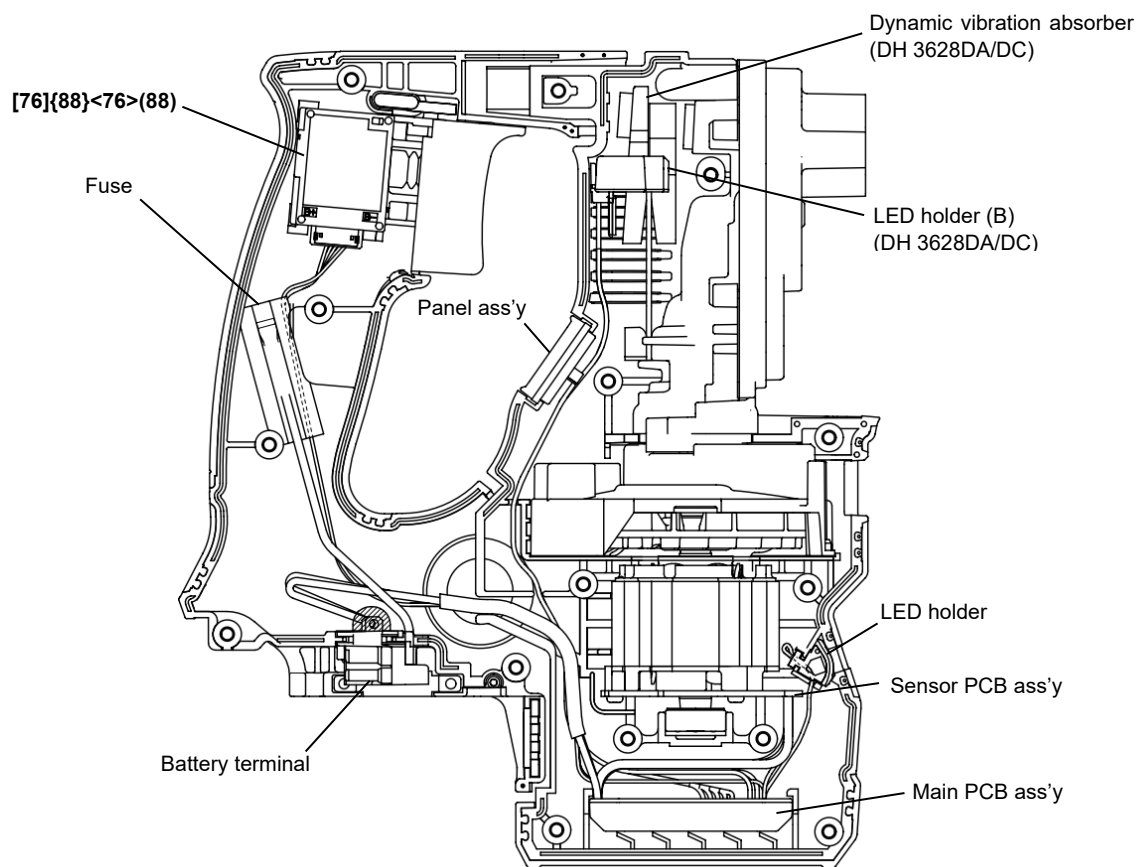
Apply or fill with grease for rotary hammer unless otherwise specified.



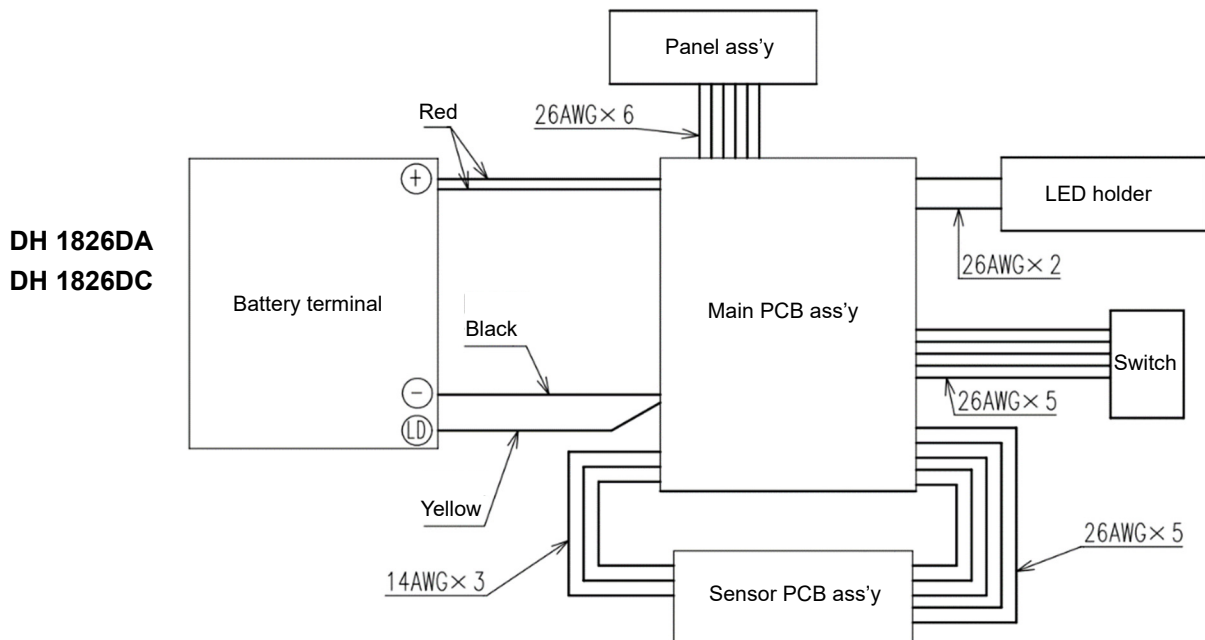
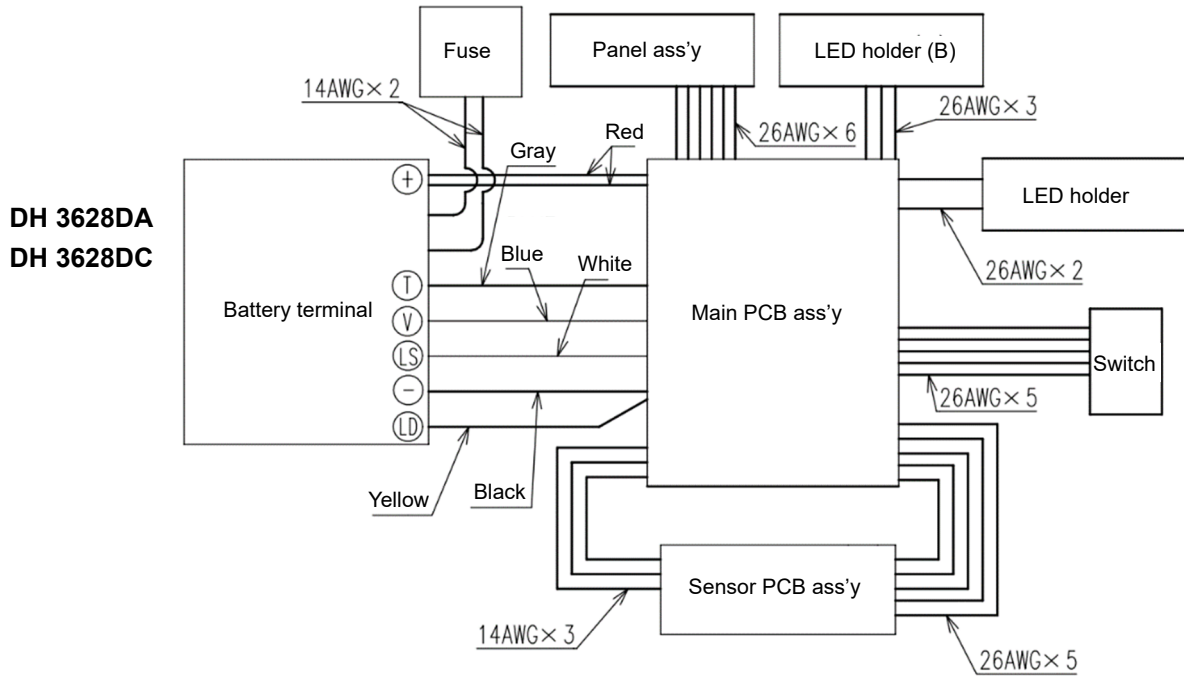


Wiring diagram

• Wiring diagram



• Connecting diagram



2. Precautions on disassembly and reassembly of the charger

Please refer to the service manuals of the charger Models UC 18YSL3 and UC 18YFSL for precautions on disassembly and reassembly of the charger.