

# ***EQ Series Electric Chain Hoist (125kg to 1t)***

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# **Disassembly and Reassembly Manual**

## **Safety precaution**

This Disassembly and Reassembly Manual includes contents to prevent injury to any person performing disassembly and reassembly, users, and other persons and damage to property, and to disassemble/reassemble the electric chain hoist safely and correctly.

Before performing disassembly/reassembly, be sure to read and follow this manual as well as the EQ Series Electric Chain Hoist Owner's Manual (separate document) since its contents are also important for disassembly/reassembly.

Disassembly/reassembly of the electric chain hoist is required operations for regular inspection and repair. Carry out disassembly/reassembly properly in accordance with these manuals.

### **Persons performing disassembly/reassembly**

Disassembly/reassembly shall be performed by a competent person (a person duly authorized by the company as having expertise on the structure and device of the electric chain hoist) or consult KITO.

# Safety Precaution

## Disassembly and reassembly (general)

### DANGER



Prohibited

- **Only competent persons must disassemble/reassemble the electric chain hoist.**

Disassembly/reassembly by anyone other than competent persons may result in death or severe injury.



Prohibited

- **Do not use unauthorized parts for EQ series electric chain hoist.**

Even if the part is an authorized part, it may not be used for a different model.

Use parts correctly in accordance with this manual.

Failure to follow this instruction may result in death or severe injury.



Prohibited

- **Do not disassemble/reassemble the electric chain hoist subject to a load.**

When disassembling/reassembling an electric chain hoist, place it on a floor and perform them on the workbench.

Failure to follow this instruction may result in death or severe injury.



Prohibited

- **Do not perform disassembly/reassembly during conduction.**

Failure to follow this instruction may result in death or severe injury due to an electric shock or unexpected operation.



Prohibited

- **Do not adjust or disassemble the friction clutch.**

Failure to follow this instruction may result in death or severe injury.

If adjustment and disassembly are required, contact KITO.



Prohibited

- **Do not use gear oil or grease in areas near a fire or spark.**

Failure to follow this instruction may result in fire or severe injury arising from ignition.



Prohibited

- **Do not cut, extend, or weld the load chain.**

Failure to follow this instruction may result in death or severe injury.



Mandatory

- **Carry out the installation or removal work of the electric chain hoist after securing the stable foothold.**

Failure to follow this instruction may result in death or severe injury due to falling or dropping.



Mandatory

- **Carry out the installation or removal work of the electric chain hoist after shutting down the power distribution panel.**

Failure to follow this instruction may result in death or severe injury due to an electric shock.



Mandatory

- **When reassembly is complete, perform a function check (preoperational check) to make sure it operates properly.**

Failure to follow this instruction may result in death or severe injury.

For details, refer to 'Periodic Inspection' in the separated Owner's Manual.



Mandatory

- **Tighten the bolts and nuts with the specified tightening torque.**

Failure to follow this instruction may result in death or severe injury.

## ⚠ CAUTION



Mandatory

- **When reassembling, follow the instructions below.**
  - **Before reassembly, remove dust and oil on the part to be reused.**
  - **Insert snap rings completely in the groove.**
  - **Assemble the load chain without torsion.**

Failure to follow these instructions may cause bodily injury or loss of property arising from damaged product or dropped parts.



Mandatory

- **When reassembling, replace the following parts with new ones.**
  - **Gear oil (type and required amount of oil vary depending on the specification and main body size. Refer to page 24.)**
  - **Packing**
  - **Grease**
  - **Oil seal**
  - **Snap ring**
  - **O ring**
  - **Liquid gasket**

Failure to follow these instructions may cause bodily injury or loss of property.

## ■ Before disassembly and reassembly

## ⚠ DANGER



Mandatory

- **Only competent persons with expertise and experience must disassemble/reassemble the electric chain hoist. Alternately, contact the nearest distributor or KITO. Disassembling/reassembling improperly causes death or severe injury.**
  - **Perform disassembly and reassembly in correct procedures as described in the manual.**
  - **Do not extend the load chain.**
  - **Before reassembling the parts such as gear, clean and remove oil and dust on them. Especially when a plastic hammer is used, clean them thoroughly so that no chip of the hammer remains inside.**
  - **Prepare anti-loosening (screw lock) for bolts. Apply it to the specified locations.**
  - **Use only authorized parts for replacement.**

Failure to follow these instructions may result in death or severe injury.

## NOTE



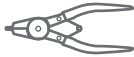



The disassembly and reassembly procedures are described based on the representative model. Note that components may be slightly different for different capacities. The specifications may be changed without prior notice and may be different from the actual products.

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# Disassembly and Reassembly Tools

For disassembly and reassembly, prepare the following tools.

No.	Tool name	Application	Icon
1	Wrench 13mm	Bolts and nuts	
2	Hexagon wrench 4mm/5mm/6mm/8mm	Socket bolts	
3	Snap ring pliers S (Large) (Small)	Snap rings (shaft)	
4	Snap ring pliers R	Snap rings (hole)	
5	Socket wrench 10mm	Bottom yokes	
6	Adjustable wrench	Bolts and nuts	
7	Plastic hammer		
8	Screwdrivers (+) (-)	Screws	
9	Puller	Bearings and fan	
10	Vices (2 pcs.)	Pull rotor	
11	Torque wrench/nut runner		
12	Plier	Set pin	

## ● Use the following types of grease.

- JIS K2220 Grease type 1 No. 2 for Roller shaft bearing
- Molybdenum disulfide lubricant Molytherm No. 2 (Specified brand: SUMICO LUBRICANT)

## ● Use the following liquid gasket.

- Liquid gasket TB1121 (made by ThreeBond)

## ● Use the following screw lock.

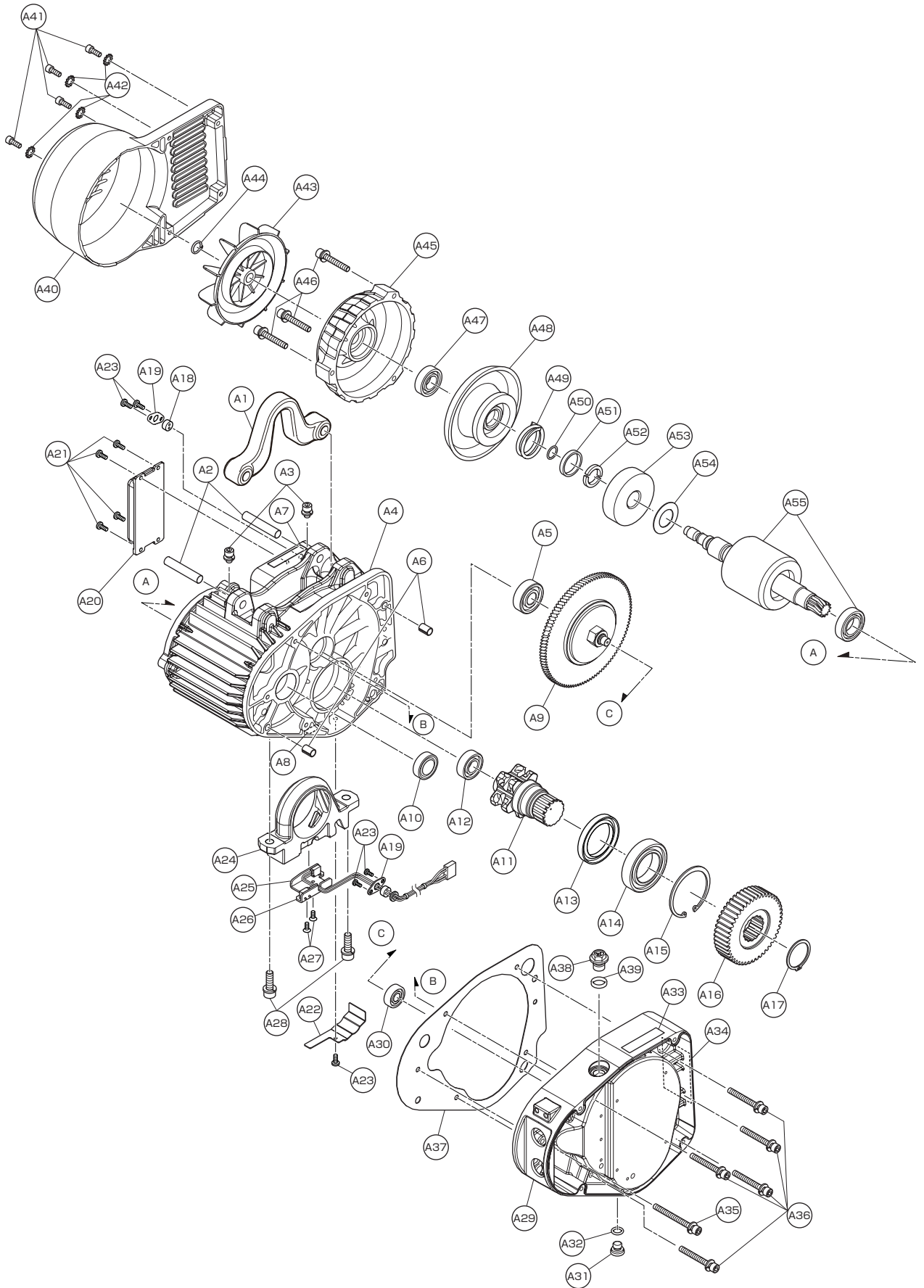
- ThreeBond 1401 (made by ThreeBond) or its equivalent

## ● Helpful tools

- Remover: Prepare a remover for bearings (for inner race & outer race) and one for oil seal for precise operation.
- Preparing wooden block (used as sleepers) and wire for guiding lead wires will be helpful.

# Name of Parts

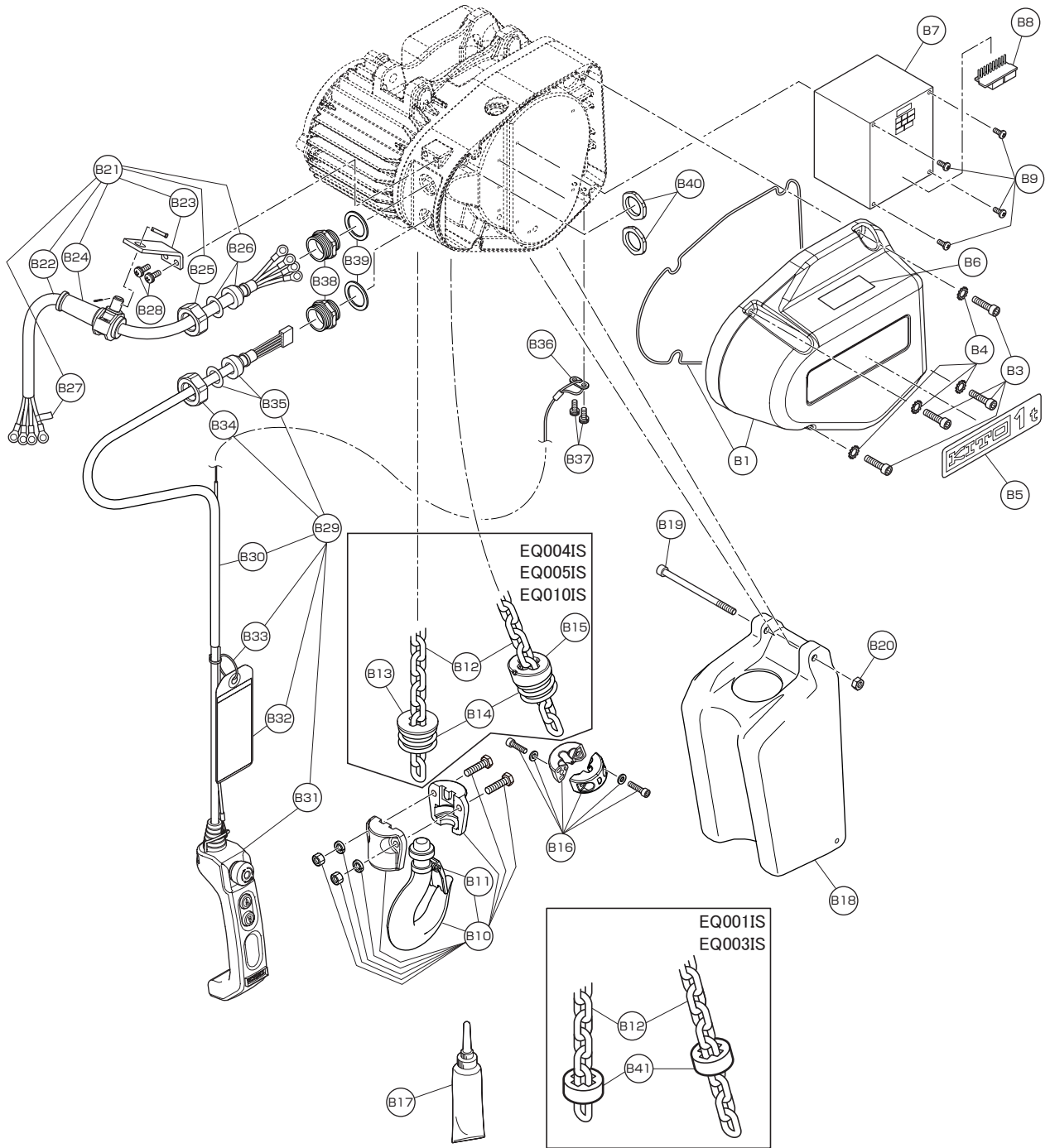
## Block A



Name of Parts

Figure #	Part Number	Part Name	Remark
A1	001	Suspension eye	
A2	121	Top pin	
A3	033	Machine screw socket bolt	For Top pin
A4	5501	Body with stator	
A5	238	Ball bearing	
A6	137	Set pin S	
A7	820	Warning sticker HW	
A8	960	Name plate load side E	
A9	1223	Friction clutch complete set	
A10	244	Oil seal	
A11	241	Load sheave	
A12	242	Ball bearing	
A13	245	Oil seal	
A14	243	Ball bearing	
A15	207	Snap ring	
A16	240	Load gear	
A17	208	Snap ring	
A18	187	Packing	
A19	153	Cable holder	
A20	5505	Braking resister assembly	
A21	194	Machine screw with spring washer	For Braking register
A22	151	Limit switch cord cover	
A23	152	Machine screw with spring washer	For Limit switch cord cover, Cable holder
A24	331	Chain guide	
A25	1060	Limit switch complete set	
A26	333	Limit switch cover	
A27	335	Machine screw	
A28	165	Machine screw socket bolt	For Chain guide
A29	110	Gear case	
A30	239	Ball bearing	
A31	133	Oil plug	
A32	136	Plug packing	
A33	810	Name plate OF	
A34	815	Name plate SP	
A35	167	Machine screw socket bolt	For Gear case (shorter)
A36	162	Machine screw socket bolt	For Gear case (longer)
A37	116	Packing G	
A38	135	Oil plug B	
A39	173	Eyebolt packing	
A40	107	Fan cover	
A41	164	Socket bolt	For Fan cover
A42	225	Toothed lock washer	For Fan cover
A43	108	Fan	
A44	323	Snap ring	
A45	106	Motor cover	
A46	163	Machine screw socket bolt	For Motor cover
A47	209	Ball bearing	
A48	5212	Brake drum assembly	
A49	214	Brake spring	
A50	324	O ring	
A51	318	Collar	
A52	317	Thrust disc	
A53	503	Pull rotor	
A54	316	Coned disc spring	
A55	5502	Motor shaft with rotor	

# Block B



Name of Parts



Figure #	Part Number	Part Name	Remark
B1	2104	Controller cover assembly	
B3	161	Socket bolt	For Controller cover
B4	224	Toothed lock washer	For Controller cover
B5	800	Name plate B	
B6	935	Warning sticker E	
B7	1571	Inverter assembly	
B8	508	HBB board	
B9	191	Machine screw with spring washer	For Inverter
B10	1011	Bottom hook complete set	
B11	002	Hook latch assembly	
B12	874	NC load chain	
B13	054	Limiting plate	For EQ004IS, EQ005IS, EQ010IS
B14	051	Chain spring	For EQ004IS, EQ005IS, EQ010IS
B15	055	Spring guide	For EQ004IS, EQ005IS, EQ010IS
B16	041	Stopper	
B17	1951	Lubricant tube assembly	For Load chain
B18	401	Chain container P assembly	
B19	166	Socket bolt	For Chain container
B20	226	U nut	For Chain container
B21	1521	Power supply cable 4C assembly	
B22	521	Power supply cable 4C	
B23	541	Cable support arm	
B24	1542	Cable support 12 assembly	
B25	569	Holder A	
B26	574	Cable packing	
B27	823	Name plate G	
B28	542	Machine screw with spring washer	For Cable support arm
B29	1557	3 push button cord 5C complete set	
B30	557	Push button cord 5C	
B31	1561	3 push button switch assembly	
B32	565	Warning tag PB	
B33	566	Tag holder	
B34	569	Holder A	
B35	574	Cable packing	
B36	535	Cord support (wire stopper)	
B37	536	Machine screw with spring washer	For Cord support
B38	891	Holder B	
B39	892	Holder packing	
B40	893	Holder nut	
B41	053	Cushion rubber	For EQ001IS, EQ003IS

# Disassembly Procedure

## DANGER



Prohibited

- Do not disassemble the electric chain hoist while it is being suspended.

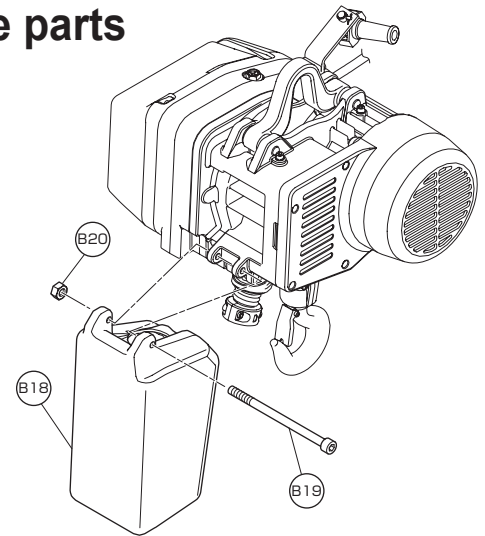
Failure to follow this instruction may result in death or severe injury due to dropped parts.

Be sure to place the electric chain hoist on a floor and perform the disassembly on the workbench.

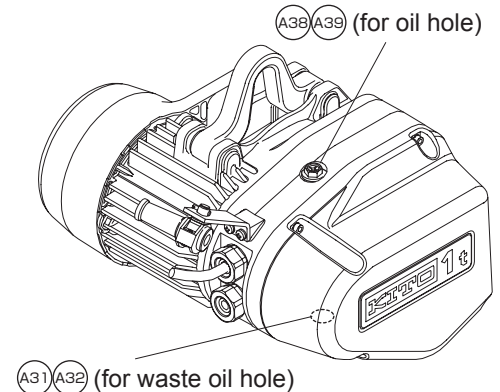
The overall disassembly procedure is shown below. Perform disassembly of only necessary parts.

## 1 Removing the outer circumference parts

- (1) Remove the chain container (B18) from the main body.



- (2) When disassembling the gear part, remove the oil plug (A31) (for waste oil hole) and plug packing (A32) from the bottom of the gear case, and then remove gear oil.
  - Check stain and viscosity of the removed oil.
  - If any metal powder is discovered, perform a careful inspection suspecting abnormal wear of the gear.



## 2 Disconnecting the power supply cable and push button cord

### CAUTION



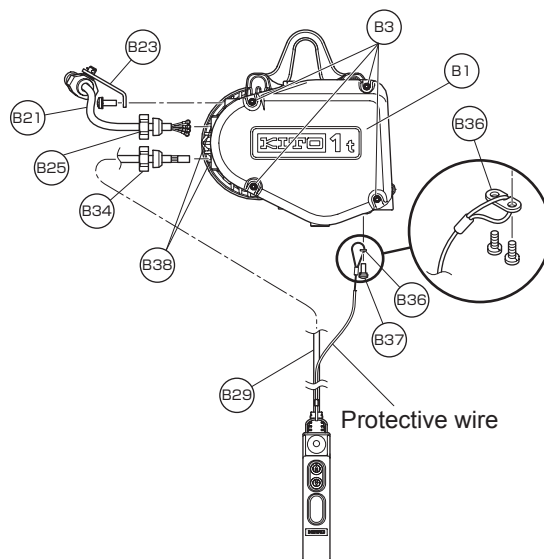
Mandatory

- When opening the controller cover, support it with your hand and open it slowly and carefully.

Failure to follow this instruction may cause the controller cover to hit the internal electrical components, resulting in damage.

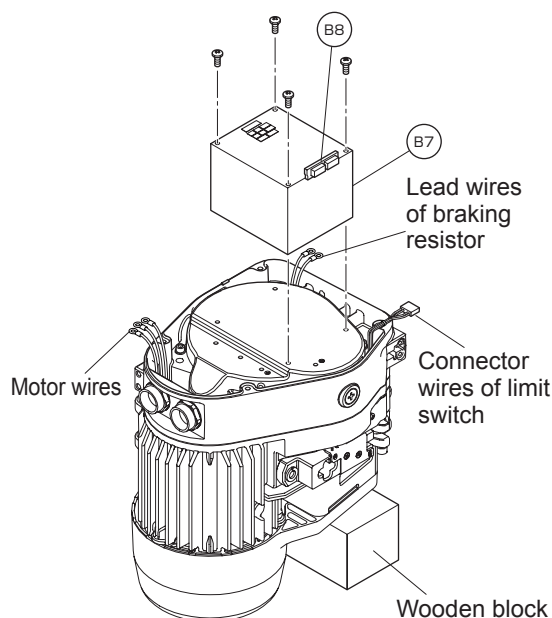
- (1) Remove the controller cover (B1).
  - Loosen the 4 socket bolts (B3) and remove the controller cover.

- (2) Disconnect the power supply cable (B21) from the inverter assembly (B7).
- (3) Remove the cable support arm (B23) from the main body, followed by the holder A (B25) of the power supply cable, and disconnect the power supply cable from the main body.
- (4) Disconnect the connector of the push button cord (B29) from the HBB board (B8) of the inverter.
- (5) Remove the cord support (B36) securing the protective wire of the push button cord from the main body (lower surface of the gear case).
- (6) Remove the holder A (B34) of the push button cord and disconnect the push button cord from the main body.



### 3 Removing the internal electrical components

- (1) Disconnect the connector wires of the limit switch (A25) from the HBB board (B8).
- (2) Disconnect the lead wires of the braking resistor connected to the inverter assembly (B7) and motor wires.
- (3) Remove the inverter assembly.



### 4 Disassembling the gear parts

#### **⚠ DANGER**



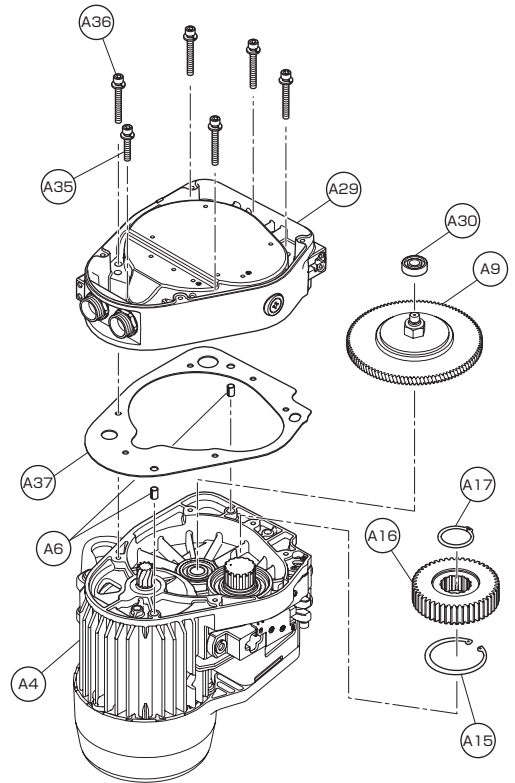
Prohibited

- Do not disassemble the friction clutch.

Failure to follow this instruction may result in death or severe injury due to a falling load.

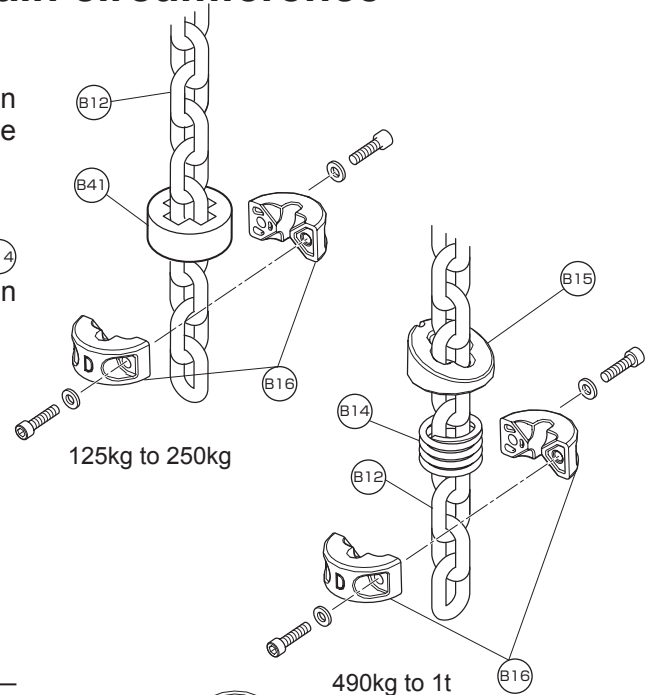
- (1) Remove the machine screw socket bolts (6 pcs.) (A35/A36). Striking the gear case (A29) with a plastic hammer, remove it from the body with stator (A4).
  - Disconnect the lead wires of the motor, braking resistor and limit switch carefully without pulling them by force.
  - Note that the gear case may come off with the friction clutch (A9) attached to it.

- (2) Remove the packing G (A37) and set pins S (A6) (2 pcs.).
  - Be careful not to scratch the gear case junction face.
- (3) Remove the friction clutch (A9) from the body with stator (A4).
- (4) Remove the snap ring (A17), followed by the load gear (A16).
- (5) Remove the snap ring (A15) from the load sheave bearing.

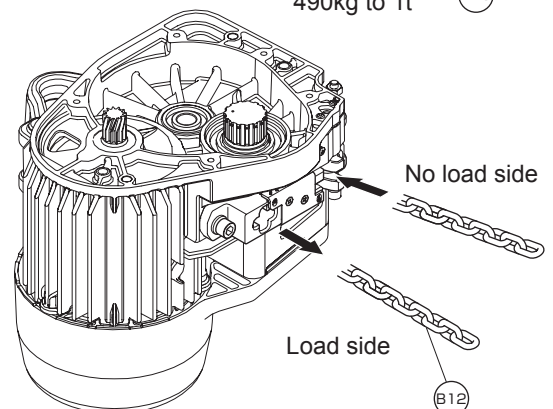


## 5 Disassembling the load chain circumference

- 125kg to 250kg
  - (1) Remove the stopper (B16) and cushion rubber (B41) from the load chain (B12) on the no load side.
- 490kg to 1t
  - (1) Remove the stopper (B16), chain spring (B14) and spring guide (B15) from the load chain (B12) on the no load side.

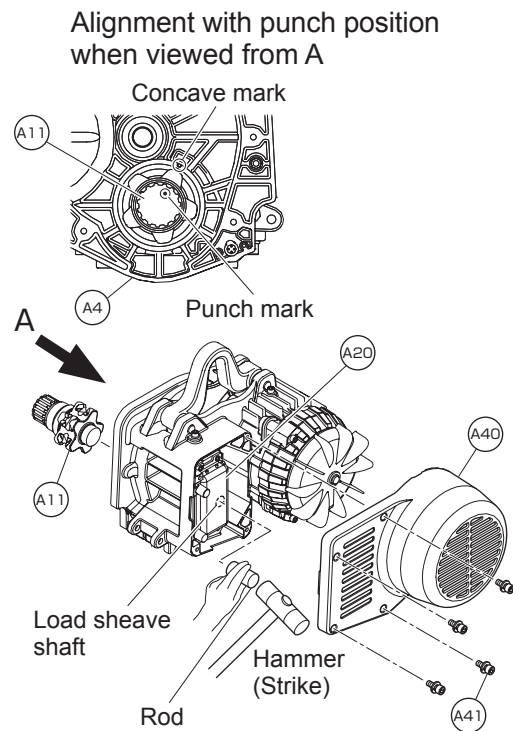


- (2) Remove the load chain from the load side.
  - Remove the bottom hook as required.



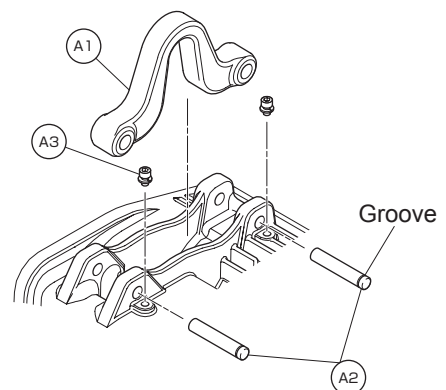
## 6 Disassembling the load sheave

- (1) Remove the fan cover (A40).
- (2) Aligning the load sheave (A11) with an assembly mark punch position, strike the load sheave from the braking resistor (A20) side with a plastic hammer to remove it.
  - Align the punch mark of the load sheave with the concave mark of the body with stator (A4).
  - Check that the snap ring (A15) of the load sheave bearing has been removed.
  - Note that striking the load sheave hard may cause it to fly out.



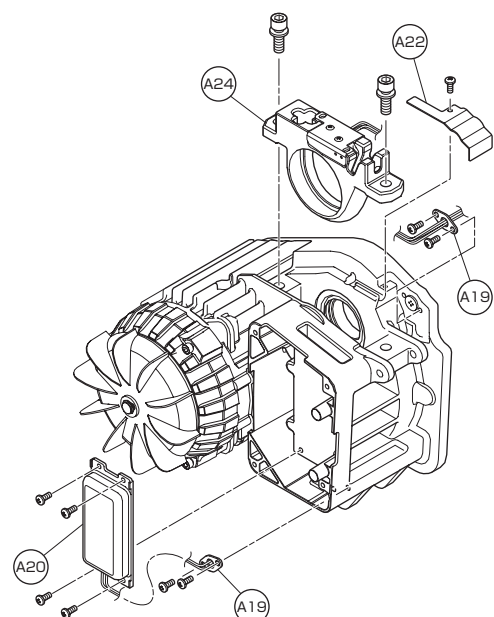
## 7 Removing the suspension eye

- (1) Remove the machine screw socket bolts (A3), pull out the top pins (A2) and remove the suspension eye (A1).
  - Make use of a groove in the top pin.



## 8 Removing the chain guide

- (1) Remove the limit switch cord cover (A22).
- (2) Remove the chain guide (A24).
- (3) Remove the cable holder (A19) and disconnect the lead wires of the limit switch (A25) from the body with stator.

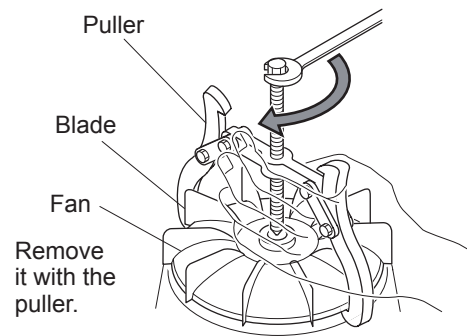
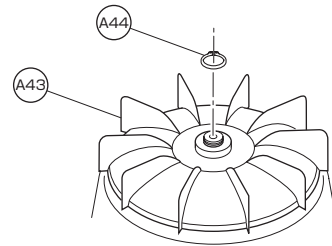


## 9 Removing the braking resistor

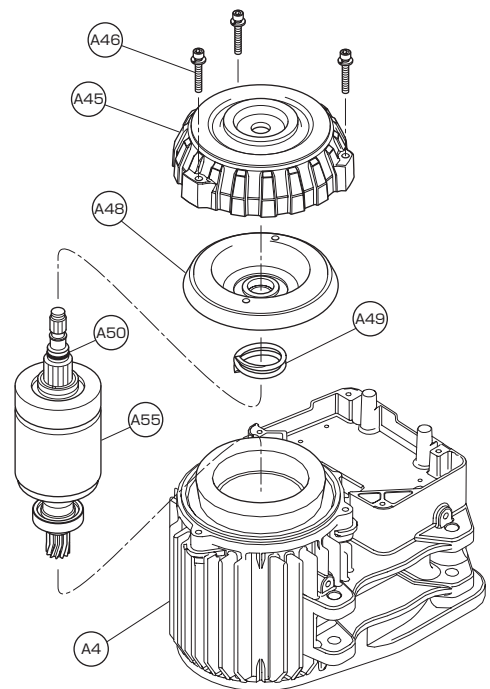
- (1) Remove the braking resistor (A20) and cable holder (A19), and disconnect the lead wires from the body with stator.

# 10 Disassembling the motor and brake

- (1) Remove the snap ring (A44) of the fan (A43).
- (2) Insert the "pawl" part of the puller to the outer circumference bottom of the fan to remove the fan.
  - Insert it as close to the blade as possible. Be careful not to damage the fan.
  - Use a three-pawl puller for safer operation.



- (3) Remove the machine screw socket bolts (A46) of the motor cover (A45).
  - They are pressed by the brake spring (A49). Remove them slowly and gradually.
- (4) Remove the brake drum (A48) and brake spring.
- (5) Remove the motor shaft with rotor (A55) from the body with stator (A4).
- (6) Remove the O ring (A50).



# Reassembly Procedure

## DANGER



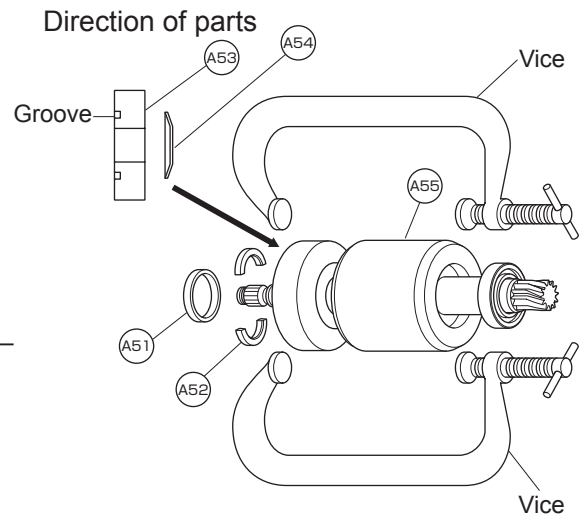
Mandatory

- Do not perform reassembly using parts exceeding application limits.
- For parts to be replaced with new parts upon reassembly, refer to page 3.
- Tighten the bolts and nuts securely with the specified torque.
- Apply oil, grease, and screw lock as instructed.

Failure to follow these instructions may result in death or severe injury.

## 1 Assembling the rotor (when disassembled to the pull rotor)

- (1) Insert the pull rotor (A53) and coned disc spring (A54) (beware of the direction) into the motor shaft with rotor.
  - Insert the pull rotor in such a manner that its grooves (into which the brake spring is set) face outside.
  - Ensure that the outer circumference of the coned disc spring comes into contact with the pull rotor.
- (2) Clamp the rotor and pull rotor with two vices, and assemble the thrust disc (A52) and collar (A51).



## 2 Assembling the stator and rotor

### DANGER



Mandatory

- Apply the specified grease on the spline part of the motor shaft.

Failure to follow this instruction may cause a falling load due to wear or damage of parts and result in death or severe injury.

- (1) Apply the liquid gasket to the body with stator (A4) (motor cover joint) (Refer to page 16), assemble the bearing (A56) to the motor shaft (A55), and insert into the body with stator.
  - Apply the liquid gasket to the entire circumference seamlessly.

Liquid gasket: TB1121, 5 g,  
Made by ThreeBond
- (2) Assemble new O ring (A50) to the motor shaft.
  - Care should be taken not to damage the O ring.



## Reassembly Procedure (continued)

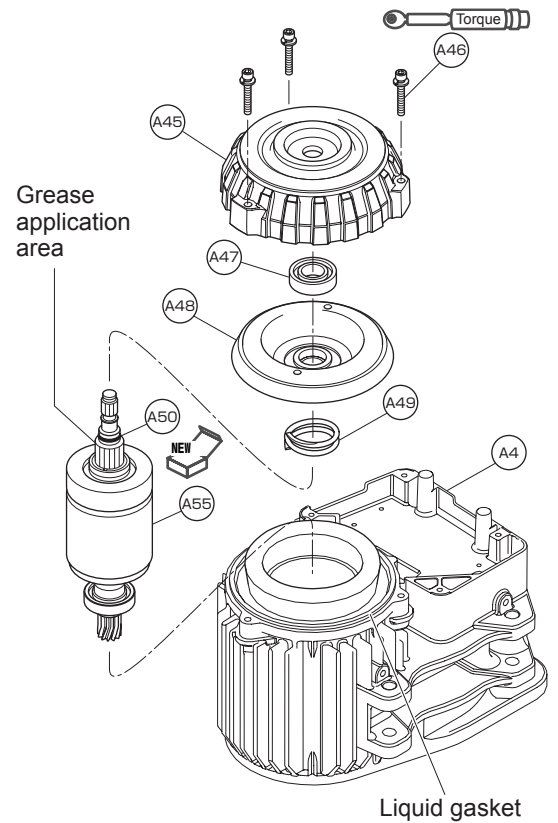
- (3) Assemble the brake spring (A49) and brake drum (A48) to the motor shaft (A55).
- Apply molybdenum disulfide grease (Molytherm No. 2) to the spline portion thinly and uniformly.
  - The brake spring is set in a groove in the pull rotor.
  - Check that the brake drum moves smoothly.
  - Wipe off the overflowing grease.

Molytherm No. 2, 2 g

- (4) Assemble the ball bearing (A47) to the motor shaft.

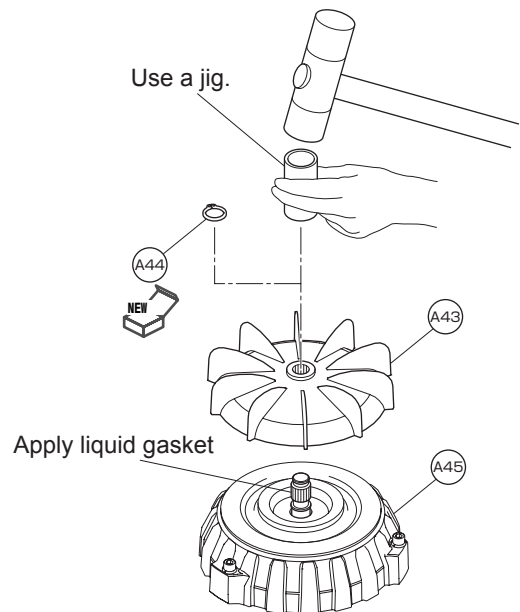
- (5) Set the motor cover (A45) and fasten it with the machine screw socket bolts (3 pcs.).
- Wipe off the overflowing liquid gasket.
  - Tighten the bolts uniformly and gradually.

Tightening torque M6: 10.8 N·m  
With spring lock washer



- (6) Apply the liquid gasket to the serrated portion of the motor shaft, and assemble the fan (A43).
- Care should be taken not to directly strike the motor shaft and fins.
  - Attach the fan with new snap ring (A44).

Liquid gasket: TB1121, 1 g,  
Made by ThreeBond



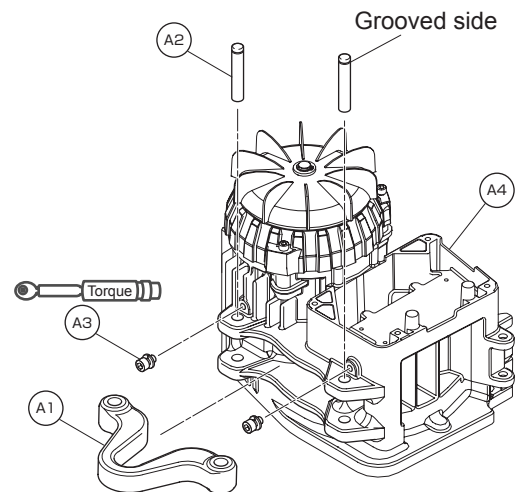


### 3 Assembling the suspension eye

- (1) Assemble the suspension eye (A1) to the body with stator (A4), using the top pins (A2).
  - Insert the top pins in such a manner that the grooved side will be visible.

- (2) Set the machine screw socket bolts (A3) onto the body with stator to prevent the top pins from coming off.

Tightening torque M6: 10.8 N·m  
With spring lock washer



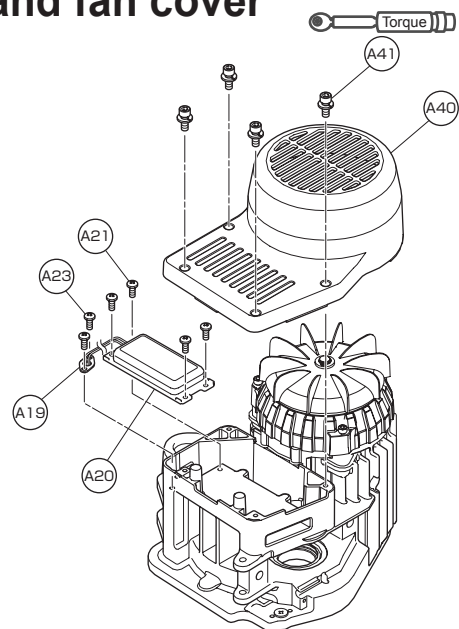
### 4 Assembling the braking resistor and fan cover

- (1) Put the lead wires of the braking resistor (A20) through the body with stator (A4) to adjust their length, and assemble the cable holder (A19) with the machine screws with spring washer (A23) to secure the lead wires.

- (2) Assemble the braking resistor to the body with stator with the machine screws with spring washer (A21).

- (3) Assemble the fan cover (A40) with the socket bolts (A41) (4 pcs.).

Tightening torque M5: 8.4 N·m  
With toothed lock washer

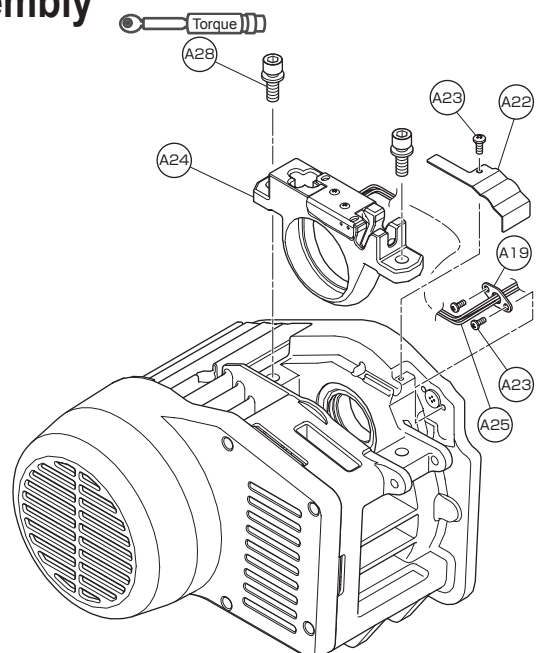


### 5 Assembling the chain guide assembly

- (1) Put the lead wires of the limit switch (A25) through the body with stator to adjust their length, and assemble the cable holder (A19) with the machine screws with spring washer (A23).

- (2) Assemble the chain guide (A24) with the machine screw socket bolts (2 pcs.).
  - 125kg to 500kg  
Tightening torque M8: 24.5 N·m  
With spring washer
  - 1t  
Tightening torque M10: 49.0 N·m  
With spring washer

- (3) Assemble the limit switch cord cover (A22) with the machine screw with spring washer (A23).
  - Care should be taken not to catch the lead wires.

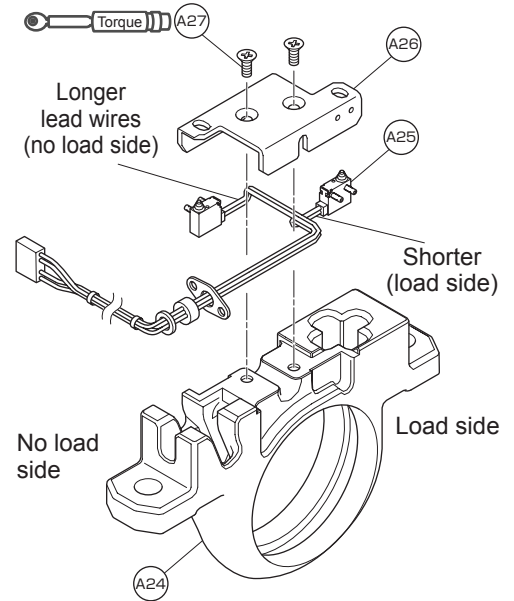


● When the chain guide (A24) and limit switch complete set (A25) have been disassembled

- (1) Assemble the load and no-load sides of the limit switch to the limit switch cover (A26).
  - Assemble the load side (shorter lead wires) of the limit switch to the grooved side of the limit switch cover.
  - The limit switch is a precision part and fragile. Assemble it carefully.

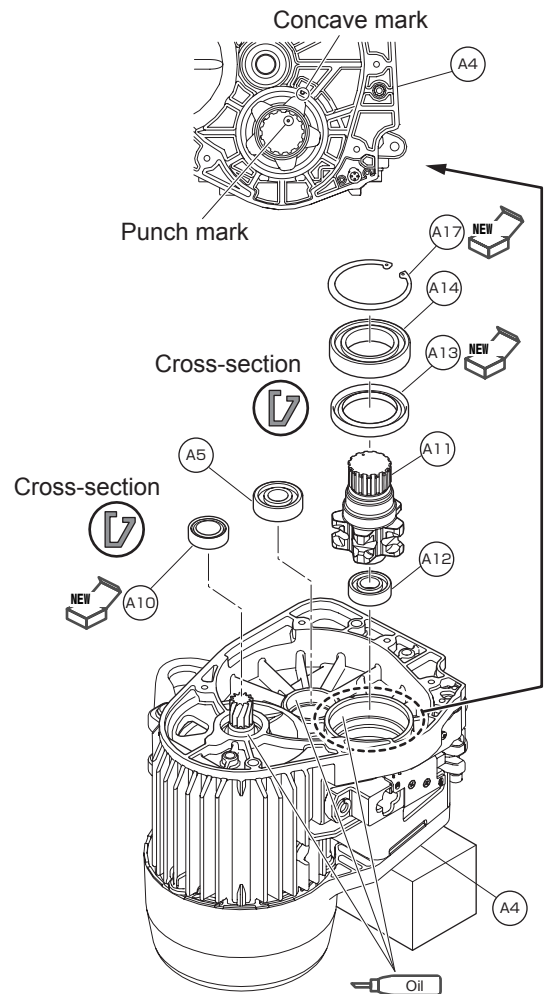
- (2) Secure the limit switch cover to the chain guide with the machine screws (A27).
  - Beware of the direction of the limit switch cover.
  - Care should be taken not to catch the lead wires.
  - Check that the limit switch can be pressed properly.

Tightening torque M4: 1.3 N·m



## 6 Assembling the load sheave

- (1) Apply gear oil to all the parts of the body with stator (A4), where the ball bearing and oil seal are to be attached.
- (2) Assemble the ball bearing (A5) for the friction clutch.
- (3) Assemble new oil seal (A10) to the motor shaft (A55).
  - Beware of the direction of the oil seal.
  - Apply oil to the lip and assemble carefully without damaging it.
- (4) Assemble the ball bearing (A12) for the load sheave (A11).
  - If it cannot be easily inserted, strike a jig lightly with a plastic hammer.
- (5) Insert the load sheave in alignment with a punch mark.
- (6) Assemble new oil seal (A13) for the load sheave.
  - Beware of the direction of the oil seal.
  - Apply oil to the lip and assemble carefully without damaging it.
- (7) Assemble the ball bearing (A14) for the load sheave.
  - If it cannot be easily inserted, strike a jig lightly with a plastic hammer.
  - Assemble new snap ring (A17).



# 7 Installing the load chain

## **⚠ DANGER**

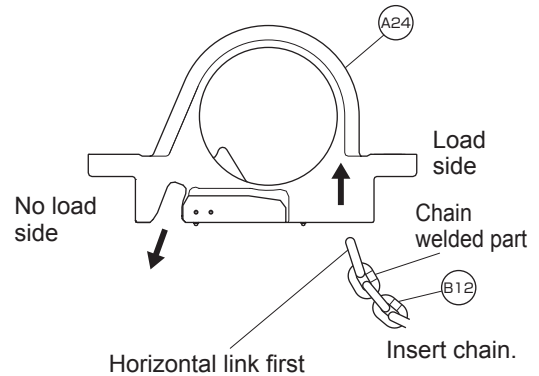


Mandatory

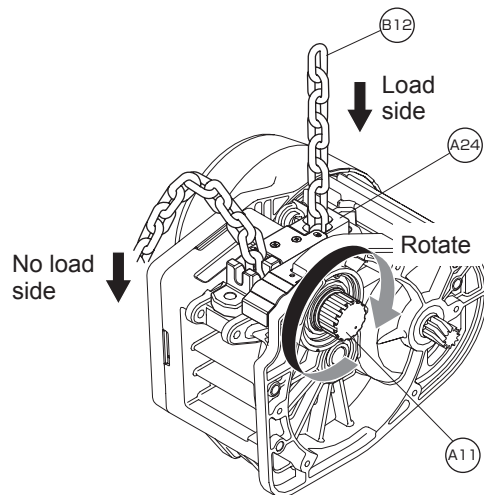
- Insert the load chain so that the welded part comes outside when it is engaged with the load sheave.

Failure to follow this instruction may cause defective operation or abnormal wear and result in severe injury due to a falling load.

- (1) Install the load chain (B12) so that the welded part comes outside of the load sheave (A11).
  - Be sure to insert a horizontal link first (as shown in the figure) into the chain guide (A24).



- (2) Insert the load chain from the load side (bottom hook side) of chain guide, wind it up by rotating the load sheave manually to guide it out to the load chain outlet (no load side).
  - Once engaged with the load sheave, shift the body with stator to the no load side and rotate the load sheave manually. The load chain is taken up and comes out smoothly.



- (3) Re-check the orientation of the load chain, and check for any twist.

### • 125kg to 250kg

- (4) Install the stopper (B16) and cushion rubber (B41) to the 3rd link from the end of the no load side load chain as they were before disassembly.

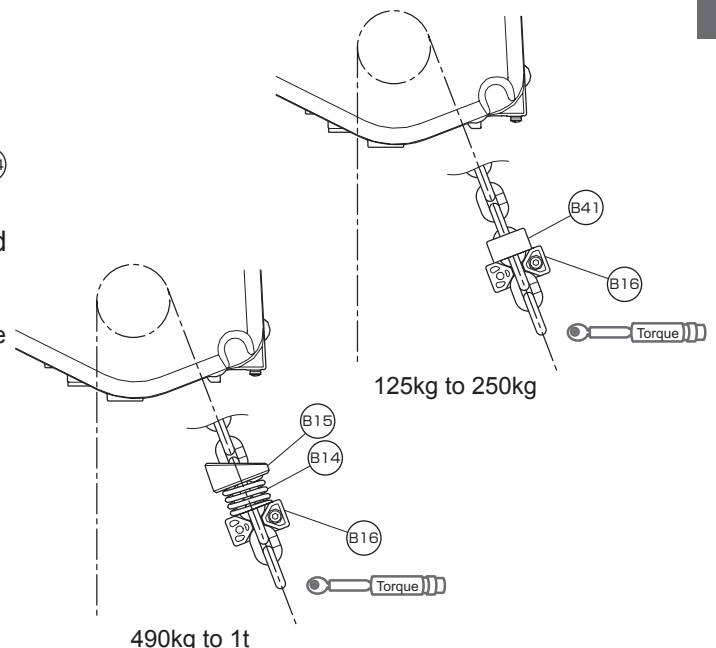
Tightening torque M6: 10.8 N·m  
With spring washer

### • 490kg to 1t

- (4) Install the stopper (B16), chain spring (B14) and spring guide (B15) (no load side) to the 3rd link from the end of the no load side load chain as they were before disassembly.

- Assemble the spring guide as shown in the figure, paying heed to its direction.

Tightening torque M6: 10.8 N·m  
With spring washer



## 8 Assembling the gear parts

### DANGER



Prohibited

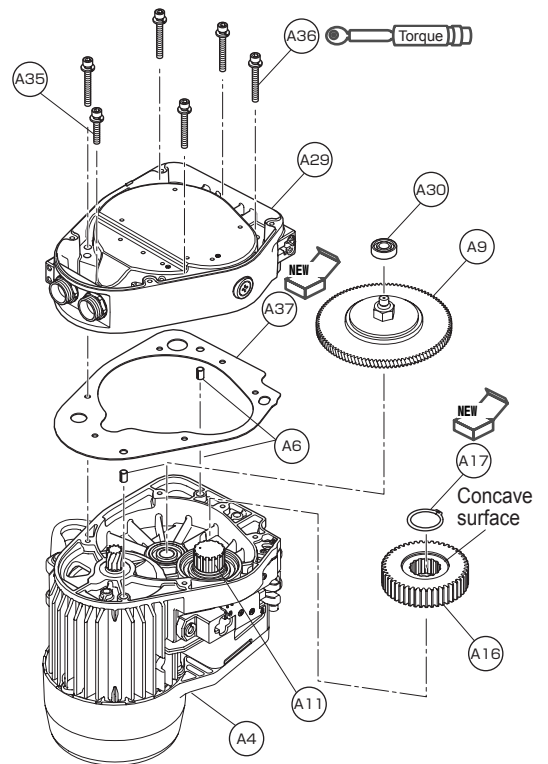
- Do not adjust the friction clutch.

Failure to follow this instruction may result in death or severe injury.

- (1) Insert the load gear (A16) to the load sheave (A11), and lock it with a new snap ring (A17).
  - The load gear should be assembled with its concave surface facing upward. (If assembled the other way around, a groove for the snap ring is invisible.)
  - Make sure that the snap ring is inserted fully.
- (2) Assemble the set pins S (A6) (2 pcs.).
- (3) Assemble the friction clutch (A9).
- (4) Assemble the ball bearing (A30) to the friction clutch.
- (5) Put new packing G (A37) on the body with stator (A4), and strike the gear case (A29) with a plastic hammer to assemble.
  - Care should be taken not to catch the lead wires.
  - Use one machine screw socket bolt (shorter) (A35) and five machine screw socket bolts (longer) (A36), totally 6 of them.
  - Assemble the gear case temporarily to the body with stator with the machine screw socket bolts, and then, tighten them diagonally and uniformly.

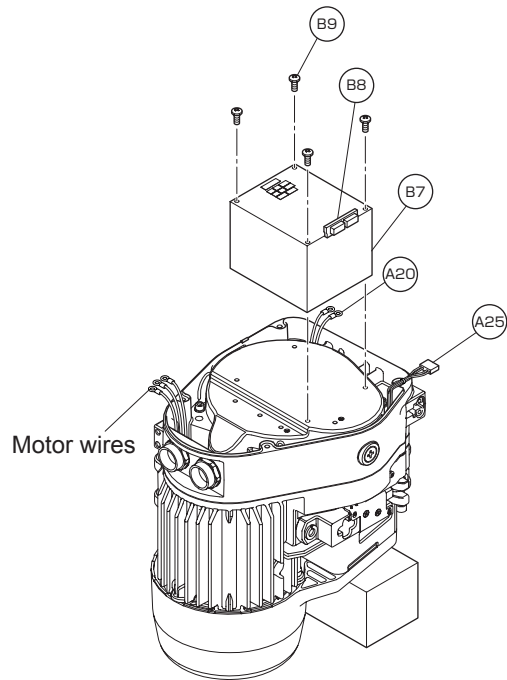
Tightening torque M6: 10.8 N·m

With spring lock washer



## 9 Assembling the internal electrical components

- (1) Assemble the inverter assembly (B7) to the body with stator with the machine screws with spring washer (B9) (4 pcs.).
- (2) Connect the lead wires of the braking resistor (A20) to the inverter as originally connected.
  - See the connection diagram to check whether the lead wires are properly connected. The connection diagram is affixed inside the controller cover.
- (3) Connect the connector wires of the limit switch (A25) to the HBB board (B8).
- (4) Connect the motor wires to the inverter assembly.
  - See the connection diagram to check whether the motor wires are properly connected.



- When the inverter assembly is replaced by new one, disconnect the connecting wires of the inverter with a precision screwdriver, and connect the HBB board as shown in the connection diagram (as originally connected).
  - \* The connection diagram is affixed inside the controller cover.

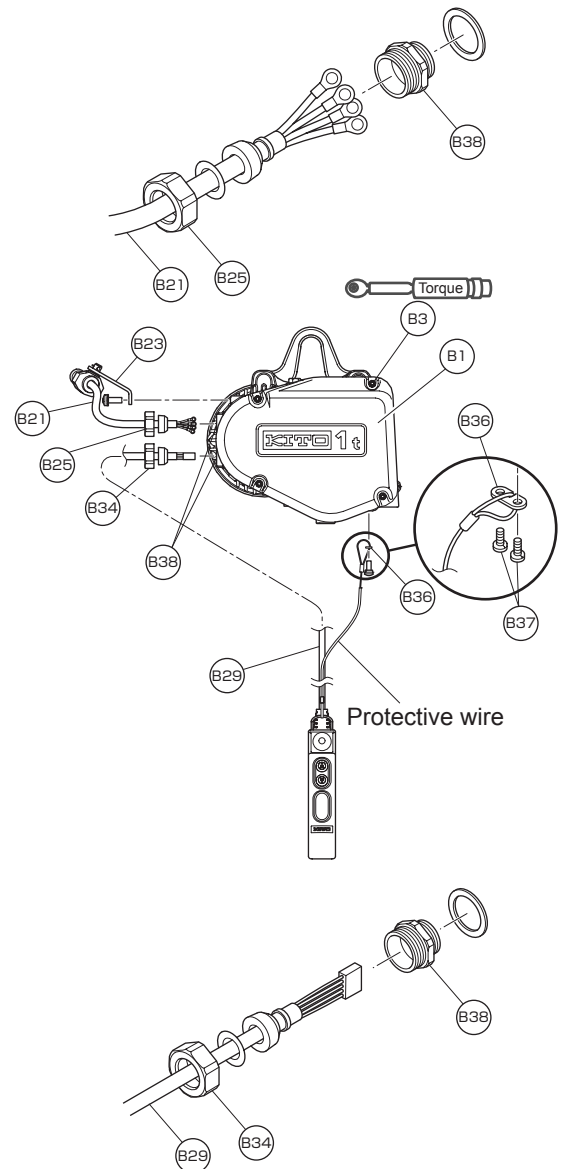
# 10 Connecting the power supply cable and push button cord

## NOTE

- Always tighten the holder A with your hand without using a tool. Tightening too hard may damage resin threads or snap a cord.
- In order to prevent snapping or disconnection, secure the protective wire attached to the push button cord to the electric chain hoist body or trolley. Be sure to secure it so as to prevent snapping or disconnection of the cord when it is pulled.
- At the time of snapping or connection work, be sure to turn off the power.

- (1) Set the holder A (B25) of the power supply cable (B21) onto the holder B (B38), and tighten it firmly.
- (2) Attach the cable support arm (B23).
- (3) Connect the power supply cable to the inverter assembly (B7).
  - See the connection diagram to check whether the power supply cable is properly connected.
- (4) Set the holder A (B34) of the push button cord (B29) onto the holder B (B38), and tighten it firmly.
- (5) Put the cord support (B36) into the end ring of the protective wire, fit the protective wire into a groove in the cord support, and secure to the main body (lower surface of the gear case) with the machine screws with spring washer (B37).
- (6) Insert the connector (white) of the push button cord into the right connector (white) of the HBB board (B8) of the inverter.
- (7) Assemble the controller cover (B1) (with packing C) with the socket bolts (B3) (4 pcs.).

Tightening torque M6: 10.8 N·m  
With toothed lock washer





# 11 Installing the bottom hook (if removed from the chain)

## ⚠ CAUTION



Mandatory

- Check the load side of the load chain to install the bottom hook.

### ● Assembling bottom hook

- Pass the limiting plate (B13) and chain spring (B14) through before installing the bottom hook.

#### (1) Apply grease on thrust bearing.

Grease for roller bearing

#### (2) Face the smaller internal diameter of thrust bearing to the A side (upper side) of thrust stopper to incorporate it into hook.

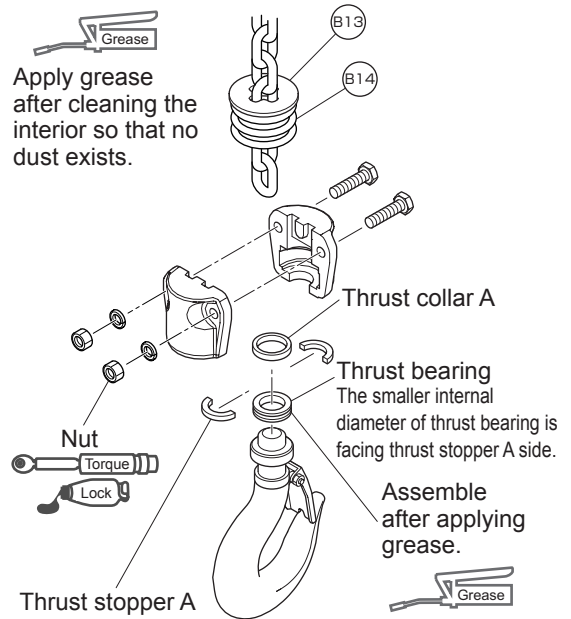
#### (3) Use 2 thrust stoppers to pinch the hook neck and incorporate thrust collar A as to cover the outer circumference of thrust stopper A.

#### (4) Assemble the incorporated hook and the terminal link of load chain as to nip them with bottom yoke.

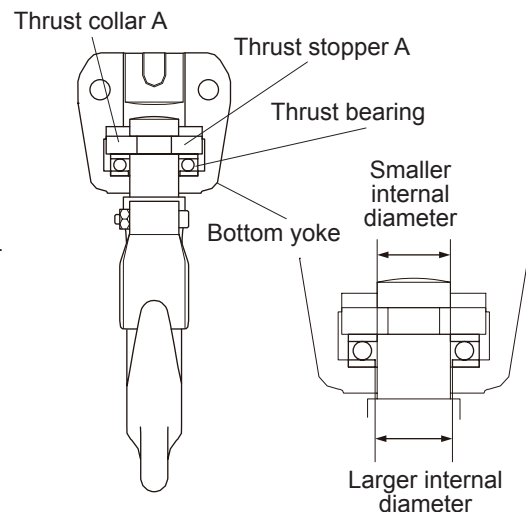
#### (5) Put through bolts, apply screw lock before tightening.

- 125kg to 500kg  
Tightening torque M6: 19.6 N·m  
With spring washer
- 1t  
Tightening torque M8: 34.3 N·m  
With spring washer

#### (6) Check if hook rotates smoothly.



Details of assembling thrust bearing



## ⚠ DANGER




Mandatory

- Make sure that thrust collar A, thrust stopper A, and thrust bearing are incorporated correctly as shown in the figure above.

Failure to follow this instruction may result in death or severe injury due to a falling load.

# 12 Oil filling

**⚠ DANGER**



Mandatory

- **Use genuine gear oil.**

If you inject (or mix) any oil other than genuine oil, a major accident such as death or serious injury may occur due to a dropped load.

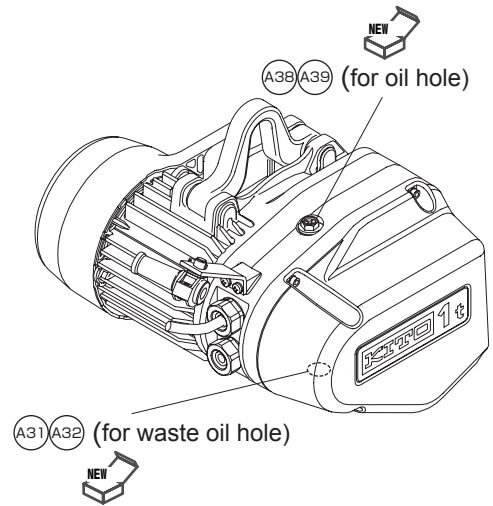
- (1) Tighten the oil plug (A31) (for waste oil hole) with a new plug packing (A32) securely.

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- (2) Inject gear oil from the oil plug B (A38) (for oil hole).
  - Inject an appropriate amount of oil.

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- (3) Set new eyebolt packing (A39) onto the oil plug B, and tighten it firmly.



● Use KITO genuine gear oil.

Code	Gear oil amount (ml)
EQ001IS	510
EQ003IS	
EQ004IS	
EQ005IS	
EQ010IS	
	840

# 13 Operation check, etc.

After disassembly and reassembly, check the following items.

- (1) Check for parts that are left unused in reassembly.
  - If any part is left, perform disassembly and reassembly again for correct assembly.
- (2) Perform frequent inspection.
  - For details, refer to “Frequent inspection” in EQ Series Electric Chain Hoist Owner’s Manual (separate document).
- (3) After checking that no error occurs with no load, perform an operation test with a rated load.
  - For details, refer to “Periodic inspection” in EQ Series Electric Chain Hoist Owner’s Manual (separate document).



# 《Memo》

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