



MODELS CJ 65S2/CJ 65VA2

1. PRECAUTIONS IN DISASSEMBLY AND REASSEMBLY:

The circled numbers in the descriptions below correspond to the item numbers in the Parts Lists for the Models CV65VA2 and CJ65S2 (all item numbers are the same for both models).

1-1. Disassembly:

- (1) Disassembly of Cover (A) (31), and Cover (B) (35):
Remove the D4 x 25 Tapping Screw (36), and disassemble Cover (A) (31) and Cover (B) (35).
- (2) Removal of the Upper Cover (34):
Remove the two M4 x 16 Machine Screws (33) and the two D4 x 65 Tapping Screws (32). Then move the Upper Cover (34) in the forward direction to remove it together with the Plunger (58) and related parts.
- (3) Disassembly of the Plunger (58) from the Upper Cover (34):
Remove the two M4 x 10 Seal Lock Flat Hd. Screws (59) which fix the Connector (42), and take out the Connector. Then pull the Plunger (58) toward the Base (65) to remove it from the Upper Cover (34). (See Fig. 12)

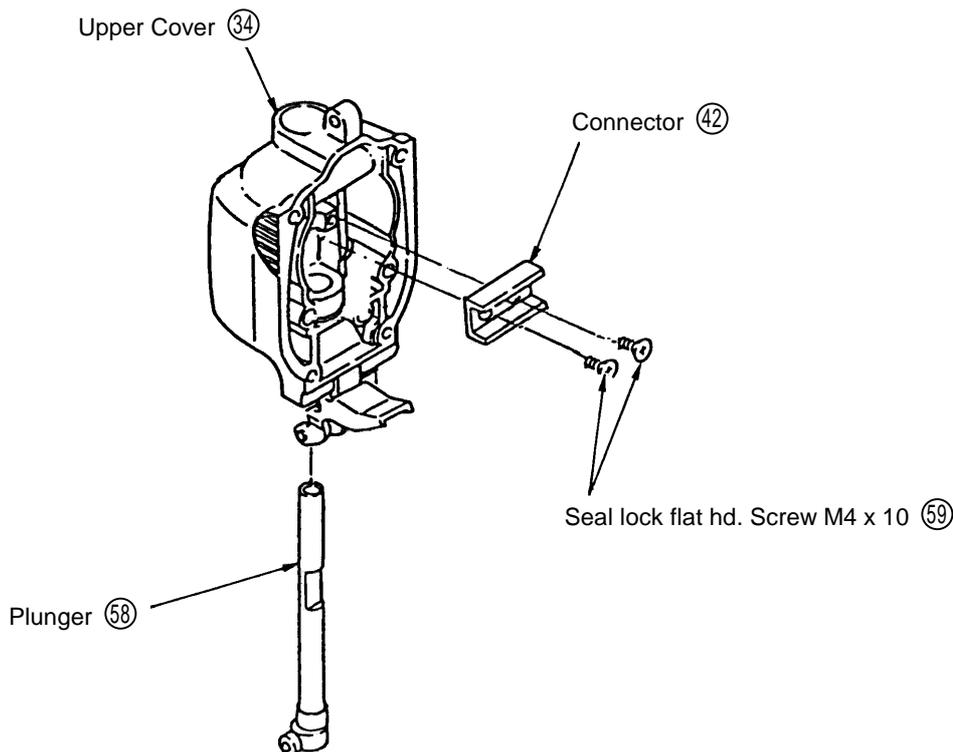


Fig. 12

- (4) Disassembly of the Plunger Holder Ass'y (38) from the Upper Cover (34):
Extract the D6 x 47 Pin (39) from the Upper Cover (34). Then, while lifting the Plunger Hodler Ass'y (38), pull it toward the Gear Cover (15) to remove it from the Upper Cover (34).

(See Fig. 13)

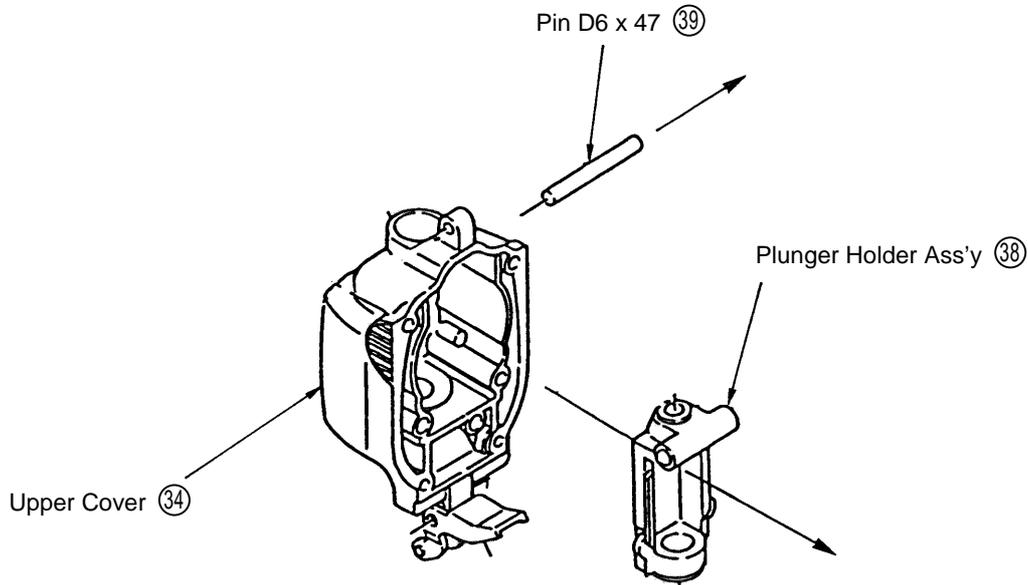


Fig. 13

- (5) Disassembly of the Guide Roller (55) from the Upper Cover (34):
Extract the D5 x 19.8 Needle (54) which is press-fitted into the Upper Cover (34), and remove the Guide Roller (55).
- (6) Disassembly of the Weight Holder (45) from the Gear Cover (15):
First, remove the Retaining Ring for D8 Shaft (60) from the end of the Spindle (52). Then, being very careful not to lose the Orbital Pin (63), pull out the Weight Holder (45) together with the Gear (50), Balance Weights (48), and related parts from the Gear Cover (15).
- (7) Disassembly of the Weight Holder (45) and the Gear (50):
Remove the M5 x 12 Hex. Socket Hd. Bolt (62) from the Weight Holder (45). Washer (A) (46), the three Balance Weights (48), the Orbital Cam (49), and Washer (A) (46) can then be removed in that order. (See Fig. 14)

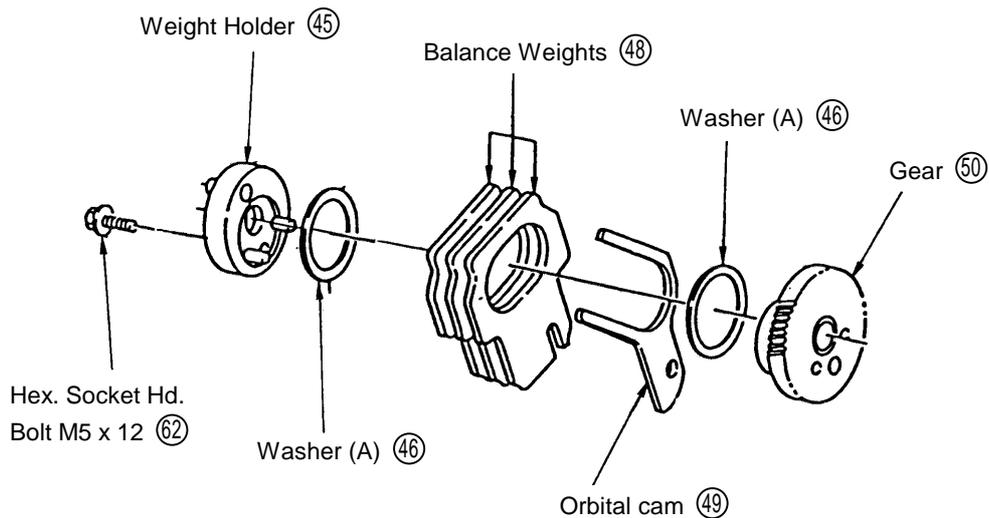


Fig. 14

- (8) Disassembly of the Gear Cover (15) and the Housing (24):
 Prior to disassembly, remove the Carbon Brushes (2) as described in the Instruction Manual. Remove the two D4 x 30 Tapping Screws (14) from inside the Gear Cover (15). Then move the Gear Cover (15) toward the front to remove it together with the Armature (18).
- (9) Disassembly of the Change Knob (30) from the Gear Cover (15):
 Being very careful not to lose Spring (C) (29) and the D3.97 Steel Ball (28) inside the Change Knob (30), remove the E-Type Retaining Ring for D5 Shaft (27) from the end of the Change Knob (30), and remove the Change Knob from the Gear Cover (15).
- (10) Removal of the Carbon Brushes (2) from the Housing (24):
 For removal of the Carbon Brushes (2), please refer to the Instruction Manual.
- (11) Removal of Wiring Block (B) (4):
 Remove the two D4 x 16 Tapping Screws (8), and take off the Cord Clip (7), Cord (13), and Cord Armor (9). Then hold Wiring Block (A) (3), and push Wiring Block (B) (4) by hand from the switch lever side toward the switch terminal side to remove it. (See Fig. 15)

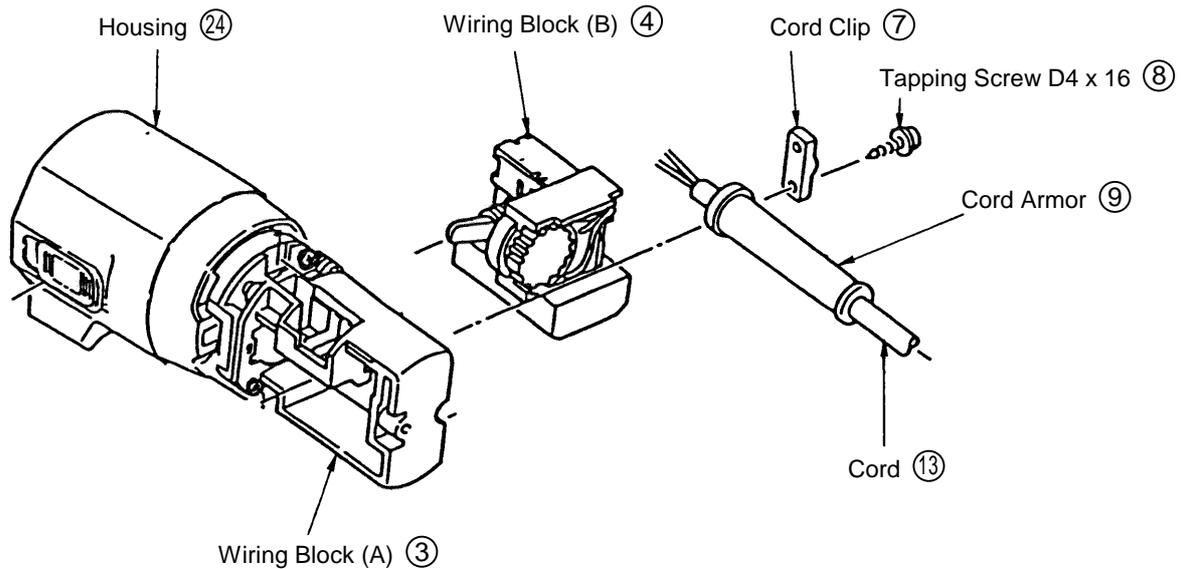


Fig. 15

(12) Removal of wiring Block (A) (3):

Remove the two D4 x 16 Tapping Screws (8), hold the Housing (24), and pull Wiring Block (A) (3) to the rear to remove it.

1-2. Reassembly:

Reassembly can be accomplished by following the disassembly procedures in reverse. However, special attention should be given to the following points.

(1) Installation of Carbon Brushes (2):

For installation of Carbon Brushes (2), please refer to the Instruction Manual.

(2) Replacement of the Cord (13):

If the Cord (13) must be replaced, ensure that the Internal Wires (5) are properly connected to the end of the new Cord (13) with the two Connectors (5) before installing the new Cord (13).

(3) Assemble Spring (C) (29) and the D3.97 Steel Ball (28) in the Change Knob (30) as shown in Fig. 16.

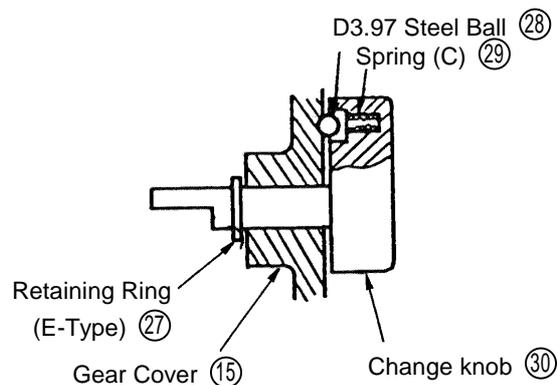


Fig. 16

(4) Carefully ensure that the two Washers (A) (46), the Orbital Cam (49), and the three Balance Weights (48) are assembled as shown in Fig. 17.

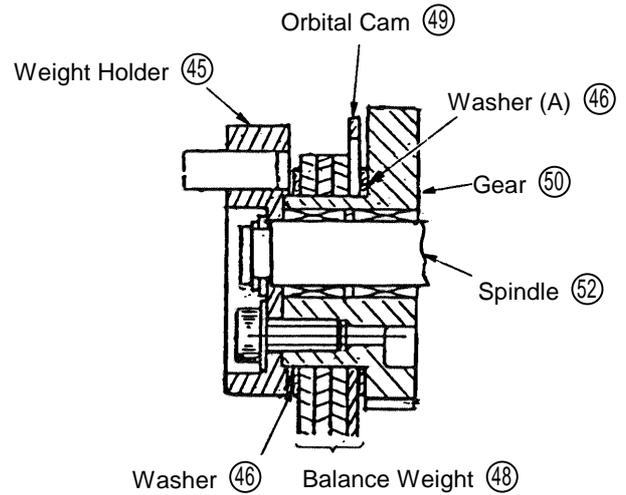


Fig. 17

(5) During reassembly, be very careful not to forget to install the Orbital Pin (63) and the Felt (64) at the lower portion of the Orbital Cam (49), as shown in Fig. 18.

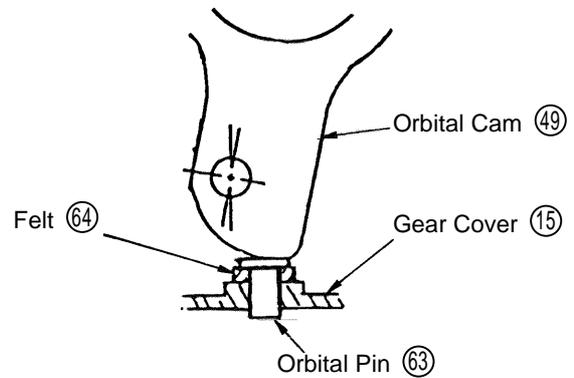


Fig. 18

(6) Grease:
 Insert 20g of Nippeco SEP-3A Grease inside the Gear Cover. Also liberally apply grease to the following portions:

- the teeth of the Gear (50)
- the slide contact portions of the Balance Weights (48)
- inside of the Needle Roller (44)
- inside of the Connector (42)
- the slide contact portions of the plunger (58)
- the Plunger Holder Ass'y (38) surfaces in sliding contact with the Connector (42)

- (7) When installing the Plunger Holder Ass'y (38) in the Upper Cover (34), ensure that the O-Ring (57) is properly mounted at the lower portion of the Plunger Holder Ass'y (38), as shown in Fig. 19. Also, ensure that the two Springs (56) are properly mounted between the Plunger Holder Ass'y (38) and the Upper Cover (34).

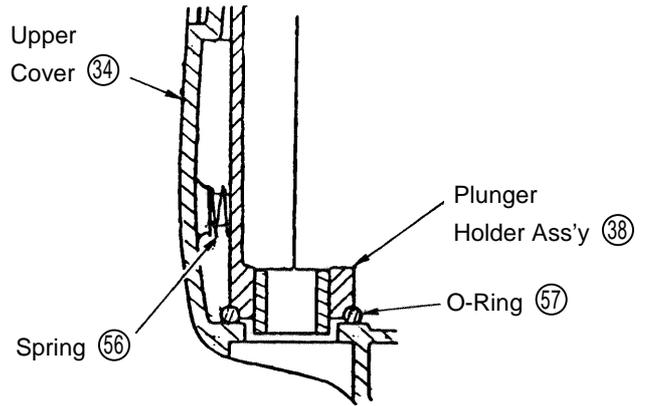


Fig. 19

- (8) After confirming that the Packing (47), Shooter (26), and Rubber Cushion (40) are properly installed, fit the Upper Cover (34) to the Gear Cover (15) so that the Connecting Piece (43) properly enters the Connector (42). (See Fig. 20)

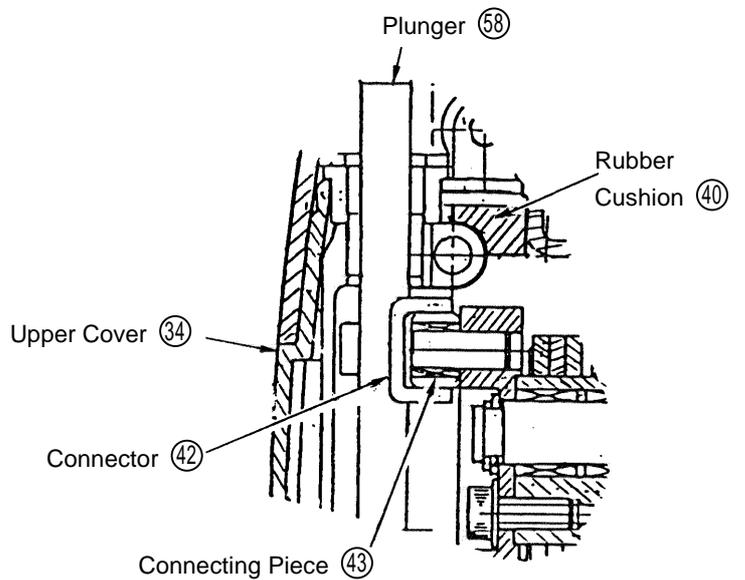


Fig. 20

- (9) Install Cover (A) (31) and Cover (B) (35) so that their pawls (two on Cover (A), one on Cover (B)) are properly inserted into the grooves provided on the Gear Cover (15). (See Fig. 21)

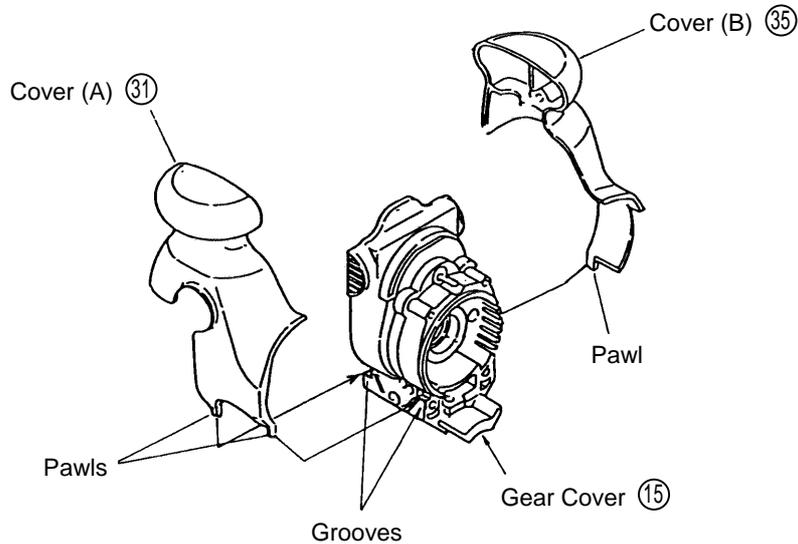


Fig. 21

(10) Screw Tightning Torques

- D4 Tapping Screw 15 - 25 kg-cm (13 - 22 in-lbs)
- M4 x 16 Machine Screw (33) 20 - 30 kg-cm (17.5 - 26 in-lbs)
- M4 x 10 Seal Lock Flat Hd. Screw (59) 20 - 30 kg-cm (17.5 - 26 in-lbs)
- M4 x 6 Hex. Socket Hd. Bolt (16) 30 - 45 kg-cm (26 - 39 in-lbs)
- M4 x 20 Hex. Socket Hd. Bolt (71) 30 - 45 kg-cm (26 - 39 in-lbs)
- M5 x 8 Nylock Flat Hd. Screw (69) 20 - 30 kg-cm (17.5 - 26 in-lbs)
- M5 x 12 Hex. Socket Hd. Bolt (62) 40 - 60 kg-cm (35 - 52 in-lbs)

1-3. Wiring Diagrams:

(1) Type CJ65S2:

For models without a Noise Suppressor, wiring is in accordance with Fig. 22. For models with a Noise Suppressor, wiring is in accordance with Fig. 23.

(2) Type CJ65VA2:

For models without a Noise Suppressor, wiring is in accordance with Fig. 24. For models with a Noise Suppressor, wiring is in accordance with Fig. 25.

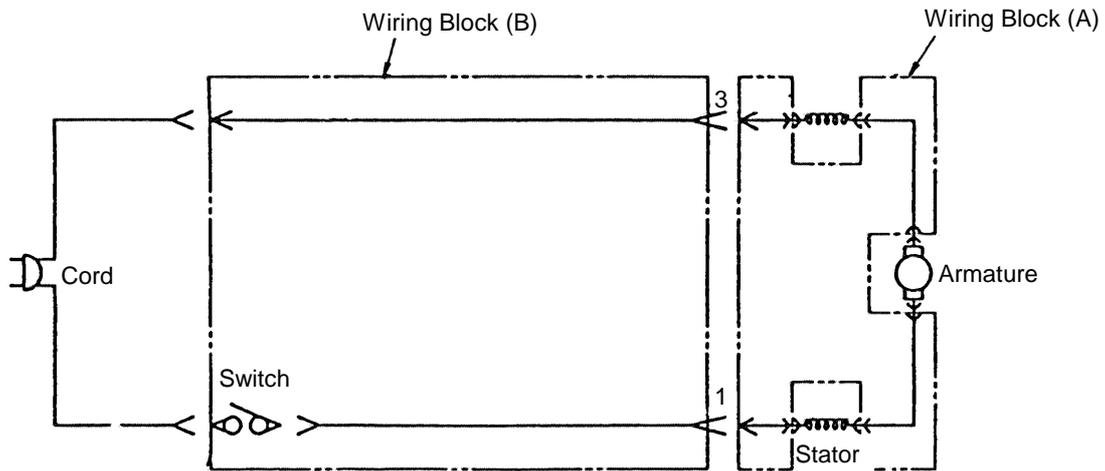


Fig. 22 CJ65S2 without Noise Suppressor

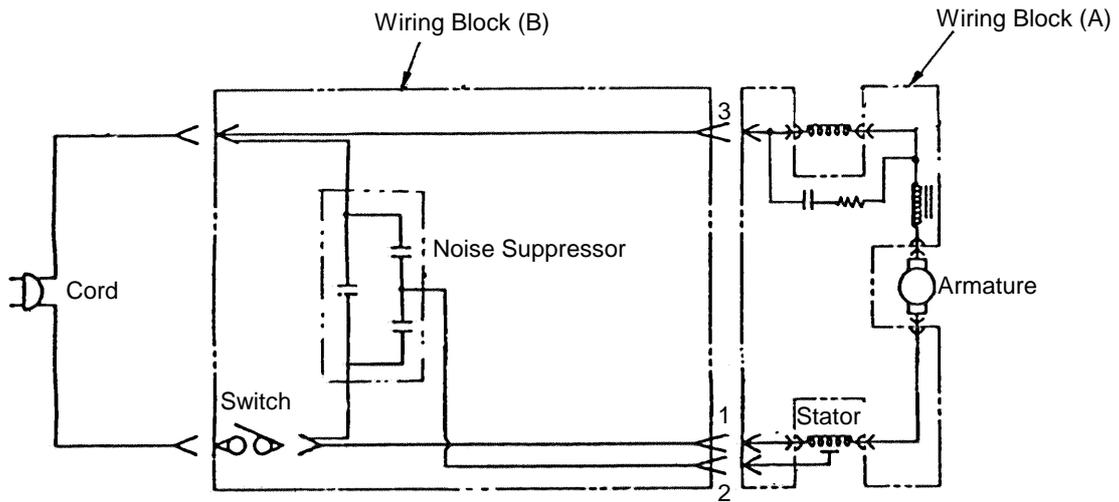


Fig. 23 CJ65S2 with Noise Suppressor

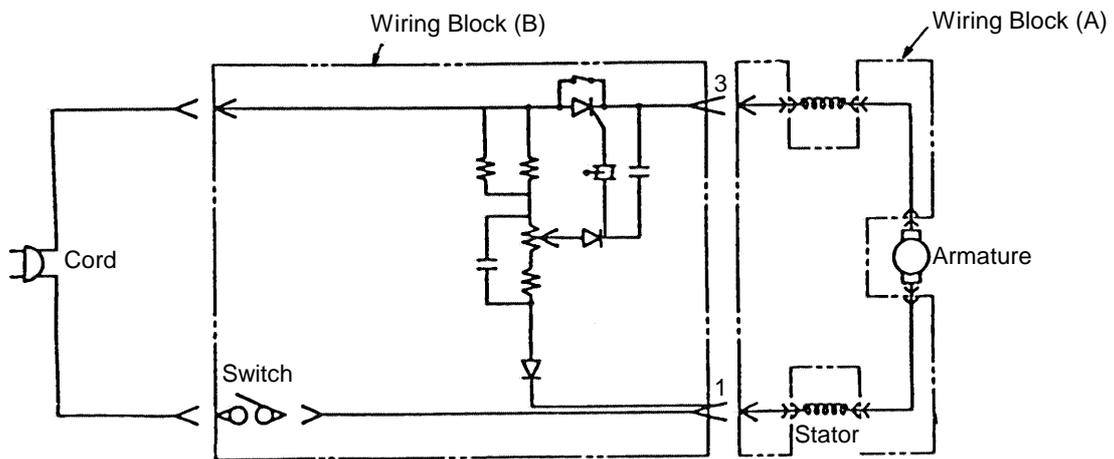


Fig. 24 CJ65VA2 without Noise Suppressor

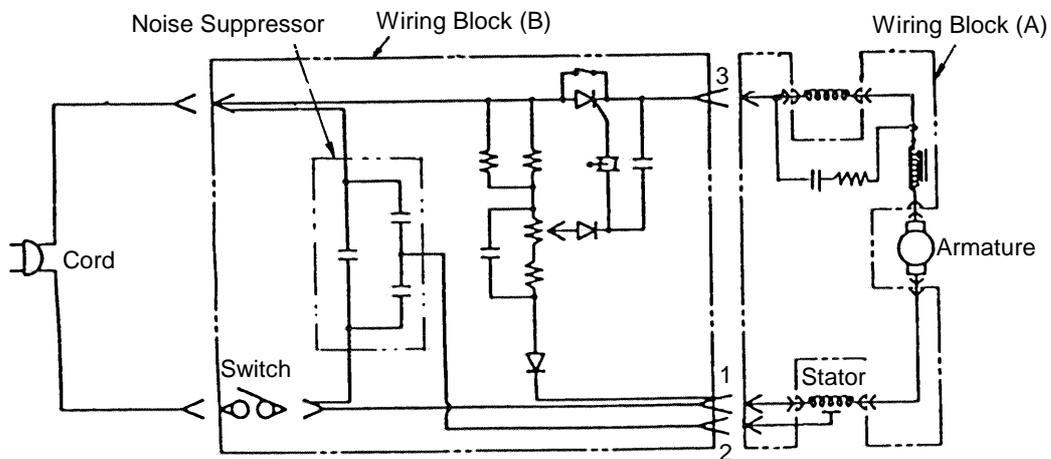


Fig. 25 CJ65VA2 with Noise Suppressor

1-4. Insulation Tests:

On completion of disassembly and repair, measure the insulation resistance and conduct insulation tests (dielectric strength test) .

Insulation Resistance: 7MΩ or more with 500V DC Megohm Tester.

Dielectric Strength:

- AC 4000V/1 minute, with no abnormalities 220V - 240V
(and 110V for U.K. products)
- AC 2500V/1 minute, with no abnormalities 110V - 127V
(except U.K. products)

CAUTION

- Ensure without fail that the insulation resistance measurement and dielectric strength test are conducted between the plugblade and some portion of the external metal frame, such as the gear cover.
Never carry out these tests between the two blades of the plug. This could cause burning out of the control element in the switch.

1-5. No-load Current Value:

After no-load operation for 30 minutes, the no-load current value should be as specified below at a frequency of 50/60Hz.

Voltage	110V	115V	120V	127V	220V	230V	240V
Current (A) Max.	2.7A	2.6A	2.5A	2.4A	1.4A	1.3A	1.2A