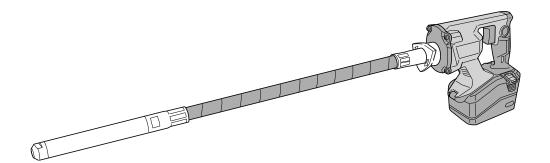
Power Tools Service Manual

PRODUCT NAME

36 V Cordless Concrete Vibrator Model UV 3628DA

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Overseas Sales Management Dept.

TROUBLESHOOTING GUIDE

NOTE: Before troubleshooting, be sure to wipe off all dust, water, and other foreign matter from the internal parts, and then dry the parts completely.

Trouble	Cause	Checking	Corrective action
1. Motor does not rotate.	Flexible shaft is locked.	Turn on the switch and check whether the switch panel indicates overload status or not. Remove the flexible ass'y and check whether the motor rotates or not.	Replace the flexible ass'y with new one.
	Stator FET PCB ass'y is inclined (improperly mounted).	Turn on the switch and check whether the switch panel indicates overload status or not. Remove the flexible ass'y and check whether the motor rotates or not.	Properly mount housing (A).(B) set according to the reassembly procedure.
	Ball bearing in the rotor ass'y is locked.	Turn on the switch and check whether the switch panel indicates overload status or not. Check whether the ball bearing in the rotor ass'y smoothly rotates or not.	Replace the rotor ass'y with new one.
	Contact failure of the magnet in the rotor ass'y	Check whether the sensor magnet in the rotor ass'y is deviated from the end face of the rotor core or not.	Replace the rotor ass'y with new one.
	Connector cables of the switch and battery terminal are improperly inserted.	Turn on the switch and check whether the indicator lamp on the switch panel lights or not. Check whether the connector cables are properly inserted or not.	Properly insert the connector cables of the switch and battery terminal.
	Faulty stator FET PCB ass'y	Check the surface of the PCB for peeling of urethane, missing of elements, or trace of dropping.	Replace the stator FET PCB ass'y.
2. Motor stops in a few seconds after starting.	Ball bearing in the flexible ass'y is faulty.	Turn on the switch and check whether the switch panel indicates overload status or not. Remove the flexible ass'y and check whether the motor stops or not.	Replace the flexible ass'y with new one.
	Ball bearing in the rotor ass'y is faulty.	Turn on the switch and check whether the switch panel indicates overload status or not. Check whether the ball bearing smoothly moves or not.	Replace the rotor ass'y with new one.
3. Mode cannot be changed.	Connector cable of the switch panel is improperly inserted.	Turn on the switch and check whether the indicator lamp on the switch panel lights or not. Check whether the connector cable is properly inserted or not.	Properly insert the connector cable of the switch panel.

Warning signals

This product features functions that are designed to protect the tool itself as well as the battery. During work, from the time the switch is being pulled and ten seconds after its release, each of the protective functions may be activated, resulting in the indicator lamp on the switch panel to blink as shown in the table below to notify the user. When any of the safeguard functions is triggered, immediately remove your finger from the switch trigger and take corrective action described in the table below.

Indicator				
lamps blink.		Safeguard function	LED light display	Corrective action
	• • ••	Overload protection	ON 0.1 second/OFF 0.1 second	Remove the cause of the overloading.
		Temperature protection	ON 0.5 second/OFF 0.5 second	Allow the tool and battery to thoroughly cool.

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 left in the main body, the motor will turn unexpectedly and could cause serious injury.

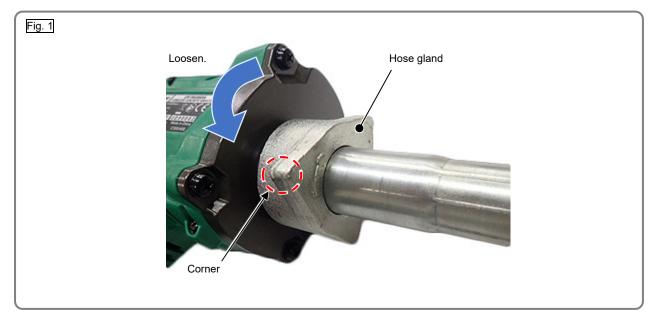
1. Precautions on disassembly and reassembly

[Bold] numbers in the description below correspond to the item numbers in the parts list and exploded assembly diagram of the Model UV 3628DA. Some abbreviated part names are used in this manual. See the parts list for the full names.

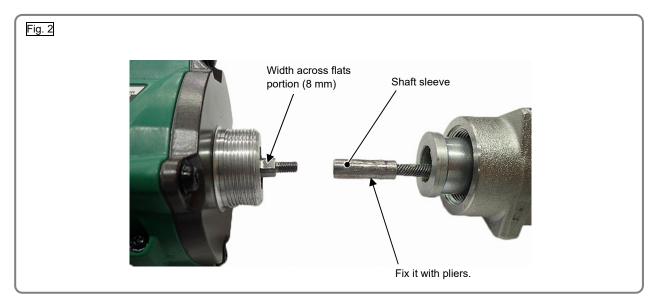
Disassembly

1. Disassembly of the flexible ass'y

(1) Wrap the hose gland with a cloth and tap the corner with a hammer to loosen it. Remove the flexible ass'y from the Front Cover [2].



(2) Fix the end of the flexible shaft (shaft sleeve) with pliers. Turn the shaft of the Rotor Ass'y **[5]** with a wrench (8 mm) fitting on its width across flats portion and remove the flexible shaft.

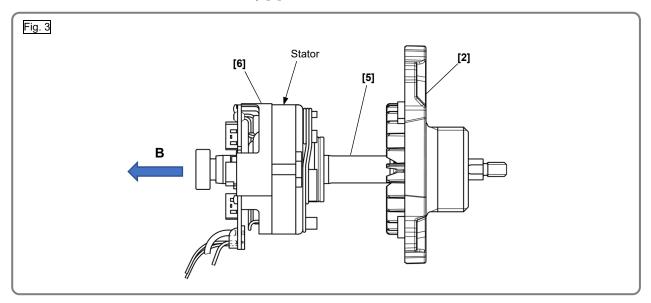


2. Disassembly of housing (A).(B) set

- (1) Remove the four Tapping Screws (W/Flange) D5 x 20 [1] from the Front Cover [2]. Remove the twelve Tapping Screws (W/Flange) D3 x 16 [8] from Housing (A).(B) Set [9]. Remove housing (B) and Battery Cover [13] from housing (A).
- (2) Remove the Front Cover [2], Rotor Ass'y [5], Stator FET PCB Ass'y [6], Switch Cover [10], and On Lock Cover [11] from housing (A).

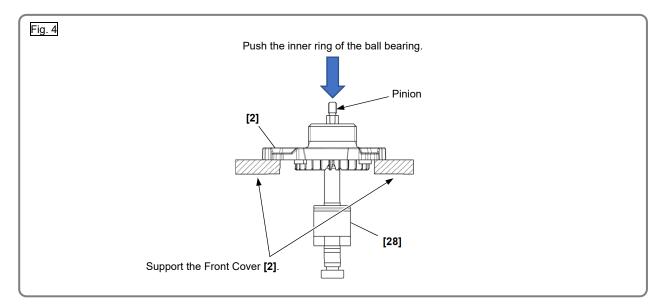
3. Removal of the rotor ass'y

The Rotor Ass'y **[5]** has strong magnetic force. Securely hold the Front Cover **[2]** with one hand and pull out the stator of the Stator FET PCB Ass'y **[6]** in "B" direction as shown below.



4. Removal of the rotor ass'y from the front cover

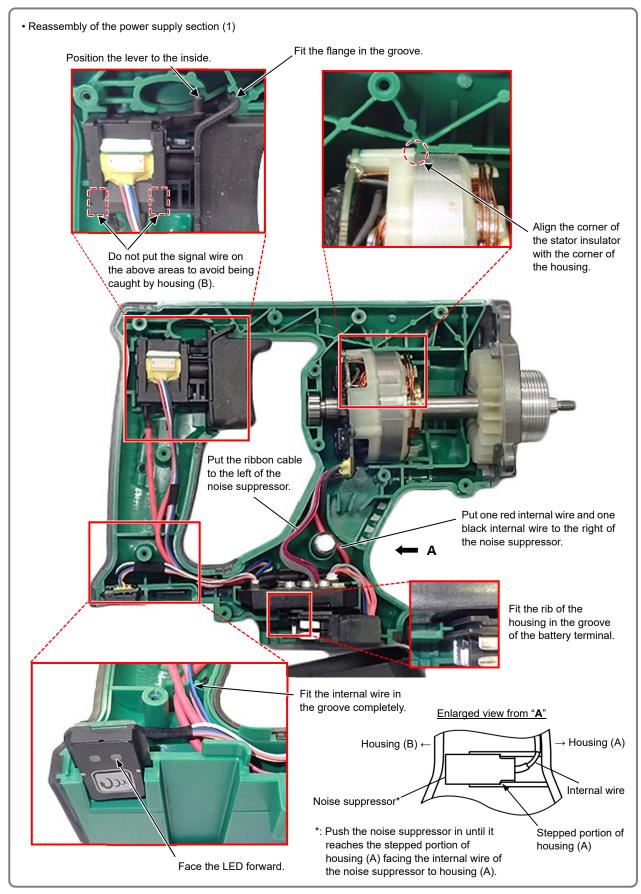
Support the Front Cover **[2]** avoiding contact with the fan of the Rotor Ass'y **[5]**. Push the inner ring of the ball bearing in the Rotor Ass'y **[5]** with a hand press to remove it.

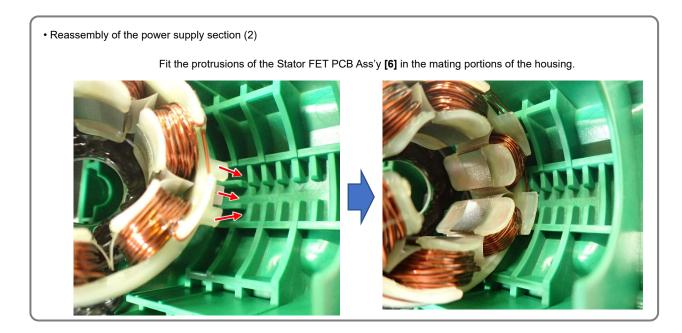


Reassembly

Conduct reassembly by reversing the disassembly procedure but note the following.

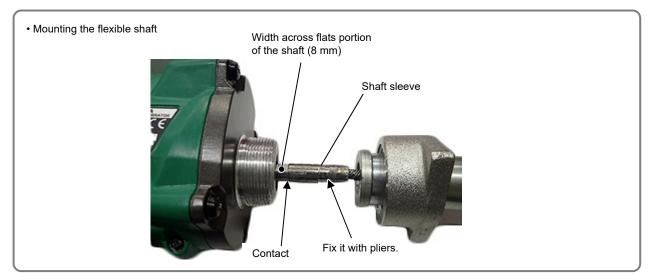
1. Reassembly of the power supply section



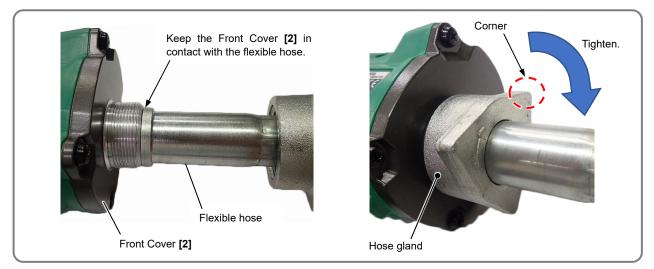


2. Mounting the flexible shaft

(1) Fix the shaft sleeve with pliers. Tighten the shaft of the Rotor Ass'y **[5]** with a wrench (8 mm) fitting on its width across flats portion until it contacts the shaft sleeve as shown in the figure below.



(2) Tighten the hose gland while keeping the Front Cover **[2]** in contact with the flexible hose. If there is any clearance between them, the tip of the flexible shaft is not fitted in the mating portion properly. Wrap the hose gland with a cloth and tap the corner with a hammer to tighten it.



Tightening torque

Item	Part name	No.	Tightening torque	
No.	Fait name	used	N•m	kgf•cm
[1]	Tapping Screw (W/Flange) D5 x 20 (Black)	4	1.3±0.3	13±3
[8]	Tapping Screw (W/Flange) D3 x 16 (Black)	12	3±0.5	30±5
—	Shaft sleeve (flexible shaft)	1	5±1	50±10
—	Hose gland (reference)	1	45±10	450±100

Checking after reassembly

Check the following after reassembly:

- (1) Check that the tool is properly turned on and off by operating the switch trigger and the on lock function is activated properly. Also check that the battery cover is smoothly opened and closed.
- (2) Check that the operating mode switches between "Normal" and "Power" with the indicator lamp lighting as shown in the table below and vibration frequency (sound of vibration) changes according to the operating mode each time the mode switch on the switch panel is pressed.

Mode	Normal	Power
Display on the switch panel		
Vibration frequency	12,000 min ⁻¹	15,200 min ⁻¹

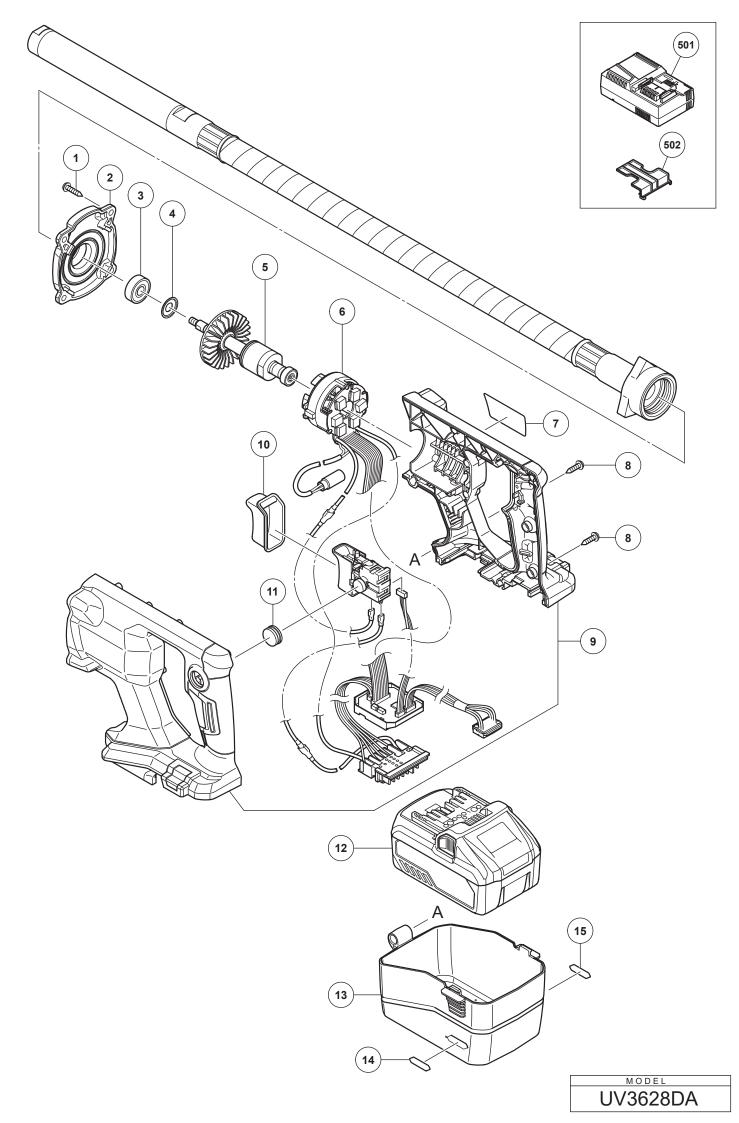
(3) Check that the battery terminal moves smoothly between housings (A) and (B) without rattling.

(4) Check that the hose gland is not loose after turning on and off the switch several times.

No-load current

The no-load current value should be 3.5 ± 1 A (39.6 VDC — equivalent to the voltage of a fully charged battery) after no-load operation for 5 minutes in the power mode.

NOTE: The flexible shaft may vibrate heavily with loud noise and the no-load current may be about 6 A during no-load operation after reassembly. This is due to the unbalanced flexible shaft and is not a fault. Heavy vibration or loud noise may be stopped after a while during operation. If it still persists, bend the flexible shaft or turn on and off the trigger switch to stabilize the rotation of the flexible shaft.



ITEM	CODE		NO.		
NO.	NO.	DESCRIPTION	USED	REMARKS	
1	302089	TAPPING SCREW (W/FLANGE) D5 X 20 (BLACK)	4		
2	376121	FRONT COVER	1		
3	629VVM	BALL BEARING 629VV	1		
4	958915	WASHER (A)	1		
5	361129	ROTOR ASS'Y	1		
6	341067	STATOR FET PCB ASS'Y	1		
7		NAME PLATE	1		
8	313687	TAPPING SCREW (W/FLANGE) D3 X 16 (BLACK)	12		
9	376120	HOUSING (A).(B) SET	1		
10	376123	SWITCH COVER	1		
11	376124	ON LOCK COVER	1		
12	372120	BATTERY BSL 36B18 (EUROPE, AUS, NZL)	1	INCLUD. 502	
13	376122	BATTERY COVER	1		
14	373913	MV LABEL (A)	1		
15	373914	MV LABEL (B)	1		
	STANDARD ACCESSORIES				
501		CHARGER (MODEL UC 18YSL3)	1		
502	329897	BATTERY COVER	1		