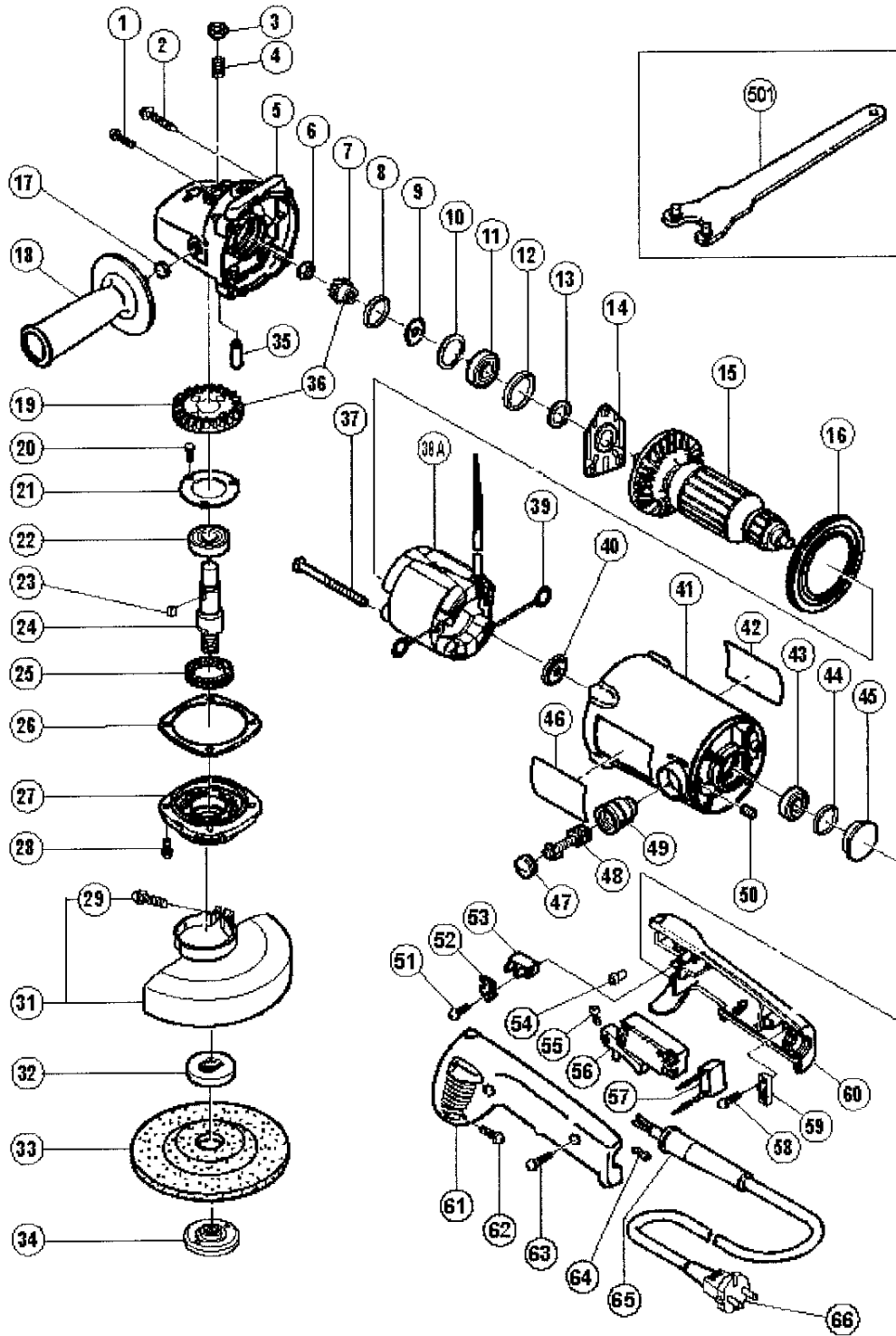


## ELECTRIC TOOL PARTS LIST

■ DISC GRINDER  
Model G 13SC2

2005 • 6 • 1  
(E1-3)



## PARTS

G13SC2

ITEM No.	CODE No.	DESCRIPTION	No. USED	REMARKS	
1	303-255	SEAL LOCK SCREW (W/SP. WASHER) M4X10	3		
2	305-507	TAPPING SCREW (W/FLANGE) D5X30	4		
3	306-888	PUSHING BUTTON	1		
4	306-889	SPRING	1		
5	315-048	GEAR COVER ASS'Y	1	INCLUD.3,4,17,35	
6	949-568	LOCK NUT M8 (10 PCS.)	1		
7	315-084	PINION	1		
8	315-055	SEAL RING (A)	1		
9	315-056	WASHER (B)	1		
10	315-054	WASHER (A)	1		
11	620-0DD	BALL BEARING 620DDCMPS2L	1		
12	315-053	RUBBER RING (A)	1		
13	315-052	FELT PACKING (B)	1		
14	315-051	BEARING COVER (B)	1		
*	15	360-433U	ARMATURE ASS'Y 110V-115V	1	INCLUD,11,13,40,43
*	15	360-433E	ARMATURE 220V-230V	1	
*	15	360-433F	ARMATURE 240V	1	
16	315-046	FAN GUIDE	1		
17	315-049	FELT WASHER	1		
18	994-322	SIDE HANDLE	1		
19	315-085	GEAR	1		
20	987-201	SEAL LOCK SCREW (W/SP. WASHER) M4X10	3		
21	937-077	BEARING COVER (A)	1		
22	620-2DD	BALL BEARING 6202DDCMPS2L	1		
23	940-533	FEATHER KEY 3X3X10	1		
*	24	315-088	SPINDLE	1	
*	24	315-065	SPINDLE	1	FOR THA
*	24	315-087	SPINDLE	1	FOR USA,CAN
25	315-062	FELT PACKING (A)	1		
26	315-060	SEAL PACKING	1		
27	315-061	PACKING GLAND	1		
28	315-636	SEAL LOCK SCREW (W/SP.WASHER)M5X14(BLACK)	1		
29	995-096	MACHINE SCREW (W/WASHERS) M5X20 (BLACK)	1		
31	320-213	WHEEL GUARD ASS'Y	1	INCLUD.29	
*	32	937-907Z	WHEEL WASHER (A)	1	
*	32A	937-928Z	WHEEL WASHER (A) FOR D16 HOLE	1	FOR THA,USA,CAN
33	316-822	D. C. WHEELS 125MM A36Q (25 PCS.)	1		
*	34	937-909Z	WHEEL NUT M14X2	1	
*	34	994-155	WHEEL NUT M16X2	1	FOR THA

\*ALTERNATIVE PARTS

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## PARTS

G13SC2

ITEM No.	CODE No.	DESCRIPTION	No. USED	REMARKS
* 34	937-923P	WHEEL NUT 5/8"-11UNC	1	FOR USA,CAN
35	315-050	LOCK PIN	1	
36	315-083	GEAR ASS'Y	1	INCLUD.7,19
37	961-501	HEX. HD. TAPPING SCREW D5X60	2	
* 38	340-383C	STATOR ASS'Y 110V-115V	1	INCLUD.39
* 38	340-383E	STATOR ASS'Y 220V-230V	1	INCLUD.39
* 38	340-383F	STATOR ASS'Y 240V	1	INCLUD.39
* 38	340-383G	STATOR ASS'Y 230V	1	INCLUD.39 FOR NZL
* 38A	340-383J	STATOR ASS'Y 110V-115V	1	INCLUD.39 FOR TPE
39	930-703	BRUSH TERMINAL	2	
40	315-047	DUST SEAL	1	
41	315-090	HOUSING ASS'Y	1	INCLUD.44,45,49,50
42		NAME PLATE	1	
43	608-VVM	BALL BEARING 608VVC2PS2L	1	
44	315-637	RUBBER RING	1	
45	315-069	BEARING BUSHING	1	
46		HITACHI LABEL	1	
47	945-161	BRUSH CAP	2	
48	999-043	CARBON BRUSH (1 PAIR)	2	
49	958-900	BRUSH HOLDER	2	
50	985-114	HEX. SOCKET SET SCREW M4X6	2	
* 51	305-720	TAPPING SCREW (W/FLANGE) D4X12	1	FOR SIN
* 52	315-086	HOLDER PLATE	1	FOR SIN
* 53	938-307	PILLAR TERMINAL	1	FOR SIN
* 54	959-140	CONNECTOR 50091 (10 PCS.)	1	
* 55	311-741	TERMINAL	1	FOR NZL,AUS,TPE
* 56	313-278	SWITCH (1P SCREW TYPE) W/LOCK	1	
* 56	315-102	SWITCH (1P SCREW TYPE) W/LOCK	1	FOR USA,CAN
* 56	315-101	SWITCH (1P SCREW TYPE) W/O LOCK	1	FOR NZL,GBR
* 56	320-098	SWITCH (1P SCREW TYPE) W/O LOCK	1	FOR USA,CAN
* 57	930-039	NOISE SUPPRESSOR	1	FOR NZL,AUS
58	984-750	TAPPING SCREW (W/FLANGE) D4X16	2	
59	937-631	CORD CLIP	1	
60	315-063	HANDLE (A)	1	
61	315-064	HANDLE (B)	1	
62	302-089	TAPPING SCREW (W/FLANGE) D5X20 (BLACK)	4	
63	302-086	TAPPING SCREW (W/FLANGE) D4X20 (BLACK)	2	
64	980-063	TERMINAL	1	FOR CORD
* 65	953-327	CORD ARMOR D8.8	1	

\*ALTERNATIVE PARTS

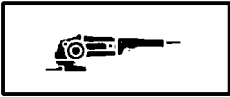
## PARTS

G13SC2

ITEM No.	CODE No.	DESCRIPTION	No. USED	REMARKS
* 65	938-051	CORD ARMOR D10.1	1	
* 66	500-212Z	CORD	1	(CORD ARMOR D10.1)
* 66	500-234Z	CORD	1	(CORD ARMOR D8.8)FOR INA
* 66	500-423Z	CORD	1	(CORD ARMOR D8.8)FOR SIN
* 66	500-439Z	CORD	1	(CORD ARMOR D10.1)FOR AUS,NZL
* 66	500-434Z	CORD	1	(CORD ARMOR D8.8)FOR USA,CAN

## STANDARD ACCESSORIES

ITEM No.	CODE No.	DESCRIPTION	No. USED	REMARKS
501	937-913Z	WRENCH	1	
601	994-325	DIAMOND WHEEL (SEGMENT) 125MM-D22.2 HOLE	1	FOR CONCRETE
602	994-326	DIAMOND WHEEL 125MM-D22.2 HOLE	1	WAVE SHAPE TYPE FOR CONCRETE
603	994-327	DIAMOND WHEEL (SEGMENT) 125MM-D22.2 HOLE	1	FOR ABRASIVE MATERIALS
604	994-328	DIAMOND WHEEL (MORTAR RAKING) 125MM-D22	1	
605	994-329	DIAMOND WHEEL (MORTAR RAKING) 125MM-D22	1	
606	307-007	DIAMOND WHEEL (SEGMENT) 125MM-D22.2 HOLE	1	FOR CONCRETE
607	310-392	DIAMOND WHEEL (SEGMENT) 125MM-D22 HOLE	1	
* 608	937-907Z	WHEEL WASHER (A)	1	FOR DIAMOND WHEEL FOR AUS
610	994-309	HANDLE JOINT	1	
611	310-337	SUPER WASHER	1	



# MODELS G 13SC2/G 15SA2

## 1. PRECAUTIONS IN DISASSEMBLY AND REASSEMBLY

The **[Bold]** numbers in the descriptions below correspond to the item numbers in the Parts List and exploded assembly diagram for G 13SC2 and the **<Bold>** numbers to those in the Parts List and exploded assembly diagram for G 15SA2.

### 1-1. Disassembly of the Armature Ass'y

- (1) Loosen the Screw M5 x 20 **[29]** **<29>**, and remove the Wheel Guard Ass'y **[31]** **<31>**.
- (2) Loosen the two Brush Caps **[47]** **<47>**, and take out the Carbon Brushes **[48]** **<48>**.
- (3) Remove the four Tapping Screws D5 x 30 **[2]** **<2>**.  
The Armature Ass'y' **[15]** **<15>** can then be taken out simultaneously with the Gear Cover Ass'y **[5]** **<5>**, Packing Gland **[27]** **<27>**, and related parts.
- (4) Remove the four Seal Lock Screws M5 x 14 **[28]** **<28>**, and remove the Packing Gland **[27]** **<27>**, and related parts.
- (5) After removing in the three Seal lock Screws M4 x 10 **[1]** **<1>**, the Armature Ass'y **[15]** **<15>** can be extracted together with the Bearing Cover (B) **[14]** **<14>**, and related parts.
- (6) Carefully wrap the Armature Ass'y **[15]** **<15>** with a soft, clean rag to protect it from being damaged, and clamp it securely in a vise. Then remove the M8 Lock Nut **[6]** **<6>**, and extract the Pinion **[7]** **<7>**.
- (7) As illustrated in Fig. 3, the Ball Bearing **[11]** **<11>** can be removed from the Armature Ass'y **[15]** **<15>** by utilizing a J-204 Bearing Puller (special repair tool, Code No.970982).  
After the Ball Bearing has been removed, the Bearing Cover (B) **[14]** **<14>** can be easily taken off.

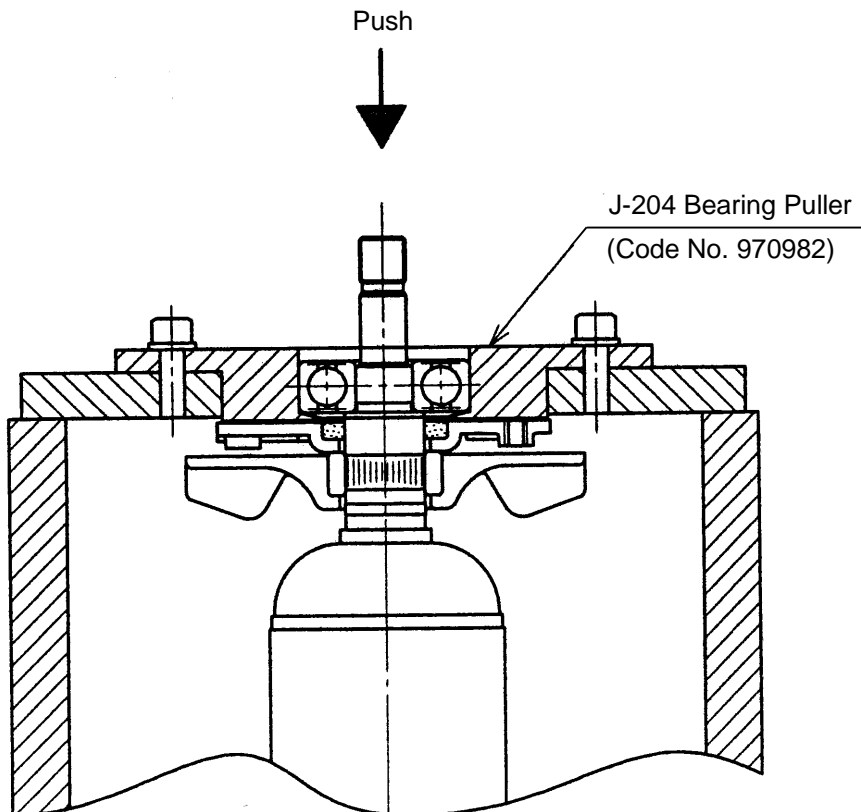


Fig. 3

## 1-2. Disassembly of the Stator Ass'y

- (1) After taking out the Armature Ass'y [15] <15>, loosen the four Tapping Screws D5 x 20 [62] <60>, and the two Tapping Screws D4 x 20 [63] <61> and remove the Handle (A) [60] <58>, Handle (B) [61] <59>.
- (2) Disconnect the lead wires of the Stator Ass'y [38] <38> from the Trigger Switch [56] <55>. Then, disconnect the lead wires of the Noise Suppressor [57], and the Connector for [54] <54> or the Pillar Terminal [53] <53>.
- (3) Disconnect the Brush Terminal Ass'ys [39] <39> from the Brush Holders [49] <49> and take out Bearing Bushing [45] <45>.
- (4) Finally, loosen the two Hexagon Hd. Tapping Screws D5 x 60 [37] <37>, and the Stator Ass'y [38] <38> can be taken out of the Housing Ass'y [41] <41>. If the Stator Ass'y [38] <38> cannot be easily taken out of the Housing Ass'y [41] <41>, disassembly can be facilitated by heating the Housing Ass'y to a temperature of approximately 60 °C (140 °F) with an appropriate heating device.

## 1-3. Disassembly of the Gear

- (1) Loosen the four Seal Lock Screws M5 x 14 [28] <28>, and remove the Packing Gland [27] <27> together with the Spindle [24] <24>, and Gear [19] <19> from the Gear Cover Ass'y [5] <5> as a unit.
- (2) When it is necessary to remove the Gear [19] <19> from the Spindle [24] <24>, it is highly recommended that the special repair tools described below be utilized.

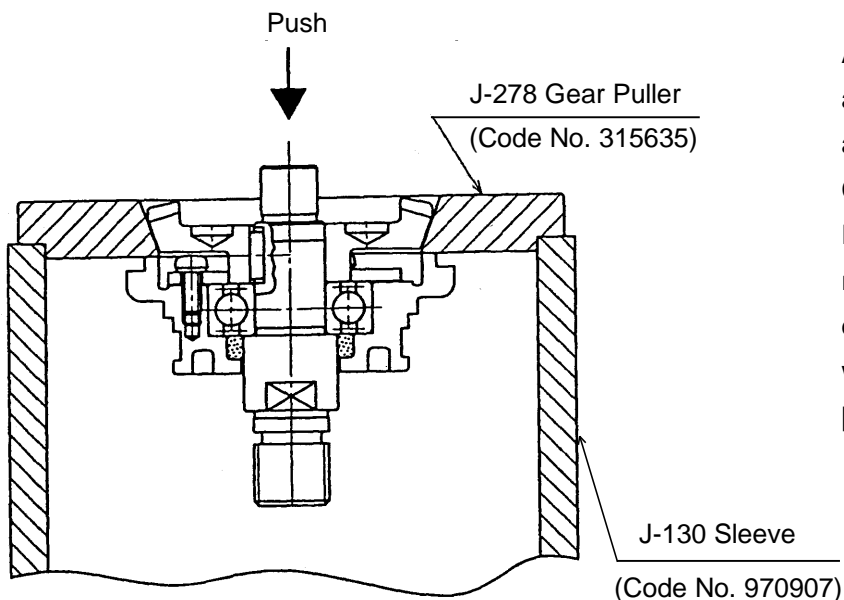


Fig. 4

As illustrated in Fig. 4, support the angled surface of the Gear [19] <19> with a J-278 Gear Puller (special repair tool, Code No. 315635), rest the J-278 Gear Puller on the J-130 Sleeve (special repair tool, Code No. 970907), and push down on the tip of the Spindle [24] <24> with a hand press to remove the Gear [19] <19>.

## 1-4. Reassembly

Perform reassembly in the reverse order of disassembly while observing the given precautions and taking care of the following points.

- (1) After disassembly, thoroughly remove old grease from the inside of the Gear Cover Ass'y [5] <5>, and insert 25 g of new grease (Nippeco JF-375, Code No.930036, is recommended.) prior to reassembly. When inserting grease, apply it to the pinion gear teeth surfaces, and to the needle bearing inside the gear cover.

(2) When replacing the ball bearing on the commutator side of the Armature Ass'y [15] <15>, be very careful to ensure that the Dust Seal [40] <40> is assembled in the proper direction. The Dust Seal [40] <40> plays an important role in dustproofing of the Ball Bearing, and must be replaced with a new one if disassembled.

(3) Apply Three Bond TB 1406 Screw Locking Agent to the following screws.

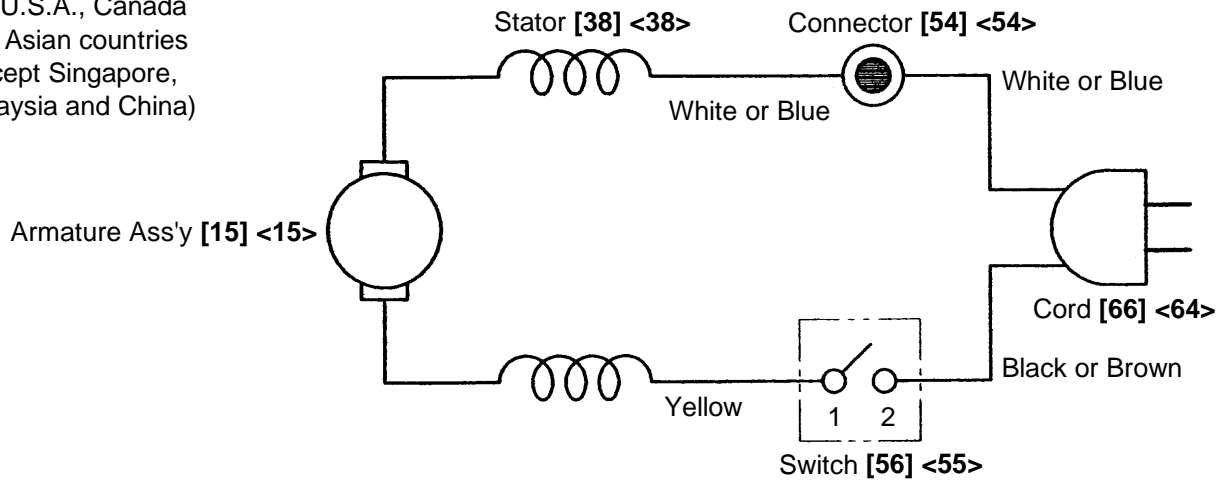
- \* Three Seal Lock Screws M4 x 10 [1] <1> which fix Bearing Cover (B) [14] <14> in place.
- \* Three Seal Lock Screws M4 x 10 [20] <20> which fix Bearing Cover (A) [21] <21> in place.
- \* Four Seal Lock Screws M5 x 14 [28] <28> which fix Packing Gland [27] <27> in place.

### 1-5. Tightening Torque

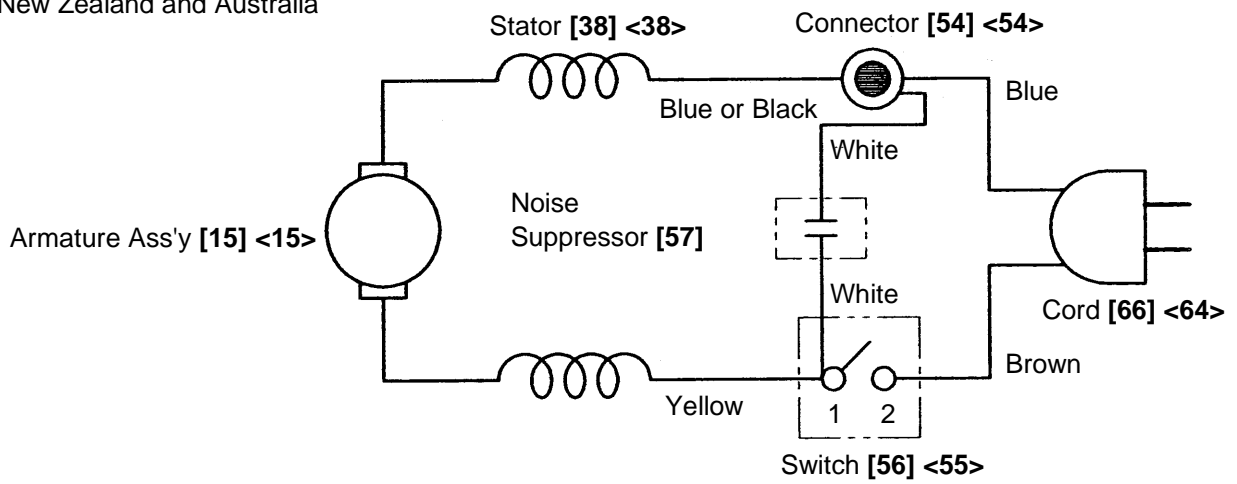
D4 Tapping Screw (W/Flange) [58] <56> [63] <61> [51] <51>	.....	2.0 ± 0.5 Nm ( 20 ± 5 kgfcm, 1.5 ± 0.4 ft-lbs)
D5 Tapping Screw [62] <60> [2] <2>	}	.....
D5 Hex. Tapping Screw [37] <37>		
M4 Seal Lock Screw (W/Sp. Washer) [20] <20> [1] <1>	.....	1.8 ± 0.4 Nm ( 18 ± 4 kgfcm, 1.3 ± 0.3 ft-lbs)
M5 Seal Lock Screw (W/Sp. Washer) [28] <28>	.....	3.4 ± 0.7 Nm ( 35 ± 7 kgfcm, 2.5 ± 0.5 ft-lbs)
M8 Lock Nut [6] <6>	.....	13.7 ± 2.0 Nm (140 ± 20 kgfcm, 10.1 ± 1.5 ft-lbs)

## 1-6. Wiring Diagrams

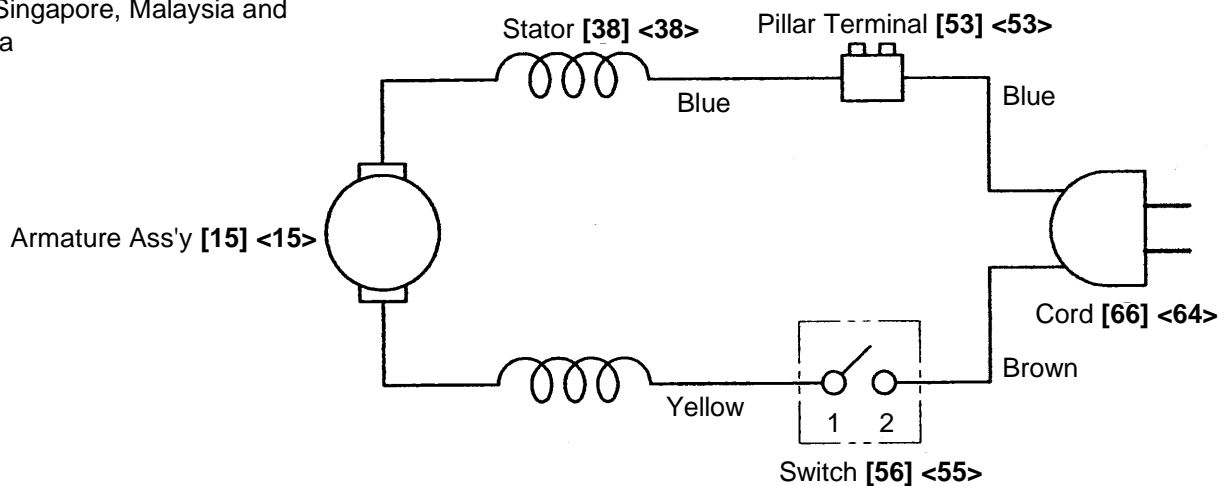
For U.S.A., Canada and Asian countries (except Singapore, Malaysia and China)



For New Zealand and Australia



For Singapore, Malaysia and China





### 1-7. Insulation Tests

On completion of reassembly after repair measure the insulation resistance and conduct the dielectric strength test.

Insulation resistance : 7 MΩ or more with DC 500 V megohm tester

Dielectric strength : AC 4,000 V for 1 minute, with no abnormalities.....220 V - 240 V

AC 2,500 V for 1 minute, with no abnormalities.....110 V - 127 V

### 1-8. Gear Backlash Value

Gear backlash should be maintained at a value of 2 mm or less measured at the outer edge of a fresh depressed center wheel.

### 1-9. No-Load Current Values

After no-load operation for 30 minutes, the no-load current value should be as follows :

Voltage (V)	110	115	220	230	240
Current (A) max.	5.5	6.0	3.0	3.0	3.0

## 2. STANDARD REPAIR TIME (UNIT) SCHEDULES

MODEL	Variable		10	20	30	40	50	60 min.
	Fixed							
G 13SC2		Work Flow						
G 15SA2		Wheel Guard Ass'y				Housing Ass'y Stator Ass'y		
	General Assembly			Pinion Armature Ass'y Gear Cover Ass'y Seal Ring (A) Washer (A) Washer (B) Ball Bearing (6200DDUCM) Rubber Ring (A) Felt Packing (B) Bearing Cover (B) Dust Seal Ball Bearing (608VVMC2)				
				Pushing Button Lock Pin Gear Ass'y Seal Packing	Bearing Cover (A) Ball Bearing (6202DDUCM) Felt Packing (A)			
		Handle (A) Handle (B) Carbon Brush x 2  Switch Cord Cord Armor		Brush Holder x 2	Packing Gland Spindle Feather Key (3 x 3 x 10)			