



**MICRO COMPUTER CONTROLLED
CONCRETE VIBRATOR**

VH / VC

V-SERIES

OPERATION MANUAL

Thank you for purchasing MIKASA micro computer controlled concrete vibrator.

For safe and correct use of the product, please read this manual beforehand.

After reading, please keep this manual for future reference.



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102-01001

MICRO COMPUTER CONTROLLED CONCRETE VIBRATOR

INTRODUCTION

We thank you for purchasing MIKASA Micro Computer Controlled Concrete Vibrator. For your proper and safe operation of this equipment, please read this manual carefully.

1. Feature

- 1) Because the rotation of vibrator's motor is controlled with a micro computer built-in the controller, the vibration frequency will not drop regardless of fluctuation in load. In case its is overloaded however, adjustment will be made via output voltage to protect the motor.
- 2) This machine can be operated on Standard AC power (VC-1A, VCW-1A and 2B on 80V~120V single phase, VC-1AII on 200V~240V single phase)
- 3) Motor being of high efficiency type, it is small in size and light in weight for easy handling.
- 4) In case of over-current, micro computer of controller detect it and cause the operation to stop. At this time, for verification purpose, the micro computer will attempt to start the motor again to make sure that it functions normally, thereby protecting the motor as well as controller.
- 5) New design of vibration head helps reduce propagation of vibration to operator's hand substantially.

2. General information

- 1) Controller is designed either for use with one vibrator or two. It operates only for designated number of vibrator.
- 2) Controller has an input cord of 2 square mm x 5m (complete with earthing). For extension, select from following chart:

Maximum extensible length of cord for power supply

Type	VC-1A				VC-2B/VCW-1A			VC-1AII			
Cord size(mm ²)	2	3.5	5.5	8	3.5	5.5	8	1.25	2	3.5	5.5
Cord length(m)	30	50	80	120	25	40	60	40	60	110	160

- 3) For extension of the Vibrator's cord between Vibrator and Controller, use MIKASA's genuine extension cord. It allows extension up to 50 meters.
- 4) Vibrator will cool down when inserted into concrete. Avoid any unnecessary idling in the air.
- 5) Capacity of power generator should be 1 KW or greater for controller of VC-1A or VC-1AII, and 2KW or greater for VC-2B or VCW-1A. Make sure that available voltage is 200V~240V for VC-1AII.

SPECIFICATIONS

VH-TYPE

MODEL	Head Dimensions dia x L(mm)	Hose length (m)	Cable length (m)	Voltage (V)	Cycle (hz)	Current (A)	Amplitude (mm)	v.p.m.	Weight (kg)
VH-32B	32 x 356	4/6	15/ 20	58	400	3.0	1.7	12,000	8.9/10.0
VH-42B	43 x 327	4/6	15/ 20	58	400	5.0	2.0	12,000	10.7/12.2
VH-52B	52 x 347	4/6	15/ 20	58	400	7.0	2.3	12,000	12.1/13.6

VHS/VHB-TYPE

MODEL	Head Dimensions dia x L(mm)	Pipe length (m)	Cable length (m)	Voltage (V)	Cycle (hz)	Current (A)	Amplitude (mm)	v.p.m.	Weight (kg)
VHS-32B	32 x 355	2.59	15	58	400	3.0	1.7	12,000	11.0
VHS-42B	43 x 327	3.34	15	58	400	5.0	2.0	12,000	16.0
VHB-32B	32 x 355	1.69	15	58	400	3.0	1.7	12,000	11.0
VHB-42B	43 x 327	1.72	15	58	400	5.0	2.0	12,000	16.0

VHW-TYPE

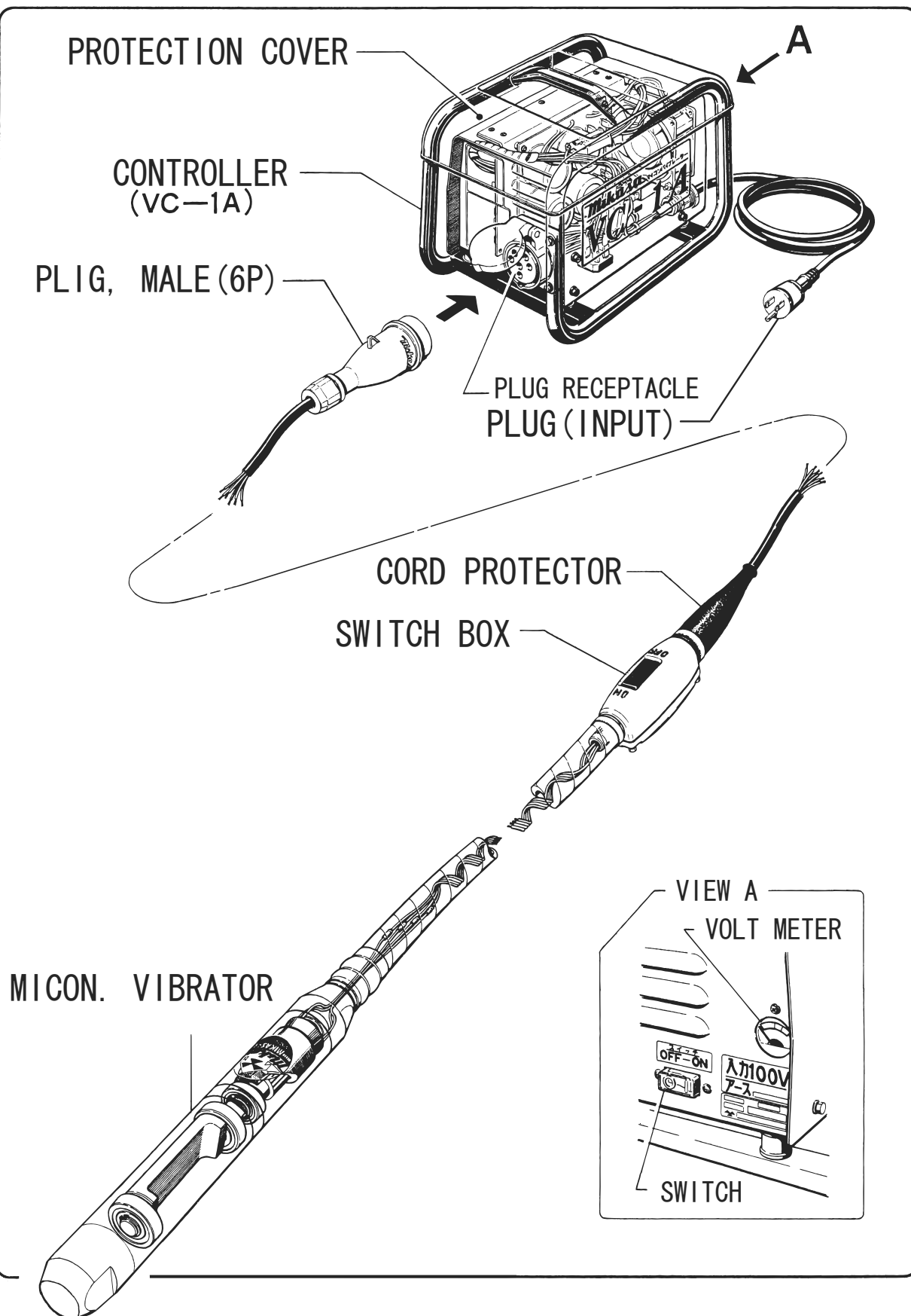
MODEL	Head dimensions dia x L(mm)	Hose length (m)	Cable length (m)	Voltage (V)	Cycle (hz)	Current (A)	Amplitude (mm)	v.p.m.	Weight (kg)
VHW-62A	61 x 434	4-6	15-20	58	360	10.0	2.5	10,800	16.2/18.0
VHW-72A	72 x 401	4-6	15-20	58	360	11.0	2.1	10,800	18.2/20.0

VC-TYPE CONTROLLER

MODEL	Dimensions LxWxH(mm) weight(kg)	Input Primary voltage(V)	Current (A)	Input (KVA)	Cycle (hz)	Output Primary Voltage(V)	Current (KVA)	Cycle (hz)	Numbers of receptacles
VC-1A	300x221x220 4.6kg	80~120V single phase	10	1.0	50/60	58	0.7	400	1
VC-2B	378x279x244 12.5kg	80~120V single phase	20	2.0	50/60	58	1.4	400	2
VCW-1A	380x275x240 7.5kg	80~120V single phase	20	2.0	50/60	58	1.3	360	1
VC- 1A II	378x279x244 7.9kg	200~240V single phase	5/4.6	1.0	50/60	58	0.7	400	1

The specifications are subject to change without notification.

PARTS AND COMPONENT



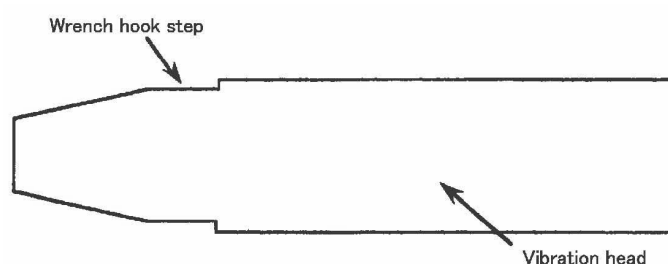
MICRO COMPUTER CONTROLLED CONCRETE VIBRATOR

3. Operation

- 1) Make sure that power supply is rated 80-120V, 50/60Hz, single phase for VC-1A and VC-2B.
- 2) After making sure that power switch for the controller is turned off, connect the input cord to power supply and do not forget to connect earthing either. (In case of VC-1A and VC-2B, make sure that input voltmeter remains inside the green zone of 80~120V. Input voltmeter should point within 180~240V range for VC-1AII.)
- 3) After making sure that switch of vibrator is turned off, connect plug. Be sure to insert the plug completely, because, if it loosens during operation, open phase may result, causing the vibration to stop.
- 4) Turn on the controller switch.
- 5) Turn on the vibrator switch.
- 6) If, while controller is running, over-current or any other trouble including open phase or short circuit should develop, protective circuit will actuate to stop the vibrator. After turning off the vibrator switch, turn off the controller switch and locate cause for trouble.
- 7) Be sure to perform warm-up run to secure constant flow of electric current. (This should be observed during winter season in particular.)
- 8) Whenever you suspend your work, be sure to turn off the vibrator switch.
- 9) After completion of work, first turn off the vibrator switch, followed by turning off the controller switch and disconnecting the input plug.
- 10) During work or moving, avoid pulling or lifting the micron vibrator set forcibly with cable cord only.

4. Maintenance and inspection

- 1) Remove any concrete deposited to vibrator head, hose, switch box, cable cord or plug before it sets and hardens.
- 2) Periodically check for loosened thread or belt and for cracked hose or cable cord and replace, at earlier stage, should any crack in hose or cable cord be discovered.
- 3) Check for wear of vibrator head form time to time. From appearance, replace it if and when wrench hook step has worn out.



PARTS REMARK INDEX

How to read the marks and remarks used in this parts book.

Section 1 : Explanation of Code Use In “MRK” Column

OO : Interchangeable between the new part and the old one.

XX : Not Interchangeable between new and old.

OX : New part is usable for the old machine but the old part is not usable for the new machine.

XO : The old part is usable for the new machine but the new part is not usable for the old machine.

Note : In case of the lack of interchangeability between the new part and old part, a new part may be used by replacing all other parts found in the assembly. In this case, refer to section 2 for instruction on identifying other parts involved in a new assembly.

AD : Newly established (added)

DC : Suspended (discontinued)

NC : Part number changed

QC : Quantity used has been changed

NS : Not supplied individually but supplied in an assembly or a group.

AS : Special part designed to allow interchangeability between new and old part.

CR : Correction

Section 2 : Items Found In “Remark” Column

Serial Numbers — Where indicated, this indicates a serial number range (inclusive) where a particular part is used.

Model Number — Where indicated, this shows that the corresponding part is utilized only with this specific model number or model number variant.

or * : All parts with the same number following # or * belong to the same assembly. This part cannot be interchanged individually with any other assemblies to replace an old part (indicated by #), with a new part (indicated by *), then all other parts of that assembly must be replaced with new ones.

Note : If more than one of the same reference number is listed, the last one listed indicates newest (or latest) part available.

Section 3: Example

REF NO.	PART NO.	PART NAME	QTY	MRK	REMARKS
457(1)	5122-09230	Hinge Metal, Upper/24g	1		-1070 #3 (5)
457(2)	5072-09420	Hinge Metal, Upper M16	1	OX(3)	U1071-(6) * 3(7)

(1) Old part

(2) New part

(3) New part usable with old machine, but old part not usable with new machine (reference section 1).

(4) Old part number is used through this machine serial number.

(5) Old part, used in an assembly with other parts marked with #3. To use this part on a new machine, all other parts in this assembly must be replaced with old ones.

(6) New part put into use starting with this serial number and is still current.

(7) New part used in an assembly with other parts marked *3, to use this part as a replacement for an old part, all other *3 marked parts must be changed at the same time.

Section 4: Items Found In “MK2” Column

(only for suspended products)

! OO (“OO” is shown in figure) : The part shown in lower line is supplied.

! SD : Not available due to termination of production.

! NS : Not supplied individually, but supplied in an assembly or a group.

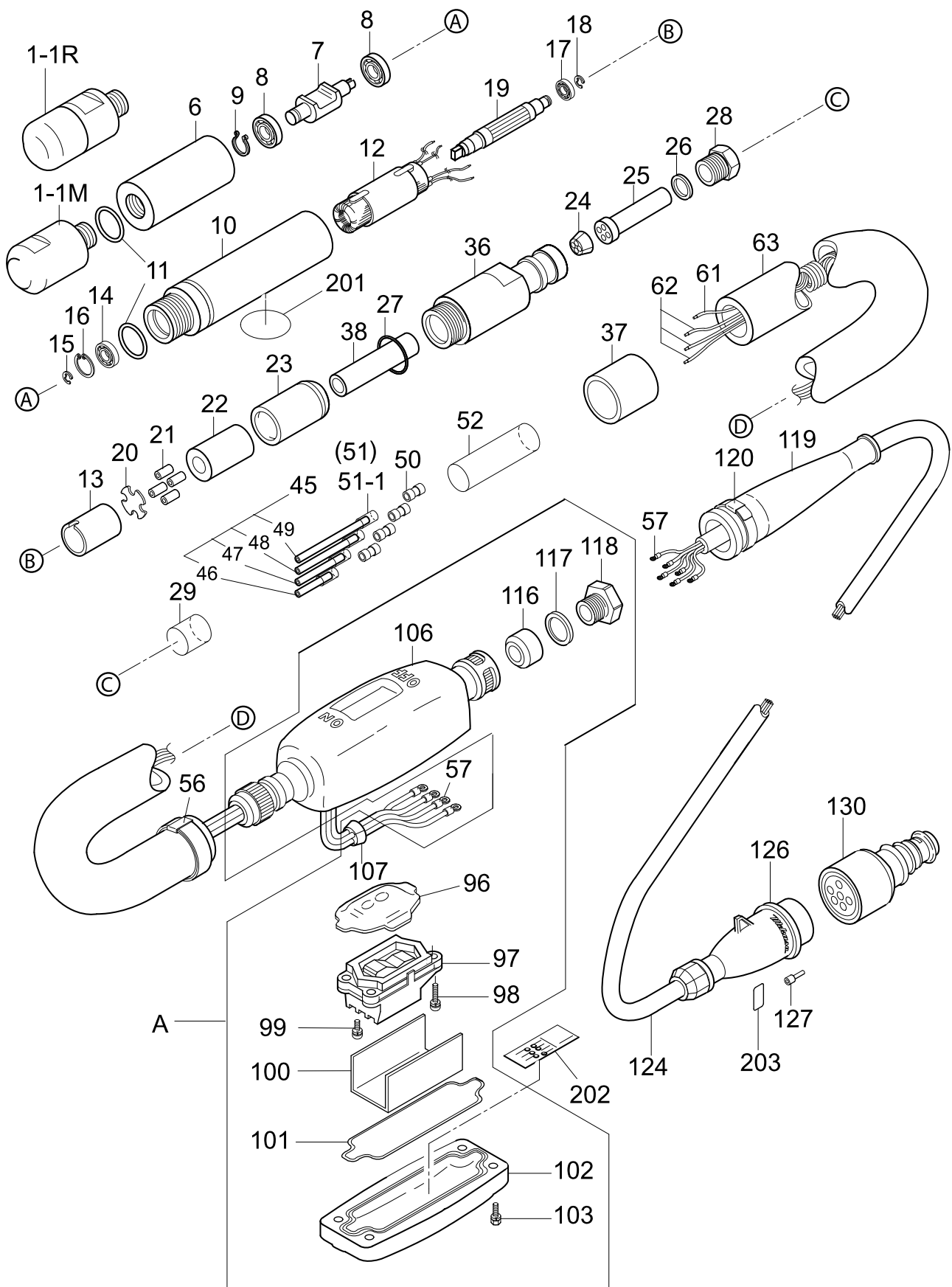
! PD : Supplied as unit product.

SS : Not available after stock run out.

(The contents of this parts catalog are subject to change without notice.)

VH-32B / 32RB CONCRETE VIBRATOR

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CONCRETE VIBRATOR

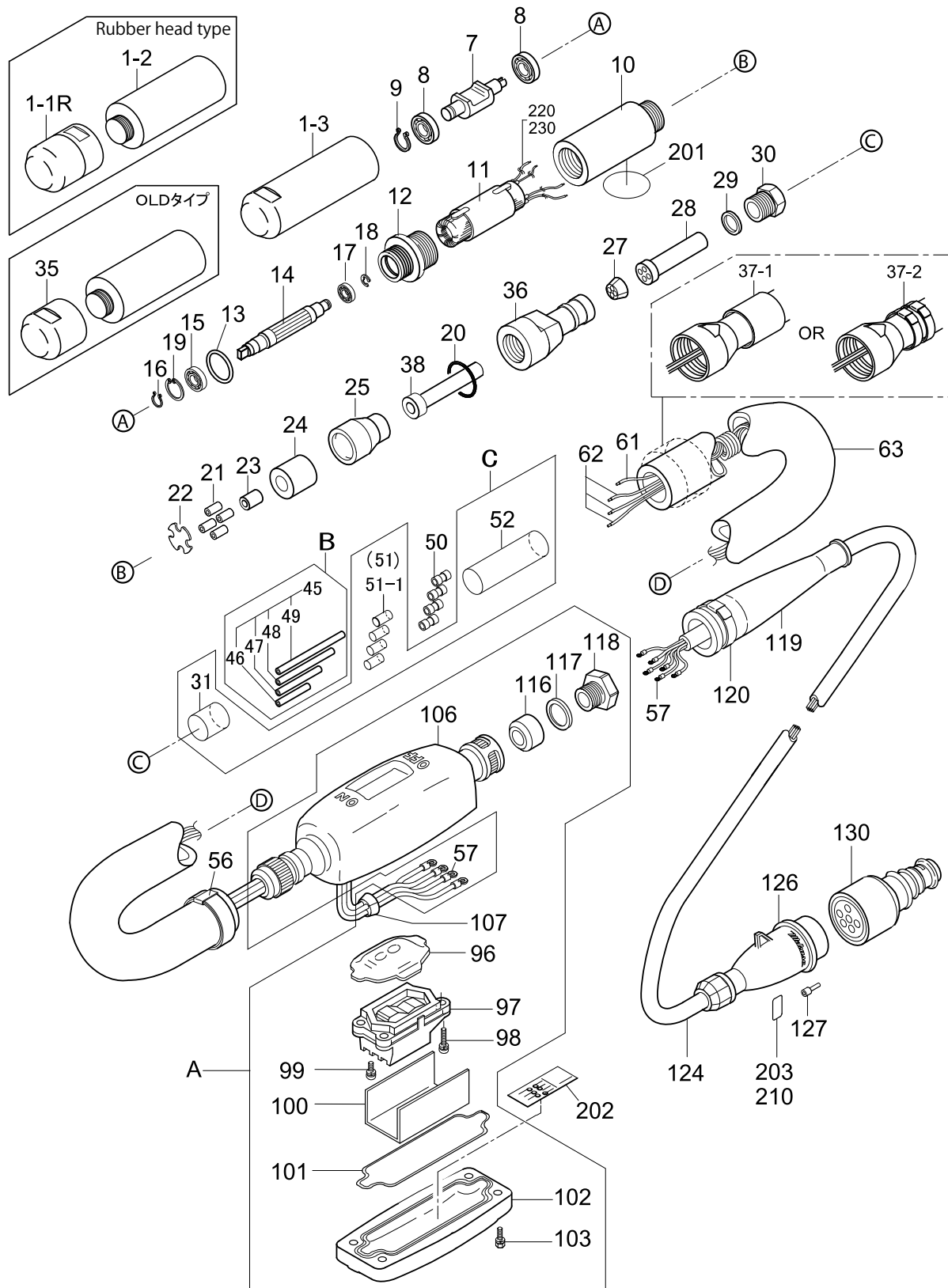
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NO.	PART/NO.	PART NAME	Q'TY	MK	MK2	REMARKS
A	1519-10011	SWITCH BOX AY /VH-B	1			
1-1M	1114-50190	HEAD CAP /FX-30,30A	1			
1-1R	1114-57150	RUBBER HEAD CAP (D32)	1			
6	1514-48330	HEAD CASE /FX-30A,VH	1			
7	1114-36520	ECCENTRIC ROTATOR /FX-30	1			
8	0425-06000	BEARING 6000ZZSG	2			
9	0802-00100	STOP RING S-10	1			
10	1213-26950	MOTOR CASE /VH-32	1			
11	0503-00240	O-RING S-24	2			
12	1510-30180	STATOR /VH-32A	1			
13	1514-48310	BEARING HOLDER VH-32A	1			
14	0425-00608	BEARING 608ZZSG	1			
15	0803-00060	STOP RING E-6	1			
16	0801-00220	STOP RING R-22	1			
17	0423-00126	BEARING MR126ZZ/MC3	1			
18	0803-00050	STOP RING E-5	1			
19	1510-30170	ROTOR /VH-32A	1			
20	1214-37630	SEAT 23D-1T /VH-32	1			
21	1114-25560	TUBE 3.2X4.2X40L	4			
22	1214-37650	CORD HOLDER 10-19-45L/VH	1			
23	1114-48350	GUIDE HOLDER /FX-30A,VH	1			
24	1514-57480	CORD BUSH / VH ,D15-2.7	1			
25	1114-57100	CORD PROTECTOR(LEAD)FX40B	1			
26	1214-37551	SLIP WASHER /VH	1			
27	0502-00200	O-RING P-20	1			
28	1114-48340	NUT,CORD PROTECTOR /FX-A	1		SS:1114-61350	M UNIT SALE
29	9590-27029	CONTRACTION TUBE/D14-1M	1		INS	
29	9590-27022	CONTRACTION TUBE/D14-35	1			
36	1214-37660	HOSE COUPLING /VH-32	1			
37	1214-37690	HOSE CLAMP 35D-50L /VH-32	1			
38	1114-48390	TUBE 7D-10D-46L	1			M UNIT SALE
45	9590-26729	RUBBER TUBE / D3.5-1M	1			
46	9590-26727	RUBBER TUBE / D3.5-130	1		INS	
47	9590-26721	RUBBER TUBE / D3.5-180	1		INS	
48	9590-26722	RUBBER TUBE / D3.5-230	1		INS	
49	9590-26723	RUBBER TUBE / D3.5-280	1		INS	M UNIT SALE
50	1210-10030	TERMINAL SLEEVE TMDB-2	4			
51	9590-26529	CONTRACTION TUBE / D6-1M	1			
51-1	9590-26521	CONTRACTION TUBE / D6-60	4		INS	
52	9590-27029	CONTRACTION TUBE/D14-1M	1			
52	9590-27023	CONTRACTION TUBE /D14-230	1		INS	M UNIT SALE
56	1210-10220	CLAMP JS 202	1			
57	1210-10280	TERMINAL V2-M4	10			
61	9590-31210	LEAD CORD 1.25 UNIT/METER	1			
62	9590-31110	LEAD CORD 1.25 UNIT/METER	3			
63	9590-23410	RUBBER TUBE 30 UNIT/METER	1		SX	4M,6M
96	1210-10160	PUSH COVER /VH	1			4M,6M
97	1210-10170	SWITCH AY /VH	1			
98	0916-05025	SCREW 5X25 SW,PW	4			
99	0940-10034	SCREW 4X8 SW (SUS)	6			
100	1114-37890	INSULATING PAPER	1			
101	1114-49120	SEAL RING /FX-A	1			
102	1112-13700	COVER, SWITCH BOX /FX-A	1			
103	0022-00620	BOLT 6X20 SW	4			
106	1112-13680	SWITCH BOX /FX-A	1			
107	1514-57490	CODE BUSH / TAPER /SW.BOX	1			
116	1210-10251	PRESSURE RUBBER, SW.BOX	1			
117	1114-35810	SLIPWASHER 16-24-1T	2			
118	1114-37760	NUT,(16D) SWITCH BOX	1			
119	1113-35850	CORD PROTECTOR,SW.BOX/FX	1			
120	1220-10060	CLAMP JS 245	1			
124	1210-10050	CABTYRE CORD 1.25-6C-U/M	1			15M
126	1513-29660	PLUG, MALE 6(P) /VH	1			
126A	1510-30060	PIN, PLUG /VH	6			
127	1510-30020	TERMINAL TC-1.25	6			
130	1210-10290	PLUG, FEMALE 6-1.25 /VH	1			
201	9201-00600	DECAL, M-MARK 54D	1			TAIWAN
202	9201-10350	DECAL ,SERIAL NO./ VH-B	1			
203	9201-06390	DECAL, CIRCUIT	1			
206	9202-10190	DECAL,EMC-LICENSE / VH,VC	1			

TAIWAN

VH-42B / 42RB CONCRETE VIBRATOR

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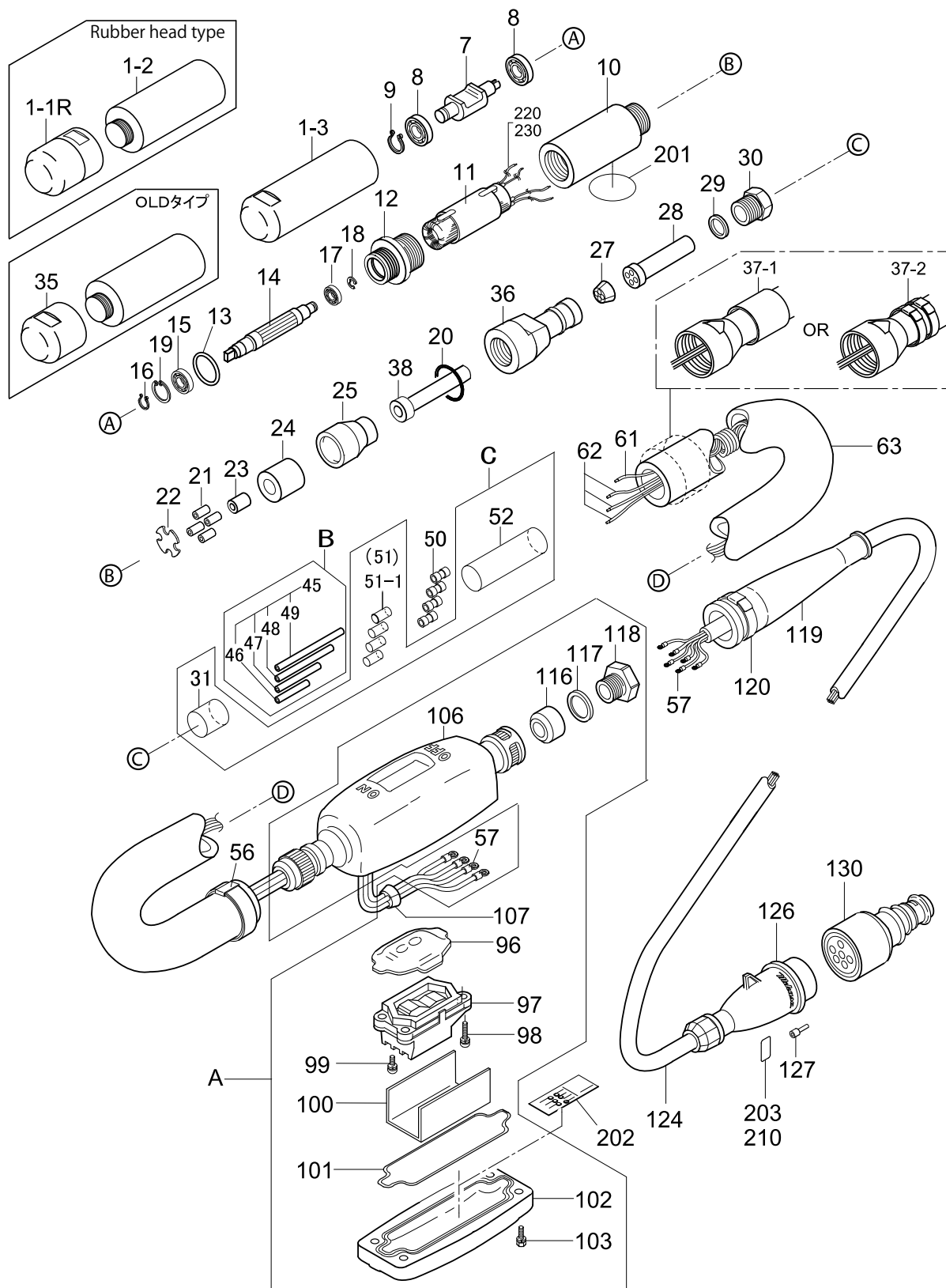
CONCRETE VIBRATOR

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NO.	PART/NO.	PART NAME	Q'TY	MK	MK2	REMARKS
A	1519-10011	SWITCH BOX AY /VH-B	1			INCL,46-49 I,31,51-1,52
B	1519-10070	RUBBER TUBE SET/D3.5/VH	1			
C	1519-10080	CONTRACTION TUBE SET/VH	1			
1-2	1513-43800	VIBRATION CASE /VH-42B	1			
1-1R	1114-57160	RUBBER HEAD CAP / FX-40RB	1			
1-3	1513-49410	HEAD CASE/VH-42B	1			
7	1214-37520	ECCENTRIC ROTATOR /VH-42	1			
8	0446-06202	BEARING 6202VVSGR	2			
9	0802-00150	STOP RING S-15	1			
10	1513-32490	MOTOR CASE 4.5D /VH-42	1			
11	1513-32560	STATOR /VH-42	1			
12	1214-37530	CASE JOINT /VH-42	1			
13	0501-00300	O-RING G-30	1			
14	1513-32540	ROTOR /VH-42	1			
15	0425-06001	BEARING 6001ZZSG	1			
16	0802-00120	STOP RING S-12	1			
17	0425-00607	BEARING 607ZZSG	1			
18	0803-00060	STOP RING E-6	1			
19	0801-00280	STOP RING R-28	1			
20	0502-00300	O-RING P-30	1			
21	1514-46030	TUBE 3.2-4.2-20L /VH	4			
22	1214-37540	SEAT 31D /VH-42	1			
23	1514-46020	TUBE 7-11-15L /VH	1			
24	1114-35670	CORD HOLDER 15X25X20L	1			
25	1114-35680	HOLDER /FX-40	1			
27	1514-57480	CORD BUSH / VH ,D15-2.7	1			
28	1114-57100	CORD PROTECTOR(LEAD)FX40B	1			
29	1214-37551	SLIP WASHER /VH	1			
30	1114-48340	NUT,CORD PROTECTOR /FX-A	1		SS!1114-61350	
31	9590-27029	CONTRACTION TUBE/D14-1M	1			
31	9590-27022	CONTRACTION TUBE/D14-35	1		INS	
35	1114-56870	METAL HEAD CAP / FX-40B	1			
36	1214-37580	HOSE COUPLING /VH-42	1			
37-1	1214-37600	HOSE CLAMP /VH-42	1			
37-2	1110-10220	CLAMP AB2050	2			
37-2	1210-10220	CLAMP JS 202	2			AB BAND BAND-IT
38	1514-48571	PROTECT TUBE /FX-A(ORA)	1			
45	9590-26729	RUBBER TUBE / D3.5-1M	1			
46	9590-26727	RUBBER TUBE / D3.5-130	1		INS	
47	9590-26721	RUBBER TUBE / D3.5-180	1		INS	
48	9590-26722	RUBBER TUBE / D3.5-230	1		INS	M UNIT SALE
49	9590-26723	RUBBER TUBE / D3.5-280	1		INS	
50	1210-10030	TERMINAL SLEEVE TMDB-2	4			
51	9590-26529	CONTRACTION TUBE / D6-1M	1			
51-1	9590-26521	CONTRACTION TUBE / D6-60	4		INS	
52	9590-27029	CONTRACTION TUBE/D14-1M	1			M UNIT SALE
52	9590-27023	CONTRACTION TUBE /D14-230	1		INS	
56	1210-10220	CLAMP JS 202	1			
57	1210-10280	TERMINAL V2-M4	10			
61	9590-31210	LEAD CORD 1.25 UNIT/METER	1			
62	9590-31110	LEAD CORD 1.25 UNIT/METER	3			4M,6M 4M,6M
63	9590-28111	HOSE,35-19-2P(UNIT/METER)	1			4M,6M
96	1210-10160	PUSH COVER /VH	1			
97	1210-10170	SWITCH AY /VH	1			
98	0916-05025	SCREW 5X25 SW,PW	4			
99	0940-10034	SCREW 4X8 SW (SUS)	6			
100	1114-37890	INSULATING PAPER	1			
101	1114-49120	SEAL RING /FX-A	1			
102	1112-13700	COVER, SWITCH BOX /FX-A	1			
103	0022-00620	BOLT 6X20 SW	4			
106	1112-13680	SWITCH BOX /FX-A	1			
107	1514-57490	CODE BUSH / TAPER /SW.BOX	1			
116	1210-10251	PRESSURE RUBBER, SW.BOX	1			
117	1114-35810	SLIPWASHER 16-24-1T	2			
118	1114-37760	NUT,(16D) SWITCH BOX	1			
119	1113-35850	CORD PROTECTOR,SW.BOX/FX	1			
120	1210-10210	CLAMP JS 253	1			
120	1220-10060	CLAMP JS 245	1			15M
124	1210-10050	CABTYRE CORD 1.25-6C-U/M	1			
126	1513-29660	PLUG, MALE 6(P) /VH	1			
126A	1510-30060	PIN, PLUG /VH	6			
127	1510-30020	TERMINAL TC-1.25	6			
130	1210-10290	PLUG, FEMALE 6-1.25 /VH	1			
201	9201-00600	DECAL, M-MARK 54D	1			
202	9201-10350	DECAL, SERIAL NO./ VH-B	1			
203	9201-06390	DECAL, CIRCUIT	1			
206	9202-10190	DECAL,EMC-LICENSE / VH,VC	1			TAIWAN
209	9202-11470	DECAL,SERIAL NO./VH-B	1			
210	9202-11460	DECAL,CIRCUIT	1			
220	1510-30210	LEAD CORD1.25-M-Y(ST)	1			
230	1510-30220	LEAD CORD1.25-M-B(ST)	1			

VH-52B / 52RB
CONCRETE VIBRATOR

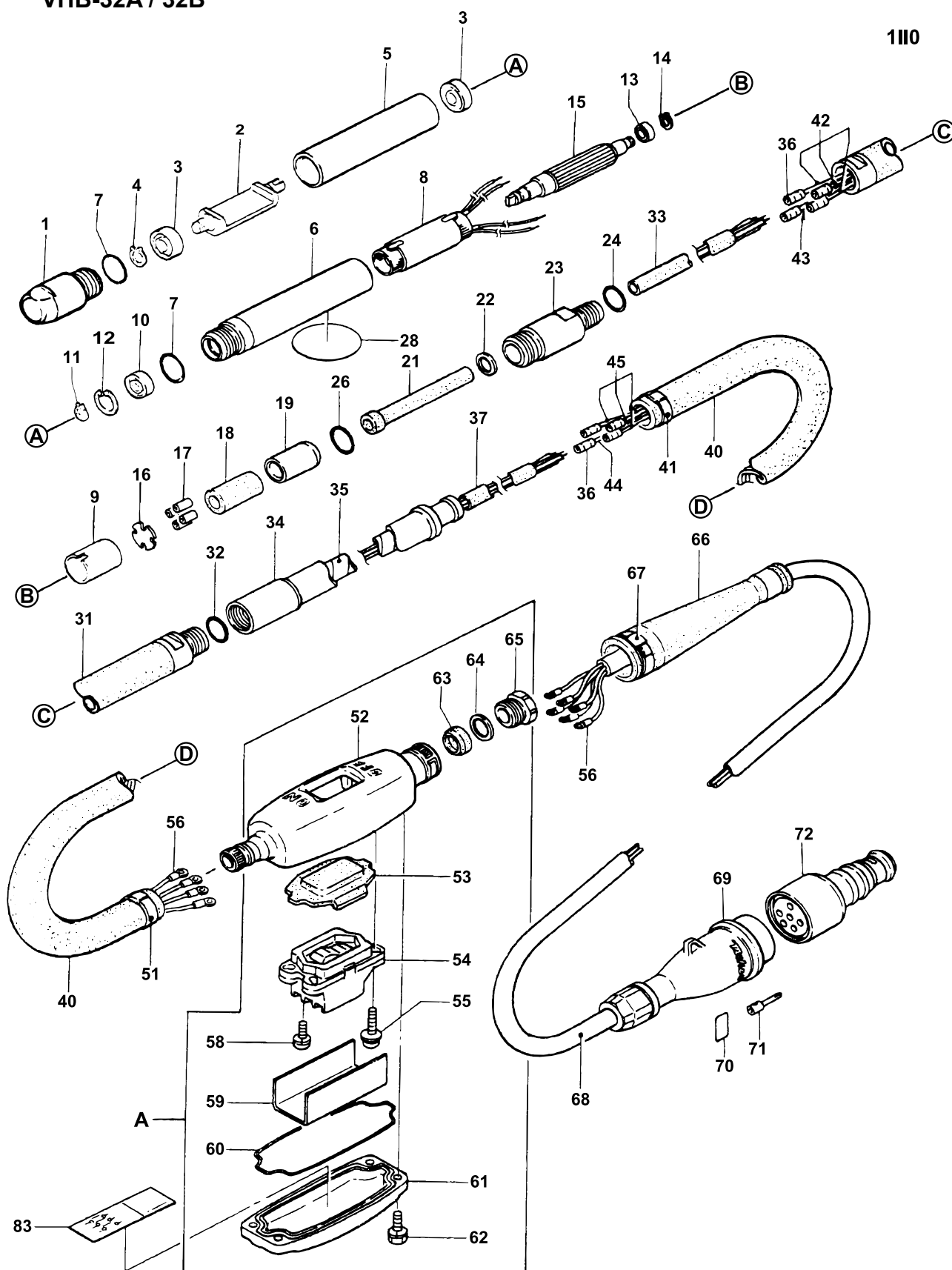
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CONCRETE VIBRATOR

** 1JP **

NO.	PART/NO.	PART NAME	Q'TY	MK	MK2	REMARKS
A	1519-10011	SWITCH BOX AY /VH-B	1			
B	1519-10070	RUBBER TUBE SET/D3.5/VH	1			INCL,46-49
C	1519-10080	CONTRACTION TUBE SET/VH	1			1,31,51-1,52
1-1R	1114-57170	RUBBER HEAD CAP / FX-50RB	1			
1-2	1113-43380	VIBRATION CASE /FX-50B,RB	1			
1-3	1113-48730	VIBRATION CASE/FX-50E	1			
7	1214-37790	ECCENTRIC ROTATOR /VH-52	1			
8	0446-06302	BEARING 6302VVSGR	2			
9	0802-00150	STOP RING S-15	1			
10	1513-32500	MOTOR CASE 4.5D /VH-52	1			
11	1513-32570	STATOR /VH-52	1			
12	1114-35630	CASE JOINTER /FX-50	1			
13	0501-00400	O-RING G-40	1			
14	1513-32550	ROTOR /VH-52	1			
15	0425-06002	BEARING 6002ZZSG	1			
16	0802-00150	STOP RING S-15	1			
17	0425-00608	BEARING 608ZZSG	1			
18	0803-00070	STOP RING E-7	1			
19	0801-00320	STOP RING R-32	1			
20	0502-00360	O-RING P-36	1			
21	1514-46030	TUBE 3.2-4.2-20L /VH	4			
22	1214-37740	SEAT 35D /VH-52	1			
23	1514-46020	TUBE 7-11-15L /VH	1			
24	1114-35200	CORD HOLDER /FX-45	1			
25	1114-35210	HOLDER /FX-45	1			
27	1514-57480	CORD BUSH / VH ,D15-2.7	1			
28	1114-57100	CORD PROTECTOR(LEAD)/FX40B	1			
29	1214-37551	SLIP WASHER /VH	1			
30	1114-48340	NUT,CORD PROTECTOR /FX-A	1		SS!1114-61350	
31	9590-27029	CONTRACTION TUBE/D14-1M	1			M UNIT SALE
31	9590-27022	CONTRACTION TUBE/D14-35	1		!NS	
35	1114-56880	METAL HEAD CAP / FX-50B	1			OLD TYPE
36	1214-37710	HOSE COUPLING /VH-52	1			
37-1	1214-37600	HOSE CLAMP /VH-42	1			
37-2	1110-10220	CLAMP AB2050	2			AB BAND
37-2	1210-10220	CLAMP JS 202	2			BAND-IT
38	1514-48571	PROTECT TUBE /FX-A(ORA)	1			
45	9590-26729	RUBBER TUBE / D3.5-1M	1			M UNIT SALE
46	9590-26727	RUBBER TUBE / D3.5-130	1		!NS	
47	9590-26721	RUBBER TUBE / D3.5-180	1		!NS	
48	9590-26722	RUBBER TUBE / D3.5-230	1		!NS	
49	9590-26723	RUBBER TUBE / D3.5-280	1		!NS	
50	1210-10030	TERMINAL SLEEVE TMDB-2	4			
51	9590-26529	CONTRACTION TUBE / D6-1M	1			M UNIT SALE
51-1	9590-26521	CONTRACTION TUBE / D6-60	4		!NS	
52	9590-27029	CONTRACTION TUBE/D14-1M	1			M UNIT SALE
52	9590-27023	CONTRACTION TUBE /D14-230	1		!NS	
56	1210-10220	CLAMP JS 202	1			
57	1210-10280	TERMINAL V2-M4	10			
61	9590-31210	LEAD CORD 1.25 UNIT/METER	1			4M,6M
62	9590-31110	LEAD CORD 1.25 UNIT/METER	3			4M,6M
63	9590-28111	HOSE,35-19-2P(UNIT/METER)	1			4M,6M
96	1210-10160	PUSH COVER /VH	1			
97	1210-10170	SWITCH AY /VH	1			
98	0916-05025	SCREW 5X25 SW,PW	4			
99	0940-10034	SCREW 4X8 SW (SUS)	6			
100	1114-37890	INSULATING PAPER	1			
101	1114-49120	SEAL RING /FX-A	1			
102	1112-13700	COVER, SWITCH BOX /FX-A	1			
103	0022-00620	BOLT 6X20 SW	4			
106	1112-13680	SWITCH BOX /FX-A	1			
107	1514-57490	CODE BUSH / TAPER /SW.BOX	1			
116	1210-10251	PRESSURE RUBBER, SW.BOX	1			
117	1114-35810	SLIPWASHER 16-24-1T	2			
118	1114-37760	NUT,(16D) SWITCH BOX	1			
119	1113-35850	CORD PROTECTOR,SW.BOX/FX	1			
120	1210-10210	CLAMP JS 253	1			
120	1220-10060	CLAMP JS 245	1			
124	1210-10050	CABTYRE CORD 1.25-6C-U/M	1			15M
126	1513-29660	PLUG, MALE 6(P) /VH	1			
126A	1510-30060	PIN, PLUG /VH	6			
127	1510-30020	TERMINAL TC-1.25	6			
130	1210-10290	PLUG, FEMALE 6-1.25 /VH	1			
201	9201-00600	DECAL, M-MARK 54D	1			
202	9201-10350	DECAL ,SERIAL NO./ VH-B	1			
203	9201-06390	DECAL, CIRCUIT	1			
206	9202-10190	DECAL,EMC-LICENSE / VH,VC	1			TAIWAN
207	9202-11460	DECAL,CIRCUIT	1			
209	9202-11470	DECAL,SERIAL NO./VH-B	1			
210	9202-11460	DECAL,CIRCUIT	1			

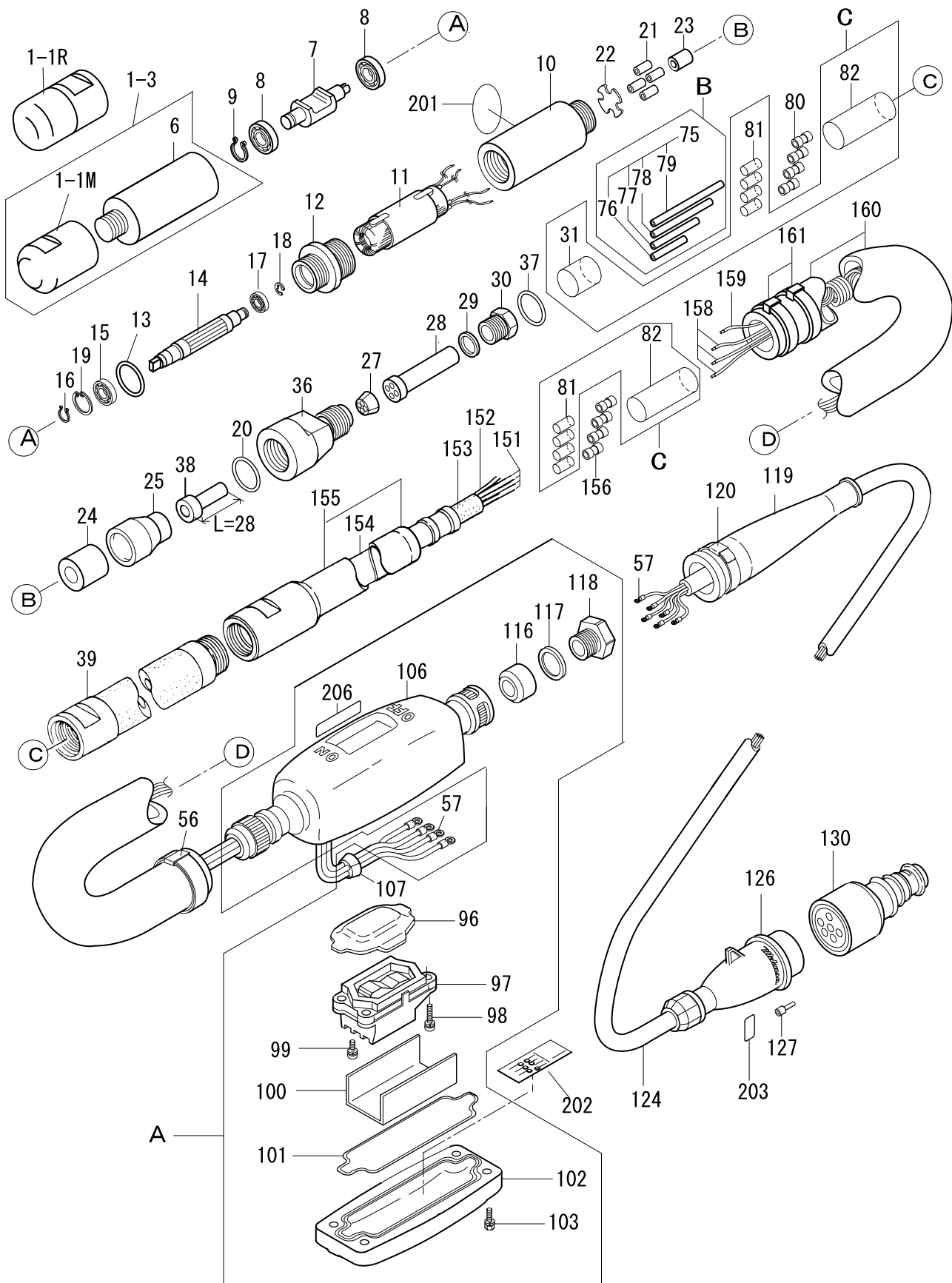


CONCRETE VIBRATOR

** III **

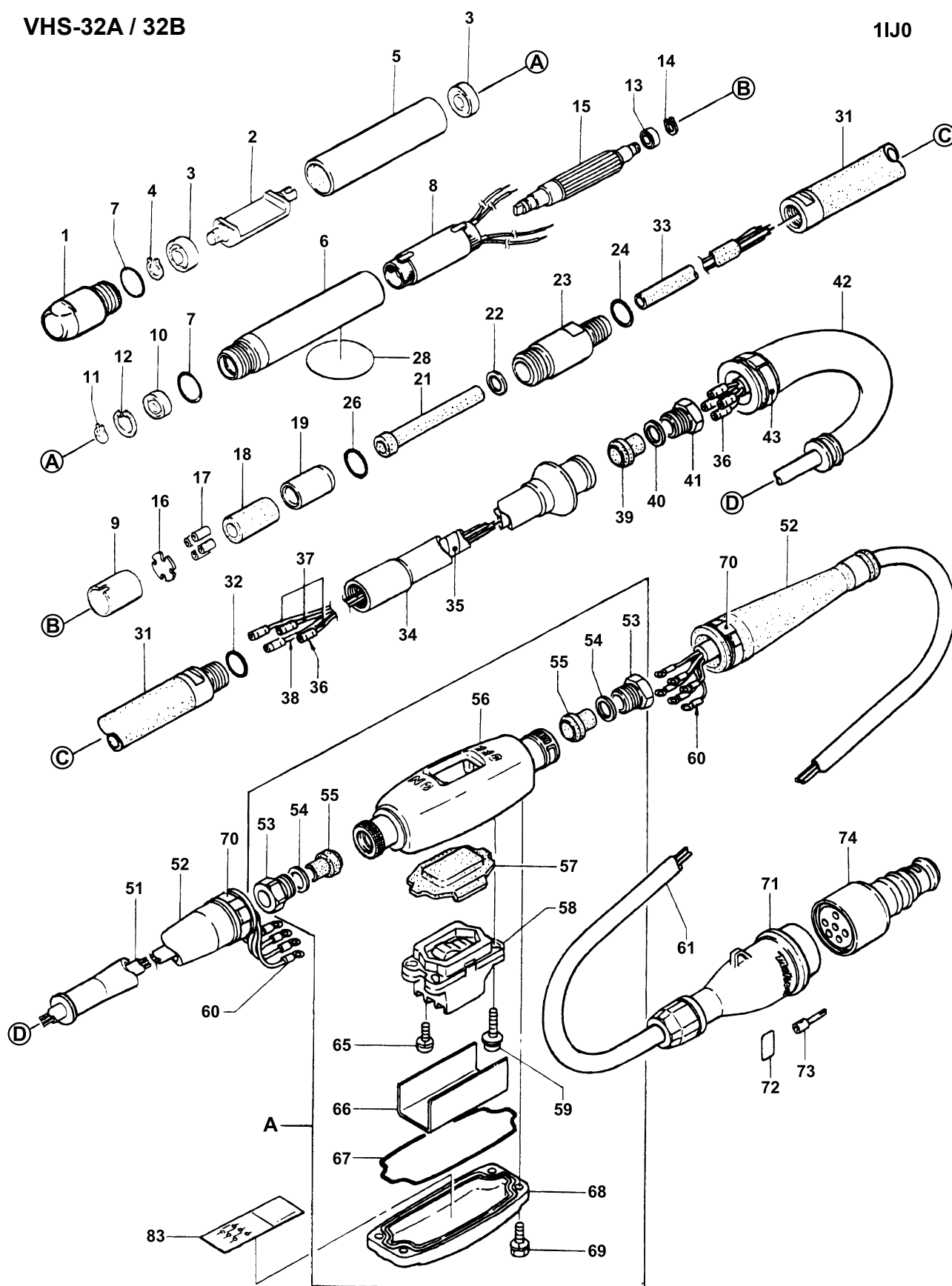
NO.	PART/NO.	PART NAME	Q'TY	MK	MK2	REMARKS
A	1519-10011	SWITCH BOX AY /VH-B	1			
1	1114-50190	HEAD CAP /FX-30,30A	1			
2	1114-36520	ECCENTRIC ROTATOR /FX-30	1			
3	0425-06000	BEARING 6000ZZSG	2			
4	0802-00100	STOP RING S-10	1			
5	1514-48330	HEAD CASE /FX-30A,VH	1			
6	1213-26950	MOTOR CASE /VH-32	1			
7	0503-00240	O-RING S-24	2			
8	1510-30180	STATOR /VH-32A	1			
9	1514-48310	BEARING HOLDER VH-32A	1			
10	0425-00608	BEARING 608ZZSG	1			
11	0803-00060	STOP RING E-6	1			
12	0801-00220	STOP RING R-22	1			
13	0423-00126	BEARING MR126ZZ/MC3	1			
14	0803-00050	STOP RING E-5	1			
15	1510-30170	ROTOR /VH-32A	1			
16	1214-37630	SEAT 23D-1T /VH-32	1			
17	1114-25560	TUBE 3.2X4.2X40L	4			
18	1214-37650	CORD HOLDER 10-19-45L/VH	1			
19	1114-48350	GUIDE HOLDER /FX-30A,VH	1			
21	1114-48371	CORD PROTECTOR(LEAD)/FX-A	1			
22	1214-37551	SLIP WASHER /VH	1			
23	1114-48540	HOSE COUPLING /FXB-30A	1			
24	0502-00160	O-RING P-16	1			
26	0502-00200	O-RING P-20	1			
28	9201-00600	DECAL, M-MARK 54D	1			
31	1213-33420	SHOCK ABSORBER /FXS,VHS	1		SX #1243-28470	
32	0503-00240	O-RING S-24	1			
33	1244-39690	RUBBER PIPE 8-12-230/VHS	1			
34	1233-28250	GUIDE PIPE 1136L /VHB32	1		SX	
35	1140-11244	SPIRAL TUBE SPP24(U/METER	1			1.06M
36	1210-10030	TERMINAL SLEEVE TMDB-2	8			
37	1144-22044	RUBBER TUBE 12D-230L	1			
40	9590-23410	RUBBER TUBE 30 UNIT/METER	1		SX	3.95M
41	1210-10220	CLAMP JS 202	1			
42	9590-31110	LEAD CORD 1.25 UNIT/METER	3			1.1M
43	9590-31210	LEAD CORD 1.25 UNIT/METER	1			1.1M
44	9590-31210	LEAD CORD 1.25 UNIT/METER	1			4M
45	9590-31110	LEAD CORD 1.25 UNIT/METER	3			4M
51	1210-10220	CLAMP JS 202	1			
52	1112-13680	SWITCH BOX /FX-A	1			
53	1110-13651	PUSH COVER /FX	1			
54	1210-10170	SWITCH AY /VH	1			
55	0916-05025	SCREW 5X25 SW,PW	4			
56	1210-10280	TERMINAL V2-M4	10			
58	0940-10034	SCREW 4X8 SW (SUS)	6			
59	1114-37890	INSULATING PAPER	1			
60	1114-49120	SEAL RING /FX-A	1			
61	1112-13700	COVER, SWITCH BOX /FX-A	1			
62	0022-10620	BOLT 6X20 H,SW	4		!!0022-00620	
62	0022-00620	BOLT 6X20 SW	4			
63	1210-10251	PRESSURE RUBBER, SW.BOX	1			
64	1114-35810	SLIPWASHER 16-24-1T	1 OR 2			
65	1114-37760	NUT,(16D) SWITCH BOX	1			
66	1113-35850	CORD PROTECTOR,SW.BOX/FX	1			
67	1210-10210	CLAMP JS 253	1			
67	1220-10060	CLAMP JS 245	1			
68	1210-10050	CABTYRE CORD 1.25-6C-U/M	1			15M
69	1513-29660	PLUG, MALE 6(P) /VH	1			
70	9201-06390	DECAL, CIRCUIT	1			
71	1510-30020	TERMINAL TC-1.25	6			
72	1210-10290	PLUG, FEMALE 6-1.25 /VH	1			
83	9201-10350	DECAL ,SERIAL NO./ VH-B	1			

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VHB-42B
CONCRETE VIBRATOR

NO.	PART/NO.	PART NAME	Q'TY	MK	MK2	REMARKS
A	1519-10011	SWITCH BOX AY /VH-B	1			
B	1519-10060	RUBBER TUBE SET/D3.5/42B	1			INCL76-79
C	1519-10080	CONTRACTION TUBE SET/VH	2			INCL31,81,82
1-1M	1114-56870	METAL HEAD CAP / FX-40B	1			
1-1R	1114-57160	RUBBER HEAD CAP / FX-40RB	1			
1-3	1519-10050	VIBRATION CASE W/HEAD/42B	1		!1513-49410	INCL.1-1M&6
6	1513-43800	VIBRATION CASE /VH-42B	1			
7	1214-37520	ECCENTRIC ROTATOR /VH-42	1			
8	0446-06202	BEARING 6202VVSGR	2			
9	0802-00150	STOP RING S-15	1			
10	1513-32490	MOTOR CASE 4.5D /VH-42	1			
11	1513-32560	STATOR /VH-42	1			
12	1214-37530	CASE JOINT /VH-42	1			
13	0501-00300	O-RING G-30	1			
14	1513-32540	ROTOR /VH-42	1			
15	0425-06001	BEARING 6001ZZSG	1			
16	0802-00120	STOP RING S-12	1			
17	0425-00607	BEARING 607ZZSG	1			
18	0803-00060	STOP RING E-6	1			
19	0801-00280	STOP RING R-28	1			
20	0502-00300	O-RING P-30	1			
21	1514-46030	TUBE 3.2-4.2-20L /VH	4			
22	1214-37540	SEAT 31D /VH-42	1			
23	1514-46020	TUBE 7-11-15L /VH	1			
24	1114-35670	CORD HOLDER 15X25X20L	1			
25	1114-35680	HOLDER /FX-40	1			
27	1514-57480	CORD BUSH / VH, D15-2.7	1			
28	1114-57100	CORD PROTECTOR(LEAD)FX40B	1			
29	1214-37551	SLIP WASHER /VH	1			
30	1114-48340	NUT,CORD PROTECTOR /FX-A	1		SS!1114-61350	
31	9590-27029	CONTRACTION TUBE/D14-1M	1			M UNIT SALE
31	9590-27022	CONTRACTION TUBE/D14-35	1		!NS	
36	1244-38280	HOSE COUPLING /VHS42	1			
37	0502-00260	O-RING P-26	1			
38	1514-48571	PROTECT TUBE /FX-A(ORA)	1			L=28
39	1143-10750	SHOCK ABSORBER 40N	1			
56	1210-10220	CLAMP JS 202	1			
57	1210-10280	TERMINAL V2-M4	10			
75	9590-26729	RUBBER TUBE / D3.5-1M	1			M UNIT SALE
76	9590-26724	RUBBER TUBE / D3.5-200	1		!NS	
77	9590-26725	RUBBER TUBE / D3.5-250	1		!NS	
78	9590-26726	RUBBER TUBE / D3.5-300	1		!NS	
79	9590-26728	RUBBER TUBE / D3.5-350	1		!NS	
80	1210-10030	TERMINAL SLEEVE TMDB-2	4			
81	9590-26529	CONTRACTION TUBE / D6-1M	1			M UNIT SALE
81	9590-26521	CONTRACTION TUBE / D6-60	8		!NS	
82	9590-27029	CONTRACTION TUBE/D14-1M	1			M UNIT SALE
82	9590-27023	CONTRACTION TUBE /D14-230	2		!NS	
96	1210-10160	PUSH COVER /VH	1			
97	1210-10170	SWITCH AY /VH	1			
98	0916-05025	SCREW 5X25 SW,PW	4			
99	0940-10034	SCREW 4X8 SW (SUS)	6			
100	1114-37890	INSULATING PAPER	1			
101	1114-49120	SEAL RING /FX-A	1			
102	1112-13700	COVER, SWITCH BOX /FX-A	1			
103	0022-00620	BOLT 6X20 SW	4			
106	1112-13680	SWITCH BOX /FX-A	1			
107	1514-57490	CODE BUSH / TAPER /SW.BOX	1			
116	1210-10251	PRESSURE RUBBER, SW.BOX	1			
117	1114-35810	SLIPWASHER 16-24-1T	2			
118	1114-37760	NUT,(16D) SWITCH BOX	1			
119	1113-35850	CORD PROTECTOR,SW.BOX/FX	1			
120	1210-10210	CLAMP JS 253	1			
120	1220-10060	CLAMP JS 245	1			
124	1210-10050	CABTYRE CORD 1.25-6C-U/M	1			15M
126	1513-29660	PLUG, MALE 6(P) /VH	1			
127	1510-30020	TERMINAL TC-1.25	6			
130	1210-10290	PLUG, FEMALE 6-1.25 /VH	1			
151	9590-31110	LEAD CORD 1.25 UNIT/METER	3			1.4M
152	9590-31210	LEAD CORD 1.25 UNIT/METER	1			1.4M
153	1144-22044	RUBBER TUBE 12D-230L	1			L=180
154	1140-11245	SPIRAL TUBE 25D-1M	1			STD=1100MM
155	1233-28310	GUIDE PIPE 1182L /VHB42	1			
156	1210-10030	TERMINAL SLEEVE TMDB-2	4			
158	9590-31110	LEAD CORD 1.25 UNIT/METER	3			4M
159	9590-31210	LEAD CORD 1.25 UNIT/METER	1			4M
160	9590-28111	HOSE,35-19-2P(UNIT/METER)	1			4M
161	1210-10220	CLAMP JS 202	2			
201	9201-00600	DECAL, M-MARK 54D	1			
202	9201-10350	DECAL ,SERIAL NO./ VH-B	1			
203	9201-06390	DECAL, CIRCUIT	1			
206	9202-10190	DECAL,EMC-LICENSE / VH,VC	1			TAIWAN

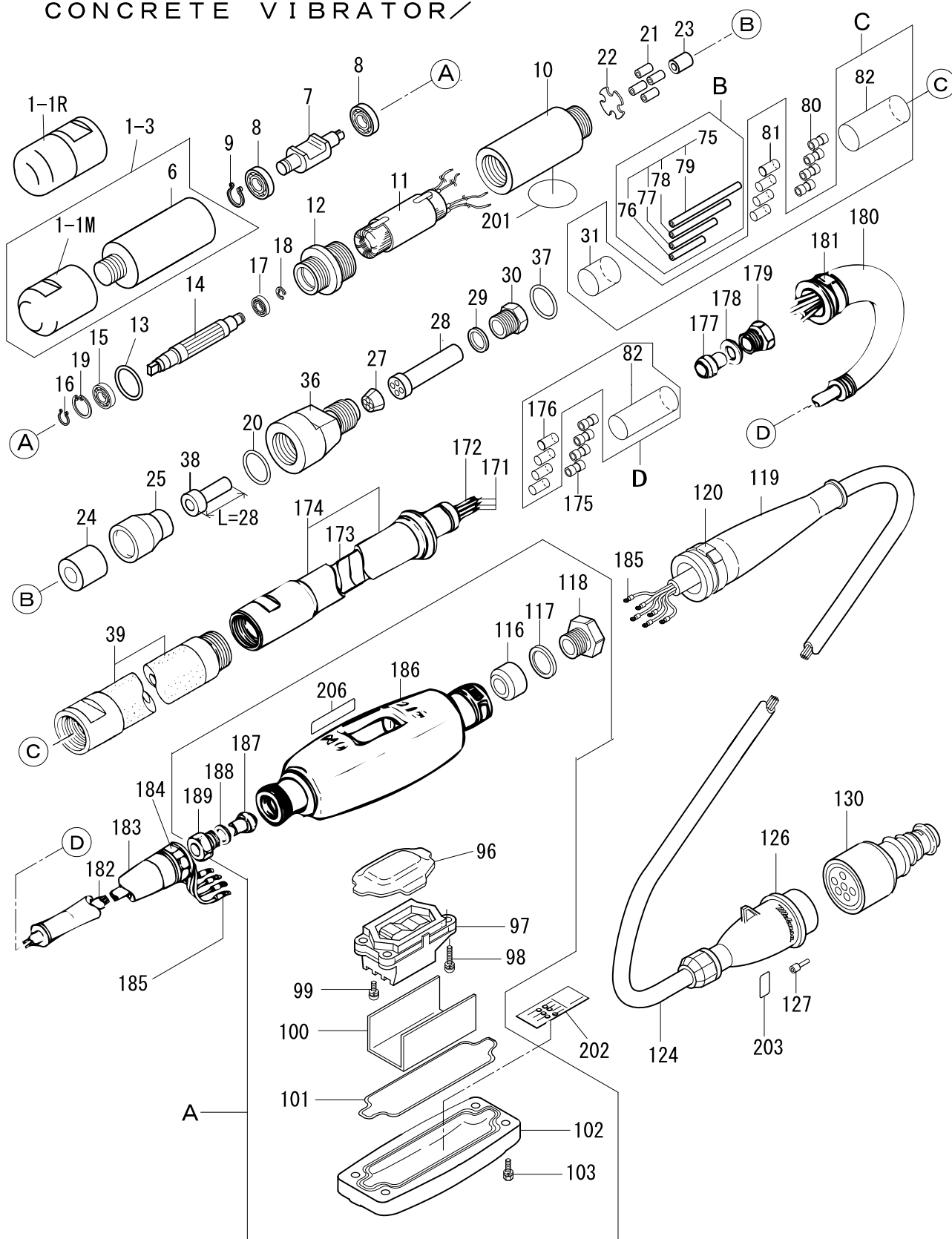


CONCRETE VIBRATOR

** 1IJ **

NO.	PART/NO.	PART NAME	Q'TY	MK	MK2	REMARKS
A	1619-30010	SWITCH BOX AY /VHS-A	1			
1	1114-50190	HEAD CAP /FX-30,30A	1			
2	1114-36520	ECCENTRIC ROTATOR /FX-30	1			
3	0425-06000	BEARING 6000ZZSG	2			
4	0802-00100	STOP RING S-10	1			
5	1514-48330	HEAD CASE /FX-30A,VH	1			
6	1213-26950	MOTOR CASE /VH-32	1			
7	0503-00240	O-RING S-24	2			
8	1510-30180	STATOR /VH-32A	1			
9	1514-48310	BEARING HOLDER VH-32A	1			
10	0425-00608	BEARING 608ZZSG	1			
11	0803-00060	STOP RING E-6	1			
12	0801-00220	STOP RING R-22	1			
13	0423-00126	BEARING MR126ZZ/MC3	1			
14	0803-00050	STOP RING E-5	1			
15	1510-30170	ROTOR /VH-32A	1			
16	1214-37630	SEAT 23D-1T /VH-32	1			
17	1114-25560	TUBE 3.2X4.2X40L	4			
18	1214-37650	CORD HOLDER 10-19-45L/VH	1			
19	1114-48350	GUIDE HOLDER /FX-30A,VH	1			
21	1114-48371	CORD PROTECTOR(LEAD)/FX-A	1			
22	1214-37551	SLIP WASHER /VH	1			
23	1114-48540	HOSE COUPLING /FXB-30A	1			
24	0502-00160	O-RING P-16	1			
26	0502-00200	O-RING P-20	1			
28	9201-00600	DECAL, M-MARK 54D	1			
31	1213-33420	SHOCK ABSORBER /FXS,VHS	1		SX #1243-28470	
32	0503-00240	O-RING S-24	1			
33	1244-39690	RUBBER PIPE 8-12-230/VHS	1			
34	1143-14140	GUIDE PIPE/S FS30	1		SX	
35	1140-11244	SPIRAL TUBE SPP24(U/METER	1			1.98M
36	1210-10030	TERMINAL SLEEVE TMDB-2	8			
37	9590-31110	LEAD CORD 1.25 UNIT/METER	3			2.1M
38	9590-31210	LEAD CORD 1.25 UNIT/METER	1			2.1M
39	1214-38210	PRESSURE RUBBER 13.4D	1			
40	1114-15740	SLIP WASHER 17X24X1T	1 OR 2			
41	1114-37770	NUT,(17.5D) SWITCHBOX	1			
42	1113-35850	CORD PROTECTOR,SW.BOX/FX	1			
43	1210-10210	CLAMP JS 253	1			
43	1220-10060	CLAMP JS 245	1			
51	9590-20710	CABTYRE CORD 1.25-4C-U/M	1			3M
52	1113-35850	CORD PROTECTOR,SW.BOX/FX	2			
53	1114-37770	NUT,(17.5D) SWITCHBOX	2			
54	1114-15740	SLIP WASHER 17X24X1T	0			2-4
55	1214-38210	PRESSURE RUBBER 13.4D	2			
56	1112-13690	SWITCH BOX /FXS-A	1			
57	1110-13651	PUSH COVER /FX	1			
58	1210-10170	SWITCH AY /VH	1			
59	0916-05025	SCREW 5X25 SW,PW	4			
60	1210-10280	TERMINAL V2-M4	10			
61	1210-10050	CABTYRE CORD 1.25-6C-U/M	1			15M
65	0940-10034	SCREW 4X8 SW (SUS)	6			
66	1114-37890	INSULATING PAPER	1			
67	1114-49120	SEAL RING /FX-A	1			
68	1112-13700	COVER, SWITCH BOX /FX-A	1			
69	0022-00620	BOLT 6X20 SW	4			
70	1210-10210	CLAMP JS 253	2			
70	1220-10060	CLAMP JS 245	2			
71	1513-29660	PLUG, MALE 6(P) /VH	1			
72	9201-06390	DECAL, CIRCUIT	1			
73	1510-30020	TERMINAL TC-1.25	6			
74	1210-10290	PLUG, FEMALE 6-1.25 /VH	1			
83	9201-10350	DECAL ,SERIAL NO./ VH-B	1			

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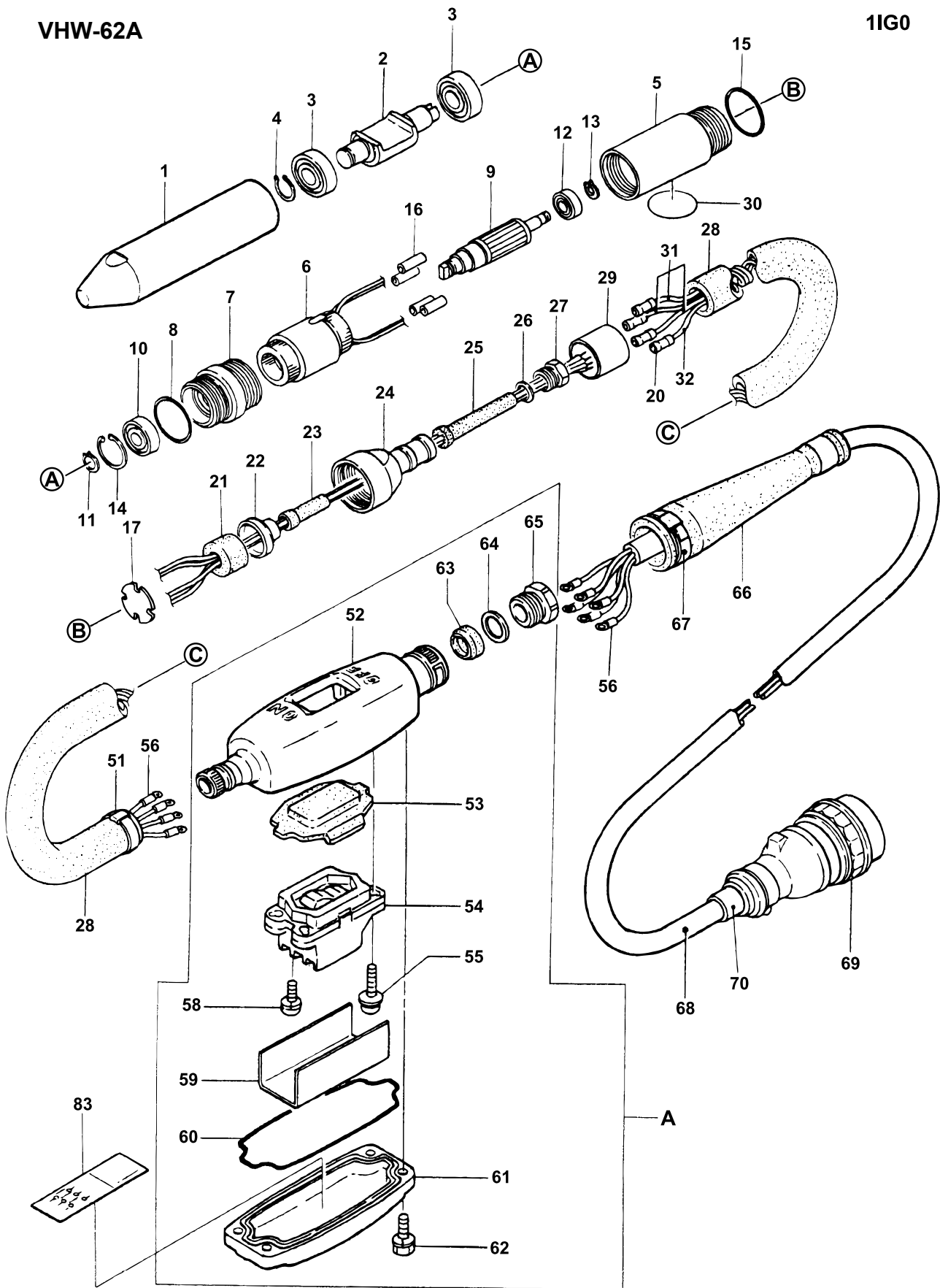
CONCRETE VIBRATOR

** 1JT **

NO.	PART/NO.	PART NAME	QTY	MK	MK2	REMARKS
A	1619-30011	SWITCH BOX AY /VHS-B	1			
B	1519-10060	RUBBER TUBE SET/D3.5/42B	1			INCL.76-79
C	1519-10080	CONTRACTION TUBE SET/VH	1			INCL.81,82
D	1519-10090	CONTRACTION TUBE SET/VHS	1			INCL.82,176
1-1M	1114-56870	METAL HEAD CAP / FX-40B	1			
1-1R	1114-57160	RUBBER HEAD CAP / FX-40RB	1		!1513-49410	INCL.1-1M&6
1-3	1519-10050	VIBRATION CASE W/HEAD/42B	1			
6	1513-43800	VIBRATION CASE /VH-42B	1			
7	1214-37520	ECCENTRIC ROTATOR /VH-42	1			
8	0446-06202	BEARING 6202VVSGR	2			
9	0802-00150	STOP RING S-15	1			
10	1513-32490	MOTOR CASE 4.5D /VH-42	1			
11	1513-32560	STATOR /VH-42	1			
12	1214-37530	CASE JOINT /VH-42	1			
13	0501-00300	O-RING G-30	1			
14	1513-32540	ROTOR /VH-42	1			
15	0425-06001	BEARING 6001ZZSG	1			
16	0802-00120	STOP RING S-12	1			
17	0425-00607	BEARING 607ZZSG	1			
18	0803-00060	STOP RING E-6	1			
19	0801-00280	STOP RING R-28	1			
20	0502-00300	O-RING P-30	1			
21	1514-46030	TUBE 3.2-4.2-20L /VH	4			
22	1214-37540	SEAT 31D /VH-42	1			
23	1514-46020	TUBE 7-11-15L /VH	1			
24	1114-35670	CORD HOLDER 15X25X20L	1			
25	1114-35680	HOLDER /FX-40	1			
27	1514-57480	CORD BUSH / VH ,D15-2.7	1			
28	1114-57100	CORD PROTECTOR(LEAD)FX40B	1			
29	1214-37551	SLIP WASHER /VH	1			
30	1114-48340	NUT,CORD PROTECTOR /FX-A	1		SS!1114-61350	
31	9590-27029	CONTRACTION TUBE/D14-1M	1		!NS	M UNIT SALE
31	9590-27022	CONTRACTION TUBE/D14-35	1			
36	1244-38280	HOSE COUPLING /VHS42	1			
37	0502-00260	O-RING P-26	1			
38	1514-48571	PROTECT TUBE /FX-A(ORA)	1			L=28
39	1143-10750	SHOCK ABSORBER 40N	1			
75	9590-26729	RUBBER TUBE / D3.5-1M	1			M UNIT SALE
76	9590-26724	RUBBER TUBE / D3.5-200	1		!NS	
77	9590-26725	RUBBER TUBE / D3.5-250	1		!NS	
78	9590-26726	RUBBER TUBE / D3.5-300	1		!NS	
79	9590-26728	RUBBER TUBE / D3.5-350	1		!NS	
80	1210-10030	TERMINAL SLEEVE TMDB-2	4			
81	9590-26529	CONTRACTION TUBE / D6-1M	1			M UNIT SALE
81	9590-26521	CONTRACTION TUBE / D6-60	4		!NS	
82	9590-27029	CONTRACTION TUBE/D14-1M	1			M UNIT SALE
82	9590-27023	CONTRACTION TUBE /D14-230	2		!NS	
96	1210-10160	PUSH COVER /VH	1			
97	1210-10170	SWITCH AY /VH	1			
98	0916-05025	SCREW 5X25 SW.PW	4			
99	0940-10034	SCREW 4X8 SW (SUS)	6			
100	1114-37890	INSULATING PAPER	1			
101	1114-49120	SEAL RING /FX-A	1			
102	1112-13700	COVER, SWITCH BOX /FX-A	1			
103	0022-00620	BOLT 6X20 SW	4			
116	1210-10251	PRESSURE RUBBER, SW.BOX	1			
117	1114-35810	SLIPWASHER 16-24-1T	2			
118	1114-37760	NUT,(16D) SWITCH BOX	1			
119	1113-35850	CORD PROTECTOR,SW.BOX/FX	1			
120	1210-10210	CLAMP JS 253	1			
120	1220-10060	CLAMP JS 245	1			
124	1210-10050	CABTYRE CORD 1.25-6C-U/M	1			15M
126	1513-29660	PLUG, MALE 6(P) /VH	1			
127	1510-30020	TERMINAL TC-1.25	6			
130	1210-10290	PLUG, FEMALE 6-1.25 /VH	1			
171	9590-31110	LEAD CORD 1.25 UNIT/METER	3			2.9M
172	9590-31210	LEAD CORD 1.25 UNIT/METER	1			2.9M
173	1140-11245	SPIRAL TUBE 25D-1M	1			STD,2070MM
174	1143-26660	GUIDE PIPE /FXS-40,45	1			
175	1110-13290	TERMINAL SLEEVE TG-B-5.5	4			
176	9590-26629	CONTRACTION TUBE /D7-1M	1			M UNIT SALE
176	9590-26621	CONTRACTION TUBE / D7-60	4		!NS	
177	1214-38210	PRESSURE RUBBER 13.4D	1			
178	1114-15740	SLIP WASHER 17X24X1T	2			
179	1114-37770	NUT,(17.5D) SWITCHBOX	1			
180	1113-35850	CORD PROTECTOR,SW.BOX/FX	1			
181	1210-10210	CLAMP JS 253	1			
181	1220-10060	CLAMP JS 245	1			
182	9590-20710	CABTYRE CORD 1.25-4C-U/M	1			3M
183	1113-35850	CORD PROTECTOR,SW.BOX/FX	1			
184	1210-10210	CLAMP JS 253	1			
184	1220-10060	CLAMP JS 245	1			
185	1210-10280	TERMINAL V2-M4	10			
186	1112-13690	SWITCH BOX /FXS-A	1			
187	1214-38210	PRESSURE RUBBER 13.4D	1			
188	1114-15740	SLIP WASHER 17X24X1T	2			
189	1114-37770	NUT,(17.5D) SWITCHBOX	1			
201	9201-00600	DECAL, M-MARK 54D	1			
202	9201-10350	DECAL, SERIAL NO./ VH-B	1			
203	9201-06390	DECAL, CIRCUIT	1			
206	9202-10190	DECAL,EMC-LICENSE / VH,VC	1			TAIWAN

VHW-62A

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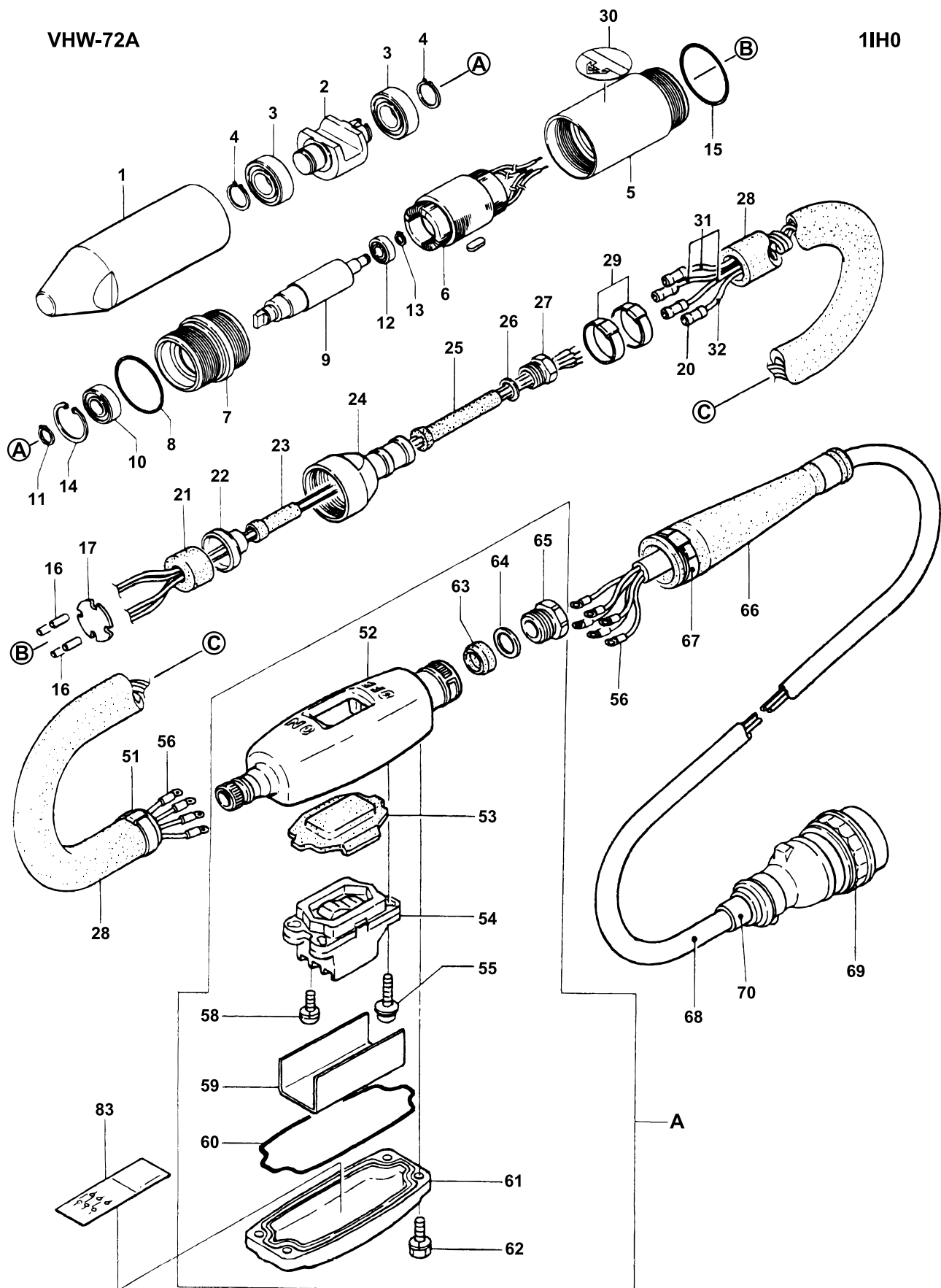


CONCRETE VIBRATOR

** 1IG **

NO.	PART/NO.	Parts Name	Q'TY	MK	MK2	REMARKS
A	1529-10010	SWITCH BOX AY /VHW-A	1			
1	1113-24030	HEAD CASE /VHW-62	1			
2	1113-24171	ECCENTRIC ROTATOR /FXA-60	1			
3	0446-06205	BEARING 6205VVSGR	2			
4	0802-00250	STOP RING S-25	1			
5	1223-28430	MOTOR CASE /VHW62	1			
6	1220-10010	STATOR /VHW62,72	1			
7	1114-34140	CASE JOINTER /FX-60	1			
8	0502-00480	O-RING P-48	1			
9	1220-10020	ROTOR /VHW62,72	1			
10	0425-06203	BEARING 6203ZZSG	1			
11	0802-00170	STOP RING S-17	1			
12	0425-06000	BEARING 6000ZZSG	1			
13	0802-00100	STOP RING S-10	1			
14	0801-00400	STOP RING R-40	1			
15	0502-00480	O-RING P-48	1			
16	9590-21422	TUBE 4D-5D-20L /FX	4			
17	1224-40550	SEAT 45D-1T /VHW62,72	1			
20	1210-10030	TERMINAL SLEEVE TMDB-2	4			
21	1114-49290	CORD HOLDER /FX-60A,VHW	1			
22	1114-48470	HOLDER /FX-60A,VHW	1			
23	1514-48571	PROTECT TUBE /FX-A(ORA)	1			
24	1114-48440	HOSE COUPLING /FX-60A,VHW	1			
25	1114-48371	CORD PROTECTOR(LEAD)/FX-A	1			
26	1214-37551	SLIP WASHER /VH	1			
27	1114-48340	NUT,CORD PROTECTOR /FX-A	1			
28	9590-23610	RUBBER TUBE 37.5D-UNIT/M	1			4M,6M
29	1114-35220	HOSE CLAMP /FX-45	1			
30	9201-00600	DECAL, M-MARK 54D	1			
31	9590-32110	LEAD CORD 2(BLUE)(UNIT/M)	3			4M,6M
32	9590-32210	LEAD CORD (YEL.)(UNIT/M)	1			4M,6M
51	1220-10060	CLAMP JS 245	1			
52	1112-13680	SWITCH BOX /FX-A	1			
53	1110-13651	PUSH COVER /FX	1			
54	1210-10170	SWITCH AY /VH	1			
55	0916-05025	SCREW 5X25 SW,PW	4			
56	1210-10280	TERMINAL V2-M4	10			
58	0940-10034	SCREW 4X8 SW (SUS)	6			
59	1114-37890	INSULATING PAPER	1			
60	1114-49120	SEAL RING /FX-A	1			
61	1112-13700	COVER, SWITCH BOX /FX-A	1			
62	0022-00620	BOLT 6X20 SW	4			
63	1114-35820	PRESSURE RUBBER,S/BOX	1			
64	1114-35810	SLIPWASHER 16-24-1T	1 OR 2			
65	1114-37760	NUT,(16D) SWITCH BOX	1			
66	1220-10070	CORD PROTECTOR 200L /VHW	1			
67	1210-10210	CLAMP JS 253	1			
67	1220-10060	CLAMP JS 245	1			
68	1220-10099	CABTYRE CORD 2.0-6C X M	1			15M
69	1220-10080	PLUG, MALE 7-20A /VHW	1			
70	1224-41400	RUBBER TUBE 15-17-45L/VHW	1			
83	9201-10350	DECAL ,SERIAL NO./ VH-B	1			

11H0

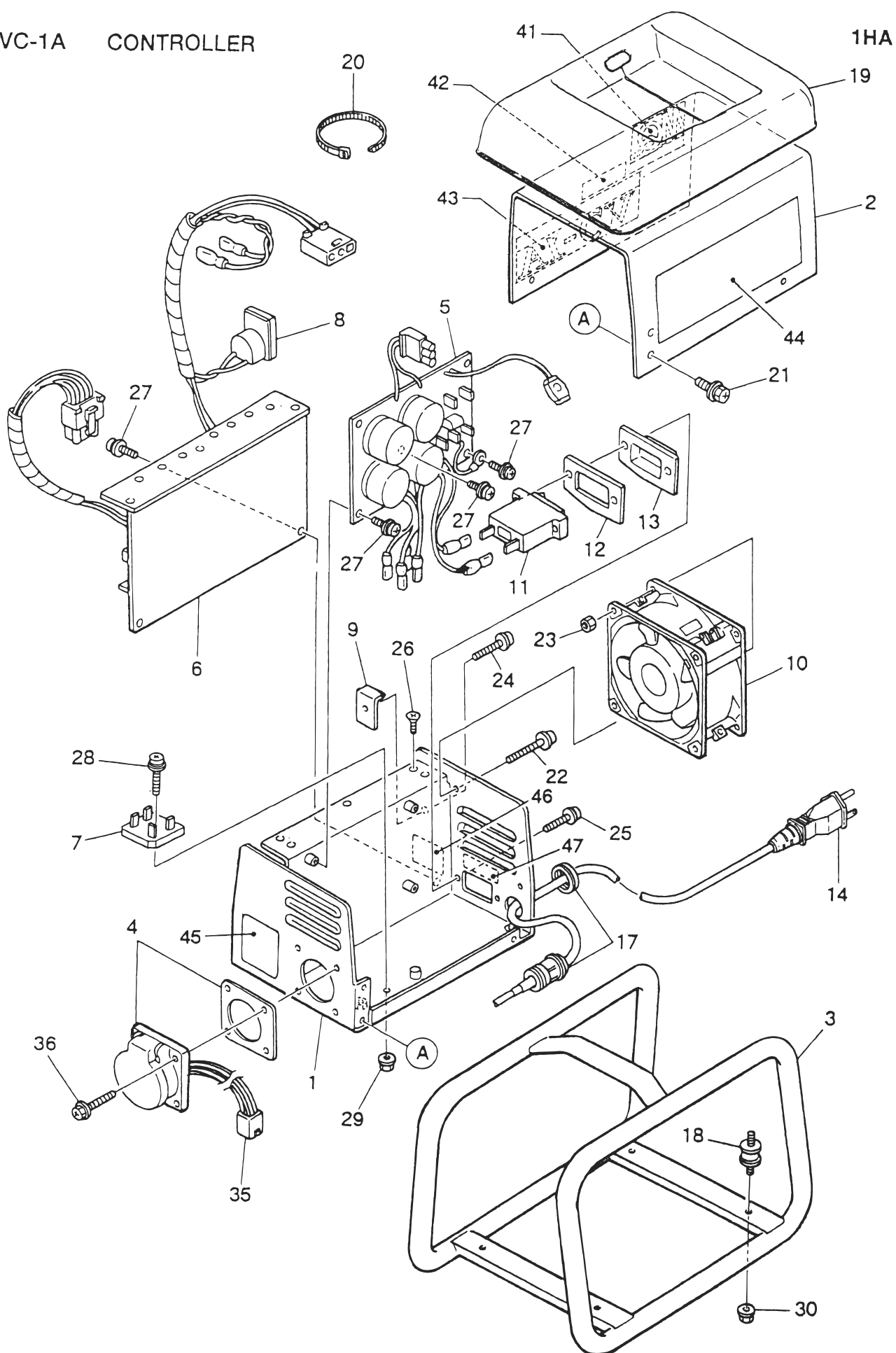


CONCRETE VIBRATOR

** 1IH **

NO.	PART/NO.	Parts Name	Q'TY	MK	MK2	REMARKS
A	1529-10010	SWITCH BOX AY /VHW-A	1			
1	1223-28440	HEAD CASE /VHW72	1			
2	1224-40850	ECCENTRIC ROTATOR /VHW72	1			
3	0446-06205	BEARING 6205VVSGR	2			
4	0802-00250	STOP RING S-25	2			
5	1223-28450	MOTOR CASE /VHW72	1			
6	1220-10010	STATOR /VHW62,72	1			
7	1224-40860	CASE JOINTER /VHW72	1			
8	0509-30600	O-RING JASO3060	1			
9	1220-10020	ROTOR /VHW62,72	1			
10	0425-06203	BEARING 6203ZZSG	1			
11	0802-00170	STOP RING S-17	1			
12	0425-06000	BEARING 6000ZZSG	1			
13	0802-00100	STOP RING S-10	1			
14	0801-00400	STOP RING R-40	1			
15	0509-30600	O-RING JASO3060	1			
16	9590-21422	TUBE 4D-5D-20L /FX	4			
17	1224-40550	SEAT 45D-1T /VHW62,72	1			
20	1210-10030	TERMINAL SLEEVE TMDB-2	4			
21	1114-49290	CORD HOLDER /FX-60A,VHW	1			
22	1114-48470	HOLDER /FX-60A,VHW	1			
23	1514-48571	PROTECT TUBE /FX-A(ORA)	1			
24	1524-48580	HOSE COUPLING /VHW-72A	1			
25	1114-48371	CORD PROTECTOR(LEAD)/FX-A	1			
26	1214-37551	SLIP WASHER /VH	1			
27	1114-48340	NUT,CORD PROTECTOR /FX-A	1			
28	9590-23610	RUBBER TUBE 37.5D-UNIT/M	1			4M,6M
29	1220-10060	CLAMP JS 245	2			
30	9201-00600	DECAL, M-MARK 54D	1			
31	9590-32110	LEAD CORD 2(BLUE)(UNIT/M)	3			4M,6M
32	9590-32210	LEAD CORD (YEL.)(UNIT/M)	1			4M,6M
51	1220-10060	CLAMP JS 245	1			
52	1112-13680	SWITCH BOX /FX-A	1			
53	1110-13651	PUSH COVER /FX	1			
54	1210-10170	SWITCH AY /VH	1			
55	0916-05025	SCREW 5X25 SW,PW	4			
56	1210-10280	TERMINAL V2-M4	10			
58	0940-10034	SCREW 4X8 SW (SUS)	6			
59	1114-37890	INSULATING PAPER	1			
60	1114-49120	SEAL RING /FX-A	1			
61	1112-13700	COVER, SWITCH BOX /FX-A	1			
62	0022-00620	BOLT 6X20 SW	4			
63	1114-35820	PRESSURE RUBBER,S/BOX	1			
64	1114-35810	SLIPWASHER 16-24-1T	1 OR 2			
65	1114-37760	NUT,(16D) SWITCH BOX	1			
66	1220-10070	CORD PROTECTOR 200L /VHW	1			
67	1210-10210	CLAMP JS 253	1			
67	1220-10060	CLAMP JS 245	1			
68	1220-10099	CABTYRE CORD 2.0-6C X M	1			15M
69	1220-10080	PLUG, MALE 7-20A /VHW	1			
70	1224-41400	RUBBER TUBE 15-17-45L/VHW	4			
83	9201-10350	DECAL ,SERIAL NO./ VH-B	1			

VC-1A CONTROLLER



VC-1A

2009/12/18

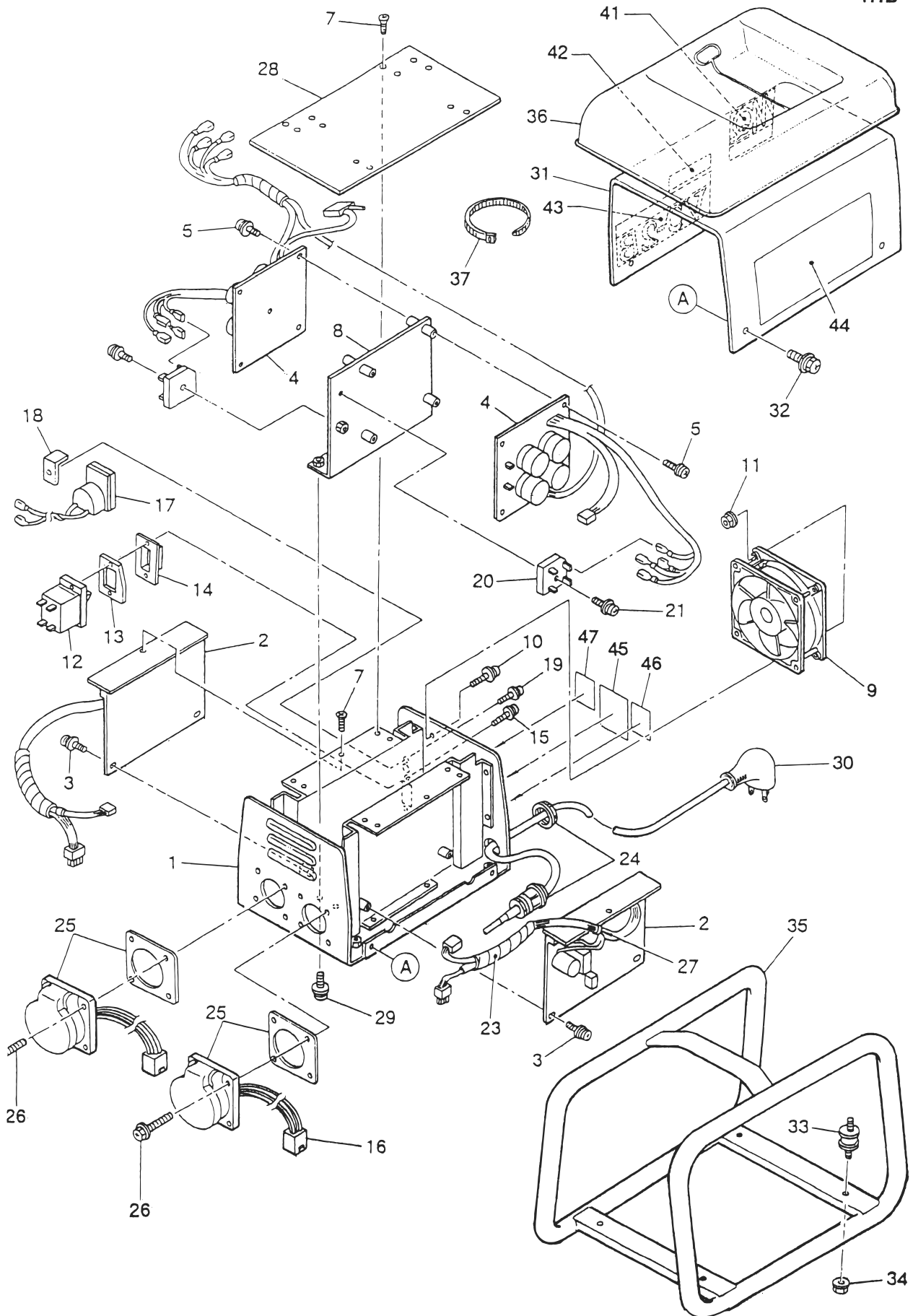
CONTROLLER

** 1HA **

REF NO.	PART NO.	PART NAME	Q' TY	MRK	MK2	REMARKS
1	1711-11640	BODY /VC-1A	1			
2	1712-11750	COVER /VC-1A	1			
3	1711-11650	FRAME /VC-1A	1			
4	1730-30340	PLUG RECEPTACLE (6P)	1			
5	1710-30160	CONTROL PLATE (1) /VC-1A	1			
6	1710-30270	CONTROL PLATE (2) /1A, 2B	1		SX	
7	1720-30360	DIODE STUFF /VCW-1A	1			
8	1710-30240	VOLT-METER YN-130 /VC	1			
9	1834-38600	KEEP PLATE, V-METER/FU, VC	1			
10	1710-30180	FAN /VC-1A	1			
11	1710-30290	BREAKER NRLR1100F-20A	1			
12	1840-10230	SWITCH PLATE /VC-1	1			
13	1840-10240	SWITCH COVER /VC-1	1			
14	1714-47980	CORD WITH PLUG 13A-125V-3	1			
17	1830-11291	CORD HOLDER AY/FU1200	1			
18	1840-10040	SHOCK ABSORBER /VC-1	4			
19	1713-31020	COVER, CONTROLLER /VC-1A	1			
20	5060-10070	CLAMP TC-150	2			
21	0024-00510	BOLT 5X10 SW, PW	5			
22	0916-04050	SCREW 4X50 SW, PW	2			
23	0203-04030	NUT M4	2			
24	0916-03015	SCREW 3X15 SW, PW	1			
25	0916-03015	SCREW 3X15 SW, PW	2			
26	0920-03008	SCREW 3X8	5			
27	0916-03006	SCREW 3X6 SW, PW	7			
28	0916-04018	SCREW 4X18 SW, PW	1			
29	0226-10404	FLANGE NUT M4 H	1			
30	0226-10606	FLANGE NUT M6 H	4			
35	1710-30190	CABLE AY 100MM /VC-1A	1			
36	0024-00420	BOLT 4X20 SW, PW	4			
41	9202-01580	DECAL, MQ MARK 71X55	1			
42	9202-00700	DECAL, MQ-MARK & NAME	1			
43	9202-02970	DECAL, MODEL (VC-1A-120V)	1			
44	9202-02940	DECAL, CAUTION/1A, 2B(120V)	1			
45	9202-06530	DECAL, SPEC/VC-1A 120V	1			
46	9202-02950	DECAL, SERIAL NO. (VC, VCW)	1			
47	9202-04350	DECAL, SWITCH(ON-OFF)	1			

VC-2B CONTROLLER

1HB



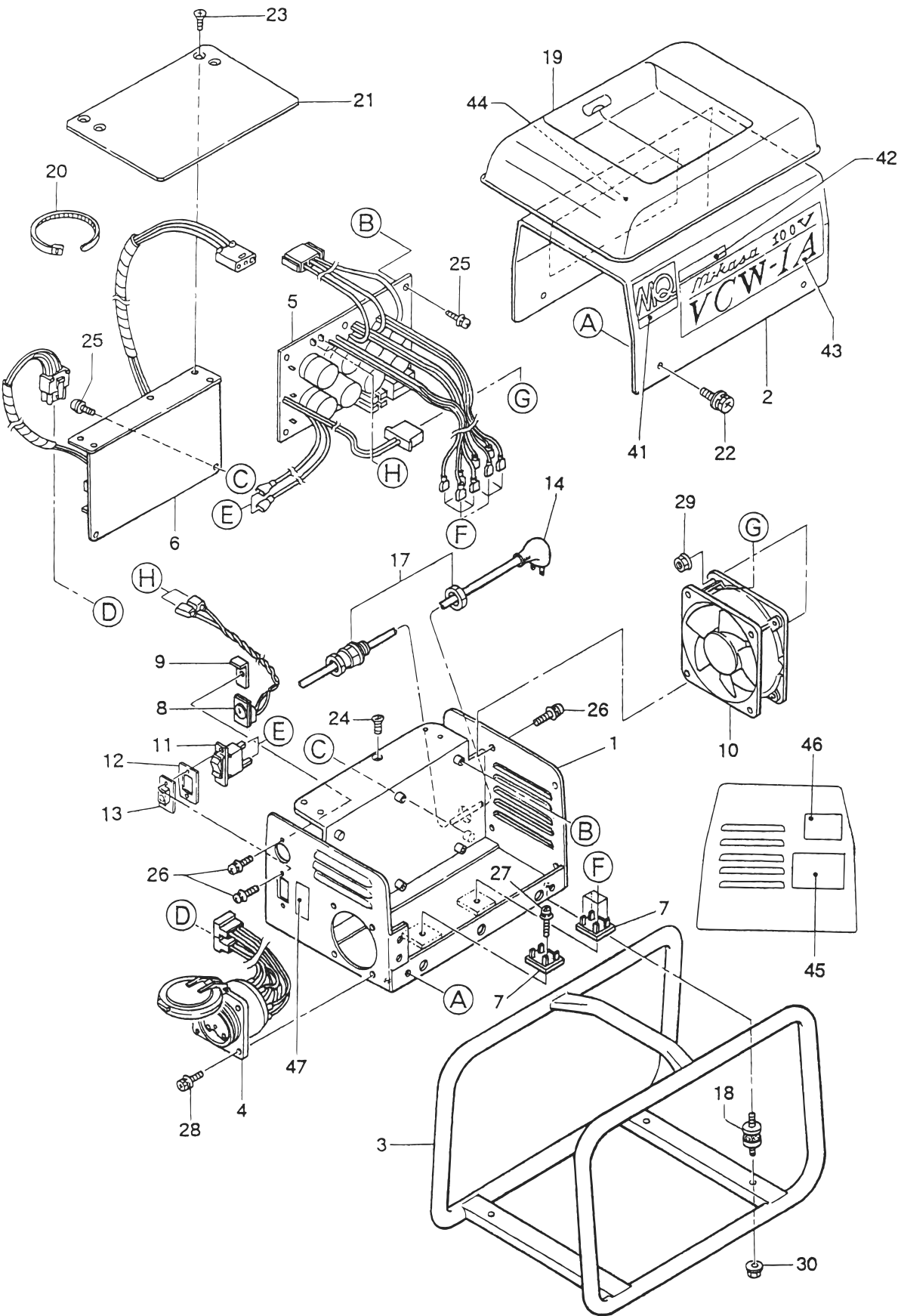
CONTROLLER

** 1HB **

REF NO.	PART NO.	PART NAME	Q' TY	MRK	MK2	REMARKS
1	1711-11950	BODY /VC-2B	1			
2	1710-30270	CONTROL PLATE (2) /1A, 2B	2		SX	
3	0916-03006	SCREW 3X6 SW, PW	4			
4 -1	1710-30200	CONTROL PLATE (1) /VC-2B	1			
4 -2	1710-30260	CONTROL PLATE (2) /VC-2B	1			
5	0916-03006	SCREW 3X6 SW, PW	10			
7	0920-03008	SCREW 3X8	10			
8	1713-31240	PLATE, CONTROL(1) /VC-2B	1			
9	1720-30260	FAN /VC-1A(200V)	1		SX	
10	0916-03015	SCREW 3X15 SW, PW	2			
11	0226-10303	FLANGE NUT M3 H	2			
12	1710-30280	BREAKER CP22R	1		SS!17	SS1710-30281
12	1710-30281		1			
13	1840-10230	SWITCH PLATE /VC-1	1			
14	1840-10240	SWITCH COVER /VC-1	1			
15	0916-03015	SCREW 3X15 SW, PW	2			
16	1710-30190	CABLE AY 100MM /VC-1A	2			
17	1710-30240	VOLT-METER YN-130 /VC	1			
18	1834-38600	KEEP PLATE, V-METER/FU, VC	1			
19	0916-03015	SCREW 3X15 SW, PW	1			
20	1720-30360	DIODE STUFF /VCW-1A	2			
21	0916-04015	SCREW 4X15 SW, PW	2			
23	1720-30290	SPIRAL TUBE SPP-06-100	3			
24	1830-11291	CORD HOLDER AY/FU1200	1			
25	1730-30340	PLUG RECEPTACLE (6P)	2			
26	0024-00420	BOLT 4X20 SW, PW	8			
27	4540-10020	CLAMP TC-100	6			
28	1722-12030	PLATE /VC-1A(200V)	1			
29	0916-05015	SCREW 5X15 SW, PW	4			
30	1714-47970	CORD WITH PLUG 20A-125V-3	1		SX	
31	1722-12040	COVER /VC-1A(200V)	1			
32	0024-00510	BOLT 5X10 SW, PW	4			
33	1840-10040	SHOCK ABSORBER /VC-1	4			
34	0226-10606	FLANGE NUT M6 H	4			
35	1721-11960	FRAME /VC-1A(200V), 2B	1			
36	1722-12060	COVER, CONTROLLER/1A(200V)	1			
37	5060-10070	CLAMP TC-150	2			
41	9202-01580	DECAL, MQ MARK 71X55	1			
42	9202-00700	DECAL, MQ-MARK & NAME	1			
43	9202-02980	DECAL, MODEL (VC-2B-120V)	1			
44	9202-02940	DECAL, CAUTION/1A, 2B(120V)	1			
45	9202-05020	DECAL, SPEC. (VC-2B-120V)	1			
45	9202-06520	DECAL, SPEC/VC-2B 120V	1	OX	!!920	
46	9202-02950	DECAL, SERIAL NO. (VC, VCW)	1			
47	9202-04270	DECAL, SWITCH ON-OFF	1			

VCW-1A
CONTROLLER

1HC



CONTROLLER

** 1HC **

REF NO.	PART NO.	PART NAME	Q' TY	MRK	MK2	REMARKS
1	1721-12030	BODY /VCW-1A	1			
2	1722-12040	COVER /VC-1A(200V)	1			
3	1721-11960	FRAME /VC-1A(200V), 2B	1			
4	1720-30200	PLUG RECEPTACLE FD-7 /VCW	1			
5	1720-30340	CONTROL PLATE (1) /VCW-1A	1			
6	1720-30370	CONTROL PLATE(2)/120V/MQ	1			120V
7	1720-30360	DIODE STUFF /VCW-1A	2			
8	1710-30240	VOLT-METER YN-130 /VC	1			
9	1834-38600	KEEP PLATE, V-METER/FU, VC	1			
10	1720-30260	FAN /VC-1A(200V)	1		SX	
11	1720-30350	BREAKER CP21RS/20-B3	1			
12	1840-10230	SWITCH PLATE /VC-1	1			
13	1840-10240	SWITCH COVER /VC-1	1			
14	1714-47970	CORD WITH PLUG 20A-125V-3	1		SX	
17	1830-11291	CORD HOLDER AY/FU1200	1			
18	1720-30190	SHOCK ABSORBER 25-18H/VCW	4			
19	1722-12060	COVER, CONTROLLER/1A(200V)	1			
20	5060-10070	CLAMP TC-150	2			
21	1723-32900	PLATE /VCW-1A	1			
22	0024-00510	BOLT 5X10 SW, PW	4			
23	0920-04010	SCREW 4X10	4			
24	0920-04008	SCREW 4X8	1			
25	0916-03006	SCREW 3X6 SW, PW	10			
26	0916-03015	SCREW 3X15 SW, PW	6			
27	0916-04020	SCREW 4X20 SW, PW	2			
28	0024-00416	BOLT 4X16 SW, PW	4			
29	0226-10303	FLANGE NUT M3 H	3			
30	0226-10606	FLANGE NUT M6 H	4			
41	9202-01580	DECAL, MQ MARK 71X55	1			
42	9202-00700	DECAL, MQ-MARK & NAME	1			
43	9202-05030	DECAL, MODEL(VCW-1A-120V)	1			
44	9202-02940	DECAL, CAUTION/1A, 2B(120V)	1			
45	9202-06510	DECAL, SPEC/VCW-1A 120V	1			
46	9202-02950	DECAL, SERIAL NO. (VC, VCW)	1			
47	9202-04270	DECAL, SWITCH ON-OFF	1			

MICRO COMPUTER CONTROLLED CONCRETE VIBRATOR

TROUBLE SHOOTING CHART

<u>Trouble</u>	<u>Probable cause</u>	<u>Remedy</u>
A. Does not vibrate	1. Poor contact in wiring:	Repair
	2. Plug defective:	Repair or replace
	3. Cable cord broken or short circuit:	Repair
	4. Lead wire broken or short circuit:	Repair
	5. Switch defective:	Repair or replace
	6. Bearing damaged:	Replace
	7. Joint between pendulum and rotor worn:	Replace
	8. Stator burnt:	Replace
	9. Controller defective :	Repair
	10. Power supply defective:	Repair
	11. Transformer insulation defective(220V model only):	
B. Vibration weak or vibration head heats :	1. Voltage drop due to extension cord:	Adjust
	2. Power supply voltage low:	Adjust
	3. Bearing grease excessive:	Adjust
	4. Insulation defective(Stator, switch, etc.):	Repair or replace
	5. Ambient temperature low:	Work-up run required in 0 degree C or lower temperature
C. Vibration noise high:	1. Bearing worn:	Replace
	2. Vibration head deformed:	Replace



MIKASA SANGYO CO., LTD.

HEAD OFFICE
No.4-3, Sarugakucho 1-chome,
Chiyoda-ku, Tokyo, 101-0064,
Japan

<http://www.mikasas.com>