

PARTS BOOK

OKUMA Model LC20 Numerically Controlled Lathes with OSP 3000L CNC

Type of Machine : LC20-1ST
LC20-1SC
LC20-2ST

This parts list has been prepared to assist you in ordering replacements and servicing parts for Okuma LC 20 CNC Lathes.

Due to constant improvements in design, you may find slight variations from the machine delivered to you. This merely indicates that mechanism has been improved to better meet your requirements.

ORDERING REPAIR PARTS

In order to obtain smooth and rapid service when ordering repair parts, please give careful attention to the following five instructions.

These FIVE requirements are essential:

1. GIVE COMPLETE SIZE, TYPE OF MACHINE AND NC SYSTEM.

EX. : LC20-1ST with OSP3000L & DC 11 kW main motor

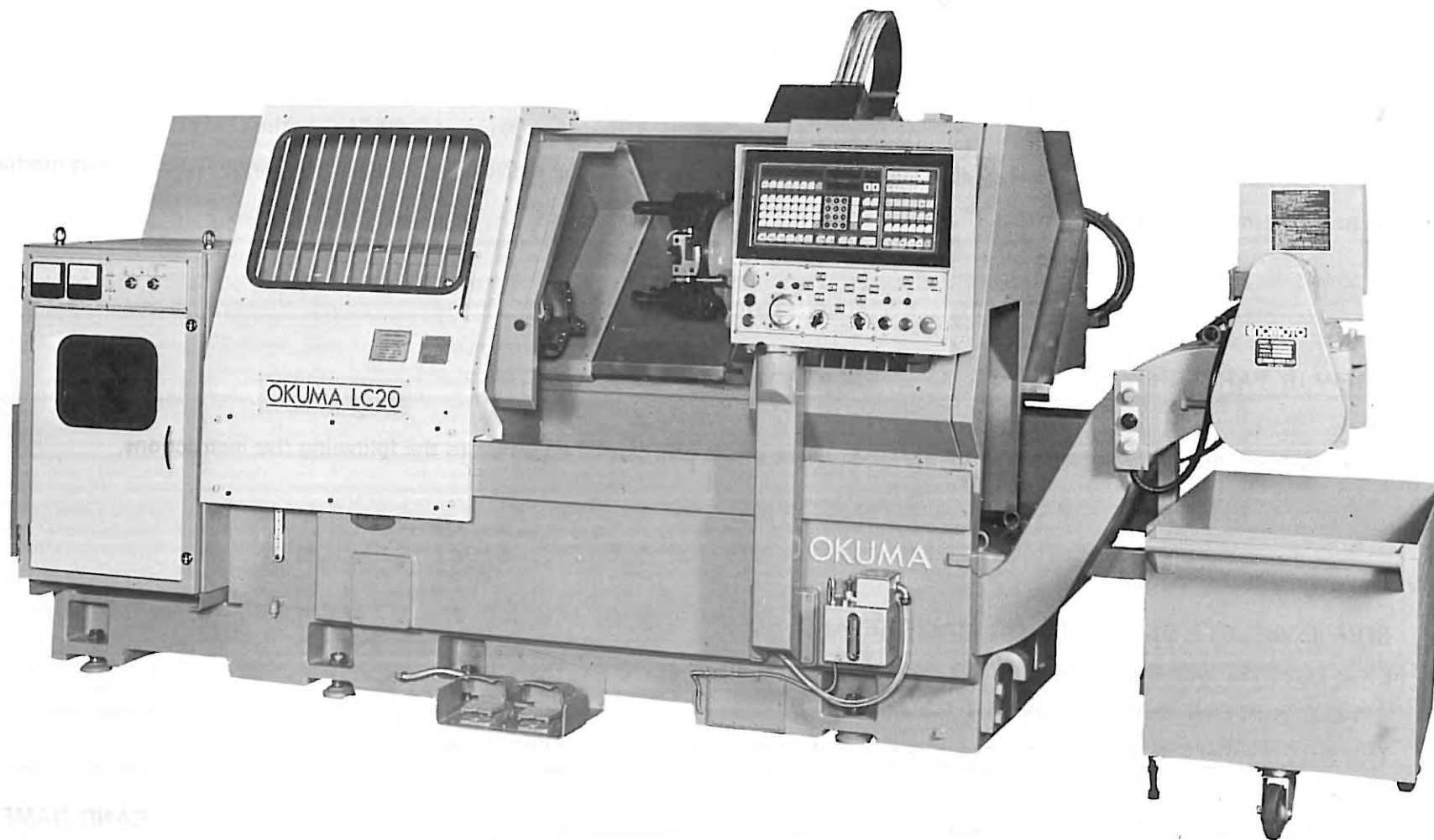
2. GIVE COMPLETE SERIAL NUMBER OF MACHINE.

This serial number will be found stamped on the Manufacture's name plate attached to the machine.

3. GIVE PARTS LIST SHEET NO., INDEX NO. AND PART NAME.

4. FOR ELECTRICALS, SPECIFY POWER VOLTAGE AND FREQUENCY ALONG WITH RATING OR BRAND NAME, OTHER INFORMATION.

5. STATE AMOUNT WANTED.



OKUMA Model LC20 CNC LATHE with OSP 3000L

2/22/1985

VEGA

PARTS BOOK

LC20 CNC LATHE

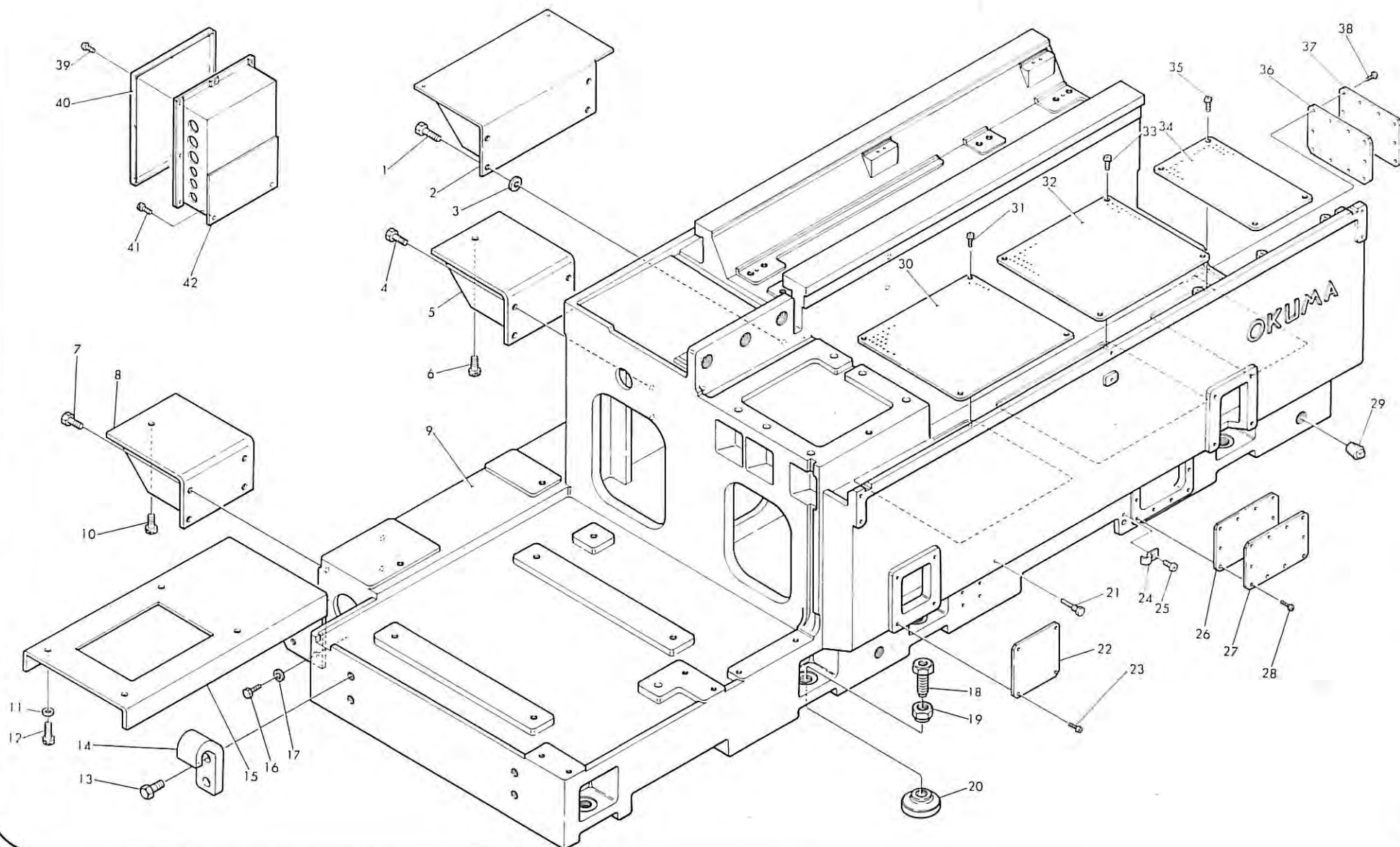
- CONTENTS -

SHEET NO.	ASSEMBLY NAME	SHEET NO.	ASSEMBLY NAME
1	BED AND BASE, - 1ST -	20	V8 UPPER TURRET COVER
2	BED AND BASE, - 1SC/2ST -	21	V8 LOWER TURRET (1)
3	DC MOTOR AND POSITION CODER	22	V8 LOWER TURRET (2)
4	HEADSTOCK AND MAIN SPINDLE	23	V8 LOWER TURRET COVER
5	HEADSTOCK GEAR SHIFTER	24	TOOLING (Qualified Turret, Inch System)
6	HEADSTOCK LUBRICATION	25	TOOLING (Qualified Turret, Metric System)
7	"HJA" HYDRAULIC POWER CHUCK AND "HYSR" CYLINDER	26	TAILSTOCK (1), - 1SC -
8	"HOS" HYDRAULIC HOLLOW CHUCK AND "YOSR" CYLINDER	27	TAILSTOCK (2), - 1SC -
9	UPPER CROSS-SLIDE AND X-AXIS BALL-SCREW	28	HYDRAULIC POWER UNIT
10	UPPER X-AXIS DRIVE UNIT	29	COOLANT NOZZLE (Upper Turret)
11	LOWER CROSS-SLIDE AND X-AXIS BALL-SCREW, - 2ST -	30	COOLANT NOZZLE (Lower Turret)
12	LOWER SADDLE AND X-AXIS DRIVE UNIT, - 2ST -	31	COOLANT SUPPLY EQUIPMENT
13	UPPER SADDLE AND Z-AXIS BALL-SCREW, - 1ST -	32	LEFT END COVER AND PTR
14	UPPER SADDLE AND Z-AXIS BALL-SCREW, - 2ST -	33	FRONT SLIDING CHIP GUARD, - 2ST -
15	LOWER SADDLE AND Z-AXIS BALL-SCREW, - 2ST -	34	COVER AND OTHER PARTS, - 2ST -
16	UPPER AND LOWER Z-AXIS DRIVE UNITS	35	CHIP CONVEYOR
17	SADDLE LUBRICATION	36	OPERATOR'S CONTROL PANEL, - 1ST -
18	V8 UPPER TURRET (1)	37	OPERATOR'S CONTROL PANEL, - 1SC/2ST -
19	V8 UPPER TURRET (2)	38	CHUCK AND TAILSTOCK PEDALS

SHEET NO. 1 BED AND BASE, - 1ST -

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
1-1	C5000-080161	BOLT, 8 x 16	4
-2	127-0000-18-2	SUPPORT, hydraulic oil tank	1
-3	M1310-01103050	SHEET, rubber, M11 x M30 x 5	4
-4	C5000-160351	BOLT, 16 x 35	4
-5	127-0000-17	SUPPORT, control panel	1
-6	D5010-160251	BOLT, socket-head, 16 x 25	1
-7	C5000-160351	BOLT, 16 x 35	4
-8	127-0000-17	SUPPORT, control	1
-9	127-0001-01-5	BED, with bed	1
-10	D5010-160251	BOLT, socket-head, 16 x 25	1
-11	127-0003-23	WASHER	4
-12	C5010-160301	BOLT, socket-head, 16 x 30	4
-13	C5000-240601	BOLT, 24 x 60	8
-14	174-0010-01	HOOK, lifting	4
-15	127-0000-20-2	SUPPORT	1
-16	C5000-100201	BOLT, 10 x 20	4
-17	C5150-000101	WASHER, plain, 10	4
-18	117-0000-01	BOLT, jack	8
-19	117-0000-04	NUT	8
-20	108-0014-04-1	WASHER, foundation	8
-21	127-0001-05	BOLT	2
-22	127-0001-04	COVER	1
-23	C5040-008101	SCREW, pan-head, 8 x 10	4
-24	H0035-0002-01	BAND, pipe	1
-25	C5040-005081	SCREW, pan-head	1
-26	H1020-1028-87	PACKING, rubber	1
-27	127-0000-03	COVER	1
-28	C5040-005121	SCREW, pan-head, 5 x 12	10
-29	C7850-000042	PLUG, M	1
-30	127-0000-01-1	COVER	1
-31	C5040-005081	SCREW, pan-head, 5 x 8	4
-32	127-0000-01	COVER	1
-33	C5040-005081	SCREW, pan-head, 5 x 8	4
-34	127-0000-02-1	COVER	1
-35	C5040-005081	SCREW, pan-head, 5 x 8	4
-36	H0120-1028-87	PACKING, rubber	1
-37	127-0000-03	COVER	1
-38	C5040-005121	SCREW, pan-head, 5 x 12	10
-39	C5040-005081	SCREW, pan-head, 5 x 8	8
-40	127-0000-15	COVER	1
-41	C5010-050101	BOLT, socket-head, 5 x 10	2
-42	127-0000-14-4	BOX, terminal	1

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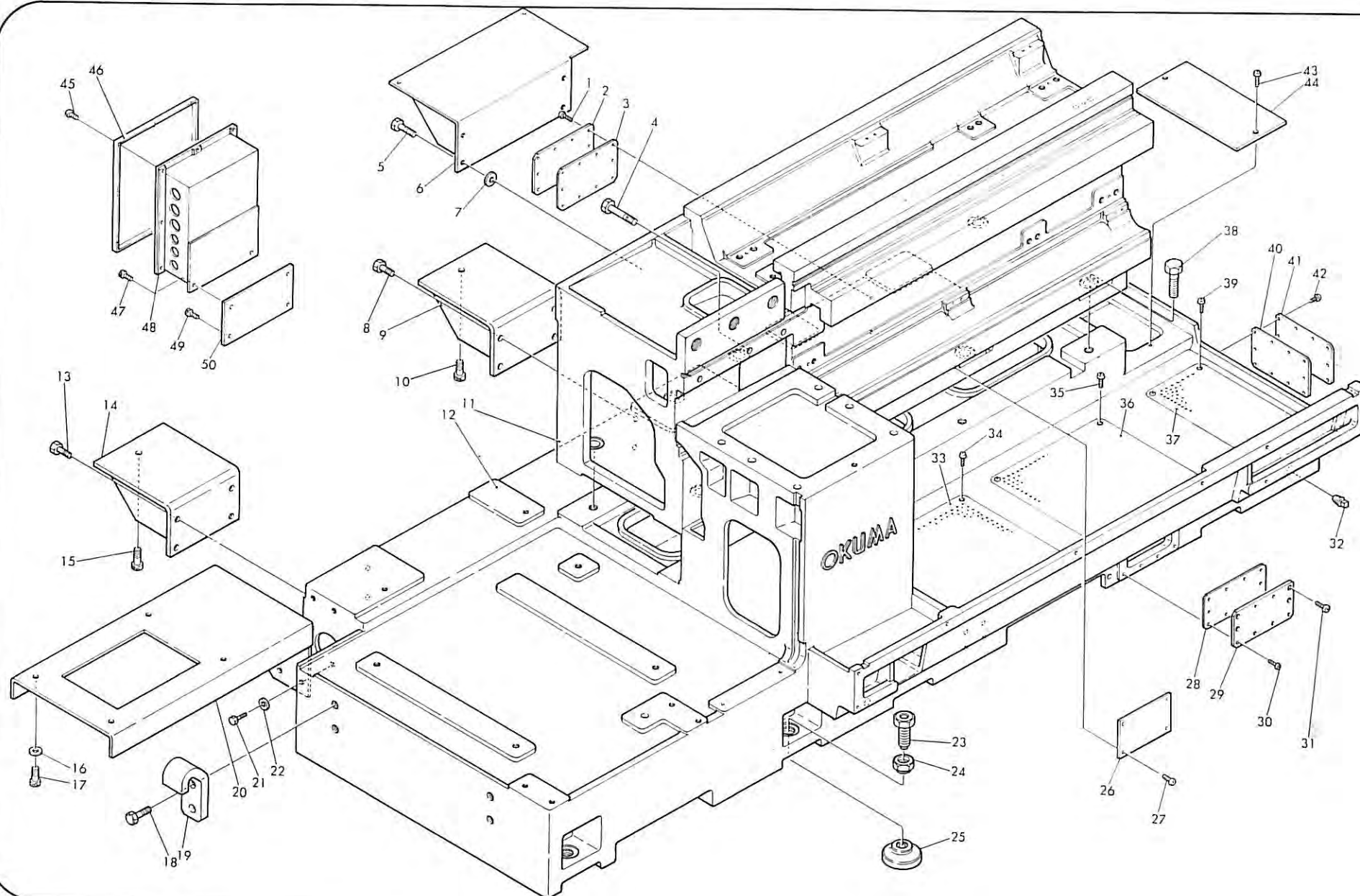
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SHEET NO. 2 BED AND BASE, - 1SC/2ST -

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
2-1	C5040-005121	SCREW, pan-head, 5 x 12	10
-2	127-0002-12	COVER	1
-3	H1020-1031-42	PACKING	1
-4	C5000-200901	BOLT, 20 x 90	3
-5	C5000-080161	BOLT, 8 x 16	4
-6	127-0000-18-2	SUPPORT, hydraulic oil tank	1
-7	M1310-01103050	SHEET, rubber, M11 x M30 x 15	4
-8	C5000-160351	BOLT, 16 x 35	4
-9	127-0000-17	SUPPORT, control panel	1
-10	D5010-160251	BOLT, socket-head, 16 x 25	1
-11	127-0002-01-7	BED, 500-2S	1
-12	127-0002-02-6	LEG, 2S	1
-13	C5000-160351	BOLT, 16 x 35	4
-14	127-0000-17	SUPPORT, control panel	1
-15	D5010-160251	BOLT, socket-head, 16 x 25	1
-16	127-0003-23	WASHER	4
-17	C5010-160301	BOLT, socket-head, 16 x 30	4
-18	C5000-240601	BOLT, 24 x 60	8
-19	174-0010-01	HOOK, lifting	4
-20	127-0000-20-2	SUPPORT	1
-21	C5000-100201	BOLT, 10 x 20	4
-22	C5150-000101	WASHER, plain, 10	4
-23	117-0000-01	BOLT, jack	8
-24	117-0000-04	NUT	8
-25	108-0014-04-1	WASHER, foundation	8
-26	127-0002-03-1	COVER	3
-27	C5040-005081	SCREW, pan-head	12
-28	H1022-1018-90	PACKING, rubber	1
-29	127-0002-08-1	COVER	1
-30	C5040-005101	SCREW, pan-head, 5 x 10	6
-31	C5040-008121	SCREW, pan-head, 8 x 12	4
-32	C7850-000042	PLUG, M, 3/4	1
-33	127-0000-01-1	COVER	1
-34	C5040-005081	SCREW, pan-head, 5 x 18	4
-35	C5040-005081	SCREW, pan-head, 5 x 18	4
-36	127-0000-01-1	COVER	1
-37	127-0000-02-1	COVER	1
-38	C5000-240701	BOLT, 24 x 70	10
-39	C5040-005081	SCREW, pan-head	4
-40	H1020-1031-42	PACKING, 200 x 130 x 2	1
-41	127-0002-12	COVER	1
-42	C5040-005121	SCREW, pan-head, 5 x 12	10
-43	C5040-005081	SCREW, pan-head, 5 x 8	2
-44	127-0002-09	COVER	1
-45	C5040-005081	SCREW, pan-head, 5 x 8	8
-46	127-0000-15	COVER	1
-47	C5010-050101	BOLT, socket-head, 5 x 10	2
-48	127-000014-4	BOX, terminal	1
-49	C5010-050141	BOLT, socket-head, 5 x 14	2
-50	127-0002-13	SUPPORT, terminal box	1

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SHEET NO. 2 BED AND BASE, - 1SC/2ST -

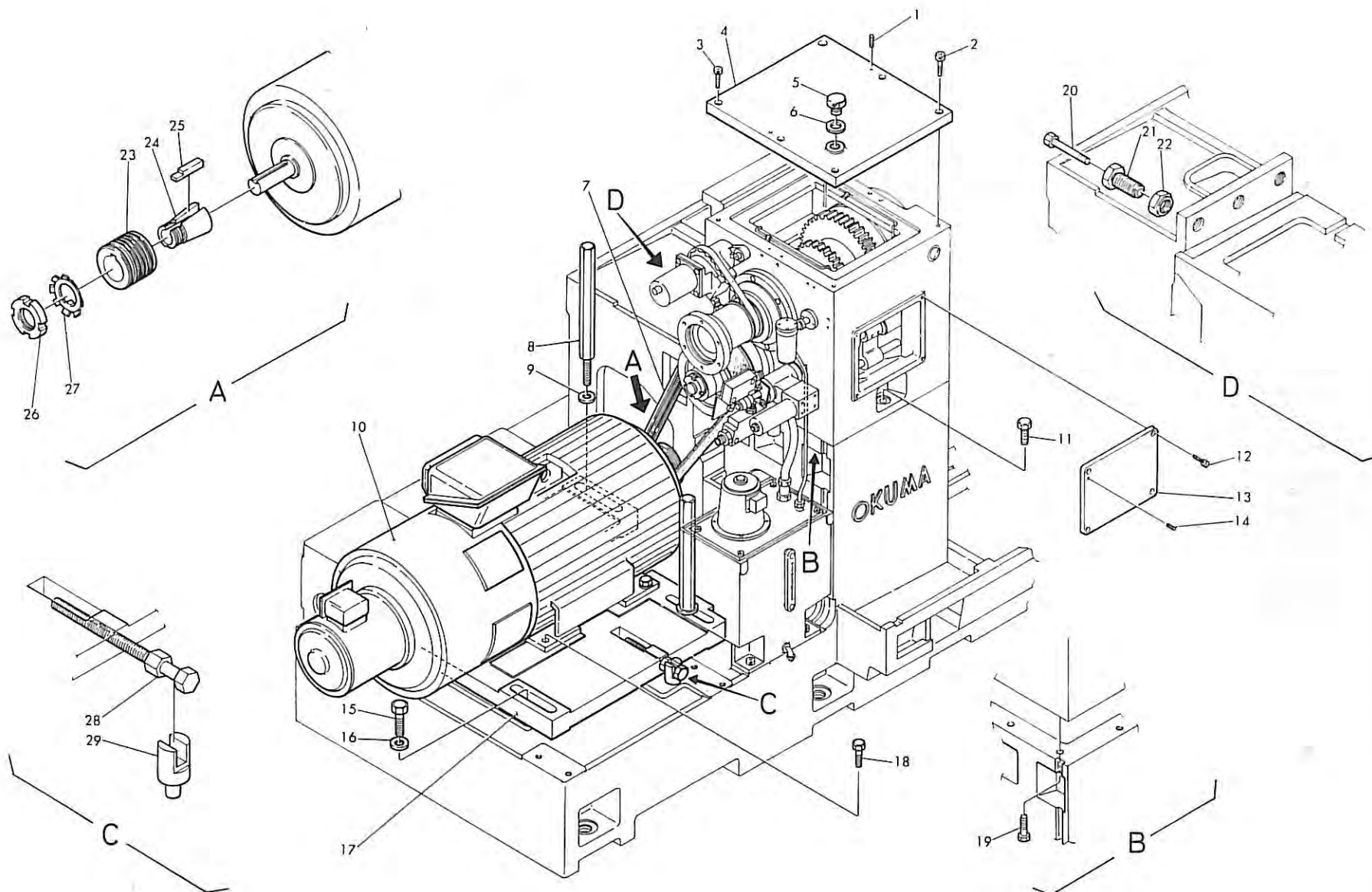


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SHEET NO.3 DC MOTOR AND POSITION CODER

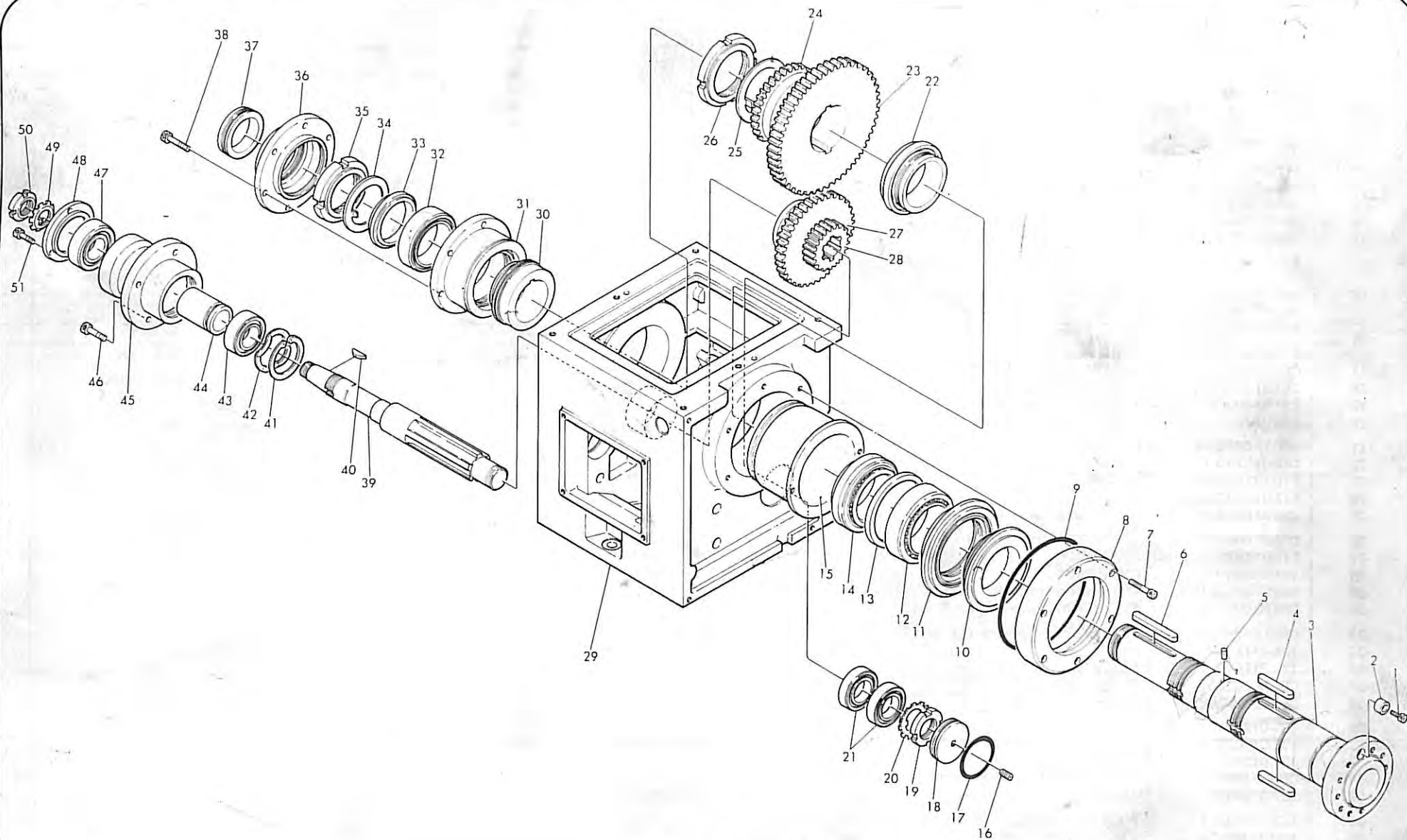
INDEX NO.	PART NO.	DESCRIPTION	Q'TY
3-1	C5030-010101	SET-SCREW, flat-point, 10 x 10	3
-2	C5010-120351	BOLT, socket-head, 12 x 35	4
-3	C5010-120401	BOLT, socket-head, 12 x 40	2
-4	127-0100-02-1	COVER	1
-5	D7863-000042	PLUG, oil, 3/4	1
-6	D7864-000040	PACKING, rubber, 3/4	1
-7	M119-0005-04	POWER-ACE, 11/7.5, 15/11 kW, 3500 rpm, 3V 600	1
	M119-0002-38	POWER-ACE, 11/7.5, 15/11 kW, 2200 rpm, 3V 560	1
	M119-0005-22	POWER-ACE, 22/15 kW, 3500 rpm, 3V 600	1
-8	127-0020-02-3	BOLT	2
-9	127-0020-04	WASHER	2
-10	E1206-892-012	DC MOTOR, GEK-180LL 11/7.5 kW	1
	E1206-892-018	DC MOTOR, GEK-180LL 15/11 kW	1
	E1206-892-010	DC MOTOR, GEK-200LL 22/15 kW	1
	E1206-892-018	DC MOTOR, GEK-180LL 15/11 kW	1
	E1206-892-019	DC MOTOR, GEK-200LL 22/15 kW	1
-11	C5000-160451	BOLT, 16 x 45	1
-12	C5010-080161	BOLT, socket-head, 8 x 16	4
-13	127-0100-03-1	COVER	1
-14	C5030-008081	SET-SCREW, flat-point, 8 x 8	1
-15	C5000-160801	BOLT, 16 x 80	2
-16	127-0020-04	WASHER	2
-17	127-0020-01-3	BASE, motor, 11/7.5, 15/11 kW	1
	127-0020-05	BASE, motor, 22/15 kW	1
-18	C5000-120401	BOLT, 12 x 40, 11/7.5, 15/11 kW	4
	C5000-160451	BOLT, 16 x 45, 22/15 kW	4
-19	C5000-160601	BOLT, 16 x 60	6
-20	D5000-161101	BOLT, 16 x 110	3
-21	117-0000-01	BOLT, jack	3
-22	117-0000-04	NUT	3
-23	127-0131-04	PULLEY, 11/7.5, 15/11 kW, 2200 rpm	1
	127-0131-02-1	PULLEY, 11/7.5, 15/11 kW, 3500 rpm	1
	127-0131-05	PULLEY, 22/15 kW, 3500 rpm	1
-24	127-0150-01-1	SLEEVE, 11/7.5, 15/11 kW	1
	127-0150-03	SLEEVE, 22/15 kW	1
-25	127-0151-01-2	KEY, 11/7.5, 15/11 kW	1
	127-0151-02	KEY, 22/15 kW	1
-26	C5132-000651	NUT, shaft, 65, 11/7.5, 15/11 kW	1
	C5132-000751	NUT, shaft, 75, 22/11 kW	1
-27	C5152-000650	WASHER, lock, 65	1
	C5152-000751	WASHER, lock, 75	1
-28	127-0020-03-1	BOLT	1
-29	137-0001-02-1	SUPPORT	1

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SHEET NO. 4 HEADSTOCK AND MAIN SPINDLE

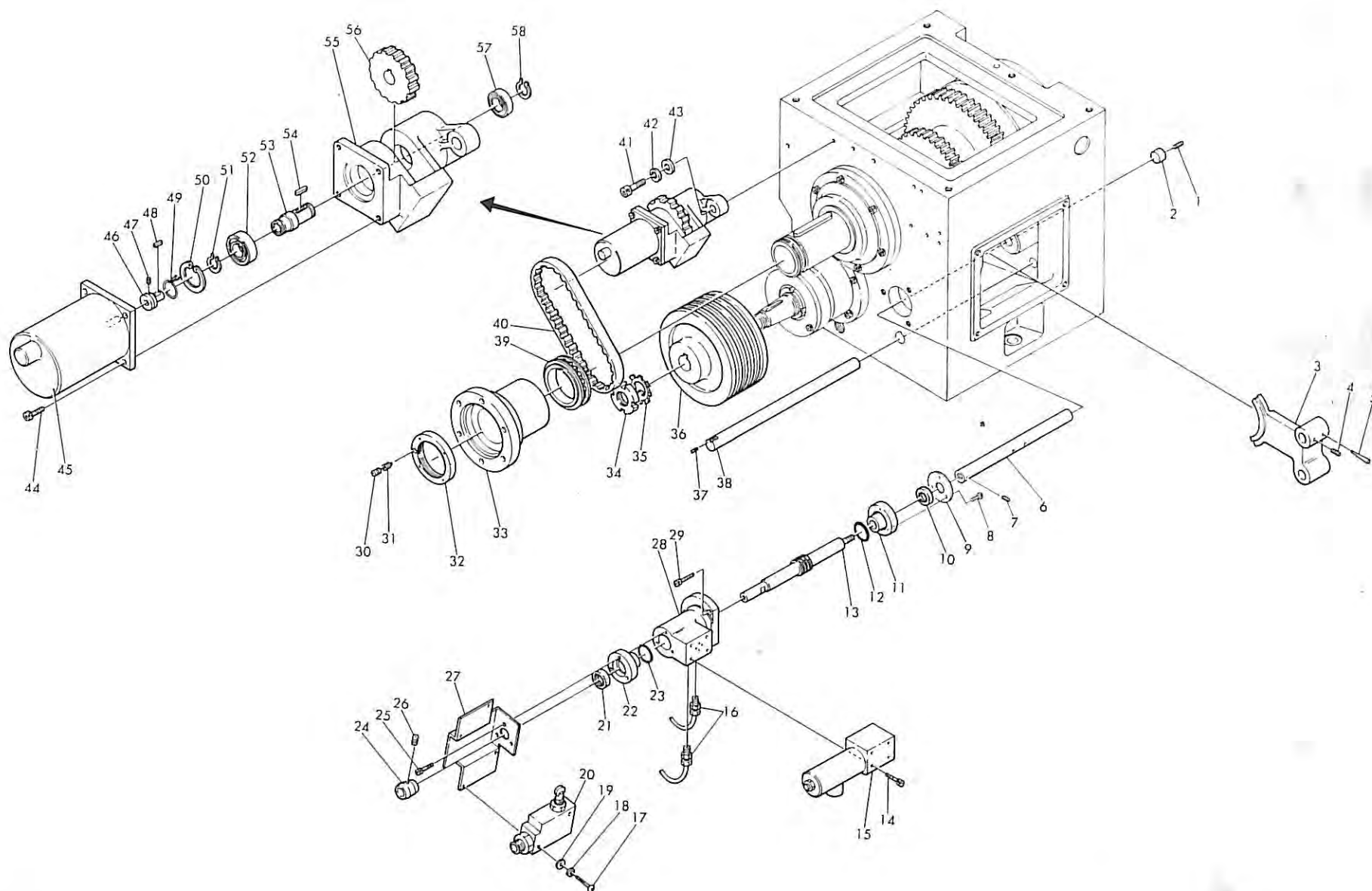
INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
4-1	C5010-080161	BOLT, socket-head, 8 x 16	1	4-51	C5010-060161	BOLT, socket-head, 6 x 16	3
-2	123-3111-30	BLOCK	1				
-3	123-3111-01-9	MAIN SPINDLE	1				
-4	123-3112-13-1	KEY, C5170-151000 (15 x 10 x 100)	2				
-5	C5201-006120	PIN, straight, 6 x 12	1				
-6	123-3111-21-1	KEY, C5170-151100 (15 x 10 x 110)	1				
-7	C5010-100501	BOLT, socket-head, 10 x 50	6				
-8	127-0110-06	COVER	1				
-9	D6101-307500	ROPE, rubber, 3 x 750	1				
-10	127-0110-01-1	LABYRINTH	1				
-11	127-0110-04-1	LABYRINTH	1				
-12	M009-0008-20	BEARING, NSK, NN3020KMBCC1UPDU10	1				
-13	127-0110-03	COLLAR	1				
-14	M009-0008-22	BEARING, NSK, BT100-3DBG19OUPA	1				
-15	127-0110-02	HOUSING	1				
-16	C5030-008101	SET-SCREW, flat-point, 8 x 10	1				
-17	F100-310-07940	O-RING, G80	1				
-18	127-0100-04-1	COVER, blind	1				
-19	C5132-000451	NUT, bearing, 45	1				
-20	C5152-000450	WASHER, lock, 45	1				
-21	M000-6209	BEARING, 6209	2				
-22	127-0110-05	LABYRINTH	1				
-23	127-0101-03-1	GEAR	1				
-24	127-0101-04-1	GEAR	1				
-25	C5153-001000	WASHER, lock, 100	1				
-26	C5131-001001	NUT, lock, 100	1				
-27	127-0101-02	GEAR	1				
-28	127-0101-01	GEAR	1				
-29	127-0100-01-1	HEADSTOCK	1				
-30	123-3111-26-1	LABYRINTH	1				
-31	127-0110-07-1	HOUSING	1				
-32	M009-0008-21	BEARING, NSK, NN3017KMBCC1P4U10	1				
-33	123-3111-27	COLLAR	1				
-34	C5153-000850	WASHER, lock, 85	1				
-35	C5131-000851	NUT, round, 85	1				
-36	127-0110-08-1	COVER	1				
-37	127-0110-09-1	COLLAR	1				
-38	C5010-120451	BOLT, socket-head, 12 x 45	6				
-39	127-0102-02-1	SHAFT	1				
-40	C5171-007450	KEY, woodruff, 7 x 45	1				
-41	C5181-000900	SNAP-RING, internal, 90	1				
-42	H1004-0001-34	WASHER, wave, BW12	1				
-43	M000-6209Z	BEARING, 6209Z	1				
-44	123-3113-20	COLLAR	1				
-45	127-0102-01-4	HOUSING	1				
-46	C5010-120401	BOLT, socket-head, 12 x 40	4				
-47	M000-6309ZZ	BEARING, 6309ZZ	1				
-48	123-3113-19-1	COVER	1				
-49	C5152-000450	WASHER, lock, 45	1				
-50	C5132-000451	NUT, bearing, 45	1				



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SHEET NO.5 HEADSTOCK GEAR SHIFTER

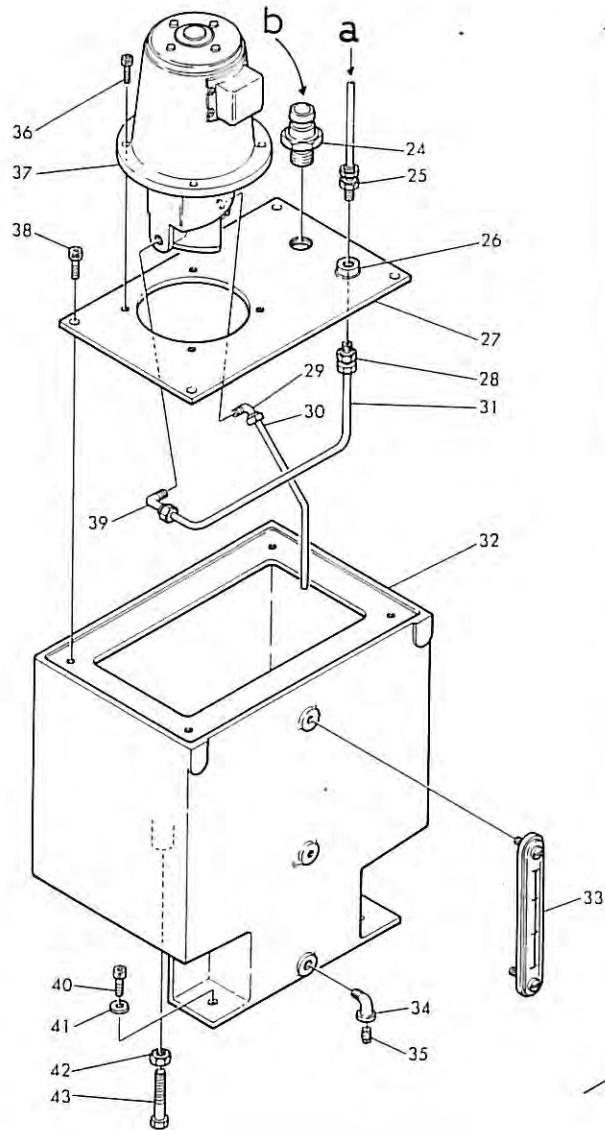
INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
5-1	C5034-008101	SET-SCREW, 8 x 10	1	5-44	C5010-050141	BOLT, socket-head, 5 x 14	4
-2	C0500-000201	COVER, blind, 20	1	-45		GENERATOR, pulse, LEP-BM	1
-3	127-0103-05-1	SHIFTER	1	-46	174-7100-03-2	SHAFT	1
-4	C5030-008081	SET-SCREW, flat-point, 8 x 8	1	-47	C5030-006081	SET-SCREW, flat-point, 6 x 18	1
-5	C0201-060361	I.T.P	1	-48	C5170-040150	KEY, feather, 4 x 4 x 15	1
-6	127-0103-03-2	SHAFT	1	-49	M120-06-080	WIRE, steel, MO, 6 x 80	1
-7	C5030-005051	SET-SCREW, flat-point, 5 x 5	1	-50	C5181-000470	SNAP RING, internal, 47	1
-8	C5010-060301	BOLT, socket-head, 6 x 30	3	-51	C5180-000200	SNAP RING, shaft, 20	1
-9	147-0113-11-1	COVER	1	-52	M000-6204ZZP6	BEARING, 6204ZZP6	1
-10	H0031-0005-52	DUST-SEAL, NOK FU0221F01, DI 20 x 33 x 10	1	-53	127-0120-02-2	SHAFT	1
-11	147-0113-14-1	COVER	1	-54	C5170-050200	KEY, feather, 5 x 5 x 20	1
-12	F100-310-02940	O-RING, G30	1	-55	127-0120-01-2	BRACKET	1
-13	127-0103-02-1	SHAFT	1	-56	127-0120-03	PULLEY, synchro, H1019-0001-64	1
-14	C5010-050451	BOLT, socket-head, 5 x 45	4			BANDO 34 L050B	
-15	F0000-142-000-38	SOLENOID VALVE, D, SD4SGS-ACB-01N-100AZ-B	1	-57	M000-6004ZZP6	BEARING, 6004ZZP6	1
	F0000-432-000-03	SOLENOID VALVE, D (IEC), SD4SGS-ACB-01N-D24AZ-13-S-33	1	-58	C5180-000200	SNAP RING, shaft, SNAP RING, 20	1
-16	H0010-0002-16	JOINT, NITTA, L2N-1/4-PT1/8	2				
	H0010-0002-17	JOINT, NITTA, C2N-1/4-PT1/8	2				
	F1242-1000-0	TUBE, synflex, NITTA, N2-2 1/4 C=1000	1				
	F1242-1110-0	TUBE, synflex, NITTA, N2-2 1/4 C=1110	1				
-17	C5040-005351	SCREW, pan-head, 5 x 35	4				
-18	C5160-000051	WASHER, spring, 5	4				
-19	C5140-000051	WASHER, polished, 5	4				
-20	E3010-397-123	LIMIT-SWITCH	2				
-21	H0031-0005-52	DUST SEAL	1				
-22	147-0113-14-1	COVER	1				
-23	F100-310-02940	O-RING	1				
-24	147-0113-12	DOG	1				
-25	C5010-060301	BOLT, socket-head, 6 x 30	3				
-26	C5030-006081	SET-SCREW, flat-point, 6 x 8	1				
-27	127-0103-06-1	SUPPORT	1				
-28	127-0103-01-1	CYLINDER	1				
-29	C5010-080251	BOLT, socket-head, 8 x 25	3				
-30	C5030-006081	SET-SCREW, flat-point, 6 x 8	1				
-31	C5031-006101	SET-SCREW, dog-point, 6 x 10	1				
-32	123-3111-29	NUT	1				
-33	123-6114-33-2	FLANGE	1				
-34	C5132-000301	NUT, bearing, 30	1				
-35	C5152-000300	WASHER, lock 30	1				
-36	127-0130-03	PULLEY, 7.5/11 11/15 kW, 2200 rpm	1				
	127-0130-02-1	PULLEY, 7.5/11 11/15 kW, 3500 rpm	1				
	127-0130-04	PULLEY, 15/22 kW, 3500 rpm	1				
-37	C5030-008081	SET-SCREW, flat-point, 8 x 8	2				
-38	127-0103-04	SHAFT	1				
-39	123-7110-05-1	PULLEY, syncho, H1019-0001-63, BANDO 34L050AF	1				
-40	M1131-05-255	BELT, synchro, BANDO 255 L050	1				
-41	C5010-120401	BOLT, socket-head, 12 x 40	2				
-42	C5160-000121	WASHER, spring, 12	2				
-43	C5140-000121	WASHER, polished, 12	2				



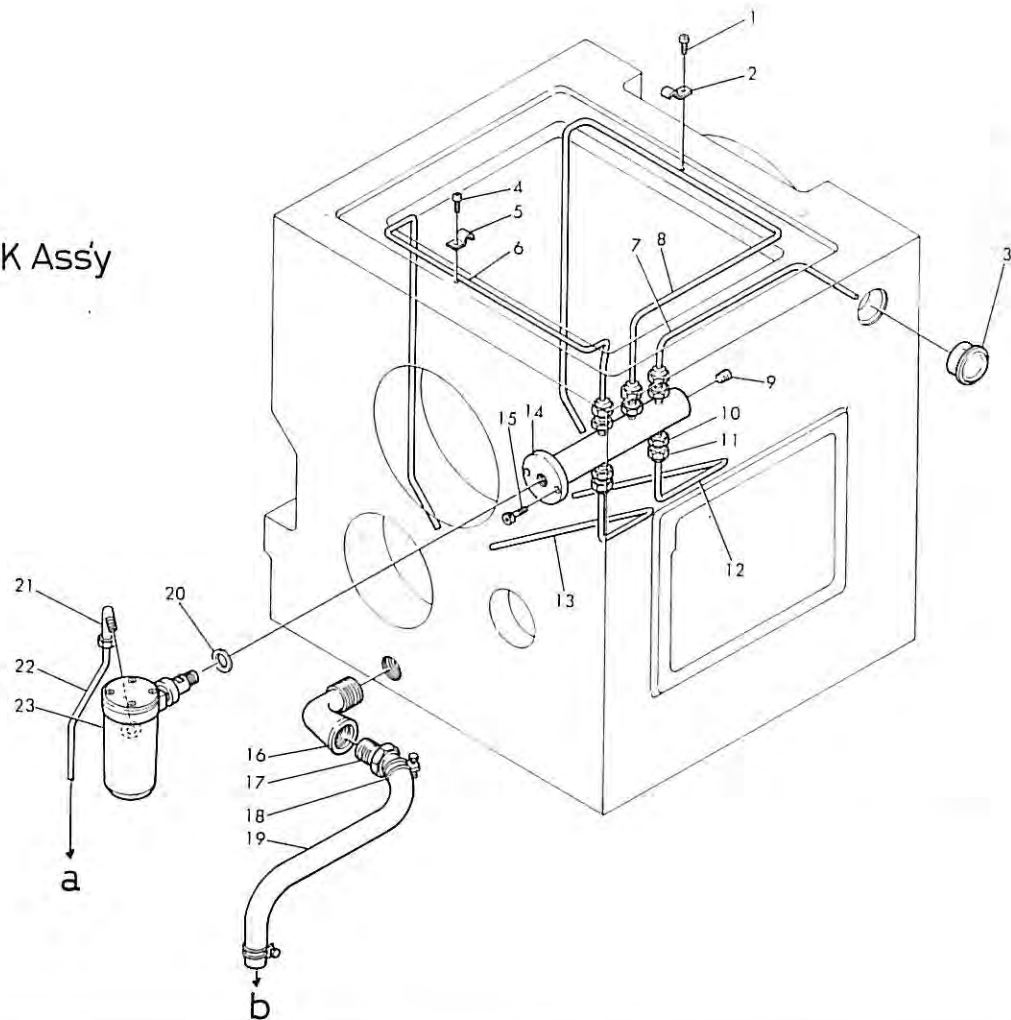
SHEET NO. 6 HEADSTOCK LUBRICATION

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
6-1	C5040-005081	SCREW, pan-head, 5 x 8	1
-2	127-0100-06	CLAMP, pipe	1
-3	C2935-000250	WINDOW, oil, A25	1
-4	C5040-005081	SCREW, pan-head, 5 x 8	1
-5	127-0100-06	CLAMP, pipe	1
-6	D7780-206500	PIPE, copper, F, 5 x 650	1
-7	D7780-204000	PIPE, copper, F, 5 x 400	1
-8	D7780-208500	PIPE, copper, F, 5 x 850	1
-9	C7861-000032	PLUG, 1/2	1
-10	C7720-000222	NIPPLE, F, TS, 5TS	5
-11	C7770-000022	NUT, F pipe, 5	5
-12	D7780-202500	PIPE, copper, F, 5 x 250	1
-13	D7780-202500	PIPE, copper, F, 5 x 250	1
-14	127-0100-05-2	PIPE	1
-15	C5010-050161	BOLT, socket-head, 5 x 16	2
-16	C7812-000442	ELBOW, street, M, 3/4	1
-17	D7872-002542	JOINT, hose, for vinyl, 3/4 (25)	1
-18	D2765-000321	CLAMP, wire, 32, SUGITA VALVE, PK-1032	2
-19	C7791-250220	PIPE, SV, (inch), 1 x 225	1
-20	H0031-0161-07	PACKING, M13.5 x 19 x 1	1
-21	H0010-0000-17	ELBOW, street, NITTA BELT, LIN-3/8-PT1/4	1
-22	F1234-0480-0	TUBE, synflex, NITTA, N2-1-3/8 L480 70	1
-23	H0032-1161-03	UNIT, filter, SHOKETSU, 20 micron	1
-24	D7872-002542	JOINT, hose, for vinyl, 3/4 (25)	1
-25	H0010-0000-19	CONNECTOR, NITTA, CIN-3/8-PT1/4	1
-26	127-6110-04	BOSS	1
-27	127-6110-02-1	COVER	1
	9A-127-6110-02	COVER (IEC)	1
-28	D2781-000812	JOINT, pipe, A-8-PT1/4 NTN A-8-PT1/4 ISO	1
-29	D2781-020802	JOINT, pipe, B-8-PT1/8 NTN BL-8-PT1/8 ISO	1
-30	D7781-080180	PIPE, steel, 8 x 180	1
-31	D7781-080300	PIPE, steel, 8 x 300	1
-32	127-6110-05	TANK	1
-33	H0039-0000-42	GAUGE, oil, NK4, KOHO-03	1
-34	C7812-000222	ELBOW, street, M, 3/8	1
-35	C7850-000022	PLUG, M, 3/8	1
-36	C5010-060161	BOLT, socket-head, 6 x 16	4
-37	F1019-0001-22	PUMP, trochoid, NOP, TOP-IME75-2-10MA, 200V	1
	F0101-10-000-42	PUMP, trochoid (IEC), NOP TOP-IME75-2-10MA	1
-38	C5010-080161	BOLT, socket-head, 8 x 16	4
-39	D2781-020802	JOINT, pipe, B-8-PT1/8 NTN BL-8-PT1/8 ISO	1
-40	C5010-080181	BOLT, socket-head, 8 x 18	2
-41	C5150-000081	WASHER, plain, 8	2
-42	C5100-000101	NUT, hex., #3, 10	1
-43	C5000-100801	BOLT, 10 x 80	1

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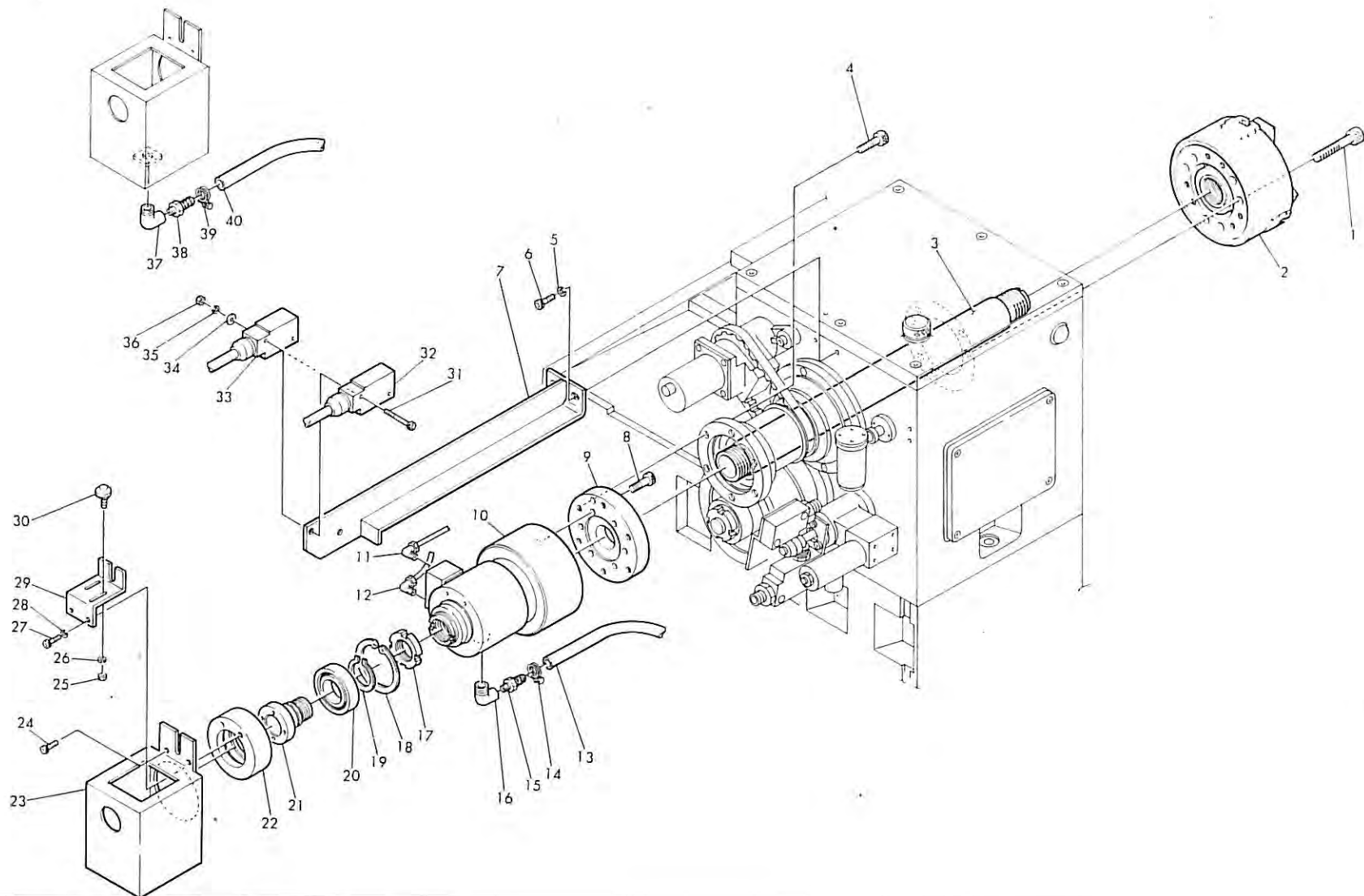
TANK Ass'y



SHEET NO. 8 "HOS" HYDRAULIC HOLLOW CHUCK AND "YOSR" CYLINDER

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
8-1		BOLT, accessory for chuck	3
-2	T009-200-000-97	CHUCK, hydraulic, HOS-8-1	1
-3	127-6120-04-1	PIPE	1
-4	C5010-120351	BOLT, socket-head, 12 x 35	6
-5	C5140-000081	WASHER, polished, 8	2
-6	C5010-080201	BOLT, socket-head, 8 x 20	2
-7	127-6120-16	SUPPORT	1
-8	C5010-100201	BOLT, socket-head, 10 x 20	6
-9	127-6120-03	FLANGE	1
-10	H0001-0001-12	CYLINDER, rotary, KITAGAWA, YOSR 15T 201	1
-11	H0010-0003-89	JOINT, L2N-1/2-PT3/8	1
-12	H0010-0003-89	JOINT, L2N-1/2-PT3/8	1
-13	D7792-250750	HOSE, vinyl, with spring, 25 x 750	1
-14	D2765-000351	CLAMP, wire, 35, SUGITA, AK-1035	2
-15	D7872-002542	JOINT, hose, for vinyl, 3/4 (25)	2
-16	C7812-000442	ELBOW, street, M, 3/4	1
-17	C5132-000501	NUT, bearing, 50	1
-18	C5181-000900	SNAP RING, internal, 90	1
-19	C5180-000550	SNAP RING, 55	1
-20	M000-6011ZZ	BEARING, 6011ZZ	1
-21	127-6120-18	SHAFT	1
-22	127-6120-19	HOUSING	1
-23	127-6120-17	COVER	1
-24	C5010-060141	BOLT, socket-head	2
-25	C5110-000051	NUT, hex., #4, 5	4
-26	C5140-000051	WASHER, polished, 5	4
-27	C5010-050121	BOLT, socket-head, 5 x 12	2
-28	C5160-000051	WASHER, spring, 5	2
-29	127-6120-20	SUPPORT	1
-30	127-6120-10	DOG	2
-31	D5010-050651	BOLT, socket-head, 5 x 65	2
-32	E3010-397-123	LIMIT-SWITCH, TATEISHI, ZV2-N22-2	1
-33	E3010-397-123	LIMIT-SWITCH, TATEISHI, ZV2-N22-2	1
-34	C5140-000051	WASHER, polished, 5	2
-35	C5160-000051	WASHER, spring, 5	2
-36	C5110-000051	NUT, hex., #4, 5	2
-37	C7812-000442	ELBOW, street, M, 3/4	1
-38	D7872-002542	JOINT, hose, for vinyl, 3/4 (25)	1
-39	D2765-000351	CLAMP, wire, 35, SUGITA, AK-1035	1
-40	D7792-251050	HOSE, vinyl, with spring, 25 x 1050	1

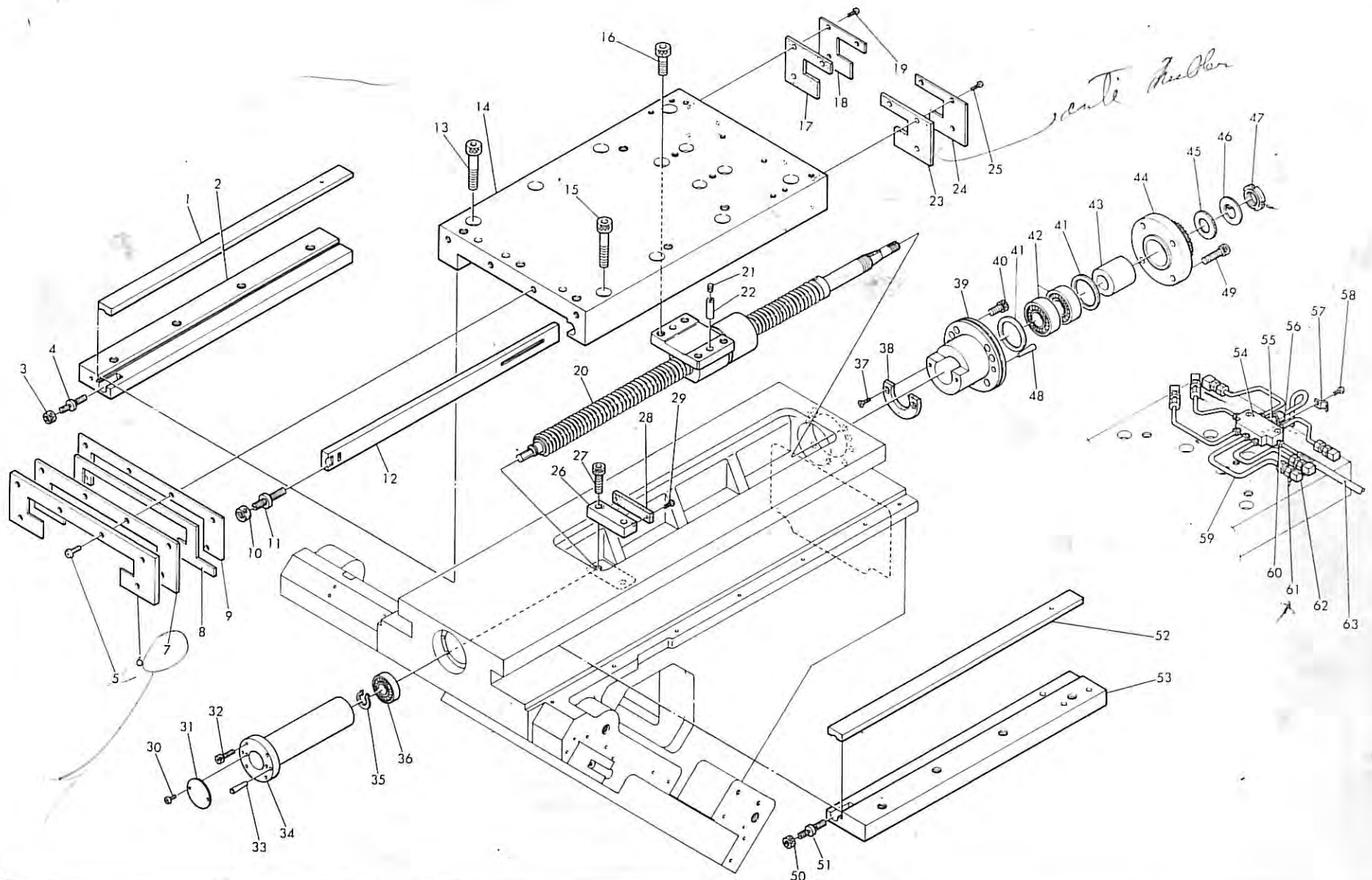
OKUMA MACHINERY WORKS LTD.



SHEET NO.9 UPPER CROSS-SLIDE AND X-AXIS BALL-SCREW

INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
9-1	127-0311-04-2	GIB	1	9-51	101-0300-13	SCREW	1
-2	127-0311-02-1	PLATE, back	1	-52	127-0311-04-1	GIB	1
-3	101-0300-14	NUT	1	-53	127-0311-03-1	PLATE, back	1
-4	101-0300-13	SCREW	1	-54	H0012-0003-89	DISTRIBUTOR, SHOWA DA-8	1
-5	C5040-005201	SCREW, pan-head, 5 x 20	6	-55	H0010-0012-38	UNIT, flow, SHOWA PSS-3	1
-6	127-0311-06-2	COVER	1	-56	H000-0000-88	JOINT, SHOWA PAN-4	7
-7	H1023-0002-66	WIPER	1	-57	H0035-0000-57	BAND, pipe, SHOWA PZ14	1
-8	H1032-1004-07-1	WIPER	1	-58	C5040-005081	SCREW, pan-head, 5 x 8	1
-9	127-0311-07-1	PLATE	1	-59	D7781-041000	PIPE, steel, 4 x 1000	1
-10	108-0301-18-1	NUT, holder	1	-60	H0012-0000-89	JOINT, SHOWA PB-4	14
-11	108-0301-17	BOLT	1	-61	H0010-0004-34	JOINT, SHOWA PST-4	6
-12	127-0311-05-2	GIB	1	-62	H0012-0003-90	ELBOW, PI-1	6
-13	C5010-120551	BOLT, socket-head, 12 x 55	4	-63	H0022-0001-94	HOSE, flexible	1
-14	127-0311-01-1	CROSS-SLIDE, 1S	1				
-15	C5010-120551	BOLT, socket-head, 12 x 55	4				
-16	C5010-100301	BOLT, socket-head, 10 x 30	4				
-17	H1020-1028-93-2	WIPER, anti-oil rubber	1				
-18	127-0311-08-1	PLATE	1				
-19	C5040-105141	SCREW, pan-head, 5 x 14	3				
-20	H1014-0000-85	BALL-SCREW, 28TTJS6-659HG5	1				
-21	C5030-005061	SET-SCREW, flat-point, 5 x 6	2				
-22	122-0310-17	PIN, straight	2				
-23	H1020-1028-91-1	WIPER, anti-oil rubber	1				
-24	127-0311-09-1	PLATE	1				
-25	C5040-005141	SCREW, pan-head, 5 x 14	3				
-26	127-0211-04	STOPPER	1				
-27	C5010-080301	BOLT, socket-head, 8 x 30	2				
-28	H1030-1000-60	STOPPER	1				
-29	5040-005101	SCREW, pan-head, 5 x 10	2				
-30	C5040-005081	SCREW, pan-head, 5 x 8	2				
-31	127-0211-03	COVER	1				
-32	C5010-050201	BOLT, socket-head, 5 x 20	4				
-33	C0201-060251	ITP, 6 x 25	2				
-34	127-0211-02-1	BUSH	1				
-35	C5180-000150	SNAP-RING, external, 15	1				
-36	M000-6202LLBP5	BEARING, 6202LLBP5	1				
-37	C5050-005101	SCREW, pan-head, 5 x 10	2				
-38	H1030-1000-61	STOPPER	1				
-39	127-0211-01-1	HOUSING	1				
-40	C5010-080161	BOLT, socket-head, 8 x 16	3				
-41	117-0200-08	COLLAR	2				
-42	M009-0006-61	BEARING, NSK, 20TAC47DBG pre-load 200 K	1				
-43	174-0210-01-1	COLLAR	1				
-44	127-0211-10-1	COVER	1				
-45	C6100-000350	RING, felt, 35	1				
-46	C5153-000200	WASHER, lock, 20	1				
-47	C5131-000201	NUT, round, 20	1				
-48	C0201-060281	ITP, 6 x 38	2				
-49	C5010-080301	BOLT, socket-head, 8 x 30	4				
-50	101-0300-14	NUT	1				

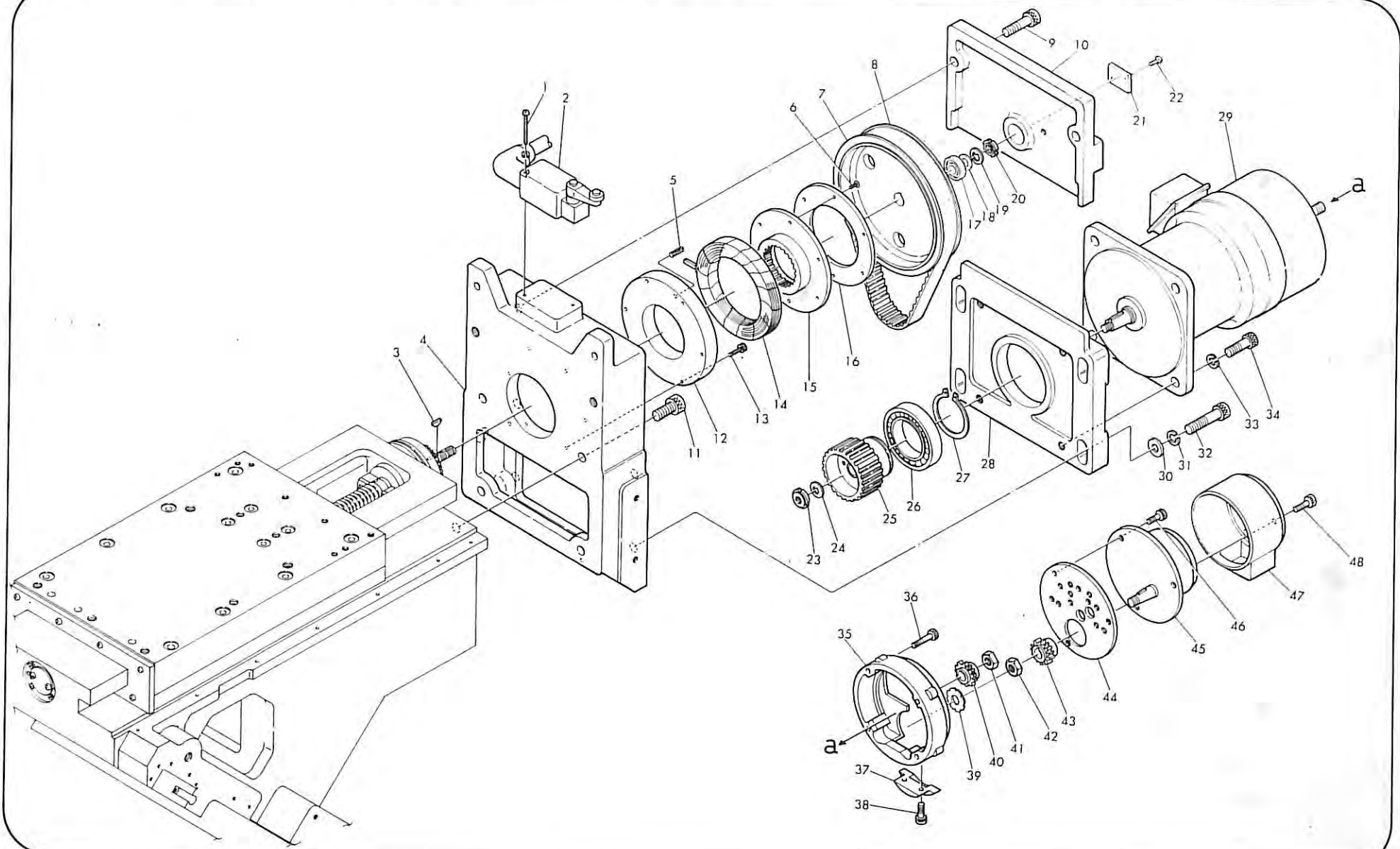
WE DO HAVE THIS
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SHEET NO. 10 UPPER X-AXIS DRIVE UNIT

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
10-1	C5010-050401	BOLT, socket-head, 5 x 40	2
-2	E3012-891-001	LIMIT-SWITCH, YAMATAKE, 1 LS1-J	1
-3	C5171-005160	KEY, woodruff, 5 x 16	1
-4	127-0211-05-1	BOX	1
-5	M101-12070-02010	SPRING, compression, setting, 1.2 x 7.0 x 20 x 10	16
-6	C5050-004081	SCREW, 4 x 8	6
-7	137-0210-03	PULLEY	1
-8	M1132-10300G	BELT, synchro, BANDO, 300H-100G	1
-9	C5010-120401	BOLT, socket-head, 12 x 40	2
-10	127-0211-07-1	COVER	1
-11	C5010-120301	BOLT, socket-head, 12 x 30	4
-12	174-0210-06-1	HOLDER, magnet	1
-13	C5010-040201	BOLT, socket-head, 4 x 20	6
-14	E2552-292-003	COIL, for brake, E180044, SANYO	1
-15	147-0210-07	SERRATION	1
-16	147-0210-26	LINING, brake	1
-17	M000-6001LLB	BEARING, 6001LLB	1
-18	122-7301-07	COLLAR	1
-19	C5153-000120	WASHER, lock, 12	1
-20	C5131-000121	NUT, round, 12	1
-21	127-0211-08-1	COVER	1
-22	C5040-005081	SCREW, pan-head, 5 x 8	2
-23	121-7210-17-1	NUT, round	1
-24	121-7303-12	WASHER	1
-25	147-0210-15-2	PULLEY	1
-26	M000-6011LLB	BEARING, 6011LLB	1
-27	C5180-000550	SNAP-RING, external, 55	1
-28	127-0211-06-1	BASE, motor	1
-29	E1226-288-010	DC MOTOR	1
-30	C5150-000121	WASHER, plain, 12	4
-31	C5160-000121	WASHER, spring, 12	4
-32	C5010-120551	BOLT, socket-head, 12 x 55	4
-33	C5160-000121	WASHER, spring, 12	4
-34	C5010-120351	BOLT, socket-head, 12 x 35	4
-35	912-6510-144	GEAR BOX	1
-36	C5010-050451	BOLT, socket-head, 5 x 45	4
-37	E5574-295-017	COVER	1
-38	C5010-040121	BOLT, socket-head	2
-39	912-1090-01-1	COLLAR, eccentric	1
-40	912-5040-19	GEAR	1
-41		NUT, accessory for No. 26	1
-42	H1005-0000-97	NUT	1
-43	912-5040-18-1	GEAR	1
-44	912-1600-04-2	PLATE	1
-45	1911-0172	OSP POSITION ENCODER	1
-46	C5010-050141	BOLT, socket-head, 5 x 14	3
-47	912-8270-03-2	COVER	1
-48	C5040-005101	BOLT, socket-head, 5 x 10	2

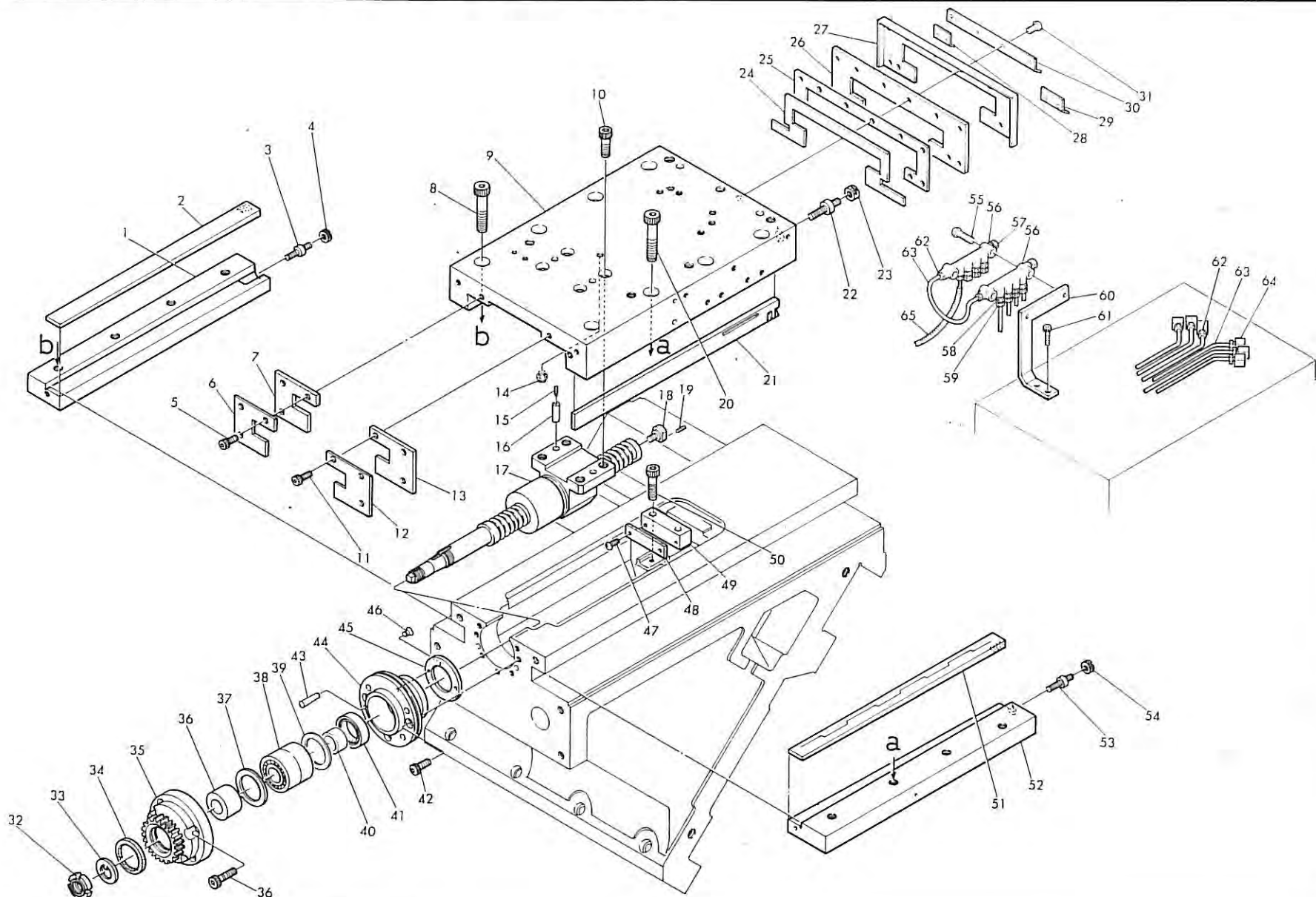
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SHEET NO. 11 LOWER CROSS-SLIDE AND X-AXIS BALL-SCREW, - 2ST -

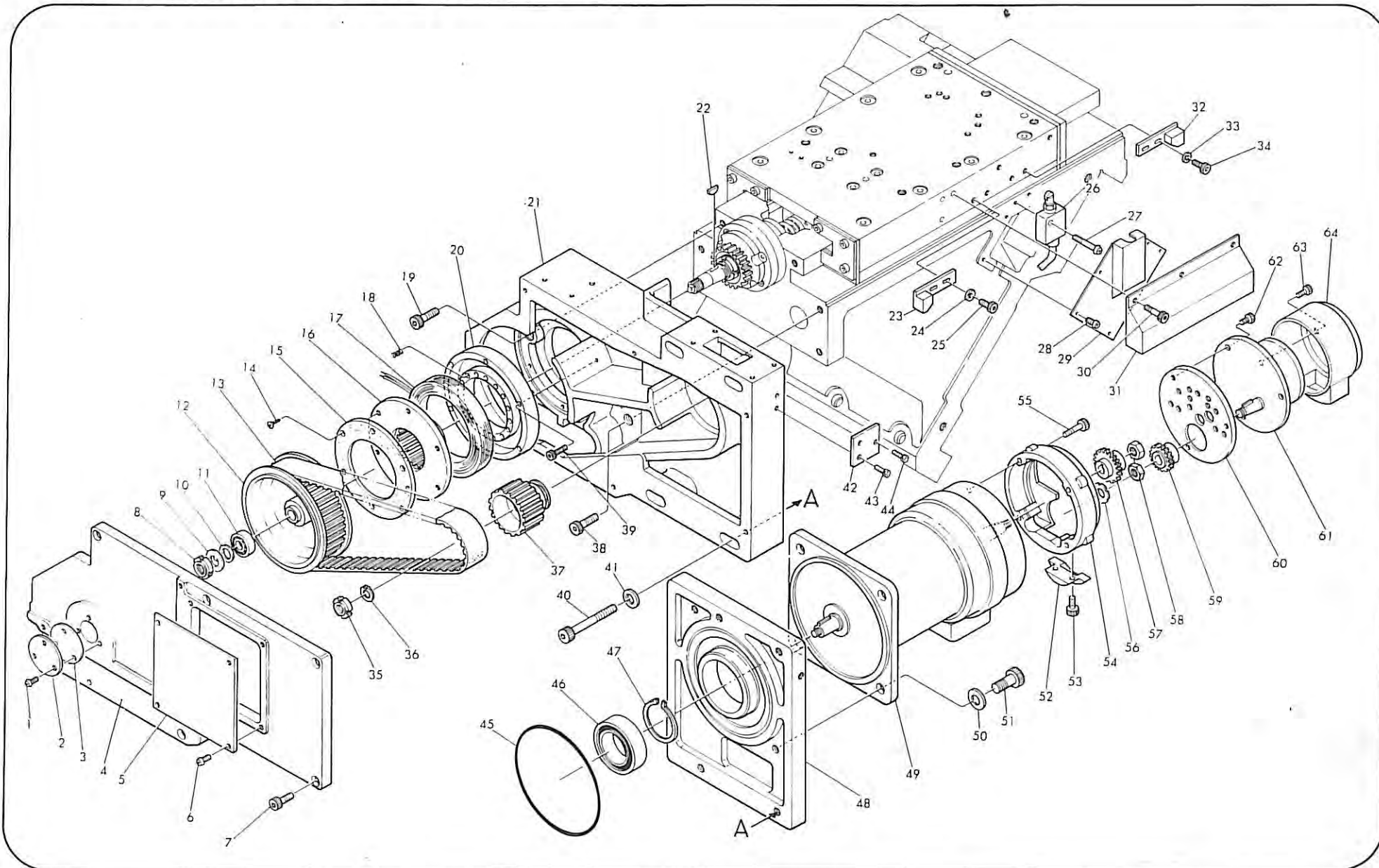
INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
11-1	127-0312-02-1	PLATE, back	1	11-51	127-0312-04-2	GIB	1
-2	127-0312-18-1	GIB	1	-52	127-0312-03-1	PLATE, back	1
-3	101-0300-13	SCREW	1	-53	101-0300-13	SCREW	1
-4	101-0300-14	NUT	1	-54	101-0300-14	NUT	1
-5	C5010-050141	BOLT, socket-head, 5 x 14	3	-55	C5040-005401	SCREW, pan-head, 5 x 40	2
-6	127-0312-16	PLATE	1	-56	H0012-0000-69	DISTRIBUTOR, SHOWA, DB-6	2
-7	H1020-1029-83	WIPER, NISHIZAWA, anti-oil rubber	1	-57	H0012-0901-45	PLUG, seal, SHOWA, PG-8	2
-8	C5010-120551	BOLT, socket-head, 12 x 55	4	-58	H0010-0004-41	UNIT, flow, SHOWA, PSS-4	6
-9	127-0312-01-1	CROSS-SLIDE	1		H0010-0012-38	UNIT, flow, SHOWA, PSS-3	1
-10	C5010-100221	BOLT, socket-head, 10 x 22	4	-59	H0010-0007-96	NUT, SHOWA, PAN-4	7
-11	C5010-050141	BOLT, socket-head, 5 x 14	3		H0010-0300-27	SLEEVE, SHOWA, PB-4	7
-12	127-0312-17	PLATE, NISHIZAWA, anti-oil rubber	1	-60	127-0312-07-1	SUPPORT	1
-13	H1020-1029-84	WIPER	1	-61	C5010-050141	BOLT, socket-head, 5 x 14	2
-14	127-0312-06	JOINT	1	-62	H0010-0300-26	PLUG, SHOWA, PA-4	9
-15	C5030-005061	SET-SCREW, flat-point, 5 x 6	2		H0010-0300-27	SLEEVE, SHOWA, PB-4	9
-16	122-0301-17	PIN, straight	2				
-17	H1014-0001-79	BALL-SCREW	1				
-18	127-0212-16	STOPPER	1				
-19	C5030-005121	SET-SCREW, flat-point, 5 x 12	1				
-20	C5010-120551	BOLT, socket-head, 12 x 55	4				
-21	127-0312-04	GIB	1				
-22	108-0301-17	BOLT	1				
-23	108-0301-18-1	NUT	1				
-24	H1032-1004-11	WIPER	1				
-25	127-0312-15-1	PLATE	1				
-26	H1023-0002-63	WIPER	2				
-27	127-0312-14-1	COVER	1				
-28	127-0312-12-1	WIPER	2				
-29	127-0312-13-1	WIPER	2				
-30	127-0312-11-1	WIPER	2				
-31	C5040-005201	SCREW, pan-head, 5 x 20	10				
-32	C5131-000201	NUT, round, 20	1				
-33	C5153-000200	WASHER, lock, 20	1				
-34	C6100-000350	RING, felt, 35	1				
-35	127-0212-02-1	COVER	1				
-36	C5010-080301	BOLT, socket-head, 8 x 30	4				
-37	127-0212-04	COLLAR	1				
-38	117-0200-08	COLLAR	2				
-39	M009-0006-61	BEARING, 20TAC47DBG NSK 200K pre-load	1				
-40	127-0212-03-1	COLLAR	1				
-41	F1100-030-04007	OIL SEAL, SB30407	1				
-42	C5010-080161	BOLT, socket-head, 8 x 16	3				
-43	C0201-060281	ITP, 6 x 28	2				
-44	127-0212-01-1	HOUSING	1				
-45	H1030-1001-65	STOPPER, leather, M36 x M58 x 5	1				
-46	C5050-005081	SCREW, flat-head, 5 x 8	2				
-47	C5040-005101	SCREW, pan-head, 5 x 10	2				
-48	H1030-1000-60	STOPPER, leather	1				
-49	127-0211-04	STOPPER	1				
-50	C5010-080301	BOLT, socket-head, 8 x 30	2				



OKUMA MACHINERY WORKS LTD.

SHEET NO. 12 LOWER SADDLE AND X-AXIS DRIVE UNIT, - 2ST -

INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
12-1	C5040-005101	SCREW, pan-head, 5 x 10	3	12-51	C5010-120301	BOLT, socket-head, 12 x 30	4
-2	127-0212-10	COVER	1	-52	E5574-295-017	COVER	1
-3	H1020-1029-89	PACKING	1	-53	C5010-040121	BOLT, socket-head, 4 x 12	2
-4	127-0212-08-1	COVER	1	-54	912-6510-144	GEAR BOX	1
-5	127-0212-09	COVER	1	-55	C5010-050451	BOLT, socket-head, 5 x 45	4
-6	C5040-005101	SCREW, pan-head, 5 x 10	4	-56	912-1090-01-1	COLLAR, eccentric	1
-7	C5010-080201	BOLT, socket-head, 8 x 20	6	-57	912-5040-15	GEAR	1
-8	C5131-000121	NUT, round, 12	1	-58	H1005-0000-97	NUT	1
-9	C5153-000120	WASHER, lock, 12	1	-59	912-5040-14-1	GEAR	1
-10	122-7301-07	COLLAR	1	-60	912-1600-04-2	PLATE	1
-11	M000-6201LLBP5	BEARING, 6201LLBP5	1	-61	1911-0172	OSP POSITION ENCODER	1
-12	127-0212-05-2	PULLEY	1	-62	C5010-050141	BOLT, socket-head, 5 x 14	3
-13	M1132-103909	BELT, synchro, BANDO, 390H100G	1	-63	C5040-005101	BOLT, socket-head, 5 x 10	2
-14	C5050-004081	SCREW, 4 x 8	6	-64	912-8270-03-2	COVER	1
-15	147-0210-26	LINING, brake	1				
-16	127-0212-15	SERRATION	1				
-17	E2552-292-003	COIL, for brake, E180044, SANYO	1				
-18	M101-12070-02010	SPRING, compression, setting, 1.2 x 7.0 x 20 x 10	16				
-19	C5010-120301	BOLT, socket-head, 12 x 30	2				
-20	174-0210-06-1	HOLDER, magnet	1				
-21	127-0212-07-1	GEAR BOX	1				
-22	C5171-005160	KEY, woodruff, 5 x 16	1				
-23	127-0312-09-1	DOG	1				
-24	C5140-000051	WASHER, polished, 5	2				
-25	C5010-050141	BOLT, socket-head, 5 x 14	2				
-26	E3001-891-007	MICRO-SWITCH, 14CE2-1, lead pipe 2m	1				
-27	C5010-050201	BOLT, socket-head, 5 x 20	2				
-28	C5040-005081	SCREW, pan-head, 5 x 8	5				
-29	127-0302-09	COVER	1				
-30	C5010-050101	BOLT, socket-head, 5 x 10	3				
-31	127-0312-08	COVER	1				
-32	127-0312-10	DOG	1				
-33	C5140-000051	WASHER, polished, 5	2				
-34	C5010-050141	BOLT, socket-head, 5 x 14	2				
-35	121-7210-17-1	NUT, round	1				
-36	121-7303-12	WASHER	1				
-37	127-0212-12-1	PULLEY, BANDO, 18H100A	1				
-38	C5010-120301	BOLT, socket-head, 12 x 30	4				
-39	C5010-040201	BOLT, socket-head, 4 x 20	6				
-40	C5010-120801	BOLT, socket-head, 12 x 80	4				
-41	C5150-000121	WASHER, plain, 12	4				
-42	127-0212-13-2	PLATE	1				
-43	C5010-080161	BOLT, socket-head, 8 x 16	2				
-44	C5010-080351	BOLT, socket-head, 8 x 35	1				
-45	F100-200-14950	O-RING, NOK, S150	1				
-46	M000-6009LLB	BEARING, 6009LLB	1				
-47	C5180-000450	SNAP-RING, external, 45	1				
-48	127-0212-11-1	BASE, motor	1				
-49	E1226-288-010	DC MOTOR	1				
-50	C5140-000121	WASHER, polished, 12	4				

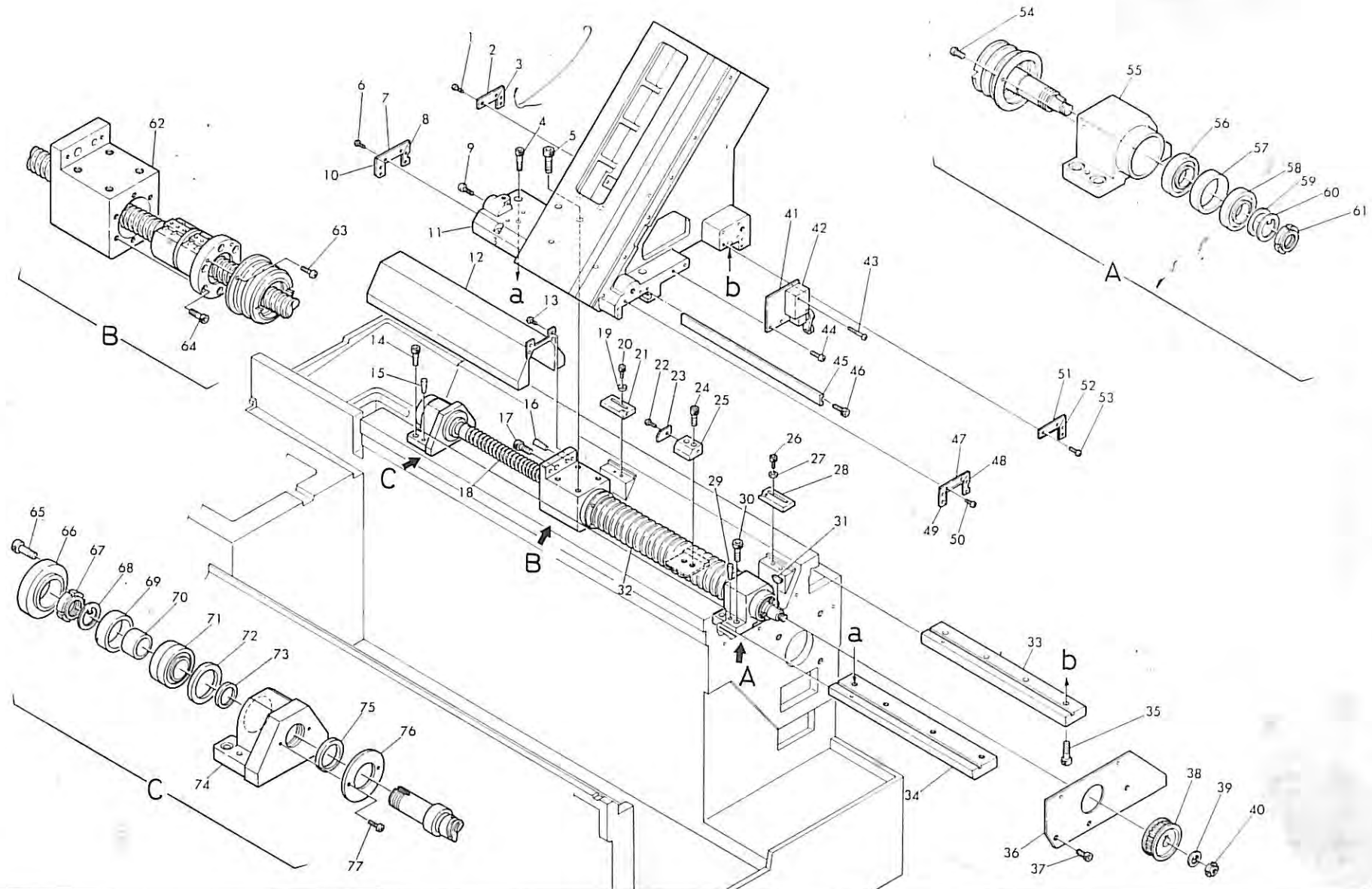


OKUMA MACHINERY WORKS LTD.

-AXIS BALL-SCREW, - 1ST -

	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
ead, 5 x 8	4	13-51	H1023-1014-41-1	WIPER	
\ Slide seal, type-SS #0	1	-52	H1023-1014-42-1	WIPER	1
\ Slide seal, type-SS #0	1	-53	C5040-005081	SCREW, pan-head, 5 x 8	1
ead, 12 x 60	4	-54	C5040-005081	SCREW, pan-head, 5 x 8	4
ead, 12 x 55	4	-55	127-0200-08-1	BRACKET	2
ad, 5 x 8	6	-56	M000-6206LLBP5	BEARING, 6206LLBP5	1
Slide seal, type-SS #0	1	-57	D5480-030150	COLLAR, distance, inner, 30 x 40 x 15	1
Slide seal, type-SS #0	1	-58	M000-6206LLBP5	BEARING, 6206LLBP5	1
Slide seal, type-SS #0	1	-59	D5420-304350	COLLAR, holding, bearing, 30 x 43 x 5	1
	1	-60	C5153-000300	WASHER, lock, 30	1
	1	-61	C5131-000301	NUT, round, 30	1
d, 5 x 8	1	-62	127-0301-05-1	BRACKET	1
ad, 12 x 40	4	-63	C5040-005081	SCREW, pan-head, 5 x 8	1
	4	-64	C5010-080201	BOLT, socket-head, 8 x 20	2
	2	-65	C5010-080351	BOLT, socket-head, 8 x 35	6
ad, 12 x 35	1	-66	127-0200-06	COVER	4
ad, 5	1	-67	C5131-000301	NUT, round, 30	1
d, 5 x 20	2	-68	C5153-000300	WASHER, lock, 30	1
	2	-69	127-0200-05	COLLAR	1
		-70	127-0200-04	COLLAR	1
, 5 x 10	1	-71	M009-0006-62	BEARING, 30TAC62DB	1
d, 12 x 40	1	-72	127-0200-03-1	COLLAR	1
	2	-73	127-0200-02	COLLAR	1
l, 5 x 20	1	-74	127-0201-04-1	BRACKET	1
l, 5	2	-75	H1032-0002-01	FELT	1
	2	-76	H1030-1001-58	STOPPER	1
	1	-77	C5040-005101	SCREW, pan-head, 5 x 10	1
, 12 x 40	2				2
	4				
043, NIPPON BELLOWS	1				
	1				
	1				
	1				
	4				
8 x 16	1				
	3				
	1				
	1				
	1				
WATAKE, L61-J	1				
i x 35	1				
x 16	2				
	2				
	1				
seal, type-SS #0	1				
seal, type-SS #0	1				
seal, type-SS #0	1				
8	1				
	6				

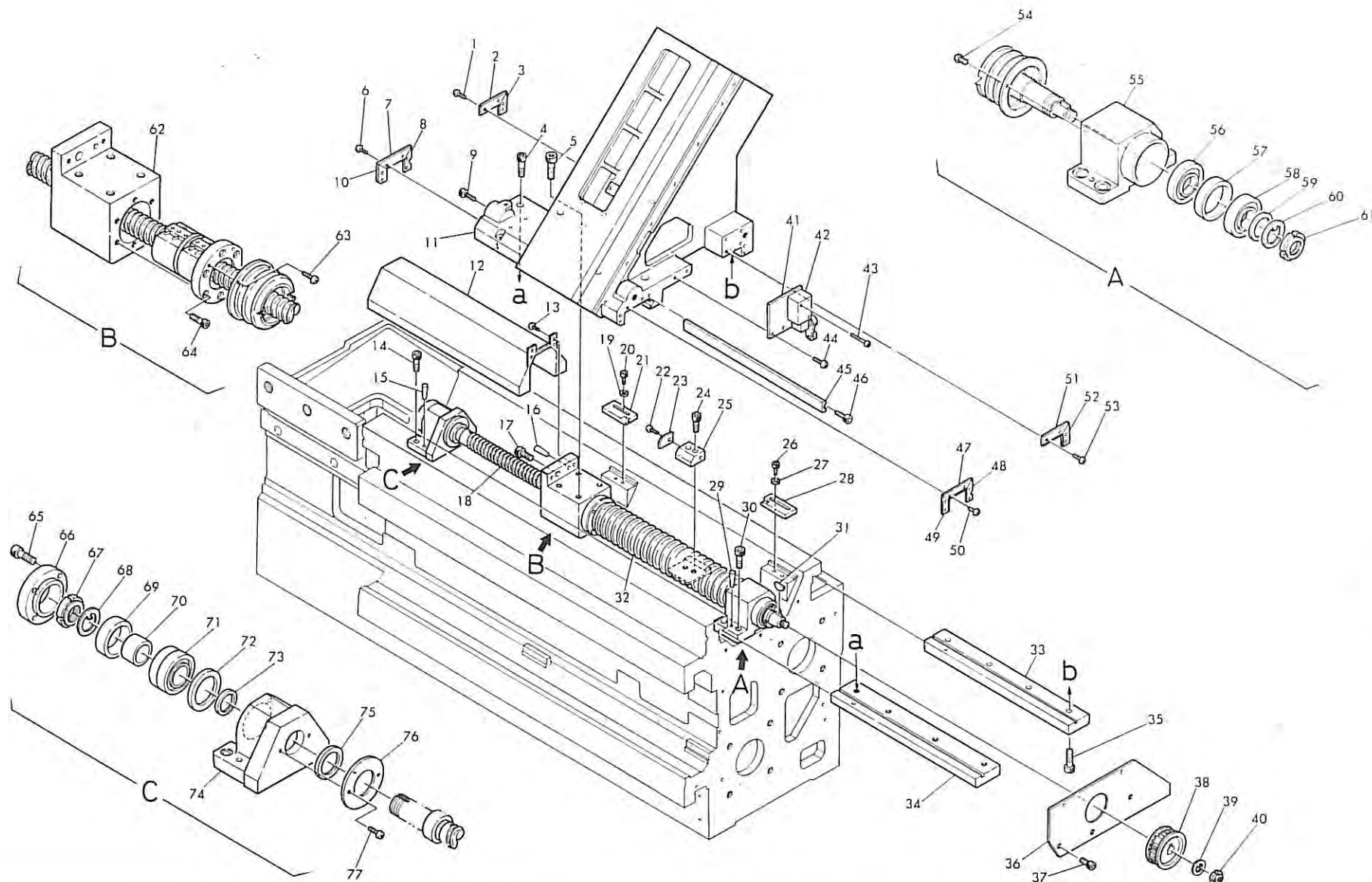
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OKUMA MACHINERY WORKS LTD.

SHEET NO.14 UPPER SADDLE AND Z-AXIS BALL-SCREW, - 2ST -

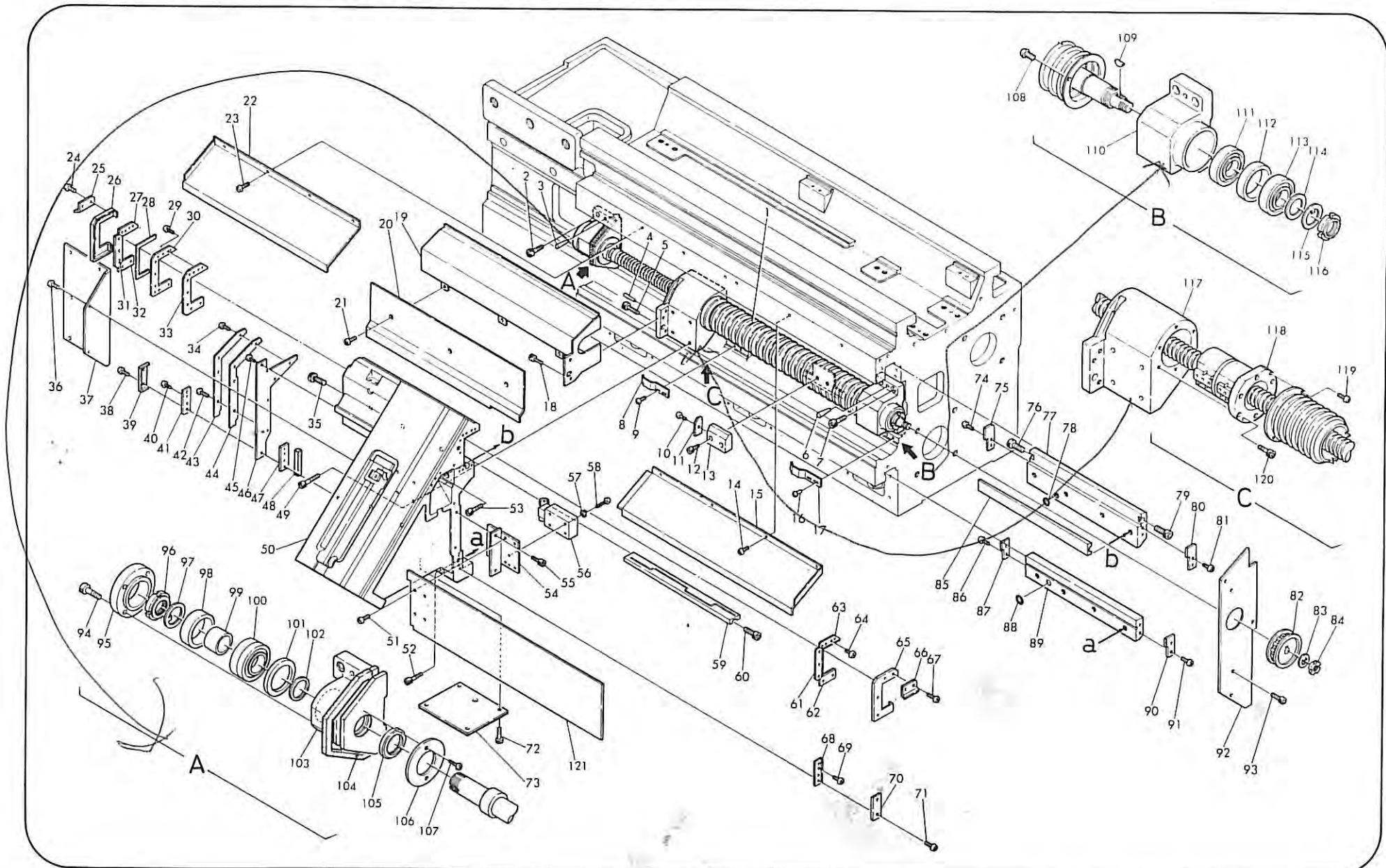
INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
14-1	C5040-005081	SCREW, pan-head, 5 x 8	4	14-51	H1023-1014-41-1	WIPER	1
-2	H1023-1014-44-1	WIPER, NITTA Slide seal type-SS #0	1	-52	H1023-1014-42-1	WIPER	1
-3	H1023-1014-45-1	WIPER, NITTA Slide seal type-SS #0	1	-53	C5040-005081	SCREW, pan-head, 5 x 8	4
-4	C5010-120601	BOLT, socket-head, 12 x 60	4	-54	C5040-005081	SCREW, pan-head, 5 x 8	2
-5	C5010-120551	BOLT, socket-head, 12 x 55	4	-55	127-0200-08-1	BRACKET	1
-6	C5040-005081	SCREW, pan-head, 5 x 8	6	-56	M000-6206LLBP05	BEARING, 6206LLBP5	1
-7	H1023-1014-48-1	WIPER, NITTA Slide seal type-SS #0	1	-57	D5480-030150	COLLAR, distance, inner, 30 x 40 x 15	1
-8	H1023-1014-94	WIPER, NITTA Slide seal type-SS #0	1	-58	M000-6206LLBP5	BEARING, 6206LLBP5	1
-9	C5029-000081	BOLT, gib	1	-59	D5420-304350	COLLAR, holder, bearing, 30 x 43 x 5	1
-10	H1023-1014-52-1	WIPER, NITTA Slide seal type-SS #0	1	-60	C5153-000300	WASHER, lock, 30	1
-11	127-0301-01-1	SADDLE	1	-61	C5131-000301	NUT, round, 30	1
-12	127-0201-03-1	COVER	1	-62	127-0301-05-1	BRACKET	1
-13	C5040-005081	SCREW, pan-head, 5 x 8	4	-63	C5040-005081	SCREW, pan-head, 5 x 8	2
-14	C5010-120401	BOLT, socket-head, 12 x 40	4	-64	C5010-080201	BOLT, socket-head, 8 x 20	6
-15	C0201-080401	ITP, 8 x 40	2	-65	C5010-080351	BOLT, socket-head, 8 x 35	4
-16	C0201-080361	ITP, 8 x 36	1	-66	127-0200-06	COVER	1
-17	C5010-120351	BOLT, socket-head, 12 x 35	1	-67	C5131-000301	NUT, round, 30	1
-18	H1014-1161-11-2	BALL-SCREW	1	-68	C5153-000300	WASHER, lock, 30	1
-19	C5140-000051	WASHER, polished, 5	2	-69	127-0200-05	COLLAR	1
-20	C5010-050201	BOLT, socket-head, 5 x 20	2	-70	127-0200-04	COLLAR	1
-21	147-0300-13	DOG	1	-71	M009-0006-62	BEARING, 30TAC62DB	1
-22	C5040-005101	SCREW, pan-head, 5 x 10	1	-72	127-0200-03-1	COLLAR	1
-23	H1030-1001-59	STOPPER	1	-73	127-0200-02	COLLAR	1
-24	C5010-120401	BOLT, socket-head, 12 x 40	2	-74	127-0201-04-1	BRACKET	1
-25	127-0200-07-2	DOG	1	-75	H1032-0002-01	FELT	1
-26	C5010-050201	BOLT, socket-head, 5 x 20	2	-76	H1030-1001-58	STOPPER	1
-27	C5140-000051	WASHER, polished, 5	2	-77	C5040-005101	SCREW, pan-head, 5 x 10	2
-28	147-0300-12	DOG	1				
-29	C0201-080401	ITP, 8 x 40	2				
-30	C5010-120401	BOLT, socket-head, 12 x 40	4				
-31		KEY, woodruff	1				
-32	H1024-0000-47	BELLOWS, J-N534043, NIPPON BELLOWS	1				
-33	127-0301-02-1	PLATE, back	1				
-34	127-0301-03-3	PLATE, back	1				
-35	C5000-120451	BOLT, 12 x 45	4				
-36	127-0201-01-3	BASE	1				
-37	C5010-080161	BOLT, socket-head, 8 x 16	3				
-38	123-7211-03-1	PULLEY	1				
-39	171-0221-17	WASHER, lock	1				
-40	05131-000161	NUT, round, 16	1				
-41	127-0301-06-1	SUPPORT	1				
-42	E3012-891-001	LIMIT-SWITCH, YAMATAKE, LSI-J	1				
-43	C5010-050351	BOLT, socket-head, 5 x 35	2				
-44	C5010-080161	BOLT, socket-head, 8 x 16	2				
-45	127-0301-04-2	GIB	1				
-46	C5029-000081	BOLT, gib	1				
-47	H1023-1014-48-1	WIPER, NITTA Slide seal type-SS #0	1				
-48	H1023-1014-49-1	WIPER, NITTA Slide seal type-SS #0	1				
-49	H1023-1014-47-1	WIPER, NITTA Slide seal type-SS #0	1				
-50	C5040-005081	SCREW, pan-head, 5 x 8	6				



SHEET NO. 15 LOWER SADDLE AND Z-AXIS BALL-SCREW, - 2ST -

INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
15-1	H1024-0000-47	BELLOWS, J-N534043, NIPPON BELLOWS	1	15-61	H1023-1014-71-1	WIPER, NITTA, Slide seal, type-SS, #3 L = 102	1
-2	C5010-120401	BOLT, socket-head, 12 x 40	4	-62	H1023-1014-72-1	WIPER, NITTA, Slide seal, type-SS, #3 L = 48	1
-3	C0201-080401	ITP, 8 x 40	2	-63	H1023-1014-69-1	WIPER, NITTA, Slide seal, type-SS, #3 L = 64	1
-4	C0201-080361	ITP, 8 x 36	1	-64	C5040-005081	SCREW, pan-head, 5 x 8	6
-5	C5010-120351	BOLT, socket-head, 12 x 35	1	-65	127-0302-13-1	COVER	1
-6	C0201-080401	ITP, 8 x 40	2	-66	127-0302-11	WIPER	2
-7	C5010-120401	BOLT, socket-head, 12 x 40	4	-67	C5040-005141	SCREW, pan-head, 5 x 14	2
-8	127-0202-05	DOG	1	-68	H1023-1014-76-1	WIPER, NITTA, Slide seal, type-SS, #3 L = 60	1
-9	C5010-050101	BOLT, socket-head, 5 x 10	2	-69	C5040-005161	SCREW, pan-head, 5 x 8	2
-10	C5040-005101	SCREW, pan-head, 5 x 10	1	-70	127-0302-15-1	COVER	1
-11	H1030-1001-59	STOPPER	1	-71	C5040-005081	SCREW, pan-head, 5 x 8	2
-12	C5010-120401	BOLT, socket-head, 12 x 40	2	-72	C5010-050101	BOLT, socket-head, 5 x 10	4
-13	127-0202-04-1	DOG	1	-73	127-0302-10	PLATE	1
-14	C5040-005081	SCREW, pan-head, 5 x 8	4	-74	C5040-005081	SCREW, pan-head, 5 x 14	2
-15	127-0202-12-2	COVER	1	-75	H1023-1014-75-1	WIPER, NITTA, Slide seal, type-SS, #4	1
-16	C5010-050101	BOLT, socket-head, 5 x 10	2	-76	127-0302-18	BOLT	1
-17	127-0202-05	DOG	1	-77	127-0302-04-1	PLATE, back	1
-18	C5010-080121	BOLT, socket-head, 8 x 12	3	-78	F100-190-00980	O-RING, P10	2
-19	127-0202-08-1	COVER	1	-79	127-0302-18	BOLT	1
-20	127-0202-09-1	COVER	1	-80	H1023-1014-74-1	WIPER, NITTA, Slide seal, type-SS, #4	1
-21	C5040-005081	SCREW, pan-head, 5 x 8	3	-81	C5040-005081	SCREW, pan-head, 5 x 8	2
-22	127-0202-11-2	COVER	1	-82	123-7211-03-1	PULLEY	1
-23	C5040-005081	SCREW, pan-head, 5 x 8	4	-83	171-0221-17	WASHER, lock	1
-24	C5040-005201	SCREW, pan-head, 5 x 20	2	-84	C5131-000161	NUT, round, 16	1
-25	127-0302-12-1	WIPER	2	-85	127-0302-03-2	GIB	1
-26	127-0302-14-1	COVER	1	-86	C5040-005081	SCREW, pan-head, 5 x 8	2
-27	H1023-1014-70-1	WIPER, NITTA Slide seal, type-SS #3 L = 64	1	-87	H1023-1014-78	WIPER, NITTA, Slide seal, type-SS, #3	1
-28	H1032-1004-12-1	WIPER, felt, 96 x 62 x 7	1	-88	F100-190-00980	O-RING, P10	1
-29	C5040-005081	SCREW, pan-head, 5 x 8	2	-89	127-0302-05-1	PLATE, back	1
-30	127-0302-19-1	PLATE	1	-90	H1023-1014-77	WIPER, NITTA, Slide seal, type-SS, #3	1
-31	H1023-1014-71-1	WIPER, NITTA, Slide seal, type-SS #3 L = 102	1	-91	C5040-005081	SCREW, pan-head, 5 x 8	2
-32	H1023-1014-73-1	WIPER, NITTA, Slide seal, type-SS #3 L = 48	1	-92	127-0202-10-1	BASE	1
-33	127-0302-22-1	PLATE	1	-93	C5010-080161	BOLT, socket-head, 8 x 16	3
-34	C5040-005121	SCREW, pan-head, 5 x 12	1	-94	C5000-080351	BOLT, 8 x 35	4
-35	127-0302-18	BOLT	1	-95	127-0200-06	COVER	1
-36	C5040-005081	SCREW, pan-head, 5 x 8	7	-96	C5131-000301	NUT, round, 30	1
-37	127-0302-08-1	COVER	1	-97	C5153-000300	WASHER, lock, 30	1
-38	C5040-005201	SCREW, pan-head, 5 x 20	2	-98	127-0200-05	COLLAR	1
-39	127-0302-15-1	COVER	1	-99	127-0200-04	COLLAR	1
-40	C5040-005141	SCREW, pan-head, 5 x 14	2	-100	M009-0006-62	BEARING, 30TAC62DB, NSK, pre-load, 200K	1
-41	H1023-1014-76-1	WIPER, NITTA, Slide seal, type-SS, #3 L = 60	1	-101	127-0200-03-1	COLLAR	1
-42	C5040-005081	SCREW, pan-head, 5 x 8	3	-102	127-0200-02	COLLAR	1
-43	127-0302-16-2	PLATE	1	-103	127-0200-01-1	BRACKET	1
-44	H1020-1031-43	WIPER, 240 x 130.6 x 2	1	-104	H1032-0002-01	FELT, 10 x 10 x 290	1
-45	C5040-005100	SCREW, pan-head, 5 x 10	2	-105	C6100-000400	RING, felt, 40	1
-46	127-0302-17-1	PLATE	1	-106	H1030-1001-58	STOPPER	1
-47	127-0302-02-1	PLATE	1	-107	C5040-005101	SCREW, pan-head, 5 x 10	2
-48	H1032-0002-26	FELT	1	-108	C5040-005081	SCREW, pan-head, 5 x 8	4
-49	C5010-120451	BOLT, socket-head, 12 x 45	4	-109	C5171-004160	KEY, woodruff, 5 x 16	1
-50	127-0302-01-2	SADDLE, lower	1	-110	127-0200-08-1	BRACKET	1
-51	C5040-005081	SCREW, pan-head, 5 x 8	4	-111	M000-6206LLBP5	BEARING, 6206LLBP5	1
-52	C5010-120801	BOLT, socket-head, 12 x 80	4	-112	D5480-030150	COLLAR, distance, inner, 30 x 40 x 15	1
-53	C5010-160701	BOLT, socket-head, 16 x 70	4	-113	M000-6206LLBP5	BEARING, 6206LLBP5	1
-54	127-0202-06-1	SUPPORT	1	-114	D5420-304350	COLLAR, bearing holder, 30 x 43 x 5	1
-55	C5010-080161	BOLT, socket-head, 8 x 16	2	-115	05153-000300	WASHER, lock, 30	1
-56	E3012-891-005	LIMIT-SWITCH, YAMATAKE, 3LS1-J	1	-116	C5131-000301	NUT, round, 30	1
-57	C5160-000051	WASHER, spring, 5	4	-117	127-0302-06-1	BRACKET	1
-58	C5040-005351	SCREW, pan-head, 5 x 35	4	-118	H1014-1161-11-2	BALL-SCREW	1
-59	127-0302-02-2	GIB	1	-119	C5040-005081	SCREW, pan-head	4
-60	127-0302-18	BOLT	1	-120	C5010-080201	BOLT, socket-head	6
				-121	127-0202-07-1	COVER	1

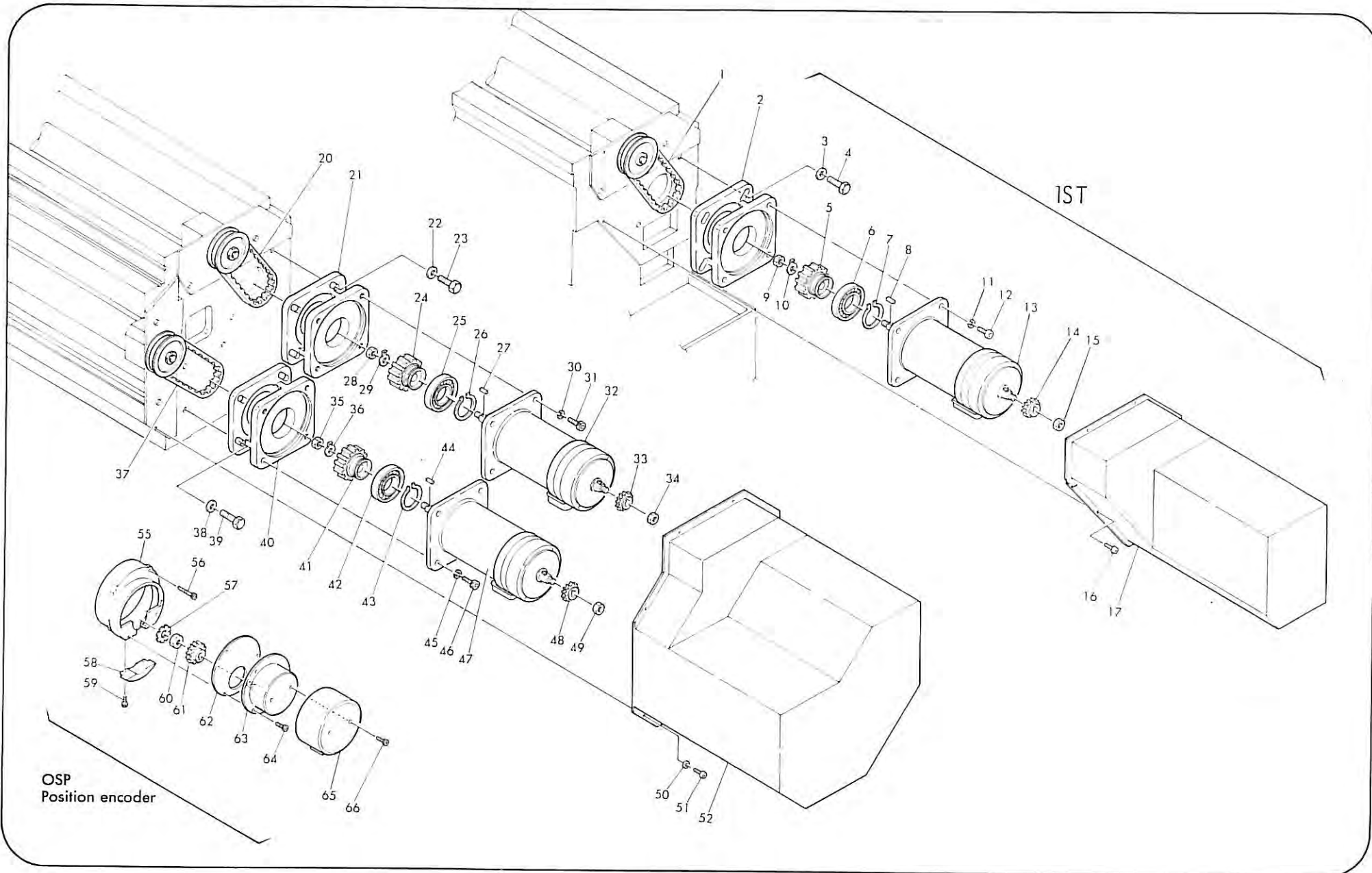
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SHEET NO. 16 UPPER AND LOWER Z-AXIS DRIVE UNITS

INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
16-1	M1132-10300G	1ST Machine	1	16-50	C5140-000051	WASHER, polished, 5	7
-2	137-0200-01-2	BELT, synchro, 300H-100G	1	-51	C5040-005101	SCREW, pan-head, 5 x 10	7
-3	C5150-000161	BASE, motor	1	-52	127-0202-02-1	COVER	1
-4	C5000-160451	WASHER, plain, 16	4			OSP POSITION ENCODER	
-5	147-0210-15-2	BOLT, hex., 16 x 45	4	-55	912-6510-144	GEAR BOX	1
-6	M000-6011LLB	PULLEY	1	-56	C5010-050451	BOLT, socket-head, 5 x 45	4
-7	C5180-000550	BEARING, 6011LLB	1	-57	912-1090-01-1	COLLAR, eccentric	1
-8		SNAP-RING, external, 55	1	-58	E5574-295-017	COVER	1
-9		KEY, accessory for motor	1	-59	C5010-040121	BOLT, socket-head, 4 x 12	2
-10	121-7303-12	NUT, M10, accessory for motor	1	-60	H1005-0000-97	NUT	1
-11	C5160-000121	WASHER, lock	1	-61	912-5040-18-1	GEAR	1
-12	C5010-120301	WASHER, spring, 12	4	-62	912-1600-04-2	PLATE	1
-13	E-1226-288-011	BOLT, socket-head, 12 x 30	4	-63	1911-0172	OSP POSITION ENCODER	1
-14	912-5040-19	DC MOTOR, C-800T-25, SANYO	1	-64	C5010-050141	BOLT, socket-head, 5 x 14	3
-15		GEAR	1	-65	912-8270-03-2	COVER	1
-16	C5040-005081	NUT, accessory for motor	1	-66	C5040-005101	BOLT, socket-head, 5 x 10	2
-17	127-0201-05-1	SCREW, pan-head, 5 x 8	5				
		COVER	1				
-20	M1132-10300G	2ST Machine	1				
-21	137-0200-01-2	BELT, synchro, 300H-100G	1				
-22	C5150-000161	BRACKET	1				
-23	C5000-160451	WASHER, plain, 16	4				
-24	147-0210-15-2	BOLT, hex., 16 x 45	4				
-25	M000-6011LLB	PELLEY	1				
-26	C5180-000550	BEARING, 6011LLB	1				
-27		SNAP-RING, external, 55	1				
-28		KEY, accessory for motor	1				
-29	121-7303-12	NUT, M10	1				
-30	C5160-000121	WASHER	1				
-31	C5010-120301	WASHER, spring, 12	4				
-32	E-1226-288-011	BOLT, socket-head, 12 x 30	4				
-33	912-5040-19	DC MOTOR, C-800T-25, SANYO	1				
-34		GEAR	1				
-35		NUT, accessory for motor	1				
-36		NUT, M10	1				
-37	121-7303-12	WASHER	1				
-38	M1132-10300G	BELT, synchro, 300H-100G	1				
-39	C5150-000161	WASHER, plain, 16	4				
-40	C5000-160401	BOLT, hex., 16 x 45	4				
-41	137-0200-01-1	BASE, motor	1				
-42	147-0210-15-2	PULLEY	1				
-43	M000-6011LLB	BEARING, 6011LLB	1				
-44	C5180-000550	SNAP-RING, external, 55	1				
-45		KEY, accessory for motor	1				
-46	C5160-000121	WASHER, spring, 12	4				
-47	C5010-120301	BOLT, socket-head, 12 x 30	4				
-48	E1226-288-011	DC MOTOR, C-800T-25, SANYO	1				
-49	912-5040-19	GEAR	1				
		NUT, accessory for motor	1				

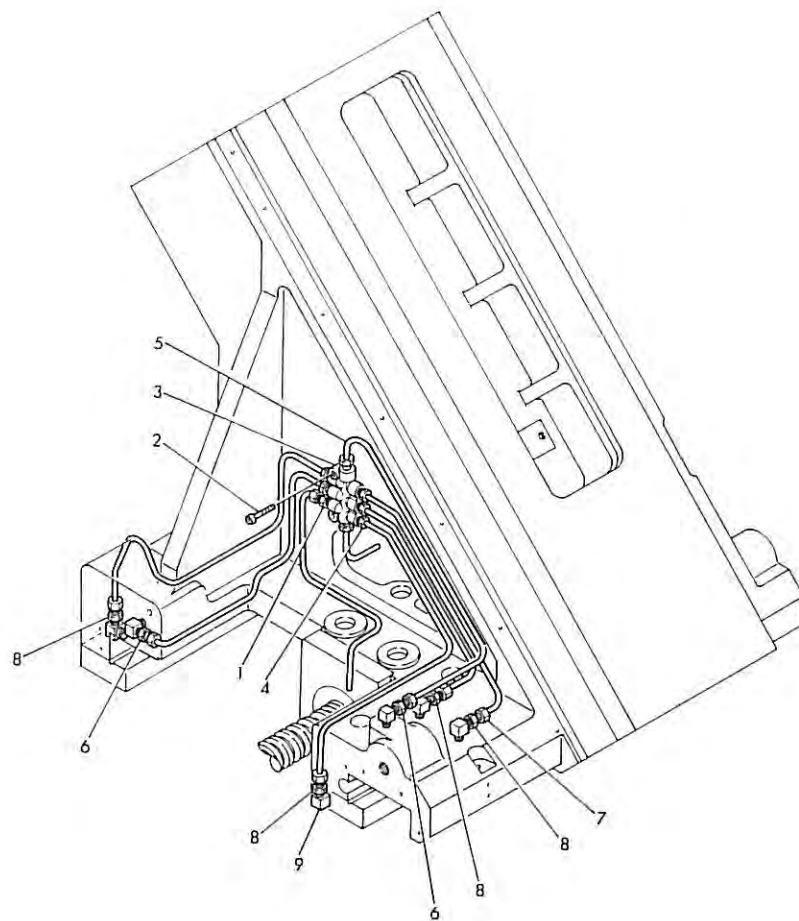
SHEET NO. 16 UPPER AND LOWER Z-AXIS DRIVE UNITS



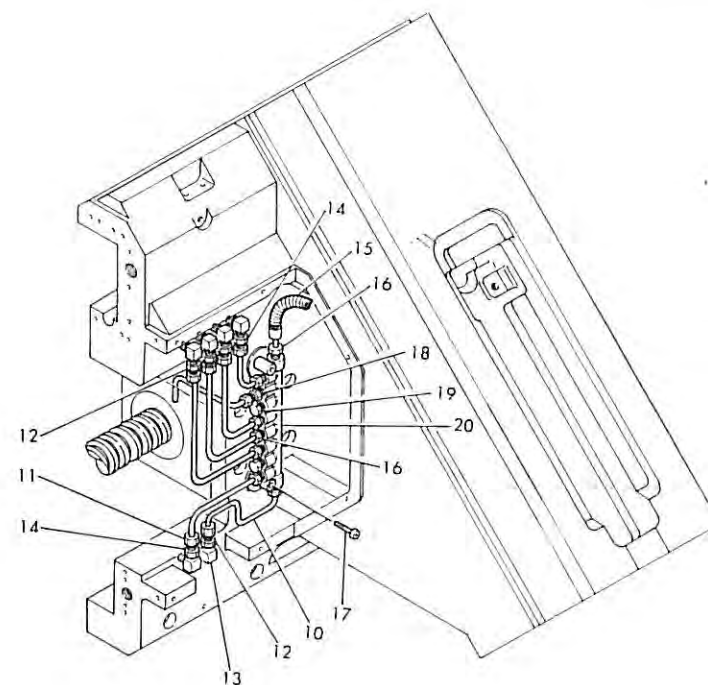
OKUMA MACHINERY WORKS LTD.

SHEET NO. 17 SADDLE LUBRICATION

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
17-1	H0010-0012-38	UNIT, flow, PSS-3	1
-2	C5040-005251	SCREW, pan-head, 5 x 25	2
-3	H0012-0003-89	DISTRIBUTOR, DA-8	1
-4	H0012-0000-88	PLUG, clamp, PA-4	7
	H0012-0000-89	SLEEVE, PB-4	7
-5	D7781-041200	PIPE, steel, 4 x 1200	4
-6	H0010-0004-34	UNIT, flow, PST-4	2
-7	H0010-0007-96	NUT, PAN-4	7
	H0012-0000-89	SLEEVE, PB-4	7
-8	H0010-0004-33	UNIT, flow, PST-3	4
-9	H0012-0003-90	ELBOW, PI-1	6
-10	D7781-041200	PIPE, steel, 4 x 1200	1
-11	H0010-0007-96	NUT, PAN-4	7
	H0012-0000-89	SLEEVE, PB-4	7
-12	H0010-0004-33	UNIT, flow, PST-3	2
-13	H0012-0003-90	ELBOW, PI-1	6
-14	H0010-0004-34	UNIT, flow, PST-4	4
-15	H0022-0000-33	HOSE, flexible, FHS409	1
-16	H0012-0000-88	PLUG, clamp, PA-4	7
	H0012-0000-89	SLEEVE, PB-4	7
-17	C5040-005251	SCREW, pan-head, 5 x 25	2
-18	H0010-0012-38	UNIT, flow, PSS-3	1
-19	H0012-0901-45	PLUG, PG-8	2
-20	H0012-0003-75	DISTRIBUTOR, DB-10	1



Lower Saddle

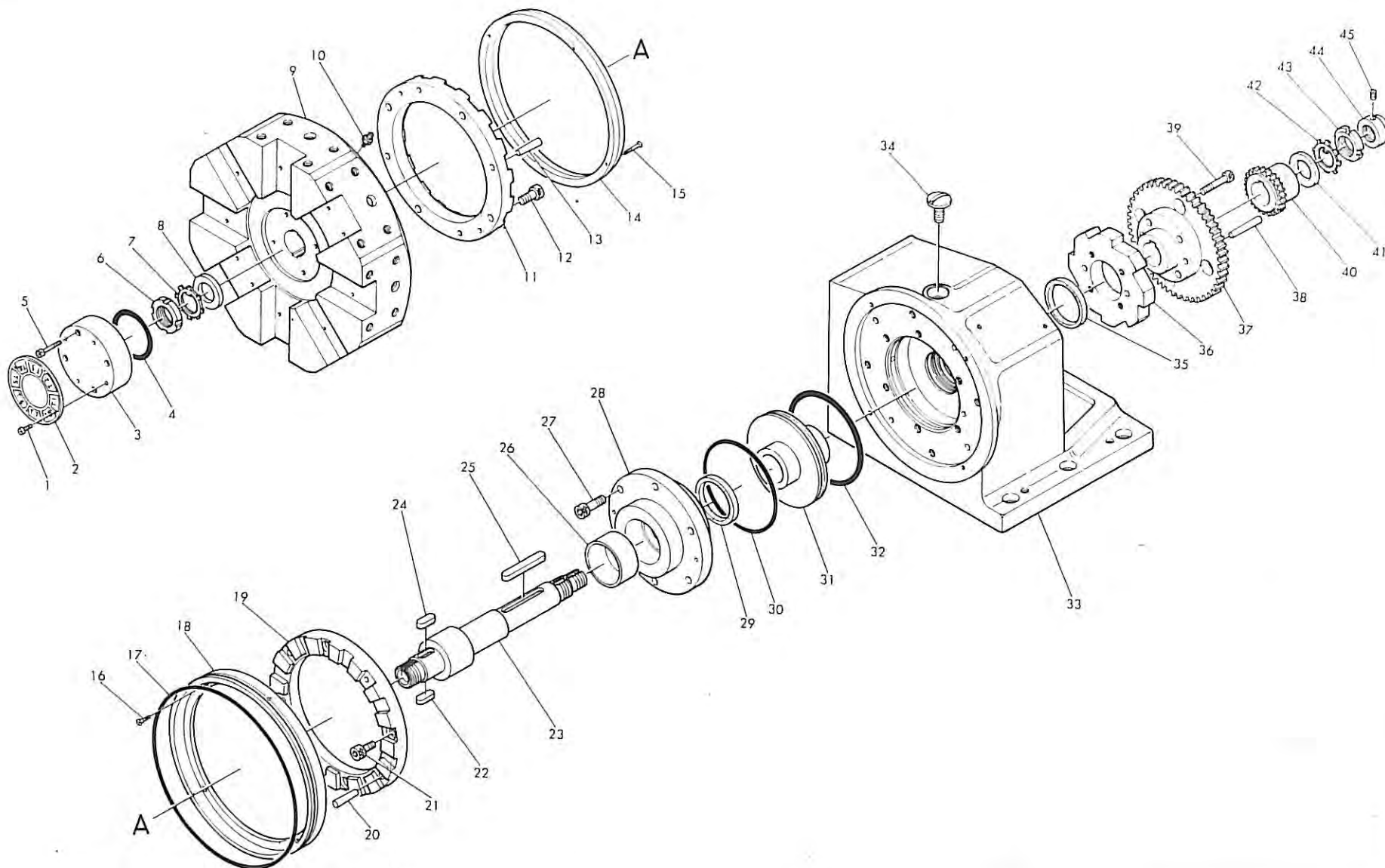


Upper Saddle

SHEET NO. 18 V8 UPPER TURRET (1)

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
18-1	C5040-004081	SCREW, pan-head, 4 x 8	4
-2	H1040-1022-17	PLATE, name	1
-3	127-3300-02-1	COVER, metric	1
	127-3100-03-1	COVER, inch (QT)	1
-4	F100-310-05940	O-RING, G60	1
-5	C5010-050351	BOLT, socket-head, 5 x 35	2
-6	127-3300-13	NUT, bearing, 30	1
-7	C5152-000300	WASHER, lock	1
-8	D5420-304850	COLLAR, bearing, 30 x 48 x 5	2
-9	127-3300-01-2	TURRET, V8, metric	1
	127-3310-01-1	TURRET, V8, inch (QT)	1
-10	C2922-000002	NIPPLE, grease, 1/8	1
-11	127-3300-03	CLUTCH	1
-12	C5010-100201	BOLT, socket-head, 10 x 20	4
-13	C0201-080361	ITP, 8 x 36	2
-14	127-3300-05-1	RING	1
-15	C5050-004251	SCREW, 4 x 25	4
-16	C5050-004101	SCREW, 4 x 10	4
-17	M119-0002-35	ROPE, $\phi 3 \times 850$, MITSUBOSHI, poly-urethane	1
-18	127-3300-04	GUIDE	1
-19	127-3300-03	CLUTCH	1
-20	C0201-080361	ITP, 8 x 36	2
-21	C5010-100201	BOLT, socket-head, 10 x 20	4
-22	C5170-100280	KEY, feather, 10 x 8 x 28	1
-23	127-3300-07-1	SHAFT	1
-24	C5170-100280	KEY, feather, 10 x 8 x 28	1
-25	C5170-100700	KEY, feather, 10 x 8 x 70	1
-26	M004-MB5530DU	METAL, DU, DAIDO, MB5530DU	1
-27	C5010-100301	BOLT, socket-head, 10 x 30	6
-28	127-3300-06	FLANGE	1
-29	H0031-0003-49	PACKING, NOK FU0694FO	1
-30	F100-310-11940	O-RING, G120	1
-31	127-3300-08	PISTON	1
-32	F100-570-11460	O-RING, P115	1
-33	127-3301-01-1	TURRET, V8	1
-34	C5022-000121	PLUG, 12	1
-35	H0031-0003-49	PACKING, NOK, FU0694FO	1
-36	127-3300-09	CAM	1
-37	127-3301-05	GEAR, (127-3302-05)	1
-38	C0201-080501	ITP, 8 x 50	2
-39	C5010-080401	BOLT, socket-head, 8 x 40	4
-40	127-3300-10	GEAR	1
-41	D5420-304850	COLLAR, bearing holder, 30 x 48 x 5	1
-42	C5152-000300	WASHER, lock, 30	1
-43	127-3300-13	NUT, bearing	1
-44	127-3300-14-1	DOG	1
-45	C5034-006101	SET-SCREW, 6 x 10	1

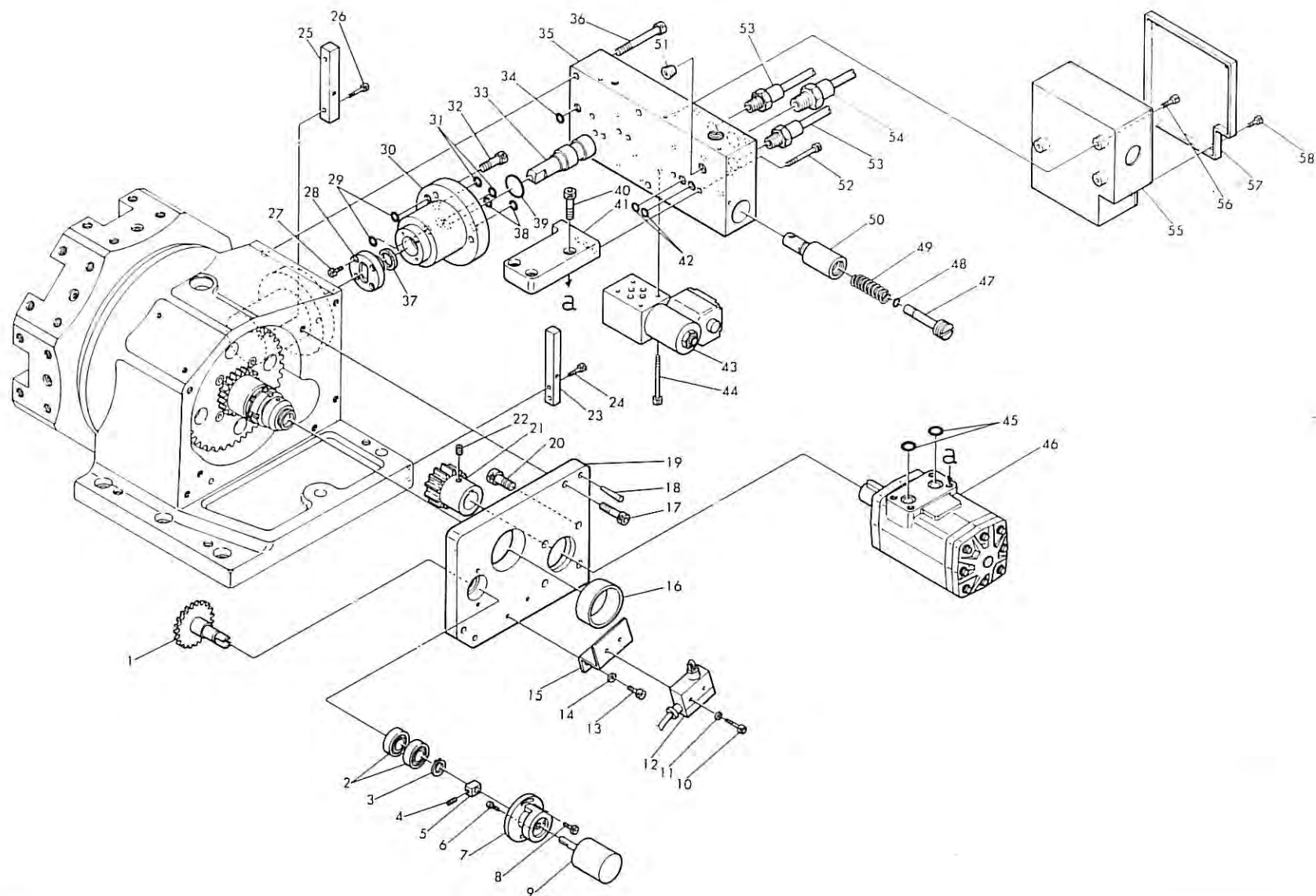
OKUMA MACHINERY WORKS LTD.



OKUMA MACHINERY WORKS LTD.

SHEET NO. 19 V8 UPPER TURRET (2)

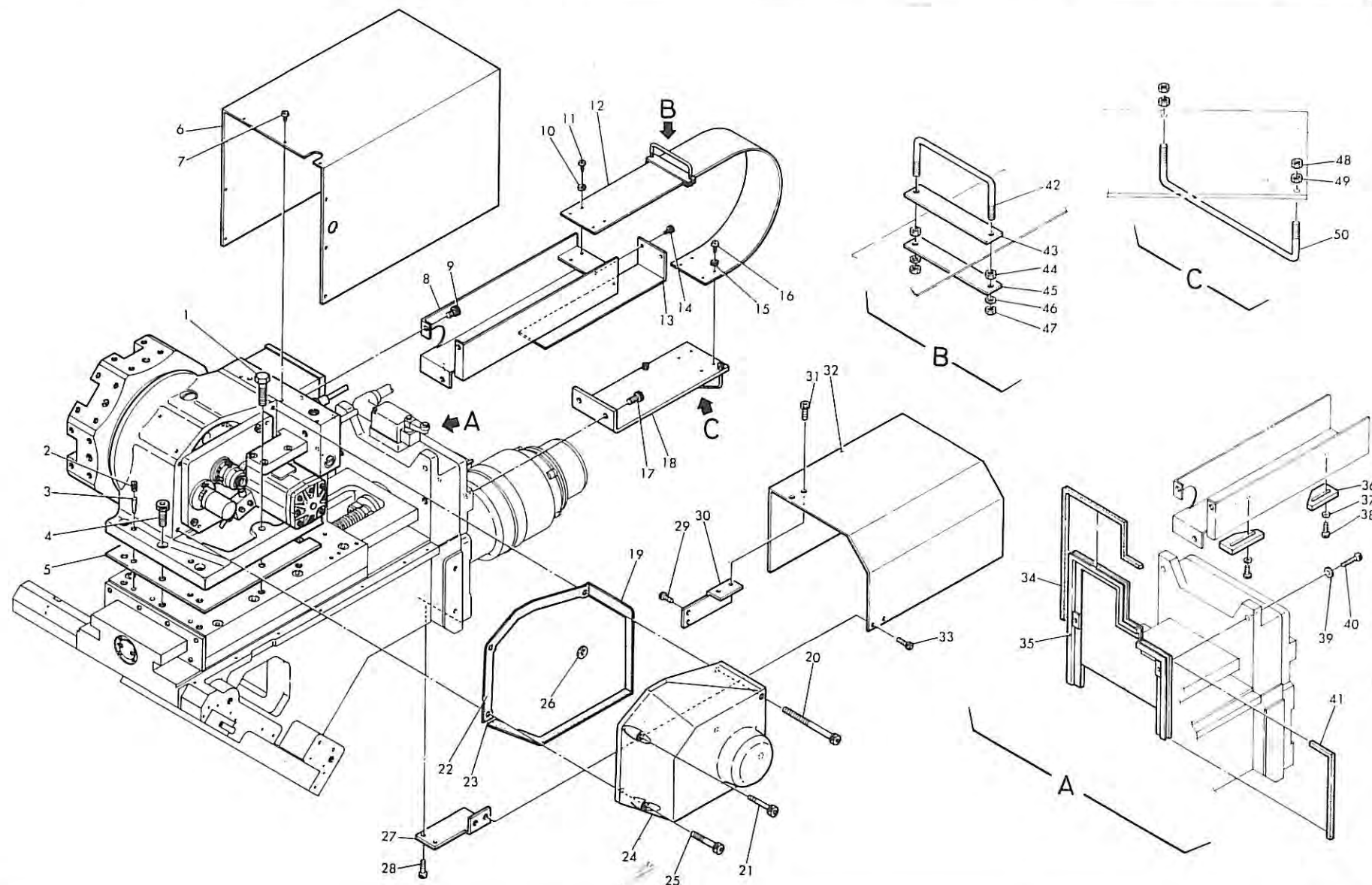
INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
19-1	127-3300-11	GEAR	1	19-47	127-3300-17	VALVE	1
-2	M000-6002ZZ	BEARING, 6002ZZ	2	-48	F100-190-00680	O-RING, P7	1
-3	C5180-000150	SNAP RING, external	1	-49	M101-12180-04510	SPRING, compression, setting, 1,2 x 18 x 45 x 10	1
-4	C5030-004061	SET-SCREW, flat-point, 4 x 6	1	-50	127-3300-16-2	BUSH	1
-5	123-3310-40-2	BLOCK	1	-51	C7861-000012	PLUG	1
-6	C5040-004101	SCREW, pan-head, 4 x 10	2	-52	C5010-050501	BOLT, socket-head, 5 x 50	2
-7	127-3300-12	SUPPORT	1	-53	D7870-010022	JOINT, hose, NIPPLE 3/8 YOKOHAMA	2
-8	C5010-050141	BOLT, socket-head, 5 x 14	2	-54	D7870-010032	JOINT, hose, NIPPLE 1/2 YOKOHAMA	1
-9	E2830-292-004	ROTARY-SWITCH, RS-04012CB	1	-55	127-3301-13	BOX, terminal	1
-10	C5010-040301	BOLT, socket-head, 4 x 30	2	-56	C5010-050161	BOLT, socket-head, 5 x 16	3
-11	C5160-000041	WASHER, spring, 4	2	-57	127-3301-14	COVER	1
-12	E3004-397-189	MICRO-SWITCH, TATEISHI, ZC-N21	1	-58	C5010-050101	BOLT, socket-head, 5 x 10	4
	E3004-397-192	MICRO-SWITCH (IEC), ZC-N21-MR (VCTIM)	1				
-13	C5010-050121	BOLT, socket-head, 5 x 12	2				
-14	C5160-000051	WASHER, spring, 5	2				
-15	127-3301-15-1	SUPPORT	1				
-16	M004-MB5020DU	METAL, DU, MB5020DU, DAIDO	1				
-17	C5010-080301	BOLT, socket-head, 8 x 30	3				
-18	C0201-060321	ITP, 6 x 32	2				
-19	127-3301-03-1	PLATE	1				
-20	C5010-100201	BOLT, socket-head, 10 x 20	4				
-21	127-3301-06	GEAR	1				
-22	C5034-006061	SET-SCREW, 6 x 6	1				
-23	127-3301-12	BLOCK	1				
-24	C5010-050201	BOLT, socket-head, 5 x 20	2				
-25	127-3301-11	BLOCK	1				
-26	C5010-050201	BOLT, socket-head, 5 x 20	2				
-27	C5010-050141	BOLT, socket-head, 5 x 14	4				
-28	127-3300-19	COVER	1				
-29	F100-190-00880	O-RING, P9	2				
-30	127-3301-09	CYLINDER	1				
-31	F100-190-00880	O-RING, P9	2				
-32	C5010-080251	BOLT, socket-head, 8 x 25	3				
-33	127-3300-15-1	PISTON	1				
-34	F100-190-00880	O-RING, P9	1				
-35	127-3301-08-1	DISTRIBUTOR	1				
-36	C5010-080651	BOLT, socket-head, 8 x 65	4				
-37	H0031-0006-29	PACKING, NOK, FU0180, FO	1				
-38	F100-190-00880	O-RING, P9	2				
-39	F100-350-02770	O-RING, P28	1				
-40	C5010-080251	BOLT, socket-head, 8 x 25	3				
-41	127-3301-10	PLATE	1				
-42	F100-190-00880	O-RING, P9	2				
-43	F0001-141-000-01	SOLENOID, VALVE, S, SD4GS-ACB-01B-100AZ-13, ACB-01B-100AZ-13, SUMITOMO-SD4GS	1				
	F0001-431-000-04	SOLENOID VALVE (IEC), SD4GS-AB-01B-D24AZ-13-S33	1				
-44	C5010-050451	BOLT, socket-head, 5 x 45	4				
-45	F100-262-01237	O-RING, JIS-W1530, #112, 2.62 x 12.37	2				
-46	F019-0001-15	MOTOR, orbit, SUMITOMO H-070BA4FM	1				



OKUMA MACHINERY WORKS LTD.

SHEET NO.20 V8 UPPER TURRET COVER

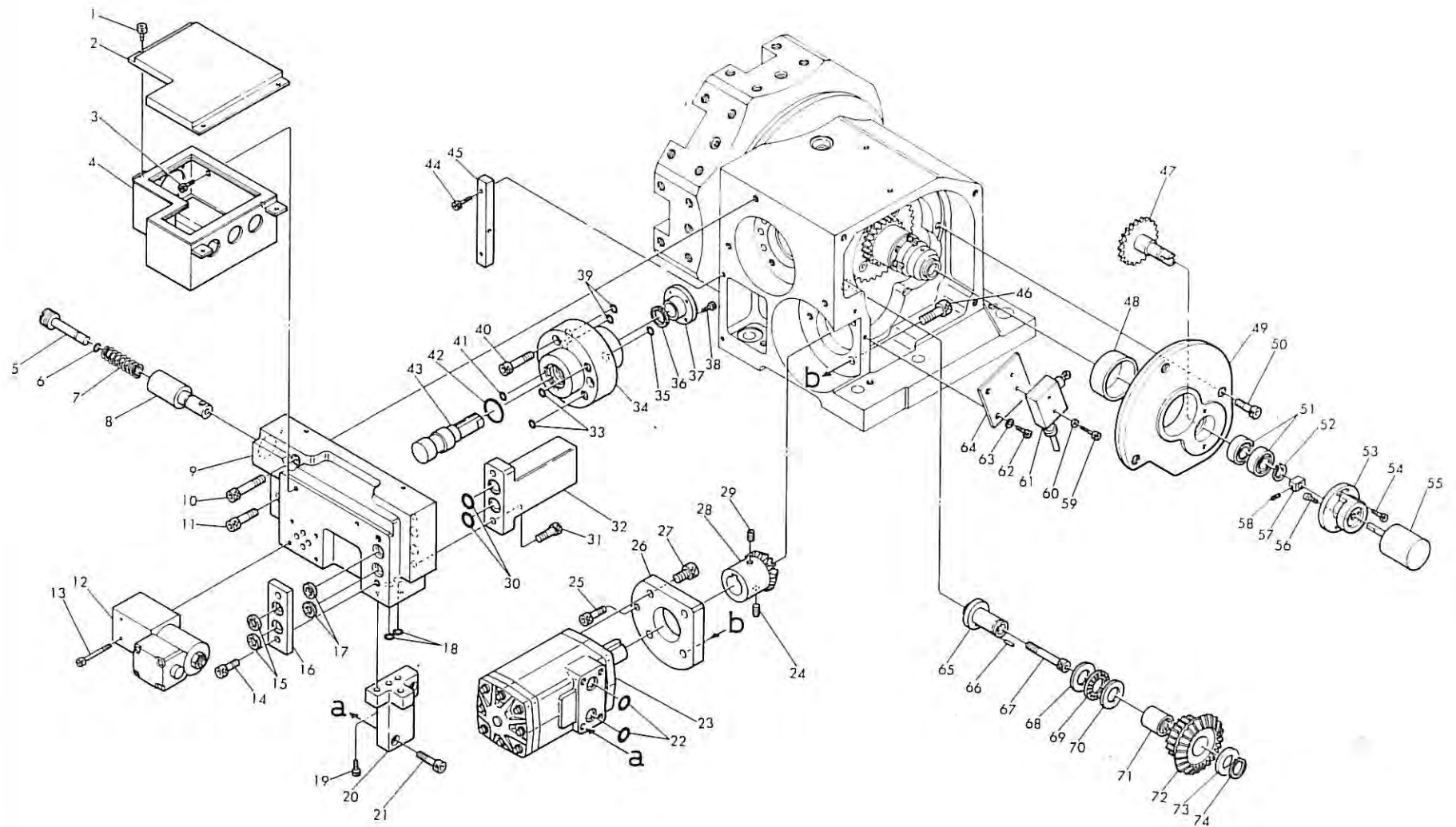
INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
20-1	C5000-120451	BOLT, 12 x 45	1	20-50	127-0231-11-1	STUD	1
	C5000-120551	BOLT, 12 x 55	1				
-2	C5034-012121	SET-SCREW, 12 x 12	2				
-3	C0201-060321	ITP, 6 x 32	2				
-4	C5010-120351	BOLT, socket-head, 12 x 35	3				
-5	127-3301-04-1	LINER	1				
-6	127-0311-10-2	COVER	1				
-7	C5040-005101	SCREW, pan-head, 5 x 10	11				
-8	127-0231-01-1	SUPPORT	1				
-9	C5010-080161	BOLT, socket-head, 8 x 16	3				
-10	C5140-000051	WASHER, polished, 5	4				
-11	C5040-005081	SCREW, pan-head, 5 x 8	4				
-12	M109-1017-34-1	PLATE	1				
-13	127-0231-04-1	COVER	1				
-14	C5010-050101	BOLT, socket-head, 5 x 10	2				
-15	C5140-000051	WASHER, polished, 5	4				
-16	C5040-005081	SCREW, pan-head, 5 x 8	4				
-17	C5010-080201	BOLT, socket-head, 8 x 20	2				
-18	127-0231-10-1	SUPPORT	1				
-19	H1020-1028-82	PACKING, rubber	1				
-20	D5010-081301	BOLT, socket-head, 8 x 130	2				
-21	C5010-080601	BOLT, socket-head, 8 x 60	1				
-22	H1020-1028-80	PACKING, rubber	1				
-23	H1020-1028-81	PACKING, rubber	1				
-24	127-3301-02-1	COVER	1				
-25	C5010-080701	BOLT, socket-head, 8 x 70	1				
-26	M1310-00902010	PACKING, rubber	1				
-27	127-0211-13	STAY, (IEC)	1				
-28	C5010-050121	BOLT, socket-head, (IEC), 5 x 12	2				
-29	C5010-050121	BOLT, socket-head, (IEC), 5 x 12	2				
-30	127-0211-12	STAY, (IEC)	1				
-31	C5010-050101	BOLT, socket-head, (IEC), 5 x 10	2				
-32	127-0211-11	COVER, motor, (IEC)	1				
-33	C5010-050101	BOLT, socket-head, (IEC), 5 x 10	2				
-34	H1032-1004-08-1	WIPER	1				
-35	127-0211-09-1	COVER	1				
-36	127-0231-02-1	DOG	2				
-37	C5140-000051	WASHER, 5	4				
-38	C5010-050251	BOLT, 5 x 25	4				
-39	C5140-000081	WASHER, 8	2				
-40	C5010-080301	BOLT, 8 x 30	2				
-41	H1032-1004-09-1	WIPER	1				
-42	127-0231-08-1	BOLT	3				
-43	127-0231-07-1	PLATE	3				
-44	C5100-000051	NUT, hex., #3, 5	6				
-45	127-0231-07-1	PLATE	3				
-46	C5160-000051	WASHER, spring, 5	6				
-47	C5100-000051	NUT, hex., #3, 5	6				
-48	C5100-000051	NUT, hex., #3, 5	2				
-49	C5110-000051	NUT, hex., #4, 5	2				



OKUMA MACHINERY WORKS LTD.

SHEET NO. 22 V8 LOWER TURRET (2)

INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
22-1	C5010-050101	BOLT, socket-head, 5 x 10	3	22-48	M004-MB5020DU	METAL, DU, MB5020DU, DAIDO	1
-2	127-3302-16	COVER	1	-49	127-3302-03-1	PLATE	1
-3	C5010-050101	BOLT, socket-head, 5 x 10	2	-50	C5010-080251	BOLT, socket-head, 8 x 25	3
-4	127-3302-15	BOX, terminal	1	-51	M000-6002ZZ	BEARING, 6002ZZ, M15 x 32 x 9	2
-5	127-3300-17	VALVE	1	-52	C5180-000150	SNAP-RING, external, 15	1
-6	F100-190-00680	O-RING, P7	1	-53	127-3300-12	SUPPORT	1
-7	M101-12180-04510	SPRING, compression, setting, 1.2 x 18 x 45 x 10	1	-54	C5010-050141	BOLT, socket-head, 5 x 14	2
-8	127-3300-16-2	BUSH	1	-55	E2830-292-004	ROTARY-SWITCH, RS-04012CB	1
-9	127-3302-10-2	DISTRIBUTOR	1	-56	C5040-004101	SCREW, pan-head, 4 x 10	2
-10	C5010-080451	BOLT, socket-head, 8 x 45	2	-57	123-3310-40-2	BLOCK	1
-11	C5010-080301	BOLT, socket-head, 8 x 30	1	-58	C5030-004061	SET-SCREW, flat-point, 4 x 6	1
-12	F0001-141-000-01	SOLENOID VALVE, S, SUMITOMO, SD4GS-ACB-01B-100AZ-13	1	-59	C5010-040301	BOLT, socket-head, 4 x 30	2
	F0001-431-000-04	SOLENOID VALVE, (IEC) SD4GS-AB-01B-D24AZ-13-S33	1	-60	Q5160-000041	WASHER, spring, 4	2
-13	C5010-050451	BOLT, socket-head, 5 x 45	4	-61	E3004-397-189	MICRO-SWITCH, TATEISHI, ZC-N2L	1
-14	C5010-080201	BOLT, socket-head, 8 x 20	2		E3004-397-192	MICRO-SWITCH, (IEC), ZC-N21-MR (VCTIM)	1
-15	F1113-010-01703	OIL SEAL, G10 x 17 x 3	2	-62	C5010-050121	BOLT, socket-head, 5 x 12	2
-16	127-3302-14	COVER	1	-63	C5160-000051	WASHER, spring, 5	2
-17	H0031-0002-81	PACKING, NOK, FU0064FO	2	-64	127-3302-17	SUPPORT	1
-18	F100-190-00880	O-RING, P5	2	-65	127-3302-07	SHAFT	1
-19	C5010-05016	BOLT, socket-head, 5 x 16	2	-66	C5201-003100	PIN, straight, 3 x 10	1
-20	127-3302-12-1	PLATE	1	-67	C5010-080551	BOLT, socket-head, 8 x 55	1
-21	C5010-080251	BOLT, socket-head, 8 x 25	2	-68	M001-AS1104	BEARING, INA, AS1104, M20 x 35 x 1	1
-22	F100-262-01237	O-RING, JIS-W1530, #112, 2.62 x 12.37	2	-69	M001-AXK1104	BEARING, INA, AXK1104, M20 x 35 x 2	1
-23	F019-0001-15	MOTOR, orbit, SUMITOMO, H-070BA4FM	1	-70	M001-AS1104	BEARING, INA, AS1104, M20 x 35 x 1	1
-24	C5034-006101	SET-SCREW, 6 x 10	1	-71	M001-WSB1104	BEARING, INA, WSB1104, M20 x 35 x 2	1
-25	C5010-080251	BOLT, socket-head, 8 x 25	1	-72	M001-HMK2026LL	BEARING, INA, HMK2026LL	1
-26	127-3302-09-1	FLANGE	1	-73	127-3302-06	GEAR	1
-27	C5010-100161	BOLT, socket-head, 10 x 16	2	-74	C5180-000200	SNAP-RING, external, 20	1
-28	127-3302-08-1	GEAR	1				
-29	C5034-006061	SET-SCREW, 6 x 6	1				
-30	F100-240-01480	O-RING, P15	2				
-31	C5010-080251	BOLT, socket-head, 8 x 25	2				
-32	127-3302-13	BLOCK	1				
-33	F100-190-00880	O-RING, P9	2				
-34	127-3302-11	CYLINDER	1				
-35	F100-190-00880	O-RING, P9	1				
-36	H0031-0006-29	PACKING, NOK, FU0180FO, IDI 18 x 26 x 5	1				
-37	127-3300-19	COVER	1				
-38	C5010-050141	BOLT, socket-head, 5 x 14	4				
-39	F100-190-00880	O-RING, P-9	2				
-40	C5010-080351	BOLT, socket-head, 8 x 35	3				
-41	F100-190-00880	O-RING, P9	1				
-42	F100-350-02770	O-RING, P28	1				
-43	127-3300-15-1	PISTON	1				
-44	C5010-050201	BOLT, socket-head, 5 x 20	2				
-45	127-3302-18-2	BLOCK	1				
-46	C5010-100301	BOLT, socket-head, 10 x 30	2				
-47	127-3300-11	GEAR	1				

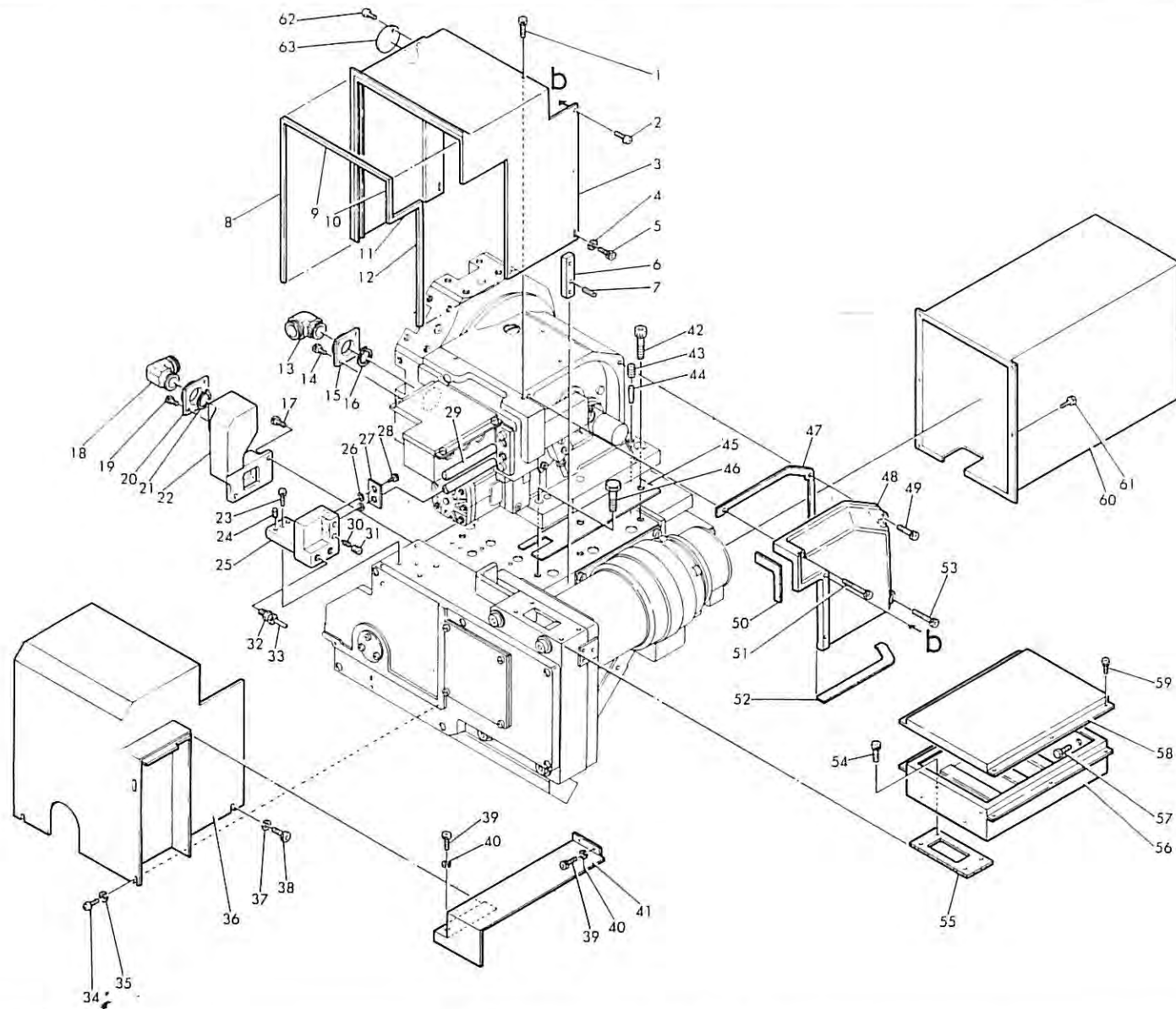


OKUMA MACHINERY WORKS LTD.

SHEET NO.23 V8 LOWER TURRET COVER

INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
23-1	C5010-050101	BOLT, socket-head, 5 x 10	2	23-49	C5010-080351	BOLT, socket-head, 8 x 35	1
-2	C5040-005101	SCREW, pan-head, 5 x 10	5	-50	H1020-1029-78	PACKING, rubber	1
-3	127-0232-09-1	COVER	1	-51	C5010-080551	BOLT, socket-head, 8 x 55	1
-4	C5140-000051	WASHER, polished, 5	2	-52	H1020-1029-77	PACKING	1
-5	C5010-050201	BOLT, socket-head, 5 x 20	1	-53	C5010-080451	BOLT, socket-head, 8 x 45	1
-6	127-0232-10-1	LINER	1	-54	C5010-080161	BOLT, socket-head, 8 x 16	4
-7	D5211-040160	PIN, spring, 4 x 16	4	-55	H1020-1029-88-1	PACKING	1
-8	H1032-0002-09	FELT, 5 x 5 x 330	1	-56	127-0232-12-1	BOX, terminal	1
-9	H1032-0002-08	FELT, 5 x 5 x 260	1	-57	C5000-080121	BOLT, 8 x 12	3
-10	H1032-0002-05	FELT, 5 x 5 x 80	1	-58	127-0232-13	COVER	1
-11	H1032-0002-06	FELT, 5 x 5 x 97	1	-59	C5010-050121	BOLT, socket-head, 5 x 12	6
-12	H1032-0002-07	FELT, 5 x 5 x 250	1	-60	127-0212-14-2	COVER, motor	1
-13	127-0232-02-1	JOINT	1	-61	C5010-050101	BOLT, socket-head, 5 x 10	6
-14	C5010-050121	BOLT, socket-head, 5 x 12	4	-62	C5040-005101	SCREW, pan-head, 5 x 10	1
-15	127-0232-01-1	JOINT	1	-63	127-0232-11-1	COVER	1
-16	C5180-000300	SNAP-RING, external, 30	1				
-17	C5010-080201	BOLT, socket-head, 8 x 20	2				
-18	127-0232-02-1	JOINT	1				
-19	C5010-050121	BOLT, socket-head, 5 x 12	4				
-20	127-0232-01-1	JOINT	1				
-21	C5180-000300	SNAP-RING, external, 30	1				
-22	127-0232-03	SUPPORT	1				
-23	C5010-080351	BOLT, socket-head, 8 x 35	2				
-24	C5035-008201	SET-SCREW, dog-point, 8 x 20	4				
-25	127-0232-04-1	JOINT	1				
-26	F100-190-00980	O-RING, P10	2				
-27	127-0232-07	COVER	1				
-28	C5010-050101	BOLT, socket-head, 5 x 10	2				
-29	127-0232-06	PIPE	2				
-30	C5031-006101	SET-SCREW, 6 x 10	2				
-31	C7861-00002	PLUG, 1/8	2				
-32	D2781-001022	JOINT, pipe, A-10-PT3/8	4				
-33	D7781-100400	PIPE, steel, 10 x 400	2				
-34	C5040-005081	SCREW, pan-head, 5 x 8	4				
-35	C5140-000051	WASHER, polished, 5	4				
-36	127-0232-08-1	COVER	1				
-37	C5140-000051	WASHER, polished, 5	1				
-38	C5010-050101	BOLT, socket-head, 5 x 10	1				
-39	C5010-050101	BOLT, socket-head, 5 x 10	3				
-40	C5140-000051	WASHER, polished, 5	3				
-41	127-0232-16-1	COVER	1				
-42	C5010-120351	BOLT, socket-head, 12 x 35	2				
	C5010-120601	BOLT, socket-head, 12 x 60	1				
-43	C5034-012121	SET-SCREW, 12 x 12	2				
-44	C0201-120301	ITP, 12 x 30	2				
-45	127-3302-04-1	LINER	1				
-46	C5000-120451	BOLT, 12 x 45	1				
	C5000-120501	BOLT, 12 x 50	1				
-47	H1020-1029-76	PACKING, rubber	1				
-48	127-3302-02-1	COVER	1				

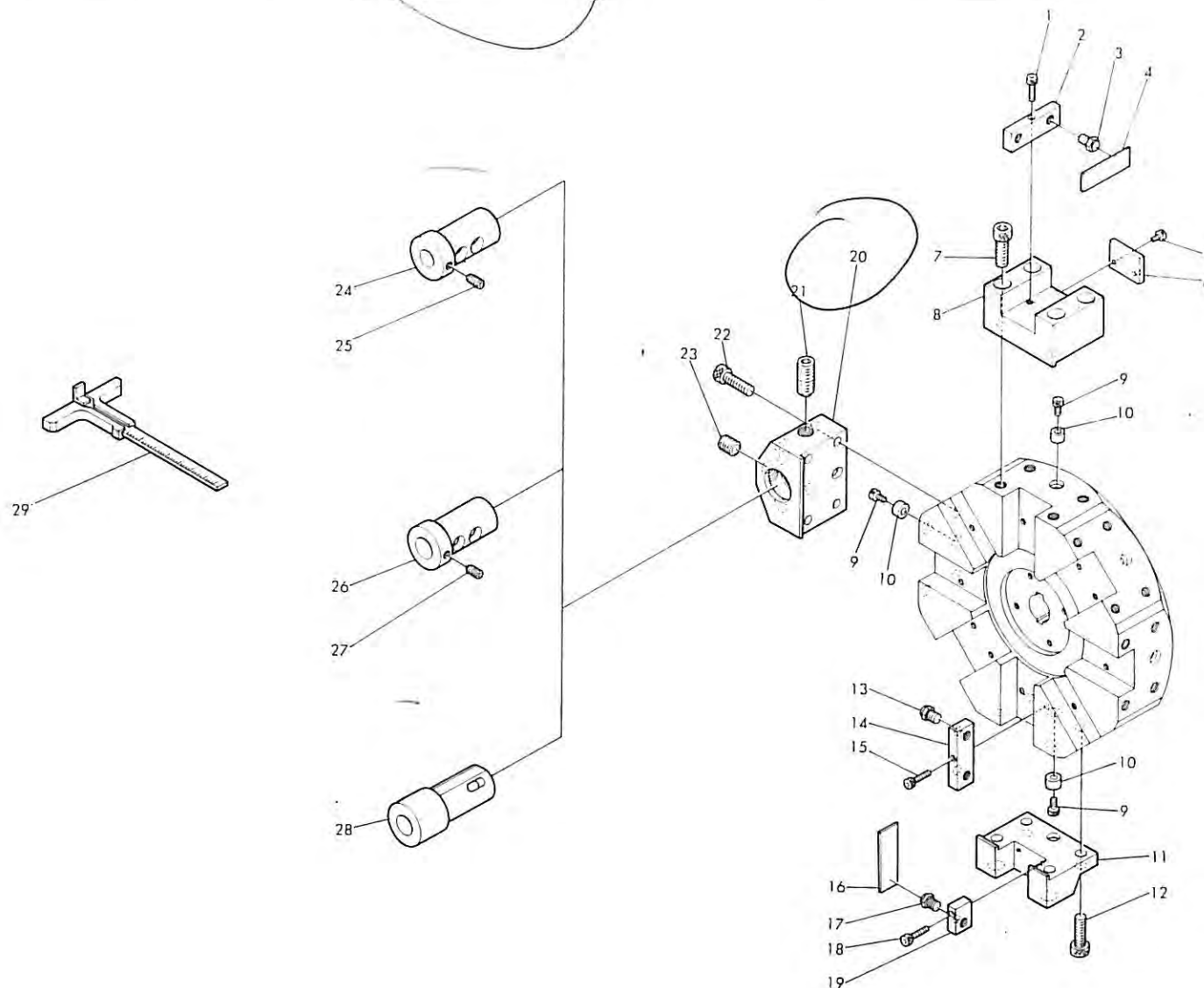
SHEET NO. 23 V8 LOWER TURRET COVER



OKUMA MACHINERY WORKS LTD.

SHEET NO. 24 TOOLING (Qualified Turret, Inch System)

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
24-1	C5010-050251	BOLT, socket-head, 5 x 25	1
-2	127-8300-02-1	SPACER	1
-3	123-3322-04	BOLT	1
-4	122-0330-21	PLATE	1
-5	C5010-050101	BOLT, socket-head, 5 x 10	2
-6	127-8301-03	STOPPER	1
-7	C5010-120351	BOLT, socket-head, 12 x 35	4
-8	127-8301-02-1	OD TOOLHOLDER, 11	1
-9	C5010-060121	BOLT, socket-head, 6 x 12	8
-10	127-3300-20	BLOCK	8
-11	127-8301-01-1	OD TOOLHOLDER, 1	1
-12	C5010-120351	BOLT, socket-head, 12 x 35	4
-13	123-3322-04	BOLT	16
-14	127-3300-18-1	SPACER	8
-15	C5010-050251	BOLT, socket-head, 5 x 25	8
-16	127-3310-02	PLATE, holder	8
-17	123-3322-04	BOLT	1
-18	C5010-050251	BOLT, socket-head, 5 x 25	1
-19	127-8300-04-1	SPACER	1
-20	127-8301-04-1	BASE, inside	1
-21	J9811-7700-160035	SET-SCREW, flat-point, 16 x 35	2
-22	C5010-120351	BOLT, socket-head, 12 x 35	4
-23	J9811-7700-160016	SET-SCREW, flat-point, 16 x 16	2
-24	127-8301-06	SLEEVE, 3/4"	1
-25	C5035-008161	SET-SCREW, dog-point, 8 x 16	1
-26	127-8301-05	SLEEVE, 1"	1
-27	C5035-008121	SET-SCREW, dog-point, 8 x 12	1
-28	127-8301-07	SLEEVE, MT3	1
-29	T019-011-000-01	CALIPER, tool setting, (inch)	1

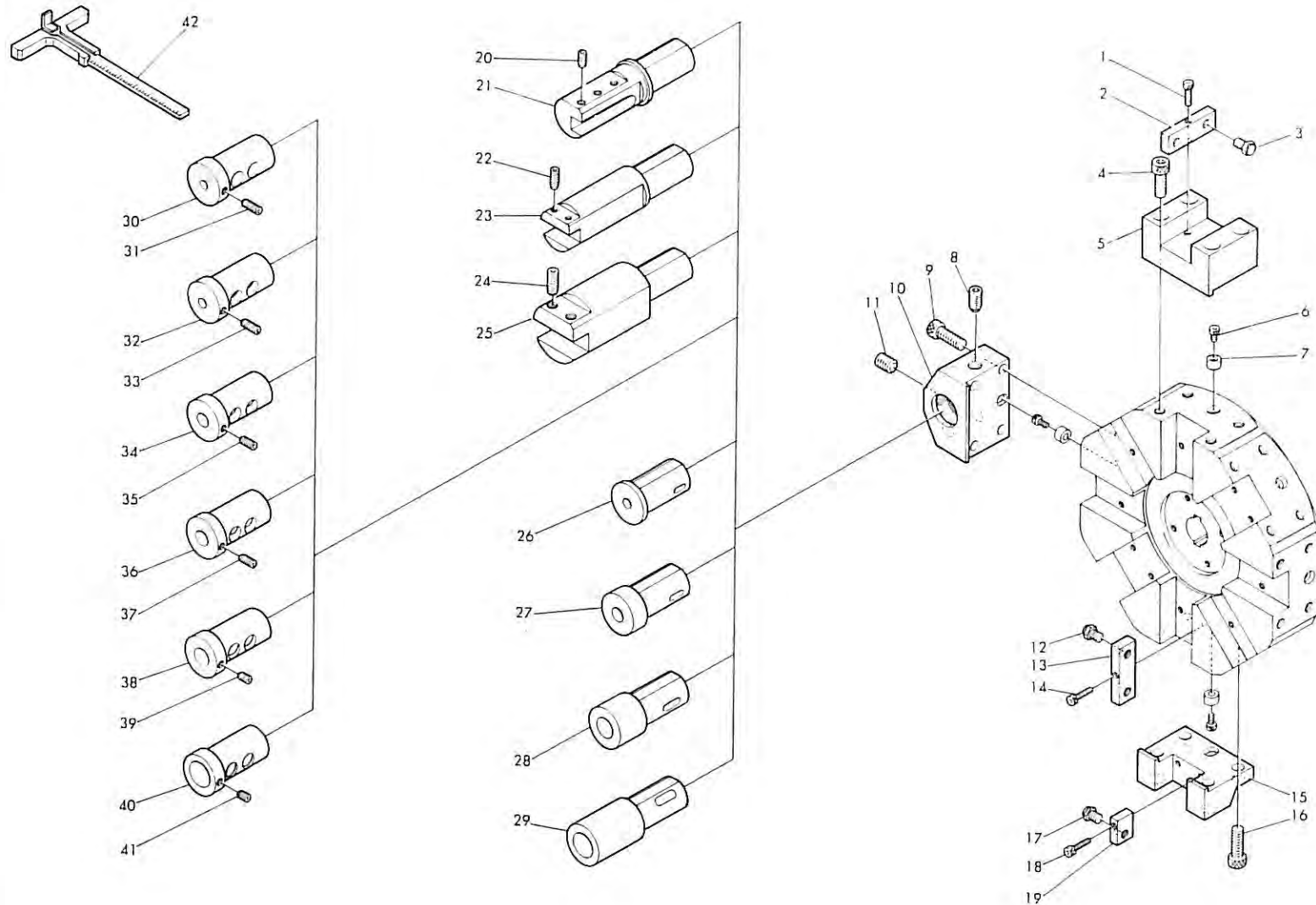


OKUMA MACHINERY WORKS LTD.

SHEET NO. 25 TOOLING (Qualified Turret, Metric System)

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
25-1	C5010-050251	BOLT, socket-head, 5 x 25	1
-2	127-8306-62-1	SPACER	1
-3	123-3322-04	BOLT	2
-4	C5010-120351	BOLT, socket-head, 12 x 35	4
-5	127-8300-01	OD TOOLHOLDER, II	1
-6	C5010-060121	BOLT, 6 x 12	8
-7	127-3300-20	BLOCK	8
-8	J9811-7700-160035	SET-SCREW, flat-point, 16 x 35	2
-9	C5010-120351	BOLT, socket-head, 12 x 35	4
-10	123-8810-61-7	HOLDER	1
-11	J9811-7700-160016	SET-SCREW, flat-point, 6 x 16	2
-12	123-3322-04	BOLT	16
-13	127-3300-18-1	SPACER	8
-14	C5010-050251	BOLT, socket-head, 5 x 25	8
-15	127-8300-03	OD TOOLHOLDER, II	1
-16	C5010-120351	BOLT, socket-head, 12 x 35	4
-17	123-3322-04	BOLT	1
-18	C5010-050251	BOLT, socket-head, 5 x 25	1
-19	127-8300-04-1	SPACER	1
-20	C5035-010161	SET-SCREW, dog-point, 10 x 16	3
-21	123-8812-08	HOLDER	1
-22	C5035-010201	SET-SCREW, dog-point, 10 x 20	2
-23	123-8812-09-1	HOLDER	1
-24	C5035-012251	SET-SCREW, dog-point, 12 x 25	2
-25	123-8810-78	HOLDER	1
-26	123-8810-79-1	SLEEVE, drill	1
-27	123-8810-77	SLEEVE, drill	1
-28	123-8810-06-3	SLEEVE, drill	1
-29	123-8810-80	SLEEVE, drill	1
-30	123-8812-01-1	SLEEVE, boring bar	1
-31	C5035-008201	SET-SCREW, dog-point, 8 x 20	1
-32	123-8812-02-1	SLEEVE, boring bar	1
-33	C5035-0080201	SET-SCREW, dog-point, 8 x 20	1
-34	123-8812-03-1	SLEEVE, boring bar	1
-35	C5035-008161	SET-SCREW, dog-point, 8 x 16	1
-36	123-8812-04-1	SLEEVE, boring bar	1
-37	C5035-008161	SET-SCREW, dog-point, 8 x 16	1
-38	123-8812-05-1	SLEEVE, boring bar	1
-39	C5035-008121	SET-SCREW, dog-point, 8 x 12	1
-40	123-8812-06-1	SLEEVE, boring bar	1
-41	C5035-008101	SET-SCREW, dog-point, 8 x 10	1
-42	T019-096-000-04	CALIPER, tool setting, (metric)	1

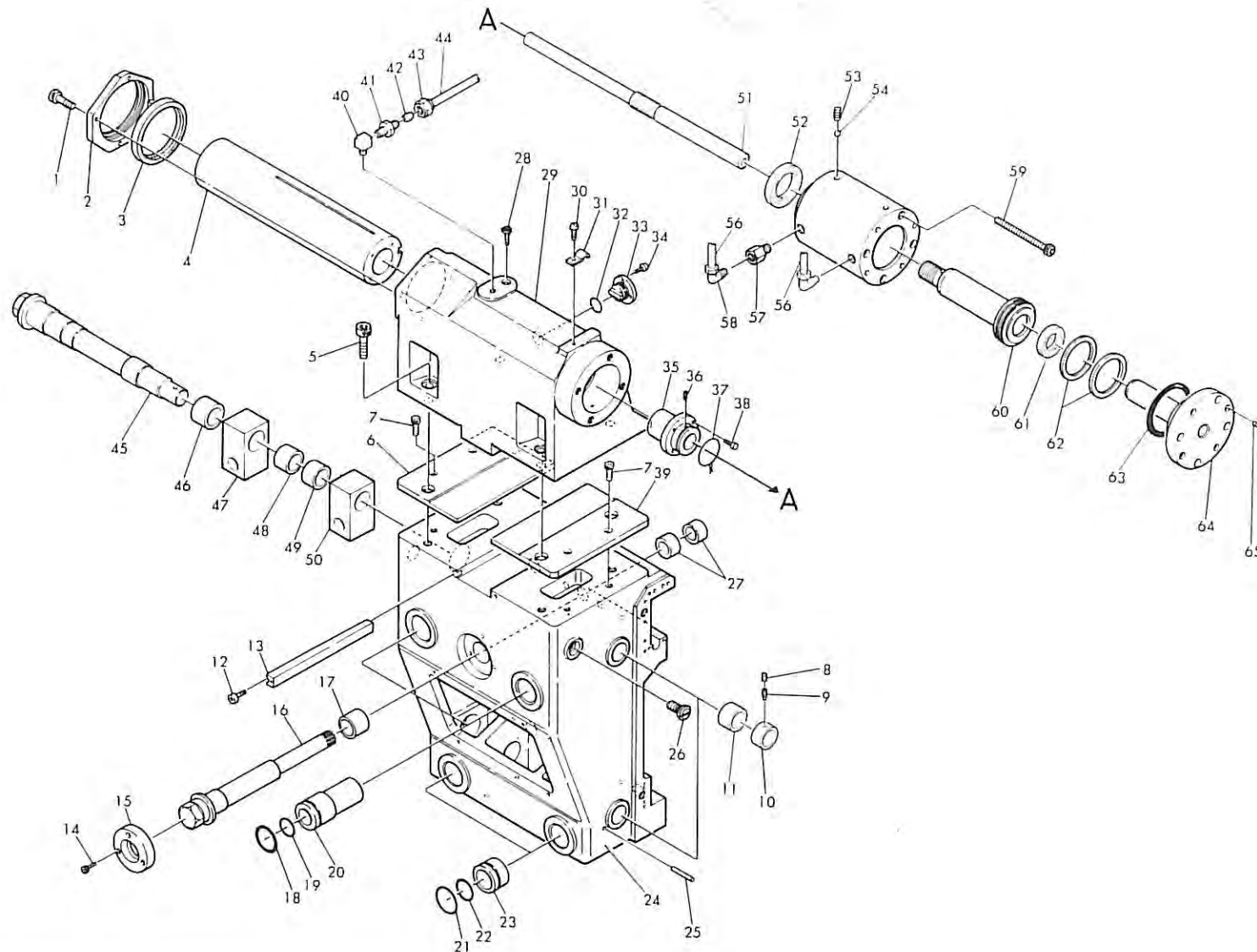
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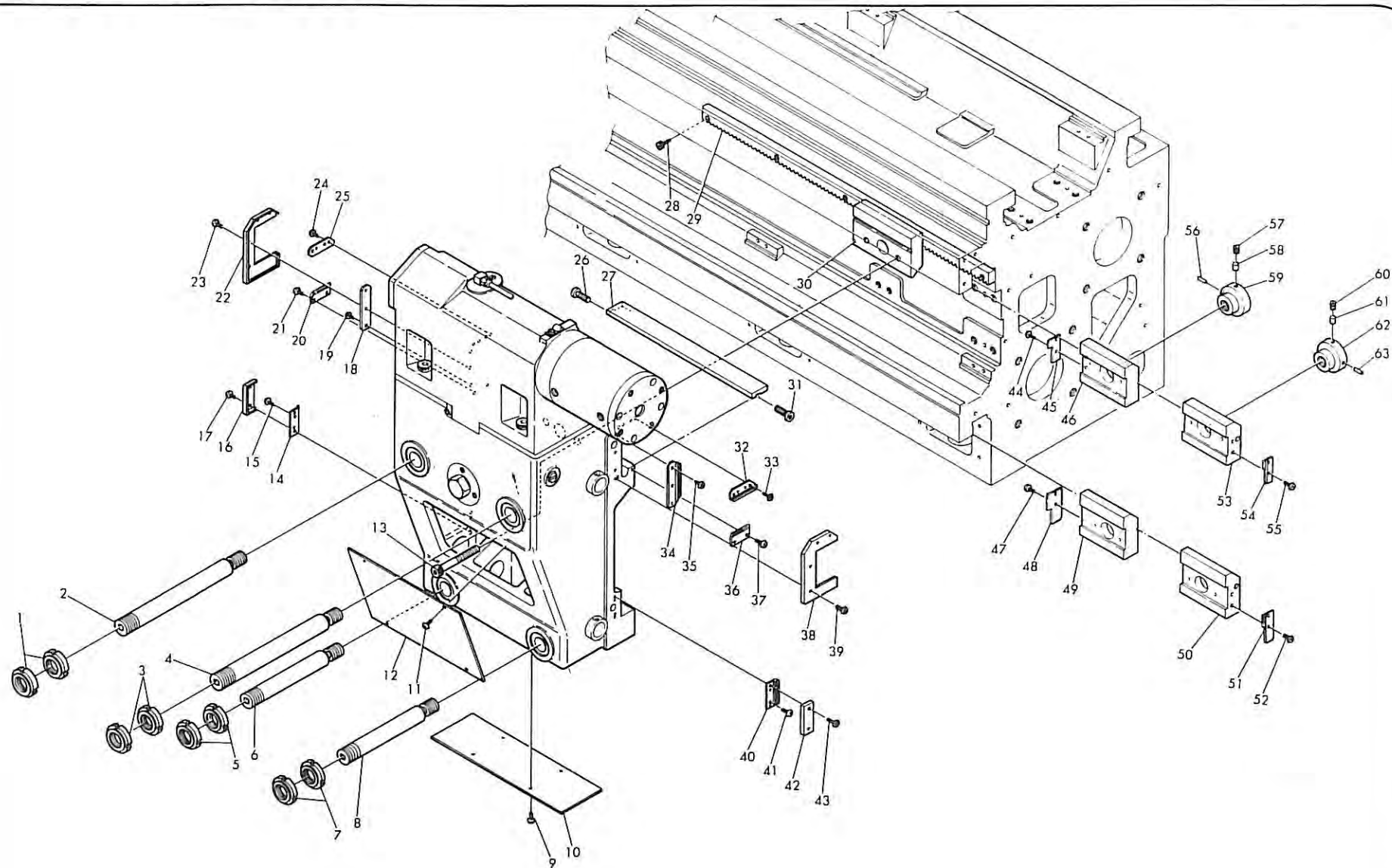
SHEET NO. 26 TAILSTOCK (1), - 1SC -

INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
26-1	C5010-050161	BOLT, socket-head, 5 x 16	4	26-51	127-3421-04	SHAFT	1
-2	127-3410-03-1	COVER	1	-52	H0031-0006-92	PACKING, NOK, FU0619KO, ISI 50 x 60 x 6	1
-3	F1104-090-11505	OIL-SEAL, VB901155	1	-53	C5030-010121	SET-SCREW, flat-point, 10 x 12	2
-4	123-0410-36	SLEEVE	1	-54	D5901-000790	BALL, steel, 5/16	2
-5	C5010-160501	BOLT, socket-head, 16 x 50	4	-55	127-3421-01-1	CYLINDER	1
-6	127-3410-04-1	LINER	1	-56	D2792-093302	HOSE, 70K, 9 x 3300	2
-7	C5010-050081	BOLT, socket-head, 5 x 8	4	-57	D7870-020022	JOINT, hose, (elbow), 3/8	4
-8	C5030-008121	SET-SCREW, flat-point, 8 x 12	2	-58	123-6111-06-1	JOINT	1
-9	D5089-080201	SCREW, pin, 8 x 20	2	-59	D5010-121201	BOLT, socket-head, 12 x 120	4
-10	C5410-000301	COLLAR, 30	2	-60	127-3421-03-1	PISTON	1
-11	M009-0008-50	BEARING, 300, 301-11-B030	1	-61	H0031-0006-93	PACKING, NOK, FU0424KO, ISI 35 x 45 x 6	1
-12	C5029-000051	BOLT, gib, 5 x 20	1	-62	H0031-00006-62	RING, piston, 80 x 3.3 x 3.5	2
-13	127-3410-06	GIB	1	-63	F100-570-06960	O-RING, P70	1
-14	C5010-050201	BOLT, socket-head, 5 x 20	3	-64	127-3421-02	COVER	1
-15	127-2410-10	HOLDER	1	-65	C5010-120251	BOLT, socket-head, 12 x 25	4
-16	127-3410-09	SHAFT	1				
-17	MB3530DU	BEARING	1				
-18	F100-350-03870	O-RING, P39	2				
-19	F100-350-02770	O-RING, P28	2				
-20	127-3410-17	COLLAR	2				
-21	F100-350-03870	O-RING, P39	2				
-22	F100-350-02770	O-RING, P28	2				
-23	127-3410-18	COLLAR	2				
-24	127-3410-02	TAILSTOCK	1				
-25	D5201-008300	PIN, straight, 8 x 30	2				
-26	C5022-000161	PLUG, 16	2				
-27	MB2420	BUSH, DU	2				
-28	C5022-000121	PLUG, 12	1				
-29	127-3410-01-1	BODY, tailstock	1				
-30	C5040-005081	SCREW, pan-head, 5 x 8	1				
-31	H0035-0002-01	BAND, pipe, SHOWA, PZ-0110	1				
-32	F100-240-02080	O-RING, P21	1				
-33	127-3410-28	KEY	1				
-34	C5040-005121	SCREW, pan-head, 5 x 12	2				
-35	123-0410-10-1	FLANGE	1				
-36	C5030-006101	SET-SCREW, flat-point, 6 x 10	1				
-37	M120-08-160	WIRE, steel, M0.8 x 160	1				
-38	5010-080201	BOLT, socket-head, 8 x 20	4				
-39	127-3410-27	LINER	1				
-40	H0012-0003-90	ELBOW, PI-1	1				
-41	H0010-0004-34	NUT, PST-4	1				
-42	H0012-0000-89	SLEEVE, PB-4	1				
-43	H0010-0007-96	NUT, PAN-4	1				
-44	H0022-0000-36	HOSE, FHS412	1				
-45	127-3410-23-1	SHAFT	1				
-46	M004-MB4530DU	BUSH, DU	1				
-47	127-3410-24	BLOCK	1				
-48	M004-MB3530DU	BUSH, DU	1				
-49	M004-MB3530DU	BUSH, DU	1				
-50	127-3410-25	BLOCK	1				



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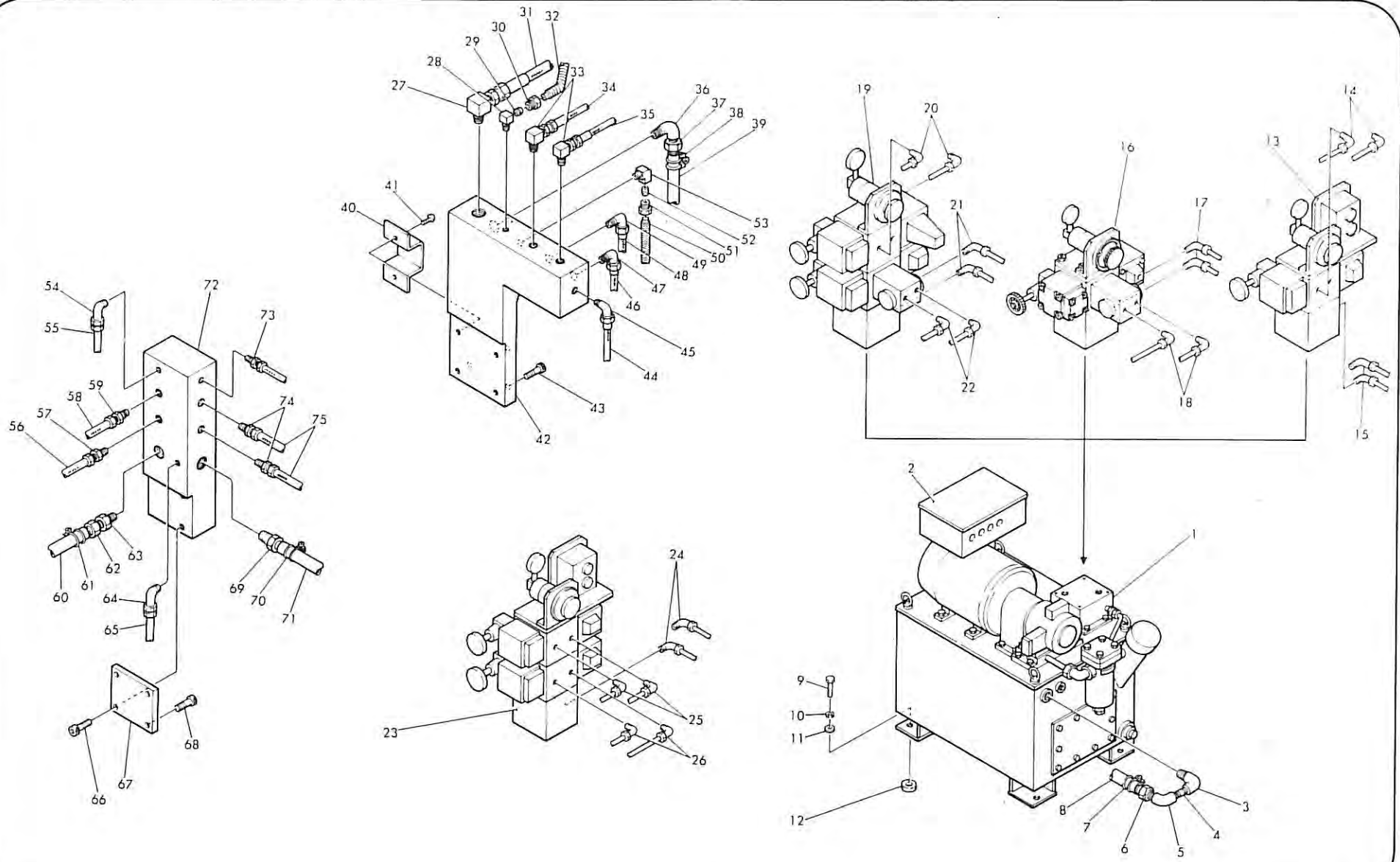
INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
27-1	C5132-000281	NUT, shaft, 28	2	27-51	H1023-1014-77	WIPER, NITTA, Slide seal, type-SS #3	1
-2	127-3410-15-2	SHAFT	1	-52	C5040-005081	SCREW, pan-head, 5 x 8	2
-3	C5132-000281	NUT, shaft, 28	2	-53	127-3410-19	PLATE, back	1
-4	127-3410-15-2	SHAFT	1	-54	H1023-1014-74-1	WIPER, NITTA, Slide seal, type-SS #4	1
-5	C5132-000281	NUT, shaft, 28	2	-55	C5040-005081	SCREW, pan-head, 5 x 8	2
-6	127-3410-16-2	SHAFT	1	-56	D5201-008120	PIN, straight, 8 x 12	2
-7	C5132-000281	NUT, shaft, 28	2	-57	C5030-008101	SET-SCREW, flat-point, 8 x 10	4
-8	127-3410-16-2	SHAFT	1	-58	D5800-006060	PUSHER, 6 x 6	2
-9	C5040-005081	SCREW, pan-head, 5 x 8	4	-59	127-3410-13	HOLDER	2
-10	127-3410-08	COVER	1	-60	C5030-080101	SET-SCREW, flat-point, 8 x 10	4
-11	C5040-005081	SCREW, pan-head, 5 x 8	4	-61	D5800-006060	PUSHER, 6 x 6	2
-12	127-3410-07	COVER	1	-62	127-3410-14	HOLDER	2
-13	C5010-120901	BOLT, socket-head, 12 x 90	2	-63	D5201-008120	PIN, straight, 8 x 12	2
-14	H1023-1014-76-1	WIPER	1				
-15	C5040-005081	SCREW, pan-head, 5 x 8	2				
-16	127-0302-15-1	COVER	1				
-17	C5040-005141	SCREW, pan-head, 5 x 14	2				
-18	H1023-1014-71-1	WIPER	1				
-19	C5040-005081	SCREW, pan-head, 5 x 8	2				
-20	H1023-1014-73-1	WIPER, NITTA, Slide seal, type-SS #3 L = 48	1				
-21	C5040-005081	SCREW, pan-head, 5 x 8	2				
-22	127-3410-26	COVER	1				
-23	C5040-005141	SCREW, pan-head, 5 x 14	4				
-24	C5040-005081	SCREW, pan-head, 5 x 8	2				
-25	H1023-1014-70-1	WIPER, NITTA, Slide seal, type-SS, #3, L = 64	1				
-26	127-0302-18	BOLT	1				
-27	127-3410-05-1	GIB	1				
-28	C5010-050201	BOLT, socket-head, 5 x 20	5				
-29	127-3410-11	RACK	1				
-30	127-3410-12	PLATE, back	1				
-31	127-0302-18	BOLT	1				
-32	H1023-1014-69-1	WIPER, NITTA, Slide seal, type-SS, #3 L = 64	1				
-33	C5040-005081	SCREW, pan-head, 5 x 8	2				
-34	H1023-1014-71-1	WIPER, NITTA, Slide seal, type-SS #3 L = 102	1				
-35	C5040-005081	SCREW, pan-head, 5 x 8	2				
-36	H1023-1014-72-1	WIPER, NITTA, Slide seal type-SS #3 L = 48	1				
-37	C5040-005081	SCREW, pan-head, 5 x 8	2				
-38	127-0302-13-1	COVER	1				
-39	C5040-005141	SCREW, pan-head, 5 x 14	4				
-40	H1023-1014-76-1	WIPER, NITTA, Slide seal, type-SS #3 L = 60	1				
-41	C5040-005081	SCREW, pan-head, 5 x 8	2				
-42	127-0302-15-1	COVER	1				
-43	C5040-005141	SCREW, pan-head, 5 x 14	2				
-44	C5040-005081	SCREW, pan-head, 5 x 8	2				
-45	H1023-1014-75-1	WIPER, NITTA, Slide seal, type-SS#4	1				
-46	127-3410-20	PLATE, back	1				
-47	C5040-005081	SCREW, pan-head, 5 x 8	2				
-48	H1023-1014-78	WIPER	1				
-49	127-3410-22	PLATE, back, NITTA, Slide seal, type-SS #3	1				
-50	127-3410-21	PLATE, back	1				



OKUMA MACHINERY WORKS LTD.

SHEET NO.28 HYDRAULIC POWER UNIT

INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
28-1	H0130-0001-59-1	UNIT, hydraulic, standard M.I with tailstock M.I	1	28-47	H0010-0003-89	JOINT, NITTA, L2N-1/2-PT3/8	1
	H0130-0001-79	UNIT, hydraulic, R ₂ , (IEC), standard M with tailstock M	1	-48	F1245-1200-0	TUBE, synflex, NITTA, N2-2-1/2 L = 1200	1
-2	H0130-0001-72	BOX, terminal, standard M.I with tailstock M.I	1	-49	H0010-0003-89	JOINT, NITTA, L2N-1/2-PT3/8	1
	H0130-0001-80	BOX, terminal, (IEC), standard M with tailstock M	1	-50	H0022-0002-11	HOSE, synflex, SHOWA, FHS-427	1
-3	C7812-000442	ELBOW, street, M, 3/4	1	-51	H0012-0000-88	JOINT, SHOWA, PA-4	1
-4	C7800-000442	NIPPLE, M, 3/4	1	-52	H0012-0000-89	JOINT, SHOWA, PB-4	1
-5	C7810-000442	ELBOW, M, 3/4	1	-53	H0012-0000-90	JOINT, SHOWA, PH-4	1
-6	D7872-002542	JOINT, hose, for vinyl, 3/4	1	-54	H0010-0002-16	JOINT, NITTA, L2N-1/4-PT1/8	1
-7	D2765-000351	CLAMP, wire, AK-1035, 35	1	-55	F1242-1700-0	TUBE, synflex, NITTA, N2-2-1/4 L = 1700	1
-8	D7792-251600	HOSE, vinyl, with spring, 25 x 1600	1	-56	F1245-1020-0	TUBE, synflex, NITTA, N2-2-1/2 L = 1020	1
-9	C5000-080161	BOLT, hex., 8 x 16	3	-57	H0010-0002-95	CONNECTOR, hose, NITTA, C2N-1/2-PT3/8	1
-10	C5160-000081	WASHER, spring, 8	3	-58	F1245-1020-0	TUBE, synflex, NITTA, N2-2-1/2 L = 1020	1
-11	5140-0000-81	WASHER, polished, 8	3	-59	H0010-0002-95	JOINT, NITTA, C2N-1/2-PT3/8	1
-12	M1310-01103050	SHEET, rubber, M11 x M30 x 5	4	-60	D7792-100900	HOSE, vinyl, with spring, 10 x 900	1
-13	H0130-0001-96	BLOCK, kg/cm ² , (IEC), standard M	1	-61	D2765-000161	CLAMP, wire, AK-1016, 16	1
-14	H0010-0003-89	JOINT, NITTA, L2N-1/2 x PT3/8	2	-62	D7872-001012	JOINT, hose, for vinyl, 1/4	1
-15	H0010-0003-89	JOINT, NITTA, L2N-1/2 x PT3/8	2	-63	C7846-000412	BUSH, M, 3/4 x 1/4	1
-16	H0130-0001-70	BLOCK, lb/in ² standard I, kg/cm ² standard M	1	-64	H0010-0002-16	JOINT, NITTA, L2N-1/4-PT1/8	1
-17	H0010-0003-89	JOINT, NITTA, L2N-1/2-PT3/8	2	-65	F1242-1700-0	TUBE, synflex, NITTA, N2-2-1/4 L = 1700	1
-18	H0010-0003-89	JOINT, NITTA, L2N-1/2-PT3/8	2	-66	C5010-080161	BOLT, socket-head, 8 x 16	2
-19	H0130-0001-90	BLOCK, kg/cm ² with tailstock, M	1	-67	127-0000-05-1	PLATE	1
	H0130-0001-94	BLOCK, lb/in ² with tailstock, I	1	-68	C5010-080161	BOLT, socket-head, 8 x 16	2
-20	H0010-0003-89	JOINT, NITTA, L2N-1/2 x PT3/8	2	-69	D7872-002542	JOINT, hose, for vinyl, 3/4	1
-21	H0010-0003-89	JOINT, NITTA, L2N-1/2 x PT3/8	2	-70	D2765-000351	CLAMP, wire, AK-1035, 35	1
-22	H0010-0003-89	JOINT, NITTA, L2N-1/2 x PT3/8	2	-71	D7792-251600	HOSE, vinyl, with spring, 25 x 1600	1
-23	H0130-0001-99	BLOCK, (IEC) with tailstock, M	1	-72	127-0000-06-1	JOINT	1
-24	H0010-0003-89	JOINT, NITTA, L2N-1/2 x PT3/8	2	-73	H0010-0000-01	JOINT, NITTA, C2N-1/4-PT1/4	1
-25	H0010-0003-89	JOINT, NITTA, L2N-1/2 x PT3/8	2	-74	H0010-0002-95	JOINT, NITTA, C2N-1/2-PT3/8	2
-26	H0010-0003-89	JOINT, NITTA, L2N-1/2 x PT3/8	2	-75	F1245-2280-0	TUBE, synflex, NITTA, N2-2-1/2 L = 2280	2
-27	D7870-020032	JOINT, hose, elbow, 1/2	1				
-28	H0012-0000-90	ELBOW, SHOWA, PH-4	1				
-29	H0012-0000-89	JOINT, SHOWA, PB-4	1				
-30	H0012-0000-88	JOINT, SHOWA, PA-4	1				
-31	D2792-123352	HOSE, 70K, 1/2 x 3350	1				
-32	H0022-0002-01	HOSE, flexible, SHOWA, FHS-418	1				
-33	D7870-020022	ELBOW, 3/8	2				
-34	D2792-093302	HOSE, 70K, 3/8 x 3300	1				
-35	D2792-093252	HOSE, 70K, 3/8 x 3250	1				
-36	C7812-00432	ELBOW, street, M, 3/4 x 1/2	1				
-37	D7872-002542	JOINT, hose, for vinyl, 3/4 (25)	1				
-38	D2765-000351	CLAMP, wire, AK1035, 35	1				
-39	D7793-251600	HOSE, vinyl, with tetolon tube, 25 x 1600	1				
-40	127-0000-08	SUPPORT	1				
-41	C5040-005081	SCREW, pan-head, 5 x 8	2				
-42	127-0000-07-2	BLOCK	1				
-43	C5010-080301	BOLT, socket-head, 8 x 30	4				
-44	F1242-1600-0	TUBE, synflex, NITTA, N2-2-1/4 L = 1600	1				
-45	H0010-0002-23	ELBOW, NITTA, L2N-1/4-PT1/4	1				
-46	F1245-1200-0	TUBE, synflex, NITTA, N2-2-1/2 L = 1200	1				

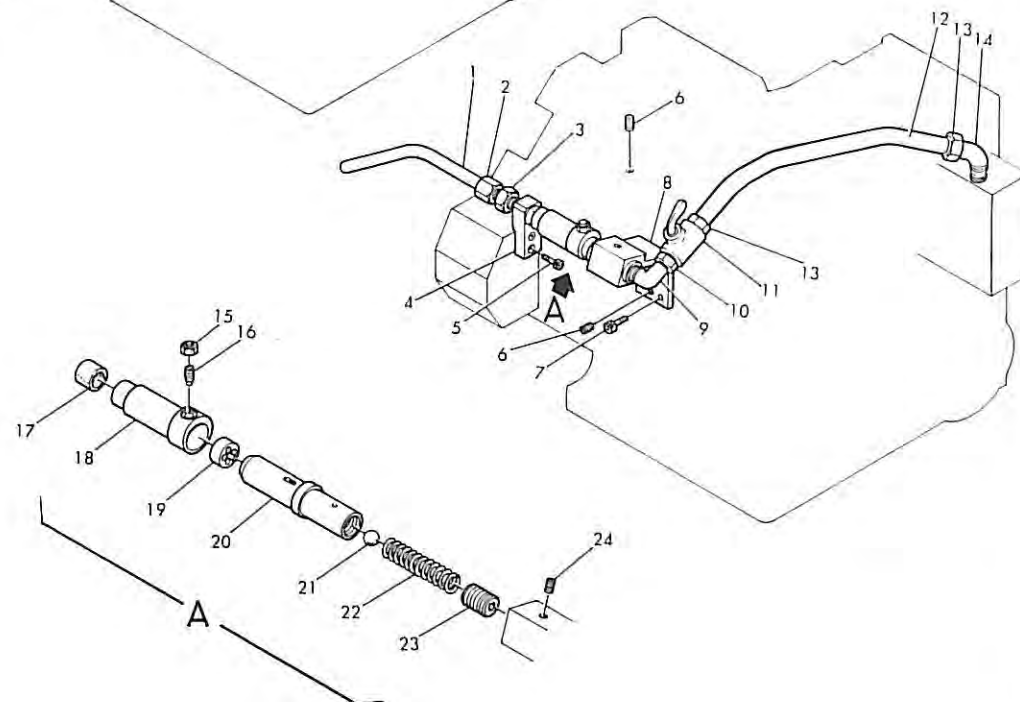
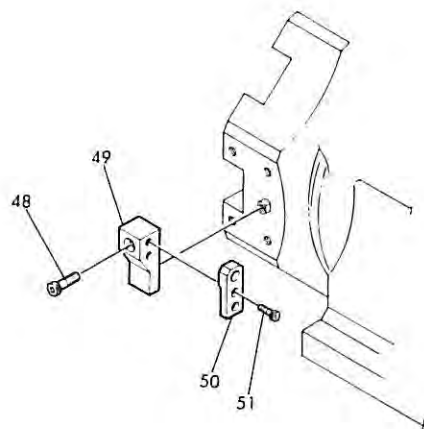
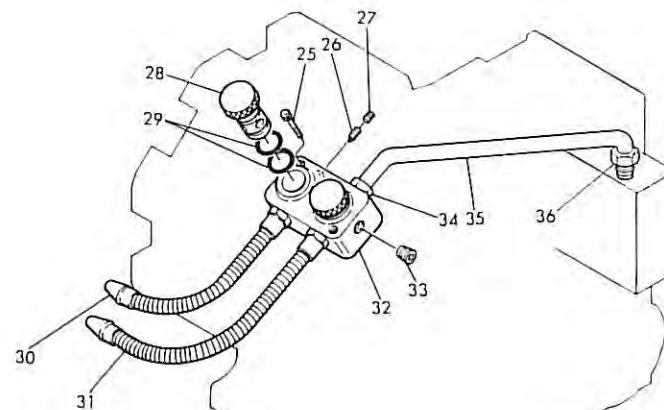
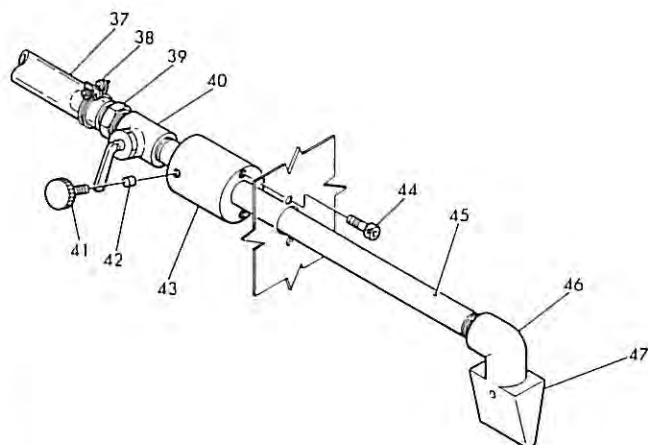


OKUMA MACHINERY WORKS LTD.

SHEET NO.29 COOLANT NOZZLE (Upper Turret)

INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
29-1	D7780-403000	PIPE, copper, 8 x 300	16	29-49	127-6730-13-1	SUPPORT	1
-2	C7770-000042	NUT, pipe, F, 8	16	-50	127-6730-12-1	SUPPORT	1
-3	C7720-000442	NIPPLE, F, TS, 8TS	16	-51	C5010-050121	BOLT, socket-head, 5 x 12	16
-4	127-6730-12-1	SUPPORT	16				
-5	C5010-050121	BOLT, socket-head, 5 x 12	32				
-6	C5030-005081	SET-SCREW, flat-point, 5 x 8	3				
-7	C5010-050141	BOLT, socket-head, 5 x 14	3				
-8	127-6730-08-1	BRACKET	1				
-9	C7812-00022	ELBOW, street, M, 3/8	2				
-10	C7800-000322	NIPPLE, M, 1/2 x 3/8	1				
-11	D2760-00032	COCK, handle, 1/2	1				
-12	D7780-604000	PIPE, steel, 16 x 400	1				
-13	D2781-001632	JOINT, pipe, NTN-16-PT1/2	1				
-14	D7813-000332	ELBOW, 45°, 1/2	1				
-15	C5110-000051	NUT hex., #4, 5	1				
-16	C5031-006121	SET-SCREW, flat-point, 6 x 12	1				
-17	H1023-1015-19	PACKING, rubber, M17 x 13	2				
-18	127-6730-10	SLEEVE	1				
-19	127-6730-18	PIN	1				
-20	127-6730-09	SHAFT	1				
-21	D5901-001110	BALL, steel, 7/16	1				
-22	M109-1015-94	SPRING, compression, stainless	1				
-23	124-0730-05	HOLDER, spring	1				
-24	C5030-005081	SET-SCREW, flat-point, 5 x 8	1				
-25	C5010-050401	BOLT, socket-head, 5 x 40	2				
-26	C5035-006121	SET-SCREW, dog-point, 6 x 12	2				
-27	C5030-006081	SET-SCREW, flat-point, 6 x 8	2				
-28	127-3303-02	VALVE	2				
-29	F100-240-02080	O-RING, P21	2				
-30	H0023-0000-14	NOZZLE, coolant, HARA, PT3/8 x 250	1				
	C7813-000222	ELBOW, street, M, 45°	1				
-31	H0023-0000-15	NOZZLE, coolant, HARA, PT3/8 x 300	1				
	C7813-000222	ELBOW, street, M, 45°	1				
-32	127-3303-01	DISTRIBUTOR	1				
-33	C7861-000012	PLUG, 1/4	1				
-34	D2781-001632	JOINT, pipe, NTN A-16-PT1/2	1				
-35	D7781-160300	PIPE, steel	1				
-36	D2781-021632	JOINT, pipe, NTN B-16-PT1/2	1				
-37	D7793-25300	HOSE, vinyl, with tetoron blade, 25 x 3000	1				
-38	D2765-000351	CLAMP, wire, SUGITA AK-1035, 35	2				
-39	D7872-002542	JOINT, hose, for vinyl, 3/4 (25)	2				
-40	D2760-000442	COCK, handle, 3/4 TOA	1				
-41	D5085-080251	BOLT, knob, 8 x 25	1				
-42	D5800-006060	PUSHER	1				
-43	127-6730-06	BLOCK	1				
-44	C5010-080121	BOLT, socket-head, 8 x 12	2				
-45	D7784-405002	PIPE, gas	1				
-46	H0010-0012-68	ELBOW, NTN 90 90EF-PT3/4	1				
-47	127-6730-67	NOZZLE	1				
-48	C5010-120301	BOLT, socket-head, 12 x 30	8				

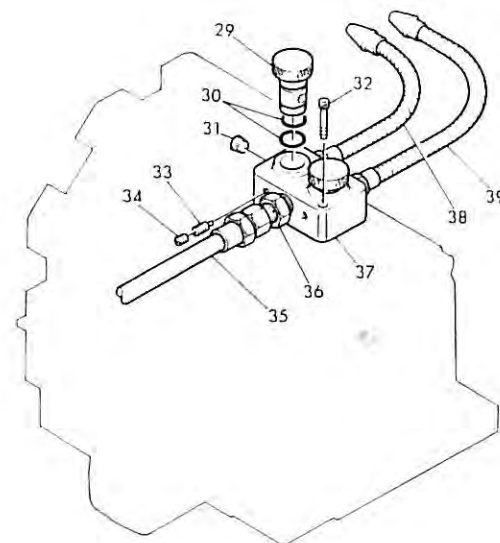
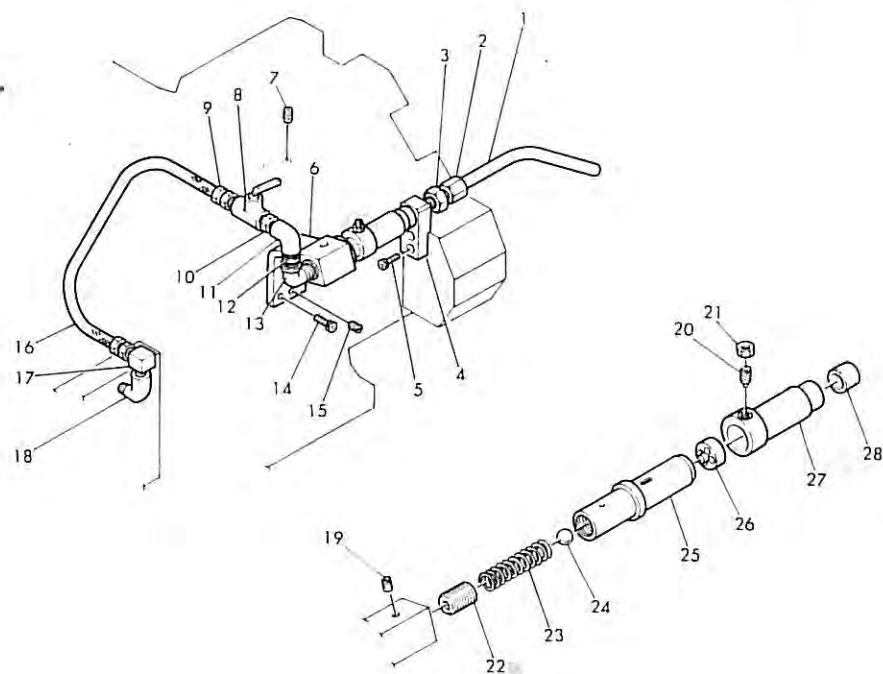
SHEET NO. 29 COOLANT NOZZLE (Upper Turret)



OKUMA MACHINERY WORKS LTD.

SHEET NO. 30 COOLANT NOZZLE (Lower Turret)

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
30-1	D7780-403000	PIPE, copper, 8 x 300	16
-2	C7770-000042	NUT, pipe, F, 8	16
-3	C7720-000442	NIPPLE, F, TS, 8TS	16
-4	127-6730-12-1	SUPPORT	16
-5	C5010-050121	BOLT, socket-head, 5 x 12	32
-6	127-6730-08-1	BRACKET	1
-7	C5030-005081	SET-SCREW, flat-point	2
-8	D2760-000322	COCK, handle, 1/2	1
-9	D7870-010032	JOINT, hose, 1/2	1
-10	C7800-000322	NIPPLE, M, 1/2 x 3/8	1
-11	C7810-000222	ELBOW, M, 3/8	1
-12	D7782-000022	NIPPLE, barrel, 3/8	1
-13	07812-000222	NIPPLE, street, M, 3/8	1
-14	C5010-050141	BOLT, socket-head, 5 x 14	3
-15	C5030-005081	SET-SCREW, flat-point	1
-16	D2792-120702	HOSE, 70K, with fixtures, 12 x 700	1
-17	D7870-030032	JOINT, hose, 1/2, 45° elbow	1
-18	C7812-000332	ELBOW, street, 1/2	1
-19	C5030-005081	SET-SCREW, flat-point, 5 x 8	1
-20	C5031-006121	SET-SCREW, dog-point, 6 x 12	1
-21	C5110-000051	NUT, hex., #4, 5	1
-22	124-0730-05	HOLDER, spring	1
-23	M109-1015-94	SPRING, compression, stainless	1
-24	D5901-001110	BALL, steel, 7/16	1
-25	127-6730-09	SHAFT	1
-26	127-6730-18	PIN	1
-27	127-6730-10	SLEEVE	1
-28	H1023-1015-19	PACKING, rubber, M17 x 13	2
-29	127-3303-02	VALVE	2
-30	F100-240-02080	O-RING, P21	2
-31	C7861-000012	PLUG, 1/4	1
-32	C5010-050401	BOLT, socket-head, 5 x 40	2
-33	C5035-006121	SET-SCREW, dog-point, 6 x 12	2
-34	C5030-006081	SET-SCREW, flat-point, 6 x 8	2
-35	D2792-120602	HOSE, 70K, with fixtures, 12 x 600	1
-36	D7870-10032	JOINT, hose, YOKOHAMA, NIPPLE, 1/2 (12)	1
-37	127-3303-01	DISTRIBUTOR	1
-38	H0023-0000-15	NOZZLE, coolant, HARA, PT3/8 x 300	1
	C7813-000222	NOZZLE, coolant, HARA, PT3/8 x 300	1
-39	H0023-0000-16	NOZZLE, coolant, HARA, PT3/8 x 350	1
	C7813-000222	NOZZLE, coolant, HARA, PT3/8 x 350	1

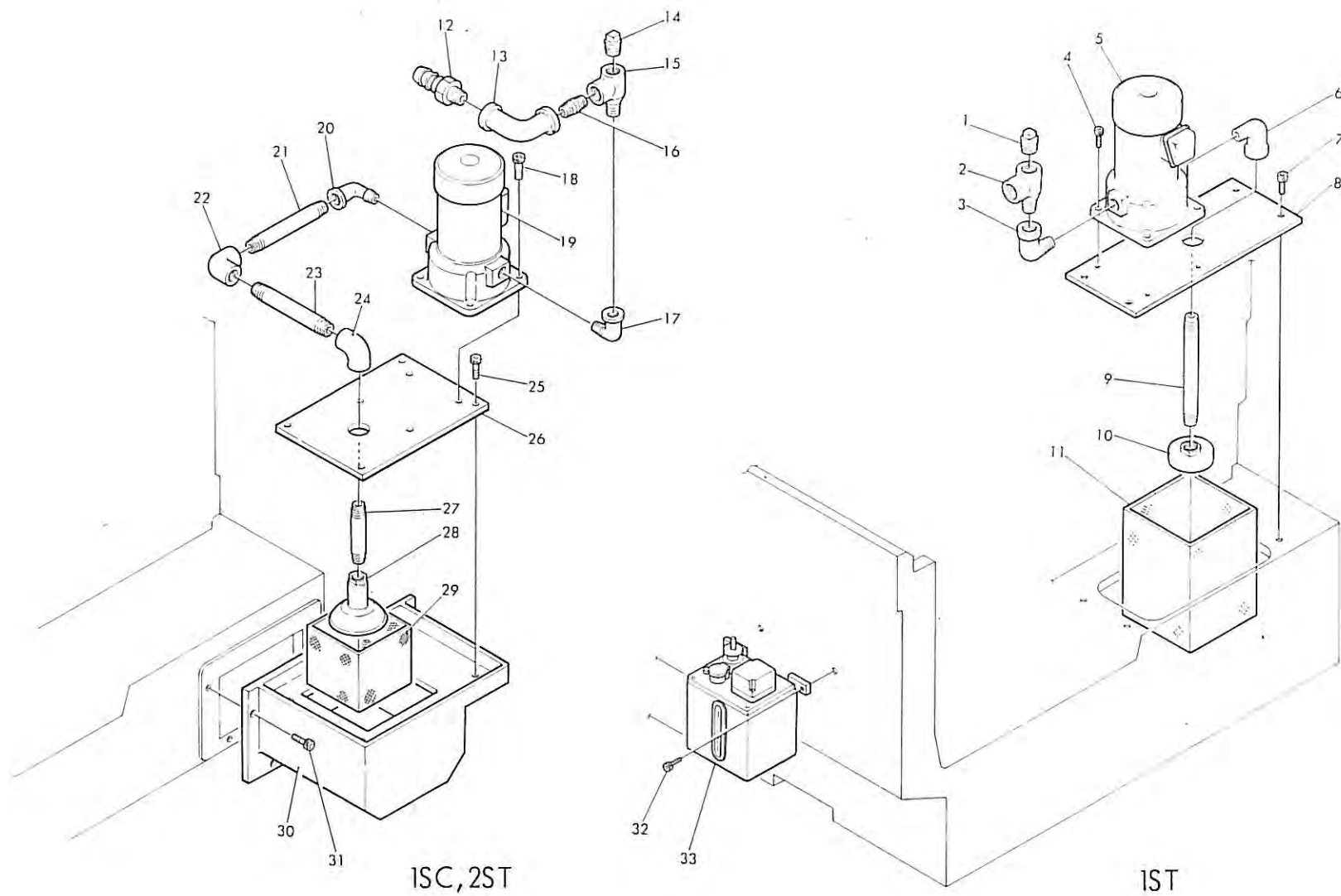


OKUMA MACHINERY WORKS LTD.

SHEET NO. 31 COOLANT SUPPLY EQUIPMENT

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
31-1	C7850-000042	1ST Machine	1
-2	C7831-004342	PLUG, M, 3/4	1
-3	C7812-000332	TEE, street, M, 3/4 x 1/2 x 3/4	1
-4	C5010-080201	ELBOW, street, M, 1/2	1
-5	F130-03-000-18	BOLT, socket-head, 8 x 20	4
	F130-03-000-18	PUMP, clamp, CP-S182 (180W)	1
	F0130-04-000-34	PUMP, coolant, (IEC), CP-S182 (180W)	1
-6	C7812-000332	ELBOW, street, M, 1/2	1
-7	C5010-080201	BOLT, socket-head, 8 x 20	4
-8	127-6730-01-1	BASE	1
-9	D7784-301802	PIPE, gas	1
-10	H0032-0001-92	VALVE, foot, 1/2	1
-11	127-6730-02-1	FILTER	1
		1SC, 2ST Machine	
-12	D7872-001932	JOINT, vinyl hose, 1/2	1
-13	C7820-000442	BEND, M, 3/4	1
-14	C7850-000042	PLUG, M, 3/4	1
-15	C7831-004342	TEE, street, M, 3/4 x 1/2 x 3/4	1
-16	D7782-000042	NIPPLE, barrel, 3/4	1
-17	C7812-000332	ELBOW, street, M, 1/2	1
-18	C5010-080201	BOLT, socket-head, 8 x 20	4
-19	F130-03-000-18	PUMP, coolant, OP-S182 (180W)	1
	F0130-04-000-34	PUMP, coolant, (IEC), CP-S182 (180W)	1
-20	C7812-000332	ELBOW, street, M, 1/2	1
-21	D7784-300802	PIPE, gas, 1/2 x 80	1
-22	07810-000332	ELBOW, M, 1/2	1
-23	D7784-300702	PIPE, gas, 1/2 x 70	1
-24	C7810-000332	ELBOW, M, 1/2	1
-25	C5010-080201	BOLT, socket-head, 8 x 20	4
-26	127-6730-14	BASE	1
-27	D7784-300902	PIPE, gas, 1/2 x 90	1
-28	H0032-0001-92	VALVE, foot	1
-29	127-6730-05-1	FILTER	1
-30	127-6730-03		1
-31	C5010-080201	BOLT, socket-head, 8 x 20	4
-32	C5010-050121	BOLT, socket-head, 5 x 12	2
-33	F019-0001-17	PUMP, cycle, SHOWA, SMA-3-5	1

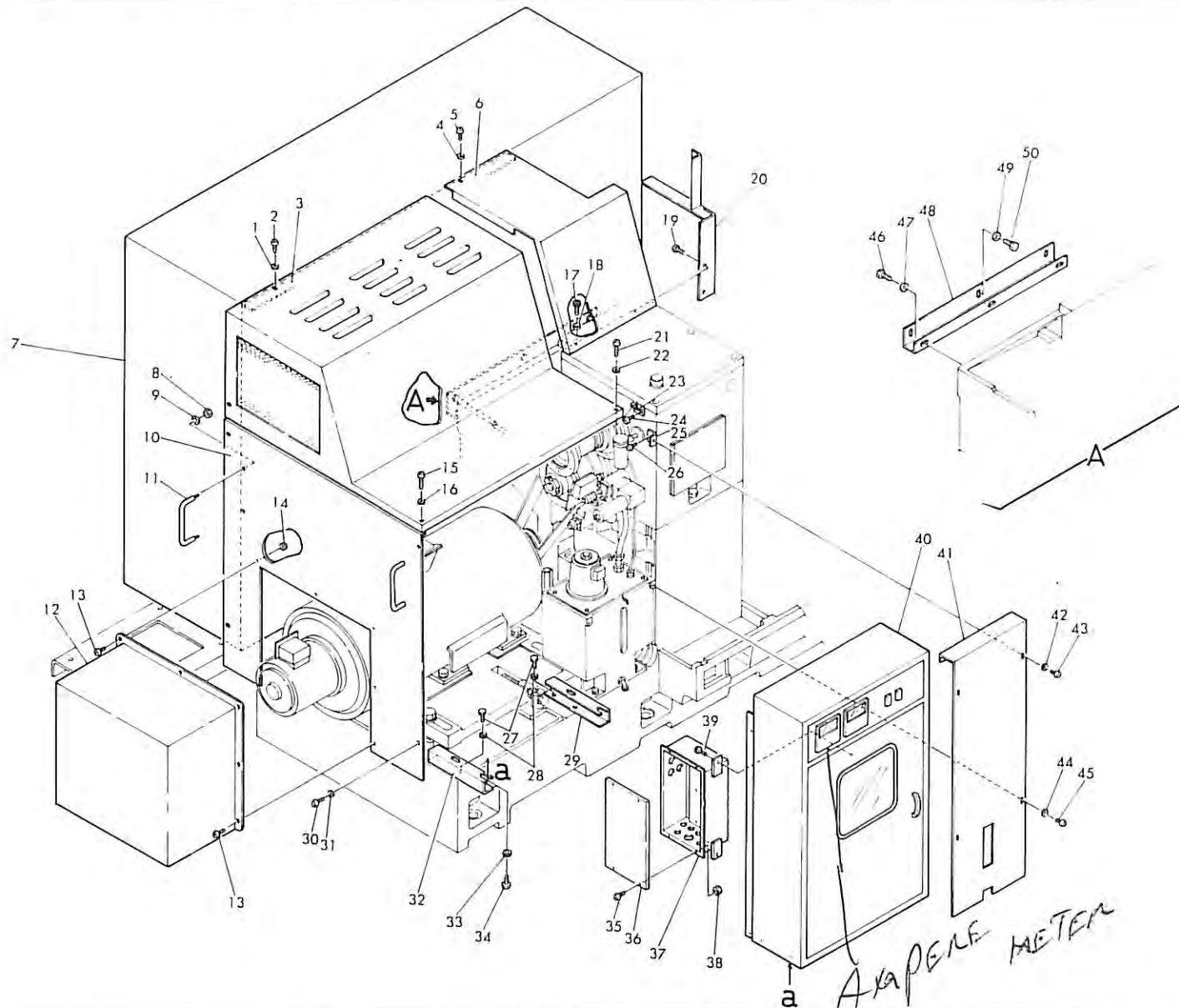
OKUMA MACHINERY WORKS LTD.



SHEET NO.32 LEFT END COVER AND PTR

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
32-1	H1004-0001-36	WASHER, polished, SPC-C, M5.5 x M18 x 1	2
-2	C5040-005141	SCREW, pan-head, 5 x 14	2
-3	127-6100-02-3	COVER	1
-4	H1004-0001-36	WASHER, polished, SPC-C, M5.5 x M18 x 1	2
-5	C5040-005141	SCREW, pan-head, 5 x 14	2
-6	127-6100-01-5	COVER	1
-7		PANEL, control	1
-8	C5110-000061	NUT, hex., #4, 6	2
-9	C5160-000061	WASHER, spring, 2	6
-10	127-6100-03-2	COVER	1
-11	121-0803-06-1	HANDLE	2
-12	127-6100-07	COVER, motor, (IEC)	1
-13	C5040-005101	SCREW, pan-head, 5 x 10, (IEC)	7
-14	C5110-000051	NUT, hex., #4, 5	7
-15	C5040-005401	SCREW, pan-head, 5 x 40	1
-16	H1004-0001-36	WASHER, polished, SPC-C, M5.5 x M18 x 1	1
-17	C5010-050101	BOLT, socket-head, 5 x 10	2
-18	H1004-0001-36	WASHER, polished, SPC-C, M5.5 x M18 x 1	2
-19	C5041-080161	BOLT, socket-head, 8 x 16	2
-20	127-0700-17-1	SUPPORT	1
-21	C5040-005401	SCREW, pan-head, 5 x 40	1
-22	H1004-0001-36	WASHER, polished, SPC-C, M5.5 x M18 x 1	1
-23	127-6100-06	SUPPORT	1
-24	C5040-005101	SCREW, pan-head, 5 x 10	2
-25	127-6100-06	SUPPORT	1
-26	C5040-005101	SCREW, pan-head, 5 x 10	2
-27	C5000-120251	BOLT, 12 x 25	4
-28	C5150-000121	WASHER, polished, 12	4
-29	127-7010-03	SUPPORT	1
-30	C5040-005101	SCREW, pan-head, 5 x 10	4
-31	H1004-0001-36	WASHER, polished, SPC-C, M5.5 x 18 x 1	4
-32	127-7010-02	SUPPORT	1
-33	C5140-000121	WASHER, polished, 12	4
-34	C5000-120201	BOLT, 12 x 20	4
-35	C5040-005081	SCREW, pan-head, 5 x 8	4
-36	127-7100-02-2	COVER	1
-37	127-7100-01-2	BOX, terminal	1
-38	C5110-000051	NUT, hex., #4, 5	4
-39	C5010-080161	BOLT, socket-head, 8 x 16	2
-40		READER, tape	1
-41	127-6100-05-1	COVER	1
-42	C5140-000051	WASHER, polished, 5	2
-43	C5040-005101	SCREW, pan-head, 5 x 10	2
-44	C5140-000051	WASHER, polished, 5	2
-45	C5040-005101	SCREW, pan-head, 5 x 10	2
-46	C5000-100161	BOLT, 10 x 16	3
-47	C5140-000101	WASHER, polished, 10	3
-48	127-0000-19	SUPPORT	1
-49	C5140-000101	WASHER, polished, 10	3
-50	C5000-100161	BOLT, 10 x 16	3

OKUMA MACHINERY WORKS LTD.

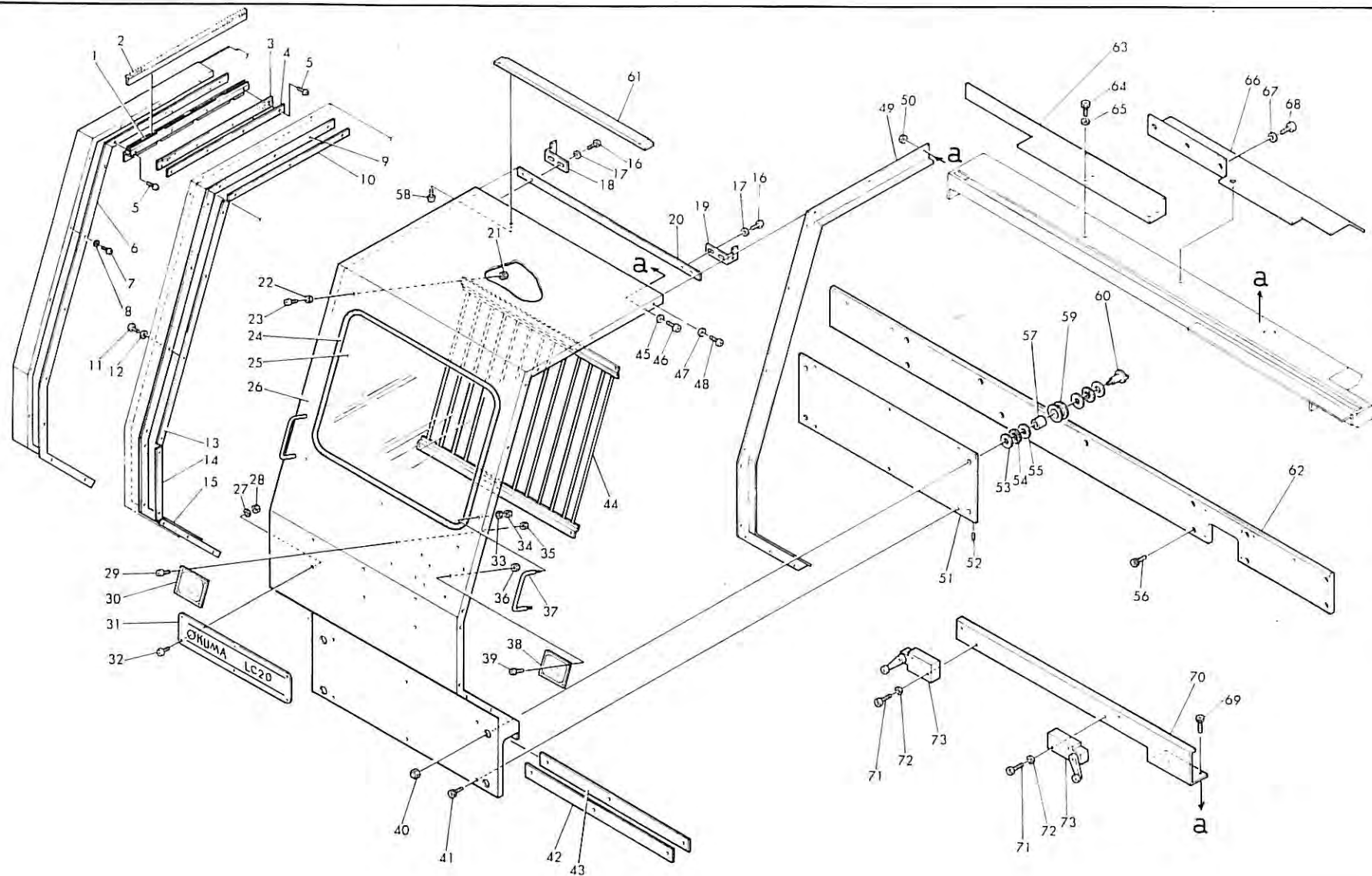


OKUMA MACHINERY WORKS LTD.

SHEET NO. 33 FRONT SLIDING CHIP GUARD, - 2ST -

INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
33-1	127-0702-24-1	HOLDER	1	33-50	C5100-000051	NUT, hex., #3, 5	12
-2	H1090-1001-98	BRUSH, channel	1	-51	127-0711-17-2	PLATE	1
-3	H1020-1031-99	WIPER	1	-52	C5030-006081	SET-SCREW, flat-point, 6 x 8	2
-4	127-0702-25	HOLDER	1	-53	M001-AS1103	BEARING, AS1103 M17 x 30 x 1	8
-5	C5040-005081	SCREW, pan-head, 5 x 8	7	-54	M001-AXK1103	BEARING, AXK1103 M17 x 30 x 2	8
-6	127-0702-21-1	FRAME	1	-55	M001-AS1103	BEARING, AS1103 M17 x 30 x 1	8
-7	C5040-005121	SCREW, pan-head, 5 x 12	10	-56	C5010-080161	BOLT, socket-head, 8 x 16	8
-8	C5140-000051	WASHER, polished, 5	10	-57	M001-HK1712	BEARING, HK1712 M17 x 23 x 12	4
-9	H1020-1032-05	WIPER	1	-58	C5010-050101	BOLT, socket-head, (IEC), 5 x 10	3
-10	127-0712-12	HOLDER	1	-59	127-0711-18	ROLLER	4
-11	C5040-005121	SCREW, pan-head, 5 x 12	12	-60	127-0711-19	SHAFT	4
-12	C5140-000051	WASHER, polished, 5	12	-61	127-0700-31	DOG (IEC)	1
-13	127-0712-13	HOLDER	1	-62	127-0002-11	RAIL	1
-14	127-0712-14	HOLDER	1	-63	127-0701-35	SUPPORT	1
-15	127-0712-15	HOLDER	1	-64	C5010-050161	BOLT, socket-head, 5 x 16	6
-16	C5040-005081	SCREW, pan-head, 5 x 8	4	-65	C5140-000051	WASHER, polished, 5	6
-17	C5140-000051	WASHER, polished, 5	4	-66	127-0702-34-1	SUPPORT	1
-18	127-0710-02	SUPPORT	1	-67	C5140-000051	WASHER, polished, 5	4
-19	127-0710-03	SUPPORT	1	-68	C5040-005081	BOLT, socket-head, 5 x 8	4
-20	127-0711-22-1	PLATE	1	-69	C5010-050101	BOLT, socket-head, (IEC), 5 x 10	4
-21	C5040-005081	SCREW, pan-head, 5 x 8	2	-70	127-0700-35-1	SUPPORT, (IEC)	1
-22	C5140-000051	WASHER, polished, 5	6	-71	C5010-060141	BOLT, socket-head, (IEC), 6 x 14	4
-23	C5040-005101	SCREW, pan-head, 5 x 10	6	-72	C5160-000061	WASHER, spring, (IEC), 6	4
-24	H1023-0002-75	RUBBER, H, #416A ϕ = 2200	1	-73	E3012-397-013	LIMIT-SWITCH, WLCA2, (IEC), TATEISHI	2
-25	H1022-1019-79	WINDOW	1				
-26	127-0712-10-4	COVER, front	1				
-27	C5160-000041	WASHER, spring, 4	6				
-28	C5110-000041	NUT, hex., 4	6				
-29	C5040-004061	SCREW, pan-head, 4 x 6	4				
-30	H1042-1028-10-2	PLATE, name	1				
	H1044-1014-19	PLATE, name	1				
-31	H1040-1022-22	PLATE, name	1				
-32	C5040-004081	SCREW, pan-head, 4 x 8	6				
-33	C5160-000061	WASHER, spring, 6	4				
-34	C5110-000061	NUT, hex., #4, 6	4				
-35	C5100-00041	NUT, hex., 4	4				
-36	C5100-00041	NUT, hex., 4	4				
-37	121-0803-06-1	KNOB	1				
-38	H1004-1014-24	PLATE, name	1				
-39	C5040-004061	SCREW, pan-head, 4 x 6	4				
-40	C5120-000101	NUT, cap, 10	4				
-41	C5010-080121	BOLT, socket-head, 8 x 12	6				
-42	127-0702-59	PLATE	2				
-43	H1020-1034-84	PACKING	2				
-44	127-0710-01-1	LATTICE	1				
-45	C5140-000051	WASHER, polished,	12				
-46	C5040-005121	SCREW, pan-head, 5 x 12	12				
-47	C5140-000051	WASHER, polished, 5	2				
-48	C5040-005081	SCREW, pan-head, 5 x 8	2				
-49	127-0712-11-1	PLATE	1				

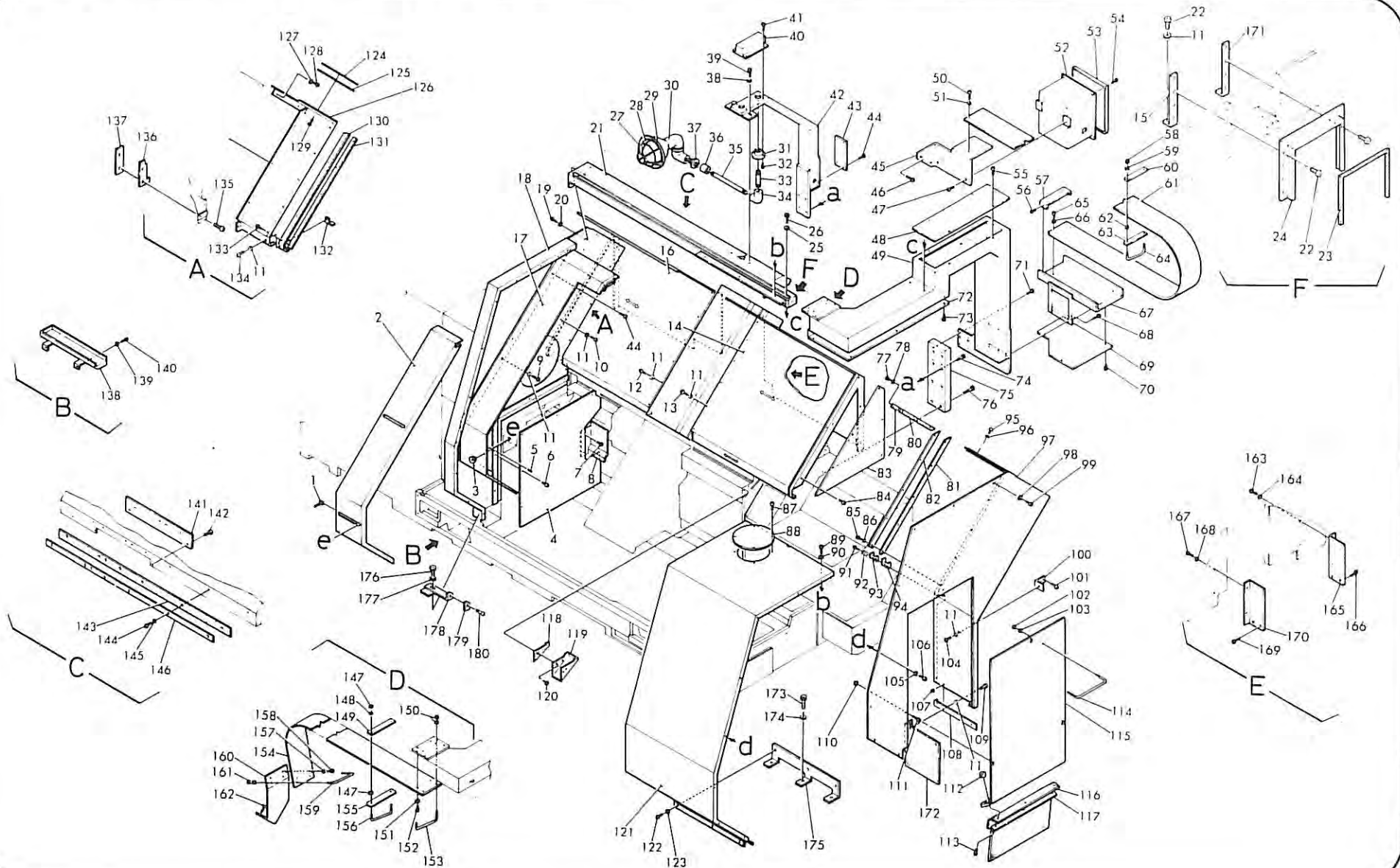
SHEET NO. 33 FRONT SLIDING CHIP GUARD, - 2ST -



OKUMA MACHINERY WORKS LTD.

SHEET NO. 34 COVER AND OTHER PARTS, - 2ST -

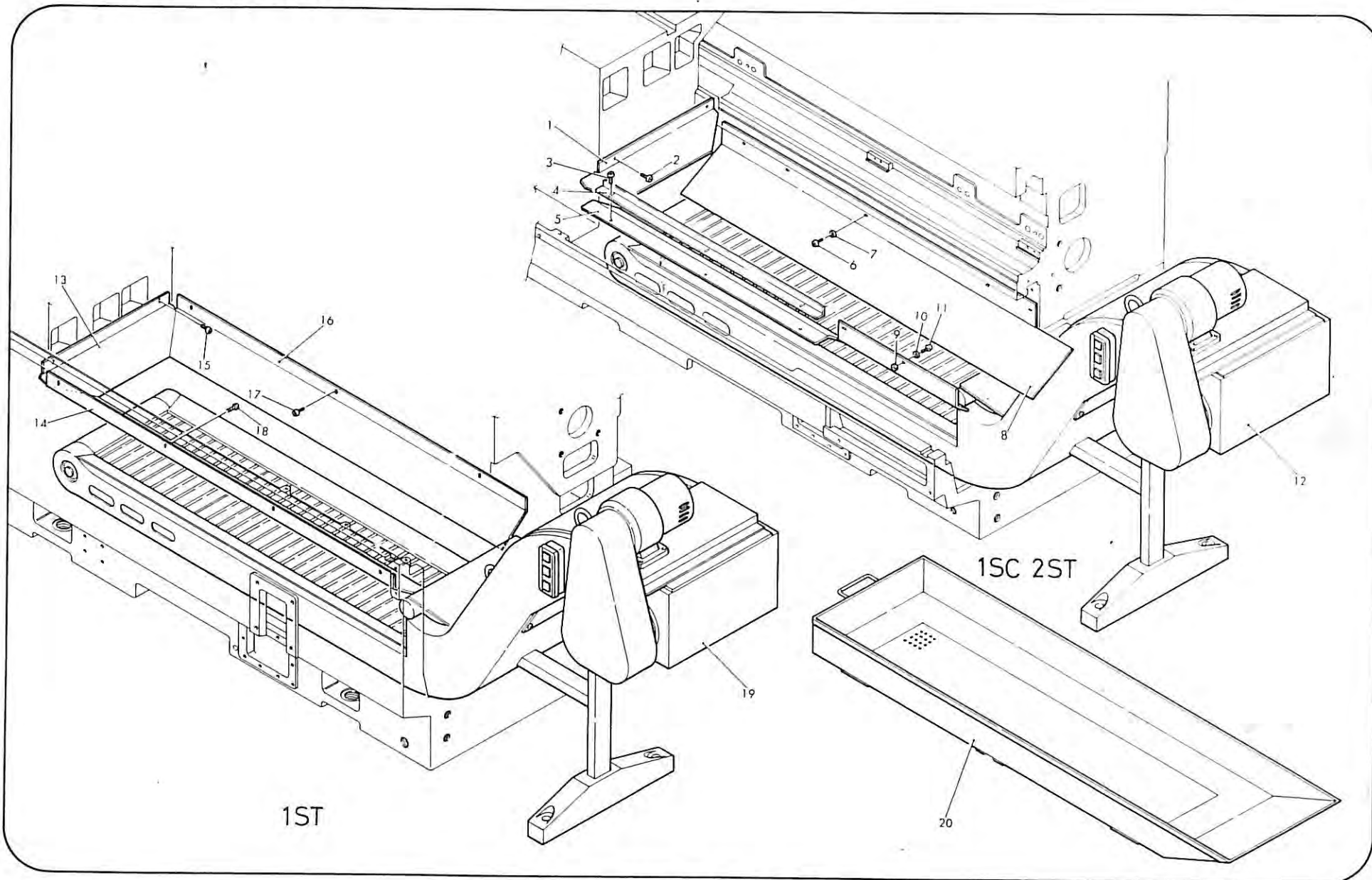
INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
34-1	C5020-080251	BOLT, T, 8 x 25	2	34 91	C5040-005101	SCREW, pan-head, 5 x 10	5
-2	127-6101-08-1	COVER, chuck	1	92	127-0702-09	PLATE	1
-3	D5103-000081	NUT, 8	2	93	127-0702-08	PLATE	1
-4	127-0702-26-1	COVER	1	94	H1020-1032-02-1	WIPER	1
-5	C5030-005061	SET-SCREW, flat-point, 5 x 10	2	95	C5040-005081	SCREW, pan-head, 5 x 8	1
-6	C5040-005081	SCREW, pan-head, 5 x 8	5	96	C5140-000051	WASHER, polished, 5	1
-7	C5040-005081	SCREW, pan-head, 5 x 8	2	97	127-0702-28-1	COVER	1
-8	127-0702-27	COVER	1	98	C5140-000051	WASHER, polished, 5	1
-9	C5040-005121	SCREW, pan-head, 5 x 12	1	99	C5040-005081	SCREW, pan-head, 5 x 8	1
-10	C5040-005081	SCREW, pan-head, 5 x 8	7	100	127-0702-06	SUPPORT	1
-11	C5140-000051	WASHER, polished, 5	27	-101	C5040-005101	SCREW, pan-head, 5 x 10	2
-12	C5040-005081	SCREW, pan-head, 5 x 8	6	-102	C5110-000061	NUT, hex., 6	2
-13	C5040-005081	SCREW, pan-head, 5 x 8	6	-103	C5160-000061	WASHER, spring, 6	2
-14	127-6300-09-1	COVER, saddle	1	-104	C5040-005101	SCREW, pan-head, 5 x 10	1
-15	127-6300-11	SUPPORT	1	-105	C5140-000051	WASHER, polished, 5	7
-16	127-6300-06-2	COVER, saddle	1	-106	C5040-005081	SCREW, pan-head, 5 x 8	7
-17	127-6101-07-2	COVER, chuck	1	-107	C5100-000051	NUT, hex., #3, 5	1
-18	127-0702-20-1	COVER	1	-108	127-0702-30	HOLDER	1
-19	C5040-005081	SCREW, pan-head, 5 x 8	2	-109	C5040-005101	SCREW, pan-head, 5 x 10	3
-20	C5140-000051	WASHER, polished, 5	2	-110	C5100-000051	NUT, hex., #3, 5	3
-21	127-0702-33-3	SUPPORT	1	-111	C5010-050141	BOLT, socket-head, 5 x 14	3
-22	C5040-005101	SCREW, pan-head, 5 x 10	8	-112	C5100-000051	NUT, hex., #3, 5	3
-23	H1032-0002-23	FELT, 1/8 x 920	1	-113	C5040-005101	SCREW, pan-head, 5 x 10	3
-24	127-6300-09-1	COVER	1	-114	121-0803-051	HANDLE	1
-25	C5140-000081	WASHER, polished, 8	2	-115	127-0702-31	COVER	1
-26	C5010-080121	BOLT, socket-head, 8 x 12	2	-116	H1020-1032-04	SHEET	1
-27	E3528-801-006	GUARD, type-LS	1	-117	127-0702-32	HOLDER	1
-28	E3525-801-003	BLUB, lamp, LL007311 100V 75W	1	-118	H1022-1018-91	PACKING	1
-29	E3528-801-006	HOOD, YK25157	1	-119	127-0002-06	SUPPORT	1
-30	E3527-801-002	SOCKET, lamp, YA58202	1	-120	C5010-050101	BOLT, socket-head, 5 x 10	2
-31	127-6510-03	JOINT	1	-121	127-0702-29-1	COVER	1
-32	C5010-050101	BOLT, socket-head, 5 x 10	3	-122	C5040-005101	SCREW, pan-head, 5 x 10	3
-33	D7784-300802	PIPE, gas, 1/2 x 80	1	-123	C5140-000051	WASHER, polished, 5	3
-34	C7810-000032	ELBOW, M, 1/2	1	-124	127-0700-19	PLATE, holder	1
-35	D7784-302202	PIPE, gas, 1/2 x 220	1	-125	H1020-1030-89	WIPER	1
-36	C7805-000332	SOCKET, M, 1/2	1	-126	127-0700-18-1	COVER	1
-37	E3528-801-005	JOINT, type-1 YK25120	1	-127	C5140-000051	WASHER, polished, 5	6
-38	C5140-000081	WASHER, polished, 8	2	-128	C5040-005081	SCREW, pan-head, 5 x 8	6
-39	C5010-080121	BOLT, socket-head, 8 x 12	2	-129	C5040-005081	SCREW, pan-head, 5 x 8	1
-40	127-0700-24	COVER	1	-130	H1020-1030-88	WIPER	1
-41	C5040-005081	SCREW, pan-head, 5 x 8	4	-131	127-0700-20	PLATE, holder	1
-42	127-0700-22	SUPPORT	1	-132	127-0700-21	PLATE, holder	1
-43	127-0700-23	COVER	1	-133	C5040-005081	SCREW, pan-head, 5 x 8	5
-44	C5040-050101	SCREW, pan-head, 5 x 10	4	-134	C5040-005081	SCREW, pan-head, 5 x 8	2
-45	127-0231-09-2	SUPPORT	1	-135	C5040-005081	SCREW, pan-head, 5 x 8	2
-46	C5010-080201	BOLT, socket-head, 8 x 20	2	-136	H1020-1032-01	PACKING	1
-47	C5010-050101	BOLT, socket-head, 5 x 10	2	-137	127-0702-22	PUSHER	1
-48	127-6602-08	COVER	1	-138	127-0702-35	GUTTER	1
-49	127-6602-07	DUCT (127-6602-01)	1	-139	C5140-000051	WASHER, polished, 5	2
-50	C5040-005081	SCREW, pan-head, 5 x 8	4	-140	C5010-050101	BOLT, socket-head, 5 x 10	2
-51	C5140-000051	WASHER, polished, 5	4	-141	127-0700-25	PLATE	1
-52	127-0231-14-1	BOX, terminal	1	-142	C5040-005081	SCREW, pan-head, 5 x 8	5
-53	127-0231-15	COVER	1	-143	H1020-1030-84	SHEET	1
-54	C5040-005101	SCREW, pan-head, 5 x 10	4	-144	C5040-005081	SCREW, pan-head, 5 x 8	5
-55	C5040-005101	SCREW, pan-head, 5 x 10	4	-145	C5140-000051	WASHER, polished, 5	5
-56	C5040-005081	SCREW, pan-head, 5 x 8	2	-146	127-0700-26	PLATE	1
-57	127-0220-02	COVER	1	-147	C5110-000051	NUT, hex., #3, 5	12
-58	C5100-000051	NUT, hex., #3, 5	6	-148	C5160-000051	WASHER, spring, 5	6
-59	C5160-000051	WASHER, spring	6	-149	127-0220-04	PLATE	3
-60	127-0220-04	PLATE	3	-150	C5110-000051	NUT, hex., #3, 5	4
-61	M109-1017-33-1	BAND, steel	1	-151	C5140-000051	WASHER, polished, 5	4
-62	C5100-000051	NUT, hex., #3, 5	6	-152	C5040-005081	SCREW, pan-head, 5 x 8	4
-63	127-0220-04	PLATE	3	-153	127-0220-03-1	CLAMP, pipe	1
-64	127-0222-01-1	CLAMP, pipe	3	-154	M109-1017-49-1	BAND, steel	1
-65	C5040-005081	SCREW, pan-head, 5 x 8	4	-155	127-0220-04	PLATE	3
-66	C5140-000051	WASHER, polished, 5	4	-156	127-0220-03-1	CLAMP, pipe	3
-67	127-6602-10	SUPPORT	1	-157	C5140-000051	WASHER, polished, 5	4
-68	C5010-050101	BOLT, socket-head, 5 x 10	4	-158	C5040-005081	SCREW, pan-head, 5 x 8	4
-69	127-6602-11	COVER	1	-159	127-0220-03-1	CLAMP, pipe	1
-70	C5010-050101	BOLT, socket-head, 5 x 10	4	-160	127-0222-02	SUPPORT	1
-71	C5010-080201	BOLT, socket-head, 8 x 20	4	-161	C5110-000051	NUT, hex.,	4
-72	127-6602-09	COVER	1	-162	C5010-080181	BOLT, socket-head, 8 x 15	3
-73	C5040-005101	SCREW, pan-head, 5 x 10	7	-163	C5040-005081	SCREW, pan-head	2
-74	C5010-080501	BOLT, socket-head, 8 x 50	4	-164	H1004-0001-36	WASHER, polished, SPC, -C	2
-75	127-0000-10-1	SUPPORT	1	-165	127-6300-04	SUPPORT	1
-76	C5010-160351	BOLT, socket-head, 16 x 35	4	-166	C5010-080121	BOLT, socket-head, 8 x 12	2
-77	C5040-005101	SCREW, pan-head, 5 x 10	3	-167	C5040-005081	SCREW, pan-head, 5 x 8	2
-78	C5140-000051	WASHER, polished, 5	3	-168	H1004-0001-36	WASHER, polished, SPC, -C	2
-79	127-0700-27	PLATE	1	-169	C5010-080121	BOLT, socket-head, 8 x 12	2
-80	H1020-1030-90	WIPER	1	-170	127-6300-02	SUPPORT	1
-81	H1020-1030-91	WIPER	1	-171	127-6300-10	SUPPORT	1
-82	127-0700-28	PLATE	1	-172	H1020-1032-03	SHEET	1
-83	127-6300-08-1	COVER	1	-173	C5010-050141	BOLT, socket-head	3
-84	C5040-005081	SCREW, pan-head, 5 x 8	5	-174	127-0702-12	COLLAR	3
-85	C5040-005101	SCREW, pan-head, 5 x 10	5	-175	127-0702-11	SUPPORT	1
-86	C5140-000051	WASHER, polished, 5	5	-176	C5010-050121	BOLT, socket-head	1
-87	C5040-005081	SCREW, pan-head, 5 x 8	4	-177	C5140-000051	WASHER, polished	1
-88	127-0700-29	COVER	1	-178	127-0702-60	STOPPER	1
-89	C5040-005081	SCREW, pan-head, 5 x 8	3	-179	H1030-1001-77	STOPPER	1
-90	C5140-000051	WASHER, polished, 5	3	-180	C5040-005101	SCREW, pan-head, 5 x 10	1



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SHEET NO. 35 CHIP CONVEYOR

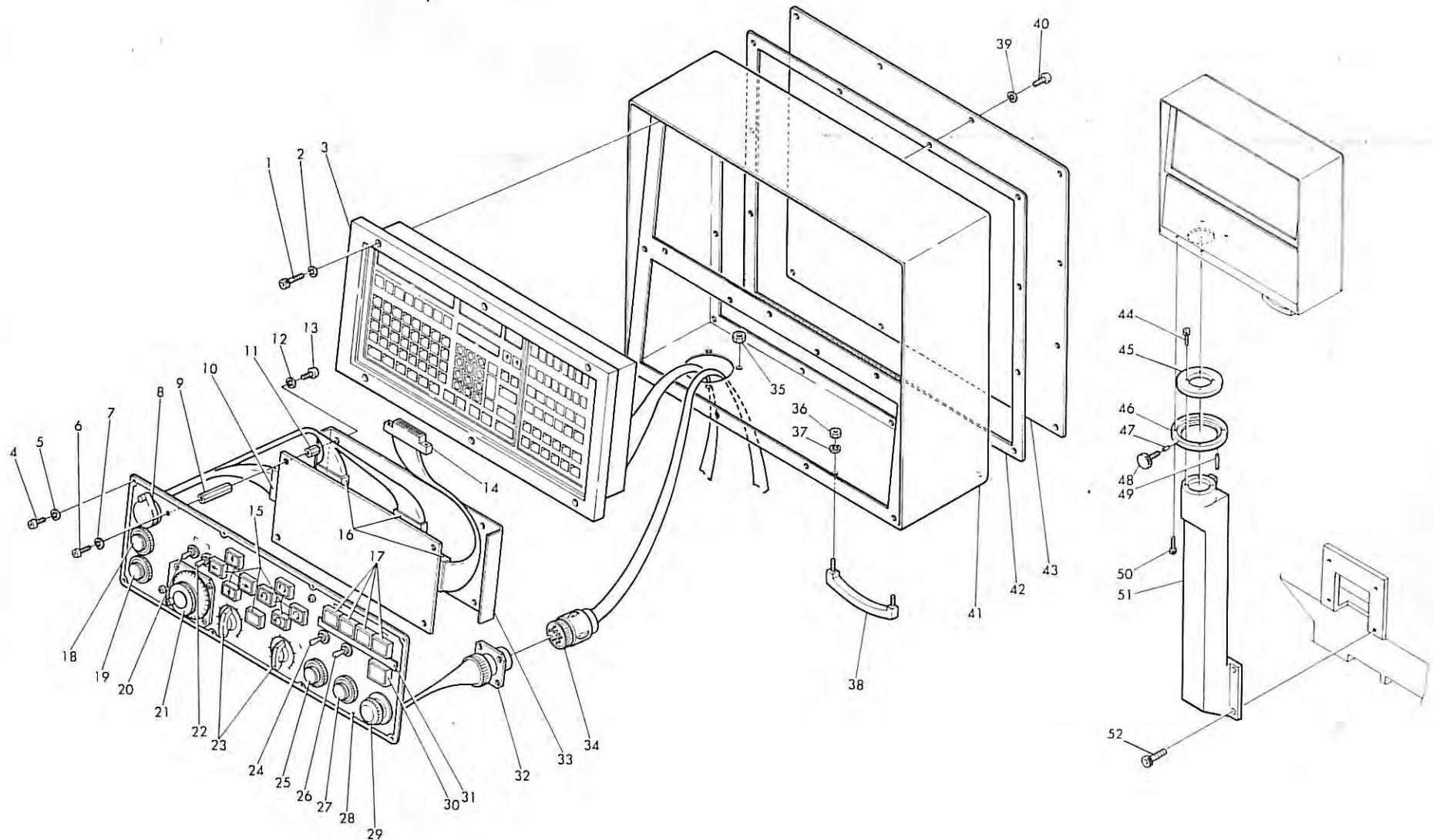
INDEX NO.	PART NO.	DESCRIPTION	Q'TY
35-1	127-6750-13	GUIDE, chip	1
-2	C5040-005081	SCREW, pan-head, 5 x 8	2
-3	C5040-005081	SCREW, pan-head, 5 x 8	3
-4	127-6750-19	PLATE	1
-5	127-6750-11	GUIDE, chip	1
-6	C5040-005081	SCREW, pan-head, 5 x 8	6
-7	C5140-000051	WASHER, polished, 5	6
-8	127-6750-12	GUIDE, chip	1
-9	C5110-000051	NUT, hex, #4, 5	2
-10	C5140-000051	WASHER, polished, 5	2
-11	C5040-005161	SCREW, pan-head, 5 x 16	2
-12	H0190-0003-68	CONVEYOR, chip, ENOMOTO, type-EC, L=26	1
-13	127-6750-10	GUIDE, chip	1
-14	127-6750-08	GUIDE, chip	1
-15	C5040-005081	SCREW, pan-head, 5 x 8	2
-16	127-6750-09	GUIDE, chip	1
-17	C5040-005081	SCREW, pan-head, 5 x 8	3
-18	C5040-005081	SCREW, pan-head, 5 x 8	4
-19	H0190-0003-68	CONVEYOR, chip, ENOMOTO type-EC, L=26	1
-20	127-6740-01	PAN, chip	1



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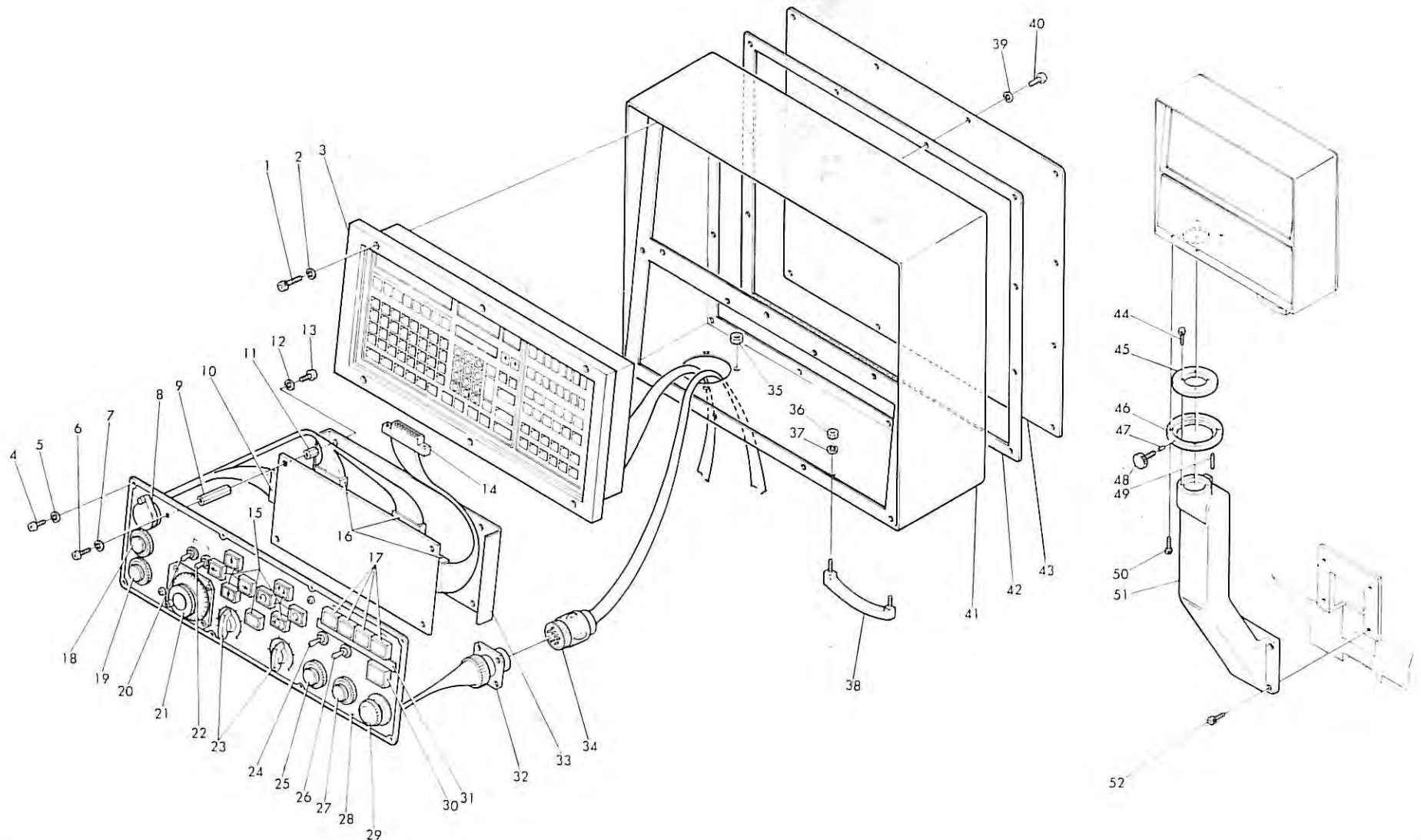
SHEET NO. 36 OPERATOR'S CONTROL PANEL, - 1ST -

INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
36-1	C5010-060161	BOLT, socket-head, 6 x 16	6		E8040-183-265	BOX, OSP3000 control (LC10)	1
-2	C5140-000061	WASHER, polished, 6	6	36-42		PACKING	1
-3	E0105-800-004	UNIT, operation panel	1	-43		COVER	1
-4	E5040-004121	SCREW, pan-head, 4 x 12	8	-44	C5010-080201	BOLT, socket-head, 8 x 20	4
-5	C5140-000041	WASHER, polished, 4	8	-45	127-0030-03-1	FLANGE	1
-6	E5040-004121	SCREW, pan-head, 4 x 12	4	-46	127-003-04-1	SUPPORT	1
-7	C5140-000041	WASHER, polished, 4	4	-47	D5800-004060	PUSHER, 4 x 16	1
-8	E2800-031-037	SWITCH, pushbutton, Green	1	-48	D5085-050251	KNOB, bolt, 85 x 25	1
	E2808-031-017	COVER	1	-49	D5201-008400	PIN, straight, 8 x 40	1
-9	E8062-090-058	BOLT, 6 x 104.5	4	-50	C5010-080251	BOLT, socket-head, 8 x 25	4
-10	E3702-655-001	CONNECTOR, BERG, 32 pin	1	-51	127-0030-07	ARM, control panel	1
-11	E8062-090-057	BOLT, 6 x 22	4	-52	C5010-080201	BOLT, socket-head, 8 x 20	4
-12	C5140-000041	WASHER, polished, 4	4				
-13	E5040-004121	SCREW, pan-head, 4 x 21	4				
-14	E3732-391-005	CONNECTOR	1				
	E3738-391-001	CONNECTOR, AT	1				
-15	E2854-043-011	SWITCH, indication	9				
	E2858-043-130	SWITCH, indication AT	9				
	E5401-183-799	PLATE, name	9				
-16	E3702-655-002	CONNECTOR, BERG, 54 pin	3				
-17	E2854-043-011	SWITCH, indication	3				
-18	E2800-031-037	SWITCH, pushbutton, Green	1				
-19	E2801-031-005	SWITCH, pushbutton, Red	1				
-20	E2840-552-012	SWITCH, toggle, 2-position	1				
-21	E3051-291-016	HANDLE, manual pulse	1				
-22	E2841-552-009	SWITCH, toggle, 3 position	1				
-23	E2830-721-047-A	ROTARY-SWITCH	2				
	E5545-721-002	KNOB	2				
-24	E2841-552-009	SWITCH, toggle, 3 position	1				
-25	E2851-031-057	SWITCH, indication, Green	1				
-26	E2840-552-012	SWITCH, toggle, 2 position	1				
-27	E2801-031-042	SWITCH, pushbutton, Red	1				
-28	E5401-183-794	PLATE, name	1				
-29	E2807-722-001	SWITCH, emergency button	1				
-30	E2854-043-011	SWITCH, indication	1				
	E2858-043-130	SWITCH, indication AT	1				
	E5401-183-799	PLATE, name	1				
-31	E5401-183-749	PLATE, name	1				
-32	E3701-082-007	CONNECTOR, 17-16	1				
	E3708-082-028	CONNECTOR, AT	1				
-33	E8030-183-483	PLATE, cover	1				
-34	E3702-082-003	CONNECTOR, 17-16	1				
	E3708-082-029	CONNECTOR, AT	1				
-35	C5110-000081	NUT, M6, 8	4				
-36	C5110-000041	NUT, M4	2				
-37	C5140-000041	WASHER, polished, 4	2				
-38		KNOB	1				
-39	C5140-000041	WASHER, polished, 4	12				
-40	E5040-004121	SCREW, pan-head, 4 x 21	12				
-41	E7391-183-006	BOX, OSP3000 control (LC20, 30, 40)	1				



SHEET NO. 37 OPERATOR'S CONTROL PANEL, — 1SC/2ST —

INDEX NO.	PART NO.	DESCRIPTION	Q'TY	INDEX NO.	PART NO.	DESCRIPTION	Q'TY
37-1	C5010-060161	BOLT, socket-head, 6 x 16	6		E8040-183-265	BOX, OSP3000 control (LC10)	1
-2	C5140-000061	WASHER, polished, 6	6	37-42		PACKING	1
-3	E0105-800-004	UNIT, operation panel	1	-43		COVER	1
-4	E5040-004121	SCREW, pan-head, 4 x 12	8	-44	C5010-080201	BOLT, socket-head, 8 x 20	4
-5	C5140-000041	WASHER, polished, 4	8	-45	127-0030-03-1	FLANGE	1
-6	E5040-004121	SCREW, pan-head, 4 x 12	4	-46	127-003-04-1	SUPPORT	1
-7	C5140-000041	WASHER, polished, 4	4	-47	D5800-004060	PUSHER, 4 x 16	1
-8	E2800-031-037	SWITCH, pushbutton, Green	1	-48	D5085-050251	KNOB, bolt, 85 x 25	1
	E2808-031-017	COVER	1	-49	D5201-008400	PIN, straight, 8 x 40	1
-9	E8062-090-058	BOLT, 6 x 104.5	4	-50	C5010-080251	BOLT, socket-head, 8 x 25	4
-10	E3702-655-001	CONNECTOR, BERG, 32 pin	1	-51	127-0030-08	ARM, control panel	1
-11	E8062-090-057	BOLT, 6 x 22	4	-52	C5010-080201	BOLT, socket-head, 8 x 20	4
-12	C5140-000041	WASHER, polished, 4	4				
-13	E5040-004121	SCREW, pan-head, 4 x 21	4				
-14	E3732-391-005	CONNECTOR	1				
	E3738-391-001	CONNECTOR, AT	1				
-15	E2854-043-011	SWITCH, indication	9				
	E2858-043-130	SWITCH, indication AT	9				
	E5401-183-799	PLATE, name	9				
-16	E3702-655-002	CONNECTOR, BERG, 54 pin	3				
-17	E2854-043-011	SWITCH, indication	3				
-18	E2800-031-037	SWITCH, pushbutton, Green	1				
-19	E2801-031-005	SWITCH, pushbutton, Red	1				
-20	E2840-552-012	SWITCH, toggle, 2-position	1				
-21	E3051-291-016	HANDLE, manual pulse	1				
-22	E2841-552-009	SWITCH, toggle, 3 position	1				
-23	E2830-721-047-A	ROTARY-SWITCH	2				
	E5545-721-002	KNOB	2				
-24	E2841-552-009	SWITCH, toggle, 3 position	1				
-25	E2851-031-057	SWITCH, indication, Green	1				
-26	E2840-552-012	SWITCH, toggle, 2 position	1				
-27	E2801-031-042	SWITCH, pushbutton, Red	1				
-28	E5401-183-794	PLATE, name	1				
-29	E2807-722-001	SWITCH, emergency button	1				
-30	E2854-043-011	SWITCH, indication	1				
	E2858-043-130	SWITCH, indication AT	1				
	E5401-183-799	PLATE, name	1				
-31	E5401-183-749	PLATE, name	1				
-32	E3701-082-007	CONNECTOR, 17-16	1				
	E3708-082-028	CONNECTOR, AT	1				
-33	E8030-183-483	PLATE, cover	1				
-34	E3702-082-003	CONNECTOR, 17-16	1				
	E3708-082-029	CONNECTOR, AT	1				
-35	C5110-000081	NUT, M6, 8	4				
-36	C5110-000041	NUT, M4	2				
-37	C5140-000041	WASHER, polished, 4	2				
-38		KNOB	1				
-39	C5140-000041	WASHER, polished, 4	12				
-40	E5040-004121	SCREW, pan-head, 4 x 21	12				
-41	E7391-183-006	BOX, OSP3000 control (LC20, 30 40)	1				



SHEET NO. 38 CHUCK AND TAILSTOCK PEDALS

INDEX NO.	PART NO.	DESCRIPTION	Q'TY
38-1	E2860-119-001	I CHUCK PEDAL (Standard)	
-2	C5010-060141	SWITCH, foot, OFL-1-SM2.C	1
-3	C5010-080161	BOLT, socket-head, 6 x 14	3
-4	127-000-21-1	BOLT, socket-head, 8 x 16	4
		SUPPORT, foot switch	1
		II 1ST CHUCK PEDAL with SAFY COVER	
-5	C5010-060141	BOLT, socket-head, 6 x 14	3
-6	E2860-119-005	SWITCH, foot, OFL-1-SM2, KS	1
-7	C5010-080161	BOLT, socket-head, 8 x 16	4
-8	127-0000-25	SUPPORT, foot switch	1
		III CHUCK PEDAL (double-type) (IEC)	
-9	C5070-000020	SCREW, NO2	2
-10	H1040-1021-99	PLATE, name	1
-11	C5076-000020	SCREW, NO2	2
-12	H1040-1021-98	PLATE, name	1
-13	E2860-119-003	SWITCH, foot	1
-14	C5010-050141	BOLT, socket-head, 5 x 14	2
-15	C5000-080201	BOLT, socket-head, 8 x 20	4
-16	127-0000-24	SUPPORT, foot switch	1
		IV 1 SC, 2ST CHUCK PEDAL with SAFTY COVER	
-17	C5010-060141	BOLT, socket-head, 6 x 14	3
-18	E2860-119-005	SWITCH, foot, OFL-1-SM2, KS	1
-19	127-0000-26	SUPPORT, foot switch	1
-20	C5010-080201	BOLT, socket-head, 8 x 20	4
		V TAILSTOCK PEDAL (Standard)	
-21	E2860-119-006	SWITCH, foot, OFL-TWY-2M2, C	1
-22	C5010-060141	BOLT, socket-head, 6 x 14	2
-23	127-6400-01	SUPPORT, foot switch	1
-24	C5000-080251	BOLT, hex., 8 x 25	4
		VI TAILSTOCK PEDAL (USA)	
-25	E2860-119-007	SWITCH, foot, OFL-TWY-SM2 KS	1

