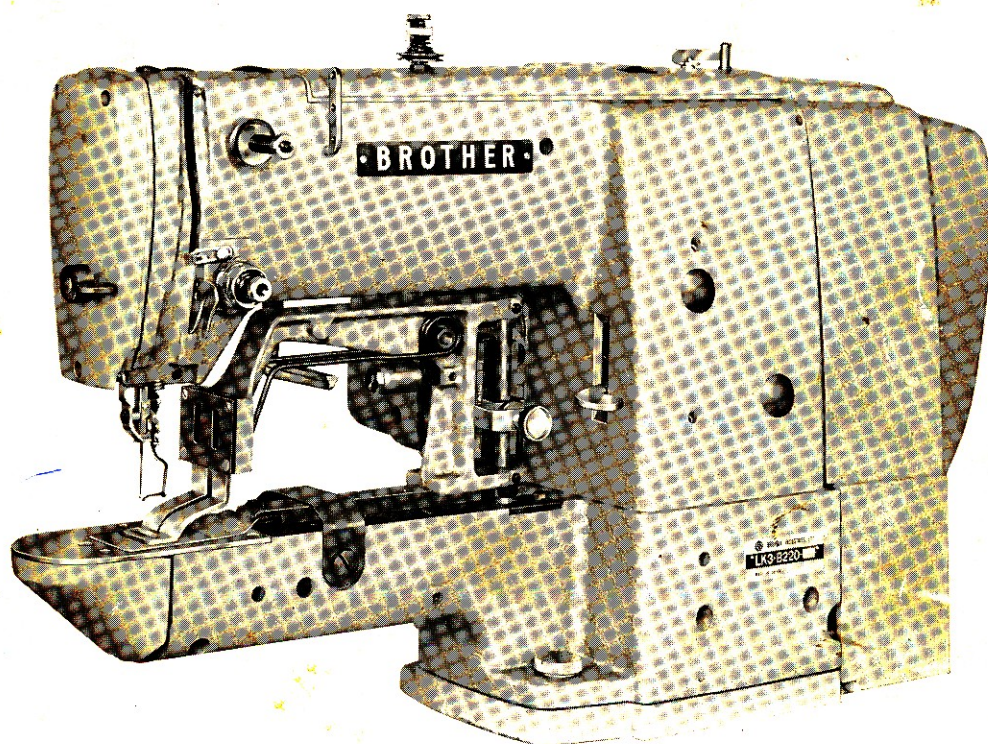


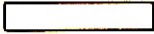
PARTS BOOK
FOR
BROTHER LK3-B220



High Speed Bar Tack Machine

BROTHER INDUSTRIES, LTD.
NAGOYA, JAPAN

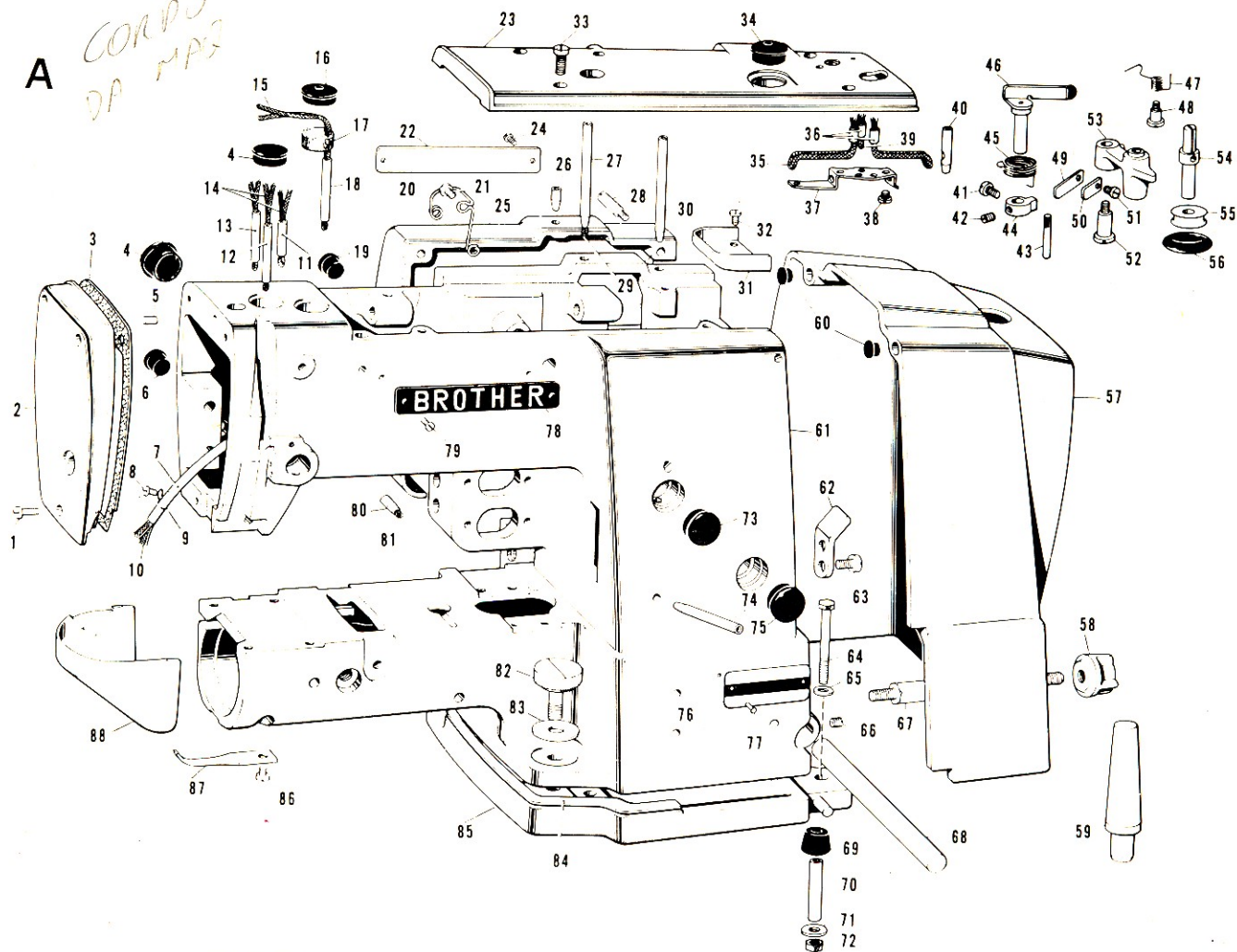
Hou to use the parts book

1. When the column for the parts number or the parts assembly number is  , please refer to the different parts list on the page 11.
2. When the column for the parts number is  , the parts cannot be supplied. But when the parts number is shown in the column, please order the parts by the parts assembly number so that the parts can be arranged in the form assembled parts.
3. The parts whose number is marked with ※ is not rapped together with the parts to be fitted. Therefore, please order the parts together with the fitting parts as a unit.

CONTENTS

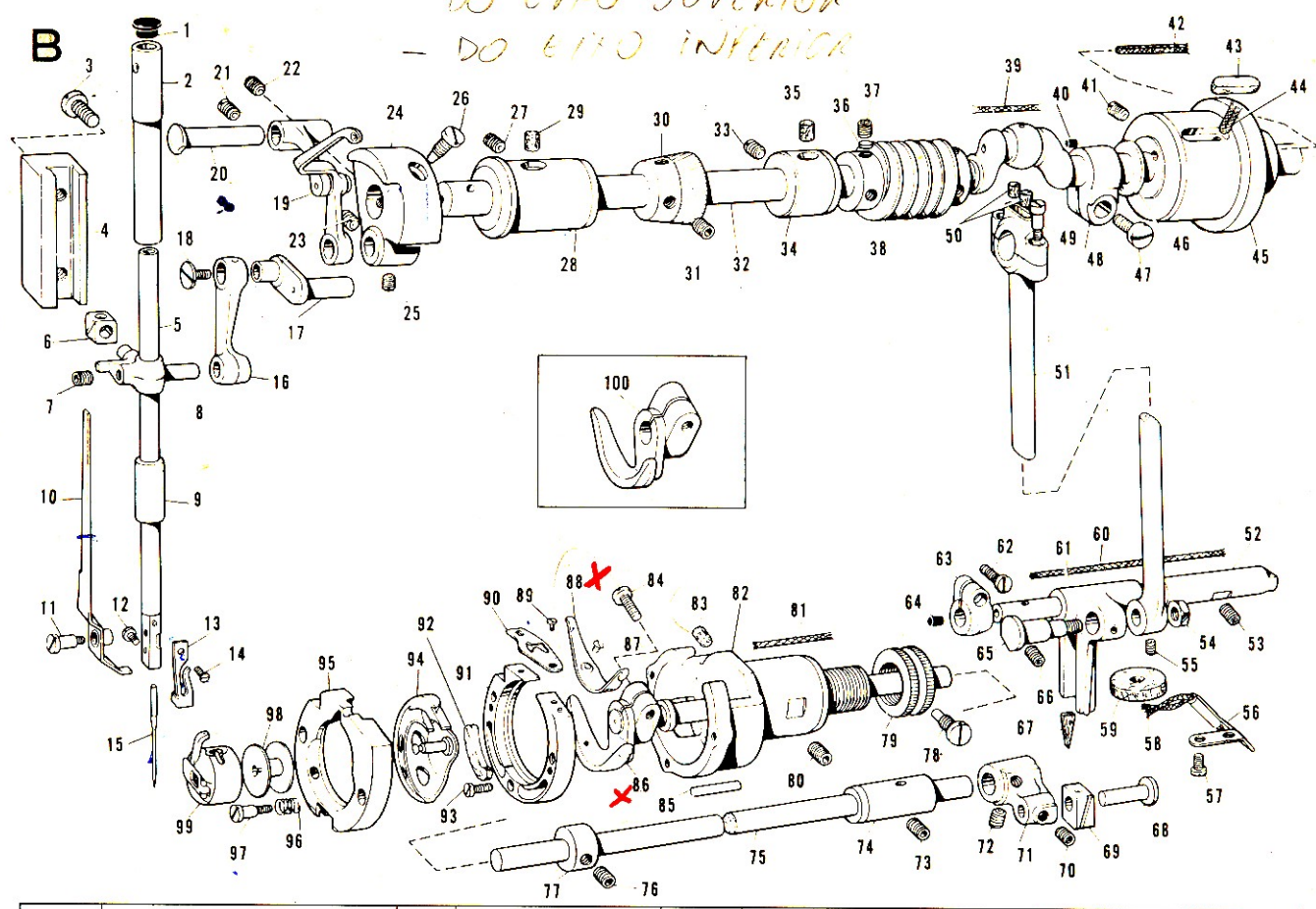
A. Machine Body	1
B. Upper Shaft and Lower Shaft Mechanism	2
C. Pulley and Clutch Mechanism	3
D. Clutch Mechanism	4
E. Feed Cam and Tack Length Feed Mechanism	5
F. Work Clamp and Tack Width Feed Mechanism	6
G. Thread Trimming Mechanism	7
H. Work Clamp Lifting Mechanism	8
I. Thread Nipper Mechanism	9
Z. Accessary	10
DIFFERENT PARTS LIST	11
INDEX	12

A

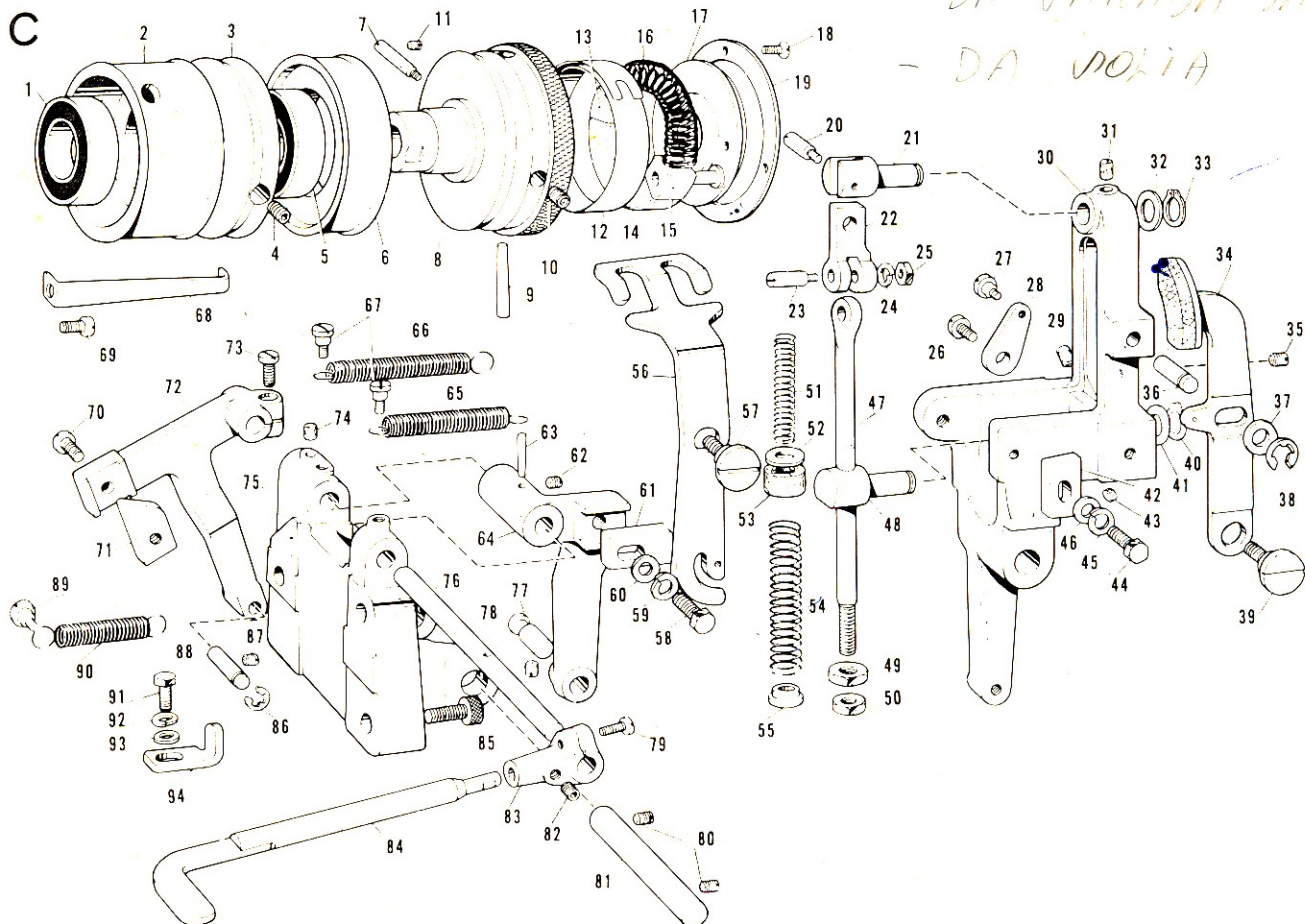
CORPO
DA MP3

Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.
A-1	Screw	3	009711-4-12		A-45	Spring	1	145274-0-01	
A-2	Face Plate	1	141994-0-01		A-46	Bobbin Presser	1	146984-0-01	
A-3	Face Plate Packing	1	143449-0-01		A-47	Spring	1	141757-0-01	
A-4	Oil Cap	2	140392-0-01		A-48	Stud Screw	1	103317-0-01	
A-5	Oil Cap	1	142274-0-01		A-49	Spring Plate	1	111942-0-01	
A-6	Oil Cap	1	117934-0-01		A-50	Washer	1	111943-0-01	
A-7	Vinyl Tube	1	117021-0-00		A-51	Screw	1	100880-0-01	
A-8	Screw	1	009670-6-12		A-52	Stud Screw	1	104212-0-01	
A-9	Vinyl Tube Holder	1	117150-0-01		A-53	Bobbin Winder Shaft Holding Bracket	1		
A-10	Wick	1	142253-0-01		A-54	Bobbin Winder Shaft	1		
A-11	Oil Pipe	1	116968-0-00		A-55	Bobbin Winder Wheel	1		
A-12	Oil Pipe	1	116968-0-00		A-56	Rubber Ring	1	120448-0-01	
A-13	Oil Pipe	1	116967-0-00		A-57	Belt Cover	1	141999-0-01	
A-14	Wick	3	118768-0-00		A-58	Belt Cover Support Knob	1	142001-0-01	
A-15	Wick	1	118955-0-00		A-59	Head Rest	1	142005-0-00	
A-16	Oil Cap	1	141744-0-01		A-60	Stopper cap	2	104450-0-01	
A-17	Felt (A)	1	141742-0-01		A-61	Arm-bed	1		
A-18	Oil Pipe	1	116969-0-00		A-62	Head Supporter	1	142422-0-01	
A-19	Oil Cap	1	117934-0-01		A-63	Screw	2	009814-6-12	
A-20	Wick Holder	1	143557-0-01		A-64	Bolt	4	144543-0-01	
A-21	Screw	1	142751-0-03		A-65	Washer	4	025060-2-32	
A-22	Name Plate	1			A-66	Screw	2	013761-0-12	
A-23	Arm Cover	1	141751-0-01		A-67	Belt Cover Support Shaft	1	142000-0-01	
A-24	Screw	2	102731-0-02		A-68	Bed Hinge Shaft	1	141761-0-01	
A-25	Cam Cover	1	147256-0-00		A-69	Cushion	4	146255-0-00	
A-26	Oil Pipe	2	100486-0-00		A-70	Pipe	4	147867-0-01	
A-27	Oil Pipe	1	142087-0-00		A-71	Washer	4	025060-3-32	
A-28	Screw	3	141748-0-01		A-72	Nut	4	021060-1-02	
A-29	Wick	1	114240-0-00		A-73	Oil Cap	1	140392-0-01	
A-30	Oil Pipe	1	142087-0-00		A-74	Oil Pipe	1	142087-0-00	
A-31	Duster Plate	1	141745-0-01		A-75	Oil Cap	1	140392-0-01	
A-32	Screw	2	100242-0-03		A-76	Model Plate	1	143231-0-01	
A-33	Screw	4	009761-4-12		A-77	Pin	2	116231-0-01	
A-34	Oil Cap	1	141744-0-01		A-78	Name Plate	1		
A-35	Wick	2	147159-0-01		A-79	Screw	2	102731-0-02	
A-36	Oil Pipe	3	116968-0-00		A-80	Oil Pipe	1	100486-0-00	
A-37	Wick Holder	1	141753-0-01		A-81	Wick	1	108805-0-01	
A-38	Screw	2	009680-6-12		A-82	Head Fixing Screw	1	141762-0-01	
A-39	Wick	1	147158-0-01		A-83	Washer	1	101046-0-01	
A-40	Oil Pipe	1	147207-0-00		A-84	Head Base Packing	1	143450-0-01	
A-41	Screw	1	140557-0-01		A-85	Head Base	1	141760-0-01	
A-47	Screw	1	013689-4-12		A-86	Screw	1	009680-7-13	
A-43	Pin	1	141752-0-01		A-87	Spring Plate	1	141812-0-01	
A-44	Bobbin Winder Pawl	1	142566-0-01		A-88	Shuttle Race Cover	1	147268-0-00	

DO EITO SUPERIOR
DO EITO INFERIOR



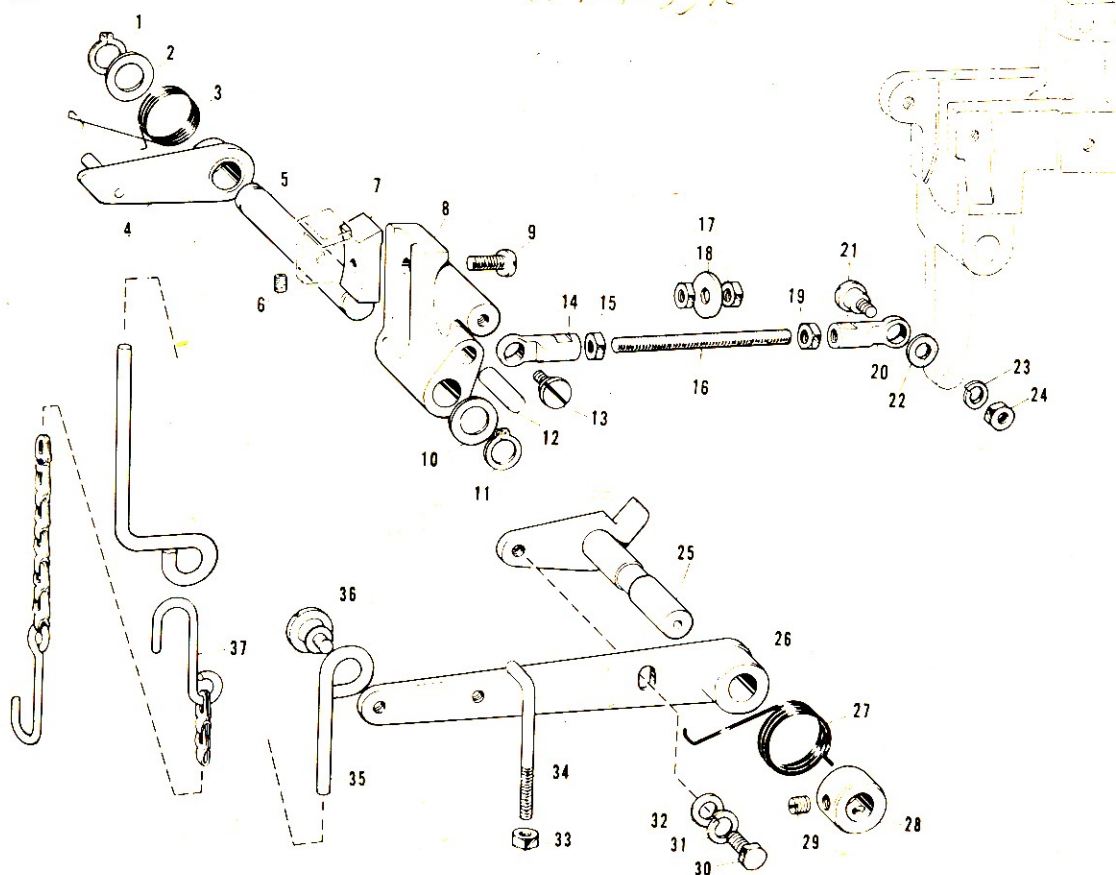
Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.
B-1	Oil Cap	1	117936-0-01		B-51	Crank Rod	1	※141785-0-01	
B-2	Needle Bar Bushing Upper	1	141777-0-01		B-52	Oscillating Rock Shaft	1	141788-0-01	
B-3	Screw	1	009781-4-12		B-53	Screw	1	013761-0-12	
B-4	Needle Bar Guide	1	141780-0-00		B-54	Nut	1	104689-0-01	
B-5	Needle Bar	1			B-55	Screw	1	014680-6-22	
B-6	Slide Block	1	142211-0-01		B-56	Wick Supporter	1	142379-0-01	X
B-7	Screw	1	014760-6-22		B-57	Screw	2	009680-6-12	
B-8	Needle Bar Clamp	1	141775-0-01		B-58	Wick	1	118768-0-01	X
B-9	Needle Bar Bushing Lower	1	141778-0-01		B-59	Felt	1	142293-0-01	X
B-10	Nipper Fastening Plate	1	141779-0-01		B-60	Wick	1	112750-0-00	X
B-11	Stud Screw	1	115404-0-01		B-61	Oscillating Rock Body	1	141787-0-01	
B-12	Screw	1	009670-4-14		B-62	Screw	1	009681-2-10	X
B-13	Thread Nipper Spring	1	115489-0-01		B-63	Set Collar	1	141789-0-01	X
B-14	Screw	1	102626-0-05		B-64	Oil Cap	1	142274-0-01	
B-15	Needle <i>DPx5 14x5</i>	1	<i>DPx5</i>		B-65	Stud Screw	1	141786-0-01	
B-16	Needle Bar Crank Rod	1	<i>DPx5</i>		B-66	Screw	1	013761-2-12	X
B-17	Needle Bar Crank	1	<i>DPx5</i>		B-67	Felt	1	115434-0-01	X
B-18	Screw	1	100253-0-01	181030-0-01	B-68	Lower Shaft Crank Pin	1	141794-0-01	
B-19	Thread Take-up Lever	1	<i>DPx5</i>		B-69	Side Block	1	142210-0-01	
B-20	Stud for Thread Take-up Supporter	1	<i>DPx5</i>		B-70	Screw	1	014680-6-22	
B-21	Screw	1	013761-2-12		B-71	Lower Shaft Crank	1	141793-0-01	
B-22	Screw	1	013780-7-10		B-72	Screw	2	014770-6-22	
B-23	Screw	1	013770-6-12		B-73	Screw	1	013760-8-12	X
B-24	Counter Weight	1	141773-0-00		B-74	Lower Shaft Bushing	1	141801-0-01	
B-25	Screw	1	101706-0-01		B-75	Lower Shaft	1	147142-0-01	
B-26	Screw	1	100250-0-01		B-76	Screw	2	014770-6-22	
B-27	Screw	1	013761-2-12		B-77	Set Collar	1	110495-0-03	
B-28	Upper Shaft Bushing Left	1	141772-0-01		B-78	Guide Screw	1	142792-0-01	
B-29	Felt	1	140560-0-01	X	B-79	Shuttle Hook Adjusting Ring	1	141806-0-01	
B-30	Collar	1	143556-0-01	X	B-80	Screw	1	014760-6-22	
B-31	Screw	2	107053-0-01		B-81	Wick	1		
B-32	Upper Shaft	1	※141765-0-01		B-82	Shuttle Race Body	1		181029-0-01
B-33	Screw	1	013761-2-12		B-83	Felt	1	107149-0-01	
B-34	Upper Shaft Bushing Intermediate	1	141771-0-01		B-84	Screw	1	009711-4-12	
B-35	Felt	1	140560-0-01	X	B-85	Guide Pin	1	141808-0-01	
B-36	Washer	1	147151-0-00		B-86	Shuttle Driver	1	141797-0-01	
B-37	Screw	6	014760-6-22		B-87	Screw	2	100191-0-04	141796-0-01
B-38	Worm	1			B-88	Shuttle Driver Spring	1	141798-0-01	
B-39	Wick	1	142794-0-01	X	B-89	Screw	2	100105-0-04	
B-40	Oil Cap	2	142274-0-01	X	B-90	Shuttle Race Thread Guide	1	142530-0-01	
B-41	Screw	1	013761-0-12		B-91	Shuttle Race	1	141805-0-01	
B-42	Wick	1	115515-0-01	X	B-92	Felt	2	144190-0-00	
B-43	Felt	1	100598-0-01	X	B-93	Screw	3	100064-0-05	
B-44	Wick	1	143444-0-01	X	B-94	Shuttle Hook	1	116827-0-01	
B-45	Upper Shaft Bushing Right	1	141766-0-01		B-95	Shuttle Race Ring	1	142088-0-01	
B-46	Washer	1	143858-0-01	X	B-96	Spring	2	105832-0-00	
B-47	Screw	1	106764-0-01		B-97	Screw	2	105831-0-01	
B-48	Upper Shaft Collar	1	141770-0-01		B-98	Bobbin	1	145265-0-01	
B-49	Screw	2	110686-0-01		B-99	Bobbin Case	1	116828-0-01	
B-50	Felt	2	107149-0-01		B-100	Shuttle Driver	1	144478-0-01	X



Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.
C-1	Ball Bearing	1	143448-0-00		C-48	Holder	1	115552-0-01	
C-2	Bobbin Winder Pulley	1	141784-0-01		C-49	Nut	1	021860-2-02	
C-3	Slow Speed Pulley	1	141783-0-01		C-50	Nut	1	100075-0-04	
C-4	Screw	1	013761-4-12		C-51	Stopper Spring (B)	1	115551-0-01	
C-5	Ball Bearing	1	143448-0-00		C-52	Washer	1	025100-1-32	
C-6	Idle Pulley	1	141782-0-01		C-53	Felt	1	115550-0-01	
C-7	Pulley Stud	1	141282-0-01		C-54	Stopper Spring (A)	1	147639-0-01	
C-8	High Speed Pulley	1	141781-0-01		C-55	Washer	1	115549-0-01	
C-9	Taper Pin	1	147111-0-01		C-56	Belt Shifter	1	141951-0-01	
C-10	Screw	1	014770-6-22		C-57	Stud Screw	1	141953-0-01	
C-11	Screw	1	109184-0-01		C-58	Bolt	1	017782-0-12	
C-12	Spring Cover for Pulley	1	142751-0-01		C-59	Spring Washer	1	028770-2-42	
C-13	Block for Plunge Spring	1	141281-0-01		C-60	Washer	1	025770-2-32	
C-14	Plunge Spring Holder	1	141284-0-00		C-61	Clutch Stop Latch	1	141962-0-01	
C-15	Block for Stop Cam	1	141285-0-01		C-62	Screw	1	014760-6-22	
C-16	Plunge Spring	1	141283-0-01		C-63	Taper Pin	1	046302-5-20	
C-17	Stop Cam	1	141286-0-01		C-64	Clutch Tripping Lever	1	141961-0-01	
C-18	Screw	3	117348-0-01		C-65	Brake Lever Spring	1	141960-0-01	
C-19	Stop Cam Rine	1	141289-0-01		C-66	Clutch Lever Spring	1	141959-0-01	
C-20	Stud Screw	1	115544-0-01		C-67	Stud Screw	2	141535-0-01	
C-21	Clutch Stopper Holder	1	142667-0-01		C-68	Belt Guide Plate	1	141975-0-01	
C-22	Clutch Stopper	1	143941-0-01		C-69	Screw	1	009761-0-12	
C-23	Clutch Stopper Stud	1	115546-0-01		C-70	Screw	1	009771-0-12	
C-24	Spring Washer	1	028050-2-42		C-71	Clutch Tripping Dog	1	144536-0-01	
C-25	Nut	1	021710-2-02		C-72	Clutch Tripping Dog Lever	1	141970-0-01	
C-26	Screw	1	009761-2-12		C-73	Screw	1	009761-4-12	
C-27	Stud Screw	1	110171-0-02		C-74	Felt	1	107149-0-01	
C-28	Spring Adjusting Plate	1	115558-0-01		C-75	Clutch Lever Bracket	1	141957-0-01	
C-29	Felt	1	107149-0-01		C-76	Clutch Tripping Lever Shaft	1	141964-0-01	
C-30	Clutch Lever	1	144427-0-01		C-77	Stud Pin for Belt Shifter	1	141963-0-01	
C-31	Felt	1	107149-0-01		C-78	Screw	1	014760-6-22	
C-32	Washer	1	025100-1-32		C-79	Screw	1	009711-2-12	
C-33	Stop Ring	1	048100-1-42		C-80	Screw	2	014760-6-22	
C-34	Brake Lever	1	145978-0-01		C-81	Clutch Lever Shaft	1	141958-0-01	
C-35	Screw	1	014760-6-22		C-82	Screw	1	014760-6-22	
C-36	Brake Lever Pin	1	142214-0-01		C-83	Stop Lever Supporter	1	141965-0-01	
C-37	Washer	1	107153-0-02		C-84	Emergency Stop Lever	1	141966-0-01	
C-38	Stop Ring	1	048070-3-42		C-85	Screw	3	018103-0-20	
C-39	Stud Screw	1	141953-0-01		C-86	Stop Ring	1	048040-3-42	
C-40	Stop Ring	1	048100-1-42		C-87	Screw	1	013680-6-12	
C-41	Washer	1	025100-1-32		C-88	Pin	1	141972-0-01	
C-42	Clutch Lever Catch	1	141950-0-01		C-89	Stud Screw	1	110171-0-02	
C-43	Felt	1	140399-0-01		C-90	Spring	1	141973-0-01	
C-44	Bolt	1	017782-0-12		C-91	Bolt	1	017781-4-12	
C-45	Spring Washer	1	028770-2-42		C-92	Spring Washer	1	028770-2-42	
C-46	Washer	1	025770-2-32		C-93	Washer	1	025770-2-32	
C-47	Stopper Adjusting Spring Shaft	1	115547-0-01		C-94	Clutch Cam Lever Stopper	1	141974-0-01	

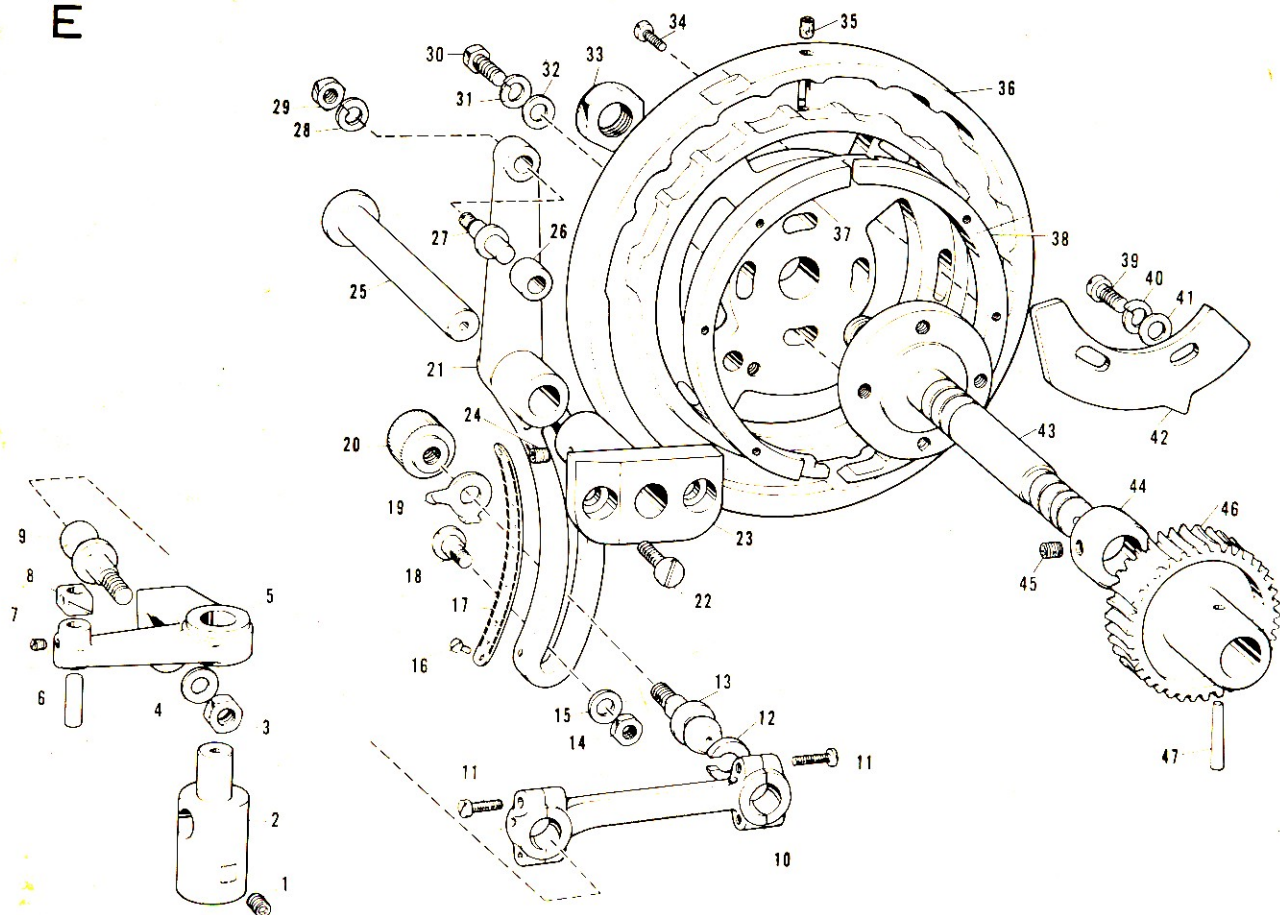
DO LEVANTADOR DE CAPACITOR

D



Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.
D-1	Stop Ring	1	048120-1-42		D-20	Joint	1	142433-2-01	
D-2	Washer	1	115007-0-02		D-21	Stud Screw	1	143988-0-02	
D-3	Spring	1	141981-0-01		D-22	Washer	1	118735-0-02	
D-4	Safety Lever	1	141980-0-01		D-23	Spring Washer	1	028770-2-42	
D-5	Drive Connecting Lever Shaft	1	141979-0-01		D-24	Nut	1	021770-1-03	
D-6	Screw	1	014760-6-22		D-25	Drive Lever Shaft	1	141985-0-01	
D-7	Drive Connecting Lever Pawl	1	141978-0-01		D-26	Clutch Actuating Lever	1	141984-0-01	
D-8	Drive Connecting Lever	1	141977-0-01		D-27	Spring	1	141986-0-01	
D-9	Screw	1	009771-4-12		D-28	Set Collar	1	117671-0-02	
D-10	Washer	1	115007-0-02		D-29	Screw	2	100251-0-01	
D-11	Stop Ring	1	048120-1-42		D-30	Bolt	1	017771-4-12	
D-12	Set Pin	1	141834-0-01		D-31	Spring Washer	1	028770-2-42	
D-13	Stud Screw	1	115389-0-02		D-32	Washer	1	025770-2-32	
D-14	Joint	1	142433-0-01		D-33	Nut	1	021760-2-02	
D-15	Nut	1	021760-2-02		D-34	Clutch Actuating Lever Stopper	1	141988-0-01	
D-16	Drive Connecting Bar	1	141983-0-01		D-35	Drive Connector	1	142270-0-01	
D-17	Nut	2	021760-2-02	141982-0-01	D-36	Stud Screw fo Chain	1	141893-0-01	
D-18	Washer	1	143190-0-01		D-37	Chain	1	106812-0-01	
D-19	Nut	1	021760-2-02						

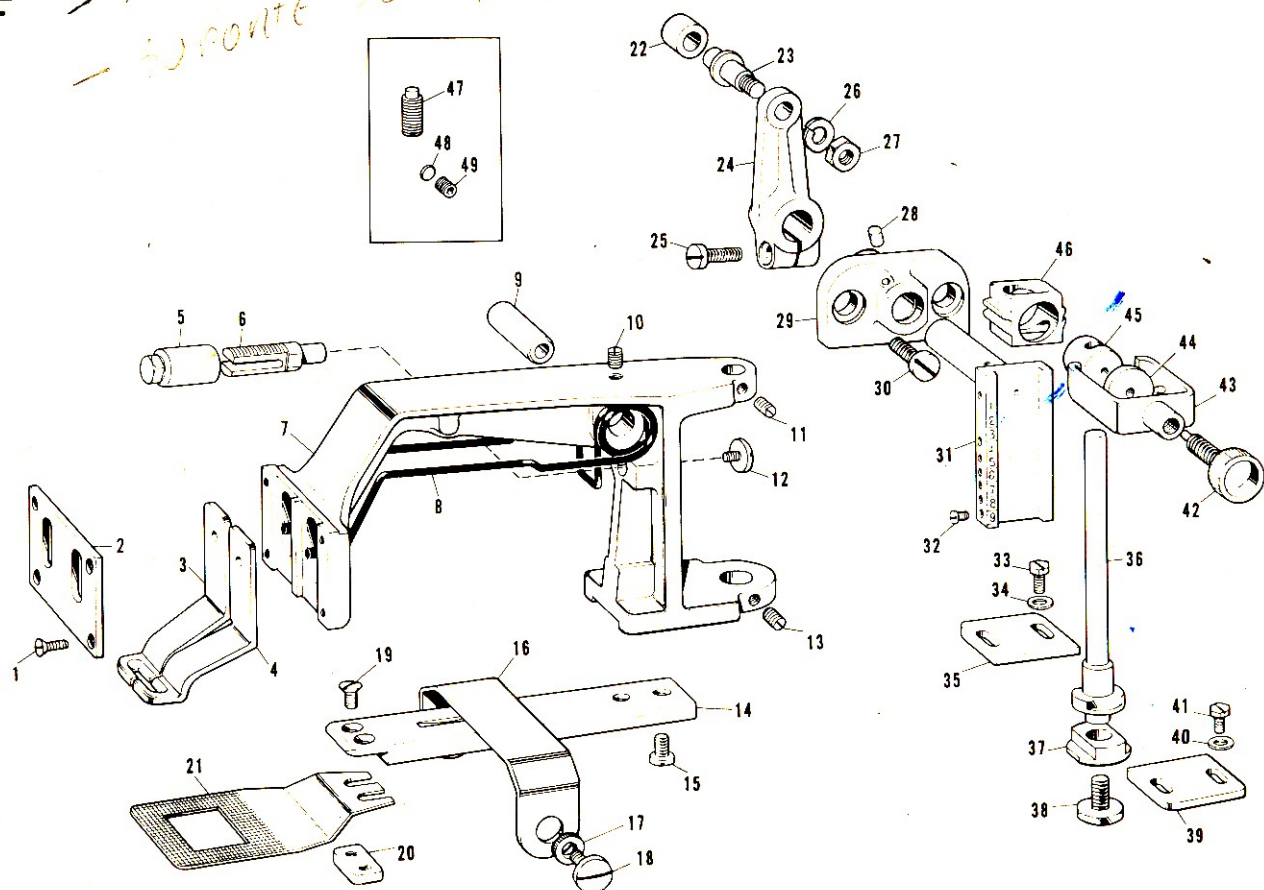
DO MOVIMENTO DO E-ENTRADO
DO COMPRIMENTO DO PONTO



Ref. No	Name of part	Q'ty	Parts No.	Assembly No.	Ref. No	Name of parts	Q'ty	Parts No.	Assembly No.
E-1	Screw	1	014760-6-22		E-25	Tack Length Feed Shaft	1	141826-0-01	
E-2	Tack Length Regulator Lever Stud	1	141835-0-01		E-26	Roller	1		
E-3	Nut	1	105812-0-02		E-27	Roller Stud	1		
E-4	Washer	1	025080-1-32		E-28	Washer	1	028060-2-42	
E-5	Tack Length Regulator Lever	1	141833-0-01		E-29	Nut	1	021760-2-02	
E-6	Set pin	1	141834-0-01		E-30	Bolt	4	017782-0-12	
E-7	Screw	1	013680-6-12		E-31	Spring Washer	4	028770-2-42	
E-8	Side Block	1	142211-0-01		E-32	Washer	4	025770-2-32	
E-9	Ball Stud	1	E-9-9-9		E-33	Nut	1	105844-0-03	
E-10	Tack Legth Regulator Rod	1	E-10-10		E-34	Screw	6	009711-4-12	
E-11	Screw	4	009681-4-14	147181-0-01	E-35	Felt	1	107149-0-01	
E-12	Washer	1	147164-0-00		E-36	Feed Cam	1		
E-13	Ball Stud	1	E-13-13		E-37	Knife Cam B	1		
E-14	Nut	1	021780-2-02		E-38	Knife Cam A	1		
E-15	Wather	1	025770-2-32		E-39	Screw	2	009781-4-12	
E-16	Screw	2	101275-0-04		E-40	Spring Washer	2	028770-2-42	
E-17	Tack Length Indicator	1	142122-0-01		E-41	Washer	2	025770-2-32	
E-18	Stud Screw	1	115389-0-02		E-42	Clutch Stopper Cam	1		
E-19	Tack Length Indicator Plate	1	144473-0-01		E-43	Worm Wheel Shaft	1	141815-0-01	
E-20	Thumb Screw	1	141831-0-01		E-44	Set Collar	1	141816-0-01	
E-21	Tack Length Regulator Lever	1	147167-0-01		E-45	Screw	2	014770-6-22	
E-22	Screw	2	009821-6-12		E-46	Worm Wheel	1		
E-23	Tack Length Feed Bracket	1	141827-0-01		E-47	Taper Pin	1	147111-0-01	
E-24	Screw	1	014760-6-22						

F

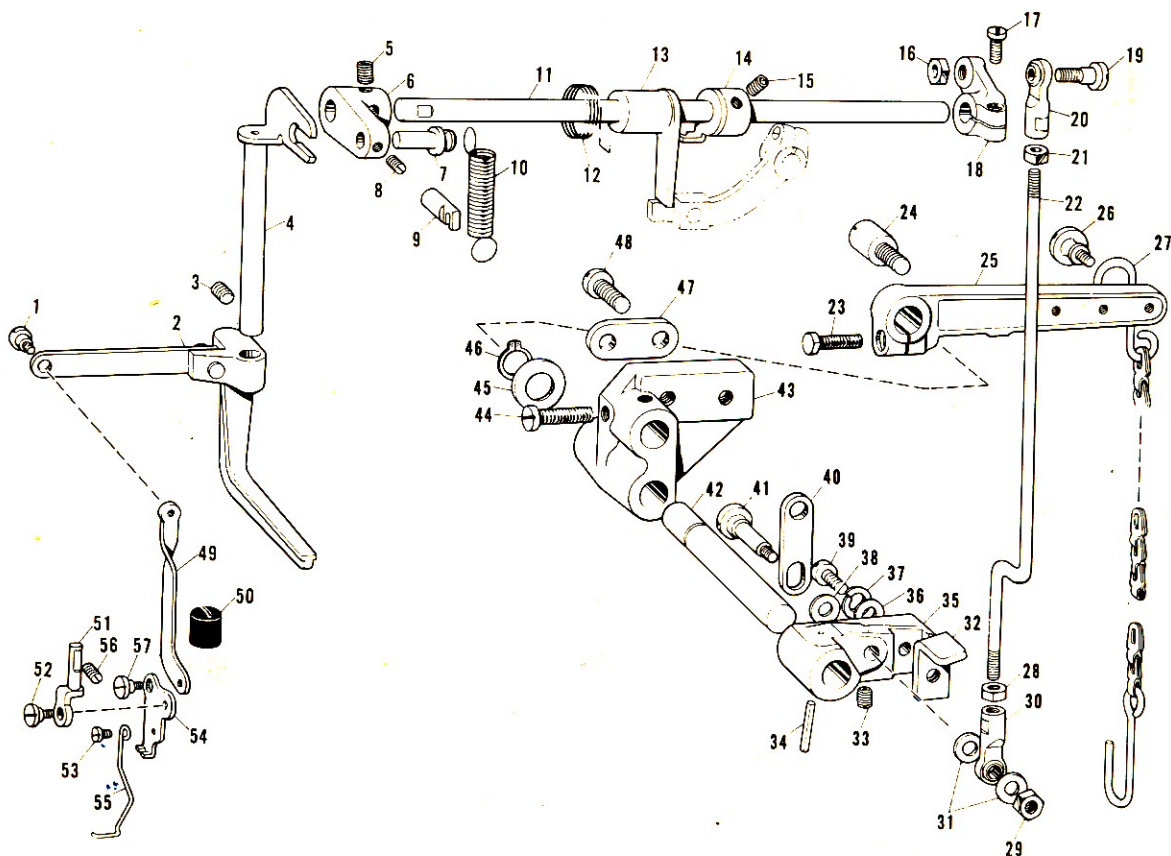
- SUPORTE DO CALÇADOR
- SUPORTE DO TRANSPORTADOR



Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.
F-1	Screw	4	107038-0-01		F-26	Washer	1	028060-2-42	
F-2	Work Clamp Guide Plate	1	141849-0-01		F-27	Nut	1	021760-2-02	
F-3	Work Clamp (Left)	1			F-28	Felt	1	107149-0-01	
F-4	Work Clamp (Right)	1			F-29	Tack Width Feed Lever Bracket	1	141844-0-01	
F-5	Nut	1	144664-0-01		F-30	Screw	2	009821-6-12	
F-6	Adjusting Screw for Work Clamp	1	144463-0-01		F-31	Tack Width Regulator Lever	1	141838-0-01	
F-7	Presser Arm	1			F-32	Screw	1	403865-0-01	
F-8	Work Clamp Spring	1	141850-0-01		F-33	Bolt	2	117363-0-01	
F-9	Shaft	1	141851-0-01		F-34	Washer	2	113431-0-02	
F-10	Screw	1	100062-0-03		F-35	Roller Stud Guide Plate	1	141858-0-01	
F-11	Screw	1	013760-8-12		F-36	Feed Regulator Post	1	141855-0-01	
F-12	Screw	1	105156-0-03		F-37	Roller Stud	1	141856-0-01	
F-13	Screw	1	100062-0-03		F-38	Screw	1	141857-0-01	
F-14	Feed Plate Carrier	1	141853-0-01		F-39	Roller Stud Guide Plate	1	141858-0-01	
F-15	Screw	2	009761-0-12		F-40	Washer	2	113431-0-01	
F-16	Holder for Feed Plate Carrier	1	144475-0-01		F-41	Bolt	2	117363-0-01	
F-17	Collar	1	143539-0-01		F-42	Adjusting Screw	1	141842-0-01	
F-18	Screw	2	141860-0-01		F-43	Hinge Block Shaft	1	141840-0-01	
F-19	Screw	2	145045-0-01		F-44	Washer	1	141843-0-01	
F-20	Feed Plate Supporter	1	142217-0-01		F-45	Shaft	1	141841-0-00	
F-21	Feed Plate	1			F-46	Tack Width Adjuster	1	141839-0-01	
F-22	Roller	1			F-47	Presser Arm Stopper Screw	1	144885-0-01	
F-23	Roller Stud	1			F-48	Washer	1	107793-0-00	
F-24	Tack Width Feed Lever	1	141837-0-01		F-49	Screw	1	013760-8-12	
F-25	Screw	1	106764-0-01						

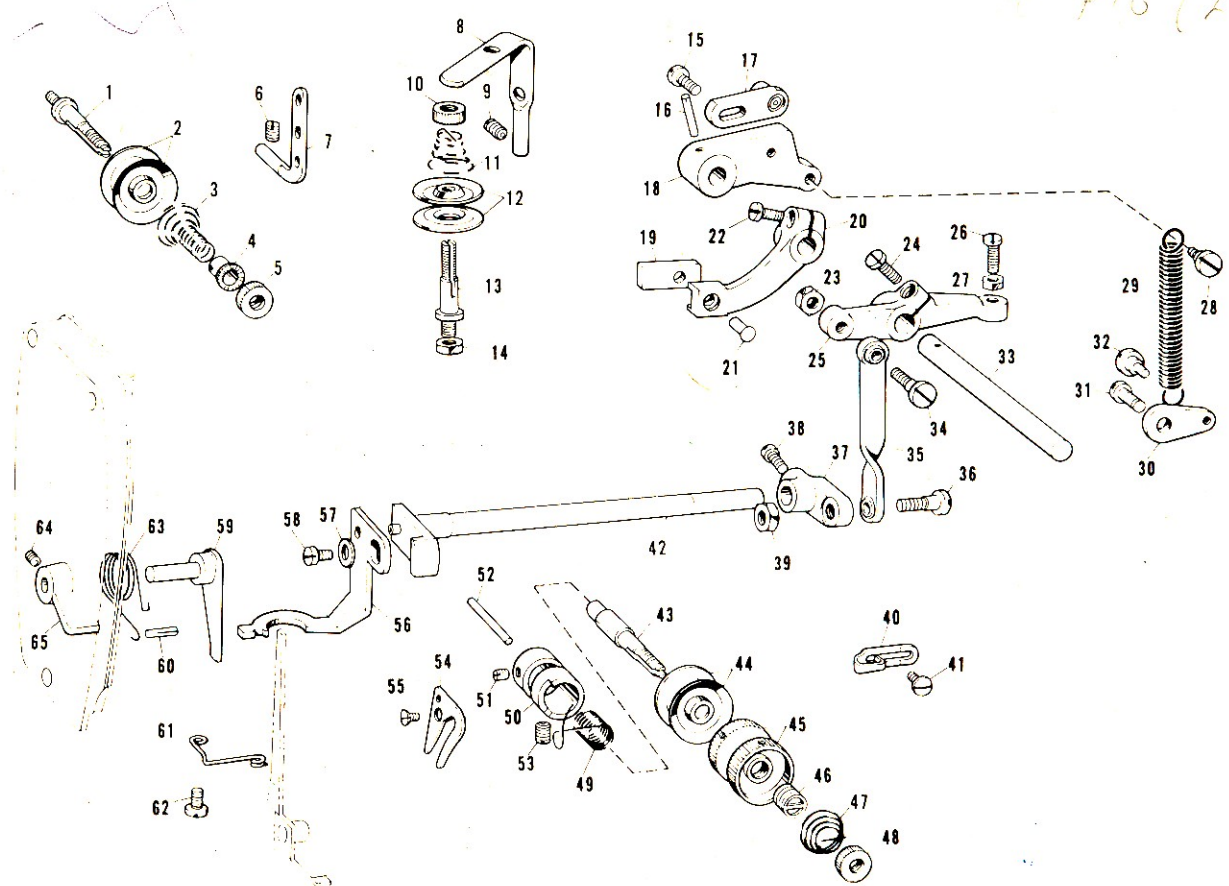
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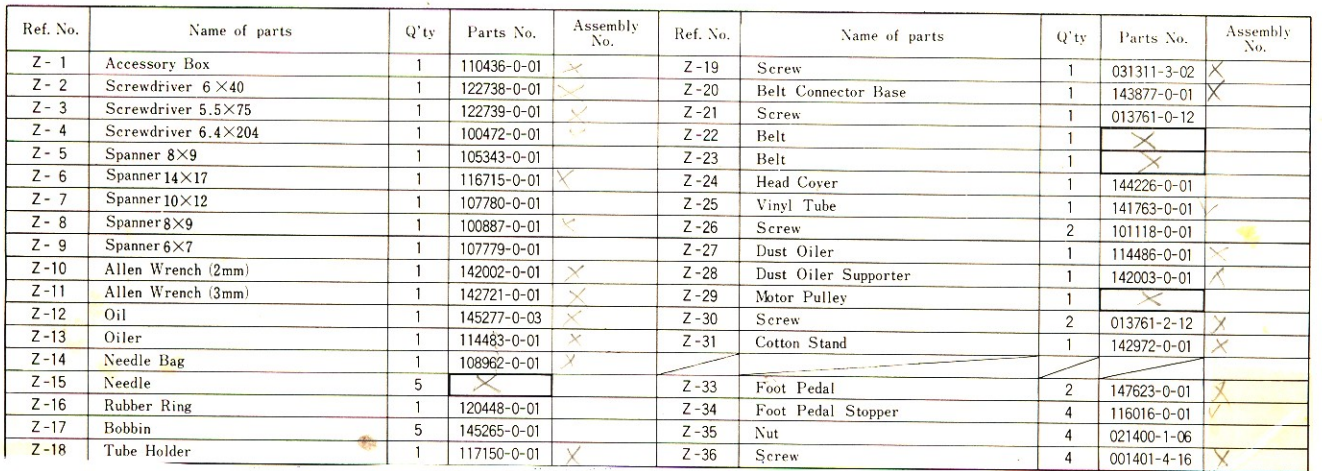
Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.
H-1	Stud Screw	1	141927-0-01		H-30	Ball Joint	1	141492-0-01	
H-2	Work Clamp Lifter Holder	1	141904-0-01	X	H-31	Washer	2	025770-2-32	
H-3	Screw	1	014770-6-22		H-32	Lifting Lever Arm Pawl	1	141882-0-01	
H-4	Work Clamp Lifter	1	141903-0-01		H-33	Screw	1	013710-7-12	
H-5	Screw	2	014760-6-22		H-34	Spring Pin	1	047502-2-42	
H-6	Lifting Arm (Front)	1	141900-0-01		H-35	Lifting Lever Arm	1	141881-0-01	
H-7	Stud Pin	1	141901-0-01		H-36	Washer	1	025770-2-32	
H-8	Screw	1	013680-6-12		H-37	Spring Washer	1	028770-2-42	
H-9	Spring Hook	1	142009-0-01		H-38	Washer	1	025770-2-32	
H-10	Spring	1	141902-0-01		H-39	Screw	1	009771-4-12	X
H-11	Work Clamp Lifting Shaft	1	141899-0-01		H-40	Connecting Plate	1	141888-0-01	
H-12	Spring	1	141909-0-01		H-41	Stud Screw	1	141889-0-01	
H-13	Nipper Operating Lever	1	141907-0-01		H-42	Lifting Lever Shaft	1	141883-0-01	
H-14	Collar	1	141908-0-01		H-43	Lifting Lever Bracket	1	141890-0-01	
H-15	Screw	2	014770-6-22		H-44	Screw	1	009772-0-12	
H-16	Nut	1	021780-3-02		H-45	Washer	1	115007-0-02	
H-17	Screw	1	009711-4-12		H-46	Stop Ring	1	048120-1-42	
H-18	Lifting Arm (Reaf)	1	141897-0-01		H-47	Washer	1	141891-0-01	
H-19	Screw	1	141898-0-01		H-48	Screw	2	009822-0-12	X
H-20	Ball Joint	1	141492-0-01		H-49	Thread Wiper Connecting Plate	1	141929-0-01	
H-21	Nut	1	021760-2-02		H-50	Oil Cap	1	141931-0-01	X
H-22	Connecting Bar	1	141896-0-01		H-51	Thread Wiper Supporter	1	141925-0-01	
H-23	Bolt	1	017761-6-12		H-52	Stud Screw	1	141927-0-01	
H-24	Stopper for Lifting Lever	1	141894-0-01		H-53	Screw	1	009670-5-14	X
H-25	Work Clamp Lifter	1	141892-0-01	X	H-54	Thread Wiper Set Plate (A)	1	141926-0-01	
H-26	Stud Screw	1	141893-0-01	X	H-55	Thread Wiper (A)	1	141928-0-01	
H-27	Chain	1	105333-0-01	X	H-56	Screw	1	013711-0-12	X
H-28	Nut	1	021760-2-02		H-57	Stud Screw	1	141927-0-01	
H-29	Nut	1	021780-2-02						

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DE FIO (LINHA)



Ref. No.	Name of parts	Q'ty	Parts No.	Assembly No.	Ref. No.	Name of parts	Q'ty	parts No.	Assembly No.
I-1	Sub Tension Stud	1	113740-0-01		I-34	Screw	1	141898-0-01	
I-2	Tension Disc	2	145446-0-01		I-35	Thread Nipper Connecting Plate	1	141918-0-01	
I-3	Sub Tension Spring	1	105278-0-00	X	I-36	Screw	1	141898-0-01	
I-4	Sub Tension Washer	1	144105-0-00		I-37	Thread Nipper Connecting Joint	1	141920-0-01	
I-5	Sub Tension Control Nut	1	105230-0-01		I-38	Screw	1	105163-0-01	
I-6	Screw	1	013711-0-12	X	I-39	Nut	1	021780-3-02	
I-7	Thread Retainer	1	141989-0-01		I-40	Arm Thread Guide Upper	1	113316-0-01	
I-8	Thread Guide for Bobbin Winder	1	141759-0-01		I-41	Screw	1	112751-0-01	
I-9	Screw	1	013710-7-12		I-42	Thread Nipper Connections Shaft	1	141922-0-01	
I-10	Tension Control Nut	1	100136-0-01		I-43	Tension Stud	1	147642-0-01	
I-11	Tension Spring	1	104525-0-01		I-44	Tension Disc	2	145446-0-01	
I-12	Tension Disc	2	145446-0-01	141758-0-01	I-45	Tension Release Adjusting Knob	2	117487-0-01	
I-13	Tension Stud	1	145273-0-01		I-46	Tension Release Adjusting Screw	1	117488-0-01	
I-14	Nut	1	021780-2-02		I-47	Tension Spring	1	104525-0-01	
I-15	Screw	1	106396-0-02	X	I-48	Tension Control Nut	1	100136-0-01	
I-16	Spring Pin	1	047301-8-42		I-49	Thread Take-up Spring	1		
I-17	Thread Nipper Lever Roller	1	141912-0-01		I-50	Tension Bracket	1	115593-0-01	
I-18	Thread Nipper Lever	1	145705-0-01		I-51	Screw	1	106449-0-01	
I-19	Thread Nipper Adjusting Lever Pawl	1	141916-0-01		I-52	Tension Release Pin	1	147643-0-01	
I-20	Thread Nipper Adjusting Lever	1	141916-0-01		I-53	Screw	1	013760-7-12	X
I-21	Pin	1	021780-2-02	142219-0-01	I-54	Thread Guide Plate	1	141993-0-01	
I-22	Screw	1	009711-4-12		I-55	Screw	1	108960-0-03	
I-23	Nut	1	021780-2-02		I-56	Thread Nipper Fastening Plate	1	141923-0-01	
I-24	Screw	1	009712-0-12	X	I-57	Washer	1	113431-0-02	
I-25	Thread Nipper Connecting Lever	1	021710-2-02		I-58	Screw	1	106396-0-02	X
I-26	Screw	1	110171-0-02		I-59	Tension Release Lever	1	141996-0-01	
I-27	Nut	1	115570-0-01		I-60	Pin	1	120034-0-01	X
I-28	Stud Screw	1	115558-0-01		I-61	Arm Thread Guide Lower	1	147316-0-01	
I-29	Spring	1	009761-2-12	X	I-62	Screw	1	009680-8-14	X
I-30	Adjusting Plate	1	110171-0-02		I-63	Spring	1	141997-0-01	
I-31	Screw	1	147253-0-01	X	I-64	Screw	1	014680-6-22	
I-32	Stud Screw	1			I-65	Nipper Operating Lever	1	141995-0-01	
I-33	Thread Nipper Lever Shaft	1							

Accessories:



This diagram shows an exploded view of a mechanical assembly. The components are numbered as follows: 1. A small circular pin or bolt. 2. A small circular pin or bolt. 3. A small circular pin or bolt. 4. A rectangular plate with rounded corners. 5. A small circular pin or bolt. 6. A small circular pin or bolt. 7. A small circular pin or bolt. 8. A small circular pin or bolt. The diagram illustrates the relative positions and assembly sequence of these parts.

Ref. No.	Name of Parts	Q'ty	Parts No.	Assembly No.
a- 1	Screw	2	009670-5-14	148820-0-01
a- 2	Screw	2	102538-0-07	
a- 3	Face Plate Hinge Assembly	1	146266-0-01.	
a- 4	Eye Guard	1	149587-0-01	
a- 5	Nut	2	021670-2-03	
a- 6	Screw	1	009670-5-14	150404-0-01
a- 7	Thread Wiper Set Screw	1	141926-0-01	
a- 8	Thread Wiper	1	150405-0-01	
a- 9	Thread Wiper	1	148837-0-01	

DIFFERENT PARTS LIST

Ref. No.	Sub-class	1	2	3	4	5	6	7	8	9
B-5	Needle bar			141776001						
B-15	Needle	105771016	105771011	105771016	105771011		144238001		141776001	
B-38	Worm	141813001	142223001			141813001		145646021	10571016	
B-86	Shuttle driver			141797001				142223001	141813001	142223001
B-87	Screw		141799001							141797001
B-88	Shuttle Driver Spring			141798001						141799001
B-86~88	Shuttle driver assembly			141796001						141798001
B-90	Shuttle Race Thread Guide			147575001						141796001
B-100	Shuttle Driver						147576001			147575001
E-26	Roller			147187001			144255001			147187001
E-27	Roller stud			141824001			144256001			141824001
E-36	Feed cam	141818001	142220001		142383001		144490001	144467001	144490001	144492001
E-37	Knife cam B	141821001	142222001		142385001		141821001	142222001	141821001	142222001
E-38	Knife cam A	141820001	142221001		142384001		145048001	145049001	141820001	142221001
E-42	Clutch stopper cam	141819001	142228001			141819001		142228001	141819001	142228001
E-34~42	Feed cam assembly	141817001	142381001		142382001		144468001	144466001	144489001	144491001
E-46	Worm wheel	141814001	142224001			141814001		142224001	141814001	142224001
F-3	Work clamp (left)	141848001	142389001	142226001	142389001	142226001	144462001	144482001	144601001	141848001
F-4	Work clamp (right)	141847001	142388001	142225001	142388001	142250001	144461001	14481001	144600001	141847001
F-7	Presser arm	14632001					144480001			146320001
F-21	Feed plate	147146001		147147001			147309001			147146001
F-22	Roller			147187001			144255001			147187001
F-23	Roller stud			141824001			144256001			141824001
F-47	Presser arm stopper screw						144485001			
F-48	Washer						107793000			
F-49	Screw						013760812			
G-4	Needle hole plate	147582001	147581001	147582001	147581001		147583001		147582001	
G-9	Thread retainer		147585001				147586001		147585001	
G-14	Knife guide		147589001				147590001		147589001	
G-3~16	Needle Plate Assembly	147578001	147577001	147578001	147577001		147579001		147601001	
G-24	Knife Bar Pulling Spring		142565001				144589001		142565001	
I-49	Thread take-up spring		100399001				144588001		100399001	
I-43~51	Tension Control Assembly		147644001				147645001		147644001	
Z-15	Needle	105771016	105771011	105771016	105771011		145646021		105771016	
Z-22	Belt					147660000				
						147661000				
Z-23	Belt					147655000				
						147657000				
Z-29	Motor pulley					144645001				
						144641001				

INDEX

Parts. No.	Ref. No.	Remark	Parts. No.	Ref. No.	Remark	Parts. No.	Ref. No.	Remark	Parts. No.	Ref. No.	Remark
001401-4-16	Z-36		017781-4-12	C-91		100250-0-01	B-26		115007-0-02	D-2	
009670-4-14	B-12		017782-0-12	C-44		100251-0-01	D-29		"	D-10	
009670-5-14	H-53		"	C-58		100253-0-01	B-18		"	H-45	
009670-6-12	A-8		"	E-30		100399-0-01	I-49		115389-0-02	D-13	
009680-6-12	A-38		018103-0-20	C-85		100472-0-01	Z-4		"	E-18	
"	B-57		021060-1-02	A-72		100486-0-00	A-26		115404-0-01	B-11	
009680-7-13	A-86		021400-1-06	Z-35		"	A-80		115434-0-01	B-67	
009680-8-14	I-62		021680-2-02	G-12		100598-0-01	B-43		115445-0-01	G-54	
009681-2-10	B-62		021710-2-02	C-25		100887-0-01	Z-8		115488-0-01	G-53	
009661-4-14	E-11		"	G-35		101015-0-01	A-83		115489-0-01	B-13	
009711-2-12	C-79		"	G-57		101118-0-01	Z-26		115515-0-01	B-42	
009711-4-12	A-1		"	I-27		101275-0-04	E-16		115544-0-01	C-20	
"	B-84		021760-2-02	D-15		101706-0-01	B-25		115546-0-01	C-23	
"	E-34		"	D-17		102626-0-05	B-14		115547-0-01	C-47	
"	H-17		"	D-19		102731-0-22	A-24		115549-0-01	C-55	
"	I-24		"	D-33		"	A-79		115550-0-01	C-53	
009712-0-12	I-26		"	E-29		103317-0-01	A-48		115551-0-01	C-51	
009761-0-12	C-69		"	F-27		104212-0-01	A-52		115552-0-01	C-48	
"	F-15		"	G-48		104450-0-01	A-60		115558-0-01	C-28	
009761-2-12	C-26		"	H-21		104525-0-01	I-11		"	I-30	
"	I-31		"	H-28		"	I-47		115570-0-01	I-29	
009761-4-12	A-33		021770-1-03	D-24		104649-0-01	I-51		115593-0-01	I-50	
"	C-73		021780-2-02	E-14		104689-0-01	B-54		115663-0-01	G-41	
"	G-27		"	H-29		105156-0-03	F-12		116016-0-01	Z-34	
009771-0-12	C-70		"	I-14		105163-0-01	I-38		116231-0-01	A-77	
009771-4-12	D-9		"	I-23		105230-0-01	I-5		116715-0-01	Z-6	
"	H-39		021780-3-02	H-16		105278-0-00	I-4		116827-0-01	B-94	
009772-0-12	H-44		"	I-39		105333-0-01	H-27		116828-0-01	B-99	
009781-4-12	B-3		021860-2-02	C-49					116967-0-00	A-13	
"	E-39		025060-2-32	A-65		105343-0-01	Z-5		116968-0-00	A-11	
009821-6-12	E-22		"	G-52		105771-0-11	B-15, Z-15		"	A-12	
"	F-30		025060-3-32	A-71		105771-0-16	B-15, Z-15		"	A-36	
009822-0-12	H-48		025080-1-32	E-4		105812-0-01	G-46		116969-0-00	A-18	
009841-6-12	A-63		025100-1-32	C-32		105812-0-02	E-3		117021-0-00	A-7	
003680-6-12	C-87		"	C-41		105831-0-01	B-97		117150-0-01	A-9	
"	E-7		"	C-52		105832-0-00	B-96		"	Z-18	
"	H-8		025710-1-32	G-58		105844-0-03	E-33		117348-0-01	C-18	
013689-4-12	A-42		025770-2-32	C-46		105955-0-01	G-6		117363-0-01	F-33	
013710-5-12	G-38		"	C-60		105965-0-02	G-10		"	F-41	
013710-7-12	H-33		"	C-93		105970-0-01	G-3		"	G-23	
"	I-9		"	D-32		106396-0-02	G-17		"	G-59	
013711-0-12	H-56		"	E-15		"	I-15		117487-0-01	I-45	
"	I-6		"	E-32		"	I-58		117488-0-01	I-46	
013760-6-12	G-49		"	E-41		106629-0-01	G-1		117671-0-02	D-28	
013760-7-12	I-53		"	G-29		106764-0-01	B-47		117934-0-01	A-6	
013760-8-12	B-73		"	H-31		"	F-25		"	A-19	
"	F-11		"	H-36		106812-0-01	D-37		117936-0-01	B-1	
"	F-49		"	H-38		107038-0-01	F-1		118244-0-01	G-60	
"	G-34		028050-2-42	C-24		107053-0-01	B-31		118735-0-02	D-22	
013761-0-12	A-66		"	G-22		107149-0-01	B-50		118768-0-00	A-14	
"	B-41		"	G-36		"	B-83		118768-0-01	B-58	
"	B-53		"	G-56		"	C-29		118955-0-00	A-15	
"	Z-21		028060-2-42	E-28		"	C-31		120034-0-01	I-60	
013761-2-12	B-21		"	F-26		"	C-74		120448-0-01	A-56	
"	B-27		028770-2-42	C-45		"	E-35		"	Z-16	
"	B-33		"	C-59		"	F-28		122738-0-01	Z-2	
"	B-66		"	C-92		"	G-40		122739-0-01	Z-3	
"	Z-30		"	D-23		107153-0-01	C-37		140024-0-01	G-11	
013761-4-12	C-4		"	D-31		107779-0-03	Z-9		140392-0-01	A-4	
013770-6-12	B-23		"	E-31		107780-0-01	Z-7		"	A-73	
013780-7-10	B-22		"	E-40		107793-0-01	F-48		"	A-75	
014680-6-22	B-55		"	H-37		108805-0-01	A-81		140399-0-01	C-43	
"	B-70		031311-3-02	Z-19		108960-0-03	I-55		140557-0-01	A-41	
"	I-64		046302-5-20	C-63		108962-0-01	Z-14		140560-0-01	B-29	
014760-6-22	B-7		047301-8-42	I-16		109184-0-01	C-11		"	B-35	
"	B-37		047502-2-42	H-34		110171-0-02	C-27		141281-0-01	C-13	
"	B-80		048040-3-42	C-86		"	I-28		141282-0-01	C-7	
"	C-35		048050-3-42	G-28		"	I-32		141283-0-01	C-16	
"	C-62		048070-3-42	C-38		"	C-89		141284-0-00	C-14	
"	C-78		048100-1-42	C-33		110436-0-01	Z-1		141285-0-01	C-15	
"	C-80		"	C-40		110495-0-03	B-77		141289-0-01	C-17	
"	C-82		048120-1-42	D-1		110686-0-01	B-49		141289-0-01	C-19	
"	D-6		"	D-11		111942-0-01	A-49		141492-0-01	H-20	
"	E-1		"	H-46		111943-0-01	A-50		"	H-30	
"	E-24		100032-0-03	G-2		112750-0-00	B-60		141535-0-01	C-67	
"	G-25		100062-0-03	F-10		112751-0-01	I-41		141742-0-01	A-17	
"	G-39		"	F-13		112751-0-03	A-21		141744-0-01	A-16	
"	H-5		100064-0-05	B-93		113316-0-01	I-40		"	A-34	
014770-6-22	B-72		100075-0-04	C-50		113431-0-01	F-40		141745-0-01	A-31	
"	B-76		100080-0-01	A-51		113431-0-02	F-34		141748-0-01	A-28	
"	C-10		100105-0-04	B-89		"	G-21		141751-0-01	A-23	
"	E-45		"	G-16		"	I-57		141752-0-01	A-43	
"	H-3		100136-0-01	I-10		113740-0-01	I-1		141753-0-01	A-37	
"	H-15		"	I-48		114240-0-00	A-29		141757-0-01	A-47	
017761-6-12	H-23		100191-0-04	B-87		114483-0-01	Z-13		141759-0-01	I-8	
017771-4-12	D-30		100242-0-03	A-32		114486-0-01	Z-27		141760-0-00	A-85	

Parts. No.	Ref. No.	Remark	Parts. No.	Ref. No.	Remark	Parts. No.	Ref. No.	Remark	Parts. No.	Ref. No.	Remark
141761-0-01	A-68		141883-0-01	H-42		142088-0-01	B-95		144588-0-01	I-49	
141762-0-01	A-82		141884-0-01	G-51		142122-0-01	E-17		144589-0-01	G-24	
141763-0-01	Z-25		141886-0-01	G-47		142210-0-01	B-69		144600-0-01	F-4	
141765-0-01	B-32		141887-0-01	G-50		142211-0-01	B-6		144601-0-01	F-3	
141766-0-01	B-45		141888-0-01	H-40		~	E-8		144641-0-01	Z-29	
141770-0-01	B-48		141889-0-01	H-41		~	G-31		144645-0-01	~	
141771-0-01	B-34		141890-0-01	H-43		142214-0-01	C-36		145045-0-01	F-19	
141772-0-01	B-28		141891-0-01	H-47		142217-0-01	F-20		145048-0-01	E-38	
141773-0-00	B-24		141882-0-01	H-25		142220-0-01	E-36		145049-0-01	~	
141775-0-01	B-8		141893-0-01	D-36		142221-0-01	E-38		145265-0-01	B-98	
141776-0-01	B-5		~	H-26		142222-0-01	E-37		~	Z-17	
141777-0-01	B-2		141894-0-01	H-24		142223-0-01	B-38		145273-0-01	I-13	
141778-0-01	B-9		141896-0-01	H-22		142224-0-01	E-46		145274-0-01	A-45	
141779-0-01	B-10		141897-0-01	H-18		142225-0-01	F-4		145277-0-03	Z-12	
141780-0-00	B-4		141898-0-01	H-19		142226-0-01	F-3		145446-0-01	I-2	
141781-0-01	C-8		~	I-34		142228-0-01	F-42		~	I-12	
141782-0-01	C-6		~	I-36		142553-0-01	A-10		~	I-44	
141783-0-01	C-3		141899-0-01	H-11		142270-0-01	D-35		145646-0-01	B-15, Z-15	
141784-0-01	C-2		141900-0-01	H-6		142274-0-01	A-5		145705-0-01	I-18	
141785-0-01	B-51		141901-0-01	H-7		~	B-40		145978-0-01	G-34	
141786-0-01	B-65		141902-0-01	H-10		~	B-64		146255-0-00	A-69	
141787-0-01	B-61		141903-0-01	H-4		142293-0-01	B-59		146332-0-01	F-77	
141788-0-01	B-52		141904-0-01	H-2		142379-0-01	B-56		146984-0-01	A-46	
141789-0-01	B-63		141907-0-01	H-13		142381-0-01	E-34~ E-42		147111-0-01	C-9	
141793-0-01	B-71		141908-0-01	H-14		142382-0-01	E-34~ E-42		~	E-47	
141794-0-01	B-68		141909-0-01	H-12		142383-0-01	E-36		147142-0-01	B-75	
141796-0-01	B-86~ B-82		141912-0-01	I-17		142384-0-01	E-38		147146-0-01	F-21	
141797-0-01	B-86		141916-0-01	I-19		142385-0-01	E-37		147147-0-01	~	
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141799-0-01	B-87		141918-0-01	I-35		142389-0-01	F-3		147158-0-01	A-39	
141801-0-01	B-74		141920-0-01	I-37		142422-0-01	A-62		147159-0-01	A-35	
141805-0-01	B-91		141922-0-01	I-42		142433-0-01	D-14		147164-0-00	E-12	
141806-0-01	B-79		141923-0-01	I-56		~	D-20		147167-0-01	E-21	
141808-0-01	B-85		141925-0-01	H-51		142565-0-01	G-24		147187-0-01	E-26	
141812-0-01	A-87		141926-0-01	H-54		142566-0-01	A-44		~	F-22	
141813-0-01	B-38		141927-0-01	H-1		142667-0-01	C-21		147207-0-00	A-40	
141814-0-01	E-46		~	H-52		142721-0-01	Z-11		147253-0-01	I-33	
141815-0-01	E-43		~	H-57		142751-0-01	C-12		147256-0-00	A-25	
141816-0-01	E-44		141928-0-01	H-55		142792-0-01	B-78		147266-0-01	G-55	
141817-0-01	E-34~ E-42		141929-0-01	H-49		142794-0-01	B-39		147268-0-00	A-88	
141818-0-01	E-36		141931-0-01	H-50		142972-0-01	Z-31		147309-0-01	F-21	
141819-0-01	E-42		141950-0-01	C-42		143190-0-01	D-18		147316-0-01	I-61	
141820-0-01	E-38		141951-0-01	C-56		143231-0-01	A-76		147575-0-01	B-90	
141821-0-01	E-37		141953-0-01	C-39		143444-0-01	B-44		147576-0-01	~	
141824-0-01	E-27		~	C-57		143448-0-00	C-1		147577-0-01	G-3~ G-16	
~	F-23		141957-0-01	C-75		~	C-5		147578-0-01	~	
141826-0-01	E-25		141958-0-01	C-81		143449-0-01	A-3		147579-0-01	~	
141827-0-01	E-23		141959-0-01	C-66		143450-0-01	A-84		147580-0-01	G-5	
141831-0-01	E-20		141960-0-01	C-65		143539-0-01	F-17		147581-0-01	G-4	
141833-0-01	E-5		141961-0-01	C-64		143556-0-01	B-30		147582-0-01	~	
141834-0-01	D-12		141962-0-01	C-61		143557-0-01	A-20		147583-0-01	~	
~	E-6		141963-0-01	C-77		143706-0-00	G-33		147585-0-01	G-9	
141835-0-01	E-2		141964-0-01	C-76		143858-0-01	B-46		147586-0-01	~	
141837-0-01	E-24		141965-0-01	C-83		143877-0-01	Z-20		147587-0-01	G-8	
141838-0-01	F-31		141966-0-01	C-84		143941-0-01	C-22		147588-0-01	G-13	
141839-0-01	F-46		141970-0-01	C-72		143988-0-01	D-21		147589-0-01	G-14	
141840-0-01	F-43		141972-0-01	C-88		144105-0-00	I-4		147590-0-01	~	
141841-0-00	F-45		141973-0-01	C-90		144190-0-00	B-92		147591-0-01	G-15	
141842-0-01	F-42		141974-0-01	C-94		144226-0-01	Z-24		147597-0-01	G-7	
141843-0-01	F-44		141975-0-01	C-68		144238-0-01	B-5		147601-0-01	G-3~ G-16	
141844-0-01	F-29		141977-0-01	D-8		144255-0-01	E-26		147623-0-01	Z-33	
141847-0-01	F-4		141978-0-01	D-7		~	F-22		147639-0-01	C-54	
141848-0-01	F-3		141979-0-01	D-5		144256-0-01	E-27		147642-0-01	I-43	
141849-0-01	F-2		141980-0-01	D-4		~	F-23		147643-0-01	I-52	
141850-0-01	F-8		141981-0-01	D-3		144427-0-01	C-30		147644-0-01	I-43~ I-51	
141851-0-01	F-9		141983-0-01	D-16		144461-0-01	F-4		147645-0-01	~	
141853-0-01	F-14		141984-0-01	D-26		144462-0-01	F-3		147660-0-00	Z-22	
141855-0-01	F-36		141985-0-01	D-25		144463-0-01	F-6		147661-0-00	~	
141856-0-01	F-37		141986-0-01	D-27		144464-0-01	F-5		147655-0-01	Z-23	
141857-0-01	F-38		141988-0-01	D-34		144466-0-01	E-34~ E-42		147657-0-01	~	
141858-0-01	F-35		141989-0-01	I-7		144467-0-01	E-36		147667-0-01	A-70	
~	F-39		141993-0-01	I-54		144468-0-01	E-34~ E-42		403865-0-01	F-32	
141860-0-01	F-18		141994-0-01	A-2		144469-0-01	E-36				
141867-0-01	G-37		141995-0-01	I-55		144473-0-01	E-19				
141868-0-01	G-42		141996-0-01	I-59		144475-0-01	F-16				
141869-0-01	G-43		141997-0-01	I-63		144478-0-01	B-100				
141870-0-01	G-32		141999-0-01	A-57		144480-0-01	F-7				
141871-0-01	G-44		142000-0-01	A-67		144481-0-01	F-4				
141872-0-01	G-19		142001-0-01	A-58		144482-0-01	F-3				
141874-0-01	G-20		142002-0-01	Z-10		144485-0-01	F-47				
141875-0-01	G-45		142003-0-01	Z-28		144489-0-01	E-34~ E-42				
141876-0-01	G-18		142005-0-01	A-59		144490-0-01	E-36				
141877-0-01	G-30		142009-0-01	H-9		144491-0-01	E-34~ E-42				
141879-0-01	G-26		142087-0-00	A-27		144492-0-01	E-36				
141881-0-01	H-35		~	A-30		144536-0-01	C-71				
141882-0-01	H-32		~	A-74		144543-0-01	A-64				