


Ishida WM-4000 Preventative Maintenance and Lubrication Guide

Customer: _____
 Contact: _____
 Model: WM-4000
 Serial Number: _____

Inspection Date: _____
 Technician(s): _____
 Cycle Count: _____
 Installation Date: _____



Authorized distributors and their employees can view or download this document from the Rice Lake Weighing Systems distributor site at www.ricelake.com/retail

This WM-4000 Preventative Maintenance Guide is divided into three intervals- **DAILY, 6-MONTH, YEARLY**. The DAILY maintenance is generally the responsibility of the end-user. It is recommended that the servicing technician review these daily maintenance checks with the appropriate end-user, especially if it is evident these checks are not being performed properly.

****Allow 2-3 hours for a 6-MONTH inspection and 4-6 hours for a YEARLY inspection.****

	Sections		Sections		Sections
1	LIFT HEAD	10	FILM TRANSPORT/INSERTION	19	KEYBOARD
2	WRAPPING: FRONT / REAR	11	LIFT DRIVE	20	SAFETY SWITCHES
3	WRAPPING: LEFT / RIGHT	12	LIFT SIZE CHANGE	21	FILE BACK-UP
4	SEAL HEATERS	13	FILM ROLL HOLDERS	22	ADJUSTMENTS, PARTS REPLACED, ETC
5	DISCHARGE PUSHER	14	FILM FEEDER MOVEMENT	23	SAMPLE LABEL
6	INFEED	15	LABEL APPLICATOR	24	REFERENCE DRAWINGS
7	CENTERING UNIT	16	PRINTER		
8	SCALE	17	CAMERA & LIGHTING		
9	FILM FEEDER ASSEMBLIES	18	TOUCHSCREEN DISPLAY		

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- Required materials:**
- Grease: White, Yellow, and Black (see table below for specifications)
 - Disposable brushes, small or cotton swabs (for grease application)
 - Wrench set, metric
 - Socket set, metric (optional)
 - Screwdrivers, assorted
 - Allen wrench set, metric
 - Sandpaper (100 grit)
 - Clean, lint-free rags
 - Compressed Air / Vacuum
 - Isopropyl Alcohol
 - Adhesive remover (for labels)
 - Thermal head cleaning kit
 - Weight set (30 lbs., or Kg equivalent)
 - Key, interlock bypass, 2 pieces
 - Machinist Ruler
 - CF Card (no larger than 128mb) with PCMCIA adapter

Lubrication for WM-4000

Color of grease	RLWS Part Number	Description
(Y) Yellow	77932	General Purpose Lithium Grease (323916) [Shell Alvania Grease "No2"]
(W) White	77933	White Food-Grade Grease (380059) [Sumico White alcom grease "No2"]
(B) Black	77934	Multi-Purpose Grease (371219) [Daizo Nichimori "L-210"]

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	Section	Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check			✓	
						D	6 mo	Y		
1	LIFT HEAD	Loose Screws	Tighten screws- Fingers and Handle				X	X		
		Cleaning	Clean the Lift Head Assembly	Soap & Water		X	X	X		
		Surface friction of Lift Heads -Center (#8), Left (#9), Right (#10)	If the Heads are worn smooth (polished) roughen with sandpaper. Replace worn out or damaged heads or finger assemblies.	Sandpaper (100 grit)	157839 (#8) 157840 (#9) 157841 (#10)			X	X	
		Lift Head Springs -Center (#8), Left (#9), Right (#10)	Replace bent or broken springs that are too weak to raise the heads.		157839 (#8) 157840 (#9) 157841 (#10)			X	X	
		Latch Pin Assembly -Spring (#6)	Replace broken or weak compression spring.		157847 (#6)			X	X	
		Lubrication	Grease all springs, as needed. After working in the grease, wipe off excess.	White Grease				X	X	
2	WRAPPING: FRONT/REAR	Loose Screws	Tighten screws as needed. Listen for odd noises.	TEST mode; Wrapper/Applicator Adjust; 12:Rear Squeeze					X	
		Condition of Rear Wrap Plate	Clean any food, dirt, oil, or label adhesive. If worn smooth (polished) roughen with sandpaper.	Soap & Water Adhesive Remover Sandpaper (100 grit)			X	X		
		Plastic bushings - Leading Roller Mounting Brackets (#18) - Drive Arm Bushings (#10, #11) - Square Shaft Mounts (#2)	Replace bushings if worn out. Note: Roller brackets can be swapped right / left side.		108171 (#2) 89101 (#10) 157949 (#11) 157950 (#18)					X
		Wrap Plate and Roller Shaft alignment	Roller Shaft should be parallel with the fixed Rollers at the exit. Adjust the two drive arms that move the Rear Wrap Plate forward and back: set screws securing shafts.							X
		Roller Shaft condition - Stepped Roller Shaft (#17)	Roller Shaft must be straight - not bent. Replace if necessary.		157898 (#17)			X	X	
		Roller Shaft movement - Shaft Holder (#18)	Roller Shaft must turn freely. Apply grease at plastic mounting brackets - 2 places. Swap left & right brackets or replace worn plastic brackets as needed.	White grease	157950 (#18)			X	X	
		Square mounting shafts	Clean debris and old grease, apply new grease	Black grease						X

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	Section	Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check			✓	
						D	6 mo	Y		
3	WRAPPING: LEFT/RIGHT	Loose screws	Tighten screws as needed. Listen for odd noises.	Test Mode, Wrapper/Applicator Adjust, 11: Right/Left Squeeze				X		
		Linear Bushings	Clean debris and old grease, apply new grease	Yellow grease			X	X		
		Linear Bushings movement - Linear Bearing, front (#19) - Linear Bearing, rear (#20)	Replace if worn out - excessive resistance.		157899 (#19) 157900 (#20)				X	
		Photo sensor - Home Position (#24)	Sensor is located at the center of the "scissor" arms that drive the side folders.	Compressed Air	104239 (#24)				X	
		Condition of Side Wrap Plates	Clean any food, dirt, oil, or label adhesive. If worn smooth (polished) roughen with sandpaper.	Soap and water adhesive remover Sandpaper (100 grit).				X	X	
4	SEAL HEATERS	Heater Guard solenoid	Check smooth operation					X		
		Heater Guard photo sensor	Clean	Compressed Air				X		
		Sealing Heater Rollers - cleaning	Caution rollers are hot . Allow to cool down before cleaning. Remove burnt on film (black) with a Degreaser (ex. Totally Awesome Orange). DO NOT use abrasive cleaning tools that will damage the roller surface.	Damp cloth (Daily) Degreaser (PM)			X	X	X	
		Sealing Heater Rollers - movement - Roller Assy (#29) - Bushing (#25)	Clean or replace		153655 (#29) 153654 (#25)				X	
		Temperature adjustment	Confirm higher and lower temperature adjustment is possible						X	
5	DISCHARGE PUSHER	Loose screws	Tighten screws as needed. Listen for odd noises.	Test Mode, Wrapper/Applicator Adjust, 13: Pusher / Tray Press				X		
		Drive Belts - tension	Right and Left side belts must be balanced					X		
		Square mounting shafts	Clean debris and old grease, apply new grease	Black grease					X	
		Photo sensor - Home position	Clean	Compressed Air					X	

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	Section	Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check			✓
						D	6 mo	Y	
	DISCHARGE PUSHER (cont.)	Discharge Pusher clearance - home position	Confirm the Discharge Pusher does not contact drive gears, etc. at the home position. Listen for noise from contact.					X	
		Black tape - Black Grip Tape, Sheet (#999)	Replace if loose or peeling	Velcro® tape	106949 (#999)		X	X	
		Discharge Pusher - cleaning	Remove labels, food, etc.			X	X	X	
6	INFEED	Loose screws	Tighten screws as needed. Listen for odd noises.	Test Mode, Wrapper/Applicator Adjust, 4: Infeed				X	
		Drive Chains - Chain (#38)	Check for damage, cracks, etc.		157882 (#38)		X	X	
		Infeed Rails	Confirm easy in/out movement. Clean debris and old grease, apply new grease.	Yellow grease				X	
		Photo sensor - Home position (front, left)	Clean. Check for any contact damage.	Compressed Air				X	
7	CENTERING	Centering Shaft	Listen for odd noises. Clean debris and old grease, apply new grease.	Yellow grease			X	X	
		Green Belt assy	Remove, disassemble, clean. Ensure smooth movement.				X	X	
		Green Belt	Clean with soap and water.			X	X	X	
8	SCALE	Check zero and calibration		30 lb. test weights				X	
		Four corner check		5 lb. test weight				X	
		Weighing	Correct weighing	1 lb. test weight		X	X	X	
		Blue Scale Platter - Platter (#25)	Clean with soap and water. No bleach. Replace if color has changed or surface is worn smooth.		157921 (#25)	X	X	X	
		Confirm Label data matches Display						X	
		Check level						X	
9	FILM FEEDER ASSEMBLIES	White Film Feed belts - White Belt (#87)	Check for broken wires, yellowing, worn surface, or other damage	Inspection and test wrapping	157869 (#87)			X	
		Green Film Feed belts - Long Green Belt (#44) - Short Green Belt, Pincher (#43)	Check for polished surface, slipping, meandering, or other damage	Inspection and test wrapping	157883 (#44) 157851 (#43)			X	
		Film Centering: Right and Left sides	Adjust centering. Verify consistency.	System Menu, Wrap Machine.				X	
		Film pieces on belts	Remove pieces. Clean belts with soap and water if needed. DO NOT use alcohol.	Inspection and test wrapping			X	X	

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	Section	Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check			✓
						D	6 mo	Y	
	FILM FEEDER ASSEMBLIES (Cont.)	Film Clamps - 10 places	Ensure all clamps operate properly and provide sufficient grip strength.	Test Mode, Wrapper/Applicator Adjust, 16: Front Clamps, 17: Rear Clamps				X	
		Film Feed Detection "Claw" Sensor - Claw Lever Assy (#63) [F/R, R/L] - Claw Lever Assy (#64) [F/L, R/R] - Photo Sensor (#89)	Verify sensor operation. Remove any film pieces or build up. If worn smooth (polished) roughen with sandpaper.	Compressed Air. Sand Paper (100 grit)	157907 (#63) 157908 (#64) 104239 (#89)		X	X	
10	FILM TRANSPORT (INSERTION PLATES)	Home position for Insertion Plates	Verify clearance at the bottom of the stroke.	Test Mode, Wrapper/Applicator Adjust, 6: Insertion				X	
		Linear Shafts (vertical)	Check for and clean corrosion or rust. Clean debris and old grease, apply new grease.	Yellow grease				X	
		Insertion Plate Drive Motor Rod Ends	Check for smooth movement, no unusual noises, no bent springs. Apply grease as needed.	Yellow grease				X	
		Polished Rollers - Rollers, Right (#21, #101) - Rollers, Left (#18, #251)	Verify one-way, smooth movement. Check for scratches. Remove film pieces and clean with alcohol.	Isopropyl Alcohol	157887 (#21, #18) 157886 (#101, #251)		X	X	
		Photo sensor - Cutter (home), Insertion (home), R (#87) - Insertion (open), Right (#88) - Cutter (home), Insertion (home), L (#78) - Insertion (open), Left (#79)	Clean. Verify operation. Cutter (home), Insertion Plate (home), and Insertion Plate (open).	Compressed Air	104239 (#87, #78) 157856 (#88, #79)			X	
		Cutter Blade - Blade (#45 [Right], #42 [Left])	Check for corrosion or rust	Visual inspection	157905 (#42, #45)		X	X	
		Cutter Blade Guard - Spring End (#43) [Right], (#40) [Left] - Blade Guard (#46) [Right], (#43) [Left] - Leaf Spring (#49) [Right], (#47) [Left]	Check movement. Clean film pieces. Check for cracks.	Visual inspection	74452 (#43,#40) 076-9824-21 (#46, #43) 091-0512-28 (#49, #47)		X	X	
		Cutter Blade Solenoids (two sides)	Check movement. Check return spring operation.	Test Mode, Wrapper/Applicator Adjust, 14: Cutter				X	

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	Section	Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check			✓	
						D	6 mo	Y		
	FILM TRANSPORT (INSERTION PLATES)- (Cont.)	Feeder movement home position sensor		Compressed Air				X		
11	LIFT DRIVE	Lower limit photo sensor. - Photo Sensor (#28)	Clean. Verify operation.	Compressed Air	99029 (#28)		X	X		
		Gear Box	Check for leaking grease	Visual inspection				3 yr.		
		Servo Motor	Check for water damage	Visual inspection					X	
		Up / Down operation	Listen for odd noises during operation	Test Mode, Wrapper/Applicator Adjust, 2: Lift					X	
		Lift Shafts	Clean debris and old grease, apply new grease.	Black grease					X	
12	LIFT SIZE CHANGE	Lift Size Change Motor - U Bracket	Clean debris and old grease, apply new grease.	Black grease			X	X		
		Ball Plungers - Ball Plungers (#26)	Verify holding - that "U" bracket snaps into place	Manually push in/pull out	157864 (#26)		X	X		
		Lift Size Change movement	Listen for odd noises during operation	Test Mode, Wrapper/Applicator Adjust, 3: Lift & Lift Change					X	
		Lift Size Change photo sensor - Photo Sensor (#18)	Clean off any debris	Compressed Air	104239 (#18)				X	
13	FILM ROLL HOLDERS	Film Roll Holding Spikes	Check if the spikes hold the rolls	2.5mm Allen wrench			X	X		
		Film position	Check if film is 0-5mm from the front edge of the Polished Roller				X	X		
		Film Roll Brake - Brake Assy, Right (#18) - Brake Assy, Left (#13)	Confirm film roll stops and does not over turn.	Test Mode, Wrapper Setup (pg. 2)	076-1967-02 (#18) 076-1966-09 (#13)			X	X	
14	FILM FEEDER MOVEMENT	Movement (Front & Rear Feeders)	Confirm smooth movement. Listen for odd noises during operation	Test Mode, Wrapper/Applicator Adjust, 9: Front Feeder Move 10: Rear Feeder Move				X		
		Belt tension (2 black drive belts)	Verify belt tension and condition					X		
		Drive Shafts	Clean debris and old grease, apply new grease.	Yellow grease				X		

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	Section	Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check			✓	
						D	6 mo	Y		
	FILM FEEDER MOVEMENT (Cont.)	Home & Limit Photo Sensors (4 places) - Front Limit (#73) - Feeder Position, 3 places (#75)		Compressed Air	104239 (#73) 157856 (#75)			X		
		Main Hex Drive Shaft	Clean debris and old grease, apply new grease.	Black grease				X		
15	LABEL APPLICATOR	Movement: three directions - Photo Sensors, 11 places (#57)	No unusual sounds	Test Mode, Wrapper/Applicator Adjust, Appl Check, 1: Appl Control Sensor	104239 (#57)			X		
		Cleaning of photo sensor for movement	Clean with compressed air. Confirm beep in Test menu.	Compressed air. Test Mode, Wrapper/Applicator Adjust, Appl Check, 1: Appl Control Sensor				X		
		Applicator End (Spring loaded assy)	Push the Applicator up. Verify free movement and vibration/bounce when lowered is not excessive.	White grease					X	
		Fan suction - Fan Assy w/ Sensor (#61)	Verify the Applicator Suction Fan can hold a 0.015 lb. tray		103221 (#61)				X	
		Applicator Shafts: Left/Right (2), Back/Front (2), Up/Down (1)	Check for rust. Clean debris and old grease, apply new grease.	Yellow grease					X	
		Applicator Sponge (blue) - Sponge (#1)	Replace if worn or damaged		103224 (#1)		X	X	X	
		Label Detection sensor (inside blue sponge)	Clean dust from sensor	Cotton swab		X	X	X		
16	PRINTER	Printing Quality - Print Head (#501)	Verify print is complete and legible. Clean print head.	Test Mode, Print Adjustment, Print. Isopropyl alcohol	87531 (#501)		X	X		
		Label Feeding - Print Rollers (#48)	Check if printing expands or contracts. Check and clean 2 print rollers. Remove paper dust.	Test Mode, Print Adjustment, Print. Label & Isopropyl alcohol	115144 (#48)			X		
		"Head Up" sensor - Sensor (#508) - Magnet (#502)	Verify sensor operation	Test Mode, Print Adjustment, "Head Up Sensor"	105978 (#508) 105979 (#502)			X		

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	Section	Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check			✓
						D	6 mo	Y	
	PRINTER (Cont.)	Label Gap sensor - Gap Sensor Assy (#507) Peel sensor - Transmitter, Right Side (#503) - Receiver, Left Side (#504)	Check sensor readings are normal. Clean, calibrate, or replace sensors as needed.	Test Mode, Print Adjustment	102190 (#507) 87534 (#503) 87535 (#504)		X	X	
		Label Pickup Roller Table - Roller Table Assy (#2)	Clean adhesive from rollers. Verify smooth turning		157891 (#2)		X	X	
		Drive Gears	Clean debris and old grease, apply new grease. Examine gears for cracks or chips.	White grease				X	
		Magnet (home position) - Catch Magnet (#43)	Inspect catch magnet for wear. Verify magnet holds and printer drive gears mesh well at home position		079-1224-01 (#43)			X	
17	CAMERA & LIGHTING	Camera - P-1007A Camera Controller (#21) - CMOS Camera (#22)	Verify tray recognition. Place trays in four corners in operation mode. Calibrate as needed.	Test Mode, Auto Verification Adjustment	157904 (#21) 157918 (#22)			X	
		LED Lights - LED Assy, Left side (#37) - LED Assy, Right side (#38)	Confirm both LED lights are lit	Operation Mode	111-8350-12 (#37) 111-8351-16 (#38)			X	
		Camera and light lens cover	Clean clear plastic lens cover	Cloth		X	X	X	
18	TOUCH SCREEN DISPLAY	Contrast - LCD Display (#50) - Invertor (#52)	Verify brightness of the display. Replace Invertor or Display as needed.	Slide Switch	98408 (#50) 098-8337-04 (#52)			X	
		Touchscreen operation - Touch Panel (#51)	Confirm accuracy. Calibrate or replace as needed.	Test Mode, Key Check, Touch Panel Adjustment	98402 (#51)		X	X	
		Touchscreen cleaning	Clean touchscreen display	Cloth		X	X	X	
19	KEYBOARD ASSEMBLY	Keyboard - Keyboard Assy (#70)	Confirm all keys function and show as dark squares	Test Mode, Key Check, Numeric Key Check	98407 (#70)			X	
		Keyboard Membrane cover - Cover (#999)	Clean keyboard cover. Replace as needed.	Cloth	98400 (#999)	X	X	X	
20	SWITCHES	Check eight (8) Door Safety Switches.						X	
		Check Emergency Stop.						X	
21	DATA BACKUP	Backup WM-4000 wrapper memory.	CF Card backup is the preferred method as this method captures more than the software backup.	CF Card and/or SLP-V / iSupport				X	

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22. Adjustments, Comments, Parts Required, etc.

Section	Inspection Items and Contents	Comments	Replacement Parts

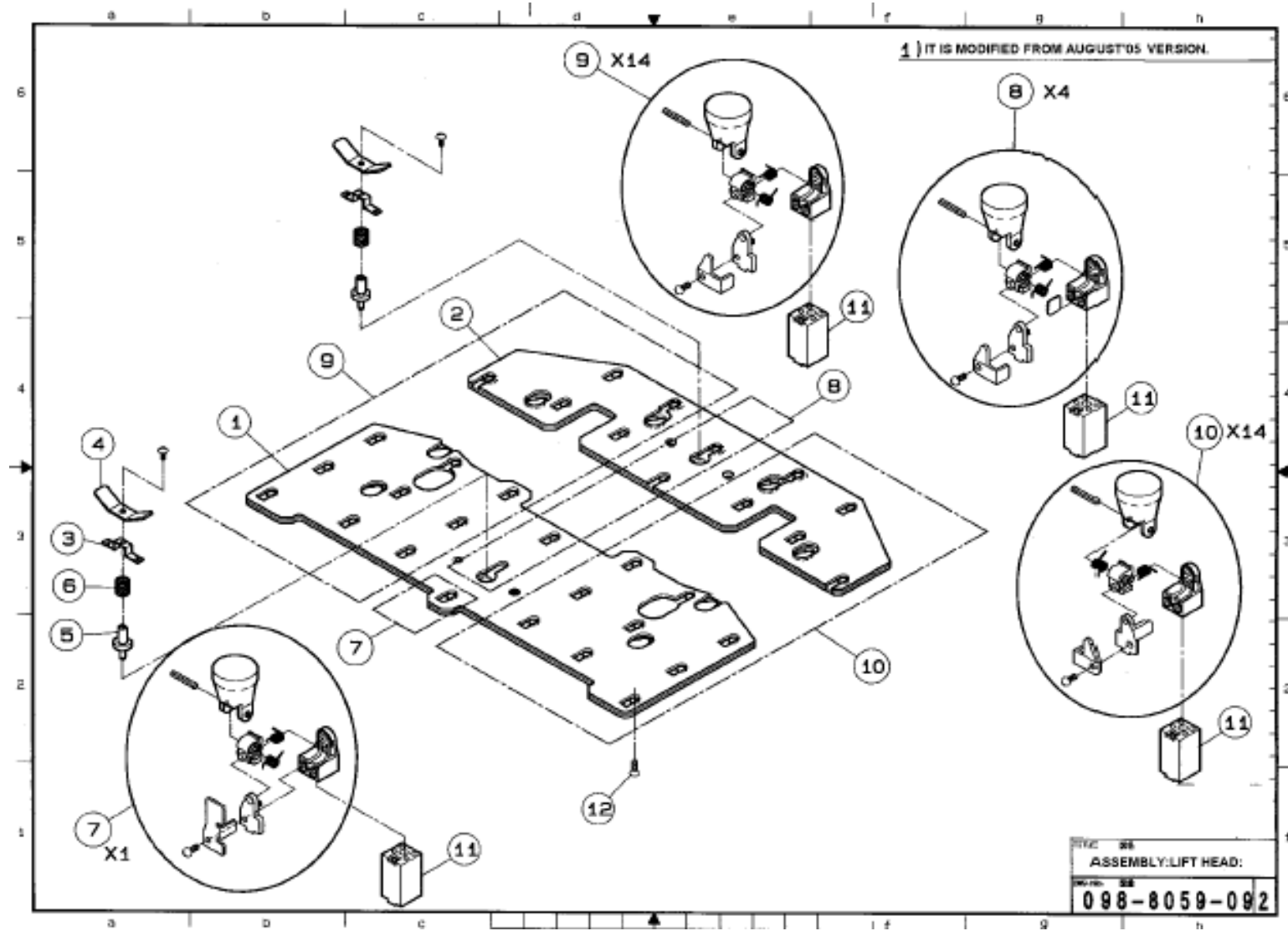
23. SAMPLE LABEL

[SAMPLE LABEL]

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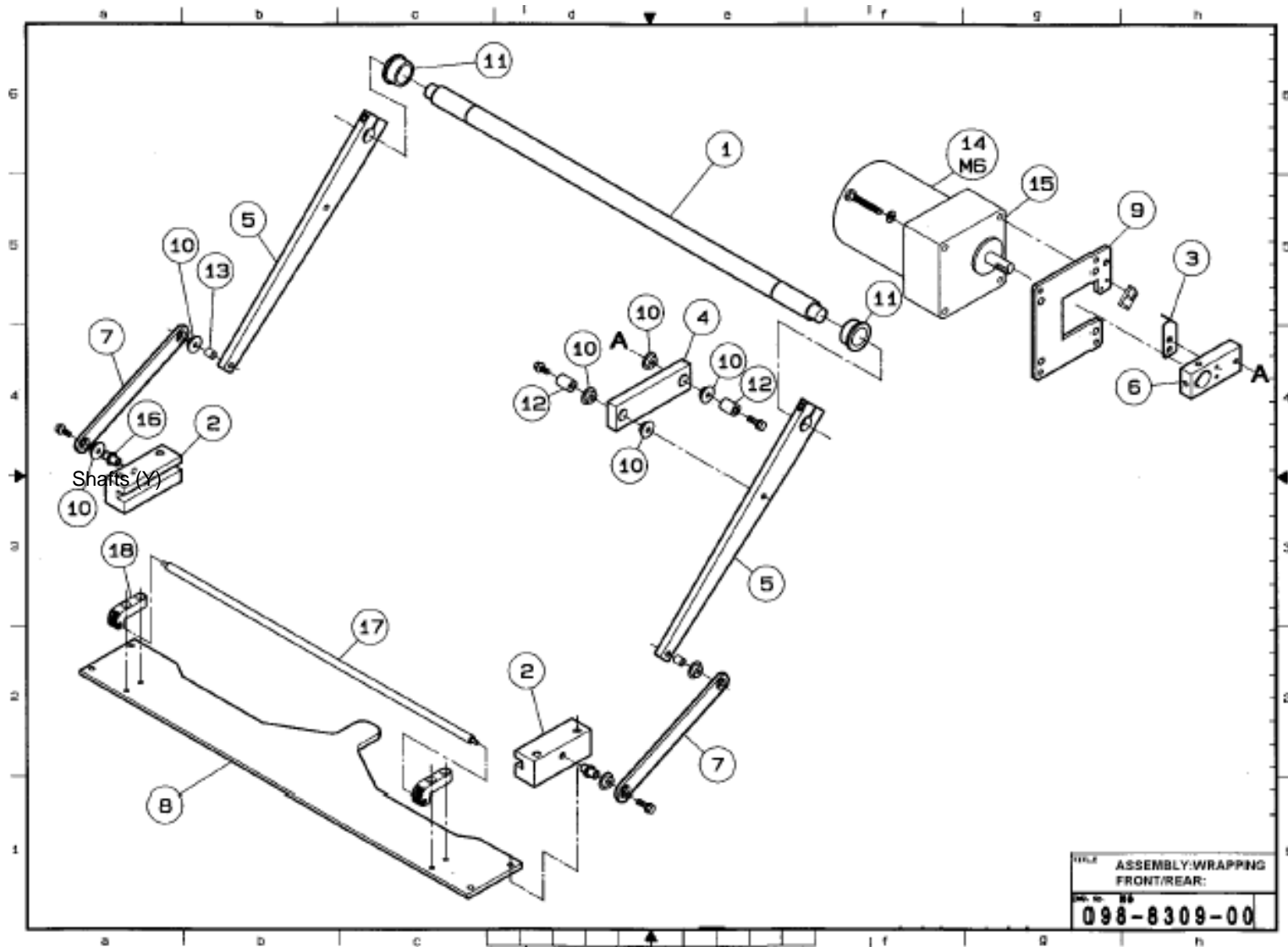
24. Reference Drawings

LIFT HEAD ASSEMBLY (Section 1)



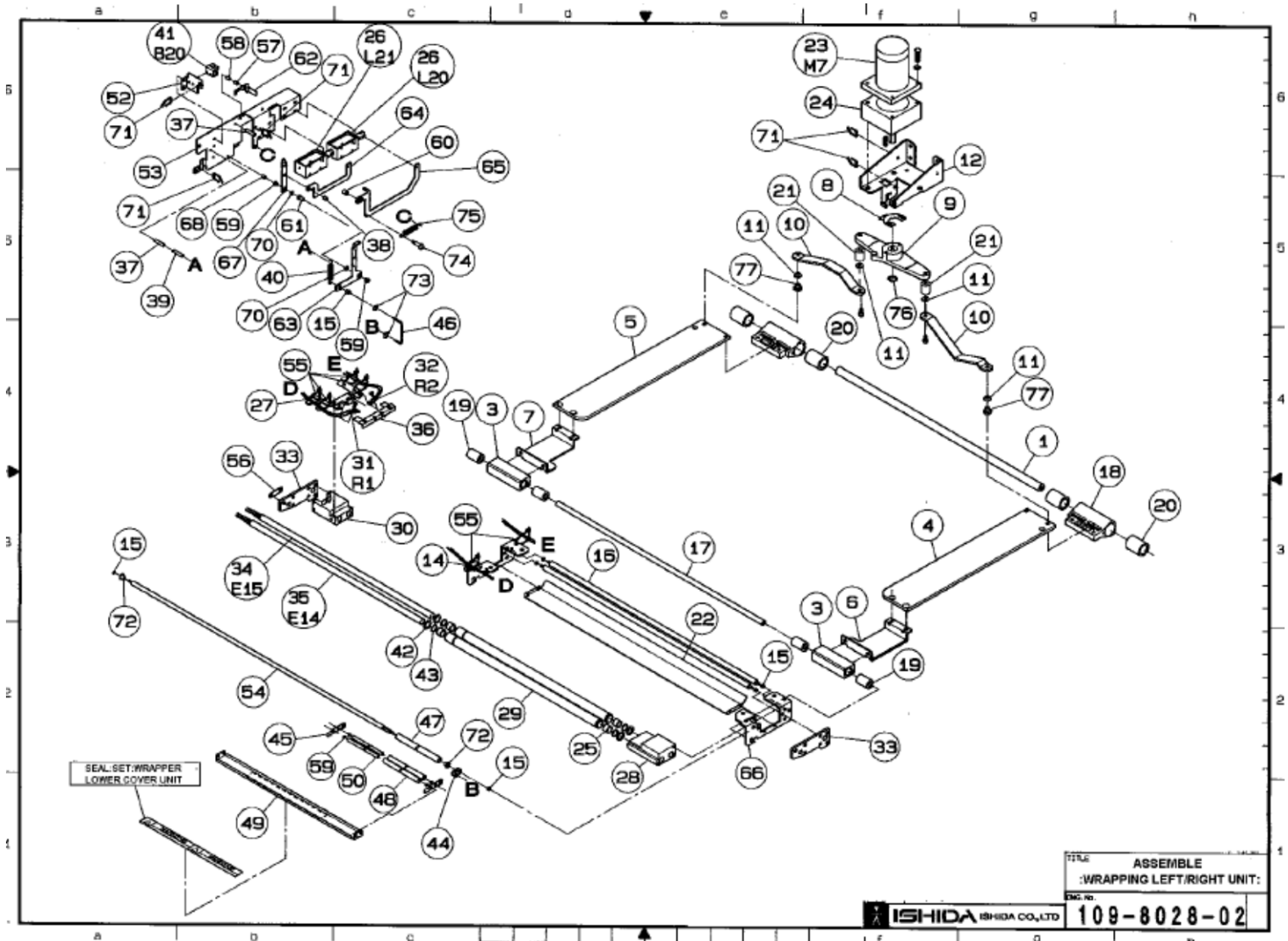
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WRAPPING: FRONT/REAR (Sections 2)



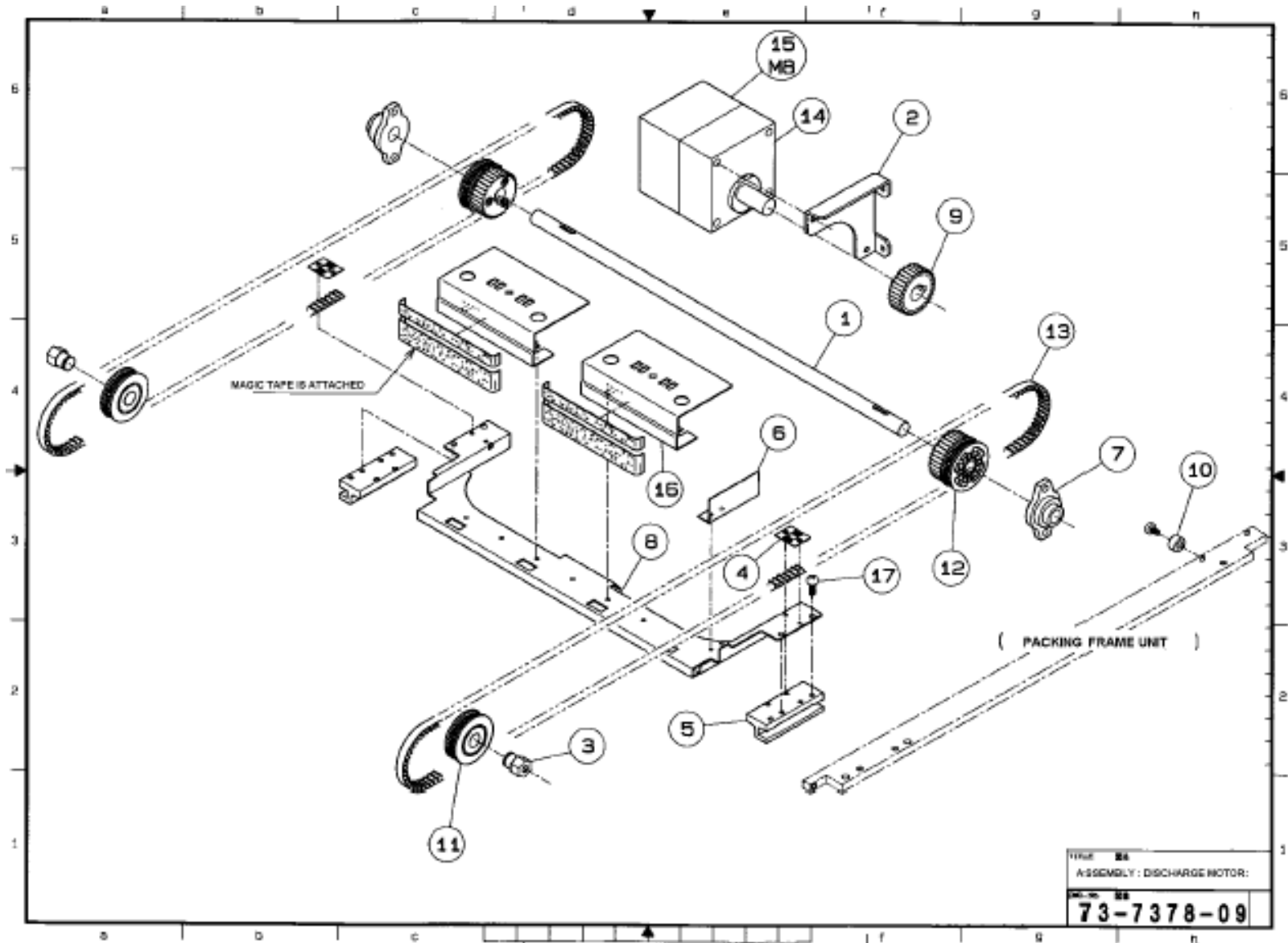
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WRAPPING: LEFT/RIGHT (Section 3)
SEALING HEATERS (Section 4)



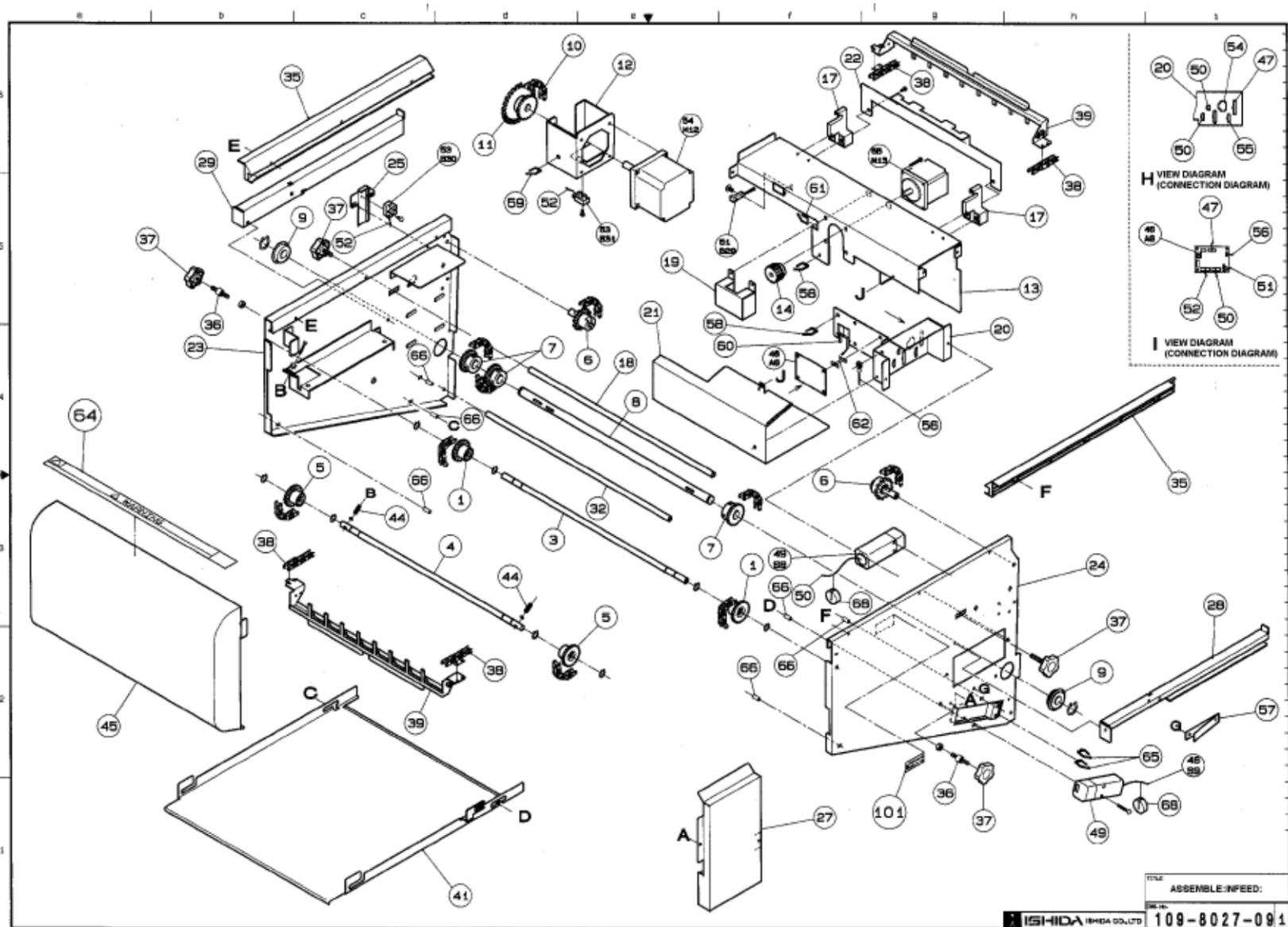
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DISCHARGE PUSHER (Section 5)



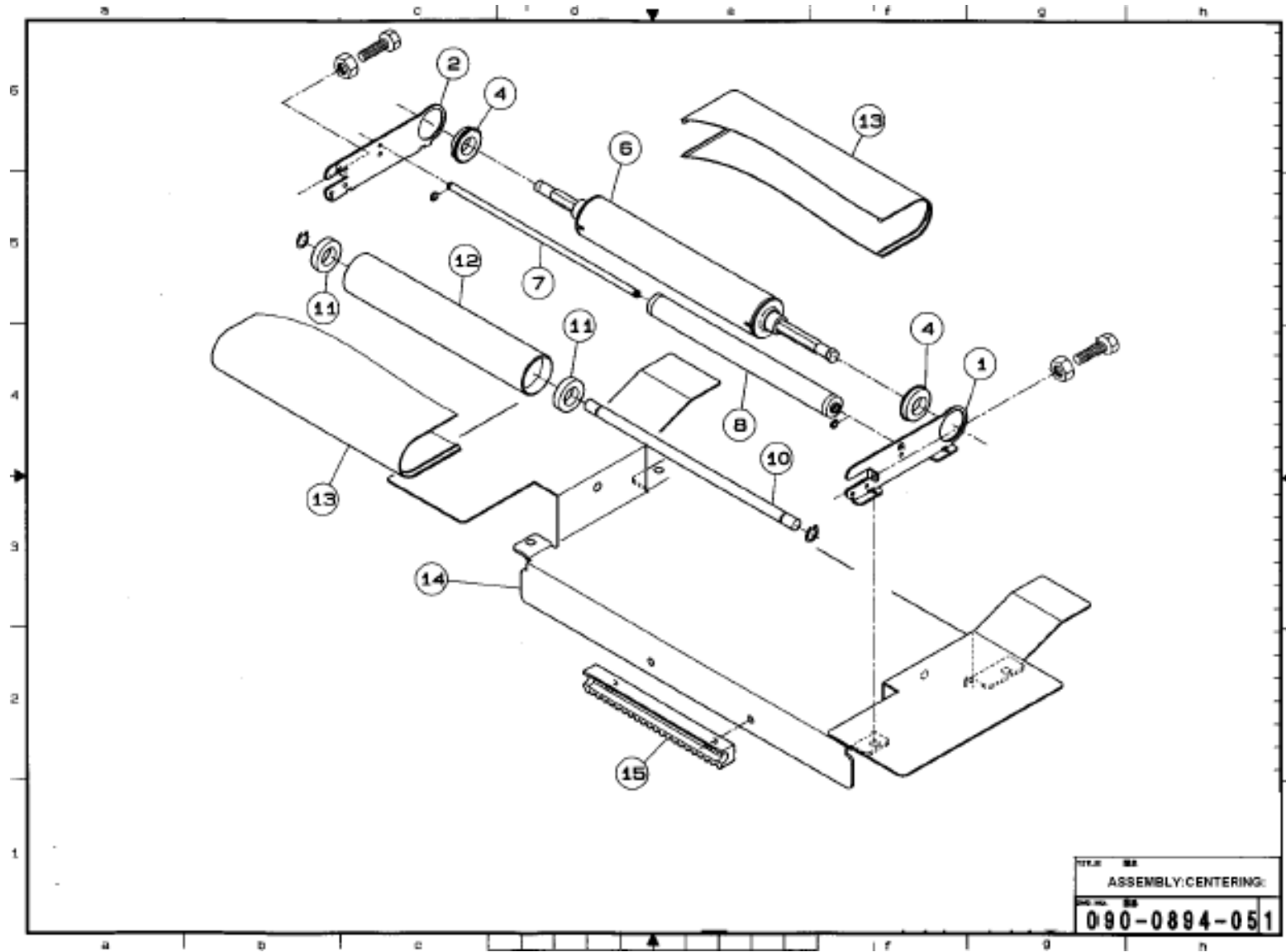
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INFEED (Section 6)



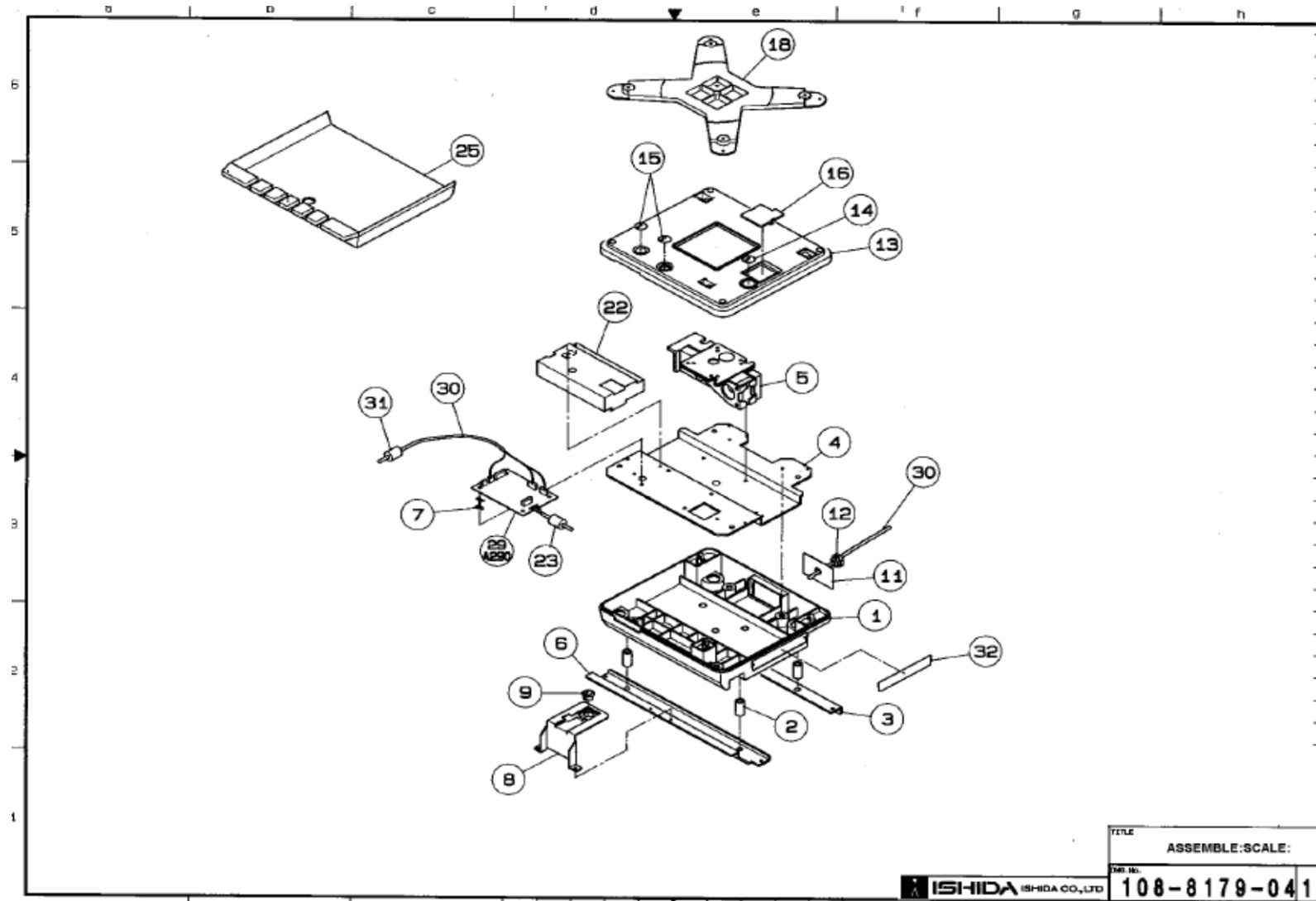
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CENTERING (Section 7)



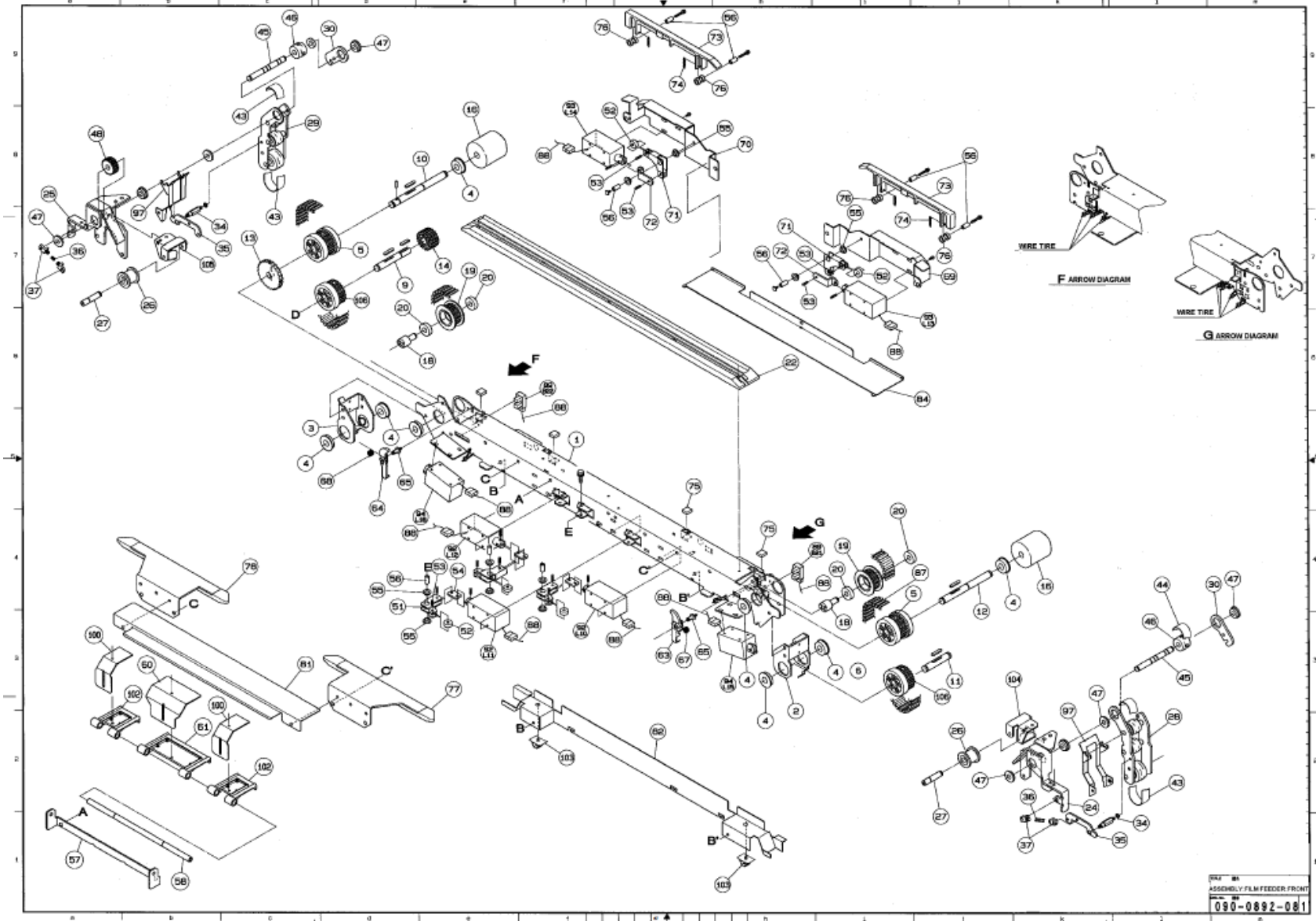
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SCALE (Section 8)



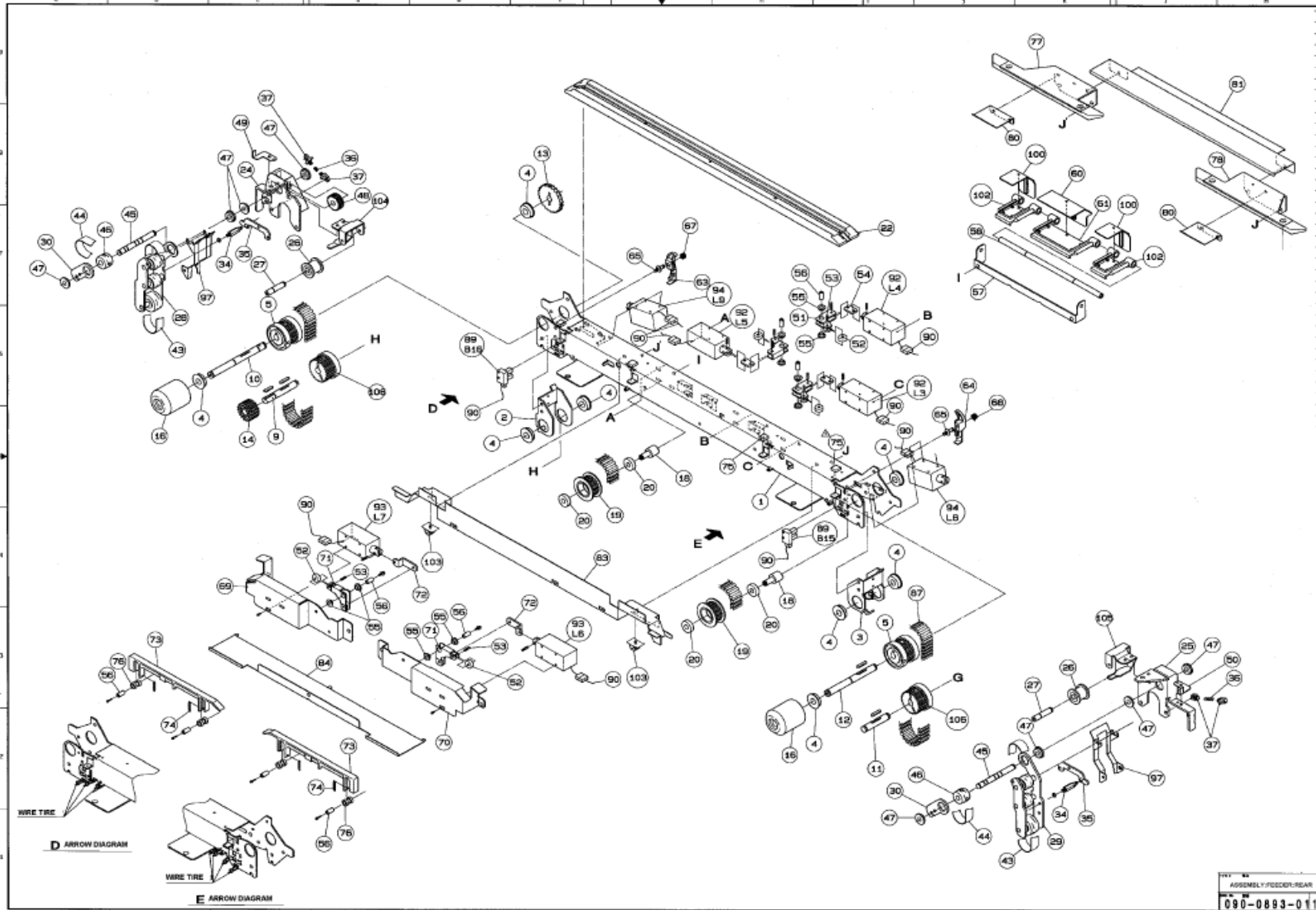
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FILM FEEDER ASSEMBLY- FRONT UNIT (Section 9)



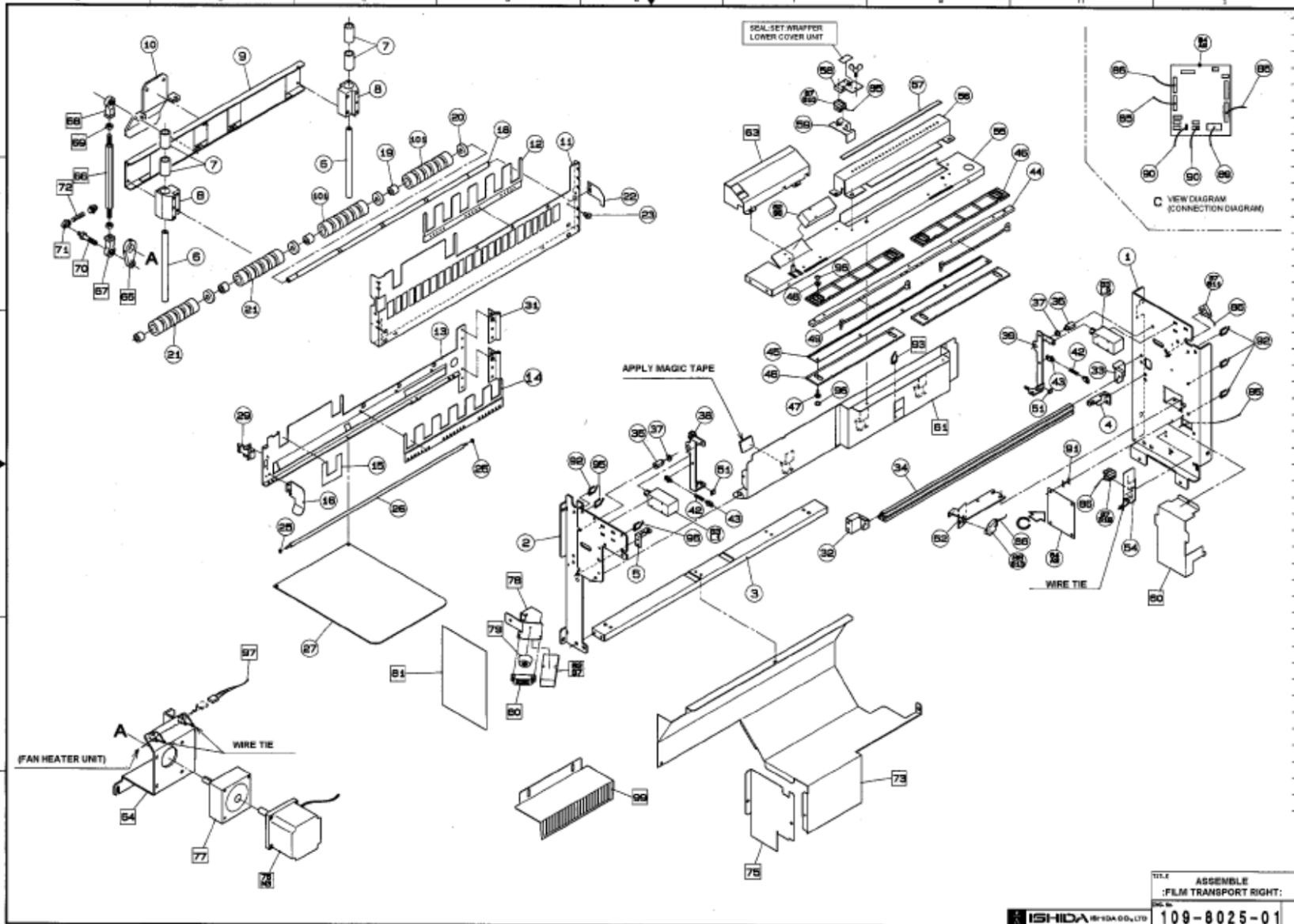
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FILM FEEDER ASSEMBLY- REAR UNIT (Section 9)



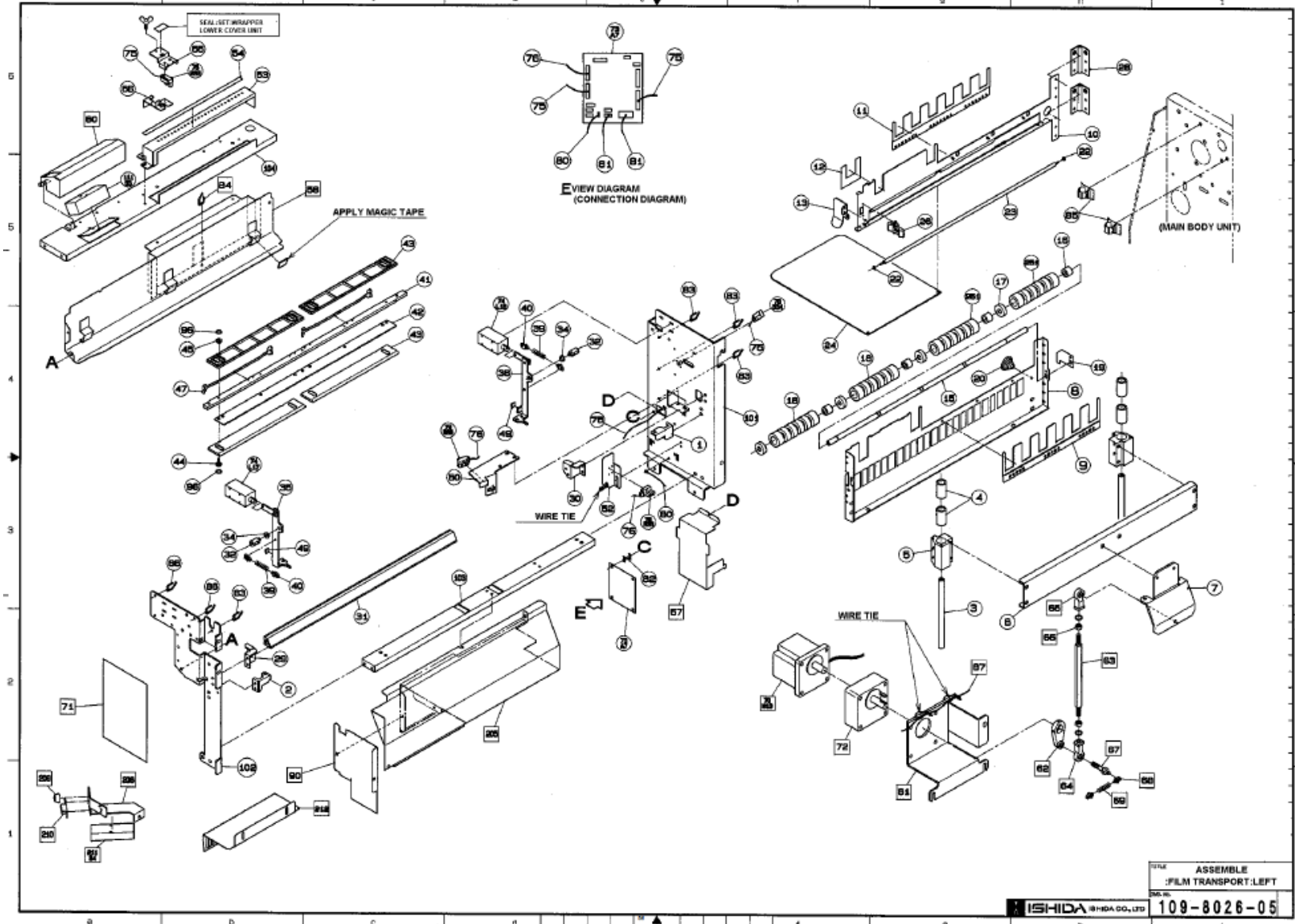
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FILM TRANSPORT ASSEMBLY- RIGHT (Section 10)



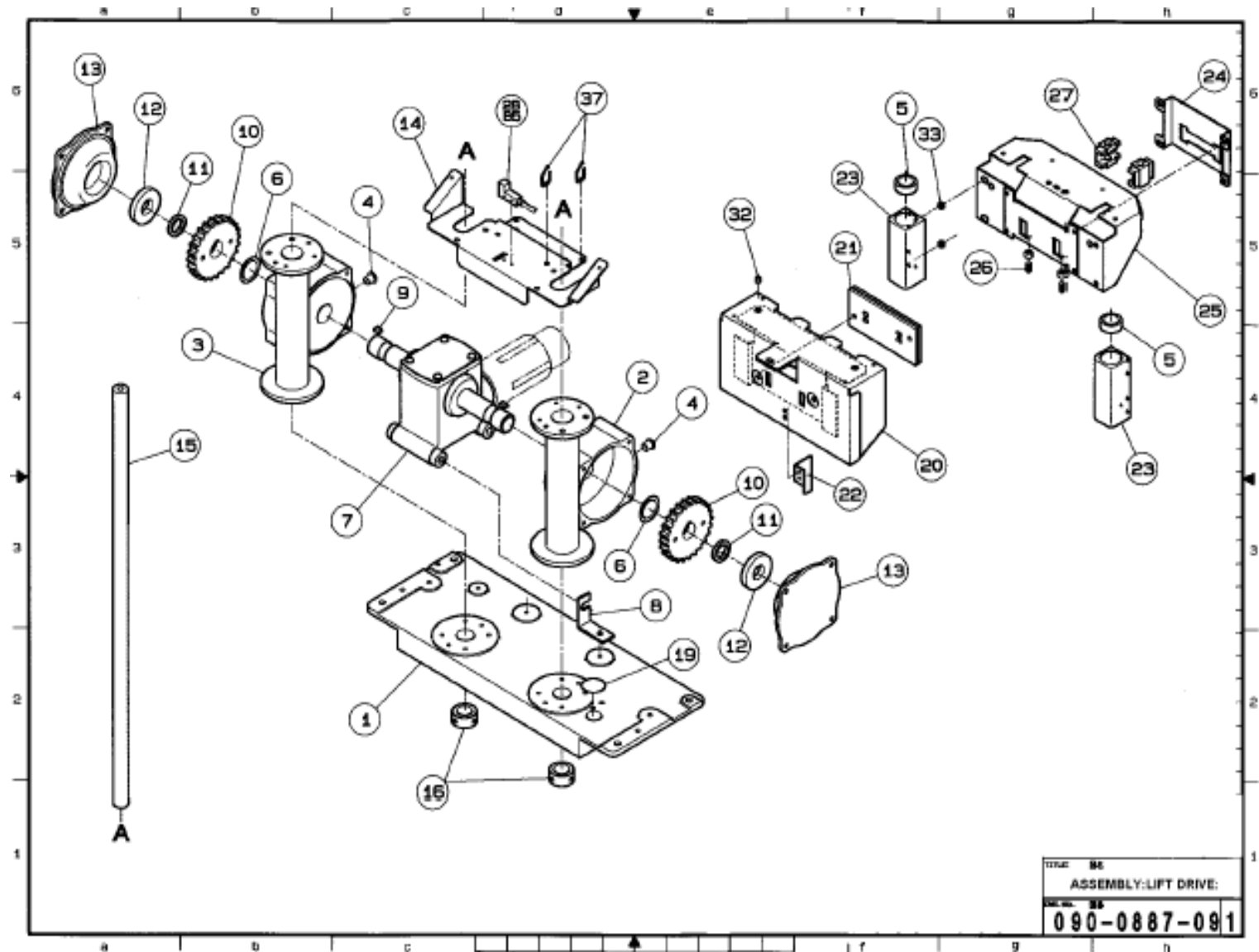
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FILM TRANSPORT ASSEMBLY- LEFT (Section 10)



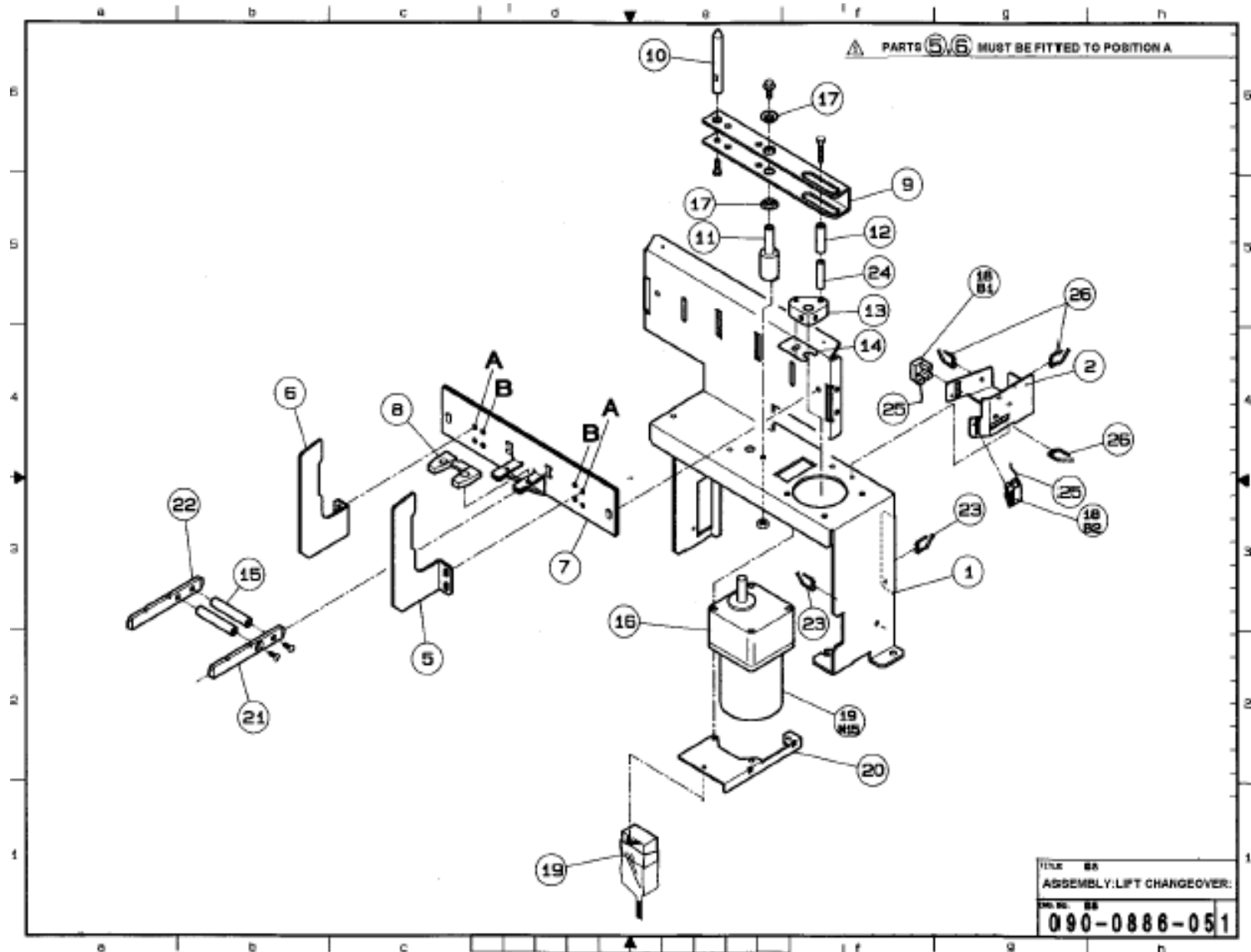
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LIFT DRIVE (Section 11)



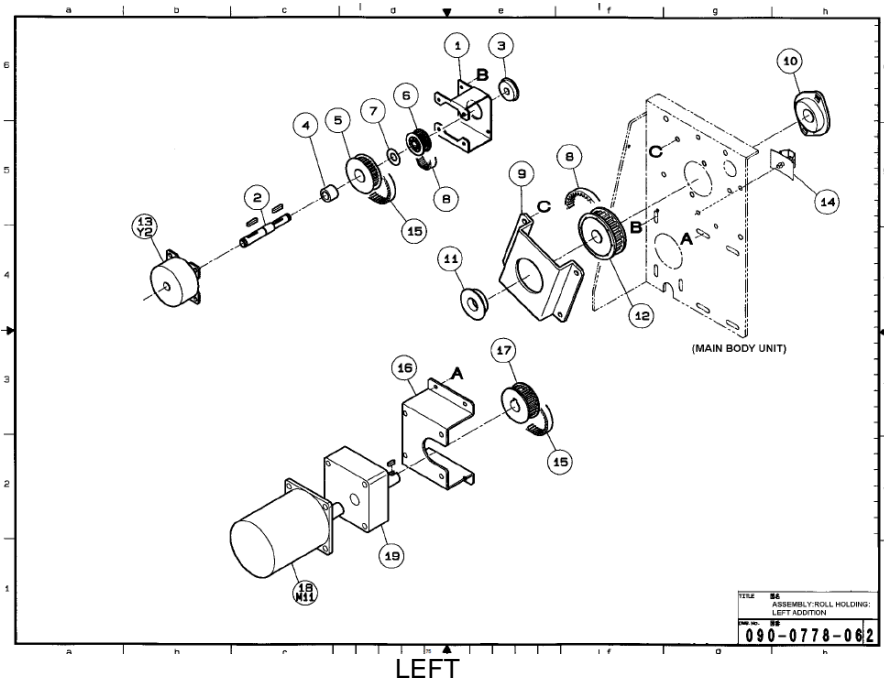
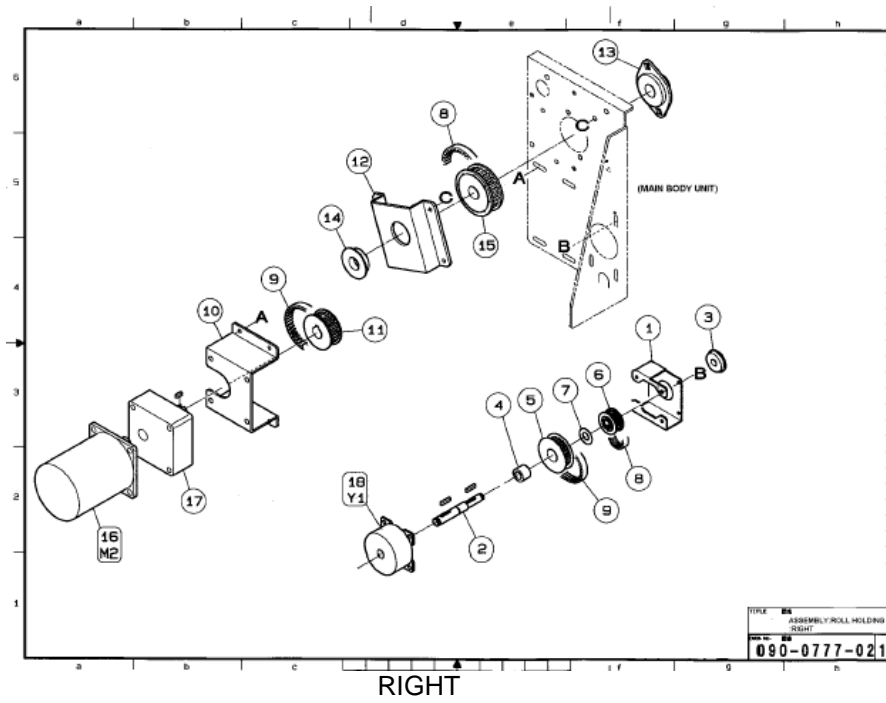
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LIFT SIZE CHANGE (Section 12)



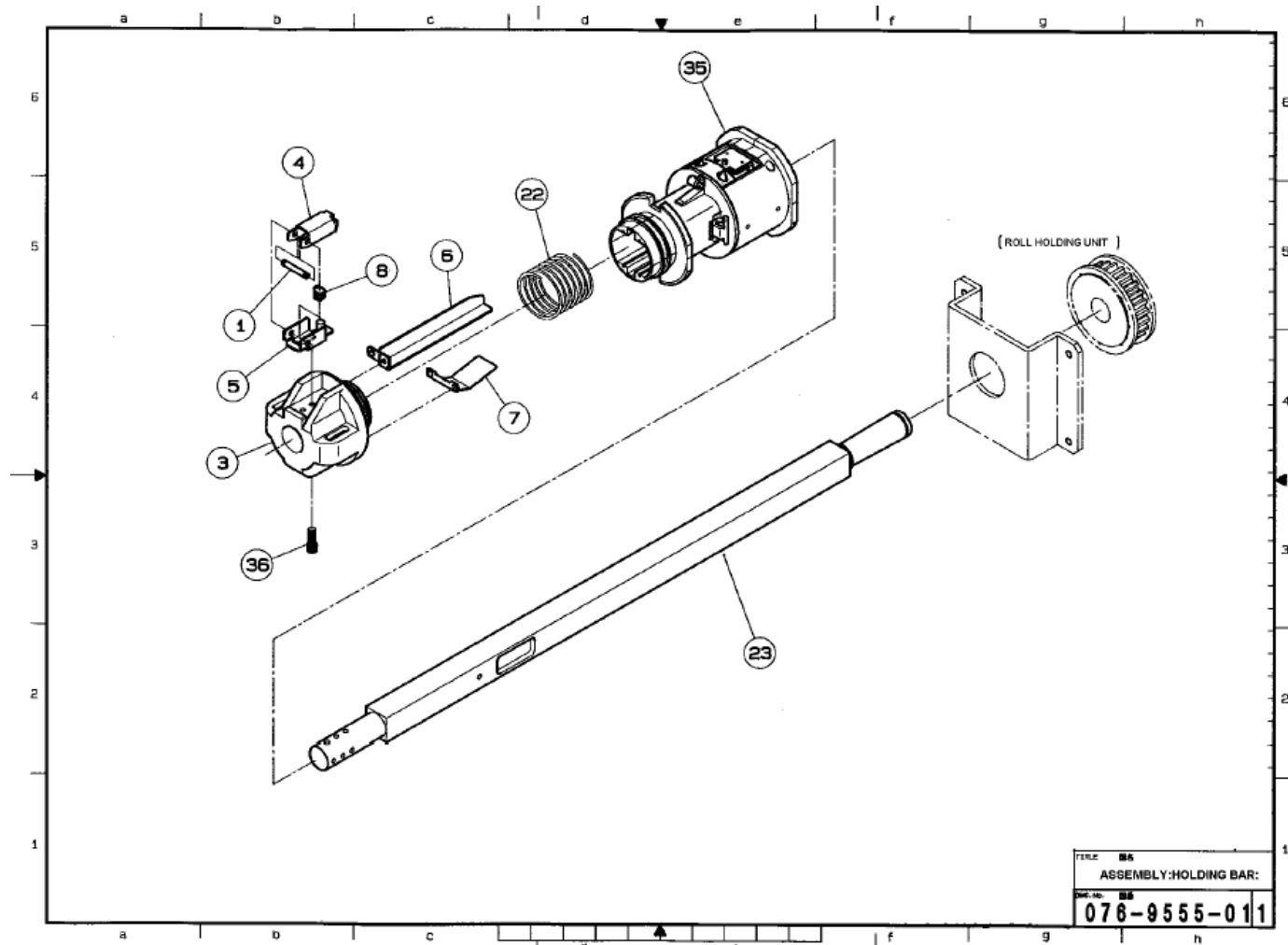
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FILM ROLL HOLDERS- (Section 13)



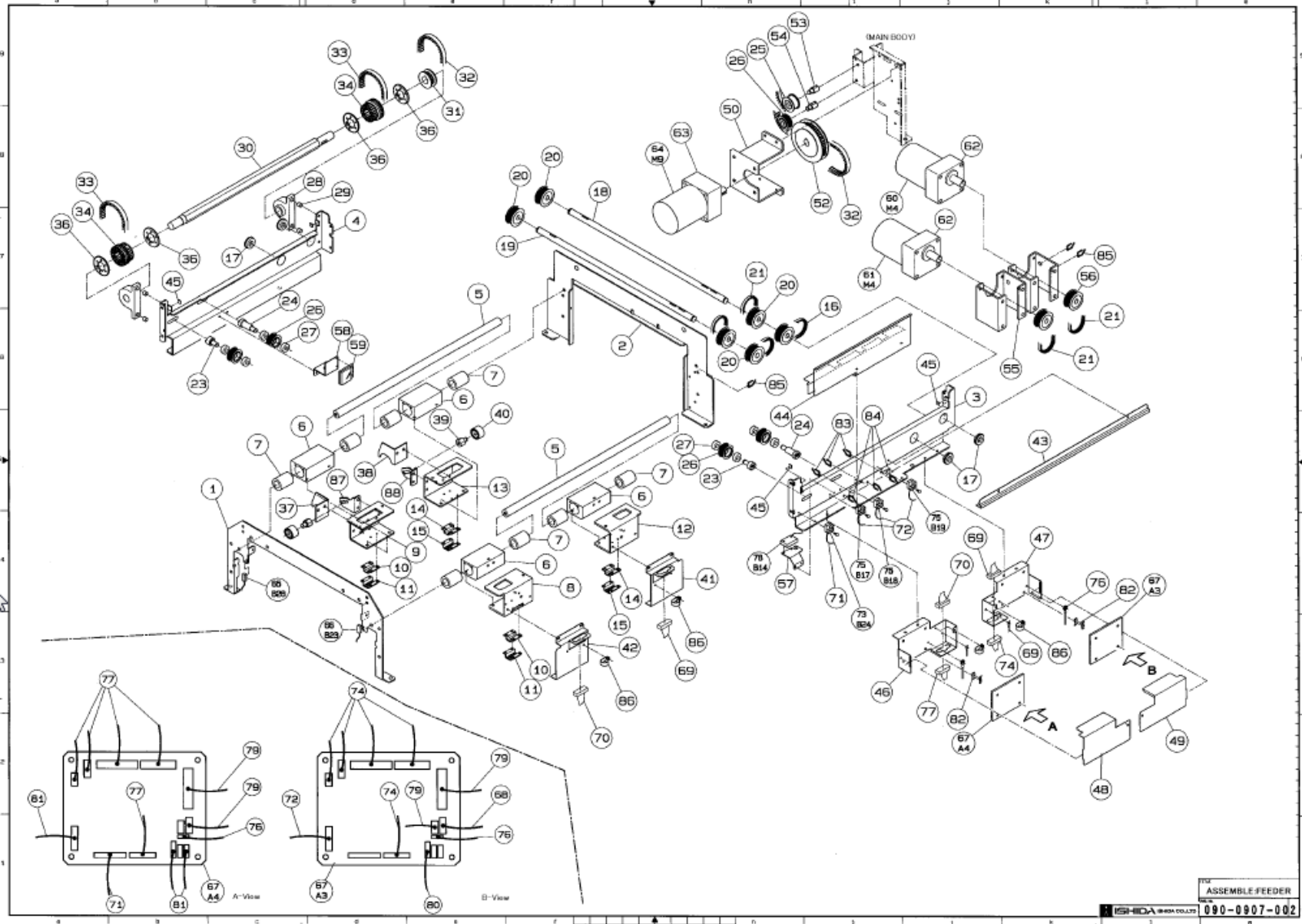
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FILM ROLL HOLDERS- Cont. (Section 13)



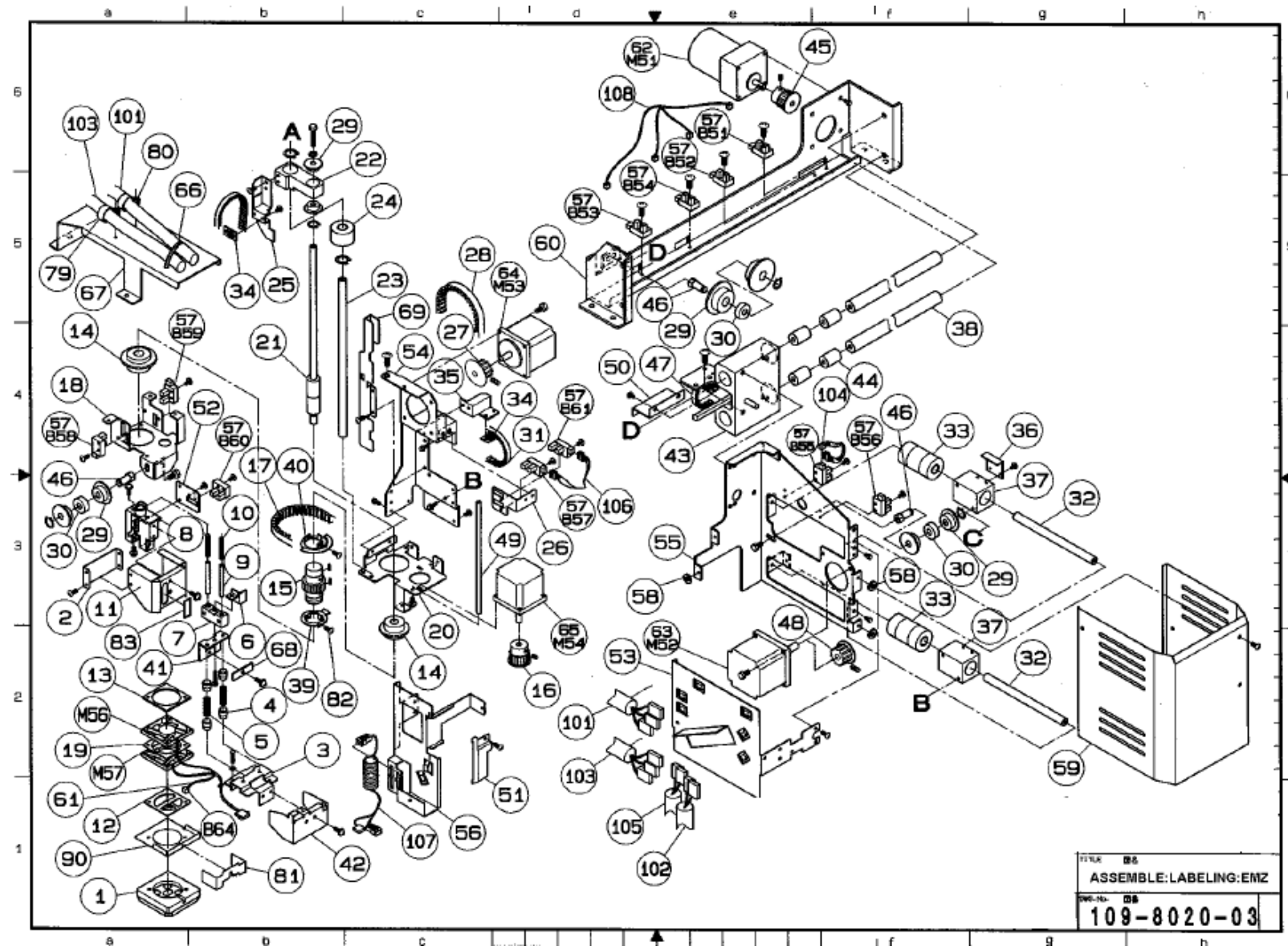
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FILM FEEDER MOVEMENT (Section 14)



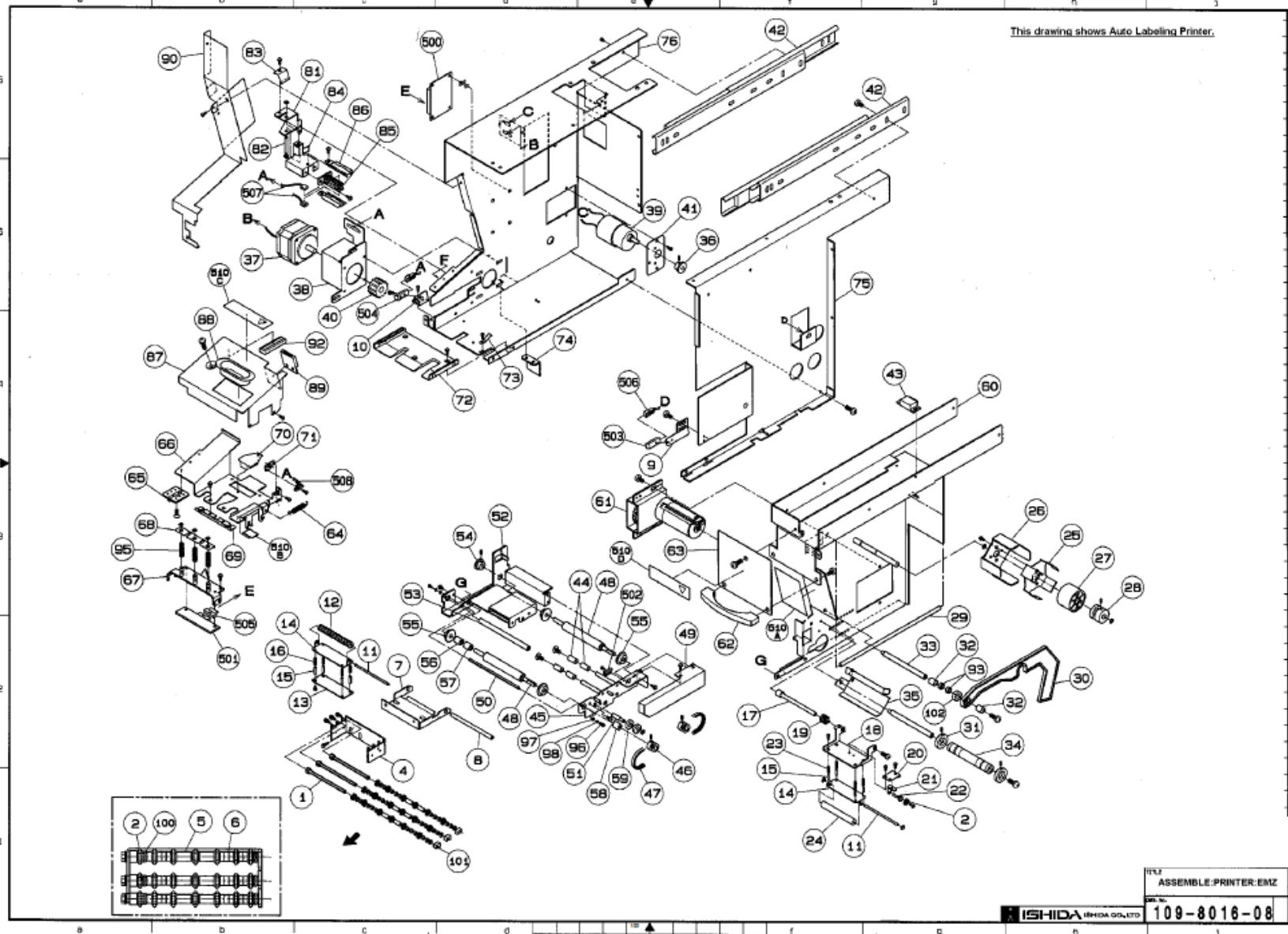
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LABEL APPLICATOR (Section 15)



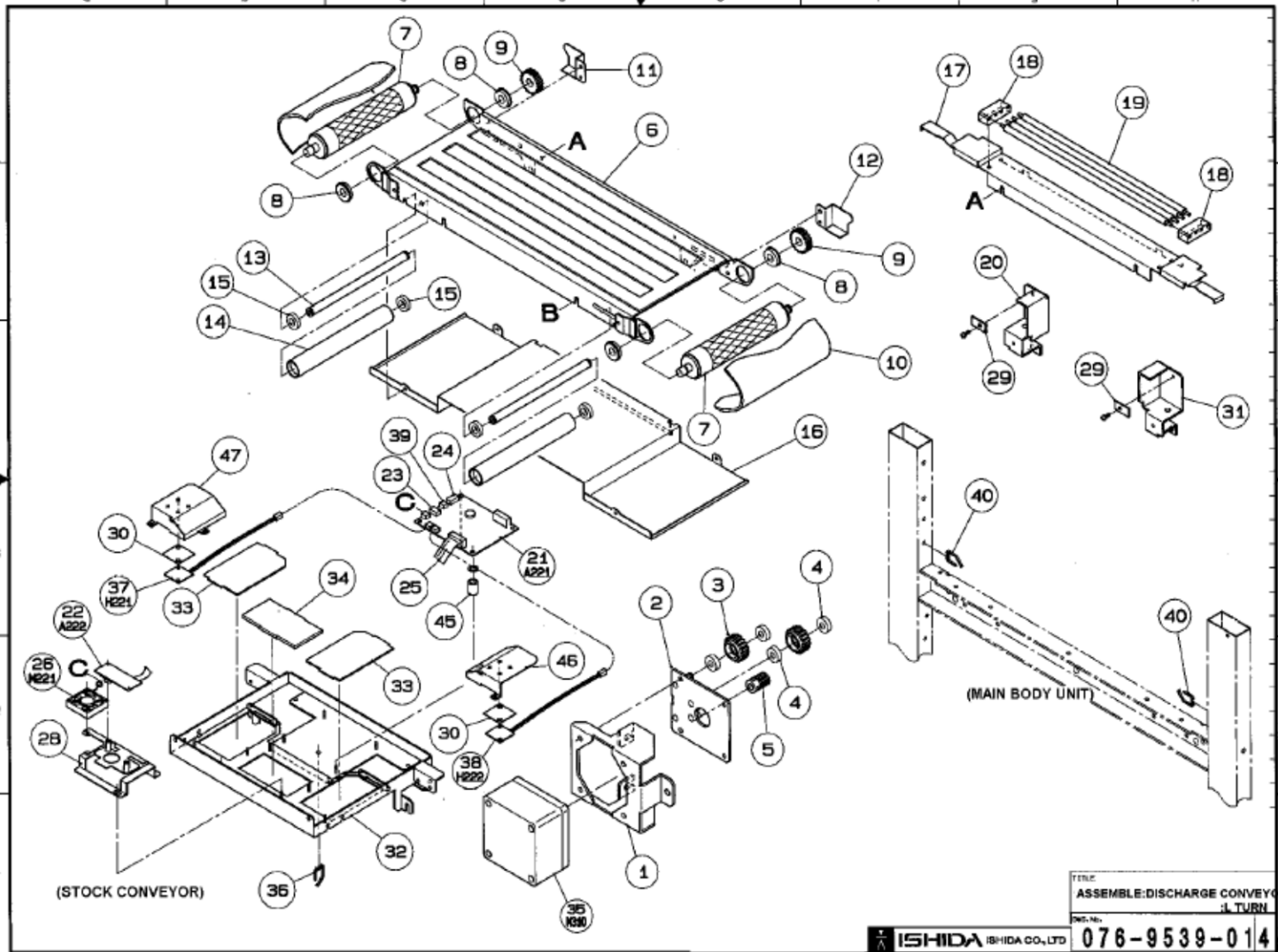
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PRINTER (Section 16)



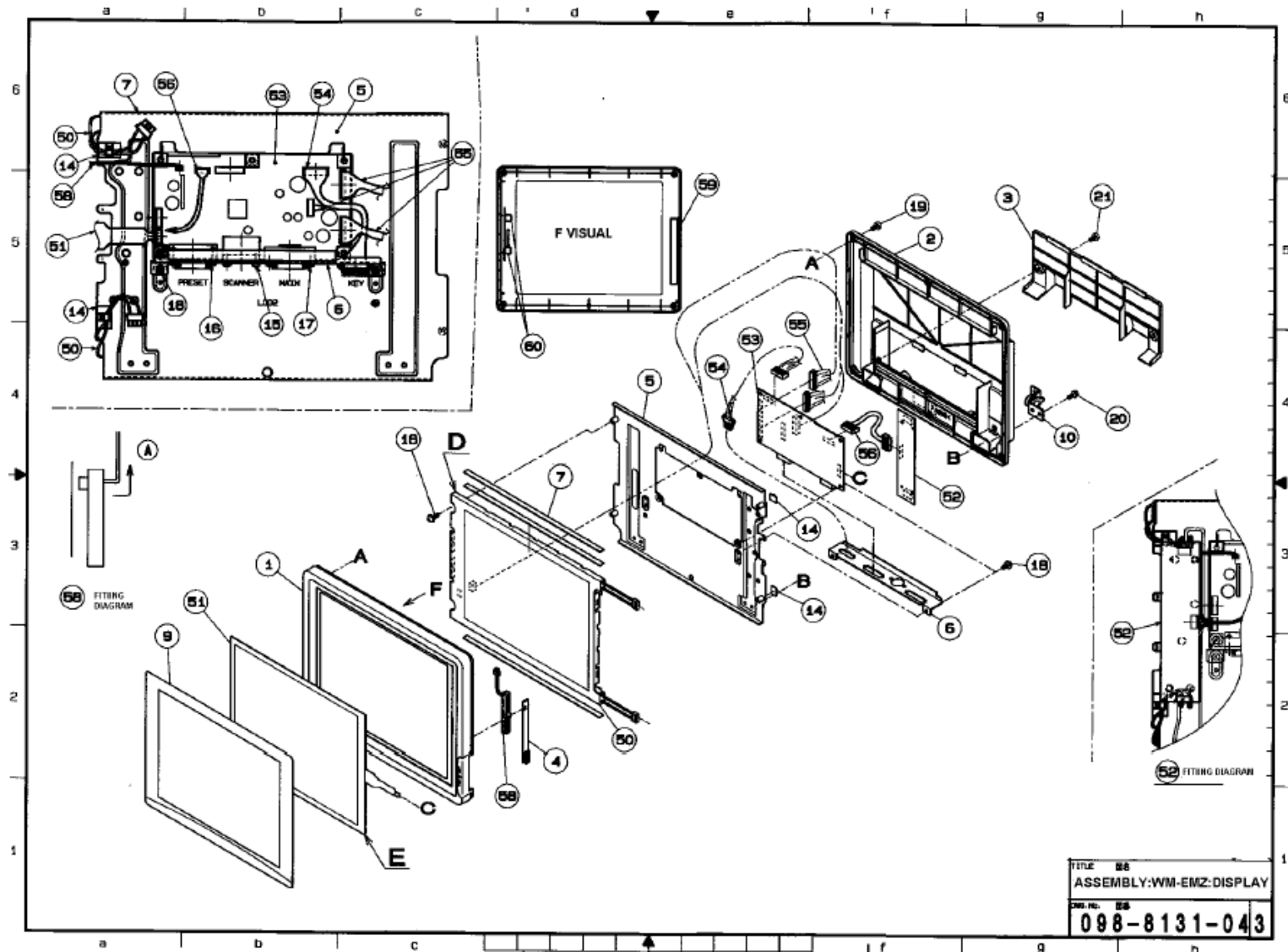
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CAMERA & LIGHTING (Section 17)



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TOUCH SCREEN DISPLAY (Section 18)



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KEYBOARD ASSEMBLY (Section 18)

