

Costco[®] Wholesale

Ishida WM-Ai-P

Preventative Maintenance Guide



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Revision History

This section tracks and describes manual revisions for awareness of major updates.

Revision	Date	Description
A	January 6, 2023	Initial document release; firmware version C2150W

Table i. Revision Letter History



Technical training seminars are available through Rice Lake Weighing Systems. Course descriptions and dates can be viewed at www.ricelake.com/training or obtained by calling 715-234-9171 and asking for the training department.

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Rice Lake continually offers web-based video training on a growing selection of product-related topics at no cost. Visit www.ricelake.com/webinars

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1.0 Introduction

The following information is provided by Rice Lake Weighing Systems to assist Authorized Service Offices performing preventive maintenance on Rice Lake Weighing Systems wrapping and weighing equipment in Costco Wholesale Warehouses.

WM-Ai-P Inspection	
Inspection Date:	Cycle Count:
Service Company:	Serial Number:
Technician(s):	Costco Store Number:
Overall Condition:	Meat Manager Signature:
Good / Fair / Poor	

Table 1-1. Inspection Confirmation

After inspection, [Page 9 – Page 20](#) should be printed, filled, scanned and returned to RLWS along with photographic documentation of all issues such as: user abuse, water damage/corrosion, premature failures, etc.).



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

1.1 Safety

Safety Definitions:



DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. Includes hazards that are exposed when guards are removed.



WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death. Includes hazards that are exposed when guards are removed.



CAUTION: Indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.



IMPORTANT: Indicates information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.

General Safety



Do not operate or work on this equipment unless this manual has been read and all instructions are understood. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Rice Lake Weighing Systems dealer for replacement manuals.

1.2 Required Materials

- Grease: White, Yellow, and Black (see [Table 1-2](#))
- 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)
- Key, interlock bypass, 2 pieces (PN 95540)
- Machinist Ruler
- USB flash drive (8 GB or smaller, FAT32 format, USB 3.0)

1.2.1 Lubrication for WM-Ai-P

Color of Grease	RLWS Part Number	Description	Industry Reference Number
(Y) Yellow	77932	General Purpose Lithium Grease (323916) [Shell Alvania Grease "No. 2"]	Sta-Lube SL3310
(W) White	77933	White Food-Grade Grease (380059) [Sumico White Alcom Grease "No. 2"]	CRC SL35600
(B) Black	77934	Multi-Purpose Grease (371219) [Daizo Nichimori "L-210"]	Sta-Lube SL3330

Table 1-2. Grease References

2.0 Preventative Maintenance Guide

2.1 Lift Head

See [Section 3.1 on page 21](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
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 & Front Left (#7), Front Right (#8), Left (#9), Right (#10), Rear Center (#14), Rear Left (#15), Rear Right (#16)	- If the Heads are worn smooth (polished) roughen with sandpaper - Replace worn out or damaged heads or finger assemblies	Sandpaper (100 grit)	125697 (#7) 171831 (#8) 125698 (#9) 125699 (#10) 171832 (#14) 171833 (#15) 171834 (#16)		X	X	
Lift Heads Movement - See above	- Replace broken assemblies that are too weak to operate and spring back		See above		X	X	
Latch Pin Assembly - Spring (#6)	- Replace broken or weak compression spring		172335 (#6)		X	X	
Lubrication	- Grease all springs, as needed - After working in the grease, wipe off excess	White Grease			X	X	

Table 2-1. Lift Head Maintenance

2.2 Wrapping: Front/Rear

See [Section 3.2 on page 21](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Loose Screws	- Tighten screws as needed. Listen for odd noises	Adjust Menu, Unit Action, 12: Back Plate				X	
Condition of Rear Wrap Plate	- Clean any food, dirt, oil, or label adhesive. If worn smooth (polished) roughen with sandpaper	Soap & Water (Daily) Adhesive Remover Sandpaper (#100)		X	X	X	
Plastic bushings - Leading Roller Mounting Brackets (#2) - Square Shaft Mounts (#4)	- Replace bushings if worn out Note: Roller brackets can be swapped right / left side		172528 (#2) 172530 (#4)			X	
Wrap Plate and Roller Shaft alignment	- Roller Shaft should be parallel with the fixed Rollers at the exit. (Loosen and adjust Shaft Holders [#2])	#2 Phillips driver				X	
Roller Shaft condition - Stepped Roller Shaft (#3)	- Roller Shaft must be straight - not bent - Replace if necessary		172529 (#3)		X	X	
Roller Shaft movement - Shaft Holder (#2)	- 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	172528 (#2)		X	X	
Square mounting shafts	- Clean debris and old grease and apply new grease	Black grease				X	
Photo sensor - Home Position, B102 (#503)	- Clean as needed - Sensor is located at the rear right of the Rear Wrap plate	Compressed Air	171837 (#503)			X	

Table 2-2. Wrapping: Front/Rear Maintenance

2.3 Wrapping: Left/Right

See [Section 3.3 on page 22](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Loose Screws	- Tighten screws as needed - Listen for odd noises	Adjust Menu, Unit Action, 11: Side Plate				X	
Linear Bushings	- Clean debris and old grease, apply new grease	Yellow grease			X	X	
Linear Bushings movement - Linear Bearing Block, front (#1) - Linear Bearing, rear (#2)	- Replace if worn out - excessive resistance		172514 (#1) 157900 (#2)			X	
Photo sensor - Home Position, B101 (#503)	- Clean as needed. Sensor is located at the rear of the Left Wrap plate	Compressed Air	171837 (#503)			X	
Condition of Side Wrap Plates	- Clean any food, dirt, oil, or label adhesive - If worn smooth (polished) roughen with sandpaper	Soap & Water (Daily) Adhesive Remover Sandpaper (#100)		X	X	X	

Table 2-3. Wrapping: Left/Right Maintenance

2.4 Seal Heaters

See [Section 3.4 on page 22](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
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 (#8) - Bushing (#22)	- Clean or replace		174923 (#8) 153654 (#22)			X	
Temperature adjustment	- Confirm higher and lower temperature adjustment is possible					X	

Table 2-4. Seal Heater Maintenance

2.5 Discharge Pusher

See [Section 3.5 on page 23](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Loose Screws	- Tighten screws as needed - Listen for odd noises	Adjust Menu, Unit Action, 13: Pusher				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, B100 (#503)	- Clean as needed - Sensor is located at the rear right of the Discharge Pusher	Compressed Air	171837 (#503)			X	
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	
Green tape - Green Grip Tape, Sheet (#999)	- Replace if loose or peeling		172536 (#999)		X	X	
Discharge Pusher - Cleaning	- Remove labels, food, etc.			X	X	X	

Table 2-5. Discharge Pusher Maintenance

2.6 Infeed

See [Section 3.6 on page 23](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Loose Screws	- Tighten screws as needed - Listen for odd noises	Adjust Menu, Unit Action, 4: Fed				X	
Drive Chains - Chain (#23)	- Check for damage, cracks, etc.		171835 (#38)		X	X	
Centering Shaft Sprockets - Sprocket Assy (#5)	- Check for square, should not be rounded or bent		172499 (#5)				
Infeed Rail Drawer Slides	- Confirm easy in/out movement - Clean debris and old grease and apply new grease	Yellow grease				X	
Photo sensor - Home position [front, left] (#502)	- Clean - Check for any contact damage	Compressed Air	104239 (#502)			X	
Thumb screws	- Confirm the thumb screw shafts are positioned correctly and locking jam nuts are tight	10 mm wrench	47159 (#22) 125462 (M6 nut)		X	X	

Table 2-6. Infeed Maintenance

2.7 Centering Unit

See [Section 3.7 on page 24](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Centering Shaft	- Listen for odd noises - Clean debris and old grease and apply new grease	Yellow Grease			X	X	
Green Belt assy	- Remove, disassemble, clean - Ensure smooth movement				X	X	
Blue Belt	- Clean with soap and water			X	X	X	

Table 2-7. Centering Maintenance

2.8 Scale

See [Section 3.8 on page 24](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
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	
Weigh Spider (#14)	- Clean debris		189309 (#14)				
Blue Scale Platter - Platter (#15)	- No bleach - Replace if color has changed or surface is worn smooth.	Soap & Water (Daily)	170292 (#15)	X	X	X	
Confirm Label data matches Display						X	
Check level						X	

Table 2-8. Scale Maintenance

2.9 Film Feeder Accessories

See [Section 3.9 on page 25](#) and [Section 3.10 on page 25](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
White Film Feed belts - White Belt (#9)	- Check for broken wires, yellowing, worn surface or other damage	Inspect, clean (alcohol) and test	171838 (#9)			X	
Green Film Feed belts - Long Green Belt (#10)	- Check for polished surface, slipping, meandering or other damage	Inspect, clean (alcohol) and test	171839 (#10)			X	
Film Centering: Upper and Lower rolls	- Adjust centering - Verify consistency	Adjust Menu, Wrapping Machine and Film tab				X	
Film pieces on belts	- Remove pieces - Clean belts with soap and water if needed IMPORTANT: DO NOT use alcohol to clean.	Inspection and test wrapping			X	X	
Film Clamps - 6 places	- Ensure all clamps operate properly and provide sufficient grip strength	Adjust Menu, Unit Action, 17: Front Clamp & 18: Rear Clamp				X	

Table 2-9. Film Feeder Accessories Maintenance

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Film Detect & Film Over "Claw" Sensor - Spring Plate, Film Detect (#33) - Coil Spring, Film Detect (34) - Spring Plate, Film Over (#29) - Film Detect Photo Sensor (#502) - Film Over Photo Sensor (#501)	- Verify sensor operation - Remove any film pieces or build up - If worn smooth (polished) roughen with sandpaper	Compressed Air. Sand Paper (100 grit)	175364 (#33) 175369 [F] (#34) 175365 [R] (#34) 175367 (#29) 171837 (#502) 104239 (#501)		X	X	

Table 2-9. Film Feeder Accessories Maintenance (Continued)

2.10 Film Transport/Insertion

See [Section 3.11 on page 26](#), [Section 3.12 on page 26](#) and [Section 3.13 on page 27](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Stop position for Insertion Unit	- Verify clearance	Adjust Menu, Unit Action, 24: Film Change				X	
One-Way Roller (clear plastic) - Roller Clutch Assy, 1-Groove (#5) - Roller Clutch Assy, 5-Groove (#6)	- Verify one-way, smooth movement - Check for scratches - Remove film pieces and clean with alcohol	Isopropyl Alcohol	172563 (#5) 172565 (#6)		X	X	
Sensors - Cutter, home (#503) - Insertion, home (#503) - Insertion, open [green] (#505, #506) - Magnet [green] (#504)	- Clean - Verify operation - Cutter (home), Insertion Plate (home) and Insertion Plate (open)	Compressed Air. Adjust Menu, Unit Action, 1: Sensor Check	104239 (#503) 175361 (#505) 175362 (#506) 105979 (#504)			X	
Cutter Blade - Blade (#4)	- Check for corrosion or rust	Visual inspection	176682 (#4)		X	X	
Cutter Blade Guard - Blade Guards (#1) [Outer] (#2) [Inner] - Leaf Spring (#5) - Coil Spring (#11) [Front] (#12) [Rear]	- Check movement - Clean film pieces - Check for cracks	Visual inspection	178891 (#1) 178892 (#2) 178893 (#5) 172560 (#11) 172561 (#12)		X	X	
Cutter Blade Solenoids	- Check movement - Check return spring operation	Adjust Menu, Unit Action, 15: Cutter				X	
Feeder movement home position sensor - Photo Sensor	- Clean as needed - Sensor is located at the lower right side of the Film Feeder assy.	Compressed Air	104239			X	

Table 2-10. Film Transport/Insertion Maintenance

2.11 Lift Drive

See [Section 3.14 on page 27](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Lower limit photo sensor. - Photo Sensor (#502)	- Clean - Verify operation	Compressed Air	157856 (#502)		X	X	
Up / Down operation	- Listen for odd noises during operation	Adjust Menu, Unit Action, 2: Lift				X	
Linear Bushings - Linear Bushing Bearing (#11)	- Clean debris and old grease and apply new grease	Yellow grease	157900 (#11)		X	X	

Table 2-11. Lift Drive Maintenance

2.12 Lift Size Change

See [Section 3.14 on page 27](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Lift Size Change movement	- Listen for odd noises during operation	Adjust Menu, Unit Action, 3: Lift Change				X	
Lift Size Change photo sensor - Photo Sensor, B214 (#501)	- Clean off any debris	Compressed Air	104239 (#501)			X	

Table 2-12. Lift Size Maintenance

2.13 Film Roll Holders

See [Section 3.16 on page 28](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Film Roll Holding Spikes	- Check if the spikes hold the rolls	2.5 mm Allen wrench			X	X	
Film position	- Shaft end hub --> front edge of film is even blade or farther back				X	X	
Film Roll Brake - Brake Assy (#27)	- Confirm film roll stops and does not over turn - Stop position, full roll: 10:00-11:00	Adjust Menu, Wrapping Machine, Roll tab	172604 (#27)		X	X	

Table 2-13. Film Roll Holders Maintenance

2.14 Film Feeder Movement

See [Section 3.17 on page 29](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Movement (Front & Rear Feeders)	- Confirm smooth movement - Listen for odd noises during operation	Adjust Menu, Unit Action, 9: Front Feeder Move 10: Rear Feeder Move				X	
Belt tension (2 black drive belts)	- Verify belt tension and condition					X	

Table 2-14. Film Feeder Movement Maintenance

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Drive Shafts	- Clean debris and old grease and apply new grease	Yellow Grease				X	
Home & Limit Photo Sensors (4 places) - Front Limit (#502) - Feeder Position, 3 places (#503)		Compressed Air	171837 (#502) 104239 (#503)			X	
Main Hex Drive Shaft	- Clean debris and old grease and apply new grease	Black grease				X	

Table 2-14. Film Feeder Movement Maintenance (Continued)

2.15 Label Applicator - Main

See [Section 3.18 on page 29](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Movement: three directions - Photo Sensors, 8 places (#501)	- No unusual sounds - Clean with compressed air - Confirm beep in Adjust menu	Compressed air. Adjust Menu, Unit Action, Label App. Tab, 1: Appl Control Sensor	104239 (#501)			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 Suction Assy (#608)	- Verify the Applicator Suction Fan can hold a 0.015 lb. tray		172624 (#608)			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	X	
Applicator Shoe (black) (#59)	- Replace if worn or cracked		171864 (#59)		X	X	
Label Detection sensor (inside applicator shoe) (#607)	- Clean dust from sensor	Cotton swab	172623 (#607)	X	X	X	

Table 2-15. Label Applicator - Main Maintenance

2.16 Label Applicator - Pop

See [Section 3.19 on page 30](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Movement: three directions - Photo Sensors: - 5 places (#509), 1 place (#510)	- No unusual sounds - Clean with compressed air - Confirm beep in Adjust menu	Compressed air. Adjust Menu, Unit Action, Label App. Tab, 1: Appl Control Sensor	104239 (#509) 171837 (#510)			X	
Applicator End (Spring loaded assy)	- Push the Applicator up - Verify free movement and vibration/bounce when lowered is not excessive	White grease				X	

Table 2-16. Label Applicator - Pop Maintenance

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Fan suction - Fan Suction Assy (#606)	- Verify the Applicator Suction Fan can hold a 0.015 lb. tray		178215 (#606)			X	
Applicator Shafts: Left/ Right (2), Up/Down (1)	- Check for rust - Clean debris and old grease, apply new grease	Yellow grease			X	X	
Applicator Shoe (black) (#44)	- Replace if worn or cracked		178204 (#44)		X	X	
Label Detection sensor (inside applicator shoe) (#605)	- Clean dust from sensor	Cotton swab	178214 (#605)	X	X	X	

Table 2-16. Label Applicator - Pop Maintenance (Continued)

2.17 Printer - Main

See [Section 3.20 on page 30](#) for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Printing Quality - Print Head (#501)	- Verify print is complete and legible - Clean print head	Adjust Menu, Printer, Printer 1, Head tab, PRINT. Isopropyl alcohol	178188 (#501)		X	X	
Label Feeding - Print Rollers (#42)	- Check if printing expands or contracts - Check and clean 2 print rollers - Remove paper dust	Adjust Menu, Printer, Printer 1, Head tab, PRINT. Label & Isopropyl alcohol	171873 (#42)			X	
"Head Up" sensor - Sensor (#601) - Magnet (#502)	- Verify sensor operation	Adjust Menu, Printer, Printer 1, Head tab, "Head Up"	172669 (#601) 105979 (#502)			X	
Label Gap sensor - Gap Sensor Assy (#601) Peel sensor - Transmitter, Left Side (#503) - Receiver, Right Side (#504)	- Check sensor readings are normal - Clean, calibrate, or replace sensors as needed	Adjust Menu, Printer, Printer 1, Label Feed tab & Peel Sensor tab	172669 (#601) 171876 (#503) 171877 (#504)		X	X	
Label Pickup Roller Table - Roller Table O-Rings (#2) - Roller Table O-Rings, End	- Clean adhesive from rollers - Verify smooth turning		157891 (#2) 178190 [End]		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 (#37)	- Inspect catch magnet for wear - Verify magnet holds and printer drive gears mesh well at home position		172642 (#37)			X	

Table 2-17. Printer - Main Maintenance

2.18 Printer - Pop

See [Section 3.21 on page 31](#) for assembly.

Check Points	Comments	Tool/Grease/Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Printing Quality - Print Head (#502)	- Verify print is complete and legible - Clean print head	Adjust Menu, Printer, Pop, Head tab, PRINT. Isopropyl alcohol	178188 (#502)		X	X	
Label Feeding - Print Rollers (#32)	- Check if printing expands or contracts Check and clean 2 print rollers - Remove paper dust	Adjust Menu, Printer, Pop, Head tab, PRINT. Label & Isopropyl alcohol	178218 (#32)			X	
"Head Up" sensor - Sensor (#601) - Magnet (#503)	- Verify sensor operation	Adjust Menu, Printer, Pop, Head tab, "Head Up"	178227 (#601) 105979 (#503)			X	
Label Gap sensor - Gap Sensor Assy (#601) Peel sensor - Transmitter, Left Side (#505) - Receiver, Right Side (#504)	- Check sensor readings are normal Clean, calibrate, or replace sensors as needed	Adjust Menu, Printer, Pop, Label Feed tab & Peel Sensor tab	178227 (#601) 171877 (#505) 171876 (#504)		X	X	
Label Pickup Roller Table - Roller Table O-Rings (#2) - Roller Table O-Rings, End	- Clean adhesive from rollers - Verify smooth turning		157891 (#2) 178190 [End]		X	X	

Table 2-18. Printer - Pop Maintenance

2.19 Camera and Lighting

See [Section 3.22 on page 31](#) for assembly.

Check Points	Comments	Tool/Grease/Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Camera - P-1107 Camera Controller (#501) - CMOS Camera (#502)	- Verify tray recognition - Place trays in four corners in operation mode Calibrate as needed	Adjust Menu, Camera	171865 (#501) 172626 (#502)			X	
LED Lights - LED Assy, Left side (#503) - LED Assy, Right side (#504)	- Confirm both LED lights are lit	Operation Mode	172627 (#503) 172628 (#504)			X	
Camera and light lens cover	- Clean clear plastic lens cover	Cloth		X	X	X	

Table 2-19. Camera and Lighting Maintenance

2.20 Touchscreen Display

See [Section 3.23 on page 32](#) for assembly.

Check Points	Comments	Tool/Grease/Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Contrast - LCD Display (#504) - P-1102 Display Control Bd (#501)	- Verify brightness of the display - Replace Inverter or Display as needed	Adjust Menu, Display Check	158278 (#504) 171882 (#501)			X	
Touchscreen operation - Touch Panel (#503)	- Confirm accuracy - Calibrate or replace as needed	Adjust Menu, Touch Screen	171883 (#503)		X	X	
Touchscreen cleaning	- Clean touchscreen display	Cloth		X	X	X	

Table 2-20. Touchscreen Display Maintenance

2.21 Keyboard Assembly

See Section 3.24 on page 32 for assembly.

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Keyboard - Keyboard Assy (#501)	- Confirm all keys function and show as dark squares	Adjust Menu, Key Check	171884 (#501)			X	
Keyboard Transparent cover - Cover (#999)	- Clean keyboard cover - Replace as needed	Cloth	98400 (#999)	X	X	X	

Table 2-21. Keyboard Assembly Maintenance

2.22 Safety Switches

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Check four (4) Door Safety Switches	- Confirm function of the following interlock switches: S101 Printer Door, S200 Film Over Door, S301 Infeed, S302 Film Loading Door	Interlock Key	157866			X	
Check Emergency Stop	- Confirm operation of the S100, Emergency Stop switch		72899			X	

Table 2-22. Safety Switches Maintenance

2.23 File Backup

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Backup WM-Ai wrapper memory	- USB flash drive backup is the preferred method as this method captures more than the software backup	Setup Menu, File Save/Load, USB > Scale tab and/or SLP-5 / Maintenance Utility			X	X	

Table 2-23. File Backup Maintenance

2.24 Firmware

Check Points	Comments	Tool/Grease/ Program	Replacement Parts	Check Frequency			✓
				D	6M	Y	
Main Firmware	- Load firmware on a blank USB stick of 8 gig or less - Insert into the access hatch on the upper left side - Reboot afterwards	Adjust Menu, Download, Main tab "USB>MAIN (PRG+IMG)", USB Memory Folder, select file, Exec, Exec.					
Sub Apps	- Load all sub apps except "Under Printer" reboot after each - Take a second backup once firmware upgrades have been completed	Adjust Menu, Download, Sub App tab.					

Table 2-24. Firmware Maintenance



NOTE: To update to the latest firmware, navigate to the "Costco Retail Solutions Resource Center" for the latest firmware at <https://www.ricelake.com/ishida>

2.25 Adjustments, Comments and Parts Required

Section	Inspection Items and Contents	Comments	Replacement Parts

Table 2-25. Inspection Comments

2.26 Sample Labels

3.0 Reference Drawings

3.1 Lift Head

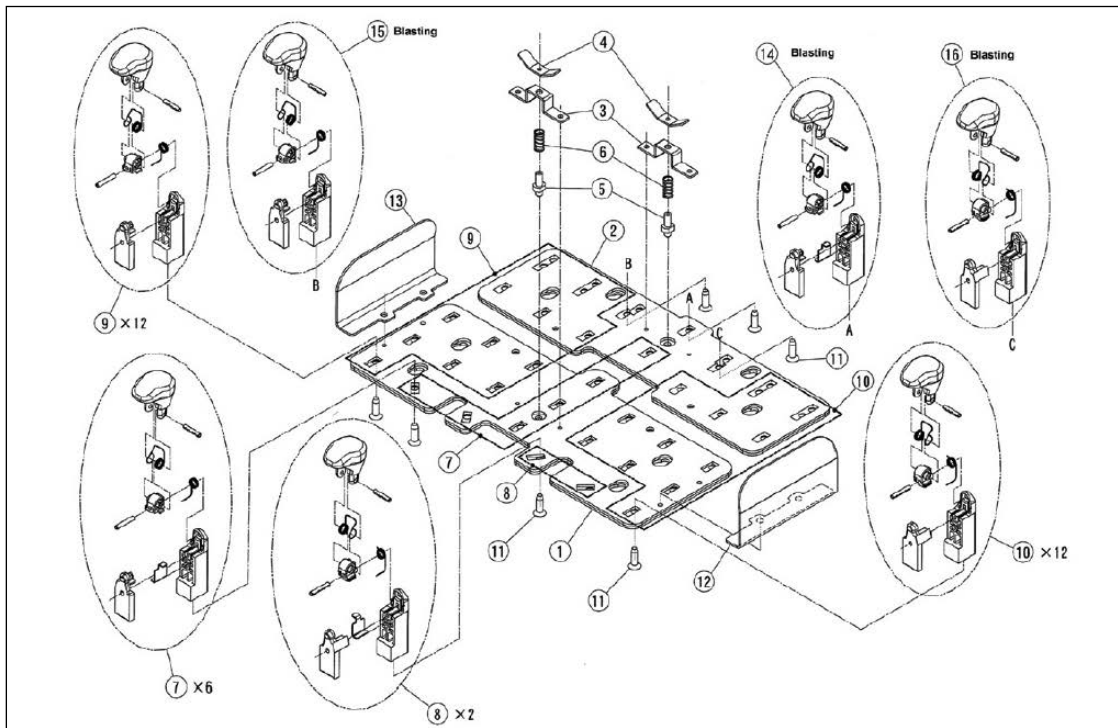


Figure 3-1. Lift Head Assembly

3.2 Wrapping: Front/Rear

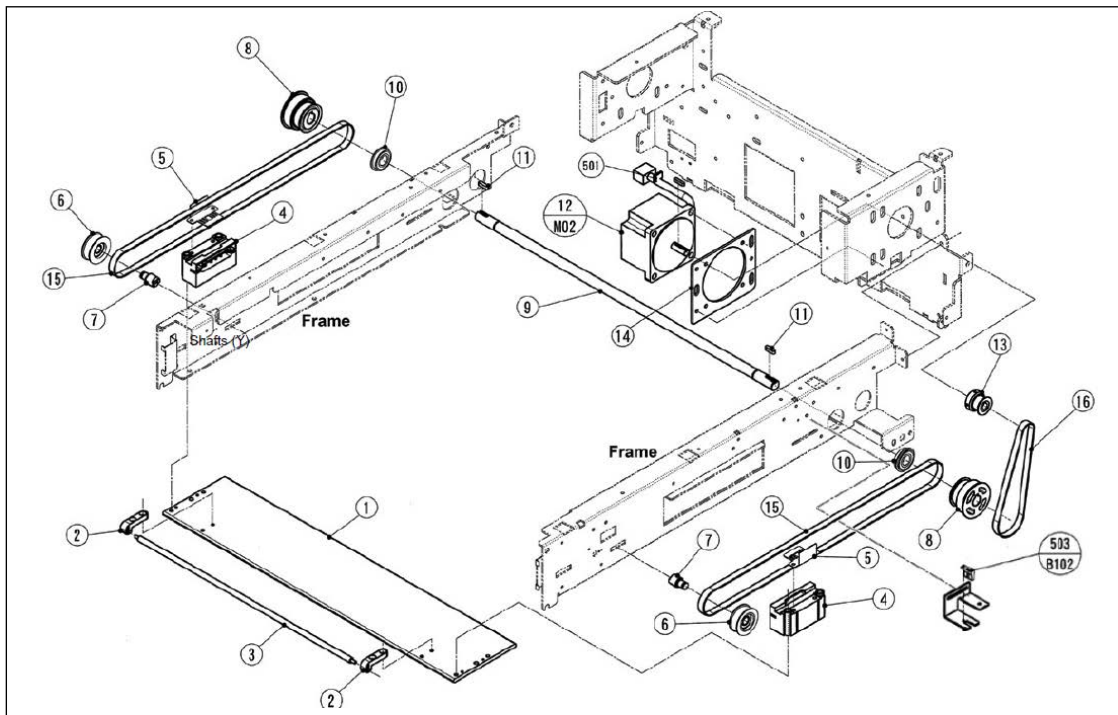


Figure 3-2. Wrapping Front/Rear Assembly

3.3 Wrapping: Left/Right

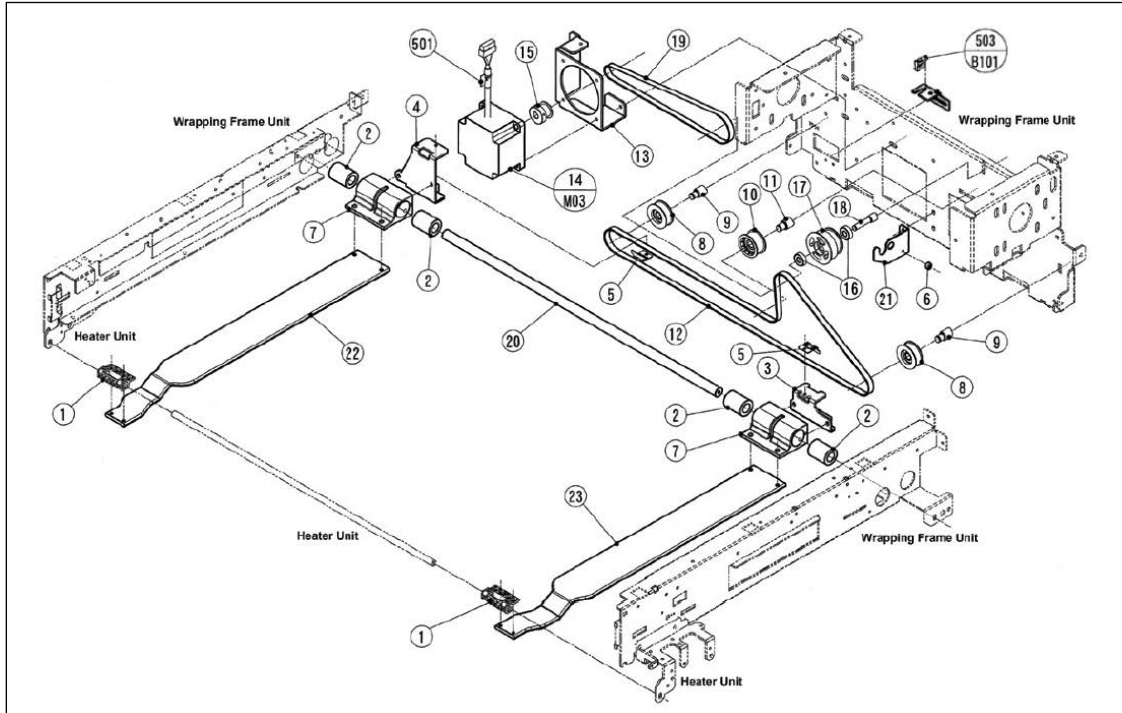


Figure 3-3. Wrapping Left/Right Assembly

3.4 Seal Heaters

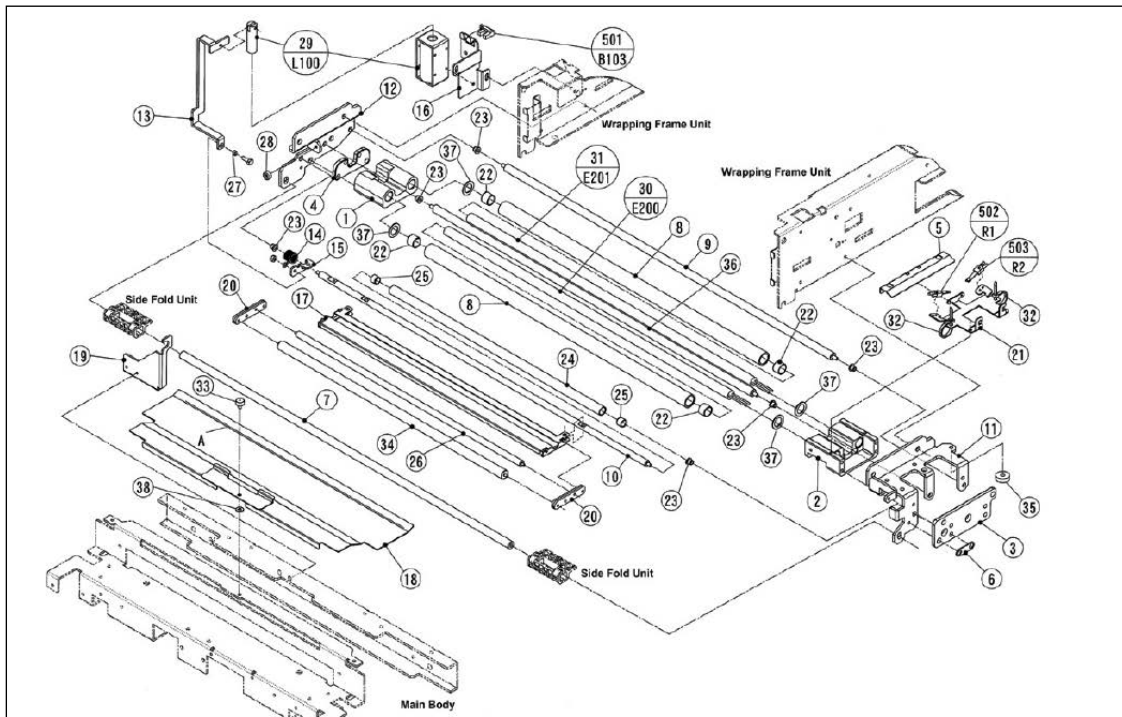


Figure 3-4. Seal Assembly

3.5 Discharge Pusher

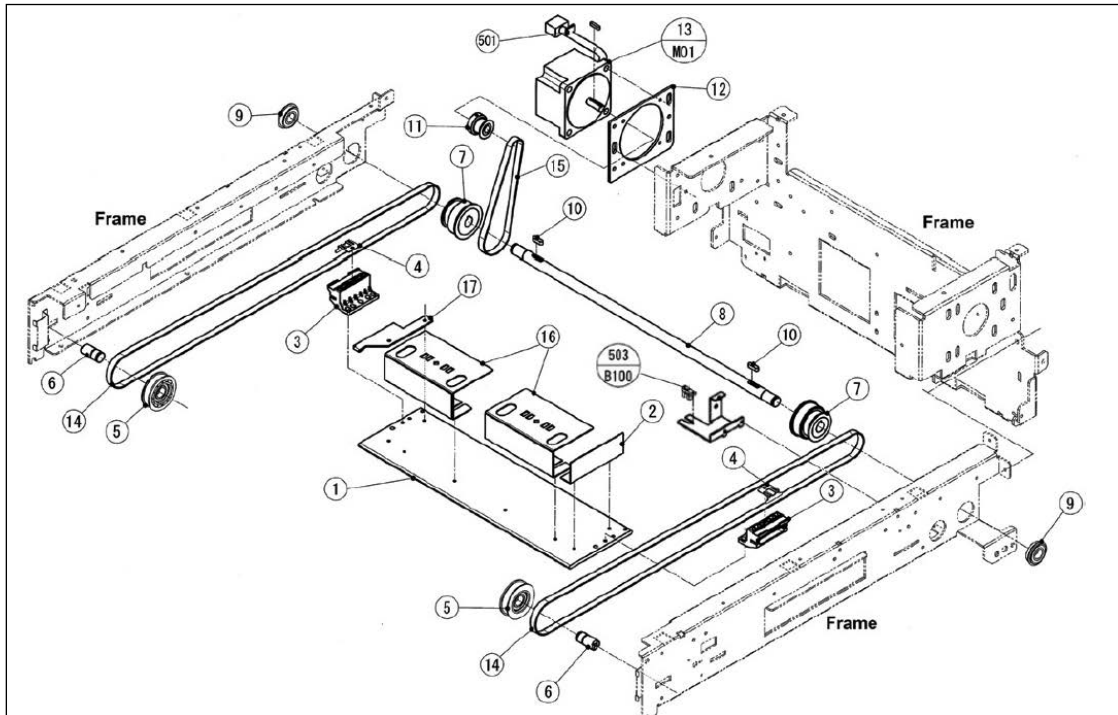


Figure 3-5. Discharge Pusher Assembly

3.6 Infeed

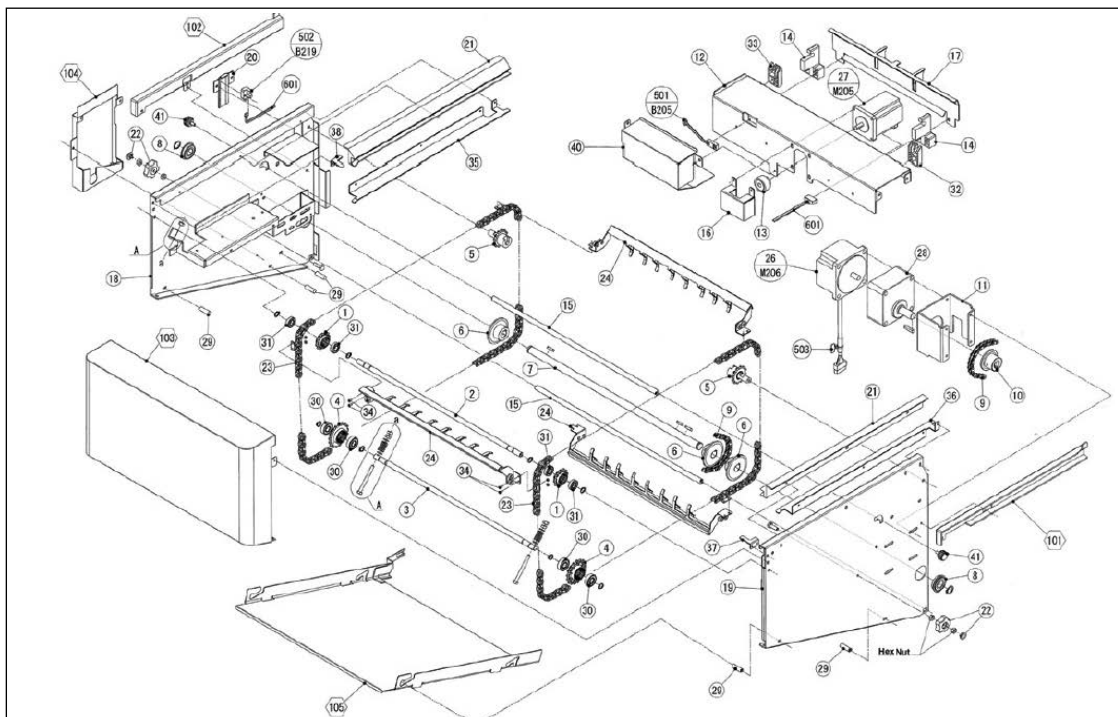


Figure 3-6. Infeed Assembly

3.7 Centering

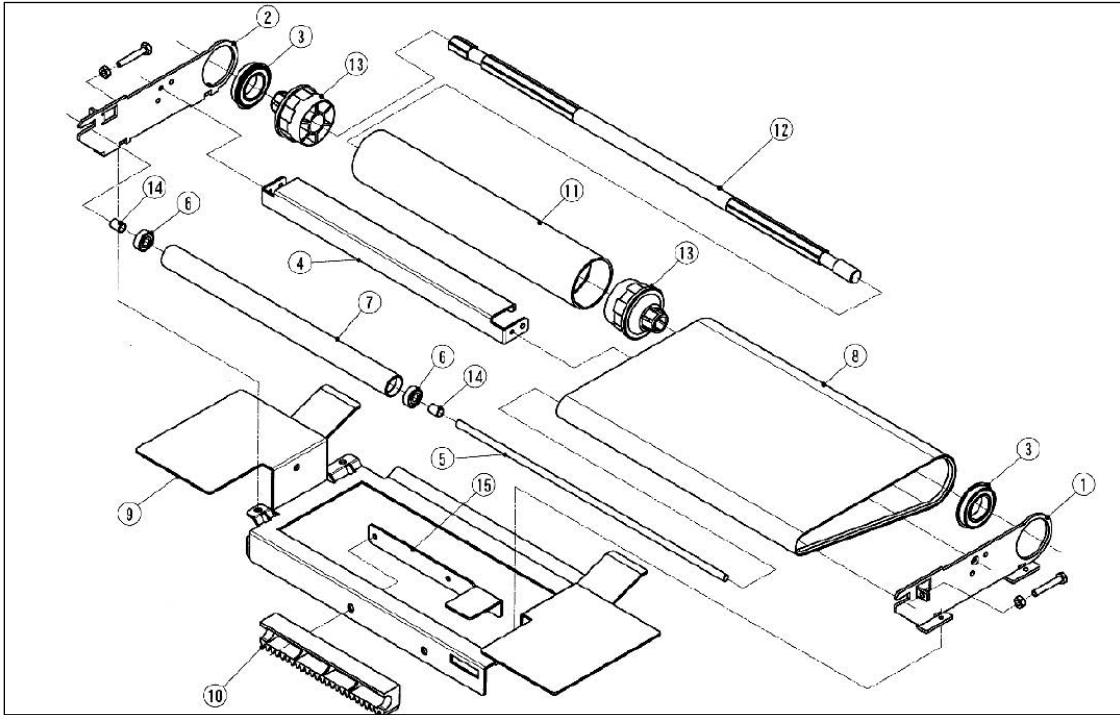


Figure 3-7. Centering Assembly

3.8 Scale

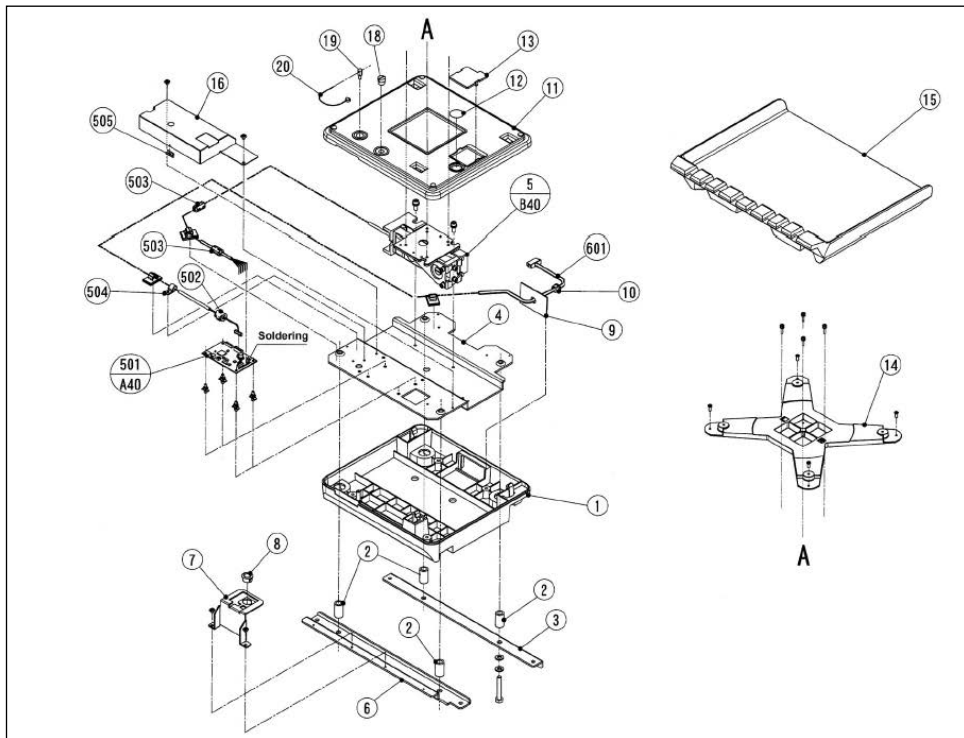


Figure 3-8. Scale Assembly

3.9 Film Feeder - Front Unit

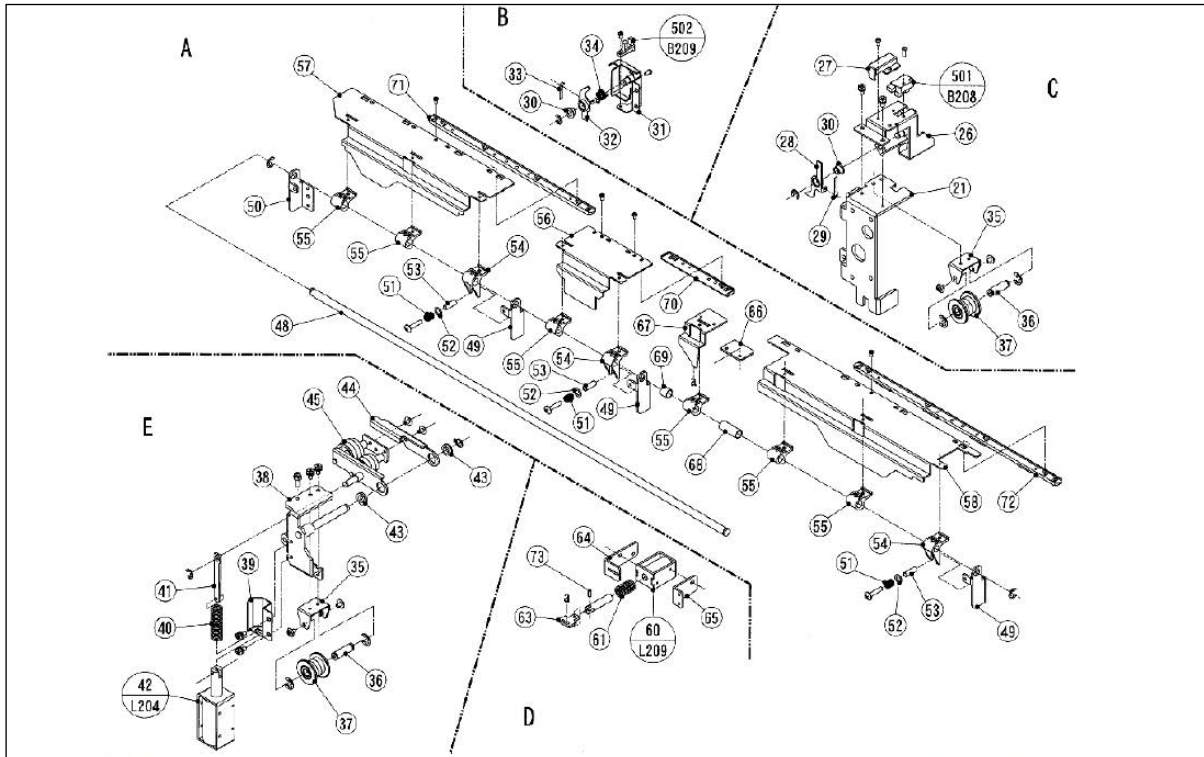


Figure 3-9. Film Feeder - Front Unit Assembly

3.10 Film Feeder - Rear Unit

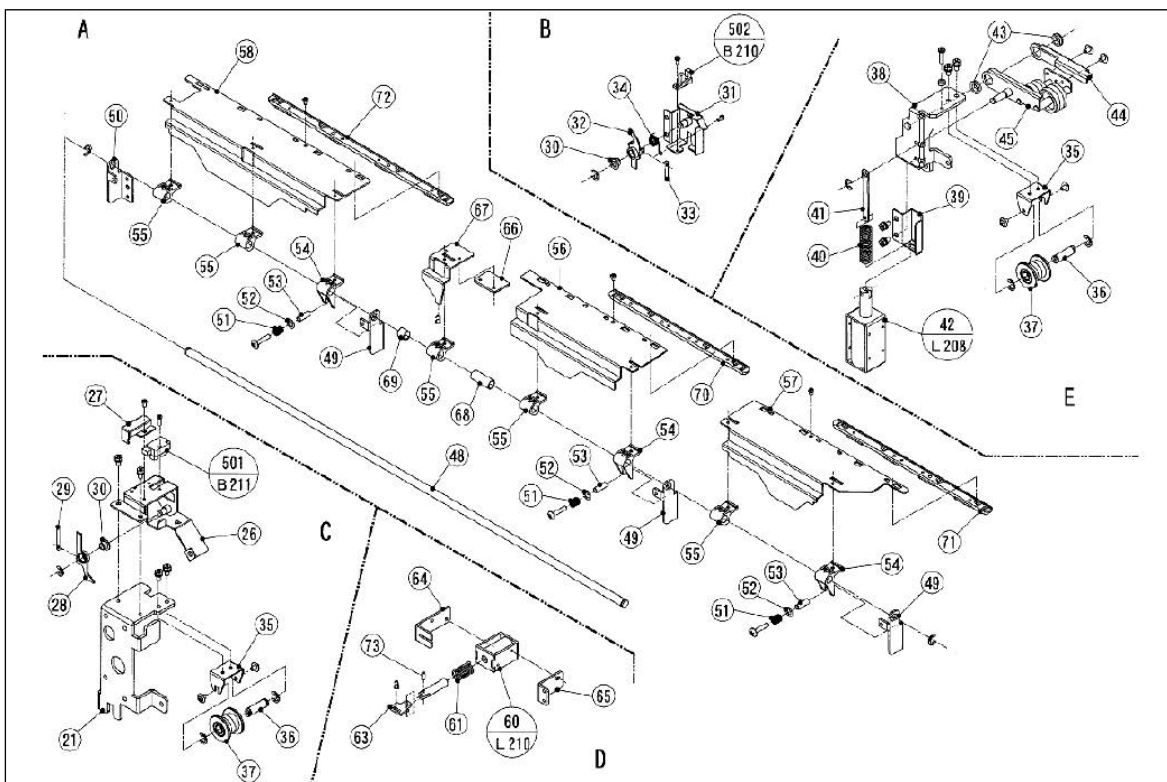


Figure 3-10. Film Feeder - Rear Unit Assembly

3.11 Film Transport #1

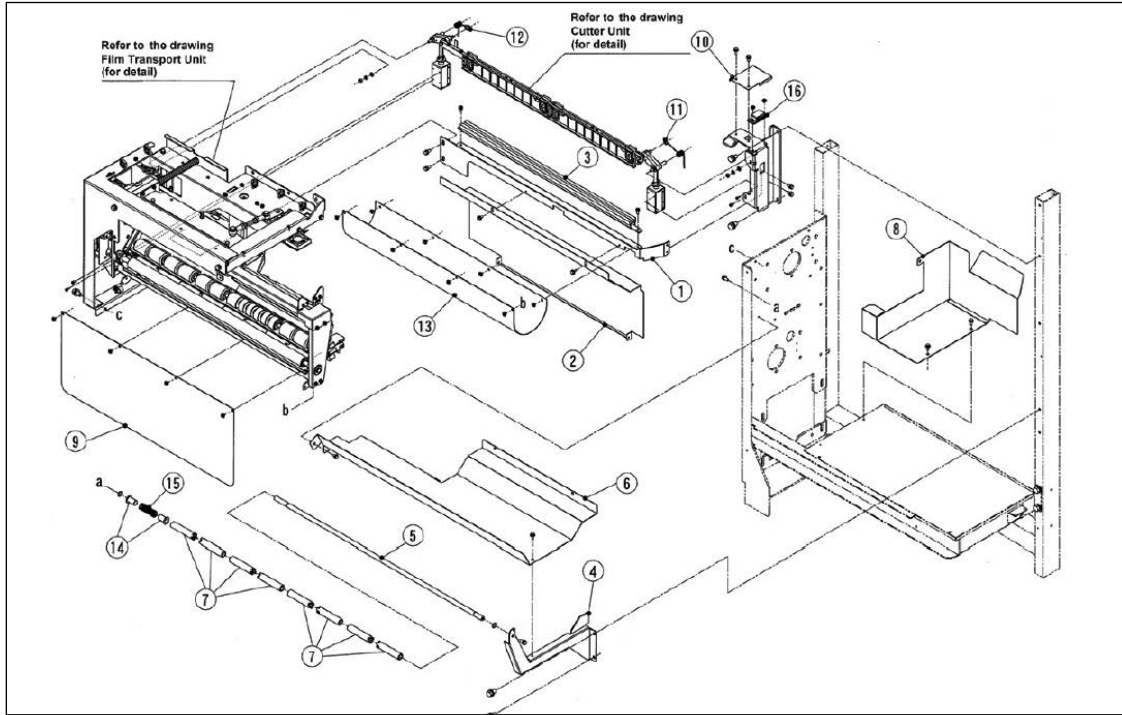


Figure 3-11. Film Transport Assembly #1

3.12 Film Transport #2

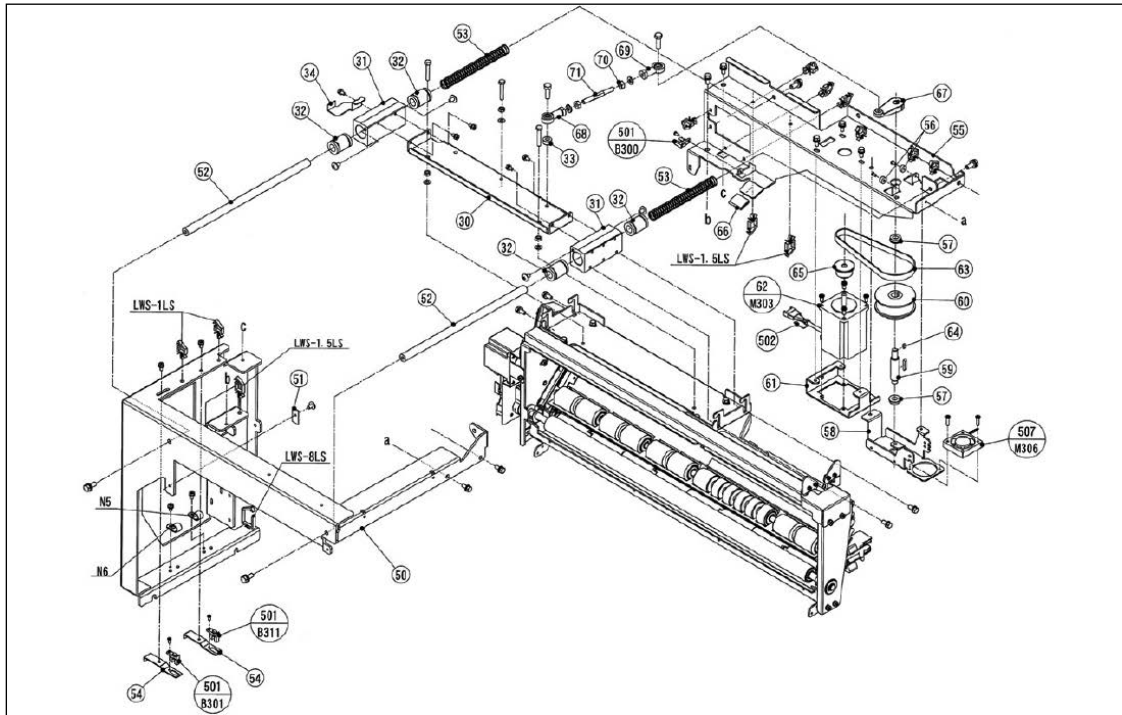


Figure 3-12. Film Transport Assembly #2

3.13 Film Transport #3

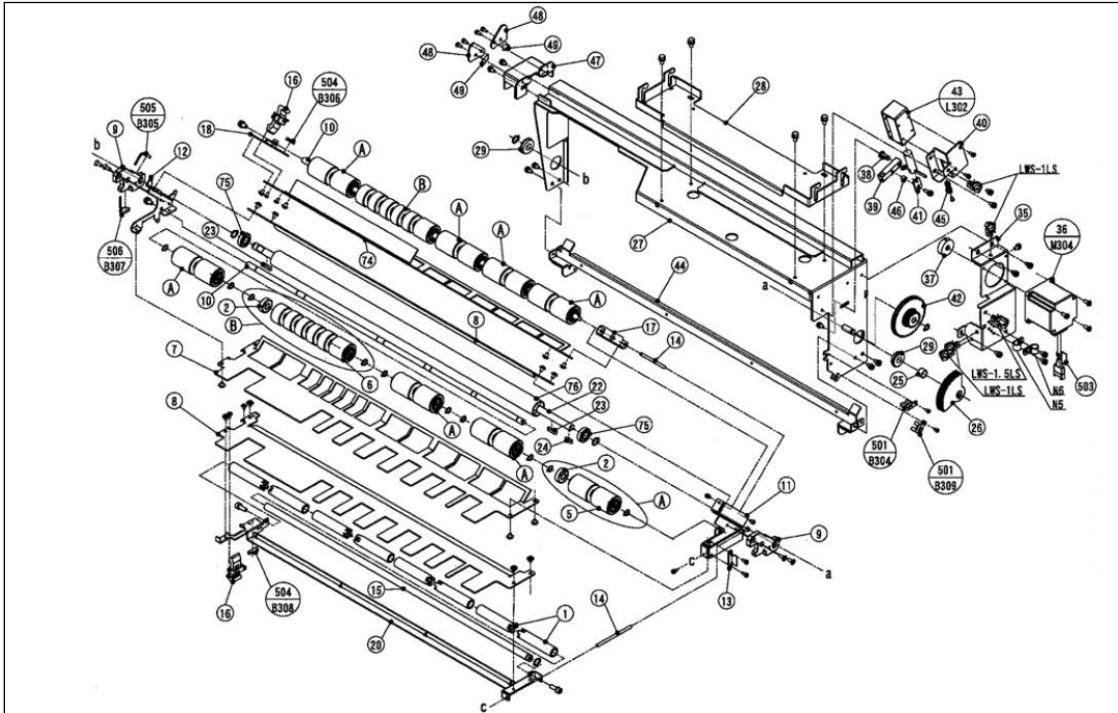


Figure 3-13. Film Transport Assembly #3

3.14 Lift Drive and Lift Size Change

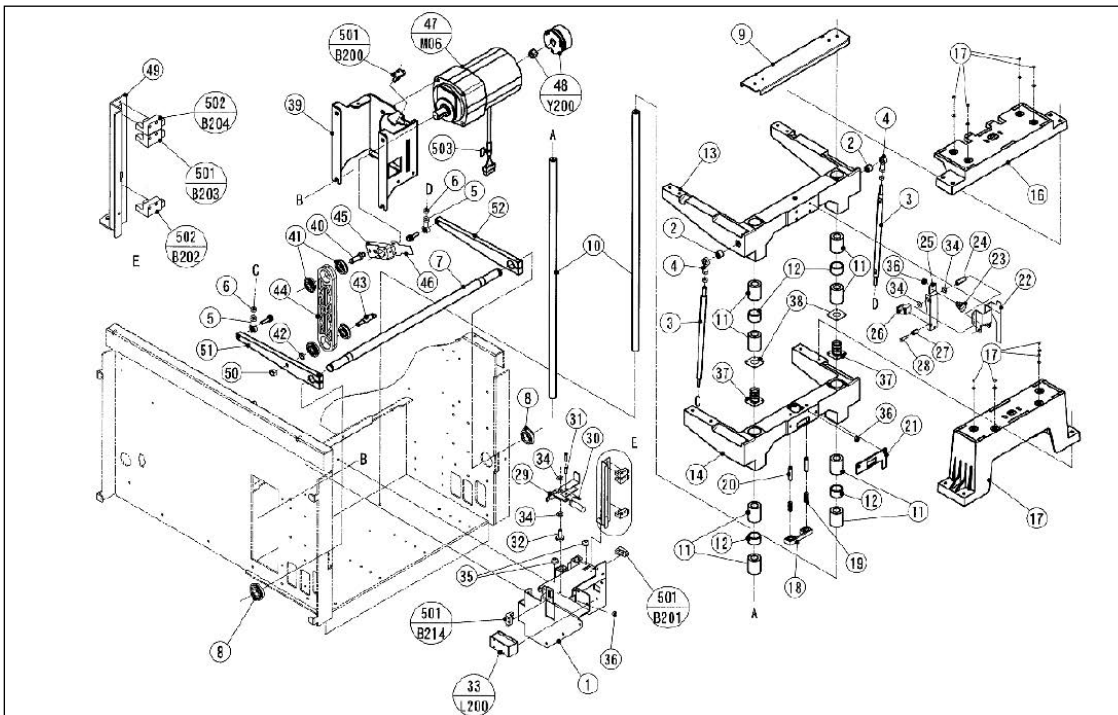


Figure 3-14. Lift Drive and Lift Size Change Assembly

3.15 Film Roll Drive

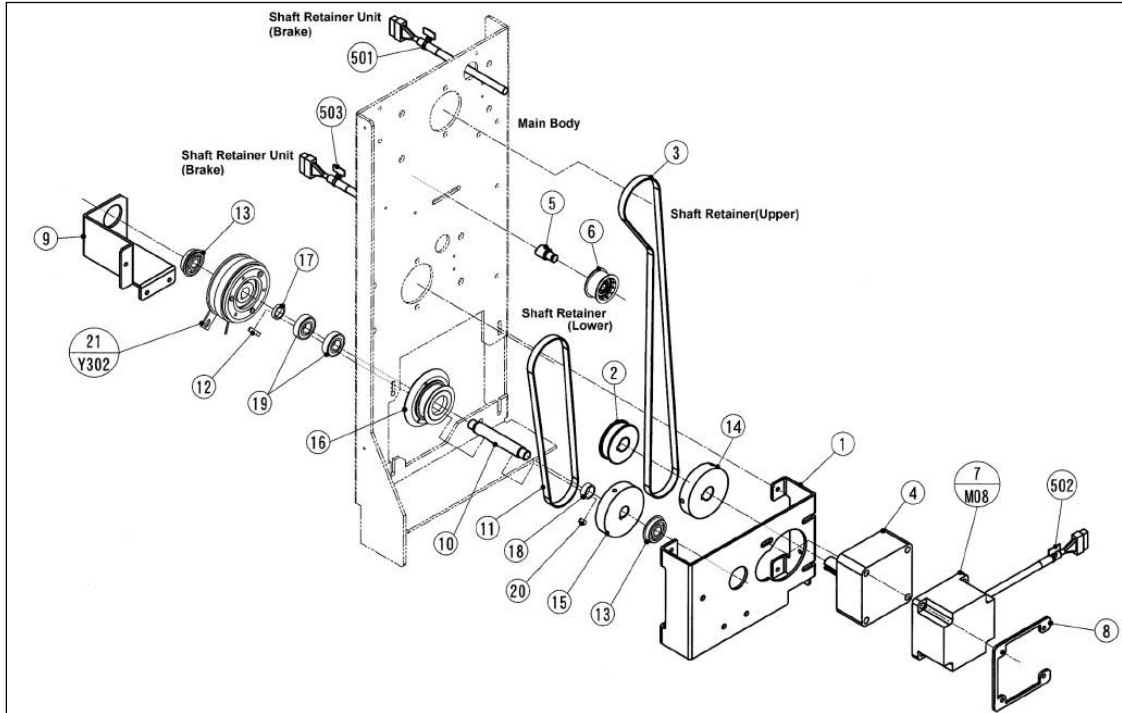


Figure 3-15. Film Roll Drive Assembly

3.16 Film Roll Holders

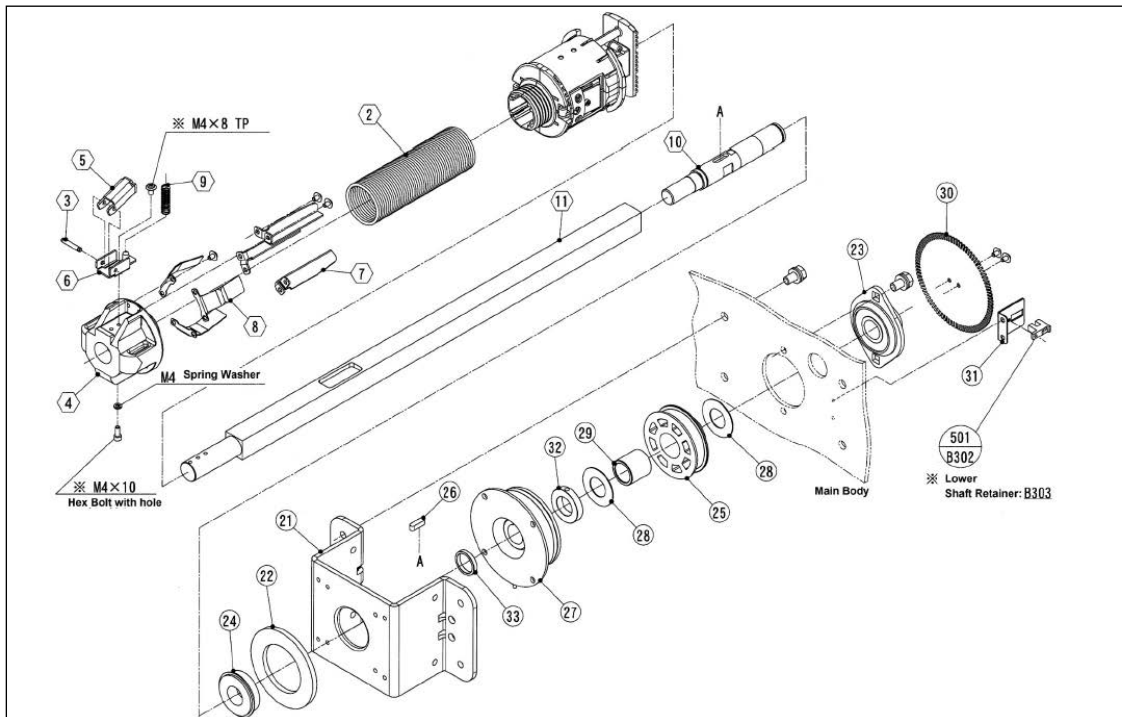


Figure 3-16. Film Roll Holders Assembly

3.17 Film Feeder Movement

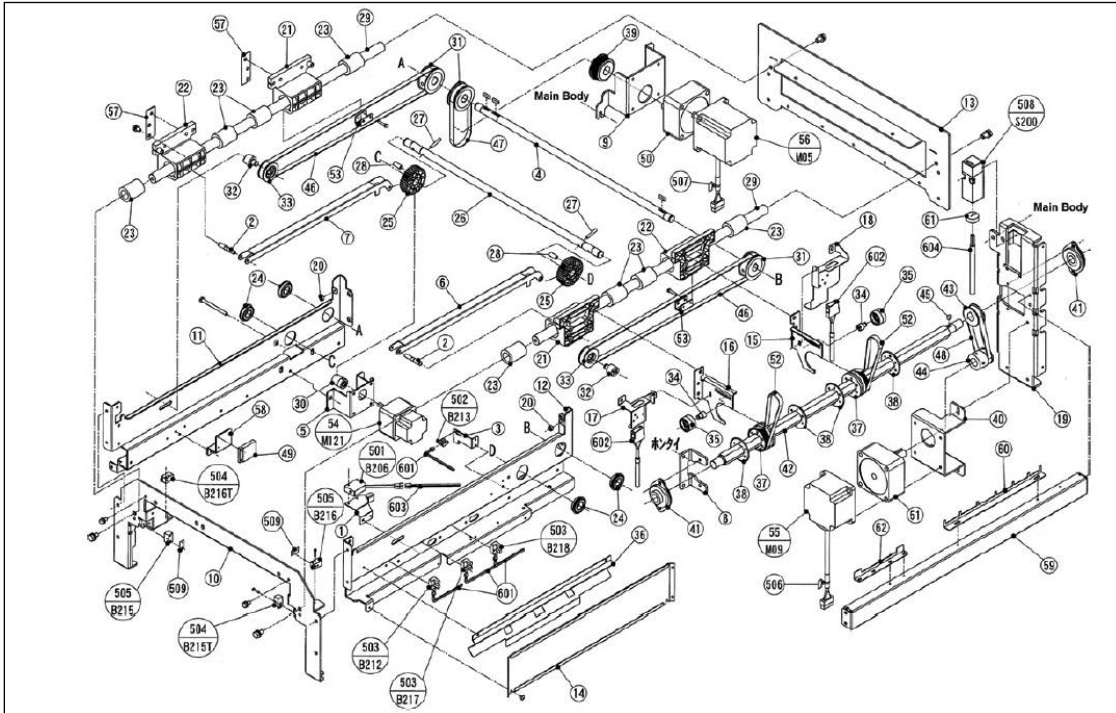


Figure 3-17. Film Feeder Movement Assembly

3.18 Label Applicator - Main

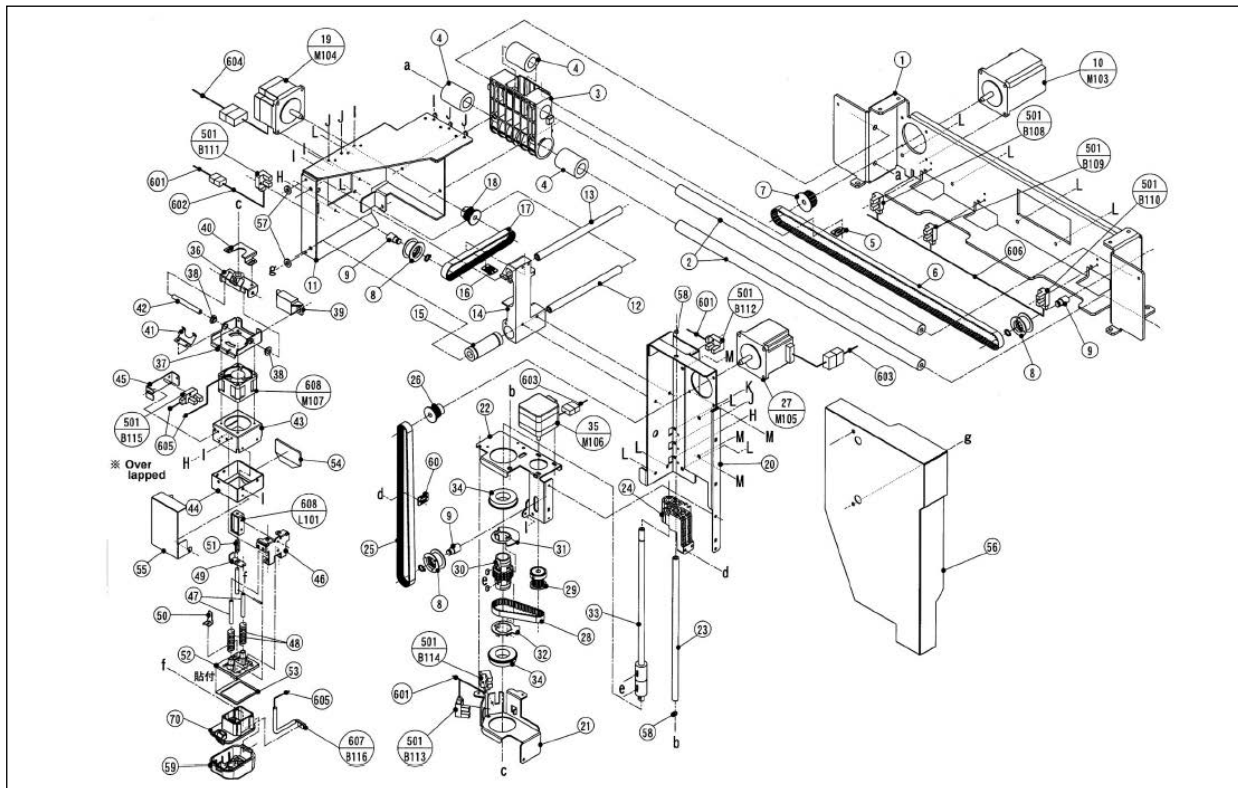


Figure 3-18. Label Applicator - Main Assembly

3.19 Label Applicator - Pop

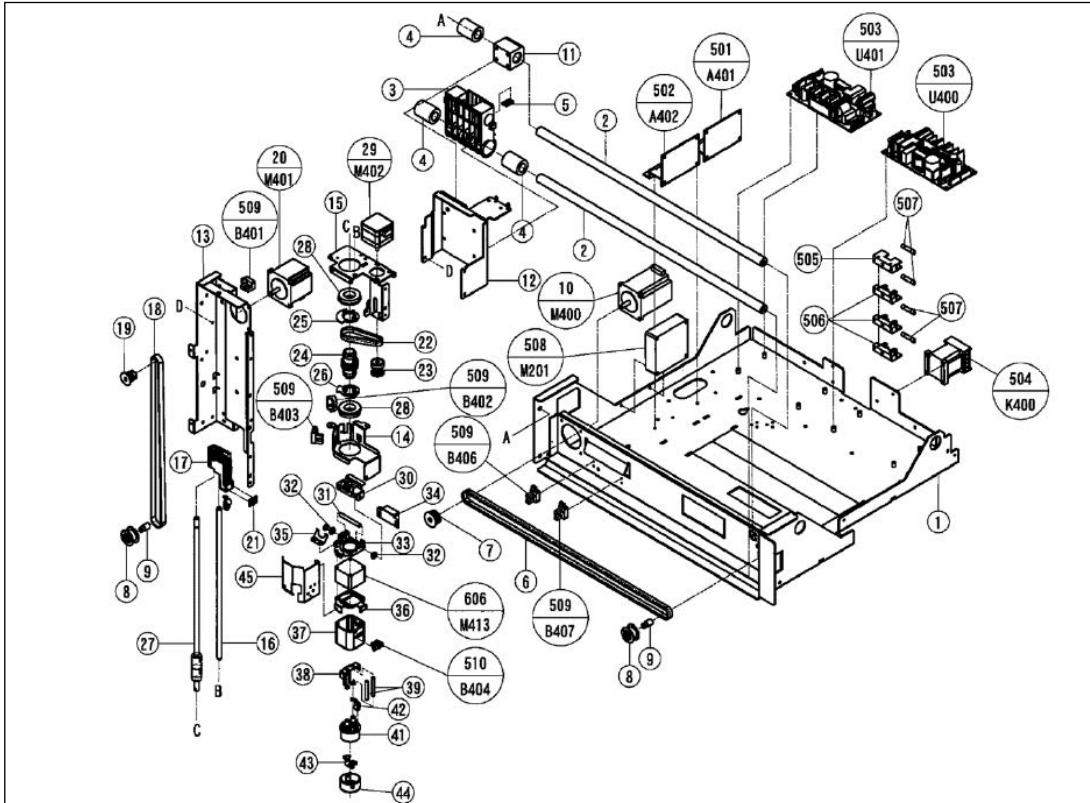


Figure 3-19. Label Applicator - Pop Assembly

3.20 Printer - Main

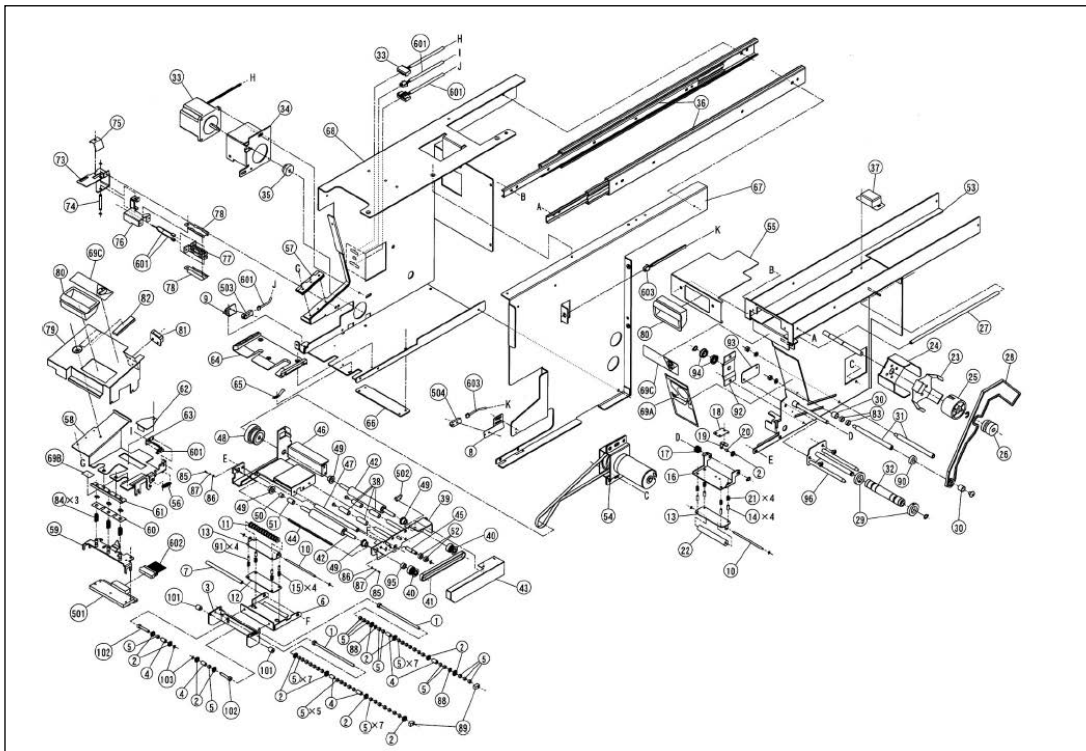


Figure 3-20. Printer - Main Assembly

3.21 Printer - Pop

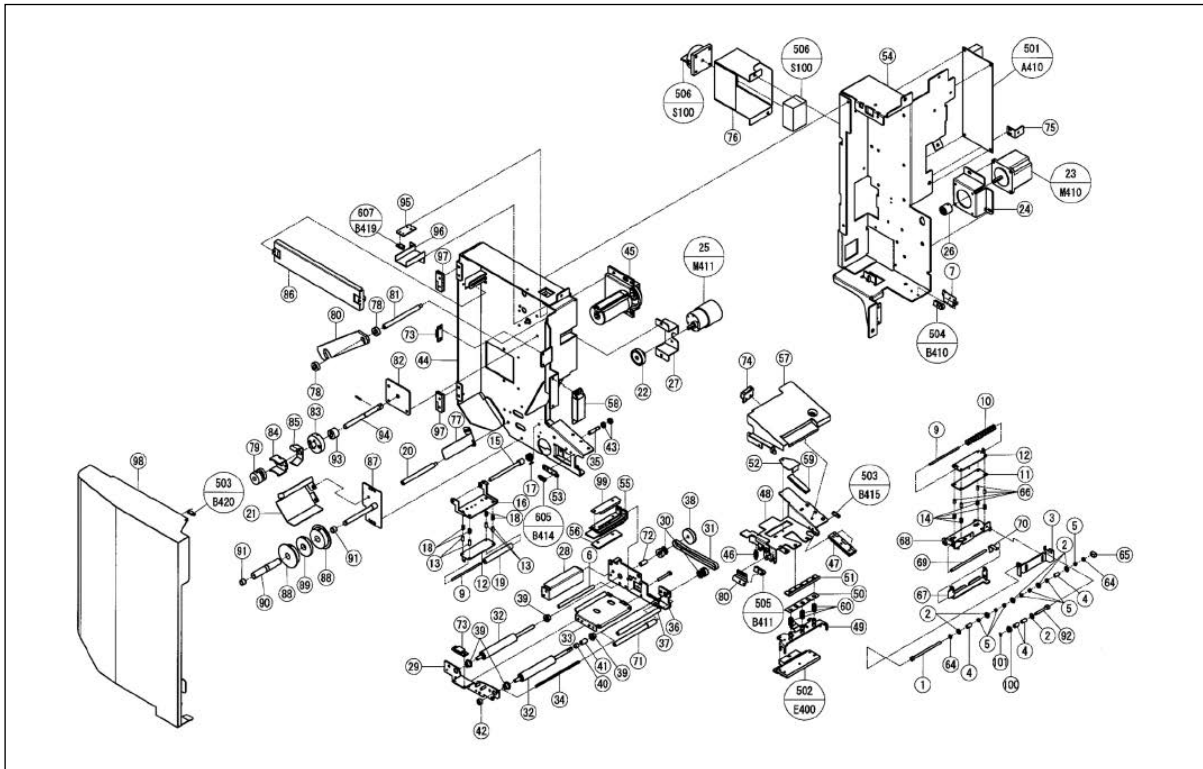


Figure 3-21. Printer - Pop Assembly

3.22 Camera and Lighting

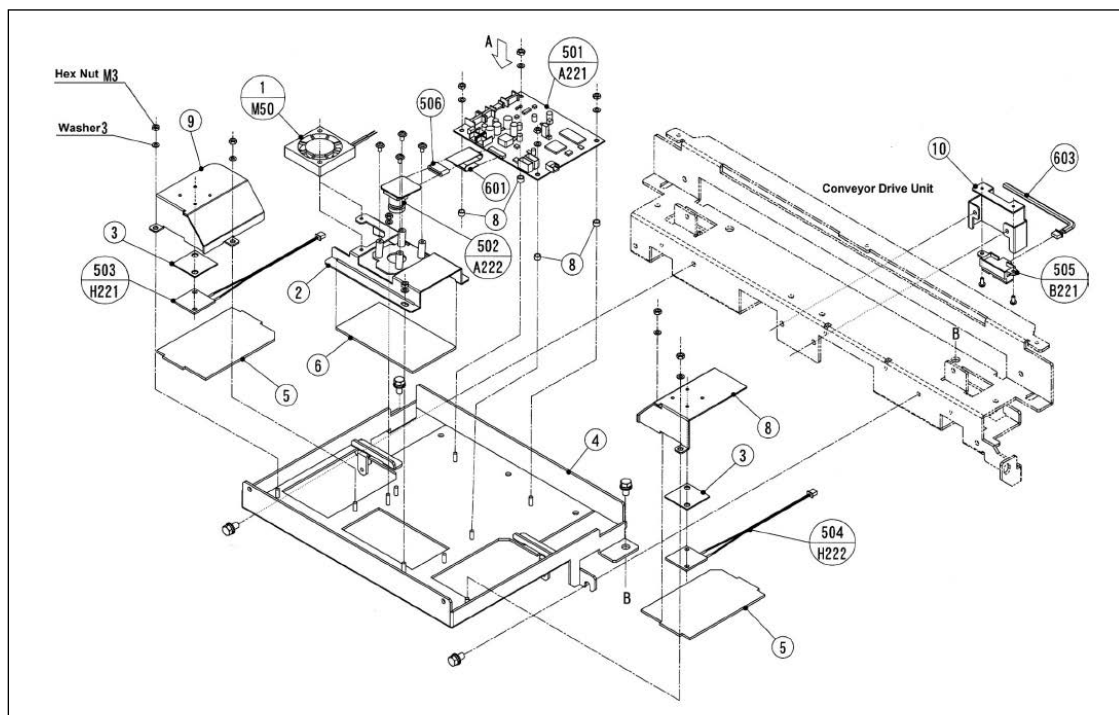


Figure 3-22. Camera and Lighting Assembly

3.23 Touch Screen Display

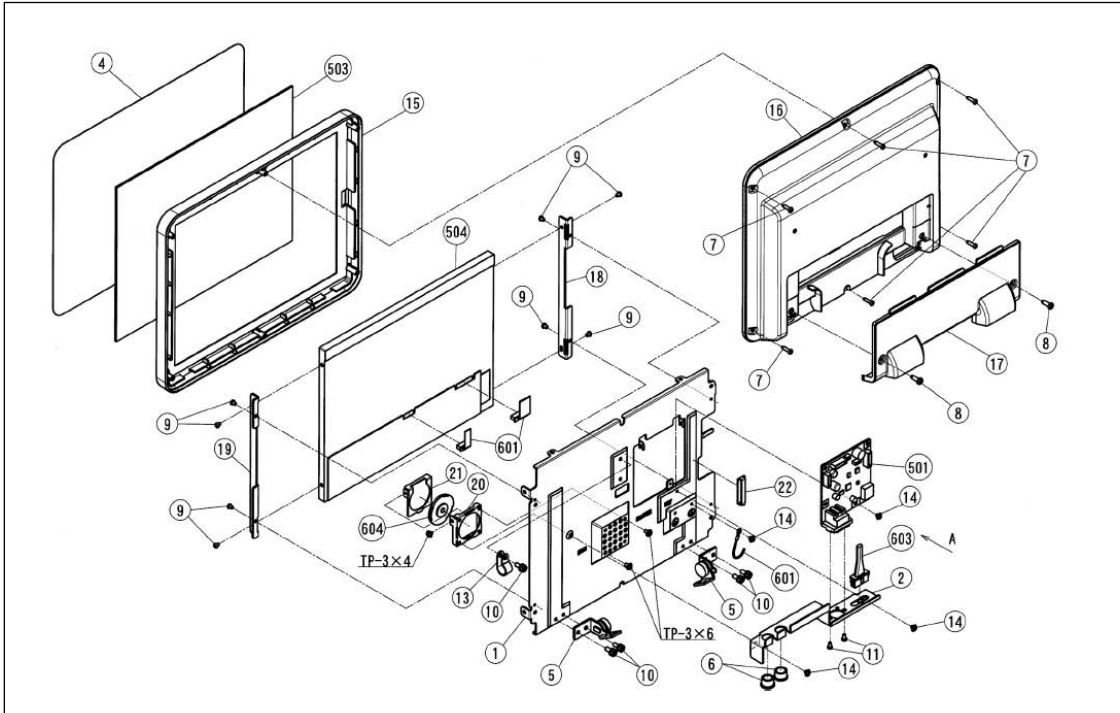


Figure 3-23. Touch screen Display Assembly

3.24 Keyboard

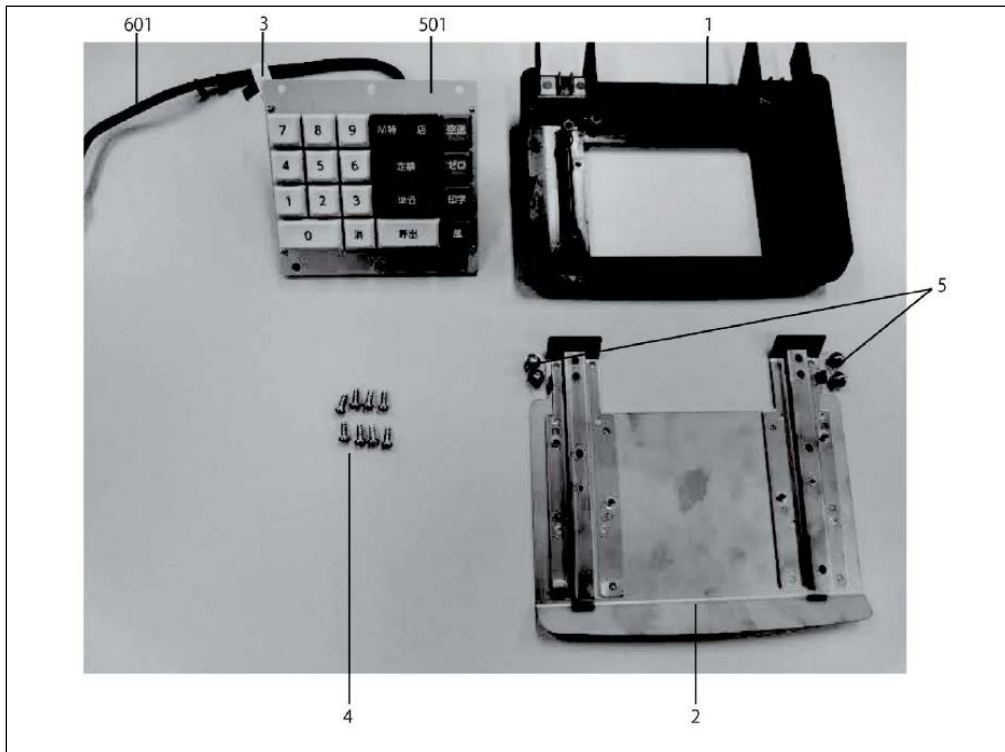


Figure 3-24. Keyboard Assembly



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