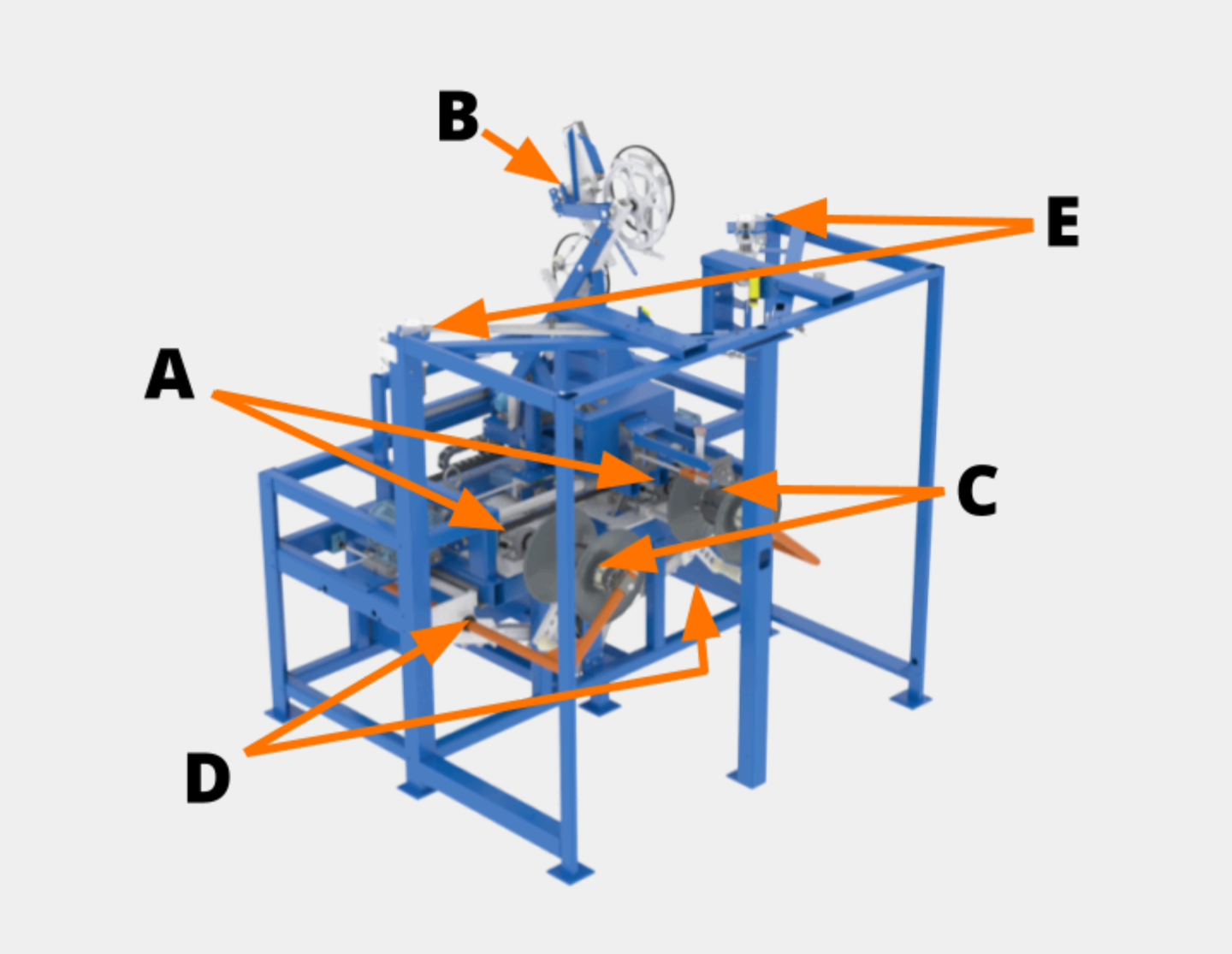
Maintenance

M340 REELEX Coiling Machine

M340 Maintenance

The REELEX M340 Dual-Spindle coiling machine is designed to operate with minimal maintenance. However, the following preventative maintenance should be performed as described in order to maximize the life of the machine and its components.

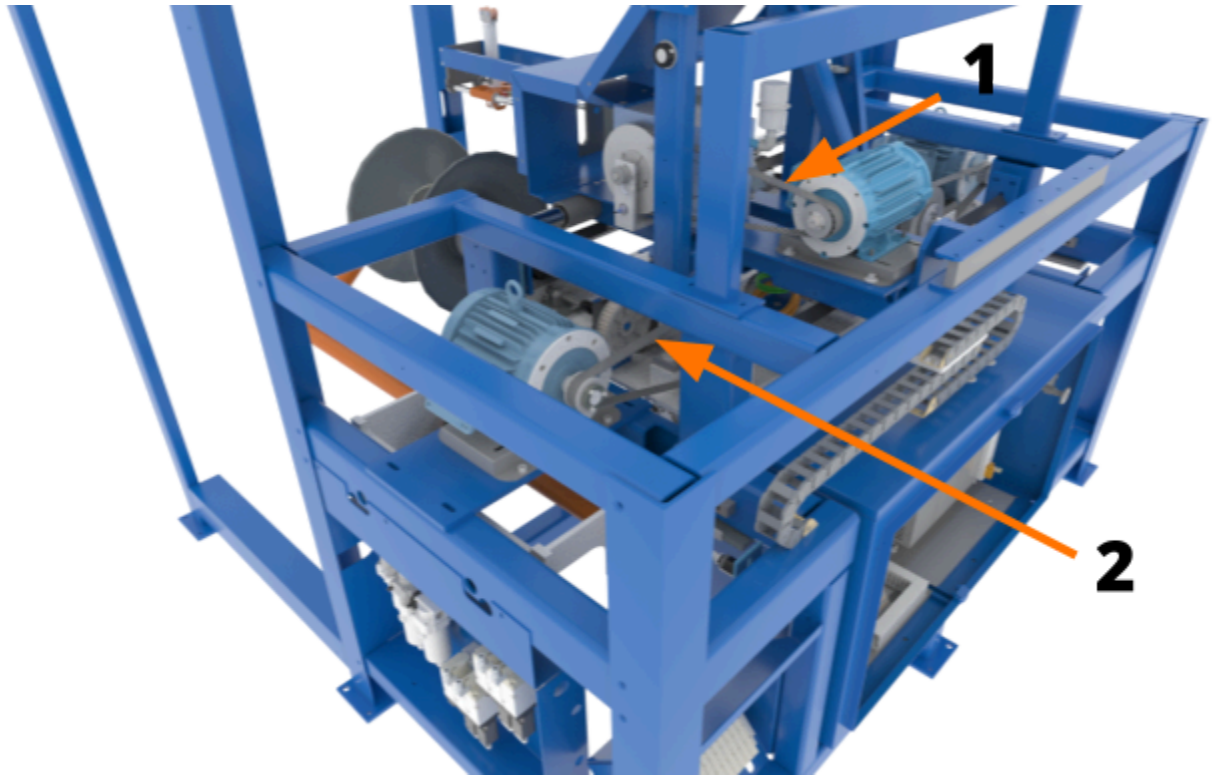
Mechanical Maintenance

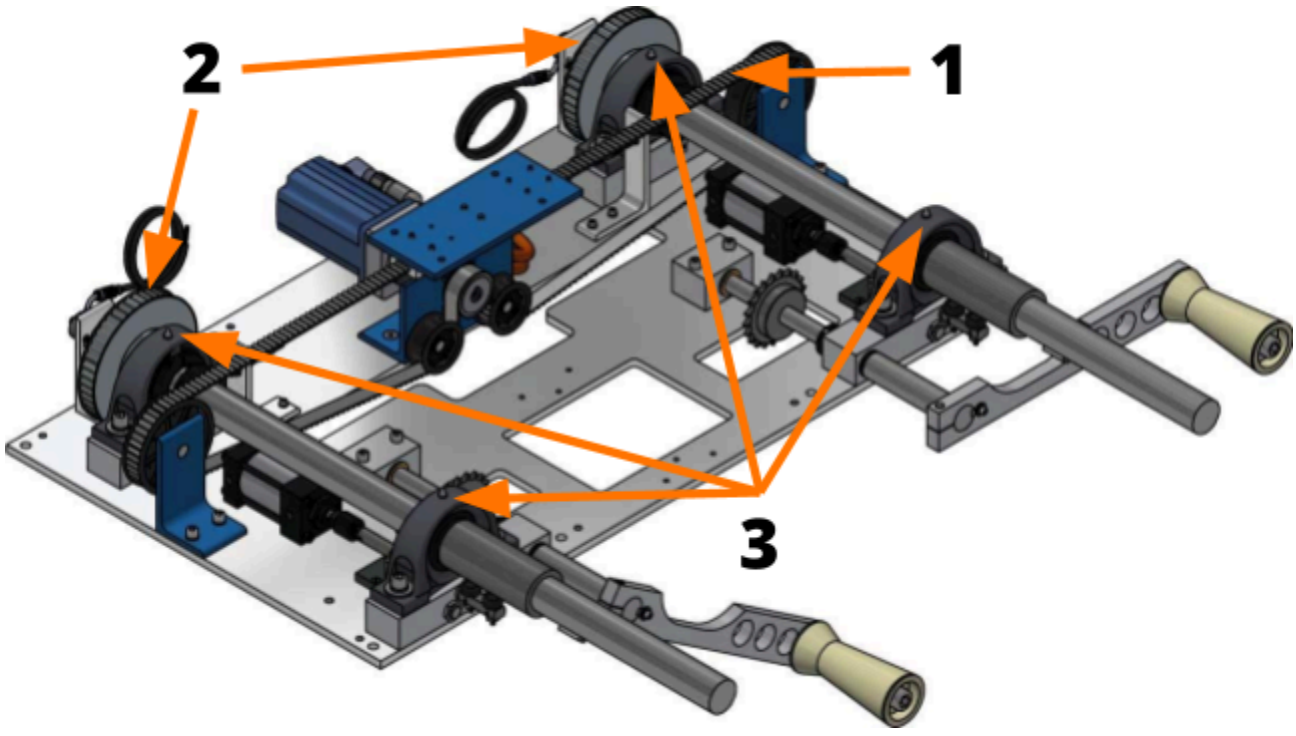


A - Motors, Shafts, Cutters, Table

References:

- 34026 - SPINDLE ASSY, CUTTER & TRANSFER ARM.pdf
- 34027 - TABLE MOVEMENT ASSY, TRAVERSE.pdf
- 34025 - MOTOR ASSY, SPINDLE (AC).pdf





Item	Action	Type	Time Period
1.	Inspect traverse and table belts monthly. Check for dry rot, excessive wear, and tightness. Tighten belt when needed, until about ¼ inch of play. To do so, loosen the 4 bolts securing the motor to the adjustable base, and use the jack screw on the base for adjustment. Tighten all bolts after desired tension is obtained.	Inspect and replace when necessary.	Monthly
2.	Inspect spindle belts monthly. Check for dry rotting, excessive wear, and tightness. Tighten belt when needed, until about ¼ inch of play. To do so, loosen the 4 bolts securing the motor to the adjustable base, and use the jack screw on the base for adjustment. Tighten all bolts after desired tension is obtained.	Inspect and replace when necessary.	Monthly
3.	Add grease until visually coming out of bearings, then wipe off excess.	Grease	Monthly

B - Buffer, Anti-Reverse

The buffer unit is essential to winding quality REELEX coils. The buffer should be regularly checked for good operation, and all springs and bearings should be replaced when worn. Not doing so could have adverse effects on the REELEX coil, including increased stress on the product (leading to poor electrical performance and other issues).

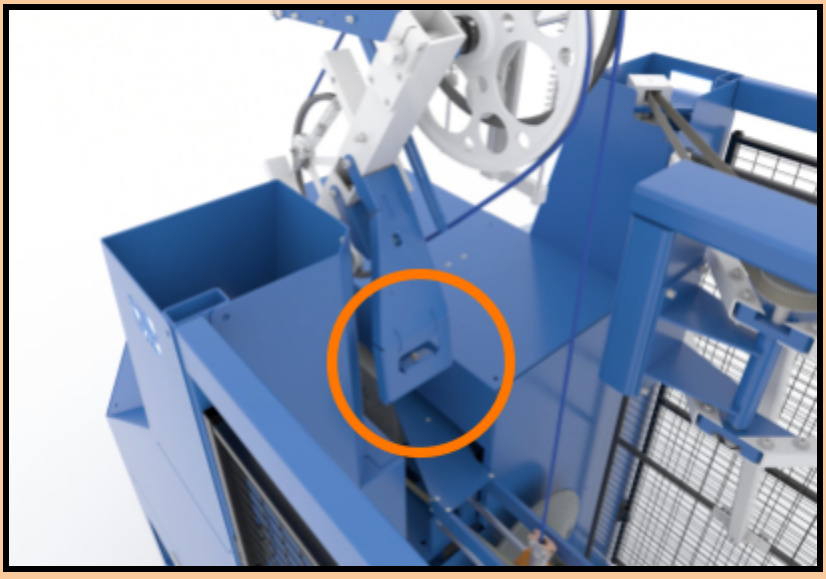
The wire buffer unit is designed to be raised and lowered as necessary. When raised, the buffer is in its normal operation position. There is a lockout switch system, which prevents the machine from starting unless the buffer is in the full up position.

The wire buffer is designed to compensate for changes in wire length during winding. The slider block shaft requires an application of silicone spray weekly, as the bearings in the buffer slider block are subjected to high velocity and cycle rates. Inspect all rollers and sheaves for serviceability. Check all securing devices, i.e. nuts, bolts, set screws, and lock rings and tighten if necessary.

The buffer slider block is equipped with a cam follower bearing, which tracks in a raceway. Check the cam follower bearing and raceway for wear and apply a small amount of silicone spray weekly.

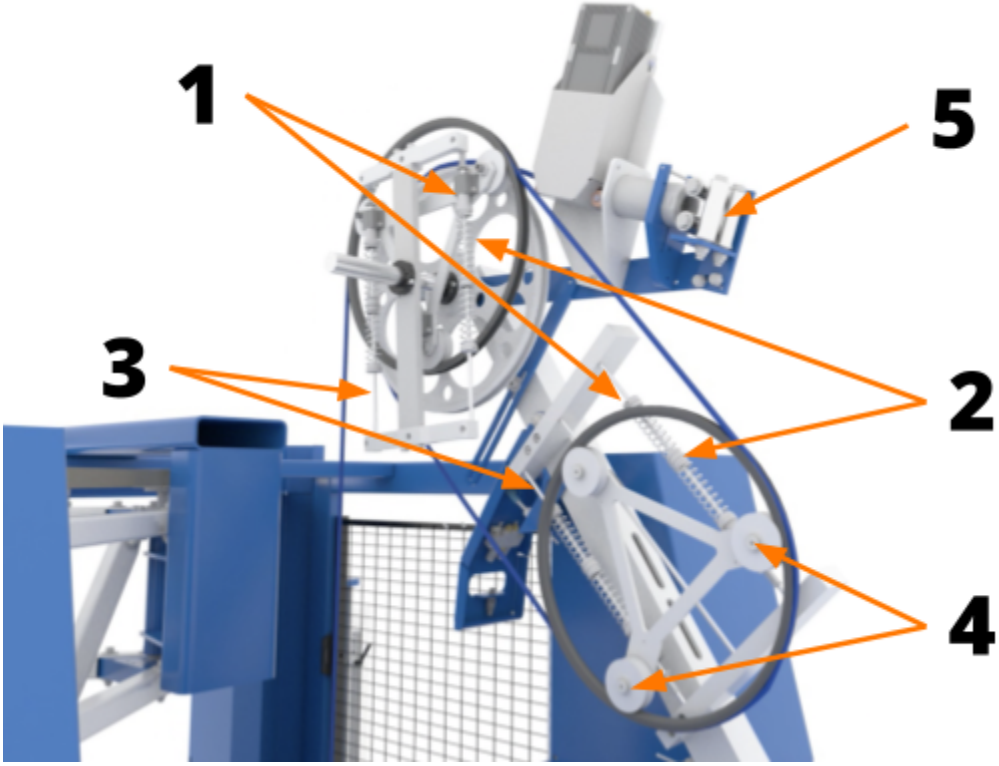
Anti-Reverse Clamp Release

NOTE: To release the anti-reverse clamp, press the button located on the buffer handle and lower the buffer until you hear air release from the clamp. The clamp is not engaged when the buffer is in the lowered position.



References:

- 34014 - BUFFER/TRAV ASSY.pdf



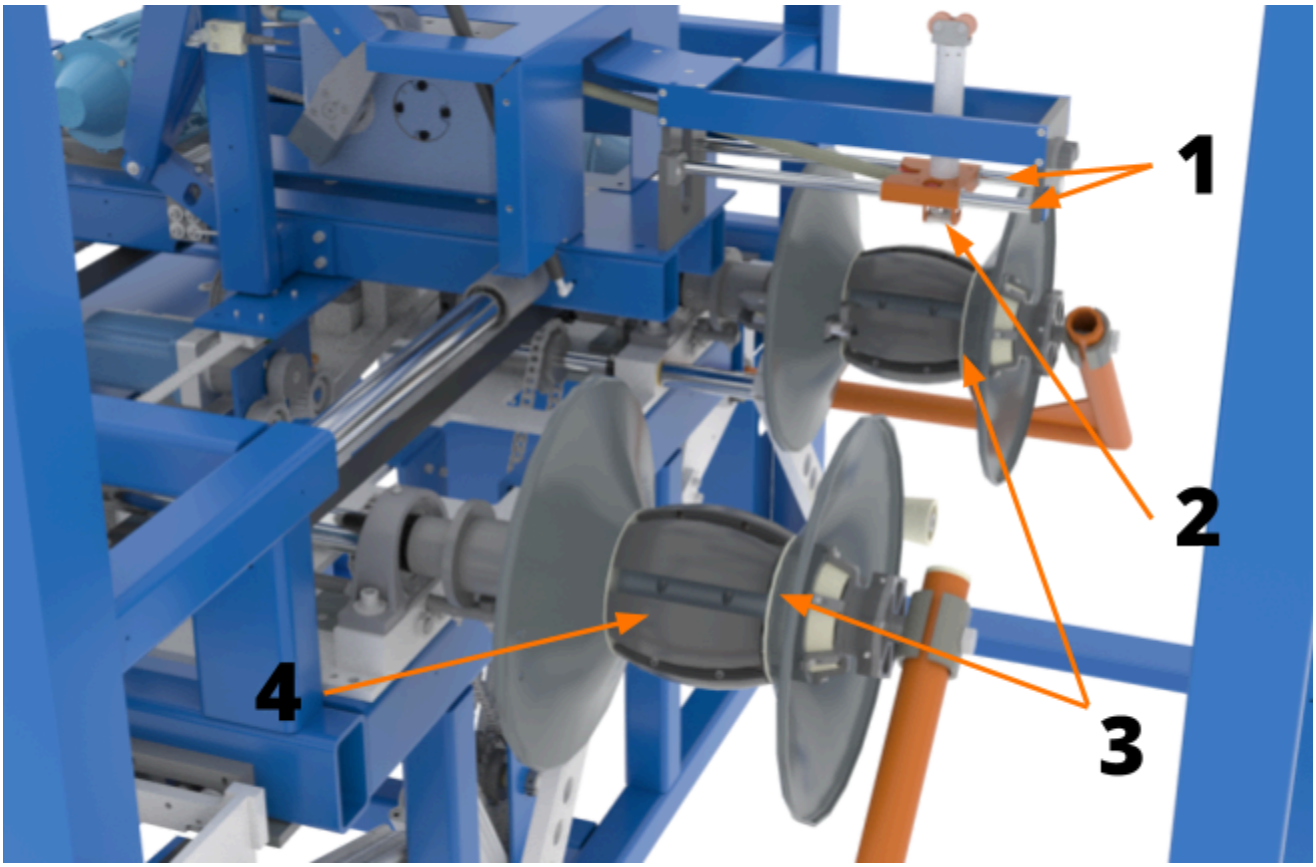
Item	Action	Type	Time Period
1.	Buffer Cam Follower Bearing and Raceway	Silicone Spray	Weekly
2.	Replace worn or broken buffer springs	SPRING-L800L-12	When springs do not provide adequate cushion for sheaves.
3.	Buffer Slider Block Shaft (Thompson)	Silicone Spray	Weekly
4.	Buffer Roller Block Bearings and Wheels	Silicone Spray	Weekly
5.	Inspect all steel wire guide rollers on the machine and dancer. Replace if groove is forming.	Replace	Weekly
6.			

C - Traverse, Mandrels and Endforms

The latest REELEX traverse design is generally built to be lubrication-free, however REELEX recommends the addition of synthetic bearing grease on the traverse shafts to prolong bearing life.

References:

- 34014 - BUFFER/TRAV ASSY.pdf



Item	Action	Type	Time Period
1.	Traverse Shaft lubrication x 2	Molykote BG20 Grease	When needed - check every two weeks
2.	Inspect adjustable wire guide for play, grooves, wear. Change springs when needed.	WIRE-AWG-ADJ	Monthly
3.	Check white nylon rings on inner and outer endforms.	Inspect and replace if worn.	Monthly
4.	Check Mandrel segments for play.	Inspect and center if needed.	Monthly

Mandrel Size Change Procedure

Mandrel sets on the M340 are equipped with quick change features allowing maintenance personnel to swap mandrel sizes in 5 minutes or less.

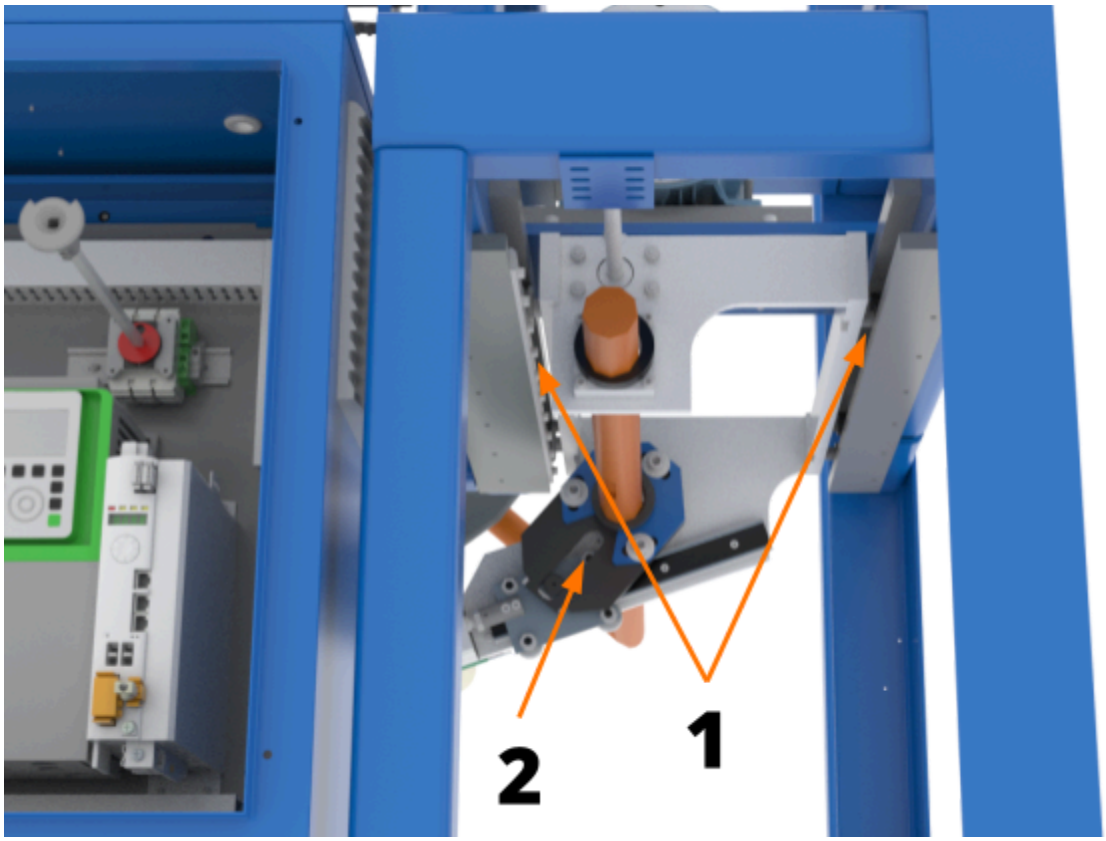
To change mandrels,

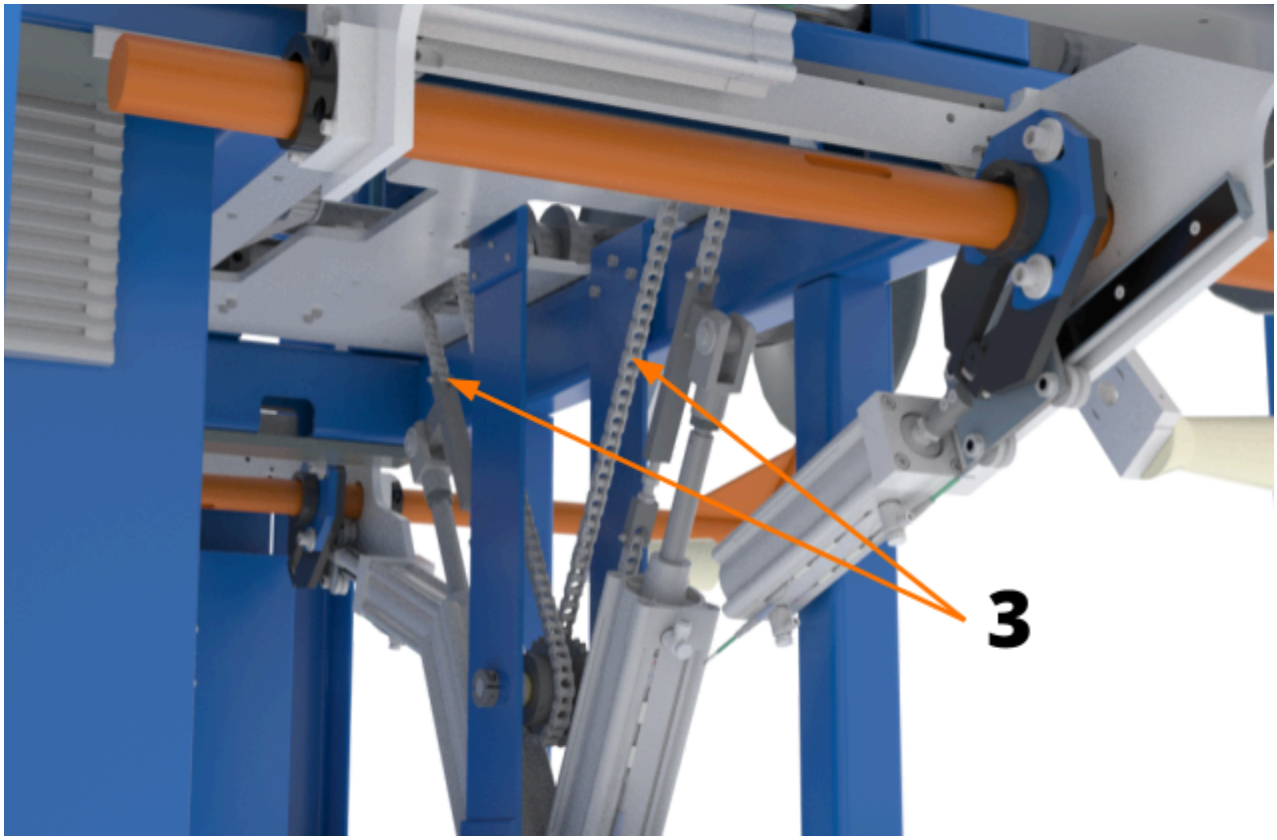
1. E-Stop the machine and manually lower both endform arms.
2. Where the outer endform attaches to the endform arm, loosen the small set screw.
3. Using an adjustable wrench, unscrew the outer endforms and remove from the endform arms.
4. Reach behind the inner endform and remove the pin attaching the cutters to the cutter collar.
5. Press the latch holding the mandrel set onto the shaft. Remove the inner endform, mandrel and cutter as one assembly and slide off the shaft.
6. Replace with the new mandrel set. Slide onto the shaft until the latch engages.
7. Attach cutter linkage to the cutter collar by inserting the pin.
8. Attach new outer endform to endform arms.
9. Adjust height of guide tube to within 0.50in (~13mm) of outer endform.

D - Endform Arms, Transfer Arms

References:

- 34007 - ACTUATION ASSY, TRANSFER ARM.pdf
- 34048 - TABLE ASSY, ENDFORM ARM.pdf





Item	Action	Type	Time Period
1.	Inspect v-roller bearings. Check for play.	Inspect	Monthly
2.	Inspect Geneva mechanism for wear and play. Lubricate when needed.	Grease	Monthly
3.	Lubricate transfer arm chains and check for play. Tighten as needed.	Silicon Spray	As Needed

Electrical Maintenance

All electrical schematics are compiled into a single document as referenced below:

References:

- 34602 - ELECTRICAL DWG PKG.pdf

Motor Drives

The M340 is designed to use a variety of industry-standard AC drives. As REELEX verifies different drive brands, additional manufacturers will be approved.

Please consult the documentation for the drives on your machine for more information. On many drives, QR codes are visible to easily access documentation.

I/O and PLC

References:

- 34602 - ELECTRICAL DWG PKG.pdf

Software

All drive settings and machine software should be obtained from REELEX. Please contact REELEX support at support@reelex.com or +1 845-878-7878.