

# MTC Maintenance Schedule

## Daily Maintenance

- Remove Saw Dust and any Dust or Debris
- Check H2O Spindle
  - Perform Spindle Warm-Up Routine
  - Check Coolant Flow:
    - Tip: Use a Flow Meter
- Check Collet & Collet Nut
  - Clean Collet & Collet Nut
    - Remove Collet from Collet Nut
    - Check & remove Rust Contamination
      - Tip: Use Scotch Brite
    - Spray Collet & Collet Nut with Dyna Glide to prevent Rust & Contamination build-up
  - The Shake Test
    - When the Collet is seated properly and snaps into the Collet Nut, shake the Collet Nut upside down. If a single Collet falls out, replace Collet. If multiple Collets fall out, replace Collet Nut.
- Check Cutters
  - Tip: Spray Cutters with Dyna Glide before use to extend Cutter life.
  - Remove Pitch Buildup from Cutters
  - Tip: Use Diamond Wet Stone on Straight Carbide Edges to extend Cutter life.

## Weekly Maintenance

- Check Round Bearing Rods along X, Y, and Z-axis
  - Remove Rust & Contamination use Scotch Brite
    - Tip: Spray with Dyna Glide to prevent Rust & Contamination build-up
    - Tip: Adjust cleaning frequency of the Round Bearing Rod based on humidity levels.
- Check Gear Rack along X & Y axis
  - Remove Rust Contamination or possible debris
    - Tip: Use Wire Brush
  - Spray with Dyna Glide to prevent Rust & Contamination build-up
    - Tip: Adjust the frequency of Cleaning Gear Rack based on humidity levels.
- Lubricate Z-Axis Screw
  - Lubricate with White Lithium Grease
    - Tip: Wipe on with a Rag to prevent Overspray.
  - Run Z-axis up and down to spread grease evenly
  - Remove excess residue

## Monthly Maintenance

- Check Coolant
  - When filling coolant reservoir, either purchase premix Antifreeze or mix the Antifreeze concentrate with Distilled Water to a 50/50 concentrate.
    - Note: Do not use Red or Pink Antifreeze.
  - Open Coolant Reservoir
    - Check the Coolant level.
      - Tip: Keep the Coolant between 1"- 3" from the top rim of the Reservoir.
    - Check the Coolant concentration.
      - Tip: Keep the Water-to-Antifreeze concentrate ratio between a 70/30 and 50/50
    - Check the Coolant color.
      - Tip: Change in color is an indicator that the Coolant is going bad.
    - Check the Coolant smell.
      - Tip: Change in smell is an indicator that the Coolant is going bad.
    - Check & remove any Debris.
- Check for Rack & Pinion for Backlash
  - Push & Pull Test
    - While the machine is turned on, check for backlash every 10" along the X & Y axis by pushing and pulling the gantry to locate Backlash.
  - Remove Backlash if needed.

## Storage Tipswhite

- Short-Term Storage 1-2 Days
  - It's ok to leave the Cutter and the Collet in the Spindle if you're planning to continue a Project.
  - Always store with the Collet Nut on the Spindle. Protect those Threads.
- Mid Term Storage 3-7 Days
  - Remove the Cutter from the Spindle.
  - It's OK to leave the Collet in the Spindle.
  - Always store with the Collet Nut on the Spindle. Protect those Threads.
- Long-Term Storage - 8 Days or Longer
  - Remove the Cutter and the Collet from the spindle.
  - Spray "White Lithium Grease" along each bearing rod on the X, Y, and Z-axis.
  - Always store with the Collet Nut on the Spindle. Protect those Threads.