

# Qualification & Preventative Maintenance Report

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**M A C H I N E**  
**T E C H S**

## Machine Model & Serial Number

MVR30 Serial#4DAAA39

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## Scheduled Report Class

- Annual
- Semi-Annual
- Quarterly

## Chuck Workholding Run-Out

NOTE: SUGGESTIONS DEPENDANT ON OEM SPECS AND CUSTOMER PRODUCTION NEEDS

N/A



## Spindle Run-Out

NOTE: SUGGESTIONS DEPENDANT ON OEM SPECS AND CUSTOMER PRODUCTION NEEDS

> .0005" IDEAL



## X-AXIS BACKLASH

NOTE: SUGGESTIONS DEPENDANT ON OEM SPECS AND CUSTOMER PRODUCTION NEEDS

> .0005" IDEAL



## X-AXIS ALIGNMENT

NOTE: SUGGESTIONS DEPENDANT ON OEM SPECS AND CUSTOMER PRODUCTION NEEDS

> .0005" IDEAL



## Y-AXIS BACKLASH

NOTE: SUGGESTIONS DEPENDANT ON OEM SPECS AND CUSTOMER PRODUCTION NEEDS

> .0005" IDEAL



## Y-AXIS ALIGNMENT

NOTE: SUGGESTIONS DEPENDANT ON OEM SPECS AND CUSTOMER PRODUCTION NEEDS

> .0005" IDEAL



## Z-AXIS BACKLASH

NOTE: SUGGESTIONS DEPENDANT ON OEM SPECS AND CUSTOMER PRODUCTION NEEDS

> .0005" IDEAL



## Z-AXIS ALIGNMENT

NOTE: SUGGESTIONS DEPENDANT ON OEM SPECS AND CUSTOMER PRODUCTION NEEDS

> .0005" IDEAL



## Additional Axis

NOTE: INPUT N/A IF IT DOESN'T APPLY

W Axis Alignment=  $>.0005''$

W Axis Backlash=  $>.001''$

A-Axis @ 0deg =  $>.001''$  over 12 inches

A- Axis @ 180deg =  $>.001''$  over 12 inches

C- Axis @ 0deg, 90deg, 180deg, 270deg=  $>.001''$

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## Industrial Machine Alignment Qualifications

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## Lubrication, Hydraulics & Fluids CHECKLIST

- (1. Inspect Hydraulic Oil and clean filters as needed)
- (2. Inspect lubrication oil/grease and clean filters as needed)
- (3. Remove valves clean and replace if needed)
- (4. Adjust all pressure as needed)
- (5. Inspect lube and hydraulic lines/connections for leaks/wear)
- (6. Check the oil temperature)
- (7. Inspect ballscrews/bearings for lubrication and wear)
- (8. Inspect linear guides/ways for lubrication and wear)
- (9. Clean and grease all zerk fittings)



## Lubrication, Hydraulics & Fluids Summary

NOTE: see periodic recommended replacement dates for fluids and filters

- no leaks discovered
- all axis ways and ballscrews appear lubricating properly
- minor wear to ways and wipers present
- all pressures and temps within 15%

\*\*\*Suggest replacing all lube, air and coolant filters by JAN 2021\*\*\*

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## Mechanical CHECKLIST

- (1. Test Level of Table/Machine)
- (2. Inspect common wear points)
- (3. Check condition of wipers)
- (4. Remove debris and clean ways)
- (5. Check Ram Movement)
- (6. Check Table Movement)
- (7. Clean limit switches and contact points)
- (8. Check and tighten wheel guides and stops)

## Mechanical Summary

- No vibration or chatter observed
  - Fluid and quite movements of all axis at max rapid
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## Electrical CHECKLIST

- (1.Check and adjust Motor Starters)
- (2.Check PC Board/Terminals)
- (3.Check Transformers)
- (4.Check Relays)
- (5.Clean all fans and motors)

## VOLTAGE MEASUREMENTS & SUMMARY NOTES

Incoming Voltage= AC Power Supplies= DC Power Supplies= Memory & Positioning Batteries= Additional Electrical=

Incoming Voltage= 210.5VAC Balanced within 10%

AC Power Supplies within 10% with variance of +/- .05AC volts load tested

DC PS 24vdc= 23.88VDC, DC PS 10vdc= 10.12VDC

\*\*\*NOTE: All batteries need replacement within 2 months.

Each memory battery is at estimated 75%. Alarms begin at 60% charge\*\*\*

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## FULL RAPID AXIS LOAD % RESULTS

X-AXIS=% Y-AXIS= % Z-AXIS=% SPINDLE=(INCLUDE RPMS!!!)% ADDITIONAL=%

X= 10%

Y= 9%

Z= 4%

W= 14%

A= N/A

C= N/A

Spindle Load @ 2,000RPMS(no tool)= 5%

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## Toolchange and Tool Retention Results:

See Post Report Pictures

Need Recommended Tolerances from OEM\*

- No toolchange issues present. Unable to test aggregate tool change test

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## Machine Homing and Dry-Run Results:

- Spindle Warm-Up Procedure completed with no vibration or noise present

- All axis repeat and home as commanded

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## Coolant and Fluid Testing Results

Coolant Health= Very Good

Coolant Pressure= Great

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## Repair Service & Safety Considerations

- All Batteries Need Replacement within 1-2 months
  - All Filters need replacement within 3-4 months
  - All Fluids need flushed 2021
  - All Electrical fan filters need replacement ASAP
  - All Motor Cooling Fans Need Cleaning within 3-4 months
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## Recommended Spare Parts & Consumables

Memory Back-Up Batteries- sending quotes ASAP

Cooling Filters- sending quotes ASAP

Fluid Filters- Need Maintenance manual/Parts List for Quotes

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## DATE COMPLETED

MM DD YYYY

08 / 19 / 2020

## Technician

Brent Harvey



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