

LAVIGNE

MANUFACTURING INC.

FACILITIES LIST



*Pictured above is some of the latest equipment we've added to our lineup.
June, 2015

CNC TURNING CENTERS

Mori Seiki NT-3200SZ Multi Axis Milling Center

- MSX-711T3 Control
- LNS bar feed
- Auto parts catcher
- Chip conveyor
- Chip Blaster D16-70-1 (1000psi) high pressure coolant

(2) Nakamura-Tome TW-20 MM

- Dual spindles / dual 12 position turret
- 6 axis machine
- LNS bar feed
- 1000 psi high pressure coolant
- Auto parts catcher
- Chip conveyor

(4) Nakamura-Tome TW-20 MMY

- Dual spindles / dual 12 position turret
- 7 axis machine
- LNS bar feed
- 1000 psi high pressure coolant
- Auto parts catcher
- Chip conveyor
- Y-axis

Nakamura-Tome SC-250

- Dual spindles / 12 position turret
- LNS bar feed
- Auto parts catcher
- Chip conveyor

Nakamura-Tome WT250

- Dual spindles / dual 12 position turret
- 6 axis machine
- 1000 psi high pressure coolant
- Auto parts catcher
- Chip conveyor

Mori Seiki SL-25B/1000

- Distance between centers 44.3"
- Swing over bed 20.5"

Samsung SL-25B/1000

- Distance between centers 44.3"
- Swing over bed 20.5"
- Chip conveyor

Mori Seiki SL-25/500

- Distance between centers 24.6"
- Swing over bed 20.5"

Samsung SL-25/500

- Distance between centers 24.6"
- Swing over bed 20.5"
- Chip conveyor

Mori Seiki CL-20A

- Swing over bed 18.5"
- Auto parts catcher

Mori Seiki CL-200

- Swing over bed 18.5"
- Auto parts catcher
- Chip conveyor

Mori Seiki SL-250/500

- Distance between centers 24"
- Swing over bed 20.5"
- Auto parts catcher
- Chip conveyor

Yama Seiki GLS-150M

- Swing over bed 15"
- 12 station turret, 6 are milling-capable

Yama Seiki GLS-150

- Swing over bed 15"
- 12 station turret

Yama Seiki GLS-1500

- Swing over bed 9"
- 12 station turret, all are milling-capable
- Auto parts catcher

Mori Seiki Frontier L1

- LNS bar feed
- Swing over bed 9"
- 12 station turret, all are milling-capable
- Chip Conveyor
- Auto parts catcher

CNC SWISS AUTOMATIC LATHES

(2) Citizen Cincom M20

- 20mm max raw material diameter thru 8000rpm spindle
- 2 live spindles, 13 axis simultaneous control
- 22 tool capacity:
 - 10 station turret, all live-tooling-capable
 - 9 station gang tool post (4 are live-capable)
 - 3 station back tool post
- 2000 PSI high pressure coolant system
- Cincom CAV20M-IS auto bar loader

Citizen Cincom M32

- 32mm max raw material diameter thru 8000rpm spindle
- 2 live spindles, 14 axis simultaneous control (includes Y Axis)
- 22 tool capacity:
 - 10 station turret, all live-tooling-capable
 - 9 station gang tool post (4 are live-capable)
 - 3 station back tool post
- 2000 PSI high pressure coolant system
- Cincom CAV32-IS auto bar loader

Citizen Cincom M32

- 32mm max raw material diameter thru 8000rpm spindle
- 2 live spindles, 13 axis simultaneous control
- 25 tool capacity:
 - 10 station turret, all live-tooling-capable
 - 10 station gang tool post (5 are live-capable)
 - 5 station back tool post
- 2000 PSI high pressure coolant system
- Cincom CAV32-IS auto bar loader

(2) Citizen Cincom A20-VII

- 20mm max raw material diameter thru 8000rpm spindle
- 2 live spindles, 5 axis simultaneous control
- 21 tool capacity in total, 4 are live
- 2000 PSI high pressure coolant system
- Cincom C320 auto bar loader

CNC MACHINING CENTERS

(2) DMG Mori Milltap 700

- Table size 33.1" X 16.5" square pallets
- 10,000 RPM spindle
- 25 tool capacity
- High pressure coolant through spindle
- Chip conveyor

Mori Seiki NH4000DCG

- Table size 16" X 16" square pallets
- 30 tool capacity
- High pressure coolant through spindle
- Chip conveyor

Matsuura ES-450HII PC5

- Table size 12" X 12" square pallets, Automatic 5 pallet changer
- 60 tool capacity
- High pressure coolant through spindle
- Chip conveyor

Matsuura RA-IIIF

- Automatic pallet changer
- Table size 43.3" X 17.7"
- 30 tool capacity
- High pressure coolant through spindle
- Chip conveyor

Matsuura MC-800VF

- Table size 43.3" X 17.7"
- 4th axis RNCX-251 Tsudakoma Rotary Table
- 30 tool capacity
- High pressure coolant through spindle
- Chip conveyor

Mori Seiki SV-50

- 4th axis RNCV-251R Tsudakoma Rotary Table
- Table size 43.3" X 17.7"
- 20 tool capacity

Mori Seiki MV-40M

- 4th axis RNCV-251R Tsudakoma Rotary Table
- Table size 40" X 17.7"
- 20 tool capacity

Mori Seiki MV-40M

- 4th axis Tsudakoma indexer
- Table size 40" X 17.7"
- 20 tool capacity

Mori Seiki MV-40E

- 4th axis Tsudakoma indexer
- Table size 35.4" X 17.7"
- 20 tool capacity

Fanuc α T10B Robodrill

- 8000 RPM spindle
- 4th axis Tsudakoma Indexer
- Table size 25.6" x 15"
- 10 tool capacity

Fanuc αT14iAL Robodrill

- 8000 RPM spindle
- 4th axis Tsudakoma Indexer
- Table size 33.5" X 15.4"
- 14 tool capacity

(2) Fanuc αT14iA Robodrill

- 8000 RPM spindle
- 4th axis Tsudakoma Indexer
- Table size 25.6" X 15"
- 14 tool capacity

(2) Fanuc αT21iEL Robodrill

- 24,000 RPM spindle
- High pressure coolant through spindle
- Table size 33.5" X 16"
- 21 tool capacity
- Fanuc Robotics M-6ib 6 axis floor mounted robot with R-J3iB Controller

Fanuc αT21iEL Robodrill

- 24,000 RPM spindle
- Table size 33.46" X 16"
- 21 tool capacity

Fanuc αT21iFa Robodrill

- 10,000 RPM spindle
- High pressure coolant through spindle
- Table size 25.6" X 15.75"
- 21 tool capacity

Fanuc αT21iDs Robodrill

- 10,000 RPM spindle
- Table size 24.8" X 13"
- 14 tool capacity

MANUAL MACHINERY

MANUAL LATHES

Clausing-Colchester 17" Lathe with Gap Bed

- Distance between centers 80"
- Swing: over bed 17", in gap 25"
- Spindle bore 3 1/16"
- Accessories: 4 jaw chuck, Aloris quick change tool post with holders, follower rest, steady rest, 2-J collet chuck, 17" face plate

Clausing-Colchester 15" Lathe with Gap Bed

- Distance between centers 55"
- Swing: over bed 15 1/2", in gap 22 1/2"
- Spindle bore 2 1/8"
- Accessories: 9" 3 jaw chuck, 12" 4 jaw chuck, Aloris quick change tool post with holders, follower rest, steady rest, 2-J collet chuck, 21" face plate, driving plate, 5-C collet closer with quick change draw bar, tool post grinder

GRINDING MACHINES

K.O. Lee Universal & Tool Grinding Machine

- Distance between centers 18"
- Swing over table 8 1/4"
- 2 cylindrical grinding I.D./O.D. work heads
- 5" O.D. adjustable 3 jaw chuck
- 5C collet attachment and various accessories

Brown & Sharpe #13 Universal and Tool Grinding Machine

- Distance between centers 28"
- Swing over table 8"

Brown & Sharpe Model 510 Surface Grinder

- Magnetic chuck size 5" X 10"

Reid Precision Surface Grinder

- Model 618 HR
- Magnetic chuck size 6" X 18"

Brown & Sharpe 612 Master Surface Grinder

- Magnetic chuck size 6" x 12"
- Precision hand feed surface grinder with rapid height adjust

Brown & Sharpe 618 Micromaster Surface Grinder

- Magnetic chuck size 6" x 18"
- Precision hand feed surface grinder with auto feed and rapid height adjust

MANUAL MILLING MACHINES

Sharp Vertical Miller with Acu-Rite MILLPWR 3-axis CNC

- 3 hp
- Table size 10" X 50"
- Longitudinal travel 35"
- Fagor digital readout

Bridgeport Vertical Miller

- 2 hp
- Table size 9" X 42"
- Longitudinal travel 16"
- Bridgeport power feed
- Acu-rite III digital readout

Bridgeport Vertical Miller

- 1 ½" hp
- Table size 9" X 42"
- Longitudinal travel 16"
- Mitutoyo digital readout

HONING MACHINES

Sunnen Model ML-5000D

- Millennium Machine 230V
- Automatic size control

Sunnen Model MBB-1660K

- .060" – 6.500" diameter capacity
- .125" – 16.00" length capacity

SAWS

HemSaw H105A-C

- 14" x 16" (W) Capacity
- 1-1/4" x 15' x .042" Blade
- 7.5HP Motor
- High speed production band saw
- Adjustable blade speed, clamping pressure, feed rate, and cutting pressure
- Computer-controlled feed system

Mastercut S-300HB Precision Automatic Band Saw

- Cutting capacities:
 - Round: 13" diameter
 - Rectangular: 13" X 17"

Kalamazoo Metal Cutting Saw

- Cutting capacities:
 - Round: 9" diameter
 - Rectangular: 9" X 13 1/2"

Delta Rockwell Vertical Band Saw

MetlSaw Systems Automatic Cutoff Saw

- 36" x 8" cutting window
- 12' stock length maximum
- Allen-Bradley system PLC controls with panel-view screen
- Telescopic 7.5HP vacuum chip collection system

DE-BURRING & FINISHING

Abtex 2000-FS-14

- 4 3HP 1200 RPM brush motors
- Accommodates extrusions 1" to 3.75" wide and up to 4.75" high
- Bradex double head flow-through system
- Variable speed conveyor
- C5-2500 dust collection unit

(2) Bel-Air Finishmaster Vibratory Finishing Machines

Clemco Blast Cabinet & DCM-161 Tumble Basket

HEAT TREATING

Radyne Flexitune

- 10 kW induction heat treat system

WELDING

Miller Dynasty 300DX

- Stick and TIG AC/DC welding unit

AIR COMPRESSORS

(C2) Kaeser ASD 40 T Compressor

- Model ASD 40 T Rotary Screw (30 HP)

(C1) Kaeser AS 30 Compressor

- Model AS 30 Rotary Screw (30 HP)

(C5) Kaeser SFC 18 T Compressor

- Model SFC 18 T Rotary Screw (25 HP)

(C4) Kaeser SM 15 T Compressor

- Model SM15 T Rotary Screw (12 HP)

Ingersoll-Rand SSR HP25 SE

- Model SSR HP25/SE Rotary Screw (25 HP)

Kaeser ABT 57 Drier

Kaeser ABT 37 Drier

INSPECTION EQUIPMENT [1]

Brown & Sharpe Global A Image Coordinate Measuring Machine

- 20" w. X 17" h. X 27" d. measuring volume
- Touch trigger probing w/ Renishaw 10M and TP200
- 360° rotational wrist indexing w/ scanning
- Fully integrated CAD interface
- Auto probe changer
- Multiple probing styli for all product geometries

Mitutoyo Contracer CV-3200H4

- Contour Measuring Machine with FormTracePak contour analysis software. Provides graphical display of geometries. Compares dimensional measurements, radii, angles, and contours to tolerances, nominal data, and deviations.
- 3.9" (100mm) X-axis measuring range, 2.4" (60mm) Z-axis measuring range
- Accurate to .000073" (1.9µm) over .500" of vertical travel
- Reads at .0000016" (.04µm) resolution

Mitutoyo Contracer CV-3100S4

- Contour Measuring Machine, as described above.
- 3.9" (100mm) X-axis measuring range, 1.97" (50mm) Z-axis measuring range
- Accurate to .00016" (4 µm) over .500" of vertical travel
- Reads at .0000020" (.05µm) resolution

(2) Vision Engineering Dynascope Stereo Microscope

- Two axis non-contact measurement
- 20X and 50X magnification
- QC-200 microprocessor w/touch pads
- Dual fiber optic illumination

Vision Engineering Cobra Stereo Microscope

- 40X magnification

(5) Vision Engineering Mantis Stereo Microscope

- 2X-20X magnification

TESA- lite 600 Height Gage

- 24" measurement height

Zoller “Smile” 400 Tool Presetter

- Touchless, rapid tool presetter and measurement tool

Brown & Sharpe Reflex CMM

- 18”w. X 15” h. X 21” d. measuring volume
- Reflex software w/ touchpad display
- Multiple probing styli



Jones & Lamson Optical Comparators

- (3) Units with:
 - 20X, 31.25X, 50X magnification
 - 8.80”w. X 5.25”h. X 2”d. measuring volume (auto feed axes)
 - QC-200 microprocessor w/ geometric tolerancing
- (1) Unit with:
 - 31.25X magnification
 - 8.80”w. X 5.25”h. X 2”d. measuring volume (manual feed axes)

Clark Rockwell Hardness Tester

- Regular and superficial Rockwell load testing, plus light load Brinell testing
- 2,000 data point memory for capability analysis
- Preset direct loads for correct linear displacement

Mahr-Federal Perthometer

- Measures surface finish parameters
 - DIN/ EN/ ISO.
 - Ra, Rz, Rmax, R_{Pc}, and JIS
- Graphic and text printout capable

ADDITIONAL INSPECTION EQUIPMENT [1]

- Mitutoyo Surftest-211 surface roughness measurement system
- (2) Federal .0001” resolution dial indicator on height comparator stands
- Jones & Lamson PC-14 optical comparator and measuring machine with surface illumination
- Brown & Sharpe Micro Val Model 454 System
- 4” Electronic Digital Tesa-Hite height gage
- 0-12” micrometers
- 0-1” & 1”-2” blade micrometers
- 48” X 120” inspection grade Ottavino surface plate
- 36” X 48” inspection grade Ottavino surface plate

- 24" X 36" inspection grade Ottavino surface plate
- (5) 18" X 24" inspection grade surface plates
- 0-1" outside disk micrometers
- (4) Mitutoyo 0-12" dial height gauges
- Mitutoyo 0-18" digital height gauge
- Assorted Mitutoyo dial indicators
- .011" - .75" Vermont plug gauges
- Grade "A" Starrett inspection gauge blocks (81 piece set)
- 0-6" Brown & Sharpe dial calipers
- 0-12" Mitutoyo dial calipers
- 0-24" Brown & Sharpe verniers
- 0-50" Starrett verniers
- 0-12" Scherr-Tumico I.D. micrometers
- 0-1" Mitutoyo pitch micrometers
- 1-2" Mitutoyo pitch micrometers
- 2-3" Mitutoyo pitch micrometers
- 3-4" Mitutoyo pitch micrometers
- 0-6" Brown & Sharpe depth micrometers
- .8-2" Alina dial bore gauges
- K.O. Lee bench centers
- Dial indicators
- Precision squares & knees
- Sheffield Style 2000 precision linear gage
- Starrett 12" Digi-Check height gage
- 5" precision hinged sine plate
- Federal groove gage series 99P-20
- Thread ring & thread plug gauges

[1] Lavigne Manufacturing, Inc. will purchase and maintain additional inspection equipment as required to produce parts in compliance with customer specifications.

OTHER NOTABLE EQUIPMENT & TOOLING

- | | |
|---|---|
| • Cycle Solve parts cleaner | • Bowers inclinable rotary table with 9" diameter |
| • Ultrasonic cleaning bath | • (2) Gorbel overhead cranes for machine-loading (125lb and 220lb capacities) |
| • Lincoln AC-255-S welder | • Hydraulic lifting hoist |
| • Oxygen / acetylene torches | • Carolina 60,000 lb heavy duty press |
| • (2) Yuasa 8" floatable index heads | • Nissan 4000 fork-truck |
| • (2) 8" Kurt Anglock precision machining vises | • Nissan 5000 fork-truck |
| • Precision toolmakers vises | |
| • Dividing head | |