Modern Machine Shop Top Shops 2021

2021 marks the eleventh annual *Modern Machine Shop* Top Shops benchmarking survey, which highlights the attributes shared by leading machining businesses. After completing the survey you will receive at a later date a report customized for your shop. The report makes it quick and easy to know where your shop stands compared to the Top Shops benchmarking group and to other shops.

To take advantage of all the benefits of participating in Top Shops, all you have to do is:

1. **Fully complete the survey for maximum value.** It's in your best interest for benchmarking and scoring. It may take time to get some data - it's worth it. You may have reservations about answering certain questions. Don't worry, all responses will remain confidential.
2. **Provide your email address** to receive a report customized for your shop, showing where your shop is strong, on track, and has opportunities.
3. **Enter your contact info** to be part of the Top Shops Honors Program for a chance to be profiled in an upcoming issue of *Modern Machine Shop*.
4. Indicate whether or not you want your shop included in the all-new **Top Shops Sourcing** platform.
5. **Select 'Submit Responses'** on the final page once you do not intend to return to the survey again.

If you get interrupted while completing the survey, you may close and return to it using the same device as many times as you like until you select 'Submit Responses' on the final page.

Note this is the first time the *Modern Machine Shop* Top Shops benchmarking survey can be completed one time, any time throughout the current year. That means if, for example, your accounting data are not available until March, no problem. You may complete the survey in April. The sooner you complete it, though, the sooner you'll be able to act on the results.

Click here to download a PDF of the survey if you want to review the questions, consult with your team, and prepare your responses before entering them online. It is important that you answer all the questions in order to receive all the benefits Top Shops offers. If you have questions, please contact Jan Schafer, Director of Market Research, Gardner Intelligence, at jschafer@gardnerweb.com.

Company & Contact Information

1. To receive a custom report of results, please fully complete the survey and provide your email address here:

2. To enter the 2021 Top Shops Honors Program, also provide the following contact information:

Name:

Job Title/Position:

Company:

Address:

City/Town:

State/Province:

ZIP/Postal Code:

Country:

Email Address:

Phone Number:

3. Please indicate whether or not you would like your shop included in Top Shops Sourcing.
More than a platform, Top Shops Sourcing is a free sales and marketing tool for participating shops. It helps shops find new opportunities to build business by connecting them with qualified buyers of parts, products, and services.
You will be asked to review your shop's information and confirm participation in the platform before your profile is visible to buyers.

◯ Yes, please add my shop's information to the Top Shops Sourcing platform.

◯ No, please do not add my shop's information to the Top Shops Sourcing platform.

Before we get started...

Most questions refer to 'your shop,' and here's how we'd like you to think about it...

If your company has more than one location, please answer all survey questions in terms of the scope for which you have the most access to operations and performance data. In some cases, that is multiple locations combined. In other cases, it is just one location.

If you have equal access to data for more than one location, please answer the survey based on the one location that is most representative, or considered most typical, of your business overall.

If you are a captive shop, answer survey questions in the terms your shop uses to report metrics to the broader company. The questions are transparent as far as the information requested. Captive shops should provide the same information, though they may have different considerations or use tweaked formulas.

Most important is that you be consistent throughout the survey as far as the parameters associated with your responses .

Please also note that questions pertain to 2020 unless indicated otherwise.

Profile Information

Please read the instructions at each question for the accepted format for responses. If you receive an error message, the format may be off or your value is outside of the set reasonable range. If both are correct, you may leave it blank.

4. Approximately how many <u>part numbers (SKUs)</u> did your business produce in 2020?

Please enter a whole number only; no decimals, commas or other symbols.

5. Approximately how many <u>total parts</u> did your business produce in 2020?

Please enter a whole number only; no decimals, commas or other symbols.

6. Approximately what was your <u>median batch size</u> in 2020?

Please enter a whole number only; no decimals, commas or other symbols.

Profile Information

7. Which dimensional volume(s) describe the parts your facility produces on a regular basis? *Select ALL that apply.*

- [ ] Fitting within a 6" cube
- [ ] 12" cube
- [ ] 18" cube
- [ ] 24" cube
- [ ] 36" cube
- [ ] 48" cube
- [ ] Larger than a 48" cube

8. What is the tightest tolerance to which your shop machines parts on a regular basis? *Select the option that comes closest.*

- ( ) +/- 0.0001 inch
- ( ) +/- 0.0005 inch
- ( ) +/- 0.0010 inch
- ( ) +/- 0.0050 inch
- ( ) +/- 0.0100 inch

9. Of the different designs your facility typically produces parts for in a single order, about what proportion are considered 'intricate' designs? By 'intricate,' we mean designs that are complex, have unique geometries, etc.

- ( ) Less than 20%
- ( ) 20-49%
- ( ) 50-79%
- ( ) 80% or more

Profile Information

10. As of the end of 2020, about how many years had your shop been in business?

Please enter a whole number only; no decimals, commas or other symbols.

[   ]

11. What is the total square footage of your entire building? Enter your best estimate if you do not have the measurements handy.

Please enter a whole number only; no decimals, commas or other symbols.

[   ]

12. What category best describes your shop's relation to its customer base? *Select ONE response.*

◯ Captive shop (component of a larger company)

◯ Contract shop (independent shop, 50% or more business is from contract work)

◯ Job shop (independent shop, 50% or less business is from contract work)

13. Which of the following, if any, describe your shop's ownership? *Select ALL that apply.*

☐ Family owned

☐ Minority owned

☐ Veteran owned

☐ Woman owned

☐ None of these

Profile Information

14. Which of the following industries does your shop serve? *Select ALL that apply.*

☐ Aerospace

☐ Appliances

☐ Automotive

☐ Die/mold

☐ Electronics, computers & telecommunications

☐ Forming & fabricating (non-automotive)

☐ Furniture manufacturing

☐ Industrial motors, hydraulics & mechanical components

☐ Other (please specify)

☐ Machinery/equipment manufacturing

☐ Medical

☐ Military

☐ Off-road & construction machinery

☐ Oil- & gas-field & mining machinery

☐ Power generation (turbines, batteries, wiring, etc.)

☐ Pumps, valves & plumbing products

Profile Information

15. Which of the industries served do you typically consider THE PRIMARY contributors to your shop's business? *Select up to three.*

☐ Aerospace

☐ Appliances

☐ Automotive

☐ Die/mold

☐ Electronics, computers & telecommunications

☐ Forming & fabricating (non-automotive)

☐ Furniture manufacturing

☐ Industrial motors, hydraulics & mechanical components

☐ Machinery/equipment manufacturing

☐ Medical

☐ Military

☐ Off-road & construction machinery

☐ Oil- & gas-field & mining machinery

☐ Power generation (turbines, batteries, wiring, etc.)

☐ Pumps, valves & plumbing products

☐ [Insert text from Other]

Profile Information

16. Of which trade associations was your shop a member in 2020? *Select ALL that apply.*

- [ ] American Mold Builders Association (AMBA)
- [ ] National Tooling & Machining Association (NTMA)
- [ ] Precision Machined Products Association (PMPA)
- [ ] Precision Metalforming Association (PMA)
- [ ] Technology & Manufacturing Association (TMA)
- [ ] Not a member of these associations

17. Which quality certifications did your shop hold in 2020? *Select ALL that apply.*

- [ ] ISO 9001:2015
- [ ] ISO 13485:2016
- [ ] IATF 16949:2016
- [ ] AS9100D
- [ ] Nadcap
- [ ] None of these

18. Which of the following applied to your shop in 2020? *Select ALL that apply.*

- [ ] ITAR registered
- [ ] RoHS compliant
- [ ] FDA registered
- [ ] Conflict Materials Disclosure
- [ ] CMMC (Cybersecurity Maturity Model Certification)
- [ ] None of these

Machining Technology

19. Which types of machining equipment does your shop use? *Select ALL that apply.*

☐ Automatic screw machines (non-CNC)	☐ Milling machines (non-CNC)
☐ Broaching machines	☐ Multi-spindle CNC
☐ Drilling machines	☐ Plasma or oxy-fuel CNC cutting machines
☐ Flexible manufacturing systems (FMS)	☐ Rotary transfer machines
☐ Gear-cutting machines	☐ Sawing machines
☐ Grinding machines (for regrinding cutting tools)	☐ Swiss-type lathes
☐ Grinding machines (for workpieces)	☐ Turning centers, horizontal CNC
☐ Honing machines	☐ Turning centers, vertical CNC
☐ Laser-cutting machines	☐ Twin-spindle CNC turning machines
☐ Lathes (non-CNC)	☐ Waterjet machines
☐ Machining centers, horizontal	☐ Wire, sinker, small-hole EDM
☐ Machining centers, vertical	
☐ Other (please specify)	

20. Which machining strategies does your shop use? *Select ALL that apply.*

☐ Five-axis machining (full contouring)	☐ Hard turning
☐ Five-axis machining (positioning only)	☐ High-speed machining
☐ Four-axis machining (full contouring)	☐ Lights-out or unattended machining
☐ Four-axis machining (positioning only)	☐ Micromachining
☐ Hard milling	☐ Prototyping
☐ Other (please specify)	

Machining Technology

21. Does your shop have 3D additive manufacturing/part printing capability?

( ) Yes, we have a 3D printer or additive manufacturing machine

( ) No, we do not have this capability

Machining Technology

22. Describe your shop's 3D printer. *Select ALL that apply.*

☐ Desktop 3D printer for plastic parts

☐ Standalone and/or industrial 3D printer for plastic parts

☐ Standalone additive manufacturing machine for metal parts

☐ Hybrid machine tool combining additive manufacturing and machining

23. What does your shop produce using 3D printing or additive manufacturing capability? *Select ALL that apply.*

☐ Look-and-feel prototypes to validate designs

☐ Functional prototypes to test parts prior to production

☐ Tooling and fixturing used internally

☐ Tooling and fixturing produced for customers

☐ Short-run initial production

☐ Full production of end-use parts

24. If your shop utilizes 3D printing or additive manufacturing capabilities in any other way(s), please describe the way(s) here. If not, please enter 'none.'

Machining Technology

25. Which tooling strategies does your shop use? *Select ALL that apply.*

☐ Burnishing	☐ Shopfloor tool vending systems
☐ Carbide recycling program	☐ Tool balancing
☐ Coolant management system	☐ Tool inventory management/usage tracking
☐ Coolant chiller	☐ Tool presetting
☐ Custom/specialty tooling	☐ Tool regrinding
☐ High-pressure coolant delivery	☐ Thread milling
☐ Knurling	☐ Thread rolling
☐ Live tooling on lathes	☐ Thread whirling
☐ Minimum quantity lubrication	☐ Through-tool coolant delivery
☐ On-machine probing for tool breakage/measurement	☐ None of these
☐ Reaming	

26. Which workholding strategies does your shop use? *Select ALL that apply.*

☐ Face drivers	☐ Pallet changers
☐ Hydraulic/pneumatic-actuated fixtures	☐ Quick-change devices
☐ Indexers/rotary tables	☐ Tombstones
☐ Magnetic chucks	☐ Vacuum chucks
☐ Multiple workpiece fixturing	☐ None of these

Machining Technology

27. Which types of software does your shop use? *Select ALL that apply.*

☐ CAD systems—2D

☐ CAD systems—3D

☐ CMM programming software

☐ ERP/MRP software

☐ CAM programming software

☐ Job-estimating software

☐ PLM software

☐ SPC/quality management software

☐ Toolpath simulation/verification software

☐ None of these

28. Which types of inspection equipment does your shop use? *Select ALL that apply.*

☐ CMM in quality department

☐ Laser trackers

☐ Microscopes

☐ On-machine probes for workpiece measurement

☐ Optical comparators

☐ Portable measuring arms

☐ Shopfloor CMMs

☐ Vision systems

☐ None of these

29. Which types of ancillary equipment does your shop use? *Select ALL that apply.*

☐ Ballbar calibration device

☐ Bar feeders

☐ Bar pullers

☐ Chip handling equipment

☐ Heat treating equipment

☐ Machine condition monitoring (i.e. monitoring spindle, environmental conditions, etc.)

☐ Machine connectivity (Ethernet, MTConnect)

☐ Machine mist control units

☐ Marking/engraving equipment

☐ None of these

30. Which surface finishing treatments did your shop offer/perform in 2020? *Select ALL that apply.*

☐ Plating   ☐ Liquid coating

☐ Anodizing   ☐ Powder coating

☐ Black oxide   ☐ Electrocoating

☐ Passivation

☐ Chem film

☐ Other (please specify)

[   ]

☐ No finishing offered

Machining Technology

31. Which <u>metallic</u> materials does your shop machine? *Select ALL that apply.*

☐ Aluminum

☐ Brass

☐ Bronze

☐ Cast iron

☐ Compacted graphite iron

☐ Copper

☐ Other (please specify)

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[                                                    ]
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☐ None

☐ High-temperature alloys (not titanium)

☐ Mild steels

☐ Stainless steels

☐ Titanium

☐ Tool steel

32. Which <u>non-metallic materials</u> does your shop machine? *Select ALL that apply.*

☐ Carbon-fiber-reinforced plastic (CFRP)

☐ Ceramic

☐ General plastics

☐ Other (please specify)

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[                                                    ]
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☐ None

☐ Medical-grade plastics

☐ Wood

Machining Technology

Please read the instructions at each question for the accepted format for responses. If you receive an error message, the format may be off or your value is outside of the set reasonable range. If both are correct, you may leave it blank.

33. How many CNC machine tools did your shop have in production (non-tool room) in 2020?

Please enter a whole number only; no decimals, commas or other symbols.

[   ]

34. What is the average age (in years) of the CNC machine tools currently in use on your shop floor?

Please enter a whole number only; no decimals, commas or other symbols.

[   ]

35. What was your shop's <u>average capacity utilization</u> in 2020?

There is no single formula that fits how every shop figures capacity utilization. For this question, please think about what you consider to be at full capacity for your shop. Then enter as a percentage the degree to which your shop's capacity was typically in use relative to being at full capacity in 2020.

You may enter a decimal, but no other signs or symbols.

Example: If your shop was typically using capacity that represented about 85% of full capacity in 2020, meaning your shop typically had 15% capacity available, you would enter 85 for capacity utilization.

[   ]

Shopfloor Practices & Performance

36. Which of the following practices and improvement methodologies does your shop use? *Select ALL that apply OR the last option only.*

☐ 5S workplace organization

☐ Benchmarking

☐ Cellular manufacturing

☐ Continuous improvement program

☐ Just-in-time movement of materials

☐ Kaizen events/blitzes

☐ Kanban and pull systems

☐ Lean manufacturing

☐ Overall Equipment Effectiveness (OEE) monitoring and analysis

☐ Poka yoke (error prevention)

☐ Single-minute exchange of dies (SMED)

☐ Six Sigma

☐ Theory of constraints

☐ Total productive maintenance

☐ Total quality management

☐ Value-stream mapping

☐ No formal methodology

37. Does your shop use robots to perform part loading/unloading for any of your machine tools?

○ Yes

○ No

Shopfloor Practices & Performance

38. Are any of the robots your shop uses collaborative models (using sensor technology to work safely alongside humans without traditional fencing, guarding, etc.)?

○ Yes

○ No

Shopfloor Practices & Performance

Please read the instructions at each question for the accepted format for responses. If you receive an error message, the format may be off or your value is outside of the set reasonable range. If both are correct, you may leave it blank.

39. What was your shop's <u>order lead time</u> in 2020, defined as the average number of days from receipt of an order to delivery to customer.
You may enter a decimal, but no other signs or symbols.
Example: For 6 days, you would enter 6. For 6 1/2 days, you would enter 6.5.

40. What was your shop's <u>on-time delivery rate</u> in 2020, defined as the percentage of goods delivered on the timing committed. Enter your number without a % sign.
You may enter a decimal, but no other signs or symbols.
Example: For 80%, you would enter 80. For 80.5%, you would enter 80.5.

41. What was your shop's average <u>setup time</u> in 2020, defined as the time, <u>in minutes</u>, between the completion of the last good piece of one run and the first good piece of the next run.
Please enter a whole number only; no decimals, commas or other symbols.
Example: If the last good piece of Run A ends at 11:45, and the first good piece of Run B ends at 12:10, you would enter 25.

42. What was your shop's <u>finished product first-pass quality yield</u> in 2020, defined as the <u>percentage</u> of product that passed inspection on first attempt; i.e. no re-work was required. Enter your number without a % sign.
You may enter a decimal, but no other signs or symbols.
Example: For 80%, you would enter 80. For 80.5%, you would enter 80.5.

Shopfloor Practices & Performance

43. What was your shop's <u>scrap and rework COST percentage</u>, defined as the **cost** of 2020 scrapped or reworked <u>materials</u> as a percentage of 2020 <u>total dollar sales</u>. Enter your number between 0 and 100 without a % sign.
You may enter a decimal, but no other signs or symbols.
Example: If $550 worth of materials were scrapped and sales were $50,000, you would enter 1.1.

44. What was your shop's <u>scrap and rework UNIT percentage</u>, defined as the **number** of 2020 scrapped or reworked <u>parts</u> as a percentage of 2020 <u>total parts produced</u>. Enter your number between 0 and 100 without a % sign.
You may enter a decimal, but no other signs or symbols.
Example: If 83 parts were scrapped or reworked, and 1000 parts were produced, you would enter 8.3.

45. What was your shop's <u>machine usage</u> in 2020, defined as the average number of <u>hours</u> machines are in production in a 24-hour day.
You may enter a decimal, but no other signs or symbols. Your answer should be between 1 and 24.
Example: For 8 hours, you would enter 8. For 8 1/2 hours, you would enter 8.5.

46. What was your shop's <u>spindle utilization</u> time in 2020, defined as the average amount of in-cut time <u>as a percentage</u> of the average machine total up-time. Enter your number without a % sign.
You may enter a decimal, but no other signs or symbols.
Example: If total machine up-time is 22 on average, and average in-cut time is 17, you would enter 77.

Shopfloor Practices & Performance

47. Installing a Web-enabled, shop-wide machine monitoring system has been suggested as the first step towards data-driven manufacturing/Industrial Internet of Things concepts. Please select the statement that best describes your shop regarding machine monitoring. *Select ONE only.*

( ) We have a machine monitoring system in place for some or all machine tools.

( ) We plan to install a machine monitoring system.

( ) We do not plan to install a machine monitoring system.

Shopfloor Practices & Performance

48. Briefly describe your shop's machine monitoring system. *Please be specific.*

49. When do you expect to begin installation of a machine monitoring system at your shop? *Select ONE only.*

  ○ First half of this year

  ○ Second half of this year

  ○ Next year or later

Shopfloor Practices & Performance

50. Briefly explain one new technology, machining strategy or strategic initiative that has been most influential in contributing to the overall success of your shop in recent years. *Please be specific.*

Business Strategy & Performance

51. Which of the following supply chain practices does your shop use? *Select ALL that apply.*

☐ Access to customer forecasts

☐ Certification of major suppliers

☐ Customer satisfaction surveys

☐ Design for manufacturability (DFM) advice to customers

☐ Just-in-time deliveries from suppliers

☐ Just-in-time deliveries to customers

☐ Sharing forecasts with suppliers

☐ Vendor-managed or -owned inventories

☐ Vendor-managed or -owned inventories for customers

☐ None of these

52. Which of the following are effective sales/marketing tools for your shop? *Select ALL that apply.*

☐ Blogs

☐ Brochures/catalogs

☐ Customer tours of your shop

☐ Email promotions

☐ Online – advertising

☐ Online – company website

☐ Print advertising (e.g., magazines)

☐ Sales personnel

☐ Social media (Facebook, Twitter, YouTube, etc.)

☐ Trade shows/events

☐ None of these

53. Please select the social media channels your shop actively used in 2020. *Select ALL that apply.*

☐ Facebook

☐ Twitter

☐ LinkedIn

☐ Instagram

☐ Pinterest

☐ Snapchat

☐ YouTube

☐ Did not actively use social media in 2020

Business Strategy & Performance

Please read the instructions at each question for the accepted format for responses. If you receive an error message, the format may be off or your value is outside of the set reasonable range. If both are correct, you may leave it blank.

54. How many <u>active</u> customers did your shop have in 2020?

Please enter a whole number only; no decimals, commas or other symbols.

[   ]

55. What was your shop's <u>customer retention rate</u> for 2020? This is the number of your shop's customers in 2020, who were also customers in 2019, as a percentage of your 2019 total customer base. Enter your number without a % sign.

You may enter a decimal, but no other signs or symbols.

Example: If you had 50 customers in 2020 who were also customers in 2019, and a total of 60 customers in 2019, your customer retention rate would be 83%, and you would enter 83.

[   ]

56. What percentage of <u>new business quoted in 2020 was actually booked</u>? Enter your number without a % sign.

You may enter a decimal, but no other signs or symbols.

Example: If you quoted 80 new jobs in 2020 and booked 40, you would enter 50. You may enter decimals but no other signs or symbols.

[   ]

Business Strategy & Performance

57. What were your shop's investments, in US dollars, in the following areas in 2020?
Please enter whole numbers only; decimals, commas, other symbols, and words are not accepted.
Enter '0' if your shop made no investment in a category.

Capital equipment (not tooling)

[   ]

Tooling

[   ]

Employee costs (all wages, benefits, etc.)

[   ]

Materials and components

[   ]

58. Does your shop lease or own its manufacturing facility?

( ) Lease

( ) Own

( ) Both

Business Strategy & Performance

Reminder, it is in your shop's best interest from benchmarking and scoring standpoints to answer all questions.

59. Please provide your shop's <u>total revenue</u> in US dollars for 2020. Providing your shop's revenue confidentially enables us to perform useful calculations on your behalf.
Please enter a whole number only; no decimals, commas, or other symbols.

_____

60. Please provide your shop's 2020 <u>gross sales per number of machines</u> in US dollars.
You may enter a decimal, but no other signs or symbols.
Example: If your shop's 2020 gross sales were $5000 and you have 2 machines, you would enter 2500.

_____

61. Please provide your shop's 2020 <u>gross sales per number of employees</u> in US dollars.
You may enter a decimal, but no other signs or symbols.
Example: If your shop's 2020 gross sales were $5000 and you have 20 employees, you would enter 250.

_____

62. Were any <u>capital investments</u> made in your shop in 2020? *Select ONE only.*

◯ Yes

◯ No

◯ Not sure

63. Please provide your shop's 2020 capital equipment expenditure as a percentage of gross sales. Enter your number without a % sign.

Formula = [(2020 cap equip exp / 2020 gross sales) * 100]

Example: If your shop's capital equipment expenditure was $500 and your gross sales were $5000, you would enter 10.

64. What, if any, type(s) of machining or manufacturing capital equipment does your shop plan to purchase in 2021? If none, please enter 'none' here. *Please be specific.*

Business Strategy & Performance

65. Please provide your shop's <u>percent change in annual sales from 2019 to 2020</u> using the following formula. Round to the nearest whole number, using a minus sign if necessary.

Formula = [(2020 gross sales - 2019 gross sales) / 2019 gross sales] * 100

Example: If your 2020 sales were $5000 and your 2019 sales were $4000, you would enter 25.

66. Please provide your shop's 2020 <u>overall **profit margin** percentage</u>, defined as your shop's <u>net income (after tax) relative to gross sales</u>, rounded to the nearest whole number. Include a minus sign if your number is negative.

Formula = [(2020 net income / 2020 gross sales) * 100]

Example: If your 2020 net income was negative $300 and your gross sales were $5000, you would enter -6.

67. Please provide your shop's 2020 **ROA**, defined as your shop's <u>net income (after tax) relative to total assets</u>, rounded to the nearest whole number. Include a minus sign if your number is negative.

Formula = [(2020 net income / 2020 total assets) * 100]

Example: If your 2020 net income was negative $300 and your total assets were $5000, you would enter -6.

Business Strategy & Performance

68. Below are business practices that your shop may or may not apply. Please select all that you consider to have been in place at your shop in 2020.

- ☐ Regularly scheduled, formal review of the state of the business
- ☐ Periodic, informal review of the state of the business
- ☐ Business metric goal setting
- ☐ Business strategy development
- ☐ Regularly scheduled management/department head meetings
- ☐ Occasional management/department head meetings
- ☐ Steering board/committee including outside membership
- ☐ None of these

Human Resources

69. Which human resource practices/programs did your shop use in 2020? *Select ALL that apply.*

☐	401(k) plan	☐	Formal safety/health program
☐	Annual review and raise program	☐	Leader/supervisor development
☐	Apprenticeship program	☐	Paid medical benefits
☐	Bonus plan	☐	Profit- or revenue-sharing plan
☐	Education reimbursements	☐	Teaming/team-building practices
☐	Employee ownership options (ESOP)		
☐	Formal employee training program		
☐	Other (please specify)		

☐ No HR programs in place

70. Which statement best describes your shop as far as skills relative to needs in 2020? *Select ONE only.*

◯ We experienced a shortage of skills needed and took action.

◯ We experienced a shortage of skills needed but did not take action.

◯ We did not experience a shortage of skills needed.

71. Which actions did your shop take in 2020 to address a shortage of skills your shop needs?   *Select ALL that apply.*

☐ Flexible schedules

☐ Weekend only shifts

☐ Signing incentives

☐ Unlimited time off

☐ Mentor program

☐ Cross training

☐ Attendance incentives

☐ Outreach program at local schools

☐ 'Get paid to learn/train' program

☐ Loosened hiring criteria

☐ Other (please specify)

☐ Outreach program to broader populations (e.g. completed rehab; released from incarceration)

☐ Billboard advertising

☐ Television advertising

☐ Radio advertising

☐ Rewards for referrals

☐ Increased automation

☐ Provide, pay for, or subsidize transportation to/from shop

☐ Temp agency

☐ Temp-to-Perm hiring

Human Resources

Please read the instructions at each question for the accepted format for responses. If you receive an error message, the format may be off or your value is outside of the set reasonable range. If both are correct, you may leave it blank.

72. How many <u>total people did your shop employ</u> in 2020 at the location(s) to which your other answers apply?

Please enter a number only; no decimals, commas or other symbols.

73. How many <u>employees were directly involved in manufacturing</u> in 2020 at the location(s) to which your other answers apply?

Please enter a number only; no decimals, commas or other symbols.

74. What was your shop's <u>annual labor turnover rate</u> of shopfloor employees in 2020? This is the number of voluntary plus involuntary separations of shopfloor employees as a percentage of the total usual number of shopfloor staff. Enter your number between 0 and 100 without a % sign.

You may enter a decimal, but no other signs or symbols.

Example: If 6 shopfloor employees left in 2020 and your usual shopfloor staff totals 30, you would enter 20.

Human Resources

75. What is the average age of your shopfloor employees?

Please enter a number only; no decimals, commas or other symbols.

[   ]

76. What is the average years of experience of your shopfloor employees?

Please enter a number only; no decimals, commas or other symbols.

[   ]

77. How many shifts per day did your shop typically run in 2020?

Please enter a number only; no decimals commas or other symbols.

[   ]

78. Were any of your employees part of a union in 2020?

◯ Yes

◯ No

Human Resources

79. What was the average hourly wage rate in US dollars for non-management machine operators in 2020, excluding overtime?

Please enter a number. You may enter a decimal, but no other signs or symbols.

[   ]

80. What was the average hourly wage rate in US dollars for non-management set-up personnel in 2020, excluding overtime?

Please enter a number. You may enter a decimal, but no other signs or symbols.

[   ]

81. What was the average hourly wage rate in US dollars for non-management CAM programmers in 2020, excluding overtime?

Please enter a number. You may enter a decimal, but no other signs or symbols.

[   ]

82. Did your shop have any accident incidents in 2020?

◯ Yes

◯ No

Human Resources

83. What was your shop's annual <u>accident incident rate for shop floor employees</u> in 2020? This is the number of shop floor accident incidents as a percentage of the total usual number of shop floor staff. Please enter your number between 0 and 100 without a % sign.

You may enter decimals but no other signs or symbols.

Example: if you had 2 accident incidents in 2020 and your usual shop floor staff totals 30, you would enter 6.67.

84. What was your shop's insurance Experience Modification Rate (EMR) for 2020?

You may enter decimals but no other signs or symbols.

85. Which of the following designated safety roles did your shop have in place in 2020?

☐ Safety manager

☐ Safety committee

☐ Neither of these

86. On average, about <u>how many hours of operations training</u> did **each** hourly paid, non-management shop floor employee receive in 2020? *Select ONE response.*

◯ less than 8 hours

◯ 8-20 hours

◯ 21-40 hours

◯ more than 40 hours

Almost finished!

This is the final page of the survey. Please double-check your responses for accuracy and completeness before you continue.

Once you click **Submit Responses** on this page, you will be taken to the *Modern Machine Shop* website. Your survey will be locked and submitted and you will not be able to change any of your answers. You may close and return to your survey to make changes as many times as you like so long as you use the same browser on the same device.