

MACHINING CAPABILITIES



AAA SALES & ENGINEERING
Depend on us



ABOUT US

For over forty years AAA Sales & Engineering has been exceeding customer expectations with consistent quality, on-time delivery and efficient cost containment. Our ISO Certified Quality Assurance System ensures that your project is manufactured with precision every step of the way. From design to prototyping, high volume manufacturing to service parts, AAA can always meet your tooling and machining needs.

In addition to state-of-the art technology, we pride ourselves on the quality of our human resources. Using Six Sigma-certified employees helps us to identify the best ways to achieve customer satisfaction. By adopting methodologies such as Kaizen, Lean Manufacturing, Cost Improvement, Structured New Product Development, and Project-Based Process Changes, our management efficiencies become your ultimate cost advantage.

Our machining facilities support Fortune 500 customers throughout North America by handling average lot sizes from 1 to 3,000 units, with annual volumes ranging from 1 to more than 40,000 units.

Our 180,000 square foot facility is fully equipped with CNC Lathes, Horizontal CNC Machining Centers and Vertical CNC Machining Centers.

AAA is dedicated to exceeding your expectations by providing you with high quality products and exceptional service. We have the expertise to meet all of your manufacturing needs, regardless of the complexity.

You can depend on AAA.



FIRE ENGINE WATER PUMP

With fire fighting equipment, there's no room for error. Hale Products requires maximum precision and quality. And with value added services like assembly, we can ensure every part meets and exceeds our customer's expectations.

These water pump assemblies, designed for use in fire engines, span 62 inches in length. Using our Mazak H880/H680 horizontal CNC machining centers, parts of this magnitude can be machined precisely, and with relative ease.

When quality matters, AAA Sales & Engineering is the first choice for Hale Products.



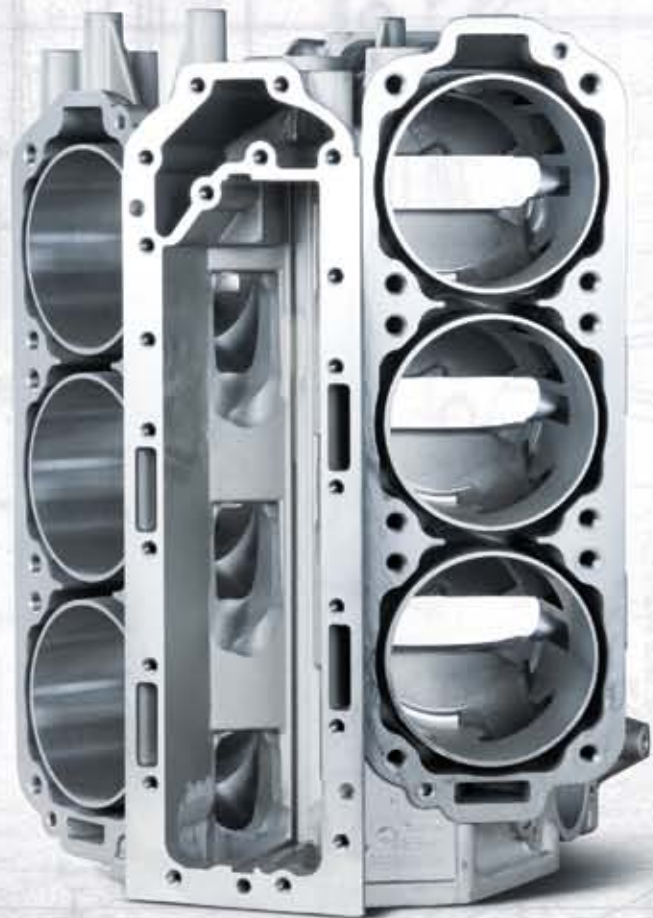
AXLE HOUSINGS

The construction industry demands a lot from machinery, particularly from axles. As a high impact area, the axles must withstand rigorous use in the harshest environments over the life of the machine. For years, leaders in the construction equipment industry have turned to AAA to produce their axles.

From design to prototype, high volume production to service parts, AAA has the expertise to produce the parts you need for the most demanding of conditions. And by placing lathes alongside horizontal CNC machining centers, we've provided the efficiency of an axle manufacturing cell to our customers.

AAA has competitive solutions for all your specific manufacturing needs.





OUTBOARD ENGINE BLOCK

For over 40 years, AAA has been a preferred engine block manufacturer to the competitive marine racing industry. Racing is a demanding application and has no margin for error. Many of the engine blocks are spec'd individually, and maintaining a full engineering staff allows us to make precise adjustments, no matter the need.

These aluminum outboard engine blocks are manufactured on our Nexus 6000 Horizontal CNC Machining Centers, machines that offer precision cutting for all your high performance parts.





INDEPENDENT SUSPENSION CENTER HOUSING

Our military relies on AAA parts. We take pride in producing components that can perform under the most extreme conditions. It is vitally important that these independent suspension center housings withstand the most rugged terrain with absolute reliability.

At AAA, we support our troops. Our OKK HM-1250 Horizontal CNC Machining Centers allow us to produce these parts with the confidence that they'll serve them faithfully.





OUR MAJOR CUSTOMERS

Our employees stick around, and so do our customers. We manufacture parts for several Fortune 500 companies, and continue to innovate while maintaining the standard of quality and service that has become synonymous with AAA. Our customers depend on us.

- Axletech International
- Case New Holland (CNH)
- Caterpillar, Inc.
- Hale Products, Inc.
- Navistar, Inc.
- Mercury Marine
- Twin Disc
- Vestas Nacelles America, Inc.
- Voith Turbo, Inc.
- ZF Industries, Inc.

VALUE ADDED SERVICES

While our expertise lies in machining exceptional parts for our customers, we also pride ourselves on offering a variety of value-added services to meet and exceed any expectations. As an ISO Certified, Tier 1 Supplier for all of these services, you can be assured of the highest quality in everything we do.

- Parts Washing
- Material Sourcing
- Assembly
- Grinding
- Honing
- Hobbing
- Painting
- Metalizing
- Heat Treating
- Balancing
- Broaching
- Gear Cutting
- Kanban
- Bar-coding
- EDI
- ASN



FACILITIES LIST

HORIZONTAL CNC MACHINING CENTERS

QTY	MANUFACTURER	TYPE	PALLET CHANGER	X in. (cm)	Y in. (cm)	Z in. (cm)	# OF TOOLS	H.P.
1	MAZAK	H550	Yes	28 (71)	27 (69)	25 (64)	80	30
4		Nexus 6000	Yes	32 (81)	32 (81)	35 (89)	80	40
2		H650	Yes	40 (102)	32 (81)	31 (79)	80	35
2		FH-6800	Yes	41 (104)	32 (81)	35 (89)	80	40
2		FH-6800*	Yes	41 (104)	32 (81)	35 (89)	120	40
4		Nexus 6800*	Yes	41 (104)	35 (89)	39 (99)	160	40
1		H880	Yes	49 (124)	39 (99)	33 (84)	80	35
1		FH-8800	Yes	49 (124)	39 (99)	33 (84)	160	40
4		FH-8800**	Yes	49 (124)	39 (99)	33 (84)	160	40
4		Nexus 8800**	Yes	55 (140)	47 (118)	52 (132)	160	40
2	OKK	HM-600	Yes	31 (78)	30 (75)	32 (80)	60	40
4		HM-1250s	Yes	67 (170)	55 (140)	49 (124)	116	50
1	MORI SEIKI	MH-1003	Yes	80 (203)	51 (130)	47 (119)	180	50

*Each MCtr with (1) 12-Pallet Mazak Pallettech System ** (4) Pairs of MCtr's, each with a 10-Pallet Mazak Pallettech System

VERTICAL CNC MACHINING CENTERS

QTY	MANUFACTURER	TYPE	PALLET CHANGER	X in. (cm)	Y in. (cm)	Z in. (cm)	# OF TOOLS	H.P.
1	HAAS	VF-4***	No	50 (127)	20 (51)	25 (64)	24	15
1	MIGHTY	HV-50A	No	47 (118)	23 (58)	23 (58)	20	30
1	MAZAK	V515	No	41 (104)	20 (51)	22 (56)	60	25
1	MAZAK	V655/60	No	59 (150)	25 (64)	25 (64)	60	30
1	OKK	VM900	No	81 (206)	37 (94)	32 (81)	40	35

***With Indexer

FACILITIES LIST

CNC TURNING CENTERS

QTY	MANUFACTURER	TYPE	DIAMETER in. (cm)	CENTERS in. (cm)
1	MAZAK	QT-28	24" (61)	20" (51)
1		QT-300	24" (61)	48" (122)
2	MORI SEIKI	AL-20	12" (30)	48" (122)
1		NL-2500	14" (36)	27" (69)
1		ZL-25/600	15.3" (39)	28.5" (72) 4-axis
1		NL-3000/700	16.5" (42)	32.3" (82)
2		NL-3000/1250	16.5" (42)	53.9" (137)
1		ZL-35B/750	16.7" (42)	32.9" (84) 4-axis
1		SL-25	20" (51)	40" (102)
1		SL-303B	24" (61)	29.3" (74)
2		SL-65	28" (71)	32" (81)
1		SL-603B	39" (99)	40" (102)
1	SL-603BMC	39" (99)	80" (203) with live tooling	
2	OKUMA	LU-45	29" (74)	40" (102) 4-axis

QUALITY ASSURANCE HARDWARE

CMM (Coordinate Measuring Machines)

3) Sheffield FLEXSCAN HA, DCC Controlled, X / Y / Z = 48" / 80" / 40" (128.92cm / 203.2cm / 101.6cm)

(2) Sheffield APOLLO, Model RS-150, DCC Controlled, X / Y / Z = 48" / 80" / 40" (128.92cm / 203.2cm / 101.6cm)

(1) Sheffield CORDAX, Model 1808, Manual Units, X / Y / Z = 30" / 25" / 40" (76.2cm / 63.5cm / 101.6cm)

Misc. - Hardness Testers, Profilometers, Micrometers, Dial-Bore & Thread Gages

CMM Software used: MeasureMax v1.53 and PC-DMIS 2011 Cad++, programming using Cad Models

Scanning capability using Renishaw SP25 Scanning Probe equipped on the three Endeavor CMM's

Several of our horizontal machining centers utilize state-of-the-art Pallettech Systems, which eliminate setups and ensure consistent quality at all times.

COMPUTER SYSTEMS

Design Engineering	AutoCAD Inventor 2010, Ansys Design Space Finite Analysis Software & AutoCAD Electrical
Mfg. Engineering	SMART CAM, Virtual Gibbs CAM Systems and SolidWorks
Business Systems	InterNetWorX 8.3 - Closed Loop ERP, FTP Data Transfer





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AAA Sales & Engineering, Inc. • 1120 West Northbranch Drive, Oak Creek, WI 53154-0108
P 414.764.2700 • TF 866.742.3221 • F 414.764.2866 • aaase.com