



# NASA/MARSHALL SPACE FLIGHT CENTER

## JOINT COUNSELING SESSION

*AMG Engineering & Machining Inc.*

*Ted Gary, President*

*Chuck Gray, Strategic Solutions*

**Nov 14<sup>th</sup> 2023**



# Background



<b>COMPANY NAME:</b>	<b>AMG Engineering &amp; Machining, Inc.</b>	<b>ADDRESS:</b>	<b>4030 Guion Lane Indianapolis, IN 46268</b>
<b>OWNER:</b>	<b>Ted Gary</b>	<b>CONTACT NAME:</b>	<b>Chuck Gray</b>
<b>EMAIL:</b>	<b>cgray@amgindy.com</b>	<b>YEARS IN BUSINESS:</b>	<b>34+</b>
<b>CAGE CODE:</b>	<b>0FDY1</b>	<b>DUNS NUMBER:</b>	<b>196801401</b>
		<b>UEI NUMBER</b>	<b>F34AJH89YZP9</b>
<b>WEB SITE:</b>	<b><a href="https://amgindy.com">https://amgindy.com</a></b>	<b>NAICS CODES:</b>	<b>Primary: 332721 Secondary: 541330 Additional: 332710 332911 – 336415- 336412 - 336992</b>



# Business Size & Classifications

<b>TOTAL EMPLOYEES:</b>	<b>52</b>
<b>AVERAGE ANNUAL SALES:</b>	<b>\$9.9M</b>
<b>CLASSIFICATIONS (select from list below):</b>	<b>Yes/No</b>
<b>SMALL BUSINESS</b>	<b>YES</b>
<b>SMALL DISADVANTAGED BUSINESS</b>	
<b>NATIVE AMERICAN-OWNED</b>	
<b>ALASKAN NATIVE CORPORATION</b>	
<b>WOMEN OWNED</b>	
<b>ECONOMICALLY DISADVANTAGED WOMEN OWNED</b>	
<b>VETERAN-OWNED</b>	<b>YES</b>
<b>SERVICE DISABLED VETERAN OWNED</b>	<b>YES</b>
<b>HUBZONE CERTIFIED</b>	
<b>8(A) CERTIFIED</b>	
<b>8(A) EXPIRATION DATE (if applicable)</b>	

# Quality Systems

**intertek**  
Total Quality. Assured.

## CERTIFICATE OF REGISTRATION

This is to certify that the management system of:

### **AMG Engineering & Machining, Inc.**

Main Site: 4030 Guion Lane, Indianapolis, Indiana 46268, USA

Has been audited and registered by Intertek as meeting the requirements of the standard:

### **AS9100:D and ISO 9001:2015**

The management system is applicable to:

Manufacturer and assembly of precision-machined, miscellaneous sub-assemblies, check valves, and pressure regulating devices for the aviation, space, and defense industries.

Certificate Number  
0008547-07  
Initial Certification Date  
07 January 2014  
Certificate Issue Date  
07 January 2023  
Certificate Reissue Date  
Certificate Expiry Date  
06 January 2026



intertek



**Calin Moldoveanu**  
President, Business Assurance

Intertek Testing Services NA, Inc. dba Intertek  
4700 Broadmoor Avenue S.E.,  
Kentwood, MI, USA



## CERTIFICATIONS:

- **AS9100:D**
- **ISO 9001: 2015**
- **IATF 16949**
- **GE S-1000**
- **Boeing DPD**
- **NIST 800-171**

The assessment was performed in accordance with the requirements of AS9104/1:2012-01. Intertek is accredited under the Aerospace Registrar Management Program and IAGQ ICOT scheme. In the issuance of this certificate, Intertek assumes no liability to any party other than to the Client, and then only in accordance with the agreed upon Certification Agreement. This certificate's validity is subject to the organization maintaining their system in accordance with Intertek's requirements for systems certification. Validity may be confirmed via email at [certificate.validation@intertek.com](mailto:certificate.validation@intertek.com) or by scanning the code to the right with a smartphone. The certificate remains the property of Intertek, to whom it must be returned upon request.

CT-A20100\_2009-AS9104\_1-ANAB-EN-L3-P-05 Jul17





# Customers & Programs

## Customers

- Blue Origin
- Defense Logistics Agency
- Boeing
- USAF
- Allison Transmission
- Caterpillar
- Cummins
- General Atomics Aeronautical
- General Electric
- Honeywell
- Rolls Royce
- Triumph

## Programs

- NASA's Lunar Lander
- V-22 Program
- KC-135 Program
- B-52 Program
- C130 Program
- LAU 116 Program
- 767-300 Program
- 767-600 Program
- C17 Program
- F15 Program
- F/A 18 Program
- A340 Program



# Principle Point(s) of Contact

NAME	TITLE	PHONE	EMAIL
<b>Chuck Gray</b>	Director, Strategic Solutions	(405) 780-0986	<a href="mailto:cgray@amgindy.com">cgray@amgindy.com</a>
<b>Ted Gary</b>	President/Owner	(317) 329-4000	<a href="mailto:tgary@amgindy.com">tgary@amgindy.com</a>
<b>Tameka Borders</b>	Account Manager	(317) 329-4000	<a href="mailto:tborders@amgindy.com">tborders@amgindy.com</a>
<b>Santosh Binwade</b>	VP Operations	(317) 329-4000	<a href="mailto:sbinwade@amgindy.com">sbinwade@amgindy.com</a>

# This Is AMG Engineering & Machining



## Value Proposition

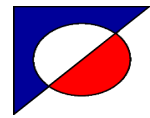
Committed to assisting customers achieve their objectives while maintaining the highest standards for quality, delivery, integrity, respect, and honesty in all relationships.

## Core Competencies

- Precision Machining
- Engineering Services
- Simple & Complex Assemblies
- Flow Control Components
- Kitting

## Markets Served

- Aerospace
- Defense
- Automotive
- Industrial
- Medical



# Facilities

**Safe, Clean, and Orderly Plant**



**Assembly & Kitting Area**



**Clean Room Environment**



**CMM Inspection**



**CAD & CAM  
Software Systems**





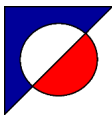
## Engineering Expertise

- Experienced AMG Engineers
- Creo Parametric Capable
- Mastercam Programming Software
- Design For Manufacture & Test
- In-House CNC Programmers
- Reverse Engineering
- SBIRS & Prototypes

## Quality Capabilities

- Class 6 Clean Room ISO14644-1
- Millipore, Hardness, Pressure & Eddy Current Testing
- Calibration/SPC/CMM Software
- Inspection/Test Equipment
- NADCAP Approved Suppliers
- Brown & Sharpe CMM's
- Keyence CMM & Vision Inspection Systems





# Machining

CNC Swiss Turning  
0.787" (20.00 mm)

CNC Multi-Spindle  
Turning 1.750" (44mm)

CNC Conventional  
Turning  
32.00" (698.500 mm)

CNC Vertical Turning  
62.00" (1575mm)

CNC Vertical Milling  
40.0" x 20.0" x 18.0"  
(1016 mm x 508 mm x  
449.58 mm)

CNC Horizontal Milling  
30.0" x 30.0" x 30.0"  
762mm x 762mm x 762mm

# Associated Capabilities

- Honing
- Lapping
- Furnace Brazing
- Welding
- Parts Cleaning & Testing
- Eddy Current Testing
- Assembly
- 3D Printing
- Laser Printing
- Wire EDM

# Materials

Aluminum

Steel Alloys

Stainless Steel

Inconel

Titanium

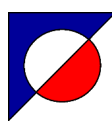
Hastelloy

Brass

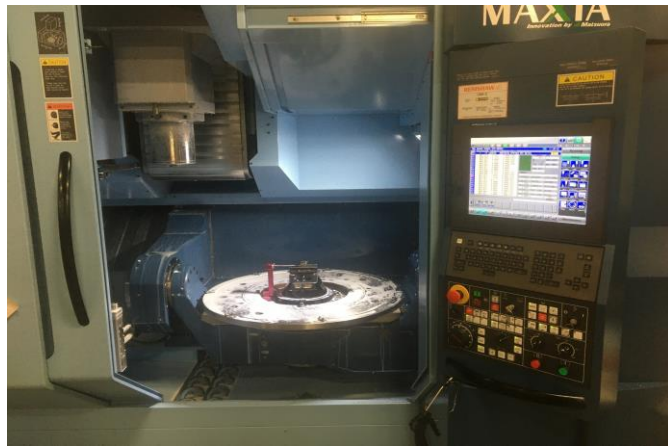
Bronze

Forgings &  
Castings

Plastics



# 5 Axis Milling



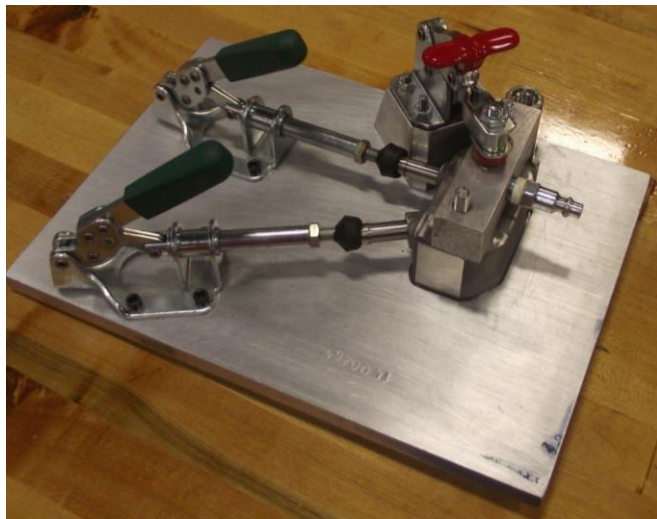
Aerospace Bracket  
 Material: Inconel 718,  
 Size: 0.59" x 0.8" x 2.6"  
 Manufacturing Processes: 5-Axis Machining,  
 Surfacing, Wire EDM, FPI  
 Critical Features: Profile of Surface 0.005"



# Mechanical Assembly

# Large Turning

# Complex MFG



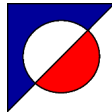
**Adapter, Sensor, Assy**



Titanium, OD 46.75" x ID 40.4" x H 24.75"  
 Manufacturing Process: Vertical Turning (Both  
 Ends). Critical Features: ID Tolerance 0.002",  
 Profile of Surface 0.005"



**Oxygen Regulator**



# Aerospace & Defense Machined Parts

## Gooseneck Actuator Fitting-Assembly

**Material:** Titanium, Ti-6AL-4V Per AMS 4928  
2) AL-NI-Bronze UNS C63000  
A Per AMS 4640

**Manufacturing Processes:** 5-Axis Machining, Surfacing, Honing, FPI, Primer, Marking, Assembly

**Critical Features:** Hole Tolerance 0.0006", 63 Contour Point Locations

## Ring, Housing (-4)

48.5" OD X 47.4" ID

**Material:** GTD222 Nickel-based Alloy, Thin Wall (0.100")

**Manufacturing Process:** Vertical Turning (Both Ends).

**Tolerance:** 0.010"

## Bracket Actuator

**Material:** 410 Stainless Steel Per AMS 5504

**Manufacturing Processes:** CNC Milling, FPI,  
**Critical Features:** Diameter Tolerance 0.0007", Perpendicularity 0.001", Parallelism 0.002", True Position 0.005"



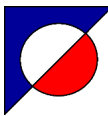
## Bushing, Slide-Metal Door

**Material:** Inconel 625 Per AMS 5666

**Manufacturing Processes:** CNC Turning



**USAF APPROVED AMG's business profile for the manufacture & repair of Propulsion Sustainment Critical Safety Items (CSI) and Critical Application Items (CAI)**



# Precision Manufacturing Expertise

## Oxygen Regulator

Stainless Steel Body  
Assembly of 50+ Parts



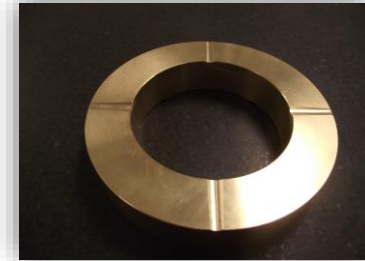
## Aluminum Manifold

L 13.250" x W 6.500" x T 4.000"  
**Manufacturing Process:** CNC Milling  
**Critical Features:** Deep and Port Holes



## Washer, Thrust

**Material:** Dia 4.750" C93700 Bronze  
**Manufacturing Process:** CNC  
Turning and Milling



## Elbow

**Size:** 21" x 9" x 5"  
**Material:** Gray Iron Casting  
**Manufacturing Process:** CNC Milling  
**Critical Features:** Flange Dia 76.2 ± 0.1 mm



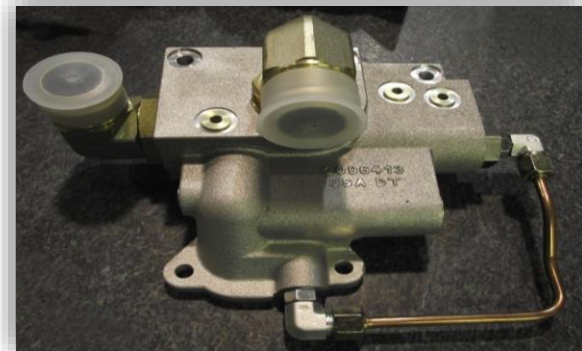
## Regulator Valve

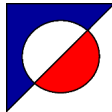
Hex 0.950" x L 2.650"  
Assembly of 6 parts  
Opening Pressure 70 ± 5 PSI



## Oil Transfer Assembly

Aluminum Casting  
L 18.400" x W 7.500" x T 3.250"  
Assembly of 10 parts





# **AMG IS COMMITTED TO NASA'S SUCCESS !**

**34 Years of Customer Satisfaction through performance excellence**

**Results Oriented Culture focused on Customer Satisfaction**

**Solutions Focused, No-Surprises Culture**

**Innovative, Agile, Team focused & Cost Competitive**

**Strong Fiscal & Financial Stability**

## **Engineering & Manufacturing Technology Innovation**



**Committed To Best-In-Class Quality, Delivery & Performance Excellence**

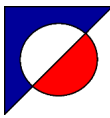
**Transparent & Responsive Communications**

**Impeccable Ethics & Integrity**

**ISO 9001 & AS9100 processes with Focused continuous Improvement**

**Proactive, Poised, Ready, And Able To Invest With Our Customers**

**Bringing Solutions to Our Customers, Listening, Planning and Doing, That's our Job**



***"AMG is Ready to Innovate, Engineer, Machine and Manufacture  
Pristine Quality, Competitively Priced Products Per P.O. For You!"***

***How Can AMG Help You??***

**Aerospace Hardware**



**Aerospace Airframe Components**



**Aerospace Engine Parts**



**Aerospace Brakes & Landing Gear Components**

**Flow Control Devices**



Ted Gary, President  
AMG Engineering & Machining, Inc.  
[tgary@amgindy.com](mailto:tgary@amgindy.com)  
(317) 329-4000 or (317) 319-6424

Chuck Gray, Strategic Solutions  
AMG Engineering & Machining, Inc. (OKC)  
[cgray@amgindy.com](mailto:cgray@amgindy.com)  
(405) 780-0986