

# Pioneer

METAL FINISHING



**YOUR  
SPECS**



**YOUR  
SCHEDULE**



**YOUR  
SECURITY**

# Our Historical Journey

- **1945** Founded in Minneapolis, MN
- **1985-** acquired Norelkote in Green Bay, WI
- **1997-** opened Greenfield Monroe, MI Facility
- **2000-** opened Pioneer Technologies in Green Bay, WI
- **2006-** acquired Plus One Anodize Portland, OR
- **2007-** acquired CRT painting facility Oshkosh, WI
- **2010-** acquired Nimet Industries South Bend, IN
- **2012-** acquired Superior Metal Finishing Portland, OR
- **2012-** acquired Parts Finishing Group Auburn Hills, MI

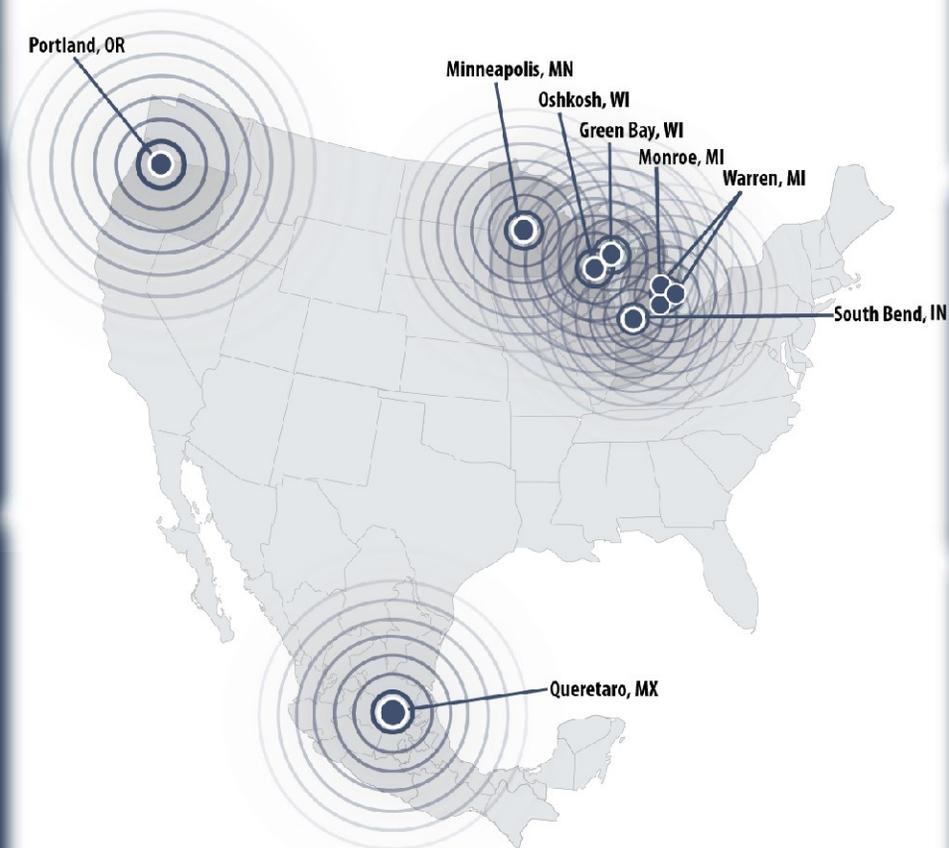
➤ **Pioneer employs over 1,300 fulltime team members**

➤ **Over 700,000 total Sq. Ft. of Manufacturing Space**



# Ready, For You

With **9 locations** across the United States and Mexico, we are driven by continuous improvement with a focus on quality and customer service.



# Our Promise

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Pioneer's brand promise of "Your Specs", "Your Schedule", "Your Security" describes how we do business.



**YOUR  
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means using established processes to fit every customer's need while creating solutions for every project.



**YOUR  
SCHEDULE**

means meeting our customer's deadline while providing superior quality to every part.



**YOUR  
SECURITY**

means handling each part with care and giving customers the trust they need to depend on us for every project.

# Pioneer Processes

## Anodizing

### Aluminum Castings

- ARP-Acid Etch
- CastGuard™
- EnduraGuard™
- Medi-Guard™

### Vortex Anodizing

### Type II (Sulfuric)

- Bright Dip
- Clear & Dyed Anodize
- FrostKote™
- Medi-Black™
- Metal FX™
- Optical Black™

### Type III (Hardcoat)

- Clear & Dyed Anodize

### Type III (w/ PTFE)

- Hard Lube
- Nituff®

## Plating

### Nickel & Zinc Plating

- Black Nickel
- Electrolytic Nickel
- Nickel Sulfamate
- Zinc
- Zinc Nickel
- Zinc Iron

### Electroless Nickel

- NiCoTef®
- NorGuard™
- NorKote I, II, III™
- NorLast™
- NorLube™

### Precious Metal Plating

- Gold - Type I, II, III
- Silver
- Tin
- Copper

## Conversion & Pretreat

### Aluminum Conversion Coating

- Non-Chrome
- Type I (Hexchrome)
- Type II (ELV/Trivalent)

### Phosphate Coatings

- Iron Phosphate
- Manganese Phosphate
- Zinc Phosphate

### Pretreatments

- Electropolish
- Parts Washing
- Passivation
- Pickle & Oil

## Adhesives & Coatings

Dry Film Lubricant  
Epoxy Paint  
Heat Reflective Coating  
Rubber to Metal Adhesive  
Zinc Rich

## Paint

C.A.R.C.  
E-Coat  
Epoxy Paint  
Powder Coat  
Wet Paint

## Mechanical Finishing

Blasting  
Deburring  
• Tumble & Vibratory  
Shot Peening



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# OEM Approvals

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Audi

**BAE SYSTEMS**

*BOEING*



**BorgWarner**



**CATERPILLAR**

**CHRYSLER**



**HONDA**

**Honeywell**

**IR Ingersoll Rand**



**JOHN DEERE**



**Kimberly-Clark**



**MOTOROLA**



**NISSAN**

**OSHKOSH**

**PACCAR**



**POLARIS**  
The Way Out.

**Rockwell Automation**



**TESLA**



**TOYOTA**



**Visteon**



**VOLVO**



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# SMART Values

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## Serving Our Customers, Employees and Community

- Listen to their needs
- Seek to understand
- Earn their trust

## Maximizing Our Potential

- Inspire others with a can-do attitude
- Build positive, successful teams

## Always Strive to Balance Short-Term and Long-Term Goals

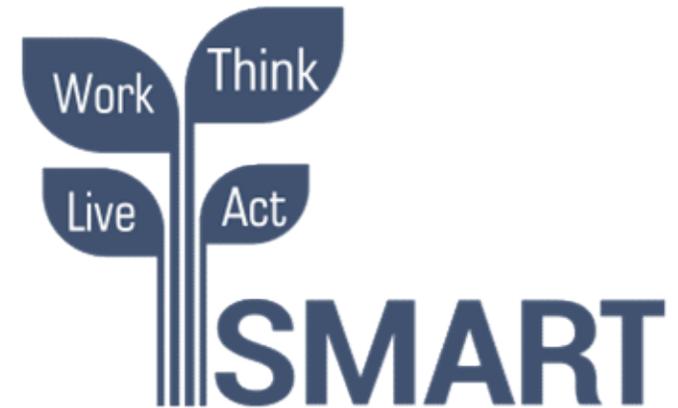
- Invest in the short-term, keeping the long-term in mind
- Balanced growth for organizational sustainability

## Relational Honesty

- Be straightforward and clear in all communication
- Support, encourage and challenge each other

## Trust

- Deliver on our promises, by doing what we say
- Act with integrity



**2,000,000,000** Parts Processed Annually

**700,000** Sq. Ft. of Production Space

**5,000** Customers Served Annually

**220** Years of Technical Experience

**70** Years of Service in the Industry

**9** Facilities Across North America

**1** Company at Your Service



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# Queretaro, MX Facility

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## Processes:

### Plating

- Zinc Iron
- Zinc Nickel

### Pretreat

- Aluminum washing
- Zinc Phosphate

### Adhesives & Coatings

- Rubber to Metal Adhesive
- Zinc Rich Coating
- Dry Film Lubricants

### Mechanical Finishing

- Blasting

## Accreditations:

ISO 9001:2008

## Production Space:

110,000 square feet



# Parts Washing

Parts Washing is a process that is able to remove rust, mill oils, and lubricating oils through a variety of methods. Normally parts which will end up being shot blasted will need to be washed prior to processing to prevent contamination of the blast media. Pioneer's inhouse equipment is designed to wash any type of part, from fragile to durable.

## Performance Benefits

- Thoroughly cleans surface prior to additional processes



# Blasting

Pioneer offers a variety of blasting options to meet pretreatment and texture requirements for various finishes. From high volume tumble blast and spinner hanger shot blast to large cabinet individual part blasting. Pioneer removes rust, scale, and other contaminants from your critical part surface prior to the application of your engineered coating system.

With a variety of different equipment applications Pioneer can handle any type of size and part.

## Standard Specifications

TT-C-490 Method I  
LMN 331-2  
TES-1401

## Performance Benefits

- Coating Adhesion
- Cosmetic Appearance

## Common Types of Media

Stainless Steel  
Shot  
Grit  
Aluminum Oxide  
Glass Bead  
Sand



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# Zinc Phosphate

Zinc Phosphate is a process that is widely used to improve corrosion resistance and paint adhesion on steel and iron. Immersion applied coating weights from 150mg/sqft to 1200mg/sqft can easily be achieved. While the crystalline structure produced is typically reserved as a base for paint adhesion, it can also serve as a short term corrosion inhibitor while improving the substrate's appearance.

## Standard Specifications

PS-80

GM9984090

TES1000

TES1007

PS119.0

RoHs, REACH, ELV & WEEE Compliant

## Performance Benefits

- Corrosion Resistance
- Provides a base for subsequent coatings



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# Zinc Nickel Plating

Pioneer's Zinc Nickel alloy creates ductile coatings that allow a full range of post-plate forming operations, greatly reducing customer manufacturing costs. Among these operations are bending, crimping and flaring processes not possible with conventional plated or painted finishes. Pioneer's automated high-performance coating with corrosion protection far exceeds conventional zinc processes.

## **Performance Benefits**

- Corrosion resistance up to 1,000 hrs B-117 salt spray, can be formulated to 3,000 hrs
- Ductile coatings allow for post-plate forming operations
- Can be formulated as a replacement for Cadmium
- High performance that far exceeds conventional processes



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# Dry Film Lubricant

Dry film lubricants are paint-like coatings incorporating very fine particles of lubricating pigment blended with a binder and other additives. The lubricant is applied to a substrate by spray, dip or brush methods. Once cured, the dry film creates a solid film which repels water, reduces friction, reduces galling, and increases the wear life of the substrate to which it has been applied.

## **Standard Specifications**

MIL-PRF-46010

RoHS, REACH, ELV & WEEE Compliant

## **Performance Benefits**

- Corrosion Resistance
- Wear Resistance
- Lubricity

## **Receptive Metals**

Aluminum Alloy

Aluminum Casting

Stainless Steel

Steel

Brass

Bronze

Copper



# Heat Reflective Coating

Pioneer utilizes LORD® HRC heat-reflective coating which is a two-component fluoroelastomer coating which features heat reflectiveness, robust adhesion and exceptional mechanical properties.

This coating greatly enhances fuel and fluid resistance for a wide variety of elastomeric substrates. Application of this Heat Reflective Coating on the surface of an elastomeric part allows the bulk of the component to be made of less expensive, less fluid resistant material. Pioneer is one of a few LORD® approved vendors of this product line.

## Standard Specifications

0095Z-SZAX-A101

## Performance Benefits

- Reflects radiant heat away from the coated parts, enabling parts to operate at cooler temperatures UL 94 V-0 certified
- Noise Reduction, eliminates rattle produced by loose heat shields
- Provides high temperature, fuel and fluid resistant barrier to external surface of elastomeric part providing longer life and higher reliability
- Cost Effective



## Receptive Metals

All elastomeric substrates



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# Rubber to Metal Adhesive Coating

Pioneer is a leader in the application of Rubber and Polyurethane to Metal adhesive coatings. These coatings rely upon robust pretreatment processes and systems, tight controls on adhesive film buildup, and protection from post application contaminants to insure successful and lasting Rubber and Polyurethane to Metal Bonds.

The adhesives can be applied in various ways. Our high volume production systems include chain on edge spray systems, dip spin, dip drain and roll coating systems. Lower volume methods such as hand spray are also offered.

## Standard Specifications

PS-135.22

PS-135-18

TES-2201

TES-2601

TES-2711

## Receptive Metals

Steel

Aluminum Alloy

Plastic



# Zinc Rich Coating

Zinc Rich & Zinc Flake Coatings are an excellent choice for improved corrosion resistance, management of torque values on fasteners, and elimination of any hydrogen embrittlement concerns on high strength steels and springs.

Because Zinc Rich coatings are applied after fabrication, coverage of welds and stamping edges is assured, and much higher levels of corrosion resistance are available when compared to traditional Ecoat or zinc plated finishes.

Pioneer's Zinc Rich and Zinc Flake products can be applied in Dip Spin, Dip Drain, and Spray systems, offering a wide choice of finish options depending upon your project requirements for performance and cost.

## **Standard Specifications**

Customer Specific Requirements  
RoHS, REACH, ELV & WEEE Compliant

## **Performance Benefits**

- Wear Resistance
- Abrasion Resistance
- Strong Durability
- Environmentally Friendly



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