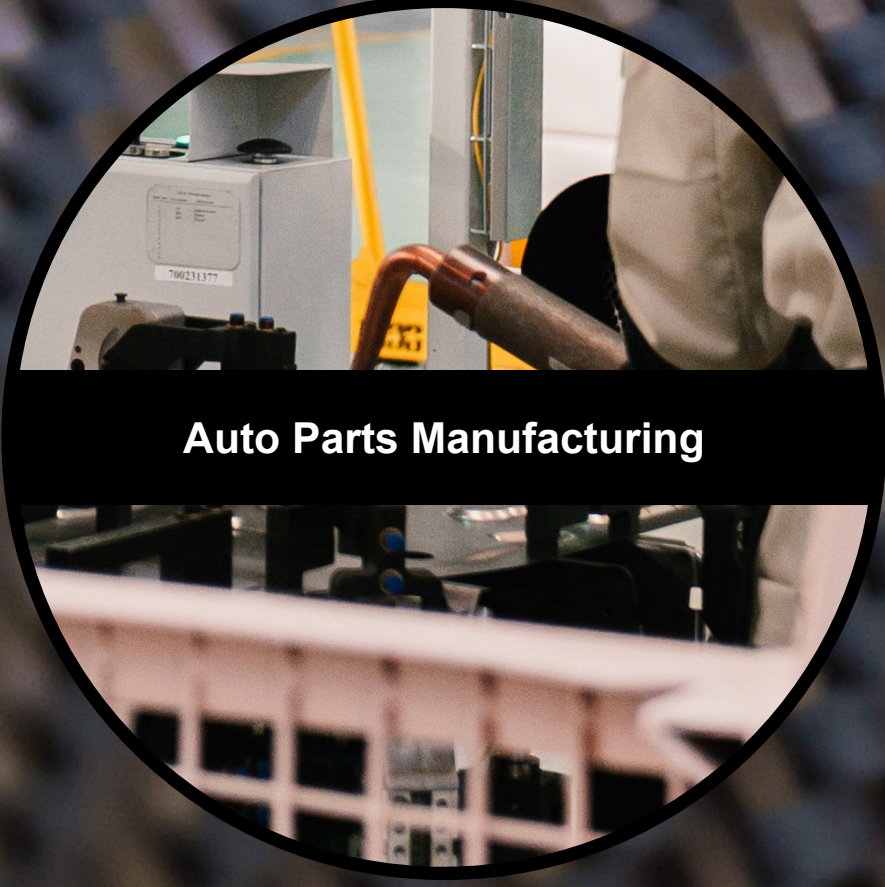




A MATRIX GUIDE TO AUTOMOTIVE PROFESSIONS AND HAZARDS





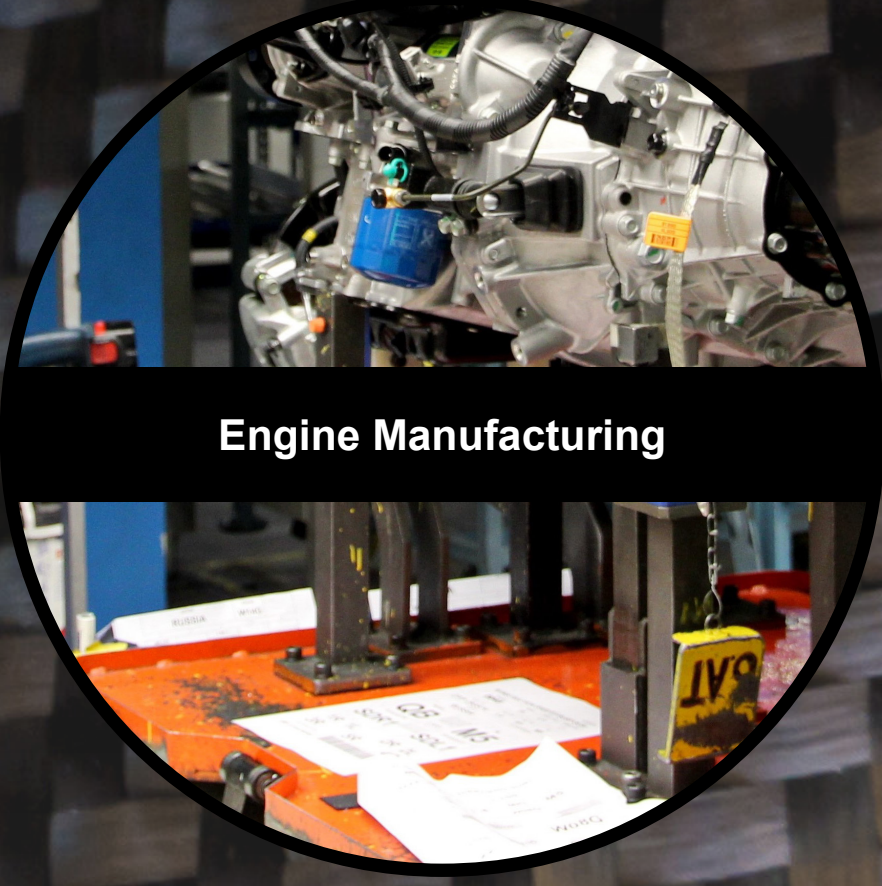
Auto Parts Manufacturing



Automotive Manufacturing



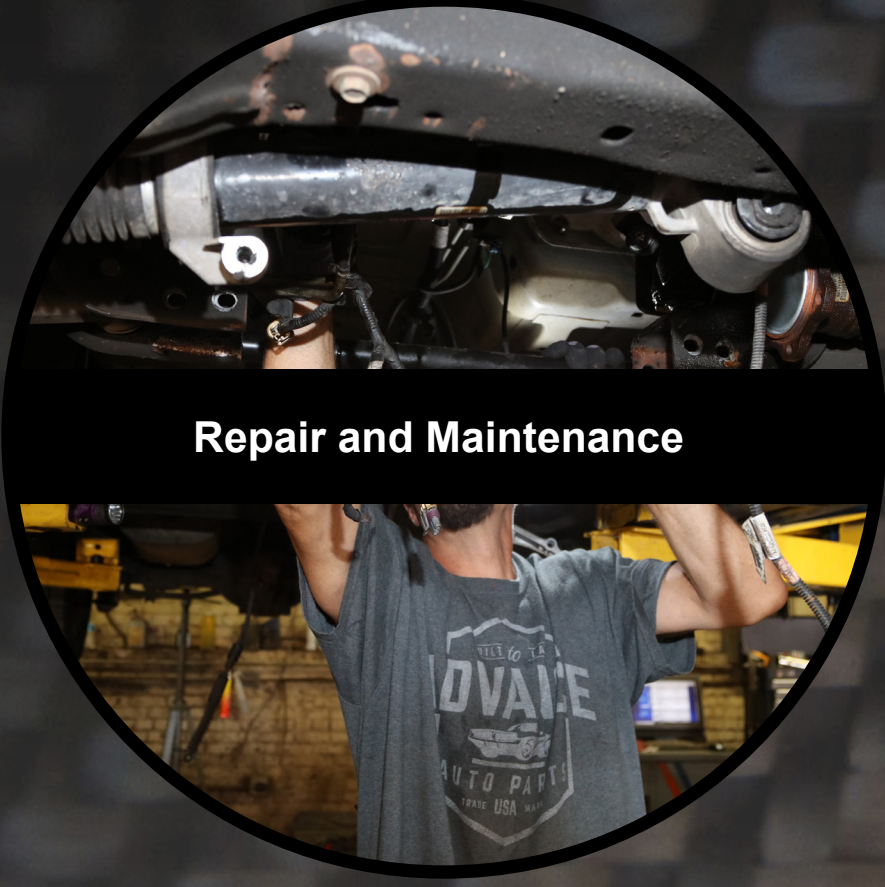
Trailer Manufacturing



Engine Manufacturing



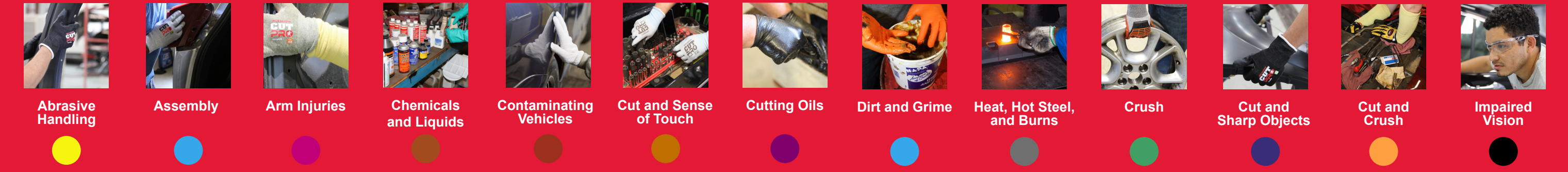
Tire Manufacturing



Repair and Maintenance



AUTOMOTIVE PROFESSIONS AND HAZARDS MATRIX: A - I

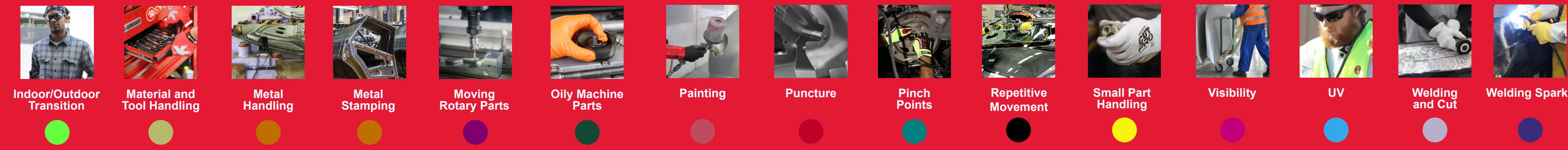


To find the appropriate PPE for any specific hazard shown, just click on the images above or the hazard name in the below table.

Occupation	Common Job Titles	Total Automotive Employment	Sub-Industries with Most Employment	What They Do	Abrasive Handling	Assembly	Arm Injuries	Chemicals and Liquids	Contaminating Vehicles	Cut and Sense of Touch	Cutting Oils	Dirt and Grime	Heat, Hot Steel, and Burns	Crush	Cut and Sharp Objects	Cut and Crush	Impaired Vision
Molding, Coremaking, and Casting Operators	Die Cast Technician, Molder, Mold Technician	16,350	Automotive Parts Manufacturing, Tire Manufacturing	Many automotive parts components are molded. This is the worker that operates and works with metal/plastic molding, casting, and coremaking machines. They mold or cast metal or thermoplastic parts or products.			●						●		●	●	●
Construction Trade Workers	Carpenters, Electricians, Glaziers, Plumbers, Painters	16,220	Motor Vehicle Manufacturing, Automotive Parts Manufacturing	Running an automotive factory requires all construction trades to keep it operating. You will find these workers constructing structures and handling equipment and tools.				●					●	●	●	●	●
Tool and Die Makers	Die Maker, Tool and Die Machinist, Tool Repairer	14,400	Automotive Parts Manufacturing, Motor Vehicle Manufacturing	Dies are specialized tools used to cut and shape the material. They are mostly used in a press. This worker helps produce, maintain, and repair dies. They lay out metal stock, fit and assemble parts, and make and repair dies.			●						●		●	●	●
Electricians	Industrial Electrician, Journeyman Electrician and Wireman, Maintenance Electrician	9,860	Automotive Parts Manufacturing, Motor Vehicle Manufacturing, Trailer Manufacturing	There is a multitude of electrical machines operating in the automotive industry. Electricians are the workers that install, maintain, and repair electrical wiring, equipment, and fixtures.						●							●
Tire Repairers and Changers	Service Technician, Tire Buster, Tire Technician	8,250	Automotive Repair and Maintenance	A vehicle requires tires to be occasionally changed once the tread wears down. You will find these workers remounting wheels, removing puncturing objects, and assisting mechanics.	●		●					●		●	●	●	●
Mixing and Blending Machine Setters, Operators, and Tenders	Batch Mixer, Fabricator, Miller	4,130.00	Automotive Parts Manufacturing, Tire Manufacturing	Machines are operated to crush, grind, and polish materials. You will find these workers crushing and grinding materials, along with mixing chemicals.			●	●									●
Cutting and Slicing Machine Setters, Operators, and Tenders	Cutter Operator, Cutting Pressman, Slitter	3,710.00	Tire Manufacturing	The rubber used in tire manufacturing needs to be cut to exact lengths. These workers operate machines that cut/slice materials, such as glass and rubber.	●		●			●		●			●	●	●
Grinding, Lapping, Polishing, and Buffing Machine Operators	Deburrer, Finisher, Grinder, Grinding Operator	3,700	Automotive Parts Manufacturing	Grinders use hand-held power tools to sand and polish metal surfaces. You will find these workers sharpening edges and corners on metal parts.	●		●						●	●	●	●	●
Structural Metal Fabricators and Fitters	Fabricator, Mill Beam Fitter, Structural Steel Fitter, Layout Man	3,350	Trailer Manufacturing	A trailer has metal components fitted across its entire frame. You will find these workers positioning welding parts and moving parts into position.	●		●			●			●	●	●	●	●
Millwrights	Common job titles for this occupation include Maintenance Mechanic and Precision Millwright	3,000	Automotive Parts Manufacturing, Motor Vehicle Manufacturing	Automotive factories are laid out with heavy equipment and machinery designed to help workers. These workers install, dismantle, and move machinery and heavy equipment. You will find them adjusting bolts, positioning parts, using hand tools, and drilling holes.	●		●	●		●	●	●	●	●	●	●	●
Plumbers and Pipefitters	Pipe Fitter, Sprinkler Fitter	2,540	Automotive Parts Manufacturing, Motor Vehicle Manufacturing	Pipes run all across automotive factories. Plumbers are the workers that assemble, install, alter, and repair pipes that carry water, steam, air, and other liquids. They install mechanical control systems and hydraulic systems.			●	●				●	●	●	●	●	●
Plating and Coating Machine Setters	Chrome Plater, Galvanizer, Plater	2,300	Automotive Parts Manufacturing	Automobile bumpers and grills are electroplated with a thick protective layer of metal. This helps the parts resist wear and corrosion. You will find this worker operating coating machines to coat metal or plastic products with chromium, zinc, copper, cadmium, or nickel to protect or decorate surfaces.			●	●					●				●
Forging Operators	Forger, Blacksmith, Hammer Operator, Forge Press Operator	1,560	Automotive Parts Manufacturing, Motor Vehicle Manufacturing	Crank shafts, drive shafts, axels, and numerous other automotive parts are die forged. You will find these workers removing dies, forging hammers, and moving metalwork pieces.	●		●						●		●	●	●
Lathe and Turning Machine Operators	Screw Machine Operator, Turn Operator, Lathe Set Up Person	1,440	Automotive Parts Manufacturing	Lathes assist in cutting automotive parts such as brake discs, brake drums, hubs, and valves. You will find these workers replacing worn tools, sharpening dull cutting tools, and using cutter-grinding machines.			●	●		●	●					●	●
Rolling Machine Setters and Operators	Rolling Mill Operator, Mill Operator, Roll Form Operator	1,420	Motor Vehicle Parts Manufacturing	Several automotive structural body parts are produced from roll formed metal parts, such as panels. You will find these workers operating shears and grinders and adjusting machines.			●			●				●	●	●	●
Fiberglass Laminators and Fabricators	Fiberglasser, Laminator	1,390	Trailer Manufacturing	The body of some trailers, such as camping trailers, are made with fiberglass. You will find these workers laminating layers of fiberglass on molds to form vehicles.						●					●		●
Heat Treating Operators	Burner, Heat Technician, Heat Treater	910	Automotive Parts Manufacturing	Engine parts and components are made from melted aluminum and other materials like zinc. This allows for the part to withstand years of wear and tear. You will find this worker operating heating equipment to temper, harden, anneal, or heat-treat metal or plastic objects.	●			●			●		●				



AUTOMOTIVE PROFESSIONS AND HAZARDS MATRIX: M - Z



To find the appropriate PPE for any specific hazard shown, just click on the images above or the hazard name in the below table.

Occupation	Common Job Titles	Total Automotive Employment	Sub-Industries with Most Employment	What They Do	Indoor / Outdoor Transition	Material and Tool Handling	Metal Handling (Dies)	Metal Stamping	Moving Rotary Parts	Oily Machine Parts	Painting	Puncture	Pinch Points	Repetitive Movement	Small Part Handling	Visibility	UV Radiation	Welding and Cut	Welding Sparks
Assemblers and Fabricators	Assembler, Fabricator	339,000	Automotive Parts Manufacturing, Motor Vehicle Manufacturing, Trailer Manufacturing	Assemblers in this industry put together various parts during subassembly work and final assembly to build parts and vehicles. You will find this worker assembling bolts, using many different types of tools, and moving heavy parts. They use tools, machines, and their hands.		●				●		●	●	●	●	●			
Mechanic	Automotive Service Technician, Master Technician, Mechanic	255,000	Automotive Repair and Maintenance	Mechanics perform maintenance on a variety of automobiles. You will find this worker replacing defective mechanical parts, disassembling and reassembling equipment, and rebuilding components. These workers typically spend a lot of time using their hands are often working in an enclosed vehicle where they are exposed to contaminants.		●			●	●	●	●	●		●			●	●
Metal and Plastic Workers	Metalworker covers a wide range of titles, including Blacksmith, Forger, Skilled Worker	196,000	Automotive Parts Manufacturing, Trailer Manufacturing, Motor Vehicle Manufacturing	Metalworkers are needed across the entire automotive industry, creating individual parts and repairing metal structures. You will find these workers welding, cutting, shaping, and forming metal pieces. Vehicles have metal everywhere across their bodies, which means a lot of metal must be shaped to the correct size.		●	●	●	●			●			●		●	●	●
Body Repairer	Auto Body Man, Auto Body Repair Technician, Body and Frame Man, Body Man, Body Technician	102,140	Automotive Repair and Maintenance	Auto body workers repair damage caused by accidents or wear and tear. You will find this worker smoothing surfaces of objects, cutting materials, removing dents, and installing machine parts. They repair and refinish automotive vehicle bodies. These workers stand most of the time, spend a lot of time using their hands, and are exposed to many contaminants.	●	●				●	●	●	●		●		●	●	●
Inspectors, Testers, Sorters, Samplers, and Weighers	Quality Technician, Inspector, Picker / Pacer	38,000	Motor Vehicle Manufacturing, Tire Manufacturing	Every vehicle that drives off the assembly line is checked multiple times throughout the entire manufacturing process, ensuring quality standards are being met. You will find this worker checking parts, assembly work, collecting samples of materials for testing, and test-driving vehicles.												●			
Painting Workers	Painter, Spray Painter	37,500	Automotive Repair and Maintenance, Trailer Manufacturing	Automotive paint workers help paint the surface of vehicles and trailers. You will find these workers applying paint coatings, cleaning production equipment, and positioning work pieces. Because most motor vehicle paintlines are automated, over 70% of all workers are in repair shops where the process isn't automated.							●								
Welders, Cutters, and Fitters	Maintenance Welder, Mig Welder, Welder/Fabricator	43,500	Automotive Parts Manufacturing, Motor Vehicle Manufacturing, Trailer Manufacturing	Robots can't weld every spot on the vehicle, which means human welders are still needed. Auto parts manufacturing and trailer manufacturing are two of the largest industries for welders. You will find these workers welding components in flat, vertical, or overhead positions.		●											●	●	●
Laborers and Material Movers by Hand	Laborer, Material Handler	32,870	Automotive Repair and Maintenance, Automotive Parts Manufacturing	The entire automotive industry has many objects moving at all times. You will find this occupation loading docks, moving parts, moving materials to production areas, and moving finished vehicles to warehouses.	●	●						●	●			●			
Helpers - Production Workers	Helper, Laborer, Support Team Member	31,000	Automotive Parts Manufacturing, Automotive Repair and Maintenance	Assembly lines need a lot of materials and resources to keep running efficiently. You will find these workers supplying materials and handling tools, in addition to cleaning work areas and equipment. They also help hold materials and tools on the assembly line.	●	●	●	●		●					●				
Cutting, Punching, and Press Machine Setters	Die Setter, Press Operator, Machine Setter and Operator, Press Punch Operator	28,000	Automotive Parts Manufacturing	Die Setters set stamping presses found in automotive factories. You will find these workers aligning metal parts, making cut-resistant gloves a high priority for their safety.		●	●	●	●			●	●		●				
Industrial Maintenance Workers	Maintenance Worker, Maintenance Mechanic, Facilities Manager, Lubricator, Maintenance Man, Oiler	27,630	Automotive Repair and Maintenance, Automotive Parts Manufacturing, Motor Vehicle Manufacturing, Trailer Manufacturing	Automotive factories have many machines that need to be maintained and repaired. A maintenance worker must be skilled in electricity, welding, and mechanical systems. You will find these workers repairing equipment and cleaning machines and machine parts. Cleaning solvents, oily parts, and metalworking fluids are a definite concern for these workers.		●			●	●							●	●	●
Machinists	Gear Machinist, Machine Operator, Maintenance Machinist	23,580	Automotive Parts Manufacturing	Some parts need to be specially fabricated and are needed in small numbers, which is where machinists come into play. You will find these workers replacing worn tools, sharpening dull cutting tools, and using cutter-grinding machines.	●	●			●	●		●	●		●		●	●	●
Tire Builders	Retreader, Splicer	22,770	Tire Manufacturing	An automobile has at least four tires, which means a lot of rubber tires are needed for a vehicle to run. This worker operates machines to build tires. You will find these workers trimming excess rubber, cutting plies, and painting solvents.						●		●	●						
Machine Tool Cutting Setters and Operators	CNC Machine Setter, CNC Machinist, CNC Operator	20,000	Automotive Parts Manufacturing, Trailer Manufacturing	"A multitude of automotive parts are shaped to different dimensions. You will find these workers inspecting metal workpieces and operating machines such as lathes, cutters, and shears to make metallic and plastic workpieces."		●			●	●		●	●						
Extruding and Drawing Operators	Extrusion Operator, Operator, Wire Mill Operator	20,000	Motor Vehicle Parts Manufacturing, Trailer Manufacturing, Tire Manufacturing	Automotive parts are needed in all shapes and sizes, including rods and other structural shapes. You will find these workers operating machines to extrude or draw thermoplastic or metal materials into tubes, rods, hoses, wire, and bars.		●			●	●		●	●						
Industrial Machinery Mechanics	Fixer, Industrial Mechanic, Master Mechanic	17,550	Automotive Parts Manufacturing, Motor Vehicle Manufacturing, Trailer Manufacturing	Industrial Mechanics repair and maintain industrial production and processing machinery. You will find these workers cutting and welding metal to repair broken metal parts.	●	●			●	●	●	●	●		●		●	●	●

