



ELECTRIC VEHICLE CAREER PATHWAYS REPORT

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Electric Vehicle Career Pathways

The EV Career Pathways report provides pathways for those interested in transitioning from traditional manufacturing or **internal combustion engine vehicle (ICE-V)** production jobs to **electric vehicle (EV)** careers with transferable skillsets. With such a strong automotive manufacturing landscape, Windsor-Essex is the ideal region for those currently employed in traditional automotive manufacturing jobs to transition into EV careers of the future.

To provide a comprehensive overview of potential career opportunities within the EV sector, this report will categorize roles into five distinct domains. These categories will serve as groupings to identify and understand various pathways available in Windsor-Essex's burgeoning EV sector. Each category will be accompanied by an overview and definitions to facilitate a clearer understanding of the roles encompassed within them.

The following are the five major categories:

- **Manufacturing**
EV Manufacturing refers to the process of producing EVs on a large scale, involving the assembly of various components and subsystems to create a fully functional EV.
- **Maintenance**
EV Maintenance refers to the regular upkeep, servicing, and repairs required to keep EVs in optimal operating condition.
- **Scientific Research**
EV Scientific Research refers to the systematic investigation and study conducted by scientists, researchers and experts in various fields to advance the knowledge and understanding of EVs.
- **Design and Development**
EV Design and Development refers to the process of creating and refining EVs.
- **Infrastructure**
EV Infrastructure refers to the network of charging stations, support systems, and associated technologies that enable the charging and operation of EVs.

Electric Vehicle Career Pathways

Manufacturing

EV manufacturing refers to the process of producing EVs on a large scale, involving the assembly of various components and subsystems to create a fully functional EV. It encompasses the entire production cycle, from sourcing raw materials to the final assembly of the vehicle. EV manufacturing involves a combination of traditional automotive manufacturing processes and specialized procedures specific to EVs. EV manufacturing is a complex and highly specialized process that requires expertise in EV technology, automotive manufacturing techniques, and quality control procedures.

The following transitions to EV careers in manufacturing can be made by those with automotive knowledge and experience. Each of the below career pathways represents a classic manufacturing or an ICE-V production job transitioning (➤) to multiple potential EV careers with transferable skillsets.

Assembly Line Worker – 9522 ► EV Assembly Technician, Battery Pack Assembly Operator, EV Quality Control Inspector

ICE-V Production Job Description

Assembly Line Worker:

- Assembly Line Workers in the manufacturing stage of ICE-V production help put cars together in a factory setting. They work on a moving line where each person has a specific task. Their job is to install parts like engines, doors, and seats onto a vehicle's frame.



Transferable Skills

- **EV Assembly Technician:** Assembly, quality control inspection, tool operation, mechanical aptitude, teamwork, attention to detail, adherence to safety protocols, process efficiency, adaptability, problem-solving skills, and familiarity with manufacturing regulations and standards.
- **Battery Pack Assembly Operator:** Component assembly, quality control inspection, tool operation, mechanical aptitude, teamwork, attention to detail, adherence to safety protocols, process efficiency, adaptability, problem-solving skills, and familiarity with manufacturing regulations and standards.
- **EV Quality Control Inspector:** Component assembly, quality control inspection, tool operation, mechanical aptitude, attention to detail, adherence to safety protocols, teamwork, process efficiency, adaptability, problem-solving skills, familiarity with manufacturing regulations and standards, and an understanding of production processes.

Upskilling/Training

- **EV Assembly Technician:** Electric powertrain assembly, high-voltage system handling, battery installation procedures, and EV safety protocols, while training in areas such as battery pack integration, electric motor mounting, and diagnostics.
- **Battery Pack Assembly Operator:** Battery cell handling, pack assembly procedures, thermal management considerations, and quality control processes, while training in areas such as battery chemistry, safety protocols, and electric powertrain integration.
- **EV Quality Control Inspector:** Electric powertrain components, battery systems, charging systems, and EV-specific quality control processes, while training in areas such as battery performance testing, electrical system diagnostics, and advanced inspection techniques.

Educational Requirements

- **Assembly Line Worker (ICE-V):** High school diploma or equivalent education.
- **EV Assembly Technician (EV):** Diploma in automotive technology or similar education.
- **Battery Pack Assembly Operator (EV):** High school diploma or equivalent education with on-the-job training.
- **EV Quality Control Inspector (EV):** High school diploma or equivalent education with on-the-job training.



EV Production Job Descriptions

EV Assembly Technician:

- EV Assembly Technicians help build EVs in a factory setting. They use their skills to put together the different parts that make up the vehicle, like the electric motor, batteries, and other components. These technicians follow instructions and use tools to assemble the parts accurately.

Battery Pack Assembly Operator:

- Battery Pack Assembly Operators help put together the batteries that power EVs. They use their skills to assemble the battery cells, wiring, and other components to create the complete battery pack. These operators follow guidelines and use tools to assemble the parts accurately.

EV Quality Control Inspector:

- EV Quality Control Inspectors check EVs to make sure they are built properly. They use their skills to carefully examine the vehicles and their parts to ensure everything meets high standards. Inspectors use tools and their knowledge to spot any mistakes or problems.

Welder/Fabricator – 7237 ► Battery Pack Welding

Technician, EV Chassis Welder, EV Body

Welder/Assembler

ICE-V Production Job Description

Welder/Fabricator:

- Welders/Fabricators in the manufacturing stage of ICE-V production use special machines to weld and join pieces of metal together, making them strong and secure. These workers also shape and cut the metal to create parts like frames, doors, and engine components.



Transferable Skills

- **Battery Pack Welding Technician:** Welding expertise, metal fabrication experience, precision in assembly, tool operation, attention to detail, adherence to safety protocols, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, mechanical aptitude, and a strong understanding of production processes.
- **EV Chassis Welder:** Welding expertise, metal fabrication experience, precision in assembly, tool operation, attention to detail, adherence to safety protocols, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, mechanical aptitude, and a strong understanding of chassis production processes.
- **EV Body Welder/Assembler:** Welding expertise, metal fabrication experience, precision in assembly, tool operation, attention to detail, adherence to safety protocols, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, mechanical aptitude, and a strong understanding of body assembly processes.

Upskilling/Training

- **Battery Pack Welding Technician:** Upskilling requires developing expertise in battery pack assembly techniques, battery cell welding methods, high-voltage safety protocols, and quality assurance processes, while training in areas such as battery pack design, weld inspection standards, and electric powertrain integration.
- **EV Chassis Welder:** Upskilling involves gaining proficiency in electric vehicle chassis design, welding techniques for lightweight materials, battery pack integration considerations, and high-voltage safety protocols, while training in areas such as electric powertrain assembly, chassis structural integrity, and EV-specific welding standards.
- **EV Body Welder/Assembler:** Upskilling requires developing expertise in electric vehicle body construction, welding techniques for lightweight materials, battery placement considerations, and high-voltage safety protocols, while training in areas such as EV body design, structural integrity, and integration of electric powertrain components.

Educational Requirements

- **Welder/Fabricator (ICE-V):** High school diploma or equivalent education and completion of apprenticeship.
- **Battery Pack Welding Technician (EV):** Completion of apprenticeship and on-the-job training.
- **EV Chassis Welder (EV):** Completion of apprenticeship with on-the-job training.
- **EV Body Welder/Assembler (EV):** Completion of apprenticeship with on-the-job training.



EV Production Job Descriptions

Battery Pack Welding Technician:

- Battery Pack Welding Technicians help build the batteries that power EVs. They use their skills to join different parts of the battery pack together using a special machine called a welder. These technicians follow specific instructions to make sure the welding is done accurately and securely.

EV Chassis Welder:

- EV Chassis Welders help build the main framework or chassis of EVs. They use their skills to join different metal parts of the chassis together using welding techniques. These welders follow specific instructions and use welding tools to create strong and secure connections.

EV Body Welder/Assembler:

- EV Body Welder/Assemblers put together the different metal parts that form the body of an EV. They use their skills to join these parts using welding techniques and other tools. These welder/assemblers follow specific instructions to ensure the body is well-built and secure.

Machinist – 7231 ► Electric Motor Manufacturing Technician, Battery Pack Manufacturing Specialist, Charging Infrastructure Manufacturing Technician

ICE-V Production Job Description

Machinist:

- Machinists in the manufacturing stage of ICE-V production work with machines to shape metal parts for cars. They use tools like lathes and mills to carefully cut and shape metal into specific shapes and sizes. These parts might include engine components, gears, and other important pieces.



Transferable Skills

- **Electric Motor Manufacturing Technician:** Machining expertise, precision tool operation, mechanical component fabrication, adherence to specifications, attention to detail, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, mechanical aptitude, and a strong understanding of manufacturing processes.
- **Battery Pack Manufacturing Specialist:** Machining expertise, precision tool operation, mechanical component fabrication, adherence to specifications, attention to detail, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, mechanical aptitude, and a strong understanding of manufacturing processes.
- **Charging Infrastructure Manufacturing Technician:** Machining expertise, precision tool operation, mechanical component fabrication, adherence to specifications, attention to detail, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, mechanical aptitude, and a strong understanding of manufacturing processes.

Upskilling/Training

- **Electric Motor Manufacturing Technician:** Upskilling involves gaining proficiency in electric motor manufacturing processes, precision assembly techniques, motor winding methods, and high-voltage safety protocols, while training in areas such as electric motor design principles, electromagnetic theory, and integration of electric powertrain components.
- **Battery Pack Manufacturing Specialist:** Upskilling requires developing expertise in battery pack assembly processes, cell handling procedures, thermal management considerations, and quality control techniques, while training in areas such as battery chemistry, safety protocols, and integration of electric powertrain components.
- **Charging Infrastructure Manufacturing Technician:** Upskilling involves acquiring proficiency in charging infrastructure components, electrical assembly techniques, smart charging systems, and

high-voltage safety protocols, while training in areas such as EV charging station design, communication protocols, and integration of power electronics.

Educational Requirements

- **Machinist (ICE-V):** High school diploma or equivalent education and completion of apprenticeship.
- **Electric Motor Manufacturing Technician (EV):** Diploma in electrical engineering technology, manufacturing technology, or related field.
- **Battery Pack Manufacturing Specialist (EV):** Diploma in electrical engineering technology, manufacturing technology, or related field.
- **Charging Infrastructure Manufacturing Technician (EV):** Diploma in electrical engineering technology, manufacturing technology, or related field.



EV Production Job Descriptions

Electric Motor Manufacturing Technician:

- Electric Motor Manufacturing Technicians help build the motors for EVs. They use their skills to assemble the various parts of the electric motor, following specific instructions and guidelines. These technicians work with precision to ensure the motor is put together correctly and functions smoothly.

Battery Pack Manufacturing Specialist:

- Battery Pack Manufacturing Specialists focus on creating the batteries that power EVs. They use their skills to assemble and build the battery packs, which are made up of many smaller battery cells. These specialists follow specific instructions and guidelines to ensure the battery packs are put together accurately and safely.

Charging Infrastructure Manufacturing Technician:

- Charging Infrastructure Manufacturing Technicians help create the charging stations that EVs use to recharge. They use their skills to build and assemble the different components of the charging stations. These technicians follow specific instructions and guidelines to ensure the stations are put together accurately and securely.

Tool and Die Maker – 7232 ► EV Component Tooling Specialist, Charging Infrastructure Manufacturing Toolmaker

ICE-V Production Job Description

Tool and Die Maker:

- Tool and die makers in the manufacturing stage of ICE-V production create specialized tools and molds for making car parts. They design and build tools that are used to cut metal into specific shapes. This job involves skill and careful craftsmanship to create the tools that make the car's parts just right.



Transferable Skills

- **EV Component Tooling Specialist:** Tool and die design expertise, precision tool fabrication, machining knowledge, CAD/CAM proficiency, adherence to specifications, attention to detail, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, mechanical aptitude, and a strong understanding of tooling processes.
- **Charging Infrastructure Manufacturing Toolmaker:** Tool and die design expertise, precision tool fabrication, machining knowledge, CAD/CAM proficiency, adherence to specifications, attention to detail, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, mechanical aptitude, and a strong understanding of manufacturing processes.

Upskilling/Training

- **EV Component Tooling Specialist:** Upskilling requires developing expertise in electric vehicle component manufacturing processes, precision tooling techniques, materials suited for electric powertrain components, and high-voltage safety protocols, while training in areas such as electric powertrain integration, battery enclosure tooling, and specialized machining for EV components.
- **Charging Infrastructure Manufacturing Toolmaker:** Upskilling requires developing expertise in charging infrastructure manufacturing processes, electrical component tooling design, smart charging systems, and high-voltage safety protocols, while training in areas such as EV charging station integration, communication interfaces, and specialized tooling for charging infrastructure components.

Educational Requirements

- **Tool and Die Maker (ICE-V):** High school diploma or equivalent education and completion of apprenticeship.
- **EV Component Tooling Specialist (EV):** Diploma in mechanical engineering technology, manufacturing technology, or related field.
- **Charging Infrastructure Manufacturing Toolmaker (EV):** Diploma in manufacturing technology or related field.



EV Production Job Descriptions

EV Component Tooling Specialist:

- EV Component Tooling Specialists focus on creating the special tools and equipment needed to build the various parts of EVs. They use their skills to design and develop the tools that help shape, cut, and assemble the components of the vehicles. These specialists follow specific instructions and use their expertise to ensure the tools are made accurately and perform effectively.

Charging Infrastructure Manufacturing Toolmaker:

- Charging Infrastructure Toolmakers focus on creating the special tools and equipment needed to build charging stations for electric cars. They use their skills to design and develop the tools that help shape, assemble, and maintain the charging infrastructure. These toolmakers follow specific instructions and use their expertise to ensure the tools are made accurately and perform effectively.

Material Handler – 7452 ► EV Parts Logistics

Coordinator, Battery Pack Material Handler, EV

Assembly Line Support

ICE-V Production Job Description

Material Handler:

- Material Handlers in the manufacturing stage of ICE-V production help manage the materials needed to build vehicles. They move and organize things like metal pieces, parts, and tools around factory settings. Material handlers use machines like forklifts to safely transport heavy items. This role involves organization and coordination to ensure materials are ready for vehicle production.



Transferable Skills

- **EV Parts Logistics Coordinator:** Inventory management, parts handling expertise, supply chain coordination, warehouse operations knowledge, attention to detail, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, communication abilities, organizational aptitude, and a strong understanding of logistics processes.
- **Battery Pack Material Handler:** Inventory management, parts handling expertise, supply chain coordination, warehouse operations knowledge, attention to detail, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, communication abilities, organizational aptitude, and a strong understanding of logistics processes.
- **EV Assembly Line Support Worker:** Parts coordination, inventory management, supply chain familiarity, attention to detail, quality control awareness, adaptability, problem-solving skills, teamwork, communication abilities, organizational aptitude, and an understanding of manufacturing processes.

Upskilling/Training

- **EV Parts Logistics Coordinator:** Upskilling involves acquiring expertise in electric vehicle components, battery modules, charging systems, and high-voltage safety protocols, while training in areas such as EV-specific parts inventory management, supply chain logistics, and sustainable sourcing practices.
- **Battery Pack Material Handler:** Upskilling requires developing proficiency in battery pack components, cell handling procedures, thermal management considerations, and high-voltage safety protocols, while training in areas such as battery chemistry, pack assembly processes, and electric powertrain integration.
- **EV Assembly Line Support Worker:** Upskilling involves gaining proficiency in electric vehicle assembly processes, battery components, high-voltage safety protocols, and EV-specific quality

control procedures, while training in areas such as battery pack integration, electric powertrain assembly, and troubleshooting of electric vehicle systems.

Educational Requirements

- **Material Handler (ICE-V):** High school diploma or equivalent education and on-the-job training.
- **EV Parts Logistics Coordinator (EV):** Diploma in logistics, supply chain management, business administration, or related field.
- **Battery Pack Material Handler (EV):** High school diploma or equivalent education and on-the-job training.
- **EV Assembly Line Support Worker (EV):** High school diploma or equivalent education and on-the-job training.



EV Production Job Descriptions

EV Parts Logistics Coordinator:

- EV Parts Logistics Coordinators focus on making sure all the necessary parts and components for building electric cars are in the right place at the right time. They use their skills to organize and manage the flow of parts from suppliers to the manufacturing facility. These coordinators follow specific plans and schedules to ensure that the parts arrive on time and in the correct quantities.

Battery Pack Material Handler:

- Battery Pack Material Handlers manage the materials needed to build the batteries that power electric cars. They use their skills to organize and handle the different parts and components used in making the battery packs. These material handlers follow specific guidelines to ensure that the materials are stored, transported, and delivered correctly.

EV Assembly Line Support Worker:

- EV Assembly Line Support Workers help the assembly line run smoothly. They use their skills to assist the technicians and operators on the production line, making sure everything works well. These support workers help with tasks like moving materials, keeping the work area organized, and fetching tools or parts.

Quality Control Inspector – 2261 ► EV Quality Assurance Specialist, Battery Pack Quality Control Inspector, Charging Infrastructure Quality Inspector

ICE-V Production Job Description

Quality Control Inspector:

- Quality Control Inspectors in the manufacturing stage of ICE-V production check vehicles to make sure they are built correctly and work well. They carefully examine vehicles and their parts to make sure everything meets high quality standards. This role involves careful attention to detail and making sure each vehicle is in excellent condition before it goes out to customers.



Transferable Skills

- **EV Quality Assurance Specialist:** Inspection expertise, adherence to specifications, defect identification knowledge, data analysis, familiarity with manufacturing regulations and standards, attention to detail, problem-solving skills, adaptability, communication abilities, teamwork, process improvement experience, and an understanding of quality assurance processes.
- **Battery Pack Quality Control Inspector:** Inspection expertise, defect identification knowledge, adherence to specifications, data analysis, familiarity with manufacturing regulations and standards, attention to detail, problem-solving skills, adaptability, communication abilities, teamwork, process improvement experience, and an understanding of quality control processes.
- **Charging Infrastructure Quality Inspector:** Inspection expertise, defect identification knowledge, adherence to specifications, data analysis, familiarity with manufacturing regulations and standards, attention to detail, problem-solving skills, adaptability, communication abilities, teamwork, process improvement experience, and an understanding of quality control processes.

Upskilling/Training

- **EV Quality Assurance Specialist:** Upskilling entails acquiring expertise in electric powertrain components, battery systems, charging infrastructure, and EV-specific quality control procedures, while training in areas such as battery performance testing, electrical system diagnostics, and integration of electric powertrain components.
- **Battery Pack Quality Control Inspector:** Upskilling requires developing proficiency in battery pack assembly processes, cell handling procedures, thermal management considerations, and high-voltage safety protocols, while training in areas such as battery chemistry, pack integration standards, and electric powertrain quality assessment.
- **Charging Infrastructure Quality Inspector:** Upskilling involves acquiring proficiency in EV charging infrastructure components, electrical assembly processes, smart charging systems, and

high-voltage safety protocols, while training in areas such as charging station integration, communication interfaces, and quality assessment of charging infrastructure components.

Educational Requirements

- **Quality Control Inspector (ICE-V):** High school diploma or equivalent education with relevant technical training or certifications.
- **EV Quality Assurance Specialist (EV):** High school diploma or equivalent education with on-the-job training.
- **Battery Pack Quality Control Inspector (EV):** High school diploma or equivalent education with on-the-job training.
- **Charging Infrastructure Quality Inspector (EV):** High school diploma or equivalent education with on-the-job training.



EV Production Job Descriptions

EV Quality Assurance Specialist:

- EV Quality Assurance Specialists make sure that EVs are built to high standards of quality. They use their skills to inspect and check the vehicles for any issues or defects. These specialists follow specific guidelines and tests to ensure that EVs are safe, reliable, and meet quality standards.

Battery Pack Quality Control Inspector:

- Battery Pack Quality Control Inspectors ensure that the battery packs used in EVs are made to high standards of quality. They use their skills to carefully examine and test the battery packs for any issues or defects. These inspectors follow specific guidelines and tests to make sure the battery packs are safe, efficient, and meet quality standards.

Charging Infrastructure Quality Inspector:

- Charging Infrastructure Quality Inspectors ensure that the charging stations for EVs are made to high standards of quality. They use their skills to carefully examine and test the charging stations for any issues or defects. These inspectors follow specific guidelines and tests to make sure the charging stations are safe, efficient, and meet quality standards.

Logistics Coordinator – 1523 ► EV Supply Chain Coordinator, Battery Logistics Manager, Charging Infrastructure Logistics Coordinator

ICE-V Production Job Description

Logistics Coordinator:

- Logistics Coordinators in the manufacturing stage of ICE-V production help organize the movement of materials and parts needed for manufacturing vehicles. They plan and arrange for materials to be delivered to factories at the right time. They work closely with suppliers, transportation companies, and manufacturers to ensure everything runs smoothly.



Transferable Skills

- **EV Supply Chain Coordinator:** Supply chain management, inventory coordination, vendor communication, transportation logistics, data analysis, familiarity with manufacturing regulations and standards, attention to detail, problem-solving skills, adaptability, communication abilities, teamwork, process optimization experience, and an understanding of logistics processes.
- **Battery Logistics Manager:** Supply chain management, inventory coordination, vendor communication, transportation logistics, data analysis, familiarity with manufacturing regulations and standards, attention to detail, problem-solving skills, adaptability, communication abilities, teamwork, process optimization experience, and an understanding of logistics processes.
- **Charging Infrastructure Logistics Coordinator:** Supply chain management, inventory coordination, vendor communication, transportation logistics, data analysis, familiarity with manufacturing regulations and standards, attention to detail, problem-solving skills, adaptability, communication abilities, teamwork, process optimization experience, and an understanding of logistics processes.

Upskilling/Training

- **EV Supply Chain Coordinator:** Upskilling requires developing expertise in electric vehicle components, battery systems, charging infrastructure, and sustainable sourcing practices, while training in areas such as EV-specific parts inventory management, battery supply chain logistics, and regulatory compliance for electric vehicle production.
- **Battery Logistics Manager:** Upskilling involves gaining proficiency in battery pack components, cell handling procedures, thermal management considerations, and high-voltage safety protocols, while training in areas such as battery chemistry, pack assembly processes, and electric powertrain integration.
- **Charging Infrastructure Logistics Coordinator:** Upskilling requires acquiring expertise in EV charging infrastructure components, electrical assembly processes, smart charging systems, and

high-voltage safety protocols, while training in areas such as charging station deployment logistics, communication interfaces, and regulatory compliance for charging infrastructure.

Educational Requirements

- **Logistics Coordinator (ICE-V):** Diploma in logistics, supply chain management, business administration, or related field.
- **EV Supply Chain Coordinator (EV):** Diploma in logistics, supply chain management, business administration, or related field.
- **Battery Logistics Manager (EV):** Bachelor's degree in logistics, supply chain management, business administration, or related field.
- **Charging Infrastructure Logistics Coordinator (EV):** Diploma in logistics, supply chain management, business administration, or related field.



EV Production Job Descriptions

EV Supply Chain Coordinator:

- EV Supply Chain Coordinators make sure all the necessary parts and materials for building EVs are available when needed. They use their skills to manage and organize the flow of supplies from different sources to the manufacturing facility. These coordinators follow specific plans and schedules to ensure that the parts arrive on time and in the right quantities.

Battery Logistics Manager:

- Battery Logistics Managers make sure all the materials needed to create the batteries for EVs are well-organized and available on time. They use their skills to plan and manage the movement of materials from different places to the manufacturing facility. These managers follow specific schedules and strategies to ensure that the materials arrive when needed and in the right amounts.

Charging Infrastructure Logistics Coordinator:

- Charging Infrastructure Logistics Coordinators make sure all the components and materials needed for creating charging stations are well-organized and delivered on time. They use their skills to plan and manage the movement of these items from various places to the manufacturing facility. These coordinators follow specific schedules and strategies to ensure that the components arrive when required and in the correct quantities.

Mechanical Assemblers and Inspectors – 9526 ► EV

Component Assembler, Battery Module Assembler and Inspector, Charging Station Assembler and Tester

ICE-V Production Job Description

Mechanical Assemblers and Inspectors:

- Mechanical Assemblers and Inspectors in the manufacturing stage of ICE-V production put car parts together and check to make sure they are put together correctly. They use tools to assemble different pieces like engines, gears, and other parts of the vehicle. They also ensure everything fits properly and functions correctly after assembly.



Transferable Skills

- **EV Component Assembler:** Component assembly, quality control inspection, mechanical aptitude, adherence to specifications, attention to detail, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, communication abilities, process efficiency, and an understanding of manufacturing processes.
- **Battery Module Assembler and Inspector:** Component assembly, quality control inspection, mechanical aptitude, adherence to specifications, attention to detail, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, communication abilities, process efficiency, and an understanding of manufacturing processes.
- **Charging Station Assembler and Tester:** Component assembly, quality control inspection, mechanical aptitude, adherence to specifications, attention to detail, familiarity with manufacturing regulations and standards, adaptability, problem-solving skills, teamwork, communication abilities, process efficiency, and an understanding of manufacturing processes.

Upskilling/Training

- **EV Component Assembler:** Upskilling involves developing proficiency in electric vehicle component assembly processes, battery integration techniques, high-voltage safety protocols, and EV-specific quality control procedures, while training in areas such as electric powertrain modules, battery pack installation, and electric motor integration.
- **Battery Module Assembler and Inspector:** Upskilling requires acquiring expertise in battery module assembly processes, cell handling procedures, thermal management considerations, and high-voltage safety protocols, while training in areas such as battery chemistry, module integration standards, and electric powertrain quality assessment.
- **Charging Station Assembler and Tester:** Upskilling involves gaining proficiency in EV charging station components, electrical assembly processes, communication interfaces, and high-voltage

safety protocols, while training in areas such as charging station integration, testing procedures, and regulatory compliance for charging infrastructure.

Educational Requirements

- **Mechanical Assembler and Inspector (ICE-V):** High school diploma or equivalent education and on-the-job training.
- **EV Component Assembler (EV):** High school diploma or equivalent education and on-the-job training.
- **Battery Module Assembler and Inspector (EV):** High school diploma or equivalent education and on-the-job training.
- **Charging Station Assembler and Tester (EV):** High school diploma or equivalent education and on-the-job training.



EV Production Job Descriptions

EV Component Assembler:

- EV Component Assemblers put together the different parts that make up EVs. They use their skills to assemble and connect various components, like motors, batteries, and other important parts. These assemblers follow specific instructions and guidelines to ensure that the components are put together accurately and securely.

Battery Module Assembler and Inspector:

- Battery Module Assemblers and Inspectors build and check the battery modules that power EVs. They use their skills to assemble the various parts of the battery modules, such as the battery cells, wiring, and connectors. These assemblers and inspectors follow specific instructions and guidelines to ensure that the modules are put together accurately and safely.

Charging Station Assembler and Tester:

- Charging Station Assemblers and Testers build and test the charging stations used to recharge EVs. They use their skills to assemble the different parts of the charging stations, following specific instructions and guidelines. These assemblers and testers work with precision to ensure that the stations are put together accurately and safely.