

Title: **Tire Machine Operation**

Activity: Remove and install a tire. Prepare and submit a report on the project.

Time Required: 7 Periods

Course: **TTJ3/4M Transportation Technology**

Rationale:

Understanding the entire process involved in the removal and installation of a tire is important in the development of essential skills. We need to see and learn the basics of the skill process involved in application tires. This is learned firsthand by utilizing your skills and knowledge on tire construction and machine operation. This activity also provides an opportunity to further develop practical/essential skills, research, safety PPE, equipment operation, literacy and presentation skills.

The Assignment:

You will research, develop a technical report, acquire practical skill sets, and learn proper technical safety skills and operation of the tire changer. This assignment is to be done individually. You will first research and collate information in regards to the operation and safety of the machine through video, manuals, and demonstrations. After this you will use the equipment **safely** to remove and install a tire. This operation will be tested on a live basis on the machine. You will finally submit a report on the whole project.

Key Concepts: You will learn in this project to:

- 1 Research the operation and safety of the machine.
- 2 Utilize drawings used in engineering conventions.
- 3 Handle equipment and tools safely and understand the importance of safety.
- 4 Evaluate your progress and application as per given dimensions and criteria.
- 5 Complete a report in a systematic and organized method.

Tools and Material:

The materials needed for this activity includes machine, attachments, lubricant, safety goggles, personal PPE, operators manual, drawing/ illustration tools such as pencils, markers, pencil crayons, computer, etc.

Project Procedures:

- 1 Read manual and make notes and observations. Initiate tracking/log sheet. Maintain it until end of project.
- 2 Research operating solutions using Internet or other resources available to you in the classroom/shop. Develop a poster on Machine Safety and write a report on the machine operation as given to you. Follow teacher directions at all times. Draw a minimum of **five** thumbnail sketches on the machine to help with the machine operation. Label them and write notes about each sketch to assist you in the report and operation.

Use tools and equipment *safely*. Use resources responsibly and avoid short cuts. Follow teacher instructions for safe operation. Ask if you are not sure or feel unsafe, never put yourself in a situation that can harm you or others.

- 3 Receive demonstration on the safe operation of the machine. Watch the video on safety concerns and symbol recognition. Use proper PPE on the job. Practice your skill set until you are proficient with its use and application. Check to see for errors and if it meets the project criteria. Make observations, modify report if required and recreate new strategies for success.
- 4 After the project is completed you should compose a detail summary or evaluation of what you observed and learned during the project. Complete you Activity sheet. Design a good Title page giving information like name of Project, your name, name of your equipment, report development, etc. Submit your report in MLA format and as outlined in the handout.