

Tyre Changing & Balancing

Annual Refresher Training Document

Introduction

Welcome to your **Tyre Changing & Balancing Annual Refresher Training**. This document is designed to provide you with updated guidelines and procedures to ensure safe and effective practices when performing tyre changing and balancing tasks. Tyre changing and balancing are essential services in automotive maintenance, and following the correct procedures ensures the safety and reliability of vehicles.

Before continuing with this document, please ensure that you have **watched the supplied training video**. This video demonstrates key procedures for tyre changing and balancing, providing visual guidance that is crucial for understanding the methods and safety precautions necessary for this task. Watching the video is mandatory before proceeding with the document.

Training Objectives

After completing this refresher training, you should be able to:

1. Understand the process for changing and balancing tyres safely.
 2. Identify and use the correct tools and equipment for tyre changing and balancing.
 3. Follow proper safety procedures to minimize risks during tyre-related tasks.
 4. Recognize signs of damaged tyres and know when to recommend tyre replacement.
 5. Understand the importance of accurate tyre balancing and its impact on vehicle performance.
 6. Complete required documentation regarding tyre inspections and work performed.
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1. Overview of Tyre Changing & Balancing

Tyre changing involves removing an old or damaged tyre from a vehicle's wheel and replacing it with a new or repaired one. Balancing ensures that the tyre and wheel assembly rotates evenly, preventing vibrations and improving safety and comfort during driving.

Key Components of Tyre Changing

- **Tyre Changer Machine:** A machine used to remove the old tyre and fit the new one onto the rim.
- **Bead Breaker:** A tool that loosens the bead of the tyre from the rim.
- **Lever Bars:** Used to help remove and fit the tyre onto the rim.
- **Lubricant:** Helps ease the process of removing and fitting the tyre onto the rim.
- **Wheel Balancer:** A machine used to detect and correct the imbalance in the tyre and wheel assembly.

2. Safe Operating Procedures for Tyre Changing

The **supplied training video** demonstrated the correct and safe operation of the tyre changing equipment. Below are the key steps for safely changing a tyre.

A. Pre-Use Inspection

Before starting any tyre changing procedure, ensure that all equipment is in proper working condition:

- **Tyre Changer:** Inspect the tyre changer for any damage, wear, or malfunction.
- **Bead Breaker:** Check for proper functioning and any signs of wear.
- **Lubricants:** Ensure that the tyre lubricant is available and has no contaminants.
- **Tools and Equipment:** Ensure that all tools, such as lever bars, are in good condition and not damaged.
- **Personal Protective Equipment (PPE):** Always wear the necessary PPE, including gloves and safety glasses.

B. Removing the Old Tyre

1. **Position the Wheel:** Place the wheel securely on the tyre changer machine.
2. **Use the Bead Breaker:** Apply the bead breaker to loosen the tyre bead from the rim. Make sure you follow the instructions in the video for proper bead breaking to avoid damage.
3. **Lubricate the Tyre Bead:** Apply a thin layer of lubricant to the bead to make the removal process easier and prevent damage.
4. **Use Lever Bars:** Carefully insert the lever bar between the tyre and the rim, using proper technique to remove the tyre from the rim. Take care not to damage the rim or tyre.

C. Fitting the New Tyre

1. **Lubricate the New Tyre:** Apply lubricant to the bead of the new tyre to facilitate easy fitting.
2. **Mount the New Tyre on the Rim:** Carefully position the new tyre on the rim, ensuring that the tyre is properly aligned with the rim before starting the fitting process.
3. **Use Lever Bars to Fit the Tyre:** Slowly use the lever bars to fit the new tyre onto the rim. Be cautious of your hand placement to avoid injury.
4. **Check for Proper Seating:** Ensure the tyre is seated correctly on the rim, with no gaps or misalignments. Check the bead area for proper fitment.

D. Inflating the Tyre

1. **Check the Tyre Pressure:** Before inflating, ensure that you know the correct tyre pressure for the specific vehicle.
2. **Inflate Gradually:** Inflate the tyre slowly, checking frequently to ensure the tyre is seating properly.

3. **Final Pressure Check:** Once the tyre is properly inflated, check the pressure using a pressure gauge to ensure it is within the manufacturer's recommended range.
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3. Tyre Balancing

Balancing is critical to ensure that the tyre and wheel assembly rotate smoothly, preventing vibrations and ensuring the safety of the vehicle. The video provides detailed steps on how to balance tyres accurately.

A. Pre-Balancing Preparation

1. **Check for Damage:** Inspect the tyre and rim for any signs of damage that may affect the balancing process.
2. **Remove the Valve Stem:** Remove the valve stem from the wheel to allow for proper balancing.
3. **Clean the Wheel:** Ensure the wheel is clean from any debris, dirt, or grease that could interfere with the balancing process.

B. Mounting the Wheel on the Balancer

1. **Place the Wheel on the Balancer:** Secure the wheel firmly on the balancing machine, ensuring that it is aligned properly.
2. **Run a Spin Test:** The balancer will run a test spin to detect any imbalances in the tyre and wheel assembly.

C. Adding Wheel Weights

1. **Adjust for Imbalance:** The machine will indicate where weights need to be added. Follow the video's guidance on how to properly add and position wheel weights.
 2. **Test Again:** After adding the required weights, perform another spin test to ensure the wheel is properly balanced.
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4. Safety Procedures

As demonstrated in the **supplied video**, following proper safety procedures is essential when performing tyre changing and balancing tasks. Below are key safety precautions to follow:

- **Personal Protective Equipment (PPE):** Always wear the necessary PPE, including gloves, safety glasses, and steel-toe boots.
- **Proper Handling of Tools:** Use all tools, including lever bars and the bead breaker, with care to avoid injury. Follow the video guidelines for correct hand placement and force application.
- **Avoid Pinch Points:** Be cautious of pinch points when using the tyre changer or balancing machine. Keep hands and clothing clear from moving parts.
- **Inspect Equipment Before Use:** Always check equipment for any damage or malfunction before starting work.

- **Clear Work Area:** Keep the work area free from clutter and ensure there is enough space for you to operate safely.
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5. Documentation and Reporting

Accurate documentation and reporting are essential for ensuring compliance and tracking maintenance tasks related to tyre changing and balancing.

A. Inspection Logs

- **Log tyre condition:** Record the condition of the tyres you are replacing. Document any damage, wear, or unusual conditions observed.
- **Record work performed:** Document the tyres changed, the balancing process, and any additional services completed.

B. Report Issues

- **Report any malfunctioning equipment:** If any tools or machines are not functioning properly, report them immediately to your supervisor for repair or replacement.
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Conclusion

Thank you for completing your **Tyre Changing & Balancing Annual Refresher Training**. By following the safe operating procedures, performing regular checks, and adhering to the guidelines outlined in this training document and the supplied video, you will help ensure the efficient and safe completion of tyre-related tasks.

If you have any questions or require clarification, please feel free to contact your supervisor or the Training Coordinator.

Employee Name: _____ **Date:** _____

Supervisor Signature: _____