



Circle Checks on Mobile Equipment

Notes for the trainer

Introduction

This safety meeting package includes a short video and simple guidelines for the trainer. (Both the video and leader's notes can be downloaded from the MASHA Safe Operator Campaign web site at www.masha.on.ca/SOC.) The package was developed as refresher training for equipment operators about how to conduct a pre-operation circle check of a vehicle they're about to drive. Read these notes ahead of time to help you prepare for the safety meeting. The video depicts both sound procedures and mistakes, to spark discussion about the best approach. We suggest you play the video the first time all the way through for your operators, followed by an open discussion of the content. Then play the video through again but, this time, stop the action and discuss the scene. Compare it with your own company procedures. Practice using the controls of your player system to start, stop and rewind the video whenever you want. This is effective to go back over part of the presentation or have a discussion while the information is fresh.

Begin the safety meeting by reviewing why circle checks (also called pre-operation or pre-op checks) are important. Mention that checks provide a chance to find and repair safety defects before they can result in an accident, and improve equipment maintenance by spotting problems before they become serious. In the mining and aggregate industries, circle checks are also required by law (Regulation 854, Section 105).

Notes on the video

1. Many operators who've seen this video comment right at the start that there are no wheel chocks in place on the loader. In fact, wheel chocks are not required for vehicles on surface on level ground. However, good practice dictates wheel chocks be placed when the controls are left unattended and the pre-operation check is being performed. When a machine is being maintained or repaired or when it is left unattended on a slope, the wheels must be chocked and all attachments lowered to the ground or adequately supported.
2. Kicking the tires doesn't tell this operator much about the tire pressure but it does emphasize the fact that he's visually inspecting each of the tires on his rounds.

3. Notice that he didn't check the fluid levels for the hydraulics, cooling or fuel.
4. As part of his running check, he lifted the bucket high enough to let him check for leaks in hydraulic hoses and couplings.
5. While he's checking the vehicle's lights he's also looking down to check for fluid leaks.
6. Dynamic brake tests – moving and braking – should never be done. If the brakes really aren't working you don't want to be in a moving vehicle when you find out. Static tests are preferable, but refer to the manufacturer's recommendations for each piece of equipment. Depending on the type of equipment and manufacturer's recommendations, a basic procedure for a static brake test may include:
 - Emergency brake on, full throttle, second gear, forward and reverse for 4 seconds maximum.
 - Service brake on (full pedal), full throttle, second gear, forward and reverse, 4 seconds maximum.
 - Park brake on, half throttle, second gear, forward and reverse, 4 seconds maximum (may include vehicles equipped with driveline or transmission brakes)

NOTE: Nobody should be within the operating radius of the vehicle during brake tests. There are a number of brake systems which each require specific tests.

Legislation pertaining to brake testing is included in Regulation 854, Mines and Mining Plants, in Section 119.

7. This operator fills out the inspection card after he's finished the inspection. Some companies insist their employees fill out the card while doing the inspection to make sure they haven't missed anything.
8. The transmission fluid level can usually only be checked with the engine running. It must be up to operating temperature.
9. Review your own procedures for circle checks with your safety meeting participants. Be sure to include the following items, which were not inspected in the video version:
 - Open the master switch before starting the circle check
 - Test horn and windshield wiper
 - Engine oil dip stick, wipe, re-insert, re-check
 - Steering turn stop to stop
 - Call for a helper to check the brake lights
 - Lubricate the bucket pivot pins
 - Fire extinguisher.