How to do a pre-operation inspection on a large wheel loader (Komatsu WA600-8)

This procedure explains how to do a pre-operation inspection on a large wheel loader, using the Komatsu WA600-8 as the example. The inspection identifies excessive wear, damage, and leaks so the machine performs at its best and lasts longer. Work through the checklist in walkaround order, starting at the bucket and finishing at the cab access ladder. If a procedure is unclear, check the operation and maintenance manual stored in the cab.

Prerequisites

Complete these items before you start the walkaround.

- [ ] Wear all required PPE, including a hard hat, safety glasses, and high-visibility clothing.
- [ ] Work in a safe, well-lit area with the machine powered down.
- [ ] Keep the operation and maintenance manual (in the cab) available for reference.
- [ ] Follow Komatsu's safety guidelines throughout the inspection and mounting procedures.

Equipment details

Record the machine details at the top of the inspection sheet. The source identifies the equipment type as a wheel loader and the model as the Komatsu WA600-8.

- Equipment ID: _____ (not specified in the source; enter your site's asset number)
- Equipment type: Wheel loader
- Model: Komatsu WA600-8
- Hour meter: _____
- Location: _____
- Shift: _____
- Inspector: _____

Before you begin the walkaround, complete these approach checks:

- [ ] Check the cab as you approach and confirm no one is inside.

- [ ] Confirm the machine is properly chocked to prevent unintended movement.



A worker in PPE stands beside the large yellow wheel loader, with its tires, access ladders, and safety signage visible on an outdoor worksite.

Safety systems

The source covers the walkaround safety checks below. It does not cover brakes, steering, alarms, fire suppression, seat belt, or emergency stops. Those cab-level checks belong in this section. Complete them from the operator's manual when you enter the cab.

Safety signage and PPE

- [ ] Confirm all safety signage, such as "DANGER: Keep a safe distance," is visible and undamaged.
- [ ] Confirm you are wearing a hard hat and safety glasses.

Access steps and handrails before mounting

Approach the machine at the designated access point. Inspect the access steps, handrails, and surrounding area for damage, loose fittings, or obstructions. Make sure the access point is clean, undamaged, and safe for mounting.

- [ ] Access steps are undamaged and clear.
- [ ] Handrails are secure.

- [ ] The area is free of obstructions.



A worker in full PPE checks the access steps and handrails at the side of the loader, using both hands to test their stability and condition.

Mounting technique

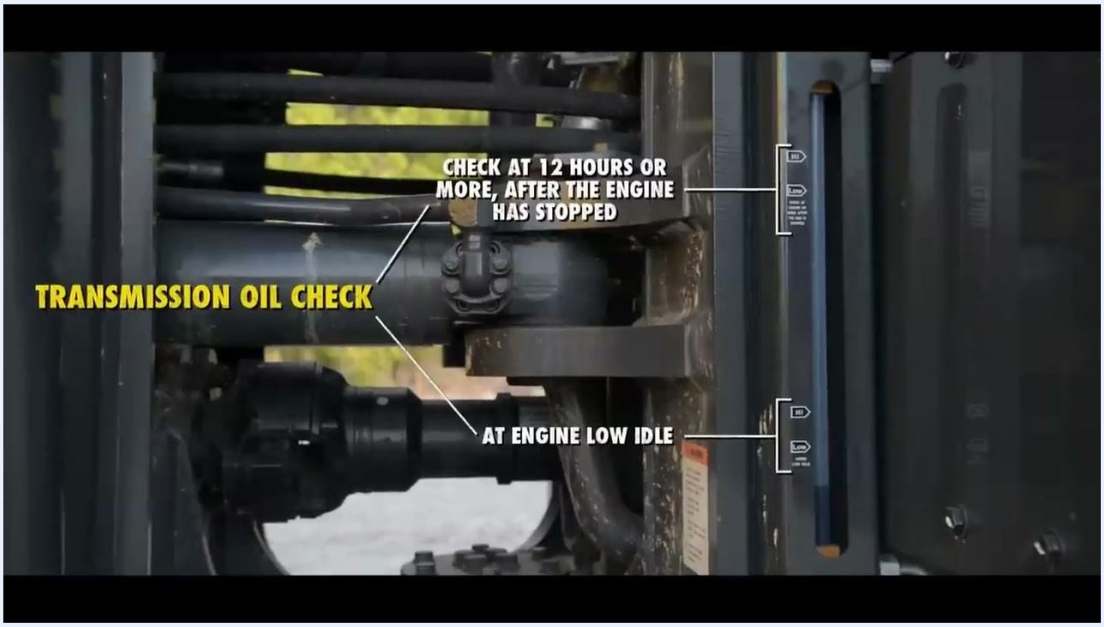
- [ ] Use three points of contact (two hands and one foot, or two feet and one hand) when mounting or dismounting.
- [ ] Face the machine while climbing up or down.
- [ ] Do not carry objects in your hands while mounting.

Lights, handrails, and mirrors

Check that all lights are intact and functional. Then step back from the machine and visually inspect all handrails and mirrors. Make sure they are present, undamaged, and securely mounted.

- [ ] All lights are intact and functional.
- [ ] Handrails are present, undamaged, and secure.

- [ ] Mirrors are present, undamaged, and securely mounted.



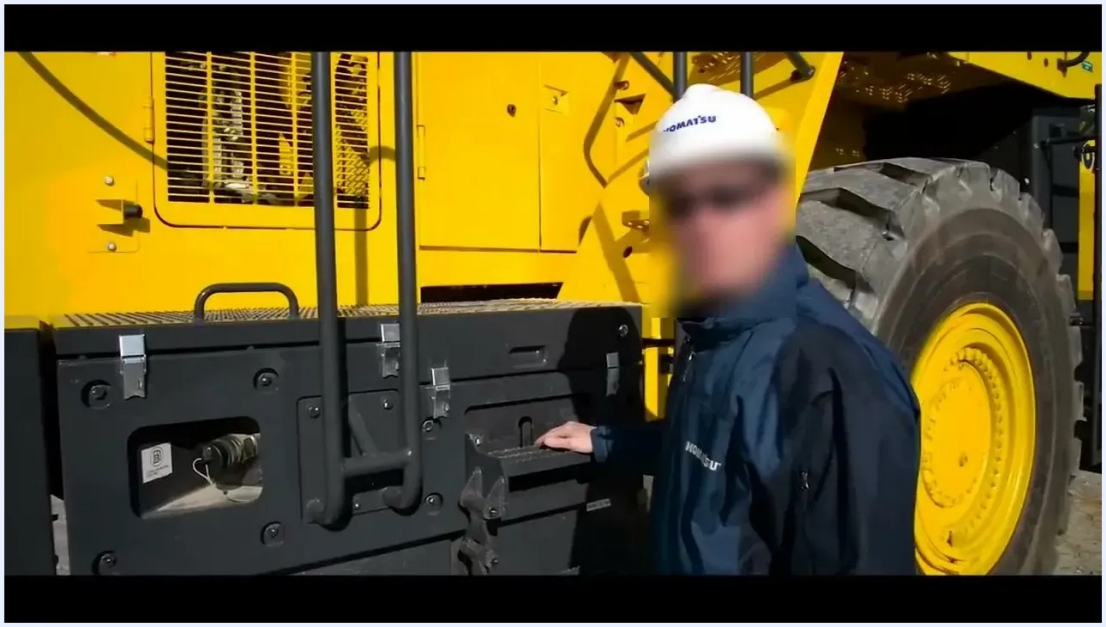
A worker stands by the rear tire of the loader, preparing to inspect the handrails and mirrors.

Final right-side safety check

Before mounting on the right side, step back and visually inspect the handrails and access points. Make sure the handrails are secure and the steps are undamaged and free of obstructions. Confirm the area is safe before you mount.

- [ ] Right-side handrails are secure.

- [ ] Right-side access steps are undamaged and unobstructed.



A worker at the right-side access area performs a final visual check of the handrails and steps before mounting.

Battery disconnect switch

Continue to the rear of the machine. Identify the location of the battery disconnect switch for safety and maintenance purposes.

- [ ] Battery disconnect switch location identified.

Mechanical checks

Inspect the bucket, tires, wheels, fenders, compartments, and fluids in the sequence below. Look for excessive wear, damage, and leaks as you go.

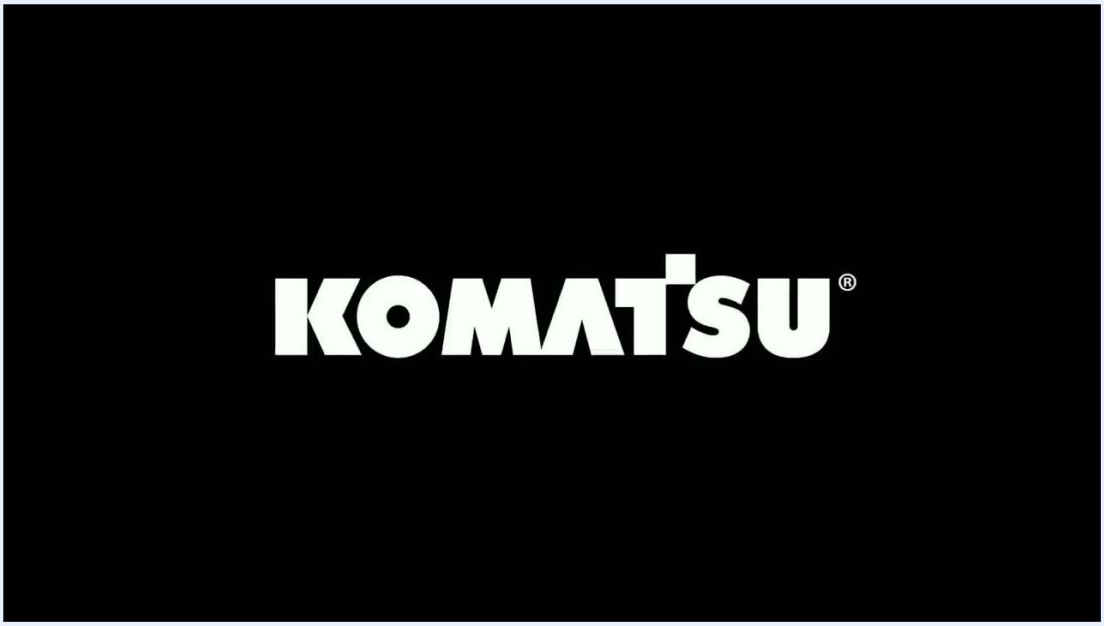
Bucket structure and ground engaging tools

Start with the overall structure of the bucket and work from top to bottom. Inspect all welds for cracks, fatigue, or separation. Check that all bolts and pins are present and tightly secured.

Then step back and assess the ground engaging tools (GET), such as the bucket teeth and cutting edge. Look for excessive wear, cracks, missing parts, visible damage, or abnormal wear patterns.

- [ ] Welds show no cracks, fatigue, or separation.
- [ ] Bolts and pins are present and tight.

- [ ] Teeth and cutting edge show no excessive wear, cracks, or missing parts.



The screen displays the KOMATSU logo on a black background, indicating the start of the instructional video.



A Komatsu representative in safety gear stands in front of a WA600-8 wheel loader, introducing the inspection process. The loader is parked on a gravel lot with trees in the background.



The screen shows the WA600-8 loader with large "KOMATSU" branding and the text "PRE OPERATION INSPECTION WA600-8" overlaid, reinforcing the inspection focus.



The representative continues to address the camera, reiterating the availability of the manual for reference.



The representative stands in front of the loader, emphasizing the importance of inspection for performance and longevity.



The representative stands beside the loader, preparing to inspect the bucket and its components.



A close-up inside the loader bucket shows the wear areas, dirt, and the condition of the bucket teeth and cutting edge.

Move to the front of the bucket and inspect all the ground engaging tools head-on. Make sure all teeth are present, securely attached, and free from major damage.

- [ ] All teeth are present, secure, and free of major damage.



A worker inspects the bucket from the front, checking the condition of the teeth and the bucket interior.

Bucket mounting points and lubrication

Inspect all mounting points on the back side of the bucket. Make sure all bolts and pins are present and properly secured. Confirm that all lubrication points are receiving the correct amount of grease.

- [ ] Mounting bolts and pins are present and secure.

- [ ] Lubrication points are receiving the correct amount of grease.



A worker beside the loader highlights the bucket mounting points and lubrication areas, with the large tire and linkage in view.

Underneath the front of the machine

Move to the front underside of the loader. Check for fluid leaks or drips on the ground and on the machine itself. Make sure the area is free of debris or obstructions that could indicate a problem.

- [ ] No fluid leaks or drips under the front of the machine.

- [ ] No debris or obstructions in the area.



A low-angle view under the front of the loader shows the underside, tires, and ground, where leaks or other issues would appear.

Tires and wheels

Repeat this inspection for all four tires.

- [ ] Inner and outer sidewalls show no cuts, bulges, or other damage.
- [ ] Wheel rim shows no cracks, dents, or other damage.

- [ ] All wheel hardware (nuts and bolts) is present and appears properly tightened.



A worker stands next to a large loader tire, demonstrating the inspection of the tire and wheel assembly.

Fenders and mounting points

Continue along the machine and stop at the fenders. Check all fender mounting points for security and for signs of damage or looseness.

- [ ] Fender mounting points are secure, with no damage or looseness.



A worker stands near the loader fender and tire, preparing to inspect the fender and its mounting points.

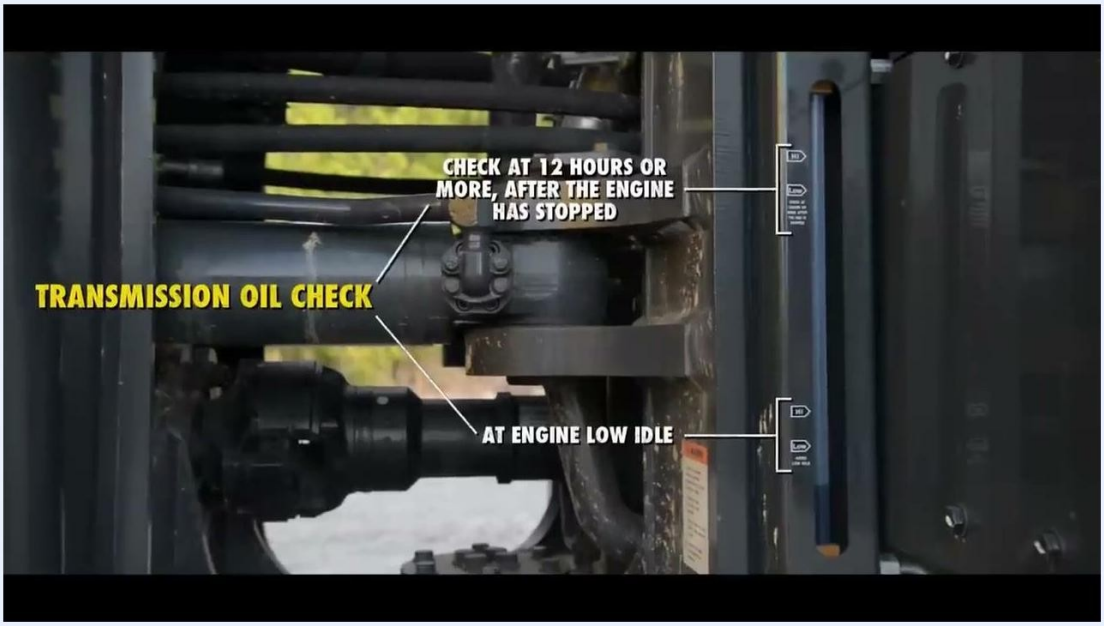
Articulation area and transmission oil level

In the articulation area, examine the drive line and articulation joint components for wear or structural issues. The hydraulic line and cylinder checks for this area are in the hydraulic section below.

- [ ] Drive line and articulation joint show no wear or structural issues.

Next, locate the transmission oil check point. Check the oil at 12 hours or more after the engine has stopped, or at engine low idle. Make sure the oil level is within the specified range on the sight gauge.

- [ ] Transmission oil level is within the specified range on the sight gauge.



A close-up of the transmission oil check area shows the labeled instructions "TRANSMISSION OIL CHECK," "CHECK AT 12 HOURS OR MORE, AFTER THE ENGINE HAS STOPPED," and "AT ENGINE LOW IDLE," with the sight gauge visible.

Side compartments: debris and leaks

Open the first compartment door on the side of the machine. Inspect the interior for debris, fluid leaks, or foreign objects. Confirm that all components inside are clean and dry. If you find any issues, address them before you continue.

- [ ] First compartment is free of debris, leaks, and foreign objects.

- [ ] Components inside are clean and dry.



A worker climbs the steps and opens the first side compartment, which carries a "DANGER Keep a safe distance" label.

Move to the next adjacent compartment and open the door. Perform the same visual inspection for debris and leaks. Make sure all visible hoses, pipes, and fittings are intact and dry.

- [ ] Second compartment is free of debris and leaks.

- [ ] Hoses, pipes, and fittings are intact and dry.



A close-up inside the second compartment shows hoses, clamps, and mechanical components in a well-lit area.

Cooler and coolant level

Locate the cooler (radiator or heat exchanger) inside the compartment. Inspect the fins and surfaces for plugging, dirt, or debris buildup. Make sure airflow is not obstructed and the cooler is clean.

Then identify the coolant reservoir or sight gauge and verify that the coolant level is within the recommended range. If the coolant is low, top it up with the coolant type specified by Komatsu.

- [ ] Cooler fins and surfaces are clean and not plugged.
- [ ] Airflow is not obstructed.

- [ ] Coolant level is within the recommended range.



A worker kneels beside the open compartment and visually inspects the cooler area, with the cooler core visible behind.

Air filter compartment and remaining compartments

Open the air filter compartment panel on the side of the machine. Check that all latches are secure and properly fastened.

- [ ] Air filter compartment latches are secure and fastened.

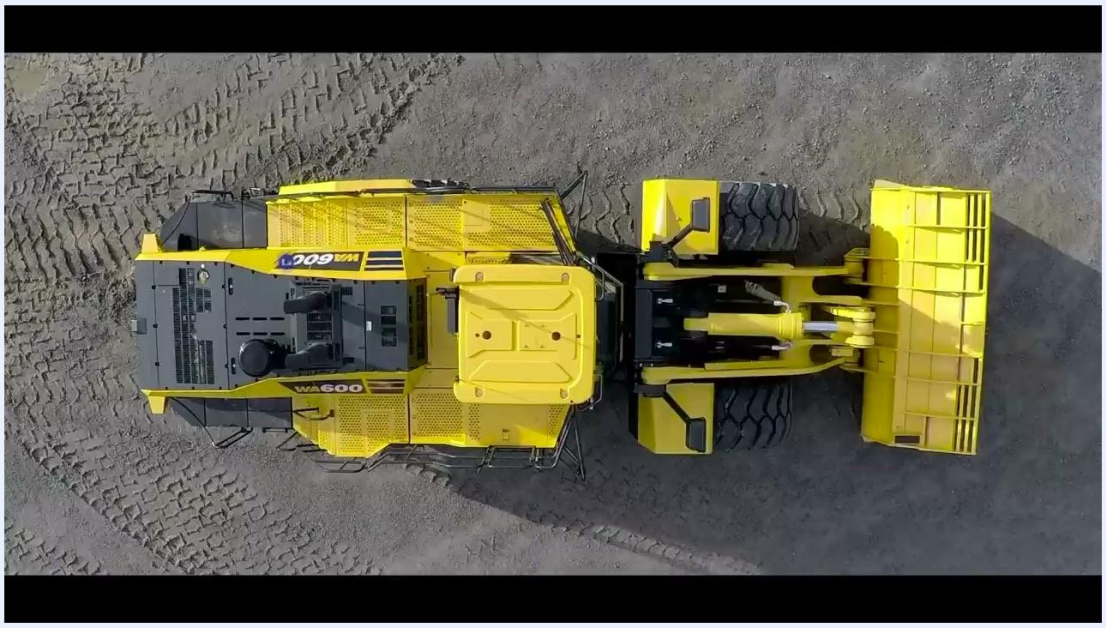


A worker opens the air filter compartment panel above the rear tire and reaches up to inspect the latches.

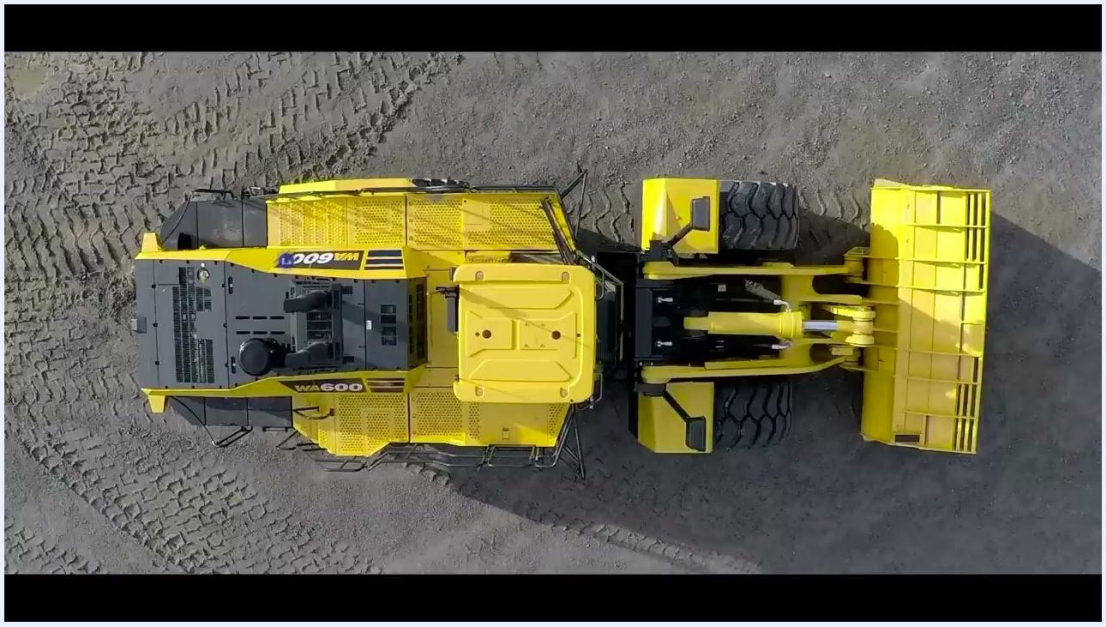
Examine the compartment for safety and cleanliness. Look for loose components, fluid leaks, debris, and foreign objects. Inspect all visible filters, hoses, and fittings for proper installation and condition.

- [ ] No loose components inside the compartment.
- [ ] No fluid leaks.
- [ ] No debris or foreign objects.

- [ ] Filters, hoses, and fittings are properly installed and in good condition.

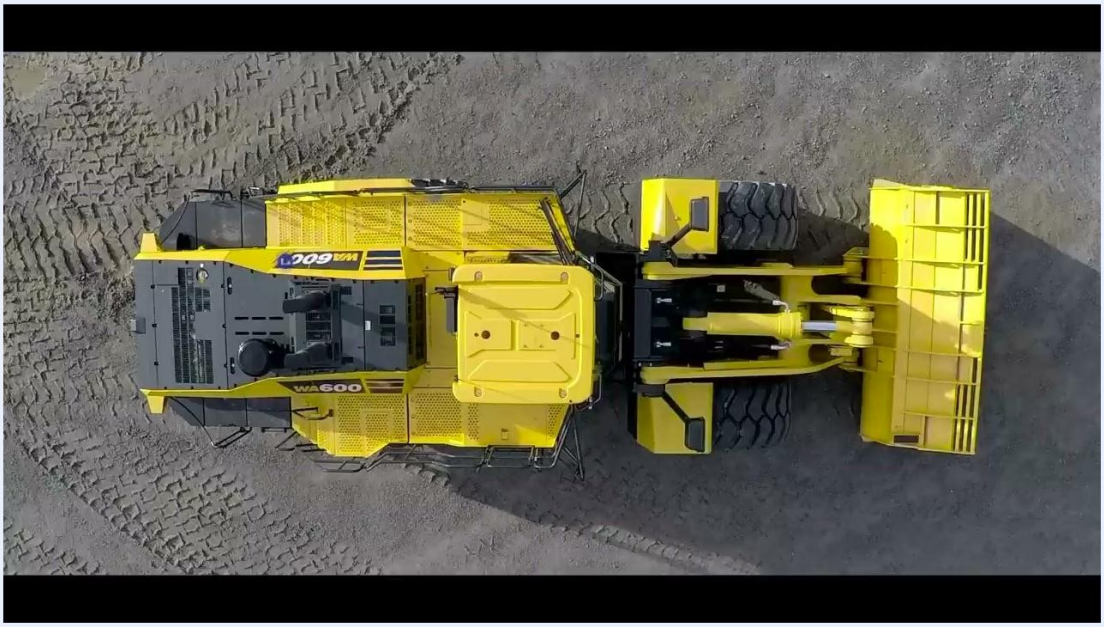


A worker bends down to inspect the open compartment, with the door open and internal components partially visible.



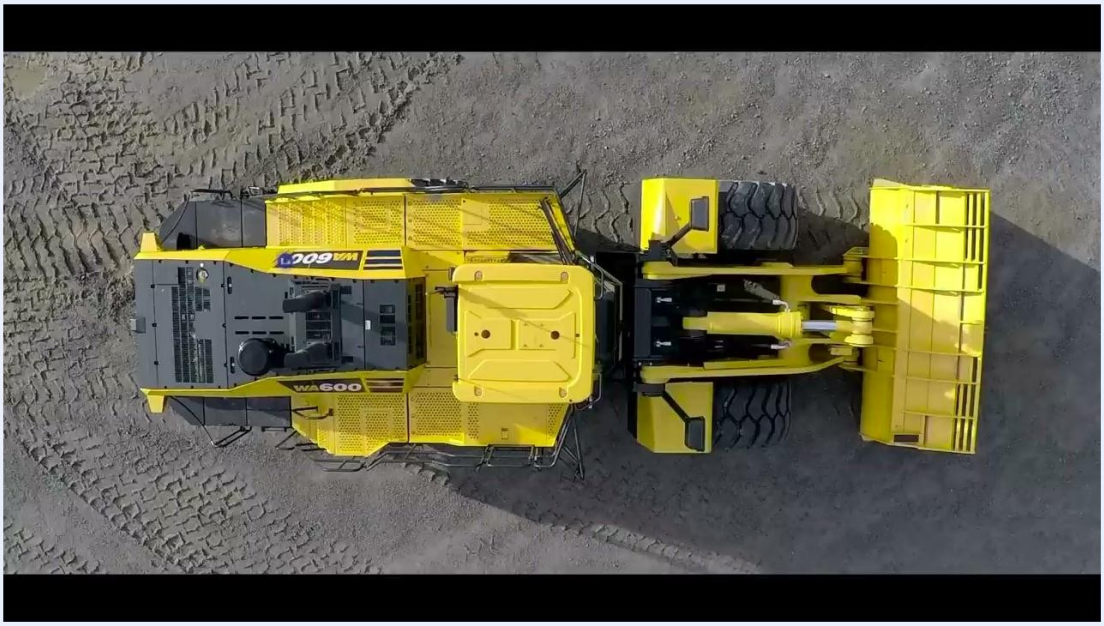
A close-up of the open compartment shows several black and white filters, hoses, and engine components, including filters labeled "PREFILTER" and "SPECIAL HIGH PRESSURE."

Move to the next compartment and repeat the checks for loose parts, leaks, and debris. Use the access stairs and handrails for safe movement between compartments.



A worker in PPE moves to the next compartment, using the stairs and handrails for support.

Repeat the inspection for each compartment on both sides of the machine. Check every point the same way you did on the first side.



A worker stands on the access platform, preparing to continue the inspection around the machine, with the model number, safety signage, and handrails visible.

Work methodically around the entire machine. Inspect all designated points, including alternate exits and sight glasses, as specified in the operator's manual. Stay aware of your surroundings and keep a safe distance from moving parts.



A worker on the ground near the access ladder and large tire points to inspection points on the side of the machine.

Complete the inspection on the opposite side of the machine, mirroring the steps above. Confirm all checks are complete before you proceed to operation.



A worker stands beside the large tire, confirming that the inspection steps on this side are complete.

- [ ] All compartments on both sides inspected.
- [ ] Alternate exits and sight glasses checked as specified in the operator's manual.

Rear of the machine

Proceed to the rear of the loader and keep watching for visible issues as you move.

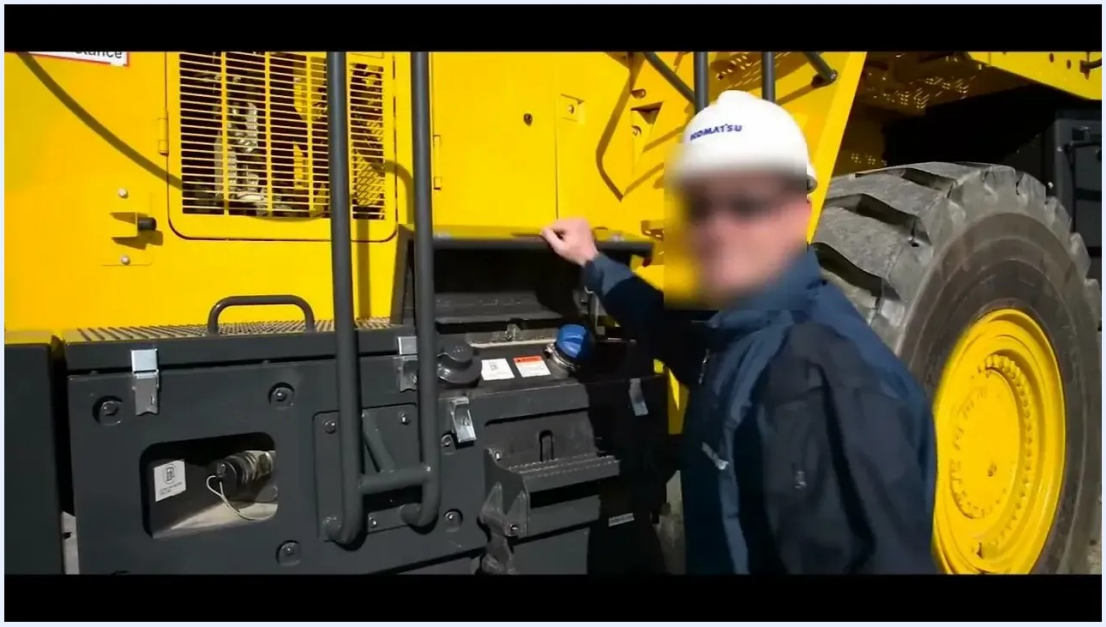
- [ ] Rear fan blades and housing are free of debris, dirt, and physical damage. Remove any obstructions.
- [ ] No fluid leaks or drips on the ground or visible components under the rear of the machine.

Right-side fluids: DEF and fuel

Move along the right side of the machine and locate the compartment that contains the DEF (Diesel Exhaust Fluid) tank. Identify the tank by its blue cap. Underneath the tank, locate the sight tube and check the DEF fluid level.

Then locate the standard and quick fill fuel ports on the right side. Confirm that both are clearly labeled and require ultra low sulfur diesel only.

- [ ] DEF level checked at the sight tube.
- [ ] Standard and quick fill fuel ports are clearly labeled for ultra low sulfur diesel only.



A worker beside the right-side compartments points to the DEF tank with the blue cap, with the sight tube and compartment latches visible.

Hydraulic checks

Inspect the hydraulic components at the front of the machine and at the articulation area. The source does not describe pressure indicators or contamination checks. Record those readings in this section if your site requires them.

Boom, linkage, lines, and cylinders

At the front of the machine, continue the inspection with these components:

- [ ] Hydraulic lines show no leaks, cracks, or loose fittings.
- [ ] Cylinders show no leaks or damage.

- [ ] Boom and linkage show no structural problems, cracks, or excessive wear.



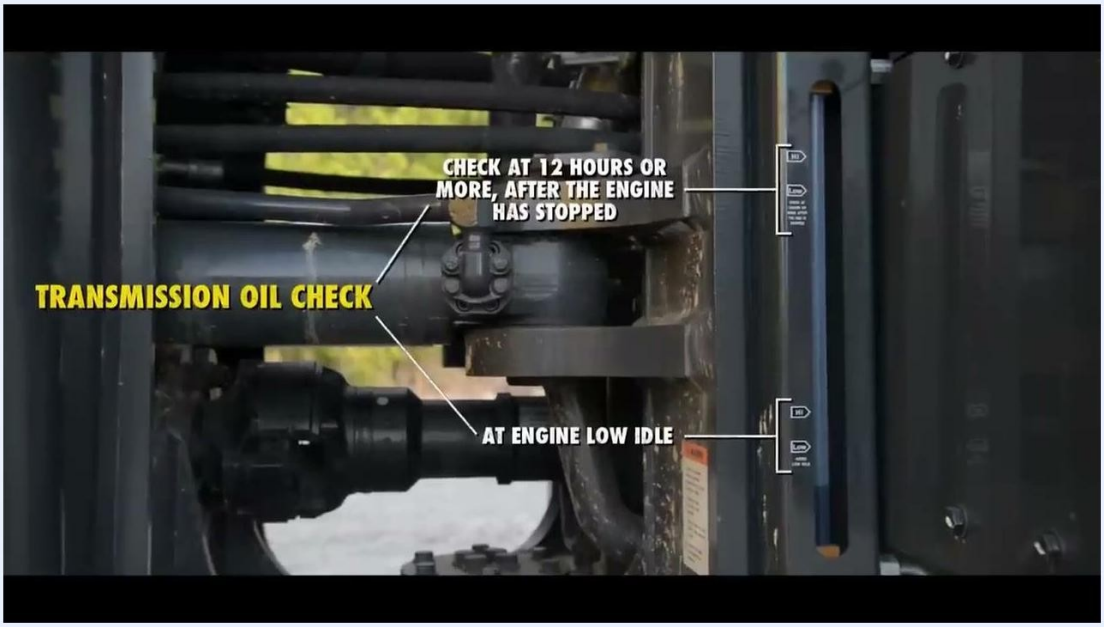
A worker points to components on the loader, including the boom, hydraulic lines, and linkage, to demonstrate the inspection.

Articulation area

Move to the articulation area of the loader and repeat the hydraulic checks there.

- [ ] Hydraulic lines show no leaks, cracks, or loose fittings.

- [ ] Cylinders show no leaks or damage.



A close-up of the articulation area shows hydraulic lines, joints, and a warning label.

Electrical checks

The source covers the breakers, batteries, battery disconnect switch, lights, and rear view camera. It does not cover harnesses, radios, or telemetry. Record those checks in this section if they apply to your machine.

Rear breaker compartment

Locate the first compartment at the rear of the machine and open it to access the breakers.

- [ ] All breakers are present and undamaged.



A worker opens the first rear compartment, showing where the machine's breakers are located.

Battery compartment

Locate the second compartment at the rear of the machine and open it to access the batteries. Make sure all fasteners are correctly installed. Check the battery terminals and connections for damage or corrosion.

- [ ] All battery fasteners are correctly installed.

- [ ] Terminals and connections show no damage or corrosion.



A worker opens the second rear compartment, which houses the batteries.

Battery disconnect switch

The battery disconnect switch is at the rear of the machine. You identify its location for safety and maintenance purposes.

- [ ] Battery disconnect switch located.



A worker walks toward the rear of the loader, where the battery disconnect switch is located.

Right-side breakers, lights, and rear view camera

On the right side of the machine, open the first compartment, which houses additional breakers. Confirm all breakers are present and undamaged.

At the rear, locate the rear view camera and all rear-facing lights. Make sure the camera lens is clean and unobstructed. Check that all lights are intact, undamaged, and securely mounted.

- [ ] Right-side breakers are present and undamaged.
- [ ] Rear view camera lens is clean and unobstructed.
- [ ] Rear-facing lights are intact, undamaged, and securely mounted.

Defects

Log every issue you find in the table below. The source does not define severity levels or remove-from-service criteria. Enter your site's severity ratings and criteria here, based on your supervisor's guidance or the operator's manual.

The source does give these immediate actions:

- Address any issue found in a compartment before you proceed.

- Top up low coolant with the coolant type specified by Komatsu.
- Remove any obstructions from the rear fan.

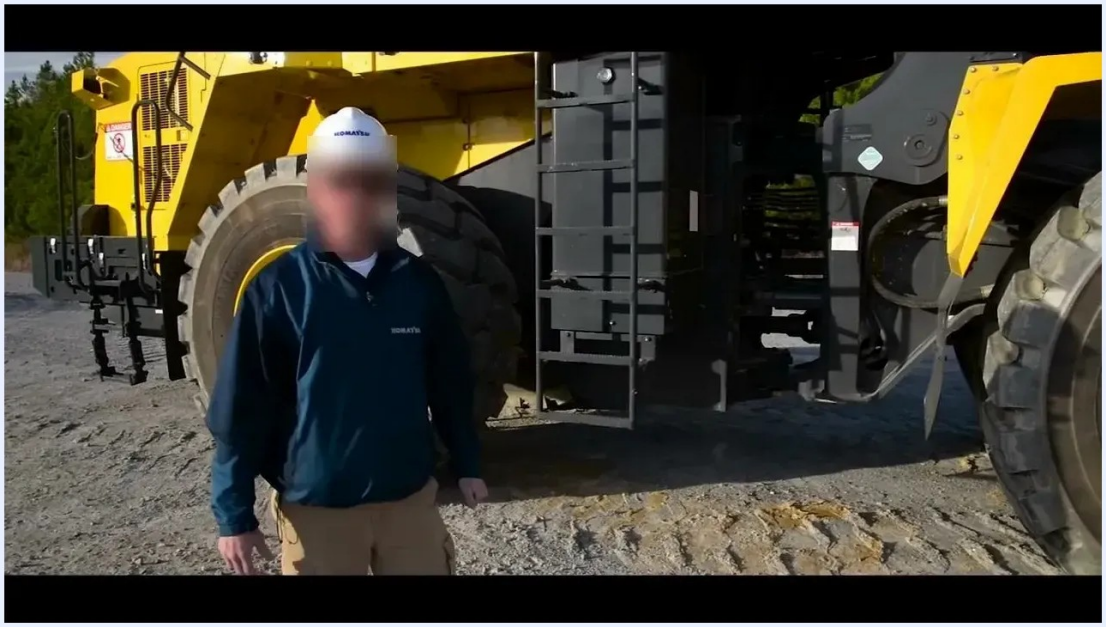
Defect	Severity	Action	Work order	Equipment status

Signoff

Before you sign off, confirm the ground-level inspection is complete. Make sure all inspected compartments, filters, hoses, and fittings are secure and free of leaks or debris. Stand clear of the machine and verify that all access panels are closed and latched. Confirm that all safety signage remains visible and undamaged.

- [ ] Ground-level inspection complete.
- [ ] All access panels are closed and latched.

- [ ] All safety signage is visible and undamaged.



A worker in PPE stands beside the loader in front of the access ladder and large tire, indicating the ground-level inspection is complete.



The screen displays the Komatsu WA600-8 loader with the text "KOMATSU PRE OPERATION INSPECTION WA600-8" overlaid, indicating the completion of the inspection and readiness for operation.



The screen displays the CADRE Solutions Group logo and website URL (www.cadresolutionsgroup.com) on a black background, indicating the end of the instructional video.

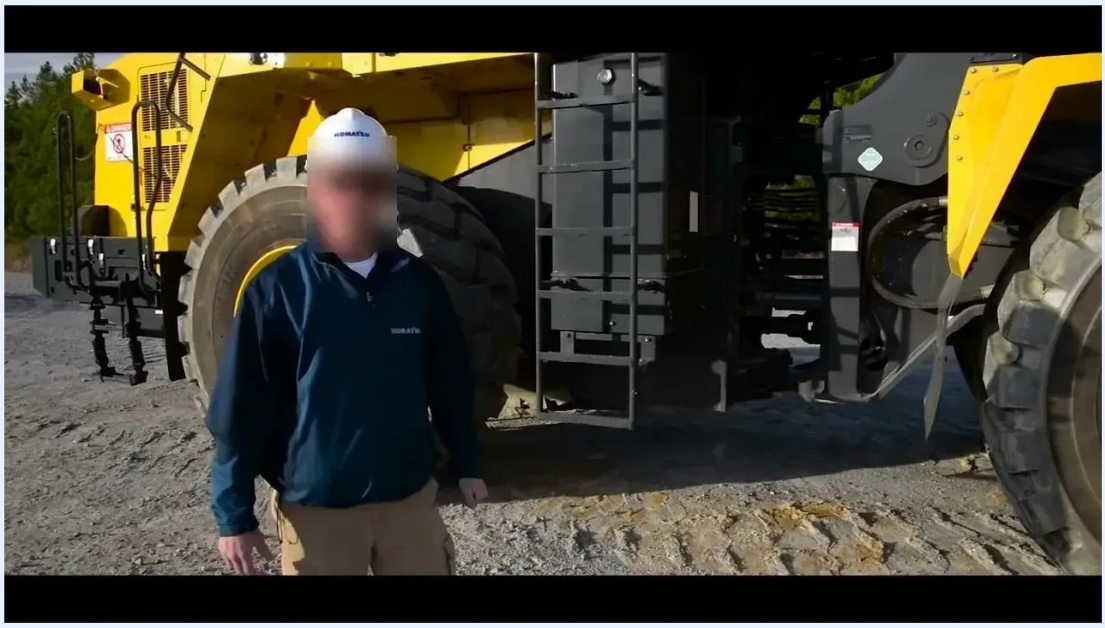
Prepare for the cab

Approach the access ladder and make sure it is clear of obstructions. Maintain three points of contact while ascending.



A worker in PPE stands beside the loader, preparing to move to the cab, with the access ladder, handrails, and large tires visible.

From the access platform, make a final visual inspection of the area around the cab and engine compartment. Check for leaks, loose components, or foreign objects on the platform or near the cab entry. Make sure the handrails and steps are secure and undamaged.



A worker in PPE on the yellow access platform prepares to enter the cab, with the engine compartment, handrails, and warning labels visible.

Confirm readiness for operation

When all checks are complete and you find no issues, proceed to operate the machine using standard procedures. Wear all required PPE before you start the machine.

The source does not provide a signoff form. Use the fields below to record the release.

- Operator: _____ Date/time: _____
- Supervisor: _____ Date/time: _____
- Maintenance release: _____ Date/time: _____

What's next

After the ground-level inspection, you move to the cab for the next phase of inspection. For further information or clarification, consult the operator's manual or contact your supervisor. For training or support, visit the website

provided by your training or solutions group. Always follow site safety protocols and manufacturer guidelines.