

VOLVO CONSTRUCTION EQUIPMENT

CARE INSPECTION

Inspection Instructions All Articulated Haulers

Foreword

The Care Inspection "Inspection Instructions" is an informal technical resource which describes all inspection steps which need to be performed during a Care Inspection on the machine.

A Care Inspection has two levels, the CSR inspection and the technician inspection.

- The CSR inspection is used by the Customer Support Representative (CSR) and is a short basic inspection that can be performed without any tools.
- The Technician Inspection is a more comprehensive inspection and should be performed by a trained Volvo technician.

NOTE!

Always refer to the latest service and operator's information for correct procedures and specifications. Read and understand the safety instructions in the Operator's and Service Manuals for the machine.

Observe the regional and national regulations!

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General

- 0.1 Gather existing machine information
 - 0.1.1 Product plates, checking
 - Check the condition.
 - Note product information.
 - 0.1.2 Service history, checking
 - Check when the last service was performed.
 - 0.1.3 Oil analysis, checking
 - Check if an oil analysis has been performed.
 - 0.1.4 MATRIS, Tech Tool and other service tools, reading
 - Connect Tech Tool to the machine and check error codes.
 - Perform a MATRIS readout.
 - Check the machine for software and hardware updates, campaigns.
- 0.2 Check fluid levels
 - 0.2.1 Engine oil level, checking
 - Check that the oil level is between the maximum and minimum marks.
 - 0.2.2 Coolant level, checking
 - Check the level on the expansion tank.
 - Visually check the condition of the coolant.
 - 0.2.3 Transmission oil level, checking
 - Check that the oil level is between the maximum and minimum marks.
 - 0.2.4 Hydraulic oil level, checking
 - Check that the oil level is between the maximum and minimum marks.
 - 0.2.5 Brake fluid level, checking (if applicable)
 - The brake fluid level should be up to the MAX marks of the reservoirs on the load and tractor units.
 - 0.2.6 Brake cooling oil level, checking (if applicable)
 - Check that the oil level is between the maximum and minimum marks.



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- 0.2.7 Dropbox oil level, checking
 - Check the oil level by removing the inspection plug.
 - 0.2.8 Axle oil level, checking
 - Check the oil level by removing the inspection plug.
 - 0.2.9 Axle hub oil level, checking (if applicable)
 - Check the oil level by removing the inspection plug.
 - 0.2.10 Exhaust Aftertreatment System, Air pump oil level, checking (if applicable)
 - The oil level should be within the flat area.
 - 0.3 Visual checks
 - 0.3.1 Leakage, checking
 - Fuel
 - Engine oil
 - AdBlue®/DEF (if applicable)
 - Coolant
 - Transmission oil
 - Dropbox oil
 - Hydraulic oil
 - Brake fluid (if applicable)
 - Brake cooling oil (if applicable)
 - Axle hub oil (if applicable)
 - Drive axle oil
 - 0.3.2 Pipes and hoses, checking
 - Check the condition.
 - 0.3.3 Cracks, welds, missing, damaged or worn parts, checking
 - Cab
 - ROPS/FOPS
 - Tractor unit frame
 - Load unit frame
 - Hitch
 - Drive axles
 - Dump body
 - Tyres
 - 0.3.4 Machine guards, checking
 - Check that all machine guards are present and are in good condition.
 - 0.3.5 Decals, checking
 - Check the condition.
 - 0.3.6 Access points, checking
 - Check that all walkways, steps, railings and foot pedals are clean and in good condition.
 - 0.3.7 Safety equipment, checking
 - Check that all safety equipment is present and installed correctly.
 - 0.3.8 Manuals, checking
 - Check that all manuals are present in the required language.
 - 0.3.9 Bolted joints, checking
 - Engine mounts
 - Transmission mounts
 - Axle mounts
 - Dropbox mounts
 - Cab mounts
 - Flanged joints, propeller shafts
 - Tail gate (if applicable)
 - Exhaust heated dump body (if applicable)
 - 0.3.10 Machine conformity, checking
 - Check the machine for unauthorized modifications.
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| 1 | Standard Parts, Service |
| 1.1 | Test run and check <ul style="list-style-type: none">- Perform the start procedure according to the Operator's Manual.- Check the function of the emergency stop switch/es.- Check all warning devices, indicator and warning lamps. |
| 1.2 | Lights, checking <ul style="list-style-type: none">- Check the function. |
| 1.3 | Lubrication, checking <ul style="list-style-type: none">- Check the function and condition.- Check the function and condition of the automatic lubrication system. (if applicable) |
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| 2 | Engine |
| 2.1 | Engine, checking <ul style="list-style-type: none">- Start the engine and check for basic function. |
| 2.2 | Engine speed, checking <ul style="list-style-type: none">- Check the engine speed in high and low idle. |
| 2.3 | Engine stall speed, checking <ul style="list-style-type: none">- Check the engine stall speed. |
| 2.4 | Coolers, checking <ul style="list-style-type: none">- Visually check that the coolers are not blocked. |
| 2.5 | Air cleaner, checking <ul style="list-style-type: none">- Check the primary and secondary filter elements for blockage or dust.- Check all connections between the air cleaner, engine, charge air cooler and turbocharger. |
| 2.6 | Coolant freezing point, checking <ul style="list-style-type: none">- Check the coolant freezing point. |
| 2.7 | Exhaust system, checking <ul style="list-style-type: none">- Check the condition of the muffler and the exhaust pipe.- Check the condition of the DPF (Diesel Particulate Filter), SCR (Selective Catalytic Reduction), flex tube and the connections. (if applicable) |
| 2.8 | Belt condition, checking <ul style="list-style-type: none">- Check the tension and condition of the engine belt(s). |
| 2.9 | Air cleaner, checking (Optional equipment) <ul style="list-style-type: none">- Check the condition of the oil bath air cleaner. (if applicable)- Check the condition of the pre cleaner (cyclone type). (if applicable) |
| 2.10 | Cooling fan, checking (Intercooler (charge air cooler)) <ul style="list-style-type: none">- Check the condition.- Check the pressure. |
| 2.11 | Cooling fan, checking (radiator) <ul style="list-style-type: none">- Check the condition.- Check the pressure. |
| 2.12 | Engine performance, checking <ul style="list-style-type: none">- Start the engine and note any abnormal noises, smoke and vibration. |
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| 3 | Electrical system |
| 3.1 | Battery, checking <ul style="list-style-type: none">- Check the battery charge.- Check the condition of the battery terminals and connectors. |
| 3.2 | Battery electrolyte level, checking (if applicable) <ul style="list-style-type: none">- Check the level of the electrolyte inside the battery. |
| 3.3 | Wiring harnesses, checking <ul style="list-style-type: none">- Check the condition. |
| 3.4 | Switches and solenoids, checking <ul style="list-style-type: none">- Check the function and condition. |
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| 4 | Power transmission |
| 4.1 | Gear selector positions and automatic gear shifting, checking <ul style="list-style-type: none"> - Check that the gear selector's positions are easy to engage and distinct. - Start the engine. Test-run the machine in all gear positions. |
| 4.2 | Differential lock and six-wheel drive, checking <ul style="list-style-type: none"> - Check the differential locks and the six-wheel drive and that the indicator lamp for the selected function lights up. |
| 4.3 | Transmission, checking <ul style="list-style-type: none"> - Check for abnormal noise and vibration. - Check the condition. |
| 4.4 | Dropbox, checking <ul style="list-style-type: none"> - Check for abnormal noise and vibration. - Check the condition. |
| 4.5 | Drive axles, checking <ul style="list-style-type: none"> - Check for abnormal noise and vibration. - Check the condition. |
| 4.6 | Transmission oil pressure, checking <ul style="list-style-type: none"> - Check oil pressure. |
| 4.7 | Propeller shafts joints and splines joints, checking <ul style="list-style-type: none"> - Check the conditions and check for play. |
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| 5 | Brakes |
| 5.1 | Parking brake, checking <ul style="list-style-type: none"> - Perform a parking brake test. |
| 5.2 | Service brakes function, checking <ul style="list-style-type: none"> - Check the function. |
| 5.3 | Retarder, checking (if applicable) <ul style="list-style-type: none"> - Check the function. |
| 5.4 | Service brake, brake pads, checking (if applicable) <ul style="list-style-type: none"> - Measuring of wear |
| 5.5 | Brake discs, checking (if applicable) <ul style="list-style-type: none"> - Measuring of wear |
| 5.6 | Parking brake pads, checking <ul style="list-style-type: none"> - Measuring of wear |
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| 6 | Steering |
| 6.1 | Steering, checking <ul style="list-style-type: none"> - Check the function. - Check for play and noise. - Check that the steering is not "nervous" (damping cylinder). - Check that the machine does not steer itself. |
| 6.2 | Steering cylinders, checking <ul style="list-style-type: none"> - Check the conditions on the front and rear steering cylinder bearings and pivot pins for play and noise. |
| 6.3 | Secondary steering, checking <ul style="list-style-type: none"> - Check the function. |
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| 7 | Frame, suspension, axle suspension and tyre, checking |
| 7.1 | Tyres, checking <ul style="list-style-type: none"> - Check for wear. - Check the tyre pressure. - Check the wheel nuts visually. |

- 7.2 Load carrier rubber cushions, checking
- Check the lateral positioning of the load carrier.
 - Check the thickness of the rear rubber cushions. The rubber cushions should be compressed equally on both sides of the load carrier.
 - Check the clearance between the front rubber cushions and the load carrier.
 - Check the clearance of the load carrier rear attachments.
- 7.3 Frame joint bearings, checking
- Check for play.
- 7.4 Steering joint bearings, checking
- Check for play.
- 7.5 Shock absorbers, checking (if applicable)
- Check the condition.
- 7.6 HS-, FS- or GHS-cylinders, checking (if applicable)
- Check for cracks.
 - Check the rubber bearings.
- 7.7 Boogie beams, checking (if applicable)
- Check for cracks.
 - Check the rubber suspension.
- 7.8 A-frame and cross stay, checking
- Check for cracks.
 - Check the rubber bushing.

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Cab

- 8.1 Operator's seat, checking
- Check the function and condition.
- 8.2 Instructor's seat, checking
- Check the function and condition.
- 8.3 Seat belts, checking
- Check the condition.
- 8.4 Climate control system, checking
- Check the function.
- 8.5 Cab doors and windows, checking
- Check the function and condition of the door handles, locks and emergency exits or equipment for emergency exits.
- 8.6 Cab filters, checking
- Check the condition.
- 8.7 Cab mounts, checking
- Check the cab mounts visually.

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Hydraulic system

- 9.1 Tipping function, checking
- Check to make sure the tipping and lowering time is correct.
 - Check that the warnings lamp for the dump body works correctly. (if applicable)
 - Check the end-stroke damping during activating. (if applicable)
 - Check the hold function for the dump lever in the lowering position. (if applicable)
- 9.2 Exhaust heated load body, checking (if applicable)
- Check the function and condition.
- 9.3 Tailgate, checking (if applicable)
- Check the function and condition.
- 9.4 Load weighing, checking (if applicable)
- Check the function and condition.

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- 9.5 Hydraulic pumps/system, checking
 - Check the maximum pressure, the stand by pressure and the neutral pressure.
 - 9.6 Hydraulic hoses, checking
 - Note the manufacturing dates of the hydraulic hoses.
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