1221F
Tier 4
Wheel Loader

OPERATOR'S MANUAL

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CASE CONSTRUCTION

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Contents

1 GENERAL INFORMATION

Note to the Owner 1-1
Diesel Particulate Filter (DPF) exhaust treament product overview 1-3
Operator's manual storage 1-7
Right, left, front, and rear of the machine 1-8
Machine components 1-9
Owner information 1-10
Product identification 1-11
Electro-Magnetic Compatibility (EMC) 1-12

2 SAFETY INFORMATION

Safety rules 2-1
Safety rules — California Proposition 65 Warning 2-2
Personal safety 2-3
Safety rules 2-4
Ecology and the environment 2-13
Operator's seat belt 2-14
Safety signs 2-15

3 CONTROLS/INSTRUMENTS

ACCESS TO OPERATOR'S PLATFORM

Proper entry and exit 3-1

OPERATOR'S SEAT

Operator seat adjustments 3-2

FORWARD CONTROLS

Front console 3-3
Status and warning icons 3-7
Switches 3-11
Steering column 3-13
Pedal controls 3-15
Display settings 3-16
Menu structure 3-18
Operator preferences 3-20
Machine mode 3-25
Monitoring menu 3-32
Machine management mode 3-36

LEFT-HAND SIDE CONTROLS

Joystick steering 3-42

RIGHT-HAND SIDE CONTROLS

Overview 3-45

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Control levers 3-46
Switch operations 3-48

OVERHEAD CONTROLS
Overhead switches 3-52

EXTERIOR CONTROLS
Master electric disconnect switch 3-56

CLIMATE CONTROLS
Climate controls 3-57
Cab air louvers 3-60

ACCESSORIES
Telematics 3-61
Radio 3-62
Bluetooth 3-65

4 OPERATING INSTRUCTIONS

COMMISSIONING THE UNIT
Before starting the engine 4-1
Run in period of a new machine 4-2

STARTING THE UNIT
Starting the engine 4-3
Operating in extreme temperatures 4-5
Cold temperature operation 4-6
Operating the machine 4-8

STOPPING THE UNIT
Stopping the engine 4-10

MOVING THE UNIT
Before operating the transmission 4-11
Control levers 4-12
Auxiliary Forward-Neutral-Reverse (F-N-R) switch 4-14
Operating the machine on a slope 4-16

5 TRANSPORT OPERATIONS

ROAD TRANSPORT
Safety rules 5-1
Transporting the machine 5-4
Moving a disabled machine 5-6

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6 WORKING OPERATIONS

GENERAL INFORMATION

Operating tips 6-1
Work equipment 6-6
Changing loader attachments 6-8

7 MAINTENANCE

GENERAL INFORMATION

Servicing 7-1
Maintenance Safety 7-3
Releasing pressure in the hydraulic system 7-5
Fluids and lubricants 7-7
Biodiesel fuel 7-10
Diesel Particulate Filter (DPF) regeneration 7-12
Diesel Particulate Filter (DPF) exhaust treament basic instructions 7-14

MAINTENANCE CHART

Maintenance Chart 7-15

Daily inspection

General 7-17

Every 10 hours

Engine oil 7-20
Hydraulic oil level 7-21
Engine coolant 7-22
Fuel prefilter 7-23
Drive belt 7-24

Initial 50 hours

Change engine oil and filter (Initial) 7-25
Fuel prefilter (Initial) 7-28
Fuel filter (Initial) 7-29
Wheel torque (Initial) 7-31

Every 50 hours

Machine lubrication 7-32
Grease machine and attachments 7-34
Wheels and tires 7-36

Initial 100 hours

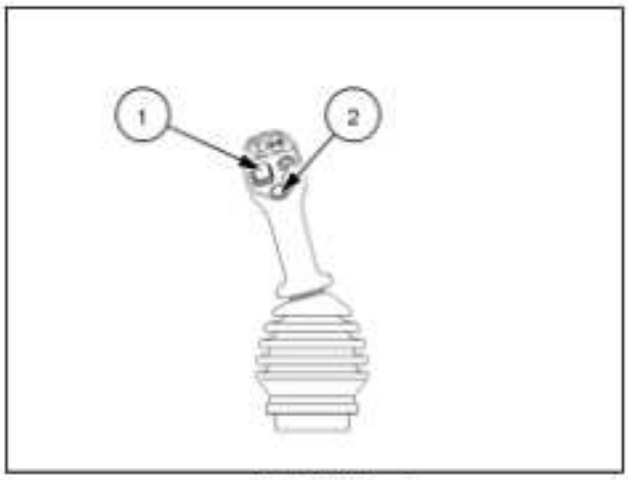
Transmission fluid and filter (Initial) 7-38

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Auxiliary Forward-Neutral-Reverse (F-N-R) switch

Auxiliary Forward-Neutral-Reverse (F-N-R) switch for control lever applications

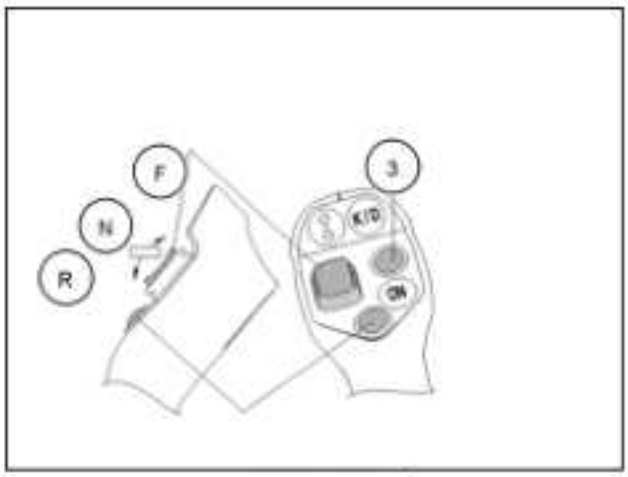
(1) F-N-R switch
(2) Select switch



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The F-N-R switch is used for forward and backward drive. The control lever also features a kick-down switch **(3)**.

1. The machine must be stopped with the engine running, and the standard transmission control lever must be in neutral.
2. Press the select button. The indicator lamp on the cluster will illuminate and the F-N-R switch is now operable.
3. Press the top of the switch to move the machine forward.
4. Press the bottom of the switch to move the machine in reverse.
5. The function is automatically released when the engine is stopped, the parking brake is ON, or the main transmission control lever is removed from neutral.



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Every 500 hours

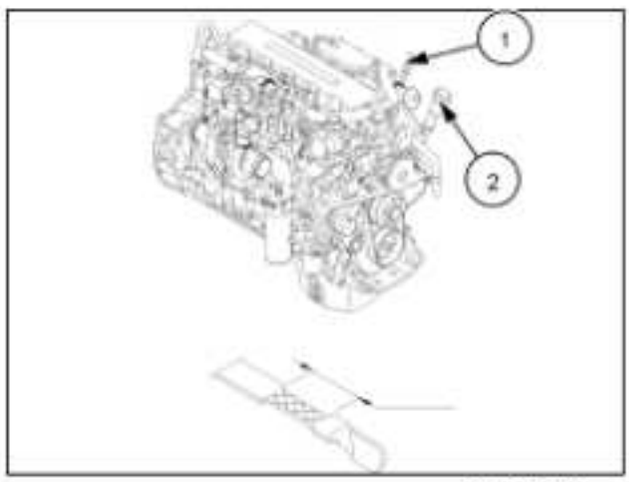
Change engine oil and filter

Change the engine oil and filter when the hour meter registers 50 hours for a new machine during the initial run-in period. The engine oil and filter should be changed every 500 hours thereafter or more frequently when the engine operating conditions are severe.

Prior operation:
Keep all unauthorized personnel clear of the area. Park the machine on level ground, in neutral with the parking brake applied, and the attachment lowered to the ground, turn off the engine, remove the key, and verify that engine components have cooled or avoid contact. Make sure that all residual pressure is relieved from circuits before beginning maintenance. Install the transport service link safety lock to prevent unexpected articulation.

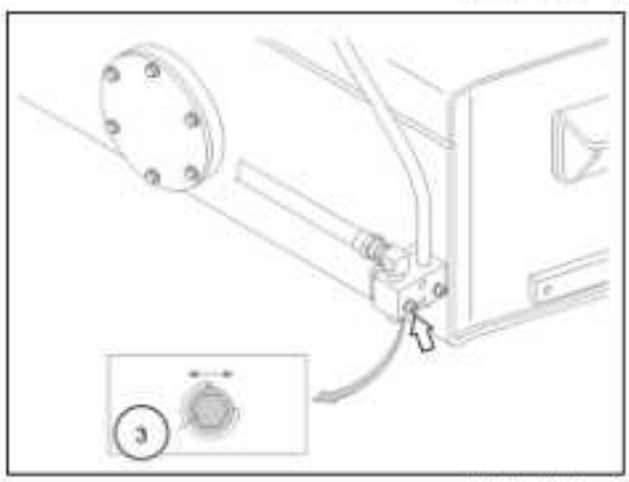
Service specifications	
Type of oil	SAE 15W-40 (API CJ-4)
Capacity (with filter change)	**43 l (45.4 US qt)**

1. Locate the oil fill and dipstick in the engine compartment on the right side of the machine. Oil will drain faster if the oil is warm (not hot) and the dipstick **(1)** is removed.



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2. Use a wrench, and open the drain valve **(3)**. Use a suitable container to collect the used oil, and drain the engine oil completely.

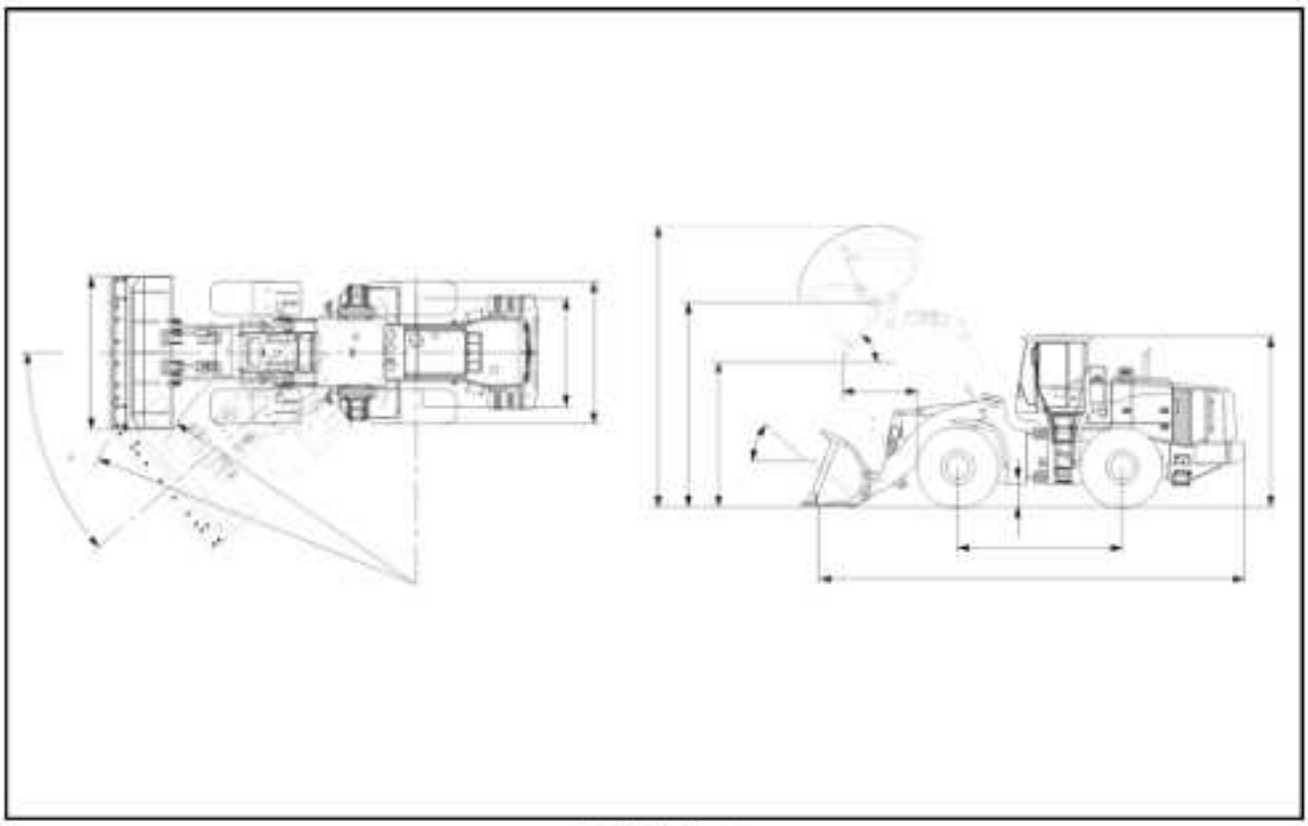


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Machine specifications and dimensions

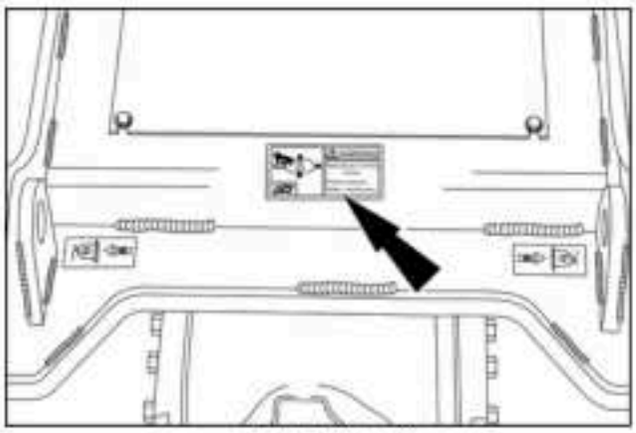
1221F Z-Bar — Bucket with bolt-on cutting edge



	Bucket with bolt on cutting edge
ISO Bucket Specifications	
Struck	**4.6 m³ (6.0 yd³)**
Heaped	**5.4 m³ (7.1 yd³)**
Dimensional Outline Specifications	
A. Overall length	**9630 mm (379.1 in)**
B. Overall width	**3450 mm (135.8 in)**
C. Overall height	**3865 mm (152.2 in)**
D. Ground clearance	**495 mm (19.5 in)**
E. Wheelbase	**3700 mm (145.7 in)**
F. Tread	**2440 mm (96.1 in)**
G. Dump clearance at **45 °**	**3300 mm (129.9 in)**
H. Dump reach — full lift	**1430 mm (56.3 in)**
I. Width over tires	**3220 mm (126.8 in)**
J. Dump angle	**47 °**
K. Roll back angle (carry position)	**48 °**
Gradeability	**30 °**
Lift cycle time with load	**6.1 s**
Dump cycle time with load	**1.4 s**
Lower cycle time with no load	**4.1 s**
Braking distance	**12 m (39.4 ft)**
Break out force	**23750 kg (52359.8 lb)**
Minimum turning radius (center of outside tire)	**6.43 m (21.1 ft)**
Operating weight	**30300 kg (66800.1 lb)**

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WARNING — Pressurized system hazard



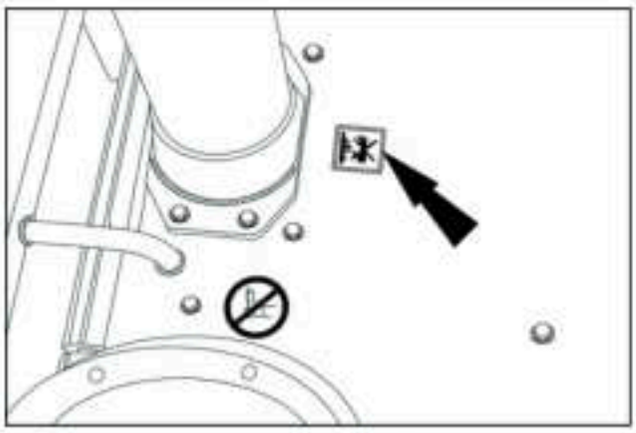
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This WARNING safety sign is located at the front of the machine between the lift arms.
WARNING: Pressurized system hazard — Relieve pressure before maintenance. Failure to comply with this warning could result in death or serious injury.
Safety sign number: 328904A1



328904A1 54

WARNING — Burn hazard



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This WARNING safety sign is located on top of the engine hood near the exhaust stack.
WARNING: Area will reach extremely high temperatures. Do not touch. Failure to comply with this warning could result in death or serious injury.
ISO safety sign number: 91N6-0111



91N6-0111 56

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