OPERATION

Check before Operation

Before performing the following checks, make sure the parking brake is applied, the attachment is on the ground, the engine is shut off, and the machine is on a level surface. Follow all the safety cautions mentioned in the safety section of this manual when checking the machine.

A. Walk-Around Inspection

For your own safety and maximum service life of the machine, make a thorough Walk-Around Inspection before mounting the machine to start the engine. Report or correct any problems found during the Walk-Around inspection.

Items to Check and What to Look for

✓ Items to Check	What to Look for
☐ Bucket / Attachment	Damage, missing bolts, leaks, and excessive wear
☐ Bucket Control Linkage	Damage, missing bolts, excessive wear, and looseness
☐ Lights	Broken bulbs, wires or lenses
☐ Radiator Fins	Trash and dirt build-up (between Fan and Radiator)
☐ Cooling System	Leaks and trash build-up
☐ Steps and Handrails	Damage and cleanliness
☐ Operator's Area	Loose items, broken mirrors, or cab glass
☐ Differentials (front and rear)	Leaks
☐ Hydraulic System	Leaks
☐ Final Drive (front and rear)	Leaks
☐ Covers and Guards	Damage or missing
☐ Transmission	Leaks
☐ Instrument Panel	Broken gauges or indicator lights
☐ Brake Lines	Damage and leaks
☐ Engine Compartment	Leaks and debris build-up

Date :_____ Hours :_____ Inspector :_____

You may wish to copy this page and use it as a daily check list.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

Inspection and Maintenance Table

Section	Items for check	Operating hours						When Required	Page
		Daily	50	250	500	1000	2000		
Engine	Check oil level	○							59
	Check coolant level	○							61
	Check air filter (warning lamp)	○							69
	Check exhaust gas color	○							72
	Drain water from fuel filter	○							61
	Check fuel level	○							69
	Drain water from fuel tank		○						114
	Check and adjust fan belts			○					119
	Replace oil			○					117
	Replace oil filter cartridge			○					117
	Check air intake system			○					119
	Replace fuel filter cartridge				○				123
	Clean fuel tank					○			130
	Check compression pressure					○			132
	Check injection pressure					○			132
	Check injection timing					○			132
	Check valve lash clearance						○		139
	Replace coolant						○	(3000)	140
	Clean air cleaner element							○	103
	Clean radiator fins							○	104
	Replace air cleaner element	After six cleanings or 1000 hours							103
Transmission & Torque Converter	Check oil level	○							69
	Replace oil filter cartridge				○				124
	Replace oil					○			127
	Clean breather					○			128
Axle system	Check tire air pressure	○							63
	Check tire for damage	○							65
	Grease axle support	○							110
	Check oil level			○					120
	Grease propeller shaft			○					116
	Check tightness of wheel bolts			○					121
	Replace gear oil						○		137

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

TROUBLESHOOTING

This troubleshooting section is not intended to cover every condition, however many of the common possibilities are listed.

Following are example of problems and their solutions.
Contact your local Kawasaki loader dealer for items marked with kawasaki or your local authorized Cummins engine dealer for items marked with Cummins to repair.

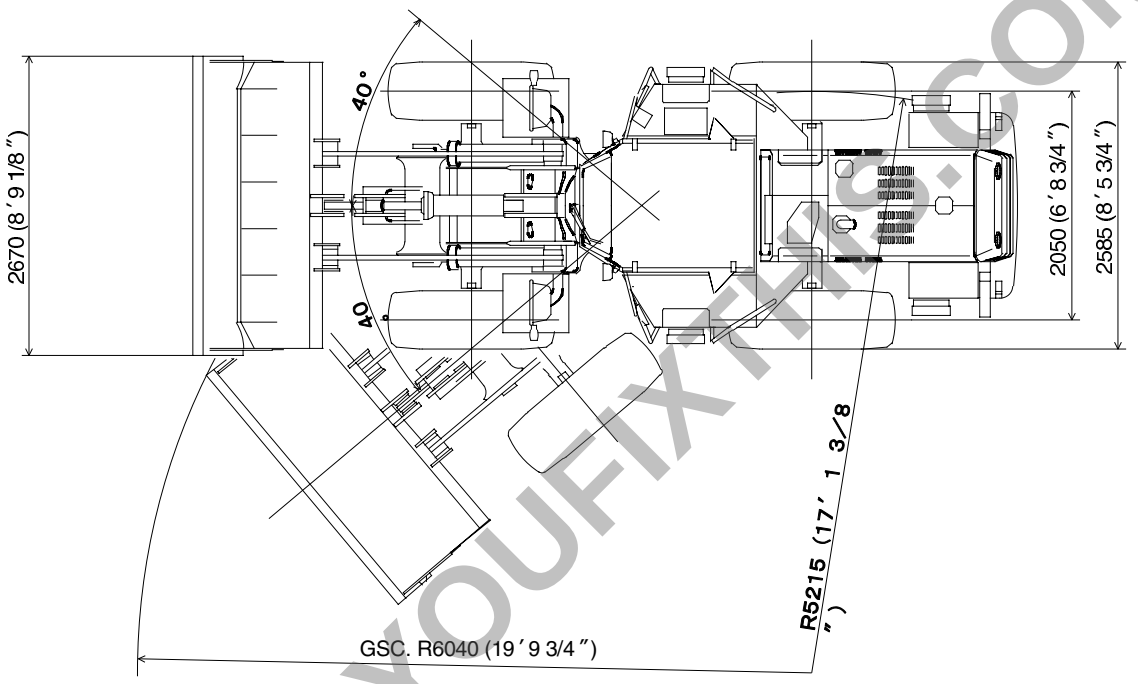
ENGINE

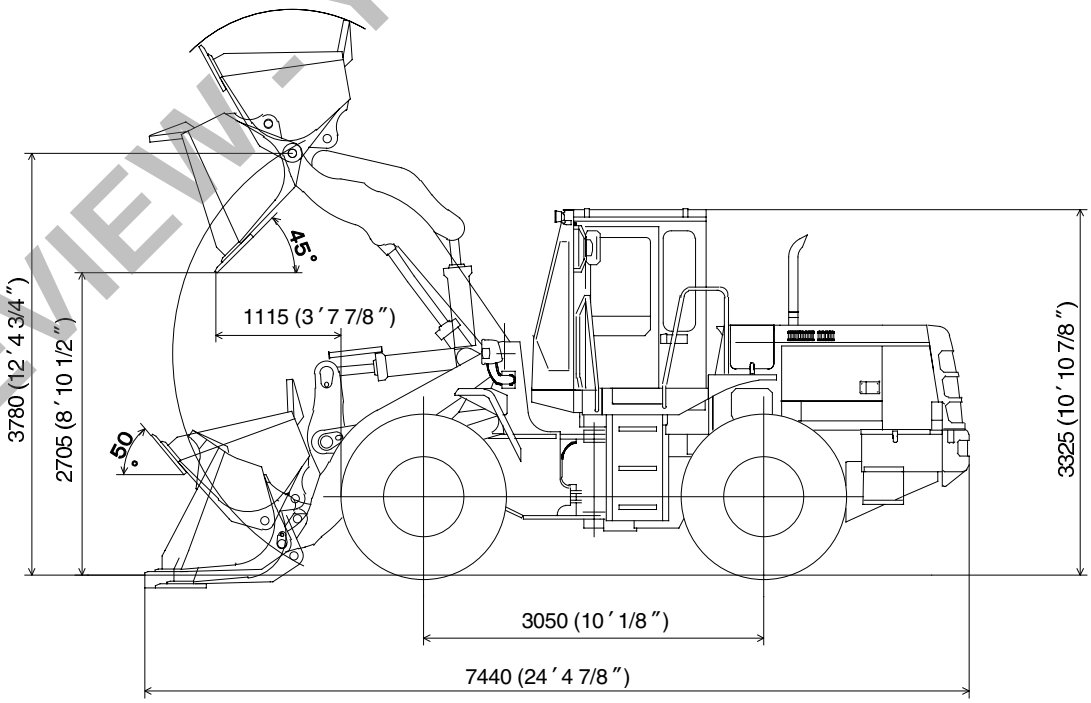
PROBLEM	POSSIBLE CAUSES	SOLUTIONS	PAGE
Engine oil pressure warning lamp lights up, and buzzer sounds	Low engine oil level Wrong grade oil for weather conditions Clogging oil filter element Defective alarm switch Oil leakage from pipe or joint Clogging suction strainer Exessive engine wear Defective oil pump	Add oil Replace oil Replace filter and oil kawasaki or Cummins	59 117 117
Coolant temp. warning lamp lights up	Low engine coolant level Loose/slipping/broken fan belt Clogging radiator fins Scale or mineral build up inside radiator Defective alarm switch (gauge is in green) Low water pump flow Thermostat stuck or missing	Add coolant Adjust or replace belt Clean Flush or professionally clean kawasaki or Cummins	61 119 104 140
Engine does not start when the starter motor is turning (Also see ELECTRICAL TROUBLESHOOTING)	Fuel filter element clogging Air in lines Starter motor speed too low Defective engine shut off motor Fuel pump failure Incorrect fuel injection timing Compression pressure too low Defective injectors	Replace fuel filter Bleed air Booster Battery may be used kawasaki or Cummins	123 90
Unstable (rough) idling	Air in fuel lines Fuel filter element clogging Fuel pump failure Incorrect fuel injection timing	Tighten fuel connections and filter Replace fuel filter kawasaki or Cummins	123
Insufficient power	Air cleaner element clogging Fuel filter element clogging Throttle linkage adjustment wrong Engine oil level too high Incorrect valve clearance Piston ring wear Defective injectors Fuel pump failure	Clean or replace element Replace fuel filter Check and adjust linkage Check dipstick and correct level kawasaki or Cummins	103 123 59

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

SPECIFICATIONS

Specifications shown are for a machine equipped with standard features. Some options or special attachment will change the specifications shown. Specifications subject to change without notice.





PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

INDEX

SAFETY 1
- Safe Operation 1
- Safe Maintenance 11
- Safety Signs 16
- Safety Devices 24

COMPONENT NAME / LOCATION 27

OPERATOR'S AREA 28
- Pedals and Levers 28
- Switches 33
- Indicators 37
- Seat 45
- Electrical Protection 47
- Cab (option) 49
- Air Conditioner(option) 53
- Heater(option) 53
- Grease Gun Holder 57

OPERATION 58
- Check before Operation 58
- Starting the Engine 66
- Check after Starting the Engine 69
- Operating the Machine 74
- Parking 77
- Stopping the Engine 78
- Operating Techniques 79

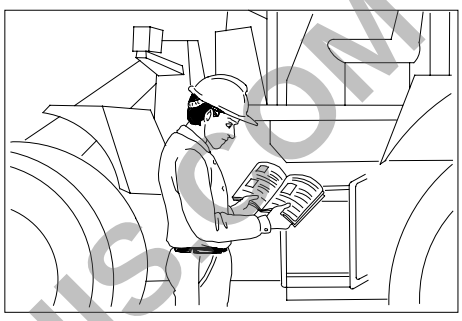
SPECIAL PROCEDURES 86
- Adjustments 86
- Roading / Special Applications 89
- Booster Batteries / Jumper Cables 90
- Towing 92
- Transportation 93
- Long Term Storage 95

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SAFETY

Safe Operation

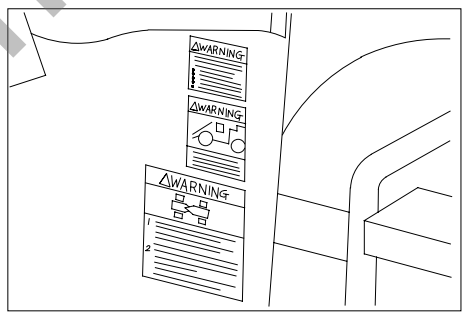


Operator Safety
Read and understand the Operation & Maintenance Manual.

Be aware of the location and meaning of safety signs (decals) on the machine. Report or replace any that are missing or unreadable.

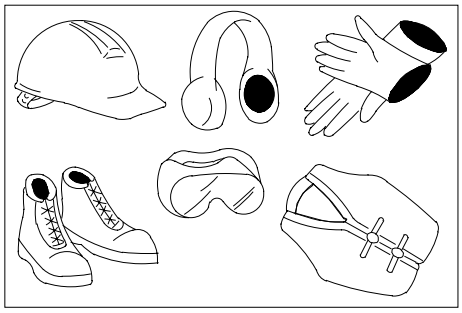
Be alert and ready to operate the machine safely:

- Do not operate if excessively tired.
- Do not operate if taking medication that causes drowsiness.
- Do not operate if under the influence of alcohol or drugs.



Wear safe clothing:

- Close fitting clothing -- loose or baggy clothing can catch on equipment or controls.
- Protective clothing as required by the job or conditions for example:
  - -Hard hat
  - -Gloves
  - -Steel-toe shoes
- Do not wear jewelry that may catch on the equipment, controls or may short and cause burns if in contact with electrical components.



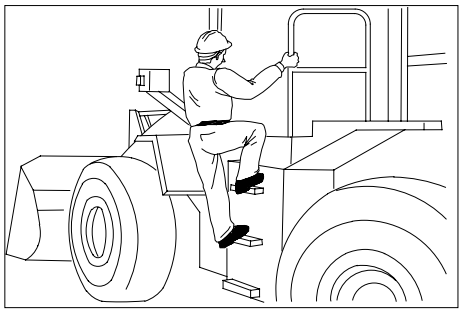
Mounting and Dismounting Safety

Face the machine when mounting or dismounting.

Maintain three points of contact when climbing (two hands and one foot, or two feet and one hand).

When mounting or dismounting, never carry tools or other objects in your hands.

Climb and step only where steps and handrails are provided.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

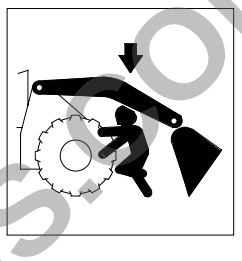
Safety Devices

Loading Control Lever Lock

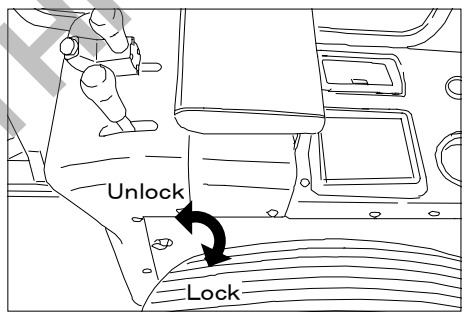
⚠ WARNING

Accidental movement of boom or machine can cause serious injury or death.

When parking or leaving machine, or when performing maintenance on it, always lower attachment to ground and lock loading control levers.



This device locks the loading control levers to prevent accidental lowering of the attachment or boom.



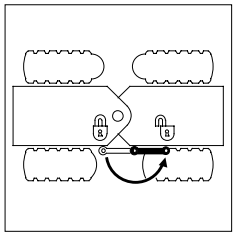
- To lock, set the loading control levers to "NEUTRAL" and push the lock lever to backward.
- To unlock, pull-up the lock lever to forward.

Articulation Stopper

⚠ WARNING

With articulation stopper in LOCKED position, machine will not steer; which, while operating, may cause an accident, injury or death.

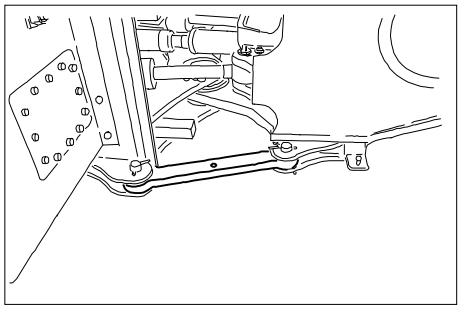
Do not lock articulation stopper during normal operation.



Articulation stopper locks the front and rear chassis to prevent them from sudden articulation during inspection or transportation.

To lock:

1. Align the front and rear chassis straight ahead.
2. Using a 17mm wrench remove the bolt that fixes the articulation stopper to the strage bracket.
3. Remove the clip pin and pin from the end of the articulation stopper.
4. Turn the link and fix the end to the bracket on the rear chassis (as shown).



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Cab (option)-North America

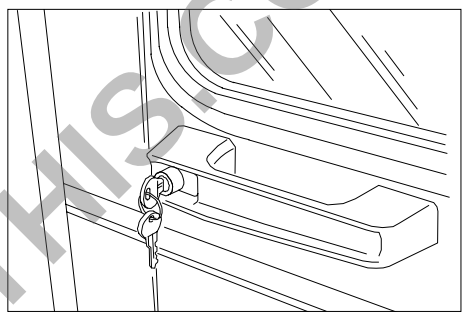
Door

Two types of door latches are used type A and type B. Refer to the illustrations to identify your type.

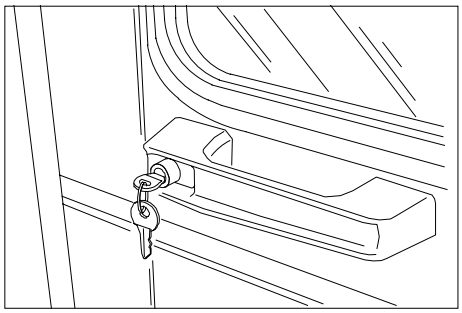
1. Door Handle (outside)

Insert the key to Lock or Unlock the door.

- When the key is straight up and down the door is unlocked.



- When the key is flat the door is locked.



Push the button to open the latch. Pull the handle to open the door.

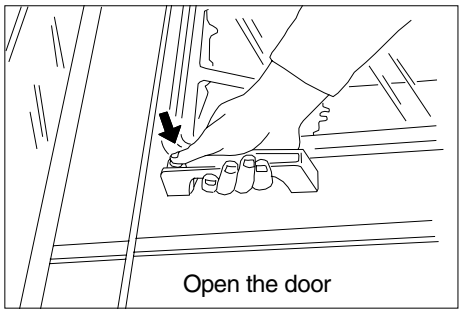
⚠ WARNING

Unauthorized operation of the wheel loader may cause injury or death.

Always lock the door when leaving the machine.

IMPORTANT

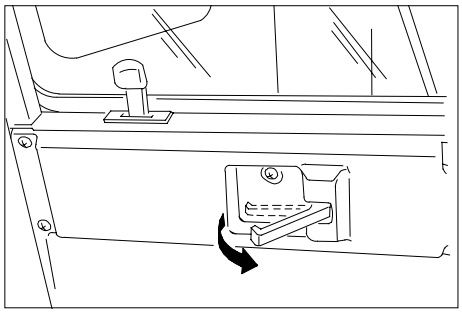
Periodic lubrication of the door latch and hinges makes the door open and close smoothly.



Open the door

2. Door Handle (inside)

When the door is shut it can be opened from inside by lifting the lever as shown.



Push the door to open it.

⚠ WARNING

The unlatched door can swing shut during operation causing injury.

Be sure the door is securely latched before operating.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

Operating the Machine

⚠ WARNING

Stopping engine while machine is moving will cause loss of steering control and unexpected operation of emergency brake which may cause serious injury or death.

Do not stop engine while machine is moving.

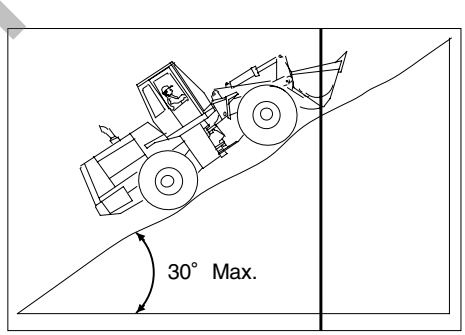
⚠ WARNING

Moving machine in congested areas can cause injury or death.

IMPORTANT

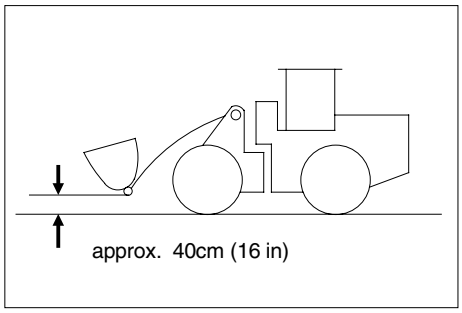
Operating machine on steep slope may cause lack of lubrication resulting in severe engine or components damage.

Do not operate machine on slopes over 30°.

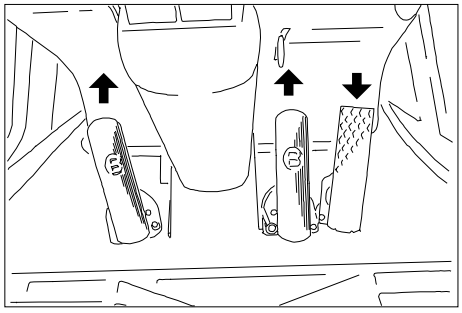


Starting the Machine

1. Raise the bucket to the carry position approximately 40cm (16in.) above the ground.



2. Depress the brake pedal.
3. Push the parking brake switch to release the parking brake.
4. Turn the transmission shift lever to the desired travel speed mode and then shift to the desired direction.



5. Release the brake pedal then depress the accelerator pedal to drive the machine.

⚠ WARNING

When parking brake is released, machine may roll on slope unexpectedly causing injury or death.

When starting machine on slope, firmly depress brake pedal before releasing parking brake.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

8. Tighten the filter an additional one-half to three-fourths turn after the gasket contacts the filter head surface.

B. Replace Transmission Oil Filter

⚠ CAUTION

Hot oil and components can cause burns.

Avoid contact with hot oil or components.

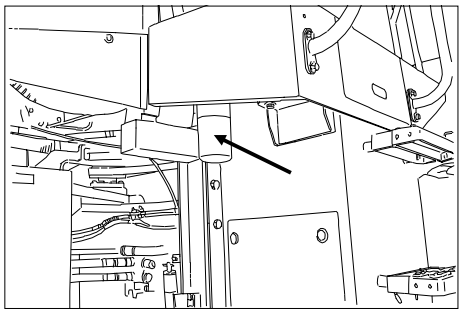


1. Operate the machine to bring the torque converter oil temperature about 30 to 40˚C (85 to 105˚F).

2. Park the machine on a level surface, apply the parking brake, lower the attachment to the ground, and stop the engine.

3. Place a suitable container (about 4 liters (1gal.)) under the transmission oil filter.

4. Turn the filter counterclockwise to remove. Properly dispose of the oil and filter.



5. Clean the filter head gasket surface.

6. Apply a light film of clean engine oil to the gasket surface of the new filter.

7. Install the filter on the filter head. Turn clockwise to tighten. Follow the instructions on the filter.

8. Idle the engine about ten minutes and inspect for leaks around the filter.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 10 of 157 pages

The full manual includes:

- All 157 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Kawasaki 70ZIV Operator Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual