

**CX210B
CX230B
CX240B**
CX210B Forestry Machine
Crawler Excavator

SERVICE MANUAL

Part number 47915916

English

July 2015

© 2015 CNH Industrial Italia S.p.A. All Rights Reserved.

CASE
CONSTRUCTION

CRAWLER EXCAVATOR CX210B-CX230B-CX240B CRAWLER EXCAVATOR CX210B Forestry machine SERVICE MANUAL

TABLE OF CONTENTS

DIVISION/SECTION	SECTION N°
1 GENERAL INFORMATION	
Safety, general information and torque specifications.....	1001
Specifications and special torque settings.....	1002
Specifications and special torque settings (CX210B Forestry machine).....	1002
2 ENGINE	
Removal and installation of the engine.....	2000
Fuel-cooler, engine inter-cooler, radiator and oil-cooler.....	2001
Removal and installation of the turbo charger.....	2004
Removal and installation of EGR cooler and EGR valve.....	2005
Removal and installation of the engine hood.....	2006
Engine specifications.....	*
Disassembly and assembly of the engine.....	*
3 FUEL SYSTEM	
Removal and installation of the fuel tank.....	3001
Removal and installation of the supply pump and common rail.....	3004
Removal and installation of the injectors.....	3005
Fuel engine system.....	*
4 ELECTRICAL SYSTEM	
Service connector kit.....	4000
Electrical and engine functions and service support.....	4001
Removal and installation of the starter motor.....	4004
Removal and installation of the alternator.....	4005
Electrical equipment and electrical circuit diagrams.....	4020
Electrical equipment and electrical circuit diagrams (CX210B Forestry machine).....	4020
Engine error code (DTC).....	4021
Main body error code (DTC).....	4022
Troubleshooting, 4HK1 engine.....	4023
5 UNDERCARRIAGE	
Removal and installation of tracks.....	5001
Upper and lower rollers.....	5003
Take-up roller.....	5005
6 DRIVE TRAIN	
Removal and installation of the drive motor and final drive transmission.....	6001
Disassembly and assembly of the drive motor and final drive transmission.....	6002
Removal and installation of the swing motor and swing reduction gear, CX210B-CX230B.....	6003
Removal and installation of the swing motor and swing reduction gear, CX240B.....	6003
Disassembly and assembly of the swing reduction gear, CX210B-CX230B ...	6004
Disassembly and assembly of the swing reduction gear, CX240B.....	6004
7 UNDERCARRIAGE HYDRAULICS	

* Consult the Engine Service Manual

8 UPPERSTRUCTURE HYDRAULICS

Specifications, troubleshooting, inspections and hydraulic pressure settings	8001
hydraulic pressure settings (CX210B Forestry machine).....	8001
Removal and installation of the hydraulic reservoir	8002
Removal and installation of the main hydraulic pump.....	8003
Removal and installation of the main hydraulic control valve.....	8004
Removal and installation of the attachment cylinders.....	8005
Removal and installation of the hydraulic swivel	8006
Removal and installation of the pilot function blocks.....	8007
Disassembly and assembly of the main hydraulic pump	8010
Disassembly and assembly of the main hydraulic pump, CX210B NLC.....	8010
Disassembly and assembly of the main hydraulic control valve	8011
Disassembly and assembly of the attachment cylinders	8012
Disassembly and assembly of the attachment cylinders (CX210B Forestry machine	8012
Disassembly and assembly of the hand control levers	8013
Disassembly and assembly of the foot control pedals.....	8014
Disassembly and assembly of the cushion control valve.....	8016
Removal and installation of the safety valve	8017
Disassembly and assembly of the swing motor, CX210B-CX230B	8019
Disassembly and assembly of the swing motor, CX240B.....	8019
Hydraulic functions	8020
Hydraulic component functions.....	8030

9 UPPERSTRUCTURE

Removal and installation of the counterweight	9002
Removal and installation of the boom, dipper and bucket	9003
Removal and installation of the seat.....	9004
Removal and installation of the cab and cab equipment	9005
Air conditioner functions and troubleshooting.....	9006
Air conditioning unit	9007
Air conditioning components.....	9009
Large size hydraulic schematics, CX210B.....	Pocket
Large size hydraulic schematics, CX210B LR	Pocket
Large size hydraulic schematics, CX210B-CX230B NLC & 2PC	Pocket
Large size hydraulic schematics, CX240B.....	Pocket
Large size hydraulic schematics, CX240B LR	Pocket
Large size electrical schematics CX210B Forestry Machine.....	Pocket
Large size electrical schematics CX210B Forestry Machine.....	Pocket

NOTE: CNH Industrial Italia S.p.A. reserves the right to make changes in the specification and design of the machine without prior notice and without incurring any obligation to modify units previously sold.

The description of the models shown in this manual has been made in accordance with the technical specifications known as of the date of design of this document.

All data given in this manual is subject to production variations. Dimensions and weights are provided with approximate values and the machine fitting shown in the illustrations may not correspond with standard models. For precise information on specific machine models and versions, please contact your CASE dealer.

Reproduction or translation, even partial, is prohibited without written authorization from CNH Industrial Italia S.p.A.

Section

1001

**SAFETY, GENERAL INFORMATION
AND TORQUE SPECIFICATIONS**

TABLE OF CONTENTS

GENERAL INFORMATION	3
SAFETY.....	4
STANDARD TORQUE DATA FOR CAP SCREWS AND NUTS.....	6



WARNING : *This symbol is used in this manual to indicate important safety messages. Whenever you see this symbol, carefully read the message that follows, as there is a risk of serious injury.*

GENERAL INFORMATION

Cleanning

Clean all metal parts except bearings, in a suitable cleaning solvent or by steam cleaning. Do not use caustic soda for steam cleaning. After cleaning, dry and put oil on all parts. Clean oil passages with compressed air. Clean bearings in a suitable cleaning solvent, dry the bearings completely and put oil on the bearings.

Inspection

Check all parts when the parts are disassembled. Replace all parts that have wear or damage. Small scoring or grooves can be removed with a hone or crocus cloth. Complete a visual inspection for indications of wear, pitting and the replacement of parts necessary to prevent early failures.

Bearings

Check bearings for easy action. If bearings have a loose fit or rough action replace the bearing. Wash bearings with a suitable cleaning solvent and permit to air dry. **DO NOT DRY BEARINGS WITH COMPRESSED AIR.**

Needle bearings

Before you press needle bearings in a bore always remove any metal protrusions in the bore or edge of the bore. Before you press bearings into position put petroleum jelly on the inside and outside diameter of the bearings.

Gears

Check all gears for wear and damage. Replace gears that have wear or damage.

Oil seals, O-rings and gaskets

Always install new oil seals, O-rings and gaskets. Put petroleum jelly on seals and O-rings.

Shafts

Check all shafts that have wear or damage. Check the bearing and oil seal surfaces of the shafts for damage.

Service parts

Always install genuine Case service parts. When ordering refer to the Parts Catalog for the correct part number of the genuine Case replacement items. Failures due to the use of other than genuine Case replacement parts are not covered by warranty.

Lubrication

Only use the oils and lubricants specified in the Operator's or Service Manuals. Failures due to the use of non-specified oils and lubricants are not covered by warranty.

SAFETY



This symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED. The message that follows the symbol contains important information about safety. Carefully read the message. Make sure you fully understand the causes of possible injury or death.

To prevent injury always follow the Warning, Caution and Danger notes in this section and throughout the manual.

Put the warning tag shown below on the key for the keyswitch when servicing or repairing the machine. One warning tag is supplied with each machine. Additional tags Part Number 331-4614 are available from your service parts supplier



WARNING: Read the operator's manual to familiarize yourself with the correct control functions.



WARNING: Operate the machine and equipment controls from the seat position only. Any other method could result in serious injury.



WARNING: This is a one man machine, no riders allowed.



WARNING: Before starting engine, study Operator's Manual safety messages. Read all safety signs on machine. Clear the area of other persons. Learn and practice safe use of controls before operating.

It is your responsibility to understand and follow manufacturers instructions on machine operation, service and to observe pertinent laws and regulations. Operator's and Service Manuals may be obtained from your Case dealer.



WARNING: If you wear clothing that is too loose or do not use the correct safety equipment for your job, you can be injured. Always wear clothing that will not catch on objects. Extra safety equipment that can be required includes hard hat, safety shoes, ear protection, eye or face protection, heavy gloves and reflector clothing.



WARNING: When working in the area of the fan belt with the engine running, avoid loose clothing if possible, and use extreme caution.



WARNING: When doing checks and tests on the equipment hydraulics, follow the procedures as they are written. DO NOT change the procedure.



WARNING: When putting the hydraulic cylinders on this machine through the necessary cycles to check operation or to remove air from a circuit, make sure all people are out of the way.



WARNING: Use insulated gloves or mittens when working with hot parts.



WARNING: Lower all attachments to the ground or use stands to safely support the attachments before you do any maintenance or service.



WARNING: Pin sized and smaller streams of hydraulic oil under pressure can penetrate the skin and result in serious infection. If hydraulic oil under pressure does penetrate the skin, seek medical treatment immediately. Maintain all hoses and tubes in good condition. Make sure all connections are tight. Make a replacement of any tube or hose that is damaged or thought to be damaged. **DO NOT** use your hand to check for leaks, use a piece of cardboard or wood.



WARNING: When removing hardened pins such as a pivot pin, or a hardened shaft, use a soft head (brass or bronze) hammer or use a driver made from brass or bronze and a steel head hammer.



WARNING: When using a hammer to remove and install pivot pins or separate parts using compressed air or using a grinder, wear eye protection that completely encloses the eyes (approved goggles or other approved eye protectors).



WARNING: Use suitable floor (service) jacks or chain hoist to raise wheels or tracks off the floor. Always block machine in place with suitable safety stands.



WARNING: When servicing or repairing the machine, keep the shop floor and operator's compartment and steps free of oil, water, grease, tools, etc. Use an oil absorbing material and/or shop cloths as required. Use safe practices at all times.



WARNING: Some components of this machine are very heavy. Use suitable lifting equipment or additional help as instructed in this Service Manual.



WARNING: Engine exhaust fumes can cause death. If it is necessary to start the engine in a closed place, remove the exhaust fumes from the area with an exhaust pipe extension. Open the doors and get outside air into the area.

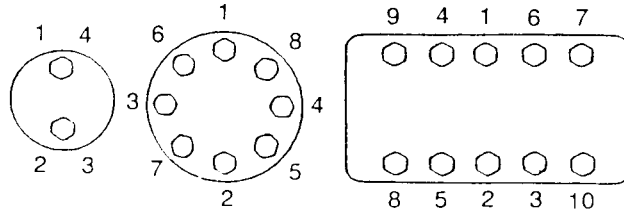


WARNING: When the battery electrolyte is frozen, the battery can explode if (1), you try to charge the battery, or (2), you try to jump start and run the engine. To prevent the battery electrolyte from freezing, try to keep the battery at full charge. If you do not follow these instructions, you or others in the area can be injured.

STANDARD TORQUE DATA FOR CAP SCREWS AND NUTS

Tightening of cap screws, nuts

Tighten alternately so that tightening torque can be applied evenly. The numbers in the figure below indicate the order of tightening.



JS00481A

Cap screws which have had Loctite used (white residue remains after removal) should be cleaned with light oil or suitable cleaning solvent and dried. Apply 2-3 drops of Loctite to the thread portion of the cap screw and then tighten.

Torque table

Tighten cap screws and nuts according to the table below if there are no other special instructions.

Cap Screw Name Size (Size)			M6	M8	M10	M12	M14	M16	M18	M20
Cap Screw	Spanner	[mm]	10	13	17	19	22	24	27	30
		[in.]	0.39	0.51	0.67	0.75	0.87	0.95	1.06	1.18
	Tightening torque	[Nm]	6.9	19.6	39.2	58.8	98.1	156.9	196.1	294.2
		[lb-ft]	5.1	14.5	28.9	43.4	72.3	115.7	144.6	217
Socket Head Cap Screw	Spanner	[mm]	5	6	8	10	12	14	14	17
		[in.]	0.20	0.24	0.32	0.39	0.47	0.55	0.55	0.67
	Tightening torque	[Nm]	8.8	21.6	42.1	78.5	117.7	176.5	245.2	343.2
		[lb-ft]	6.5	15.9	31.1	57.9	86.9	130.2	181	253.2

Section 1002

SPECIFICATIONS AND SPECIAL TORQUE SETTINGS

TABLE OF CONTENTS



WARNING: *This symbol is used in this manual to indicate important safety messages. Whenever you see this symbol, carefully read the message which follows. Your safety depends on it.*

TYPE, SERIAL NUMBER AND YEAR OF MANUFACTURE OF THE MACHINE	4
Machine	4
Engine	4
Serial numbers of the components	4
FLUIDS AND LUBRICANTS	5
Hydraulic fluid	5
Transmission component oil	5
Grease	5
Engine Oil	6
Engine fuel, maintenance of fuel filters and fuel storage	7
Anti-freeze/Anti-corrosion.....	9
Environment.....	9
Plastic and resin parts.....	9
SPECIFICATIONS	10
Main data	10
Performance	10
Complete machine dimensions.....	11
Main body dimensions	13
Engine.....	14
Cooling system	14
Capacity of coolant and lubricants	14
Hydraulic oil filter.....	15
Fuel filter	15
Operating devices	15
Hydraulic system.....	16
Swing unit	19
Travel lower body.....	20
Work Unit	21
Digging force (ISO 6015)	30
COMPONENT WEIGHT.....	31
Major component weight.....	31
Other component weight.....	33
DIMENSIONS AND WEAR LIMIT OF THE TRACK ASSEMBLY	35
Sprocket.....	35
Idler wheel.....	36
Upper roller	37

Lower roller 38

Track 40

DIMENSIONS AND WEAR LIMITS OF ATTACHEMENT MOBILE JOINTS 41

1. Boom foot/Frame 41

2. Boom cylinder foot/Frame 42

3. Boom cylinder head/Boom 42

4. Arm cylinder foot/Boom 43

5. Boom/Arm 43

6. Arm cylinder head/Arm 44

7. Bucket cylinder foot/Arm 44

8. Connecting rod/Arm 45

9. Compensator/Bucket 45

10. Connecting rod/Compensator/Bucket cylinder head 46

11. Arm/Bucket 47

SPECIAL TORQUE SETTINGS 48

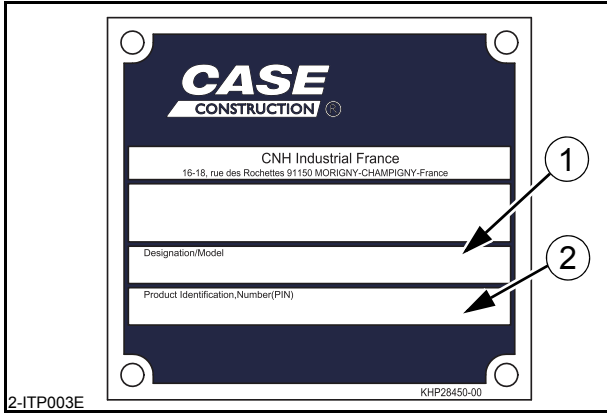
MACHINE OVERALL DIMENSIONS 52

TYPE, SERIAL NUMBER AND YEAR OF MANUFACTURE OF THE MACHINE

For all part orders, request for information or assistance, always specify the type and the serial number of the machine to your Case dealer.

Fill in the following lines with the required information: Type, serial number, year of manufacture of the machine and the serial numbers of the hydraulic and mechanical components.

Machine



(1) Designation/Model.....

(2) Serial number.....

Engine

Make and type.....

Serial number.....

Serial numbers of the components

Hydraulic pump

Swing reduction gear.....

Travel reduction gears

Control valve.....

FLUIDS AND LUBRICANTS

Lubricants must have the correct properties for each application.



WARNING: The conditions of use for individual fluids and lubricants must be respected.

Hydraulic fluid

CASE/AKCELA hydraulic fluid is specially designed for high pressure applications and for the CASE hydraulic system. The type of fluid to be used depends on the ambient temperature.

Temperate climates: -20°C to +40°C (-4° to 104° F)

CASE/AKCELA: HYDRAULIC EXCAVATOR FLUID (MS 1230. ISO VG 46. DIN 51524 PART 2 HV)

Hot climates: 0°C to +50°C (32° to 122° F)

CASE/AKCELA: AW HYDRAULIC FLUID 68 HV (MS 1216. ISO VG 68. DIN 51524 PART 3 CATEGORY HVLP)

Cold climates: -25°C to +20°C (-13° to 68° F)

CASE/AKCELA: AW HYDRAULIC FLUID 32 (MS 1216. ISO VG 32. DIN 51524 PART 2)

Biodegradable fluid: -30°C to +40°C (-22° to 104° F)

This yellow-colored fluid is miscible with standard fluid. If used to change standard fluid, it is advised to drain the circuit completely before refilling with this fluid.

CASE/AKCELA: HYDRAULIC EXCAVATOR FLUID BIO (MS 1230. ISO VG 46. DIN 51524 PART 2 HV)

Transmission component oil

Extreme pressure oil used for enclosed transmission components.

CASE/AKCELA: GEAR 135H EP (SAE 80W-90. API GL 5. MIL-L-2105 D. MS 1316. ZF TE-ML 05A)

Grease

CASE/AKCELA: MOLY GREASE 251H EP-M (251H EP-M. NLGI 2)

"Extreme Pressure" multipurpose grease with lithium soap and molybdenum disulphide.

CASE/AKCELA: MULTIPURPOSE GREASE 251H EP (251H EP. NLGI 2)

"Extreme Pressure" multipurpose grease with lithium soap and calcium.

CASE/AKCELA: PREMIUM GREASE EP2 (NLGI 2)

"Extreme Pressure" multipurpose grease with lithium soap.

Hydraulic breakers

CASE/AKCELA: MULTIPURPOSE GREASE 251H EP (NLGI 2).

Engine Oil

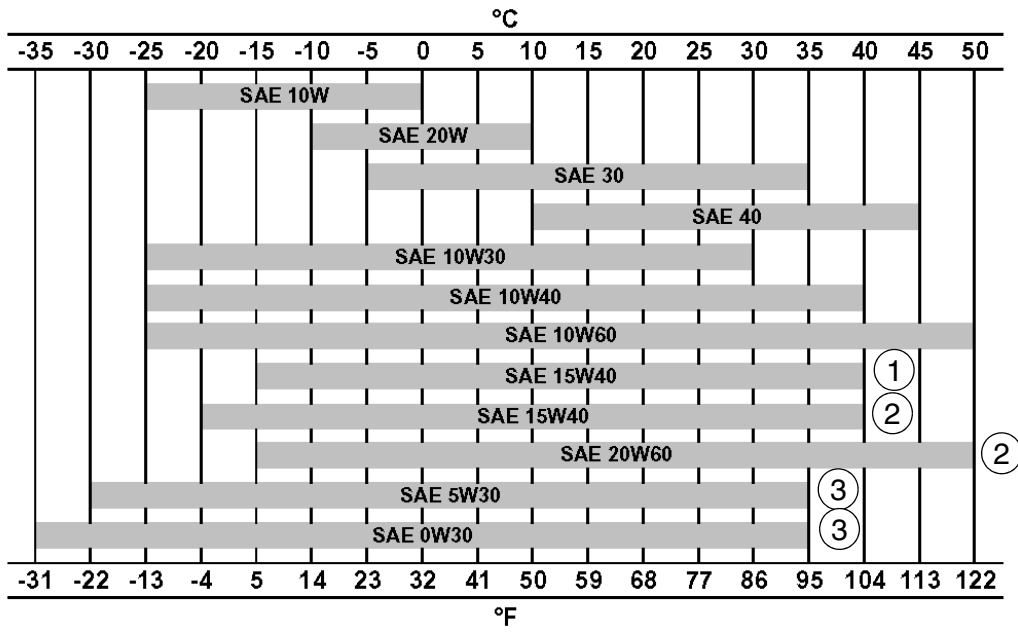
THE CASE/AKCELA No. 1 engine oil is recommended for your engine. This oil ensures proper lubrication of your engine for all operating conditions.

If the CASE/AKCELA Multigrade "No. 1 ENGINE OIL" cannot be obtained, use the oil corresponding to one of the following categories: ACEA E7. API CI-4.



CP02N001

Oil viscosity / Oil range



CT02M001

- 1) With mineral base
- 2) With semi-synthetic base
- 3) With synthetic base

Engine fuel, maintenance of fuel filters and fuel storage

In order to meet the emission control regulation of 3rd-stage, the engine components have been made precisely and they are to be used under high-pressure conditions.

Therefore, the specified fuel must be used for the engine.

As a matter of course, not only the guarantee will not be given for the use of a fuel other than the specified but also it may invite a serious breakdown.

In addition, since suitable specifications for the fuel filter elements have been established for this engine, use of the genuine filter is essential.

The following describes the specifications and the requirements of the fuel to be applied, and maintenance of the fuel and the fuel elements.

Fuel to be applied

Selection of fuel

Following conditions must be met for the diesel engines, that is the one;

- 1 In which no dust even fine one is mixed,
- 2 With proper viscosity,
- 3 With high cetane rating,
- 4 With good flow properties in lower temperature,
- 5 With not much sulfur content, and
- 6 With less content of carbon residue

Applicable standards for diesel fuel

Applicable Standard	Recommendation
JIS (Japanese Industrial Standard)	NO.2
DIN (Deutsche Industrie Normen)	DIN 51601
SAE (Society of Automotive Engineers)	
Based on SAE-J-313C	NO. 2-D
BS (British Standard) Based on BS/2869-197	Class A-1
EN590	

If a standard applied to the fuel for the diesel engine is stipulated in your country, check the standard for details.

Requirements for diesel fuel

Although conditions required for the diesel fuel are illustrated above, there are other requirements exerting a big influence on its service durability and service life.

Be sure to observe the following requirements for selecting fuel.

Sulfur content	2500 ppm or less
HFRR*	460 mm or less
Water content	0.05 wt% or less

* HFRR (High-Frequency Reciprocating Rig.): An index showing lubricating properties of the fuel.

Sulfur content reacts to moisture to change into sulfuric acid after combustion.

Use of a fuel containing much sulfur content allows it to accelerate internal corrosion and wear.

In addition, much sulfur content quickens deterioration of engine oil allowing its cleaning dispersive property to be worse which results in acceleration of wear of sliding portions.

HFRR is an index that indicates lubricating property of a fuel.

Large value of the index means poor lubrication so that seizure of the machine components may result if such a fuel is used.

Since a fuel with high HFRR value also has lower viscosity, it can easily be leaked out.

If the fuel is mixed with the engine oil, the oil is diluted to deteriorate its lubricating property resulting in acceleration of wear.

Water content allows inside of the fuel tank to rust which in turn blocking the fuel line and the fuel filter.

IMPORTANT : *In cold weather, fill the fuel tank at the end of the day's work, in order to prevent the formation of condensation.*

This may also cause wear and seizure of the machine components.

If atmospheric temperature goes below the freezing point, moisture content in the fuel forms fine particle of ice allowing the fuel line to be clogged.

IMPORTANT : *Obtain table of analysis for the fuel you are using from the fuel supplier to confirm that it meets the criteria described above.*

IMPORTANT : *If a fuel which does not meet the specifications and the requirements for the diesel engine, function and performance of the engine will not be delivered. In addition, never use such a fuel because a breakdown of the engine or an accident may be invited.*

Guarantee will not be given to a breakdown caused by the use of a improper fuel.

Some fuels are used with engine oil or additives mixed together with diesel engine fuel.

In this case, do not use these fuels because damage to the engine may result as the fuel has been contaminated.

It is natural that the emission control regulation of 3rd-stage will not be cleared in case where a fuel that does not meet the specifications and the requirements is used.

Use the specified fuel for compliance of the exhaust gas control.

IMPORTANT : *If you use diesel fuel which contains much sulfur content more than 2500 ppm, be sure to follow the items below for the engine oil selection and maintenance of engine parts. Guarantee will not be given to breakdowns caused by not to follow these items.*

1 Selection of engine oil

Use API grade CF-4 or JASO grade DH-1.

2 Exchange the engine oil and engine oil filter element by the periodical interval reported on the Operator's Manual.

3 Inspect and exchange the EGR (*)parts and fuel injector parts of engine every 3000 hour of use.

* EGR: Exhaust Gas Recirculation

Maintenance of fuel filters

Be sure to use the genuine fuel filters.

The fuel injection system is precisely constructed and the genuine filter employs finer mesh than conventional filters to improve protection of machine equipment.

If a filter with coarse mesh is used, foreign object passing through the filter enters into the engine so that machine equipment can wear out in a short period of time.

IMPORTANT : *If a fuel filter other than the genuine filter is used, guaranty will not be applied to a fault caused by the use of a wrong filter.*

Two kinds of fuel filter, the pre-filter and the main filter, are mounted on the machine.

Be sure to use the genuine fuel filters and replace them at the periodic intervals reported on the operator's Manual.

IMPORTANT : *Since the pre-filter also has a function of water separation, discharge water and sediment when the float reaches lower part of the filter elements. CHECK EVERY DAY before to start the engine.*

Time to replace filters may be advanced according to properties of the fuel being supplied.

- Therefore, take measures to prevent dust or water from being entered in the fuel tank when supplying fuel.
- When supplying fuel directly from a fuel drum can, leave the drum as it stands for a long period of time to supply clean fuel standing above a precipitate.
- If it is hard to leave the drum for a long period of time, install a fuel strainer and a water separator before the fuel tank of the machine to supply clean fuel.

Water drain cock is provided on the bottom side of the fuel tank.

- Drain water before starting the engine every morning.
- In addition, remove the cover under the tank once a year to clean up inside of the tank.

Fuel storage

Long storage can lead to the accumulation of impurities and condensation in the fuel. Engine trouble can often be traced to the presence of water in the fuel.

The storage tank must be placed outside and the temperature of the fuel should be kept as low as possible. Drain off water and impurities regularly.

Anti-freeze/Anti-corrosion

Use anti-freeze in all seasons to protect the cooling system from corrosion and all risk of freezing.

CASE/AKCELA: PREMIUM ANTI-FREEZE (MS 1710)

For areas where the temperature goes down to -38°C (-36.4°F), mix 50/50 with water.

IMPORTANT : *Do not mix products of a different origin or brand. The same product must be used when topping up the system.*

Environment

Before carrying out any maintenance operation on this machine and before disposing of used fluids or lubricants, always think of the environment. Never throw oil or fluid on the ground and never place it in leaking receptacles.

Contact your local ecological recycling centre or your CASE Dealer to obtain information on the correct method of disposing of these lubricants.

Plastic and resin parts

When cleaning plastic parts, the console, the instrument panel, the indicators etc... avoid using petrol, kerosene, paint solvents etc... Use only water, soap and a soft cloth.

The use of petrol, kerosene, paint solvents etc... causes discoloration, cracks or deformation of these parts.

SPECIFICATIONS

Main data

Model name

CX210B (STD, LC, NLC and LR type), CX230B (NLC type) and CX240B (LC, NLC and LR type) Hydraulic Excavator

Operating weight

CX210B (thailand, STD type).....	20740 kg (45724 lbs)
CX210B (indonesia, STD type).....	20990 kg (46275 lbs)
CX210B (standard boom, LC type).....	21200 kg (46738 lbs)
CX210B (articulated boom, LC type).....	21450 kg (47289 lbs)
CX210B (standard boom, NLC type).....	21350 kg (47069 lbs)
CX210B (articulated boom, NLC type).....	22200 kg (48943 lbs)
CX210B (LR type).....	22300 kg (49163 lbs)
CX230B (standard boom, NLC type).....	22700 kg (50045 lbs)
CX230B (articulated boom, NLC type).....	23550 kg (51919 lbs)
CX240B (LC type).....	24500 kg (54014 lbs)
CX240B (NLC type).....	24400 kg (53793 lbs)
CX240B (LR type).....	28000 kg (61730 lbs)

Engine output

CX210B, CX230B.....	117.3 kW / 1800 rpm
CX240B.....	132.1 kW / 2000 rpm

Performance

Swing speed

CX210B, CX230B.....	11.5 Tr/min.
CX240B.....	10.7 Tr/min.

Travel speed

CX210B.....	Low Speed 3.4 km/h (2.11 mph)
CX230B.....	Low Speed 3.2 km/h (1.99 mph)
CX240B.....	Low Speed 3.5 km/h (2.17 mph)
CX210B.....	High Speed 5.6 km/h (3.48 mph)
CX230B.....	High Speed 5.0 km/h (3.11 mph)
CX240B.....	High Speed 5.5 km/h (3.42 mph)

Maximum drawbar pull

CX210B, CX230B.....	189.2 kN (42533.85 lbf)
CX240B.....	201 kN (45186.6 lbf)

Grade ability 70% (35°)

Ground pressure

CX210B (thailand, STD type).....	35 kPa (800 mm (31.50 in) grouser shoe)
CX210B (indonesia, STD type).....	35 kPa (800 mm (31.50 in) grouser shoe)
CX210B (standard boom, LC, NLC type).....	43 kPa (600 mm (23.62 in) grouser shoe)
CX210B (standard boom, LC type).....	37 kPa (700 mm (27.56 in) grouser shoe)
CX210B (standard boom, LC type), CX210B (LR type).....	36 kPa (800 mm (31.50 in) grouser shoe)
CX210B (standard boom, NLC type).....	53 kPa (500 mm (19.68 in) grouser shoe)
CX210B (articulated boom, LC type).....	45 kPa (600 mm (23.62 in) grouser shoe)
CX210B (articulated boom, NLC type).....	55 kPa (500 mm (19.68 in) grouser shoe)
CX210B (articulated boom, NLC type).....	46 kPa (600 mm (23.62 in) grouser shoe)
CX230B (standard boom).....	54 kPa (550 mm (21.65 in) grouser shoe)
CX230B (articulated boom).....	56 kPa (550 mm (21.65 in) grouser shoe)
CX240B (LC, NLC type).....	48 kPa (600 mm (23.62 in) grouser shoe)
CX240B (LC type).....	42 kPa (700 mm (27.56 in) grouser shoe)
CX240B (LC type).....	37 kPa (800 mm (31.50 in) grouser shoe)
CX240B (LR type).....	42 kPa (800 mm (31.50 in) grouser shoe)

Complete machine dimensions

CX210B(STD type, standard boom)	Arm (dipper)		
	2940 mm (115.75 in)	1900 mm (74.80 in)	2400 mm (94.49 in)
Lenght (without attachment)	4810 mm (189.37 in)	4810 mm (189.37 in)	4810 mm (189.37 in)
Lenght (with attachment)	9400 mm (370.08 in)	9490 mm (373.62 in)	9480 mm (373.23 in)
Height (with attachment)	2970 mm (116.93 in)	3090 mm (121.65 in)	3190 mm (125.59 in)

CX210B (LC type, standard boom)	Arm (dipper)		
	2940 mm (115.75 in)	1900 mm (74.80 in)	2400 mm (94.49 in)
Lenght (without attachment)	4955 mm (195.08 in)	4955 mm (195.08 in)	4955 mm (195.08 in)
Lenght (with attachment)	9400 mm (370.08 in)	9490 mm (373.62 in)	9480 mm (373.23 in)
Height (with attachment)	2970 mm (116.93 in)	3090 mm (121.65 in)	3190 mm (125.59 in)

CX210B (LC type, articulated boom)	Arm (dipper)		
	2940 mm (115.75 in)	1900 mm (74.80 in)	2400 mm (94.49 in)
Lenght (without attachment)	4955 mm (195.08 in)	4955 mm (195.08 in)	4955 mm (195.08 in)
Lenght (with attachment)	9400 mm (370.08 in)	9470 mm (372.83 in)	9455 mm (372.24 in)
Height (with attachment)	2960 mm (116.53 in)	2960 mm (116.53 in)	3035 mm (119.49 in)

CX210B (NLC type, standard boom)	Arm (dipper)		
	2940 mm (115.75 in)	1900 mm (74.80 in)	2400 mm (94.49 in)
Lenght (without attachment)	5055 mm (199.01 in)	5055 mm (199.01 in)	5055 mm (199.01 in)
Lenght (with attachment)	9500 mm (374.01 in)	9590 mm (377.56 in)	9590 mm (377.5 in)
Height (with attachment)	2990 mm (117.72 in)	3090 mm (121.65 in)	3200 mm (125.98 in)

CX210B (NLC type, articulated boom)	Arm (dipper)		
	2940 mm (115.75 in)	1900 mm (74.80 in)	2400 mm (94.49 in)
Lenght (without attachment)	5055 mm (199.01 in)	5055 mm (199.01 in)	5055 mm (199.01 in)
Lenght (with attachment)	9500 mm (374.01 in)	9570 mm (376.77 in)	9560 mm (376.38 in)
Height (with attachment)	2990 mm (117.72 in)	2990 mm (117.72 in)	3035 mm (119.49 in)

CX210B (LR type)	Arm (dipper) 6400 mm (251.97 in)
Lenght (without attachment)	4950 mm (194.88 in)
Lenght (with attachment)	12470 mm (490.94 in)
Height (with attachment)	3000 mm (118.11 in)

CX230B (Standard boom)	2940 mm (115.75 in)	Arm (dipper) 1900 mm (74.80 in)	2400 mm (94.49 in)
Lenght (without attachment)	4945 mm (194.68 in)	4945 mm (194.68 in)	4945 mm (194.68 in)
Lenght (with attachment)	9490 mm (373.62 in)	9570 mm (376.77 in)	9580 mm (377.16 in)
Height (with attachment)	3020 mm (118.90 in)	3110 mm (122.44 in)	3200 mm (125.98 in)

CX230B (Articulated boom)	2940 mm (115.75 in)	Arm (dipper) 1900 mm (74.80 in)	2400 mm (94.49 in)
Lenght (without attachment)	4945 mm (194.68 in)	4945 mm (194.68 in)	4945 mm (194.68 in)
Lenght (with attachment)	9495 mm (373.82 in)	9565 mm (376.57 in)	9560 mm (376.77 in)
Height (with attachment)	3020 mm (118.90 in)	3020 mm (118.90 in)	3045 mm (119.88 in)

CX240B (LC type)	3000 mm (118.11 in)	Arm (dipper) 2500 mm (98.42 in)	3520 mm (138.58 in)
Lenght (without attachment)	5270 mm (207.48 in)	5270 mm (207.48 in)	5270 mm (207.48 in)
Lenght (with attachment)	9930 mm (390.94 in)	9980 mm (392.91 in)	9910 mm (390.16 in)
Height (with attachment)	3150 mm (124.02 in)	3310 mm (130.31 in)	3310 mm (130.31 in)

CX240B (NLC type)	3000 mm (118.11 in)	Arm (dipper) 2500 mm (98.42 in)	3520 mm (138.58 in)
Lenght (without attachment)	5265 mm (207.28 in)	5265 mm (207.28 in)	5265 mm (207.28 in)
Lenght (with attachment)	9930 mm (390.94 in)	9980 mm (392.91 in)	9910 mm (390.16 in)
Height (with attachment)	3150 mm (124.02 in)	3310 mm (130.31 in)	3310 mm (130.31 in)

CX240B (LR type)	Arm (dipper) 8000 mm (314.96 in)
Lenght (without attachment)	5265 mm (207.28 in)
Lenght (with attachment)	14380 mm (566.14 in)
Height (with attachment)	3130 mm (123.23 in)

Main body dimensions

Main body width	See machine overall dimensions
Upper side swing body width	
CX210B (STD, LC, LR type), CX240B	2770 mm (109.05 in)
CX210B (NLC type), CX230B	2540 mm (100 in)
Cab width	1000 mm (39.37 in)
Main body height	
CX210B (STD, LC, LR type)	2960 mm (116.54 in)
CX210B (NLC type)	2990 mm (117.72 in)
CX230B, CX240B	3020 mm (118.90 in)
Engine displacement	
CX210B (STD, LC, LR type)	2750 mm (108.27 in)
CX210B (NLC type), CX230B	2830 mm (111.42 in)
CX240B.....	2950 mm (116.14 in)
Swing body tail distance	
CX210B (STD, LC, LR type)	2720 mm (107.09 in)
CX210B (NLC type), CX230B	2825 mm (111.22 in)
CX240B.....	2940 mm (115.75 in)
Swing body rear section bottom height	
CX210B (STD, LC, LR type)	1040 mm (40.94 in)
CX210B (NLC type)	1070 mm (42.13 in)
CX230B, CX240B	1100 mm (43.31 in)
Distance between tumblers	
CX210B (STD type)	3370 mm (132.68 in)
CX210B (LC, NLC, LRtype)	3660 mm (144.09 in)
CX230B.....	3460 mm (136.22 in)
CX240B.....	3840 mm (151.18 in)
Overall track length	
CX210B (STD type)	4180 mm (164.57 in)
CX210B (LC, NLC, LRtype)	4460 mm (175.59 in)
CX230B.....	4240 mm (166.93 in)
CX240B.....	4650 mm (183.07 in)
Width of track shoe	
CX210B (STD type)	800 mm (31.50 in) (Optional:600 mm (23.62 in) 700 mm (27.56 in))
CX210B (LC type).....	600 mm (23.62 in) (Optional: 700 mm (27.56 in), 800 mm (31.50 in), 900 mm (35.43 in))
CX210B (NLC type)	500 mm (19.68 in) (Optional: 600 mm (23.62 in))
CX210B (LR type).....	800 mm (31.50 in)
CX230B.....	550 mm (21.65 in)
CX240B (LC type).....	600 mm (23.62 in) (Optional: 700 mm (27.56 in), 800 mm (31.50 in), 900 mm (35.43 in))
CX240B (NLC type)	600 mm (23.62 in) (Optional: 700 mm (27.56 in))
CX240B (LR type).....	800 mm (31.50 in)
Minimum ground clearance (To bottom of lower frame)	
CX210B, CX240B	460 mm (18.11 in)
CX230B.....	450 mm (17.72 in)

Engine

Name.....	ISUZU, 4HK1X
Type:	4-cycle, water-cooled, overhead camshaft, vertical in-line, direct injection type (electronic control), with turbocharger.
No. of cylinders - bore x stroke.....	4 - Ø115 mm x 125 mm (Ø4.53 x 4.92 in)
Displacement	5.193 L (1.372 gal)
Compression ratio	17.5
Rated output	
CX210B, CX230B	117.3 kW / 1800 min ⁻¹
CX240B	132.1 kW / 2000 min ⁻¹
Maximum torque	
CX210B, CX230B	628 N.m (463.19 lb-ft) / 1500 min ⁻¹
CX240B	636 N.m (469.09 lb-ft) / 1500 min ⁻¹
Engine dimensions (LxWxH).....	1020.4x829x1011.8 mm (40.17x32.64x39.83 in)
Oil pan.....	All direction 35°, inclinable
Oil pan capacity.....	Maximum: 20.5 L (5.42 gal) Minimum: 13 L (3.43 gal) (excluding oil filter)
Direction of rotation	Clockwise (as seen from fan)
Starter, reduction type.....	24 V, 5 kW
Alternator, AC type	24 V, 50 A
Battery	
CX210B (STD type)	2 x 12 V, 88 Ah/5 Hr
CX210B (LC type), CX230B, CX240B.....	2 x 12 V, 92 Ah/5 Hr

Cooling system

Fan type	Ø 650 mm (25.59 in), suction type - 7 blades, plastic with belt mouth-type fan guide
Pulley ratio	0.85 (reduction)
Radiator	
Fin type	wavy
Fin pitch	2.0 mm (0.078 in)
Oil cooler	
Fin type	wavy
Fin pitch	1.75 mm (0.069 in)
Inter-cooler	
Fin type	triangular straight
Fin pitch	1.75 mm (0.069 in)
Fuel cooler	
Fin type	wavy
Fin pitch	2.0 mm (0.078 in)
Coolant capacity.....	14 L (3.70 gal) (engine only)

Capacity of coolant and lubricants

Coolant	
CX210B, CX230B	25.6 L (6.76 gal)
CX240B	25.2 L (6.66 gal)
Fuel	410 L (108.31 gal)
Lubricant for engine	23.1 L (6.1 gal)
Lubricant for travel reduction gear (per side)	5.0 L (1.32 gal)
Lubricant for swing reduction gear (per side)	
CX210B, CX230B	5.0 L (1.32 gal)
CX240B	9.7 L (2.56 gal)
Hydraulic oil	
CX210B, CX230B	240 L (63.40 gal)
CX240B	250 L (66.04 gal)
Capacity of hydraulic oil tank	147 L (38.83 gal)

Hydraulic oil filter

Suction filter (inside tank)

CX210B, CX230B 150 µm

CX240B..... 155 µm

Return filter (inside tank) 6 µm

Pilot line filter (inside housing)..... 8 µm

Fuel filter

Main filter 4 µm

Pre-filter 10 µm

Operating devices

Operator's seat

Location: left side

Structure: Adjustable forward and back and up and down, reclining mechanism, with seat suspension.

Cab

Sealed steel type, all reinforced glass.

Levers and pedals

For travel use: Lever and pedal type (hydraulic pilot type) (x2)

For operating machine use: Lever type (hydraulic pilot type) (x2)

Instruments and switches

Work mode select switch: 3 modes (SP / super power, H / heavy duty, A / automatic)

Travel mode select switch: Low-speed / high-speed switch type

One-touch idle: Knob switch type

Engine emergency stop: Switch type

Monitor device

Machine status display (full-dot liquid crystal)

Work mode selection status: SP / H / A

Instruments (full-dot liquid crystal, except for hour meter)

Fuel gauge: bar graph indicator

Engine coolant temperature gauge: bar graph indicator

Hydraulic oil temperature gauge: bar graph indicator

Hour meter: digital type

Machine Status and Warning Alarms (full-dot liquid crystal and warning tone) *Items have a warning alarm

Over heat*	Battery charge*	Faulty electrical system*
Refill fuel*	Engine oil pressure*	Refill coolant*
Engine preheat	Auto warm-up	Air cleaner clogged
Anti-theft device triggered	Faulty engine system	Engine emergency stop

Lighting

Working light	Tank:	24V, 70W (x1)
	Boom:	24V, 70W (x1)
	Cab:	24V, 70W (x2)
Interior light		24V, 10W (x1)

Horn: electric horn (x2)

Other

Wiper with intermittent function, Window washer, Air conditioner, Rear view mirrors (left and right), DC converter,

Clock

Hydraulic system

Hydraulic pump drive system, directly coupled to the engine (no transmission)

Main pump

Manufacturer	Kawasaki
Pump type	double variable displacement piston pump
Displacement volume	118.5 cm ³ (7.23 cu in) x 2 /rev
Rated operating pressure	34.3 MPa (4975 psi)
Maximum operating pressure	36.8 MPa (5337 psi)
Input revolution speed	
CX210B, CX230B	1800 min ⁻¹
CX240B	2000 min ⁻¹
Maximum discharge flow	
CX210B, CX230B	211 L/min (55.74 gpm) x 2 at 1800 min ⁻¹
CX240B	234 L/min (61.82 gpm) x 2 at 2000 min ⁻¹

Pilot pump

Pump type	Gear pump
Displacement volume	10 cm ³ (0.61 cu in)/rev
Operating pressure	3.92 MPa (568 psi)
Maximum flow	
CX210B, CX230B	18 L/min (4.75 gpm) (at 1800 min ⁻¹)
CX240B	20 L/min (5.28 gpm) (at 2000 min ⁻¹)

Control method

- Hydraulic simultaneous constant output control.
- Maximum flow adjustment control through external commands (negative control).
- Setting horsepower adjustment control through external command current.

Control Valve

Model; 4-spool section: integrated (1) or 5-spool section: integrated (1)
 Operation method: hydraulic pilot method: travel, swing and operating machine
 Maximum flow

CX210B, CX230B	211 L/min (55.74 gpm) x 2 (at 1800 min ⁻¹)
CX240B	234 L/min (61.82 gpm) (at 2000 min ⁻¹)

Main relief set pressurestandard; 34.3 MPa (4975 psi), power boost 36.8 MPa (5337 psi)

Overload set pressure

CX210B (LR type)	
.....	bucket; 25.0 MPa (3626 psi)
.....	arm in; 23.0 MPa (3336 psi)
CX240B (LR type)	
.....	bucket; 29.4 MPa (4264 psi)
.....	arm in; 21.1.0 MPa (3060 psi)

All

.....	when boom down; 29.4 MPa (4264 psi)
.....	other: 38.7 MPa (5613 psi)

Foot relief set pressure 2.55 MPa (369.85 psi)

Functions

- Straight travel circuit
- Boom up / arm 2 pumps internal flow
- Boom and arm load holding circuit
- Boom-down regenerative circuit
- Bucket-close regenerative circuit
- Arm-in forced regenerative circuit
- Swing priority variable orifice (for arm operation)
- 2 pumps flow
- Variable foot relief

Hydraulic Cylinders

Boom cylinder (x2)

CX210B, CX230B

Cylinder bore	Ø120 mm (Ø4.72 in)
Rod diameter	Ø85 mm (Ø3.35 in)
Maximum retracted length	1753 mm (69.02 in)
Stroke	1255 mm (49.41 in)

CX240B

Cylinder bore	Ø130 mm (Ø5.12 in)
Rod diameter	Ø90 mm (Ø3.54 in)
Maximum retracted length	1855 mm (73.03 in)
Stroke	1335 mm (52.56 in)

Articulated boom cylinder

CX210B, CX230B

Cylinder bore	Ø150 mm (Ø5.90 in)
Rod diameter	Ø100 mm (Ø3.94 in)
Maximum retracted length	1570 mm (61.81 in)
Stroke	1090 mm (42.91 in)

Arm (dipper) cylinder

CX210B (LC, NLC type), CX230B

Cylinder bore	Ø140 mm (Ø5.51 in)
Rod diameter	Ø100 mm (Ø3.94 in)
Maximum retracted length	2020 mm (79.53 in)
Stroke	1460 mm (57.48 in)

CX210B (LR type)

Cylinder bore	Ø145 mm (Ø5.71 in)
Rod diameter	Ø105 mm (Ø4.13 in)
Maximum retracted length	2205 mm (86.81 in)
Stroke	1627 mm (64.05 in)

CX240B (LC, NLC type)

Cylinder bore	Ø145 mm (Ø5.71 in)
Rod diameter	Ø105 mm (Ø4.13 in)
Maximum retracted length	2240 mm (88.19 in)
Stroke	1660 mm (65.35 in)

CX240B (LR type)

Cylinder bore	Ø150 mm (Ø5.90 in)
Rod diameter	Ø105 mm (Ø4.13 in)
Maximum retracted length	2425 mm (95.47 in)
Stroke	1737 mm (68.39 in)

Bucket cylinder

CX210B (LC, NLC type), CX230B

Cylinder bore	Ø120 mm (Ø4.72 in)
Rod diameter	Ø85 mm (Ø3.35 in)
Maximum retracted length	1565 mm (61.61 in)
Stroke	1010 mm (39.76 in)

CX240B (LC, NLC type)

Cylinder bore	Ø130 mm (Ø5.12 in)
Rod diameter	Ø90 mm (Ø3.54 in)
Maximum retracted length	1635 mm (64.37 in)
Stroke	1070 mm (42.13 in)

CX210B (LR type), CX240B (LR type)

Cylinder bore	Ø95 mm (Ø3.74 in)
Rod diameter	Ø65 mm (Ø2.56 in)
Maximum retracted length	1373 mm (54.05 in)
Stroke	881 mm (34.68 in)

Rotating Joint

Operating pressure

High pressure passage (ABCD)	34.3 MPa (4975 psi)
Drain port (E)	0.5 MPa (72.52 psi)
Pilot port (F)	3.9 MPa (566 psi)

Flow

High pressure passage (ABCD)	234 L/min (61.82 gpm)
Drain port (E)	10 L/min (2.64 gpm)
Pilot port (F)	21 L/min (5.55 gpm)

Port A; forward right	G3/4
Port B; forward left	G3/4
Port C; backward right	G3/4
Port D; backward left	G3/4
Port E; drain port	G1/2
Port F; pilot port	G1/4

Solenoid Valve

Maximum flow	P -> B: 25 L/min (6.60 gpm) Other: 5 L/min (1.32 gpm)
Rated pressure	4.5 MPa (652.67 psi)

Port size

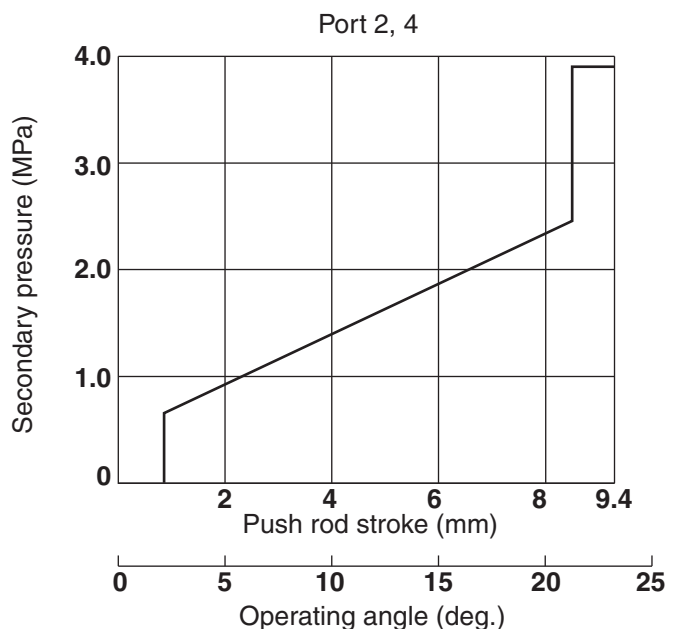
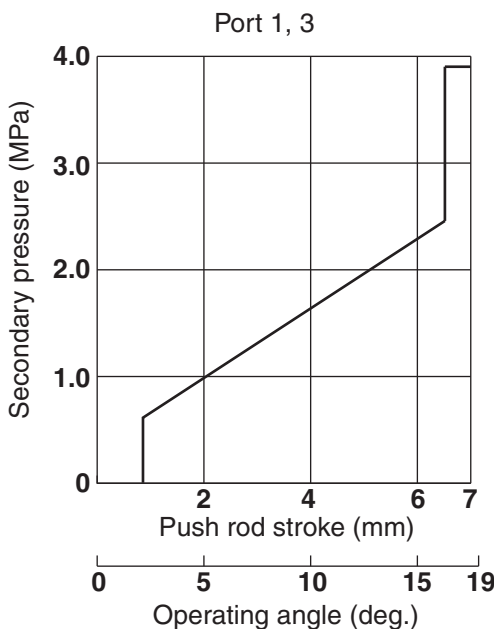
P, T, B port	G3/8
C1, C2, C3, C4, C5 port	G1/4

Solenoid specifications

Operating voltage	DC 20 to 32 V
Power consumption	17 W max.

Hand control valve

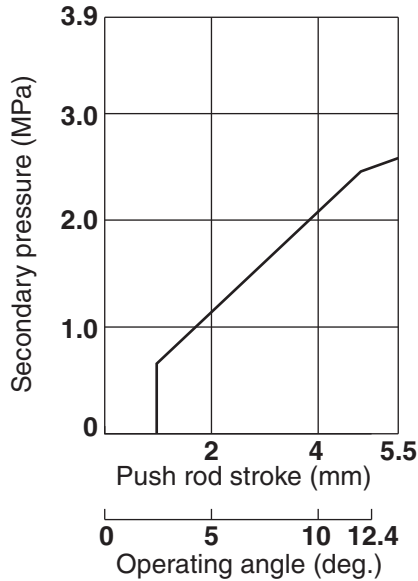
Manufacturer	Kawasaki
Operating pressure	3.92 MPa (569 psi)
Secondary pressure, primary short type	0.64 to 2.45 MPa (92.82 to 355.34 psi)
Operating angle	
Ports 1, 3	19°
Ports 2, 4	25°



RST-03-01-001B

Foot control valve

Manufacturer	Kawasaki
Operating pressure	3.92 MPa (569 psi)
Secondary pressure, primary short type	0.64 to 2.45 MPa (92.82 to 355.34 psi)
Operating angle	12.4°



RST-03-01-001D

Swing unit

Swing circle	Swing bearing type (with internal gear)
Swing parking brake	Mechanical lock (operational lever linkage type)
Swing hydraulic motor	Fixed displacement piston motor with parking brake
Displacement	
CX210B, CX230B	151 cm ³ (9.21 cu in)/rev
CX240B	148.5 cm ³ (9.06 cu in)/rev
Operating pressure	
CX210B (LC, NLC type), CX230B	29.4 MPa (4264 psi)
CX210B (LR type)	24.0 MPa (3481 psi)
CX240B (LC, NLC type)	28.9 MPa (4192 psi)
CX240B (LR type)	27.0 MPa (3916 psi)
Operating flow	
CX210B, CX230B	210.6 L/min (55.63 gpm)
CX240B	214 L/min (56.53 gpm)
Mechanical brake torque	
CX210B, CX230B	821.5 Nm (605.91 lb-ft) min.
CX240B	846 Nm (623.98 lb-ft) min.
Brake off pressure	
CX210B, CX230B	3.2 MPa (464.12 psi) max.
CX240B	2.9 MPa (420.61 psi) max.
Relief valve set pressure	
CX210B, CX230B	29.4 MPa (4264 psi)
CX240B	28.9 MPa (4192 psi)
Reduction gear	Planetary gear 2-stage reduction gear
Reduction ratio	
CX210B, CX230B	16.757
CX240B	21.75

Travel lower body

Travel hydraulic motor (x2)	Variable displacement piston motor, automatic 2-speed switch-over with parking brake
Displacement	
CX210B	168.9/100.3 cm ³ (10.31/6.12 cu in)/rev
CX230B, CX240B	181.3/112.6 cm ³ (11.06/6.87 cu in)/rev
Operating pressure	34.3 MPa (4975 psi)
Operating flow	
CX210B	210.6 L/min (55.63 gpm)
CX230B, CX240B	234 L/min (61.81 gpm)
Brake torque	20.9 KNm (15415 lb-ft) min. (including reduction gear)
Relief valve set pressure	35.3 MPa (5119.83 psi)
Automatic 2-speed switch-over pressure	25.5 MPa (3698.46 psi)
Reduction gear	Planetary gear 2-stage reduction gear
Reduction ratio	43.246
Travel brake	Hydraulic lock
Parking brake	Mechanical lock (travel lever linkage type)
Track shoe	
Model	Assembly type triple grouser shoe
Number of shoes (per side)	
CX210B (STD type)	46
CX210B (LC, NLC, LR type)	49
CX230B	47
CX240B,	51
Shoe width	
Standard	
CX210B (LC type), CX240B (LC, NLC type)	600 mm (23.62 in)
CX210B (NLC type)	500 mm (19.68 in)
CX210B (STD type, LR type), CX240B (LR type)	800 mm (31.50 in)
CX230B	550 mm (21.65 in)
Optional	
CX210B (STD type)	600 mm (23.62 in) , 700 mm (27.56 in)
CX210B (LC type), CX240B (LC type)	700 mm (27.56 in), 800 mm (31.50 in), 900 mm (35.43 in)
CX210B (NLC type)	600 mm (23.62 in)
CX240B (NLC type)	700 mm (27.56 in)
Grouser height	26 mm (1.02 in)
Link pitch	190 mm (7.48 in)
Roller	
Number of upper rollers (per side)	2
Number of lower rollers (per side)	
CX210B (STD type)	7
CX210B, CX230B	8
CX240B	9
Track belt tension adjuster	Grease cylinder type (with cushion spring)
Mounting length of spring	576 mm (22.68 in.)

Work Unit

Model.....Backhoe attachment

Components / dimensions / working dimensions

CX210B (LC type, standard boom)	Standard boom		
	Standard arm	Su-Short arm	Short arm
Arm (dipper) length	2940 mm (115.75 in)	1900 mm (74.80 in)	2400 mm (94.49 in)
Boom length (Standard boom spec.)	5700 mm 224.41 in		
Bucket radius	1450 mm 57.09 in		
Bucket wrist angle	177°		
Maximum digging radius	9900 mm 389.76 in	8960 mm 352.75 in	9420 mm 370.87 in
Maximum digging radius at ground line	9730 mm 383.07 in	8770 mm 345.27 in	9240 mm 363.78 in
Maximum digging depth	6650 mm 261.81 in	5610 mm 220.87 in	6110 mm 240.55 in
Maximum vertical straight wall digging depth	5960 mm 234.64 in	5010 mm 197.24 in	5500 mm 216.53 in
Maximum digging height	9610 mm 378.35 in	9160 mm 360.63 in	9410 mm 370.47 in
Maximum dump height	6810 mm 268.11 in	6330 mm 249.21 in	6590 mm 259.45 in
Minimum swing radius at front	3600 mm 141.73 in	3580 mm 140.94 in	3600 mm 141.73 in
Height for minimum swing radius at front	7640 mm 300.79 in	7710 mm 303.54 in	7690 mm 302.76 in

CX210B (LC type, articulated boom)	Articulated boom		
	Standard arm	Su-Short arm	Short arm
Arm (dipper) length	2940 mm (115.75 in)	1900 mm (74.80 in)	2400 mm (94.49 in)
Boom length (articulated boom spec.)	5670 mm 223.23in		
Bucket radius	1450 mm 57.09 in		
Bucket wrist angle	177°		
Maximum digging radius	9910 mm 390.16 in	8950 mm 352.36 in	9420 mm 370.87 in
Maximum digging radius at ground line	9730 mm 383.07 in	8760 mm 344.88 in	9230 mm 363.38 in
Maximum digging depth	6290 mm 247.64 in	5280 mm 207.87 in	5780 mm 227.56 in
Maximum vertical straight wall digging depth	5270 mm 207.48 in	4370 mm 172.05 in	4840 mm 190.55 in
Maximum digging height	10970 mm 431.89 in	10250 mm 403.54 in	10610 mm 417.72 in
Maximum dump height	8070 mm 317.72 in	7350 mm 289.37 in	7720 mm 303.94 in
Minimum swing radius at front	2310 mm 90.94 in	2460 mm 96.85 in	2630 mm 103.54 in

CX210B (NLC type, standard boom)	Standard boom		
	Standard arm	Su-Short arm	Short arm
Arm (dipper) length	2940 mm (115.75 in)	1900 mm (74.80 in)	2400 mm (94.49 in)
Boom length (Standard boom spec.)	5700 mm 224.41 in		
Bucket radius	1450 mm 57.09 in		
Bucket wrist angle	177°		
Maximum digging radius	9900 mm 389.76 in	8960 mm 352.75 in	9420 mm 370.87 in
Maximum digging radius at ground line	9730 mm 383.07 in	8760 mm 344.88 in	9230 mm 363.38 in
Maximum digging depth	6620 mm 260.63 in	5580 mm 219.68 in	6080 mm 239.37 in
Maximum vertical straight wall digging depth	5930 mm 233.46 in	4980 mm 196.06 in	5470 mm 215.35 in
Maximum digging height	9640 mm 379.53 in	9190 mm 91.90 in	9440 mm 371.65 in
Maximum dump height	6840 mm 269.29 in	6360 mm 250.39 in	6620 mm 260.63 in
Minimum swing radius at front	3600 mm 141.73 in	3580 mm 140.94 in	3600 mm 141.73 in
Height for minimum swing radius at front	7670 mm 301.97 in	7740 mm 304.72 in	7740 mm 304.72 in

CX210B (NLC type, articulated boom)	Articulated boom		
	Standard arm	Su-Short arm	Short arm
Arm (dipper) length	2940 mm (115.75 in)	1900 mm (74.80 in)	2400 mm (94.49 in)
Boom length (articulated boom spec.)	5670 mm 223.23in		
Bucket radius	1450 mm 57.09 in		
Bucket wrist angle	177°		
Maximum digging radius	9910 mm 390.16 in	8950 mm 352.36 in	9420 mm 370.87 in
Maximum digging radius at ground line	9730 mm 383.07 in	8760 mm 344.88 in	9230 mm 363.38 in
Maximum digging depth	6320 mm 248.82 in	5310 mm 209.05 in	5800 mm 228.35 in
Maximum vertical straight wall digging depth	5300 mm 208.66 in	4390 mm 172.83 in	4870 mm 191.73 in
Maximum digging height	10940 mm 430.71 in	10220 mm 402.36 in	10580 mm 416.53 in
Maximum dump height	8040 mm 316.53 in	7320 mm 288.19 in	7690 mm 302.76 in
Minimum swing radius at front	2310 mm 90.94 in	2460 mm 96.85 in	2630 mm 103.54 in
Height for minimum swing radius at front	8280 mm 325.98 in	8330 mm 327.95 in	8320 mm 327.56 in

CX210B (LR type)	Standard boom
	S-long arm
Arm (dipper) length	6400 mm (251.97 in)
Boom length (Standard boom spec.)	8700 mm 342.52 in
Bucket radius	1200 mm 47.24 in
Bucket wrist angle	178°
Maximum digging radius	15600 mm 614.17 in
Maximum digging radius at ground line	15490 mm 609.84 in
Maximum digging depth	12010 mm 472.83 in
Maximum vertical straight wall digging depth	10290 mm 405.12 in
Maximum digging height	12970 mm 510.63 in
Maximum dump height	10730 mm 422.44 in
Minimum swing radius at front	5190 mm 204.33 in
Height for minimum swing radius at front	10390 mm 409.05 in

CX230B (Standard boom)	Standard boom		
	Standard arm	Su-Short arm	Short arm
Arm (dipper) length	2940 mm (115.75 in)	1900 mm (74.80 in)	2400 mm (94.49 in)
Boom length (Standard boom spec.)	5700 mm 224.41 in		
Bucket radius	1450 mm 57.09 in		
Bucket wrist angle	177°		
Maximum digging radius	9900 mm 389.76 in	8960 mm 352.75 in	9420 mm 370.87 in
Maximum digging radius at ground line	9730 mm 383.07 in	8760 mm 344.88 in	9240 mm 363.78 in
Maximum digging depth	6590 mm 259.45 in	5550 mm 218.5 in	6050 mm 238.19 in
Maximum vertical straight wall digging depth	5900 mm 232.28 in	4950 mm 194.88 in	5440 mm 214.17 in
Maximum digging height	9670 mm 380.71 in	9220 mm 362.99 in	9470 mm 372.83 in
Maximum dump height	6870 mm 270.47 in	6400 mm 251.97 in	6650 mm 261.81 in
Minimum swing radius at front	3600 mm 141.73 in	3580 mm 140.94 in	3600 mm 141.73 in
Height for minimum swing radius at front	7700 mm 303.15 in	7700 mm 303.15 in	7700 mm 303.15 in

CX230B (NLC type, articulated boom)	Articulated boom		
	Standard arm	Su-Short arm	Short arm
Arm (dipper) length	2940 mm (115.75 in)	1900 mm (74.80 in)	2400 mm (94.49 in)
Boom length (articulated boom spec.)	5670 mm 223.23in		
Bucket radius	1450 mm 57.09 in		
Bucket wrist angle	177°		
Maximum digging radius	9910 mm 390.16 in	8950 mm 352.36 in	9420 mm 370.87 in
Maximum digging radius at ground line	9720 mm 382.68 in	8750 mm 344.49 in	9230 mm 363.38 in
Maximum digging depth	6290 mm 247.64 in	5280 mm 207.87 in	5770 mm 227.16 in
Maximum vertical straight wall digging depth	5270 mm 207.48 in	4360 mm 171.65 in	4840 mm 190.55 in
Maximum digging height	10970 mm 431.89 in	10250 mm 403.54 in	10610 mm 417.72 in
Maximum dump height	8070 mm 317.72 in	7350 mm 289.37 in	7720 mm 303.94 in
Minimum swing radius at front	2310 mm 90.94 in	2460 mm 96.85 in	2630 mm 103.54 in
Height for minimum swing radius at front	8310 mm 327.16 in	8360 mm 329.13 in	8350 mm 328.74 in

CX240B (LC, NLC type)	Standard boom		
	Standard arm	Short arm	Long arm
Arm (dipper) length	3000 mm (118.11 in)	2500 mm (98.42 in)	3520 mm (138.58 in)
Boom length (Articulated boom spec.)	5850 mm 230.31 in		
Bucket radius	1570 mm 61.81 in		
Bucket wrist angle	175°		
Maximum digging radius	10280 mm 404.72 in	9820 mm 386.61 in	10790 mm 424.80 in
Maximum digging radius at ground line	10100 mm 397.64 in	9630 mm 379.13 in	10620 mm 418.11 in
Maximum digging depth	6900 mm 271.65 in	6400 mm 251.97 in	7420 mm 292.13 in
Maximum vertical straight wall digging depth	6140 mm 241.73 in	5700 mm 224.41 in	6680 mm 262.99 in
Maximum digging height	9760 mm 384.25 in	9560 mm 376.38 in	10070 mm 396.46 in
Maximum dump height	6760 mm 266.14 in	6550 mm 257.87 in	7060 mm 277.95 in
Minimum swing radius at front	3950 mm 155.51 in	3980 mm 156.69 in	3950 mm 155.51 in
Height for minimum swing radius at front	7750 mm 305.12 in	7820 mm 307.87 in	7740 mm 304.72 in

CX240B (LR type)	Standard boom
	S-long arm
Arm (dipper) length	8000 mm (314.96 in)
Boom length (Standard boom spec.)	10300 mm 405.51 in
Bucket radius	1200 mm 47.24 in
Bucket wrist angle	178°
Maximum digging radius	18320 mm 721.26 in
Maximum digging radius at ground line	18220 mm 717.26 in
Maximum digging depth	14560 mm 573.23 in
Maximum vertical straight wall digging depth	12130 mm 477.56 in
Maximum digging height	13950 mm 549.21 in
Maximum dump height	11780 mm 463.78 in
Minimum swing radius at front	6220 mm 244.88 in
Height for minimum swing radius at front	11810 mm 464.96 in

Digging force (ISO 6015)

CX210B (LC, NLC type), CX230B	Arm (dipper)		
	2940 mm (115.75 in)	1900 mm (74.80 in)	2400 mm (94.49 in)
Arm (dipper) digging force (standard)	103 kN (23155.3 lbf)	142 kN (31922.9 lbf)	123 kN (27651.5 lbf)
Arm (dipper) digging force (power up)	110 kN (24729 lbf)	152 kN (34171 lbf)	132 kN (29674.8 lbf)
Bucket digging force (standard)	142 kN (31922.9 lbf)	142 kN (31922.9 lbf)	142 kN (31922.9 lbf)
Bucket digging force (power up)	152 kN (34171 lbf)	152 kN (34171 lbf)	152 kN (34171 lbf)

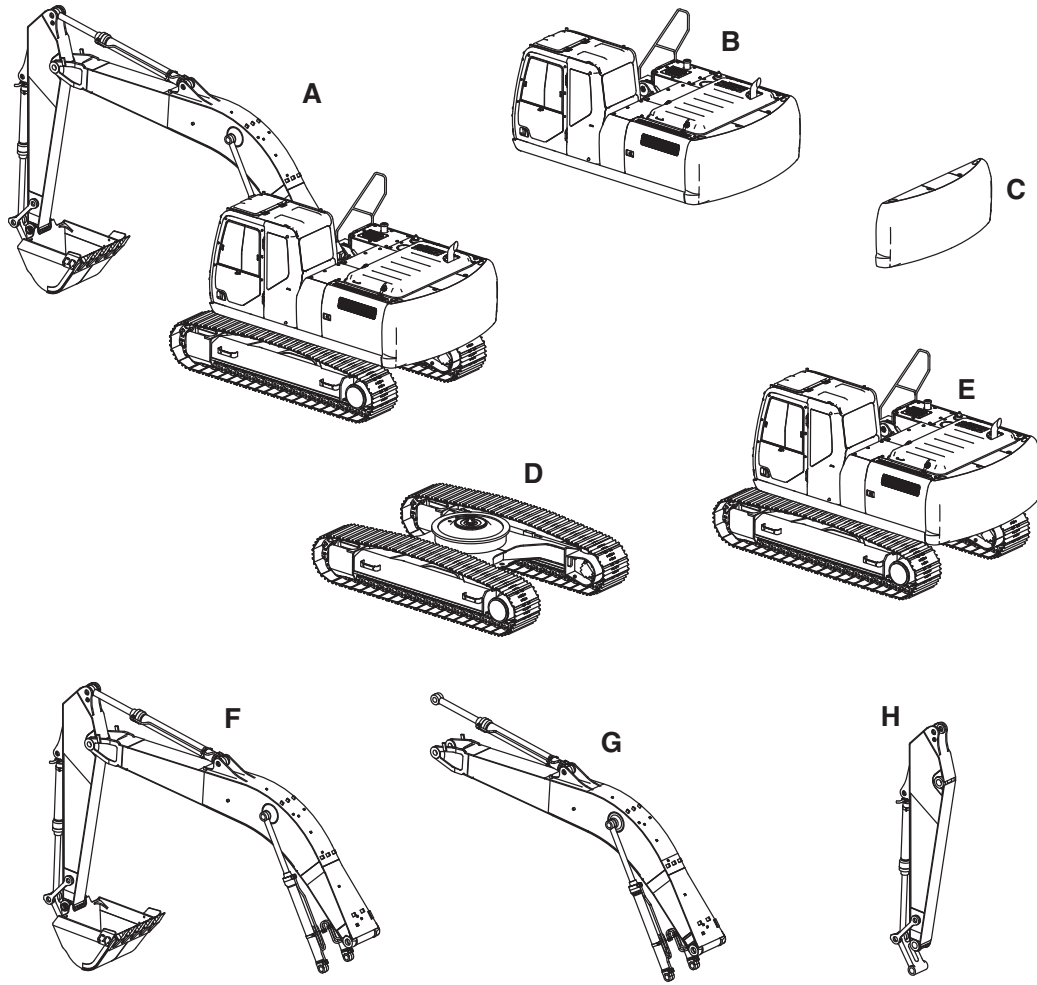
CX210B (LR type)	Arm (dipper) 6400 mm (251.97 in)
Arm (dipper) digging force	46 kN (10341.2 lbf)
Bucket digging force	65 kN (14612.6 lbf)

CX240B (LC, NLC type)	Arm (dipper)		
	3000 mm (118.11 in)	2500 mm (98.42 in)	3520 mm (138.58 in)
Arm (dipper) digging force (standard)	120 kN (26977.1 lbf)	141 kN (31698.1 lbf)	107 kN (24054.6 lbf)
Arm (dipper) digging force (power up)	129 kN (29000.3 lbf)	151 kN (33946.1 lbf)	115 kN (25853 lbf)
Bucket digging force (standard)	162 kN (36419 lbf)	162 kN (36419 lbf)	162 kN (36419 lbf)
Bucket digging force (power up)	174 kN (39116.8 lbf)	174 kN (39116.8 lbf)	174 kN (39116.8 lbf)

CX240B (LR type)	Arm (dipper) 8000 mm (314.96 in)
Arm (dipper) digging force	44 kN (9891.6 lbf)
Bucket digging force	77 kN (17310.3 lbf)

COMPONENT WEIGHT

Major component weight



RST-11-01-001A

Weight information is approximate

A) Operating weight

CX210B (thailand, STD type)	.....	20740 kg (45724 lbs)
CX210B (indonesia, STD type)	.....	20990 kg (46275 lbs)
CX210B (LC type)	.....	21200 kg (46738 lbs)
CX210B (NLC type)	.....	21350 kg (47069 lbs)
CX210B (LR type)	.....	22300 kg (49163 lbs)
CX230B	.....	22700 kg (50045 lbs)
CX240B (LC type)	.....	24500 kg (54013 lbs)
CX240B (NLC type)	.....	24400 kg (53793 lbs)
CX240B (LR type)	.....	28000 kg (61730 lbs)

B) Upper mechanism (including counterweight and turntable bearing)

CX210B (STD type)	.....	9330 kg (20569 lbs)
CX210B (LC type)	.....	9630 kg (21231 lbs)
CX210B (NLC type)	.....	10420 kg (22972 lbs)
CX210B (LR type)	.....	10700 kg (23589 lbs)
CX230B	.....	10740 kg (23678 lbs)
CX240B (LC type)	.....	11280 kg (24868 lbs)
CX240B (NLC type)	.....	11360 kg (25045 lbs)
CX240B (LR type)	.....	13600 kg (29983 lbs)

C) Counterweight	
CX210B (STD type).....	3820 kg (8422 lbs)
CX210B (LC type).....	4120 kg (9083 lbs)
CX210B (NLC type).....	4560 kg (10053 lbs)
CX210B (LR type).....	5120 kg (11288 lbs)
CX230B.....	4900 kg (10803 lbs)
CX240B (LC, NLC type).....	5270 kg (11618 lbs)
CX240B (LR type).....	7520 kg (16579 lbs)
D) Lower mechanism (with standard grouser shoe)	
CX210B (STD type).....	7430 kg (16380 lbs)
CX210B (LC type).....	7460 kg (16446 lbs)
CX210B (NLC type).....	6880 kg (15168 lbs)
CX210B (LR type).....	7200 kg (15873 lbs)
CX230B.....	7910 kg (17439 lbs)
CX240B (LC type).....	8250 kg (18188 lbs)
CX240B (NLC type).....	8180 kg (18034 lbs)
CX240B (LR type).....	8830 kg (19467 lbs)
E) Main Unit Weight	
CX210B (STD type).....	16760 kg (36950 lbs)
CX210B (LC type).....	17090 kg (37677 lbs)
CX210B (NLC type).....	17300 kg (38140 lbs)
CX210B (LR type).....	17900 kg (39463 lbs)
CX230B.....	18650 kg (41116 lbs)
CX240B (LC type).....	19530 kg (43056 lbs)
CX240B (NLC type).....	19540 kg (43078 lbs)
CX240B (LR type).....	22430 kg (49450 lbs)
F) Attachments	
CX210B (thailand, STD type).....	3980 kg (8774 lbs)
CX210B (indonesia, STD type).....	4230 kg (9326 lbs)
CX210B (LC, NLC type), CX230B.....	4050 kg (8929 lbs)
CX210B (LR type).....	4400 kg (9700 lbs)
CX240B (LC, NLC type).....	4860 kg (10714 lbs)
CX240B (LR type).....	5570 kg (12280 lbs)
G) Boom (including cylinders)	
CX210B (thailand, STD type).....	2410 kg (5313 lbs)
CX210B (indonesia, STD type).....	2560 kg (5644 lbs)
CX210B (LC, NLC type), CX230B.....	2270 kg (5004 lbs)
CX210B (LR type).....	2780 kg (6129 lbs)
CX240B (LC, NLC type).....	2750 kg (6063 lbs)
CX240B (LR type).....	3680 kg (8113 lbs)
H) Arm (dipper) (including cylinders and linkage)	
CX210B (thailand, STD type).....	1060 kg (2337 lbs)
CX210B (indonesia, STD type).....	1160 kg (2557 lbs)
CX210B (LC, NLC type), CX230B.....	1070 kg (2359 lbs)
CX210B (LR type).....	1290 kg (2844 lbs)
CX240B (LC, NLC type).....	1300 kg (2866 lbs)
CX240B (LR type).....	1550 kg (3417 lbs)

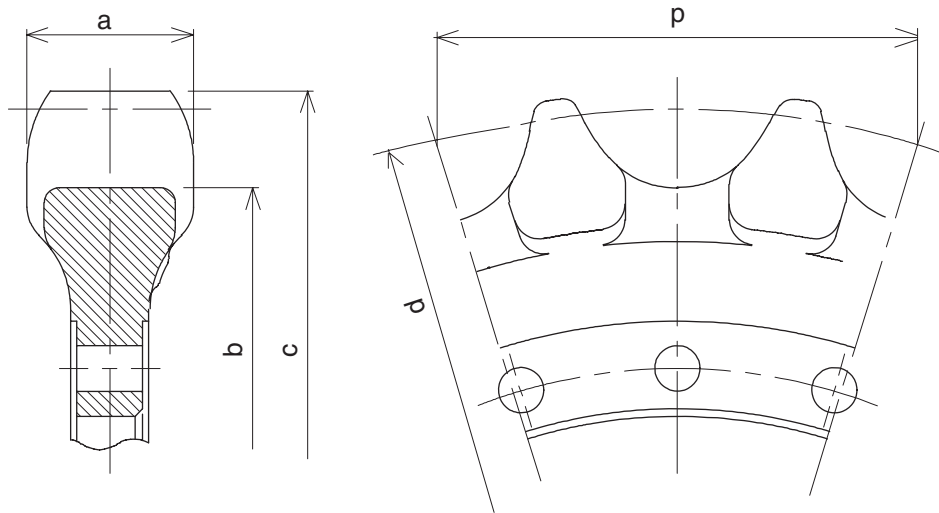
Other component weight

Engine	531 kg (1170.6 lbs)
Air cleaner	7.6 kg (16.8 lbs)
Hydraulic pump	
CX210B (LC, LR type), CX240B	144 kg (317.5 lbs)
CX230B, CX210B (NLC type)	165 kg (363.8 lbs)
Attachment control valve	203 kg (447.5 lbs)
Swing motor and reduction gear assembly	
CX210B, CX230B	241 kg (531.3 lbs)
CX240B.....	297 kg (654.8 lbs)
Travel motor and reduction gear assembly.....	328 kg (723.1 lbs)
Rotary joint	31 kg (68.3 lbs)
Solenoid valve bank	6.7 kg (14.8 lbs)
Cushion valve.....	12.5 kg (27.6 lbs)
Hand control valve.....	1.9 kg (4.2 lbs)
Foot control valve	7.8 kg (17.2 lbs)
Standard boom	
CX210B (thailand, STD type).....	1406 kg (3099.7 lbs)
CX210B (indonesia, STD type).....	1553 kg (3423.8 lbs)
CX210B (LC, NLC type), CX230B	1543 kg (3401.7 lbs)
CX210B (LR type).....	1820 kg (4012.4 lbs)
CX240B (LC, NLC type).....	1846 kg (4069.7 lbs)
CX240B (LR type).....	2532 kg (5582.1 lbs)
Standard arm (dipper)	
CX210B (thailand, STD type).....	684 kg (1508.0 lbs)
CX210B (indonesia, STD type).....	773 kg (1704.1 lbs)
CX210B (LC, NLC type), CX230B	697 kg (1536.6 lbs)
CX240B (LC, NLC type).....	792 kg (1746.1 lbs)
Short arm (dipper)	
CX210B (STD type)	659 kg (1452.9 lbs)
CX210B (LC, NLC type) , CX230B	670 kg (1477.1 lbs)
CX240B (LC, NLC type).....	680 kg (1499.1 lbs)
Long arm (dipper)	
CX240B (LC, NLC type).....	893 kg (1968.7 lbs)
S-Long arm (dipper)	
CX210B (LR type).....	1050 kg (2314.9 lbs)
CX240B (LR type).....	1320 kg (2910.1 lbs)
Boom cylinder (one)	
CX210B, CX230B	164 kg (361.6 lbs)
CX240B.....	204 kg (449.7 lbs)
Articulated boom cylinder (one)	
CX210B, CX230B	254 kg (560 lbs)
Arm (dipper) cylinder	
CX210B (LC, NLC type), CX230B	263 kg (579.8 lbs)
CX210B (LR type).....	317 kg (698.9 lbs)
CX240B (LC, NLC type).....	324 kg (714.3 lbs)
CX240B (LR type).....	359 kg (791.5 lbs)
Bucket cylinder	
CX210B (LC, NLC type), CX230B	150 kg (330.7 lbs)
CX210B (LR type), CX240B (LR type).....	91 kg (200.6 lbs)
CX240B (LC, NLC type).....	190 kg (418.9 lbs)
Fuel tank.....	160 kg (352.7 lbs)
Hydraulic oil tank	152 kg (335.1 lbs)
Turntable bearing	
CX210B, CX230B	263 kg (579.8 lbs)
CX240B.....	404 kg (890.7 lbs)

Muffler	15.9 kg (35.1 lbs)
Radiator total weight	
CX210B, CX230B	134 kg (295.4 lbs)
CX240B	142 kg (313.1 lbs)
Oil cooler	
CX210B, CX230B	27.5 kg (60.6 lbs)
CX240B	30 kg (66.1 lbs)
Radiator	
CX210B, CX230B	15.6 kg (34.4 lbs)
CX240B	15.2 kg (33.5 lbs)
Air cooler	
CX210B, CX230B	7 kg (15.4 lbs)
CX240B	8 kg (17.6 lbs)
Fuel cooler	1.2 kg (2.65 lbs)
Idler wheel	87 kg (191.8 lbs)
Upper roller	17 kg (37.5 lbs)
Lower roller	
CX210B, CX230B	34 kg (75 lbs)
CX240B	36 kg (79.4 lbs)
Recoil spring assembly	
CX210B, CX230B	155 kg (341.7 lbs)
CX240B	160 kg (352.7 lbs)
Recoil spring	67.6 kg (149 lbs)
Grease cylinder assembly	
CX210B, CX230B	30.4 kg (67 lbs)
CX240B	35.4 kg (78 lbs)
Threaded rod	29.7 kg (65.5 lbs)
Yoke	25.6 kg (56.4 lbs)
Track chains (per side)	
500 mm (19.68 in)	
CX210B (NLC type)	1203 kg (2653 lbs)
550 mm (21.65 in)	
CX230B	1302 kg (2871 lbs)
600 mm (23.62 in)	
CX210B (STD type)	1324 kg (2918.9 lbs)
CX210B (LC, NLC type)	1340 kg (2954.2 lbs)
CX240B	1480 kg (3262.8 lbs)
700 mm (27.56 in)	
CX210B (STD type)	1460 kg (3218.8 lbs)
CX210B (LC type)	1564 kg (3448 lbs)
CX240B (LC type)	1630 kg (3593.5 lbs)
800 mm (31.5 in)	
CX210B (STD type)	1586 kg (3496.6 lbs)
CX210B (LC, LR type)	1710 kg (3769.9 lbs)
CX240B (LC, LR type)	1780 kg (3924.2 lbs)
900 mm (35.43 in)	
CX210B (LC type)	1825 kg (4023.4 lbs)
CX240B (LC type)	1924 kg (4241.7 lbs)

DIMENSIONS AND WEAR LIMIT OF THE TRACK ASSEMBLY

Sprocket

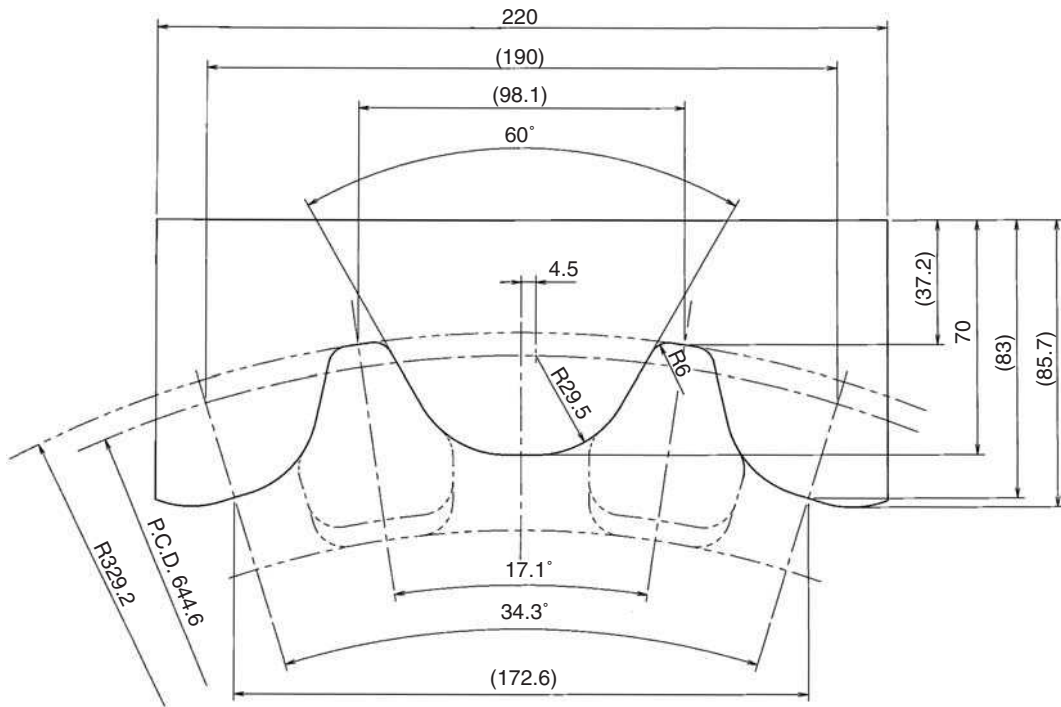


RI14001-001

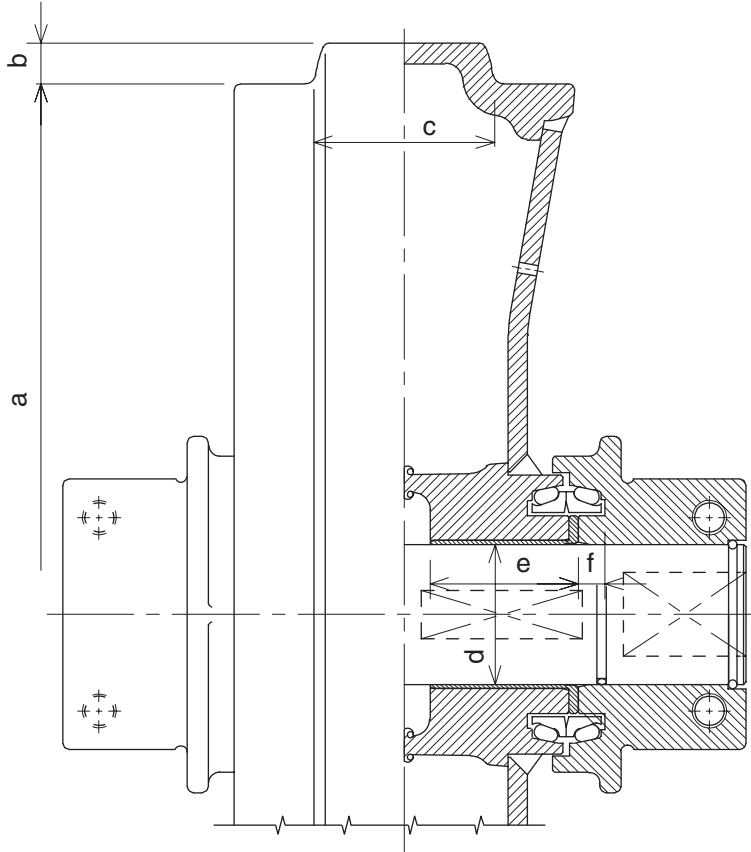
Part name	Code	Measured dimensions (mm)	Standard value (mm)	Usage limit (mm)	Judgment	Solution
Sprocket	a		66	60	Acceptable/Unacceptable	Cladding by welding or replacement
	b	∅	∅585.5	∅579.5	Acceptable/Unacceptable	
	c	∅	∅659	∅653	Acceptable/Unacceptable	
	d	∅	∅644.6	-	Acceptable/Unacceptable	
	p		190	-	Acceptable/Unacceptable	

Gauge

unit in mm



Idler wheel

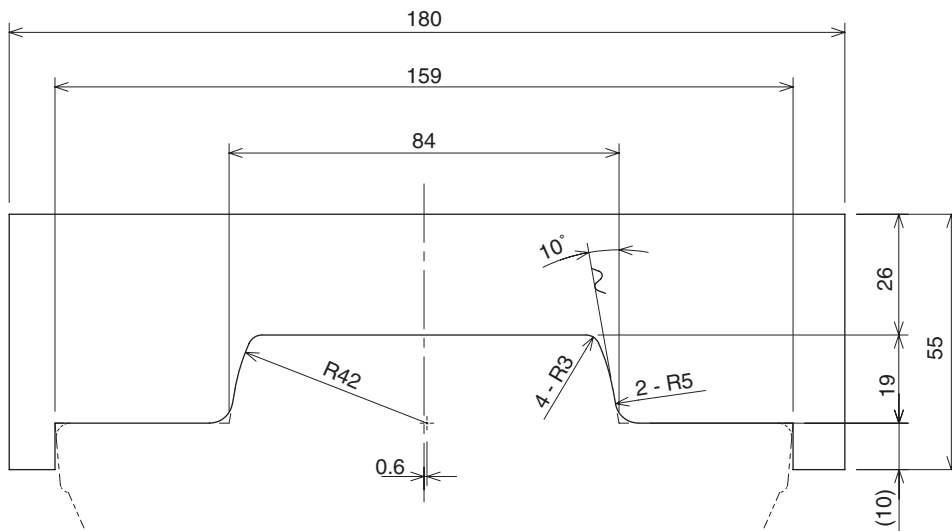


RI14001-002

Part name	Code	Measured dimensions (mm)	Standard value (mm)	Usage limit (mm)	Judgment	Solution
Idler wheel	a	∅	∅494	∅490	Acceptable/Unacceptable	Cladding by welding or replacement
	b		19	-	Acceptable/Unacceptable	
	c		84	80	Acceptable/Unacceptable	
Shaft	d	∅	∅65	∅64.5	Acceptable/Unacceptable	Replacement
Bushing	d	∅	∅65	∅65.8	Acceptable/Unacceptable	Replacement
	e		69	68.6	Acceptable/Unacceptable	
Hub	f		12.4	11.9	Acceptable/Unacceptable	Replacement

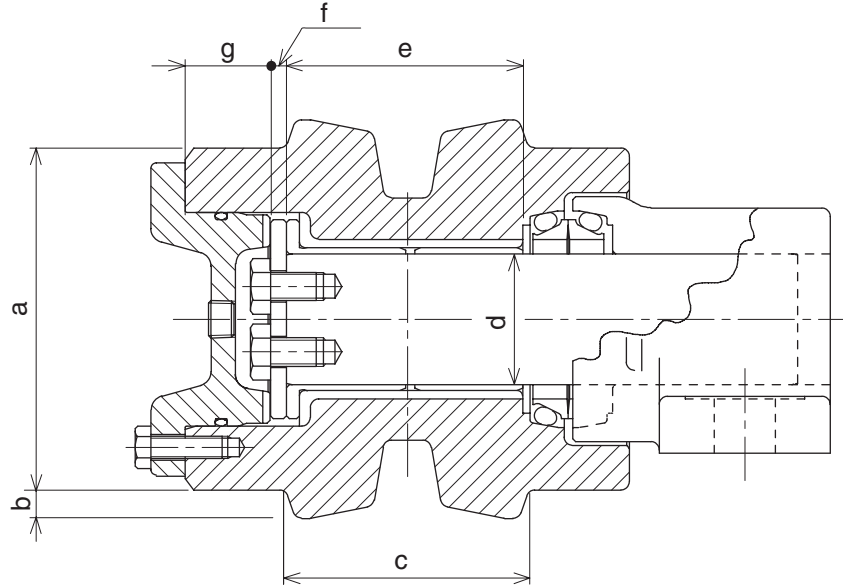
Gauge

unit in mm



RI14001-014

Upper roller

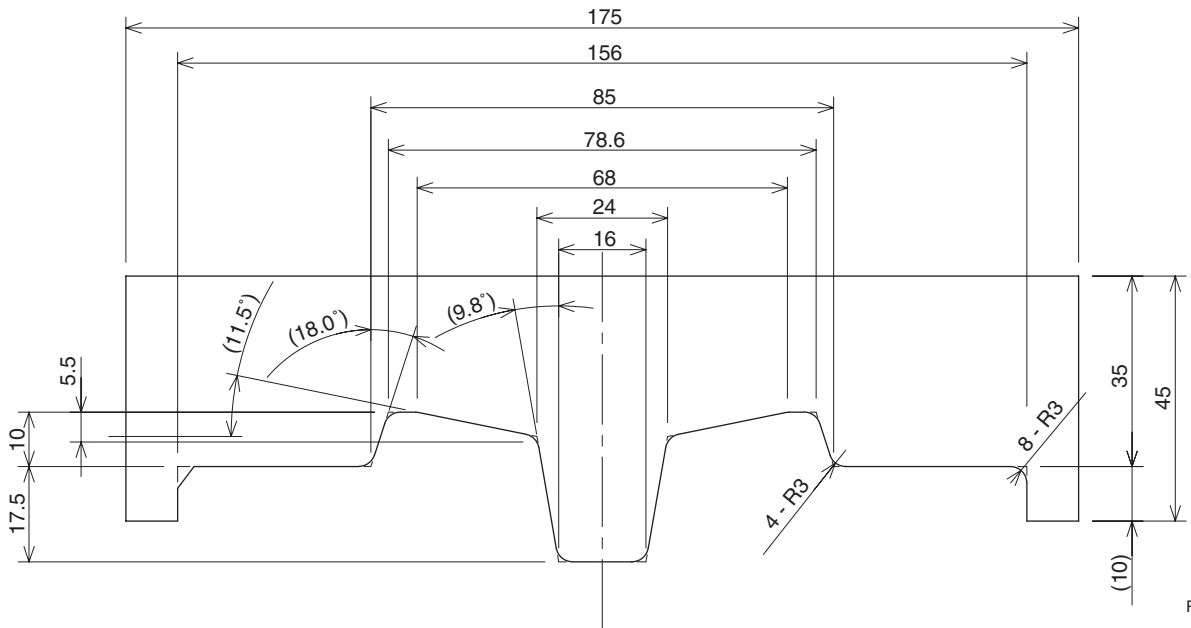


RI14001-003

Part name	Code	Measured dimensions (mm)	Standard value (mm)	Usage limit (mm)	Judgment	Solution
Carrier roller	a	∅	∅120	∅112	Acceptable/Unacceptable	Cladding by welding or replacement
	b		10	-	Acceptable/Unacceptable	
	c		85	79	Acceptable/Unacceptable	
Shaft	d	∅	∅46	∅45.5	Acceptable/Unacceptable	Replacement
Bushing	d	∅	∅46	∅46.8	Acceptable/Unacceptable	Replacement
	e		83	82.6	Acceptable/Unacceptable	
Thrust plate	f		5.5	5	Acceptable/Unacceptable	Replacement
Cover	g		29.7	29.2	Acceptable/Unacceptable	Replacement

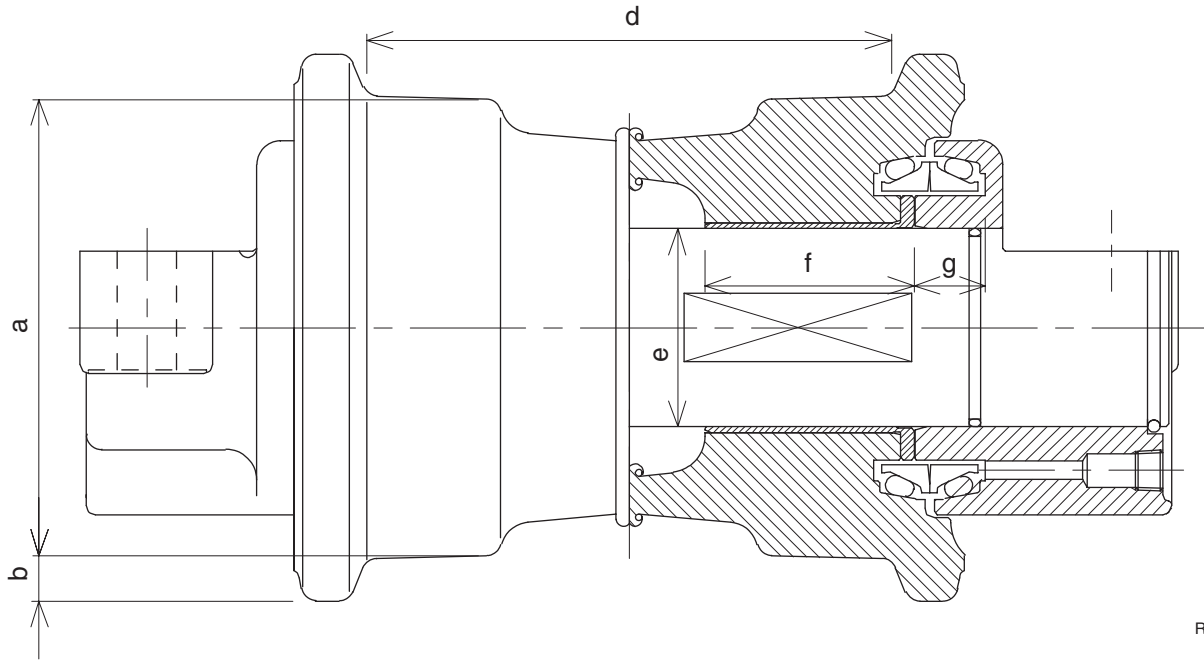
Gauge

unit in mm



RI14001-015

Lower roller

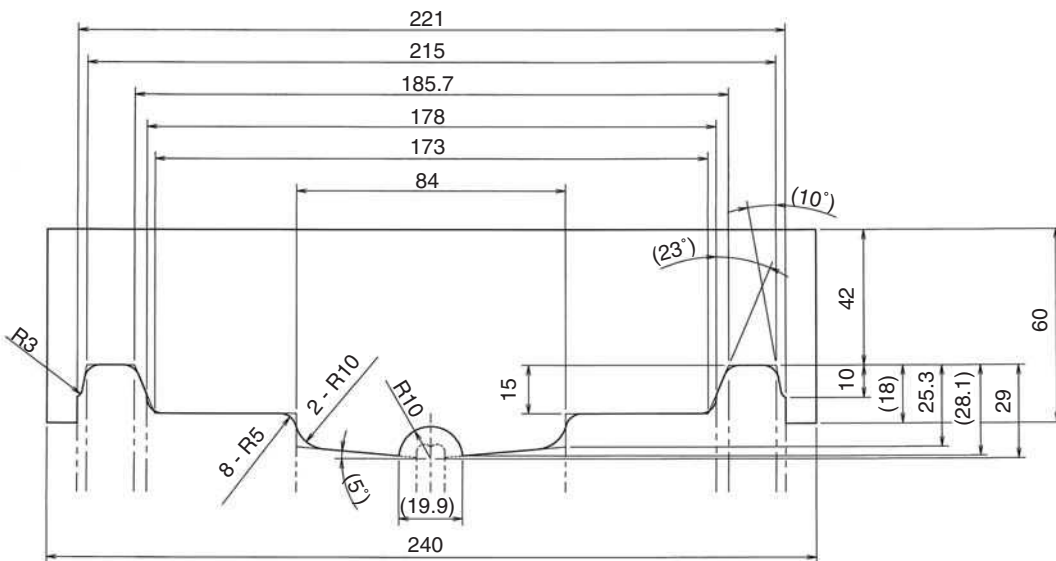


RI14001-004

Part name	Code	Measured dimensions (mm)	Standard value (mm)	Usage limit (mm)	Judgment	Solution
Track roller	a	∅	∅150	∅142	Acceptable/Unacceptable	Cladding by welding or replacement
	b		15	-	Acceptable/Unacceptable	
	d		173	179	Acceptable/Unacceptable	
Shaft	e	∅	∅65	∅64.5	Acceptable/Unacceptable	Replacement
Bushing	e	∅	∅65	∅65.8	Acceptable/Unacceptable	Replacement
	f		69	68.6	Acceptable/Unacceptable	
Collar	g		23.3	22.8	Acceptable/Unacceptable	Replacement

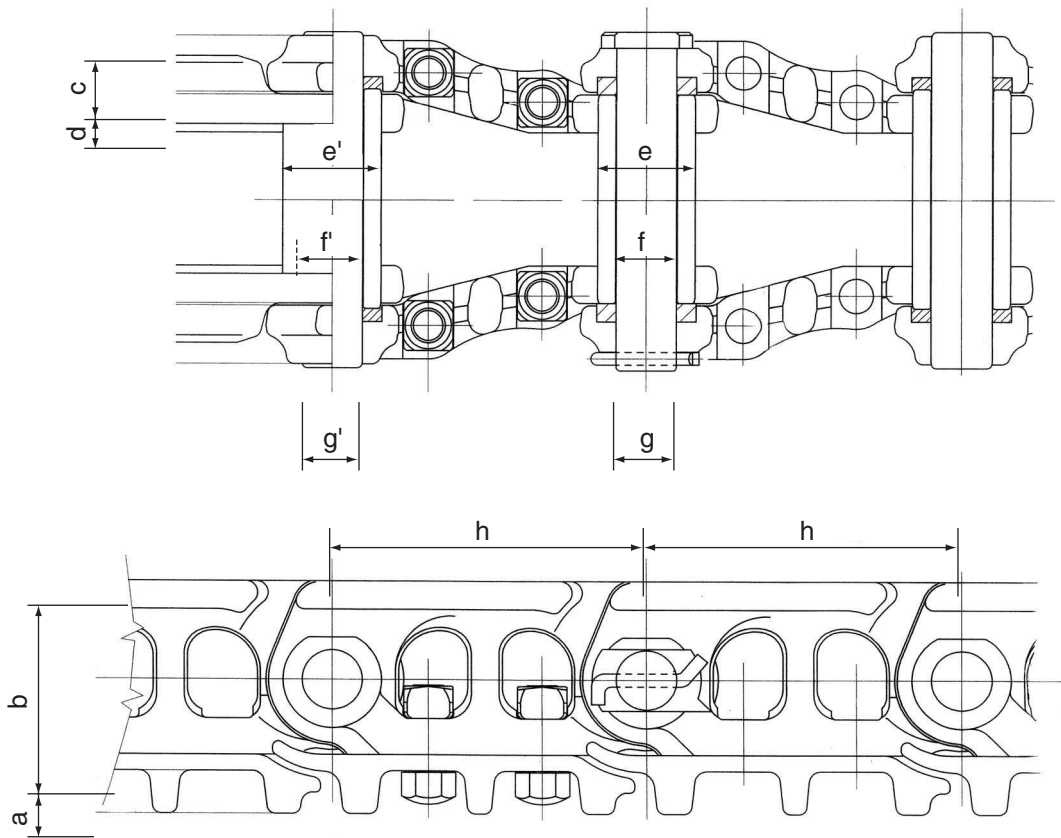
Gauge

unit in mm



RI14001-016

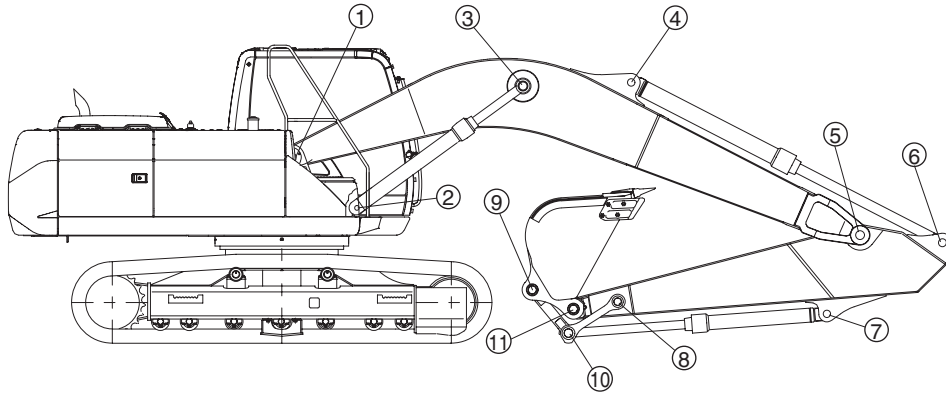
Track



RI14001-005

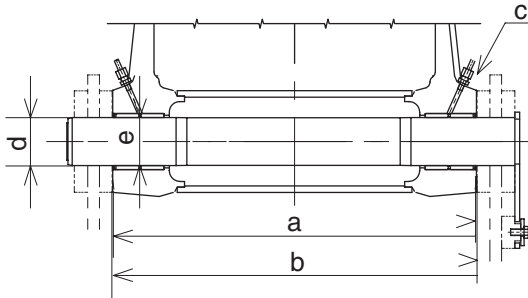
Part name	Code	Measured dimensions (mm)	Standard value (mm)	Usage limit (mm)	Judgment	Solution
Shoe plate	a		34.5	21.5	Acceptable/Unacceptable	Replacement
Link	b		106	101	Acceptable/Unacceptable	Cladding by welding or replacement
	c		37.985	36	Acceptable/Unacceptable	
	d		17.95	16	Acceptable/Unacceptable	
Master bushing	e	Ø	Ø58.72	Ø57.5	Acceptable/Unacceptable	Replacement
	f	Ø	Ø37.3	Ø38.3	Acceptable/Unacceptable	
Master pin	g	Ø	Ø36.3	Ø35.5	Acceptable/Unacceptable	Replacement
Link pitch	h		190	195	Acceptable/Unacceptable	Replacement
Track bushing	e'	Ø	Ø58.72	Ø57.5	Acceptable/Unacceptable	Replacement
	f'	Ø	Ø37.3	Ø38.3	Acceptable/Unacceptable	
Track pin	g'	Ø	Ø36.65	Ø35.5	Acceptable/Unacceptable	Replacement

DIMENSIONS AND WEAR LIMITS OF ATTACHEMENT MOBILE JOINTS



RI14001-006Ea

1. Boom foot/Frame



RI14001-006Eb

Mark		Dimension CX210B-CX230B		Dimension CX240B	
		mm	in	mm	in
a (frame)	Standard	684	26.93	703.5	27.70
	Limit	692	27.24	711.5	28.01
b (boom)	Standard	681.5	26.83	706	27.80
	Limit	679.5	26.75	704	27.72
c (a - b) (clearance)	Standard	0.5 to 3	0.02 to 0.12	2.5 to 3	0.10 to 0.12
	Limit	Shim adjustment		Shim adjustment	
Ø d (shaft)	Standard	90	3.54	100	3.94
	Limit	89	3.50	99	3.90
Ø e (bushing)	Standard	90	3.54	100	3.94
	Limit	91.5	3.60	101.5	4.00

This as a preview PDF file from best-manuals.com



Download full PDF manual at best-manuals.com