

Shop Manual

KOMATSU XCENTRIC RIPPER

Serial numbers

JGXR 10-1

10001~

JGXR 15-1

10001~

JGXR 20-1

10001~

JGXR 30-1

10001~

JGXR 40-1

10001~

JGXR 50-1

10001~

JGXR 60-1

10001~

JGXR 80-1

10001~

JGXR 120-1

10001~



This shop manual is for Xcentric Ripper
For excavators, please refer to their shop manual.

KOMATSU

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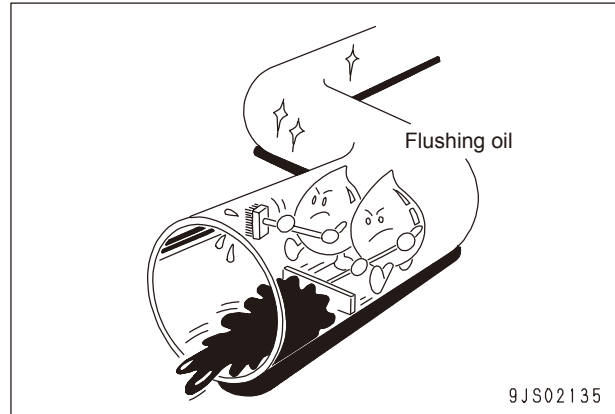


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6. Flushing operations

After disassembling the equipment or when changing the hydraulic oil with new one, flush the system to remove the contaminant and sludge left in the hydraulic circuit as well as the oil which includes them. Normally, flushing is performed twice. Primary flushing is performed by use of the flushing oil and the secondary flushing is performed by use of the specified hydraulic oil.



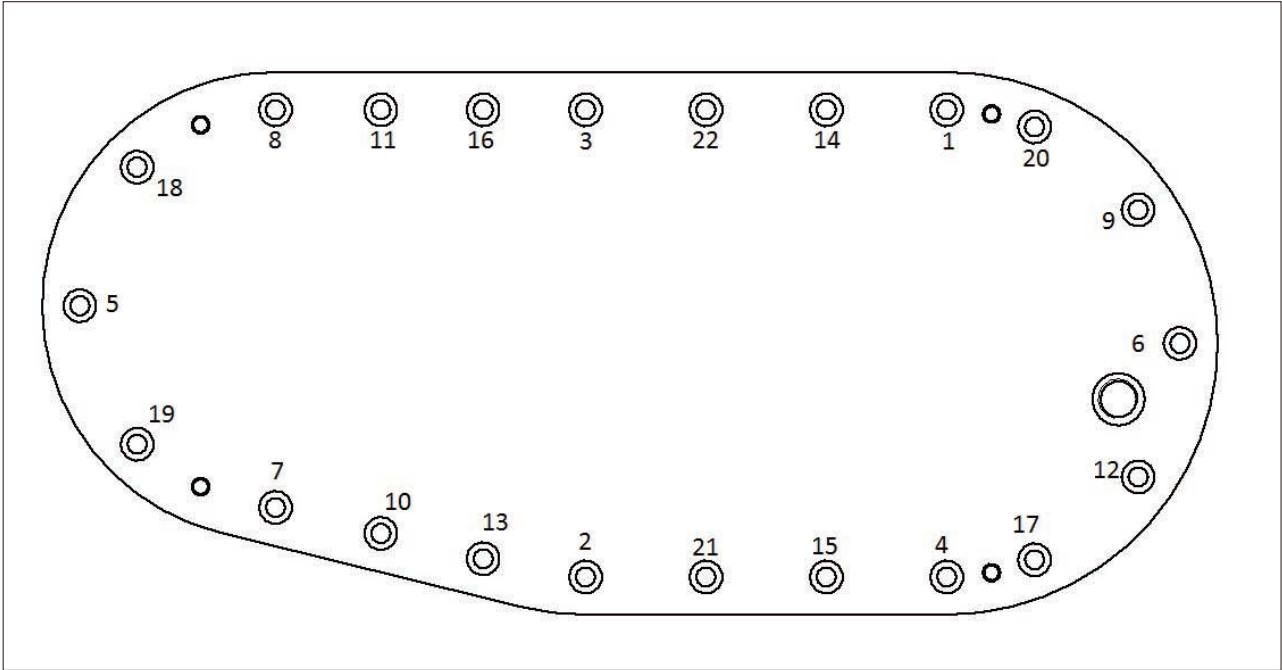
7. Cleaning operations

After repairing the hydraulic equipment (pump, control valve, etc.) or when the machine is in operation, perform oil cleaning to remove the sludge or contaminant in the hydraulic oil circuit. The oil cleaning equipment can remove the ultra fine (approximately 3 μm) particles that the filter built in the hydraulic equipment can not remove. So, it is an extremely effective device.

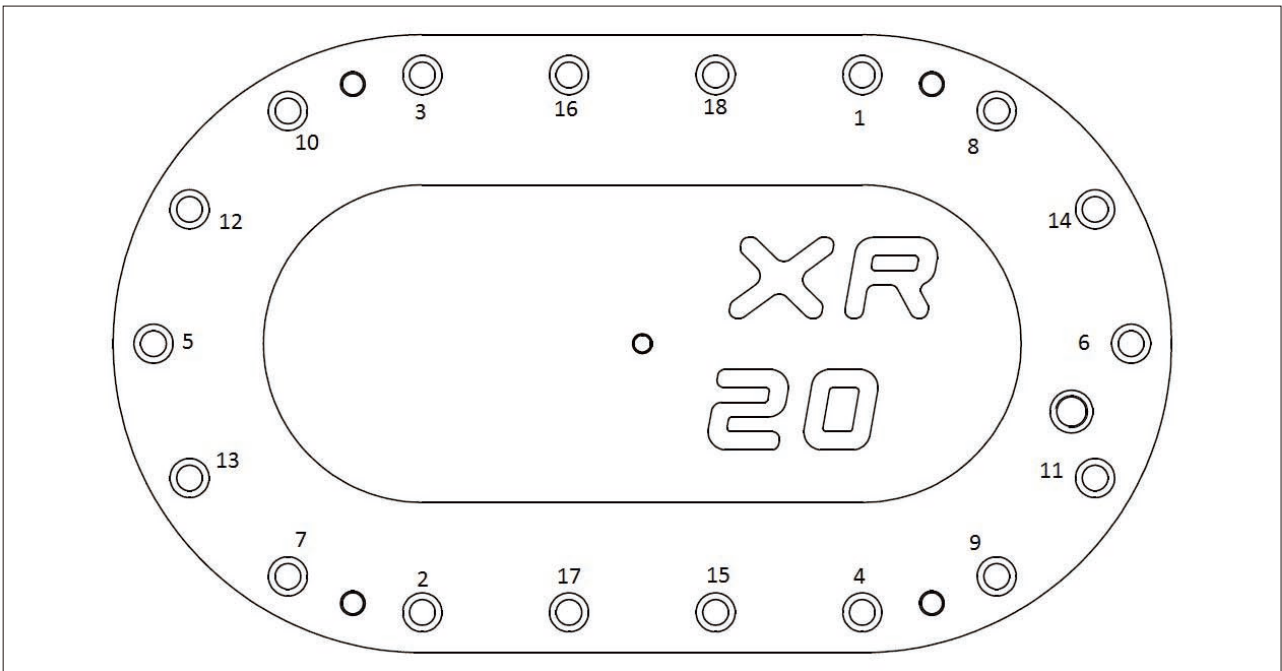
40 Troubleshooting

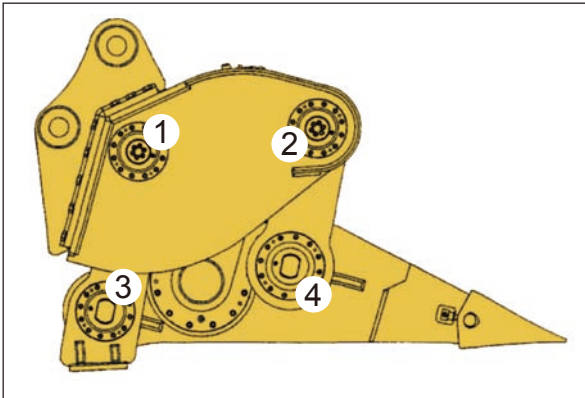
Gear housing cover screw tightening pattern

JGXR10

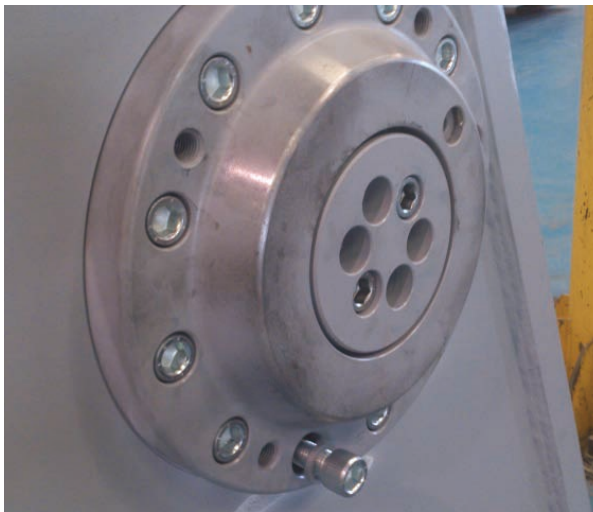


JGXR20





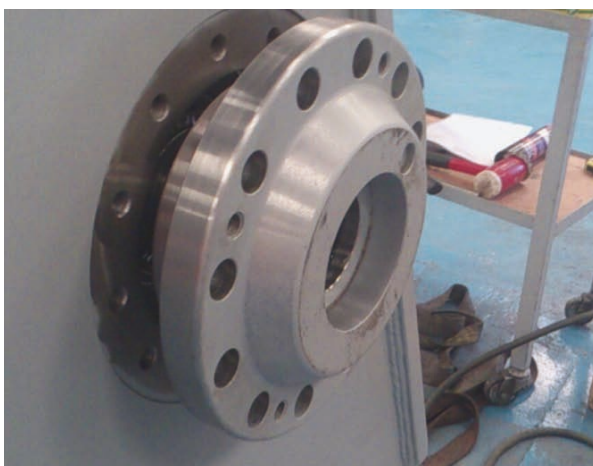
Removing order of pivot pin



Remove the upper front pivot pin locking plate.

Loosen and remove the Allen screws or hexagonal bolts (XR 10 & XR 15) holding the upper front pivot arm locking plate and remove the locking plate. The different models of rippers have a different amount of bolts holding the locking plate as follows:

Model	Allen key size (mm)
JGXR10	8mm
JGXR15 & JGXR20	5/16"
JGXR30 & JGXR40	3/8"
JGXR50	10mm
JGXR60 to JGXR120	14mm



Remove the upper front pivot pin cover.

Loosen and remove the Allen screws holding the upper front pivot arm pin cover and remove the pin cover. To remove the cover screw 2 long threaded bolts into the two threaded holes in the cover. Screw both bolts at the same time and at the same speed to remove the cover.

Model	Bolt size (mm)	Min Length (mm)

Inspection, replacement or repair

Thoroughly clean all items of the disassembled ripper. Inspect all removed items for wear or damage as follows:

Top bracket:

Thoroughly inspect the top bracket for any wear or damage in the quick coupling connections or excavator mounting pin holes. If any wear or damage is found this must be corrected before reassembly. Also inspect the top bracket for any cracks in the welding of the top bracket. If cracks are found these must be re-welded. Please see the welding instructions on page 70.

Ripper housing:

Inspect all threaded bolt holes for wear or damage to the threads. If any is found correct these before reassembling. Inspect the ripper housing for any cracks in the welding of the ripper housing. If cracks are found these must be re-welded. Please see the welding instructions on page 70.

Ripper arm:

Inspect all threaded bolt holes for wear or damage to the threads. If any is found correct these before reassembling. Inspect the tooth holder section of the ripper arm for damage caused by the tooth being loose on the tooth holder or by using the ripper with a broken tooth. If the tooth holder is worn beyond the limits a new tooth holder must be fitted. For instructions on how to carry out this repair please see page 70.

Eccentric gears:

Inspect the eccentric gears for damage to the teeth caused by non-replacement of the gear housing oil. If any damage is found the gears must be replaced with new gears. Inspect the tapered roller bearing inner and outer races and the bearing roller and cage assembly. If any damage is found the bearing, as an assembly must be replaced.

Ripper tooth:

Inspect the ripper tooth for cracks, if any are found the tooth must be replaced. Measure the tooth length, if it is below the maximum tooth length the tooth must be replaced (see page 72 for the tooth wear limits). Inspect the tooth retaining parts for wear or damage. Replace all parts that are worn or damaged.

Hydraulic motor:

The only part that can be replaced is the shaft seal. If this is leaking order a new seal from your dealer. If the motor was suspected of poor performance the motor must be returned to your nearest Parker dealer or replaced by a new motor.

Accumulator:

Inspect the accumulator rubber bags for cuts, tears or holes. If the bags are damaged a new accumulator must be installed.

Bolt, nuts and washers:

Inspect all bolts, screws, nuts and washers for thread damage, deformation, worn or damaged hexagons and worn or damaged Nord-Lock washers. Any part found to be damaged must be replaced.

Rubber seals:

The Viton seal for the eccentric gear housing cover and all quad rings from the pivot arms must be replaced before reassembly. **Do not reuse these items.**

Face seals:

Inspect the face seals from the pivot arms for damage to seal faces and the rubber rings of the face seals. If any are damaged they must be replaced by a face seal assembly. If one side of a face seal is damaged do not put it together with another face seal part as these will leak after reassembly.



Fill the gear housing with oil.

Fill the gear housing with ISO -VG46 hydraulic oil as per the quantities listed below:

Model	Oil quantity
JGXR10 & JGXR15	0.7 Litres
JGXR20	0.8 Litres
JGXR30	1 Litres
JGXR40	1.5 Litres
JGXR60	2 Litres
JGXR50, JGXR80, JGXR120	3 Litres



Install the drain/filler plug.

Install the drain/filler plug. The correct plug has a flat machined on the bottom four threads. This is for relieving the pressure inside the gear casing before removing the plug.



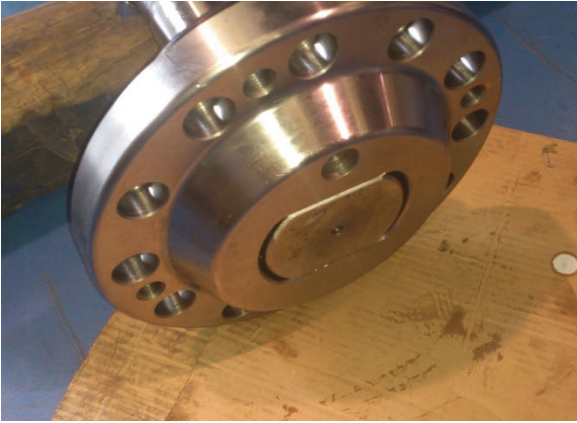
Tighten the filler plug.

Tighten the filler plug with a hexagon wrench.



Lift the ripper arm to the vertical position.

With a crane and a nylon sling or chain turn the ripper arm into the vertical position.



Clean the pin and cap.

With a clean cloth wipe off any remaining grease and anti-rust spray.



Install the tapered roller bearing on the pin.

Turn the pin upright and install the tapered roller bearing on the pin.



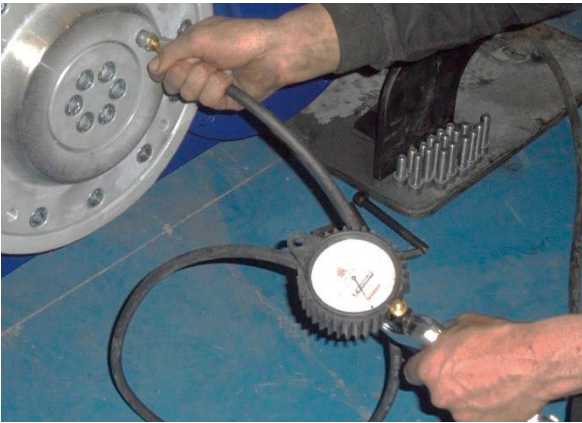
Push the bearing down.

Push the bearing down until it seats against the bearing spacer in the cap.



Install the inner bearing spacer.

Install an inner bearing spacer on the pin after the tapered roller bearing.



Attach the air pressure charging kit.

Attach the air pressure charging kit to the charging valve in the right hand pivot pin cover.

Charge the grease chamber to 8,5 bar (125 psi) for a minimum of 15 minutes to check for any leakage past the quad rings.

If any leakage is detected the pivot pin covers must be removed and the quad rings inspected for damage.

After checking for leakage, discharge the air pressure in the grease chamber, remove the charging valve and install the grease plug.



Position the upper pivot arm.

Before installing the upper front pivot arm pin it is necessary to position the pivot arm. Position a bar through the cover hole in the ripper housing and push the pivot arm forward.



Lock the pivot arm in position.

Whilst holding the pivot arm in position place a place a steel bar or Allen key in the retaining bolt hole at the nine o'clock position to keep the pivot arm in the correct position. Remove the steel bar used to push the pivot arm forward.



Install the upper front pivot arm pin.

Install the upper front pivot pin following the instructions for installing the lower rear pivot pin.

Remove the small bar retaining the pivot arm in position and install the pivot pin cover and locking plate.

Torque the cover retaining bolts on both covers and the pin cover lock plate screws to the correct torques.

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