

REPAIR MANUAL

CLAAS



***CLAAS ROLLANT 66
CLAAS ROLLANT 46***

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INTRODUCTION

This CLAAS REPAIR MANUAL has been prepared to assist all personnel concerned with the maintenance and service of CLAAS Round Balers and to help preserve their permanent working order.

The experience of our Service engineers has been compiled in this CLAAS REPAIR MANUAL. The illustrations show the procedure for the repairs, whilst the text gives the necessary instructions for the different adjustments to be made, the use of CLAAS Special Tools, etc. The major repairs are broken down in such a way that minor repairs and adjustments can be easily picked out and followed.

The CLAAS REPAIR MANUAL is filed in a folder which allows supplementary pages to be inserted as they are issued, ensuring that an updated manual is always at hand for reference.

To be sure, always compare settings and filling capacities with the specifications stated in the Operator's Manual which applies to the Round Baler.

CLAAS OHG
Service Department

INTRODUCTION TO THE CLAAS REPAIR MANUAL

This CLAAS REPAIR MANUAL is divided into main groups (see group index).

Pages and illustrations are numbered consecutively throughout each main group. Page numbering starts always with the number 1 in each group. The first figure at the bottom of each page refers to the main group whereas the second figure following the point indicates the page number within the main group.

Differences between the machine models are indicated by illustration are sub-titles or text headings. Where a service procedure applies to all the machines covered by this manual, no reference is made to machine designations.

Supplementary sections are numbered by an additional figure which is separated by a dash from the page number. Any supplements are to be inserted behind the corresponding main group and the table of contents updated accordingly.

The symbols are intended to assist in orientation where recurring service procedures are described. The meaning of the symbols is explained at the beginning of this manual.

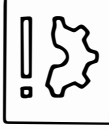
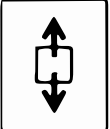
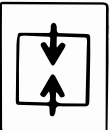
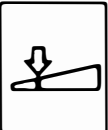
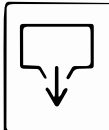
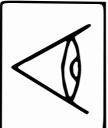
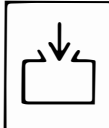
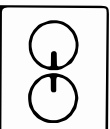
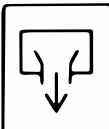
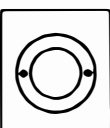
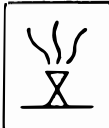
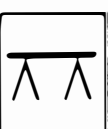
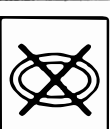
The section „GENERAL RECOMMENDATIONS FOR REPAIRS“ at the beginning of the manual contains useful practical hints. Read and follow these fundamental instructions – they are the basis for reliable service and durability of parts after repairs have been carried out.

The description of a particular service procedure can easily be found by referring to the table of contents of the appropriate main group.

KEY TO SYMBOLS

In this CLAAS REPAIR MANUAL a limited number of symbols from the DIN publication 30600 have been used, which was prepared by the German Standards Institution (DIN).

The meaning of the symbols will soon be learned by the user. The symbols help to quickly recognize recurring service procedures and they also help to communicate information shown by the illustrations.

	Remove, dismantle		Grease		Prevent damage to material
	Disassemble		Oil		Special tool
	Assemble		Adjust, set		Drain, Drain outlet
	Install, Mount		Visually check		Fill, Filler opening
	Mark		Unlock, release Secure		Overflow
	Balance		Lock Bound Seal using adhesives		Bleed
	Possibly reusable		Block up Support Hold		
	Renew on each assembly		Note direction of installation		

GENERAL RECOMMENDATIONS FOR REPAIRS

1. Identify the cause of the trouble, note all defective parts and take the necessary precautions to prevent accidents with the round baler.
2. Always shut off the tractor engine and remove the ignition key before carrying out any repairs on the round baler.
3. Use only genuine CLAAS spare parts and suitable CLAAS special service tools.
4. Always drain the oil before removing the transmission cases. Use a plastic or soft metal hammer to separate tight fitting parts.

5. Tensioning steel roller chains

Steel roller chains are correctly tensioned when, with a slight load on the tight span, the slack span can be deflected with the thumb midway between two sprockets by approx. 2% of the distance between the centre of the sprocket shafts. Check the tension of new chains more frequently.

Example: Distance between shaft centres = 500 mm
Deflection of slack chain span = approx. 10 mm

6. Self-locking bolts (with adhesive-filled micro capsules)

Renew self-locking bolts, e.g. Verbus-Plus/Imbus-Plus or similar bolts whenever they have been loosened. In exceptional cases, self-locking bolts may be reused up to three times. Always be sure to tighten self-locking bolts to the specified torque.

Always tighten self-locking bolts with adhesive-filled micro capsules quickly to the specified torque. When removing these bolts, always unscrew them quickly all the way out. These self-locking bolts with adhesive-filled micro capsules must not come into contact with sealing compounds (e.g. Eppler 33 or similar products).

In individual cases, regular bolts with locking compound may be used instead of self-locking bolts, but only at points where it is possible to heat the connection to approx. 200° C (392° F) before removal. Ensure always that the regular bolts conform to the specified grades (8.8/10.9 etc.).

Self-locking bolts with adhesive-filled micro capsules may only be used where the operating temperature will not exceed +90° C (194° F).

After 24 hours' curing at +20° C (68° F), these connections can be subjected to the full load. The curing time can be shortened (e.g. to 15 minutes at +70° C; 158° F) by heating the joint.

7. Liquid locking compound (e.g. Casco 118/Loctite 75 or similar)

Use liquid locking compound only where expressly recommended by the manufacturer.

Correct application: All metal surfaces to which the liquid locking compound is to be applied must be absolutely free from grease; use the „Aktivator“ which is included in the workshop package for cleaning.

Allow the „Aktivator“ on the metal surfaces to dry before applying the liquid locking compound. Particularly in blind holes, care must be taken that no residues of the „Aktivator“ cleaning agent are left.

When making bolted connections with liquid locking compound, try to apply the compound to the inside thread only (nuts) and in small amounts (drops). When using the locking compound in blind holes, apply the compound only to the bottom end of the thread by wetting a length of thread roughly equal to the diameter of the bolt (1 x nominal bolt diameter). The same applies to the threads of any extra long female connectors. If the locking compound is applied to the thread of the bolt or at the top end of a female thread, the compound will be spread over the full length of the thread when the bolt is screwed in. As a result, an excessive breakaway torque would be required to loosen the bolt – should this become necessary – and the bolt could break.

Connections made with liquid locking compound can be easily loosened after heating them to approx. 200° C (392° F).

8. Correct installation of lock collar bearings

The lock collar bearings are tightened by pushing the eccentric locking collar over the extended inner ring of the bearing and rotating the locking collar in the direction of shaft rotation. This clamps the bearing to the shaft.

It is advisable to coat the inner ring and the shaft with semi-fluid lubricant NLGI grade 00 (e.g. Shell Retinax G or its equivalent) before mounting the bearings. This will facilitate the subsequent removal of the bearings, should this be necessary.

The locking collar is tightened by applying light hammer blows to a punch and tapping the collar in the direction of shaft rotation until a moderate lock is obtained. Then tighten the set screw. Loosen the bearing by tapping the eccentric collar in the opposite direction to the direction of shaft rotation.

9. Olive-type connectors on hydraulic lines

After all preassembly work and for olive-type fittings supplied ready assembled from the factory, final assembly is performed in the corresponding, well-oiled female connector by tightening the union nut 1/2 turn beyond the point of the noticeable rise in effort required.

Preassembly:

- a) Saw off the pipe at right angles. DO NOT use pipe cutters! Pipe cutters can cut the wall of the pipe at an angle and severe burrs are formed on the inside and outside of the pipe. Lightly deburr the end of the pipe on the inside and outside (but do not chamfer) and clean. For pipe elbows, the length of the straight pipe end must be at least twice the thickness of the union nut before the start of the bending radius.
- b) Push union nut and olive onto the pipe.
- c) Push the pipe up to the stop into the female connector and tighten the union nut until the olive contacts the pipe (the pipe must not turn with the nut!) This point is recognisable by the increase in effort required.
- d) Tighten the union nut 1/2 turn beyond the pressure point.
- e) Check the opening in the cutting face: A noticeable collar must fill out the space in front of the face of the olive. The olive may turn but must not move axially.

Final assembly:

Push the preassembled pipe into the well-oiled female connector and tighten the union nut until a noticeable increase in effort is felt, then tighten by a further 1/2 turn.

Subsequent reassembly:

Each time the olive-type connector is loosened, the union nut must be retightened without any great application of force. Leaks at olive-type connector: If the pipe connection leaks, first loosen the union nut until a little oil escapes from the connection, then tighten the union nut again as described above.

10. Some advice for speedy and correct repair:

- a) Mark machine parts before removal or disassembly to ensure that they are reinstalled on the correct side and correctly balanced.
- b) Fit roll (expansion) pins always with their gap pointing to the load side. If fitted with 1/4 turn from this position, they will come loose, fall out or shear off.
- c) Always renew cotter pins, split pins, locking wires, locking plates, tab washers and lock washers during repairs.
- d) Fit lubricated ball and sleeve bearings coated with high quality grease.
- e) Ensure that chain sprockets and V-belt pulleys are correctly aligned.
- f) Always ensure the utmost cleanliness whenever working on the hydraulic system.
- g) Do not mix different types and grades of oil.
- h) After carrying out the repair, run or operate the machine or machine assemblies at low speed at first.

11. Inform the machine owner of the cause of damage, the extent of consequential damage and the machine parts involved.

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Feed Rake***
- 5 Baler Forming Rollers***
- 6 Net Wrapping System***
- 7 Twine Tying
Mechanism***
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1

Specifications

1 SPECIFICATIONS

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SPECIFICATIONS – ROLLANT 66

PTO speed	540 rpm
Universal drive shaft	wide angle joint – tractor side over-run clutch – machine side
Drawbar	height adjustable Tightening torque for mounting bolts: M 20 = 370 Nm (273 ft-lb) M 24 = 640 Nm (472 ft-lb)
Tyres	11.5/80-15.3 6 PR 15.0/55-17 10 PR
Tyre pressure	2.0 bar (29 psi) 2.0 bar (29 psi)
Wheel tread	2040 mm (80.3 in.) 2070 mm (81.5 in.)
Tightening torque for wheel bolts	150 Nm (110 ft-lb)
Capacities	
Angle drive gearbox	2.5 litres of hypoid transmission oil SAE 90 to (MIL-L-2105 B) API-GL-5-90
Safety Features	
Setting of pressure relief valve	240 ⁺¹⁰ bar Shear bolt M 8 x 30 DIN 931-8.8
Electrical remote control and lighting	8 A fuse

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