



CROP TIGER 40 TERRA TRAC STD/MID

Repair Manual

Original Repair Manual

Handling the manual

This repair manual should help you to maintain ongoing operational capacity. The high value of the harvesting machine is ensured through careful maintenance and technical monitoring by customer service.

This repair manual is a compilation of our service technician's and shop-floor experience.

The picture sequence demonstrates the steps in a repair procedure. The text provides you with the information required for making adjustments, using special tools and further similar information.

Essential repairs are listed in such a way that even individual and small repairs can be easily found and followed.

Supplements are added to reflect the ongoing technical development of the machines and the manual is thereby continuously being updated as a reference book.

As a precaution, always compare the setting values and fill quantities with the most recent operator's manual and the technical systems documents for the respective machine.

Texts and figures





Pictures and graphics apply to all models covered by this manual. Differences are highlighted by captions below the figures.

In general, texts are short and apply to all models covered by this manual. Differences are highlighted by intermediate headings.

Different text categories can be easily identified by the formatting. The following different formattings are distinguished:

Formatting	Meaning	Description
Description	Descriptive text	Further information on the subject.
- Procedure instructions	Process	Operations which must be carried out one after the other.
<i>Result</i>	Result	Result of the processes carried out.

References can be easily identified by corresponding symbols. The following symbols are distinguished:

Symbol	Meaning	Description
	See index	The  symbol indicates that further information on this subject is available in other sections of this manual.
	See the index of the Operator's Manual in question	The  symbol indicates that further information on this subject is available in the Operator's Manual of the machine or of the implement in question.

Document structure based on the assembly structure

The chapters of the present manual are subdivided into assemblies as far as contents permit. The structure of these assemblies is the same in all chapters.

Different product groups have different assembly structures. CLAAS makes every effort to keep this assembly structures identical in any document.

Search and find

Due to the constantly recurring assembly structure, the subject in question can be quickly found using the table of contents or the header of this manual.

In addition, the index provided in this manual is a useful tool for locating a subject. The index can be found on the last pages of this manual.

Directions

Front, rear, right and left refer to the direction of forward travel. If necessary, a direction arrow is used for indicating the direction of travel in figures.

Abbreviations

Abbreviation	Description
bar	bar (unit for pressure)
approx.	approximately
cm	Centimetre
DIN	German Standardization Institute
EC	European Community
EN	European Standard
GPS	Satellite navigation system
h	Hours
Ident no.	Identification number of machine
ISO	International Standardization Organisation
kg	Kilogram
kPa	Kilopascal
km	Kilometre
km/h	Kilometres per hour
m	Metre
mm	Millimetre
Nm	Newtonmetre
psi	pound per square inch
StVZO	German Regulations Authorizing the Use of Vehicles for Road Traffic
e.g.	for instance
%	percent
°C	degrees Celsius (unit for temperature)

Technical terms

Technical term	Description
Recycle	Re-use of used, defective or no longer required products
Season	Recurring periods of a year
Ignition TDC	Ignition top dead centre (diesel engine piston position)
Overlap TDC	Valve overlap top dead centre (diesel engine piston position)
BDC	Bottom dead centre (diesel engine piston position)

Your CLAAS Service Department

Validity of manual

This manual applies to the following machine / front attachment:

Designation	Type	Serial number	
		from	to
CROP TIGER 40 Terra Trac STD	070	07070001	–
CROP TIGER 40 Terra Trac MID	070	07070001	–

Diesel engine

Overview of TATA 497 TC 48 Diesel engine



Overview

Item	Designation
1	TATA 497 TC 48 Diesel engine

WARNING

Lifting heavy components

Risk of death or serious injury

- ▶ Use a lifting device with sufficient bearing load.
- ▶ Attach the lifting devices to the engine at the intended points.
- ▶ Protect lifting accessories against sharp corners and edges, for example using protectors.

Environment!

Lubricants and fuel end up in the environment.

Environmental pollution.

- ▶ Lubricants and fuel must be collected and stored in suitable containers and disposed of in a way that is harmless to the environment and in accordance with existing anti-pollution regulations.

CAUTION

Contact with hot liquids or machine parts.

Danger of burns

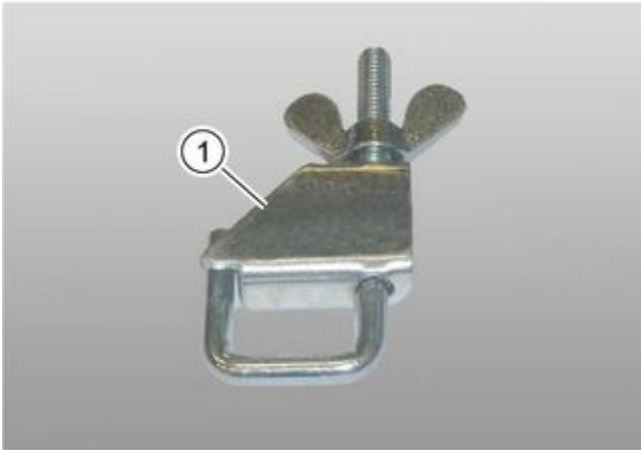
- ▶ Wear suitable protective clothing.
- ▶ Let liquids or machine parts cool down.
- ▶ Comply with instructions.

Removal of Diesel Engine:

Work preparation

- ▶ Stop and secure the engine.
- ▶ Suitable lifting device.
Load-bearing capacity **510 kg min.**
- ▶ Suitable lifting gears (ropes and shackles) with appropriate load-bearing capacity.
- ▶ Oil collecting tank.
- ▶ Coolant collecting tank.
- ▶ Disconnect the battery isolating switch.

Special tool

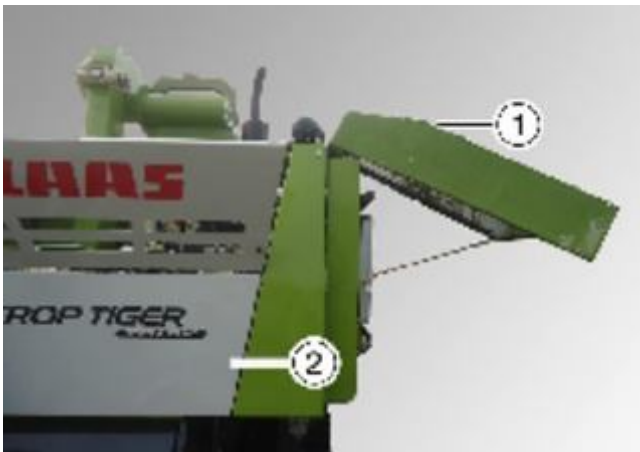


♣

Item	Special tool / part no.	Pcs.
1	Hose clamp 00 0181 867 0	1

- ▶ Let the diesel engine cool down.
- ▶ Disconnect the battery isolating switch.
- ▶ Disconnect the battery.
- ▶ Drain the coolant.
- ▶ Drain the engine oil.

Panels and flaps:



- ▶ Remove screws from the flap (1).
- ▶ Remove rear panel (2) by removing screws.

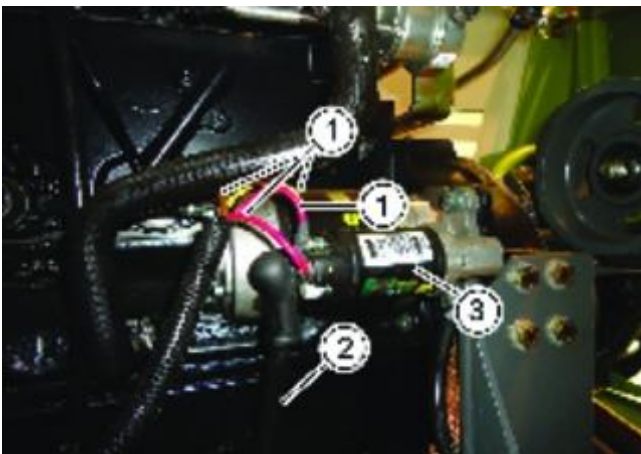


- ▶ Remove screws (1) and disconnect forked rod.
- ▶ Unscrew (4) and remove belt protector (2) and loose the power band belt (3).
- ▶ Make the engine free from V-belt pulley.



- ▶ Power band belt loosen (1) and forked rod (2) free from fittings.

Starter relay:



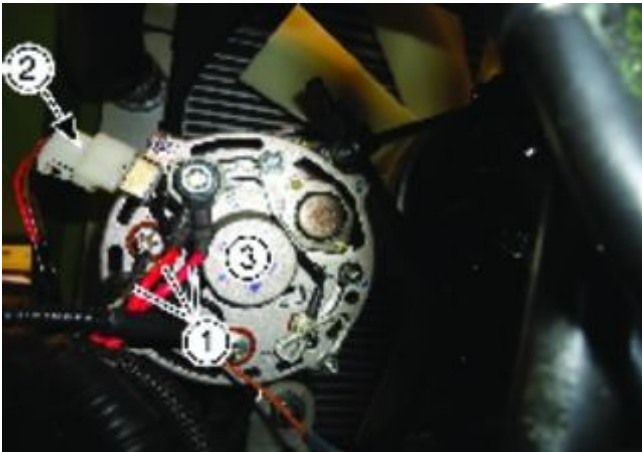


- ▶ Disconnect wiring harness (1) from starter relay (3).
- ▶ Disconnect Sleeve (2) from starter relay (3).

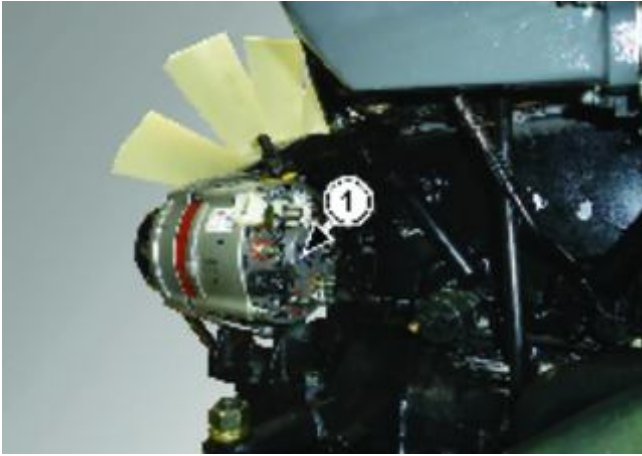


- ▶ Starter relay (1) is free from cables.

Alternator:



- ▶ Disconnect power cables (1) from alternator (3).
- ▶ Unplug the starter cable (2) from alternator (3).



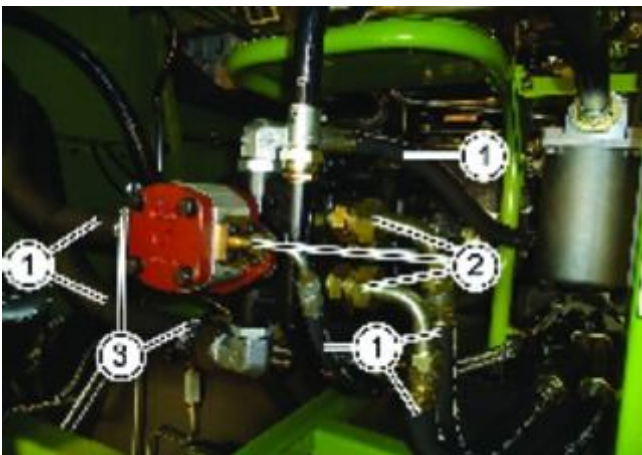
- ▶ Alternator (1) is free from cables.

EGR valve:



- ▶ Unplug the cable (1) from EGR valve (2).
- ▶ Make the engine free from electric system.

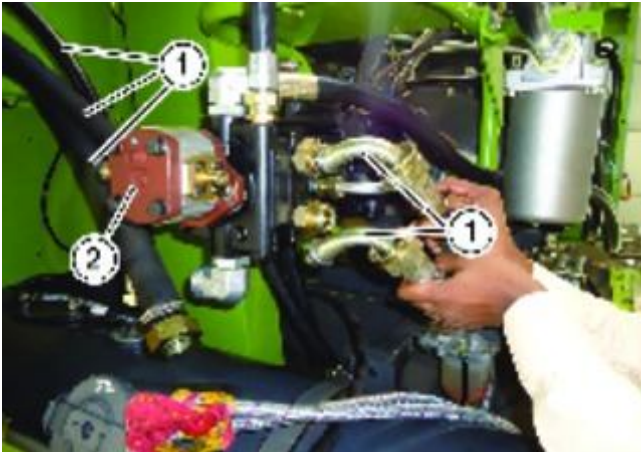
Hydraulic hoses:



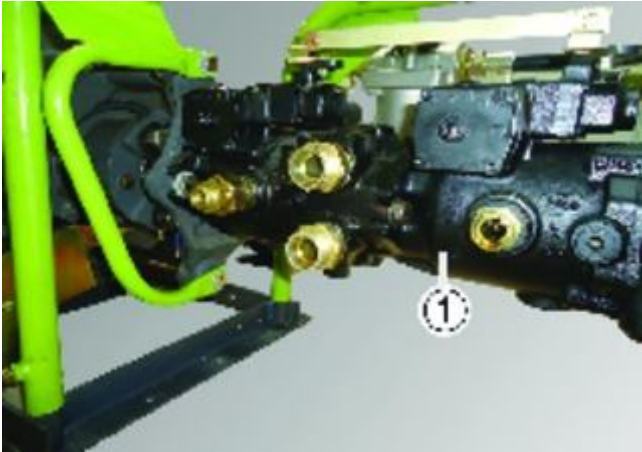
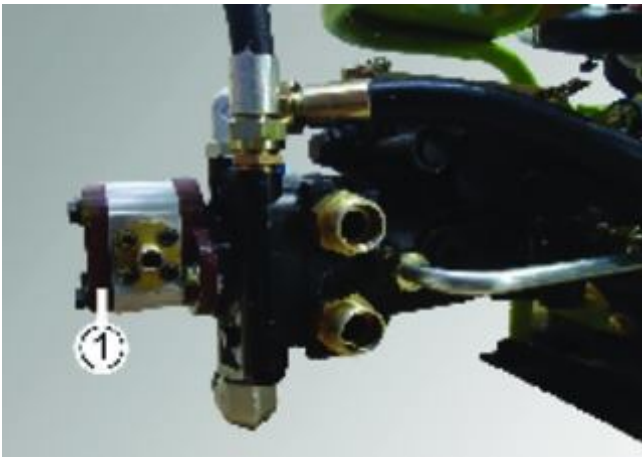
- ▶ Unscrew hydraulic hoses (1) from screw fittings (2).
- ▶ Unscrew (3) and remove the hoses (1) from angle union.



- ▶ Unscrew hydraulic hoses (1) from screw fittings (2).

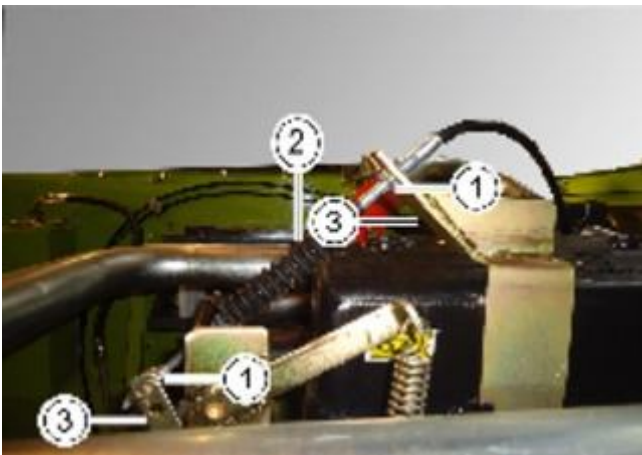


- ▶ Separate hydraulic hoses (1) from hydraulic pump (2).
- ▶ Collect any escaping liquid and dispose it properly.



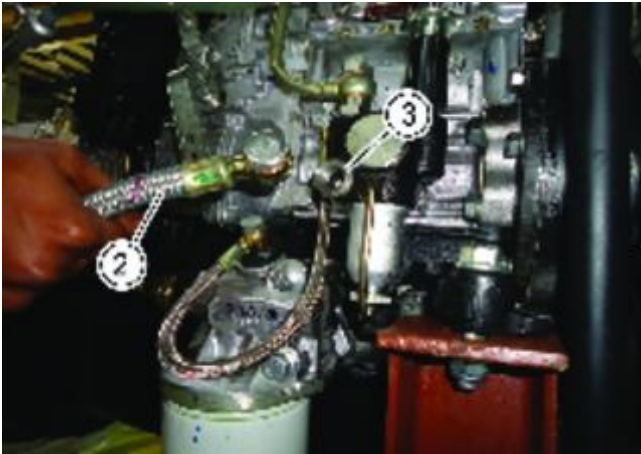
► Make hydraulic pump (1) free from hoses.

Accelerator rod:



- ▶ Unscrew the nuts (1) and loosen the accelerator rod (2).
- ▶ Remove the accelerator rod (2) from the clamps (3).

Diesel pipe:

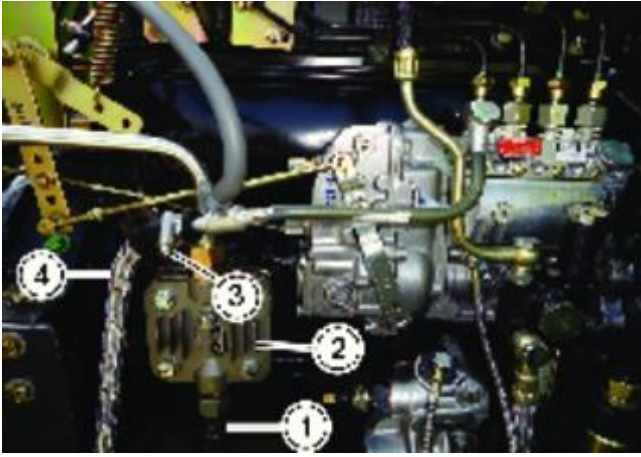


- ▶ Unscrew the diesel pipe (1) and remove the hose (2).
- ▶ Remove diesel hose (2).
- ▶ Collect any escaping fuel and dispose it properly.
- ▶ Seal the opening (3) tightly.

Threaded fork:



- ▶ Unscrew the bolt attached to threaded fork (1) and to the engine frame and loose it.
- ▶ Unscrew the bolts (2) and loose the threaded fork (1).

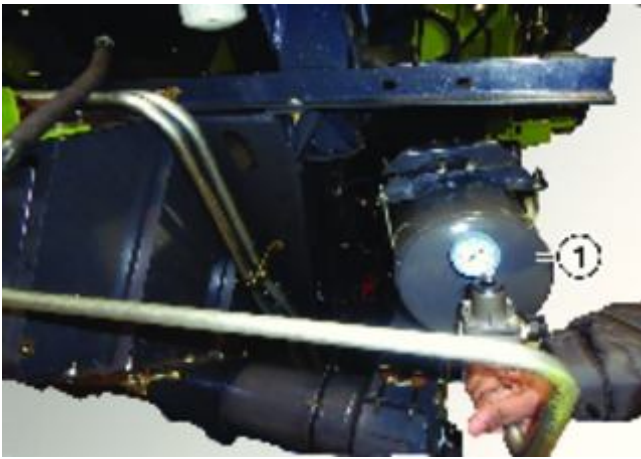
Air pump:

- ▶ Unscrew (3) and remove pipe (4) from air pump (2).
- ▶ Unplug the hose pipe (1) from air pump (2).
- ▶ Air pump (2) is free from hoses (1) and (3).

Air reservoir:

Item	Designation	Value	Torque
1	Hexagonal head screw	M8 x 25	24,5Nm

- ▶ Overview of air reservoir (2).
- ▶ Unscrew hexagonal head screws (1) fixed to the engine frame (3).



- ▶ Weight of air reservoir:
Approx. 10KG
- ▶ Remove the air reservoir (1).

Torque fittings:

Torque values for hexagonal head screws connected to engine frame.

- ▶ Remove all the engine frame hexagonal head screws with proper tools.

Item	Designation	Value	Torque
1	Hexagonal head screw	M8 x 25	24.5Nm
2	Hexagonal head screw	M10 x 30	48.5Nm
3	Hexagonal head screw	M12 x 35	83.5Nm

Installation:



Work Preparation:

- ▶ Replace with new parts in necessity and take down the part numbers.
- ▶ Preparing a parts change and release information when installing a **new** diesel engine:
 - ▶ Take down the engine number of the **new** diesel engine.
 - ▶ Open CLAAS Extra.Net / Service Online.
 - ▶ Write the parts change and release information for the machine.

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