SERVICE MANUAL

B90B / B95B / B95BLR / B95BTC / B110B / B115B

Backhoe Loader

Part number 87643850C
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NEW HOLLAND CONSTRUCTION

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B90B
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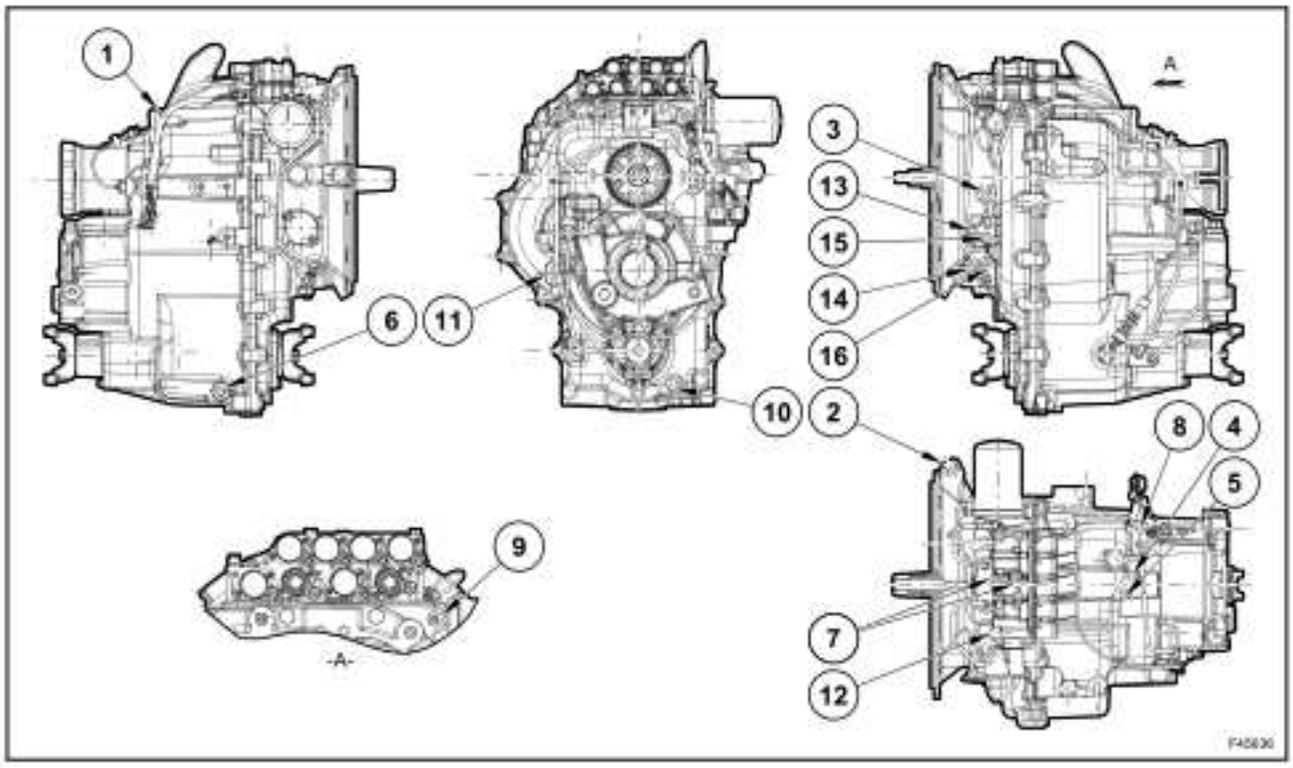
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4WS



REF.	DIMENSION	USE	NOTES - MISCELLANEOUS
1	7/8" - 14 UNF	Oil inlet from cooler	
2	7/8" - 14 UNF	Oil outlet to cooler	
3	9/16" - 18 UNF	Check port for torque converter input pressure	3 ÷ 9 bar (43.5 ÷ 130 psi)
4	9/16" - 18 UNF	Forward gear pressure check port	13.5 ÷ 16.5 bar (196 ÷ 239 psi) 0.3 bar (4.3 psi) = maximum pressure in neutral position
5	9/16" - 18 UNF	Reverse gear pressure check port	13.5 ÷ 16.5 bar (196 ÷ 239 psi) 0.3 bar (4.3 psi) = maximum pressure in neutral position
6		Oil drain plug	
7	9/16" - 18 UNF	Oil pressure delivery to differential lock	14 ÷ 17 bar (203 ÷ 246 psi)
8	9/16" - 18 UNF	Lubrication pressure check port (from cooler) Oil outlet to brake tank	1 ÷ 5 bar (14.5 ÷ 72.5 psi) forward/reverse gear 1 ÷ 5 bar (14.5 ÷ 72.5 psi) neutral position
9	9/16" - 18 UNF	Brake oil pressure delivery	14 ÷ 17 bar (203 ÷ 246 psi)
10	9/16" - 18 UNF	Oil return	
11	9/16" - 18 UNF	Oil level check port	
12	9/16" - 18 UNF	Oil main pressure check port	14 ÷ 17 bar (203 ÷ 246 psi)
13	1/8" - BSP	Lubrication check port	
14	1/8" - BSP	Check port of 1st gear	
15	1/8" - BSP	Check port of 2nd gear	
16	1/8" - BSP	Check port of 4th gear	

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TROUBLESHOOTING

PRELIMINARY CHECKS

When troubleshooting, the pressure and flow rate test must be carried out in a systematic manner and the results analyzed.

In this way, the trouble may be identified immediately and accurately.

If short-cuts, assumptions and guesses are made, unnecessary component disassembly or replacement could result.

Follow the step-by-step procedures outlined below.

As a first step in the fault finding procedure, several preliminary checks should be made.

These checks are important because, once they have been performed, they need no longer be considered as a possible cause of the immediate or reported malfunction.

Check that the hydraulic oil is at the correct level and of the correct specification.

Check the loader, backhoe or any additional accessory such as hydraulic bucket, hammers etc., for correct assembly or installation and additionally for signs of external damage that might cause gross misalignment of structural members.

Check in more detail for other mechanical damage such as kinked, twisted, worn or decayed hoses, damaged cylinders and bent elements.

Do not forget to check underneath the unit for damaged steel tubes, particularly if the unit has been known to have operated in arduous conditions, been grounded, or bogged down.

Ensure optimum operating temperature of the hydraulic oil is achieved.

Perform the system pressure and rear pump relief valve pressure tests.

The above-described preliminary checks assume that the failure is not linked to the engine performance.

Having performed these checks and failed to locate the cause of the malfunction, the following procedures should be adopted:

- if possible, operate the backhoe attachment and make notes of its operating characteristics. Move each cylinder control lever so that the cylinders move from the fully extended to the fully retracted position;
- compare the operating characteristics in the preceding stage with the malfunctions listed hereunder.

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CONDENSER

The condenser (1), located at the front of the machine in front of the engine radiator consists of a number of turns of continuous coil mounted in a series of thin cooling fins to provide a maximum of heat transfer in a minimum amount of space.

The condenser receives the hot, high pressure coolant vapour from the compressor.

The hot vapour passes through the condenser coils and outside air is drawn through the condenser by the engine cooling fan.

Heat moves from the hot coolant vapour into the cooler outside air flowing across the condenser coils and fins.

When the coolant vapour reaches the pressure and temperature that will induce a change of state, a large quantity of heat is transferred to the outside air and the coolant changes to a high pressure warm liquid.

The warm liquid coolant continues onto the receiver/drier where it is filtered and desiccated, to remove any moisture, before passing through an outlet line to the thermostatic expansion valve.



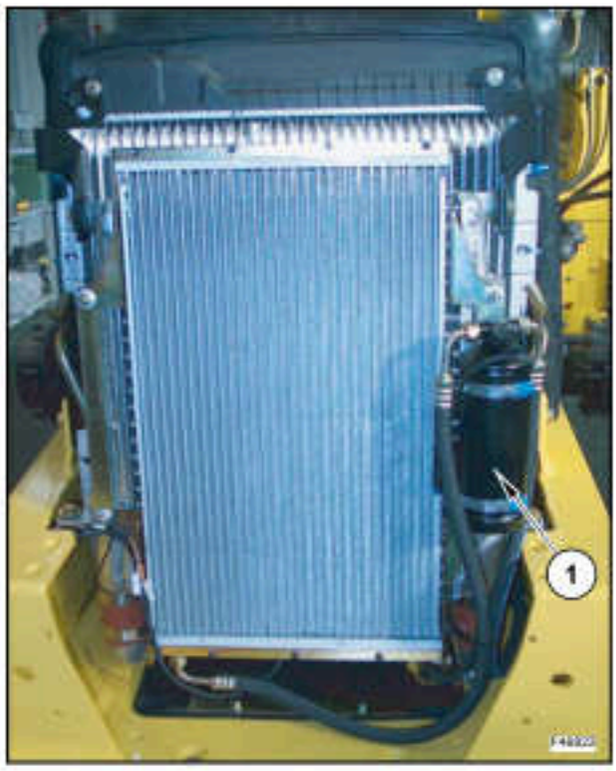
RECEIVER DRYER

The receiver/dryer (1) stores the liquid coolant to make sure that a steady flow to the expansion valve is maintained also under extremely different operating conditions.

The drier contains a desiccant (molecular sieve) which absorbs any moisture within the system, and a filter which prevents the entry of foreign particles.

NOTE: *any moisture in the air conditioning system is extremely harmful. Moisture not absorbed by the dehydrator will circulate with the coolant and droplets may collect and freeze in the thermostatic expansion valve orifice. This action will block the coolant flow and stop the cooling action. Moisture will also react with coolant HFC 134a and the lubricant to form a corrosive acid.*

The desiccant can only absorb a limited amount of moisture before reaching saturation point. Because of this, after any system component replacement or repairs requiring entry into the system, the receiver/dryer should be replaced.



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LOADER BUCKET CYLINDER REMOVAL (B95BTC - B115B)

Move the machine to a level and firm ground.

Place the bucket firmly on the ground.

Relieve the residual pressure in the system by moving the loader control lever through all operating positions.

Support the cylinder using a sling and a suitable support.

Disconnect the hoses.

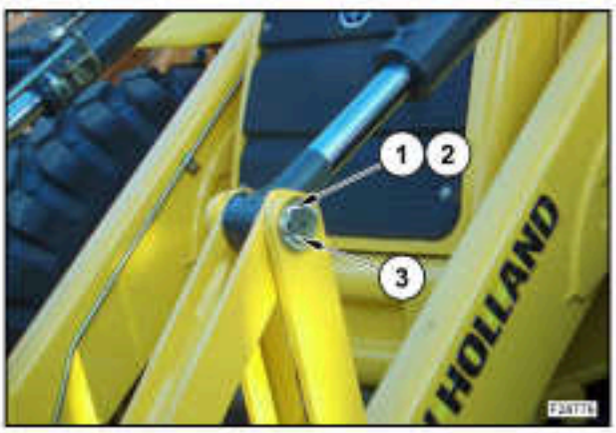
Cap or plug all exposed openings.



Support the bucket linkage and rods.

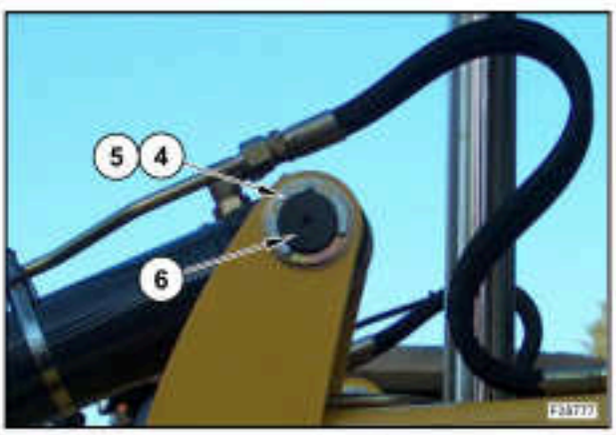
Remove the snap ring (1) and the spacer (2).

Hammer to slide out the pin (3).



Remove the stop ring (4) and the shim (5).

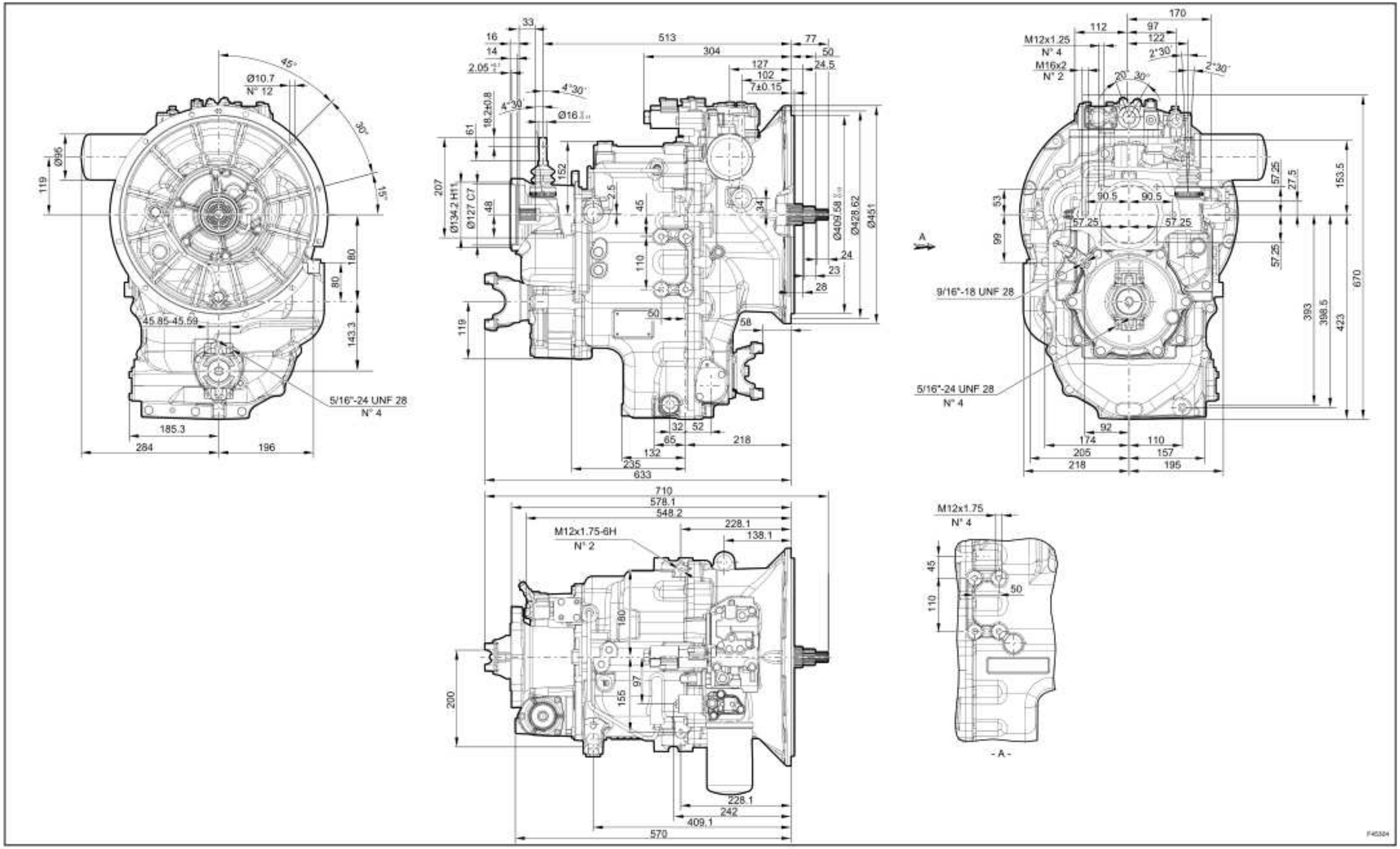
Hammer to slide out the pin (6).



Remove the loader bucket cylinder.

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