SERVICE MANUAL

B90B / B95B / B95BLR / B95BTC / B110B / B115B

Backhoe Loaders

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NEW HOLLAND CONSTRUCTION

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TROUBLESHOOTING

TROUBLE	POSSIBLE CAUSE	ACTION
Wheel vibrations.	Incorrect installation.	Correct the installation.
	Axle faulty.	Inspect and repair the axle.
	Wrong weight distribution.	Distribute the weight differently.
	Overload.	Remove the excessive load.
	Incorrect tyre rotation radius.	Replace the tyre or adjust pressure on both tyres.
	Axle beam bent.	Replace the axle beam.
Tyre resistance.	Incorrect installation.	Correct the installation.
	Axle faulty.	Inspect and repair.
	Wrong weight distribution.	Distribute the weight differently.
	Overload.	Remove the excessive load.
	Incorrect tyre rotation radius.	Replace the tyre or adjust pressure on both tyres.
	Axle beam bent.	Replace the axle beam.
Broken axle shaft.	Incorrect installation.	Correct the installation.
	Axle faulty.	Inspect and repair.
	Wrong weight distribution.	Distribute the weight differently.
	Overload.	Remove the excessive load.
	Incorrect tyre rotation radius.	Replace the tyre or adjust pressure on both tyres.
	Axle beam bent.	Replace the axle beam.
Difficult steering; the machine travels in a straight line while steering.	Incorrect installation.	Correct the installation.
	Axle faulty.	Inspect and repair.
	Wrong weight distribution.	Distribute the weight differently.
	Overload.	Remove the excessive load.
	Incorrect tyre rotation radius.	Replace the tyre or adjust pressure on both tyres.
	Bent or broken axle shaft.	Replace the axle beam.
No differential action; jams during steering.	Incorrect installation.	Correct the installation.
	Bent or broken axle shaft.	Replace the axle beam.

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TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	ACTION
Wheel vibrations.	Incorrect installation.	Correct the installation.
	Axle faulty.	Inspect and repair the axle.
	Wrong weight distribution.	Distribute the weight differently.
	Overload.	Remove the excessive load.
	Incorrect tyre rotation radius.	Replace the tyre or adjust pressure on both tyres.
	Axle beam bent.	Replace the axle beam.
Tyre resistance.	Incorrect installation.	Correct the installation.
	Axle faulty.	Inspect and repair.
	Wrong weight distribution.	Distribute the weight differently.
	Overload.	Remove the excessive load.
	Incorrect tyre rotation radius.	Replace the tyre or adjust pressure on both tyres.
	Axle beam bent.	Replace the axle beam.
Broken axle shaft.	Incorrect installation.	Correct the installation.
	Axle faulty.	Inspect and repair.
	Wrong weight distribution.	Distribute the weight differently.
	Overload.	Remove the excessive load.
	Incorrect tyre rotation radius.	Replace the tyre or adjust pressure on both tyres.
	Axle beam bent.	Replace the axle beam.
Difficult steering; the machine travels in a straight line while steering.	Incorrect installation.	Correct the installation.
	Axle faulty.	Inspect and repair.
	Wrong weight distribution.	Distribute the weight differently.
	Overload.	Remove the excessive load.
	Incorrect tyre rotation radius.	Replace the tyre or adjust pressure on both tyres.
	Bent or broken axle shaft.	Replace the axle beam.

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6. "CRAB" (4WS) STEER INDICATOR LAMP
   This lamp turns on when crab steer mode is selected and phased.

NOTE: *if the three lamps turn on at once, this means there is a problem with the electric circuit. Consult your Dealer.*

7. TACHOMETER
   The tachometer shows travel speed in kilometres per hour (km/h) and miles per hour (mph).
8. ROTATING BEACON SWITCH
   This switch is used to turn the rotating beacon on or off.
9. LIGHT SWITCH
   This switch has three positions:
   - The first position is OFF (control lamp off).
   - Second position, by pressing the symbol side (first click) the instrument cluster panel is powered, the side lights and the low beam indicator lamp are turned on (control lamp on).
   - Third position, by pressing the symbol side again (second click), the high beams are enabled and the low beams and the low beam indicator lamp are turned on (control lamp on).
10. HAZARD LIGHT SWITCH
    Press the control down to locked position. The direction indicators and the control will flash simultaneously. Press the control down again to turn off the direction indicators and the indicator lamp.
11. HAND-HELD AUXILIARY HYDRAULIC ATTACHMENT SWITCH (Optional)
    This switch has two positions:
    - The first position is OFF (control lamp on).
    - The second position is ON and enables the auxiliary hydraulic attachments (control lamp off).
12. 2WD/4WD SWITCH
    This switch is used to engage or disengage the 4WD function.
    This switch has two positions:
    - First position (powershuttle) (by pushing button on the right): rear wheel drive and braking on rear wheels for all gears (lamp off).
    - First position (powershift) (by pushing button on the right): rear wheel drive with braking only on rear wheels (only in first and second gear) (lamp off); four wheel drive and braking (in third and fourth gear) (lamp on).
    - Second position (by pushing button on the left): 4 wheel drive and braking on 4 wheels (lamp on).
13. MANUAL MODE SELECTION SWITCH (Powershift transmission)
    In situations where manual gearshifting (up or downshift) is required, the automatic gearshift of the powershift transmission can be overridden by means of this switch.

NOTE: *changing gears up or down must always be done using the powershift transmission lever.*

    When the manual mode is no longer required, place the switch back to the OFF position to return to automatic gearshifting.

13. QUICK COUPLER SWITCH (B95BTC)
    The switch has a central neutral position. By pressing the switch to the left, the bucket is released. By pressing the switch to the right, the bucket is locked.

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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.



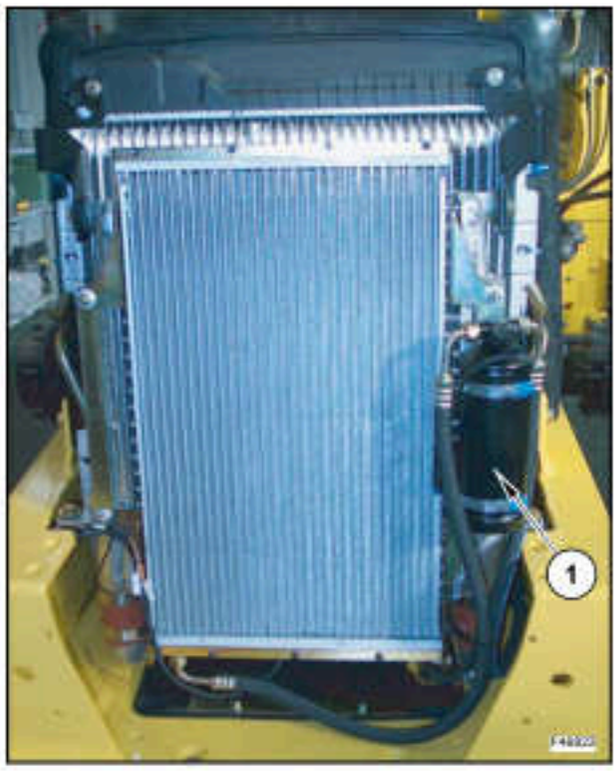
RECEIVER DRYER

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.

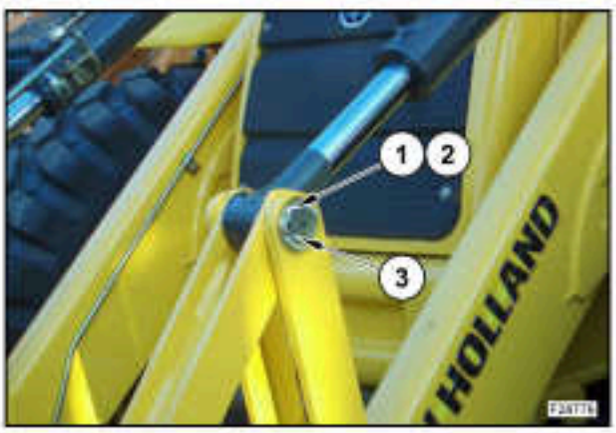
Cap or plug all exposed openings.



Support the bucket linkage and rods.

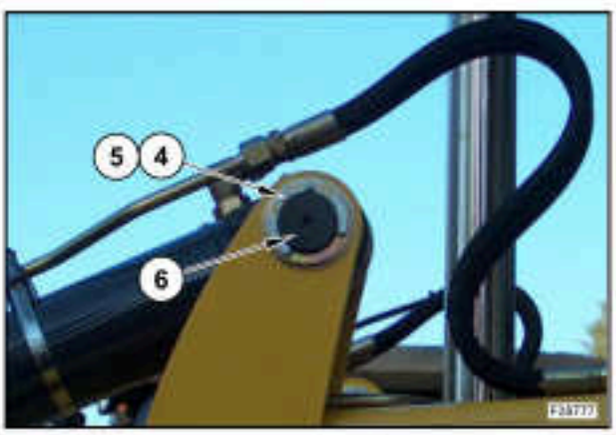
Remove the snap ring (1) and the spacer (2).

Hammer to slide out the pin (3).



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

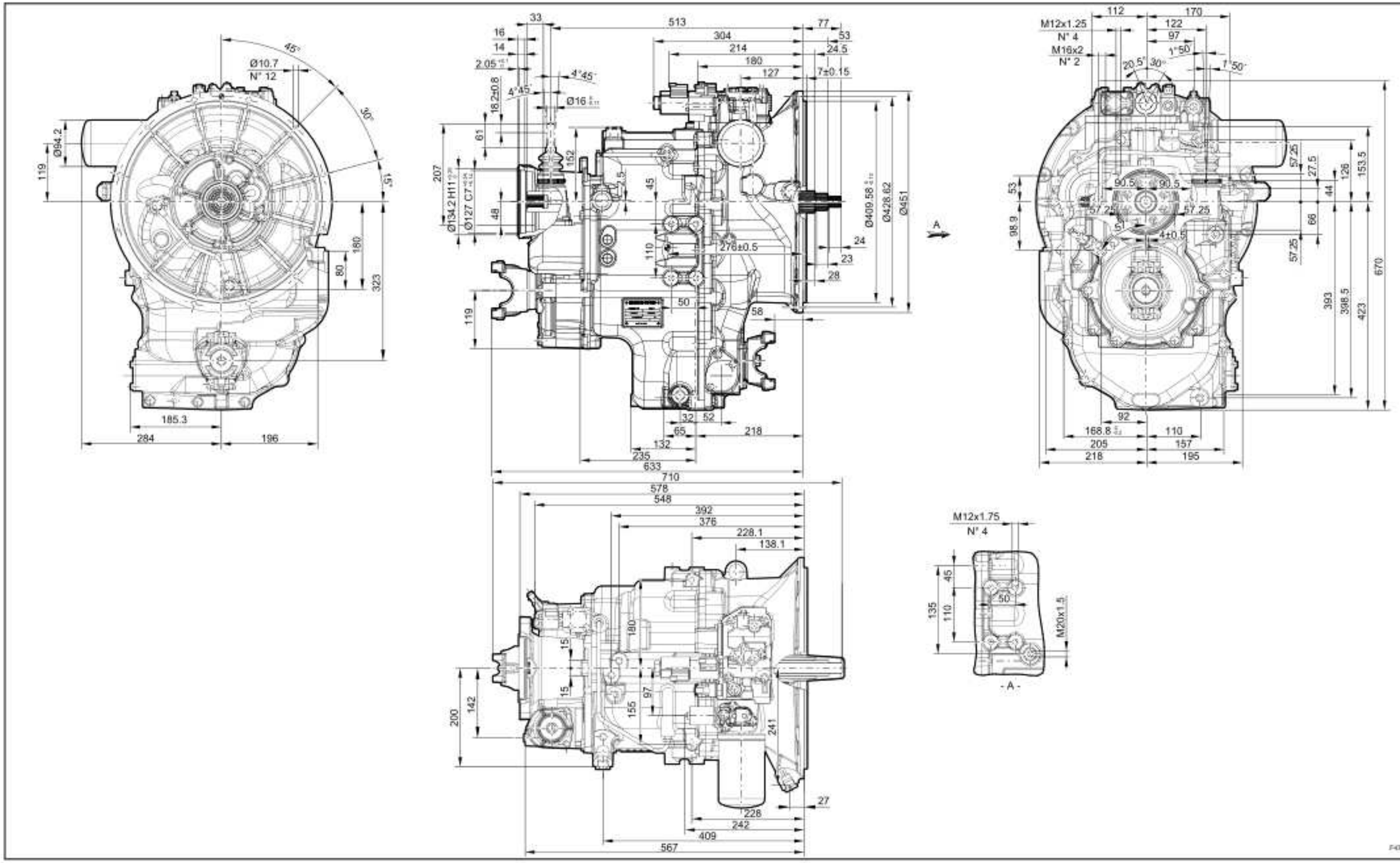
Hammer to slide out the pin (6).



Remove the loader bucket cylinder.

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4WD



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