Connectors					
Wiring harness type	**Item**	**Name of component**	**Designation**	**Position on diagram**	**Hydraulic correspondence**
Main	X66	B12	Rear wheel alignment sensor	G3	
Main	X67	A4	JSM (Joystick Switch and Move)	C7	
Main	X92	Y13	Negative brake electrovalve	M16	
Main	X139	B9	Inching pedal redundant angle sensor	O10	
Engine	X260	Y6	Hydrostatic motor 2P proportional electrovalve	Q13	
Engine	X261	Y7	BDP (Brake Pressure Defeat) electrovalve	Q15	
Engine	X292	A2	Transmission ECU	I9	
Main	X294	S13	Low Speed/High Speed switch	A16	
Engine	X295	A2	Transmission ECU	I3	
Main	X302	S15	Negative parking brake switch	E16	
Main	X309	H24	Rear wheel alignment indicator lamp	E3	
Main/Engine	X310		Main/Engine Interface	G10/K12	
Engine	X387	B14	Hydrostatic pump speed sensor	Q5	
Engine	X388	Y3	Forward gear proportional electrovalve	M2	
Engine	X389	Y4	Reverse gear proportional electrovalve	M3	

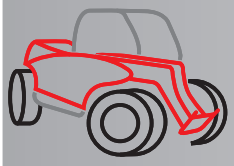
Fuses and relays		
Item	**Designation**	**Position on diagram**
BF2/M1		
F4	Transmission ECU + seat switch + JSM (10A)	A3
F10	Wheel alignment sensor + indicator lamp (2A)	A4
BF2/M5		
K2	Reverse light and buzzer relay (20A/35A)	G13

Splices	
Item	**Position on diagram**
Ep.7	S14
Ep.9	K11
Ep.10	K10
Ep.13	E7

Components			
Item	**Designation**	**Position on diagram**	**Hydraulic correspondence**
A2	Transmission ECU	I16	
A4	JSM (Joystick Switch and Move)	A12	
B9	Inching pedal redundant angle sensor	Q11	
B12	Rear wheel alignment sensor	G3	
B14	Hydrostatic pump speed sensor	Q6	
B15	Roller 1 on JSM (Telescope)	A9	
B16	Roller 2 on JSM (Attachment)	A9	
H13	High speed indicator lamp (GV)	C16	
H15	Parking brake control indicator lamp	G16	
H24	Rear wheel alignment indicator lamp	E3	
S4	FNR (Forward/Neutral/Reverse) selector	A11	
S13	Low Speed/High Speed switch	A16	
S15	Negative parking brake switch	E16	
S22	Bauser module lighting + right-hand sidelight power supply	A8	
Y3	Forward gear proportional electrovalve	O3	
Y4	Reverse gear proportional electrovalve	O5	
Y6	Hydrostatic motor control proportional electrovalve	Q13	
Y7	Direction selection electrovalve	Q15	
Y13	Negative brake electrovalve	O17	

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HYDRAULIC SCHEMATIC DIAGRAMS

pages

MT 625 TURBO / MT 625 T COMFORT / MT-X 625 TURBO / MT-X 625 T COMFORT .....A

MLT 625-75 H / MLT-X 625-75 H.....B

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STANDARD TIGHTENING TORQUES

Standard tightening torque to be used when not otherwise indicated in the removal and refitting operations:

- The following tightening torques are given for hexagon head screws without flanges and cylinder head hexagon socket screws.
- The torques are given for a friction coefficient μ = 0,20 corresponding to dry-fitted zinc-plated fasteners and for torque tools having a ± 20 % class C tightening torque accuracy (equivalent to pneumatic screwdrivers).

1 - Tightening torque in N.m (±20%) for screw / nut connection (NF E 25-030-1):

Ø x "coarse" pitch	*Grade 8.8*	*Grade 10.9*	*Ø x "fine" pitch*	*Grade 8.8*	*Grade 10.9*
M6 x 1	8,2	12,1	-	-	-
M8 x 1,25	20	30	M8 x 1	22	32
M10 x 1,5	40	59	M10 x 1,25 (x 1)	43 (46)	63 (68)
M12 x 1,75	69	102	M12 x 1,5 (x 1.25)	74 (78)	108 (115)
M14 x 2	111	163	M14 x 1,5	123	181
M16 x 2	175	256	M16 x 1,5	190	279
M18 x 2,5	240	352	M18 x 1,5	279	410
M20 x 2,5	341	501	M20 x 1,5	391	574
M22 x 2,5	470	691	M22 x 1,5	531	780
M24 x 3	588	864	M24 x 2	659	967
M27 x 3	874	1284	M27 x 2	965	1418
M30 x 3,5	1181	1735	M30 x 2	1351	1984
M33 x 3,5	1614	2371	M33 x 2	1821	2674
M36 x 4	2068	3037	-	-	-

For hexagon screws with flanges (NF E 25-030-1) :
Apply an increased torque of +10%.



Where washers are used, the following coefficient is to be applied (FD E 25-502) :
- Plate : +0%
- Smooth tapered washer (CL): +5%
- Spring (or Grower) washer without jaws (W) : +10%
- Conical, internal teeth (CDJ-JZC) : +15%.

2 - Tightening torque in N.m (±20%) for screw / nut connection (with marking) :

Ø x Pitch	4 *4T* (flange : 4.8T)	5 *5T*	6 *6T* (flange : 6.8T)	7 *7T*	8 *8T* (flange : 8.8T)	(flange : 10.9T)	11 (flange : 11.9T)
M6 x 1	**5.4** (5.5)	**6.5**	**7.8** (7.5)	**11**	**12** (12)	(15.5)	(17.5)
M8 x 1,25	**13** (13)	**16**	**19** (19)	**25**	**29** (29)	(38)	(42)
M10 x 1,25	**25** (27)	**32**	**39** (39)	**52**	**61** (61)	(80)	(89)
M12 x 1,25	**47** (50)	**59**	**72** (71)	**95**	**108** (110)	(145)	(160)
M14 x 1.5	**75** (78)	**91**	**108** (110)	**147**	**172** (175)	(230)	(260)
M16 x 1.5	**113** (120)	**137**	**172** (170)	**226**	**265** (270)	(360)	(400)

use the upper class where spring (or Grower) washers are used.

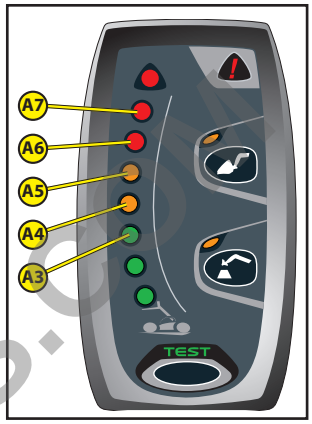
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LONGITUDINAL STABILITY INDICATOR (LLMI)

ERROR CODES

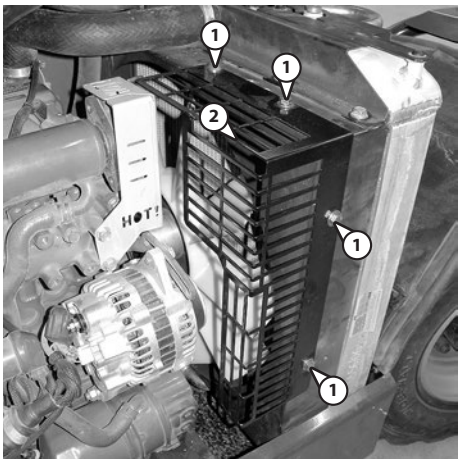
The error codes are indicated by LEDs A3 to A7 on the warning device and longitudinal stability limiter.



ERROR CODES					
LEDS					DESCRIPTIONS
A7	A6	A5	A4	A3	
●	●	●	●	●	Regulating fault (fault detected during the test).
●	●	●	●	○	Lowering regulating valve fault.
●	●	●	○	●	Safety valve cut-off fault (fault detected during the test).
●	●	●	○	○	Safety valve fault.
●	●	○	●	●	Gauge calibration fault (fault detected during the test). Resetting the longitudinal stability limiter and warning device may resolve the problem. (o : 3 - MAINTENANCE: G - OCCASIONAL MAINTENANCE)
●	●	○	●	○	Angle calibration fault (fault detected during the test).
●	●	○	○	●	Inclination cut-off valve fault.
●	○	●	●	●	Strain gauge fault.
●	○	●	●	○	Jib angle sensor fault.
●	○	●	○	●	Telescope or attachment control fault.
●	○	●	○	○	Telescope retracted senor fault.
●	○	○	●	●	Computer earth output fault.
●	○	○	●	○	Aggravating hydraulic movement cut-off disable fault.
●	○	○	○	○	Fan drive valve fault.
○	●	●	●	○	Stability indicator fault.
○	●	●	○	●	Electronic handling controller fault.
○	●	●	○	○	Hydraulic control lever control setting fault.
○	●	○	●	●	Transmission cut-off output fault.
○	●	○	○	●	Electronic handling controller supply fault.
○	●	○	○	○	Telescope retracted sensor fault (fault detected during the test).
○	○	●	●	●	Tilt cut-off valve fault (according to model)
○	○	●	●		Boom head solenoid valve fault. (OPTION)
○	○	●	○	●	Button fault, accessory hydraulic easy attachment (OPTION)
○	○	●	○	○	Electrovalve attachment hydraulic control and electrical jib provision fault button. (OPTION)
○	○	○	●	●	Forced operation indicator fault (OPTION)
○	○	○	●	○	Electric handling controller 10 V output fault.
○	○	○	○	●	Forced operation button fault (OPTION)

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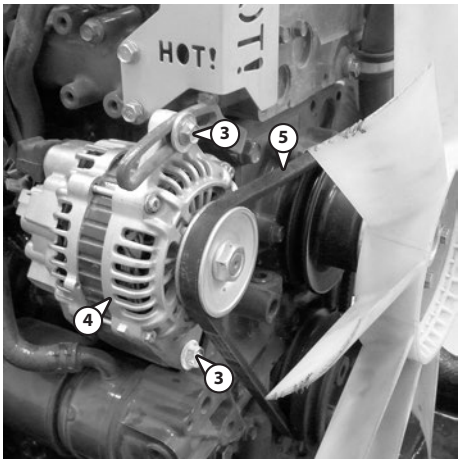
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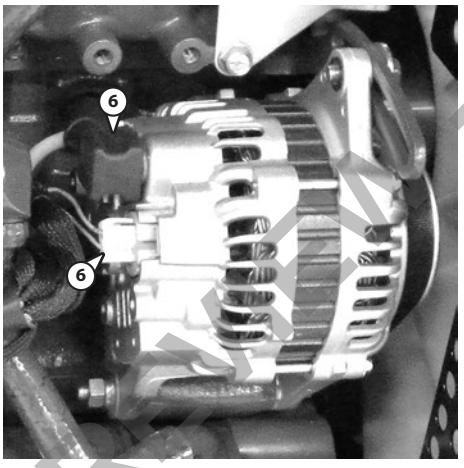
A - CHANGING THE ALTERNATOR

REMOVAL

Undo the 4 screws (1) and take off the radiator protection grill (2).



Loosen the 2 screws (3) by two to three thread turns.
Pivot the alternator assembly (4) so as to free the belt (5) from the alternator pulley.



Mark the position of the electrical wires and disconnect the connectors (6).

Undo the 2 screws (3) and remove the alternator.

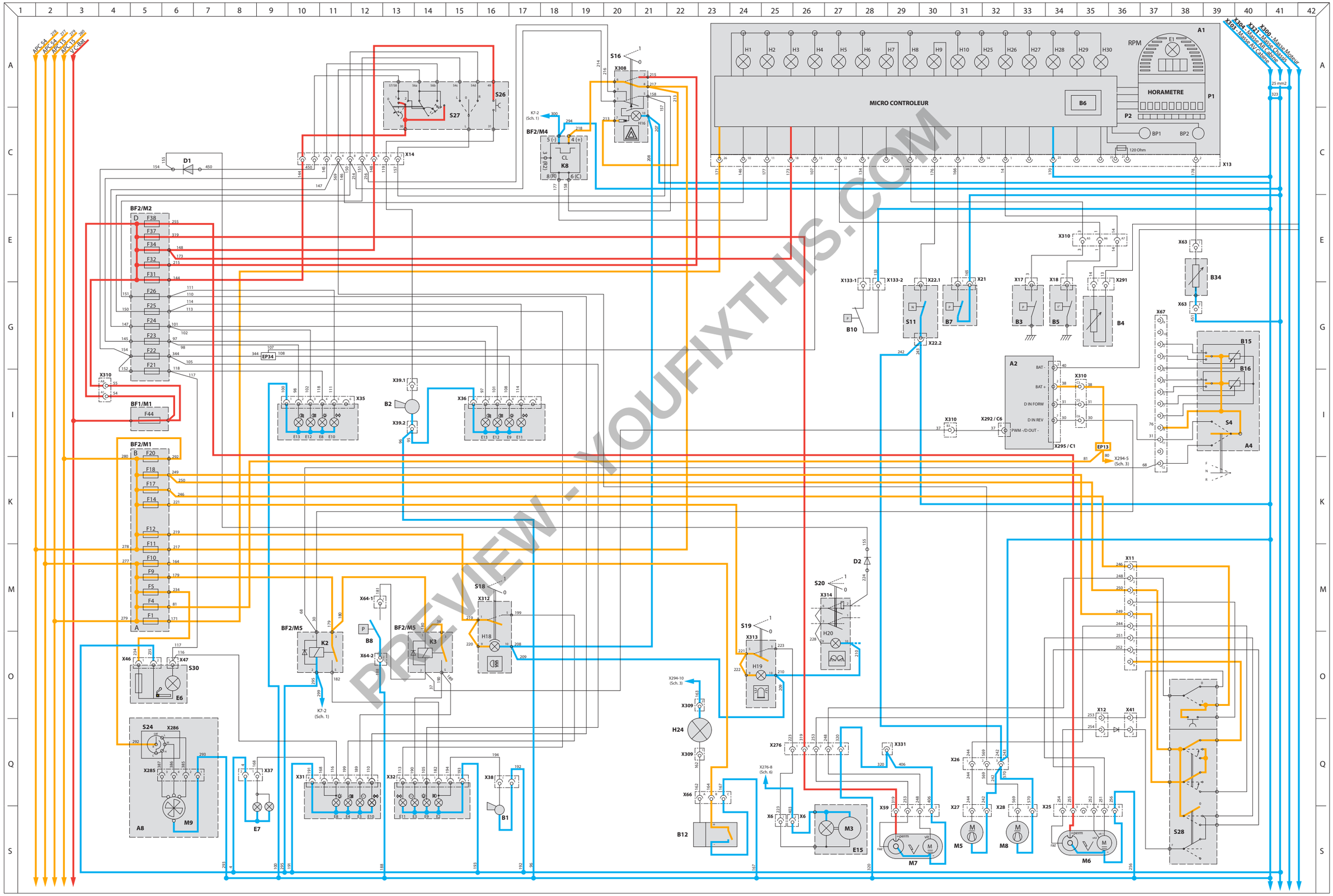
REFIT

Refit the alternator (4) with the 2 screws (3).
Refit the belt (6) then adjust the belt tension by pivoting the alternator assembly (4). Refer to the operator's instructions.
Retighten the 2 screws (3).
Reconnect the electrical connectors.
Refit the radiator protection grill (2).

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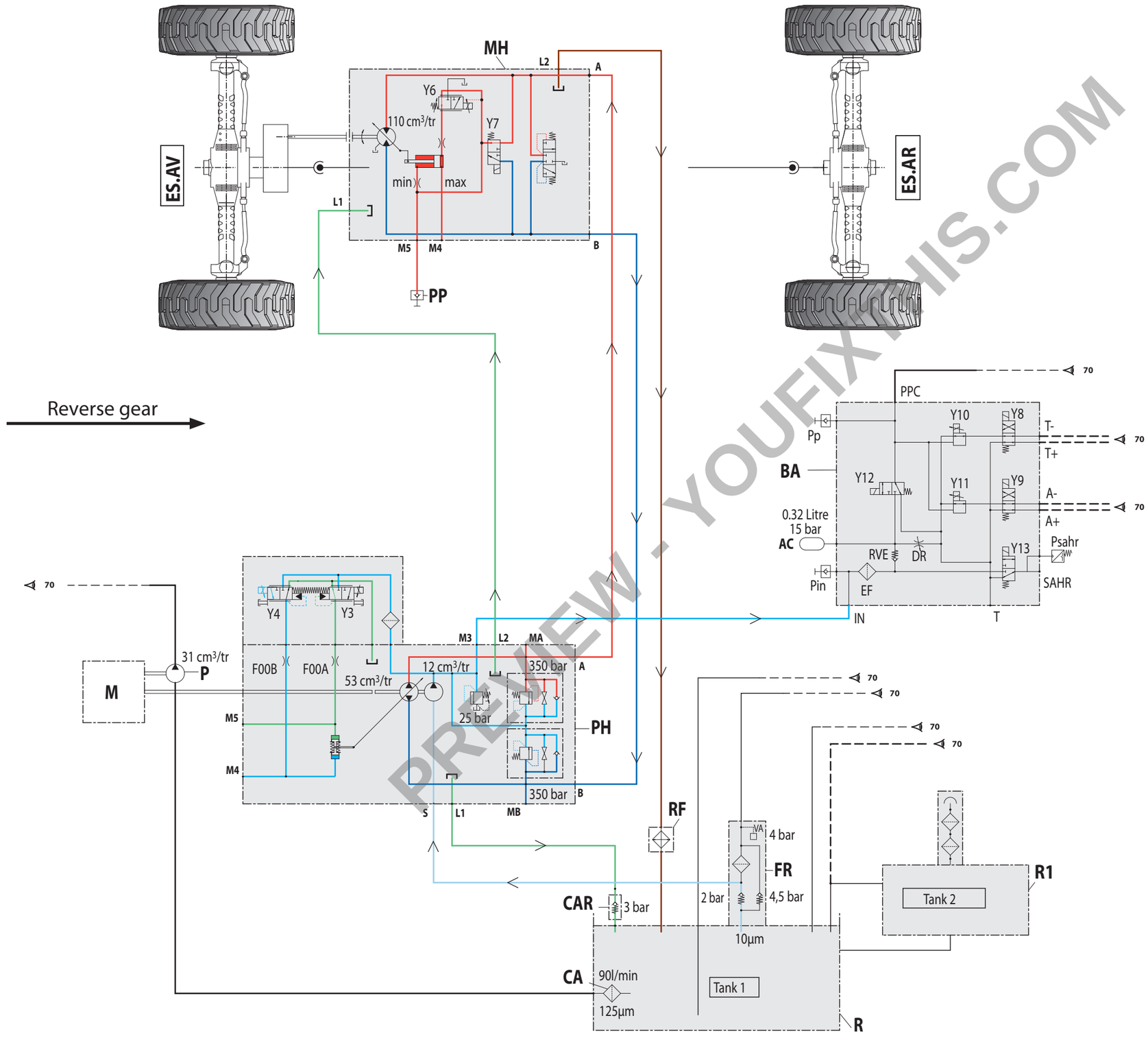
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DIAGRAM 5



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HYDROSTATIC TRANSMISSION IN REVERSE GEAR *(MAXIMUM SPEED/MINIMUM TORQUE)* ***SCHEMATIC DIAGRAM***



Key:

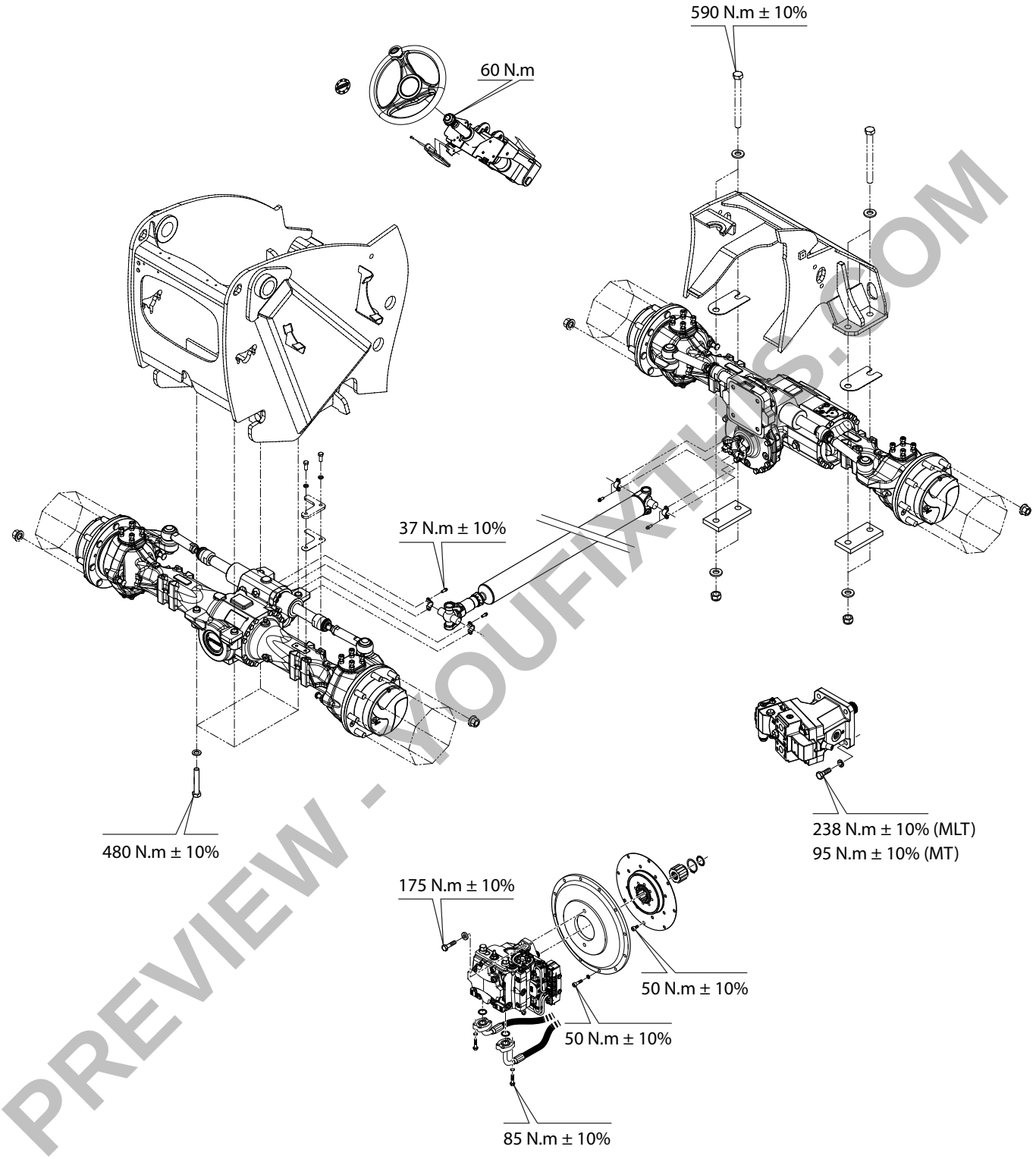
- Suction pressure
- Boost pressure
- High Pressure
- Low Pressure
- Cooling pressure
- Drainage pressure
- 70 See group "70 - hydraulics"

BA	Feed block + accumulator
CA	Suction strainer
CAR	Non-return valve
FR	Return filter
M	Turbo engine
MH	Hydrostatic motor
P	Hydraulic pump
PH	Hydrostatic pump
PP	Pressure port
R	Main hydraulic tank
R1	Secondary hydraulic tank
RF	Oil cooler

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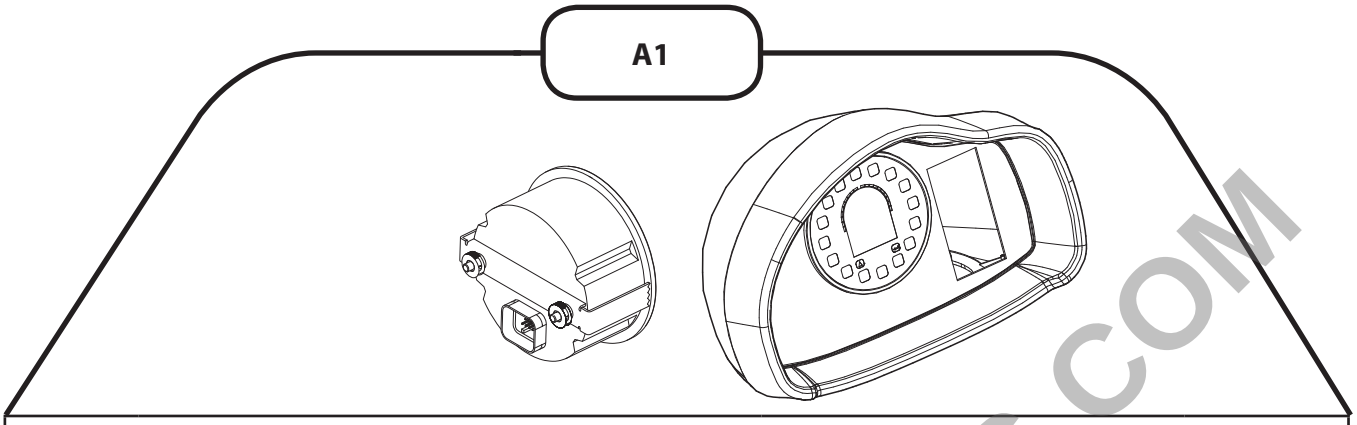
TIGHTENING TORQUE



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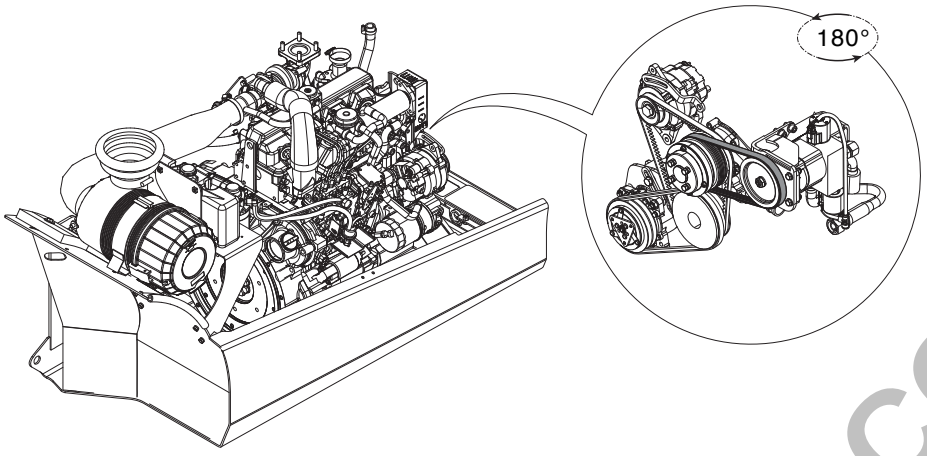
ERROR CODES / CONTROL UNITS



Bauser ECU (A1)				
Error Code	***Problem description***	***Machine response***	***Repair actions***	***Comments***
520400	Network link fault	RPM value - > « - - - » and LED 16 lit	Check CAN network wiring	
520401	Fuel gage fault	Incorrect fuel gage display	Check gage wiring	
520402	Engine temperature sensor fault	Incorrect temperature display	Check sensor wiring	
520404	Man-Frame Interface fault	Incorrect Hour meter value and LED 16 lit	Replace dashboard module	
520405	Man-Frame Interface fault	Incorrect fuel gage and temperature display LED 16 lit	Replace dashboard module	
520406	Man-Frame Interface fault	Incorrect Hour meter value and LED 16 lit	Replace dashboard module	
520407	Man-Frame Interface fault	LED 16 lit	Replace dashboard module	
520408	Man-Frame Interface fault	LED 16 lit	Replace dashboard module	
520409	Man-Frame Interface fault	LED 16 lit	Replace dashboard module	
520410	Man-Frame Interface fault	LED 16 lit	Replace dashboard	
520411	Man-Frame Interface fault	LED 16 lit	Replace dashboard	
520412	Hydrostatic transmission network link fault	RPM value - > « - - - » and LED 16 lit	Check CAN network wiring	
520413	Electronic controller network connection fault	LED 16 lit	Check CAN network wiring	

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A - CHANGING THE FAN BELT

REMOVAL

Unscrew the 2 screws (Item 1) and remove the engine box lower cover (Item 2) (17 mm open-end wrench).



Undo the hose clip (Item 3) of the upper radiator hose (Item 4) (Screwdriver).

Disconnect the hose from the radiator.

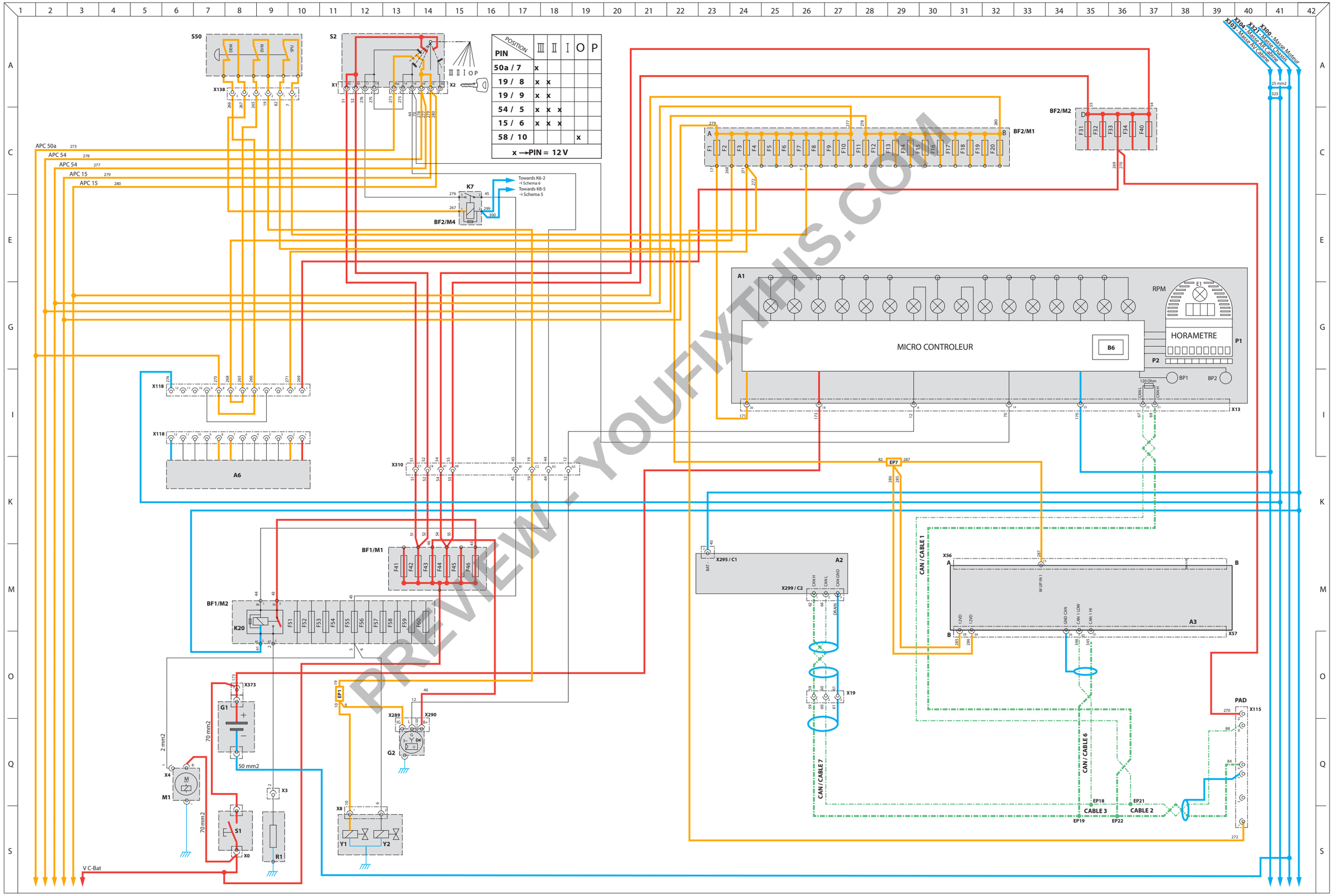


Keep the upper hose (Item 4) pointing upwards, a small amount of coolant will leak from the radiator and the hose.

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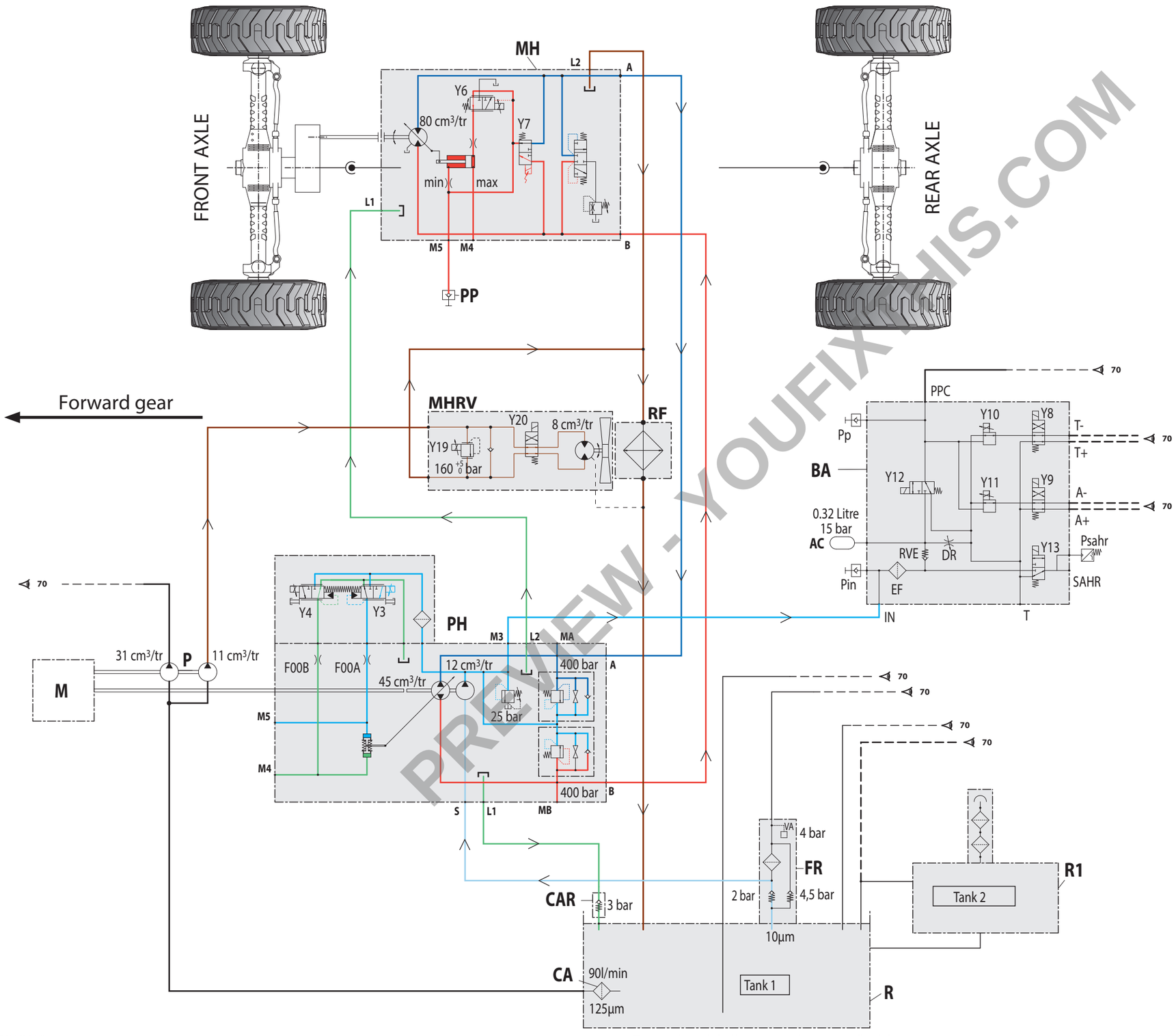
DIAGRAM 1



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HYDROSTATIC TRANSMISSION IN FORWARD GEAR *(MAXIMUM SPEED/MINIMUM TORQUE)* ***SCHEMATIC DIAGRAM***



Key:

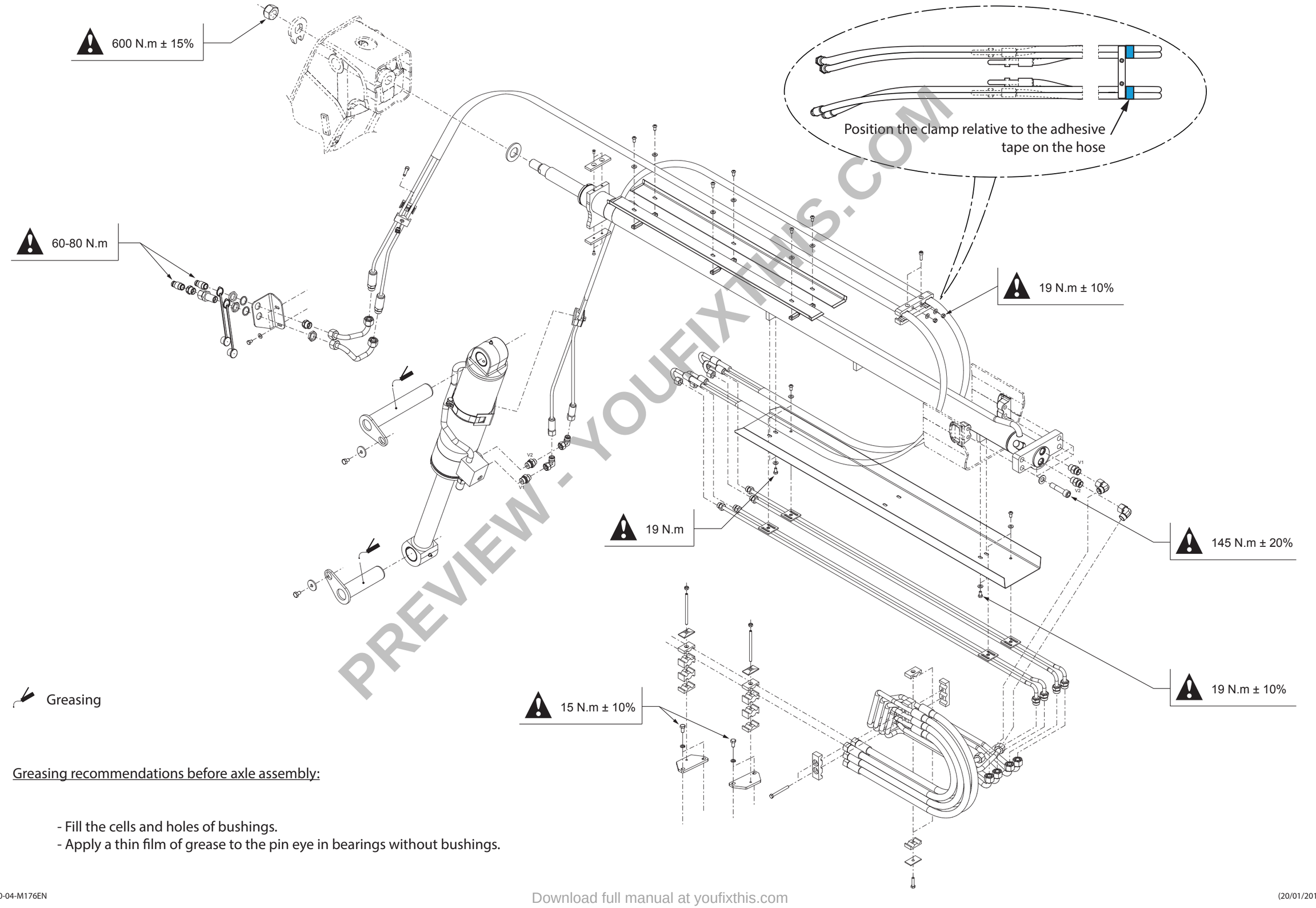
- Suction pressure
- Boost pressure
- High Pressure
- Low Pressure
- Cooling pressure
- Drainage pressure

70	See group "70 - hydraulics"
BA	Feed block + accumulator
CA	Suction strainer
CAR	Non-return valve
FR	Return filter
M	Turbo engine
MH	Hydrostatic motor
MHRV	Fan drive hydraulic motor
P	Hydraulic pump
PH	Hydrostatic pump
PP	Pressure port
R	Main hydraulic tank
R1	Secondary hydraulic tank
RF	Oil cooler

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TIGHTENING TORQUE AND GREASING AREA



Greasing

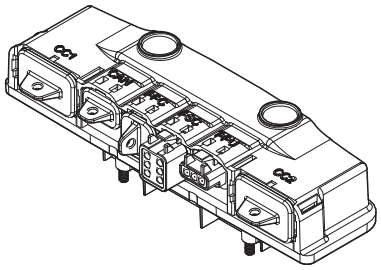
Greasing recommendations before axle assembly:

- Fill the cells and holes of bushings.
- Apply a thin film of grease to the pin eye in bearings without bushings.

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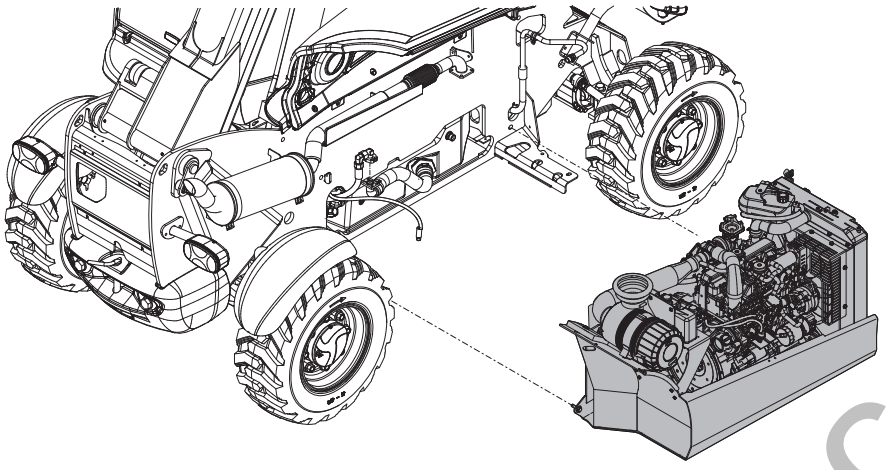
A2



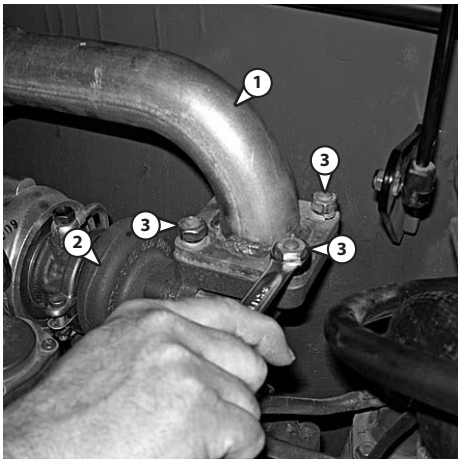
Transmission ECU (A2)				
Error Code	**Problem description**	**Machine response**	**Repair actions**	**Comments**
520201	Hydraulic transmission electronic control unit voltage fault	ECU internal fault	Change battery, check ECU supply voltage	
520214	Hydraulic transmission electronic control unit fault	ECU internal fault	Change ECU. See Manitou specification for inching pedal configuration and calibration	
520215	Hydrostatic motor regulator control fault	As the 'PCOR' also manages low or high speed (servo piston), it is dangerous for the operator to leave the ECU in normal mode.	No requirement. The replacement of the component does not require special calibration	
520216	Hydrostatic motor plate electrovalve control fault	Transmission in degraded mode (reduced speed)	Check wiring and electrovalve.	
520217	Stop light control fault	The stop lights are no longer lit by the ECU. The braking system pressure switch lights the stop lights	Change ECU. See Manitou specification for inching pedal configuration and calibration	
520218	Hydraulic motor speed sensor fault	Can be driven, limited performance	Change sensor	For MLT 625-75 H only
520224	Hydrostatic motor operating electrovalve control fault	As the 'BPD' also manages the low or high speed control pressure (servo piston), it is dangerous for the operator to leave the ECU in normal mode.	No requirement. The replacement of the component does not require special calibration	
520225	Hydraulic transmission electronic control unit fault	ECU internal fault	Change ECU. See Manitou specification for inching pedal configuration and calibration	
520226	Hydraulic transmission electronic control unit fault	ECU internal fault	Change ECU. See Manitou specification for inching pedal configuration and calibration	
520227	Hydraulic transmission electronic control unit fault	ECU internal fault	Change ECU. See Manitou specification for inching pedal configuration and calibration	520227 ECU internal fault
520273	Forward/reverse selector error	Cannot be driven	No requirement. The replacement of the component does not require special calibration	
520274	Inching sensor error	Can be driven, limited performance	Change inching sensor. Inching pedal calibration by MMI	
520275	Hydrostatic pump reverse operation control fault	Reverse gear unavailable	No requirement. The replacement of the component does not require special calibration	
520276	Hydrostatic pump forward operation control fault	Forward gear unavailable	No requirement. The replacement of the component does not require special calibration	
520277	Hydraulic pump speed sensor fault	Automotive driving mode no longer possible	No requirement. The replacement of the component does not require special calibration	
520281	Temperature outside operating range	Machine shutdown		
520282	Pedal high switch	Transmission in degraded mode (reduced speed)	Check switch and harness	(MLT only)

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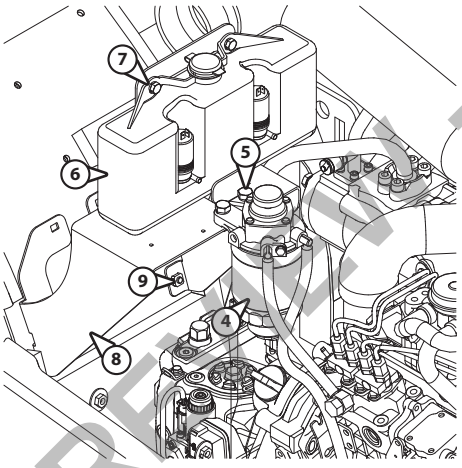
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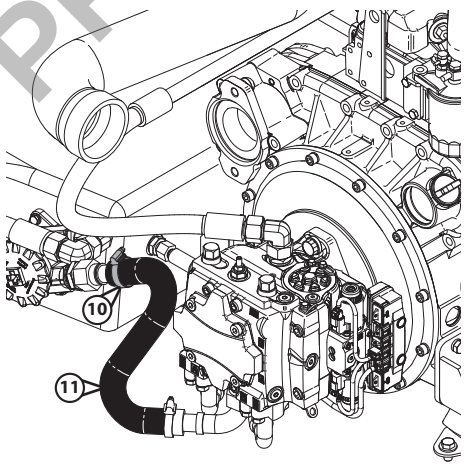
COMPLETE “BOX + ENGINE ASSEMBLY” REMOVAL



Drain the oil tank.
Disassemble the turbo exhaust line (1) du turbo (2) by taking out the 4 screws (3).



Remove the fuel filter (4), by taking out the 2 screws (5).
Remove the windscreen washing fluid tank (6), by taking out the 2 screws (7).
Remove the windscreen washing fluid tank support bracket (8) by taking out the 4 screws (9).



Unscrew the clamp (10) then remove the suction hose (11) from the filter.

Help:

20 - Transmission schematic diagrams

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GROUP 85 Driver's cab 9-1

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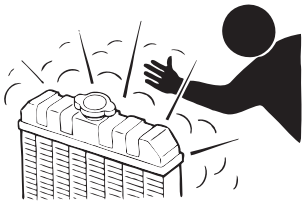
RULES FOR MAINTENANCE



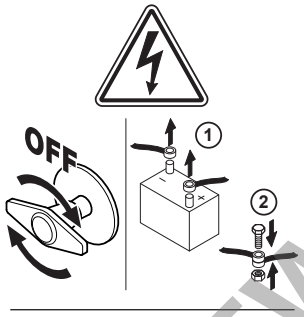
Do not carry out any work on the machine unless you have followed a suitable training course and have the knowledge required for it.

Make sure you have taken into consideration all the indicator plates on the machine and in the instruction manual.





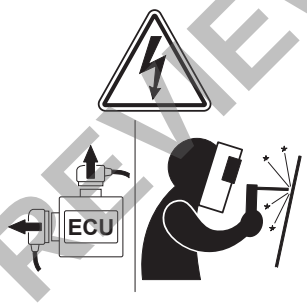
Be careful not to burn yourself when touching hot liquids or parts when operations have to be done before the machine has had time to cool down.



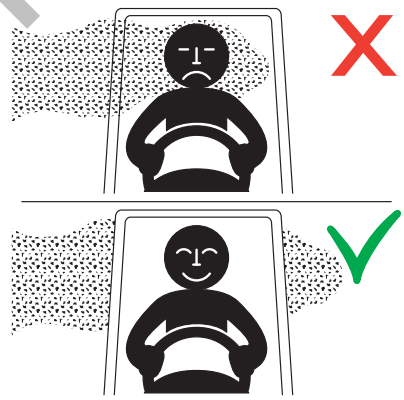
Before carrying out any operation on an electrically powered component, activate the battery cut-off.

Press the battery switch at least 30 seconds after disconnecting the electrical contact with the ignition key.

If the telehandler does not have a battery isolating switch, disconnect the battery terminals then gather them.



Before carrying out any welding operations, think of disconnecting computers.



A machine operating in a contaminated environment should be specifically equipped. Moreover, local safety notices deal with maintenance and repair work on such machines.

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