SERVICE MANUAL

Workmaster™ 55
Workmaster™ 65
Workmaster™ 75

Tractor

Part number 51489998
1st edition English
October 2018

MidWestTech | New Holland Workmaster 55, 65, 75 Tractor Service Manual | Publication 51489998

Order the manual at mid-west-tech.com >

Contents

Maintenance 00

[00.100] New unit pre-delivery operations 00.1

[00.150] Start-up 00.2

Engine 10

[10.001] Engine and crankcase 10.1

Clutch 18

[18.110] Clutch and components 18.1

Transmission 21

[21.114] Mechanical transmission 21.1

[21.112] Power shuttle transmission 21.2

Four-Wheel Drive (4WD) system 23

[23.101] Mechanical control 23.1

[23.304] Four-Wheel Drive (4WD) gearbox 23.2

Front axle system 25

[25.100] Powered front axle 25.1

Rear axle system 27

[27.100] Powered rear axle 27.1

Power Take-Off (PTO) 31

[31.101] Rear mechanical control 31.1

[31.104] Rear electro-hydraulic control 31.2

[31.114] Two-speed rear Power Take-Off (PTO) 31.3

Brakes and controls 33

[33.202] Hydraulic service brakes 33.1

Hydraulic systems 35

[35.000] Hydraulic systems 35.1

MidWestTech | New Holland Workmaster 55, 65, 75 Tractor Service Manual | Publicati... Order the manual at mid-west-tech.com >

[35.116] Three-point hitch cylinder 35.2
[35.204] Remote control valves 35.3
Steering 41
[41.101] Steering control 41.1
[41.200] Hydraulic control components 41.2
[41.216] Cylinders 41.3
Cab climate control 50
[50.100] Heating 50.1
[50.200] Air conditioning 50.2
Electrical systems 55
[55.000] Electrical system 55.1
[55.051] Cab Heating, Ventilation, and Air-Conditioning (HVAC) controls 55.2
[55.100] Harnesses and connectors 55.3
[55.201] Engine starting system 55.4
[55.301] Alternator 55.5
[55.302] Battery 55.6
[55.408] Warning indicators, alarms, and instruments 55.7
[55.512] Cab controls 55.8
[55.DTC] FAULT CODES 55.9
Front loader and bucket 82
[82.100] Arm 82.1
[82.300] Bucket 82.2
[82.AAA] Front loader and bucket generic sub-group 82.3
Platform, cab, bodywork, and decals 90
[90.150] Cab 90.1

MidWestTech | New Holland Workmaster 55, 65, 75 Tractor Service Manual | Publicati... Order the manual at mid-west-tech.com >

A. If there is continuity, there is a short circuit in the intake manifold temperature sensor **B-9001** in the engine harness 2 (EN2) wiring. Use the appropriate electrical schematics, if necessary, to locate and repair the shorted conductor.

B. If there no continuity, leave connector **X-9003** disconnected and continue to Step **4**.

4. Replace the intake manifold temperature sensor **B-9001**.

   Use the Electronic Service Tool (EST) to check the status of this fault.

   A. If the fault is no longer active, return the machine to service.

   B. If the fault is still active, check the ECU **A-9000** for the appropriate software and re-flash, if necessary.

5. Visually inspect the relevant harnesses and connectors for damage, bent or dislocated pins, corroded terminals, or broken wires. Verify that the connectors are fully installed. Flex the harnesses involved to reveal intermittent breaks or shorts in the wiring concerned. Operate the machine while you monitor the display.

   A. If you find damage or the display indicates other than normal display readings, then repair the damage discovered during the inspection or locate and repair the other than normal display condition and verify that the error has been resolved.

   B. If you do not find damage and the display indicates only normal readings, then erase the fault code and continue operation.

Wiring harnesses - Electrical schematic sheet 01 ENGINE_1_S8000 (55.100.DP-C.20.E.01)

MidWestTech | New Holland Workmaster 55, 65, 75 Tractor Service Manual | Publicati... Order the manual at mid-west-tech.com >

3703 (DTC 26F-04) - The minimum rail pressure value necessary to allow fuel injection has not been reached

Control Module: ECU

NOTE: *If the Pressure Relief Valve (PRV) is replaced, it is necessary to perform the Replacement of the Rail Pressure Relief Valve (PRV) - Reset ECU Data with the Electronic Service Tool (EST) before you return the machine to service. See* ***Common rail - Configure - Reset ECU data (10.218)****, if necessary.*

NOTE: *If the rail pressure sensor* ***B-9004*** *is replaced, it is necessary to perform the Replacement of the Rail Pressure sensor - Reset ECU Data with the Electronic Service Tool (EST) before you return the machine to service. See* ***Common rail pressure sensor - Configure - Reset ECU data (Rail pressure sensor) (55.010)****, if necessary.*

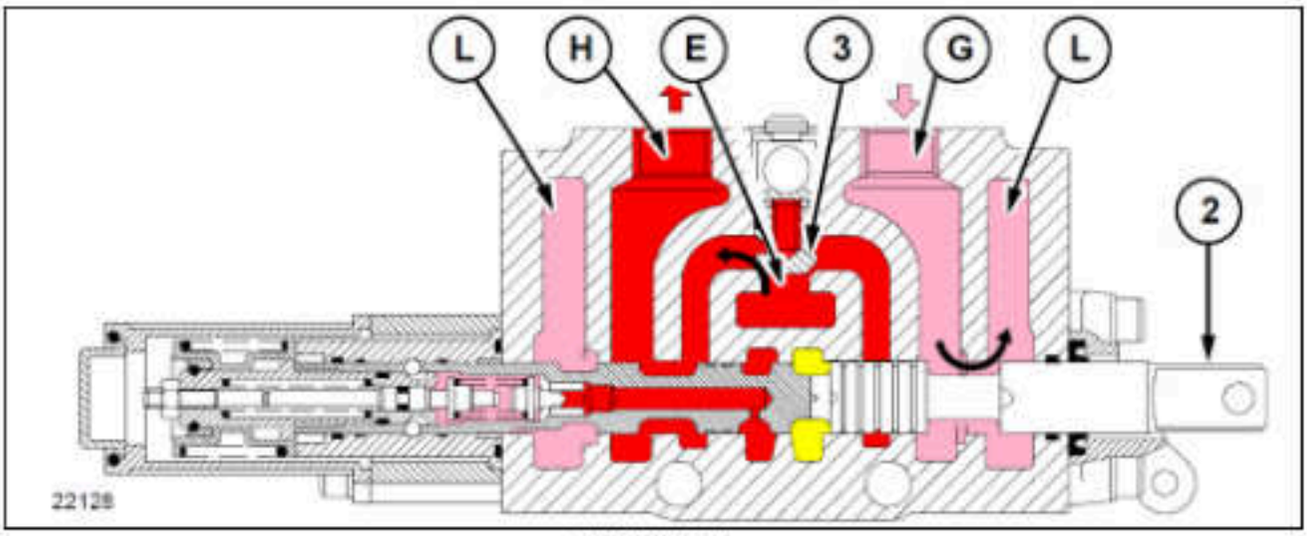
Context:
The Engine Control Unit (ECU) **A-9000** monitors fuel rail pressure **B-9004**. If the ECU **A-9000** determines that fuel rail pressure is less than **130.0 bar** (**1885.0 psi**) or below a limit value from an ECU **A-9000** calculated curve, this fault will occur. Other active faults may have caused this fault to occur. For more information regarding fuel system troubleshooting, see **Fuel injection system - Troubleshooting (10.218)**.

Cause:
The ECU **A-9000** has determined that fuel rail pressure is too low to continue engine operation.

Possible failure modes:

1. Faulty fuel metering unit **Y-9000**, stuck closed or internal failure.
2. Faulty high pressure pump, low efficiency.
3. Faulty charge gear pump, low efficiency.
4. Faulty fuel filters, clogged.
5. Faulty fuel lines, leakage or blockage.
6. Faulty electric fuel pump (if equipped).
7. Faulty fuel injectors, internal leakage or stuck open.
8. Faulty Pressure Relief Valve (PRV), leakage.
9. Faulty rail pressure sensor **B-9004** drifted signal or leaking.
10. Faulty ECU **A-9000**, software.

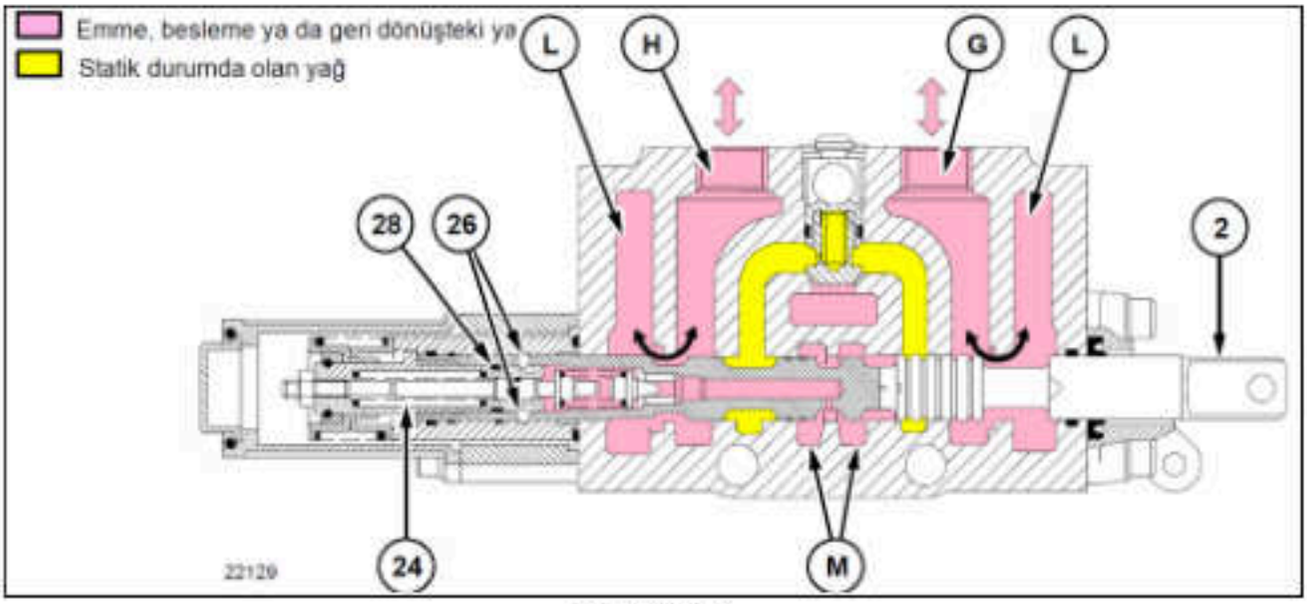
MidWestTech | New Holland Workmaster 55, 65, 75 Tractor Service Manual | Publicati... Order the manual at mid-west-tech.com >



LOWERING

Push the control lever (in the cab) to lower the agricultural equipment. The control valve handle **(2)** slides to enable the lock balls **(26)** to sit in the middle groove via the bracket **(28)** and spring **(24)**. Under these conditions, as the oil situated in the lower reservoir of the cylinder travels to the exhaust line **(L)** via the **(G)** line, the top reservoir **(H)** is connected to the feeding line **(E)** via the feeding line and the check valve **(3)**. Upon completion of the lowering operation, the lock moves to the idle position automatically as described previously.

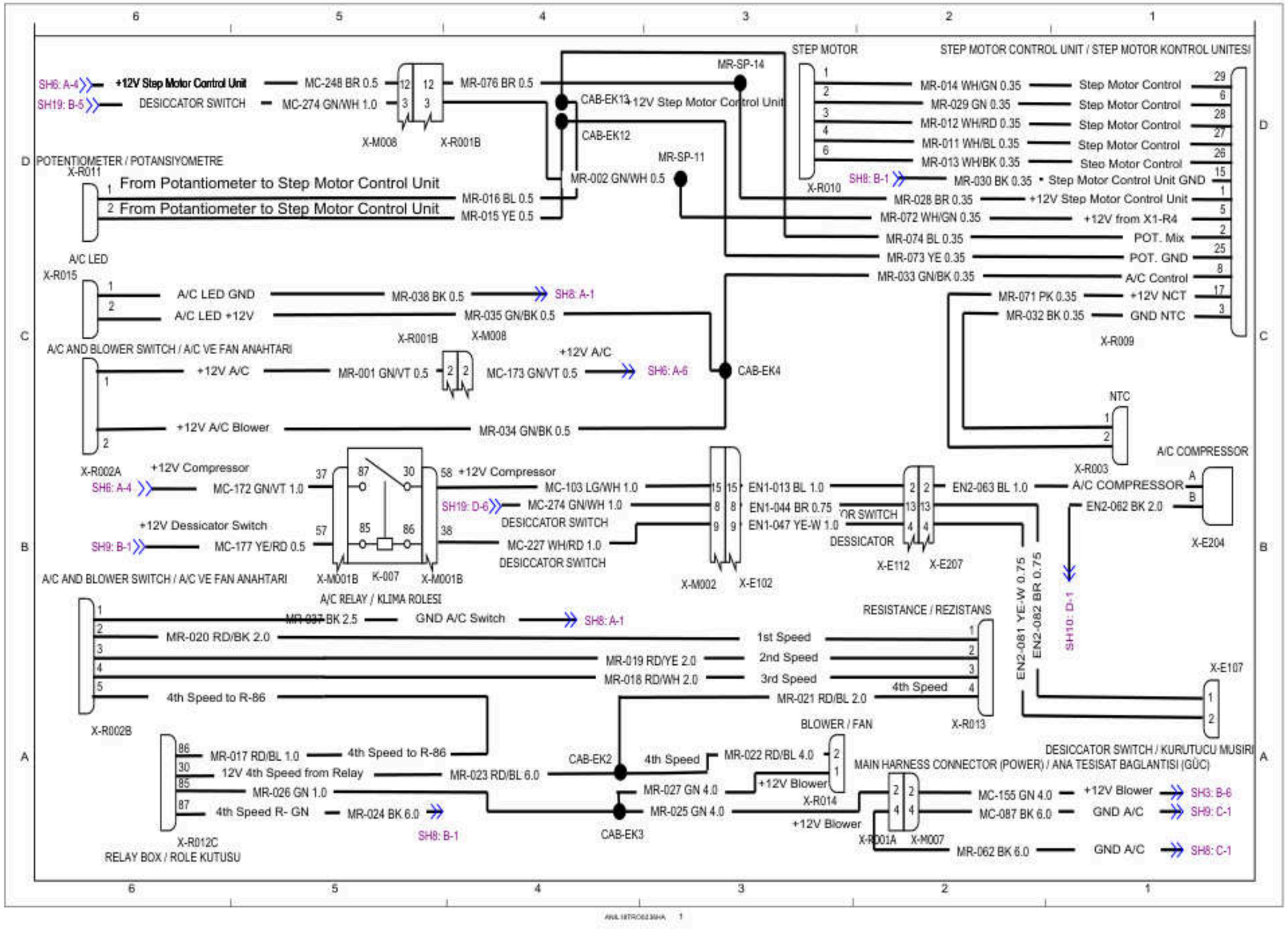
OPERATIONAL STAGES OF AUTOMATIC KICK OUT AND FLOATING REMOTE CONTROL VALVE WITH SINGLE-ACTION CYLINDER



FLOAT MODE

For float mode, push the control lever (in the cab). Handle **(2)** slides and balls **(26)** enter into the groove on the right, to be held in place by the bracket and the spring **(24)**. The handle **(2)** connects the following lines: two **(M)** lines that feed the entire pump flow into the lifting control valve. Also, via the **(H)** and **(G)** lines it connects two exhaust **(L)** lines with the upper and lower reservoirs of the cylinder. Under these conditions, the only force exerted on the agricultural equipment will be its own weight, which allows the equipment to follow the terrain, enabling the use of its hydraulic lifter. Since there is no pressure in the remote control valve, automatic kick out will not take place during float control.

MidWestTech | New Holland Workmaster 55, 65, 75 Tractor Service Manual | Publicati... Order the manual at mid-west-tech.com >



MidWestTech | New Holland Workmaster 55, 65, 75 Tractor Service Manual | Publication 51489998
Order the manual at mid-west-tech.com >