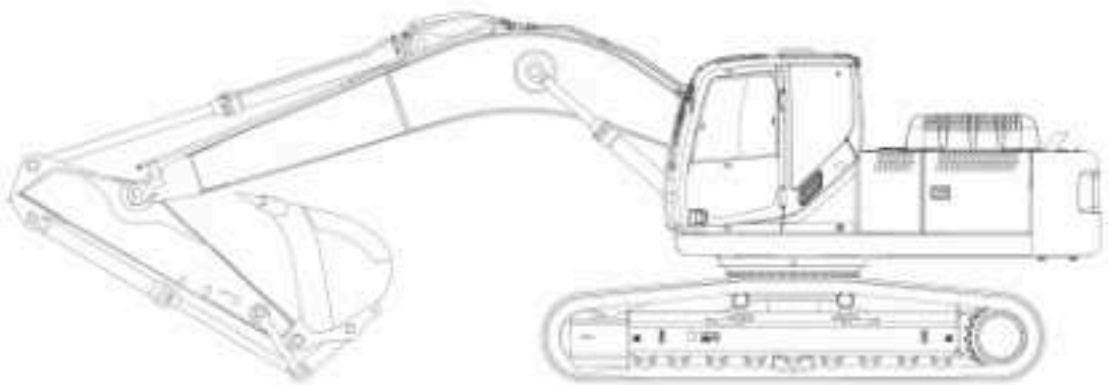
SERVICE MANUAL

E215C
E245C
Crawler Excavators



Print no. 47399290A
1st Edition
English 07/12

NEW HOLLAND CONSTRUCTION

MidWestTech | New Holland E215C, E245C Crawler Excavator Service Manual | Publicatio... Order the manual at mid-west-tech.com >

MANUAL INDEX



GENERAL SAFETY INFORMATION

Page

Section 1 SAFETY INFORMATION S1
Section 2 SAFETY PRECAUTIONS S2
Section 3 SAFETY DECALS S3



OPERATIONAL PRINCIPLE

Section 1 GENERAL INFORMATION
Group 1 Specifications T1-1



Section 2 SYSTEM
Group 1 Mechatro Control System T2-1
Group 2 Hydraulic System T2-2
Group 3 Electrical System T2-3



Section 3 COMPONENT OPERATION
Group 1 Hydraulic Pump Assy T3-1
Group 2 Pilot Valve T3-2
Group 3 Control Valve T3-3
Group 4 Swing Device T3-4
Group 5 Travel Device T3-5
Group 6 Swivel Joint T3-6
Group 7 Cylinders T3-7
Group 8 Air Conditioner system T3-8
Group 9 Electrical Equipment T3-9



OPERATIONAL PERFORMANCE TEST

Section 4 OPERATIONAL PERFORMANCE TEST
Group 1 Introduction T4-1
Group 2 Standard Performances T4-2
Group 3 Test Procedures T4-3
Group 4 Mechatro Controller T4-4



TROUBLESHOOTING

Section 5 TROUBLESHOOTING
Group 1 Troubleshooting (by error codes) T5-1
Group 2 Troubleshooting (by trouble) T5-2

MidWestTech | New Holland E215C, E245C Crawler Excavator Service Manual | Publi... Order the manual at mid-west-tech.com >



REPAIR INSTRUCTIONS

Section 1 GENERAL INFORMATION

Group 1	Precautions for Disassembly and Assembly	W1-1
Group 2	Tightening Torque	W1-2



Section 2 UPPERSTRUCTURE

Group 1	Upperstructure	W2-1
Group 2	Pump Device	W2-2
Group 3	Control Valve	W2-3
Group 4	Swing Device	W2-4
Group 5	Pilot Valve	W2-5



Section 3 UNDERCARRIAGE

Group 1	Swing Bearing	W3-1
Group 2	Travel Device	W3-2
Group 3	Swivel Joint	W3-3
Group 4	Track Adjuster	W3-4
Group 5	Front Idler	W3-5
Group 6	Upper and Lower Roller	W3-6
Group 7	Tracks	W3-7

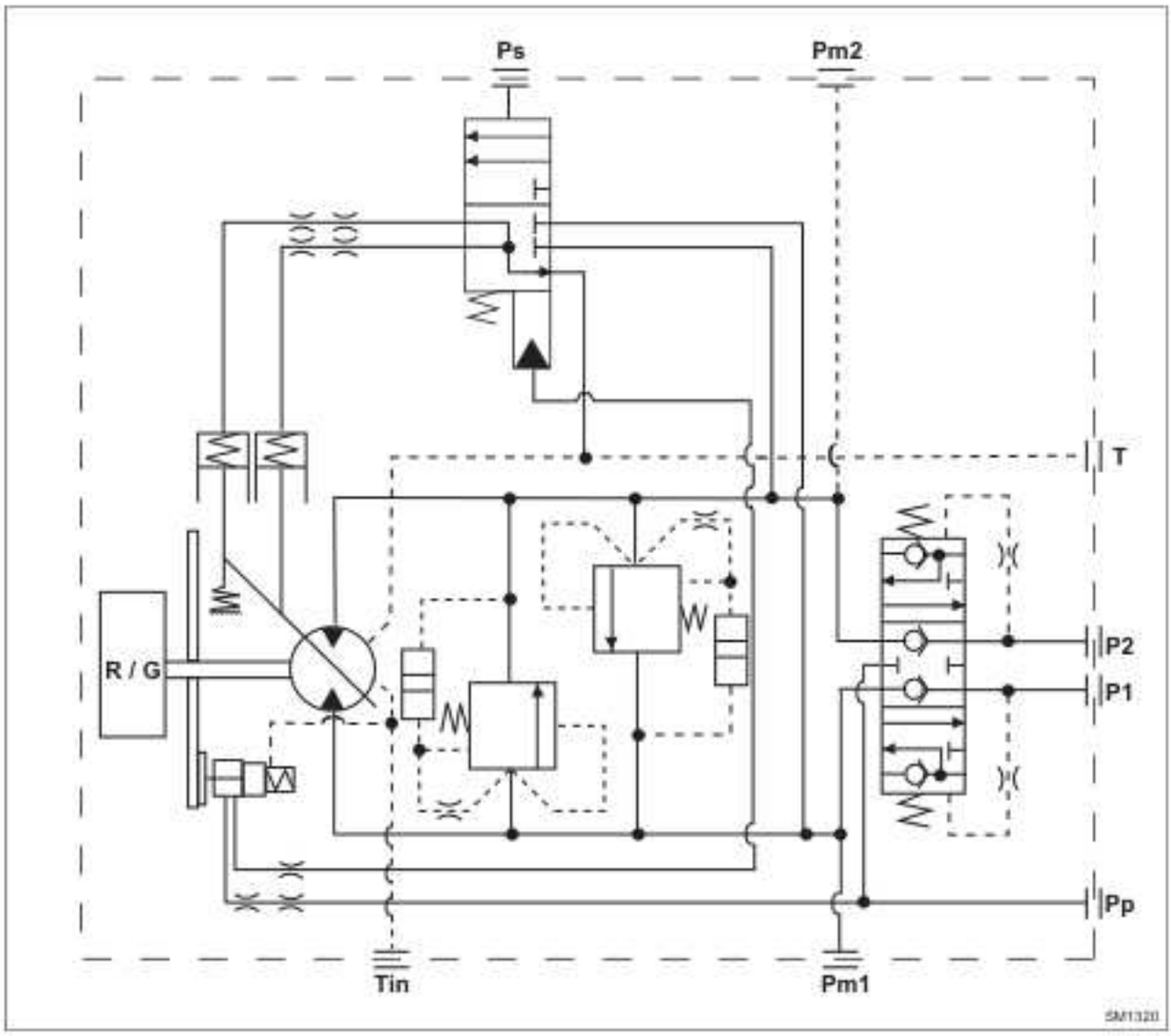


Section 4 FRONT ATTACHMENT

Group 1	Front attachment	W4-1

MidWestTech | New Holland E215C, E245C Crawler Excavator Service Manual | Publi... Order the manual at mid-west-tech.com >

Hydraulic circuit



MidWestTech | New Holland E215C, E245C Crawler Excavator Service Manual | Publi... Order the manual at mid-west-tech.com >

Table 95

Error code	**R154**		
Trouble	Travel alarm relay error.		
Judging condition	The mechatro controller output line to travel alarm relay is short-circuited with the power source.		
Symptom	Travel alarm does not actuate.		
Control in the event of failure	Relay output is stopped.		
Returned in normal condition	When the power is OFF.		
Service diagnosis checking screen	Screen No.	17	D15
	Screen No.		
	Screen No.		
Checking object			Checking contents and remedy
1	• Travel alarm relay R-8		When error is cancelled after removing of travel alarm relay, check relay unit for failure, replace it with new one if failed. When resistance between relays (1) and (2) is 0 Ω , it is in abnormal condition. 
2	• Wiring between travel alarm relay and controller CN-109F, CN2-2 • Fuse & relay box E-1		When R154 is left displayed with the relay removed Check that no power 24 V is produced on relay (-) line according to the wiring checking procedure and replace it if necessary. When no failure found after checking on wiring and R154 is left displayed. Replace fuse/relay box.
3	• Mechatro controller		Check that the error is corrected after replacement of controller.

Table 96

Error code	**R164**		
Trouble	Auto idle stop relay 2 relay error.		
Judging condition	The mechatro controller output line to auto idle stop relay 2 is short-circuited with the power source.		
Symptom	Power source for mechatro controller often turns off. Auto idle stop relay 2 does not actuate.		
Control in the event of failure	Relay output is stopped.		
Returned in normal condition	When the power is OFF.		
Service diagnosis checking screen	Screen No.	4	K-1 AIS RELAY 2
	Screen No.		
	Screen No.		
Checking object			Checking contents and remedy
1	• Auto idle stop relay 2 relay R-24		When error is cancelled after removing of auto idle stop relay 2, check relay unit for failure, replace it with new one if failed. When resistance between relays (1) and (2) is 0 Ω , it is in abnormal condition. 
2	• Wiring between auto idle stop relay 2 and controller CN-109F, CN2-2 • Fuse & relay box E-1		When R164 is left displayed with the relay removed Check that no power 24 V is produced on relay (-) line according to the wiring checking procedure and replace it if necessary. When no failure found after checking on wiring and R164 is left displayed. Replace fuse/relay box.
3	• Mechatro controller		Check that the error is corrected after replacement of controller.

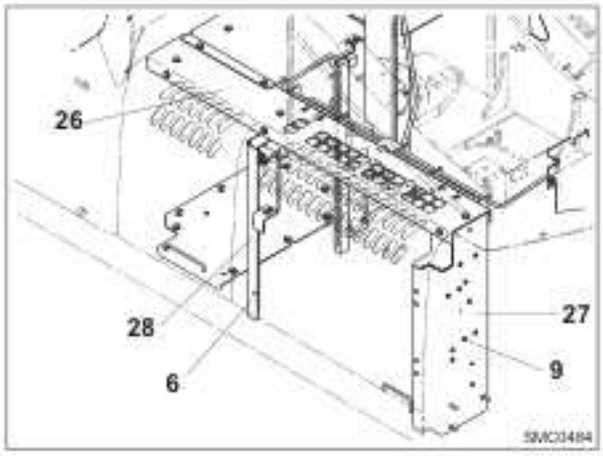
MidWestTech | New Holland E215C, E245C Crawler Excavator Service Manual | Publi... Order the manual at mid-west-tech.com >

9) Remove beam (**26**) and pillar (**27**), (**28**).

1. Loosen 6 sems bolts (**6**) M12x25.
   : 19 mm
2. Remove beam (**26**).
   Weight: 10.9 kg (24 lbs)

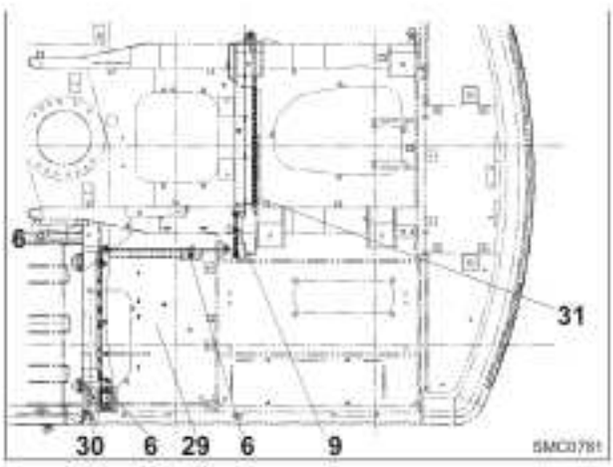
NOTE: *remove battery relay box in advance and then remove pillar (**27**).*

3. Loosen 2 capscrews (**9**) M12x40 and one capscrew M12x35 and remove pillar (**27**).
   : 19 mm
   Weight: 12.5 kg (27.5 lbs)
4. Loosen 2 sems bolts (**6**) M12x30 and remove pillar (**28**).
   : 19 mm
   Weight: 4.8 kg (10.6 lbs)



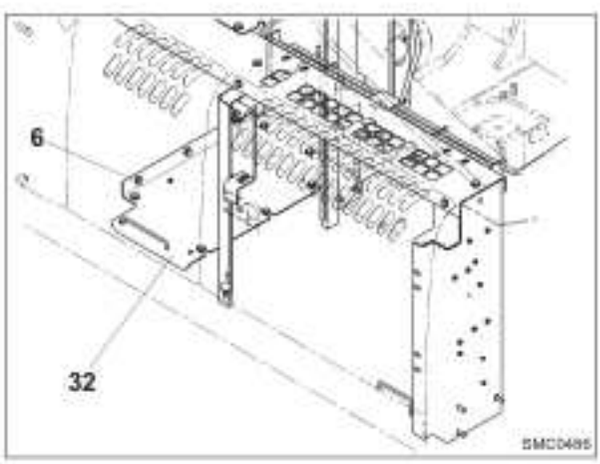
10) Remove guard assy (**29**), (**30**) and (**31**).

1. Loosen 5 sems bolts (**6**) M12x25 and remove guard assy (**29**).
   : 19 mm
   Weight: 8.2 kg (18.1 lbs)
2. Loosen 6 sems bolts (**6**) M12x25 and remove guard assy (**30**).
   : 19 mm
   Weight: 18.9 kg (41.7 lbs)
3. Loosen 3 sems bolts (**9**) M12x40 and remove guard assy (**31**).
   : 19 mm
   Weight: 13.7 kg (30.2 lbs)



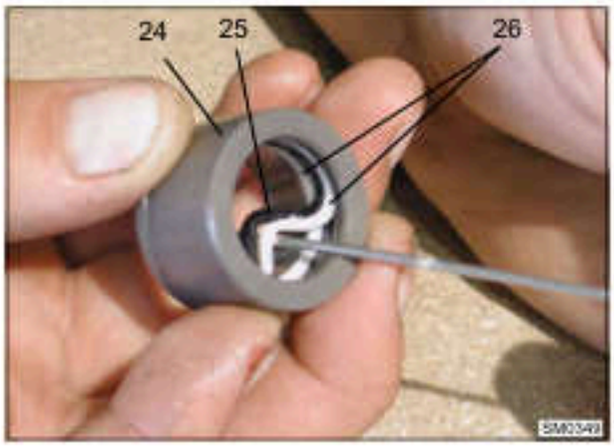
11) Remove guard assy (**32**).

1. Loosen 7 sems bolts (**6**) M12x25 and remove guard assy (**32**).
   : 19 mm
   Weight: 7.8 kg (17.2 lbs)



MidWestTech | New Holland E215C, E245C Crawler Excavator Service Manual | Publi... Order the manual at mid-west-tech.com >

29. Remove the O-ring seal (**25**) and the backup rings (**26**) from their seats in the free piston (**24**).

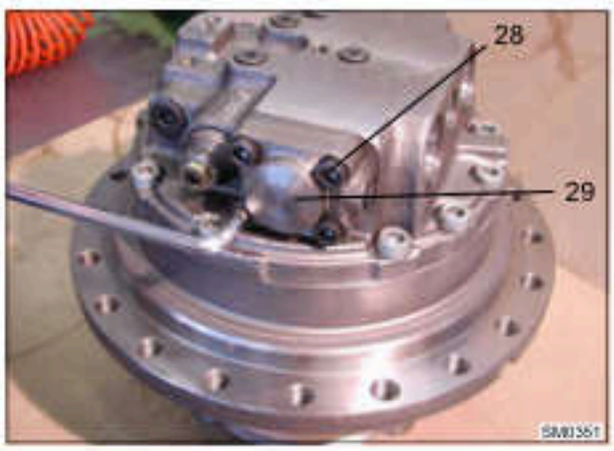


30. Remove the O-ring seal (**27**) from relief valve (**23**). Repeate the same steps for the 2nd relief valve disassembly.



Disassembly of the counterbalance valve assy

31. Unscrew the 4 socket head screws M12x40 (**28**), grade 12.9 of the first flanged plug assy (**29**) by a male hex head wrench.
    ⌐ : 10 mm

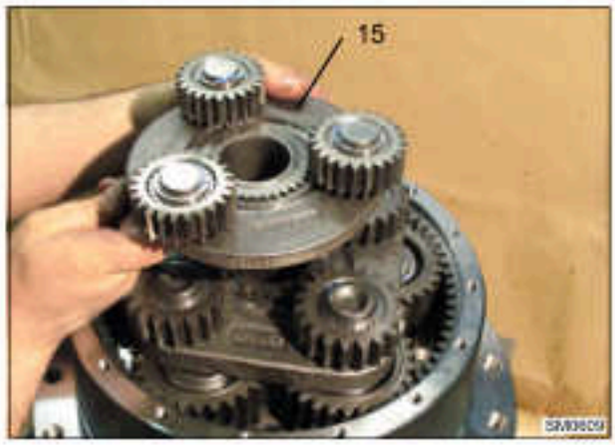


32. Take out the first flanged plug assy (**29**) and the spring seat.

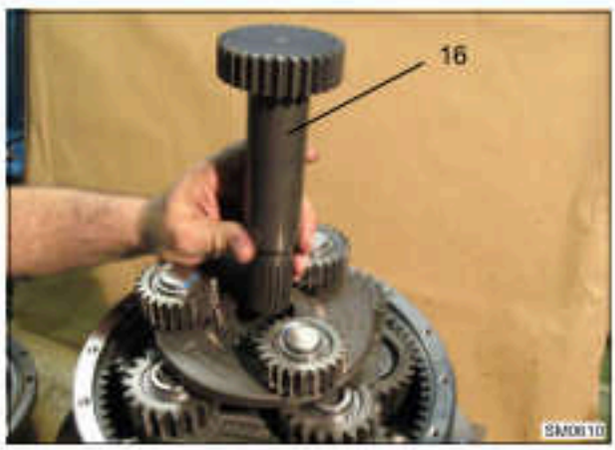


MidWestTech | New Holland E215C, E245C Crawler Excavator Service Manual | Publi... Order the manual at mid-west-tech.com >

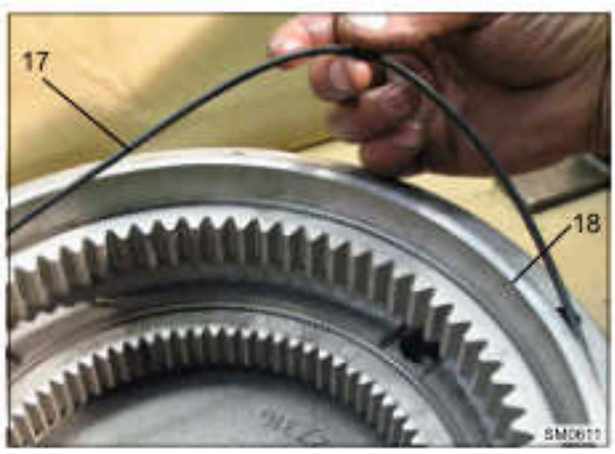
18. Insert the 1st reduction assembly (**15**).



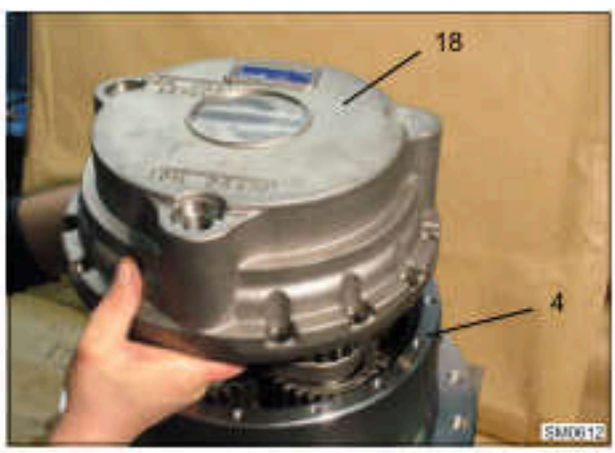
19. Insert the 1st reduction sun gear (**16**).



20. Assemble the O-ring (**17**) into its seat in the cover (**18**).



21. Place the end cover (**18**) on the gearbox housing (**4**).



MidWestTech | New Holland E215C, E245C Crawler Excavator Service Manual | Publi... Order the manual at mid-west-tech.com >