WHEELED EXCAVATOR

SERVICE MANUAL

R200W-7

HYUNDAI

MidWestTech | Hyundai R200W-7 Wheel Excavator Service Manual | Publication R200W-7

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

CONTENTS

SECTION 1 GENERAL

Group 1 Safety Hints 1-1
Group 2 Specifications 1-9

SECTION 2 STRUCTURE AND FUNCTION

Group 1 Pump Device 2-1
Group 2 Main Control Valve 2-21
Group 3 Swing Device 2-47
Group 4 Travel Device 2-59
Group 5 RCV Lever 2-65
Group 6 Accelerator Pedal 2-72
Group 7 Brake Pedal 2-73
Group 8 Transmission 2-76
Group 9 Transmission control valve 2-83
Group 10 Steering Valve 2-85
Group 11 Axle 2-87

SECTION 3 HYDRAULIC SYSTEM

Group 1 Hydraulic Circuit 3-1
Group 2 Main Circuit 3-2
Group 3 Pilot Circuit 3-5
Group 4 Single Operation 3-13
Group 5 Combined Operation 3-30

SECTION 4 ELECTRICAL SYSTEM

Group 1 Component Location 4-1
Group 2 Electrical Circuit 4-3
Group 3 Electrical Component Specification 4-22
Group 4 Connectors 4-31

SECTION 5 MECHATRONICS SYSTEM

Group 1 Outline 5-1
Group 2 Mode Selection System 5-3

MidWestTech | Hyundai R200W-7 Wheel Excavator Service Manual | Publication R20... Order the manual at mid-west-tech.com >

Group 3 Automatic Deceleration System 5-6
Group 4 Power Boost System 5-7
Group 5 Travel Speed Control System 5-8
Group 6 Automatic Warming Up Function 5-9
Group 7 Engine Overheat Prevention Function 5-10
Group 8 Anti-Restart system 5-11
Gropu 9 Self-Diagnostic System 5-12
Group 10 Engine Control System 5-15
Group 11 EPPR(Electro Proportional Pressure Reducing) Valve 5-22
Group 12 Monitoring system 5-25

SECTION 6 TROUBLESHOOTING

Group 1 Before Troubleshooting 6-1
Group 2 Hydraulic and Mechanical System 6-4
Group 3 Electrical System 6-23
Group 4 Mechatronics System 6-38

SECTION 7 MAINTENANCE STANDARD

Group 1 Operational Performance Test 7-1
Group 2 Major Components 7-19
Group 3 Track and Work Equipment 7-26

SECTION 8 DISASSEMBLY AND ASSEMBLY

Group 1 Precaution 8-1
Group 2 Tightening Torque 8-4
Group 3 Pump Device 8-7
Group 4 Main Control Valve 8-36
Group 5 Swing Device 8-49
Group 6 Travel Motor 8-74
Group 7 Transmission 8-97
Group 8 Steering valve 8-152

MidWestTech | Hyundai R200W-7 Wheel Excavator Service Manual | Publication R20... Order the manual at mid-west-tech.com >

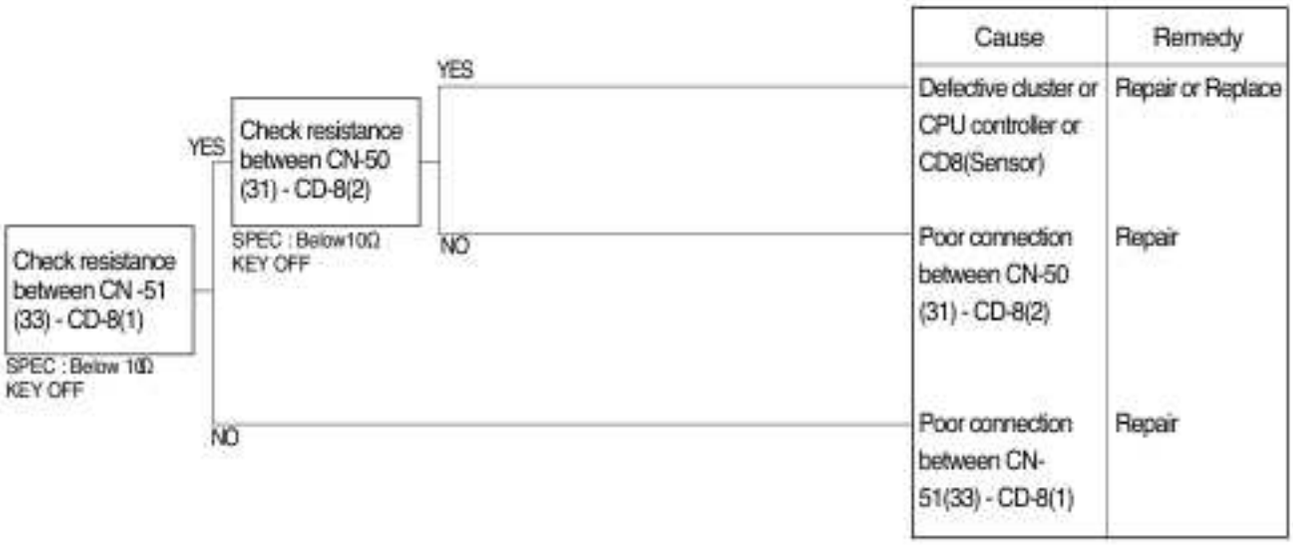
Group 9 Front Axle 8-177
Group 10 Rear Axle 8-229
Group 11 RCV Lever 8-280
Group 12 Turning Joint 8-295
Gropu 13 Boom, Arm, Bucket, Dozer and Outrigger Cylinder 8-302
Group 14 Work Equipment 8-323

MidWestTech | Hyundai R200W-7 Wheel Excavator Service Manual | Publication R20... Order the manual at mid-west-tech.com >

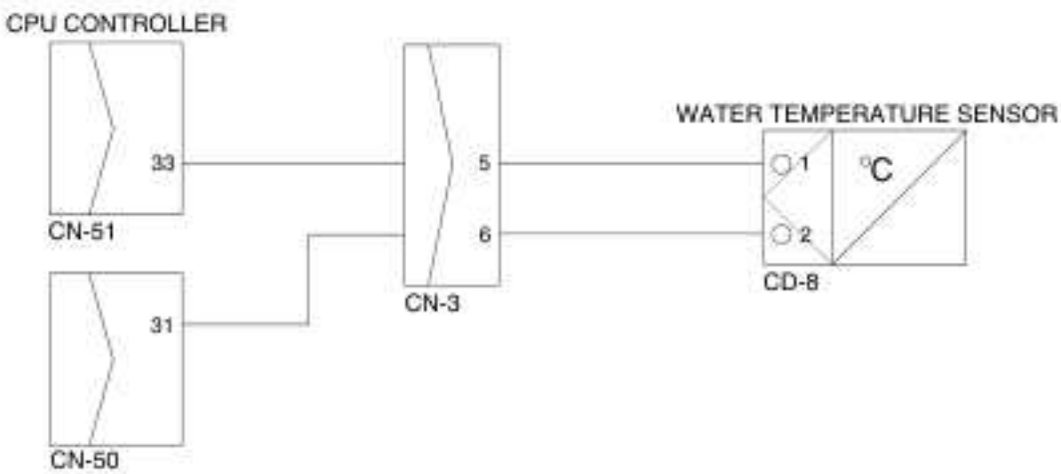
7. MALFUNCTION OF WARMING UP

※ Before carrying out below procedure, check all the related connectors are properly inserted.

1) INSPECTION PROCEDURE



Wiring diagram



MidWestTech | Hyundai R200W-7 Wheel Excavator Service Manual | Publication R20... Order the manual at mid-west-tech.com >

(4) Insert the two cup springs and align them centrically.

¦ Pay attention to the installation position, see figure.



(5) Assemble measuring cover and pull it evenly against shoulder, using 4 socket head screws(M12).

¦ /Tightening torque : 8.0kgf¦ /m(58.2lb¦ /ft)



(6) Determine dimension ¥ form the plane surface of the measuring cover to the plane surface/piston.

¦ /Dimension ¥ e.g. : 32.60mm

Example D

¦ /Dimension	32.60mm
¦ /Manufacturing dimension measuring cover	-20.00mm
¦ /Difference = Dimension X	12.60mm

¦ The manufacturing dimension is stamped on the measuring cover and is principally 20.00mm.



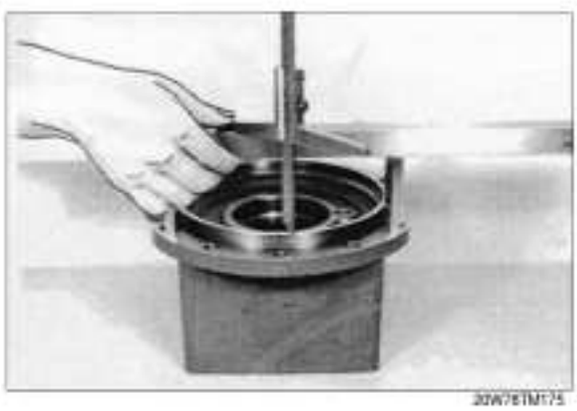
(7) Measure dimension Y from the locating face of the drive casing to the flange-mounted surface.

¦ /Dimension Y e.g. : 11.10mm

Example E

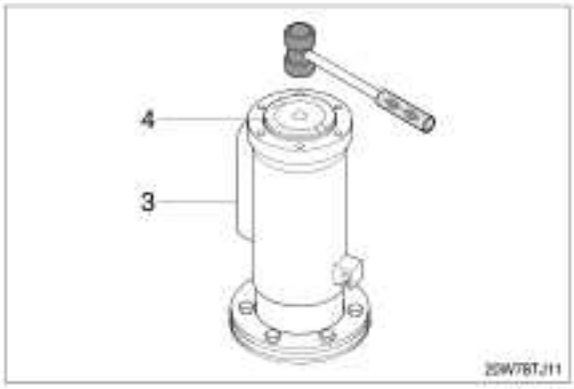
¦ /Dimension X	12.60mm
¦ /Dimension Y	-11.10mm
¦ /Difference¦ adjustment value	=1.50mm

¦ Carry out possible corrections with corresponding outer plates(s=3.0, 3.2, 3.5). Now, take off the measuring cover and remove the piston again.



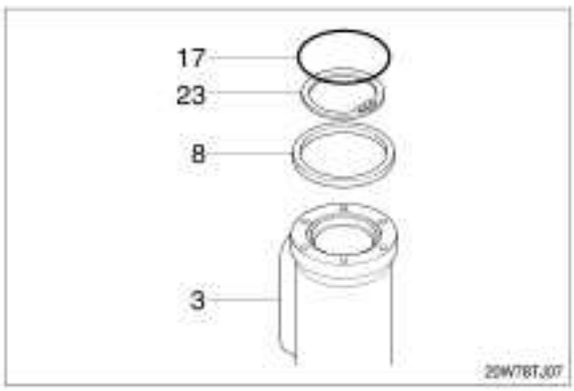
MidWestTech | Hyundai R200W-7 Wheel Excavator Service Manual | Publication R20... Order the manual at mid-west-tech.com >

(5) Set shaft(4) of turning joint upside on block, tap hub(3) with a plastic hammer to install.

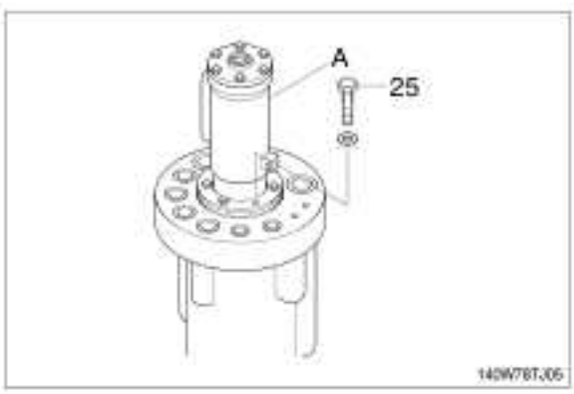


(6) Fit spacer(8) and retainer ring(23) to shaft(4).

(7) Fit O-ring(17) to hub(3).

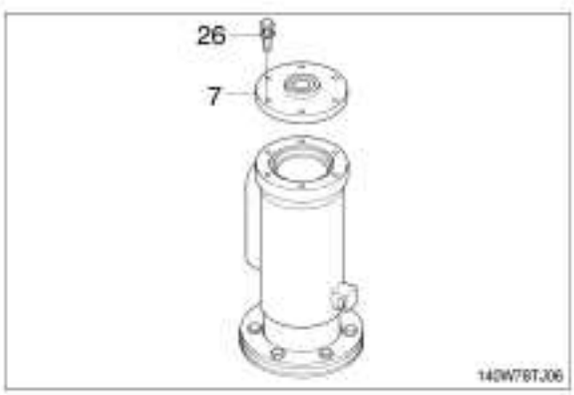


(8) Set turning joint upside(A) on downside, tighten bolts(25).
- Torque : 3.5± 0.4kgf· m



(9) Fit O-ring(17) to hub(3).

(10) Install cover(7) to hub and tighten bolts(26).
- Torque : 2.35± 0.35kgf· m



MidWestTech | Hyundai R200W-7 Wheel Excavator Service Manual | Publication R20... Order the manual at mid-west-tech.com >

(9) Fit tilting bush(214) of swash plate(212) to tilting pin(531) and fit swash plate to swash plate support(251) correctly.

- Take care not to mix up parts of drive shaft side with those of driven shaft side.
- Even after fitting, swash plate(212) comes off from swash plate support(251), in some cases. They do not come off easily if grease is applied to the sliding surfaces.
- Confirm with fingers of both hands that swash plate can be moved smoothly.



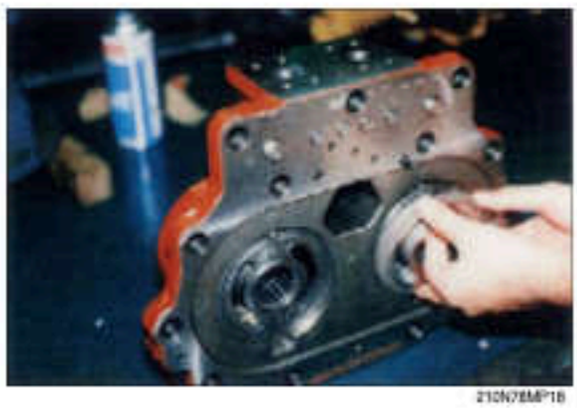
(10) Assemble piston cylinder subassembly [cylinder(141), piston subassembly(151, 152), set plate(153), spherical bush(156), cylinder spring(157)]. Fit spline phases of spherical bush and cylinder and insert piston cylinder subassembly into pump casing with respect to drive shaft(111) and driven shaft(113).

- Take care not to mix up parts of drive shaft side with those of driven shaft side.
- Confirm that swash plate(212) is not off from swash plate support(251) and from tilting pin(531), before inserting them.



(11) Fit valve plates(313, 314) to valve cover, entering valve plate pin(885) into pin hole.

- Take care not to mistake suction/delivery directions of valve plate.
- Apply grease to matching surface in contact with valve cover(312) because valve plates(313, 314) tend to come off.



(12) Insert check valve subassemblies(541, 543, 545) and needle bearings(124) to valve cover(312).

- Insert check valve subassemblies into valve cover in correct order.
- Since check valve subassembly tends to come off, apply grease to matching part of valve cover(312).



MidWestTech | Hyundai R200W-7 Wheel Excavator Service Manual | Publication R20... Order the manual at mid-west-tech.com >

(3) Disassemble rear cover assy sub

① Disassemble pin(8, 23), valve plate(24) from rear cover(21).



1407BSM212/212A

② Using a torque wrench, disassemble relief valve assy(33) 2 set from rear cover(21).



1407BSM213/213A

③ After disassembling plug with a L-wrench from rear cover(21), disassemble respectively back up ring, O-ring, O-ring, spring, anti-inversion valve assy(34)



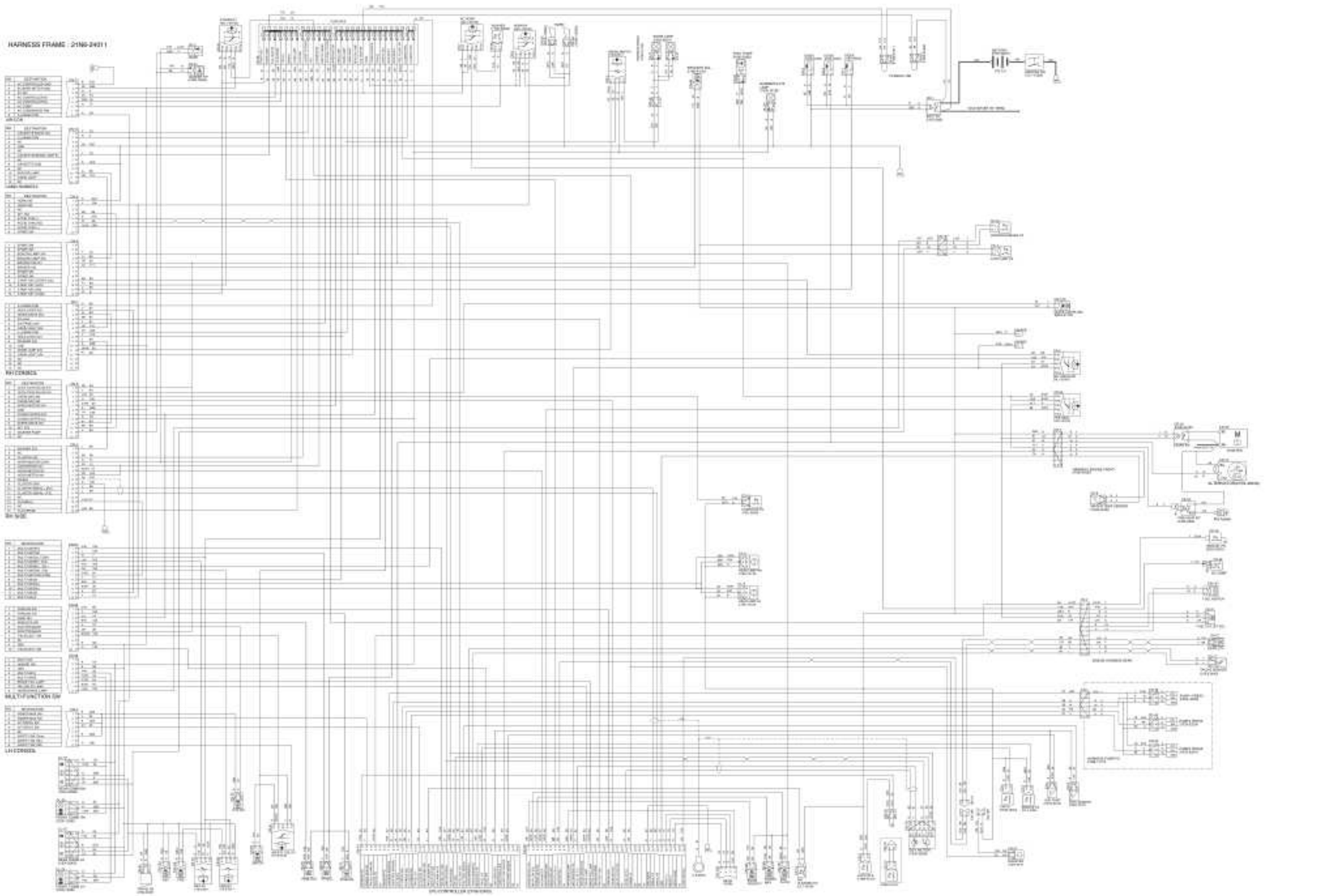
1407BSM214/214A

④ Disassemble make up check valve assy with a torque wrench from rear cover(21).



1407BSM215/215A

MidWestTech | Hyundai R200W-7 Wheel Excavator Service Manual | Publication R20... Order the manual at mid-west-tech.com >



MidWestTech | Hyundai R200W-7 Wheel Excavator Service Manual | Publication R200W-7

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