SERVICE MANUAL

COMFORT INTELLIGENCE H

HYDRAULIL EXCAVATOR

R150WVS PRO

HD HYUNDAI CONSTRUCTION EQUIPMENT

MidWestTech | Hyundai R150WVS PRO (China) Crawler Excavator Service Manual | Publi... 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 2-20
Group 3 Swing Device 2-47
Group 4 Travel Motor 2-59
Group 5 RCV Lever 2-66
Group 6 Accelerator Pedal 2-73
Group 7 Brake Pedal 2-74
Group 8 Transmission 2-76
Group 9 Travel Control Valve 2-83
Group 10 Steering Valve 2-85

SECTION 3 HYDRAULIC SYSTEM

Group 1 Hydraulic Circuit 3-1

SECTION 4 ELECTRICAL SYSTEM

Group 1 Component Location 4-1
Group 2 Electrical Circuit 4-3
Group 3 Electrical Component Specification 4-24
Group 4 Connectors 4-32

SECTION 5 MECHATRONICS SYSTEM

Group 1 Outline 5-1
Group 2 Mode selection System 5-3
Group 3 Automatic Deceleration System 5-6

MidWestTech | Hyundai R150WVS PRO (China) Crawler Excavator Service Manual |... Order the manual at mid-west-tech.com >

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 Variable Power Control System 5-11
Group 9 Attachment Flow Control System 5-12
Group 10 Anti-Restart System 5-13
Group 11 Self-Diagnostic System 5-14
Group 12 Engine Control System 5-27
Group 13 EPPR Valve 5-28
Group 14 Monitoring System 5-33
Group 15 Fuel Warmer System 5-56

SECTION 6 TROUBLESHOOTING

Group 1 Before Troubleshooting 6-1
Group 2 Hydraulic and Mechanical System 6-4
Group 3 Electrical System 6-25
Group 4 Mechatronics System 6-41

SECTION 7 MAINTENANCE STANDARD

Group 1 Operational Performance Test 7-1
Group 2 Major Components 7-19
Group 3 Track and Work Equipment 7-28

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 8-30
Group 5 Swing Device 8-44
Group 6 Travel Motor 8-65
Group 7 Transmission 8-89
Group 8 Steering Valve 8-143
Group 9 Front Axle and Rear Axle 8-168
Group 10 RCV Lever 8-240

MidWestTech | Hyundai R150WVS PRO (China) Crawler Excavator Service Manual |... Order the manual at mid-west-tech.com >

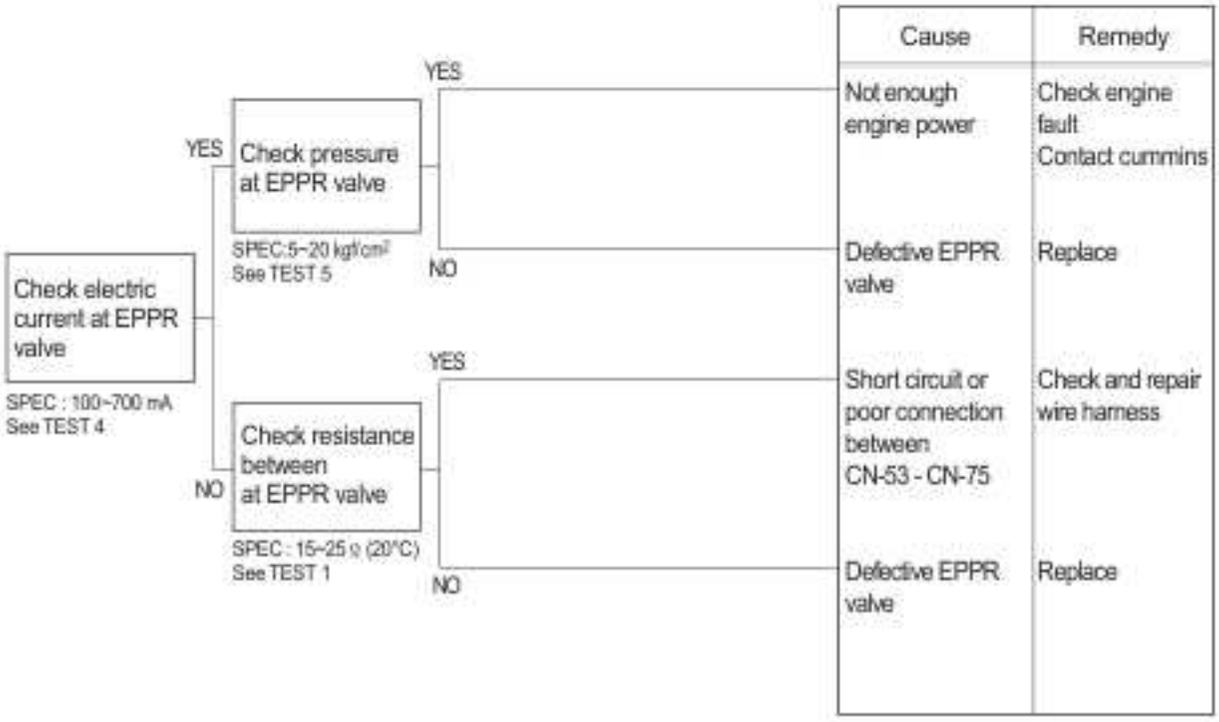
Group 11 Turning Joint 8-254
Group 12 Boom, Arm, Bucket, Dozer and Outrigger Cylinders 8-260
Group 13 Work Equipment 8-282

MidWestTech | Hyundai R150WVS PRO (China) Crawler Excavator Service Manual |... Order the manual at mid-west-tech.com >

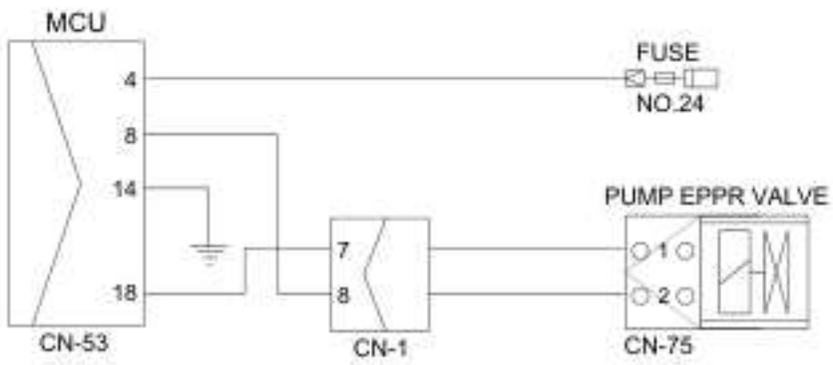
2. ENGINE STALL

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

1) INSPECTION PROCEDURE



Wiring diagram



14W99MS01

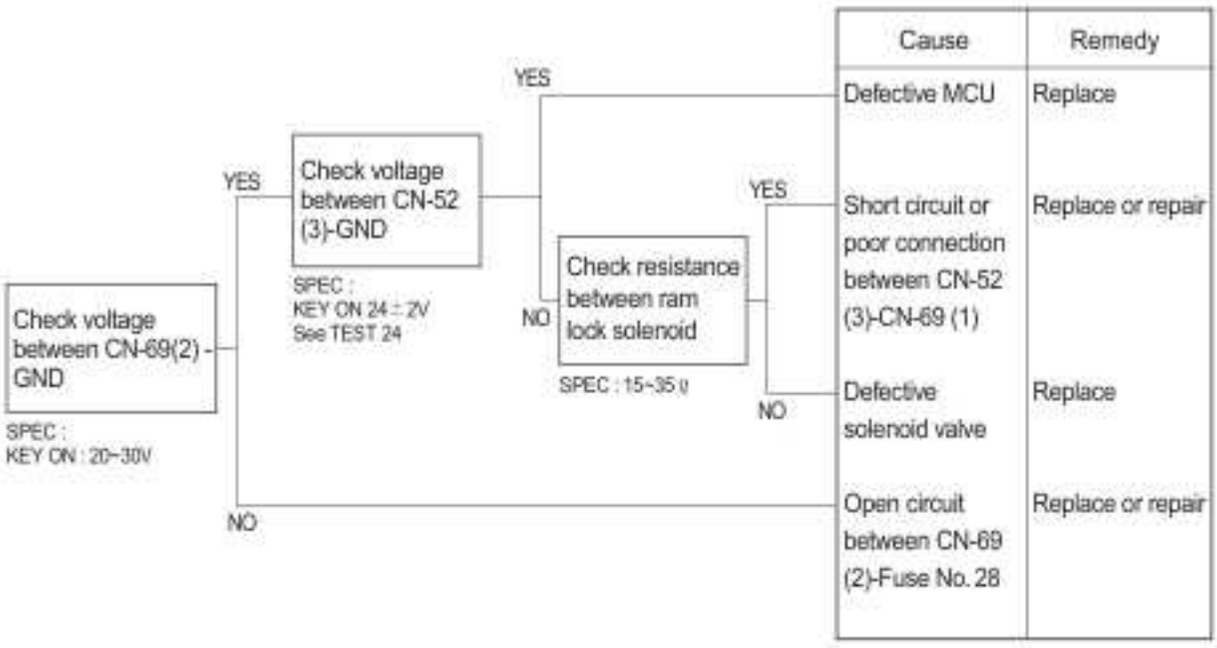
MidWestTech | Hyundai R150WVS PRO (China) Crawler Excavator Service Manual |... Order the manual at mid-west-tech.com >

21. MALFUNCTION OF RAM LOCK SOLENOID

- Fault code : HCESPN 525, FMI 5 or 6

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

1) INSPECTION PROCEDURE



Wiring diagram



MidWestTech | Hyundai R150WVS PRO (China) Crawler Excavator Service Manual |... Order the manual at mid-west-tech.com >

(27) Adjustment and check of piston stroke

Piston stroke / disk clearance =
0.7 ... 1.3 mm

Build up brake pressure (100 bar) and close shut-off valve of HP pump.

Determine dimension "A", from face of the ring gear (1) through the measuring hole (see also sketch 43) to the face of the piston (3).

Dim. "A" e.g. ..... 83.10 mm

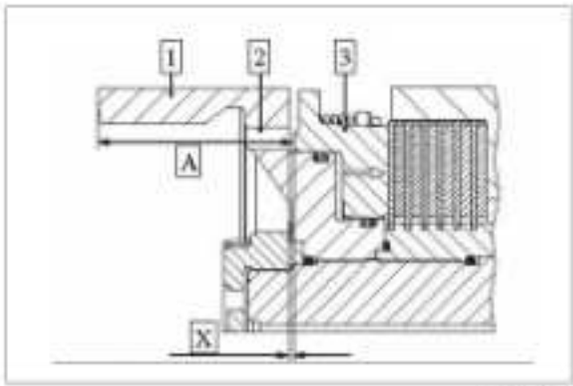
※ Breathe brake completely before starting the measuring operation.


17W98RA129

(28) Then open shut-off valve of HP pump and release pressure from brake (piston return via compression springs).

Determine dimension "B", from the face of the ring gear (1) through the measuring hole (see also sketch RA131) to the face of the piston (3).

Dimension "B" e.g ..... 82.10 mm



17W98RA130

(29) Calculation example :

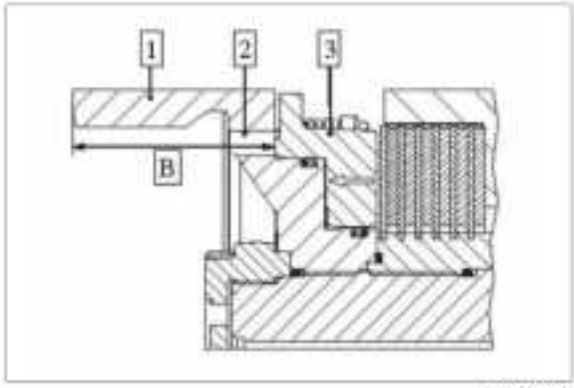
Dimension „A" e.g. ..... 83.10 mm
Dimension „B" e.g. ..... - 82.10 mm
Difference = piston stroke = 1.00 mm

※ If the required piston stroke (0.7 ... 1.3 mm) is not achieved, correct it with (a) corresponding inner clutch disk(s) – see respective spare parts list.

Then remove HP pump (S), breather bottle (S) and threaded coupling (S).

Legend to sketches RA130 and RA131:
1 = Ring gear
2 = Measuring hole
3 = Piston
X = Piston stroke/disk clearance

(S) Straightedge 5870 200 022



17W98RA131

MidWestTech | Hyundai R150WVS PRO (China) Crawler Excavator Service Manual |... Order the manual at mid-west-tech.com >

(3) Monitoring

① Active fault



- The active faults of the MCU or engine ECM can be checked by this menu.

② Logged fault



- The logged faults of the MCU or engine ECM can be checked by this menu.

③ Delete logged fault



- The logged faults of the MCU or engine ECM can be deleted by this menu.

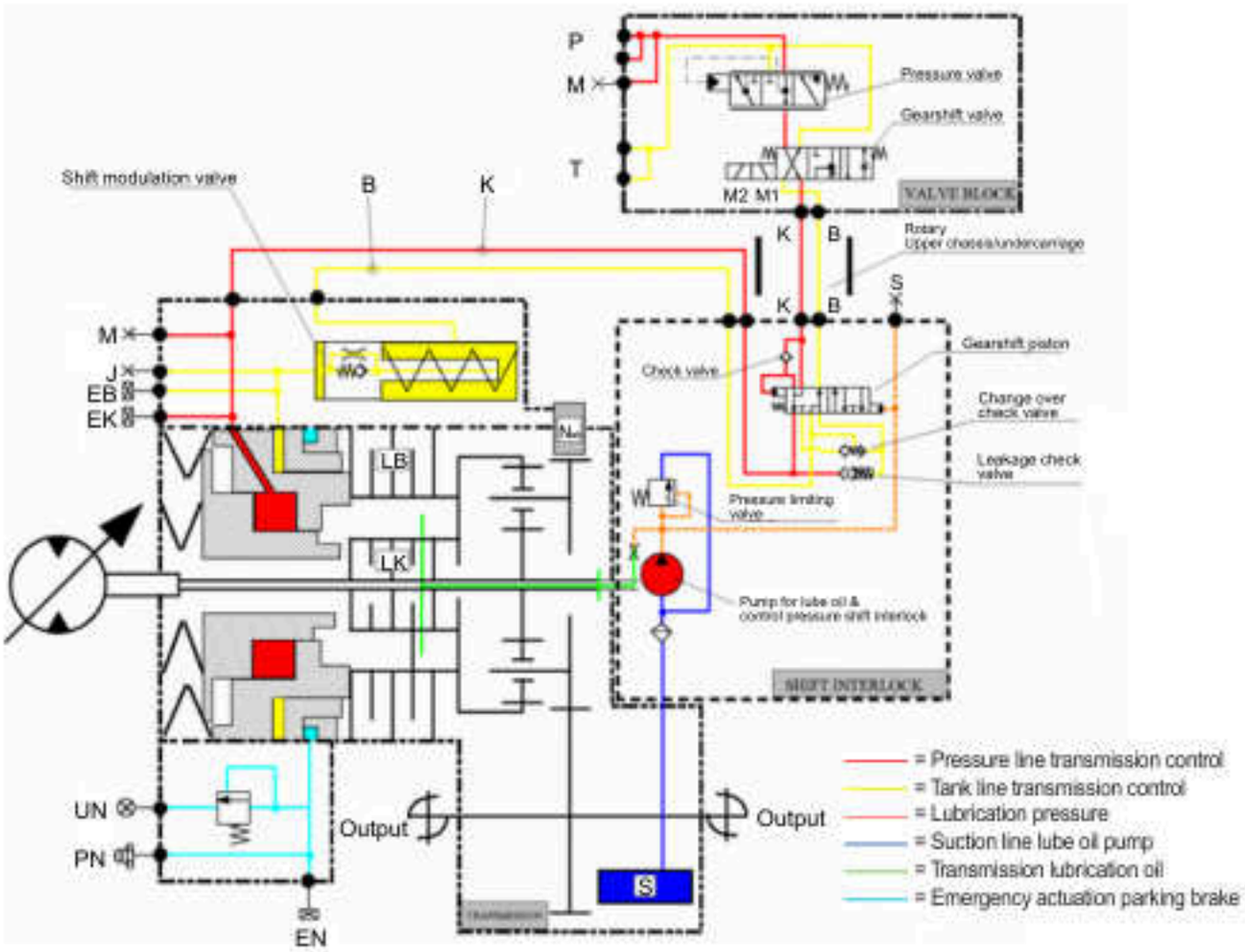
④ Monitoring(Analog)



- The machine status such as the engine rpm, oil temperature, voltage and pressure etc. can be checked by this menu.

MidWestTech | Hyundai R150WVS PRO (China) Crawler Excavator Service Manual |... Order the manual at mid-west-tech.com >

2. TRANSMISSION DIAGRAM



Measuring points-Transmission/Shift interlock :
J : High speed (brake)
M : Low speed (clutch)
S : Lubrication pressure

Connections-Transmission/Shift interlock :
B : Brake
K : Clutch
PN : Emergency actuation parking brake

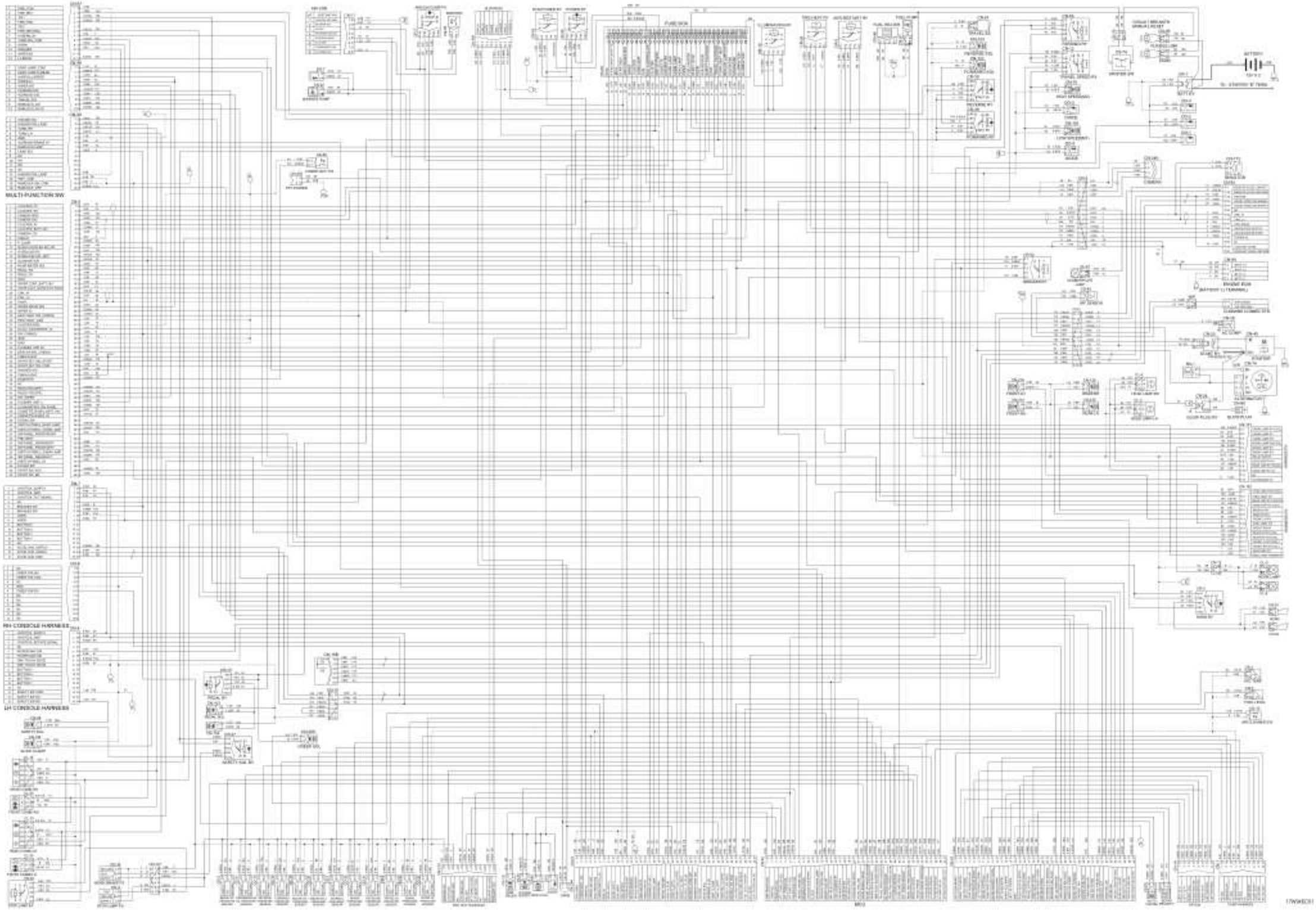
Measuring points-Valve block :
M : System pressure transmission control

Connections-Valve block :
P : System pressure transmission control
T : Tank
B : Brake
K : Clutch

Solenoid valves-valve block :
M1 : Solenoid valve (low speed)
M2 : Solenoid valve (high speed)

Port	Name	Size	Port	Name	Size
P1 (B)	Shift pressure, High speed	M16 × 1.5	M	Gauge port, Low speed	M10 × 1.0
P2 (K)	Shift pressure, Low speed	M16 × 1.5	S	Lubrication pressure port	M10 × 1.0
J	Gauge port, High speed	M10 × 1.0	PN	Parking brake lubricant	Grease nipple

MidWestTech | Hyundai R150WVS PRO (China) Crawler Excavator Service Manual |... Order the manual at mid-west-tech.com >



MidWestTech | Hyundai R150WVS PRO (China) Crawler Excavator Service Manual | Publication R150WVS PRO (China)
Order the manual at mid-west-tech.com >