CRAWLER EXCAVATOR

# SERVICE MANUAL

## *R15-7*

HYUNDAI

MidWestTech | Hyundai R15-7 Crawler Excavator Service Manual | Publication R15-7

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

| Description | | | Unit | Robex15-7 |
|---|---|---|---|---|
| Machine weight | Canopy | Rubber shoe | Kg | 1460 |
| | | Steel shoe | | 1510 |
| | Cabin | Rubber shoe | | 1570 |
| | | Steel shoe | | 1620 |
| Standard bucket | Capacity | | $m^3$ | 0.04 |
| | Width | | mm | 400 |
| Engine | Maker, model | | | MITSUBISHI L3E |
| | Rated power | | kW(ps)/$min^{-1}$ | 12.5(17)/2400 |
| | Displacement | | cc | 952 |
| Working range | Max.digging depth | | mm | 2175 |
| | Max.vertical digging depth | | | 1535 |
| | Max.digging height | | | 3250 |
| | Max.dumping height | | | 2180 |
| | Max.digging reach | | | 3730 |
| | Min.swing radius | Front | | 1630 |
| | | Swing | | 1235 |
| | Rear end radius | | | 1140 |
| | Boom swing angle | | deg | Left80/Right50 |
| Dimension | Overall length | | mm | 3720 |
| | Overall width | | | 1000 |
| | Overall height | | | 2260 |
| | Dozer(width × height) | | | 1000×240 |
| Performance | Travel speed | | km/hr | 2.1/3.9 |
| | Swing speed | | $min^{-1}$ | 11.5 |
| | Gradeability | | deg(%) | 25(47) |
| | Max.digging force | Bucket | kN(kgf) | 14.4(1470) |
| | | Arm | | 9.0(920) |
| | Max. drawbar pull | | | 12.6(1290) |
| Under-carriage | Ground pressure | Canopy&rubber shoe | kpa($kgf/cm^2$) | 26(0.27) |
| | | Cabin&rubber shoe | | 28(0.29) |
| | Tumbler distance × track gauge | | mm | 1130×770 |
| | Track shoe width | | | 230 |
| | Type of travelling motor | | | Piston shoe-in type |
| | Crawler tension system | | | Grease cylinder |
| Hydraulic | Type of hydraulic pump | | | Gear×3 |
| | Pump oil flow | | ℓ/min | 3×15.7 |
| | Auxiliary circuit oil flow | | | 31.4 |
| | Relief valve setting pressure | | MPa($kgf/cm^2$) | 18.6(190) |
| Capacity | Hydraulic oil tank | | ℓ | 24 |
| | Engine oil | | | 3.5 |
| | Fuel tank | | | 20 |
| | Cooling water | | | 5.6 |
| Noise | Noise level(LwA/LpA) | | dB | 95/84 |



MidWestTech | Hyundai R15-7 Crawler Excavator Service Manual | Publication R15-7 Order the manual at mid-west-tech.com >

# 2-4 Weight list

Unit: kg

| Part name | | Part name | |
|---|---|---|---|
| Boom | 58 | Slew bearing | 17.7 |
| Arm | 24.5 | Track frame | 101 |
| Bucket | 32.3 | Dozer | 36.5 |
| Dump link | 3.6 | Crawler(steel) | 74×2 |
| Bucket link(R) | 1.6 | Crawler(rubber) | 51×2 |
| Bucket link(L) | 1.9 | Idler | 8×2 |
| Boom joint pin | 1.8 | Adjust cylinder | 10.6×2 |
| Arm joint pin | 1.9 | Track roller | 2.9×6 |
| Bucket pin | 0.8×2 | Sprocket | 4×2 |
| Swing post | 24.5 | Slew motor | 23 |
| Swing post pin | 3.2 | Turning motor | 14×2 |
| Swing frame | 162 | Joystick | 3.5×2 |
| Hydraulic oil tank | 29 | Console box | 9.6×2 |
| Fuel tank | 16 | Engine | 94 |
| Engine cover(A) | 17.6 | Radiator | 6.9 |
| Engine cover(B) | 2.7 | Battery | 12.5 |
| Counter weight | 83 | Seat plate | 12 |
| Operator cabin | 200 | Swivel joint | 8 |
| Boom cylinder | 12.5 | Pump | 5.4 |
| Arm cylinder | 12 | Control valve | 24 |
| Bucket cylinder | 12 | Tops roof | 85 |
| Swing cylinder | 12.5 | Cabin | 200 |
| Dozer cylinder | 8.5 | | |



MidWestTech | Hyundai R15-7 Crawler Excavator Service Manual | Publication R15-7 Order the manual at mid-west-tech.com >

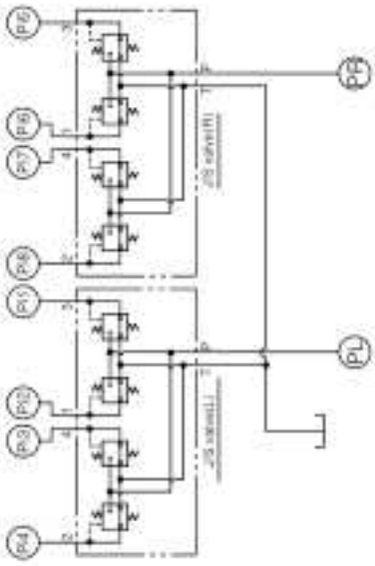
# 2 OUTLINE

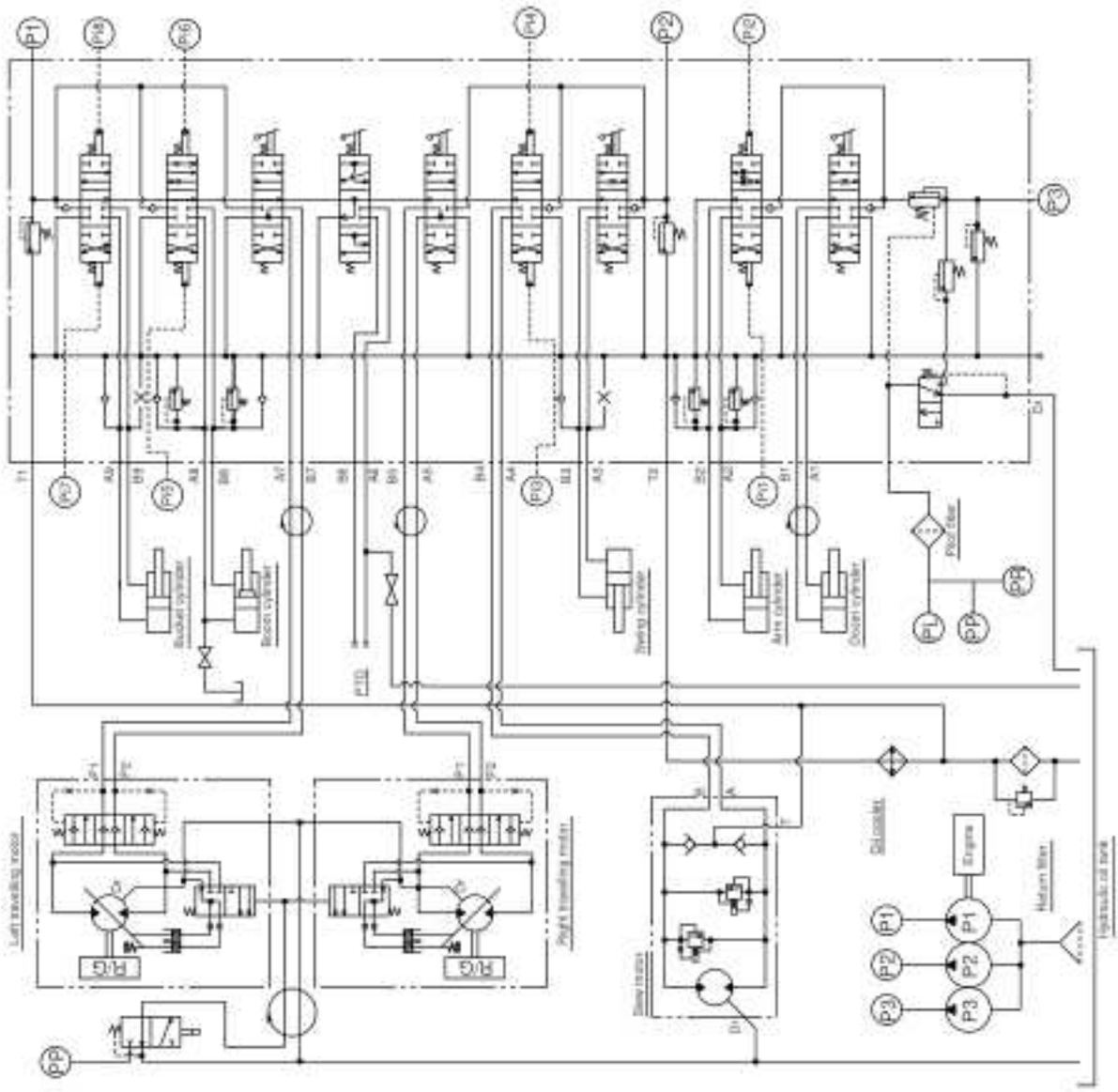
## CONTENTS


2-1 Location of serial No.
2-2 Name of each part
2-3 Dimensions and specification
2-4 Weight list
2-5 Oil and grease supply points
2-6 List of supply oil and grease
2-7 When to repair
2-8 Hydraulic circuit diagram


MidWestTech | Hyundai R15-7 Crawler Excavator Service Manual | Publication R15-7 Order the manual at mid-west-tech.com >

# 2-8 Hydraulic circuit diagram







MidWestTech | Hyundai R15-7 Crawler Excavator Service Manual | Publication R15-7 Order the manual at mid-west-tech.com >

# 19 TROUBLESHOOTING

## CONTENTS


19-1 Troubleshooting
- 19-1-1 All functions not operational
- 19-1-2 Operation power is weak
- 19-1-3 No operation on boom, arm, bucket slewing

19-2 Travelling system
- 19-2-1 Right (or left) hand side of crawler does not work correctly
- 19-2-2 Travelling meander by slow speed on only right (left) hand side
- 19-2-3 Machine fails to hold on incline

19-3 Slewing system
- 19-3-1 No operation both (right/left)slewing
- 19-3-2 It is possible to turn right (left) but not left (right)
- 19-3-3 Turning acceleration slow, the overturn is highter than tolerance
- 19-3-4 Extreme slow turning speed
- 19-3-5 Turning movement when the machine is parked on a slope

19-4 Boom system (for arm and bucket cylinders the same method as follows.)
- 19-4-1 No movement on boom cylinder
- 19-4-2 Slow action or lack of power on boom cylinder
- 19-4-3 Natural fall of boom

19-5 Swing system
- 19-5-1 No movement on swing system
- 19-5-2 Drifting swing cylinder


MidWestTech | Hyundai R15-7 Crawler Excavator Service Manual | Publication R15-7 Order the manual at mid-west-tech.com >