WEBM000404

SHOP MANUAL

WB91R-2
WB93R-2

avance

BACKHOE-LOADER

SERIAL NUMBER

WB91R 2 91F20145 and up

WB93R-2 93F23453 and up

KOMATSU®

Utility

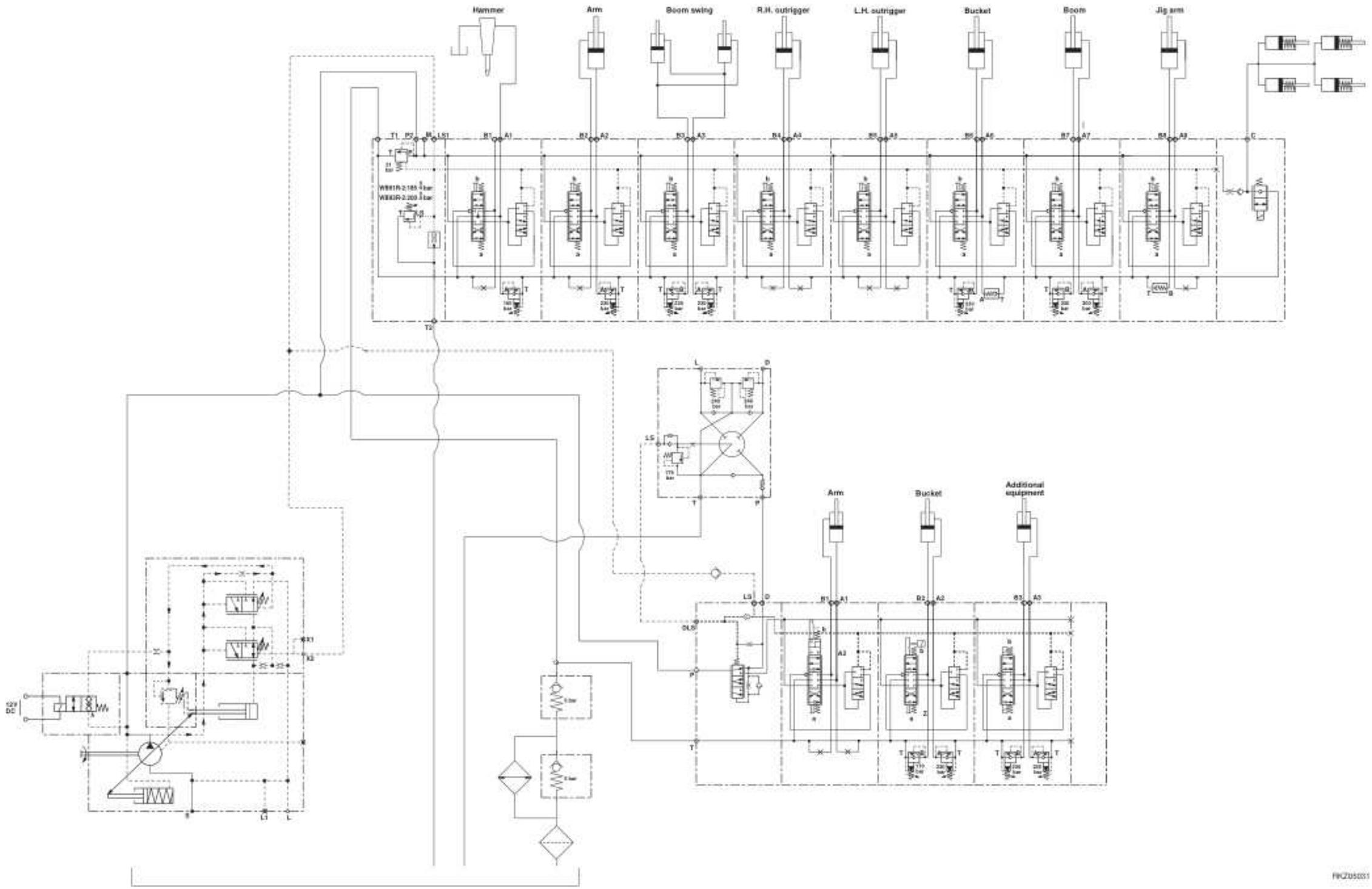
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HYDRAULIC CIRCUIT

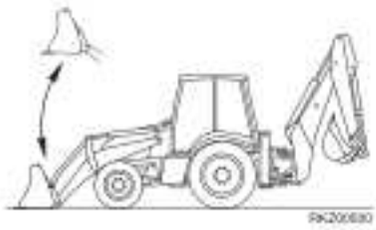
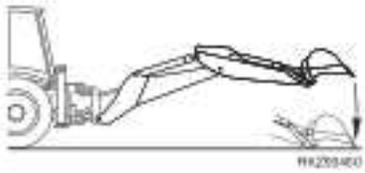
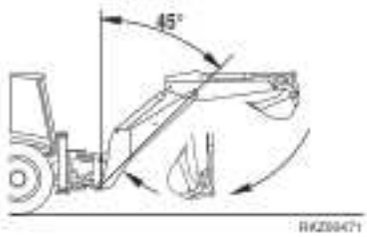


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★ The technical data of follow table are refered to a machine with max 500 kg shovel bucket, 600 mm (max. 160 kg) backhoe bucket and standard arm (or telescopic arm) closed.

FOR MACHINE

Machine model					WB91R-2	
Classification		Check item	Test conditions	Unit	Standard value	Permissible value
Work equipment speed	Time lags	Tilt lever front bucket	Measuring posture  • Engine speed: Min. • Oil temperature: 45 – 55°C • Check the time necessary to lift bucket from level ground.	sec.	0	Max. 2
		Boom	Measuring posture  • Engine speed: Min. • Oil temperature: 45 – 55°C • With attachments fully extended, lower the boom and check the necessary time from the beginning of machine lifting until bucket is on level ground.		0	Max. 2
		Arm	Measuring posture  • Engine speed: Min. • Oil temperature: 45 – 55°C • Put boom at 45°, open completely the arm with curled bucket. Extend arm cylinder and check the time passing between arm stop at dead centre and the restart movement.		0	Max. 2

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Ring gear tooth broken at the outer side	
CAUSES	**REMEDY**
Excessive gear load compared to the one foreseen	Replace bevel gear set Follow carefully the recommended operations for the adjustment of bevel gear set free backlash
Incorrect gear adjustment (excessive backlash)	
Pinion nut loosened	

Ring gear tooth broken side	
CAUSES	**REMEDY**
Load bump	Replace bevel gear set Adjust bevel gear set freebacklash
Incorrect gear adjustment (insufficient backlash)	
Pinion nut loosened	

Pinion or ring gear teeth or worn	
CAUSES	**REMEDY**
Insufficient lubrication; contaminated oil; incorrect lubrication or depleted additives	Replace bevel gear set Follow carefully the recommended operations for the adjustment of bevel gear set freeplay Use correct lubricants, fill up to the right levels and replace according to the recommended program.
Worn out pinion bearings	

Overheated ring and pinion teeth	
CAUSES	**REMEDY**
Prolong ed functioning at high temperatures	Replace bevel gear set. Use proper lubrication, fill up to right level and replace at recommended program.
Insufficient lubrication; contaminated oil; incorrect lubrication	

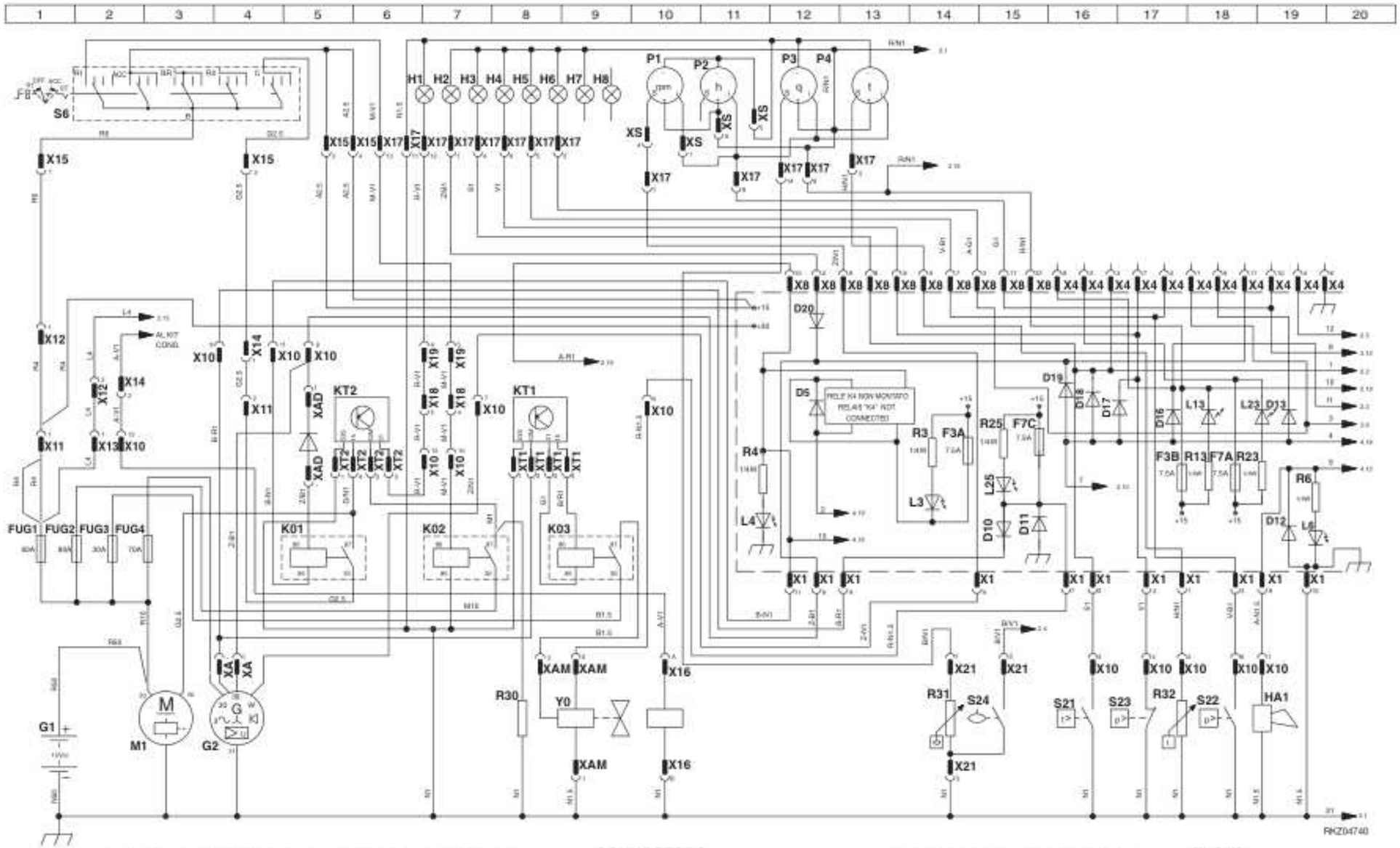
Pinion teeth pitting	
CAUSES	**REMEDY**
Excessive use	Replace bevel gear set. Use correct lubrication, fill up to the right level and substitute at recommended intervals
Insufficient lubrication	

Axle beam body bent	
CAUSES	**REMEDY**
Vehicle over loaded	Replace axle beam body
Vehicle's accident	
Load bump	

Worn out or pitted bearings	
CAUSES	**REMEDY**
Insufficient lubrication; contaminated oil	Replace bearings. Use correct lubrication fill up, to the right level and replace at recommended intervals
Excessive use	
Normal wear out	
Pinion nut loosened	

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ELECTRICAL DIAGRAM (1/6)



COMPONENTS

G1 - Battery
G2 - Generator
H1 - Preheating warning light
H2 - Generator warning light
H3 - Engine water high temperature warning light
H4 - Air filter warning lamp
H5 - Hydraulic oil filter warning lamp
H6 - Optional warning lamp
H7 - Optional warning lamp
H8 - Optional warning lamp
HA1 - Horn
K01 - Starter relay
K02 - Preheating relay
K03 - Fuel shut off relay
KT1 - Fuel shut off timer
KT2 - Preheating timer
M1 - Starter motor
P1 - Rpm instrument
P2 - Hour counter
P3 - Fuel level indicator
P4 - Water temperature instrument
R30 - Heating start
R31 - Fuel level sender
R32 - Water temperature sender
S6 - Starting switch
S21 - Engine water high temperature switch
S22 - Air filter blocked switch
S23 - Engine oil low pressure switch
S24 - Fuel gauge
Y0 - Fuel shut off solenoid valve

CONNECTORS

X1 - Front line (engine) 11 way connector
X4 - Monitor 11 way connector
X8 - Lateral dashboard 17 way connector
X10 - Front line-engine line 13 way connector
X11 - Power 3 way connector
X12 - Front line-cross line 3 way connector
X13 - Front line-engine line 2 way connector
X14 - Front line-cross line 4 way connector
X15 - Start key 4 way connector
X16 - Conditioner clutch 2 way connector
X17 - Lateral dashboard 21 way connector
X18 - Power box 5 way connector
X19 - Front dashboard 9 way connector
X21 - Fuel level indicator 3 way connector
XA - Generator 2 way connector
XAD - Diode 2 way connector
XAM - Fuel shut off valve 3 way connector
XS - Multifunction instrument 16 way connector
XT1 - Fuel shut off timer 4 way connector
XT2 - Preheating timer 4 way connector

FUSES

F3A - Starting fuse 7.5A
F3B - Switch+warning light+ return to dig fuse 7.5A
F7A - Monitor power fuse 7.5A
F7C - Fuel shut off fuse 7.5A
FUG1- General fuse 60A
FUG2- Preheating fuse 80A
FUG3- Fuel shut off power fuse 30A
FUG4- Generator fuse 70A

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