CK25-CK28 Crawler Excavators

Table of contents

DIVISION/SECTION	SECTION N°	FORM N°
1. GENERAL		
Safety, General Information and Torque Specifications	1001	7-55741GB
General specifications	1002	7-37930GB
2. ENGINE		
Engine Removal and Installation	2002	7-37940GB
Engine Disassembly/Assembly, Lubrication System, Cooling System and Fuel System	2010	7-37950GB
4. ELECTRICAL		
Electrical Troubleshooting and Schematics	4001	7-37960GB
Alternator	4002	7-37980GB
Starter Motor	4003	7-37970GB
5. UNDERCARRIAGE		
Tracks, Rollers and Idlers	5002	7-37990GB
6. POWER TRAIN		
Travel Motor and Reduction	6002	7-38000GB
Swing Reduction Gear	6003	7-38150GB
7. UNDERCARRIAGE HYDRAULICS		
Hydraulic Swivel	7004	7-38010GB
8. UPPERSTRUCTURE HYDRAULICS		
Pressure setting, Troubleshooting, Hydraulic Schematics	8001	7-38020GB
Hydraulic Reservoir	8010	7-38030GB
Main hydraulic Pump	8020	7-38040GB
Hydraulic Pilot Pump	8021	7-38130GB
Attachment valve	8032	7-38050GB
Swing and offset cylinder flow selector valve	8035	7-38060GB
Pressure Limiter and Flow Cut-Off Valve	8036	7-38140GB
Swing Motor (CK25)	8037	7-56660GB
Swing Motor (CK28)	8037	7-37920GB
Hand Control Valve	8050	7-38120GB
Attachment cylinders	8081	7-38070GB
9. UPPERSTRUCTURE/ATTACHMENTS		
Upperstructure and Turntable Bearing	9001	7-38080GB
Boom, Dipper, Bucket and Dozer Blade	9002	7-38090GB
Pedals and Levers	9003	7-38100GB
Operator's Cab and Canopy	9004	7-38110GB

PREVIEW - YOUFIXTHIS.COM

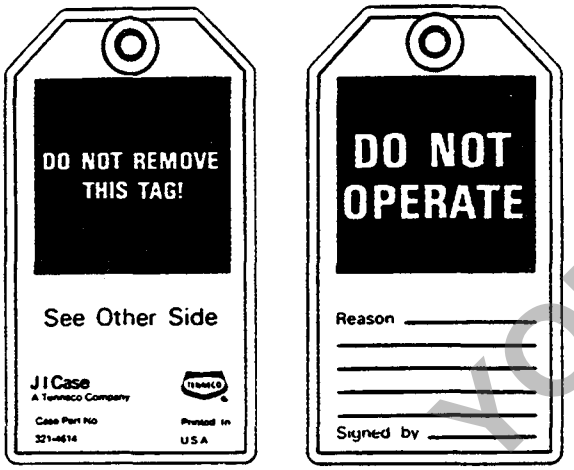
Copyright © 1995 Case Corporation
Printed in England
February 1995

Download full manual at youfixthis.com

SAFETY

This symbol means ATTENTION ! BECOME ALERT ! YOUR SAFETY IS INVOLVED. The message that follows the symbol contains important information about safety. Carefully read the message, Make sure you fully understand the causes of possible injury or death.

To prevent injury always follow the Warning, Caution and Danger notes in this section and throughout the manual.
Put the warning tag shown below on the key for the keyswitch when servicing or repairing the machine. One warning tag is supplied with each machine. Additional tags Part Number 331-4614 are available from your service parts supplier.



B004

Read the operator's manual to familiarize yourself with the correct control functions.

Operate the machine and equipment controls from the seat position only. Any other method could result in serious injury.

This is a one man machine, no riders allowed.

Before starting engine, study Operator's Manual safety messages. Read all safety signs on machine. Clear the area of other persons. Learn and practise safe use of controls before operating.
It is your responsibility to understand and follow manufacturers instrucitons on machine operation, service, and to observe pertinent laws and regulations. Operator's and Service Manuals may be obtained from your J.I. CASE dealer.

If you wear clothing that is too loose or do not use the correct safety equipment for your job, you can be injured. Always wear clothing that will not catch on objects. Extra safety equipment that can be required includes hard hat, safety shoes, ear protection, eye or face protection, heavy gloves and reflector clothing.

When working in the area of the fan belt with the engine running, avoid loose clothing if possible, and use extreme caution.

When doing checks and tests on the equipment hydraulics, follow the procedures as they are written. DO NOT change the procedure.

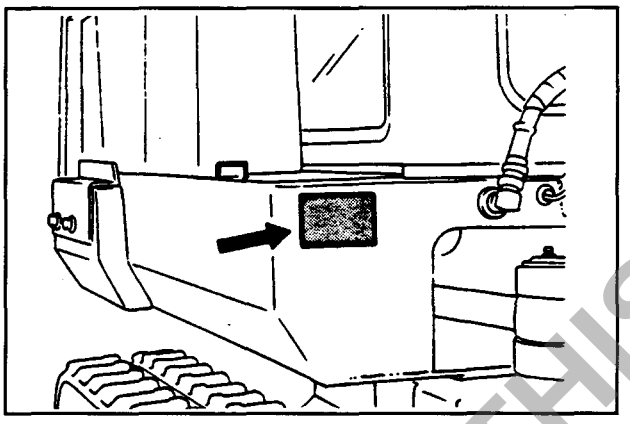
When putting the hydraulic cylinders on this machine through the necessary cycles to check operation or to remove air from a circuit, make sure all people are out of the way.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PRODUCT IDENTIFICATION AND SERIAL NUMBERS

When ordering parts or when requesting information or assistance always give the model and serial numbers of your machine.
Write the model and serial numbers of your machine on the lines below.



Model _____
Product Identification Number (PIN)_____

GENERAL SPECIFICATIONS

Capacities - CK25

Engine Oil (without filter change)	4 litres
Radiator	4 litres
Fuel Tank	30 litres
Hydraulic Oil Reservoir	25 litres
Hydraulic Circuit	36 litres
Bottom Track Roller	0.05 litres
Track Idler Wheel	0.04 litres
Travel Motor Reduction	0.5 litres

Capacities - CK28

Engine Oil (without filter change)	5.3 litres
Radiator	4 litres
Fuel Tank	57 litres
Hydraulic Oil Reservoir	43 litres
Hydraulic Circuit	65 litres
Bottom Track Roller	0.05 litres
Top Track Roller	0.025 litres
Track Idler Wheel	0.04 litres
Travel Motor Reduction	0.5 litres

Travel Speed - CK25

1st Speed	2.1 Km/h
2nd Speed	3.9 Km/h

Travel Speed - CK28

1st Speed	2.1 Km/h
2nd Speed	4.1 Km/h

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

STANDARD FASTENER TORQUE SPECIFICATIONS

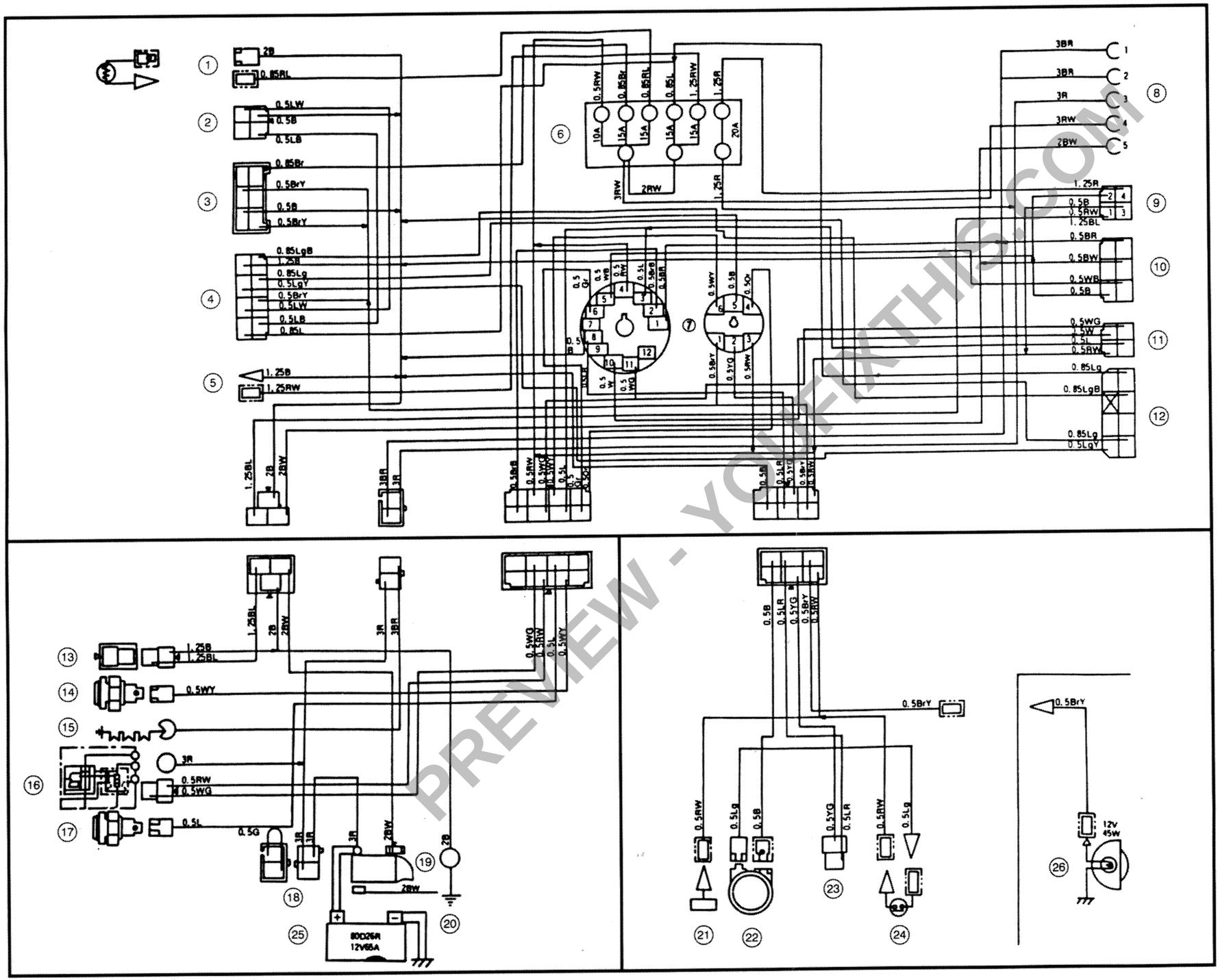
Unless otherwise specified, use the following torque specifications. Lubricate the threads with engine oil or ordinary grease.

SCREWS / STANDARD SIZE	4	7	9
M6	7.8 to 9.3 Nm (5.75 to 6.86 lb ft)	9.8 to 11.3 Nm (7.23 to 8.33 lb ft)	12.3 to 14.2 Nm (9.07 to 10.47 lb ft)
M8	17.7 to 20.6 Nm (13.0 to 15.2 lb ft)	23.5 to 27.5 Nm (17.34 to 20.29 lb ft)	29.4 to 34.3 Nm (21.6 to 25.31 lb ft)
M10	39.2 to 45.1 Nm (28.9 to 33.28 lb ft)	48,0 to 55.9 Nm (35.42 to 41.25 lb ft)	60.8 to 70.6 Nm (44.8 to 52.10 lb ft)
M12	62.8 to 72.6 Nm (46.3 to 53.5 lb ft)	77.5 to 90.2 Nm (57.19 to 66.56 lb ft)	103.0 to 117.7 Nm (76.0 to 86.86 lb ft)
M14	107.9 to 125.5 Nm (79.6 to 92.6 lb ft)	123.6 to 147.1 Nm (91.2 to 108.5 lb ft)	166.7 to 196.1 Nm (123.0 to 144.7 lb ft)
M16	166.7 to 191.2 Nm (123.0 to 141.0 lb ft)	196.1 to 225.6 Nm (144.7 to 166.49 lb ft)	259.9 to 304.0 Nm (191.8 to 224.3 lb ft)
M18	245.2 to 284.4 Nm (180.9 to 209.88 lb ft)	274.6 to 318.7 Nm (202.6 to 235.2 lb ft)	343.2 to 402.1 Nm (253.2 to 296.74 lb ft)
M20	333.4 to 392.2 Nm (246.0 to 289.44 lb ft)	367.7 to 431.5 Nm (271.36 to 318.44 lb ft)	490.3 to 568.8 Nm (361.8 to 419.77 lb ft)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

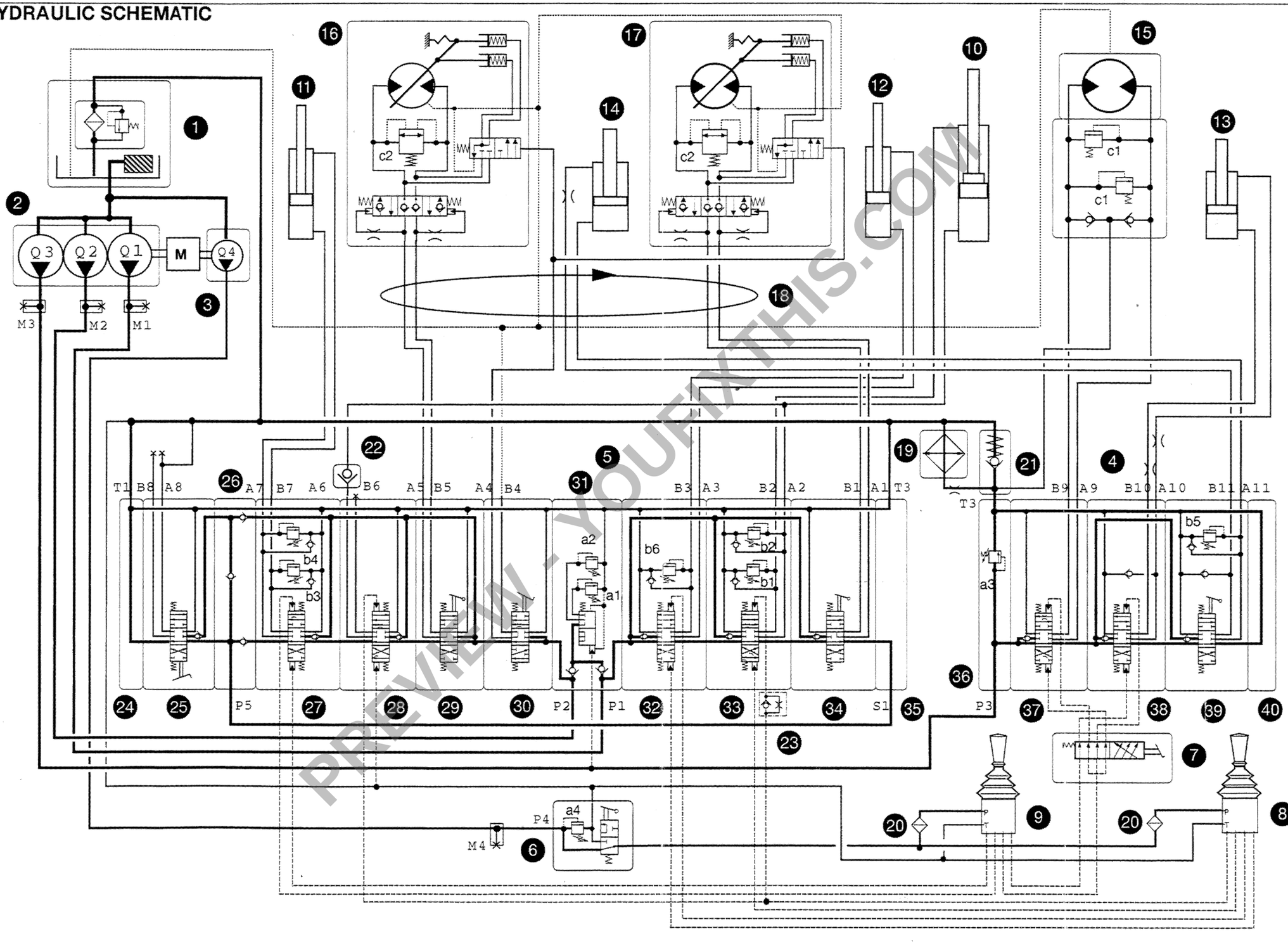
ELECTRICAL SCHEMATIC - CK25



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

CK25 HYDRAULIC SCHEMATIC



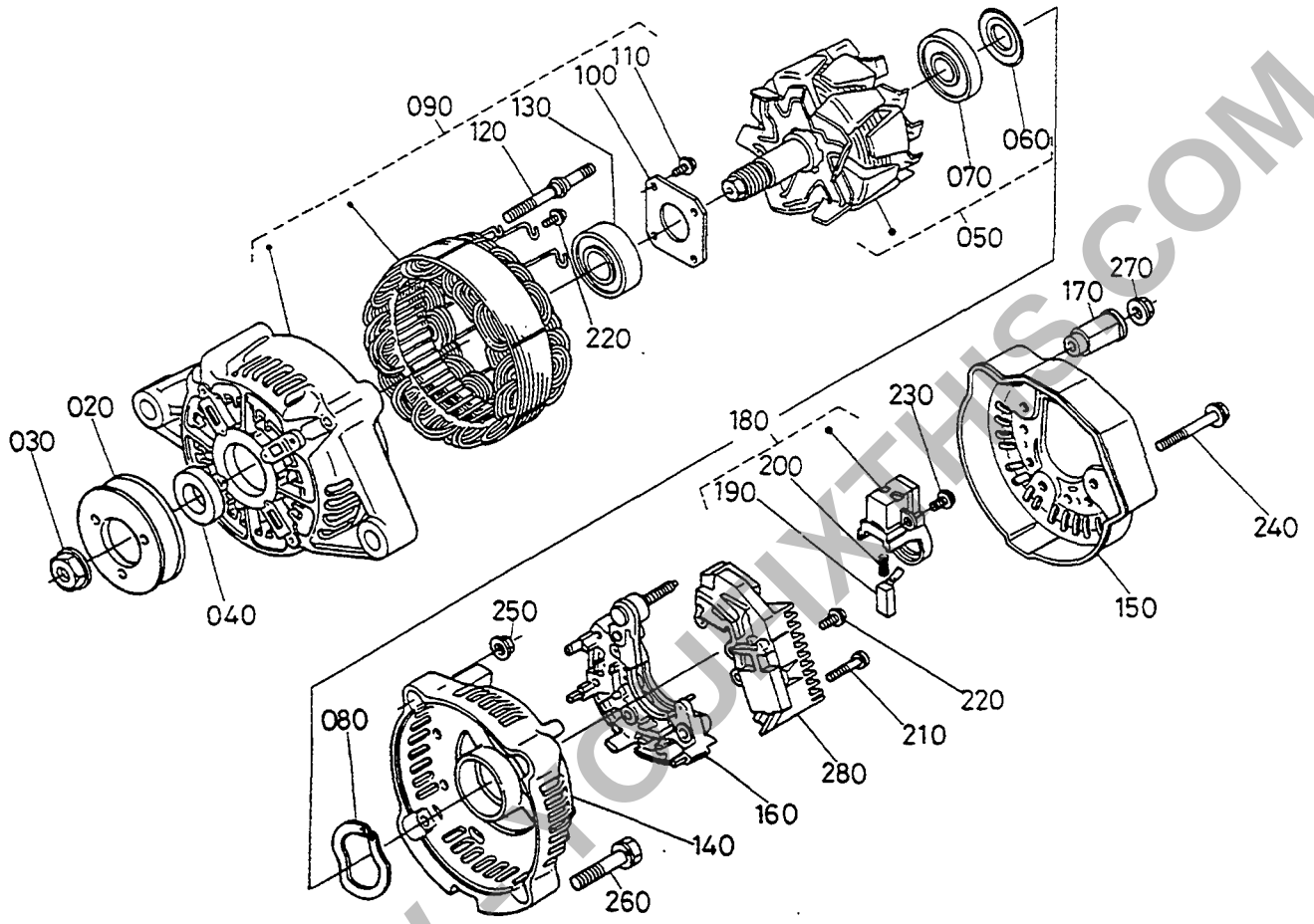
PREVIEW - YOUFIXTHIS.COM

PDH0531

Download full manual at youfixthis.com

Disassembly and Assembly

STEP 5



020. PULLEY
030. NUT
040. SPACER
050. ROTOR
060. COVER PLATE
070. BEARING
080. SNAP RING
090. BEARING
100. PLATE
110. SCREW
120. SCREW
130. BEARING
140. SUPPORT
150. COVER PLATE
160. RECTIFIER
170. BUSHING
180. BRUSH HOLDER
190. BRUSH
200. SPRING
210. SCREW
220. SCREW
230. SCREW
240. SCREW
250. NUT
260. SCREW
270. NUT
280. REGULATOR

PREVIEW YOUFIXTHIS.COM

Download full manual at youfixthis.com

TROUBLESHOOTING

Fault	Possible Cause	Correction
Battery discharged too early (Battery dead)	Fan belt loose	Adjust or replace
	Low electrolyte level	Add distilled water and charge
	Battery bad	Replace
	Wiring bad (between regulator and alternator or between regulator and battery)	Check the wiring and repair
	Regulator bad	Replace
	Alternator bad	Replace
Glow plug pilot lamp not illuminating or slow to illuminate	Battery discharged too much	Charge or replace
	Glow plug coil broken	Replace
	Key switch bad	Replace
	Wiring bad (between key switch and glow plug or between key switch and battery)	Check the wiring and repair
Charge lamp not illuminated when engine stopped and key switch turned on	Fuse bad	Replace
	Lamp bad	Replace
	Wiring bad (between key switch, charge lamp and regulator)	Check the wiring and repair
	Regulator bad	Replace
Charge lamp stays illuminated when engine is running	Wiring bad (between regulator N terminal and alternator N terminal)	Check the wiring and repair
	Regulator bad	Replace
	Alternator bad	Replace
Engine does not stop when key switch turned to the off position	Fuse bad	Replace
	Timer bad	Replace
	Solenoid bad	Replace
	Switch bad	Replace
	Wiring bad (between key switch and timer or between timer and solenoid)	Check the wiring and repair

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Removal and Installation

STEP 1

Park the machine on hard level ground. Lower the attachment to the ground. Release pressure in the hydraulic circuits and stop the engine.

STEP 2

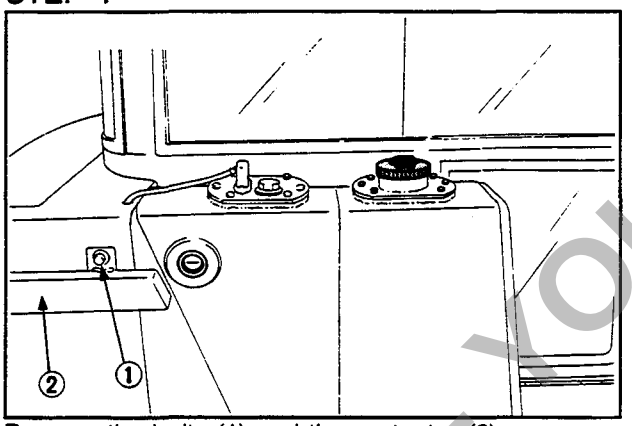
Disconnect the battery, positive (+) terminal first.

NOTE: *For Installation, install and tighten the negative (−) terminal first.*

STEP 3

Remove the Cab or Canopy, refer to Section 9004.

STEP 4



Remove the bolts (1) and the protector (2).

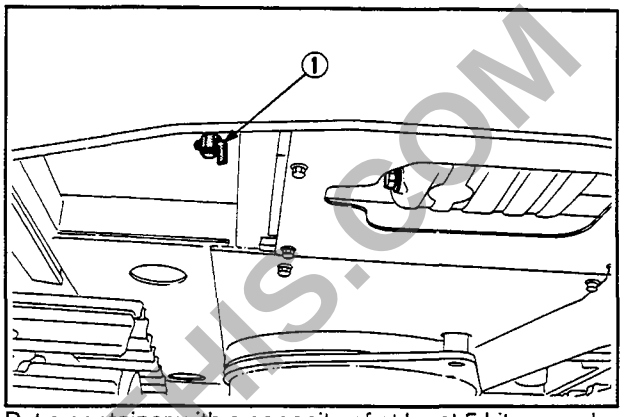
NOTE: *For Installation, apply Loctite 271 to the bolts and tighten to a torque of:*

M12 - 77 to 90 Nm
M16 - 166 to 197 Nm

STEP 5

Remove the Hydraulic Oil Reservoir, refer to Section 8010.

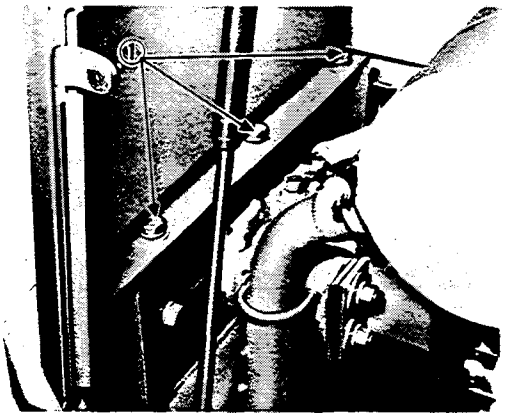
STEP 6



Put a container with a capacity of at least 5 Litres under the radiator drain valve and drain the coolant.

NOTE: *For Installation, install coolant to the correct level.*

STEP 7



Remove the hood mounting bolts (1) from the inside of the engine compartment.

NOTE: *For Installation, apply Loctite 271 to the bolts (1) and tighten to a torque of:*

M10 - 48 to 56 Nm
M12 - 77 to 90 Nm

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

TABLE OF CONTENTS

SAFETY INSTRUCTIONS....3

GENERAL INFORMATION....5

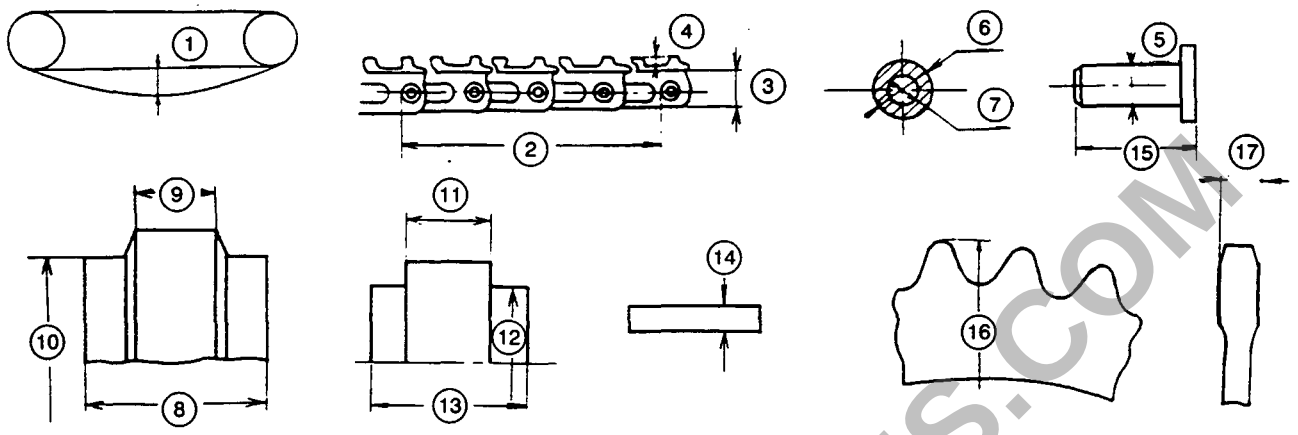
STANDARD FASTENER TORQUE SPECIFICATIONS....6

HYDRAULIC CONNECTION TORQUE SPECIFICATIONS....7

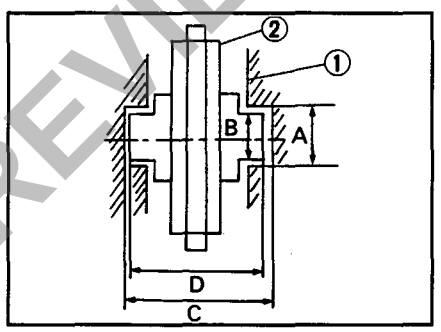
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SPECIFICATIONS



1. Track Tension		
CK25 and CK28 (Rubber)		10 to 15 mm
CK25 (Steel)		30 to 35 mm
CK28 (Steel)		40 to 45 mm
2. 4 Chain Stretch (Length)	406 mm	416 mm maximum
3. Link Wear (Height)	68 mm	63 mm minimum
4. Pad Wear (Height)	16 mm	8 mm minimum
5. Link Pin Wear (O.D.)	17 mm	15 mm minimum
6. Link Bushing Wear (O.D.)	28 mm	26 mm minimum
7. Link Bushing Wear (I.D.)	17 mm	19 mm maximum
8. Idler Wheel Outer Surface Wear (Width)	72 mm	64 mm minimum
9. Idler Wheel Outer Surface Wear (Guide Width)	22 mm	18 mm minimum
10. Idler Wheel Outer Surface Wear (O.D.)	305 mm	297 mm minimum
11. Lower Roller Outer Surface Wear (Guide Width)	26 mm	20 mm minimum
12. Lower Roller Outer Surface Wear (O.D.)	96 mm	91 mm minimum
13. Lower Roller Outer Surface Wear (Width)		61 mm
14. Sliding Plate Wear	6 mm	3 mm minimum
15. Master Pin Length		93.5 mm
16. Drive Sprocket Wear (O.D.)	393 mm	385 mm minimum
17. Drive Sprocket Wear (Width)	30 mm	26 mm minimum
18. Top Roller Wear (O.D.) (CK28 Only)	85 mm	80 mm minimum



IDLER TO TRACK FRAME CLEARANCE

A - B	6 mm
C - D	6 mm

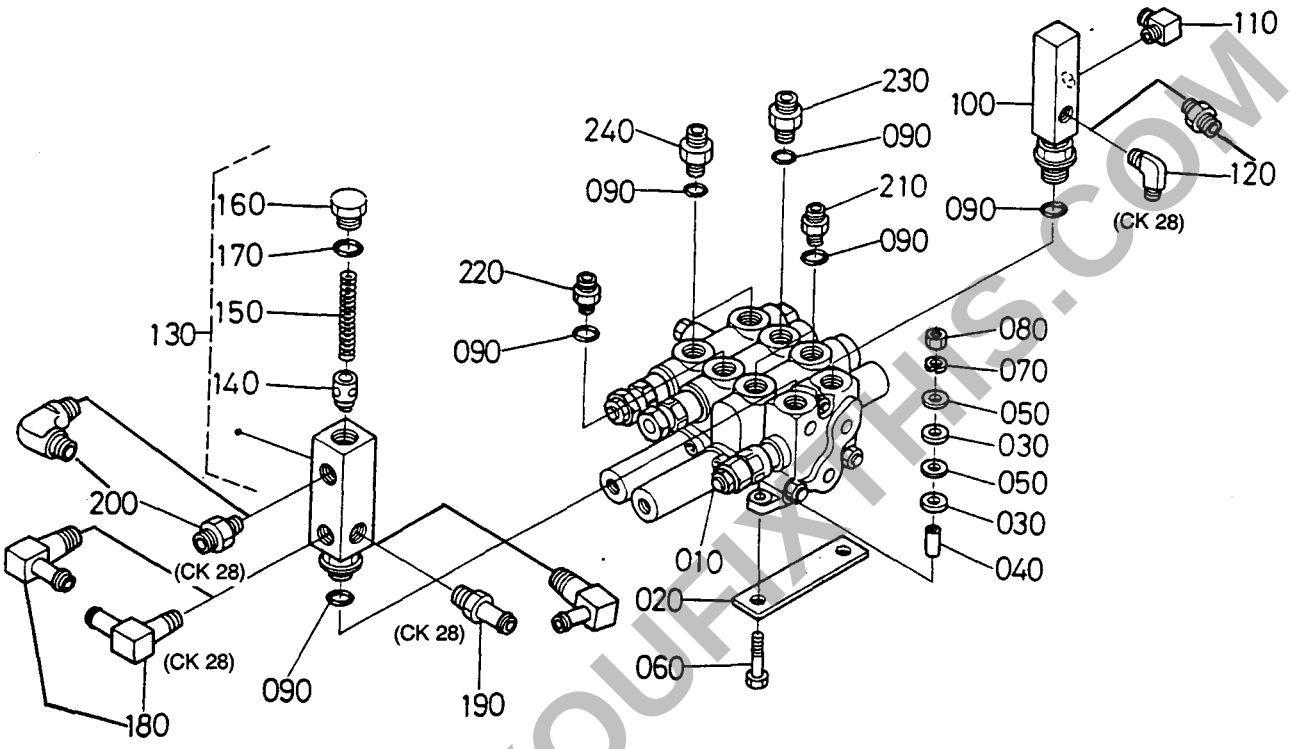
STEEL TRACKS

Overall Height (Link and Pad)	
CK25	90.0 mm
CK28	90.5 mm
Pitch	101.6 mm

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

SECONDARY CONTROL VALVE

Fittings and Connections



010. SELECTOR BLOCK
020. SEAL
030. INSULATOR BLOCK
040. SPACER
050. LOCKWASHER
060. SCREW
070. LOCKWASHER
080. NUT
090. O-RING
100. CONNECTION
110. ANGLE PIECE
120. ANGLE PIECE
130. VALVE
140. VALVE
150. SPRING
160. PLUG
170. O-RING
180. CONNECTION
190. CONNECTION
200. FITTING
210. FITTING
220. FITTING
230. FITTING
240. FITTING

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 12 of 288 pages

The full manual includes:

- All 288 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Case CK25, CK28 Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual