

# CK25-CK28 Crawler Excavators

## Table of contents

DIVISION/SECTION	SECTION N°	FORM N°
<b>1. GENERAL</b>		
Safety, General Information and Torque Specifications .....	1001 .....	7-55741GB
General specifications .....	1002 .....	7-37930GB
<b>2. ENGINE</b>		
Engine Removal and Installation .....	2002 .....	7-37940GB
Engine Disassembly/Assembly, Lubrication System, Cooling System and Fuel System .....	2010 .....	7-37950GB
<b>4. ELECTRICAL</b>		
Electrical Troubleshooting and Schematics .....	4001 .....	7-37960GB
Alternator .....	4002 .....	7-37980GB
Starter Motor .....	4003 .....	7-37970GB
<b>5. UNDERCARRIAGE</b>		
Tracks, Rollers and Idlers .....	5002 .....	7-37990GB
<b>6. POWER TRAIN</b>		
Travel Motor and Reduction .....	6002 .....	7-38000GB
Swing Reduction Gear .....	6003 .....	7-38150GB
<b>7. UNDERCARRIAGE HYDRAULICS</b>		
Hydraulic Swivel .....	7004 .....	7-38010GB
<b>8. UPPERSTRUCTURE HYDRAULICS</b>		
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
<b>9. UPPERSTRUCTURE/ATTACHMENTS</b>		
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

# **Section 1001**

## **SAFETY INSTRUCTIONS, GENERAL INFORMATION AND TORQUE SPECIFICATIONS**

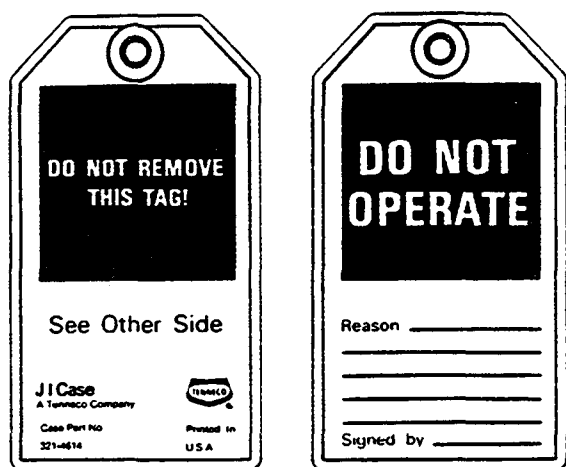
## SAFETY



*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 instructions 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.*



*Use insulated gloves or mittens when working with hot parts.*



*Lower all attachments to the ground or use stands to safely support the attachments before you do any maintenance or service.*



*Pin sized and smaller streams of hydraulic oil under pressure can penetrate the skin and result in serious infection. If hydraulic oil under pressure does penetrate the skin, seek medical treatment immediately. Maintain all hoses and tubes in good condition. Make sure all connections are tight. Make a replacement of any tube or hose that is damaged or thought to be damaged. DO NOT use your hand to check for leaks, use a piece of cardboard or wood.*



*When removing hardened pins such as a pivot pin, or a hardened shaft, use a soft head (brass or bronze) hammer or use a driver made from brass or bronze and a steel head hammer.*



*When using a hammer to remove and install pivot pins or separate parts using compressed air or using a grinder, wear eye protection that completely encloses the eyes (approved goggles or other approved eye protectors).*



*Use suitable floor (service) jacks or chain hoist to raise wheels or tracks off the floor. Always block machine in place with suitable safety stands.*



*When servicing or repairing the machine. Keep the shop floor and operator's compartment and steps free of oil, water, grease, tools, etc. Use an oil absorbing material and or shop cloths as required. Use safe practices at all times.*



*Some components of this machine are very heavy. Use suitable lifting equipment or additional help as instructed in this Service Manual.*



*Engine exhaust fumes can cause death. If it is necessary to start the engine in a closed place, remove the exhaust fumes from the area with an exhaust pipe extension. Open the doors and get outside air into the area.*



*When the battery electrolyte is frozen, the battery can explode if (1), you try to charge the battery, or (2), you try to jump start and run the engine. To prevent the battery electrolyte from freezing, try to keep the battery at full charge. If you do not follow these instructions, you or others in the area can be injured.*



*Batteries contain acid and explosive gas. Explosions can result from sparks, flames or wrong cable connections. To connect the jumper cables correctly to the battery of this machine see the Operator's Manual. Failure to follow these instructions can cause serious injury or death.*

## GENERAL INFORMATION

### CLEANING

Clean all metal components, except bearings, with steam or white spirit. Do not use caustic soda when steam-cleaning. After cleaning, dry and oil the components. Clean oil lines with compressed air. Clean bearings in kerosene, dry them completely and oil them.

### INSPECTIONS

Carefully examine all disassembled components. Replace all parts showing signs of wear or damage. Light scores and scratches can be removed by honing or with a buffing compound. Fast, abnormal wear of components can be avoided by careful examination and early detection of wear and pitting.

### BEARINGS

Check that bearings run freely. Replace bearings that show signs of too much play or seizing. Clean bearings in a good solvent or kerosene and allow them to dry naturally. **DO NOT DRY BEARINGS WITH COMPRESSED AIR.**

### NEEDLE BEARINGS

Before installing needle bearings in their housing, remove any metal edges inside or around the housing. When installing bearings with a hydraulic press, grease the inside and the outside of the bearing with petroleum jelly.

### GEARS

Check all gears for signs of damage or wear. Replace damaged or worn gears.

### SEAL RINGS, O RINGS AND FLAT SEALS

Always install new seal rings, O-rings and flat seals, if removed. Lubricate seal rings and O-rings with petroleum jelly.

### SHAFTS

Check all shafts showing signs of damage or wear. Check particularly to make sure that any surface of the shaft in contact with bearings or seal rings is not damaged.

### SERVICE PARTS

Always use genuine CASE service parts. To order service parts, see the Spare Parts Catalog and remember to give the correct reference of the necessary CASE part. No warranty claims will be considered for failures involving parts which are not of CASE origin.

### LUBRICATION

Never use oil or grease which is different from that specified in the Operator's Manual or the Service Manual. No warranty claims will be considered for failures due to the use of wrong oil or grease.

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