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**TECHNICAL MANUAL**

**OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE  
MANUAL**

**(INCLUDING REPAIR PARTS INFORMATION AND SUPPLEMENTAL MAINTENANCE  
AND REPAIR PARTS INSTRUCTIONS)**

**TRACTOR, FULL TRACKED, LOW SPEED,**

**HEAVY DRAWBAR PULL, (SIZE T-11)**

**W/ANGLE DOZER, WINCH AND ROPS**

**CATERPILLAR MODEL D8K-8A-58 (CCE)**

**NSN 2410-00-574-7597**

**AND W/BULLDOZER (SEMI-U-TILT), RIPPER**

**AND ROPS CATERPILLAR MODEL D8K-8S-8 (CCE)**

**NSN 2410-00-574-7598**

**This copy is a reprint which includes  
current pages from Change 1.**

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**H E A D Q U A R T E R S , D E P A R T M E N T O F T H E A R M Y**

**30 JUNE 1981**

CHANGE  
NO. 1



HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, DC, 3 November 1986

**TECHNICAL MANUAL**  
**OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT**  
**MAINTENANCE MANUAL (INCLUDING REPAIR PARTS INFORMATION AND**  
**SUPPLEMENTAL MAINTENANCE AND REPAIR PARTS INSTRUCTIONS)**  
**TRACTOR, FULL TRACKED, LOW SPEED, HEAVY DRAWBAR PULL, (SIZE T-11)**  
**W/ANGLE DOZER, WINCH AND ROPS, CATERPILLAR MODEL D8K-8A-58 (CCE)**  
**NSN 2410-00-5747597**  
**AND W/BULLDOZER (SEMI-U-TILT), RIPPER AND ROPS, CATERPILLAR**  
**MODEL D8K-8S-8 (CCE)**  
**NSN 2410-00-574-7598**

TM 5-2410-234-14&P-1, 30 June 1981 is changed as follows:

1. Chapter 7, Repair Parts, in this manual has been superseded by TM 5-2410-234-20P, Organizational Maintenance Repair Parts and Special Tools Lists, and TM 5-2410-234-34P Direct Support and General Support Maintenance Repair Parts and Special Tools Lists
2. File this change sheet in front of the publication for reference purposes.

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By Order of the Secretary of the Army.

Official:

R.L. DILWORTH  
*Brigadier General, United States Army*  
*The Adjutant General*

JOHN A WICKHAM, JR.  
*General, United States Army*  
*Chief of Staff*

Distribution.:

To be distributed in accordance with DA Form 12-25 A, Operator's Organizational, Direct Support and General Support Maintenance Requirements for Tractor, Full Tracked, Low Speed with Angle Dozer Models D8K-8A-58, D8K-8S-8

**WARNING**

The proper and safe lubrication and maintenance procedures for this machine, recommended by Caterpillar, are outlined in the LUBRICATION & MAINTENANCE GUIDE for this machine. Improper performance of lubrication or maintenance procedures is dangerous and could result in injury or death. Read and understand the LUBRICATION & MAINTENANCE GUIDE before performing any lubrication or maintenance.

**WARNING**

To avoid possible weakening of this ROPS, consult a Caterpillar dealer before altering this ROPS in any way.

**WARNING**

The protection offered by this ROPS will be impaired if it has been structurally damaged or has been involved in an overturn accident.

**WARNING**

Seat adjustment should be checked at the beginning of each shift and when operators change.

**WARNING**

Always use seat belts when operating machine.

**WARNING**

Always check condition of seat belt and connecting brackets.

**WARNING**

Attach ground cable last, and remove first, to prevent sparks from occurring near the battery which could cause battery vapors to explode. Attach ground cable from booster battery to frame of machine to be started at a point away from, and below, the battery on the machine to be started.

**WARNING**

Use starting fluid sparingly. Follow manufacturer's instructions carefully.

**WARNING**

Do not store starting fluid in operator's compartment.

**WARNING**

Keep tractor under control at all times. Do not neutralize transmission or forward-reverse lever, or disengage flywheel clutch to allow machine to coast.

**WARNING**

Select gear range necessary before starting downgrade. Do not change gears while going downhill.

**WARNING**

Do not allow tractor to coast downhill.

**WARNING**

When load is pushing tractor, put gear selector in first speed before starting downhill.

**WARNING**

Do not release clutch or shift transmission while moving.

**WARNING**

Use extra caution when crossing side hills, ridges, logs and ditches.

**WARNING**

Make certain personnel are clear of cable when there is a load on the cable. Cable can break and cause personal injury.

**WARNING**

Exercise care with suspended loads. If engine speed is too low, the weight of the load may cause it to drop, even though the winch is in the Reel In position.

**WARNING**

Check travel route for overpass clearances. Make sure there will be adequate clearance if vehicle being transported is equipped with ROPS, cab or canopy.

**WARNING**

If the rack setting or the high idle speed is higher than the setting in the book RACK SETTING INFORMATION for the "altitude" (height above sea level) at which the engine is operated, there can be damage to the engine or to parts of the turbocharger.

**WARNING**

Be sure to make an adjustment to the regulator so the air supply in the tank is a maximum of 15 psi (1.05 kg/cm<sup>2</sup>).

**WARNING**

When making the (cooling system) checks, fasten the transmission in neutral, put the parking brakes on and lower all equipment. Make all checks at engine LOW IDLE and on the side of the radiator opposite the fan. Wear eye protection.

**WARNING**

Never disconnect any charging unit circuit or battery circuit cable from battery when the charging unit is producing a charge.

**WARNING**

Disconnect batteries before performance of any service work.

**WARNING**

The (valve) locks can be thrown from the valve when the valve spring compressor is released. Make sure the locks are in the correct position on the valve.

**WARNING**

When (transmission) tests must be done in a closed area, activate the brakes and use blocks to prevent the machine from moving during the tests. Let only approved personnel on the machine. Keep other personnel off the machine and in view of the operator.

**WARNING**

Do not make any adjustments to the (transmission) linkage with the engine running.

**WARNING**

The adjuster cylinder for the track is under high hydraulic pressure. Do not visually inspect the relief valve to see if grease is being released. Check the adjuster cylinder that it moves to the rear into the front pilot for the recoil springs. Use this warning any time that the track is loosened or tightened.

**WARNING**

Make sure the hydraulic jack is tight against the track roller frame when the track is lifted.

**WARNING**

Make sure the hydraulic pressure in the track adjusting mechanism is completely released and the cylinder can be moved to the rear into the front pilot for the recoil spring before making a separation of the track or installing the track adjusting mechanism. On machines with badly worn tracks, it is possible for the hydraulic track adjuster to have a maximum forward adjustment and the stop will be against the front support for the track roller frame. The hydraulic track adjuster is under high pressure. Do not visually inspect the relief valve to see if grease is being released. Check the adjuster cylinder to see that it moves to the rear into the front pilot for the recoil spring. Use this warning any time that the track is loosened or tightened.

**WARNING**

Do not remove the front cover for the recoil springs until Step 4 (spring compression) is completed. If the front pilot for the recoil spring is broken, the procedure on page II-40 must not be used. See RECOIL SPRINGS (with broken pilots) for correct procedures.

**WARNING**

The recoil springs are assembled under a force of several tons. This force is released against legs during disassembly. Caution must be used to make sure the correct tooling is used and the correct procedure is followed.

**WARNING**

The recoil springs are assembled under a force of several tons. This force is released against legs during assembly. Caution must be used to make sure the correct tooling is used and the correct procedure is followed.

**WARNING**

Do not remove the hoist from the track roller frame at this time (following Step 6 of track roller frame disassembly).

**WARNING**

Make sure the track roller frame does not hit the equalizer bar when it is removed. Weight of the track roller frame is 8000 lb. (3629 kg).

**WARNING**

Do not hit the equalizer bar when the track roller frame is put in position.

**WARNING**

The recoil springs are under several tons of force. Do not remove cover until force is controlled by (proper) tooling.

**WARNING**

Do not put more than 50 ton (45t) of force on (pilot) bolt.

**WARNING**

(Valve assembly) Cover is under spring tension. Hold the cover in position when the bolts that hold it to the housing are removed.

**WARNING**

The access cover is under spring pressure. Hold the cover when the bolts that hold it are removed.

**WARNING**

Exercise care with suspended loads; if engine speed is too low, the weight of the load may cause it to drop, even though the winch is in the REEL IN position.

**WARNING**

Do not underwind cable onto winch drum unless the winch has been modified to operate in this manner.

**WARNING**

When testing or making an adjustment to the hydraulic system, move the machine to a location away from other moving machines. The operator must be sure that other personnel are not near the machine when the engine is running and he is making tests.

**WARNING**

To avoid possible weakening of the ROPS (Rollover Protective Structure), consult a Caterpillar Dealer before altering the ROPS in any way. The protection offered by the ROPS will be impaired if it has been subjected to structural damage or has been involved in an overturn accident.

**WARNING**

When using pressure air, wear safety glasses and protective clothing. Maximum air pressure must be below 30 psi (2 kg/cm<sup>2</sup>).

**WARNING**

(Corrosion) Inhibitor contains alkali, avoid contact with skin and eyes.

**WARNING**

Never service air cleaners with engine running.

**WARNING**

If track is sealed and lubricated type, secure track with chain before separating links. Sealed and lubricated track is very flexible. When disconnected, it can move and cause injury.

**WARNING**

Never visually inspect relief valve or fill valve to see if grease is escaping. Always observe the track to see if it has loosened.

**WARNING**

Never service air cleaners with engine running.

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TECHNICAL MANUAL  
No. 5-2410-234-14&P-1



HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, DC, 30 June 1981

**OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT  
AND GENERAL SUPPORT MAINTENANCE MANUAL  
(INCLUDING REPAIR PARTS INFORMATION AND SUPPLEMENTAL  
MAINTENANCE AND REPAIR PARTS INSTRUCTIONS)  
FOR  
TRACTOR, FULL TRACKED, LOW SPEED,  
HEAVY DRAWBAR PULL, (SIZE T-1 1)  
W/ANGLE DOZER, WINCH AND ROPS  
CATERPILLAR MODEL D8K-8A-58 (CCE)  
NSN 2410-00-574-7597  
AND  
W/BULLDOZER (SEMI-U-TILT), RIPPER  
AND ROPS  
CATERPILLAR MODEL D8K-8S-8 (CCE)  
NSN 2410-00-574-7598**

**REPORTING OF ERRORS**

You can improve this manual by recommending improvements using DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 located in the back of this manual. Mail the form direct to Commander, US Army Tank-Automotive Command, ATTN: DRSTA-MBS, Warren, MI 48090. A reply will be furnished direct to you.

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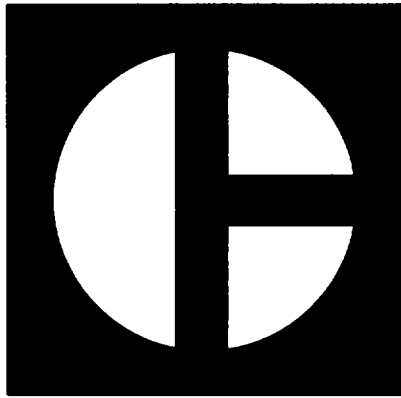
- N. WALK-AROUND INSPECTION
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**This technical manual is an authentication of the manufacturers' commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.**



**CHAPTER 1**  
**OPERATOR'S GUIDE**



# **OPERATOR'S GUIDE**

## **D7G, D8K, D9H TRACTORS**

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<b>SERIAL NUMBERS</b>	<b>64V1-UP</b>	<b>91V1-UP</b>
	<b>65V1-UP</b>	<b>92V1-UP</b>
	<b>66V1-UP</b>	<b>44W1-UP</b>
	<b>76V1-UP</b>	<b>45W1-UP</b>
	<b>77V1-UP</b>	<b>72W1-UP</b>
	<b>90V1-UP</b>	

 **IMPORTANT SAFETY NOTICE**

Most accidents involving machine operation are caused by failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs.

Improper operation is dangerous and could result in injury or death.

**READ AND UNDERSTAND ALL SAFETY PRECAUTIONS AND WARNINGS BEFORE OPERATING THIS MACHINE.**

Basic safety precautions are outlined in the **SAFETY** section of this Guide and in the description of operations where hazards exist. Warning labels have also been put on the machine to provide instructions and to identify specific hazards which, if not heeded, could cause bodily injury or death to you or other persons. These warnings in the Guide and on the machine labels are identified by the symbol



Operations that may result only in machine damage are identified by **CAUTION** labels on the machine and in the Guide.

Caterpillar cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this Guide and on the machine are therefore not all inclusive. If an operation is not performed as specifically recommended by Caterpillar, you must satisfy yourself that it is safe for you and others. You should also ensure that the machine will not be damaged or made unsafe by the method of operation you choose.

 **WARNING**

The proper and safe lubrication and maintenance procedures for this machine, recommended by Caterpillar, are outlined in the **LUBRICATION & MAINTENANCE GUIDE** for this machine.

Improper performance of lubrication or maintenance procedures is dangerous and could result in injury or death. Read and understand the **LUBRICATION & MAINTENANCE GUIDE** before performing any lubrication or maintenance.

## FOREWORD

This guide is a reference for the new operator and a refresher for the experienced one. Read, study and keep it handy.

Illustrations help guide the operator through the correct procedures of checking, starting, operating and stopping the vehicle and attachments.

Operating techniques outlined in the guide are basic. Skill and techniques develop as the operator gains knowledge of the vehicle and its capabilities.

Your safety and the safety of others depends upon care and judgment in the operation of this vehicle. A careful operator is good insurance against an accident.

Some photographs in this publication may show details or attachments that may be different from your unit. Also, the Rollover Protective Structure (ROPS), for some photographs may have been removed for illustrative purposes.

Continuing improvement and advancement of product design may cause changes to your machine which may not be included in this publication. Each publication is reviewed and revised, as required, to update and include these changes in later editions.

When a question arises regarding your Caterpillar product, or this publication, please consult your Caterpillar dealer for the latest available information.

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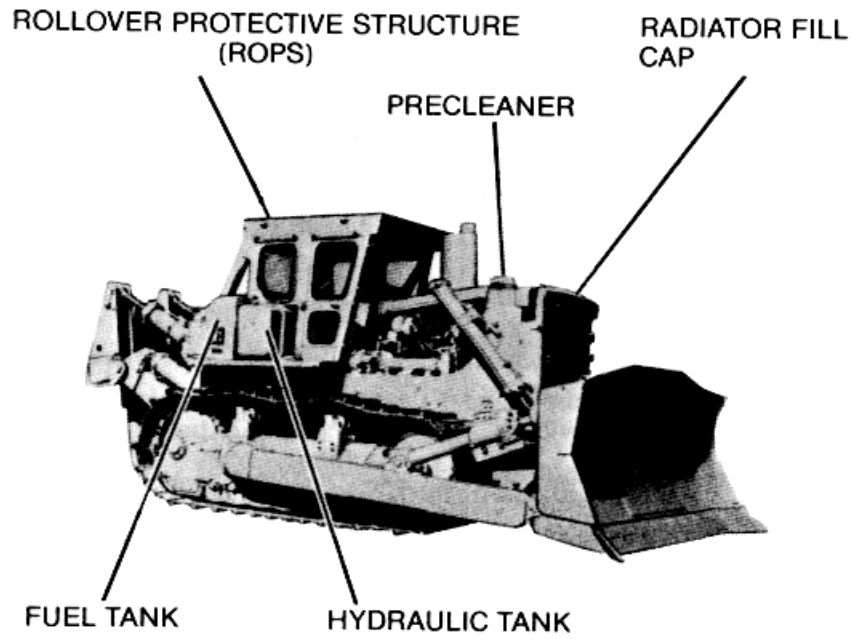
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**TRACTOR**  
**General Locations**



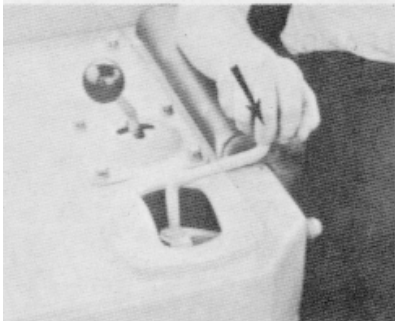
**SAFETY**

 **THIS SYMBOL WARNS OF POSSIBLE PERSONAL INJURY**

 **WARNING**  **WARNING**

To avoid possible weakening of this ROPS, consult a Caterpillar dealer before altering this ROPS in any way.

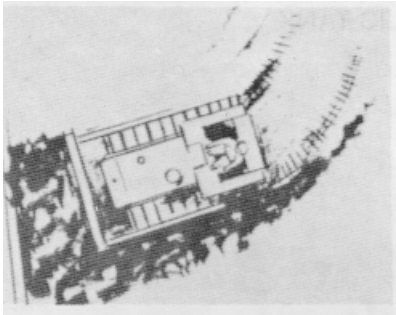
The protection offered by this ROPS will be impaired if it has been structurally damaged or has been involved in an overturn incident.



Lower or block equipment and stop engine before servicing.



Lower all equipment and set parking brake before leaving machine.



Stay safe distance from edge of cliff or overhang.

## **General**

Clean steps, grab irons and operator's compartment.

Wear a hard hat, safety glasses and respirator as required by job conditions.

Do not wear loose clothing or jewelry that could catch on controls.

Report needed repairs.

Make sure clearance flags, lights and other required warnings are on machine when roading.

Know hand signals and who gives them.

Do not smoke while fueling machine or when near batteries.

## **Preparing to Operate**

Clear all personnel from machine and surrounding area.

Clear obstacles from path of machine, note hazards such as wires and ditches.

Make certain all safety guards and covers are secured in place Adjust seat and fasten seat belt before operating.

Move all controls to HOLD before starting engine

Move transmission to NEUTRAL and have brake lock engaged before starting engine

Start engine in a well ventilated area.

## **Testing Controls**

Test all controls for proper operation.

Test right and left steering while moving slowly.

Test brakes.

Test function of safety de-vices such as lights and backup alarm.

## **Mounting and Dismounting**

To park machine, lower blade to ground and apply down pressure, engage parking brake.

Stop engine before leaving the machine.

Do not jump off machine Use steps and grab irons.



Do not allow riders on the machine

The operator must satisfy himself that no one will be endangered before, and while, backing the machine.

Observe all gauges frequently--investigate improper readings.

Know traffic pattern of the job and obey flagmen, road signs and signals.

Match speed with job conditions do not coast.

Carry blade close to ground

Know stopping distance of your machine at any given speed Regulate travel speed accordingly.

## **Operating**

Stop machine frequently at night, walk around and inspect machine -- stay alert.

Road machine in forward direction, not reverse.

Stay clear of overhangs, electric wires, slide or other dangerous areas.

Use caution in crossing side hills, ridges, ditches, and other obstructions.

Use caution when working on hills, banks or slopes, to avoid tipping.

Stay a safe distance from edge of cliff or overhang.

Listen for unusual noises Report needed repairs noted during operation.





































## **Shipping**




































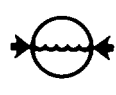




For shipping instructions consult your Caterpillar dealer.








# SYMBOL IDENTIFICATION

THESE PAGES EXPLAIN THE MEANING OF SYMBOLS THAT MAY APPEAR ON YOUR MACHINE.

 **THIS SYMBOL WARNS OF POSSIBLE PERSONAL INJURY**

BULLDOZER - ANGLE LEFT 	RIPPER - ANGLE IN 	LIGHT - ALL 	WINDSHIELD DEFROSTER CONTROL 
BULLDOZER - ANGLE RIGHT 	RIPPER - ANGLE OUT 	LIGHT - BRIGHT 	WINDSHIELD WASHER CONTROL 
BULLDOZER - FLOAT 	RIPPER - HOLD 	LIGHT - DIM 	WINDSHIELD WIPER CONTROL 
BULLDOZER - HOLD 	RIPPER - LOWER 	LIGHT - FLOOD 	STEERING 
BULLDOZER - LOWER 	RIPPER - RAISE 	LIGHT - INSTRUMENT 	TURN - LEFT 
BULLDOZER - RAISE 	WINCH - REEL IN 	LIGHT - PARK 	TURN - RIGHT 
BULLDOZER - TILT - LEFT 	WINCH - REEL OUT 	LOCK 	STEERING OIL FILTER 
BULLDOZER - TILT - RIGHT 	WINCH - OVERWIND 	UNLOCK 	TRACTOR - FORWARD 
PRESSURIZED COMPARTMENT 	WINCH - UNDERWIND 	HORN CONTROL 	TRACTOR - REVERSE 

TRANSMISSION OR CONVERTER 	ENGINE - HEAT 	FUEL TANK 	INSIDE AIR CIRCULATION 
TRANSMISSION OR CONVERTER OIL 	ENGINE OIL 	FUEL FILTER 	OUTSIDE AIR CIRCULATION 
TRANSMISSION CONTROL OIL PRESSURE 	ENGINE OIL FILTER 	FUEL LEVEL 	AIR FILTER 
TRANSMISSION OR CONVERTER OIL FILTER 	ENGINE OIL LEVEL 	FUEL PRESSURE 	AIR PRESSURE 
TRANSMISSION OR CONVERTER OIL LEVEL 	ENGINE OIL PRESSURE 	FUEL SHUTOFF 	AMMETER OR ALTERNATOR 
RETARDER OIL TEMPERATURE 	ENGINE - START OR RUNNING 	VOLUME - FULL 	OIL PRESSURE 
TRANSMISSION OR CONVERTER OIL PRESSURE 	ENGINE - STOP OR NOT RUNNING 	VOLUME - ONE HALF FULL 	COOLANT FLOW 
TRANSMISSION OR CONVERTER OIL TEMPERATURE 	HYDRAULIC OIL FILTER 	VOLUME - EMPTY 	COOLANT LEVEL 
TRANSMISSION DRIVE OIL LEVEL 	HYDRAULIC OIL LEVEL 	OFF 	COOLANT PRESSURE 
TRANSMISSION DRIVE OIL TEMPERATURE 	HYDRAULIC OIL TEMPERATURE 	ON 	COOLANT TEMPERATURE 

BRAKE - PARK 	LIFT POINT 	BRAKE 	CONTINUOUSLY VARIABLE 
DISENGAGE 	ENGAGE 	MAXIMUM 	MINIMUM 