485 Tractor

Operators Manual

9-11253

Reprinted

CASE IH

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TABLE OF CONTENTS

TO THE OWNER I
SERIAL NUMBERS . . . . . II,III
SAFETY . . . . . VI-XI
Safety Rules VI
Before Starting VII
Operation VIII
Service XI
HAND SIGNALS . . . . . XII,XIII
DECALS . . . . . XIV-XVI

SPECIFICATIONS 1-21
Diesel Engine 1,2
General 3-6
Travel Speeds 7-9
Approximate Weights and Measurements 10,11
Tires and Wheels 12-14
Front Wheel Tread (2WD) . . 15
Front Wheel Tread (MFD) . . 16
Steering Angles (MFD) 17
Oscillation Stops (MFD) . . . 18
Rear Wheel Tread 19
Diesel Fuel 20
Fuel Conditioner 20

OPERATING CONTROLS 21-37
Instrument Panel 22
Warning Lamps 23
Controls 24-31
Operators Seat 32,33
Seat belts 34
Amber Warning Lamps, Turn Signals and SMV Symbol 35-37

OPERATING INSTRUCTIONS 38-85
Run-in Procedure 38
Before Starting Engine . 39-41
Starting Procedure 42,43
Cold Temperature Operation 43-47
Using Booster Batteries . . . 47
Driving The Tractor 48,49

OPERATING INSTRUCTIONS Continued
Forward/Reverse Transmission 50
Two Speed Power Shift . . . 50
Differential Lock 51
Mechanical Front Drive (MFD) 52
Steering The Tractor 53
Stopping The Tractor 54
Stopping The Engine 55
Dismounting and Mounting . 56
Towing The Tractor 57
Transporting The Tractor . . 57
Hitch System Control . . 58-68
Position Control 58
Adjustable Stop 59
Draft Control 60
Raise Response 61
Drop Response 62
Remote Hydraulic Controls . 63
Neutral and Float Lockout Bar 63
Remote Hydraulic Circuits . 64
Hydraulic Hose Couplers . . 65
Self Sealing Breakaway Couplers 66,67
Remote Cylinder 68
7 Point Electrical Socket . . 69
Power Take Off (PTO) . . 70,71
PTO Guards 72
PTO Operating Safety . . . 73
Drawbar 74
Three Point Hitch 75
Check Chains 76,77
Upper (Turnbuckle) Link . . 78
Hitching An Implement . . .79
Ballasting 80,81
Front End Weights 80
Rear Wheel Weights 80
Water Ballasting 81
Measuring Wheel Slip . . 82,83
Loads Matched To Tractor . 84
Adjusting Tread Positions . . 85
Front Axle 2WD 85
Front MFD and Rear 85

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SAFETY
Safety Rules

Understand that your safety and the safety of other persons is measured by how you service, and operate this machine. Know the positions and operations of all controls before you try to operate. MAKE SURE YOU CHECK ALL CONTROLS IN A SAFE AREA BEFORE STARTING YOUR WORK.

READ THIS MANUAL COMPLETELY and make sure you understand the controls. All equipment has a limit. Make sure you understand the speed, brakes, steering, stability, and load characteristics of this machine before you start to operate.

The safety information given in this manual does not replace safety codes, insurance needs, federal, state and local laws. Make sure your machine has the correct equipment needed by the local laws and regulations.

J I Case is continuing to work for your safety: by making tractors with better protection and by giving these rules for safe operation.



THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.

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WARNING: *Engine can start with transmission in gear when neutral or safety start switch is by-passed.*

1. Do not connect across terminals on starter.

2. Attach booster batteries according to safe method in Operators Manual. Then use recommended starting procedure from operators seat.

3. When necessary, repair electrical system components promptly so that "jump starting" will not be attempted.

Machine run-away can cause injury or death to operator and by-standers.

WARNING: *Collision of high speed road traffic and tractors or implements can cause personal injury or death. On roads, use flasher lights according to local laws. Keep SMV emblem visible.*

WARNING: *Tractor travel speed should be such that complete control and tractor stability is maintained at all times. Where possilble, avoid operating the tractor near ditches, embankments and holes. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.*

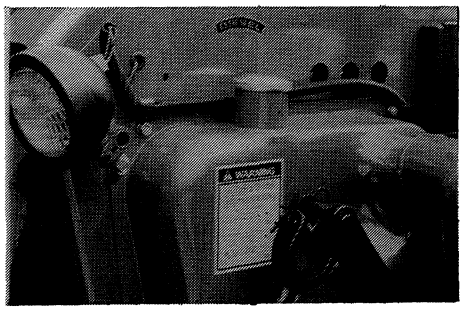
CAUTION: *Stop, look and listen before entering a highway, stay on your side of the road and pull over to let faster traffic pass. Slow down and signal as you turn off.*

WARNING: *A frequent cause of personal injury or death is persons falling off and being run over. Do not permit others to ride. Only one person - the operator - should be on a tractor when it is in operation.*

CAUTION: *Try to balance the load primarily on the implement wheels - as in loading a trailer or spreader. Avoid overloading the drawbar. Add front end weights for improved stability. Engage the clutch smoothly, avoid jerking and use the brakes cautiously to avoid jack-knifing.*

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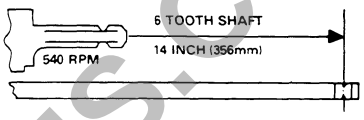


⚠ WARNING

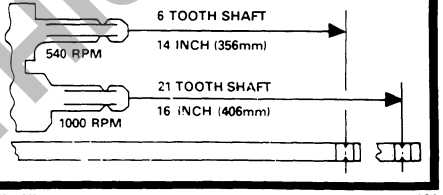
TO AVOID CLOTHING ENTANGLEMENT AND INJURY, PTO SHIELD MUST BE POSITIONED FOR SHAFT BEING USED. KEEP DRIVELINE SHIELDS IN PLACE.

DRAWBAR MUST BE SET AND LOCKED TO PREVENT BOTTOMING OR SEPARATION OF DRIVELINE:

FOR TRACTORS WITH ONE PTO SHAFT



FOR TRACTORS WITH TWO PTO SHAFTS

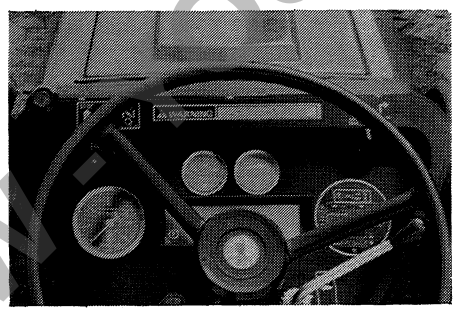


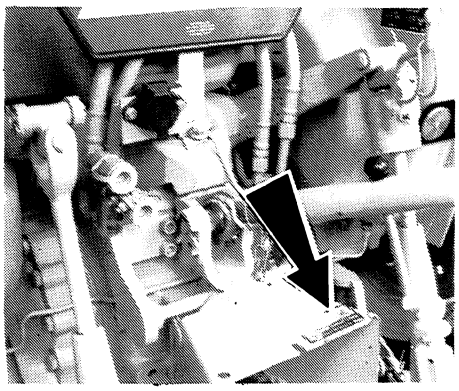
121 6769 COS

⚠ WARNING

PTO MACHINES MAY FAIL IF OPERATED OVER RATED SPEEDS AVOID INJURY. LIMIT RPM TO 600 OR LESS FOR 540 RPM MACHINES AND 1100 OR LESS FOR 1000 RPM MACHINES COS

321 6770





⚠ WARNING

Power drive system safety shields must be kept in place. ET

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Standard Synchromesh Transmission

Type . . . . . 4 Speed Synchromesh, High and Low Ranges and Reverse Manual Foot Operated Clutch

Gear Selection . . . . . 8 Speeds Forward and 4 Speeds Reverse

Shift Control . . . . . Actuated by 2 Levers on Left Console

Optional Forward Reverse Shuttle Transmission

Type . . . . . Same as Synchromesh, Except Reverse, Plus Hydraulically Operated Forward and Increased Speed Reverse Gear

Gear Selection . . . . . 8 Speeds Forward and 8 Speeds Reverse

Shift Control . . . . . Actuated by 2 Levers on Left Console, and Forward / Reverse Lever on Instrument Panel

Optional 2 Speed Power Shift Transmission

Type . . . . . Same as Synchromesh, Plus Hydraulically Operated Speed Decrease in all Forward and Reverse Gears

Gear Selection . . . . . 16 Speeds Forward and 8 Speeds Reverse

Shift Control . . . . . Actuated by 2 Levers on Left Console, and Power Shift Switch on Instrument Panel

Oil Cooler . . . . . Transmission, Hydraulic, Steering and Brake Oil

Mechanical Front Drive (M.F.D.)

Axle Type . . . . . Spiral Bevel Gear and Planetary Reduction Hubs APL 330 Standard or Optional APL 325 with LImited Slip Differential

Transfer Gearbox . . . . . Mechanically Operated Dog Clutch as Standard, or Optional Electical / Hydraulically Operated Multiplate Clutch

Shift Control . . . . . Lever for Standard Dog Clutch or Switch for Optional Electical /Hydraulic Multiplate Clutch

Axle Oil Capacities

- Differential . . . . . 4.5 U.S. Quarts (4.5 Litres)
- Hubs (Each Side) . . . . . 0.8 U.S. Quart (0.75 Litre)

Differential Lock

Type . . . . . Mechanically Actuated by Operators Right Foot

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TOWING THE TRACTOR

If it is necessary to tow a tractor, follow these rules:

IMPORTANT: *The engine must be running at approximately 1000 RPM. to provide power steering and transmission lubrication. If the engine cannot be run, add 4 U.S. gal (15 litre) of HY-TRAN PLUS (MS 1207) to the transmission. After towing the tractor, drain sufficient fluid to bring the level in the transmission to the FULL mark.*

1. Never tow the tractor faster than the maximum rated ground speed of the tractor.

2. Make sure all controls are in the NEUTRAL position.

3. Because of a possible loss of steering and brakes when the tractor engine is not running, use only a rigid towing bar and safety chains to tow the tractor.



CAUTION: *Make sure that the weight of a trailed vehicle that is not equipped with brakes, NEVER EXCEEDS the weight of the machine that is towing the vehicle. Stopping distance increases with increasing speed as the weight of the towed load increases, especially on hills and slopes.*

TRANSPORTING THE TRACTOR

When transporting the tractor by truck or rail, hold the tractor with tie downs and blocks.

IMPORTANT: *The PARK BRAKE MUST NOT be engaged when transporting a tractor. Engage the PARK BRAKE BEFORE releasing tractor tie downs.*

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BEFORE STARTING THE ENGINE

Before starting your Case Tractor for the first time and before each operating period after that, make these checks:

1. Make sure all persons that operate or do maintenance on the tractor understand that clean fuel is important.

2. Check all lubrication fittings for grease as given in the Lubrication Chart.

3. Check the oil level in the engine crankcase. Check the fluid level in the transmission.

4. Check the electrolyte level in the batteries.

5. Check that the tractor fuel tank is filled with clean fuel that has the specifications given in this manual.

   NOTE: *Clean around the fuel tank cap before you remove the cap.*

6. Check the fuel system, cooling system and engine oil pan for leaks.

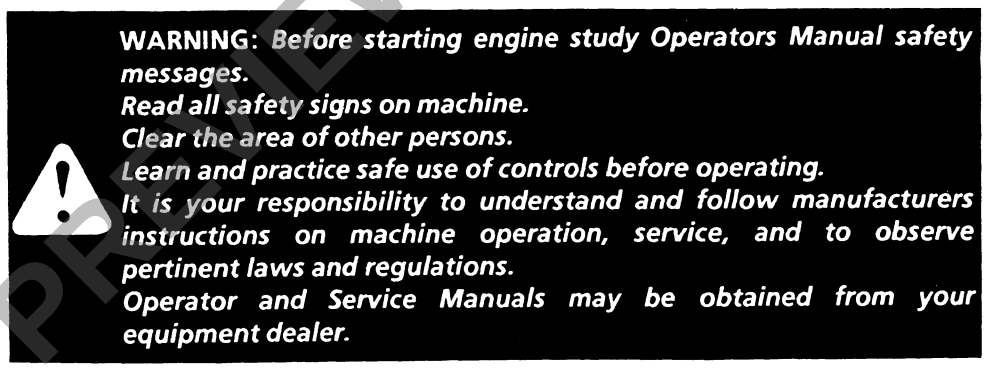
7. Check that the alternator belt is adjusted correctly.

8. Remove any water or sediment from the water trap of the fuel filters.

9. Check the air pressure in the tires.

10. If your tractor has a power takeoff, make sure the safety guard is installed.

11. Check the coolant level in the radiator. Add water and Ethylene Glycol coolant as needed.



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Grease Points

Lubrication interval . . . . . Every 10 hours

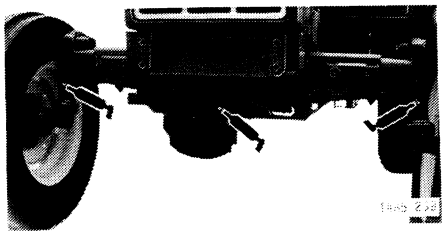


Figure 82
Steering arm pivot and knuckles

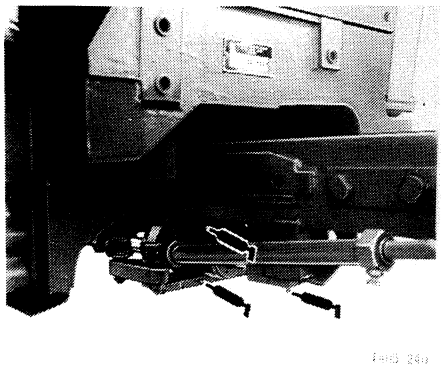


Figure 83
Steering cylinder pivot and clevis

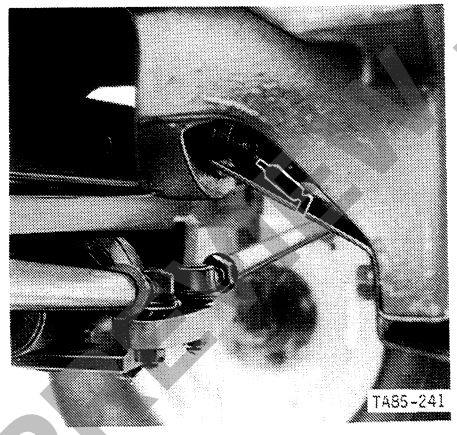


Figure 84
Axle pivot rear

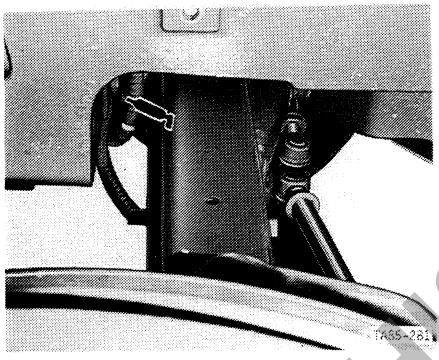


Figure 85
Axle pivot front

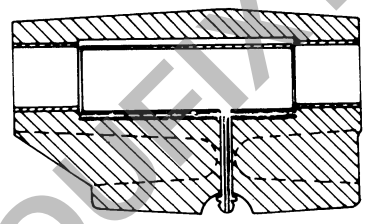


Figure 86
Axle pivot, Rigid cast iron axle

NOTE: *On tractors with a rigid cast iron axle, the pivot is lubricated through a single grease nipple located centrally on the underside of the axle as shown.*

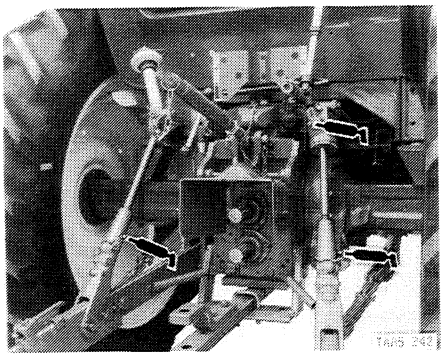


Figure 87
Three point linkage levelling box and levelling screws.

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The outside check chain front mounting brackets are bolted to the axle housings and have four holes to which the check chain front bracket can be attached depending on the mounting position (hitch point) of the front end of the lower links, and if swing or no swing in work is needed. The mounting bracket holes are numbered 1 to 4.

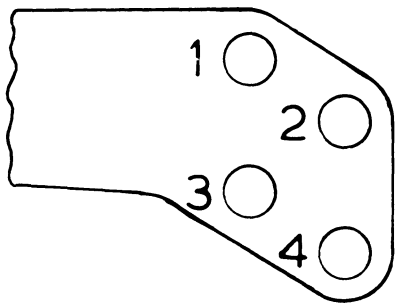


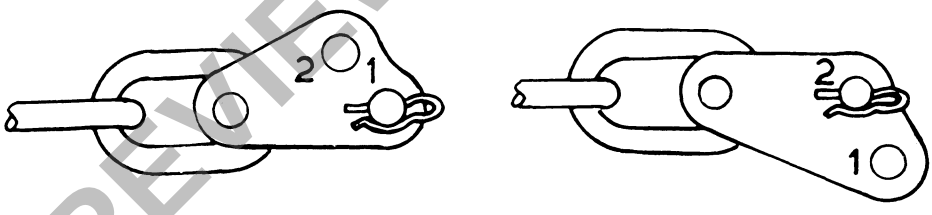
Figure 67

1. UPPER HITCH POINT - NO LATERAL SWAY
2. UPPER HITCH POINT - LATERAL SWAY
3. LOWER HITCH POINT - NO LATERAL SWAY
4. LOWER HITCH POINT - LATERAL SWAY

Outside check chains have two holes at the front of the front brackets which are stamped 1 and 2.

When using Category 1 equipment, fit the pin in the front bracket hole marked 1.

When using Category 2 equipment, fit the pin in the front bracket hole marked 2.



CATEGORY 1 POSITION CATEGORY 2 POSITION

Figure 68

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LOADS MATCHED TO TRACTOR

Do not operate the tractor with heavy implement loads that need the use of gears in the lower ranges. The tractor is made for continued field operation at the rated engine rpm and 2nd gear, low range or faster with a load that is correctly matched to the tractor. If you operate the tractor with too much ballast and pull too heavy a load for a long period of time in the low gears, you will cause damage to the drive train and decrease tire life.

1 .If you want to operate at a slower ground speed than 2nd gear-low range, first check for correct matched gear selection where the tractor can pull the load at rated engine rpm and 2nd gear-low range or faster. Then, change to a lower gear for continued operation at a slower speed.

2. The best traction occurs when wheel slip is between eight and fifteen percent for drawbar work and thirteen to fifteen percent for hitch work (the extra percent is to compensate for additional tire distortion caused by weight transfer from the hitch).

3. Remove the ballast when not needed for lighter loads.

4. Pull lighter loads at a little faster speed to do more work and increase efficiency. Do not over ballast the tractor to pull very heavy loads.

5. If the implement cannot be pulled at the required depth at rated engine rpm and 2nd gear-low range or faster, the implement is over matched for your tractor.

Operating a tractor with too much weight can cause:

A. A decrease in horsepower available at the implement and then, a decrease in amount of field worked.
B. An increase in amount of fuel used.
C. A decrease in tire life.
D. The soil to be compressed.
E. Too much force on the power train which will decrease the life of the power train and cause high operating cost.

The most important item in field operations is the amount of horsepower available at the hitch or drawbar. Power needed to move a tractor that has too much weight will decrease the power that is available to pull the implement.

IMPORTANT: *The total tractor weight with ballast must not be more than that stated on the ROPS label.*

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DIFFERENTIAL LOCK

CAUTION: ***Do not drive on roads, or at high speed anywhere, with the differential lock engaged. Difficult steering will occur, and can result in an accident. In field operation, use the differential lock for traction improvement, but release for turning at row ends.***

Engage the differential lock to obtain better traction if one wheel slips.

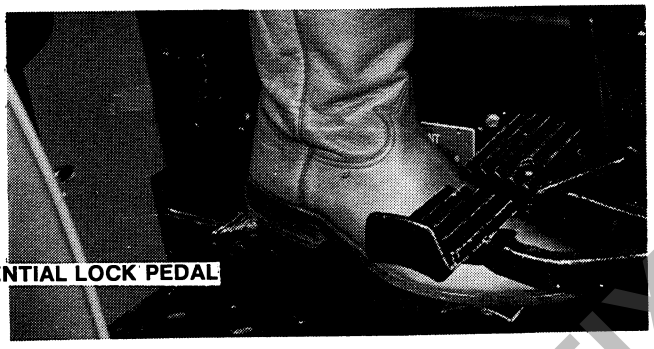


Figure 38

Press and hold the pedal down to engage the differential lock.

Release the pedal to disengage.

If the differential lock does not immediately disengage a quick press on the clutch or brake pedals or a momentary reduction in engine speed will release the load on the drive and permit disengagement of the differential lock.

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