

**685 Tractor**  
**Operators Manual**

9-11273

**CASE *III***



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

SB001

IF THIS MACHINE IS USED BY AN EMPLOYEE, IS LOANED, OR IS RENTED, MAKE SURE THAT THE OPERATOR UNDERSTANDS THE TWO INSTRUCTIONS BELOW.

BEFORE THE OPERATOR STARTS THE ENGINE:

1. GIVE INSTRUCTIONS TO THE OPERATOR ON SAFE AND CORRECT USE OF THE MACHINE.
2. MAKE SURE THE OPERATOR READS AND UNDERSTANDS THE OPERATOR'S MANUAL FOR THIS MACHINE.

# **WARNING**

**IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH.**

BEFORE STARTING THE ENGINE, DO THE FOLLOWING:

1. READ THE OPERATOR'S MANUAL.
2. READ ALL SAFETY DECALS ON THE MACHINE.
3. CLEAR THE AREA OF OTHER PERSONS.

LEARN AND PRACTICE SAFE USE OF MACHINE CONTROLS IN A SAFE, CLEAR AREA BEFORE YOU OPERATE THIS MACHINE ON A JOB SITE.

It is your responsibility to observe pertinent laws and regulations and to follow manufacturer's instructions on machine operation and maintenance.

See your Authorized Case dealer for additional operator's manuals, parts catalogs, and service manuals.

## TO THE OWNER OF A CASE INTERNATIONAL TRACTOR

Use this manual as your guide. If you follow the instructions given in this manual, your Case International Tractor will work well for many years.

Your Dealer can give you assistance with Case Company made parts and persons with special training that know the best methods of repair and maintenance for your tractor.

Call your Dealer if you need any assistance or information.

### *Your Authorized Case Dealer*



**Figure 1**

**NOTE:** Where right hand and left hand of the tractor is used in this manual it means the same as your right hand and left hand when you are in the tractor seat looking forward.

## SERIAL NUMBERS

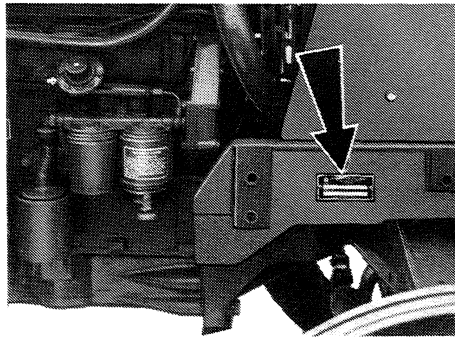
When ordering parts, requesting information or assistance always give the model and serial numbers of your tractor.

Write the model and serial numbers of your tractor on the lines below:

1. TRACTOR MODEL NUMBER \_\_\_\_\_
2. PRODUCT IDENTIFICATION NUMBER \_\_\_\_\_
3. ENGINE SERIAL NUMBER \_\_\_\_\_
4. TRANSMISSION SERIAL NUMBER \_\_\_\_\_
5. MFD AXLE SERIAL NUMBER \_\_\_\_\_
6. ROPS FRAME SERIAL NUMBER \_\_\_\_\_
7. CAB SERIAL NUMBER \_\_\_\_\_

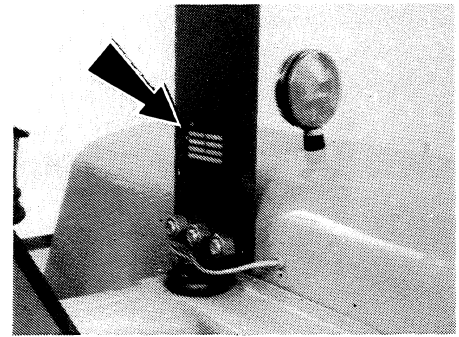
### Serial Number Location

MODEL AND PRODUCT  
IDENTIFICATION NUMBER  
(P I N) PLATE



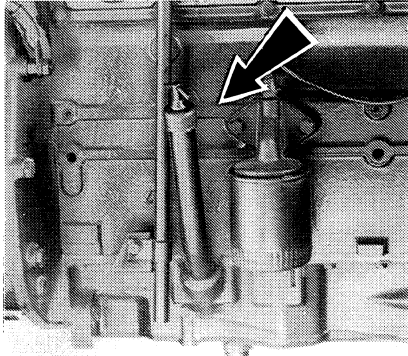
On right hand side of front bolster.

ROPS FRAME SERIAL  
NUMBER PLATE



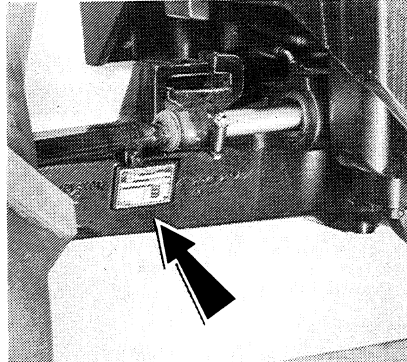
On right hand upper frame.

ENGINE SERIAL NUMBER



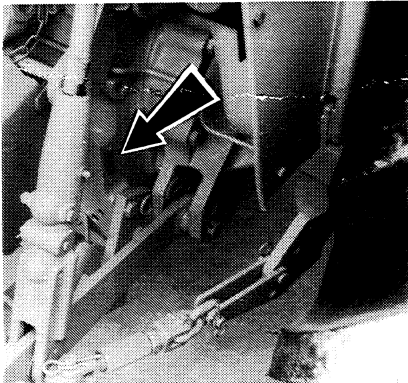
On right hand side of engine.

MFD AXLE SERIAL NUMBER



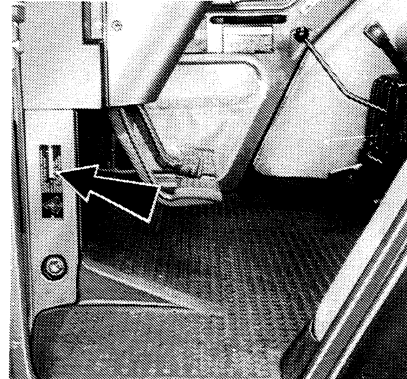
On rear left hand of housing.

TRANSMISSION SERIAL NUMBER



On right hand rear of transmission

CAB SERIAL NUMBER



Inside cab, left ,lower front

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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 MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.**



## Before Starting



**CAUTION:** *Provide a first aid kit for use in case of accident.*



**CAUTION:** *It is good practice to carry a fire extinguisher on the tractor. Be sure that the extinguisher is properly maintained and be familiar with its proper use*



**CAUTION:** *Check the machine for leaks or any parts that are broken, not working correctly, or not there at all. Before you start the machine, tighten all caps, dipsticks, battery covers, etc.*



**WARNING:** *Before starting the engine, be sure all operating controls are in neutral. This will ease starting loads on the starter and batteries and will eliminate the accidental start up of PTO driven equipment.*



**WARNING:** *Before starting engine study Operators Manual safety messages.*

*Read all safety signs on machine.*

*Clear the area of other persons.*

*Learn and practice 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 and Service Manuals may be obtained from your equipment dealer.*



**WARNING:** *To help prevent injury:*

**BEFORE STARTING ENGINE** - *Put shields in place. Sit in the seat. Place controls in neutral.*

**BEFORE OPERATING MACHINE** - *Clear people away. No riders. Fasten seat belt.*

**WHEN OPERATING MACHINE** - *Keep away from power driven parts. Avoid steep slopes, embankments, ditches and rough terrain. Reduce speed when turning. In high speed travel, couple brake pedals together where applicable. On road travel, use flashing warning lights where permitted and keep SMV emblem visible from rear.*

**WHEN MACHINE IS STOPPED** - *Engage park lock or brake. Lower raised equipment to ground. Stop engine before dismounting to service or clear machine(s).*

## Operation

**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 possible, 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.*



**WARNING:** *Be certain all hitch retaining pins are securely engaged in the implement lift pins and both telescopic lower link latches are fully engaged before transporting or pulling the implement.*



**WARNING:** *Rear upset can result if pulling from wrong location on tractor. Hitch only to the drawbar. Use 3 point hitch only with the implements designed for its use - not as a drawbar.*



**CAUTION:** *Operate the tractor with the cab door closed to provide proper ROPS protection and to properly utilize the heating, ventilating or cooling systems.*



**WARNING:** *Stay off slopes too steep for safe operation. Shift down before you start up or down a hill with a heavy load. Avoid "free wheeling".*



**WARNING:** *Rotating machine parts, stay clear, keep shields installed to help protect from clothing entanglement and injury. Wear close-fitted clothing.*



**WARNING:** *To prevent personal injury due to PTO driven machine shaft bottoming or separating, drawbar must be properly positioned in pivot bracket.*

PTO Shaft	PTO Shaft End To Hitch Pin Hole
540 RPM 6 Spline	14.00 inch (356 mm)
1000 RPM 21 Spline	16.00 inch (407 mm)



**CAUTION:** *To provide more secure hand and foot mobility, preventing slipping and possible injury, always face the tractor when mounting and dismounting.*



**CAUTION:** *Make sure that the rim bolts, hub bolts or nuts, or hub clamp bolts are tightened to specifications. Check these torques after the first 10 hours and thereafter every 50 hours of operation until torques remain constant.*



**WARNING:** *Lower or block hydraulically or mechanically elevated implements and other attachments before servicing or when leaving the equipment.*



**CAUTION:** *When remote cylinders are connected to the hydraulic system, cycle the control lever about three times to remove air from the cylinder and hoses. With air in the system raised equipment can drop accidentally and cause personal injury or machine damage.*



**CAUTION:** *The implement should be lowered to the ground before uncoupling of the remote hydraulic hoses.*



**WARNING:** *Contact with overhead power lines can cause severe electrical burns or death from electrocution. Make sure there is enough clearance between raised equipment and overhead power lines.*

## Service



**CAUTION:** *Never use gasoline, naphtha or any other volatile material for any cleaning purposes. These materials may be toxic and/or flammable.*



**WARNING:** *Never operate the engine in a closed building. Proper ventilation is required under all circumstances.*



**WARNING:** *Battery explosion and/or damage to electrical components can result from improper connection of booster batteries or charger. Connect positive to positive and negative to negative. Externally, battery acid can cause burns and blindness, and taken internally is poison.*



**WARNING:** *Extreme care must be exercised when adjusting and checking hitch and control linkage when the engine is running and when linkage is under hydraulic or mechanical load. Study the linkage and hitch travel. Keep the hands, arms, legs and feet out of the travel arc of the hitch and linkage.*



**WARNING:** *Do not remove, install or make repairs to a tractor tire on a rim. Take the tire and rim to a tire shop where persons with special training and special safety tools are available. If the tire is not in correct position on the rim, or if too full of air, the tire bead can loosen on one side and cause air to leak at high speed and with large force. Because the air leak can thrust the tire in any direction, and with much force, you will be in danger of injury.*



**WARNING:** *Rotating fan and belts . Contact can injure . Keep clear.*



**WARNING:** *Coolant can spray under pressure. Close valves before removing coolant conditioner filter.*

## HAND SIGNALS

For communication under noise conditions and for special operations, the following system of standard hand signals has been devised by the American Society of Agricultural Engineers. The signals can decrease time loss and prevent accidents.

### Start the Engine



Move arm in a circle at waist level

### Stop the Engine



Move your right arm across your neck from left to right.

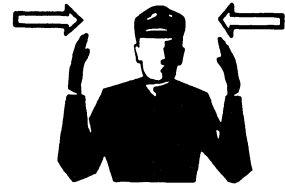
### Move Toward Me - Follow Me



Look toward the person or vehicle you need to move. Hold one hand in front of you with the back of

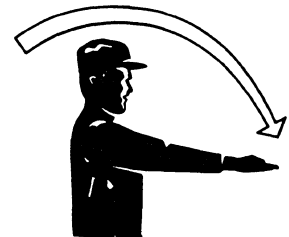
the hand toward the machine and move your arm from the elbow to the fingers backward and forward.

### This Far To Go



Put your hands in front of your face with the backs of your hands outward. Move your hands in or out as an indication of how far to go.

### Move Out



Face in the needed direction of movement. Put your arm straight out behind you, then swing your arm over your head and forward until your arm is straight out in front of you with the back of your hand up.

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