8825 & 8825HP Windrower Tractor

Operators Manual

9-29501

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CASE IH

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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.

M171B

If Safety Decals on this machine use the words **Danger, Warning or Caution,** which are defined as follows:

- **DANGER:** Indicates an immediate hazardous situation which if not avoided, will result in death or serious injury. The color associated with Danger is RED.
- **WARNING:** Indicates an potentially hazardous situation which if not avoided, will result in serious injury. The color associated with Warning is ORANGE.
- **CAUTION:** Indicates an potentially hazardous situation which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

If Safety Decals on this machine are ISO two panel Pictorial, decals are defined as follows:

- The first panel indicates the nature of the hazard.
- The second panel indicates the appropriate avoidance of the hazard.
- Background color is YELLOW.
- Prohibition symbols such as  and  if used, are RED.

WARNING

IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH. BEFORE USING THIS MACHINE, MAKE CERTAIN THAT EVERY OPERATOR:

- Is instructed in safe and proper use of the machine.
- Reads and understands the Manual(s) pertaining to the machine.
- Reads and understands ALL Safety Decals on the machine.
- Clears the area of other persons.
- Learns and practices safe use of machine controls in a safe, clear area before operating this machine on a job site.

It is your responsibility to observe pertinent laws and regulations and follow Case Corporation instructions on machine operation and maintenance.

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SPECIFICATIONS

(Specifications and design are subject to change without notice and without liability therefore.)

MODEL ..... 8825 and 8825HP Windrower Tractor

DIMENSIONS AND WEIGHTS

Weight without header (approx.) ..... 5950 LBS (2699 kg)
Overall length
  with draper header ..... 264 IN (6704 mm)
  with auger header ..... 242 IN (6147 mm)
Height
  top of cab ..... 121 IN (3073 mm)
Clearance under walking beam ..... 36.5 IN (927 mm)
Clearance under frame ..... 35.4 IN (889 mm)
Width, without header
  outside of hubs ..... 119.6 IN (3038 mm)
  with standard tires ..... 139.5 IN (3543 mm)
  with optional tires ..... 147.5 IN (3747 mm)
Wheel base ..... 124 IN (3150 mm)
Tread width
  standard tires ..... 122.6 IN (3114 mm)
  optional tires ..... 127 IN (3226 mm)
Tread width, castor wheels
  minimum ..... 84.3 IN (2140 mm)
  maximum ..... 110.2 IN (2800 mm)

TIRES

Drive wheels
  standard ..... 21.5L- 16.1 (I-3) bar tread
  optional flotation ..... 21.5L - 16.1 (R-3) Turf tread
  wheel nut size 5/8-18
  wheel nut torque ..... 200 LB·FT (271 N·m)
  tire pressure ..... 24 psi (165 kPa)
Rear caster wheels ..... 11.5L-15 4-ply implement rib
  wheel bolt size ..... 9/16-18 x 1-1/8
  wheel bolt torque ..... 120 LB·FT (165 N·m)
  tire pressure ..... 28 psi (193 kPa)

ENGINE

Model
  8825 ..... Case, 4-390 Diesel
  8825HP ..... Case, 4T-390 Diesel
Horsepower
  8825 ..... 75 at 2300 rpm (r/min)
  8825HP ..... 96 at 2300 rpm (r/min)
High Idle ..... 2500 rpm (r/min)
Displacement ..... 239 CU IN (3.9 L)
Cooling system capacity ..... 22 U.S. quarts (20.8 L)
Cooling fan diameter ..... 17.7 IN (450 mm)
Fuel ..... ASTM No. 2 Diesel
Fuel tank capacity ..... 42 U.S. gallons (159 L)

ELECTRICAL SYSTEM

System voltage ..... 12 volts
Grounding ..... negative
Batteries
  quantity 2
  capacity, each ..... 12 volt, 450 amp minimum cranking capacity at 0°F
  type ..... SAE J537, group size 24 or 27, top post
Alternator
  manufacturer ..... Robert Bosch
  output ..... 65 amperes

GROUND DRIVE SYSTEM

Final drive ..... roller chain
  primary reduction ..... No. 50
  final reduction ..... No. 80
Tandem pump ..... Vickers model 19, piston
Ground drive motors ..... Vickers model MFE, fixed displacement motors

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GENERAL INFORMATION

⚠ WARNING

Before doing any maintenance or service work on the tractor or the header, you must:

- **Put all controls in NEUTRAL.**
- **Apply the parking brake.**
- **Center and lock the steering wheel.**
- **When working on the tractor, lower the header to the floor.**
- **When working on the header, raise the header all the way.**
- **Stop the engine and take the key with you.**
- **Look and Listen! Make sure all moving parts have stopped.**
- **If the header is raised, install the cylinder safety stops on both header lift cylinders.**
- **If the reel is raised, install the safety stops in the safety position under both reel lift arms.**

⚠ WARNING

When the header is raised for service or maintenance work, install the cylinder safety stops on both header lift cylinders to prevent lowering of the header.

⚠ WARNING

When the reel is raised for service or maintenance work, install the safety stops in the safety position under both reel lift arms.

⚠ WARNING

Never check or lubricate chains while the machine is running.

⚠ WARNING

After lubricating, servicing or adjusting the machine, make sure all tools and equipment have been removed.

⚠ WARNING

All shields and guards must be in position before operating the machine.

Introduction

This operator's manual has been prepared with the latest information available at the time of publication. Read the operator's manual carefully before operating the machine and before doing any service on this machine. Practicing the instructions given here will result in many years of dependable service from your machine. The operating and maintenance instructions included in this manual are compiled from extensive field experience and engineering data. Some information may be general in nature due to unknown and varying conditions; however, through your own experience and these instructions, you will be able to develop operating procedures suitable to your particular situation.

Right and left as used throughout this operator's manual is determined by facing in the direction the machine will travel when in use.

The photos, illustrations and data used in this manual were current at the time of printing, but due to possible production changes, your machine can vary slightly. The Manufacturer reserves the right to redesign and change the machine as necessary without notification.

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Securely fasten your seat belt. The seat belt can help insure your safety if used and maintained. Never wear a seat belt loosely or with slack in the belt system. Never wear the seat belt in a twisted condition or pinched between the seat structural members.

Any time the engine is running and the parking brake is disengaged, the machine will turn if the steering wheel is moved, even though the travel control lever is in neutral.

Always lower the header to the ground when parking.

Do not tow or drive the machine with header up and safety stops in safety position.

Always apply the parking brake when parking, and center and lock the steering wheel.

Always park crosswise to the slope when parking on a hill.

Always travel with the header as low as possible.

Always keep hands, feet and clothing away from moving parts.

Entanglement in rotating drive shafts can cause serious injury or death. Do not operate the machine with drive shafts shields open or removed.

Never check drive belts while machine is running.

Never remove the cap from a hot radiator; escaping steam and hot fluids can cause personal injury.

Hydraulic fluid escaping under pressure can have sufficient force to penetrate the skin, causing serious injury. Be sure to relieve all pressure from hydraulic lines before disconnecting them. Before applying pressure to the system, make sure all connections are tight and that hoses and lines have not been damaged.

Hydraulic fluid escaping from a very small hole can be almost invisible. Always use a piece of cardboard or wood, rather than hands, to search for suspected leaks. If injured by escaping hydraulic fluid, see a doctor immediately.

BE AWARE of the width of the machine. Be careful when roading or transporting the machine on narrow roads and across narrow bridges. See Specifications for the overall dimensions.

Always use ample safety warnings and adequate lights when roading or transporting the machine on public roads. Be sure the SMV emblem is visible. Check with your local law enforcement agencies for specific requirements.

See the Operation Section for information for safe transporting of the machine.

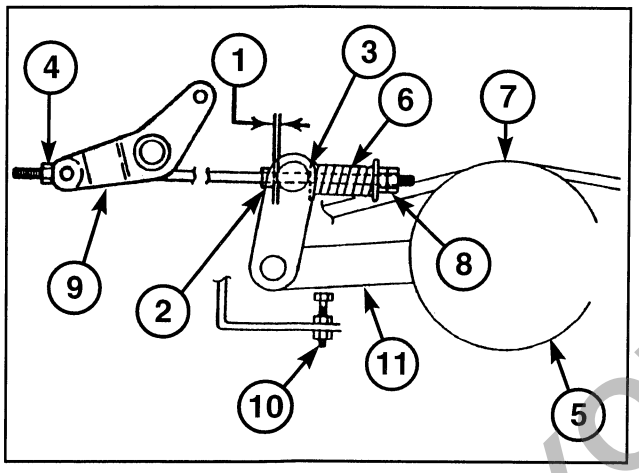
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Header Clutch Belt Adjustment

1. Push the header control lever all the way forward to engage the header clutch.

2. Measure the gap between the nut welded on the rear of the control shaft and the pivot. The gap must be 1/4 to 3/8 IN (6.4 to 9.5 N·m). If the gap is not correct, loosen the jam nut at the front of the control rod. Rotate the control rod to adjust the gap between the nut welded on the rear of the control shaft and the pivot. When the gap is correct, hold the control rod and tighten the jam nut.



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HEADER CLUTCH BELT ADJUSTMENT

1. Gap
2. Rear Weld-on Nut
3. Pivot
4. Jam Nut
5. Tensioner Sheave
6. Tensioning Spring
7. Downward Movement of Tensioner Sheave
8. Two Jam Nuts
9. Bellcrank
10. Stop Bolt
11. Tensioner Sheave Arm

3. Pull down on the tensioner sheave until the tensioning spring is completely compressed. The downward movement of the tensioner sheave must be 1/4 to 1/2 IN (6.4 to 12.7 mm). If the measurement is not correct, the length of the tensioning spring must be adjusted.

If the movement was less than 1/4 IN (6.4 mm), the tensioning spring must be lengthened. If the movement was more than 1/2 IN (12.7 mm), the tensioning spring must be shortened. Loosen the jam nut on the rear of the control rod. Adjust the nut to change the length of the tensioning spring and tighten the jam nut. Repeat step 2 to adjust the gap between the nut welded on the rear of the control shaft and the pivot.

Pull down on the tensioner sheave and measure the movement of the tensioner sheave again. If necessary, repeat this step to get the correct movement of the tensioner sheave.

4. Move the header control lever all the way forward and all the way rearward. The header control lever must not contact either end of the slot in the console. To adjust the header control lever, adjust the clevis on the end of the control rod between the header control lever and the bellcrank.

5. Pull the header control lever all the way rearward to disengage the header clutch.

6. Look at the bottom span of the clutch drive belt. The bottom span must be as straight as possible. Having the bottom span straight increases the life of the clutch drive belt and the efficiency of the clutch. To adjust the bottom span, adjust the position of the stop bolt.

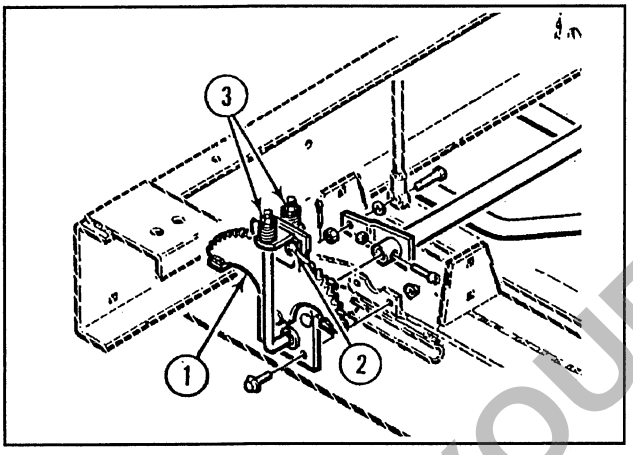
7. Make sure the header is disengaged before starting the engine.

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Travel Control Lever Adjustment, Machines without Lever Assist

The travel control lever is held in place by a detent assembly. The pressure that the rollers apply to the detent sprocket can be increased to prevent inadvertent movement of the travel control lever during operation or decreased so the travel control lever can be moved easier. To adjust the pressure on the detent sprocket, tighten or loosen the springs on either side of the detent sprocket to get the desired tension on the travel control lever.



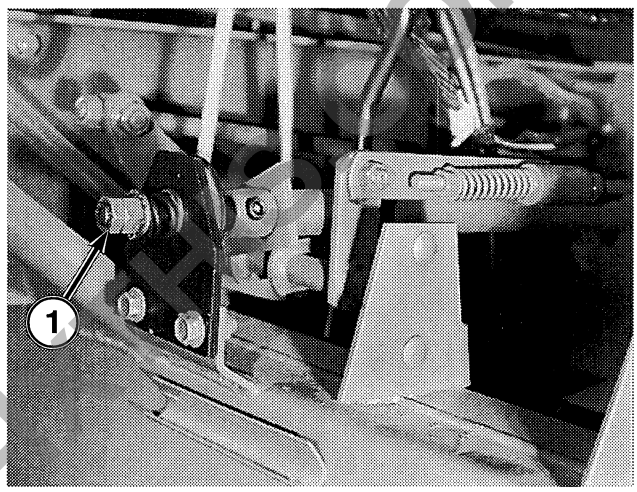
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TRAVEL CONTROL DETENT ADJUSTMENT

1. Detent Sprocket
2. Rollers
3. Spring (2)

Travel Control Lever Adjustment, Machines with Lever Assist

The tensioner assembly can be adjusted to provide more drag on the ground speed lever and maintain a constant ground speed. To increase drag, tighten the nuts on tensioner assembly.



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TENSIONER ASSEMBLY

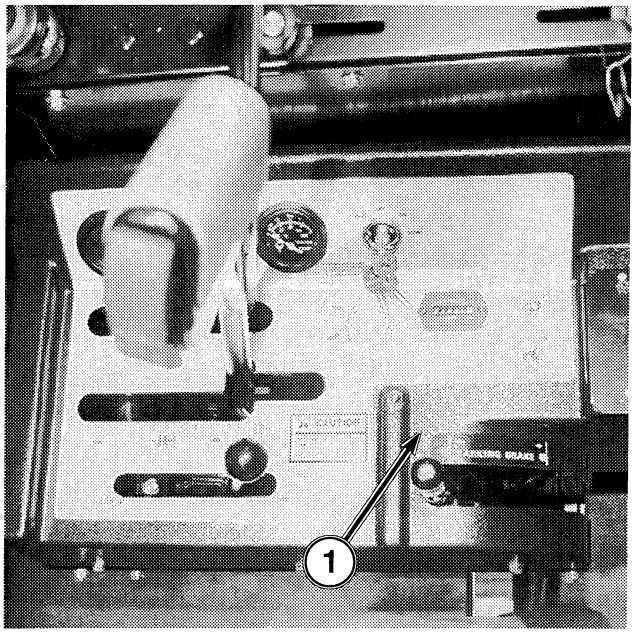
1. Nut on Tensioner Assembly

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Instrument Panel Maintenance

To gain access to the instrument panel, remove top plastic cover from the console.



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1. Top Plastic Cover on Console

Wheels and Tires

Air Pressure

Check the air pressure and the condition of the tires each day. See Specifications for the correct air pressure.

Wheel Nuts and Bolts Torque

See Specifications for the correct wheel nut and bolt torque.

When a wheel has been removed and installed, check the torque of the wheel nuts after 3 to 5 hours of operation.

NOTE: When using an electric or pneumatic wrench, MAKE SURE the wrench is set for the correct torque.

Changing a Tire

Have a qualified tire mechanic service the wheels that are used on this machine. The correct tire equipment, especially a tire inflation cage, is required.

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Header Hydraulic System

Header Lift Circuit. There are two switches on the travel control lever. The bottom switch controls the header lift circuit. Pressing on the top of the bottom switch will cause the header to raise. Pressing on the bottom of the switch will cause the header to lower. The engine must be running to raise or lower the header. The header lift hydraulic circuit consists of a header and reel lift control valve and two header lift cylinders.

Reel Drive Circuit. The reel of the draper header is driven hydraulically. The reel drive system consists of a reel drive pump, a relief valve, and a reel drive motor. The reel drive pump is a variable displacement piston pump controlled by a cable from the cab. A stop bolt prevents the control arm on the reel drive pump from being moved into the reverse position.

The reel drive pump is mounted at the right side of the mainframe. A belt from the sheave on the header drive jackshaft drives the reel drive pump. The reel drive motor is a fixed displacement piston motor and is mounted on the left end of the header.

Reel Lift Circuit. The reel of the draper header can be raised or lowered hydraulically. There are two switches on the ground speed control handle. The top switch controls the reel lift circuit. Pressing on the bottom of the switch will cause the reel to lower. Pressing on the top of the switch will cause the reel to raise. The engine must be running to raise or lower the reel.

The reel lift hydraulic circuit consists of a header and reel lift control valve and two reel lift cylinders. There is a reel lift cylinder mounted on each end of the header. A double acting master cylinder is mounted on the right side of the header. A single acting slave cylinder is mounted on the left side of the header. The base end of the master cylinder is connected to the reel lift control valve. The rod end of the master cylinder is connected to the base end of the slave cylinder.

NOTE: If the reel fails to raise, check the hand valve on the header and reel lift valve. The hand valve must be closed. To close, turn the hand valve clockwise.

Draper Drive Circuit. The draper drive system consists of a draper drive pump, a relief valve, and two draper drive motors. The draper drive pump is a variable displacement piston pump controlled by a cable from the cab. The draper drive pump is mounted at the right side of the mainframe. A belt from the sheave on the header drive jackshaft drives the draper drive pump. The draper drive motors are fixed displacement and are mounted at the inner ends of the drapers.

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Hydraulic System

There are two main hydraulic systems on the tractor: the ground drive hydraulic system and the header hydraulic system.

Ground Drive Hydraulic System

The ground drive system consists of a tandem pump and two ground drive motors. The tandem pump is two variable displacement piston pumps mounted on a common valve block. The left piston pump drives the left ground drive motor and the right piston pump drives the right ground drive motor. The tandem pump also includes a charge pump mounted on the left piston pump. The charge pump is a vane type pump that supplies oil to both piston pumps. The charge pump also supplies oil for the header lift systems. A flow divider valve in the cover on the charge pump directs the flow of oil. The tandem pump is mounted in the mainframe and is driven by a belt from the pulley on the rear of the engine. The ground drive motors are mounted on the chain cases and drive the drive wheels through a series of chains and sprockets.

The steering wheel and the travel control lever direct the flow from the tandem pump. When the controls are in the neutral position there is no flow from the tandem pump. When the travel control lever is moved forward, both control arms on the tandem pump are moved in the same direction. Equal flow from both of the piston pumps is directed to the ground drive motors and the tractor moves straight ahead. The farther forward the travel control lever is moved, the more flow is directed to the ground drive motors and the faster the tractor will travel. When the travel control lever is returned to the NEUTRAL position, the flow to the motors is stopped. The return flow from the motors is also stopped, preventing the motors from turning and causing the tractor to stop. When the travel control lever is pulled back to the REVERSE position, the output from the tandem pump is reversed. This causes the motors to rotate in the opposite direction so the tractor moves rearward.

NOTE: The travel control lever cannot be moved when the parking brake is engaged and the steering wheel is centered and locked.

The steering wheel also controls the two piston pumps. When the tractor is moving, turning the steering wheel increases the flow to one ground drive motor and decreases the flow to the other ground drive motor, causing the tractor to turn. When the travel control lever is in the NEUTRAL position, turning the steering wheel causes one drive wheel to rotate forward and the other drive wheel to rotate rearward, causing the tractor to turn.

NOTE: The steering wheel cannot be turned when the parking brake is engaged and the steering wheel is centered and locked.

Charge Circuit. The charge pump is a balanced vane type pump mounted on the end of the tandem pump. The charge pump supplies oil to the charge circuit of the tandem pump. The charge pump also supplies oil to the header and reel lift system.

The charge pump is nominally rated at 14.5 gpm (54.9 L/min) at rated engine speed. Flow from the charge pump goes through the flow divider valve in the end cover of the charge pump. The flow divider valve determines the amount of flow to the primary and the secondary ports.

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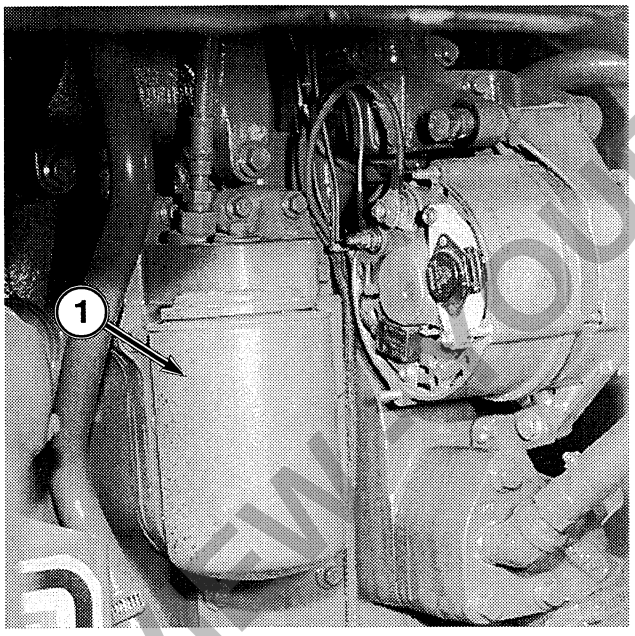
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Changing Oil and Oil Filter

Change the oil filter every time the oil is changed. The frequency of oil change is determined by the operating conditions. Under normal operating conditions, change the oil and oil filter every 250 hours of operation. Change the oil and oil filter more frequently in heavy load and extremely dusty conditions. It is also recommended that the oil be changed at least once a season or prior to storage at the end of the season.

Drain the oil while the engine is hot. Oil will drain better and will remove more of the dirt and foreign matter if the engine is hot. Clean the area around the oil drain plug in the bottom of the engine oil pan and around the oil filter. Remove oil drain plug.

Remove and discard the old oil filter. Make sure the old gasket is removed from the filter head.



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1. Oil Filter

Allow oil to flow from the crankcase and filter head for several minutes.

Make sure the oil drain plug and the area around the opening are clean. Install the oil drain plug.

Use a clean cloth and wipe the sealing surface in the filter head to remove all dirt.

Lubricate the oil filter gasket with clean oil. DO NOT fill the new oil filter with oil. Oil that is poured into an oil filter will not be filtered before entering the engine. Install the oil filter according to the oil filter manufacturers instructions.

NOTE: Do not use a filter strap wrench. A filter strap wrench can cause a leak if the oil filter is dented.

See Specifications for the correct type and quantity of oil. Install the oil in the engine.

Start and run the engine at low idle. Check the engine oil filter and the drain plug for leaks. After 2 minutes, stop the engine. Wait for 2 to 3 minutes and check the engine oil level with the dipstick. Add oil if necessary.

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