

O P E R A T O R ' S M A N U A L

# DRAWN BOX SCRAPER

**LL1160**

**LL1172**



**FRONTIER**  
EQUIPMENT

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# LL11 SERIES SPECIFICATIONS

Model	LL1110	LL1112
Capacity (cu. ft.)	9.375	11.25
Tractor HP	20 min to 50 max HP	20 min to 50 max HP
Working Width	5 Feet	6 Feet
Machine Width	5 Feet 1 Inches	6 Feet 1 Inches
Machine Length	8 Feet 2 Inches	8 Feet 2 Inches
Machine Height	29.5 Inches	29.5 Inches
Operating Weight	612 lbs	735 lbs
Hitch Type	Drawn	Drawn
Cutting Edge	6 Inches Tall, 5/8 Thick Grading Blade	6 Inches Tall, 5/8 Thick Grading Blade
Moldboard Thickness	3/8 Inch	3/8 Inch
Scarifier Shanks	4 Standard	6 Standard
Replaceable Shanks	Yes	Yes
Scarifier Beam Size	4" x 4" x .250"	4" x 4" x .250"
End Plate Thickness	3/8 Inch	3/8 Inch
Hydraulic Cylinders	Standard	Standard
Hydraulic Cylinders (#)	1	1
Cylinder Size	3 Inch Bore	3 Inch Bore
Cylinder Rod Size	1 3/8 Inches	1 3/8 Inches
Wheels	6 x 10	6 x 10
Tires	20.5 x 8 x 10	20.5 x 8 x 10
Cylinder Stroke Length	8 Inches	8 Inches
Jack Stand	Standard	Standard
Safety Chains	Standard	Standard
Duty	Construction	Construction
Warranty	6 Months	6 months

## GENERAL INFORMATION

The purpose of this manual is to assist you in operating and maintaining your drawn box scraper. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance.

These instructions have been compiled from field experience and engineering data. Some information may be general in nature, due to unknown and varying operating conditions. However, through experience and these instructions, you should be able to develop procedures suitable to

your particular situation.

The illustrations and data used in this manual were current at the time of printing. However, due to possible inline production changes, your machine may vary slightly in detail. We reserve the right to redesign and change the machines as may be necessary without notification.

Throughout this manual, references are made to right and left direction. These are determined by standing behind the tractor facing the direction of forward travel.

## 1 Specifications

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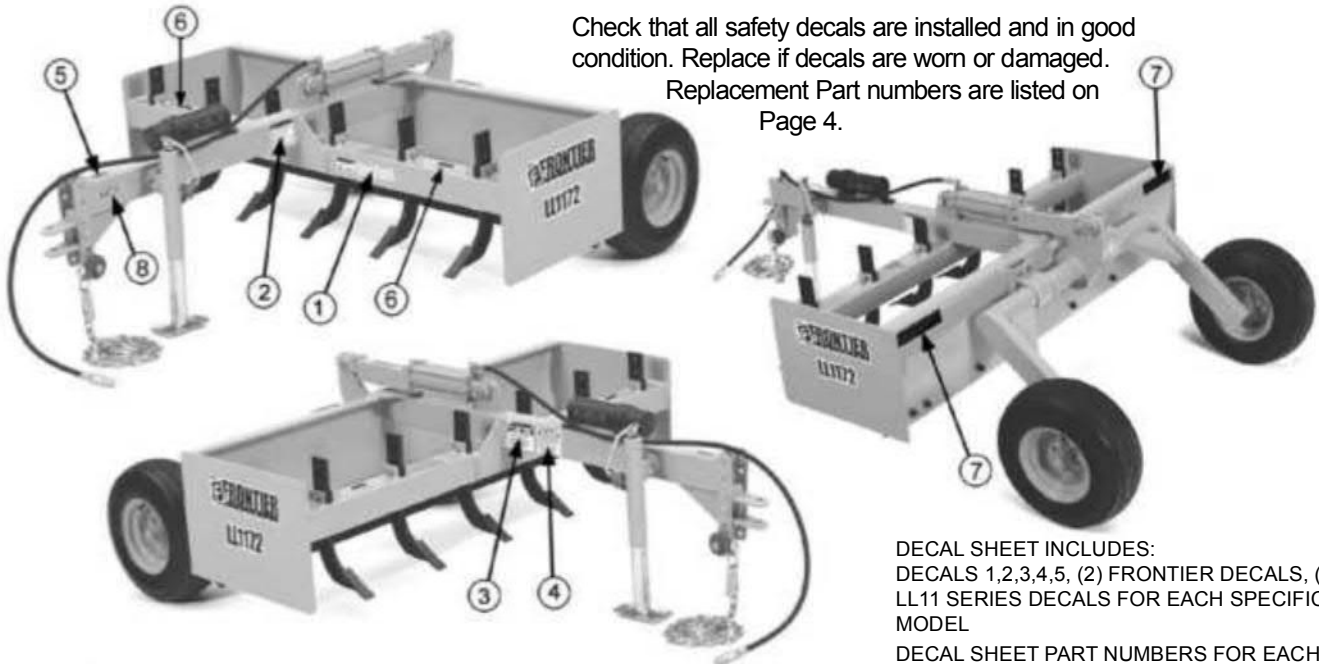
# SAFETY & INSTRUCTIONAL DECALS, REFLECTORS AND LIGHTS

## ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

### FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH

Check that all safety decals are installed and in good condition. Replace if decals are worn or damaged.

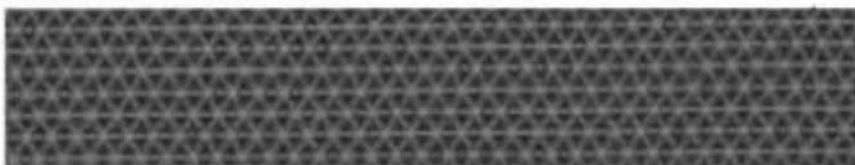
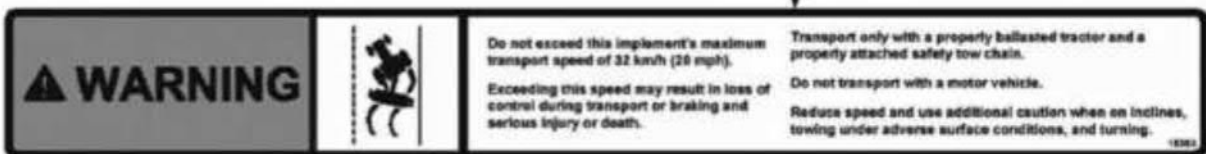
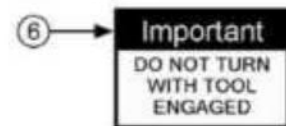
Replacement Part numbers are listed on Page 4.



DECAL SHEET INCLUDES:  
 DECALS 1,2,3,4,5, (2) FRONTIER DECALS, (2) LL11 SERIES DECALS FOR EACH SPECIFIC MODEL

DECAL SHEET PART NUMBERS FOR EACH MODEL:

5DDP00461	LL1160
5DDP00462	LL1172



7 5DDP00162  
2" x 9" Red Reflective Strips



8 5DDP00205  
Frontier Serial Number



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# SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by an operator's single careless act.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, judgement, and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

It has been said "The best safety device is an informed, careful operator." We ask you to be that kind of operator.

## TRAINING

- Safety instructions are important! Read all attachment and power unit manuals; follow all safety rules and safety decal information. (Replacement manuals are available from selling dealer.) Failure to follow instructions or safety rules can result in serious injury or death.
- If you do not understand any part of this manual and need assistance, see your dealer.
- Operators must be instructed in and be capable of the safe operation of the equipment, its attachments, and all controls. Do not allow anyone to operate this equipment without proper instructions.
- Never allow children or untrained persons to operate equipment.
- Train all new personnel and review instruction's frequently with existing workers. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.

## PREPARATION

- Always wear relatively tight and belted clothing to

avoid getting caught in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing, and head; and respirator or filter mask where appropriate.

- Make sure attachment is properly secured, adjusted, and in good operating condition.
- Power unit must be equipped with ROPS or ROPS cab and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS system in "locked up" position at all times.
- A minimum 20% of tractor and equipment weight must be on the tractor front wheels when attachments are in transport position. Without this weight, tractor could tip over, causing personal injury or death. The weight may be attained with a loader, front wheel weights, ballast in tires or front tractor weights. Weigh the tractor and equipment. Do not estimate.

## TRANSPORTATION

- Always comply with all state and local laws governing highway safety and lighting and marking requirements.
- Keep away from overhead power lines. Serious injury or death may result. Know the transport height and width of your machine.
- Never allow riders on power unit or attachment.
- Do not operate or transport on steep slopes.
- Use extreme care and reduce ground speed on slopes and rough terrain.
- Prevent collisions between other road users, slow moving tractors with attachments or towed equipment, and self-propelled machines on public roads. Frequently check for traffic from the rear, especially in turns, and use turn signal lights

## 3 Safety Rules



# SAFETY RULES



ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

- Do not operate or transport equipment while under the influence of alcohol or drugs. Consult your doctor about operating this machine while taking prescription medications.

## OPERATION

- Never go underneath equipment (lowered to the ground or raised) unless it is properly blocked and secured.

- Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.

- Escaping fluid under pressure can penetrate the skin causing serious injury. Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Search for leaks with a piece of cardboard.

- Protect hands and body from high pressure fluids. If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source.

- Always comply with all state and local laws governing highway safety and lighting and marking requirements.

- Operate only in daylight or good artificial light.

- Keep bystanders away from equipment.

- Keep hands, feet, hair, and clothing away from equipment while engine is running. Stay clear of all moving parts.

- Power unit must be equipped with ROPS or ROPS cab and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS system in “locked up” position at all times.

- Never allow riders on power unit or attachment.

- Always sit in power unit seat when operating controls or starting engine. Securely fasten seat belt, place transmission in neutral, engage brake, and ensure all other controls are disengaged before starting power unit engine.

- Look down and to the rear and make sure area is clear before operating in reverse.

- Use extreme care when working close to fences, ditches, other obstructions, or on hillsides.

- Do not operate or transport on steep slopes.

- Do not stop, start, or change directions suddenly on slopes. Always operate down slopes; never across the face.

- Use extreme care and reduce ground speed on slopes and rough terrain.

- Keep alert and watch the front, as well as, the rear when operating.

- Be careful to keep hands and feet clear of sliding parts and possible pinch points.

- Stop power unit and equipment immediately upon striking an obstruction. Engage brake, turn off engine, remove key, inspect, and repair any damage before resuming operation.

- Before leaving operator's seat put equipment on the ground. Engage brake, stop engine, remove key, and remove seat belt.

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