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# Operator's Manual

Keep this manual with the machine at all times

## CONTROL CHCFE

# Header Wagon

CHCFE30, CHCFE36, CHCFE3627,  
CHCFE45, CHCFE4527



### CAUTION

#### Operational Hazard

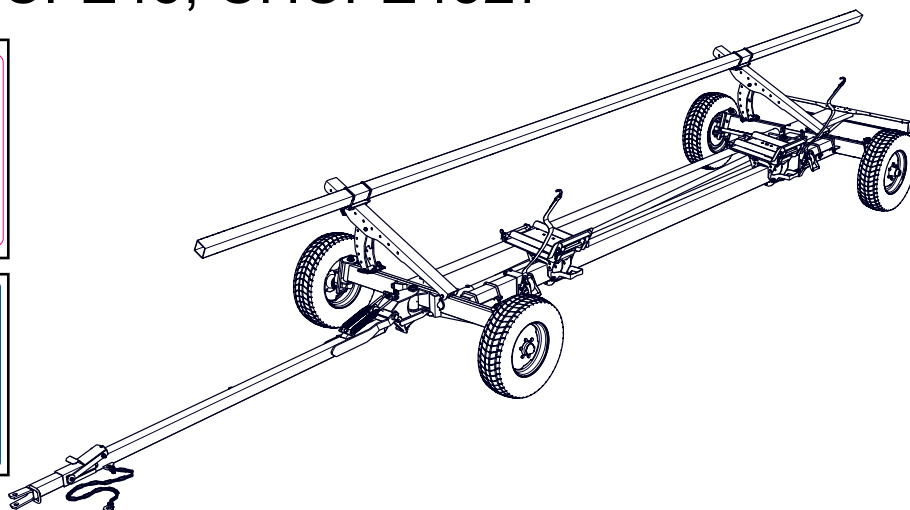
Do not exceed travel speed rating of the components:  
Maximum 50 km/h (30 mph).  
Obey SMV speed limits.



### CAUTION

#### Operational Hazard

Personal Protection Equipment (PPE) is required when operating or maintaining this machine.



Do not attempt to operate the equipment without thoroughly reviewing this manual for safe and proper operation.

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## INTRODUCTION

Thank you for purchasing your new **CHCFE Horst Contour 4 Wheel Steer Header Wagon**. Your Contour Header Wagon has been designed and manufactured to give you many years of dependable service. Horst CHC Series header wagons unique design helps to increase productivity by ensuring safe, effective and speedy transport of your header from job site to job site.

Trailing your combine head with a Horst CHCE Wagon keeps you moving with safe and easy road travel. The no-sway design of Horst's running gear provides a smooth trailing wagon that eliminates the zig-zag action. The predictable trailing movement of Horst's Header Wagons is especially important for combine operators who don't have a clear rear-view and need to rely on a steady trailing wagon.

The CHCFE series header wagons feature LED tail light indicators and rear electric brakes to give you more control and confidence when transporting your head from field to field. Each 12" brake is equipped with 2" wide non asbestos brake pads and rated at 2600 lb capacity, for extra vehicle control.

Safe, efficient and trouble free operation of your CHCFE header wagon requires that you or any other person, who will be assembling, operating, maintaining or working with this product, are required to read and completely understand the information and instructions contained in this manual.

If anyone does not fully understand every part of this manual, please obtain further assistance by contacting the dealer from which this product was purchased or by contacting Horst Welding with the information listed on the cover of this manual.

Keep this operators manual available for reference by the operator and to pass on to new owners and/or operators .

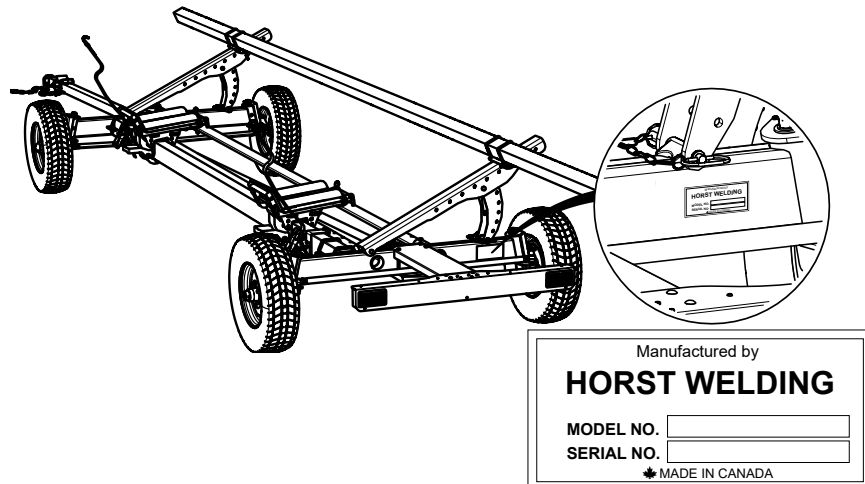
Assembly may be required depending on how you purchased your wagon. Follow the assembly procedures as outlined in the assembly manual.

This manual covers models: **CHCFE30, CHCFE36, CHCFE3627, CHCFE45 CHCFE4527**

In this manual the CHCFE series header wagons may be referred to as "implement", "wagon" or "header wagon"

## SERIAL NUMBER LOCATION

The serial number for your Contour Header Wagon is located on the back top right side of the rear axle. Please record your serial number here as a handy reference. In case of warranty issues, your dealer will ask for the serial to verify your warranty.



Model Number \_\_\_\_\_

Serial Number \_\_\_\_\_

## GENERAL INFORMATION

The purpose of this manual is to assist you in safely operating and maintaining your Contour Header Wagon in a safe manner. Read this manual carefully to obtain valuable information and instructions that will help you achieve safe and dependable service. The illustrations and data used in this manual were current at the time of printing, but due to possible engineering and/or production changes, this product may vary slightly in detail. Horst Welding reserves the right to update and/or change components as necessary without notification.

In this manual:

- **Travel speed rating** refers to the maximum speed the trailer components are design for.
- **Maximum road speed** refers to the 40 km/h for slow moving vehicles displaying a SMV.

## INTENDED USE

The Horst Wagons CHCF series header wagon is intended for attachment and use on qualified power units for the sole purpose of hauling harvester heads.

## PARTS LIST

The parts lists for this product can be found online. Visit [horstwagons.com](http://horstwagons.com) and click on the PARTS tab to be directed to our online parts catalogue.

## CALIFORNIA PROPOSITION 65

You may see a warning label similar to the following:



This warning is required by California Proposition 65 (Prop 65), which is meant to notify California residents of exposures to Prop 65-listed chemicals. For more information go to 'www.P65Warnings.ca.gov.'

## SPEED IDENTIFICATION SYMBOL (SIS)

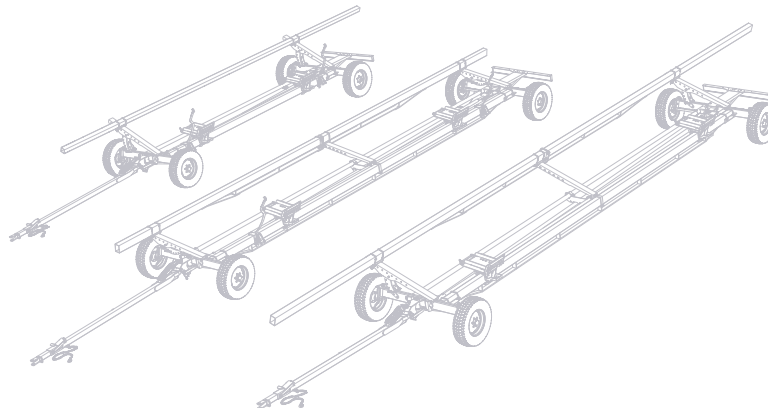
### High Speed Tractors Traveling Faster Than 25 mph

The SIS standard is part of the US Federal Regulation 49CFR Part 562. (Does not apply in Canada)

The purpose of the Speed Identification Symbol (SIS) standard is primarily to identify equipment that has been specifically designed for ground speeds greater than 40 km/h (25 mile/h) but under 65 km/h (40 mile/h), when operating or traveling on public roads. The SIS also identifies the farm machineries' maximum safe travel speed. Maximum rated safe travel speed of Horst Header Wagons is 30 mile/h.

The SIS needs to be used in conjunction with the SMV sign.

Horst Wagons supplies a bracket and SIS for U.S. customers to use if they intend on traveling on public roads at speeds greater than 25 mile/h. See the assembly reference book for your header wagon.





# SAFETY



This Safety Alert Symbol means:  
**ATTENTION!**  
**BECOME ALERT!**  
**YOUR SAFETY IS INVOLVED!**

The Safety Alert symbol identifies important safety messages on the Horst product and in the manual. When you see this symbol, read and understand the message, be alert to the potential hazard in the message. Follow the instructions in the safety message.

## DEFINITION OF SAFETY TERMS AND SYMBOLS

Throughout this manual, the terms **DANGER**, **WARNING**, **CAUTION** and **IMPORTANT** are used to indicate the degree of hazard to personnel if proper safety procedures / guidelines are not followed. The appropriate term for each message has been selected using the following guide-lines:

**DANGER** - Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury, and includes most extreme situations typically for implement components which, for functional purposes, cannot be guarded.

**WARNING** - Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

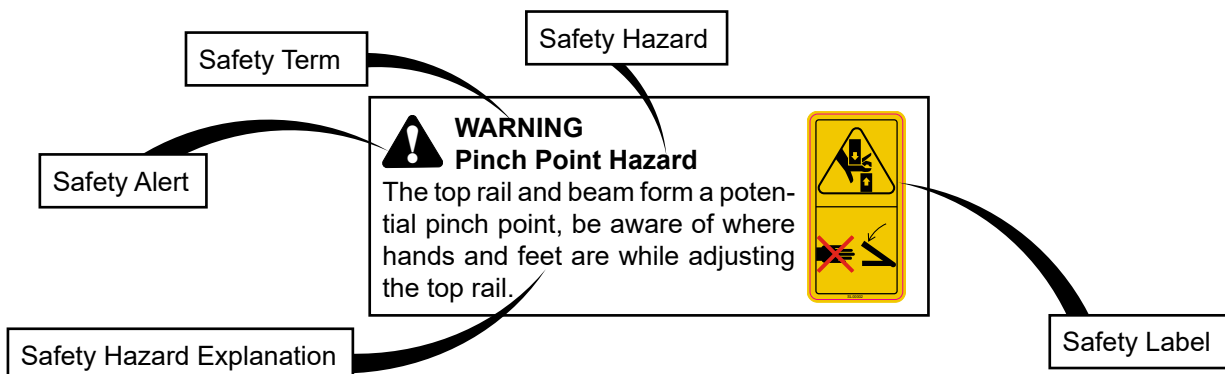
**CAUTION** - Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

**IMPORTANT** - Indicates a situation that could result in damage to the implement or other property.

In the owners manual, when a hazard is present you will see a safety message box. The box may contain:

- The safety alert symbol,
- The safety term
- The safety hazard
- The safety hazard explanation

When applicable you may also see the appropriate safety label displayed with the message, as shown below.



The safety information given in this manual does not replace any safety codes, insurance needs, government and local laws.

## ACCIDENT PREVENTION

# ACCIDENTS CAN BE PREVENTED WITH YOUR HELP!

**YOU** are responsible for the SAFE operation and maintenance of your implement. **YOU** must ensure that you and anyone else who is going to use, maintain or work around the implement be familiar with the work and maintenance procedures and related SAFETY information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be used.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices an effective part of your day to day work habits. Be certain that EVERYONE using this implement is familiar with the recommended maintenance and work procedures and follow all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

**The best accident prevention is a careful operator.**

**Horst Welding and your dealer ask that YOU be that careful, responsible equipment operator.**

### **YOU ARE THE KEY TO SAFETY:**



- Familiarize yourself, and anyone else who will operate, maintain, or work around this product, with the safety and operation information contained in this manual.

- Read and understand the safety labeling which appears on the implement.
- Have a first-aid kit available for use should the need arise and know how to use it.
- Pay attention to the job at hand. Do not let your mind lose concentration on what you are doing. No accident prevention program can be successful without the wholehearted cooperation of the person who is directly responsible for the operation of the implement.
- Have a fire extinguisher available for use should the need arise and know how to use it.
- Reduce the risk of injury or death by following all safety precautions and by using good safety practices.
- Accidents can to be prevented: that prevention will come from equipment operators who accept their complete responsibility and anticipate the results of their actions.



- Never exceed the limits of the implement. Safety of the operator and safe operation are the main concerns in designing a safe product, however ignoring implement specifications by the operator can result in a accident which could have been prevented.



- Do not allow riders on the implement, loaded or empty.
- Do not operate this implement under the influence of drugs or alcohol.
- Be responsible for the SAFE operation and MAINTENANCE of YOUR implement.
- Wear appropriate personal protective equipment (PPE). This list includes but is not limited to:

- Hard hat
- Heavy gloves
- Hearing Protection
- Protective foot wear
- Protective eye wear
- Safety Vest



## SAFETY GUIDELINES

Safety of the operator and bystanders is one of the chief concerns in developing and designing equipment. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more cautious approach to handling equipment.

You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury or death, study the following precautions and insist those working with you, or for you to follow them.

In addition to the design and configuration of this implement, including safety labels and safety devices, hazard control and accident prevention are dependent upon the awareness, concern, and proper training of personnel involved in the operation, transport, maintenance, and storage of the implement. Refer also to safety messages and operation instruction in each of the appropriate sections of the tractor and implement manuals. Pay close attention to the safety labeling affixed to the implement.

1. In order to provide a better view, certain illustrations in this manual may show an assembly with a safety device removed. However, equipment should never be used in this condition. Keep all safety devices in place, if removal becomes necessary for repairs, replace the device prior to use.
2. Replace any safety label or instruction sign that is unreadable or is missing. Location of safety signs is indicated in this manual.
3. Never use alcoholic beverages or drugs which can hinder alertness or coordination while using this implement. Consult your doctor about using this implement while taking prescription medications.
4. Under no circumstances should young children be allowed to work with this implement.
5. This implement is dangerous to persons unfamiliar with its operation. Do not allow persons to use or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works. Review the safety instructions with all users annually.
6. If the elderly are assisting with work, their physical limitations need to be recognized and accommodated. Assistants should be a responsible, properly trained and physically able person familiar with machinery and trained in this implement's operations.
7. Never exceed the limits of the implement. If its ability to do a job, or to do so safely, is in question - DON'T TRY IT.
8. Do not modify the implement in any way. Unauthorized modification may result in serious injury or death and may impair the function and life of the implement.

## SAFETY TRAINING

A person who has not been trained or has not read and understood all use and safety instructions is not qualified to use the implement. An untrained operator exposes himself and bystanders to possible serious injury or death.

- Train all new personnel with the instructions alongside the implement. Be certain only a properly trained and physically able person will use the machinery.
- Working with unfamiliar equipment can lead to careless injuries. If this implement is used by any person other than yourself, or is loaned or rented, it is the implement owner's responsibility to make certain that the operator, prior to using:
  - Reads and understands the operator's manuals.
  - Is instructed in safe and proper use of the implement
  - If the elderly are assisting with the work, their physical limitations need to be recognized and accommodated.
- Operators or maintenance personnel who are not fully able to read and understand this manual should not operate or work on the implement:
- Make certain that all operators and maintenance personnel have complete understanding of the full and exact contents of this manual and safety labeling.
- ALL information contained in this manual and labeling on the implement must be conveyed CLEARLY and FULLY, in order to be able to operate safely and knowledgeably.
- Review the implement and instructions regularly with existing workers.

## PREPARATION

1. Inspect Wagon for shipping damage. If damage does exist, do not use. Notify your dealer immediately to have damaged parts replaced or repaired.
2. Assembly may be required depending on how you purchased your equipment. Follow the assembly procedures as outlined in the assembly manual.
3. When not attached to the towing unit, block and chock the wheels to prevent movement.
4. Ensure slow-moving-vehicle (SMV) emblem has been properly installed at rear of wagon.
5. Personal protection equipment (PPE) including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, cleaning, or moving the unit. Do not allow long hair, loose fitting clothing or jewelry to be around equipment.
6. Ensure safety chain, straps, tires are not damaged and in good condition.
7. Inspect all fasteners that they are not loose or missing. Ensure fasteners and wheel bolts are torqued according to the torque chart at the back of this manual
8. If traveling at night, ensure provincial / state and local laws / lighting requirements have been met.
9. Ensure that all applicable safety decals are installed and legible.
10. Check alignment of wheels, realign the wheels if needed.
11. Check and Inflate all tires to recommended PSI.
12. Check wiring harness connection and test function of the electric brakes and wagon tail lights.
13. Synchronize brakes with brake controller.

## OPERATION SAFETY

1. NEVER allow helpers or bystanders under or near header while mounting on header wagon.
2. Make sure that the load is fastened securely to the wagon before moving.
3. Inspect all fastening devices, do not use if worn or damaged.
4. Use a high strength hitch pin to hitch the implement to towing unit,
5. Secure the hitch with the safety chain. Replace the safety chain if one or more links or end fittings are broken, stretched or otherwise damaged or deformed.
6. Make sure that everyone is clear before moving the implement. NEVER position yourself between the towing unit and the implement.
7. Do not permit riders while transporting this implement, with or without a load.
8. Where possible, avoid operating near ditches, embankments and holes.
9. Loading or unloading an unhitched implement, be sure to properly block / chock the wheels to prevent the implement from moving.
10. Check wiring harness is undamaged and that wagon brakes are functioning properly: no lockup
11. Inspect rims for dents or damage, check wheel lugs and tighten if required.
12. Ensure there is adequate lighting while working at dusk or after sunset.

## STORAGE SAFETY

1. Store the safety chain by securing it around the tongue
2. Store the unit in an area away from human activity.
3. Do not allow children to play on or around the stored implement.
4. Store the unit in a dry, level area. Cover if stored outside.
5. Ensure safety chain, straps, tires are not damaged and in good condition before storing the wagon. Make repairs now to be ready for the following season.
6. Chock wheels to prevent unintentional movement.

## RATCHET STRAP SAFETY

Ratchet straps are an important part of the header wagon, and affects the safety of drivers, loads and those around you, so it is important that they are used safely and inspected for damage or wear each time they are used.

1. Avoid dragging ratchet straps on the ground, floor or over abrasive surfaces.
2. When not in use protect the strap and store in a dry, clean environment.
3. If the ratchet mechanism is damaged in any way, DO NOT USE IT. Replace the mechanism as soon as possible.
4. NEVER use the strap for towing purposes.
5. NEVER use the strap for lifting, lowering, or suspending objects.
6. Do not shorten or adjust ratchet straps using methods other than outlined in this manual.
7. Do not twist, kink or knot the ratchet strap.
8. Avoid exposing ratchet straps to damaging acids or alkali.
9. Avoid using ratchet straps or allowing exposure to temperatures above 194°F (90°C) or below -40°F (-40°C).
10. Be aware of using the ratchet strap with equipment that has edges or surfaces that could damage the ratchet strap, use corner/ edge protectors to protect the strap from damage.
11. Do not run / drive over ratchet straps with a vehicle or other equipment.
12. Ratchet straps that are used outdoors regularly should generally be permanently removed from service within a period of 2 to 4 years.
13. Keep the ratchet mechanism clean and lubricated.
14. Visible indications of deterioration can include the following:
  - Fading of webbing color.
  - Uneven or disoriented surface yarn of the webbing.
  - Shortening of the ratchet strap length.
  - Reduction in elasticity and strength of the ratchet strap material due to an exposure to sunlight, often evident by an accelerated abrasive damage to the surface yarn of the ratchet strap.
  - Breakage or damage to yarn fibres, often evident by a fuzzy appearance of the web.
  - Stiffening of the web, which can become particularly evident when ratchet straps are exposed to outdoor conditions without being used.

## MAINTENANCE SAFETY

1. Good maintenance is your responsibility, follow the maintenance schedule. Poor maintenance is an invitation to trouble.
2. Follow good shop practices.
  - Keep service area clean and dry.
  - Be sure electrical outlets and tools are properly grounded.
  - Use adequate light for the job at hand.
3. Never work under or around the implement unless it is blocked / chocked securely.
4. Use personal protection equipment (PPE) such as eye, hand and hearing protectors.
5. Never adjust, service, clean or lubricate the implement until all power is shut off when attached to the tow unit.
6. Ensure hardware is torqued according to the torque chart at the back of this manual.

## TRANSPORT SAFETY

1. Do not tow loads more than 1.5 times the tractor / tow vehicle weight. Towed loads that are too heavy for the tow vehicle can cause loss of control when braking. Consider total weight: wagon and its load.
2. Stopping distance of towed loads increase with speed, weight and on slopes. Towed loads that are too heavy for the tow vehicle or are towed too fast can cause loss of control. Consider total weight: wagon and its load.
3. To avoid component failure and maintain complete control and stability at all times do not exceed travel speed rating of the components: maximum 50 km/h (30 mph).
4. When traveling on public roads, make certain your implement meets local, provincial, state, and national codes. In Canada, maximum road speed for all agricultural equipment is 40 km/h (25 mph) and must display a SMV sign. ("Towing" on page 31)
5. Ensure electric brakes are working and have been properly synchronized with the tow vehicle brake controller.
6. Do not overload the wagon. Overloading the wagon is dangerous and can cause injury and damage to the implement.
7. Be sure all markers and SMV sign required by local traffic regulations are in place, clean and working.
8. Reduce speed when turning, crossing slopes and rough, slick or muddy surfaces.
9. Be aware that four wheel steer wagon will react differently than a two wheel steer when cornering and or backing up.
10. Ensure the correct size / grade hitch pin is used and secured with a lynch pin.
11. Check tires before proceeding:
  - Inflation - correct pressure
  - Tread - unusual wear, exposed cord
  - Rims - damaged or bent
  - Wheel bolts - all secure, not loose
  - Replacement tires must be same type / rating
12. Just before transport, perform a circle check to ensure everything is safe.
13. Lighting is not required for daytime transport, however generally lighting is required one-half hour before sunset to one-half hour after sunrise and at any other time when there is insufficient light or unfavourable atmospheric conditions.
14. Test the function of the wagon tail lights:
  - Turn signals
  - Running lights
  - Brake lights

### 15. Safety chain

- Do not allow the chain to drag, string the safety chain thru the chain support at the clevis.
- Do Not use the any wagon component as an attaching point
- Secure chain on the tow vehicle at the towing attach point.
- Do Not allow more slack than necessary for articulation.
- Replace the safety chain if one or more links or end fittings are broken, stretched or otherwise damaged or deformed.

## BRAKE SAFETY

1. Good brake maintenance is your responsibility, Poor maintenance is an invitation to trouble.
2. Follow the maintenance schedule and have a mechanic inspect the entire brake system.
3. Brakes should be adjusted after the first 320 km (200 miles) of operation when the brake shoes and drums have "seated,"
4. Regularly check:
  - Wire harness for sheathing damage, which could allow moisture into the harness.
  - 7 pin plug contacts are clean and clear for good electrical connection.
  - Brakes function properly, and apply evenly
  - Test the function of the wagon brake lights
5. Synchronize brakes with brake controller, to ensure safe brake performance. Read the brake controller manufacturer's instructions completely before attempting any synchronization procedure.
6. Avoid an aggressive brake setting which results in wheel lock up and sliding, Wheel lock up can cause a dangerous loss of control and result in personal injury or death.
7. If transporting a variety of headers of different weights, then you may have to adjust or synchronize the brakes / brake controller for each header.

# SAFETY LABELS

Safety labeling is an important part of the overall safe use of the implement. Safety labeling alerts and warns against potential injury or death, and is important to follow these points to help keep your implement safe for you and others who may be using it.

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replaced parts that displayed a safety sign should also display the current sign.
- Safety signs in Section 3 each have a part number displayed with it. Use this part number when ordering replacement parts.
- Safety signs are available from your authorized Distributor or the factory order desk.

## SAFETY LABEL DESCRIPTIONS



Caution: read and understand ALL safety and operating instructions in the manual, read and understand ALL safety labels located on the machine. The most important safety device on this equipment is an informed SAFE operator.



Caution: Accidental wagon disconnection on a public road could result in death or serious injury and/or implement damage. Before transport on public roads always have the safety chain attached, and a 3/4" grade 5 hitch pin is installed.



Caution: an unsecured load may fall from the wagon and could result in death or serious injury and/or implement damage. Before transport on public roads always check the ratchet straps are tight and in locked position.



Caution: Wagon components are rated at 50 km/h (30 mile/h) maximum speed. Potential for injury and damage if traveling above maximum travel speed rating.



Caution: Do not stand under or directly in front of the top rail while it is being adjusted, potential collision exists if the rail drops suddenly and could result in death or serious injury.



Caution: Moving parts present a potential pinch hazard and could result in a serious injury. Use caution and be aware of parts as they are being moved or adjusted.



Caution: Loading the header on the wagon presents a potential pinch hazard and could result in a serious injury. Use caution and be aware as the header is loaded on potential pinch points on the header pads and the top rail.



Caution: Personal Protection Equipment (PPE) is required when operating or maintaining this machine. Failure to wear PPE will result in personal injury.



Caution: Block or chock the wheels. Loading or unloading the wagon presents a potential unintentional movement hazard. Chock wheels when loading or unloading or storing the wagon.



Slow-moving vehicle sign (SMV) warns other road users that the wagon displaying the sign is traveling at maximum road speed of 40 km/h (25 mile/h) or less. Ensure the sign is in place whenever transporting on a public road.

## IF LABELS NEED TO BE REPLACED:

- Be sure that the installation area is clean and dry.
- Be sure temperature is above 50°F (10°C).
- Determine exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.



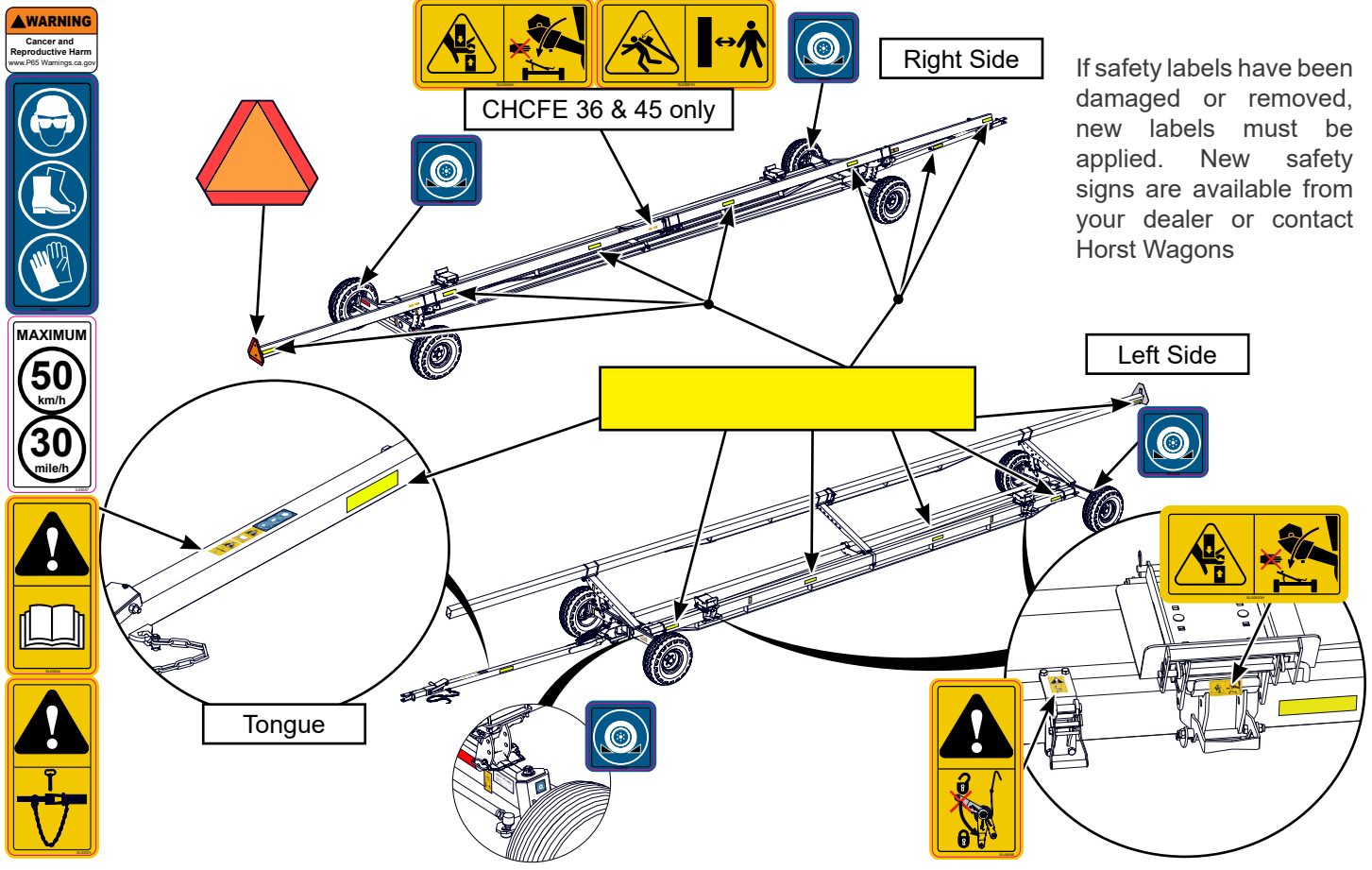
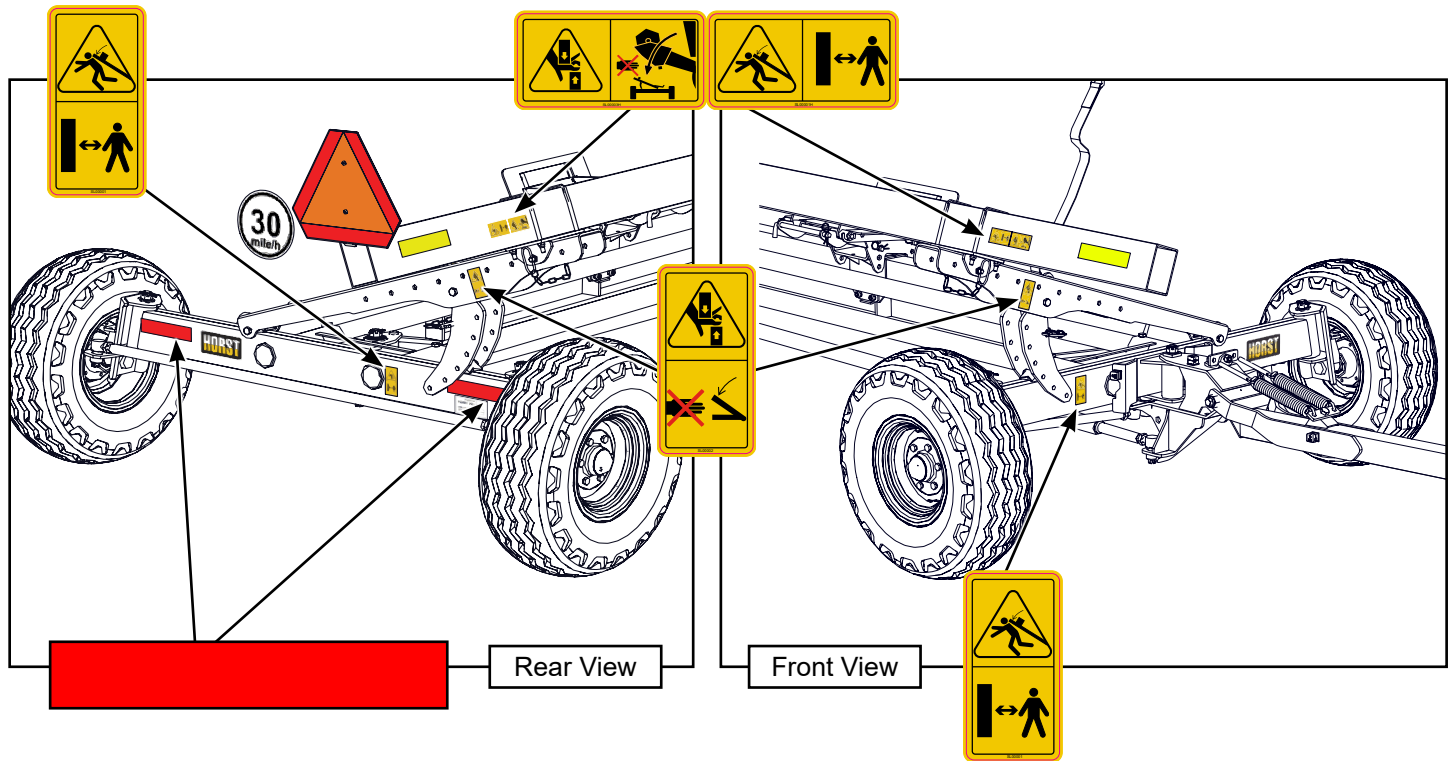
Yellow Retro-reflective label required for marking of implements for length / width.



Red Retro-reflective label required for marking of implements for width: rear view.

## SAFETY LABEL LAYOUT

Safety signs and locations on the equipment are shown in the illustrations below. The CHCFE45 is illustrated however label locations are similar for all models, unless otherwise indicated. Good safety practice requires that you familiarize yourself with the label and the safety message it is delivering. Be aware of the equipment or particular equipment feature that requires your SAFETY AWARENESS.





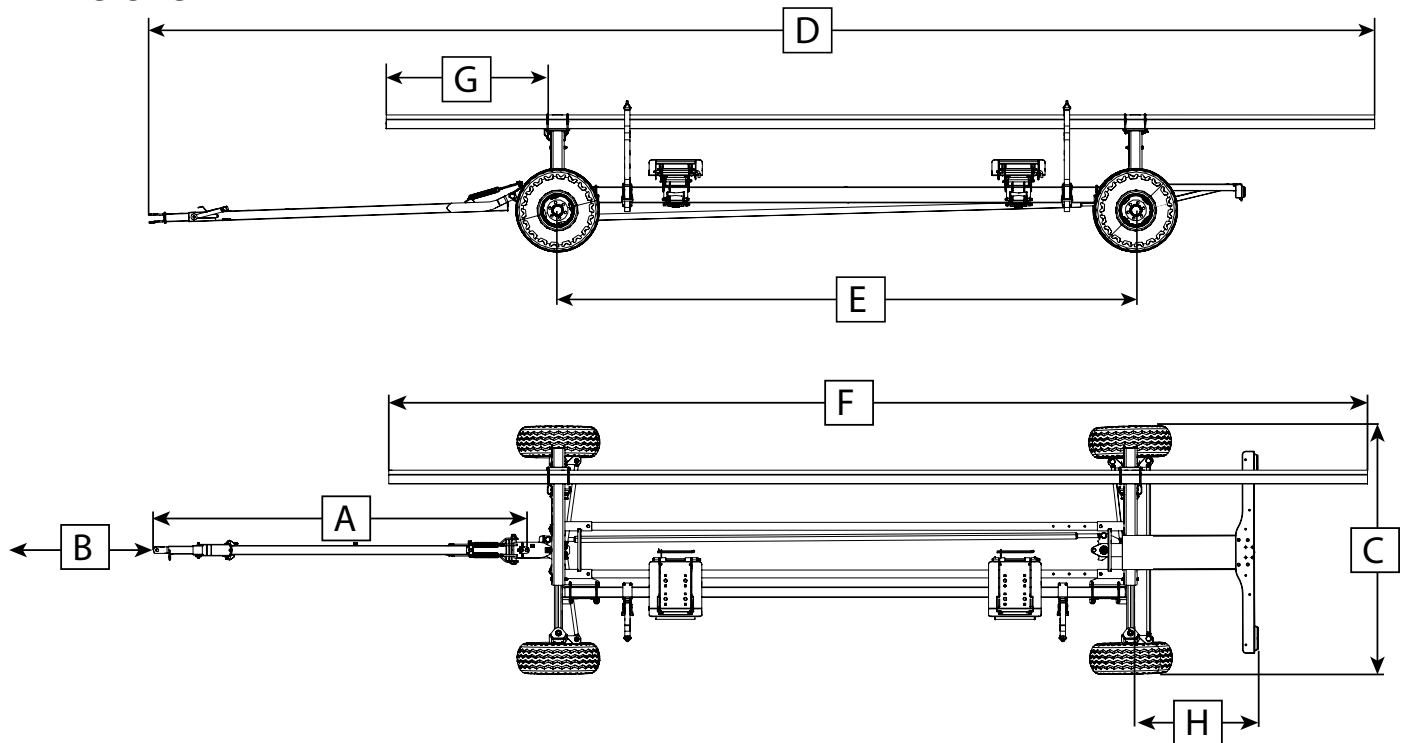
# SPECIFICATIONS AND DIMENSIONS

## SPECIFICATIONS

CHCFE Series 4 Wheel Steer		CHCFE30	CHCFE36	CHCFE3627* (Draper Head)	CHCFE45	CHCFE4527* (Draper Head)
Gross Vehicle Weight Rating (GVWR)		4,717 kg 10,400 lbs				
Maximum Head Length		9.1 m 30 ft.	10.6 m 35 ft.		13.7 m 45 ft.	
Top Rail		9.5 m (31') long 10cm x 15cm (4" X 6") HSS Steel Tubing	11.0 m (36') long 10cm x 15cm (4" X 6") HSS Steel Tubing		14.6 m (48') 10cm x 15cm (4" X 6") HSS Steel Tubing	
Tire and Rim		235/85 R16 (F Range) Highway Trailer Tire 16 x 8 x 6 x 6" Bolt Circle Rim 31.3 kg (69 lbs) ea (rim & tire)				
Bridged Top & Bottom Rail		-----	Standard			
Hubs	Front - Agricultural Hub x 2	6 Bolt Pattern 6" ag bolt circle 9/16 - 18 Thread for Bolt 1179 kg (2600lb) capacity - each 50 km/h (30mph) max speed				
	Rear - Brake Drum / Hub x 2	6 Bolt Pattern 6" Ag Bolt Circle 9/16 - 18 Stud 1179 kg (2600lb) capacity				
Brakes		2 x Rear Electric Brakes 12" Dual Non Asbestos Pads				
Axle Beam		76mm x 152mm (3" x 6") Structural Welded				
Adjustable Universal Pads		Standard x 2 pcs				
Ratchet Strap Tie Down		20mm (2.0") x 2 pcs Working Load Limit 1497 kg (3300 lbs)				
Weight (Less Rims & Tires)		1120 kg 2470 lb.	1579 kg 3480 lb.		1624 kg 3580 lb.	
Wheel Base		5.5 m 18 ft.	9.1 m 30 ft.	8.3 m 27 ft.	9.1 m 30 ft.	8.3 m 27 ft.
Tongue	Main Tongue	144° Swing, Double Spring Balanced, Extendable (see below)				
	5 Position Extendable (min - max)	3.4 - 4.26 m 11 ft. - 14 ft.				
	Safety Chain	3 m (10ft) Grade 70 Safety Chain including clevis slip hook w/ safety latch				
	Retract, with Auto Relock	21.5 - 23 cm 8.5 - 9.0"				
Accessories		Fender Kit CHCFK				
		Honey Bee AirFLEX® Pad Kit HBAFK				

\* CHCFE3627 & CHCFE4527: See "Dimensions" page for note.

## DIMENSIONS



Dimension	CHCFE Series 4 Wheel Steer				
	CHCFE30	CHCFE36	CHCFE3627* (Draper Head)	CHCFE45	CHCFE4527* (Draper Head)
A Tongue Minimum Length	11' 348 cm				
B Tongue Maximum Extention	3' 91.5 cm				
C Trailer Width Maximum	95" 241 cm				
D Overall Length	38' 5" 11.7 m	45' 13.7 m		52' 6" 15.6 m	
E Wheel Base	18' 5.5 m	30' 9.1 m	27' 8.2m	30' 9.1 m	27' 8.2m
F Top Rail Length	31' 9.5 m	36' 11.0 m		48' 14.6 m	
G Top Rail Front OverHang	61" 155 cm	32" 81 cm		96" 244 cm	
H Tail Light OverHang	37" 94 cm				

\* **CHCFE3627 & CHCFE4527:** Flex draper heads from Case IH and New Holland 35, 40 and 45 foot units (up to and including model year 2014) where the right hand gauge wheel interferes with the header carrier wheels on CHCFE36 & CHCFE45. Models CHCFE3627 & CHCFE4527 have been designed to overcome this issue, by shortening the wheelbase to 27'. The right hand gauge wheel of the header will fit between the rear carrier wheel and the light bracket with the head almost centered on the carrier. The gauge wheels should be in the fully raised position as well as the universal pads.

# ASSEMBLY & INSPECTION

Depending on how you ordered your CHCFE wagon, assembly may be required. To assemble your wagon please find the Assembly Instructions Manual that came with your wagon.

Assembly instructions will also include accessory installation instructions.

Before beginning assembly or putting the wagon into service the first time, inspect Wagon for shipping damage. If damage does exist, do not use. Notify your dealer immediately to have damaged parts replaced or repaired.

## COMPONENTS AND FEATURES

The CHCFE series header wagons are designed to transport combine headers in a reliable, safe way. Its features make it the best choice for transporting various types of headers quickly and easily.

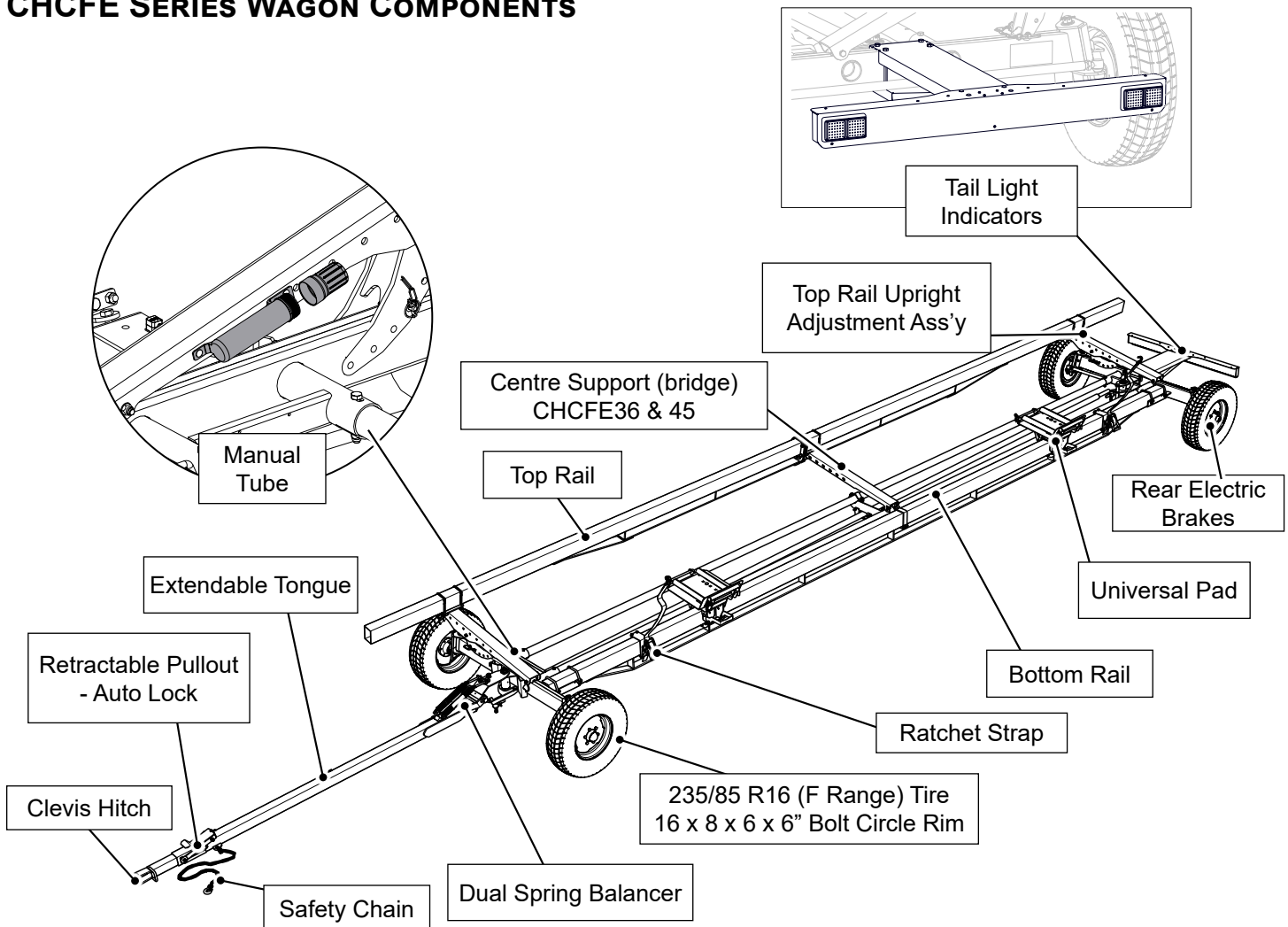
The owner or operator has the responsibility of being familiar with all the features of the CHCFE wagon and know how to operate them. Each owner or operator must train all other operators before they start working with the machine.

Read this section carefully to learn how to use the header wagon safely and how to set it to provide maximum field efficiency. By following instructions in conjunction with a good maintenance program, your CHCFE wagon will provide many years of trouble-free service.

Do not operate this wagon if you are not familiar with its features.

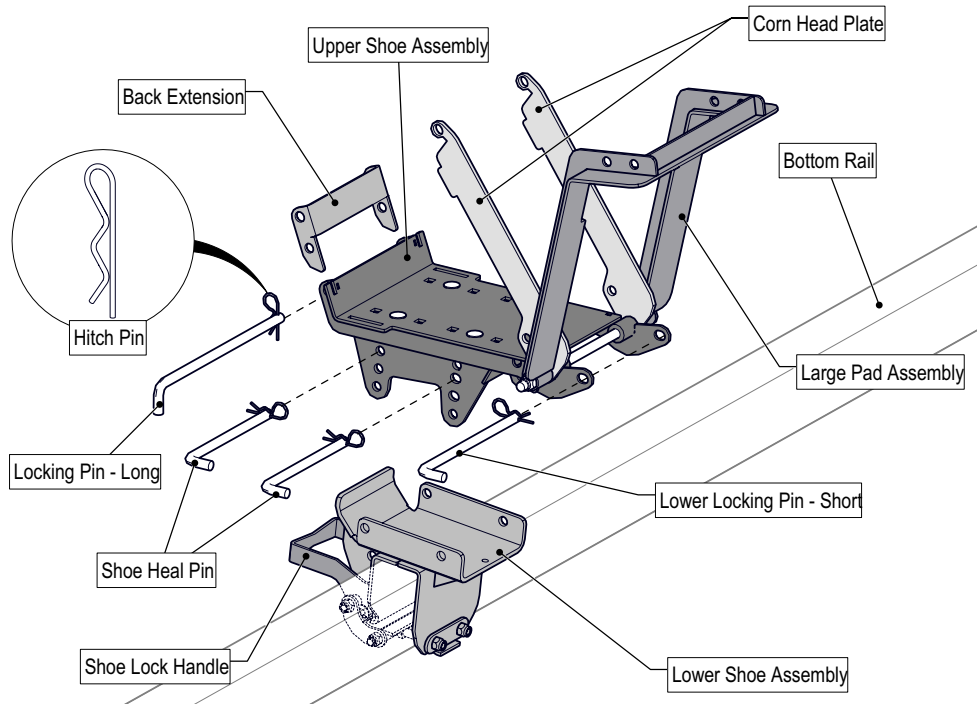
The CFCHE 36 is illustrated below, showing its basic components. Components and features are similar for the CHCFE series unless noted. Review the various components and their position, the names of the components will be used to describe where they are and how they work through out the manual.

### CHCFE SERIES WAGON COMPONENTS



## UNIVERSAL HEADER PADS

There are two universal header pads, they are located along the bottom beam of the header wagon. The quick release and lock universal header pad makes it easy to reposition for your header along the beam. Once in position, the revolutionary triple-axis base universal pad provides you with multiple pad configurations. Making these multi-functional pads the only pads you'll ever need.



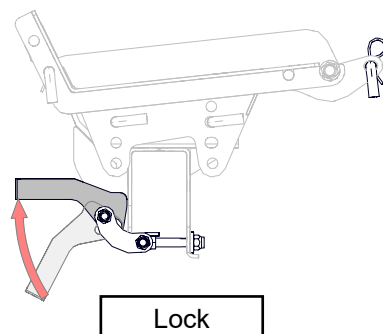
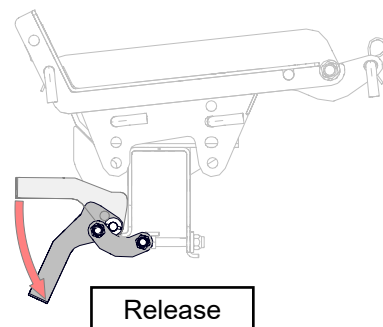
### QUICK RELEASE AND LOCK

The quick release and lock features an over-centre locking mechanism which tightly clamps on the bottom rail to ensure a secure lock while transporting your header from job to job.

When aligning the pads to the header be aware of pinch points and overhead hazards. Wear proper PPE.

Quick release and lock :

- Firmly grasp the shoe lock handle, push down on the handle to release the lock.
- Position pad to the desired location.
- Firmly grasp the shoe lock handle, pull up on the handle to engage the lock.



#### **WARNING** **Pinch Point Hazard**

When mounting the header onto the pads be aware of pinch points: keep hands and feet away from the mounting points and pads during mounting.



# UNIVERSAL HEADER PAD CONFIGURATIONS

## 5 BASIC CONFIGURATIONS:

- Base Pad - low profile corn head
- Large Pad - for most draper heads
- High Back Pad - for flex draper head
- Low Back Pad - for standard cutting platform
- Low Back - for standard corn head

Follow the instructions below to adjust and set up your universal header pads for your particular header.



### WARNING

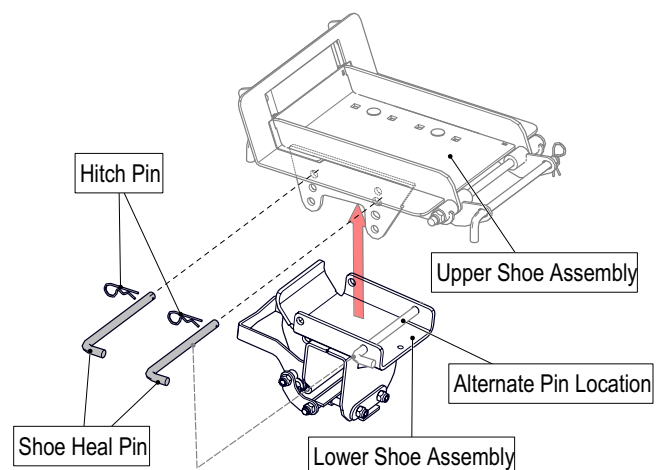
#### Operational Hazard

Ensure locking & heal pins are secured with hitch pins. If a hitch pin is lost or damaged, replace only with the same style hitch pin.

## BASE PAD

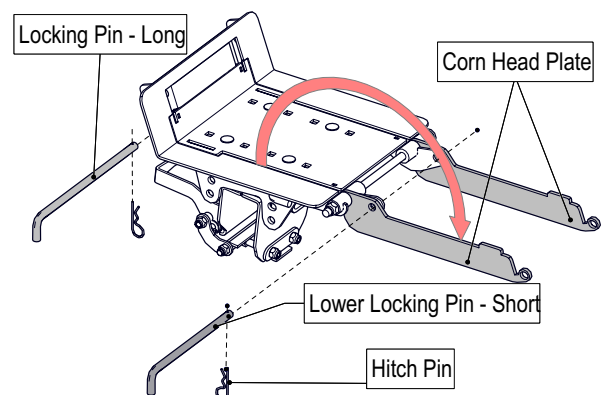
Ideal for low profile corn heads or combines with lift height limitations.

- Remove the hitch pins and slide out the shoe heal pins.
- Remove the upper shoe assembly,
- Reassemble the shoe heal pins to the upper shoe assembly for storage.
- Ensure the hitch pins are securely in place.
- Release the shoe lock handle and locate base pad on rail to desired position, lock the handle.
- In some applications installing one pin in the alternate pin location may be desirable to keep head from sliding.



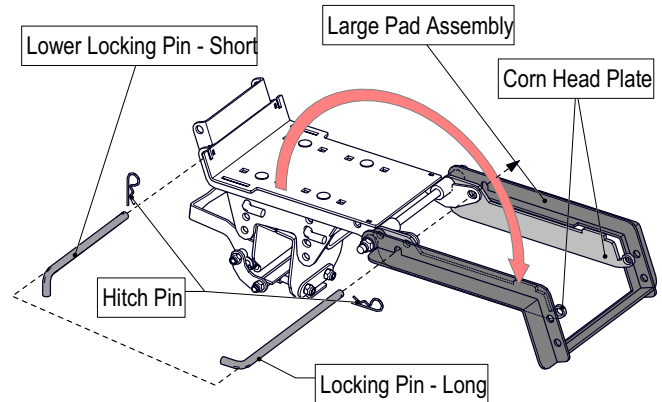
## LARGE PAD FOR DRAPER HEAD

- Remove the hitch pins and slide out the lower locking (short) and locking pin (long).
- Swing the two corn head plates 180 degrees to the open position, and reassemble with the lower locking pin.
- Ensure the hitch pin is securely in place.
- Release the shoe lock handle and locate base pad on rail to desired position, lock the handle.



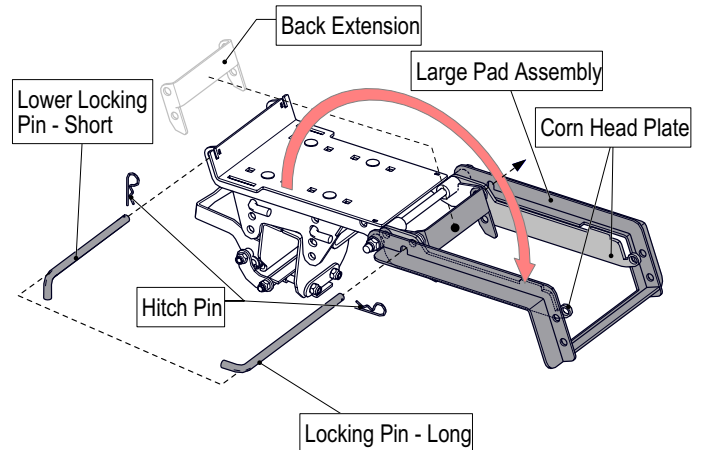
### HIGH BACK PAD FOR FLEX DRAPER HEAD

- Remove the hitch pins and slide out the lower locking (short) and locking pin (long), leave the back extension in place.
- Swing the two corn head plates and large pad assembly 180 degrees to the open position.
- Switch locations of the locking pins and reassemble to the pad as shown: locking pin-long thru the large pad.
- Ensure the hitch pins are securely in place.
- Release the shoe lock handle and locate base pad on rail to desired position, lock the handle.



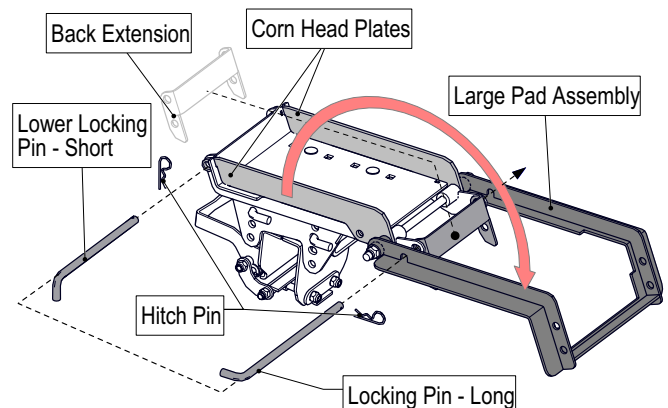
### LOW BACK PAD FOR STANDARD CUTTING PLATFORM

- Remove the hitch pins and slide out the lower locking (short) and locking pin (long), remove the back extension.
- Swing the two corn head plates and large pad assembly 180 degrees to the open position.
- Place the back extension between the corn head plates and align the top holes as shown.
- Switch locations of the locking pins and reassemble to the pad as shown: locking pin-long thru the large pad.
- Ensure the hitch pins are securely in place.
- Release the shoe lock handle and locate base pad on rail to desired position, lock the handle.



### STANDARD CORN HEAD WITH LOW BACK

- Remove the hitch pins and slide out the lower locking (short) and locking pin (long), remove the back extension.
- Swing the large pad assembly 180 degrees to the open position.
- Place the back extension between the corn head plates and align the top holes as shown.
- Switch locations of the locking pins and reassemble to the pad as shown: locking pin-long thru the large pad.
- Ensure the hitch pins are securely in place.
- Release the shoe lock handle and locate base pad on rail to desired position, lock the handle.



## PAD HEIGHT, TILT & DEPTH SETTINGS

In addition to re-positioning along the rail the universal header pad features three height settings with a forward / back tilt and three depth settings.

### HEIGHT SETTING

- Remove the hitch pins and slide out the shoe heal pins.
- Select and move the upper shoe assembly to one of the two remaining set of holes.
- Replace the shoe heal pins and secure with the hitch pins.

### TILT SETTING

- When you have selected a height, remove the outside hitch pin and slide out the shoe heal pin as shown.
- Pivot the upper shoe assembly so it lines up with pin hole.
- Replace the shoe heal pin and secure with the hitch pin.

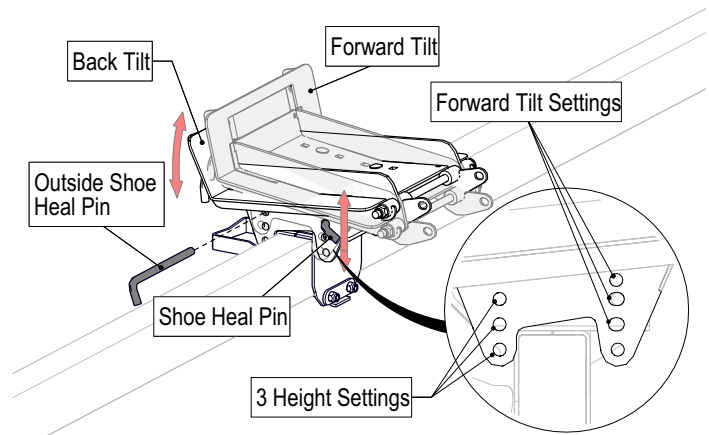
### DEPTH SETTING

- Remove the hitch pins and slide out the shoe heal pins as shown.
- Lift the upper shoe assembly and remove the four carriage bolts and lock nuts,
- Remove the upper shoe mount from the assembly,
- Locate the assembly in one of the three depth location holes on the mount.
- Replace and tighten securely the carriage bolts and lock nuts and replace the entire assembly on the lower shoe assembly
- Replace the shoe heal pins and secure with the hitch pins.



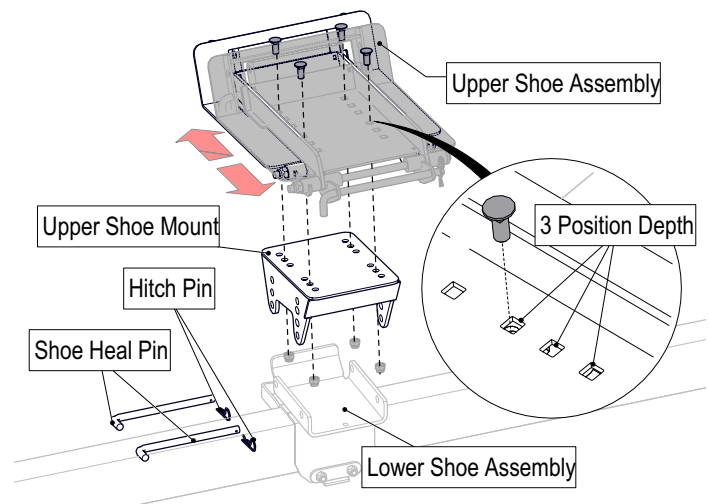
#### **WARNING** **Operational Hazard**

When making adjustments involving removal of hardware, ensure when the hardware is replaced it is securely fastened and torqued according to the torque chart at the back of this manual.



#### **WARNING** **Operational Hazard**

Ensure locking & heal pins are secured with hitch pins. If a hitch pin is lost or damaged, replace only with the same style hitch pin.

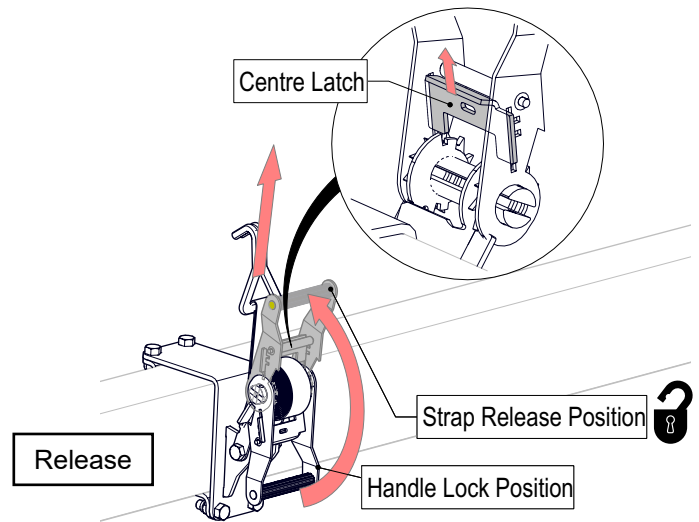


## RATCHET STRAP SYSTEM


There are two 50mm (2.0") wide, sliding ratchet straps included with the header wagon. They are fully re-positionable anywhere along the bottom rail. Once in your selected position, follow the points below to release or tighten the strap.

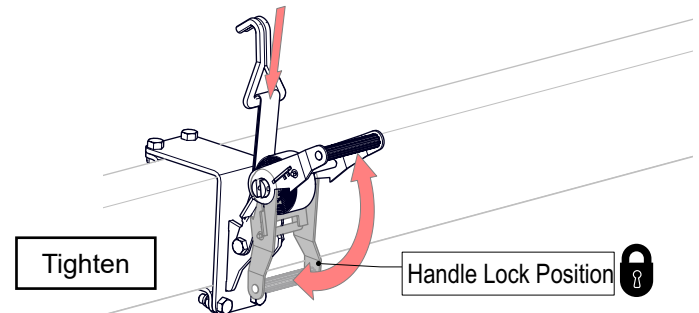
### RELEASE THE STRAP FROM THE RATCHET:

- Pull up on the centre latch, and move the handle up out of the lock position, to the upper stop
- Pull up on the centre latch, and move the handle past the stop, and the ratchet will release.
- Pull out as much strap as you need.



### TO TIGHTEN THE STRAP:


- Attach the end of the strap to a secure location
- Pull up on the centre latch and pull the handle down to engage the ratchet, and begin ratcheting, continue to pull the handle up and down.
- When the strap is tight, pull up on the centre latch, lower the handle into the lock position.
-  Ensure the handle is locked before proceeding with transport.



Ratchet Strap Specifications			
Hook Type	Strap Size	Work Load Limit	Breaking Strength
Double "J" Hook	50mm (2.0")	1511 kg (3333 lb)	4535 kg (10,000 lb)

**WARNING**  
**Drop Hazard**

Be aware that an unsecured load may fall from the wagon. Proceed with caution until the load has been secured.



**WARNING**  
**Operational Hazard**

Be sure to inspect the ratchet and strap for excessive wear or damage each time they are put in use. Replace if worn or damaged.

**WARNING**  
**Pinch Point Hazard**

When strapping, be aware of pinch points at the hitch point, and ratchet handle.



## ADJUSTABLE TONGUE SYSTEM

The header wagon adjustable tongue features include:

- 3 meter (10ft) Grade 70 Safety Chain including clevis slip hook w/safety latch
- Double spring tongue balancer assembly
- Retractable tongue pull out with auto lock latch.
- 5 Position extendable tongue pull out

### SAFETY CHAIN:

After attaching the clevis hitch use the safety chain assembly to secure your wagon to the tow vehicle

- Attach the tow hook to the hitch point on the tow vehicle, or wrap the chain around the hitch point and attach the hook to the chain.
- Ensure safety latch is closed on the hook.
- Store the chain by securing it around the tongue.

### SPRING BALANCER:

Springs offset and balance the weight of the tongue making it easier to hook up.

- Tension may be adjusted by tightening up the 2 nuts at the end of the eye bolts. (see illustration) Ensure that both nuts are tightened the same amount.

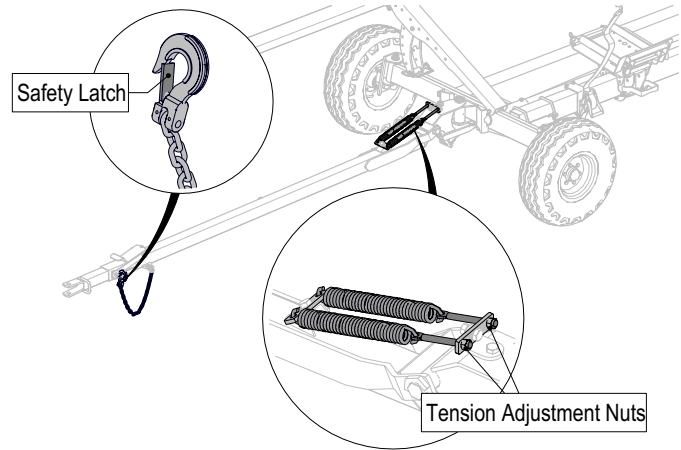
### RETRACTABLE PULLOUT W/ AUTO LOCK:

This feature will help eliminate the need for precise hook-up alignment, and provides up to 23 cm (9.0") of adjustment, to aid in aligning the vehicle to the clevis at the point of hook up. The pullout auto-locks into position when pulling away.

- Back the tow vehicle close to the tongue.
- Pull up on the auto-lock latch, this releases the pullout stop and will allow the pullout to move inside the main tongue assembly.
- Move the pullout in/out as required to align the clevis to the tow vehicle hitch point,
- When aligned, attach the clevis with a appropriate sized hitch pin, secure with a lynch pin.
- Pull the tow vehicle ahead slightly to activate and engage the auto lock on the pullout.
- Stop the tow vehicle, check that the pullout lock is in place and attach the safety chain.

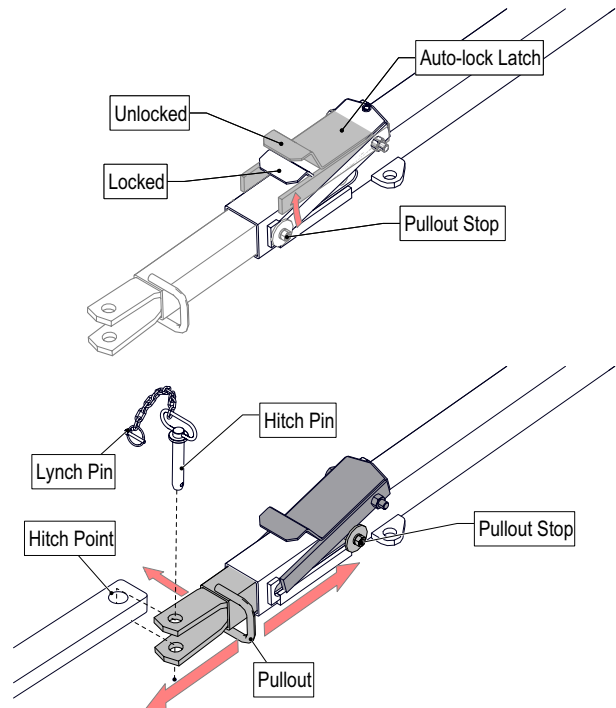
### **WARNING** **Machine Runaway Hazard**

NEVER tow the wagon on a public road without a properly sized hitch pin retainer and a safety chain secured.



### **WARNING** **Pinch Point Hazard**

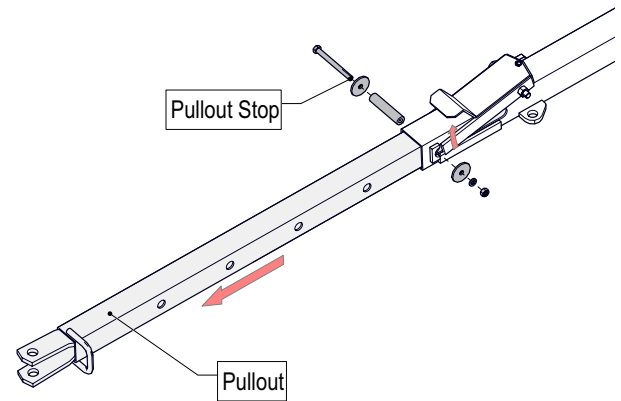
When hitching or unhitching, be aware of pinch points at the hitch point, spring balancer and tongue pivot



## EXTENDABLE TONGUE:

When extra length is required on the tongue, the 5 position pullout may be extended up to a maximum of 91.5 cm (3.0').

- Remove the pullout stop hardware as shown in the diagram.
- Extend the pullout to the desired length, then replace the pullout stop hardware.
- Ensure the hardware is fastened securely.
- The retractable, auto-lock feature will work in all extended positions.



## TOP RAIL SYSTEM

The top rail features adjustment in height and position. Position adjustments include 9 positions along the top rail mount, and 6 top rail height settings.

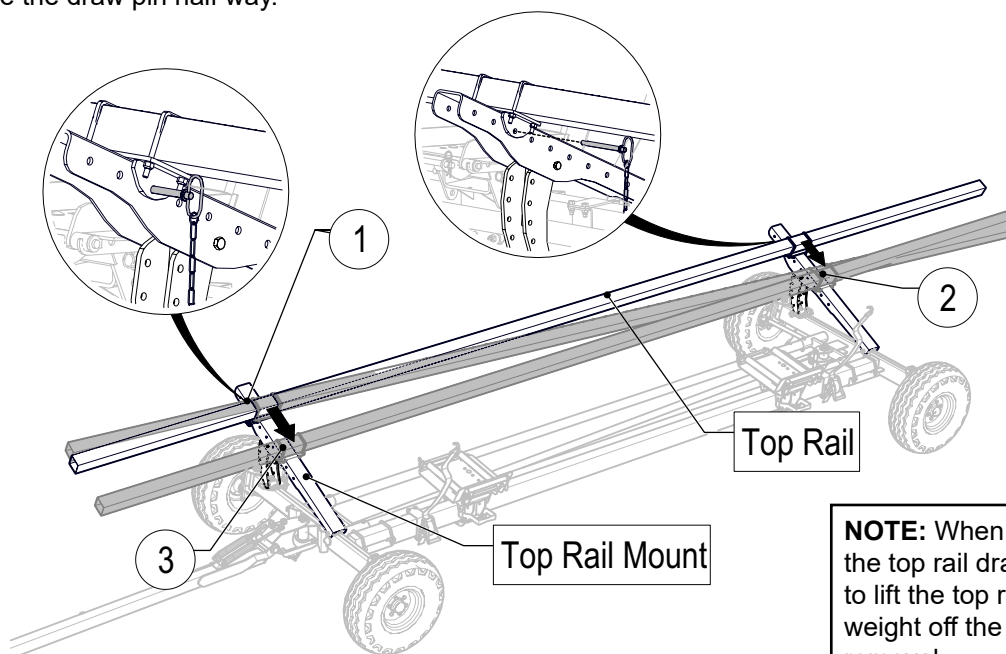
Generally these will be a one time adjustments to match your combine. If another make or model combine is used then adjustment may have to be made again.

### TOP RAIL POSITION ADJUSTMENT:

Adjusting the position of the top rail can be done safely with one person, by "walking" it to position up or down.

If your model has a centre support (bridge), remove the draw pin, and store in a unused hole position.

- ① At one end, remove the snap pin then carefully pull the draw pin out only half way. This will allow the top rail to pivot slightly without sliding.
- At the opposite end, release the top rail by carefully pulling out the draw pin. Set the draw pin close by.
- ② Slide the rail in the direction of position you've chosen, one hole at a time. You can slide the rail a maximum of 2 hole positions but you may experience some binding.
- Replace the draw pin half way.
- ③ Go back to the opposite end and remove the draw pin and slide the top rail to the next hole position.
- Replace the draw pin half way.
- Follow the previous steps to "walk" the top rail to the position you require.
- When in the final position, fully insert the draw pins, (including the centre) and secure them with the snap pins.

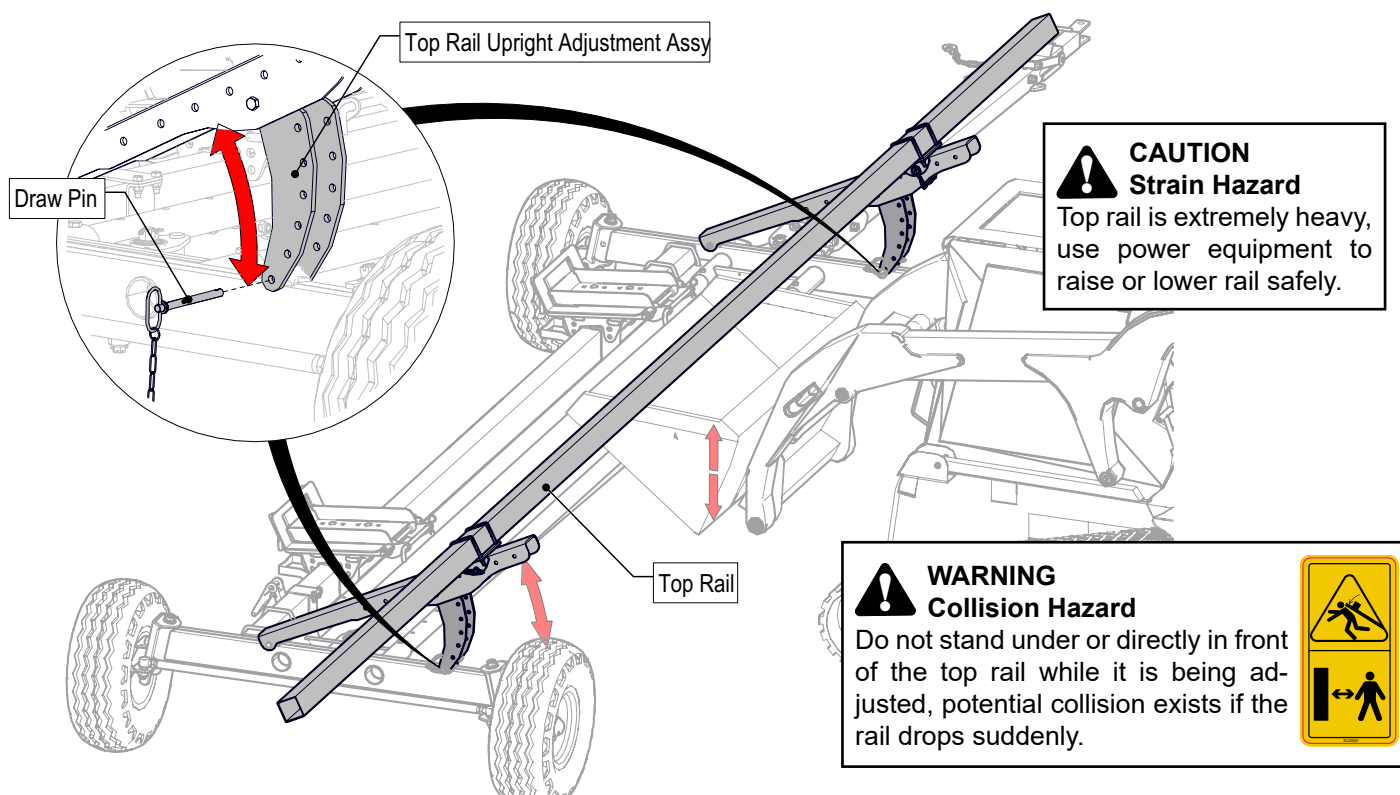


**NOTE:** When removing or inserting the top rail draw pins, you may have to lift the top rail slightly to take the weight off the draw pin for easy removal.

## TOP RAIL HEIGHT ADJUSTMENT:

The top rail features 6 height positions and is designed to hold the full weight of a combine header. The top rail is made of heavy wall square tubing that can weigh up to 363 kg (800 lbs), depending on your wagon model. Adjusting the height of the top rail can be done safely and easily with power equipment (like a tractor with a front loader) and a helper.

- On the top rail side of the wagon, move the front loader up to the top rail and lift the loader bucket till you've taken pressure off of the adjustment assembly draw pins.
- Standing clear of the top rail, have your helper remove the draw pin from the bottom of the adjustment assembly at each end of the wagon, (remove the snap pin then carefully pull the draw pin out)
- Using the front loader, carefully raise or lower the top rail to the position required.
- Standing clear of the top rail, have your helper align the adjustment assembly and carefully replace the draw pins at each end.
- Secure draw pins in place with the snap pins.



## HEADER WAGON CAPACITY

The CHCFE series wagon Gross Vehicle Weight Rating is determined by two factors:

- the chassis assembly maximum gross capacity
- and the gross capacity of the four tires.

It is the lesser of the two that determines the GVWR of the unit.

If replacing tires on the wagon, ensure you replace them with tires of similar capacity. Lower capacity tires will lower GVWR, higher weight capacity tires do not increase GVWR above the maximum chassis rating.

Note:

CHCFE GVWR: 4,717 kg (10,400 lbs).

To calculate the maximum weight the wagon can carry: chassis weight + tire weight + the payload = GVWR.

## FOUR WHEEL STEER

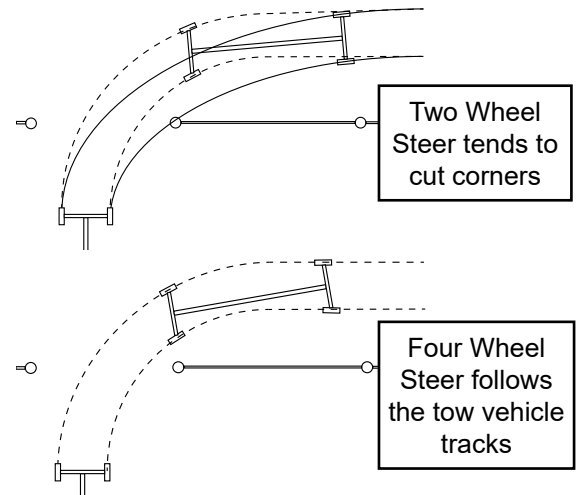
The CHCFE series wagon feature four wheel steer. This makes the wagon very manoeuvrable, and able to get into a narrow field entrance more easily. The wagon tracks right behind the tow vehicle, eliminating having to make wide turns to avoid cutting corners.

As the front wheels turn to follow the tongue the rear wheels turn in the opposite direction, the result is that the rear end tracks right along with the front wheels.

Backing a four wheel steer wagon may require some practice to master! The concept is similar to backing a two wheel steer but two points to bear in mind:

- As soon as you begin to turn the wagon, the back end will immediately begin turning.
- The rear wheels always turn in the direction of the tongue: if the tongue goes to the right the rear of the wagon goes to the right.

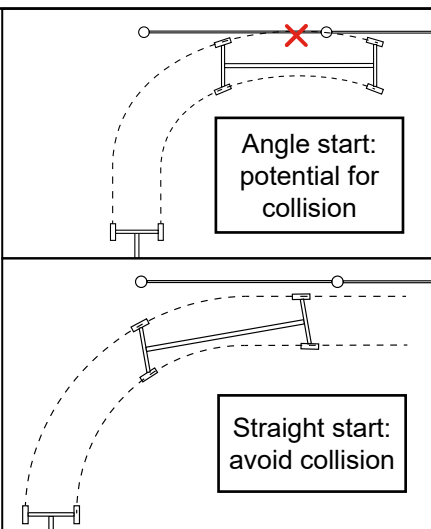
The result is that you may find that you'll tend to over steer at first. Practice is the best solution.



### WARNING Operational Hazard

Be aware of potential collision when parked directly beside a building or object: starting off on an angle, the back end of the trailer will begin turning as soon as you pull away, causing a collision.

To avoid collision, start off straight then begin your turn. Proceed slowly to ensure that the wagon will clear buildings or objects as you pull away.



## ELECTRIC BRAKES

The CHCFE series feature rear brakes to enhance and aid the safe transport of your header. The drum brakes on your wagon are operated electrically and activate an electro magnet that in turn causes the brakes to be applied. Electric brakes are a dependable system similar to the hydraulic drum brakes on your automobile.

Each 12" brake is rated at 2600 lb capacity, with two 2" wide non asbestos brake linings for reliable sure control. Brakes should be adjusted after the first 320 km (200 miles) of operation when the brake shoes and drums have "seated,"

## BRAKE CONTROLLER

The CHCFE system requires a brake controller to be installed in the tow vehicle to operate the electric brakes.

Recommended is a good quality proportional brake controller rated to control 2 brakes. Proportional controllers give the best control and performance and produce more even wear on the braking system.

At minimum a good quality time delay brake controller rated for 2 brakes may also be used.

The header wagon comes equipped with a female 7 flat pin RV style connector, a male connector is required on the tow vehicle side to connect the wagon brakes and rear indicator lights to the controller.

## TAIL LIGHT INDICATORS

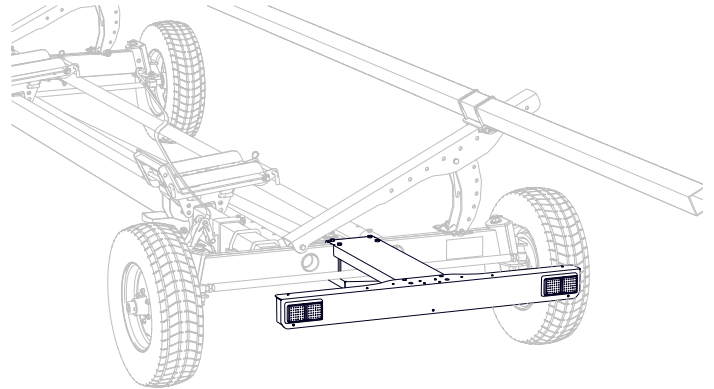
Tail light indicators come standard on the CHCFE series. and are important if transporting along public roads to help alert surrounding traffic of your intentions.

The header wagon comes equipped with a female 7 flat pin RV style connector, a male connector is required on the tow vehicle side to connect the tail light indicators to the tow vehicle lighting system.

The indicators are high performance long lasting LED lights.

The tail lights display normal functions of :

- Running lights
- Left / right turn indicators
- Brake indicators



# INITIAL SETUP

Before attempting to load the header wagon, ensure the wagon is either attached to the tow vehicle or the wheels have been secured with wheel chocks to prevent unwanted movement during the loading process. To start using the header wagon, Three basic adjustments should be made for the initial setup:

- Universal Header Pads
- Top Rail Setup
- Electric Brake / Lights Setup

## UNIVERSAL HEADER PADS

To prevent potential injury, avoid working around the wagon with the header positioned above it. To ensure safe working conditions, move the header away from the wagon when making adjustments.

### 5 BASIC CONFIGURATIONS:

- Base Pad - low profile corn head
- Large Pad - for most draper heads
- High Back Pad - for flex draper head
- Low Back Pad - for standard cutting platform
- Low Back - for standard corn head


Determine the type of header that you have and configure the universal header pads to best fit your header. (page 17)


You can fine tune the header pad by making height, tilt and depth setting adjustments.(page 19)

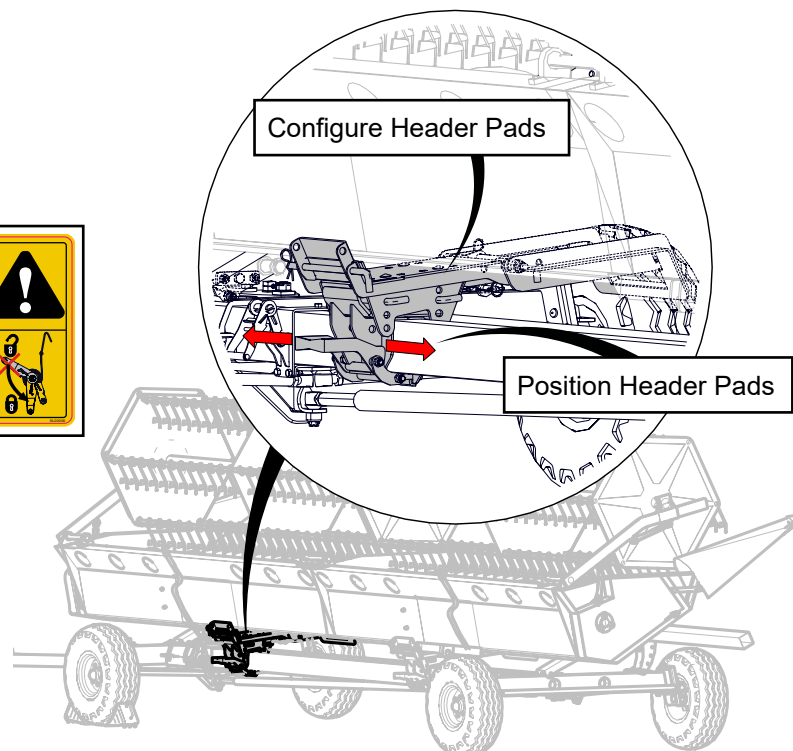
Adjust the position of the header pads along the wagon bottom rail to align with the skid plate heel,(corn header) or space the header pads close to the front and back along the bottom main beam of the header (grain header).


Ensure the heel of the header will sit firmly on the header pad.


Position the header evenly from front to back on the wagon, do not position the header beyond the front of the top rail to ensure there is adequate clearance between the tow vehicle and header. If extra clearance is required the tongue may be extended up to 91.5 cm (3.0').


**WARNING**  
**Drop Hazard**  
Be aware that an unsecured load may fall from the wagon. Proceed with caution until the load has been secured.






**CAUTION**  
**Operational Hazard**  
Chock wheels when loading or unloading the wagon to prevent unwanted movement



**WARNING**  
**Pinch Hazard**  
Keep hands away from mounting points and pads while loading the header. Potential pinch hazard exist between the wagon and header





## TOP RAIL SETUP

Review your header and header owner manual, determine where the front main cross beam is located (generally along the nylon pads behind the cutter bar on a grain header.)

Remember to detach any power connections (hydraulic, PTO etc) and release any safety latches, bracket or pins between the header and feeder house

Take measurements, and adjust the top rail on the wagon to align with the front main beam on the header.

Ensure the header main cross beam is aligned with the wagon top rail, or damage could result from insufficient support on the header.

Adjust the height of the top rail so that the header beam will make contact with the wagon before the heel of the header. This will simplify removing and loading header.

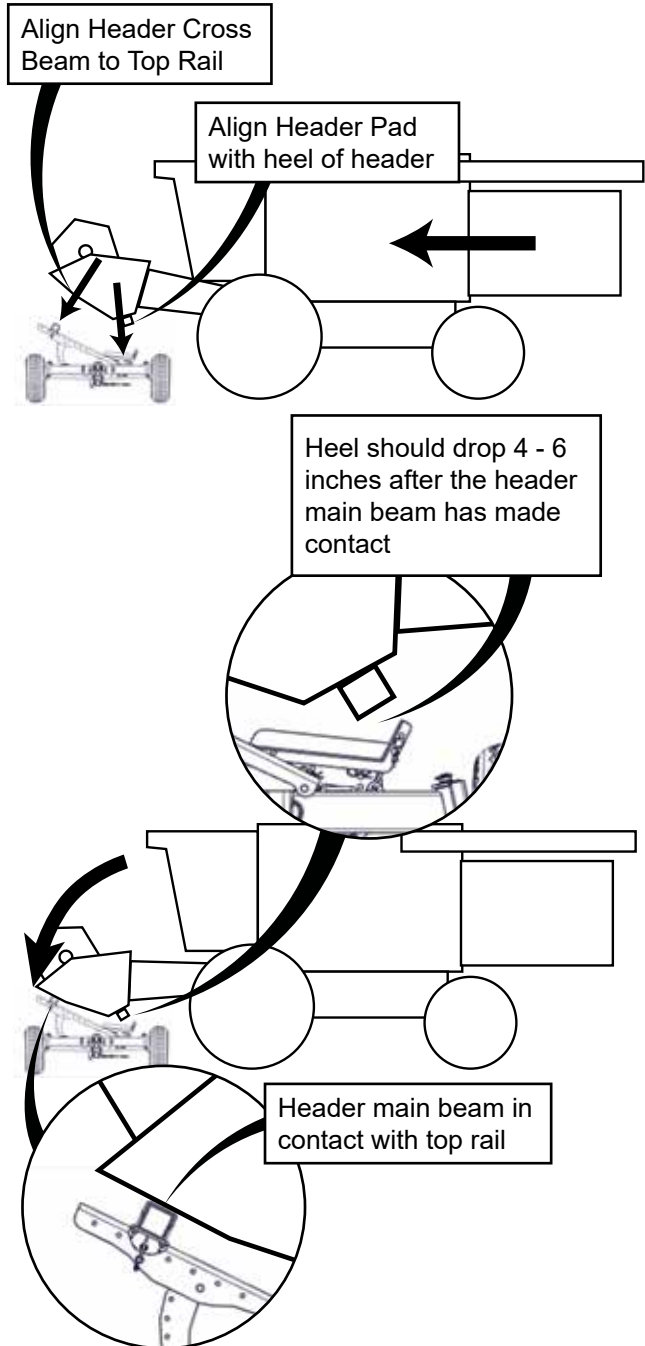
### TEST LOAD THE HEADER

Once the header wagon pads and top rail have been adjusted,

- Move the harvester forward and align the header pads to the heel positions on the header.
- Note any adjustments required and lift and move the header away from the wagon to make adjustments
- Move the header back, begin to lower the header, the header beam should make contact with the top rail,
- Check to make sure the top rail is under a main cross beam on the header.
- Note any adjustments required then lift and move the header away from the wagon to make adjustments
- Move the header back, and continue to lower the header onto the wagon,
- As the header beam makes contact with the top rail, the lower portion of the feeder house will begin to separate from the header.
- Continue to lower the header until the header heel is fully seated in the header pads, and the feeder house clears the header.
- Carefully back the harvester away from the header wagon.

Check to make sure there is adequate swing clearance for the tongue (from side to side/up and down) to prevent damage to the wagon or combine head when turning or moving over uneven ground.

Also check that there is no interference between the header and wagon tires.



#### **WARNING Drop Hazard**

Be aware that an unsecured load may fall from the wagon. Proceed with caution until the load has been secured.



#### **WARNING Pinch Hazard**

Keep hands away from mounting points and pads while loading the header. Potential pinch hazard exist between the wagon and header.



#### **WARNING Collision Hazard**

Do not stand under or directly in front of the top rail while it is being adjusted, potential collision exists if the rail drops suddenly. Use proper lifting equipment.



## ELECTRIC BRAKES / LIGHTS SETUP

The CHCFE series rear electric brakes require some set up and testing before being put into use. Ensure you have the appropriate brake controller installed in the tow vehicle (see “Brake Controller” on page 25)

### TEST THE BRAKE CONNECTION:

Before putting your wagon into service, check that header wagon plug wiring matches the tow vehicle wiring. There are many variations for RV wiring pin outs, so it is imperative that the connection be tested before using the wagon.

Follow these steps to test the brake connection:

- Hook up the wagon to the tow vehicle,
- Connect header wagon RV plug to the tow vehicle,
- Ensure the area is clear of by standers,
- Move the vehicle ahead slowly.
- Apply the wagon brakes using the manual control on the brake controller.
- If the connection is correct then your tow vehicle should be stopped by the braking action of the header wagon.

If the brakes do not activate, stop and secure the tow vehicle. On the tow vehicle 7 pin receptacle, determine which pin position controls the brakes. Disassemble the wagon 7 pin plug and change wiring to match. Retest the connection.

### TEST THE LIGHTING CONNECTION:

Follow these steps to test the brake connection:

- Connect header wagon RV plug to the tow vehicle,
- Apply the tow vehicle brakes.
- Apply the left then right direction indicators.

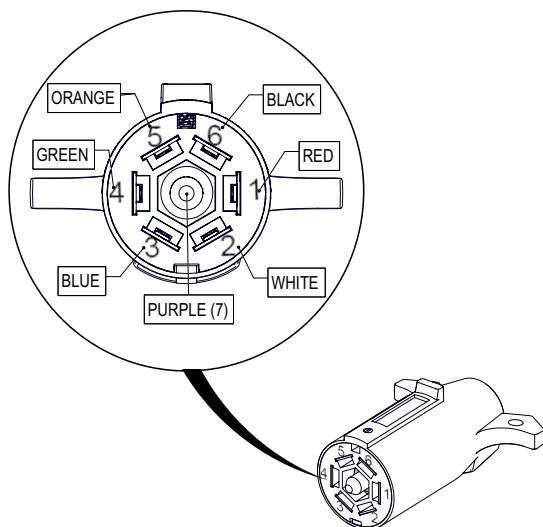
If the indicator or brake lights do not activate properly, then the wiring pin outs will need to be changed. On the

tow vehicle 7 pin receptacle, determine which pin position controls the brakes. Disassemble the wagon 7 pin plug and change wiring to match. Retest the connection.

### SYNCHRONIZE THE BRAKES:

To ensure safe brake performance and synchronization, read the brake controller manufacturer’s instructions completely before attempting any synchronization procedure.

1. Avoid a brake setting which results in wheel lock up and sliding. Wheel lockup can cause a dangerous loss of control and result in personal injury or death.
2. For proper braking performance, it is recommended that the controller be adjusted to allow the trailer brakes to come on just slightly ahead of the tow vehicle brakes.
3. When proper synchronization is achieved there will be no sensation of the trailer “jerking” or “pushing” the tow vehicle during braking.
4. Always keep in mind loading conditions, weather, wheel and tire size can all affect braking.



RV style female 7 flat pin connector

#	Signal	Color
1	Left Turn Signal, Stop lamps	Red
2	Ground	White
3	Electric brake control	Blue
4	Right Turn Signal, Stop lamps	Green
5	+12V via ignition lock	Orange
6	Tail lamps, clearance lamps/outline marker lamps and registration plate lamp	Black
7	Reversing lamps, control current to block surge brakes when reversing.	Purple

Pin / wire colour assignment used for CHCFE series header wagons.



# FIELD OPERATION

This section describes how to safely and effectively operate the CHCFE wagon in the field of operation. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the work site. Not all situations and conditions can be addressed, proceed with care & caution and use safety as your guide.

**The owner or operator** has the responsibility of being familiar with the operation of the CHCFE wagon and must train all other operators before they start working with the machine.

Work in a safe manner and follow all instructions exactly, safety is everyone's business. Untrained operators are not qualified to use the machine.

## OPERATION SAFETY CHECKLIST

- ✓ NEVER allow helpers or bystanders under or near header while mounting on header wagon.
- ✓ Make sure that the load is fastened securely to the wagon before moving.
- ✓ Inspect all fastening devices, do not use if worn or damaged.
- ✓ Use a 3/4" grade 5 hitch pin to hitch the implement to towing unit,
- ✓ Secure the hitch with the safety chain. Replace the safety chain if one or more links or end fittings are broken, stretched or otherwise damaged or deformed.
- ✓ Do not exceed travel speed rating, 50 km/h (30 mph),
- ✓ Make sure that everyone is clear before moving the implement. NEVER position yourself between the towing unit and the implement.
- ✓ Do not permit riders while transporting this implement, with or without a load.
- ✓ Where possible, avoid operating near ditches, embankments and holes.
- ✓ Loading or unloading an unhitched implement, be sure to properly block / chock the wheels to prevent the implement from moving.
- ✓ Inspect rims for dents or damage, check wheel lugs and tighten if required.
- ✓ Check brakes are operational.


## PREPARE

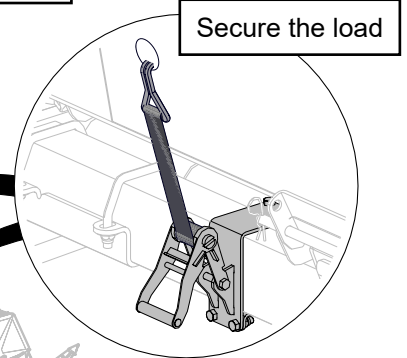
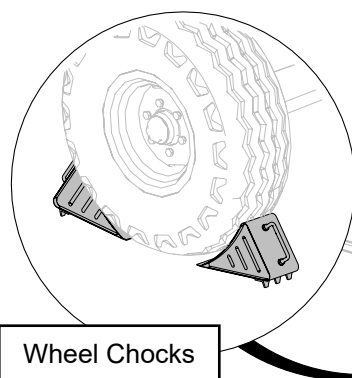
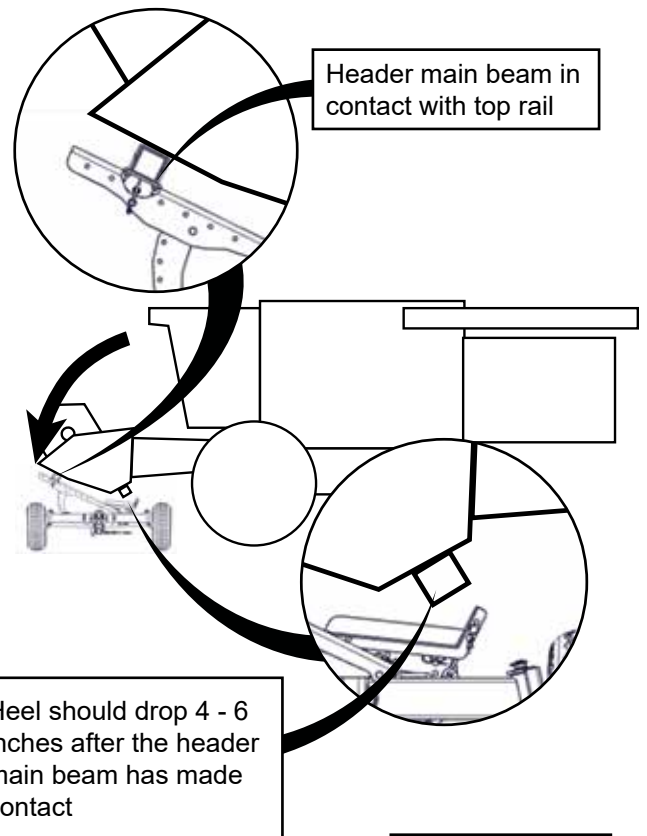
- Clear the area of bystanders, especially small children.
- Each operator must be trained and familiar with the set up and operation of the CHCFE wagon and its components.
- Review:
  - "Operational Features"
  - "Operation Safety Checklist"
  - "CHCFE Series Wagon Components"
- Survey the work site, remove debris and make note of nearby or overhead obstructions.
- It is recommended that each person wear appropriate Personal Protective Equipment (PPE) whenever working in the vicinity. This equipment is designed to prevent injury to any personnel in the area. This list includes but is not limited to:
  - Safety shoes with slip resistant soles.
  - Safety glasses.
  - Hearing protection.
  - Heavy or leather gloves
- Find a flat area to work in, this will make loading & unloading easier and safer.
- Before use, inspect the wagon (see service & maintenance section) and check the following:
  - Wheel alignment
  - Tire pressure
  - Check wheel lug nuts and ensure they are all properly secured
  - Check all nuts, bolts and screws and ensure they are all properly secured
  - Check wagon 7 pin plug is connected to the tow vehicle and brakes are functioning
  - Ensure the SMV sign is attached to the rear of the wagon.
- If loading the wagon unattached to the towing vehicle, make sure the wheels are chocked to prevent unwanted movement during loading operations
- Hitch the wagon to the tow vehicle with a 3/4" grade 5 hitch pin, and secure with the safety chain.
- Ensure the tow vehicle has the towing and braking capacity to safely tow the load. It is dangerous to tow an over weight load

## LOADING THE HEADER

Before attempting to load the header wagon, ensure the wagon is either attached to the tow vehicle or the wheels have been secured with wheel chocks to prevent unwanted movement and potential injury during the loading process.

Once the initial setup (page 26) is complete no further adjustment is necessary.

- Load the header on the wagon:
  - Move the harvester forward and align the header pads to the heel positions on the header.
  - Begin to lower the header, the header beam should make contact with the top rail,
  - As the header beam makes contact with the top rail, the lower portion of the feeder house will begin to separate from the header.
  - Continue to lower the header until the header heel is fully seated in the header pads, and the feeder house clears the header.
  - Carefully back the harvester away from the header wagon.
- Locate a place on the header to hook the ratchet strap that is rigid enough so it won't bend or break when the strap is tightened, or during transport.
- Position the movable bracket directly below this point.
- Hook the straps to the header and ratchet the straps tight.
- If you are going any distance or over rough terrain, periodically check the ratchet straps for tightness.
-  Check that the ratchet handle is in the lock position (page 20)



### WARNING Drop Hazard

Be aware that an unsecured load may fall from the wagon. Proceed with caution until the load has been secured and ratchet handles are in locked position.



### IMPORTANT Operational Hazard

Check to make sure there is adequate swing clearance for the tongue (from side to side/up and down) to prevent damage to the wagon or combine head when making a tight turn or moving over uneven ground.

## TOWING

Be aware of local, provincial, state, and national codes concerning towing implements (wagon) on public roads. Vehicles traveling at maximum road speed 40kph (20mph) or below must have a SMV (slow moving vehicle) sign attached to the rear of the implement. In the U.S. vehicles towing at the travel speed rating of maximum 50kph (30mph) require an SIS sign in addition to an SMV.

When transporting at night, It is recommended to turn on your running lights

Plan your route, if possible avoid busy highways, be a safe and courteous driver, and obey the rules of the road.


### BEFORE TOWING WAGON:

- Check all pull pins are in place and secured.
- Ensure the header is seated securely to the wagon.
- Ratchet straps are tight and locked in position.


### ATTACH THE WAGON

- Back the tow vehicle close to the tongue, within 17-20 cm (7-8") and set the parking brake.
- Carefully pull up on the auto-lock latch, move the pullout in/out as required to align the clevis to the tow vehicle hitch point,
- Connect the clevis with a 3/4" grade 5 towing pin and secure with a lynch pin.
- Connect the 7 pin plug and check function of the tail lighting and electric brakes.
- Attach the safety chain.
  - Ensure the chain is through the chain support.
  - Secure chain on the tow vehicle at the towing attach point.
  - Do Not allow more slack than necessary for turning.
  - Do not allow the chain to drag, wrap the excess chain around the hitch point.
- Attach the tow hook to the hitch point on the tow vehicle, and attach the hook to the chain.
- Ensure safety latch is closed on the hook.
- Pull the tow vehicle ahead slightly to auto-lock latch
- Recheck all connections and you are ready to tow.
  - Auto-lock latch
  - Tow pin
  - Safety chain
  - Ratchet straps
  - 7 Pin plug - brakes, tail lighting

**CAUTION**  
**Operational Hazard**  
Wagon components are rated at 50 km/h (30 mile/h) maximum speed. Potential for injury and damage if traveling above maximum speed.

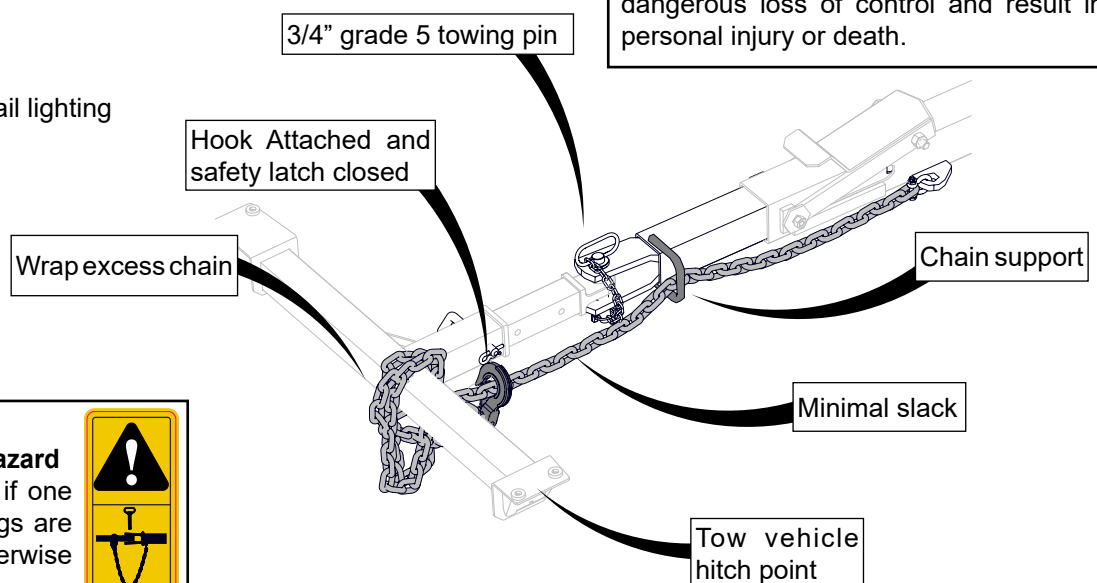


**WARNING**  
**Wagon Runaway Hazard**  
NEVER tow the wagon on a public road without a properly sized towing pin and the safety chain secured.




**CAUTION**  
**Operational Hazard**  
Do not tow loads more than 1.5 times the tractor / tow vehicle weight. Towed loads that are too heavy for the tow vehicle can cause loss of control.

**CAUTION**  
**Operational Hazard**  
Aggressive braking which results in wheel lock up and sliding, can cause a dangerous loss of control and result in personal injury or death.



**WARNING**  
**Wagon Runaway Hazard**  
Replace the safety chain if one or more links or end fittings are broken, stretched or otherwise damaged or deformed.



# STORAGE

## STORAGE SAFETY CHECKLIST

- ✓ Store the implement away from work area's and livestock.
- ✓ Do not permit children to play on or around the stored machinery.
- ✓ Block or chock the wheels to prevent unexpected movement
- ✓ Ensure all pins, latches and locks are secure.

After the season's use or when the machine will not be used for a period of time, completely inspect all parts of the header wagon . Replace or repair any worn or damaged components to prevent any unnecessary down time at the beginning of the next season. Your implement is an important investment. Spending some time to protect it from rust and corrosion will result a safer, longer service life and better performance.

## PLACING THE IMPLEMENT IN STORAGE:

1. Thoroughly wash the machine with a pressure washer or water hose to remove all dirt, mud or debris.
2. Remove all remaining material and debris from the machine.
3. Inspect for damaged or worn parts. Repair or replace before next season.
4. Replace any missing or unreadable safety decals.
5. Repaint any chipped or scraped areas to prevent rust and corrosion.
6. It is best to store the machine inside in a dry clean area. If that is not possible, cover with a waterproof tarpaulin and tie down securely.



### CAUTION

#### Operational Hazard

Chock wheels when loading, unloading or storing the wagon to prevent unwanted movement.



# SERVICE & MAINTENANCE

Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.

To keep your CHCFE Header wagon in good working condition, and increase bearing life as well as maintain ease of operation, periodic lubrication is essential. This also helps to flush out moisture and dirt.

By following a careful service and maintenance program for your machine, you will enjoy many years of trouble-free operation.

Replacement of parts should be done by a qualified personnel only. Keep a record of all maintenance, to ensure scheduled inspections and maintenance are performed.

## MAINTENANCE SAFETY CHECKLIST

- ✓ Follow good shop practices.
- ✓ Keep service area clean and dry.
- ✓ Use adequate light for the job at hand.
- ✓ Never work under equipment unless it is blocked securely
- ✓ Parts replacement should be performed by qualified personnel to ensure safe and complete installation.
- ✓ A fire extinguisher and first aid kit should be kept readily accessible.
- ✓ Always use personal protection devices such as eye, hand, foot and hearing protectors.
- ✓ Use heavy gloves when handling heavy or sharp components.
- ✓ Ensure wagon is disconnected from the towing vehicle and wheels are chocked.

## WHEEL BEARINGS:

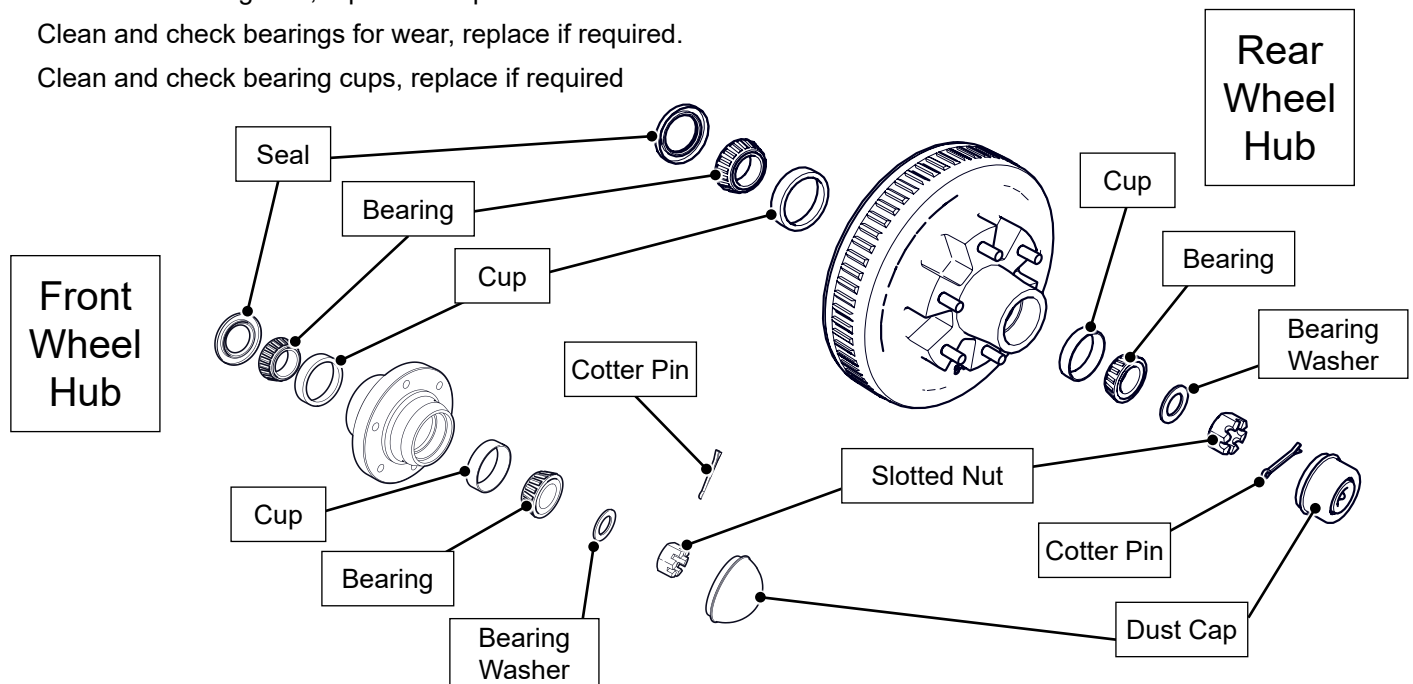
Inspect bearings monthly: check for

- Unusual front to back movement or chatter
- Free spinning with no grinding noise.

Replace if required, replacements and repacking should be performed by qualified personnel. For replacement parts and repacking procedures please call your dealer or contact Horst Wagons.

Wheel bearings should be cleaned, re-packed & adjusted, annually, or 1000 hours of operation, whichever comes first. Use a premium quality, multipurpose, extreme-pressure (EP2) calcium sulfonate or equivalent grease for the bearings (NLGI GC-LB Certified)

- Check the bearing seal, replace if required
- Clean and check bearings for wear, replace if required.
- Clean and check bearing cups, replace if required



## WAGON COMPONENTS:

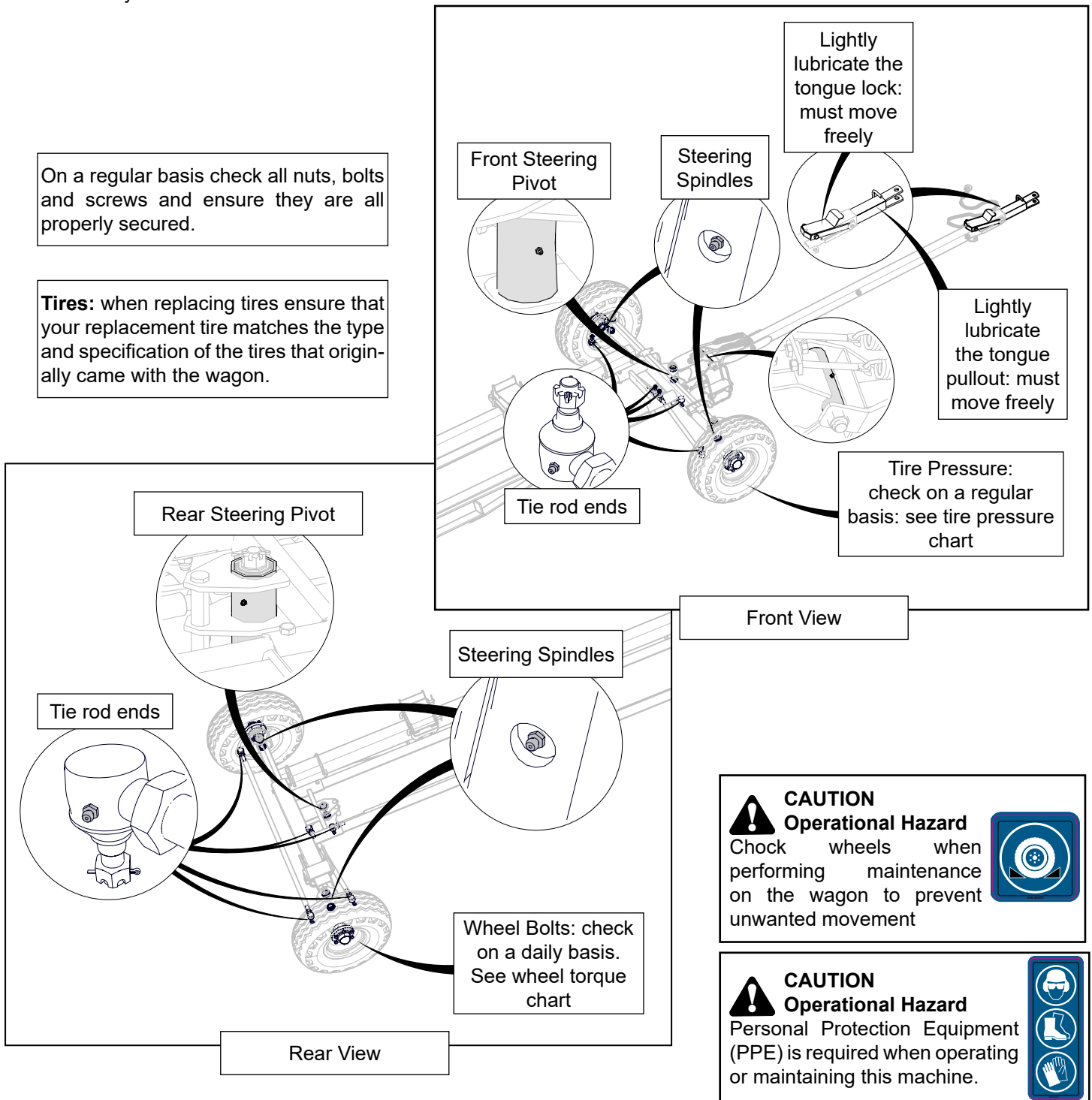
Inspect wagon components monthly. Unusual play or noise could be an indication of worn parts. Parts replacement should be performed by qualified personnel.

Wagon components should be lubricated / greased yearly, locate the grease zerks shown in the illustrations below.

- Lubricate with an good Lithium EP2 grease or equivalent.
- Use a hand-held grease gun for all greasing, one shot of grease is adequate
- Wipe grease zerk with a clean cloth before greasing, to avoid injecting dirt and grit.
- Replace broken zerk fitting immediately.
- If grease zerk will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fittings if necessary.

On a regular basis check all nuts, bolts and screws and ensure they are all properly secured.

**Tires:** when replacing tires ensure that your replacement tire matches the type and specification of the tires that originally came with the wagon.



## WHEEL ALIGNMENT

When the unit is new, both axles are preset at the factory with .3175 - .635 cm (1/8" – 1/4") tow-in and should not require any initial adjustment. Adjustment may be required if steering components have been damaged or replaced. Toe in adjustments should be made by qualified personnel.

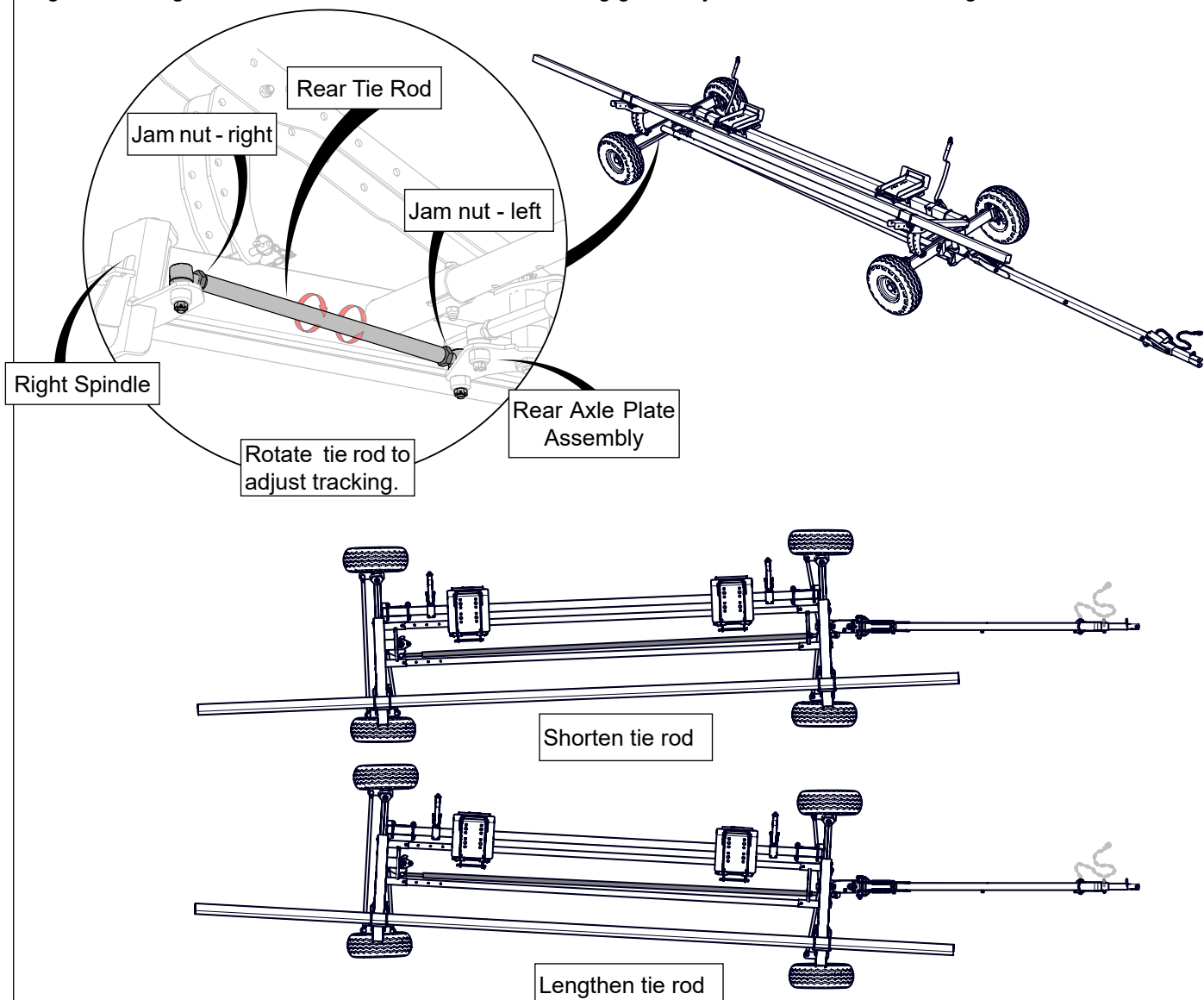
## TRAILING ADJUSTMENT

Through normal use or after unit has been repaired some maintenance with respect to the tracking alignment may be required.

If the rear axle begins to track excessively left or right of the front axle (dog track), then corrective adjustment is made by lengthening or shortening the tie rod at the rear of the wagon, between the rear axle plate assembly, and the right steering spindle.

- Loosen jam nuts at the left and right of the rear tie rod to allow free rotation of the tie rod.
- Rotate the tie rod to lengthen or shorten as required (see diagram below).
- When adjustment is complete, tighten the jam nuts to secure the setting.
- Test drive the wagon and check for front to rear trailing, repeat adjustment as required.

When the wagon is being trailed empty, it should track slightly left. When the wagon is loaded it may track slightly to the right. The weight causes normal distortion to the steering geometry which affects the tracking when loaded.





## ELECTRIC BRAKE MAINTENANCE

The CHCFE series feature rear brakes to enhance and aid the safe transport of your header. The drum brakes on your wagon are operated electrically and activate an electro magnet that in turn causes the brakes to be applied. Electric brakes are a dependable system similar to the hydraulic drum brakes on your automobile.

Horst uses non asbestos brake pads. When replacing the brake pads, replace with non asbestos type pads.

As with all brakes periodic maintenance and inspection is required. Brake troubleshooting, maintenance or replacement should be performed by qualified personnel only.

For replacement parts please call your dealer or contact Horst Wagons.

### NOTE: INITIAL SERVICE:

Have the brakes serviced after the first 320 km (200 miles) of operation when the brake shoes and drums have "seated,"

### INSPECTION

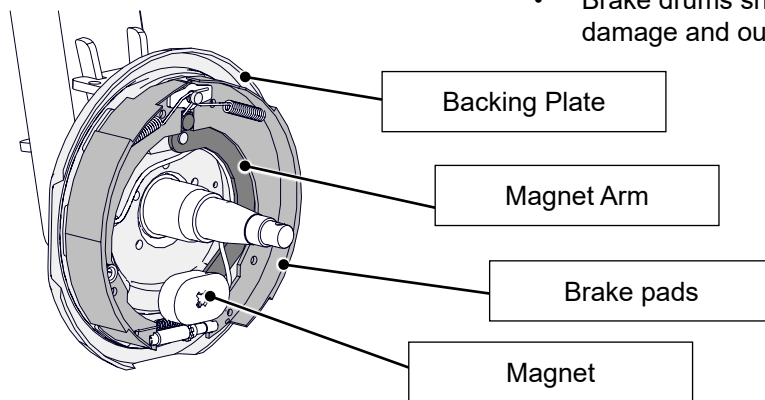
Brake should be inspected for operation and function each time the wagon is used. If a loss of performance is experienced, the header wagon brakes must be serviced immediately.

### SERVICE

Brake service should be performed by qualified personnel only.

- Brakes should be adjusted and the drum removed for inspection and service:
  - At 4,800 km (3,000) mile intervals or 1 year,
  - Or as use and performance requires.

- With normal use, servicing at one year intervals is usually adequate. With increased usage, this work should be performed more frequently as required.
- Magnets and shoes must be changed when they become excessively worn or scored, a condition which can reduce vehicle braking.
- Backing plate, magnet arm, magnet, and brake shoes must be cleaned.
- Inspect and replace any loose, worn parts, stretched or deformed springs.
- Replacement is necessary if the brake pad is worn to 1/16" or less. Brake pads contaminated with grease or oil, or abnormally scored or gouged must also be replaced.
- When replacement is necessary, it is important to replace both pads on each brake and both brakes of the same axle. This will help retain the "balance" of your brakes.
- Brake drums should be inspected for surface wear or damage and out of round wear.



## ELECTRICAL SYSTEM

### WIRING HARNESS

Inspect your wiring harness for damage and breaks in the wire covering. To prevent moisture from entering the wiring system and causing corrosion, repair any damage with water resistant tape. Be sure to test all lighting and brake functions.

### TRAILER 7 PIN PLUG

Inspect the plug for corrosion on the contacts. If corrosion is found, clean the plug with electrical contact cleaner. Maintain with a good contact corrosion preventative spray.

### LED LIGHTING.

- Left / right turn signals
- Brake lights

Led light bulbs are not replaceable within the unit. If the LED is damaged or ceases to work then the entire unit will need to be replaced.

Call your dealer or Horst Wagons for replacement LED units.



## BOLT TORQUE TABLE

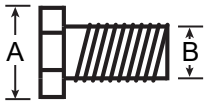
These tables are offered as the suggested maximum torque values for dry (not lubricated) threaded products and are only a general guide.

Check tightness of bolts periodically, replace hardware with the same strength bolt.

Torque specification for bolts are identified by their head markings as shown.

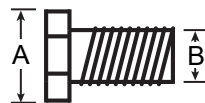
See the "Wheel Torque Specification" page for wheel bolt /nut torque settings

### METRIC TORQUE SPECIFICATIONS



Wrench Size: "A"	Thread Size: "B" Fine	Class 8.8		Class 10.9		Thread Size: "B" Coarse	Class 8.8		Class 10.9	
		N-m	lbs-ft	N-m	lbs-ft		N-m	lbs-ft	N-m	lbs-ft
10 mm	6 x 0.75	---	---	---	---	6 x 1.0	11.3	8.3	16.5	12.2
13 mm	8 x 1.0	27	20	38	28	8 x 1.25	27.3	20.1	40.1	29.6
16 mm	10 x 1.25	52	38	73	54	10 x 1.5	54	40	49	36
18 mm	12 x 1.25	95	70	135	100	12.1.75	93	69	137	101
21 mm	14 x 1.5	150	111	210	155	14 x 2.0	148	109	218	161
24 mm	16 x 1.5	225	166	315	232	16 x 2.0	230	170	338	249
27 mm	18 x 1.5	325	240	460	339	18 x 2.5	329	243	469	346
30 mm	20 x 1.5	460	339	640	472	20 x 2.5	464	342	661	487
34 mm	22 x 1.5	610	450	860	634	22 x 2.5	634	468	904	667
36 mm	24 x 2.0	780	575	1100	811	24 x 3.0	798	588	1136	838
41 mm	27 x 3.0	---	---	---	---	27 x 3.0	1176	867	1674	1234
46 mm	30 x 2.0	---	---	---	---	30 x 3.0	1597	1178	2274	1677

### SAE TORQUE SPECIFICATIONS



Wrench Size: "A"	Thread Size: "B" Fine	SAE 2		SAE 5		SAE 8		Thread Size: "B" Coarse	SAE 2		SAE 5		SAE 8	
		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m		lbs-ft	N-m	lbs-ft	N-m	lbs-ft	N-m
7/16"	1/4-28	6	8.1	10	13.6	14	19.0	1/4-20	5	6.8	8	10.8	12	16.3
1/2"	5/16-24	13	17.6	19	25.7	27	36.6	5/16-18	11	14.9	17	23.0	25	33.9
9/16"	3/8-24	23	31.2	35	47.4	49	66.4	3/8-16	20	27.1	31	42.0	44	59.6
5/8"	7/16-20	36	48.8	55	74.5	75	101.6	7/16-14	32	43.4	49	66.4	70	94.9
3/4"	1/2-20	55	74.5	85	115.2	120	162.6	1/2-13	49	66.4	75	101.6	107	145.0
13/16"	9/16-18	79	107.0	122	165.3	172	233.1	9/16-12	70	94.9	109	147.7	154	208.7
15/16"	5/8-18	110	149.1	170	230.4	240	325.2	5/8-11	97	131.4	150	203.3	212	287.3
1-1/8"	3/4-16	192	260.2	297	402.4	420	569.1	3/4-10	173	234.4	266	360.4	376	509.5
1-5/16"	7/8-14	184	249.3	474	642.3	668	905.1	7/8-9	166	224.9	429	581.3	606	821.1
1-1/2"	1.0-12	274	371.3	705	955.3	995	1348.2	1.0-8	250	338.8	644	872.6	909	1231.7

## WHEEL TORQUE SPECIFICATION

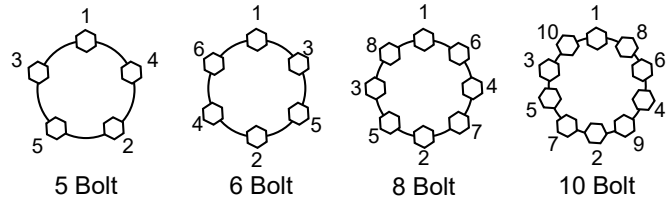
It is an extremely important safety procedure to apply and maintain proper wheel mounting torque on your trailer axle. Torque wrenches are the best method to assure the proper amount of torque is being applied to a fastener.

Wheel lugs should be torqued before first road use and after each wheel removal. Check and re torque after the first 10 miles, 25 miles, and again at 50 miles. Check periodically thereafter.

Note: Wheel lugs must be applied and maintained at the proper torque levels to prevent loose wheels, broken studs, and possible dangerous separation of wheels from your axle.

1. Start all lugs by hand to prevent cross threading.
2. Tighten lugs in sequence, as shown in the diagram.
3. Tighten the lugs - see chart

Wheel Nut / Bolt Size	Torque Dry		Torque Lubricated	
	lbs-ft	N-m	lbs-ft	N-m
1/2"	<b>90</b>	<b>122</b>	<b>65</b>	<b>88</b>
1/2" (brake drum)	<b>100</b>	<b>136</b>	<b>75</b>	<b>102</b>
9/16"	<b>120</b>	<b>163</b>	<b>90</b>	<b>122</b>
5/8	<b>180</b>	<b>244</b>	<b>130</b>	<b>176</b>
3/4	<b>300</b>	<b>407</b>	<b>220</b>	<b>298</b>



**Wheel Lug Torque Sequence**

## TIRE PRESSURE TABLE

The following is to be used as a general guide for tire inflation. It is important that tires are inspected after unit is loaded. Do not exceed maximum recommended tire pressure.

<b>Tire</b>	<b>PSI</b>	<b>kPa</b>
Tires: 20.5 x 8 - 10 (F Range) tire	<b>105</b>	<b>723</b>
Tires: 26 x 12 12 ply tire	<b>62</b>	<b>427</b>
Tires: 235/85 R16 (F Range) Highway Trailer tire	<b>95</b>	<b>655</b>
Tires: 11L x 15 (F Range) Highway Service tire	<b>90</b>	<b>620</b>
225/75 R15 Load Range D	<b>65</b>	<b>448</b>

## TROUBLE SHOOTING

On the following page, we have listed many of the causes and solutions to issues that you may encounter.

If you encounter a issue that is difficult to solve, even after having read through this trouble shooting section, please call your local distributor or dealer. Before you call, please have this Operator's Manual and serial number ready

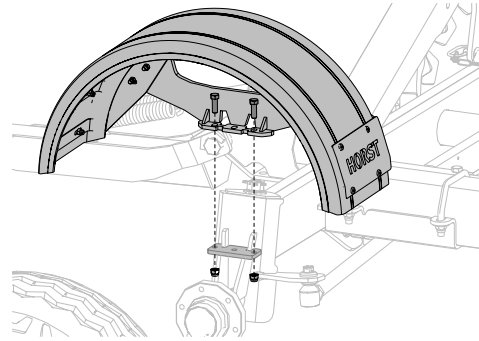
Issue	Cause	Solution
The wagon sways while being towed down the road.	There are 2 reach tubes that run the length of the wagon. The reach tubes are fastened to the front and rear axle assemblies by 1 bolt at each end for each of the tubes. If any of these bolts are loose then there will be end play causing sway.	Tighten and torque the bolts and ensure that the bolts are held in place with lock nuts. Lock nuts will prevent loosening of the bolts.
	Travelling faster than what speed it is designed for.	The wagon design has a travel speed rating at or below 50 km/h (35 MPH). Stay at or below the travel speed rating.
	Worn steering components	check for excessive play in the - wheel bearing - steering spindles - ball joints - tongue pivots replace any bearings that are worn
	Toe in setting is out of specification	Have a qualified person adjust the toe-in. The factory setting for both axles should be .3175 - .635 cm (1/8" – 1/4") tow-in
Lighting / Braking system not working or working erratically	Loose or corroded wires, contacts	Check the trailer side plug for loose or corroded wires, loose wires in the light casing, replace or repair as required
		Check the tow side receptacle for loose or corroded wires or damaged receptacle, replace or repair as required
	Loss of electrical ground connection	Check connection to ground on the trailer side and the tow vehicle side. Disconnect and clean or replace terminal.
		Brakes: have a qualified technician inspect the braking system.

Issue	Cause	Solution
Header moves on wagon during transport	Header is positioned on the trailer too flat	Increase the angle of the top rail mounts so that the header puts more pressure on its heel points that rest in the universal shoes. As well increase the angle of the universal shoe
	Ratchet straps not holding the header	Tighten up the ratchet straps, check straps, hooks and strap mechanism for wear / damage, replace if required
	Ratchet strap hook becomes loose,	Reposition the ratchet straps closer to the ends of the wagon may provide better leverage
		Attach point seems deformed: move the ratchet strap to a different attach point that is more ridged. If required, find a ridged metal point and mount a 3/4" grade 5 eye bolt to use as an attach point.
		Ratchet is not positioned directly below attach point, the ratchet will slide. Position the ratchet directly below the attach point
Rapid or unusual tire wear.	Worn steering components	Check for wear or excessive play in - wheel bearings - steering spindles - ball joints replace any components that are worn out
	Toe in setting is out of specification	Have a qualified person adjust the toe-in. The factory setting for both axles should be .3175 - .635 cm (1/8" - 1/4") tow-in
	Tire rim bent	Check tire rims for wobble while rotating, replace if bent.
	Improper tire for application	Check that your tire type matches your application. Example: Ag tires used consistently on highway will wear prematurely. Replace tires with correct type.
Difficult to attach / detach header	Improper set up on header wagon.	Adjust the height of the top rail so that the header beam will make contact with the wagon before the heel of the header.
	Loading area uneven	Find an area that is flat as possible to help with alignment while loading/unloading.

## ACCESSORIES

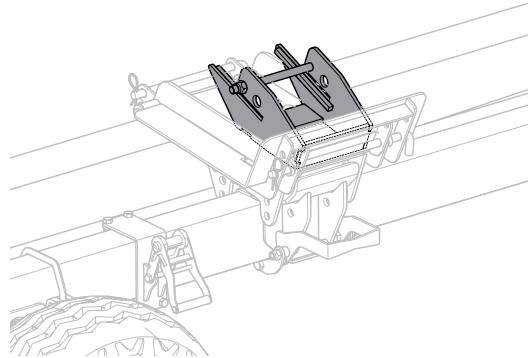
### CHCFK FENDER KIT

The CHCFK Fender kit fits on all CHCFE wagon models. Simple to install, it bolts on to the spindle close to the tire to keep mud and road debris away from your header!



### HBAFK HONEY BEE AIRFLEX PAD ADAPTER KIT

The HBAFK Honey Bee Airflex Pad Kit is designed to work with models CHCFE36 & 45. This bolt on kit adapts the Honey Bee's unique design to work with the header pads on Horst header wagons.





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# Warranty

## One Year Limited Warranty

Warranty is active at the time of customer delivery and any claims require the product model and serial number.

All claims must be discussed with a representative from the distributor prior to any repairs or warranty will be void.

This new and unused product is warranted by Horst Welding, to be free from defects in material and workmanship under normal use and regular service as described in the owner's manual, for a period of 1 year from the date of purchase. Warranty is limited to the repair of the product and / or replacement of parts.

**Customer:** If issues develop within the warranty period with the product, contact the local dealer from which you purchased the unit. Only Horst authorized dealers may make repairs to the product or affect the replacement of defective parts, unless otherwise approved by Horst.

**Distributor / Dealer:** must notify Horst Welding of the defect before repair / replacement is made. Recommended repairs / replacement and cost are to be discussed with, and agreed on, by an authorized Horst Welding representative. All claims must be accompanied by a photograph of the defective product.

Defective products may be required to be returned to Horst Welding in Listowel, Ontario at the request of Horst Welding. Repairs / Replacement will be done at no charge to the customer within a reasonable time after the receipt of the product.

### **This warranty does not cover the following items:**

1. Normal replacement of service items.
2. Normal maintenance or adjustments.
3. Machines or parts lost or damaged during shipment,
4. Accessory items / parts not supplied by Horst Welding
5. Damages resulting from:
  - misuse, negligence, accident, theft or fire
  - use of improper or insufficient fuel, fluids or lubricants
  - use of after market parts or accessories, unless approved by Horst Welding
  - modifications, alteration, tampering or improper repair
  - any device or accessories installed other than an authorized dealer.
  - using incorrect supplies or supplies not specified in the owners manual.

Horst shall not, in any event, be liable for any losses, damages or costs; to include profits, travel, transportation, pick up, delivery, towing cost, tow vehicle, loss of use, whether special, incidental, consequential or otherwise, in any way. Unit or parts are returned at the customer's expense.

There are no warranties, expressed or implied, other than those specified herein. No agent, employee or other person has any authority to vary any of the foregoing provisions.

**All claims must be discussed with a representative from the distributor prior to any repairs or warranty will be void.**

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