C Series
Corn Header

Unloading and Assembly Instructions
(Dealer Shipments)
215037 Revision B
Original Instruction

The harvesting specialists.
Unload and Assembly, Dealer – C Series

The following instructions are to be completed when receiving a C Series header and prepping for field use.

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1. Safety

1.1 Signal Words

Three signal words, DANGER, WARNING, and CAUTION, are used to alert you to hazardous situations. Two signal words, IMPORTANT and NOTE, identify non-safety related information. Signal words are selected using the following guidelines:

⚠️ DANGER

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.

⚠️ WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. 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 be used to alert against unsafe practices.

IMPORTANT:

Indicates a situation that, if not avoided, could result in a malfunction or damage to the machine.

NOTE:

Provides additional information or advice.
1.2 General Safety

CAUTION

The following are general farm safety precautions that should be part of your operating procedure for all types of machinery.

Protect yourself.

- When assembling, operating, and servicing machinery, wear all protective clothing and personal safety devices that could be necessary for job at hand. Do NOT take chances. You may need the following:
  - Hard hat
  - Protective footwear with slip-resistant soles
  - Protective glasses or goggles
  - Heavy gloves
  - Wet weather gear
  - Respirator or filter mask
- Be aware that exposure to loud noises can cause hearing impairment or loss. Wear suitable hearing protection devices such as earmuffs or earplugs to help protect against loud noises.

Provide a first aid kit for use in case of emergencies.

Keep a fire extinguisher on the machine. Be sure fire extinguisher is properly maintained. Be familiar with its proper use.

Keep young children away from machinery at all times.

Be aware that accidents often happen when Operator is tired or in a hurry. Take time to consider safest way. NEVER ignore warning signs of fatigue.
Wear close-fitting clothing and cover long hair. **NEVER** wear dangling items such as scarves or bracelets.

Keep all shields in place. **NEVER** alter or remove safety equipment. Make sure driveline guards can rotate independently of shaft and can telescope freely.

Use only service and repair parts made or approved by equipment manufacturer. Substituted parts may not meet strength, design, or safety requirements.

Keep hands, feet, clothing, and hair away from moving parts. **NEVER** attempt to clear obstructions or objects from a machine while engine is running.

Do **NOT** modify machine. Unauthorized modifications may impair machine function and/or safety. It may also shorten machine’s life.

To avoid bodily injury or death from unexpected startup of machine, **ALWAYS** stop the engine and remove the key from the ignition before leaving the operator’s seat for any reason.

Keep service area clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Be sure all electrical outlets and tools are properly grounded.

Keep work area well lit.

Keep machinery clean. Straw and chaff on a hot engine is a fire hazard. Do **NOT** allow oil or grease to accumulate on service platforms, ladders, or controls. Clean machines before storage.

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

When storing machinery, cover sharp or extending components to prevent injury from accidental contact.
1.3 Safety Signs

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or illegible.
- If original part on which a safety sign was installed is replaced, be sure the repair part displays the current safety sign.
- Safety signs are available from your MacDon Dealer.

Figure 1.7: Operator’s Manual Decal
2. Header Lifting Points
   a. The header can be lifted with either a forklift, or via a crane (Figure 1).
   b. Use an appropriately sized forklift, or crane and cables, to lift and move header. Consult the Operator’s Manual for header weights.
   c. When lifting a 12 row header, use four cables as shown in bottom right of Figure 1.

![Figure 1: Head stand lifting point (bottom left) and lifting bars (top and bottom right).]

3. Tipping Header Down and Removing Shipping Stands
   a. Use lifting bar on top of header to attach and tilt header down to field position.
      i. IMPORTANT: deploy header field stands before tipping header down to protect bottom of row units (Figure 2), and ensure ground is level and free of rocks and debris.

![Figure 2: Velcro straps securing bulkhead lines (left), header field stands (right).]
b. Once header is tilted down to field position, remove header stand.
   i. Remove lifting bar after attaching header to combine (Section 6), raising header, and engaging feederhouse cylinder props.
   ii. If applicable, remove Velcro strap securing bulkhead lines from header stand first (Figure 2).

4. Moving Driveline Storage Bracket from Shipping to Field Position
   a. Driveline storage bracket/s must be moved down from the shipping to field position (Figure 3).

5. Moving Header Clearance Lights from Shipping to Field Position
   a. Remove U-bolts securing clearance light, rotate light to field position (ensure yellow reflector faces forward), and rotate and reinstall U-bolts (Figure 4).

6. Attaching Header to Combine
   a. Adjusting latch hooks
      i. After picking up the header, position of latch plate may need to be adjusted in order to engage the locking pins.
ii. Loosen hardware, adjust plates as needed to engage lock, and retighten hardware (John Deere, Figure 5).

iii. Make similar adjustment as needed on Case IH and Massey Ferguson configured headers.

b. Secure Header Latch Mechanism
   i. This varies for combine type; ensure locking pins are seated before proceeding (adjustment of latch mechanism may be needed for proper seating).

c. Attach Drivelines to Combine
   i. Note: chopping and folding headers will have a driveline attach to each side of the combine feederhouse.
   ii. Ensure driveline guard retention chain is secured to the guard and driveline storage bracket, and the guard seal is flush with the header gearbox (Figure 6).

Figure 6: Driveline guard retention chain (left) and guard seal to gearbox (right).

d. Attaching Hydraulic and Electrical Bulkhead to Combine/Header
   i. Varies for combine type (note: securing John Deere bulkhead also engages locking pins).

7. Attaching Snouts
   a. Lift header and remove green wire and bungee straps securing snouts in shipping position (Figure 7).
   b. Remove snout pivot hardware and install snout on bushings, reinstall hardware and torque to 100 Nm.
i. May consider completing step 10 before installing snouts.

ii. Snout may need to be spread at the rear flanges to fit poly over bushings.

c. Install wire brackets on front snouts (Figure 8). Brackets support snout in service position and can be found in wooden shipping crate.

8. Setting Header Angle

a. Place combine harvester on level ground.

b. To set header angle, lower header until front of row unit rest of a 4” X 4” block (Figure 9).
c. Measure snapping plate angle relative to the ground (Figure 9).
   i. Angle should measure 23 degrees for field operation.
   ii. Adjust feederhouse angle if row unit angle is out of specification (see combine manual for feederhouse adjustment instructions).
   iii. Reseat header on 4” X 4” blocks and re-measure deck plate angle until desired angle is achieved.

9. Setting Snout Position
   a. With header resting on 4” x 4” blocks, adjust the snout height so the tip of the snout is just touching the ground.
   b. Adjust major position by changing position of bolt as shown in Figure 10 (circled).
      i. Ensure nut faces outboard on end rows to prevent interference with gathering chain.
   c. Adjust minor position with nut as shown in Figure 10 (arrow).
   d. Note: 20” and 22” snout adjustment (right, Figure 10) is different that 30” adjustment (left, Figure 10).

10. Checking Snout Seating Pin Alignment
    a. Check each snout that it seats properly with alignment pin.
    b. Loosen hardware to adjust plate if needed (Figure 11).
11. Setting Auger Debris Shield Angle
   a. Auger debris shield angle is factory set at 192 degrees (Figure 12) – verify setting has not changed.

   ![](Figure_12.png)
   **Figure 12**: Auger debris shield should be set 192 degrees below the top flange (red arrow).

12. Run-Up
   a. Before run-up, check all gearboxes for lubricant and free rotation of components.
   b. Run header for 30 minutes at rated speed (550 rpm backshaft) to allow all gearbox oil and grease to warm up as well as check proper operation of all drive and driven components.
   c. If header is configured with chopping gearboxes, ensure they turn on and off.
   d. Check level of all gearboxes with header deck angle at 23 degrees (operating position).
      i. Main Gearbox Oil (left, Figure 13).
      ii. Row unit grease level (right, upper, Figure 13).
         1. Ensure grease level is between maximum and minimum fill lines of dipstick.
      iii. Chopper oil level (right, lower, Figure 13).
         1. Ensure oil level is between upper fill line and bottom of dipstick.

   ![](Figure_13.png)
   **Figure 13**: Gearbox check locations (red arrows).

   e. Ensure high speed auger drive sprocket (16T) is installed (Figure 14).
      i. High speed for normal operating conditions; slow speed sprocket for severely lodged corn.
f. Check auger clearance is between 1.0” and 1.25” (Figure 15).
   i. See Operator’s Manual for adjustment procedure.

h. Check deck plate clearance with the deck plates set to their minimum gap (Figure 15).
   i. A – 3/4”
   ii. B – 15/16”
   iii. See Operator’s Manual for adjustment procedure.

i. Check minimum snapping roll knife clearance (Figure 16).
i. Chopping header – 2-3 mm gap
   
   ii. Non-chopping headers – 1mm gap

![Figure 16: Checking minimum snapping roll knife clearance.](image)

j. Check vine knife clearance to snapping roll knives for 0.5mm clearance.
   
   i. See operator’s manual for more detail.

k. Check gathering chain tension and phasing (Figure 17).
   
   i. Fully staggered (Figure 17, left), lease aggressive, good conveyance.
   
   ii. One lug staggered (Figure 17, right), factory
   
   iii. Fully in-phase (lugs aligned), most aggressive.

![Figure 17: Gathering chains fully staggered, left, or one lug staggered (factory), right.](image)

l. Check auger timing.
   
   i. For center bearing supported augers, flighting should be offset 180 degrees at center to feed combine smoothly. When paddles/fingers are installed, they should be offset 90 degrees (Figure 18). Adjust via clocking auger drive chain.
ii. For folding headers, ensure flighting pitch is 22” (560 mm) or less at pivot (Figure 18, red arrow). The center auger flighting should lag the wing auger flighting to avoid binding of material flow. Adjust auger drive dog on wing to correct timing if needed. See operator’s manual for further detail.

![Figure 18: Center bearing support auger (w/paddles), left, and folding auger wing timing, right.](image)

m. Check lighting and confirm proper operation.

n. Inspect header for loose hardware, missing parts, etc.

o. Place all tools from wooden crate and gathering chain adjustment tool in header toolbox (Figure 19).

![Figure 19: Tools stored in header toolbox.](image)

13. PDI Checklist

a. Please verify using the checkboxes below (Table 1) that the corn head is properly set up before delivering to customer.
## Table 1: PDI Checklist

<table>
<thead>
<tr>
<th>Checkoff</th>
<th>Item</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lifting bar and other packaging removed</td>
<td>Section 3a</td>
</tr>
<tr>
<td></td>
<td>Header latches properly seated</td>
<td>Section 6a and b</td>
</tr>
<tr>
<td></td>
<td>Operating position set to 23 degrees</td>
<td>Section 8</td>
</tr>
<tr>
<td></td>
<td>Hydraulic and electrical properly connected to combine and functioning</td>
<td>Section 6d and Section 12</td>
</tr>
<tr>
<td></td>
<td>Drive shaft properly connected to combine</td>
<td>Section 6c</td>
</tr>
<tr>
<td></td>
<td>Deck plates correctly set</td>
<td>Section 12h</td>
</tr>
<tr>
<td></td>
<td>Gathering chains properly set and tensioned</td>
<td>Section 12k</td>
</tr>
<tr>
<td></td>
<td>Auger drive chains properly tensioned</td>
<td>Section 12g</td>
</tr>
<tr>
<td></td>
<td>Snouts and dividers properly adjusted and secured</td>
<td>Section 9 and 10</td>
</tr>
<tr>
<td></td>
<td>All safety shields functioning, secured, and installed</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Gearbox lubricant checked for proper fill</td>
<td>Section 12a and d</td>
</tr>
<tr>
<td></td>
<td>Snapping roll clearances properly set</td>
<td>Section 12i</td>
</tr>
<tr>
<td></td>
<td>Hardware is tight and</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Free rotation of chopper knives (if applicable) and drives</td>
<td>Section 12a and c</td>
</tr>
<tr>
<td></td>
<td>Header run-up for 30 min</td>
<td>Section 12b</td>
</tr>
</tbody>
</table>