D65
Draper Header for Windrowers

Unloading and Assembly Instructions (North America)

169900 Revision A

Original Instruction

The harvesting specialists.

D65 Draper Header for Self-Propelled Windrowers

Published: August, 2014

Introduction

This instructional manual describes the unloading, setup, and predelivery requirements for the MacDon D65 Draper Header for Windrowers.

Some sections/steps apply to multiple header configurations and sizes. Carefully follow the instructions for your specific header.

Use the Table of Contents to guide you to specific areas.

Retain this instruction for future reference.

Carefully read all the material provided before attempting to unload, assemble, or use the machine.

NOTE:
Keep your MacDon publications up-to-date. The most current version can be downloaded from our website (*www.macdon.com*) or from our Dealer-only site (*https://portal.macdon.com*) (login required).

This instruction is also available in Russian and can be downloaded from our website or from our Dealer-only site. The part number is MD #169798.

List of Revisions

Summary of Change	Location
Revised belt tensioning procedures to improve clarity and accuracy.	*14.4 Checking and Adjusting Knife Drive Belt Tension, page 66*
Repositioned Adjusting Side Draper Tension topic so it precedes Checking and Adjusting Draper Seal topic.	*14.7 Checking and Adjusting Draper Seal, page 73*
Updated manual part numbers in the Checking Manuals topic.	*14.13 Checking Manuals, page 86*
Changed draper seal gap from 1/32 in. (1 mm) to 1/8 in. (3 mm) so it is consistent with SB #1409.	*14.7 Checking and Adjusting Draper Seal, page 73*
Revised Predelivery Checklist to make it more consistent with the D65 SP Export manual.	*Predelivery Checklist, page 91*

1 Safety

1.1 Signal Words

Three signal words, *DANGER*, *WARNING*, and *CAUTION*, are used to alert you to hazardous situations. The appropriate signal word for each situation has been 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.

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 the protective clothing and personal safety devices that **COULD** be necessary for the job at hand. Don't take chances.
- You may need:
  - A hard hat
  - Protective footwear with slip resistant soles
  - Protective glasses or goggles
  - Heavy gloves
  - Wet weather gear
  - A respirator or filter mask

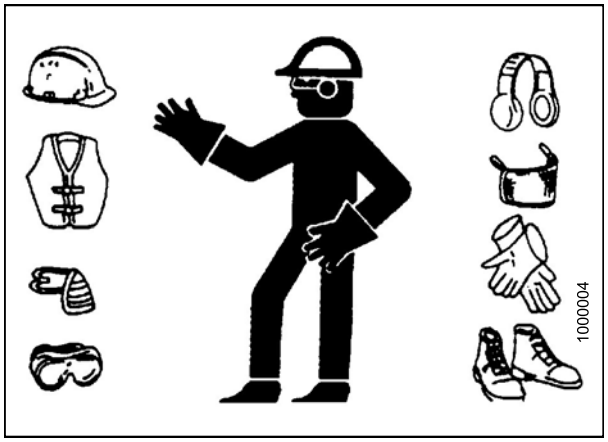

Figure 1.1: Safety Equipment

Hearing protection

- Be aware that exposure to loud noise can cause impairment or loss of hearing. Wear suitable hearing protection devices such as ear muffs or ear plugs to help protect against objectionable or loud noises.

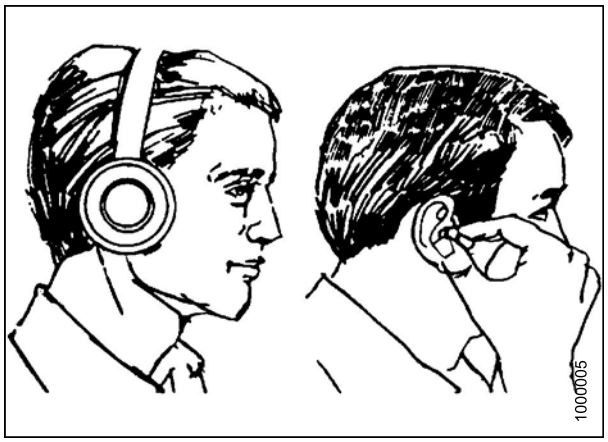

Figure 1.2: Safety Equipment

- Provide a first aid kit for use in case of emergencies.
- Keep a fire extinguisher on the machine. Be sure the fire extinguisher is properly maintained. Be familiar with its proper use.
- Keep young children away from the machinery at all times.
- Be aware that accidents often happen when the Operator is tired or in a hurry to get finished. Take the time to consider the safest way. Never ignore warning signs of fatigue.

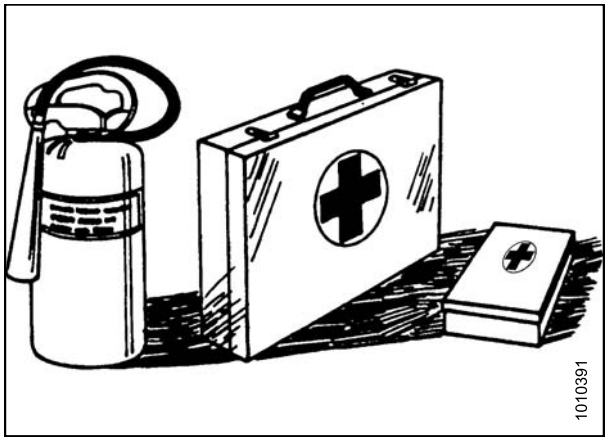

Figure 1.3: Safety Equipment

- 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 the shaft and can telescope freely.
- Use only service and repair parts made or approved by the equipment manufacturer. Substituted parts may not meet strength, design, or safety requirements.

Figure 1.4: Safety Around Equipment

- Keep hands, feet, clothing, and hair away from moving parts. Never attempt to clear obstructions or objects from a machine while the engine is running.
- Do **NOT** modify the machine. Non-authorized modifications may impair machine function and/or safety. It may also shorten the machine's life.
- Stop the engine and remove the key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.

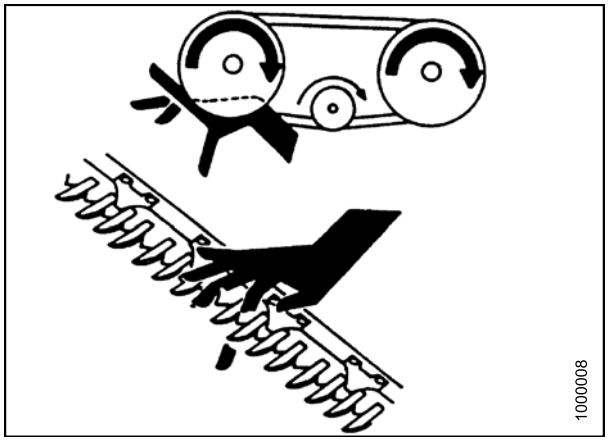

Figure 1.5: Safety Around Equipment

- Keep the area used for servicing machinery 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, are 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.

Figure 1.6: Safety Around Equipment

1.3 Safety Signs

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

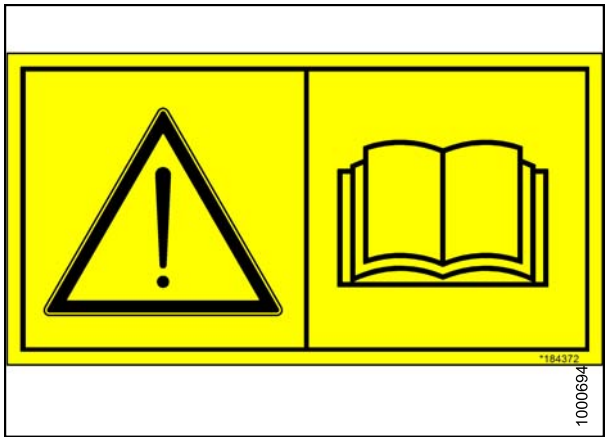

Figure 1.7: Operator's Manual Decal

2 Recommended Torques

2.1 Torque Specifications

The following tables give correct torque values for various bolts, cap screws, and hydraulic fittings.

- Tighten all bolts to the torques specified in chart (unless otherwise noted throughout this manual).
- Replace hardware with the same strength and grade bolt.
- Check tightness of bolts periodically, using the tables below as a guide.
- Torque categories for bolts and cap screws are identified by their head markings.

2.1.1 SAE Bolt Torque Specifications

Torque values shown in this table are valid for non-greased, or non-oiled threads and heads. Therefore, do **NOT** grease or oil bolts or cap screws unless otherwise specified in this manual.

Table 2.1 SAE Grade 5 Bolt and Grade 5 Free Spinning Nut

Nominal Size (A)	Torque (ft·lbf) (*in·lbf)		Torque (N·m)	
	Min.	Max.	Min.	Max.
1/4-20	*106	*117	11.9	13.2
5/16-18	*218	*241	24.6	27.1
3/8-16	32	36	44	48
7/16-14	52	57	70	77
1/2-13	79	87	106	118
9/16-12	114	126	153	170
5/8-11	157	173	212	234
3/4-10	281	311	380	420
7/8-9	449	496	606	669
1-8	611	676	825	912

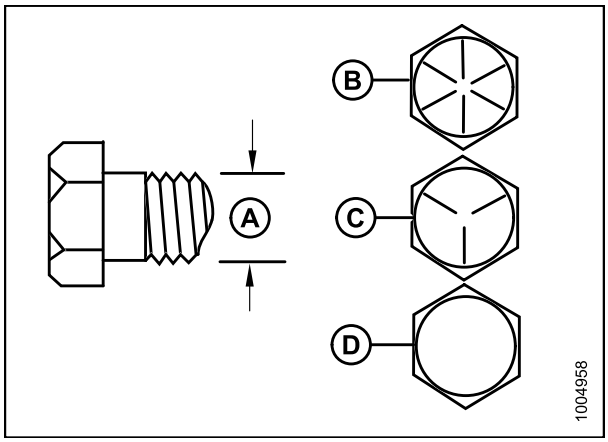

Figure 2.1: Bolt Grades

A - Nominal Size
B - SAE-8
C - SAE-5
D - SAE-2

Table 2.2 SAE Grade 5 Bolt and Grade 5 Distorted Thread Nut

Nominal Size (A)	Torque (ft·lbf) (*in·lbf)		Torque (N·m)	
	Min.	Max.	Min.	Max.
1/4-20	*72	*80	8.1	9
5/16-18	*149	*164	16.7	18.5
3/8-16	22	24	30	33
7/16-14	35	39	48	53
1/2-13	54	59	73	80
9/16-12	77	86	105	116
5/8-11	107	118	144	160
3/4-10	192	212	259	286
7/8-9	306	338	413	456
1-8	459	507	619	684

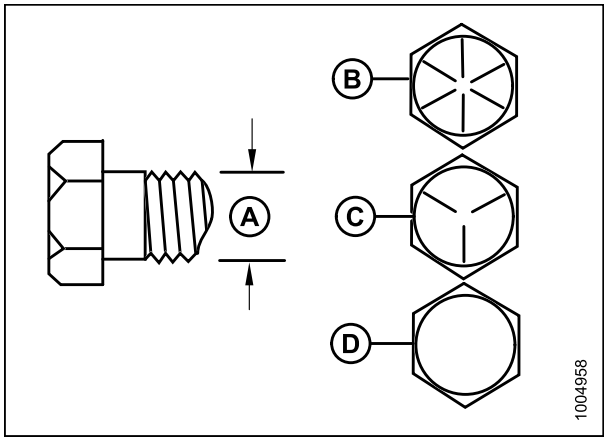

Figure 2.2: Bolt Grades

A - Nominal Size **B - SAE-8**
C - SAE-5 **D - SAE-2**

Table 2.3 SAE Grade 8 Bolt and Grade 8 Distorted Thread Nut

Nominal Size (A)	Torque (ft·lbf) (*in·lbf)		Torque (N·m)	
	Min.	Max.	Min.	Max.
1/4-20	*150	*165	16.8	18.6
5/16-18	18	19	24	26
3/8-16	31	34	42	46
7/16-14	50	55	67	74
1/2-13	76	84	102	113
9/16-12	109	121	148	163
5/8-11	151	167	204	225
3/4-10	268	296	362	400
7/8-9	432	477	583	644
1-8	647	716	874	966

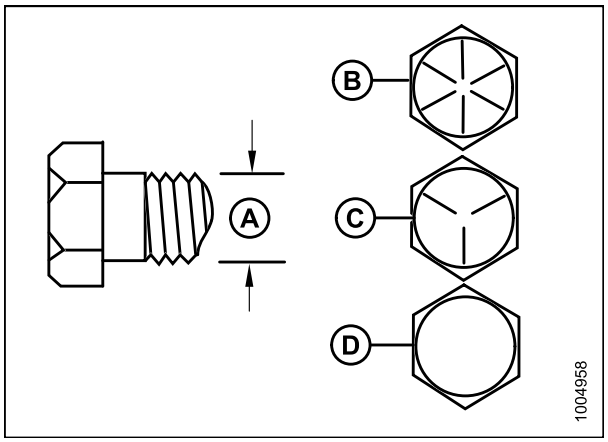

Figure 2.3: Bolt Grades

A - Nominal Size **B - SAE-8**
C - SAE-5 **D - SAE-2**

Table 2.4 SAE Grade 8 Bolt and Grade 8 Free Spinning Nut

Nominal Size (A)	Torque (ft·lbf) (*in·lbf)		Torque (N·m)	
	Min.	Max.	Min.	Max.
1/4-20	*150	*165	16.8	18.6
5/16-18	26	28	35	38
3/8-16	46	50	61	68
7/16-14	73	81	98	109
1/2-13	111	123	150	166
9/16-12	160	177	217	239
5/8-11	221	345	299	330
3/4-10	393	435	531	587
7/8-9	633	700	855	945
1-8	863	954	1165	1288

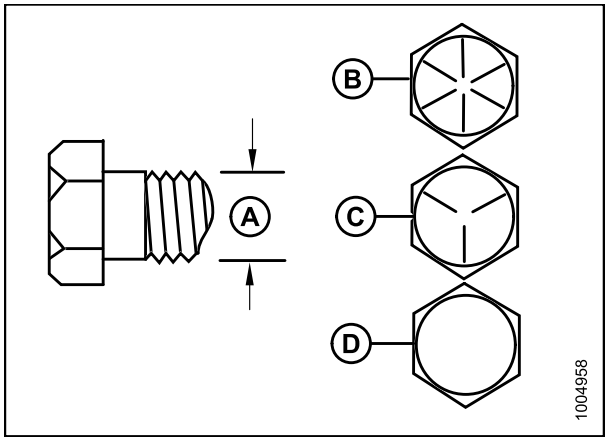

Figure 2.4: Bolt Grades

A - Nominal Size **B - SAE-8**
C - SAE-5 **D - SAE-2**

2.1.2 Metric Bolt Specifications

Table 2.5 Metric Class 8.8 Bolts and Class 9 Free Spinning Nut

Nominal Size (A)	Torque (ft·lbf) (*in·lbf)		Torque (N·m)	
	Min.	Max.	Min.	Max.
3-0.5	*13	*14	1.4	1.6
3.5-0.6	*20	*22	2.2	2.5
4-0.7	*29	*32	3.3	3.7
5-0.8	*59	*66	6.7	7.4
6-1.0	*101	*112	11.4	12.6
8-1.25	20	23	28	30
10-1.5	40	45	55	60
12-1.75	70	78	95	105
14-2.0	113	124	152	168
16-2.0	175	193	236	261
20-2.5	341	377	460	509
24-3.0	589	651	796	879

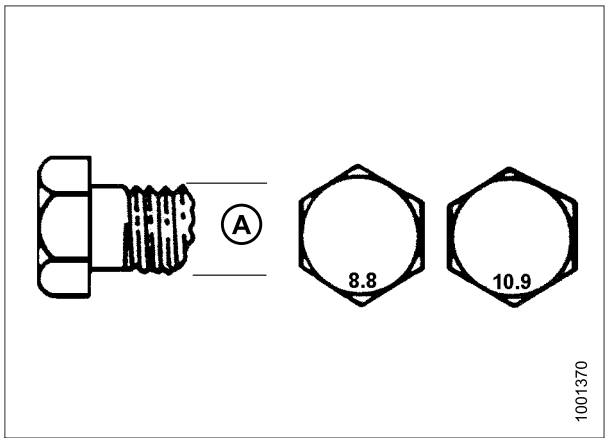

Figure 2.5: Bolt Grades

Table 2.6 Metric Class 8.8 Bolts and Class 9 Distorted Thread Nut

Nominal Size (A)	Torque (ft·lbf) (*in·lbf)		Torque (N·m)	
	Min.	Max.	Min.	Max.
3-0.5	*9	*10	1	1.1
3.5-0.6	*14	*15	1.5	1.7
4-0.7	*20	*22	2.3	2.5
5-0.8	*40	*45	4.5	5
6-1.0	*69	*76	7.7	8.6
8-1.25	*167	*185	18.8	20.8
10-1.5	28	30	37	41
12-1.75	48	53	65	72
14-2.0	77	85	104	115
16-2.0	119	132	161	178
20-2.5	233	257	314	347
24-3.0	402	444	543	600

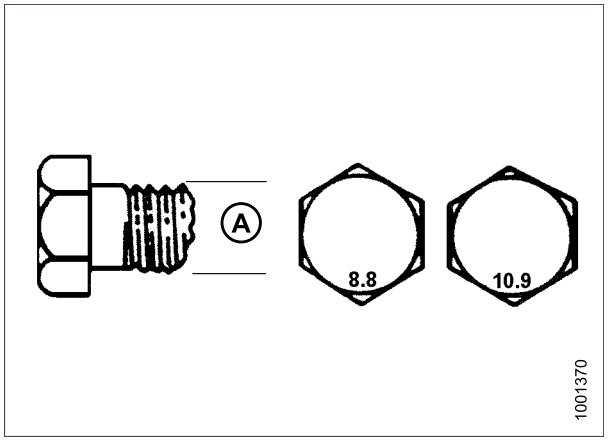

Figure 2.6: Bolt Grades

Table 2.7 Metric Class 10.9 Bolts and Class 10 Free Spinning Nut

Nominal Size (A)	Torque (ft·lbf) (*in·lbf)		Torque (N·m)	
	Min.	Max.	Min.	Max.
3-0.5	*18	*19	1.8	2
3.5-0.6	*27	*30	2.8	3.1
4-0.7	*41	*45	4.2	4.6
5-0.8	*82	*91	8.4	9.3
6-1.0	*140	*154	14.3	15.8
8-1.25	28	31	38	42
10-1.5	56	62	75	83
12-1.75	97	108	132	145
14-2.0	156	172	210	232
16-2.0	242	267	326	360
20-2.5	472	521	637	704
24-3.0	815	901	1101	1217

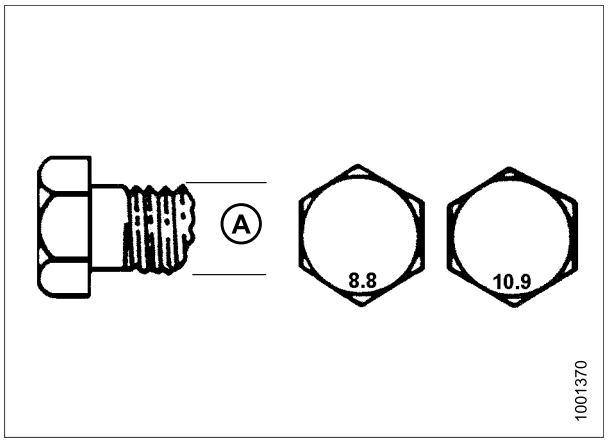

Figure 2.7: Bolt Grades

Table 2.8 Metric Class 10.9 Bolts and Class 10 Distorted Thread Nut

Nominal Size (A)	Torque (ft·lbf) (*in·lbf)		Torque (N·m)	
	Min.	Max.	Min.	Max.
3-0.5	*12	*13	1.3	1.5
3.5-0.6	*19	*21	2.1	2.3
4-0.7	*28	*31	3.1	3.4
5-0.8	*56	*62	6.3	7
6-1.0	*95	*105	10.7	11.8
8-1.25	19	21	26	29
10-1.5	38	42	51	57
12-1.75	66	73	90	99
14-2.0	106	117	143	158
16-2.0	165	182	222	246
20-2.5	322	356	434	480
24-3.0	556	614	750	829

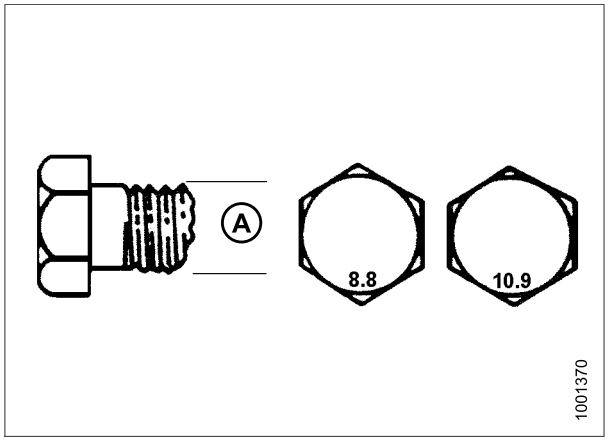

Figure 2.8: Bolt Grades

2.1.3 Metric Bolt Specifications Bolting into Cast Aluminum

Table 2.9 Metric Bolt Bolting into Cast Aluminum

Nominal Size (A)	Bolt Torque			
	8.8 (Cast Aluminum)		10.9 (Cast Aluminum)	
	ft·lbf	N·m	ft·lbf	N·m
M3	–	–	1	–
M4	–	–	2.6	4
M5	–	–	5.5	8
M6	6	9	9	12
M8	14	20	20	28
M10	28	40	40	55
M12	52	70	73	100
M14	–	–	–	–
M16	–	–	–	–

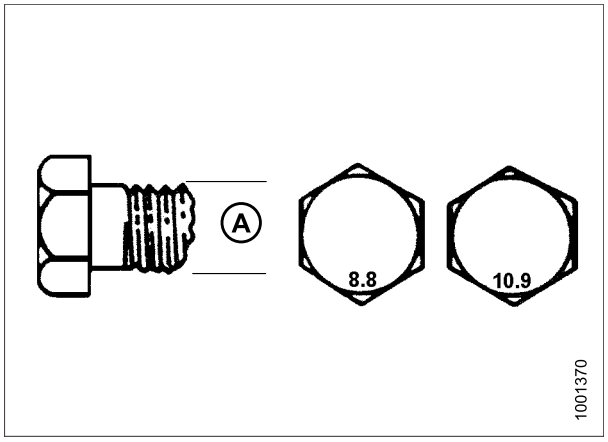

Figure 2.9: Bolt Grades

2.1.4 Flare-Type Hydraulic Fittings

1. Check flare (A) and flare seat (B) for defects that might cause leakage.
2. Align tube (C) with fitting (D), and thread nut (E) onto fitting without lubrication until contact has been made between the flared surfaces.
3. Torque the fitting nut (E) to the specified number of flats from finger tight (FFFT) or to a given torque value shown in Table *2.10 Flare-Type Hydraulic Tube Fittings, page 13*.
4. To prevent the fitting (D) from rotating, use two wrenches. Place one wrench on the fitting body (D), and tighten the nut (E) with the other wrench to the torque shown.
5. Assess the final condition of the connection.

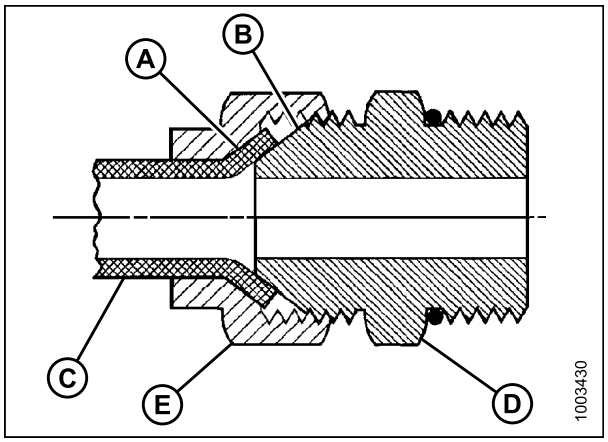

Figure 2.10: Hydraulic Fitting

Table 2.10 Flare-Type Hydraulic Tube Fittings

SAE No.	Tube Size O.D. (in.)	Thread Size (in.)	Nut Size across Flats (in.)	Torque Value[1]		Flats from Finger Tight (FFFT)	
				ft·lbf	N·m	Flats	Turns
3	3/16	3/8	7/16	6	8	1	1/6
4	1/4	7/16	9/16	9	12	1	1/6
5	5/16	1/2	5/8	12	16	1	1/6
6	3/8	9/16	11/16	18	24	1	1/6
8	1/2	3/4	7/8	34	46	1	1/6
10	5/8	7/8	1	46	62	1	1/6
12	3/4	1-1/16	1-1/4	75	102	3/4	1/8
14	7/8	1-3/8	1-3/8	90	122	3/4	1/8
16	1	1-5/16	1-1/2	105	142	3/4	1/8

1. Torque values shown are based on lubricated connections as in reassembly.

2.1.5 O-Ring Boss (ORB) Hydraulic Fittings (Adjustable)

1. Inspect O-ring (A) and seat (B) for dirt or obvious defects.
2. Back off the lock nut (C) as far as possible. Ensure that washer (D) is not loose and is pushed toward the lock nut (C) as far as possible.
3. Check that O-ring (A) is **NOT** on the threads, and adjust if necessary.
4. Apply hydraulic system oil to the O-ring (A).

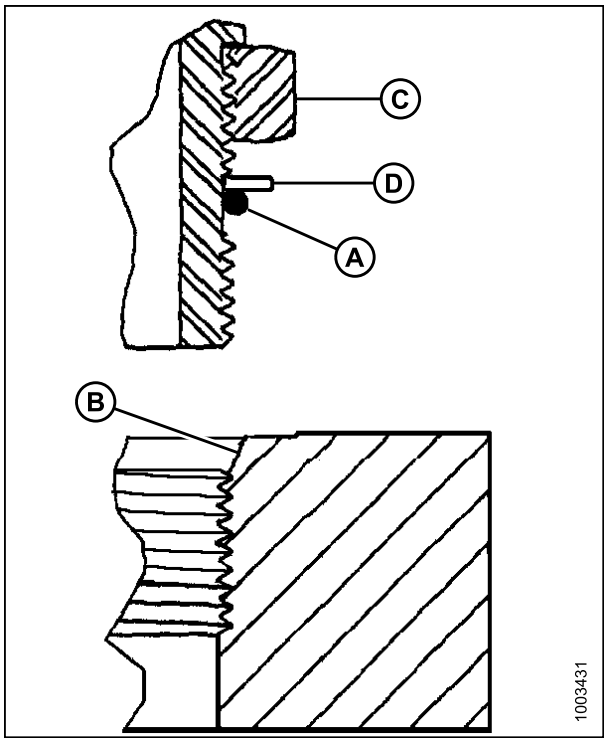

Figure 2.11: Hydraulic Fitting

5. Install fitting (B) into port until back up washer (D) and O-ring (A) contact the part face (E).
6. Position angle fittings by unscrewing no more than one turn.
7. Turn lock nut (C) down to washer (D) and tighten to torque shown. Use two wrenches, one on the fitting (B) and the other on the lock nut (C).
8. Check the final condition of the fitting.

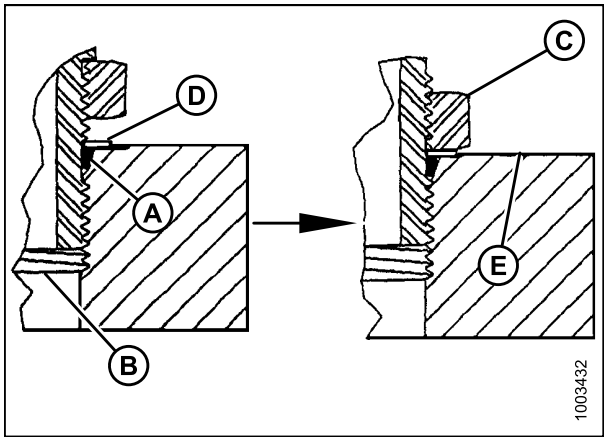

Figure 2.12: Hydraulic Fitting

Table 2.11 O-Ring Boss (ORB) Hydraulic Fittings (Adjustable)

SAE Dash Size	Thread Size (in.)	Torque Value[2]	
		ft·lbf (*in·lbf)	N·m
-3	3/8-24	*106–115	12–13
-4	7/16–20	14–15	19–21
-5	1/2–20	15–24	21–33
-6	9/16–18	19–21	26–29
-8	3/4–16	34–37	46–50
-10	7/8–14	55–60	75–82
-12	1-1/16-12	88–97	120–132
-14	1-3/8-12	113–124	153–168
-16	1-5/16-12	130–142	176–193
-20	1-5/8-12	163–179	221–243
-24	1-7/8-12	199–220	270–298

2. Torque values shown are based on lubricated connections as in reassembly.

2.1.6 O-Ring Boss (ORB) Hydraulic Fittings (Non-Adjustable)

1. Inspect O-ring (A) and seat (B) for dirt or obvious defects.
2. Check that O-ring (A) is **NOT** on the threads, and adjust if necessary.
3. Apply hydraulic system oil to the O-ring.
4. Install fitting (C) into port until fitting is hand tight.
5. Torque fitting (C) according to the values in Table *2.12 O-Ring Boss (ORB) Hydraulic Fittings (Non-Adjustable), page 16*.
6. Check the final condition of the fitting.

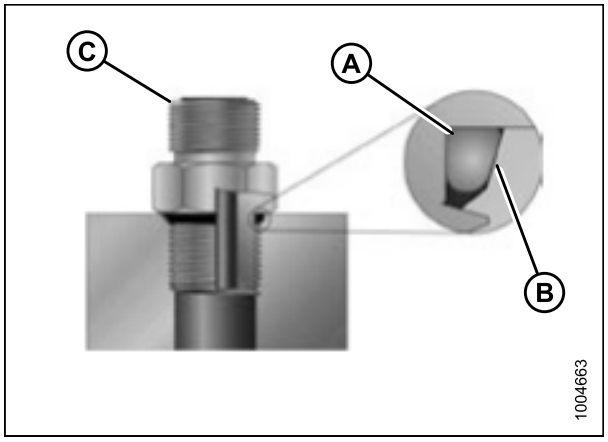

Figure 2.13: Hydraulic Fitting

Table 2.12 O-Ring Boss (ORB) Hydraulic Fittings (Non-Adjustable)

SAE Dash Size	Thread Size (in.)	Torque Value[3]	
		ft·lbf (*in·lbf)	N·m
-3	3/8-24	*106–115	12–13
-4	7/16–20	14–15	19–21
-5	1/2–20	15–24	21–33
-6	9/16–18	19–21	26–29
-8	3/4–16	34–37	46–50
-10	7/8–14	55–60	75–82
-12	1-1/16-12	88–97	120–132
-14	1-3/8-12	113–124	153–168
-16	1-5/16-12	130–142	176–193
-20	1-5/8-12	163–179	221–243
-24	1-7/8-12	199–220	270–298

3. Torque values shown are based on lubricated connections as in reassembly.

2.1.7 O-Ring Face Seal (ORFS) Hydraulic Fittings

To tighten O-ring face seal (ORFS) hydraulic fittings, follow these steps:

1. Check components to ensure that the sealing surfaces and fitting threads are free of burrs, nicks, and scratches or any foreign material.

Figure 2.14: Hydraulic Fitting

2. Apply hydraulic system oil to the O-ring (B).
3. Align the tube or hose assembly so that the flat face of the sleeve (A) or (C) comes in full contact with O-ring (B).
4. Thread tube or hose nut (D) until hand-tight. The nut should turn freely until it is bottomed out.
5. Torque fittings according to the values in Table *2.13 O-Ring Face Seal (ORFS) Hydraulic Fittings, page 18*.

NOTE:
If applicable, hold the hex on the fitting body (E) to prevent rotation of fitting body and hose when tightening the fitting nut (D).

6. Use three wrenches when assembling unions or two hoses together.
7. Check the final condition of the fitting.

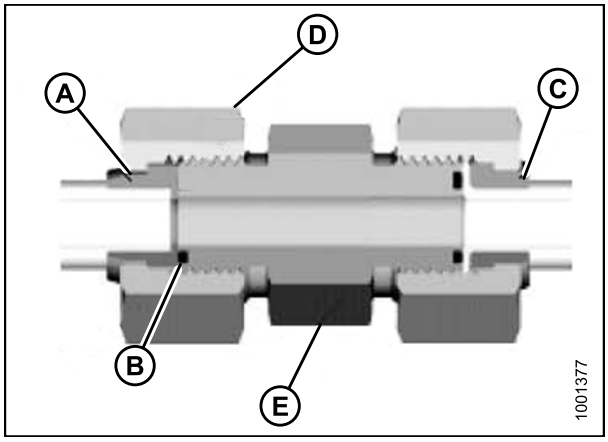

Figure 2.15: Hydraulic Fitting

Table 2.13 O-Ring Face Seal (ORFS) Hydraulic Fittings

SAE Dash Size	Thread Size (in.)	Torque Value[4]	
		ft·lbf (*in·lbf)	N·m
-3	Note[5]	–	–
-4	9/16–18	18–21	25–28
-5	Note[5]	–	–
-6	11/16-16	29–32	40–44
-8	13/16-16	41–45	55–61
-10	1–14	59–65	80–88
-12	1-3/16-12	85–94	115–127
-14	Note[5]	–	–
-16	1-7/16-12	111–122	150–165
-20	1-11/16-12	151–167	205–226
-24	2–12	232–256	315–347
-32	2-1/2-12	376–414	510–561

4. Torque values and angles shown are based on lubricated connection as in reassembly.
5. O-ring face seal type end not defined for this tube size.

3 Conversion Chart

Quantity	Inch-Pound Units		Factor	SI Units (Metric)	
	Unit Name	Abbreviation		Unit Name	Abbreviation
Area	Acres	acres	x 0.4047 =	Hectares	ha
Flow	US Gallons per Minute	gpm	x 3.7854 =	Liters per Minute	L/min
Force	Pounds Force	lbf	x 4.4482 =	Newtons	N
Length	Inch	in.	x 25.4 =	Millimeters	mm
	Foot	ft.	x 0.305 =	Meters	m
Power	Horsepower	hp	x 0.7457 =	Kilowatts	kW
Pressure	Pounds per Square Inch	psi	x 6.8948 =	Kilopascals	kPa
			x .00689 =	Megapascals	MPa
			÷ 14.5038 =	Bar (Non-SI)	bar
Torque	Pound Feet or Foot Pounds	ft·lbf	x 1.3558 =	Newton Meters	N·m
	Pound Inches or Inch Pounds	in·lbf	x 0.1129 =	Newton Meters	N·m
Temperature	Degrees Fahrenheit	˚F	(˚F-32) x 0.56 =	Celsius	˚C
Velocity	Feet per Minute	ft/min	x 0.3048 =	Meters per Minute	m/min
	Feet per Second	ft/s	x 0.3048 =	Meters per Second	m/s
	Miles per Hour	mph	x 1.6063 =	Kilometres per Hour	km/h
Volume	US Gallons	US gal	x 3.7854 =	Liters	L
	Ounces	oz.	x 29.5735 =	Milliliters	ml
	Cubic Inches	$in.^3$	x 16.3871 =	Cubic Centimetres	cm^3 or cc
Weight	Pounds	lbs	x 0.4536 =	Kilograms	kg

4 Definitions

The following terms and acronyms may be used in this manual.

Term	Definition
API	American Petroleum Institute
ASTM	American Society of Testing and Materials
Bolt	A headed and externally threaded fastener that is designed to be paired with a nut
Cab-forward	Windrower operation with the Operator and cab facing in the direction of travel
CDM	Cab display module on a self-propelled windrower
Center-link	A hydraulic cylinder link between the header and the machine to which it is attached: It is used to change header angle
CGVW	Combined vehicle gross weight
D-Series header	MacDon rigid draper header
DK	Double knife
DKD	Double-knife drive
DDD	Double-draper drive
DR	Double reel
Finger tight	Finger tight is a reference position where sealing surfaces or components are making contact with each other and the fitting has been tightened to a point where the fitting is no longer loose
FFFT	Flats from finger tight
GSL	Ground speed lever
GVW	Gross vehicle weight
Hard joint	A joint made with the use of a fastener where the joining materials are highly incompressible
Header	A machine that cuts and lays crop into a windrow and is attached to a self-propelled windrower
Hex key	A hex key or Allen key (also known by various other synonyms) is a tool of hexagonal cross-section used to drive bolts and screws that have a hexagonal socket in the head (internal-wrenching hexagon drive)
HDS	Hydraulic deck shift
hp	Horsepower
ISC	Intermediate Speed Control
JIC	Joint Industrial Council: a standards body that developed the standard sizing and shape for original 37° flared fitting
Knife	A cutting device which uses a reciprocating cutter (also called a sickle)
n/a	Not applicable
Nut	An internally threaded fastener that is designed to be paired with a bolt
NPT	National Pipe Thread: a style of fitting used for low pressure port openings. Threads on NPT fittings are uniquely tapered for an interference fit

DEFINITIONS

Term	Definition
ORB	O-ring boss: a style of fitting commonly used in port opening on manifolds, pumps and motors
ORFS	O-ring face seal: a style of fitting commonly used for connecting hoses and tubes. This style of fitting is also commonly called ORS, which stands for O-ring seal
PTO	Power Take-Off
RoHS (Reduction of Hazardous Substances)	A directive by the European Union to restrict the use of certain hazardous substances (such as hexavalent chromium used in some yellow zinc platings)
SAE	Society of Automotive Engineers
Screw	A headed and externally threaded fastener that threads into preformed threads or forms its own thread in one of the mating parts
SDD	Single-draper drive
Self-Propelled (SP) Windrower	Self-propelled machine consisting of a power unit with a header
SK	Single knife
SKD	Single-knife drive
Soft joint	A joint made with the use of a fastener where the joining materials are compressible or experience relaxation over a period of time
spm	Strokes per minute
SR	Single reel
Tractor	Agricultural type tractor
Truck	A four-wheel highway/road vehicle weighing no less than 7500 lbs (3400 kg)
Timed knife drive	Synchronized motion applied at the cutterbar to two separately driven knives from a single hydraulic motor
Tension	Axial load placed on a bolt or screw, usually measured in pounds (lb) or Newtons (N)
TFFT	Turns from finger tight
Torque	The product of a force X lever arm length, usually measured in foot-pounds (ft·lbf) or Newton-meters (N·m)
Torque angle	A tightening procedure where the fitting is assembled to a precondition (finger tight) and then the nut is turned further a number of degrees or a number of flats to achieve its final position
Torque-tension	The relationship between the assembly torque applied to a piece of hardware and the axial load it induces in the bolt or screw
UCA	Upper cross auger
Untimed knife drive	Unsynchronized motion applied at the cutterbar to two separately driven knives from a single hydraulic motor or two hydraulic motors
Washer	A thin cylinder with a hole or slot located in the center and is to be used as a spacer, load distribution element, or a locking mechanism
Windrower	Power unit of a self-propelled header

5 Unloading Header

Perform all procedures in this chapter in the order in which they are listed.

5.1 Unloading Header from Trailer

CAUTION

To avoid injury to bystanders from being struck by machinery, do not allow people to stand in unloading area.

CAUTION

Equipment used for unloading must meet or exceed the requirements specified below. Using inadequate equipment may result in chain breakage, vehicle tipping, or machine damage.

Table 5.1 Lifting Vehicle

	15–25 Foot Header	30–40 Foot Header
Minimum Lifting Capacity (at 48 in. (1220 mm) from back end of forks).	5000 lb (2270 kg)	7000 lb (3178 kg)
Minimum Fork Length	78 in. (1981 mm)	

IMPORTANT:
Forklifts are normally rated for a load located 24 inches (610 mm) from back end of forks. To obtain forklift capacity at 48 inches (1220 mm), check with your forklift distributor.

To unload headers from a trailer, follow these steps:

1. Move trailer into position, and block trailer wheels.
2. Lower trailer storage stands.

IMPORTANT:
Ensure that forks extend beyond the inner support prior to lifting the header. If the forks do NOT lift at the supports, damage to the header may occur.

IMPORTANT:
Avoid lifting the second header and ensure the forks do not interfere with the shipping frame. If the forks contact the second header, damage to the headers may occur.

3. Approach the header, and slide forks (A) underneath the shipping support (B) of header as far as possible without contacting the shipping support (C) of opposite header.
4. Remove hauler's tie-down straps and chains.
5. Slowly raise header off trailer deck.

WARNING

Be sure forks are secure before moving away from load. Stand clear when lifting.

6. Back up until unit clears trailer, and slowly lower to 6 in. (150 mm) from ground.

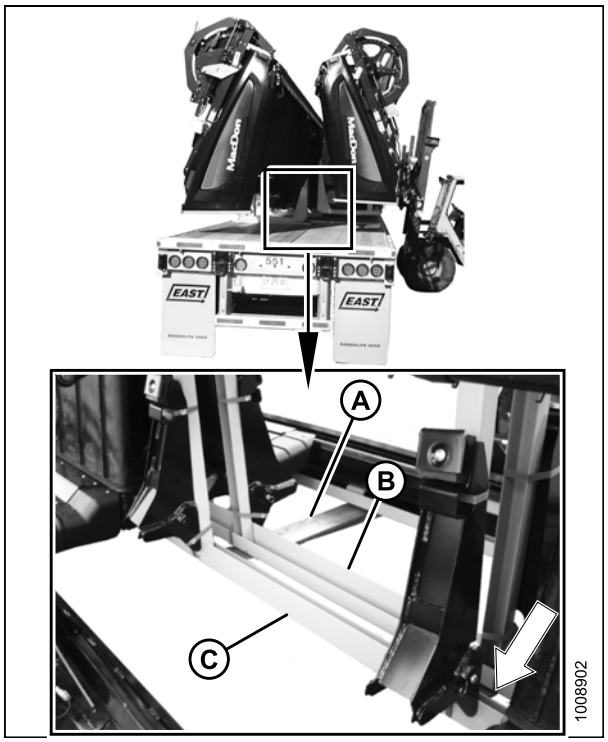

Figure 5.1: Header Shipping Supports

7. Take header to storage or setup area.
8. Repeat above steps for second header.
9. Check for shipping damage and missing parts.

5.2 Lowering Header

The procedure for lowering the header from the trailer varies depending on whether the header has a single or double reel. Refer to the following:

- *5.2.1 Lowering Single-Reel Header, page 25*
- *5.2.2 Lowering Double-Reel Header, page 27*

5.2.1 Lowering Single-Reel Header

Reposition header in preparation for assembly and setup as follows:

1. Choose an area with level ground.
2. Approach header from its underside and place forks under top of shipping frame.
3. Attach a chain at each end of frame and secure other end to lifting vehicle.

Figure 5.2: Top of Shipping Frame

CAUTION

Stand clear when lowering, as machine may swing.

4. Back up SLOWLY while lowering forks until header is just above the ground. Refer to the four positions in the illustration.

Figure 5.3: Backing Up

5. Place 6 in. (150 mm) blocks (A) under each end and center of cutterbar, and lower header onto blocks.
6. Remove chain, and move lifting vehicle to rear of header.
7. Attach chain to center-link anchor on frame tube, and raise rear of header so that stand can be lowered.

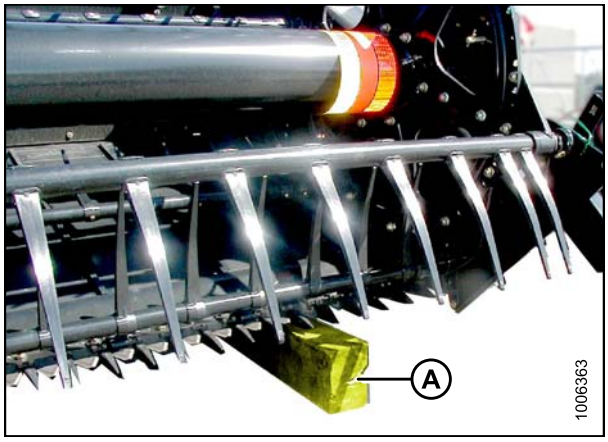

Figure 5.4: Blocks at Each End and Center of Cutterbar

8. Lower header stand by pulling pin (A), lowering stand (B), and releasing pin (A) to secure stand in place.
9. Lower header onto stand.

NOTE:
If ground is soft, place a block under the stand.

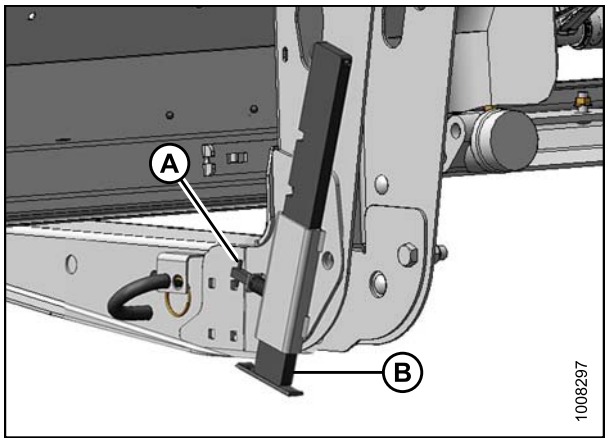

Figure 5.5: Header Stand

5.2.2 Lowering Double-Reel Header

Reposition header in preparation for assembly and setup as follows:

1. Choose an area with level ground.
2. Drive lifting vehicle to approach header from its underside.

IMPORTANT:
Do NOT lift header at this location. This procedure is only for laying the machine over into working position.

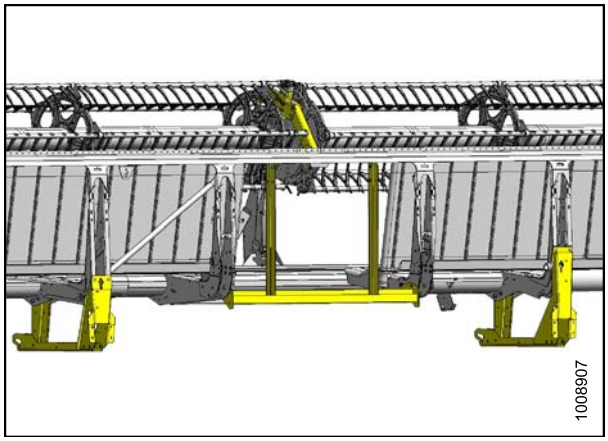

Figure 5.6: Underside of Header Lift Location

3. Attach a chain to shipping support at center reel arm.

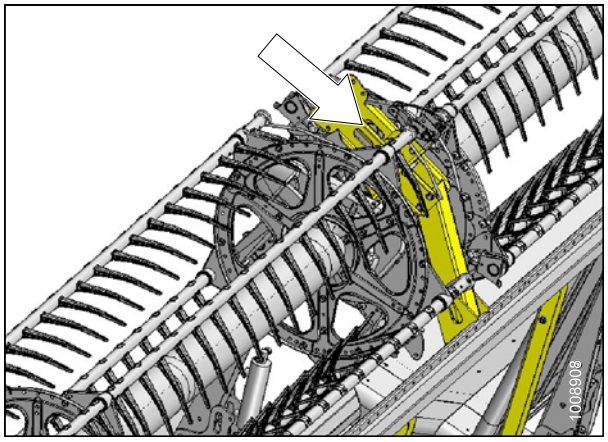

Figure 5.7: Shipping Support

CAUTION

Stand clear when lowering, as machine may swing.

4. Back up SLOWLY while lowering forks until header is just above the ground. Refer to the four positions in the illustration.

Figure 5.8: Unloaded Header on Level Ground

5. Place 6 in. (150 mm) blocks (A) under each end and center of cutterbar, and lower header onto blocks.
6. Remove chain, and move lifting vehicle to rear of header.
7. Attach chain to center-link anchor on frame tube, and raise rear of header so that stand can be lowered.

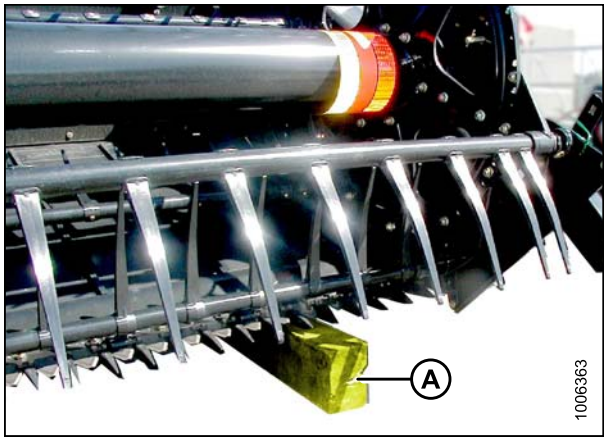

Figure 5.9: Blocks at Each End and Center of Cutterbar

8. Lower header stand by pulling pin (A), lowering stand (B), and releasing pin (A) to secure stand in place.
9. Lower header onto stand.

   NOTE:
   If ground is soft, place a block under the stand.

10. Remove chain.

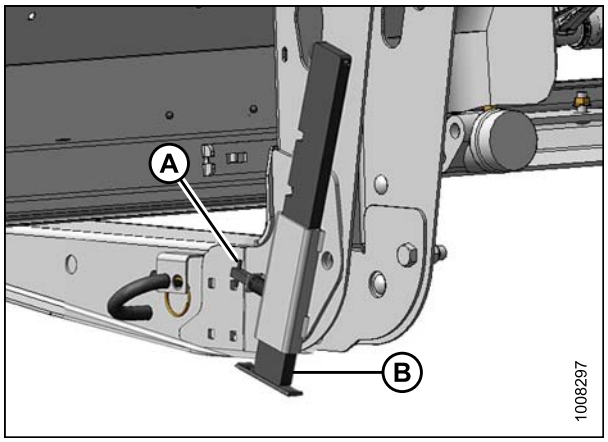

Figure 5.10: Header Stand

5.3 Removing Shipping Supports

The removable supports are painted yellow.

NOTE:
Unless otherwise specified, discard supports and all shipping material and hardware.

1. Cut straps and remove header boots from shipping support. Set boots aside for reinstallation.

Figure 5.11: Straps, Header Boots, and Shipping Supports

2. Remove six bolts securing lower support to header legs, and remove support.
3. Remove four bolts securing upper support to header legs, and remove support.

Figure 5.12: Upper and Lower Supports

4. Remove two bolts on each center leg shipping support, and remove stands.

Figure 5.13: Center Leg Shipping Support and Stands

5. If outer leg shipping supports are installed, remove as follows:
   a. Remove two bolts attaching stand to the leg under the header.
   b. Remove pin at top of stand, and remove stand.

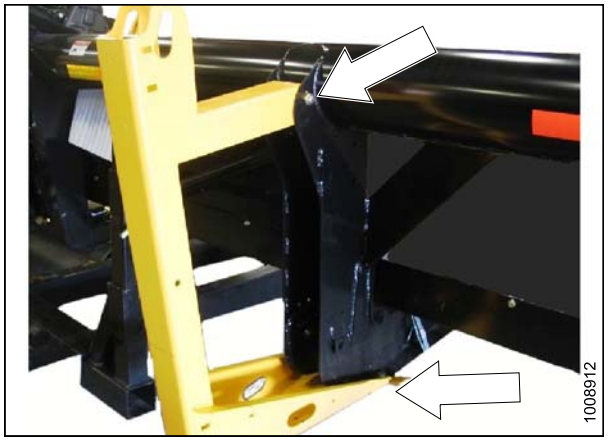

Figure 5.14: Outer Leg Shipping Supports

6. **Single Reel Only:** Cut banding securing reel to cutterbar and backtube.

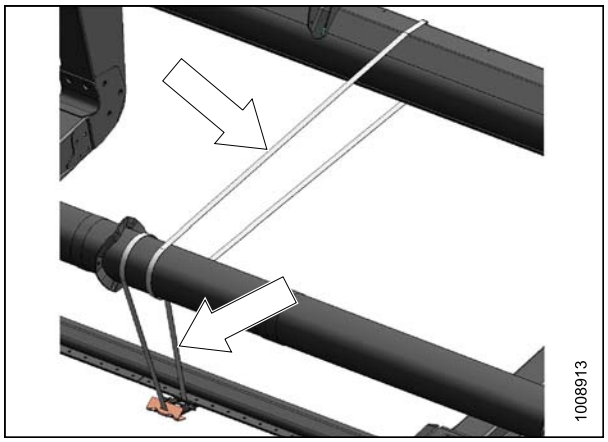

Figure 5.15: Single Reel

7. Remove reel anti-rotation brace between reel and endsheet.

Figure 5.16: Anti-Rotation Brace

5.4 Attaching Reel Lift Cylinders

CAUTION

Braces on reel arms keep reel from sliding forward. Do NOT remove.

1. Remove two top bolts (A) on outboard reel arm support—both ends.

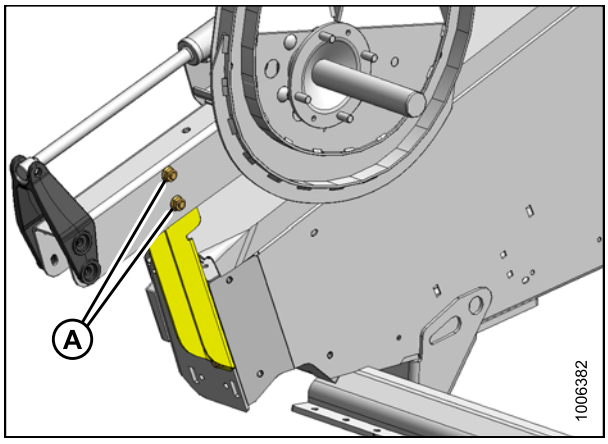

Figure 5.17: Outboard Reel Arm Support

2. **Double-Reel Header Only:** Remove two top bolts (A) on center reel arm.

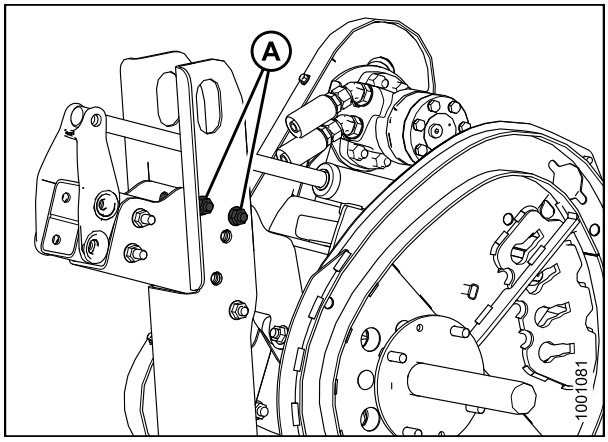

Figure 5.18: Double-Reel Header Only

3. Position sling around the reel tube close to outboard end of reel, and attach sling to a forklift (or equivalent).
4. Remove shipping wire/banding from cylinder, and remove pins from lug and arm.
5. Lift reel so the reel lift cylinder mounting holes line up with lug on endsheet and hole in reel arm.

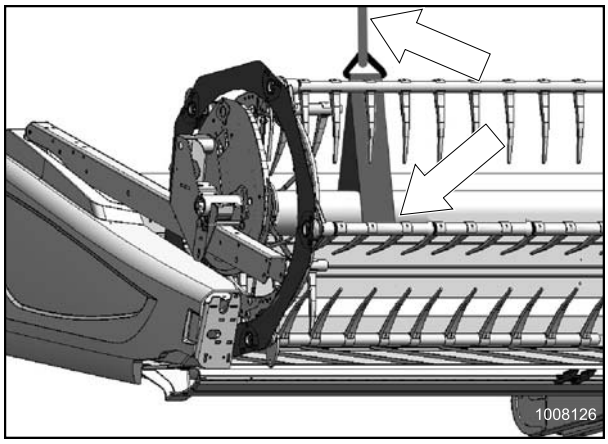

Figure 5.19: Reel Tube

6. Secure cylinder to endsheet and reel arm with pins as shown.

   NOTE:
   Insert cotter pin **OUTBOARD** at reel arm, and insert cotter pin **INBOARD** at endsheet.

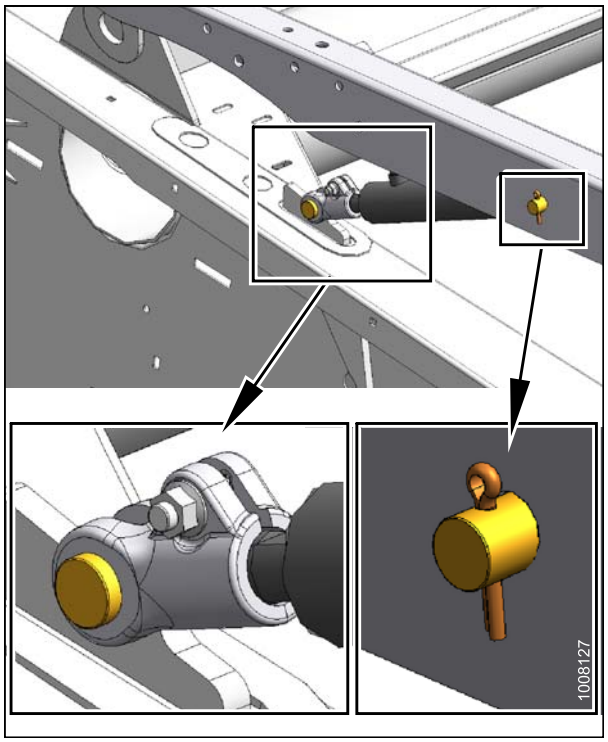

Figure 5.20: Right-Hand Shown – Left-Hand Opposite

NOTE:
Step *7, page 34* to Step *14, page 35* apply **ONLY** to **Double-Reel headers**. For **Single-Reel headers**, go to Step *15, page 35*.

7. **Double Reel Only:** Move reel safety props (A) to engaged position (B) at outer arm.

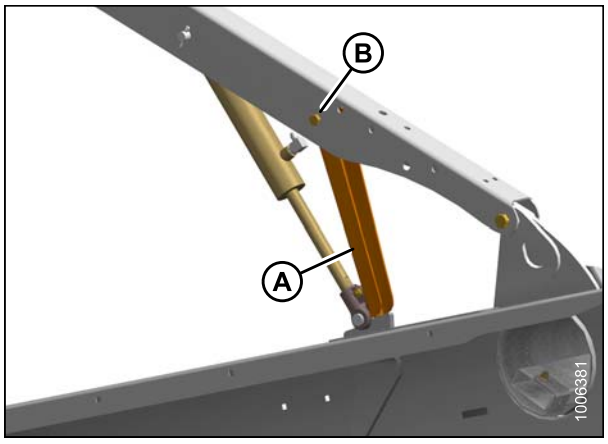

Figure 5.21: Reel Safety Props

8. **Double Reel Only:** Remove sling (A), and reposition around reel tube near reel center support arm.
9. **Double Reel Only:** Lift reel to gain access to the center lift cylinder.
10. **Double Reel Only:** Remove shipping wire and banding from center reel lift cylinder.

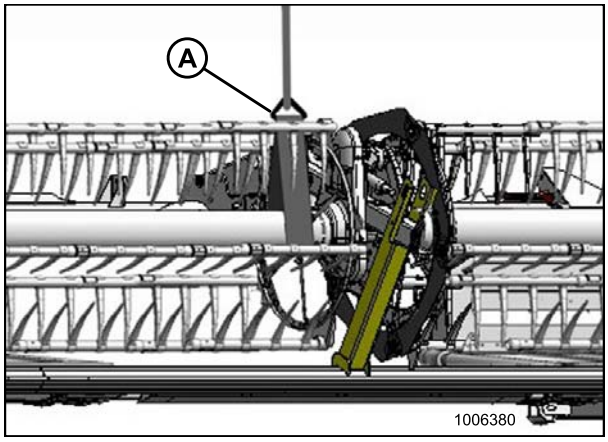

Figure 5.22: Double-Reel Header Only

11. **Double Reel Only:** Remove socket head bolt and nut from cylinder rod end.
12. **Double Reel Only:** Attach rod end of cylinder to reel arm with socket head bolt and nut. Access hardware through holes in reel arm braces.
13. **Double Reel Only:** Remove pin at barrel end of cylinder.
14. **Double Reel Only:** Adjust reel height so pin can be installed at barrel end of cylinder and mounting structure.

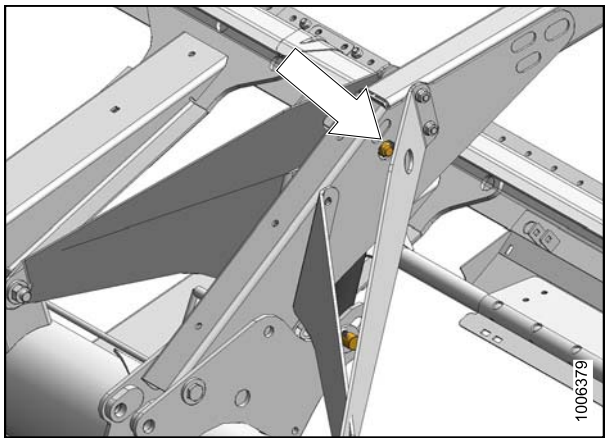

Figure 5.23: Reel Arm Braces

15. Move reel safety props (A) to engaged position (B) at opposite outboard reel arm.

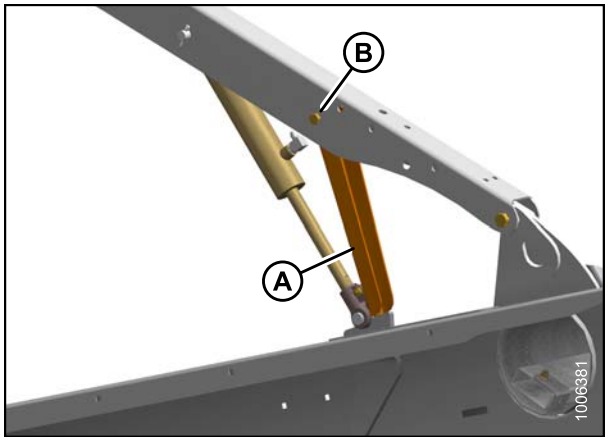

Figure 5.24: Reel Safety Props

16. Remove sling, and reposition around reel tube near opposite outboard reel arm.
17. Remove shipping wire and banding from cylinder, and remove pins from lug and arm.

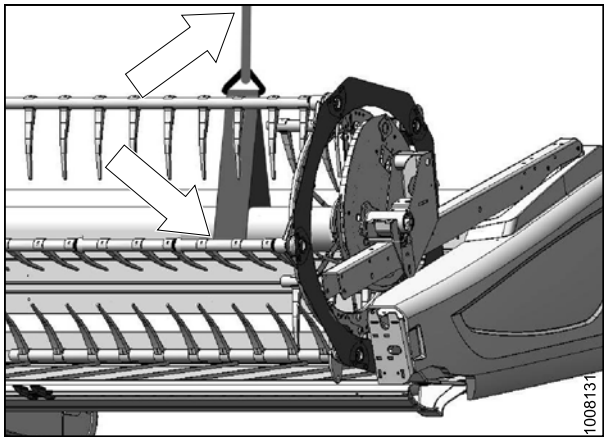

Figure 5.25: Outboard Reel Arm

18. Lift reel so that reel lift cylinder mounting holes line up with lug on endsheet and hole in reel arm.
19. Secure cylinder to endsheet and reel arm with pins as shown.

    NOTE:
    Insert cotter pin **OUTBOARD** at reel arm, and insert cotter pin **INBOARD** at endsheet.

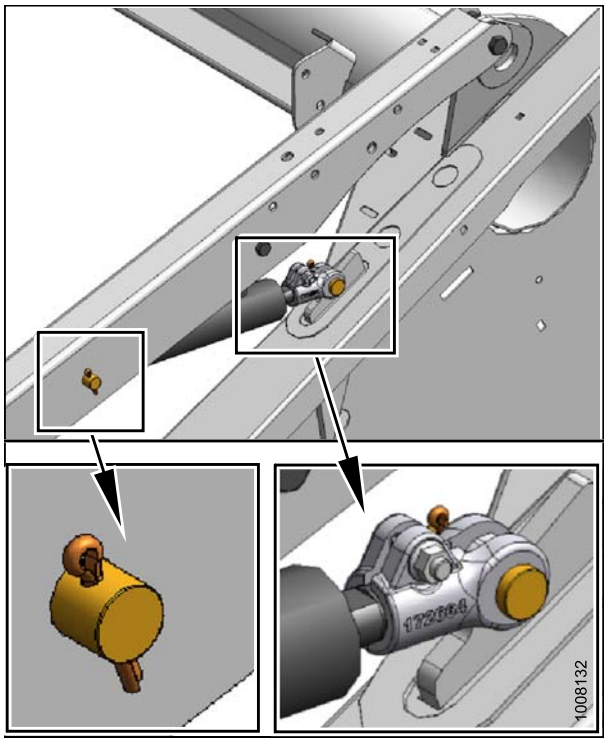

Figure 5.26: Cylinder and Endsheet

20. **Double Reel Only:** Disengage center reel arm shipping support from cutterbar, and remove.

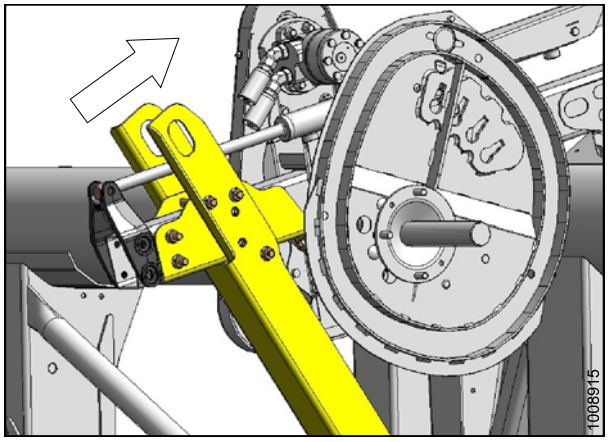

Figure 5.27: Center Reel Shipping Support (Double-Reel Header Only)

21. Remove two bolts (A) from reel arm support at endsheet, and remove support. Repeat at other side.

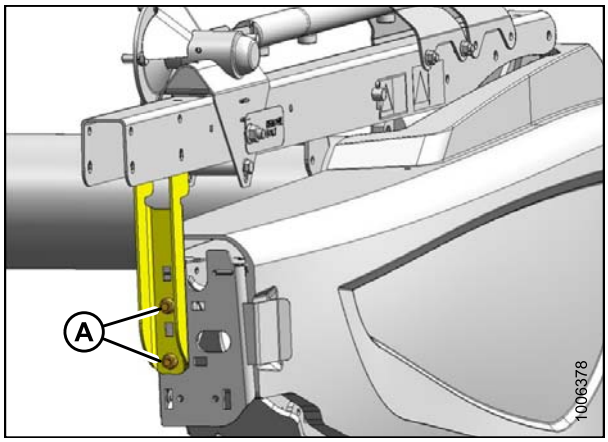

Figure 5.28: Outboard Reel Arm Supports

22. Remove bolts and tags locking reel fore-aft position at outer reel arms.

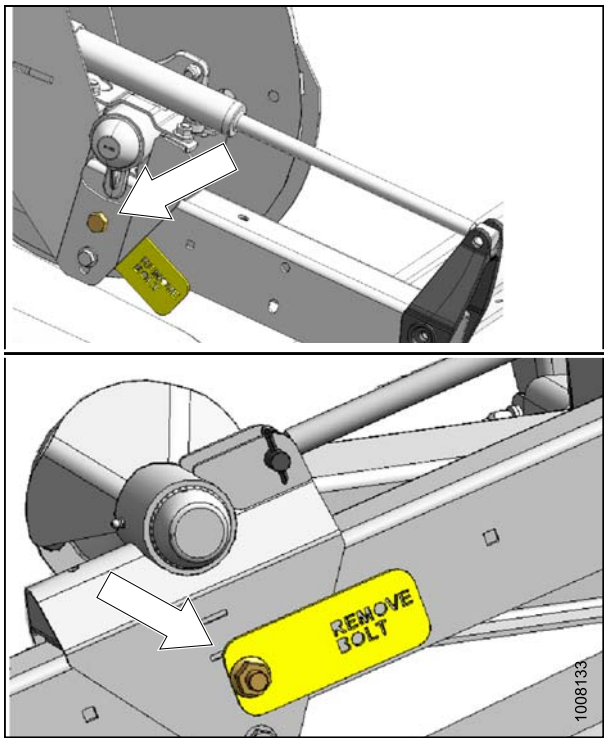

Figure 5.29: Right-Hand and Left-Hand Arm

23. **Double Reel Only:** Remove bolt locking reel fore-aft position at center reel arm, and remove center reel arm shipping channel.

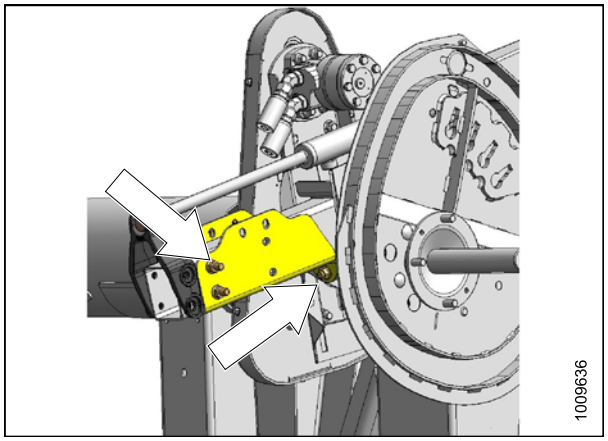

Figure 5.30: Center Reel Arm Shipping Channel (Double-Reel Header Only)

6 Attaching Header to Windrower

IMPORTANT:
To prevent damage to the lift system when lowering header lift linkages without a header or weight box attached to windrower, ensure that float engagement pin is installed in storage location (B) and NOT installed at hole location (A).

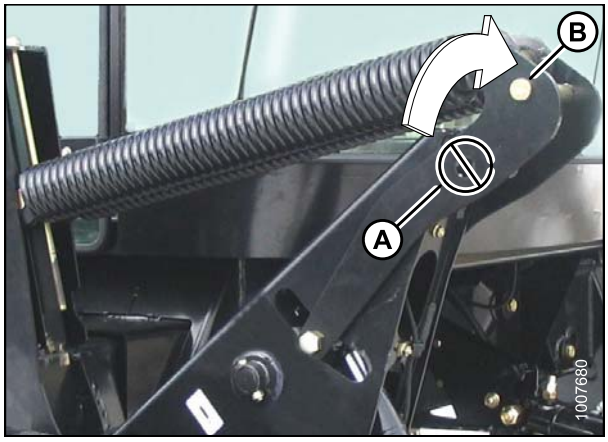

Figure 6.1: Float Engagement Pin in Storage Location

If not installed, attach draper header boots (supplied with header) to windrower lift linkage as follows:

WARNING

Stop self-propelled windrower engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.

1. Remove pin (B) from boot (A).

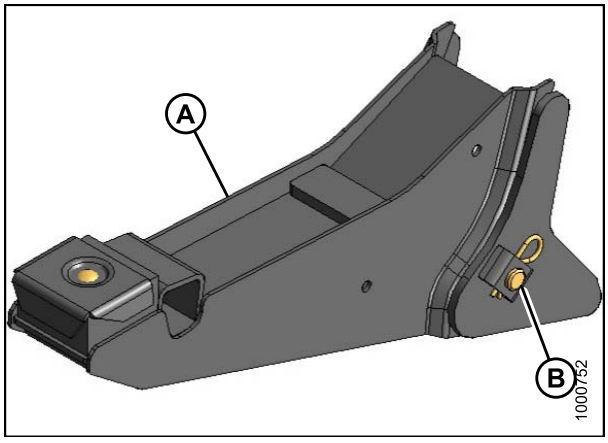

Figure 6.2: Boot and Pin

2. Position boot (B) on lift linkage (A) and reinstall pin (C). Pin may be installed from either side of boot.
3. Secure pin (C) with hairpin (D).
4. Repeat for opposite lift linkage.

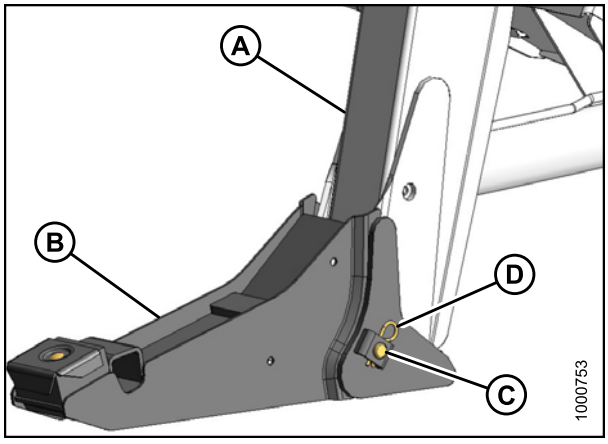

Figure 6.3: Boot, Lift Linkage, and Pin

5. Remove hairpins from pins (A), and remove pins from header legs.

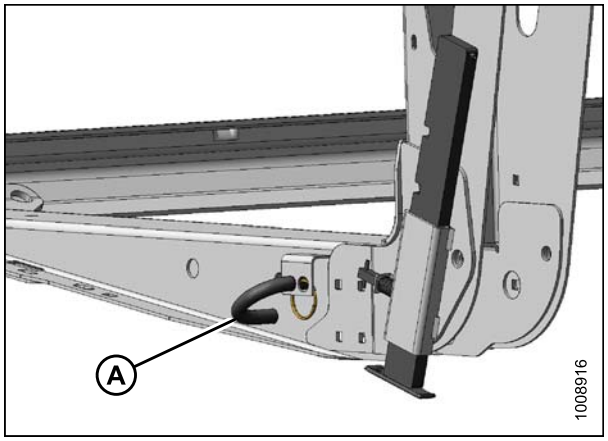

Figure 6.4: Header Leg Pins

CAUTION

Check to be sure all bystanders have cleared the area.

6. Start engine and activate HEADER DOWN switch (A) on the ground speed lever (GSL) to fully retract header lift cylinders.

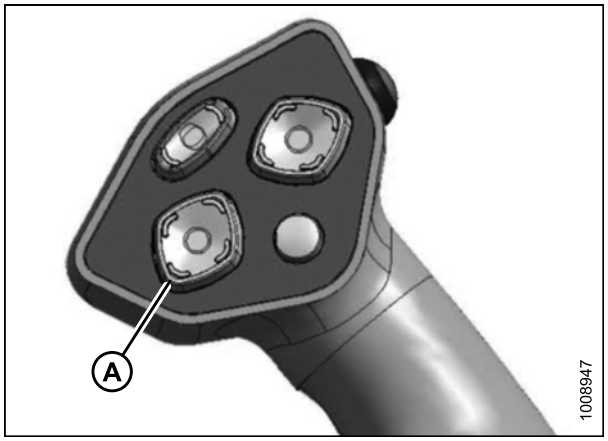

Figure 6.5: GSL

7. Drive windrower forward slowly so that boots (A) enter header legs (B). Continue to drive slowly forward until linkages contact support plates in the lower header legs and header nudges forward.
8. Check that linkages are properly engaged in header legs, contacting support plates.

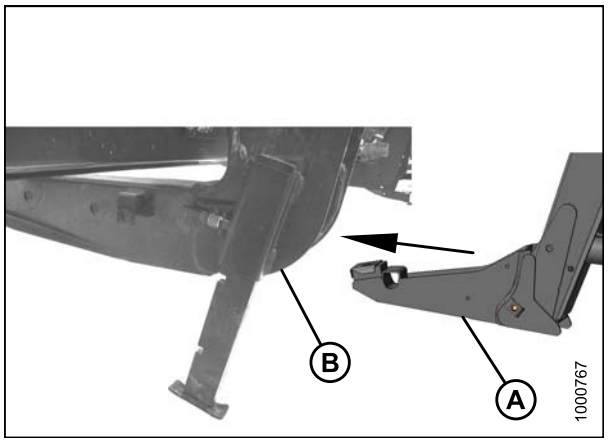

Figure 6.6: Header Leg and Boot

7 Connecting Center-Link

Based on your equipment, refer to the following sections to connect the center-link:

- *7.1 Mechanical Link, page 41*
- *7.2 Hydraulic Link without Self-Alignment Kit, page 43*
- *7.3 Hydraulic Link with Optional Self-Alignment Kit, page 46*

When the center-link is connected, proceed to *8 Connecting Hydraulics, page 49*.

7.1 Mechanical Link

For M100, M105, M150, and M155 windrowers.

WARNING

Stop self-propelled windrower engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.

1. Stop engine and remove key.
2. Loosen nut (A), and rotate barrel (B) to adjust length so that link lines up with header bracket.
3. Install pin (C), and secure with cotter pin.
4. Adjust link to required length for proper header angle by rotating barrel (B). Tighten nut (A) against barrel. A slight tap with a hammer is sufficient.

CAUTION

Check to be sure all bystanders have cleared the area.

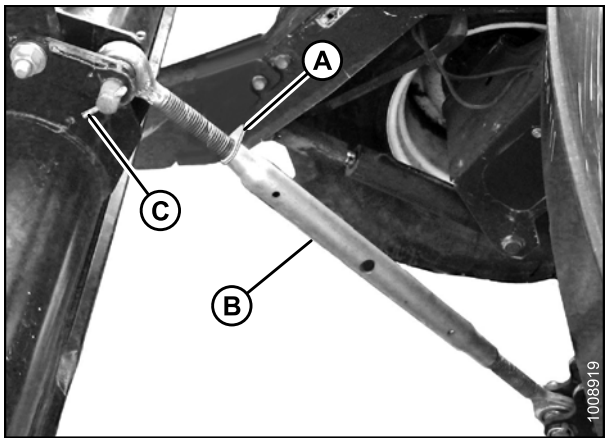

Figure 7.1: Linkage Adjustment

5. Start engine.
6. Raise the header fully with HEADER UP switch (A) on the ground speed lever (GSL).
7. Stop engine and remove key.

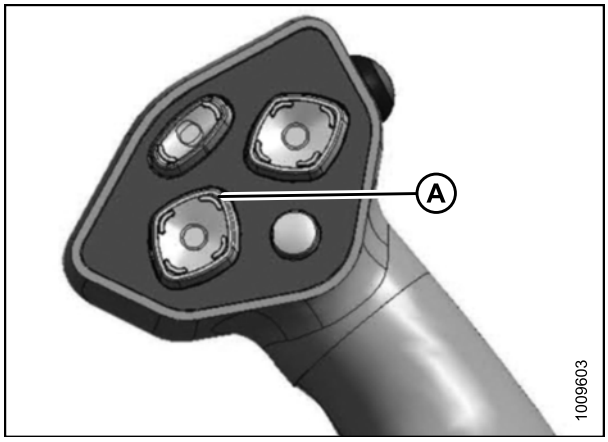

Figure 7.2: GSL

WARNING

To avoid bodily injury or death from unexpected start-up or fall of raised machine, stop engine, remove key, and engage safety props before going under machine for any reason.

8. Engage safety props on both lift cylinders.
9. Install pin (A) through header leg (engaging U-bracket in header leg). Repeat for opposite side of header.
10. Raise header stand (B) to storage position by pulling pin (C), and lifting stand into uppermost position. Release pin (C) to secure stand in place.

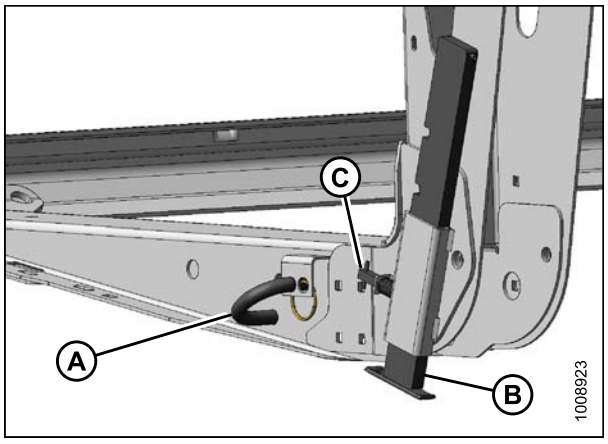

Figure 7.3: Pin and Header Stand in Raised Position

11. Remove pin from storage position (B) in linkage, and insert into hole (A) to engage float springs. Secure with hairpin, and repeat for opposite side of windrower.
12. Disengage safety props.

CAUTION

Check to be sure all bystanders have cleared the area.

Figure 7.4: Float Springs Engaged

13. Start engine and activate HEADER DOWN switch (A) on GSL to lower header fully.

WARNING

Stop self-propelled windrower engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.

14. Stop engine and remove key.

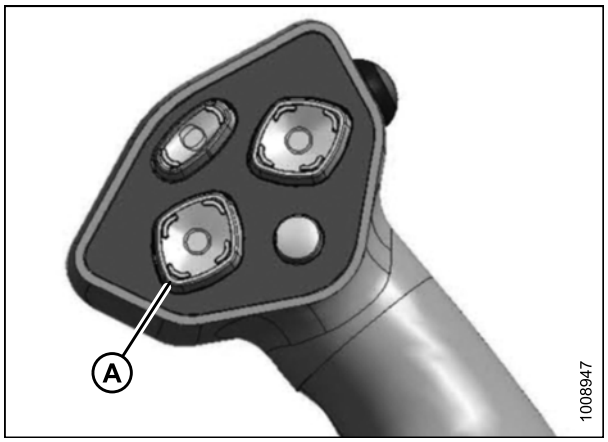

Figure 7.5: GSL

7.2 Hydraulic Link without Self-Alignment Kit

Standard for M200 and M205 windrowers. Optional for M105, M150, and M155 windrowers.

1. Stop engine and remove key.
2. Relocate the pin (A) at the frame linkage as required to position the hook (B) over the header pin (not shown).

CAUTION

Check to be sure all bystanders have cleared the area.

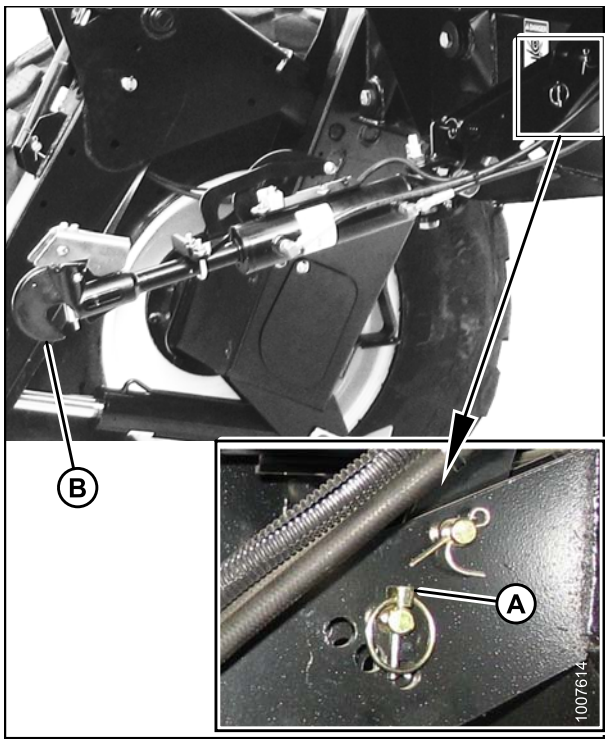

Figure 7.6: Frame Linkage Pin and Hook

3. Start engine, and activate HEADER TILT switches on ground speed lever (GSL) to extend or retract center-link cylinder so that the hook lines-up with the header attachment pin.
4. Stop engine.

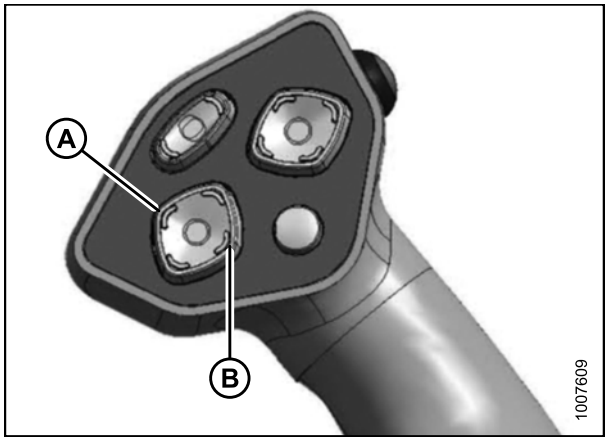

Figure 7.7: GSL

A - HEADER TILT DOWN Switch B - HEADER TILT UP Switch

5. Push down on rod end of link cylinder until hook engages pin on header and is locked.
6. Check that center-link is locked onto header by pulling upward on rod end of cylinder.

Figure 7.8: Center-Link on Header

CAUTION

Check to be sure all bystanders have cleared the area.

7. Start engine.
8. Raise the header fully with HEADER UP switch (A) on the GSL.
9. Stop engine and remove key.

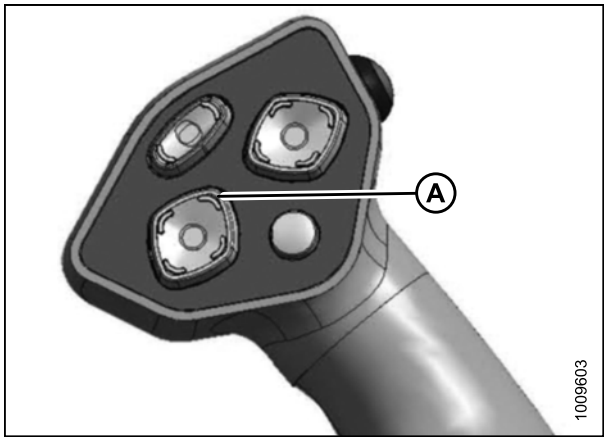

Figure 7.9: GSL

WARNING

To avoid bodily injury or death from unexpected start-up or fall of raised machine, stop engine, remove key, and engage safety props before going under machine for any reason.

10. Engage safety props on both lift cylinders.
11. Install pin (A) through header leg (engaging U-bracket in header leg). Repeat for opposite side of header.
12. Raise header stand (B) to storage position by pulling pin (C), and lifting stand into uppermost position. Release pin (C) to secure stand in place.

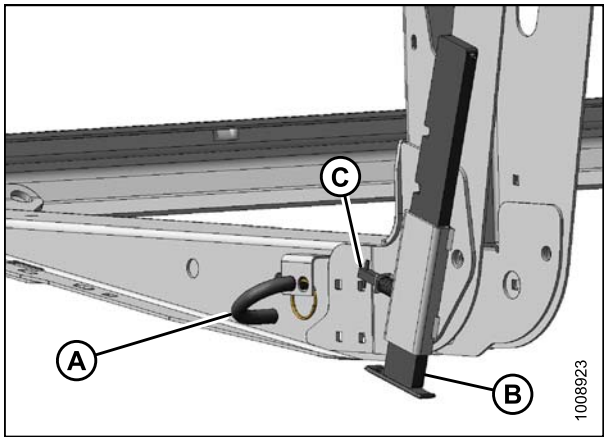

Figure 7.10: Pin and Header Stand in Raised Position

13. Remove pin from storage position (B) in linkage, and insert into hole (A) to engage float springs. Secure with hairpin, and repeat for opposite side of windrower.
14. Disengage safety props.

CAUTION

Check to be sure all bystanders have cleared the area.

Figure 7.11: Float Springs Engaged

15. Start engine and activate HEADER DOWN switch (A) on GSL to lower header fully.

WARNING

Stop self-propelled windrower engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.

16. Stop engine and remove key.

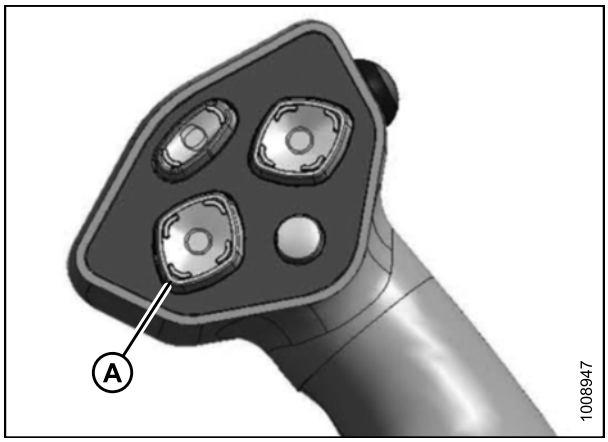

Figure 7.12: GSL

7.3 Hydraulic Link with Optional Self-Alignment Kit

Optional for M150, M155, M200, and M205 windrowers.

1. Adjust position of center-link cylinder with the REEL UP, REEL DOWN, and HEADER TILT switches on the ground speed lever (GSL) to position hook above the header attachment pin.

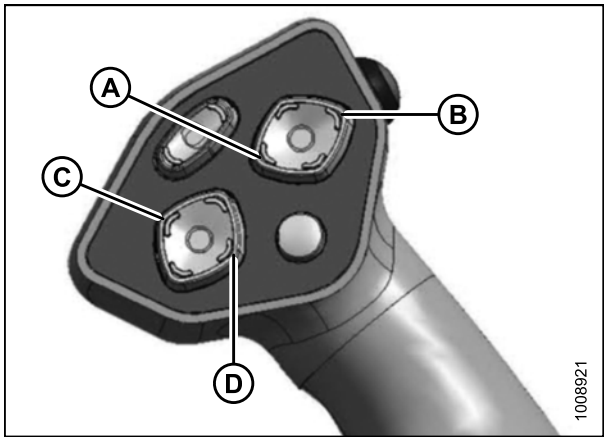

Figure 7.13: GSL

A - REEL DOWN Switch **B - REEL UP Switch**
C - HEADER TILT UP Switch **D - HEADER TILT DOWN Switch**

2. Lower center-link onto header with REEL DOWN switch until it locks into position (handle is down).

Figure 7.14: Center-Link on Header

⚠ CAUTION

Check to be sure all bystanders have cleared the area.

3. Start engine.
4. Raise the header fully with HEADER UP switch (A) on the GSL.
5. Stop engine and remove key.

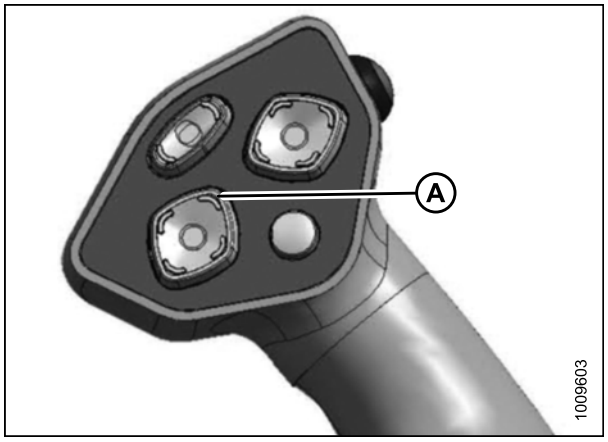

Figure 7.15: GSL

WARNING

To avoid bodily injury or death from unexpected start-up or fall of raised machine, stop engine, remove key, and engage safety props before going under machine for any reason.

6. Engage safety props on both lift cylinders.
7. Install pin (A) through header leg (engaging U-bracket in header leg). Repeat for opposite side of header.
8. Raise header stand (B) to storage position by pulling pin (C), and lifting stand into uppermost position. Release pin (C) to secure stand in place.

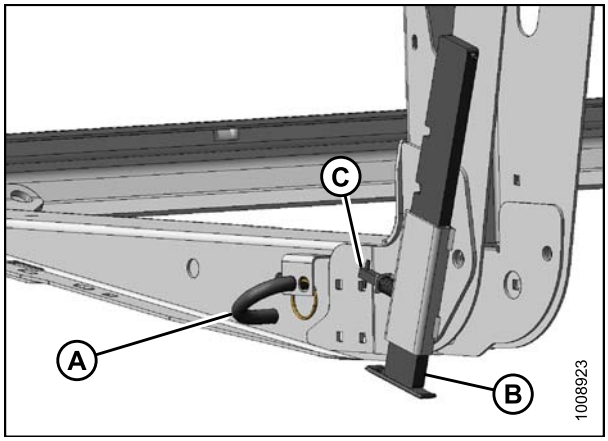

Figure 7.16: Pin and Header Stand in Raised Position

9. Remove pin from storage position (B) in linkage, and insert into hole (A) to engage float springs. Secure with hairpin, and repeat for opposite side of windrower.
10. Disengage safety props.

CAUTION

Check to be sure all bystanders have cleared the area.

Figure 7.17: Float Springs Engaged

11. Start engine and activate HEADER DOWN switch (A) on GSL to lower header fully.

WARNING

Stop self-propelled windrower engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.

12. Stop engine and remove key.

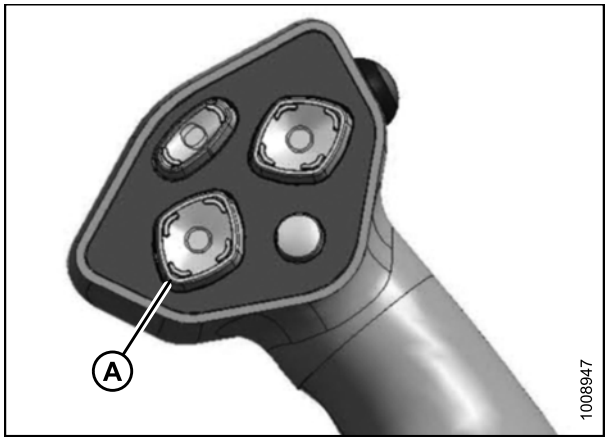

Figure 7.18: GSL

8 Connecting Hydraulics

M150, M200, and M205 Windrowers may **NOT** be factory-equipped with D-Series header and reel hydraulics as shown below.

NOTE:
Windrowers equipped with D-Series hydraulics have four header-drive hoses on the left-hand side and up to five reel-drive hoses on the right-hand side.

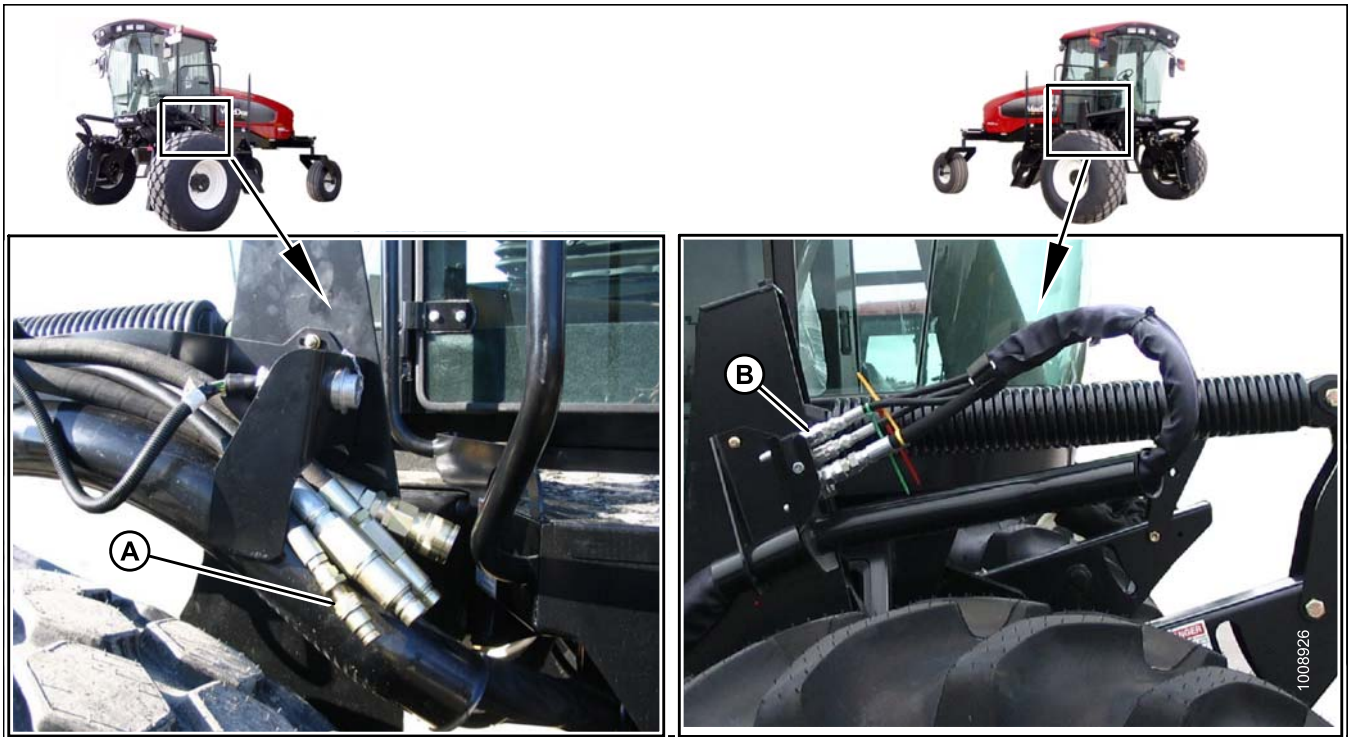

Figure 8.1: D-Series Hydraulics

A - Header-Drive Hydraulics **B - Reel-Drive Hydraulics**

1. Install optional drive/lift kits as shown in Table *8.1 Optional Drive/Lift Kits for D-Series Header, page 49* if **NOT** already factory-equipped (if already factory-equipped, proceed directly to Step *12., , page 51*).

Table 8.1 Optional Drive/Lift Kits for D-Series Header

Windrower	Part Numbers for D-Series Draper Header Optional Kits			
	Reel Drive/Lift	Reel Fore-Aft	Reverser	Coupler
M100	MD #B5426	MD #B5194	–	–
M105	MD #B5577	MD #B5577	–	–
M150	MD #B5426	MD #B5194	MD #B4656	–
M155	MD #B5577	MD #B5577	MD #B4656	–
M200	MD #B5426 MD #B4651	MD #B5194	MD #B4656	–
M205	MD #B5491	MD #B5496	MD #B5492	MD #B5497

Connect header-drive hydraulics and electrical harness to header as follows:

2. Check connectors and clean if required.
3. Disengage and rotate lever (C) counterclockwise to fully up position.
4. Remove cap securing electrical connector (B) to frame.
5. Move hose bundle (A) from windrower around hose support on header.

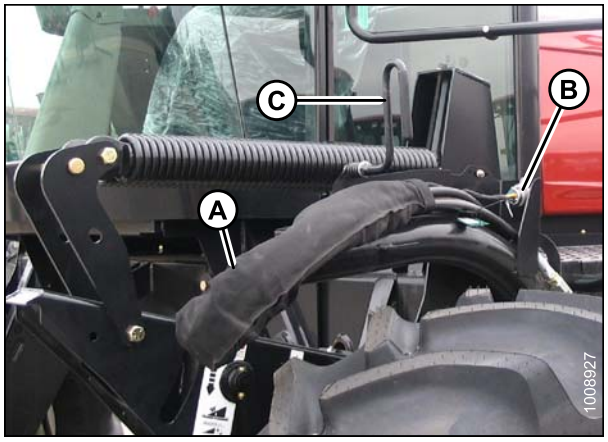

Figure 8.2: Header-Drive Hydraulics and Electrical Harness Connection

6. Push hose connectors onto mating receptacle until collar on receptacle snaps into lock position.
7. Remove cover on electrical receptacle (A).
8. Push electrical connector onto receptacle and turn collar on connector to lock it in place
9. Attach cover to mating cover on windrower wiring harness.

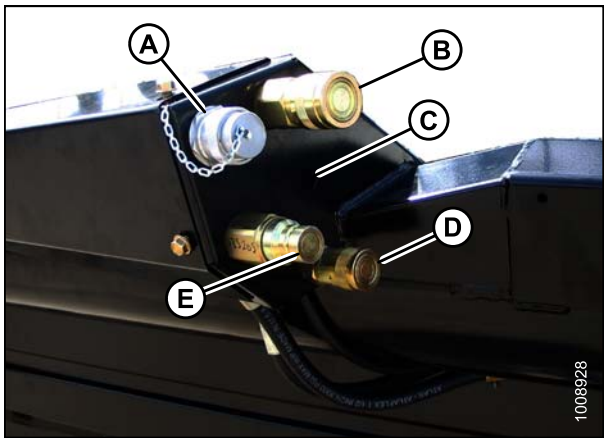

Figure 8.3: Mating Receptacle

A - Electrical Connector
B - Knife Drive
C - Case Drain (Double Knife)
D - Draper Drive
E- Return

10. Lower lever (A) and engage in down position.

Figure 8.4: Lever

11. Check that hose support is positioned so that top bolt is midway in slot and lower bolt is in forward hole. Loosen bolts and adjust as required.

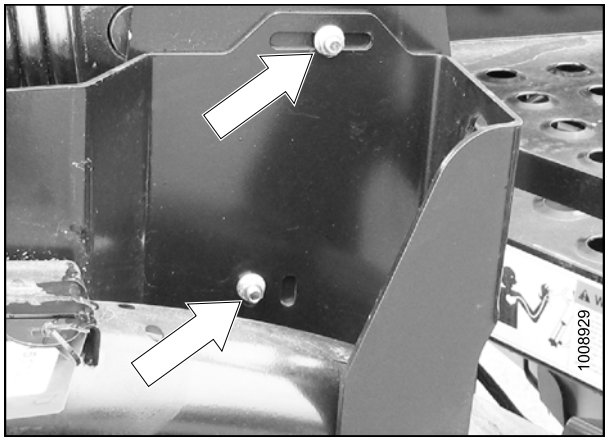

Figure 8.5: Hose Support

Connect reel-drive hydraulics (A) as follows:

12. Check connectors and clean if required.

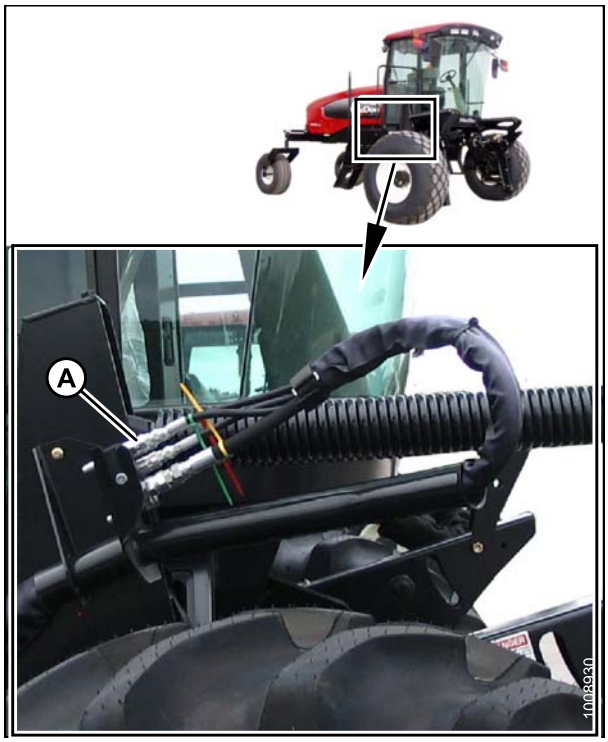

Figure 8.6: Reel-Drive Hydraulics

13. Open cover (A) on header receptacle.
14. Push in lock button (B), and pull handle (C) to half open position.

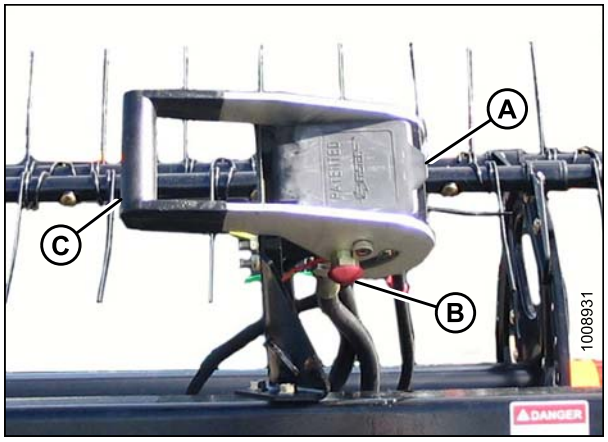

Figure 8.7: Header Receptacle

15. Remove hose bundle with multi-coupler (A) from windrower, and position onto header receptacle.
16. Push handle (B) to engage pins on connector.
17. Push handle away from hoses until lock button (C) snaps out.

CAUTION

Check to be sure all bystanders have cleared the area.

18. Start engine and raise and lower header and reel a few times to allow trapped air to pass back to the reservoir.
19. Stop engine.

NOTE:
It is not necessary to bleed the system by loosening fittings.

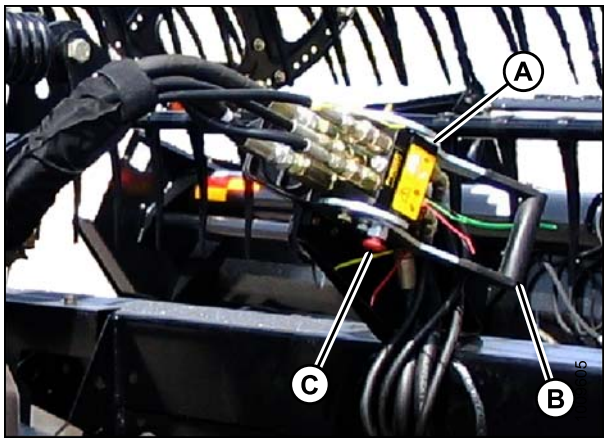

Figure 8.8: Multi-Coupler on Header

9 Attaching Cam Arms

To attach the reel cam arms, follow these steps:

1. Rotate the reel manually until the tine bars with disconnected cam links are accessible.
2. Remove shipping wire (if not already removed).

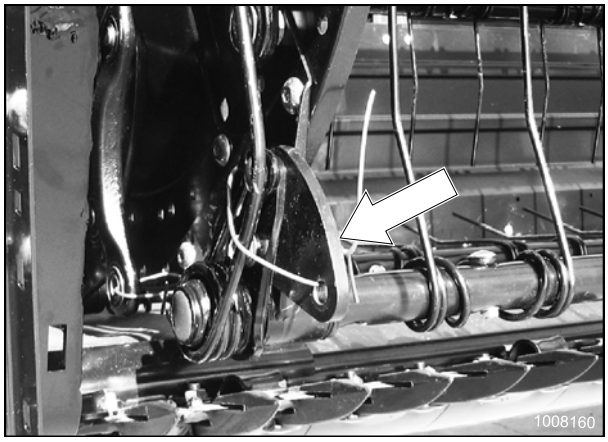

Figure 9.1: Disconnected Cam Links and Shipping Wire

3. Remove bag of hardware (A) from tine bar. It contains hardware for cam links and endshields.

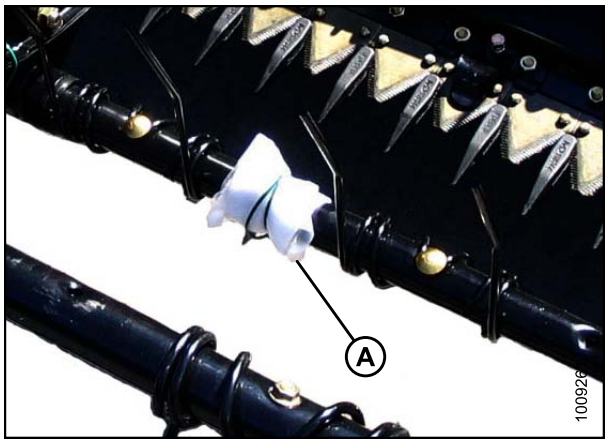

Figure 9.2: Hardware Bag Right-Hand Reel

4. Rotate tine bar crank (A), and position link (B) so attachment holes in bar crank are aligned with hole in link.
5. Install bolt (C) in link, and position shim (D) on bolt so that shim is between link and tine bar crank.

   NOTE:
   Bolts are pre-coated with Loctite®, so no further locking method is required.

6. Realign link (B) and tine bar crank (A), and thread in bolt (C).
7. Repeat for remaining tine bars, and torque bolts to 120 ft·lbf (165 N·m).

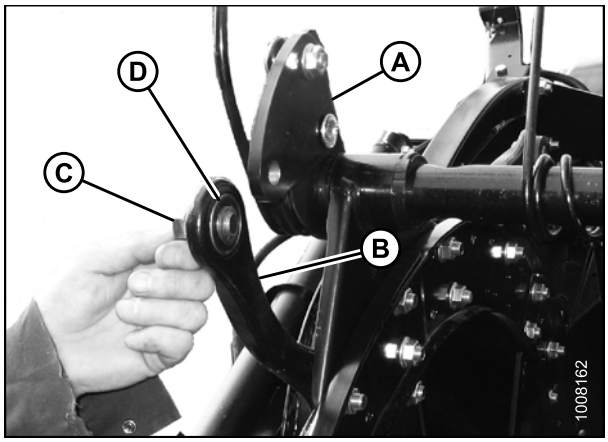

Figure 9.3: Bar Crank Attachment Holes and Link Alignment

10 Installing Crop Dividers

Dividers are stored on inboard side of endsheets.

1. Support the divider, remove shipping wire (A) at front end, and remove bolt (B).
2. Remove bolt and washer (C).

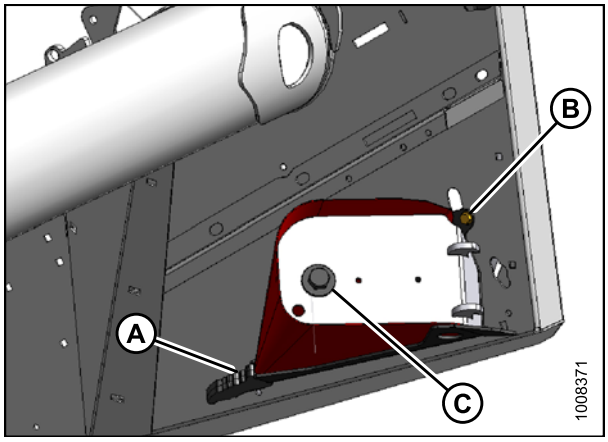

Figure 10.1: Crop Divider on Endsheet

3. Position crop divider as shown, and insert lugs (A) into slots (B) in endsheet.

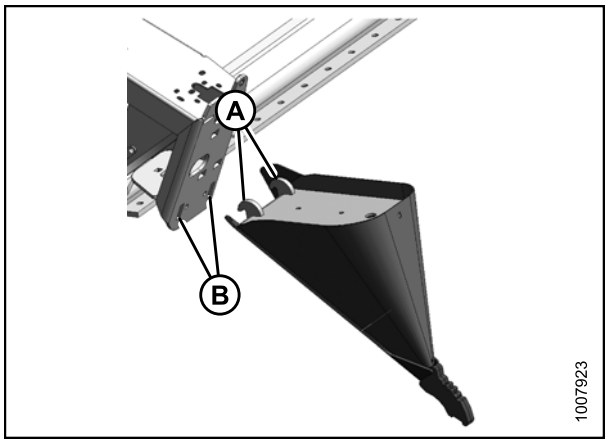

Figure 10.2: Crop Divider Lugs and Endsheet Slots

4. Lift forward end of divider up to endsheet, and install washer (A) and bolt (B).

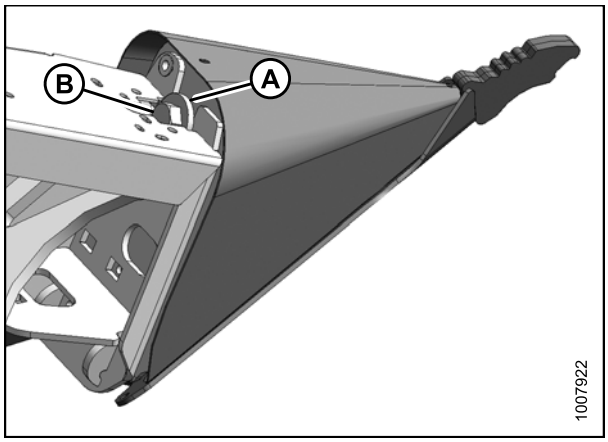

Figure 10.3: Installation Hardware

5. Check that divider does **NOT** move laterally. Adjust bolts (A) as required to tighten divider and remove lateral play when pulling at divider tip.

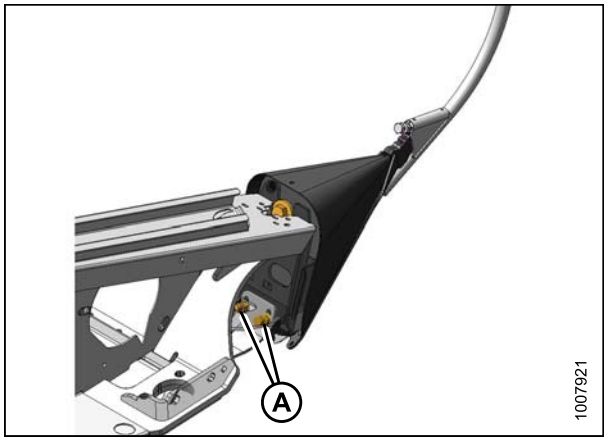

Figure 10.4: Adjustment Hardware

11 Positioning Transport Lights

Transport lights are located on each of the outboard reel arms.

1. Position lights perpendicular to header.

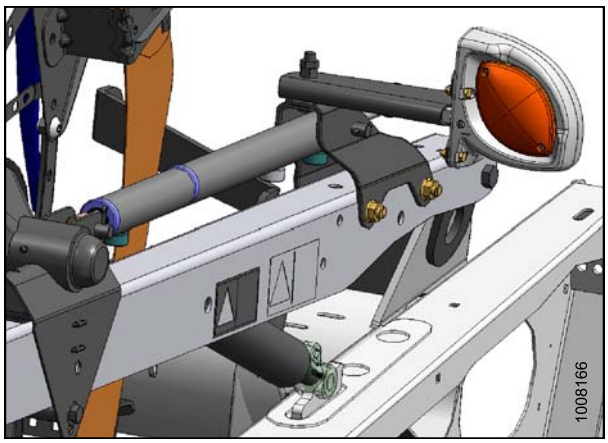

Figure 11.1: Transport Light Perpendicular to Header

12 Installing Options

Retrieve kits supplied as options with the header, and install in accordance with the installation instructions supplied with each kit.

13 Adding Ballast

Fluid ballasting of rear caster tires is recommended in order to provide adequate machine stability when using large headers on the windrower.

Machine stability also varies with different attachments, windrower options, terrains, and operators' driving techniques.

Ballast capability per tire is at a maximum fill of 75% or when the fluid is level with the valve stem when the stem is positioned at the "12 o'clock" position. Fluid can be added to any level up to maximum fill, but always add an equal amount of fluid on both sides.

Table 13.1 Fluid per Tire

Tire Size	Fluid per Tire at 75% Fill U.S. Gal. (litres)	Total Weight of BOTH Tires lb (kg)[6]
7.5 x 16	10 (38)	200 (91)
10 x 16	18 (69)	380 (170)
16.5 x 16.1	41 (158)	830 (377)

Table 13.2 Recommended Ballast

Header Size	Applicable Windrower	Rec. Tire Size	Level Ground		Hills	
			Per Tire U.S. Gal. (liters)	Both Tires lb (kg)[7]	Per Tire U.S. Gal. (liters)	Both Tires lb (kg)[7]
25 ft. and less	All	7.5 x 16 10 x 16 16.5 x 16.1	0	0	0	0
30 ft. Single Reel or Double Reel (without conditioner) **35 ft. Single Reel**	All	7.5 x 16 10 x 16 16.5 x 16.1	0	0	10 (38)	200 (91)
30 ft. Double Reel (with steel fingers and conditioner) **35 ft. Double Reel** (5- or 6-bat)	All	Level Ground: 10 x 16 16.5 x 16.1 Hills: 16.5 x 16.1	18 (69)	380 (170)	30 (115)	630 (288)
40 ft.	M150 M200 M205	16.5 x 16.1	30 (115)	630 (288)	41 (158)	830 (377)

When the recommended fluid ballast has been added, proceed to *14 Performing Predelivery Checks, page 63*.

6. Weights are given for typical calcium chloride and water mixtures. Weight is reduced by 20% if only water is used (for areas that do not require antifreeze protection).
7. If only water is used, increase volume of water by 20% (up to maximum allowable fill per tire) to compensate.

14 Performing Predelivery Checks

Perform all procedures in this chapter in the order in which they are listed.

WARNING

Stop self-propelled windrower engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.

IMPORTANT:
To avoid machine damage, check that no shipping dunnage has fallen into the machine.

IMPORTANT:
The machine has been set at the factory and should require no further adjustments; however, perform the following checks to ensure your machine will provide maximum performance. Adjustments should be made only if absolutely necessary, and in accordance with the instructions in this manual.

1. Perform the final checks as listed on the **Predelivery Checklist** (yellow sheet attached to this instruction – *Predelivery Checklist, page 91*) to ensure the machine is field-ready. Refer to the following pages for detailed instructions as indicated on the Checklist.
2. The completed Checklist should be retained either by the Operator or the Dealer.

14.1 Checking Tire Pressure: Transport and Stabilizer Wheels

Check tire inflation pressure. If necessary, inflate according to the following table:

Table 14.1 Tire Inflation Pressure

Year	Tire	Size	Pressure
2006 and earlier	Goodyear Wrangler RT/S	205/75 R15	40 psi (276 kPa)
2007 and later	Carlisle and Titan	ST205/75 R15	65 psi (448 kPa)

IMPORTANT:
Do NOT exceed maximum pressure specified on tire sidewall.

14.2 Checking Wheel Bolt Torque

Perform the following procedure to ensure that transport and stabilizer wheel bolts are correctly torqued:

1. Check wheel bolt torque is 80–90 ft·lbf (110–120 N·m). Refer to bolt tightening sequence illustration at right.

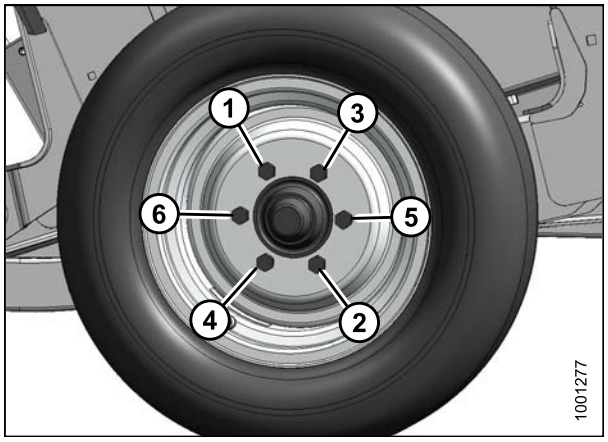

Figure 14.1: Bolt Tightening Sequence

14.3 Checking Knife Drive Box

1. Check position of plug (A) and breather (B) at knife drive box–position MUST be as shown.
2. Check oil level. It should be between the lower hole (C) on the dipstick and the bottom end of the dipstick.

   NOTE:
   Check oil level with top of knife drive box horizontal.

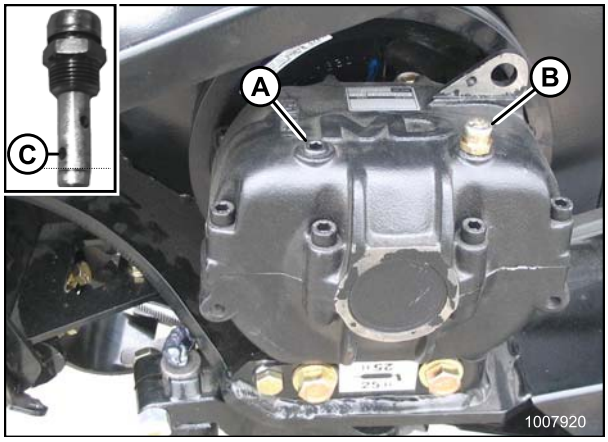

Figure 14.2: Knife Drive Box

14.4 Checking and Adjusting Knife Drive Belt Tension

Refer to the appropriate section for your equipment type:

- *14.4.1 Tensioning Non-Timed Knife Drive Belts, page 66*
- *14.4.2 Tensioning Timed Knife Drive Belts, page 66*

14.4.1 Tensioning Non-Timed Knife Drive Belts

IMPORTANT:
To prolong belt and drive life, do **NOT** overtighten belt.

1. Open left endshield.
2. Loosen the two bolts (A) that secure the motor assembly to header endsheet.
3. Turn adjuster bolt (B) clockwise to move the drive motor until a force of 20 lbf (80 N) deflects belt (C) 3/4 in. (18 mm) at mid-span.

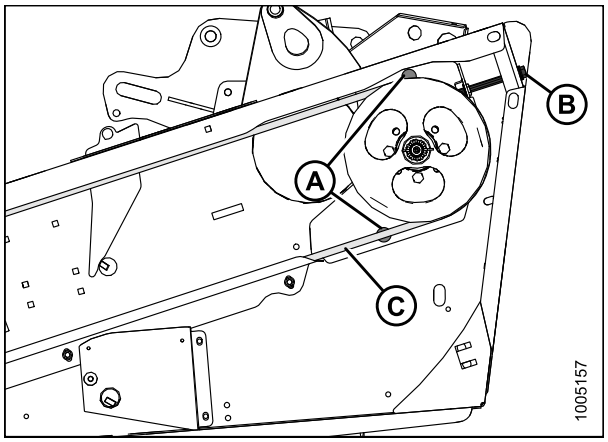

Figure 14.3: Left-Hand Shown – Right-Hand Opposite for Double-Knife Headers

4. Ensure that clearance between belt (A) and belt guide (B) is 1/32 in. (1 mm).
5. Loosen three bolts (C), and adjust position of guide (B) as required.
6. Tighten bolts (C).
7. Close endshield.

NOTE:
Readjust tension of a new belt after a short run-in period (about five hours).

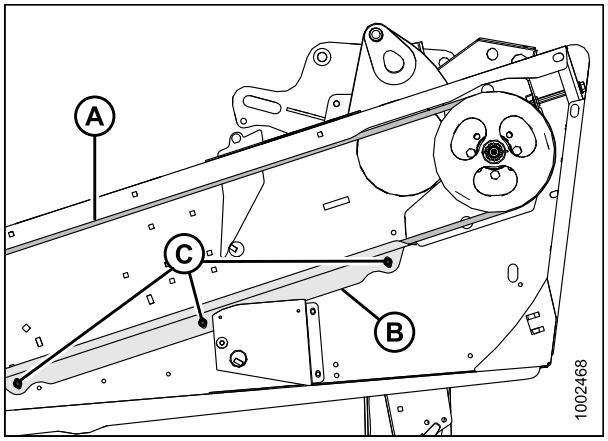

Figure 14.4: Knife Drive

14.4.2 Tensioning Timed Knife Drive Belts

This describes the tensioning procedure for the timed left and right knife drive belts. The illustrations for the right side are opposite to what is shown.

IMPORTANT:
To prolong belt and drive life, do **NOT** over-tighten belt.

IMPORTANT:
Do **NOT** use the adjuster bolt at the drive pulley to adjust timing belt tension.

1. Open left endshield.
2. Loosen two nuts (A) on knife drive belt idler bracket.

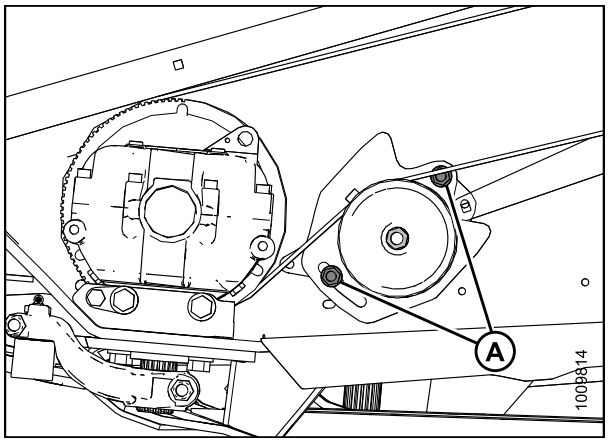

Figure 14.5: Knife Drive

3. Position pry bar (A) under the idler bracket (C), and push the bracket up until a force of 6 lb (27 N) deflects the belt 1/2 in. (13 mm) at mid-point of the upper span.

   NOTE:
   Place a piece of wood (B) under pry bar (A) to protect paint.

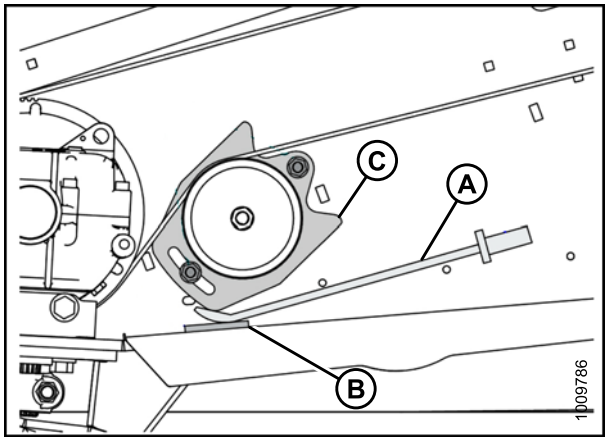

Figure 14.6: Knife Drive

4. Tighten nuts (C) to 54–59 ft·lbf (73–80 N·m) when proper belt tension is achieved.
5. Remove pry bar (A) and wood (B).

   NOTE:
   Readjust tension of a new belt after a short run-in period (about five hours).

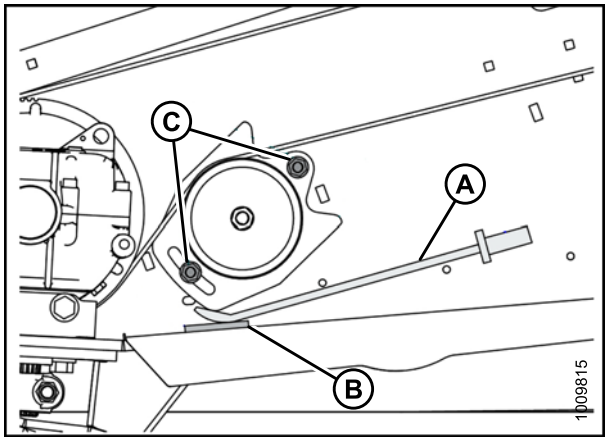

Figure 14.7: Knife Drive

6. Check that clearance (A) between belt (B) and guide (C) is 1/32–1/16 in. (0.5–1.5 mm).
7. If necessary, loosen bolts (D) and adjust guide as required. Tighten bolts.
8. Repeat procedure for opposite side of header.
9. Close endshields.

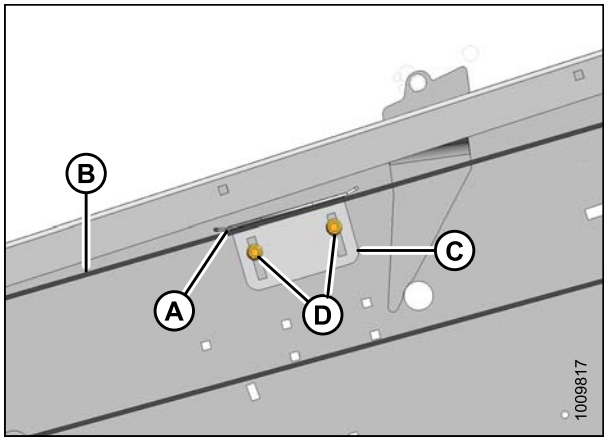

Figure 14.8: Belt Guide

14.5 Centering the Reel

Refer to the appropriate section for your equipment type:

- *14.5.1 Centering the Reel: Double-Reel Headers, page 69*
- *14.5.2 Centering the Reel: Single-Reel Headers, page 69*

14.5.1 Centering the Reel: Double-Reel Headers

If required, center reels on a double-reel header as follows:

WARNING

Stop self-propelled windrower engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.

1. Measure clearance between reels and both endsheets. The clearances should be the same if the reels are centered.
2. Loosen bolts (A) on each of the braces (B) located on both sides of the reel support arm (C).
3. Move forward end of reel support arm (C) laterally as required to center reel.
4. Tighten bolts (A), and torque to 265 ft·lbf (359 N·m).

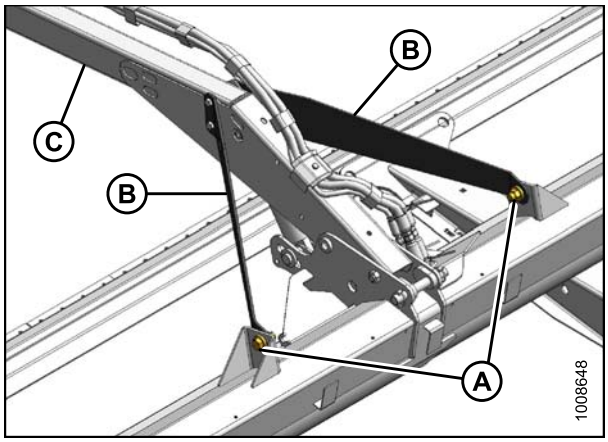

Figure 14.9: Reel Support Arm and Centering Adjustment Locations

14.5.2 Centering the Reel: Single-Reel Headers

If required, center reel on a single-reel header as follows:

WARNING

Stop self-propelled windrower engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.

1. Measure clearance between reels and both endsheets. The clearances should be the same if the reels are centered.

2. Loosen bolts (A) on each of the braces (B) located on both sides of the reel support arm (C).
3. Move forward end of reel support arm (C) laterally as required to center reel.
4. Tighten bolts (A), and torque to 265 ft·lbf (359 N·m).

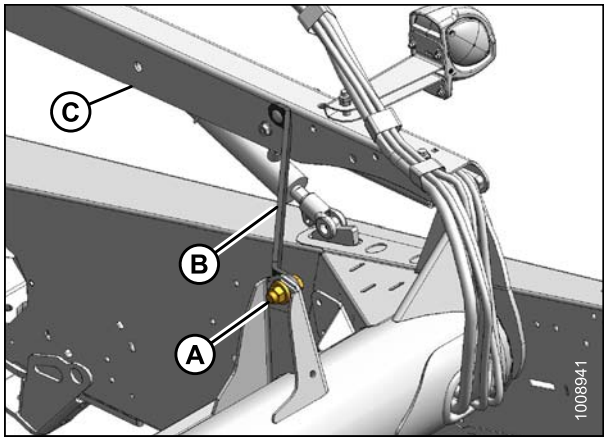

Figure 14.10: Reel Support Arm and Centering Adjustment Locations

14.6 Adjusting Draper Tension

WARNING

To avoid bodily injury or death from unexpected start-up or fall of raised machine, stop engine, remove key, and engage safety props before going under machine for any reason.

NOTE:
The drapers are tensioned at the factory and should NOT require adjustment. If adjustment is required, draper tension should be just enough to prevent slipping and to keep the draper from sagging below the cutterbar.

1. Ensure white bar (A) is about halfway in the window.

CAUTION

Check to be sure all bystanders have cleared the area.

2. Start engine and raise header.
3. Stop engine, remove key, and engage header safety props.

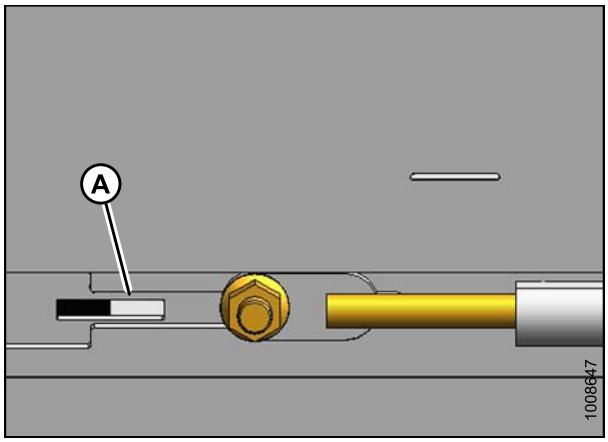

Figure 14.11: Tension Adjuster: Left-Hand Shown – Right-Hand Opposite

4. Check that draper guide (rubber track on underside of draper) is properly engaged in groove of drive roller.

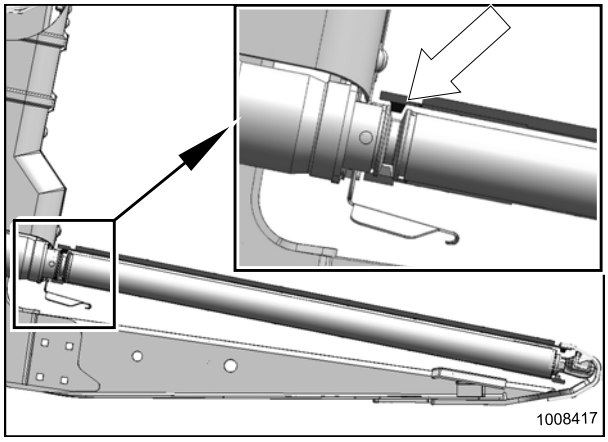

Figure 14.12: Drive Roller

5. Check that idler roller is between the guides.

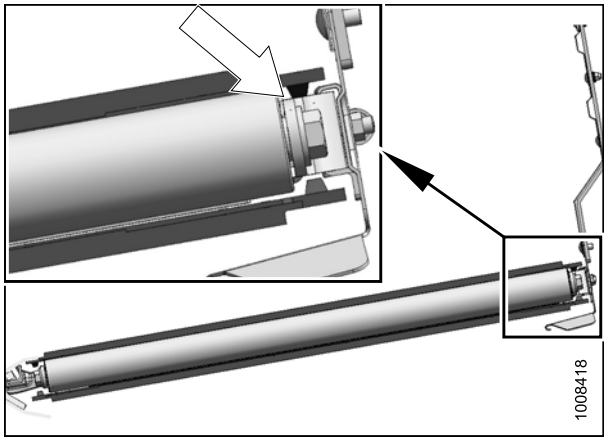

Figure 14.13: Idler Roller

IMPORTANT:
Do **NOT** adjust nut (C). This nut is used for draper alignment only.

6. Turn adjuster bolt (A) counterclockwise to loosen, and white indicator bar (B) will move outboard in direction of arrow (D) to indicate that draper is loosening. Loosen until bar is about halfway in window.
7. Turn adjuster bolt (A) clockwise to tighten, and white indicator bar (B) will move inboard in direction of arrow (E) to indicate that draper is tightening. Tighten until bar is about halfway in window.

IMPORTANT:

- To avoid premature failure of draper, draper rollers, and/or tightener components, do not operate with tension set so that white bar is not visible.
- To prevent the draper from scooping dirt, ensure draper is tight enough that it does not sag below point where cutterbar contacts the ground.

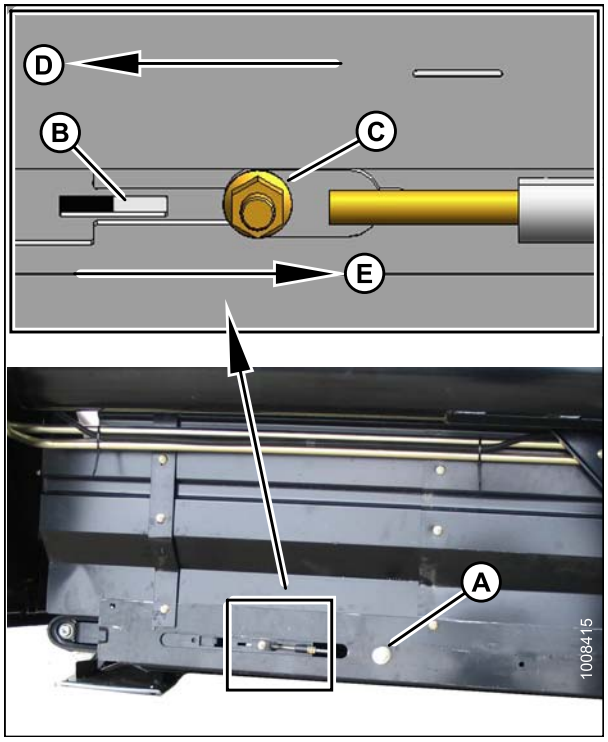

Figure 14.14: Tension Adjuster: Left-Hand Shown – Right-Hand Opposite

14.7 Checking and Adjusting Draper Seal

IMPORTANT:
Maintain deck height so that the draper runs just below cutterbar. With a new header or newly installed draper, set the initial gap to 1/8 in. (3 mm). To prevent material from entering the drapers and cutterbar, you may need to decrease the deck clearance to 0–1/32 in. (0–1 mm) after the initial break-in period of approximately 50 hours.

1. Check deck height. Draper (A) should run just below cutterbar (B) with a gap of 1/8 in. (3 mm) between the top of deck front track and cutterbar.

   NOTE:
   Measurement is at supports with header in working position and decks slid fully forward.

   If deck height is acceptable, skip the remaining steps and proceed to *14.8 Checking and Adjusting Skid Shoe Settings, page 75*.

   If deck height is NOT acceptable, adjust seal as described in the following steps:

2. Loosen tension on drapers. Refer to *14.6 Adjusting Draper Tension, page 71*.

3. Lift draper (A) up at front edge past cutterbar (B).

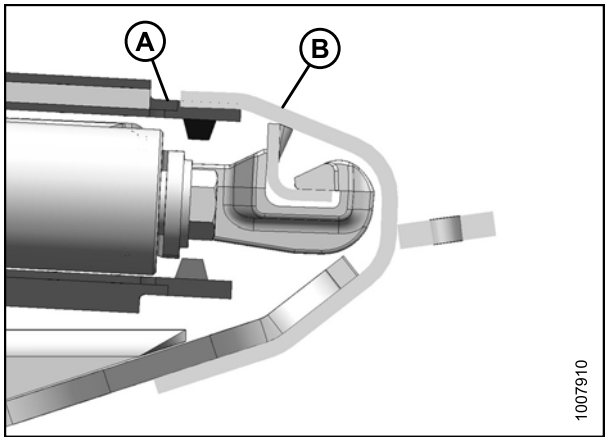

Figure 14.15: Draper Height Measurement

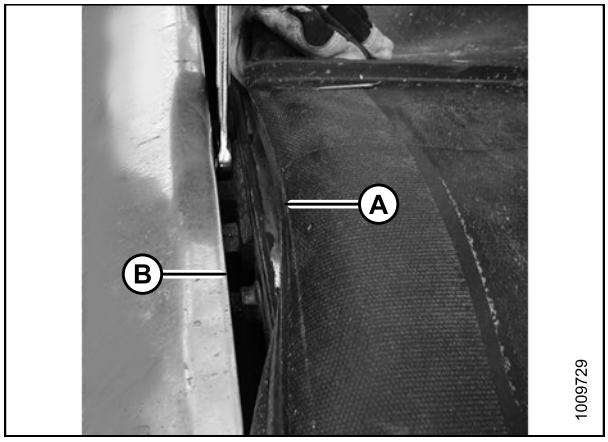

Figure 14.16: Draper Adjustment

4. Loosen two lock nuts (A) only **one-half-turn** on deck support (B).

   NOTE:
   There are between two and five supports per deck depending on header size.

5. Tap deck (C) to lower deck relative to supports and achieve the recommended setting. Tap support (B) using a punch to raise deck relative to supports.
6. Tighten deck support hardware (A).
7. Tension drapers. Refer to *14.6 Adjusting Draper Tension, page 71*.

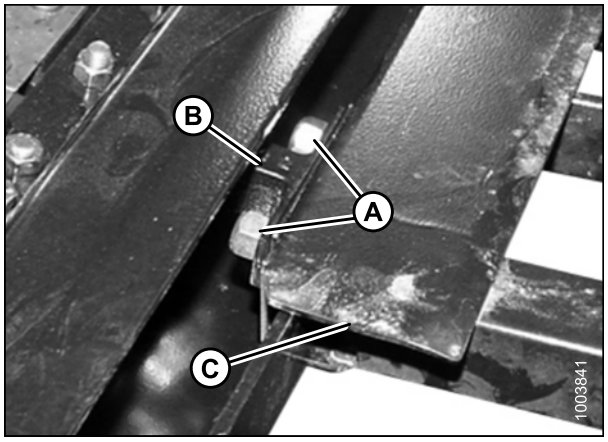

Figure 14.17: Draper Removed for Clarity

14.8 Checking and Adjusting Skid Shoe Settings

If optional skid shoes are installed, check and adjust if necessary.

WARNING

Stop self-propelled windrower engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.

DANGER

Engage header safety props and reel props before working under header or reel.

1. Note the adjustment hole positions on the lugs (A) on each skid shoe. They should be the same.
2. If necessary, adjust as follows:
   a. Remove lynch pin (B).
   b. Hold shoe, and remove pin (C) by disengaging frame, and then pulling away from shoe.
   c. Raise or lower skid shoe to desired position using holes in support as a guide.
   d. Reinsert pin (C), engage in frame, and secure with lynch pin (B).
   e. Check that all skid shoes are adjusted to the same position.

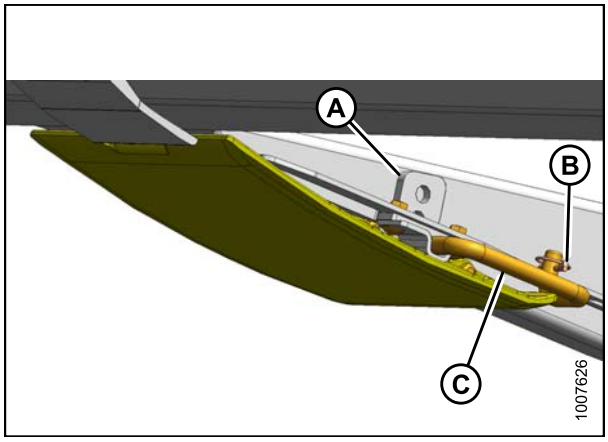

Figure 14.18: Inner Skid Shoe

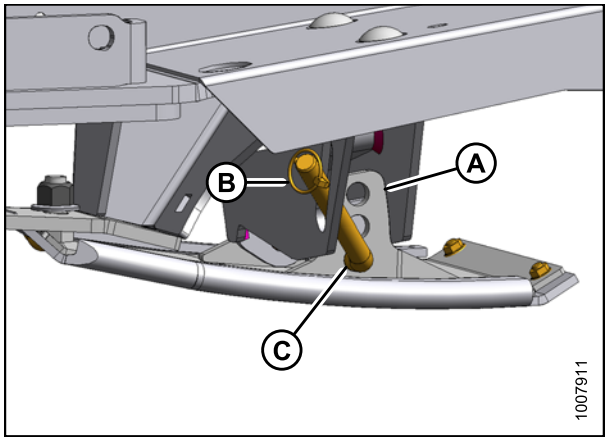

Figure 14.19: Outer Skid Shoe

14.9 Levelling the Header

The windrower linkages are factory-set to provide the proper level for the header and should not normally require adjustment.

NOTE:
The float springs are NOT used to level the header.

If the header is not level, check the pressure of the windrower's tires to ensure they are properly inflated (refer to your windrower's operator's manual).

If the header is still not level, adjust the windrower linkages as required (refer to the appropriate section in the windrower's operator's manual).

14.10 Measuring and Adjusting Reel Clearance to Cutterbar

The minimum clearance between the reel fingers and the cutterbar ensures that the reel fingers do not contact the cutterbar during operation. The clearance is adjusted at the factory, but adjustments may be necessary before the header is put into operation.

The finger to guard/cutterbar clearances with reels fully lowered are shown in Table *14.2 Finger to Guard/Cutterbar Clearance, page 77*.

Table 14.2 Finger to Guard/Cutterbar Clearance

Header Width	'X' +/- 1/8 in. (3 mm) at Reel Ends	
	Single Reel	Double Reel
15 ft.	3/4 in. (20 mm)	–
20 ft.		
25 ft.	1 in. (25 mm)	
30 ft.	1-3/4 in. (45 mm)	3/4 in. (20 mm)
35 ft.	2-3/8 in. (60 mm)	
40 ft.	–	

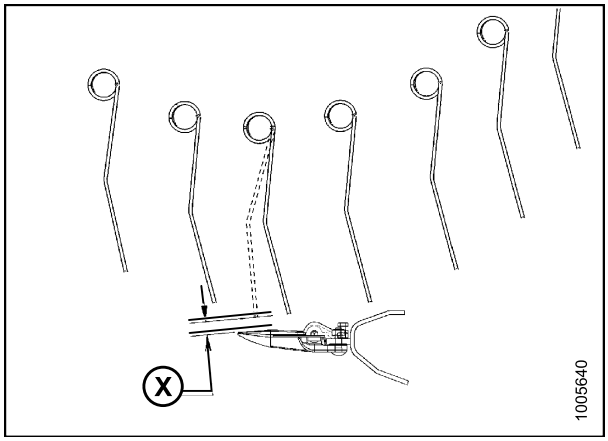

Figure 14.20: Clearance with Reel Fully Lowered

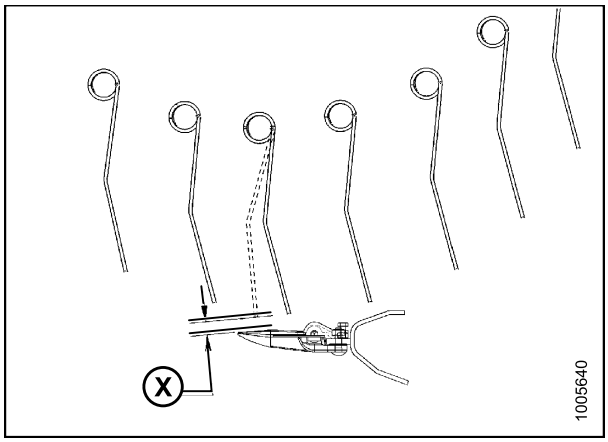

Figure 14.21: Clearance at Both Ends of Reel

14.10.1 Measuring Reel Clearance

To measure the finger-to-guard/cutterbar clearance, follow these steps:

DANGER

To avoid bodily injury or death from unexpected start-up or fall of raised machine, always stop engine, remove key, and engage safety props before going under header for any reason. Refer to the self-propelled windrower operator's manual for instructions regarding the proper use and storage of header safety props.

1. Park header on level ground.

2. Set the fore-aft position to mid–position (‘5’ on the reel arm indicator decal).
3. Fully lower the reel.
4. Shut down engine. Remove key from ignition.

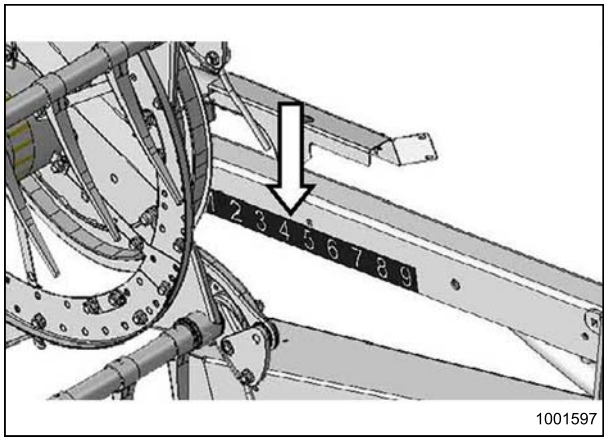

Figure 14.22: Fore-Aft Position

5. Measure clearance ‘X’ between points ‘Y’ and ‘Z’ at ends of each reel (A).

   NOTE:
   The reel has been adjusted at the factory to provide more clearance at the center of the reel than at the ends (‘frown’) to compensate for reel flexing.

6. Check all possible points of contact between points ‘Y’ and ‘Z’. Depending on reel fore-aft position, minimum clearance can occur at guard tine, hold-down, or cutterbar.

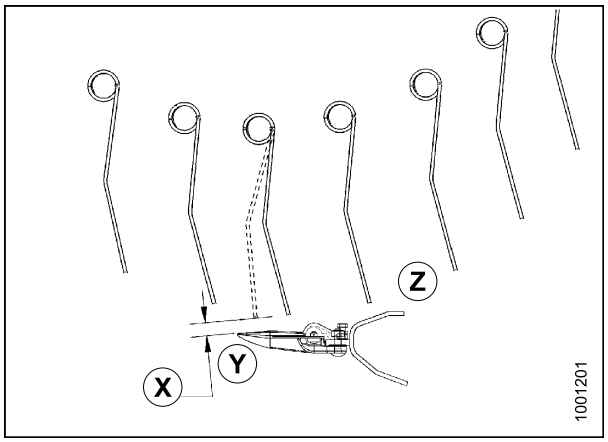

Figure 14.23: Clearance

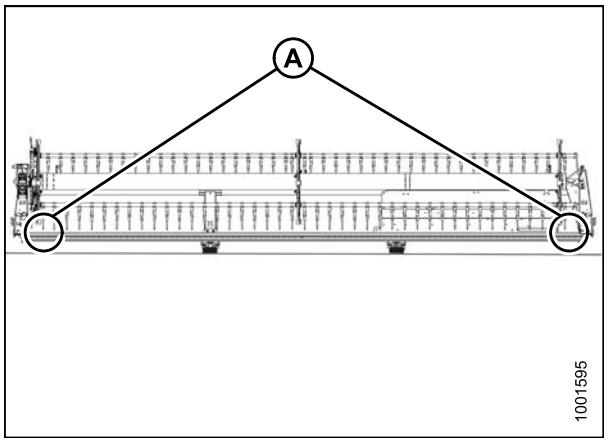

Figure 14.24: Single Reel Measurement Locations (Two Places)

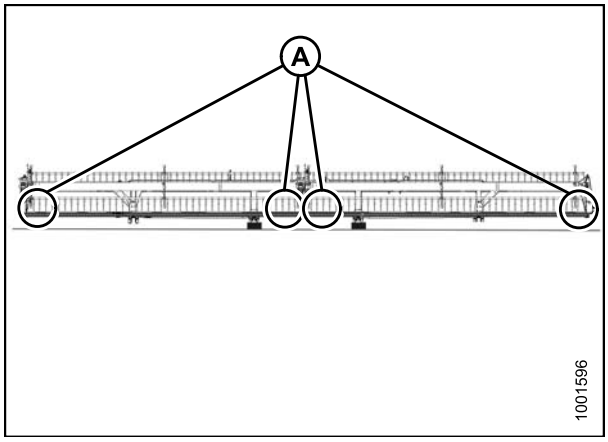

Figure 14.25: Double Reel Measurement Locations (Four Places)

7. If necessary, refer to *14.10.2 Adjusting Reel Clearance, page 79* for adjustment procedure.

14.10.2 Adjusting Reel Clearance

DANGER

To avoid bodily injury or death from unexpected start-up or fall of raised machine, always stop engine, remove key, and engage safety props before going under header for any reason. Refer to the self-propelled windrower operator's manual for instructions regarding the proper use and storage of header safety props.

1. Adjust outboard reel arm lift cylinders to set clearance at outboard ends of reel as follows:
   a. Loosen bolt (A).
   b. Turn cylinder rod (B) out of clevis to raise reel and increase clearance to cutterbar, or turn cylinder rod into clevis to lower reel and decrease clearance.
   c. Tighten bolt (A).
   d. Repeat at opposite side.

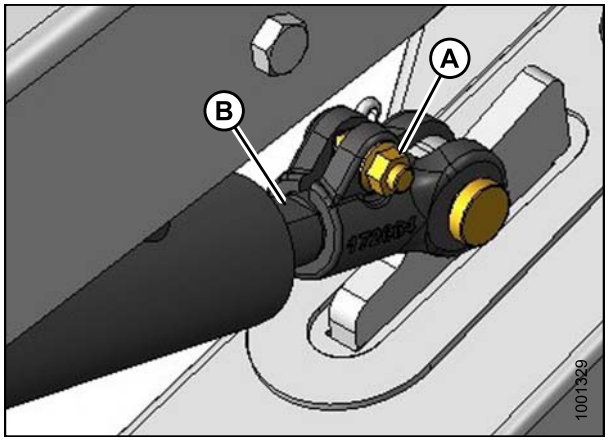

Figure 14.26: Outside Reel Arm

2. **For Double Reel Only:** Adjust center arm lift cylinder stop (A) to change clearance at inboard ends of reels as follows:

   NOTE:
   Instructions apply to double-reel headers only and are performed from the underside of the arm.

   a. Loosen nut (B).

   b. Turn nut (C) counterclockwise to raise reel and increase clearance to cutterbar, or clockwise to lower reel and decrease clearance.

   c. Tighten nut (B).

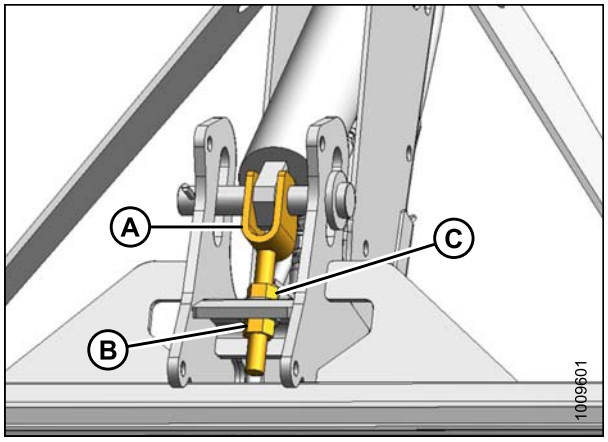

Figure 14.27: Looking Up at Arm Underside

14.11 Checking and Adjusting Endshields

Plastic endshields are subject to expansion or contraction depending on large temperature variations. The position of the top pin and lower catch can be adjusted to compensate for dimensional changes.

1. Check gap **'X'** between front end of shields and header frame, and compare to the values in Table *14.3 Gap "X" at Different Temperatures, page 81*.

Table 14.3 Gap "X" at Different Temperatures

Temperature in Degrees °F (°C)	Gap "X" in Inches (mm)
25 (–4)	1–1/10 (28)
45 (7)	1 (24)
65 (18)	13/16 (20)
85 (29)	5/8 (16)
105 (41)	1/2 (12)
125 (52)	5/16 (8)
145 (63)	3/16 (4)
165 (89)	0

NOTE:
If the gap is correct, proceed to *14.13 Checking Manuals, page 86*.

If the gap is incorrect, follow Step *2, page 81* to Step *12, page 82* to adjust.

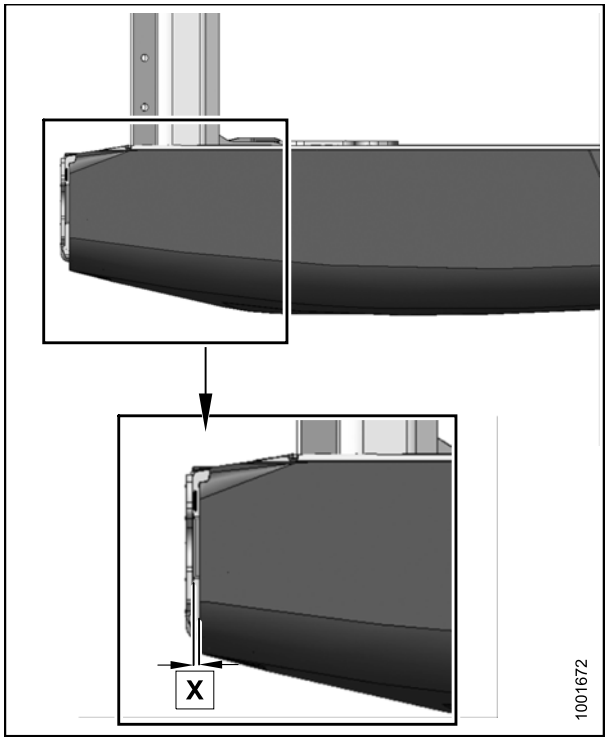

Figure 14.28: Gap Between Endshield and Header Frame

Opening the endshield:

2. Remove lynch pin (A) and tool (B) from pin (C) at top rear of endshield.

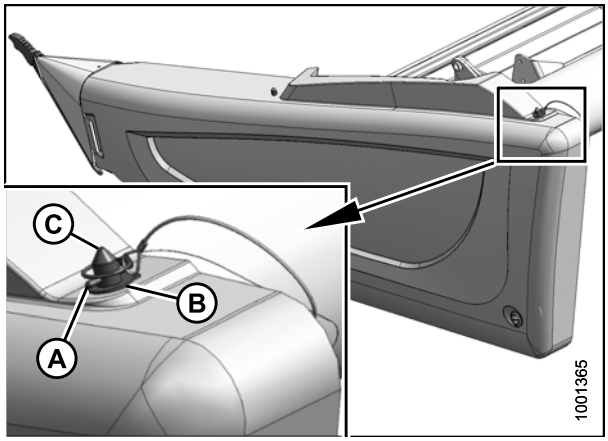

Figure 14.29: Left-Hand Endshield

3. Use tool (B) to unlock latch (A) at lower rear corner of endshield.
4. Lift shield at aft end to clear pin.
5. Swing shield out and away from header while maintaining forward pressure to prevent shield from slipping out of tab (C) at front of endsheet.

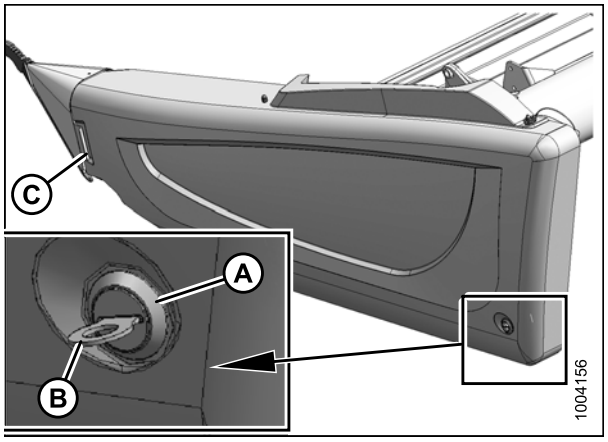

Figure 14.30: Tool to Unlock Endshield

Adjusting the endshield gap:

6. Loosen nut (A) on pin (B) from inside endsheet.
7. Close endshield and adjust position to achieve gap **'X'** between the front end of shield and header frame in accordance with Table *14.3 Gap "X" at Different Temperatures, page 81*.
8. Open endshield, and tighten nut (A).
9. Check for a snug fit between top of shield and header frame, and for full engagement of endshield on pin (B).
10. If necessary, loosen bolts on catch (C), and adjust catch as required to reposition shield.
11. Tighten bolts on catch (C).
12. Close endshield.

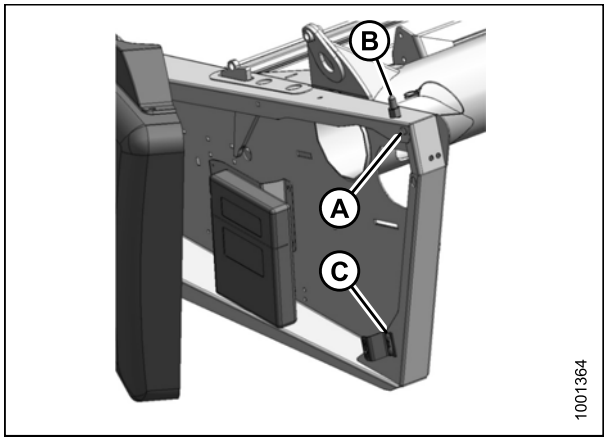

Figure 14.31: Endshield Gap

14.12 Lubricating the Header

Table 14.4 Recommended Lubricant

Specification	Description	Use
SAE Multipurpose	High Temperature, Extreme Pressure (EP2) Performance With 1% Max Molybdenum Disulphide (NLGI Grade 2) Lithium Base	As required unless otherwise specified
	High Temperature, Extreme Pressure (EP) Performance With 10% Max Molybdenum Disulphide (NLGI Grade 2) Lithium Base	Driveline slip-joints

14.12.1 Greasing Procedure

Greasing points are marked on the machine by decals showing a grease gun and grease interval in hours of operation. Master grease point location decals as shown below are provided on the header.

CAUTION

Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.

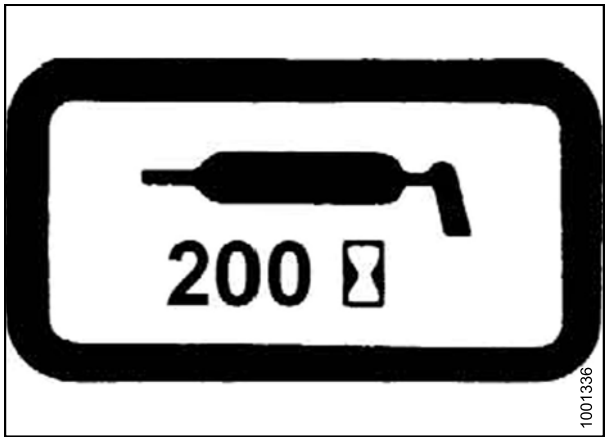

Figure 14.32: Use Only Recommended Lubricants

1. Wipe grease fitting with a clean cloth before greasing to avoid injecting dirt and grit.
2. Inject grease through fitting with grease gun until grease overflows fitting (except where noted).
3. Leave excess grease on fitting to keep out dirt.
4. Replace any loose or broken fittings immediately.
5. Remove and thoroughly clean any fitting that will not take grease. Also clean lubricant passageway. Replace fitting if necessary.
6. Use clean High Temperature Extreme Pressure grease as shown.

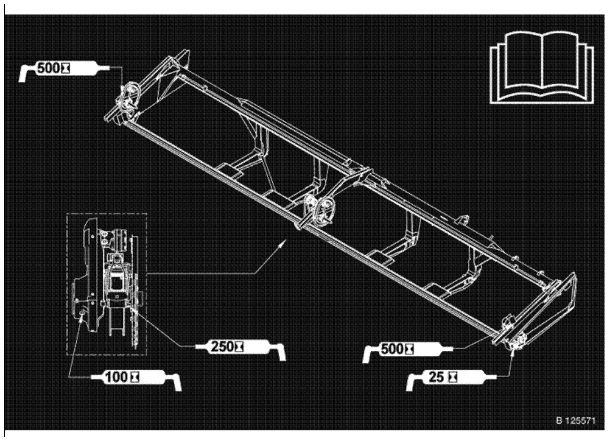

Figure 14.33: Single-Knife Header

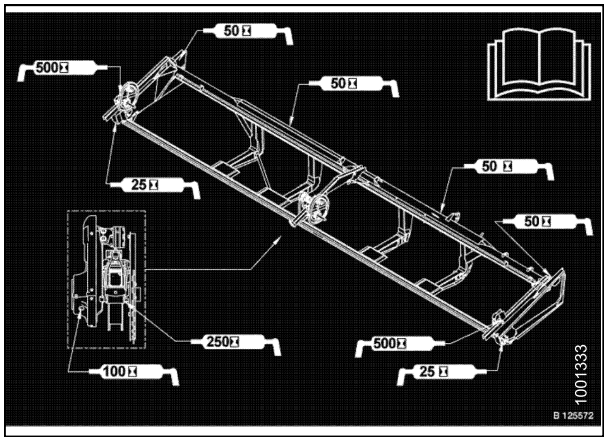

Figure 14.34: Double-Knife Header

14.12.2 Lubrication Points

Refer to the illustrations on the following pages to identify the various locations that require lubrication.

NOTE:

- To prevent binding and/or excessive wear caused by knife pressing on guards, do **NOT** over grease the knifehead (A).
- Only 1–2 pumps with a mechanical grease gun is required (do **NOT** use an electric grease gun).
- If more than 6–8 pumps of the grease gun are required to fill the cavity, replace the seal in the knifehead.

NOTE:
Check for signs of excessive heating on first few guards after greasing. If required, relieve pressure by pressing check-ball in grease fitting.

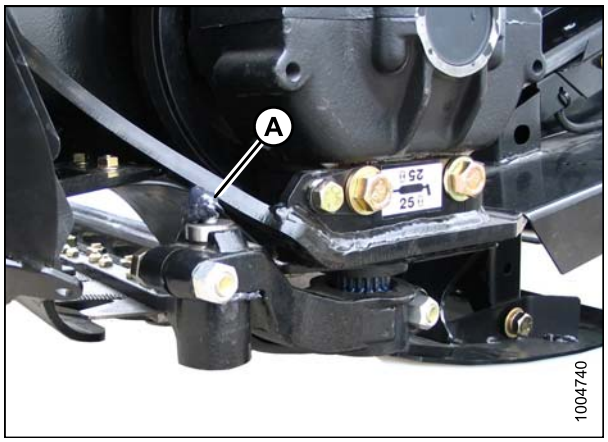

Figure 14.35: Knifehead

A - Knifehead (Single Knife - 1 Place) (Double Knife - 2 Places)

Reel Shaft Bearings

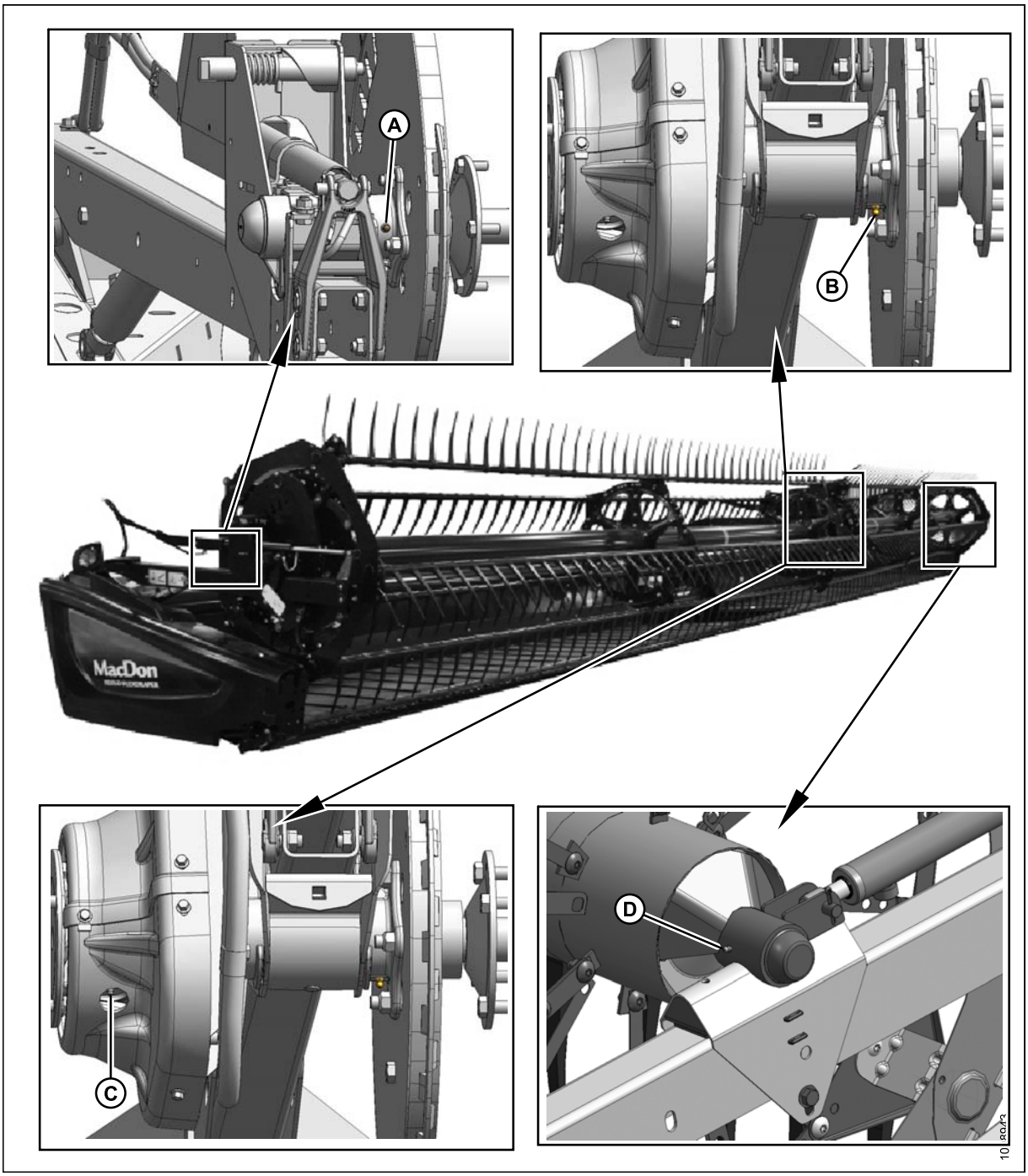

Figure 14.36: Use High Temperature Extreme Pressure (EP2) Performance With 1% Max Molybdenum Disulphide (NLGI Grade 2) Lithium Base.

IMPORTANT:

U-joint has an extended lubrication cross and bearing kit. Stop greasing when greasing becomes difficult or if U-joint stops taking grease. OVERGREASING WILL DAMAGE U-JOINT. Six to eight pumps is sufficient at first grease (factory). Decrease grease interval as U-joint wears and requires more than six pumps.

A - Reel Shaft Right-Hand Bearing (1 Place)

B - Reel Center Bearing (1 Place) (Double Reel Only)

C - Reel Universal (1 Place) (Double Reel Only)

D - Reel Shaft Left-Hand Bearing (1 Place)

14.13 Checking Manuals

Check manual case contents. The manual case is located inside the left-hand endshield.

1. Open the left-hand endshield, and remove the cable tie on the manual case.

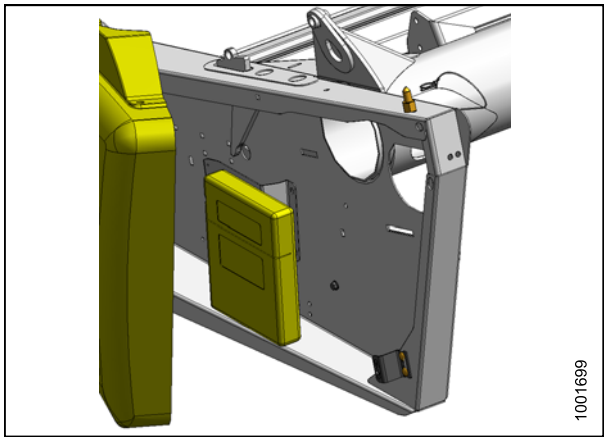

Figure 14.37: Manual Case

2. Confirm that the case contains the following manuals:

Table 14.5 Manual Case Contents

Description	Type	MacDon Part Number
D65 Draper Header for Self-Propelled Windrowers	Operator's Manual	MD #169900
D65 Draper Header	Parts Catalog	MD #169902
D65 Draper Header for Self-Propelled Windrower	Quick Card	MD #169600

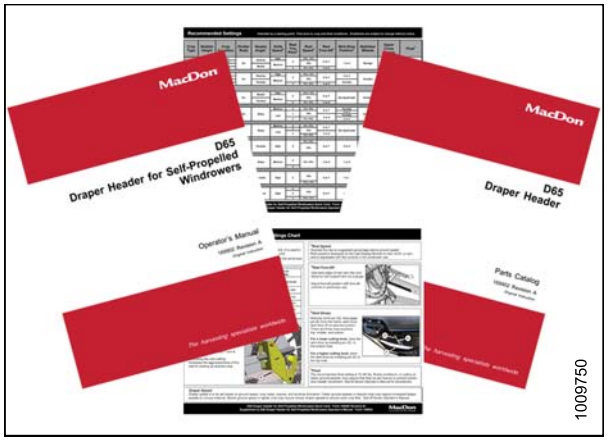

Figure 14.38: D65 Manuals

3. Close case and endshield.

15 Running Up the Header

To run up the header, follow these steps:

CAUTION

Clear the area of other persons, pets etc. Keep children away from machinery. Walk around the machine to be sure no one is under, on, or close to it.

CAUTION

Before investigating an unusual sound or attempting to correct a problem, shut off engine, engage parking brake, and remove key.

1. Open the left-hand endshield.
2. Start the self-propelled windrower, and run header for 5 minutes, watching and listening FROM THE OPERATOR'S SEAT for binding or interfering parts.

NOTE:
Reels and drapers will not operate until oil flow fills the lines.

3. Run header for an additional 10 minutes at operating speed, watching and listening FROM THE OPERATOR'S SEAT for binding or interfering parts.
4. Shut down the self-propelled windrower, and remove key.
5. Perform the run-up check as listed on the Predelivery Checklist (yellow sheet attached to this instruction) *Predelivery Checklist, page 91*.

16 Performing Post Run-Up Adjustments

Perform post run-up check as listed on the Predelivery Checklist (yellow sheet attached to this instruction - *Predelivery Checklist, page 91*) to ensure machine is field-ready.

WARNING

Stop self-propelled windrower engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.

Some adjustments may be necessary after the run-up. Refer to the following:

- *16.1 Adjusting Knife, page 89*

16.1 Adjusting Knife

WARNING

Stop self-propelled windrower engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.

1. Check guards for signs of heating during run-up due to insufficient clearance between guard and knife.
2. If heating is evident, check gap between knifehead (A) and pitman arm (B). A business card should slide easily through the gap. If not, then adjust gap by loosening bolt and tapping knifehead (A) with a hammer. Retighten bolt.

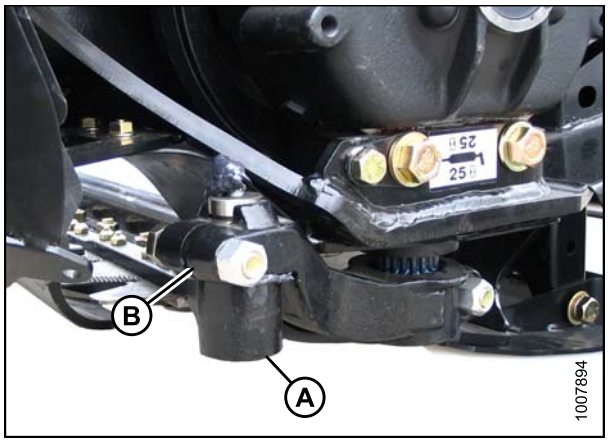

Figure 16.1: Knifehead and Pitman Arm

3. Adjust guard alignment as necessary using guard straightening tool (MD #140135). Adjust guard tips upwards by positioning tool as shown, and pulling up.

Figure 16.2: Upward Adjustment

4. Adjust guard tips downward by positioning tool as shown, and pushing down.

Figure 16.3: Downward Adjustment

Predelivery Checklist

Perform these checks and adjustments prior to delivery to your Customer. **Adjustments are normally not required as the machine is factory-assembled and adjusted.** If adjustments are required, refer to the appropriate page number in this manual. The completed Checklist should be retained by either the Operator or the Dealer.

CAUTION

Carefully follow the instructions given. Be alert for safety related messages that bring your attention to hazards and unsafe practices.

Header Serial Number: _____

Table 1 D65 Predelivery Checklist – North America

✓	Item	Reference
	Check for shipping damage or missing parts. Be sure all shipping dunnage is removed.	—
	Check for loose hardware. Tighten to required torque.	*2 Recommended Torques, page 7*
	Check tire pressure (Transport/Stabilizer Option).	*14.1 Checking Tire Pressure: Transport and Stabilizer Wheels, page 63*
	Check wheel bolt torque (Transport/Stabilizer Option).	*14.2 Checking Wheel Bolt Torque, page 64*
	Check knife drive box breather position.	*14.3 Checking Knife Drive Box, page 65*
	Check knife drive box lube level.	*14.3 Checking Knife Drive Box, page 65*
	Check knife drive belt(s) tension.	*14.4 Checking and Adjusting Knife Drive Belt Tension, page 66*
	Check if reel is centered between header endsheets.	*14.5 Centering the Reel, page 69*
	Grease all bearings and U-joints.	*14.12 Lubricating the Header, page 83*
	Check draper tension.	*14.6 Adjusting Draper Tension, page 71*
	Check draper seal.	*14.7 Checking and Adjusting Draper Seal, page 73*
	Check reel tine to cutterbar clearance.	*14.10.1 Measuring Reel Clearance, page 77*
	Check if skid shoes are evenly adjusted an appropriate setting for first crop.	*14.8 Checking and Adjusting Skid Shoe Settings, page 75*
	Check fitment of endshields.	*14.11 Checking and Adjusting Endshields, page 81*
	Check that header is level	*14.9 Levelling the Header, page 76*
	Check hydraulic hose and wiring harness routing for clearance when raising or lowering header and reel.	—
RUN-UP PROCEDURE		*15 Running Up the Header, page 87*
	Check knife drive pulley(s) is rotating in proper direction. Clockwise on left-hand side; Counterclockwise on right-hand side (double knife only).	*14.4 Checking and Adjusting Knife Drive Belt Tension, page 66*
	Check if lights are functional.	—

PREDELIVERY CHECKLIST

✓	Item	Reference
	Check if reel lift cylinders extend fully.	—
	Check if reel moves fully fore and aft.	—
POST RUN-UP CHECK. STOP ENGINE.		*16 Performing Post Run-Up Adjustments, page 89*
	Check belt drives for heated bearings.	*14.4 Checking and Adjusting Knife Drive Belt Tension, page 66*
	Check knife sections for discoloration caused by misaligned components.	*16.1 Adjusting Knife, page 89*
	Check for hot spots on the cutterbar above the draper seal. Adjust deck height as required.	*14.7 Checking and Adjusting Draper Seal, page 73*
	Check for hydraulic leaks.	—
	Check that manual storage case contains operator's manual and parts catalog.	*14.13 Checking Manuals, page 86*

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