Hitch and Drawbar Operation

Match Machine Power to Implement

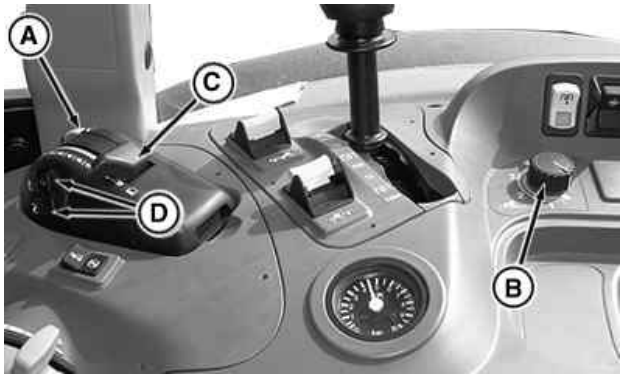
IMPORTANT: Matching machine and implement ensures that neither becomes damaged.

IMPORTANT: Overpowering an implement causes damage. Attaching an implement that requires more horsepower than the machine can produce damages the machine.

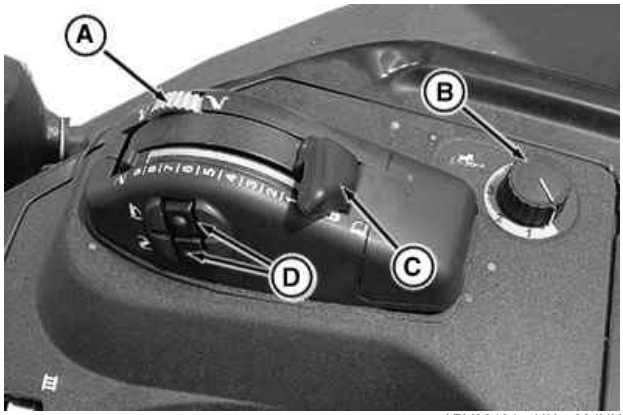
See your implement Operator's Manual for minimum and maximum power requirements before attaching implement to machine.

LGCKF7U,0000BD8-19-11JUN21

Rear Hitch Controls

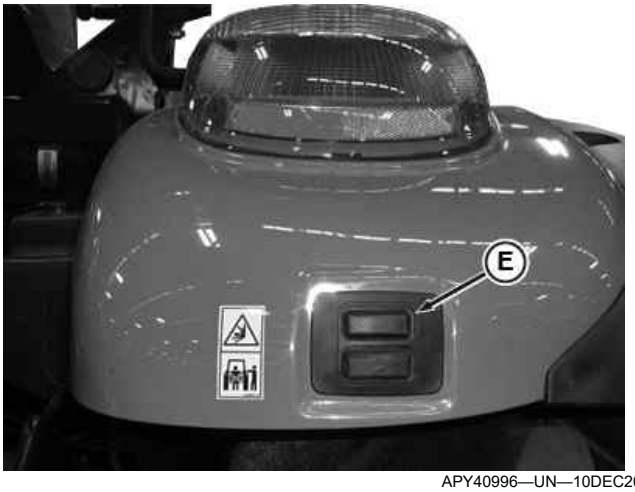


APY33192—UN—08JUN20



APY33191—UN—08JUN20

Electrohydraulic Hitch (OSS)

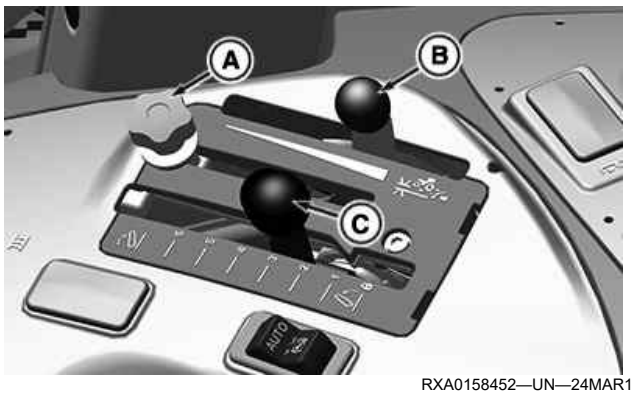


APY40996—UN—10DEC20

Cab

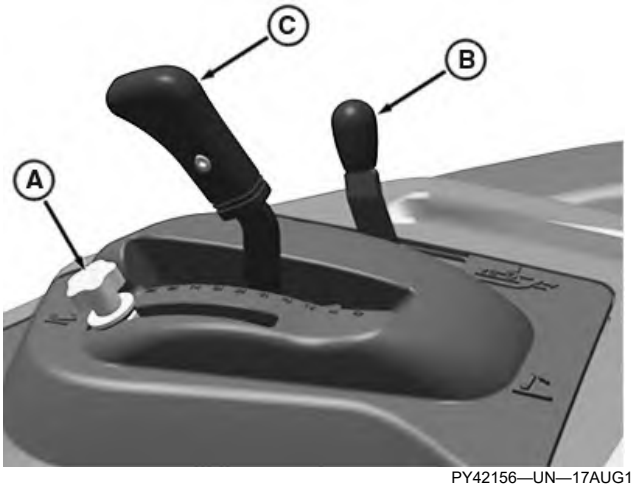
APY48037—UN—21APR21

OOS



RXA0158452—UN—24MAR17

Mechanical Hitch (Cab)



PY42156—UN—17AUG17

Mechanical Hitch (OOS)

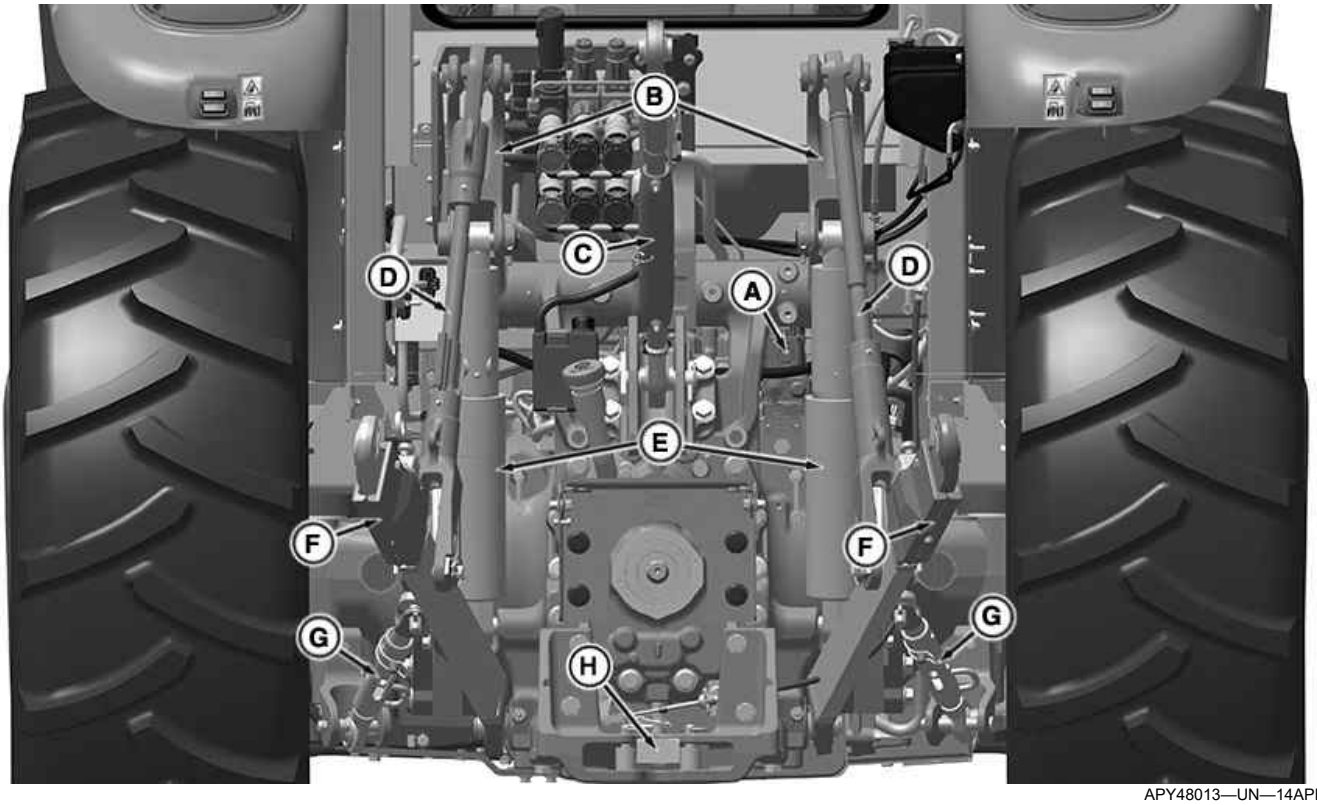
A—Position Lever Stop
B—Draft Control
C—Position Lever
D—Quick Raise/Lower Button
E—Rear Hitch Fender Switch

NOTE: Hydraulic center link can be plumbed to any rear SCV port and operated by the appropriate SCV control.

LGCKF7U,0000CE8-19-21MAY21

Rear Hitch Components

Drawbar Hitch

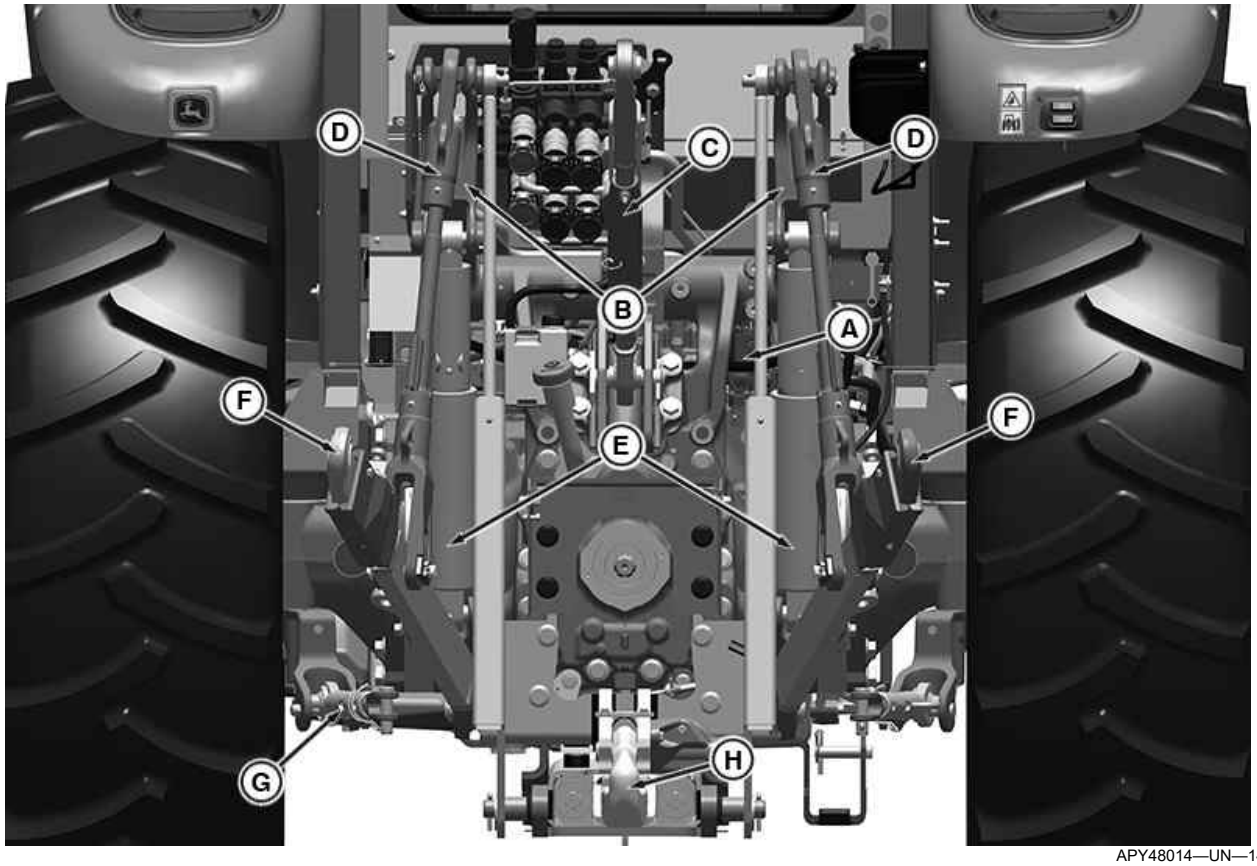


APY48013—UN—14APR21

Ball End Drawbar Hitch

A—Hitch Valve
B—Lift Arms
C—Center Link
D—Lift Links
E—Hitch Cylinders
F—Draft Link Ends
G—Sway Bars
H—Drawbar Components

Pickup Hitch

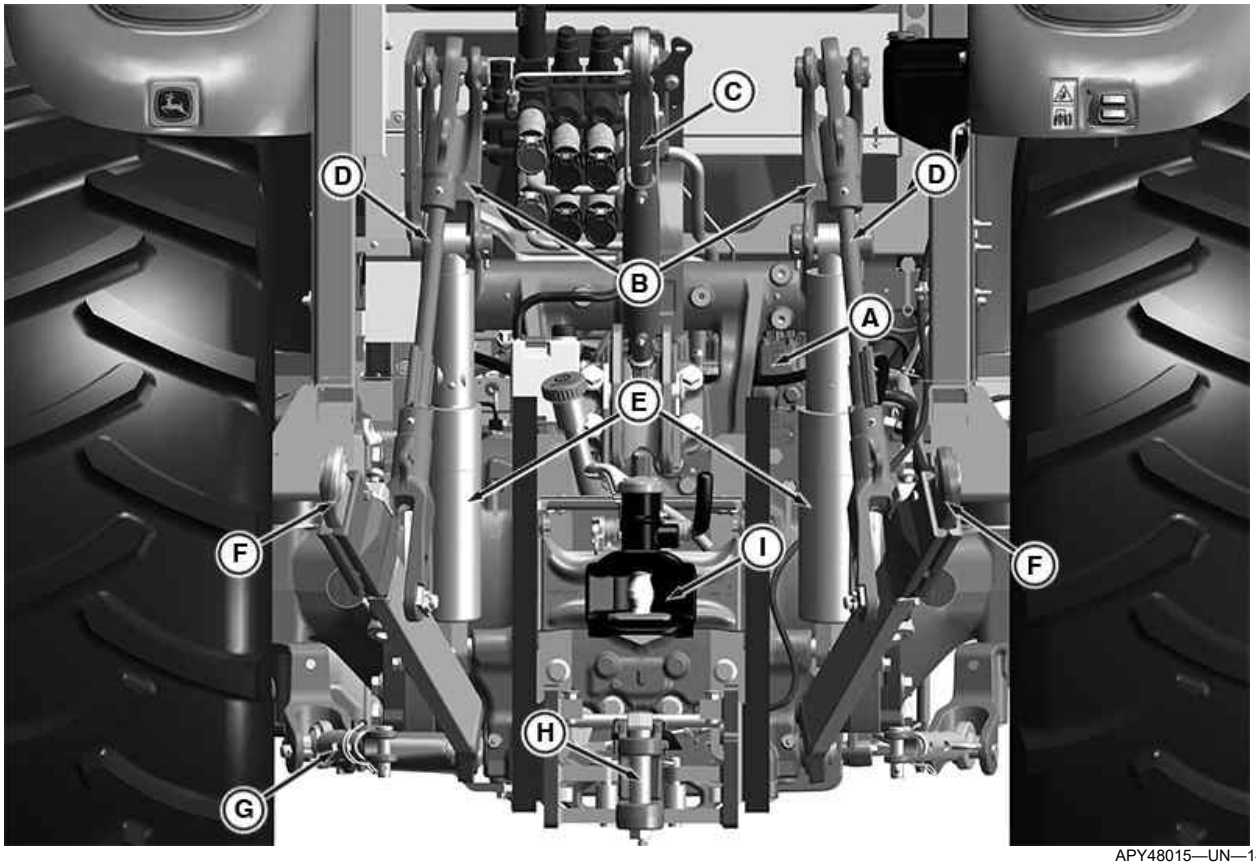


APY48014—UN—14APR21

Ball End

A—Hitch Valve
B—Lift Arms
C—Center Link
D—Lift Links
E—Hitch Cylinders
F—Draft Link Ends
G—Sway Bars
H—Pickup Hitch Hook Components

Automatic Wagon Hitch

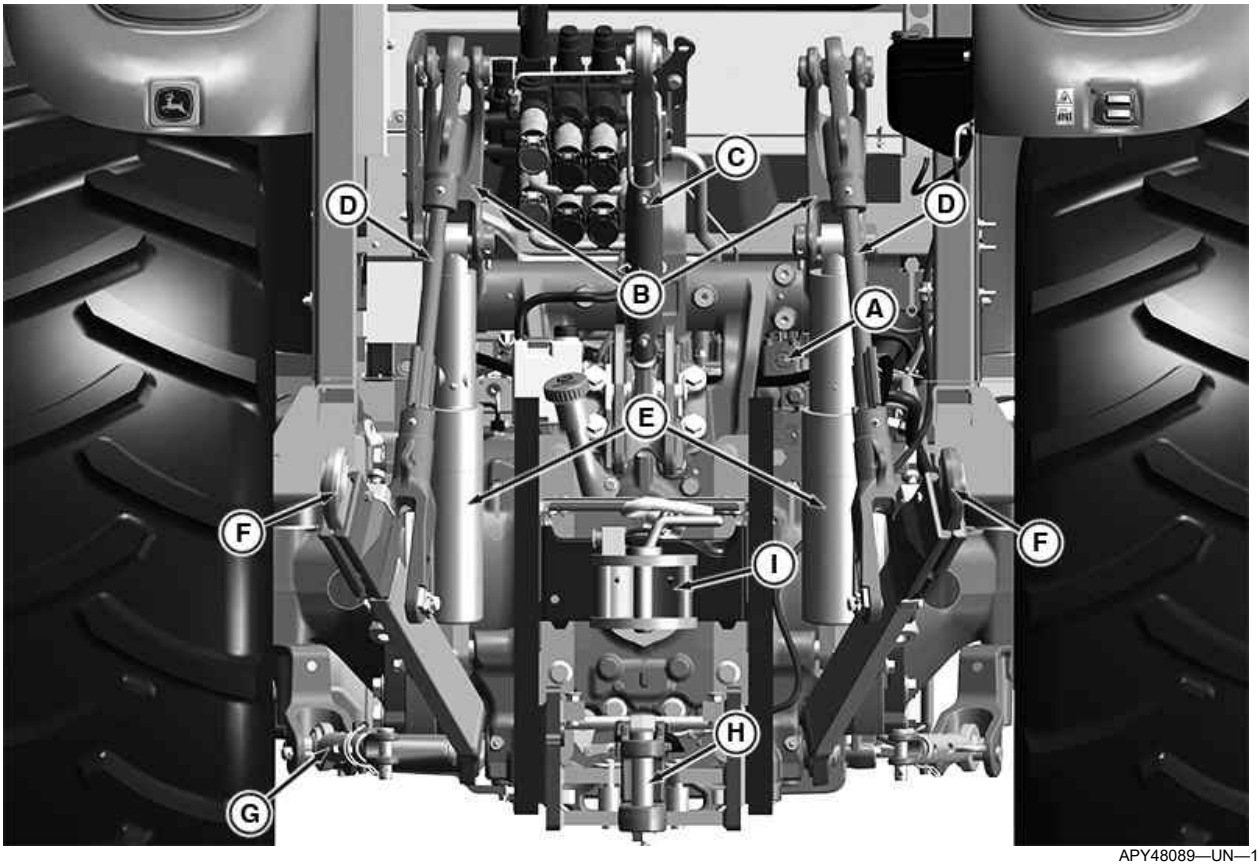


APY48015—UN—14APR21

Ball End With Automatic Wagon Hitch

A—Hitch Valve
B—Lift Arms
C—Center Link
D—Lift Links
E—Hitch Cylinders
F—Draft Link Ends
G—Sway Bars
H—Wagon Hitch Drawbar Components
I—Automatic Wagon Hitch

Cuna C Wagon Hitch

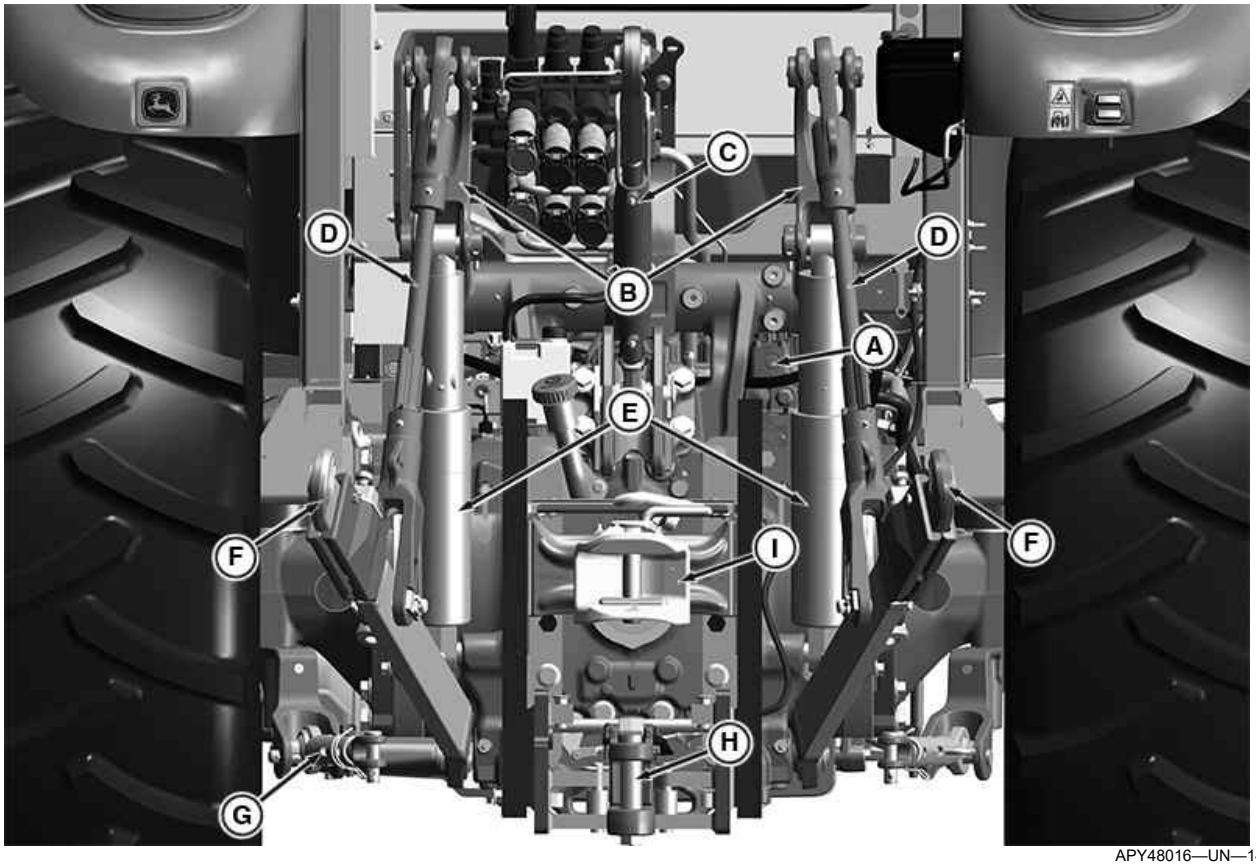


APY48089—UN—18JUL21

Ball End With Cuna C Wagon Hitch

A—Hitch Valve
B—Lift Arms
C—Center Link
D—Lift Links
E—Hitch Cylinders
F—Draft Link Ends
G—Sway Bars
H—Wagon Hitch Drawbar Components
I—Cuna C Wagon Hitch

Manual Wagon Hitch



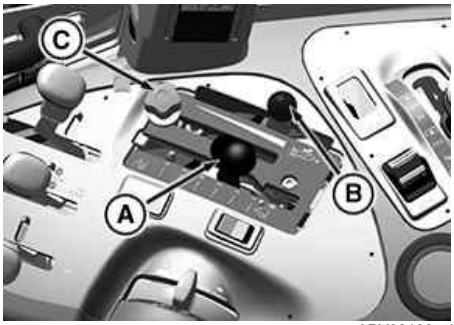
APY48016—UN—14APR21

Ball End With Manual Wagon Hitch

A—Hitch Valve
B—Lift Arms
C—Center Link
D—Lift Links
E—Hitch Cylinders
F—Draft Link Ends
G—Sway Bars
H—Wagon Hitch Drawbar Components
I—Manual Wagon Hitch

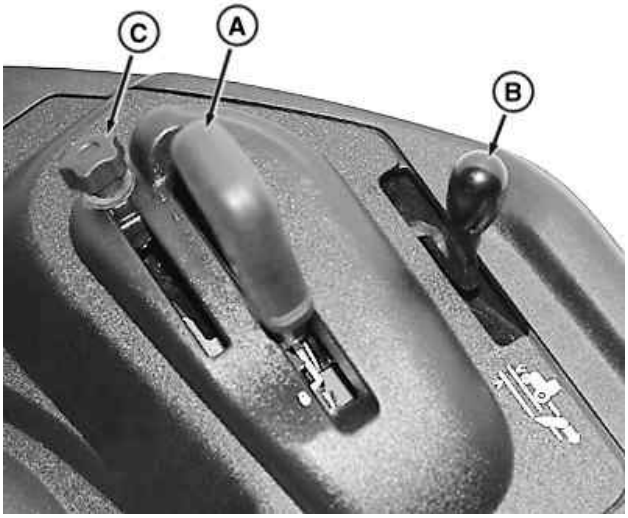
LGCKF7U,0000DE5-19-11JUN21

Operate Mechanical Position and Draft Control



APY33193—UN—08JUN20

Cab



RXA0161889—UN—09FEB18

OOS

A—Position Lever
B—Draft Control Lever
C—Position Lever Stop

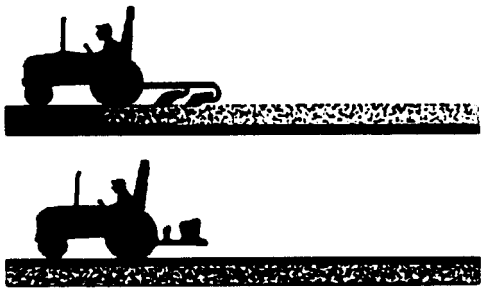
CAUTION: To prevent unexpected movement, put draft control lever (B) in full forward position before attaching implement.

IMPORTANT: Draft control setting automatically influences actual hitch position. For independent position control, move draft control (B) to full forward position.

Operate Mechanical Position Control

Rear hitch position lever (A) controls 3-point hitch-mounted implement raise or lower movement and ground depth penetration.

Depth Control (level, in-ground, on-ground, and non-ground engaged situations):



LV09233—UN—26JUL04

Depth Control

- Position lever (A) at desired depth.

NOTE: A few minutes of implement operation are required to determine the best depth. Set desired depth with position lever stop (C). Hitch returns implement to previous above- or below-ground depth.

Float Control (uneven ride, on-ground contour situations):

LV9457—UN—26JUL04

Float Control

- Position lever (A) and draft control (B) fully forward.

NOTE: Ensure that implement skids or height gauge wheels are set correctly to carry full implement weight. Ensure that hitch draft link arms are adjusted for any required lateral float.

Height at Turn (end-of-field turn around situations):

- Position lever (A) rearward until implement is out of ground.

Implement Transport (load and non-load sense usage):

- Position lever (A) fully rearward.

Operate Mechanical Draft Control

Rear hitch draft control lever (B) controls ground penetration response of 3-point hitch-mounted implement to varying soil conditions.

Mechanical Draft Control:

- Draft control fully forward = No draft sensing.
- Draft control fully rearward = Reduces the amount of draft load required to override depth setting (position preset by position lever (A)).

Draft Load Sensing Operation:

1. Place position lever (A) to full rearward position and draft control in full forward (least draft response) position.
2. With machine moving, push position lever forward to set implement operating depth.
3. Set position lever stop (C) so that position lever can be brought back to exactly the same position.

NOTE: Operating depth setup prevents the 3-point hitch from lowering all the way when the machine begins to slip.

4. Pull draft control rearward until desired draft sensing sensitivity is obtained.

NOTE: Position lever (A) can also be raised slightly to override the draft control setting to help get through slippery spots without getting stuck. Position lever (A) can be moved fully rearward to raise the hitch at the end of the field.

Terrain Contour (irregular ground level conditions):

PULV000236—UN—08MAR08

Terrain Contour

Implement rises and lowers to follow the ground contours while maintaining a nearly constant depth.

Variable Soil (ground hardness conditions):

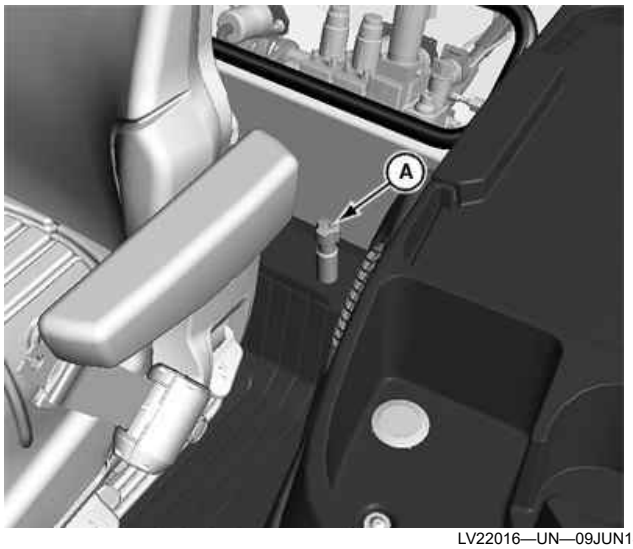
PULV000237—UN—08MAR08

Variable Soil

Implement rises slightly to get through tough spots and operator does not need to shift to lower gear.

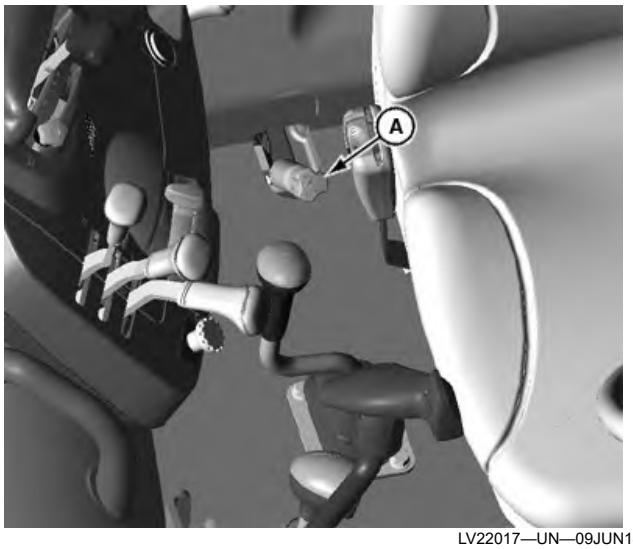
LGCKF7U,0000BDB-19-10MAY21

Operate Mechanical Rate-of-Drop Knob



LV22016—UN—09JUN14

Cab



LV22017—UN—09JUN14

OOS

A—Rate-of-Drop Knob

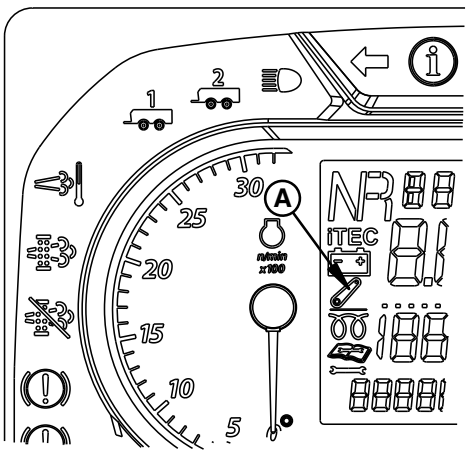
⚠ CAUTION: To avoid injury from hitch movement, only adjust rate of drop from operator's seat.

IMPORTANT: Ideal minimal implement rate of drop from fully raised to fully lowered is 2 seconds. Rate of drop is directly related to implement weight. Select a rate slow enough to prevent damage.

- For faster rate of drop, rotate rate-of-drop knob (A) to left (counterclockwise).
- For slower rate of drop, rotate rate-of-drop knob (A) to right (clockwise).

LGCKF7U,0000BDC-19-10MAY21

Electrohydraulic Hitch System



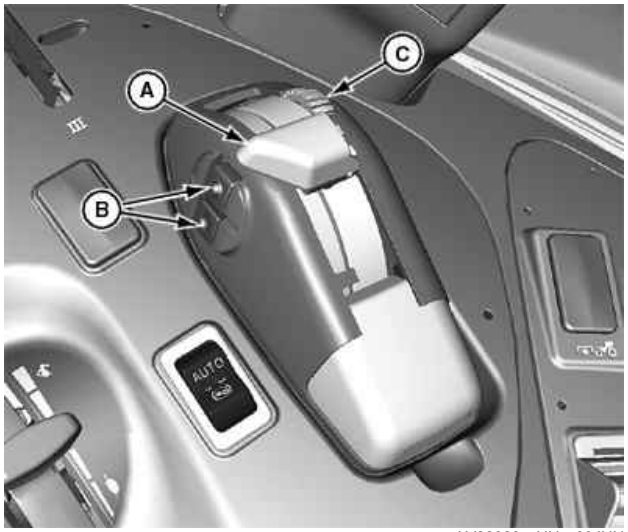
PY42063—UN—15MAY17

Rear Hitch Indicator

A—Electrohydraulic Hitch System Indicator

Electrohydraulic hitch system indicator (A) warns of a malfunction in the electrohydraulic hitch control system. See the nearest John Deere dealer.

Operate Electrohydraulic Position Control



LV22023—UN—09JUN14

A—Position Lever
B—Quick Raise/Lower Buttons
C—Position Lever Stop

CAUTION: To prevent possible injury, use only position lever (A) when attaching or detaching implements. Do not use quick raise/lower buttons (B).

IMPORTANT: Draft control setting automatically influences actual hitch position. For independent position control, rotate draft knob fully counterclockwise. See Operate Electrohydraulic Draft Control in this section.

NOTE: Engine must be running for electrohydraulic hitch controls to work.

Rear hitch position lever (A) controls raise or lower movement of 3-point hitch-mounted implement and ground depth penetration. Pull lever rearward to raise; push lever forward to lower.

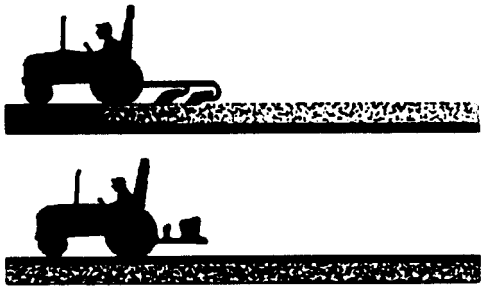
Adjust Position Control Depth Stop:

- Push down and rotate position lever stop (C) until stop sets to desired working depth. After raising hitch, implement returns to set depth when hitch position lever (A) is pushed forward (lowered) to contact stop.

  A few minutes of implement operation are required to determine the best depth. Set desired depth with position lever stop (C). Hitch returns implement to previous above- or below-ground depth.

  To lower hitch below the preset depth stop, lift position lever (A) and push forward past stop.

Depth Control (level, in-ground, on-ground, and non-ground engaged conditions):



LV09233—UN—26JUL04

Depth Control

- Position lever (A) at desired depth.

Float Control (uneven, ride on-ground contour conditions):

LV9457—UN—26JUL04

Float Control

- Position lever (A) fully forward and rotate draft knob fully counterclockwise.

NOTE: Ensure that implement skids or height gauge wheels are set correctly to carry full implement weight. Ensure that hitch draft link arms are adjusted for any required lateral float.

Height at Turn (end of field turn-around conditions):

- Position lever (A) rearward until implement is out of ground.

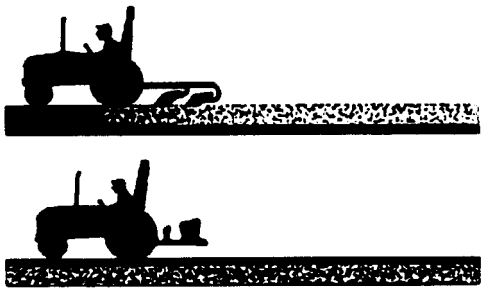
NOTE: Set hitch height with the limit knob. See Operate Electrohydraulic Height Limit Control in this section.

Quick Raise at Turn (end of field turn around conditions):

- Press and hold the top raise button of the quick raise/ lower buttons (B) until hitch implement is not engaged in or on ground, but not fully raised.

NOTE: Set hitch height limit with the height limit knob.

Implement Transport (load and non-load sense usage):



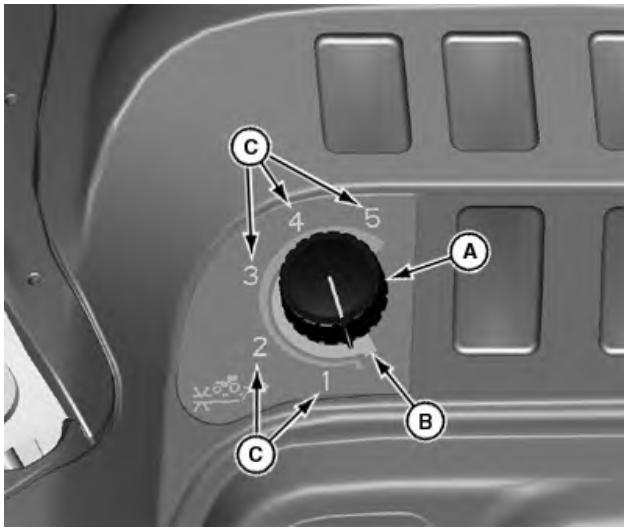
LV09233—UN—26JUL04

Implement Transport

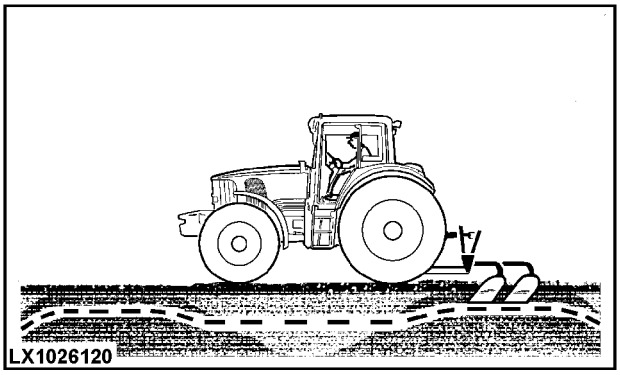
- Position lever (A) fully rearward. Ensure that lever is in transport lock position (lever flipped over latch at the padlock symbol).

NOTE: Quick raise/lower buttons are disabled when the position lever (A) is in transport lock position. Hitch rises to transport lock position when machine is started.

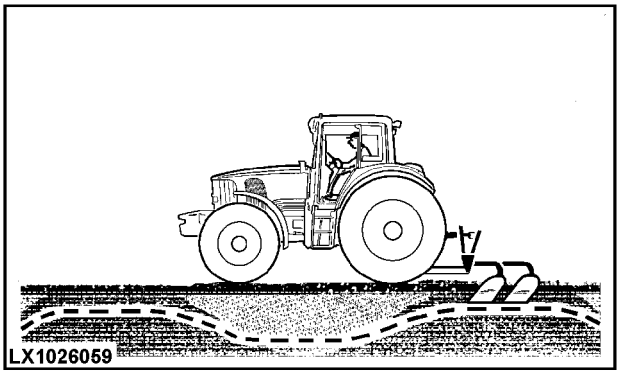
Operate Electrohydraulic Draft Control



LV22018—UN—09JUN14



LX1026120—UN—10MAY01



LX1026059—UN—18MAY01

A—Load/Depth (Draft) Knob
B—Position Control Detent
C—Draft Control Setting

Rear hitch load/depth (draft) knob (A) controls 3-point hitch-mounted implement ground penetration response to varying soil conditions.

Electrohydraulic Draft Control:

1. Turn load/depth (draft) knob to one of five draft control settings (C) to control depth and load depending on implement and field or soil conditions:
2. Turn counterclockwise to reduce draft response.
3. Turn clockwise to increase draft response.

With the control turned to a higher number, the implement is raised as resistance (soil density) increases and lowered as resistance decreases; typical settings are:

Implement	Draft Control Setting
Integral Ripper/Subsoiler	1—3
Integral Chisel Plow	2—4
Semi-Integral Moldboard Plow	2—4
Integral Moldboard Plow	3—5
Integral Field Cultivator or Box Blade Scraper	4—5

Operate Electrohydraulic Rate of Drop Control

LV22019—UN—09JUN14

A—Electrohydraulic Rate of Drop Control

CAUTION: To avoid injury from hitch movement, only adjust rate of drop from operator's seat.

IMPORTANT: Ideal minimal implement rate of drop from fully raised to fully lowered is 2 seconds. Rate of drop is directly related to implement weight; therefore select a rate slow enough to prevent damage.

Electrohydraulic Hitch Rate of Drop Control:

- For faster rate of drop, rotate electrohydraulic rate-of-drop control (A) to right (clockwise).
- For slower rate of drop, rotate electrohydraulic rate-of-drop control (A) to left (counterclockwise).

Operate Electrohydraulic Height Limit Control

LV22020—UN—09JUN14

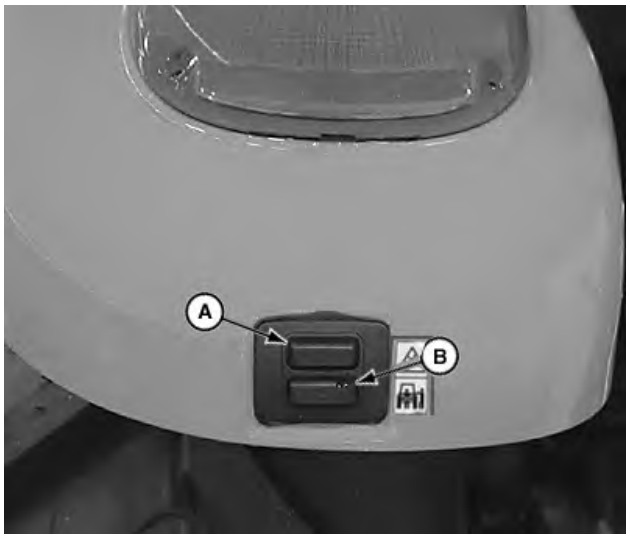
B—Height Limit Knob

The height to which an implement is raised can be limited with the height limit knob (B).

Electrohydraulic Height Limit Control:

- For minimum height, turn the height limit knob (B) fully left (counterclockwise).
- For maximum height, turn the height limit knob (B) fully right (clockwise).

Operate Electrohydraulic Hitch Fender Switch



APY48017—UN—14APR21

A—External Raise Switch
B—External Lower Switch

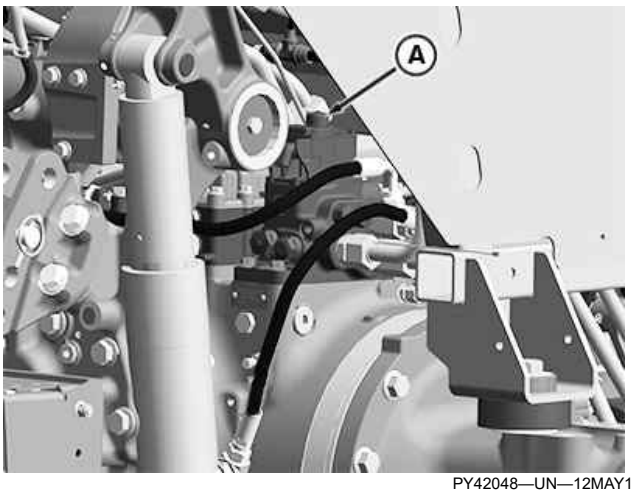
CAUTION: Put machine in Park before using fender switches. Implement moves when fender switches are used. Stay clear of interference points during operation.

NOTE: When remote hitch switches are pressed, the hitch moves slowly but increases speed the longer hitch switch is held.

1. Implement is raised when top external raise switch (A) is held.
2. Implement is lowered when bottom external lower switch (B) is held.
3. Once external position control switch is activated, the hitch does not respond to movements of the position lever.

   To reactivate the lever, place lever at a position that corresponds with hitch position and then actuate quick raise/lower buttons.

Manually Lower Electrohydraulic Hitch



PY42048—UN—12MAY17

A—Protective Cap

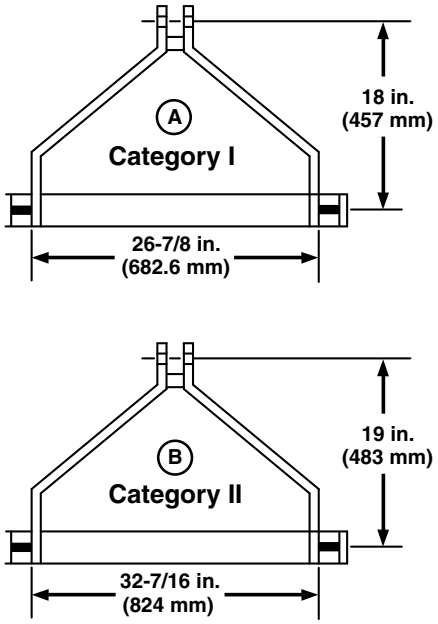
CAUTION: Perform procedure from operator's station to avoid possible injury from rear hitch-mounted implements.

If engine or electrical power is not available, hitch can be lowered manually.

1. Park machine, remove key.
2. Remove protective cap (A) to access set screw.
3. Turn set screw counterclockwise to lower hitch.
4. With hitch lowered, turn the set screw clockwise and install cap.

LGCKF7U,0000CEA-19-21MAY21

Prepare Implement



LV9639—UN—11AUG04

A—Category I Implement
B—Category II Implement

NOTE: See the implement Operator's Manual to identify implement category.

When attaching Category I implements to the machine, sway bars need adjustment to prevent binding and limiting full raise of the hitch. (See Adjust Hitch Side Sway in this section.)

Category I implements (A); hitch is narrower and shorter for smaller implements than Category II implements (B).

Category II implements (B); hitch is wider and taller for implements larger than Category I implements (A).

Category	Mast Height	Width Between Lower Pins	Pin Size	
			Lower	Upper
I (A)	457 mm (18 in)	682.6 mm (26-7/8 in)	22 mm (7/8 in)	19 mm (3/4 in)
II (B)	483 mm (19 in)	824 mm (32-7/16 in)	28 mm (1-1/8 in.)	25.4 mm (1 in)

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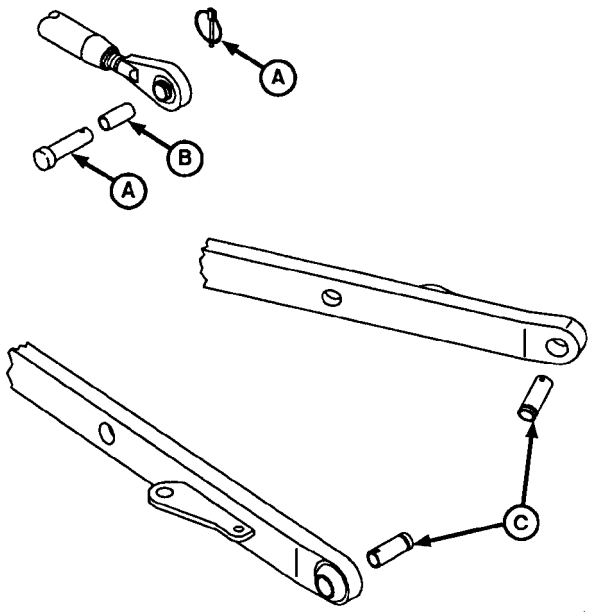
Hitch Conversion - Category II to I



M47171A—UN—22APR94

A—Implement Pin
B—Center Link Reducing Bushing
C—Draft Link Reducing Bushing

NOTE: There is a hook end option for the center link and draft link ends. The adjustments are all made on the implement side for these ends.

Center link end and draft link ends are sized for Category II implement attaching pins.

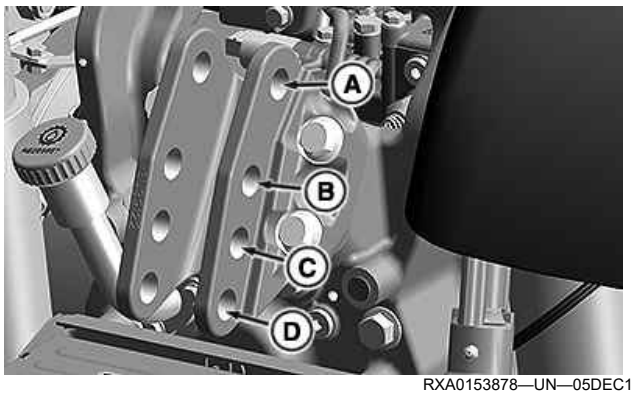
To use Category I implements, convert the Category II hitch:

- Insert reducing bushing (B) in the center link end.
- Use smaller implement pin (A) through the implement mast.
- Add draft link reducing bushings (C) to end of draft links.

See your John Deere dealer for parts.

HK75640,0001018-19-14SEP20

Position Center Link



RXA0153878—UN—05DEC16

A—Highest Position (0 degrees of tilt for category II)
B—Second Position (10 degrees of tilt for category II)
C—Third Position (15 degrees of tilt for category II)
D—Lowest Position (10 degrees of tilt for category I)

The center link attaching bracket has holes which allow up to four different positions for attaching the center link.

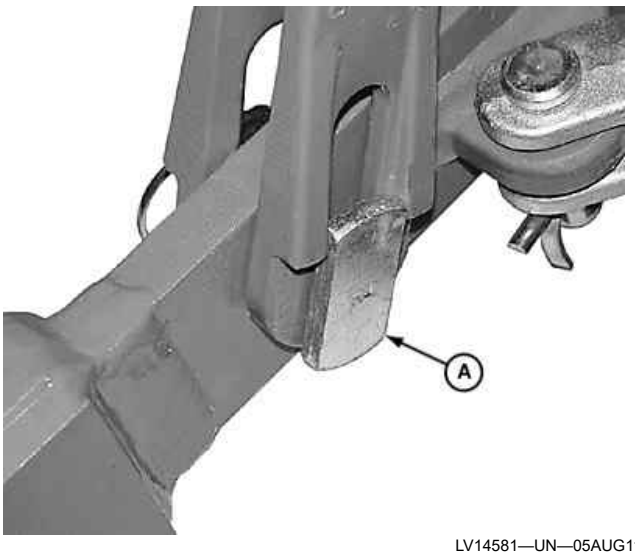
If the following conditions occur, move the center link to indicated holes to correct.

Condition	Hole to Use
Rear of implement rises too much when lifted.	A
Rear of implement drags the ground.	B or C
Category I mast height 457 mm (18 in) implement is used.	C or D
Category II mast height 483 mm (19 in) implement is used.	A, B, or C

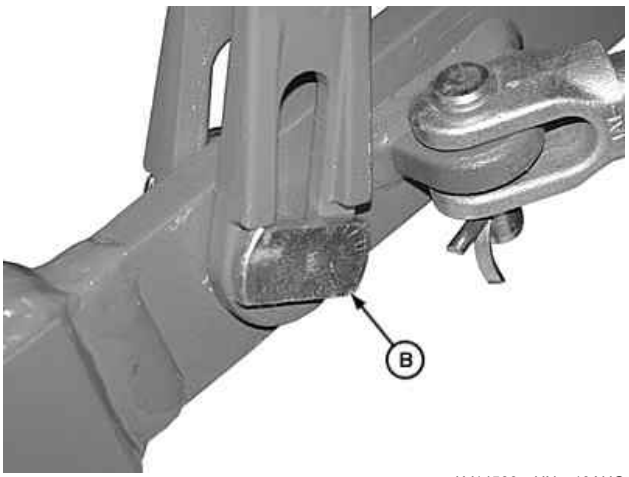
NOTE: The implement weight which can be lifted is reduced slightly with center link attachment in lower holes C and D.

LGCKF7U,0000BDF-19-10MAY21

Adjust Lateral Float



LV14581—UN—05AUG11



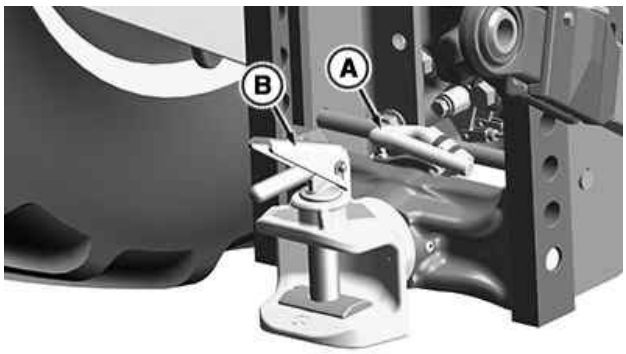
LV14583—UN—10AUG11

A—Pin in Float Position (vertical)
B—Pin in Fixed Position (horizontal)

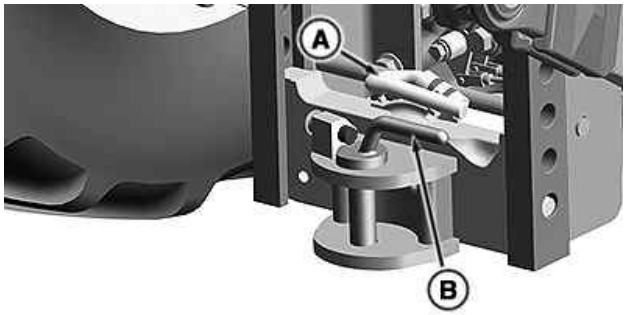
- **Float Position (A):** Ground following implements (cultivator or mower), use ground gauging skids or wheels to rise/lower slightly or twist as implement follows the ground contour.
- **Fixed Position (B):** Ground engaging implements (plows, rippers, disk) require fixed ground depth and alignment with machine, no relative twisting.

LGCKF7U,0000BE0-19-10MAY21

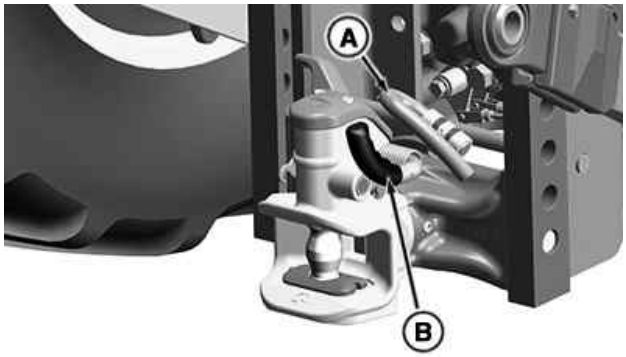
Height-Adjustable Trailer Hitch



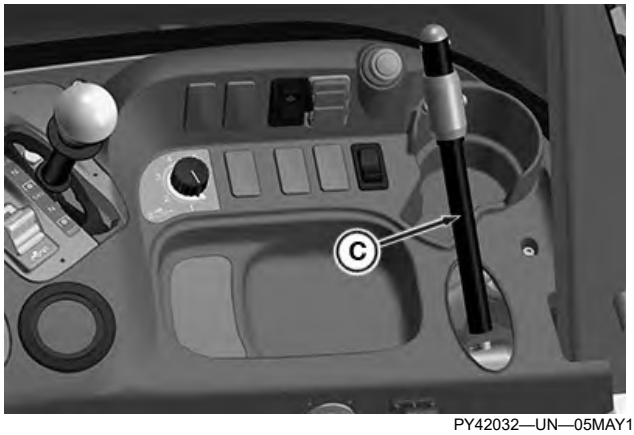
RXA0155244—UN—27OCT16
Height-Adjustable Trailer Hitch, Manual Type



RXA0155245—UN—27OCT16
Height-Adjustable Trailer Hitch, CUNA Type



RXA0155246—UN—27OCT16
Height-Adjustable Trailer Hitch, Automatic Type



PY42032—UN—05MAY17

Remote Hitch Lever

A—Quick Release Lever
B—Actuating Handle
C—Remote Hitch Lever

CAUTION: Use the manual hitch system for trailers with non-pivoting towing eyes.

Use the CUNA hitch system for trailers with pivoting towing eyes.

IMPORTANT: Use only trailers with a towing eye that matches the hitch pin diameter.

Hitches can be adjusted up or down according to the implement height and to obtain clearance for the center link or PTO operation.

The machine can be equipped with different hitch versions which are operated in different ways.

Adjust Height and Operate Hitch:

1. The height of all hitches can be adjusted using quick release lever (A). Support hitch with one hand move hitch with the other.
2. Make sure that the side locking pins are fully engaged.
3. Manual type hitches can be operated by handle (B).
4. Automatic type hitches can be operated using lever (B) or can be operated from the operator's seat using remote hitch lever (C).

Maximum permissible static vertical loads and towable loads are stated in Specifications section.

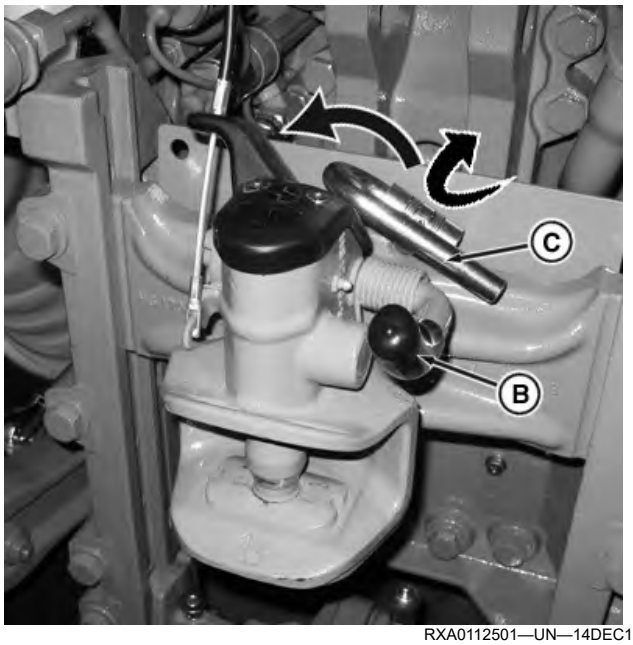
NOTE: Inspect hitch for wear as required. See "Maintenance Intervals" section.

LGCKF7U,0000BE1-19-10MAY21

Operate Wagon Hitch

Operate Automatic Wagon Hitch

RXA0155878—UN—18NOV16



RXA0112501—UN—14DEC10

A—Lever
B—Release Lever
C—Height Adjustment Lever

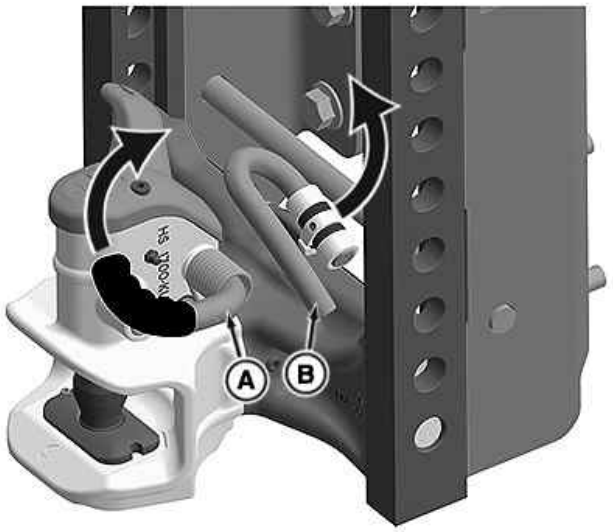
CAUTION: Avoid personal injury. Keep hands and fingers from hitch latching mechanism.

Wagon hitch can be released from the operator's seat using lever (A).

The wagon hitch closes automatically when trailer towing eye enters the hitch, or can be manually closed using release lever (B).

Wagon hitch height can be adjusted using height adjustment lever (C). To adjust, rotate height adjustment lever back, then slide lever to the left. Move hitch assembly up or down as desired. Make sure the pins lock into holes in hitch rail before connecting implement.

Operate Manual Wagon Hitch



RXA0156169—UN—13DEC16

A—Release Lever
B—Height Adjustment Lever

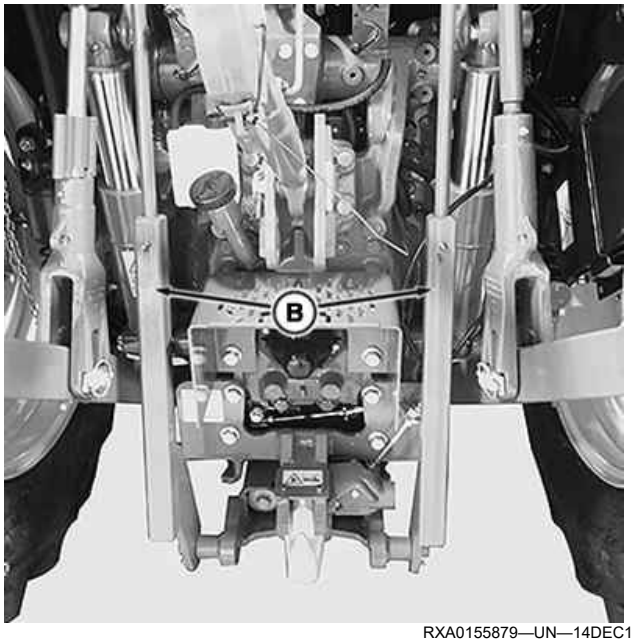
The wagon hitch closes automatically when trailer towing eye enters the hitch, or can be manually closed using release lever (A).

Wagon hitch height can be adjusted using height adjustment lever (B). To adjust, rotate height adjustment lever back, then slide lever to the left. Move hitch assembly up or down as desired. Make sure the pins lock into holes in hitch rail before connecting implement.

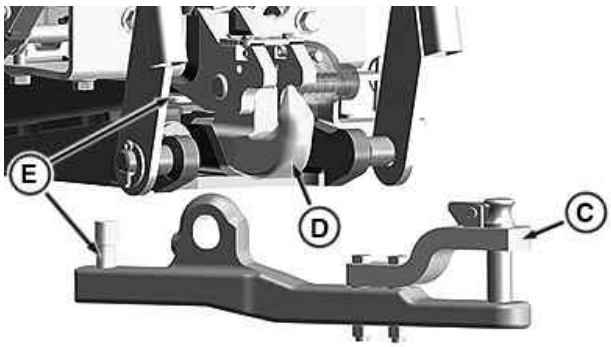
LGCKF7U,0000BE2-19-10MAY21

Operate Pickup Hitch

RXA0155878—UN—18NOV16



RXA0155879—UN—14DEC16



RXA0155882—UN—18NOV16

RXA0155881—UN—18NOV16

A—Pickup Hitch Control Lever
B—Lift Links
C—Drawbar
D—Hook End
E—Draw Bar Retaining Pin
F—Rear Hitch Control Lever

CAUTION: Avoid bodily injury when pickup hitch is used. Ensure pick-up hitch is fully raised and locked in position before driving away.

Avoid implement and/or pickup hitch lift link damage:

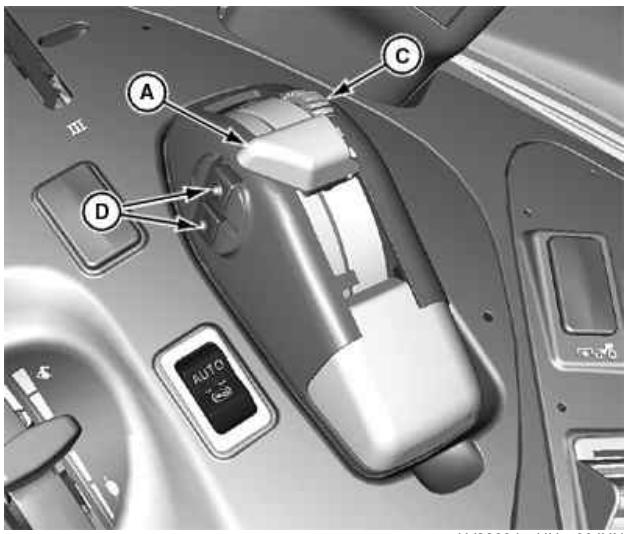
- **Use caution when making sharp turns.**
- **Adjust sway blocks or stabilizers to prevent interference or binding.**

NOTE: Hook end (D) can be replaced with a standard drawbar (C) if needed.

1. Lower rear hitch using the rear hitch control lever (F).
2. Retract pickup hitch control lever (A).
3. Retract rear hitch control lever (F) to raise pick-up hitch.
4. Remove draw bar retaining pin (E) and remove hook end (D) and drawbar (C).
5. Install standard draw bar (C) and reinstall retaining pin (E).

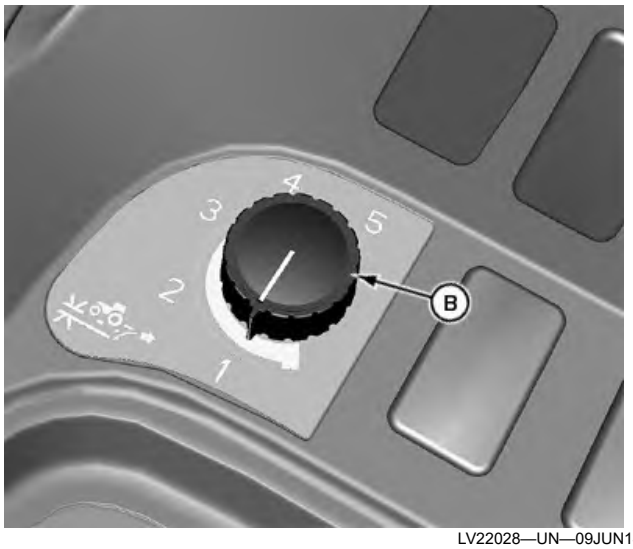
LGCKF7U,0000BE3-19-10MAY21

Attach Implement to Ball-End Rear Hitch



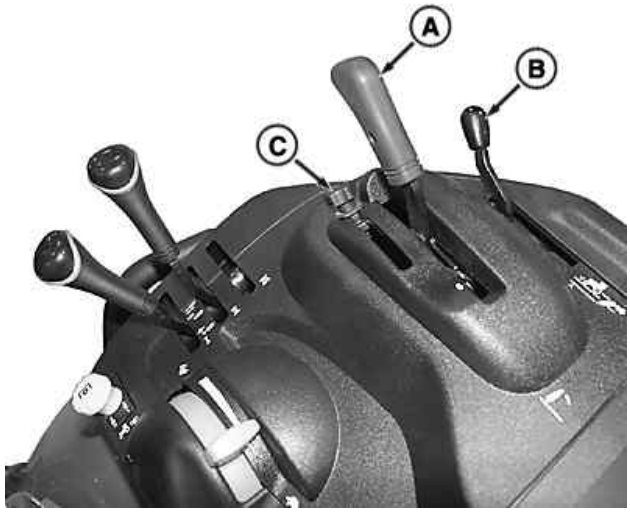
LV22034—UN—09JUN14

Electrohydraulic Hitch



LV22028—UN—09JUN14

Electrohydraulic Hitch



RXA0162134—UN—15FEB18

Mechanical Hitch

A—Position Lever
B—Draft Control
C—Position Lever Stop
D—Quick Raise/Lower Buttons

CAUTION: Hitch movement can cause injury or death.

CAUTION: To prevent unexpected movement of rear hitch, place draft control to lowest position before attaching implement to hitch.

IMPORTANT: Ensure center link and lift link adjustments DO NOT cause implement contact with fenders.

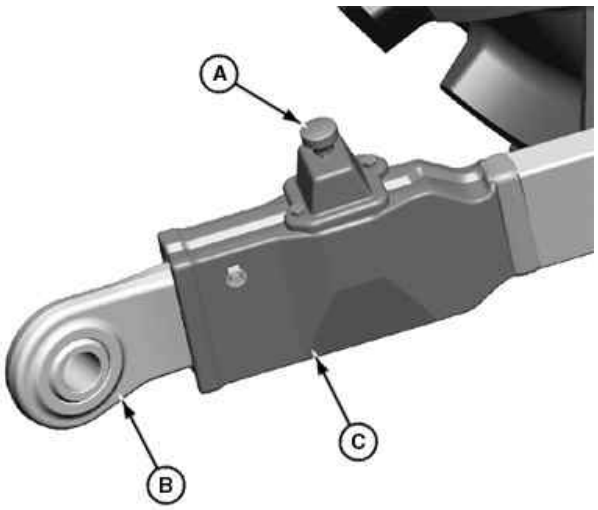
NOTE: Engine must be running for rear hitch controls to work.

1. Before attaching or detaching implement, place draft control (B) into lowest setting.
2. Use position lever (A) to raise or lower implement.

NOTE: Do not use rear quick raise/lower buttons (D).

3. Be sure that drawbar does not interfere. If necessary, move the drawbar to fully retracted position or remove it. Check for any other potential interference.

Telescopic Draft Links

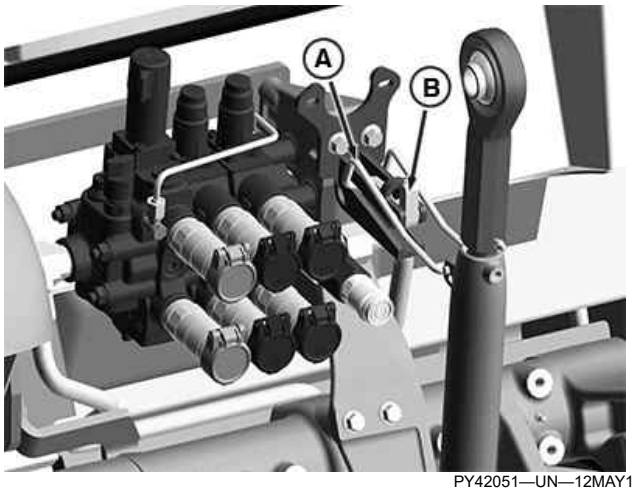


LV22036—UN—09JUN14

A—Button or Lock Pin
B—Draft Link End
C—Draft Arm

1. Move button or lock pin (A) toward center of machine and pull out draft link end (B). Slip draft link end over the implement hitch pin. Retain with a quick-lock pin. Repeat on the other side.
2. Raise or lower draft arms (C) to align draft link ends (B) with implement, slowly back up the machine to lock ends in place.
3. Back machine up to implement so that hitch points align. Place transmission in Park and stop engine.
4. Slip draft link ends (B) over the implement hitch pins and retain with quick-lock pins.

Center Link

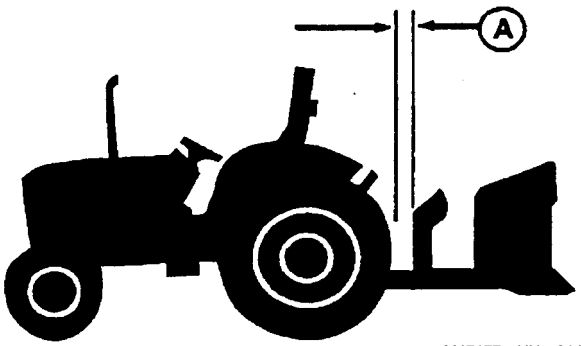


PY42051—UN—12MAY17

A—Center Link Locking Clip
B—Release Tab

1. Pull release tab (B) back and remove center link locking clip (A) to release center link from the transport hook.
2. Attach center link to implement top mast. Use appropriate SCV to extend hydraulic center link if equipped.

Adjust and Check Clearance



M47177—UN—31JAN92

A—Clearance

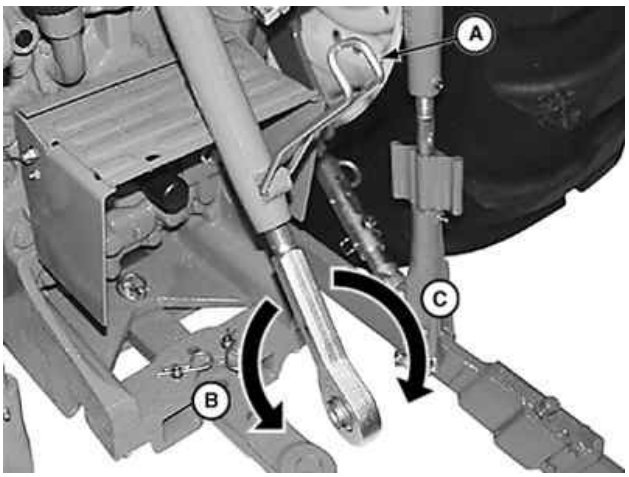
IMPORTANT: Whenever an implement, quick coupler, or attachment is connected to the hitch, check full range of operation for interference, binding, or PTO separation.

When large diameter rear tires are installed, a quick coupler or similar device is required to provide adequate implement-to-tire clearance.

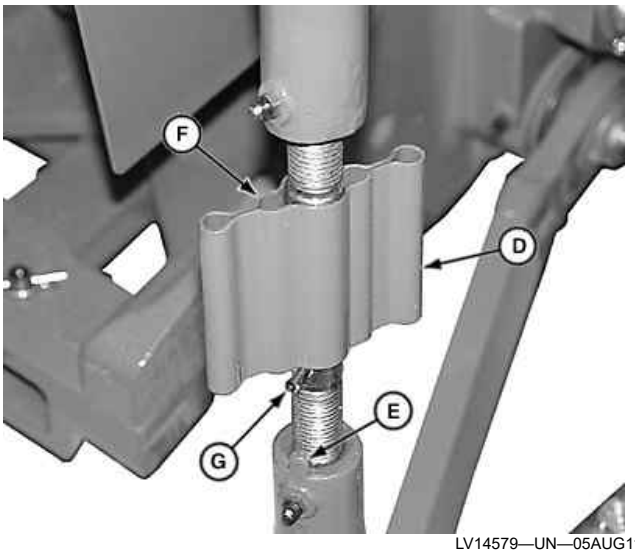
1. Adjust center link and lift links as necessary. (See Level Hitch in this section.)
2. Adjust sway as necessary. (See Adjust Hitch Side Sway in this section.)
3. Start engine.
4. Slowly raise and lower implement using hitch fender switch or position lever.
5. Watch for interference points and adjust hitch setting as required.
6. Check for adequate clearance (A) between outside diameter of the tire and implement with hitch in raised position.

LGCKF7U,0000BE4-19-10MAY21

Level Ball-End Hitch



APY48073—UN—21MAY21



LV14579—UN—05AUG11

A—Locking Clip
B—Center Link Counterclockwise Rotation
C—Center Link Clockwise Rotation
D—Locking Handle
E—Locking Tab
F—Slot
G—Roll Pin

IMPORTANT: Do NOT attempt to overextend the center link beyond limits of locking clip or lift links past the stop indicators (missing thread). Link body threads could be damaged.

Manual Center Link Adjustment:

1. Lower implement to ground and adjust center link to level implement front-to-rear.

NOTE: Maximum adjustment range of the center link can only be obtained if the ends are aligned with the body when attached to an implement.

2. Unlatch locking clip (A). Rotate link body:
   a. Clockwise (C) to lengthen.
   b. Counterclockwise (B) to shorten.
3. Latch locking clip.

Lift Link Adjustment:

1. Adjust lift link to level implement side-to-side. Lift locking handle (D) to clear locking tab (E). Keep slot (F) engaged on roll pin (G) and turn locking handle (D):
   a. Clockwise to raise the draft link.
   b. Counterclockwise to lower the draft link.
2. When adjustment is complete, align slot (F) with locking tab (E), and lower to lock in place and prevent change of adjustment during operation.

LGCKF7U,0000DE6-19-11JUN21

Attach Implement to Hook-End Rear Hitch

RXA0153750—UN—08SEP16

A—Position Control Lever Stop
B—Position Control Lever
C—Quick Lower Button
D—Quick Raise Button

CAUTION: Hitch movement can cause injury or death.

To prevent unexpected movement of rear hitch, set load depth to position control (setting "0") before attaching implement to hitch.

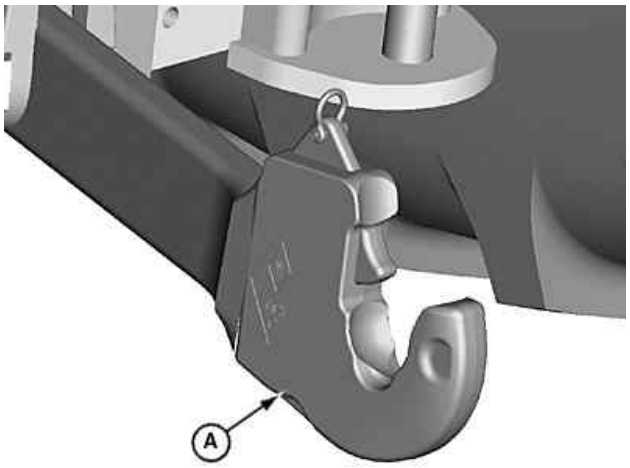
IMPORTANT: Ensure center link and lift link adjustments do NOT cause implement contact with fenders.

NOTE: Engine must be running for 3-point hitch control to work.

1. Back machine up for implement to be attached. Engine must be running to operate the rear hitch.
2. Use position control lever (B) to raise or lower draft links near the attachment points. Do NOT use rear quick raise/lower buttons (C and D).

3. Set desired depth using the position control lever stop (A).
4. Be sure that drawbar does not interfere. If necessary, move the drawbar to fully retracted position or remove it. Check for any other potential interference.

Hook-End Draft Links



LV15845—UN—29JUN12

A—Hook-Type Draft Link

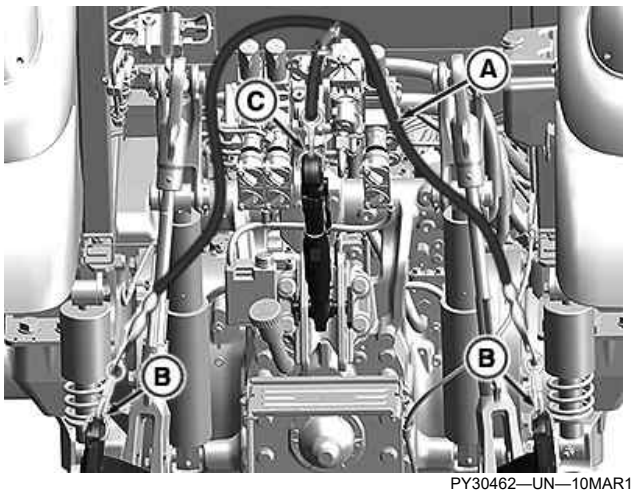
CAUTION: When implements with asymmetrical load (e.g. side-mounted mowing unit) are attached, or when driving through high-growing bushes and trees (e.g. when working in the forest), the draft links must be secured to prevent accidental opening.

NOTE: The coupler hooks can be locked in their "open" position by pulling on lever and rotating 90 degrees.

To close the coupler hook again, pull the lever up at an angle and rotate.

Hook-type draft links (A) are intended for Category I and Category II implements. Implements can be attached to and removed from the draft links without the driver having to leave the seat.

Draft Link Release Cable



PY30462—UN—10MAR17

A—Release Cable
B—Draft Link Ends
C—Center Link

Hook-type draft links (B and C) can be released from the operator's position by pulling on cable (A). When cable (A) is released, hook-end draft links return to closed position.

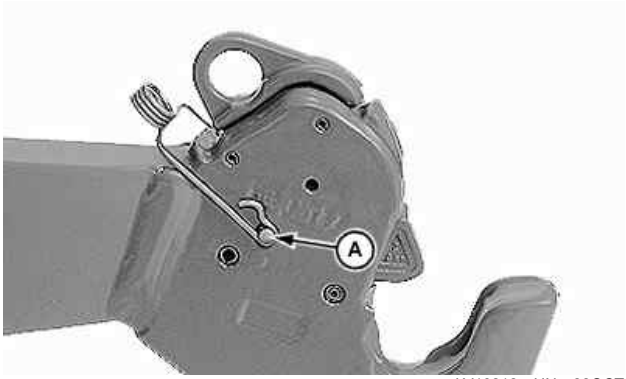
Attaching Implement

RXA0156170—UN—13DEC16

IMPORTANT: Make certain that implement is correctly locked to coupler hooks.

1. With draft links lowered, reverse machine until the coupler hooks are below the implement hitch pins.
2. Slowly raise draft links until pins are engaged in coupler hooks and locked into position.
3. Adjust center link to the required length and attach to top attaching point of implement mast.

Draft Link Hook Lock



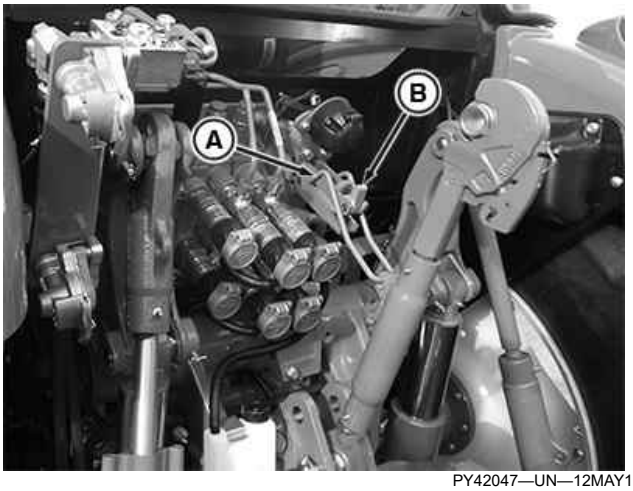
LV16212—UN—22OCT12

A—Draft Link Locking Pin

CAUTION: Use draft link locking pins on applications where implement could be forced up and open unintentionally, for example when driving through high-growing bushes and trees, or when using implements with asymmetrical load such as a side-mounted mower.

1. Lower rear hitch below the implement connection points.
2. Position coupler ends of lift arms below the implement link pins and slowly raise hitch until coupler ends lock on the pins.
3. Insert draft link pins (A) in both coupler hooks. See your John Deere dealer for locking pins.

Center Link

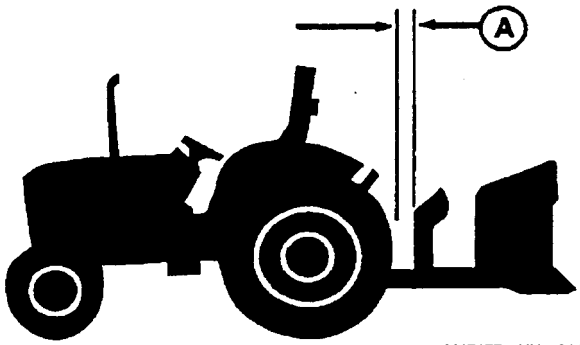


PY42047—UN—12MAY17

A—Center Link Locking Clip
B—Release Tab

1. Pull release tab (B) back and remove center link locking clip (A) to release center link from the transport hook.
2. Attach center link to implement top mast. Use appropriate SCV to extend hydraulic center link if equipped.

Adjust and Check Clearance



M47177—UN—31JAN92

A—Clearance

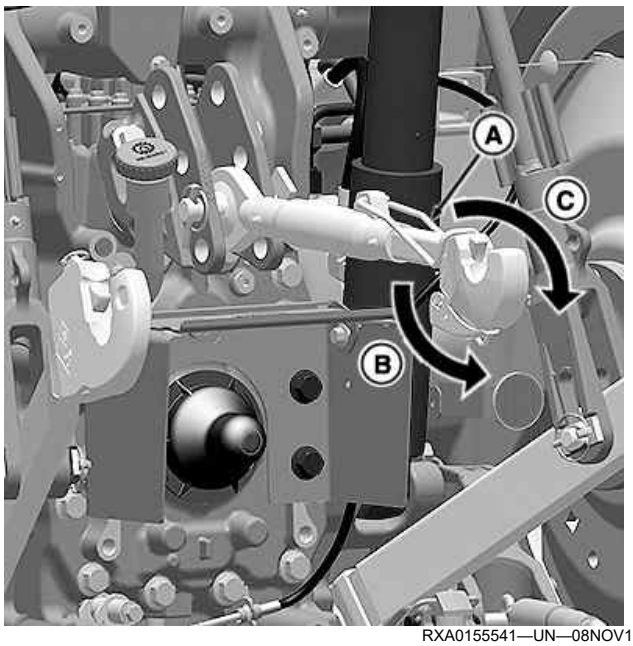
IMPORTANT: Whenever an implement, quick coupler, or attachment is connected to the hitch, check full range of operation for interference, binding, or PTO separation.

When large diameter rear tires are installed, a quick coupler or similar device is required to provide adequate implement-to-tire clearance.

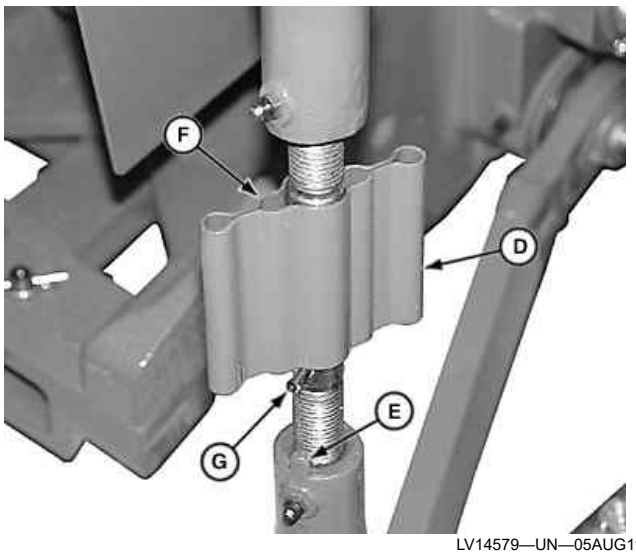
1. Adjust center link and lift links as necessary. See Level Hitch in this section.
2. Adjust sway as necessary. See Adjust Hitch Side Sway in this section.
3. Start engine.
4. Slowly raise and lower implement using hitch fender switch or position control lever.
5. Watch for interference points and adjust hitch setting as required.
6. Check for adequate clearance (A) between outside diameter of the tire and implement with hitch in raised position.

LGCKF7U,0000BE6-19-10MAY21

Level Hook-End Hitch



RXA0155541—UN—08NOV16



LV14579—UN—05AUG11

A—Locking Clip
B—Center Link Counterclockwise Rotation
C—Center Link Clockwise Rotation
D—Locking Handle
E—Locking Tab
F—Slot
G—Roll Pin

IMPORTANT: Do NOT attempt to overextend the center link beyond limits of locking clip or lift links past the stop indicators (missing thread). Link body threads could be damaged.

Manual Center Link Adjustment:

1. Lower implement to ground and adjust center link to level implement front-to-rear.

NOTE: Maximum adjustment range of the center link can only be obtained if the ends are aligned with the body when attached to an implement.

2. Unlatch locking clip (A). Rotate link body:
   a. Clockwise (C) to lengthen.
   b. Counterclockwise (B) to shorten.
3. Latch locking clip.

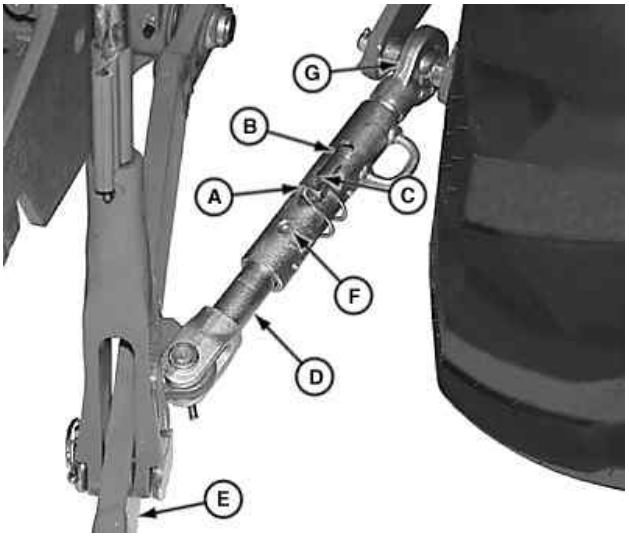
Lift Link Adjustment:

1. Adjust lift link to level implement side-to-side. Lift locking handle (D) to clear locking tab (E). Keep slot (F) engaged on roll pin (G) and turn locking handle (D):
   a. Clockwise to raise the draft link.
   b. Counterclockwise to lower the draft link.
2. When adjustment is complete, align slot (F) with locking tab (E), and lower to lock in place and prevent change of adjustment during operation.

LGCKF7U,0000BE7-19-10MAY21

Adjust Hitch Side Sway

LV14576—UN—05AUG11



LV14575—UN—05AUG11

Sway Bar Pin in Sway Position

A—Pin
B—Sway Position Outer Slot
C—Sway Position Inner Slot
D—Inner Sliding Member
E—Draft Link
F—Fixed Position Holes
G—Stabilizer

NOTE: Check implement Operator's Manual for instruction on whether to allow side sway.

If sway is desired, install pin (A) in the sway position outer slot (B), ensuring it goes through the inner slot (C).

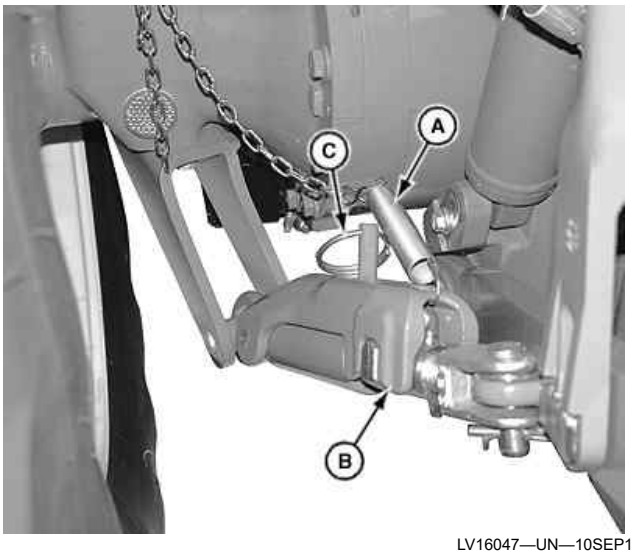
If sway is not desired, move draft link (E) to desired position. Install pin (A) in a fixed position hole (F) that lines up with one of the holes (not slot) of the inner sliding member (D).

Adjust opposite side sway bar to same position.

NOTE: Additional fixed positions are obtained by adjusting threaded end of stabilizer (G). Remove pin (A) and rotate the stabilizer to desired position. Insert pin in a fixed position hole. Missing thread on stabilizer also acts as a stop indicator.

LGCKF7U,0000BE8-19-10MAY21

Stabilizing System



LV16047—UN—10SEP12

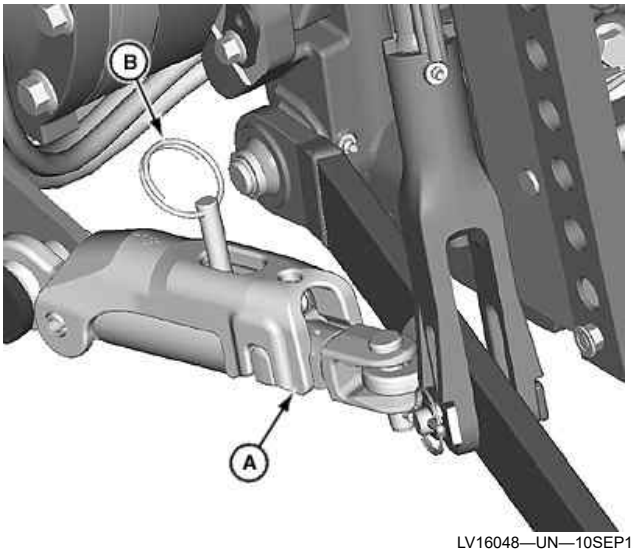
A—Adjustment Chain
B—Flap Cover
C—Locking Pin

The stabilizing system is operated by means of adjustment chain (A) and flap cover (B). When locking pin (C) is removed and flap cover (B) is raised, the draft links have lateral play. When lowered and secured with locking pin, draft links are locked.

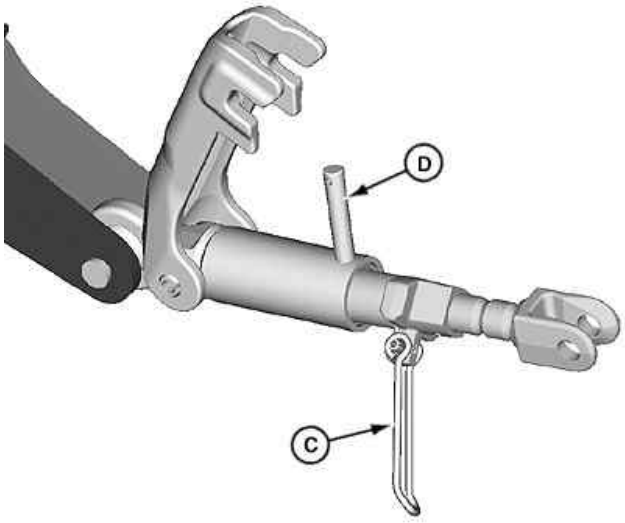
- Short Chain Adjustment (A):
  - Draft links are locked in raised position (rigid setting), in lowered position they have lateral play.
- Long Chain Adjustment (A):
  - Draft links are locked in all positions.

HK75640,0001024-19-14SEP20

Adjusting Spreading Dimensions



LV16048—UN—10SEP12



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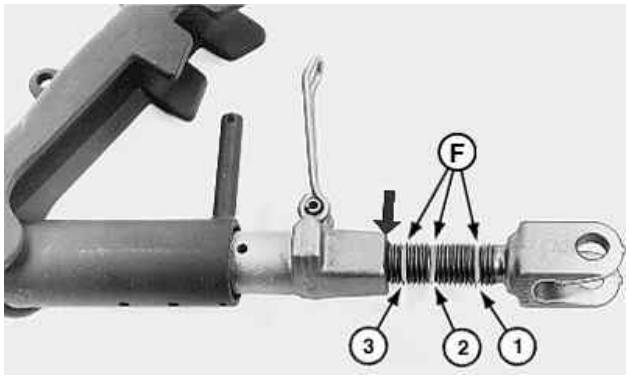
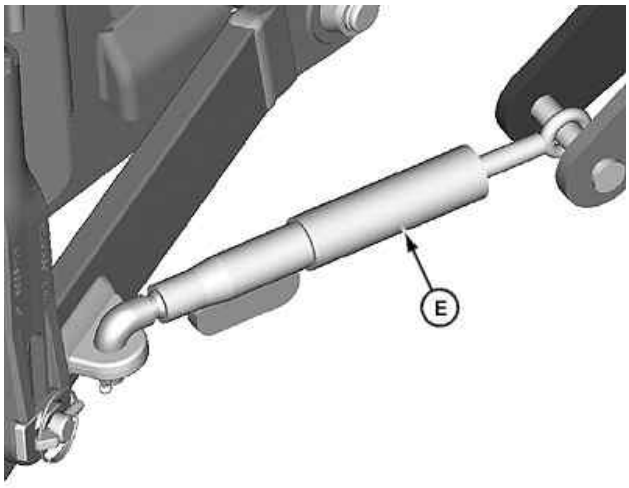


PY30463—UN—10MAR17



LV16050—UN—10SEP12

A—Flap Cover
B—Ring
C—Lever
D—Pin
E—Spacer
F—Grooves

1. Drive machine to align with the implement and park.
2. Remove ring (B) and lift flap cover (A).
3. Rotate lever (C) to adjust the spreading dimension.

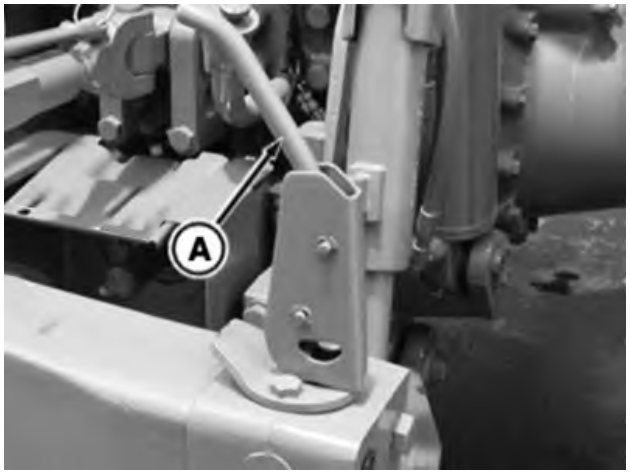
   Grooves (F) provide a guide for correct category adjustment.

Category	Groove
I + II	1
III	2
II + 3N	3

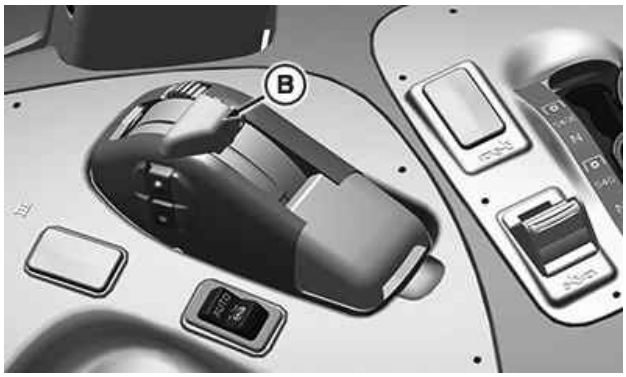
4. Align desired category groove (1, 2, or 3) with the edge of the turnbuckle as indicated (see arrow).
5. Locate lever (C) on pin (D), lower flap cover (A), and secure with ring (B).
6. Adjust spacer (E) accordingly.

LGCKF7U,0000BE9-19-10MAY21

Quick Coupler

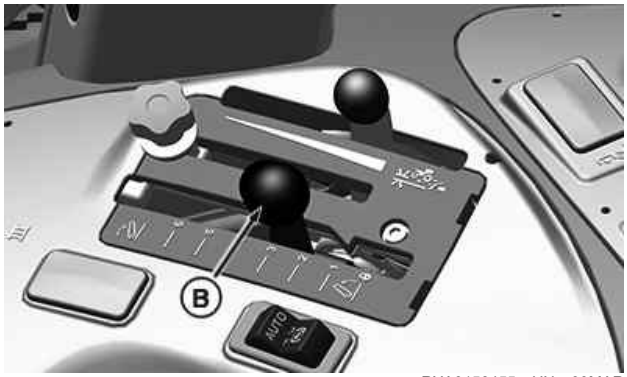


APY48074—UN—21MAY21



RXA0158454—UN—30MAR17

Electrohydraulic Hitch



RXA0158455—UN—30MAR17

Mechanical Hitch

A—Coupler Latch Handle
B—Rear Hitch Position Lever

CAUTION: Avoid bodily injury or machine damage:

- **Put transmission in park position and check the full range of hitch for interference, binding, or PTO separation whenever an implement is attached.**
- **Make sure that implement is correctly attached. Incorrect attachment can allow implement to be pulled over the machine wheel and onto the operator's station.**
- **Do not stand between machine and implement.**

Connect Implement:

1. Pull coupler latch handles (A) up.
2. Lower hitch until quick coupler hooks are lower than implement hitch pins.
3. Back up the machine to implement.
4. Raise hitch enough to engage implement pins in hooks.
5. Push coupler latch handles down to lock implement to quick coupler.
6. Connect hydraulic hoses and electrical connections.

IMPORTANT: Check for implement interference. Drawbar removal may be necessary.

7. Slowly pull rear hitch position lever (B) to raise implement. Lower implement to ground and adjust upper height limit control if necessary.

Disconnect Implement:

1. Pull coupler latch handles (A) up with implement raised.
2. Disconnect hydraulic hoses and electrical connections.
3. Lower implement to ground and continue lowering quick coupler until hooks clear implement hitch pins.
4. Carefully drive the machine away from implement.

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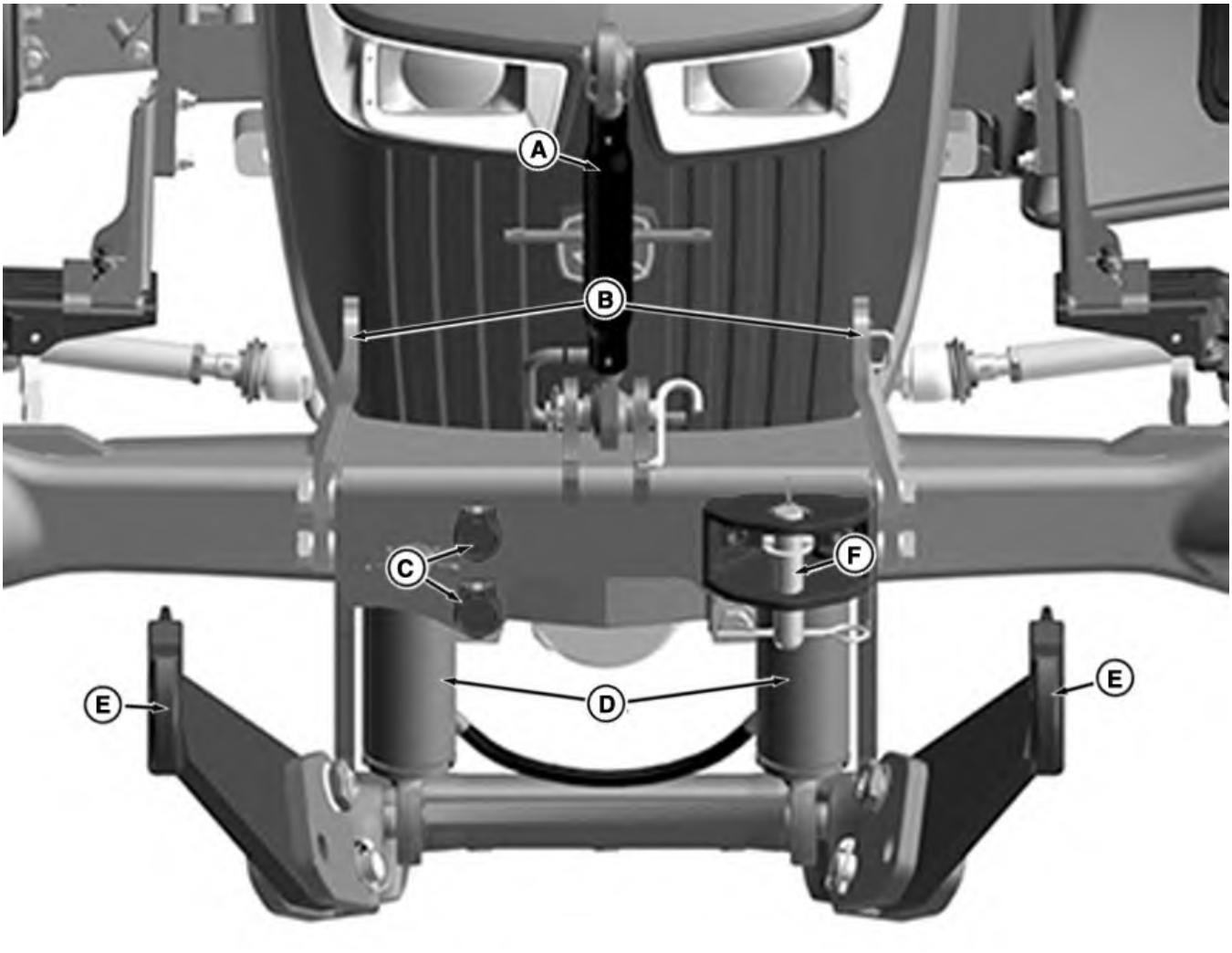
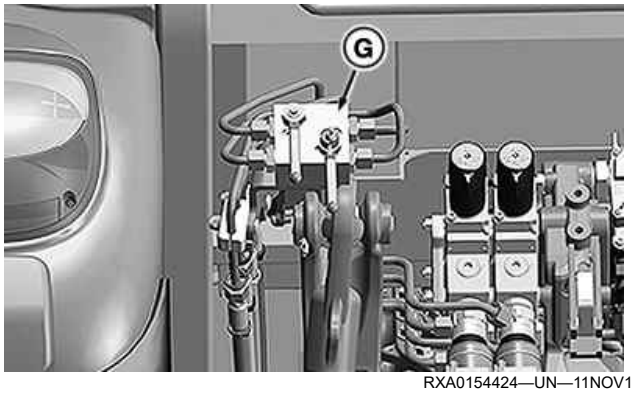
Front Hitch Components



RXA0153753—UN—27APR17



RXA0154424—UN—11NOV16

A—Center Link
B—Chain Hooks
C—Front SCV Couplers
D—Hitch Cylinders
E—Lift Arms
F—Tow Pin
G—Diverter Valve

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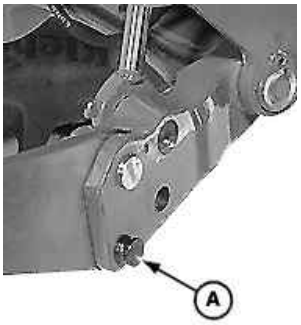
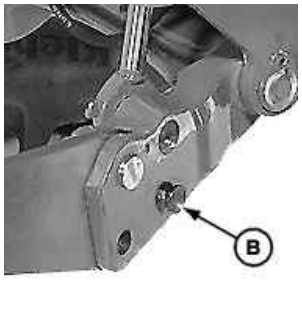
Front Implement Connection

Draft Link Positions



LV16176—UN—12OCT12



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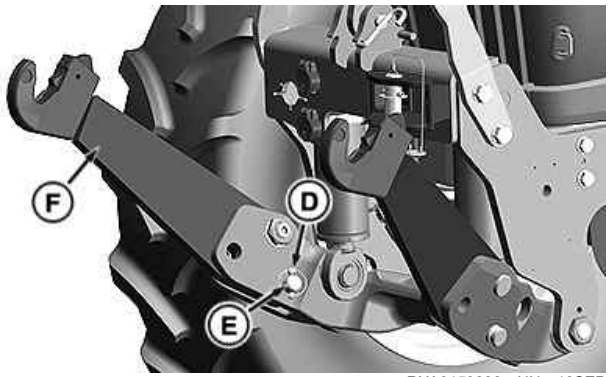
PY42081—UN—18MAY17



RXA0153886—UN—13SEP16

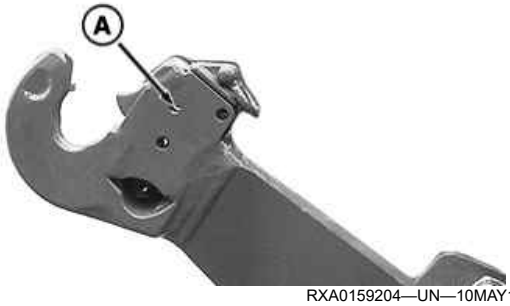
A—Draft Links with Vertical Float Position
B—Draft Links Locked Position
C—Draft Links in Transport Position
D—Retaining Clip
E—Draft Link Pin
F—Draft Link

Set front draft links to vertical float position (A), locked position (B), or transport position (C).

To change setting:

1. Remove retaining clip (D) from pin (E).
2. Lift draft link (F) to relieve pressure from pin.
3. Remove pin.
4. Move draft link to desired position.
5. Reinstall pin and retaining clip.

Draft Link Hook Lock



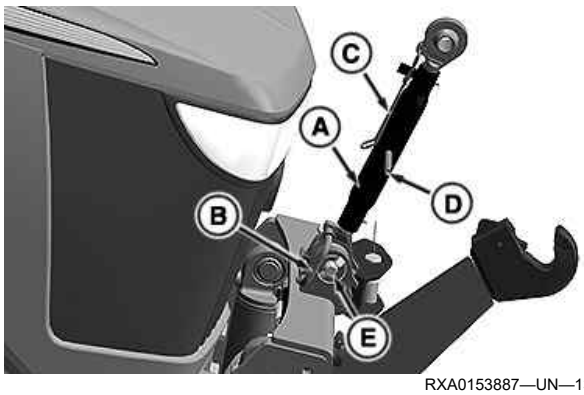
RXA0159204—UN—10MAY17

A—Draft Link Locking Pin Hole

CAUTION: Use draft link locking pins on applications where implement could be forced up and open unintentionally. Examples are driving through high-growing bushes, trees, or implements with asymmetrical load, such as a side-mounted mower.

1. Install front-mounted implement using SCV I. For diverter valve settings, see Front Hitch and Coupler Operation in this section.
2. Lower front hitch below the implement connection points.
3. Position coupler ends of lift arms below the implement link pins and slowly raise hitch until coupler ends lock on the pins.
4. Insert draft link locking pin into draft link locking pin hole (A) in both coupler hooks. See your John Deere dealer for locking pins.

Front Hitch Center Link



RXA0153887—UN—13SEP16

A—Center Link
B—Storage Handle
C—Locking Clip
D—Turnbuckle

E—Pin and Clip

1. Lower implement to ground.
2. Hold center link (A) and pull on the storage handle (B).
3. Align center link with the top mast of implement.
4. To lengthen or shorten the center link, move locking clip (C) away from center link.
5. Use turnbuckle (D) to adjust length and return locking clip (C) to closed position.

NOTE: Perform additional adjustment as necessary to level implement after cycling front hitch.

6. Install implement pin through center link and retain.
7. Remove implement in reverse order.

NOTE: If front hitch center link must be removed for any reason, support center link and remove pin and clip (E).

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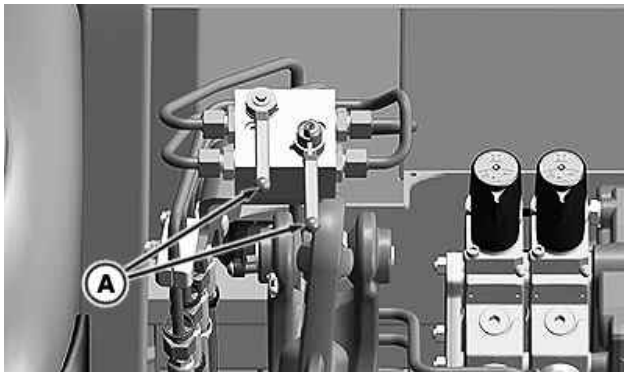
Front Hitch and Coupler Operation

Diverter Valve Operation



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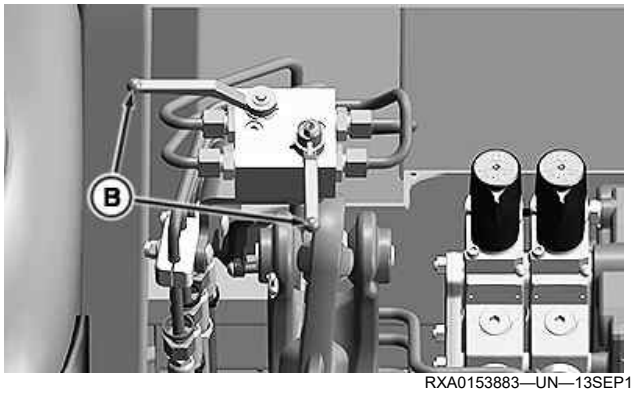

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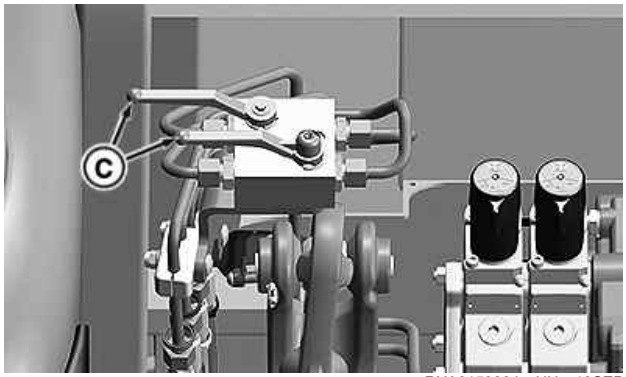


RXA0153884—UN—13SEP16

A—Oil Flow Blocked Setting
B—Hydraulic Raise, Gravity Lower Setting
C—Hydraulic Raise and Lower Setting

NOTE: Depending on which SCV configuration the machine is equipped with, determines which SCV levers are used to operate the front hitch and SCV. Dual SCV valves use SCV I for front hitch and SCV II for front SCV. Triple SCV valves use SCV II for front hitch and SCV III for front SCV.

CAUTION: If rear SCV I or II couplers are used for a rear implement, diverter valve must be in the oil flow blocked setting (A) to the front hitch.

IMPORTANT: When front-mounted implements with retaining chains are used, avoid damage by selecting hydraulic raise, gravity lower setting (B). Operate SCV I or II in float to allow implement to follow the ground contour.

The diverter valve is located just outside the rear window on the rear left corner of the cab and controls only controls front hitch oil flow. Diverter valve handles can be accessed and changed from within the machine cab. There are three settings for the diverter valve:

- Oil flow blocked setting (A). Front hitch does not move.
- Hydraulically raised, gravity lower setting (B) using weight of implement.
- Hydraulically raised and lower setting (C).

Front Hitch Operation

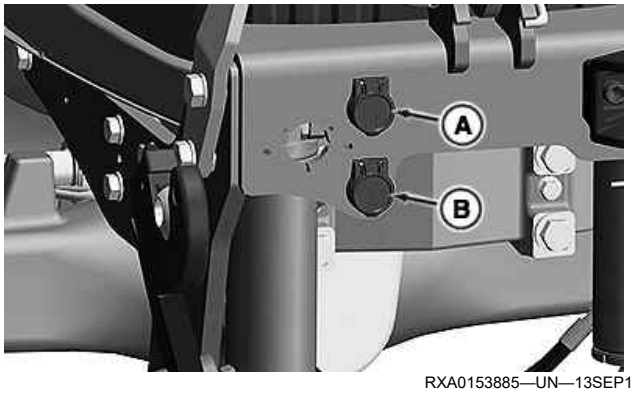
CAUTION: Do not attach hoses to rear SCV I or II couplers if using front hitch. Unexpected movement and undesired performance occur.

	Tractor Equipped with DUAL SCV	Tractor Equipped with TRIPLE SCV
Front Hitch Operation	I SCV Lever	II SCV lever
Retract	I SCV Lever	II SCV lever
Extend	I SCV Lever	II SCV lever
Push for Float	I SCV Lever	II SCV lever

The front hitch utilizes the SCV I (dual SCV) or SCV II (triple SCV) for oil supply and control. To operate front hitch:

- Retract SCV I or II to lower the hitch.
- Extend SCV I or II to raise the hitch.
- Push SCV I or II fully forward to float the front hitch.

Front Hydraulic Couplers



RXA0153885—UN—13SEP16

A—SCV II/III Coupler
B—SCV II/III Coupler

CAUTION: Do not attach hoses to rear SCV II or III couplers when front couplers are used. Unexpected movement and undesired performance occur.

	Tractor Equipped with DUAL SCV	Tractor Equipped with TRIPLE SCV
Front Coupler Operation	II SCV Lever	III SCV lever
Retract	II SCV Lever	III SCV lever
Extend	II SCV Lever	III SCV lever
Push for Float	II SCV Lever	III SCV lever

- Couplers (A and B) are provided with oil via rear SCV.
- If the tractor is equipped with a dual rear SCV, oil is supplied from SCV II.
- If the tractor is equipped with a triple rear SCV, oil is supplied from SCV III.

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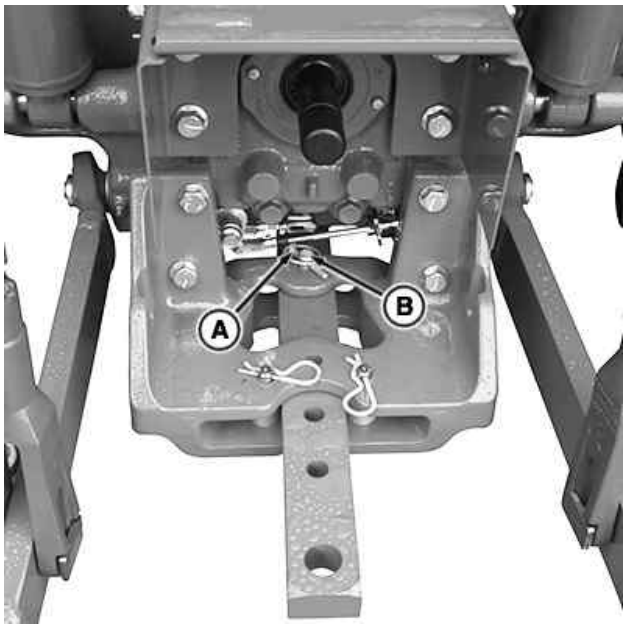
Drawbar Settings

Adjust Drawbar Length

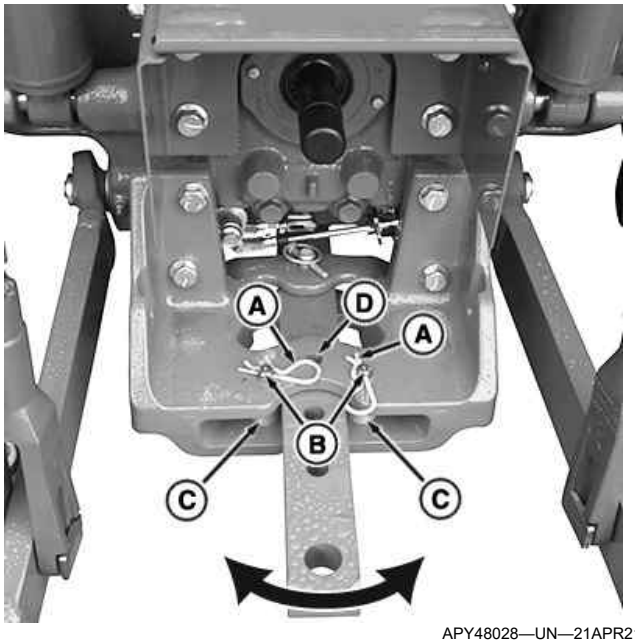


APY48029—UN—21APR21

A—Retaining Pin
B—Drawbar Pin

1. Remove retaining pin (A).
2. Remove drawbar pin (B).
3. Slide drawbar to desired position.
4. Install pin (B) and insert a retaining pin (A) to lock drawbar in place.

Adjust Drawbar Offset



APY48028—UN—21APR21

A—Retaining Pin
B—Drawbar Pin
C—Spacers (2 used)

D—Offset Mounting Hole

1. Remove retaining pin (A).
2. Remove pin (B) and spacers (C).
3. Offset drawbar toward left or right.
4. Install pin (B) and insert a retaining pin (A) and spacers (C) into hole (D) to hold drawbar in place.

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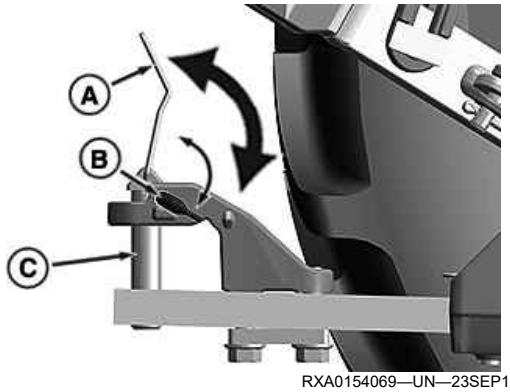
Clevis Drawbar



RXA0154069—UN—23SEP16

A—Handle
B—Retaining Pin
C—Implement Pin

1. Flip handle (A) to the vertical position as indicated.
2. Rotate retaining pin (B) counterclockwise while pulling upward on the handle. Implement pin (C) releases when a notch in retaining pin aligns.
3. Implement pin can be removed during connection or placed in the upper position. There are two detents on the implement pin shaft, one at the top and one at the bottom. If the bottom detent of the implement pin is aligned with the retaining pin and locked, the pin is held up, allowing connection to the implement.

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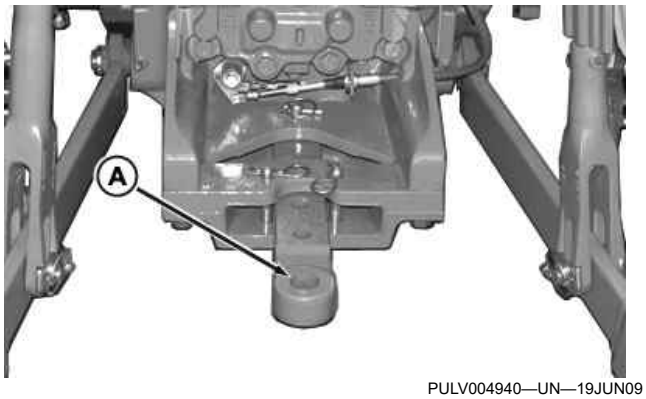
Drawn Implement Connection



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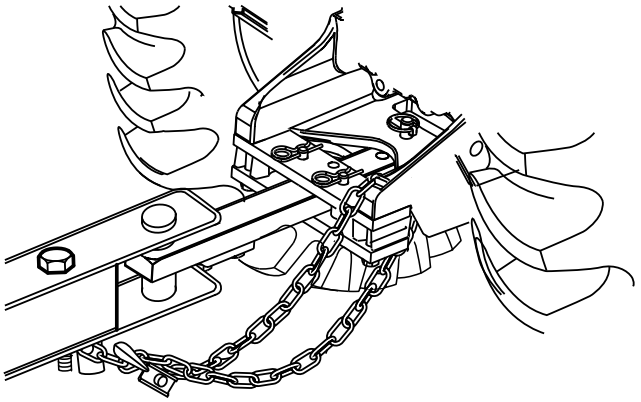
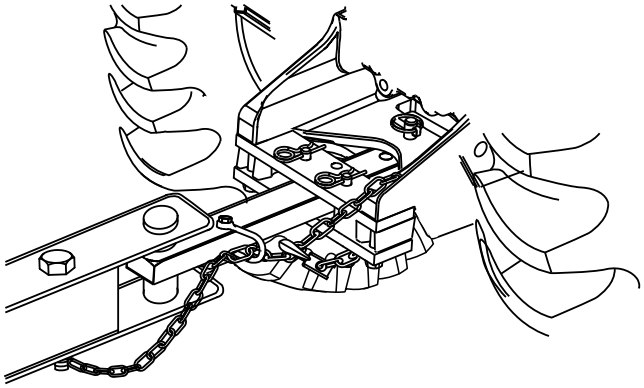


PULV000530—UN—11MAR08

Safety Chain with Drawbar Retracted



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Safety Chain with Drawbar Extended

A—Drawbar

⚠ CAUTION: Using smaller diameter pins reduces implement control, increases potential for pin failure, and causes excessive drawbar wear.

⚠ CAUTION: A safety chain helps control drawn equipment in case it accidentally separates from the drawbar.

Using the appropriate adapter parts, attach the chain to the drawbar support. Provide only enough slack in the chain to permit turning.

See your John Deere dealer for a chain with a strength rating equal to or greater than the gross weight of the towed machine.

IMPORTANT: Some heavy implements, such as a loaded single-axle trailer, can put excessive strain on drawbar. Speed and rough terrain increase drawbar strain. Reduce speed with heavy loads. Do not exceed maximum static vertical load on drawbar. See the Specifications section for maximum vertical drawbar load.

1. Back machine up to implement.
2. Align drawbar (A) with the implement connection point as close as possible.

3. Use a drawbar pin that is matched for the machine and implement holes with as little free play as possible.
4. Install a retaining clip in the drawbar pin.
5. Install a safety chain from the implement to the machine.

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