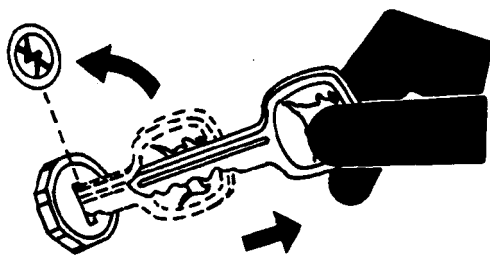


# Transport and Storage

## Keep Machines Secure

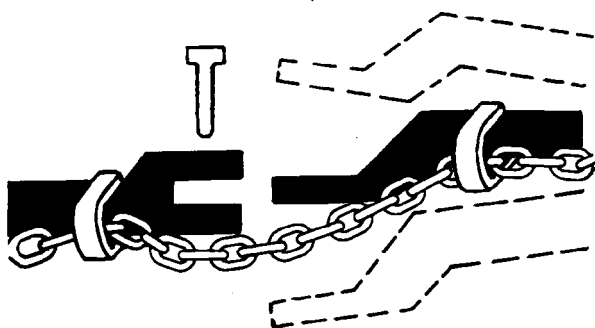


TS230—UN—24MAY89

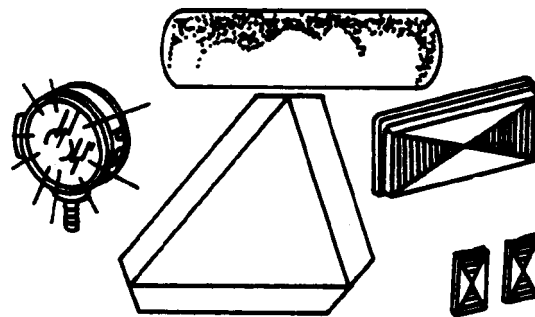
1. Install vandal-proof devices.
2. When machine is in storage:
  - Lower equipment to the ground
  - Set wheels to widest position to make loading more difficult
  - Remove any keys and batteries
3. When parking indoors, put large equipment in front of exits and lock your storage buildings.
4. When parking outdoors, store in a well-lighted and fenced area.
5. Make note of suspicious activity and report any thefts immediately to law enforcement agencies.
6. Notify your John Deere dealer of any losses.

DX, SECURE2-19-18NOV03

## Deliver Safely



TS217—UN—23AUG88



TS949—UN—22MAR90

The best method for delivering tractors, self-propelled equipment, and most implements or attachments is on a flatbed truck or trailer. Secure loads with tie down chains, straps, and binders.

Be aware of height and width restrictions to avoid collision with overpasses, bridge abutments, or other road users. Check with local authorities regarding oversized load transport restrictions and requirements.

When towing, remember that towed loads can swerve, upset or cause loss of control when towed with an undersized towing unit.

Never tow an implement behind a truck or other motor vehicle. The ability to maintain control and brake the implement and vehicle mass is compromised. The ability to properly attach the implement hitch and safety chain to the motor vehicle may be marginal. With most motor vehicles it is not possible to properly operate the warning, tail and turn signal lights on the implement, and in most cases the implement tires are not rated for highway speeds.

Tow drawn implements only with a properly sized and weighted tractor equipped with a stationary drawbar. (See tractor operator's manual for ballast requirements.)

Integral and semi-integral implements should be attached to a tractor with a three-point hitch as specified in the implement operator's manual. The tractor should have the proper size rear tires and the sway blocks should be in the down position. Do not transport unless the tractor front end is ballasted to the weight levels specified in the tractor operator's manual for the correct implement code.

Before transporting, attach a properly sized safety tow chain between the implement and tractor.

Stopping distance increases with speed and weight of towed loads, and when transporting on slopes. Observe these recommended maximum road speeds, or local speed limits that may be lower:

- If towed equipment does not have brakes, do not transport at speeds above 32 km/h (20 mph) and do not tow loads that weigh more than 1.5 times the weight of the tractor.
- If the towed equipment has brakes, do not transport

at speeds above 40 km/h (25 mph) and do not tow loads more than 4.5 times the weight of the tractor.

Use additional caution and reduce speed when towing under adverse surface conditions, when turning, and when on inclines.

Attach the implement lighting harness to the tractor and make sure that the warning and taillights on both the tractor and implement are on and functioning properly.

Make sure that the SMV and other markings on the implement are clean and visible.

DX, DELIVER-19-26JUL19

## Road Transportation

**CAUTION:** Before operating machine on public roadways, familiarize yourself with the machine and the controls. Read this manual thoroughly, familiarize yourself with the machine, and understand how to use all of the controls. Consider weather, type of towed implement, roadway surface, lighting conditions, and traffic when operating on public roadways.

When transporting, use adequate accessory lights and devices to warn operators of other machines. Frequently check for traffic from the rear, especially in turns. Use your turn signals. Check local governmental regulations. Various safety devices are available from your John Deere dealer. Keep safety items in good condition. Replace missing or damaged items.

The following items must be considered before transporting on public roads:

1. Always wear your seat belt.
2. Correct driving lights for road use and use implement connector to power implement lights. Turn signal and warning light usage. (See Electrical and Lighting Operation section.)
3. Lock brake pedals together. (See Steering and Brake Operation section.)
4. Transmission operation, see Transmission Operation section.
5. Correct MFWD setting for road use, see MFWD and Front Axle Operation section.
6. Disengage differential lock, see Differential and Rear Axle Operation section.
7. Lock rear hitch in transport position, see Hitch and Drawbar Operation section.
8. Lock loader cylinders, see loader Operator's Manual for more information.
9. Lock SCVs or lock implement cylinders to prevent

accidental engagement, see Selective Control Valve Operation section or implement operator's manual.

10. Clean windows, slow moving machine sign, and lights. Adjust steering wheel, seat, and mirrors. (See Operators Station Operation" section.)
11. Ballast machine correctly, see Ballasting section.
12. Use the foot throttle instead of the hand throttle. (See Engine Operation section.)

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## Towing Loads

**CAUTION:** Avoid possible injury from losing control while towing a load. Stopping distance increases with speed and weight of towed loads, and on slopes.

Never operate with transmission in neutral position or with clutch disengaged.

Never exceed the implement maximum transport speed. Before transporting a towed implement, refer to implement operator's manual and implement decals to determine maximum transport speed. Use implement code in the implement Operator's Manual to determine minimum number of front weights required.

Failure to adhere to implement maximum transport speed or to have correct ballast can result in:

- Loss of control of machine/implement combination.
- Reduced or no ability to stop during braking.
- Implement tire failure.
- Damage to implement structure or components.

Drive slowly enough to maintain safe control. Be alert for skids. Shift to a lower gear for hillsides, rough ground, and sharp turns, especially when transporting heavy equipment.

Machine must be heavy and powerful enough with adequate braking power for towed load. Add ballast to the machine or lighten implement load.

### Guidelines for Towing Equipment without Brakes:

- Do not transport at speeds greater than 32 km/h (20 mph).
- Equipment must weigh less than 1.5 times the ballasted machine weight.

### Guidelines for Towing Equipment with Brakes:

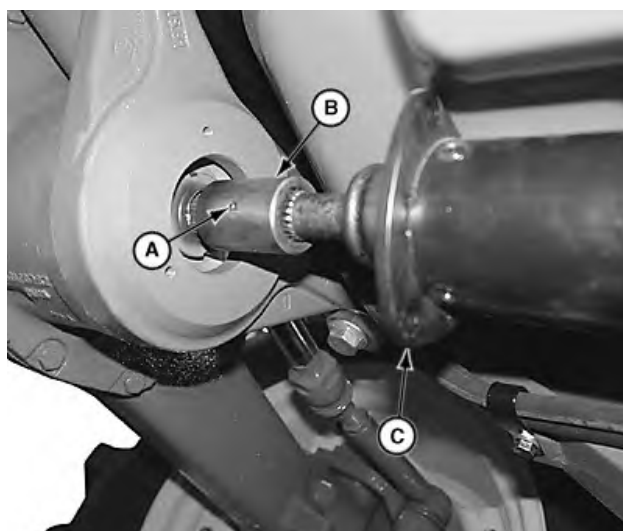
- If the implement manufacturer does not specify a

maximum transport speed, avoid transport at speeds above 40 km/h (24.8 mph).

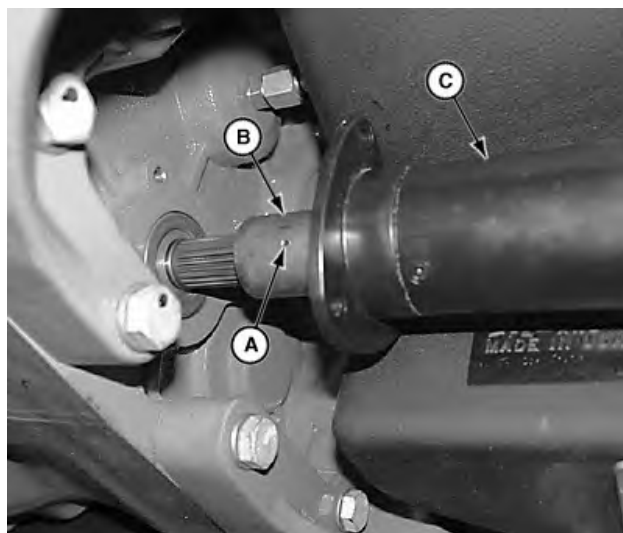
- When transporting at speeds up to 40 km/h (24.8 mph), the fully loaded implement must weigh less than 4.5 times machine weight.

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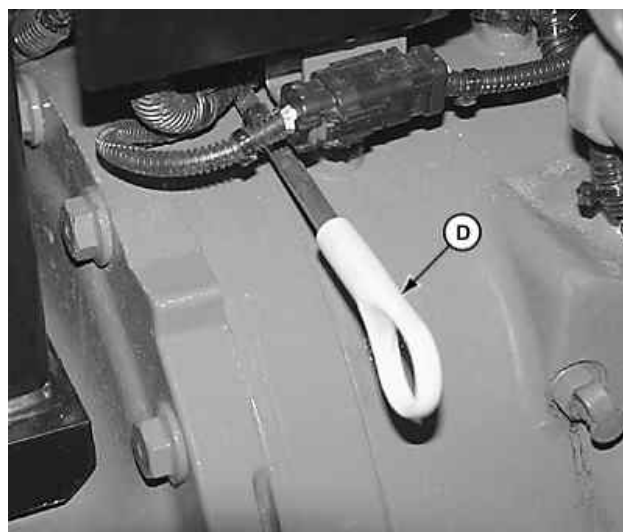
## Tow Machine



LV14557—UN—03AUG11



LV14558—UN—03AUG11



LV14559—UN—03AUG11

- A—Spring Pin
- B—Coupler
- C—Driveshaft Shield
- D—Dipstick

**⚠ CAUTION:** Remove MFWD driveshaft if towing machine with front wheels on a carrier. Loss of electrical power or transmission/hydraulic system pressure engages the MFWD and can pull machine off the carrier, even with switch in the DISENGAGED position.

**IMPORTANT:** To avoid damage to transmission and power train components, **NEVER** attempt to start machine by towing; engine will not start.

1. If equipped with MFWD and towing machine with front wheels on a carrier, remove driveshaft:
  - a. Remove three cap screws and slide driveshaft shield (C) away. Repeat on opposite end.
  - b. Remove spring pin (A) using a punch and a hammer.
  - c. While supporting driveshaft, slide coupler (B) toward shield (C) to disengage.
  - d. Remove driveshaft, shields, and couplers.
2. If possible, operate the engine at above 1250 rpm to provide lubrication, power steering, and power brakes. Have an operator steer and brake machine.
3. If not possible to run engine, add 40 L (10 gal) of transmission/hydraulic oil to transmission. Drain excess oil after transporting.
4. To make sure that differential lock is not engaged, tap brake pedals.
5. Disengage PTO and move range and speed shift levers to Neutral.
6. If equipped with a left-hand reverser, move lever to Neutral.

7. Do not tow a machine faster than 8 km/h (5 mph). Do not exceed 3 km/h (2 mph) for the first 10 minutes at temperatures below freezing.

### After Towing

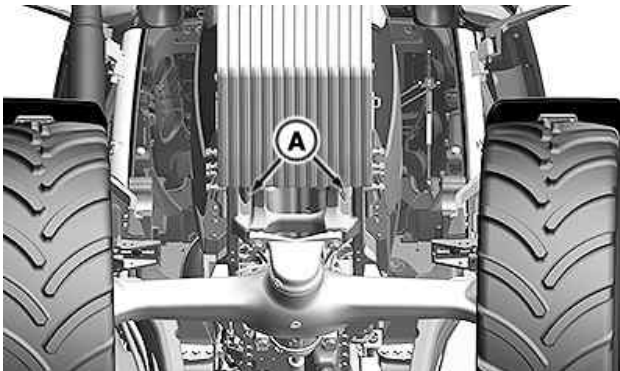
If equipped with MFWD, apply multi-purpose grease to couplers and shaft splines, and reinstall driveshaft assembly.

Drain excess transmission/hydraulic oil to return system to normal operating level.

Check oil level with dipstick (D) after draining and again after operating for five minutes.

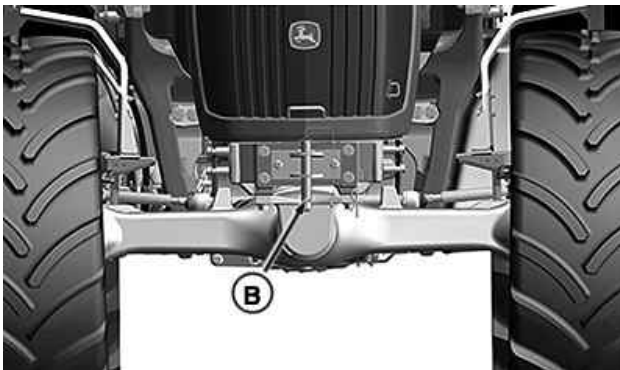
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### Front Tow Points



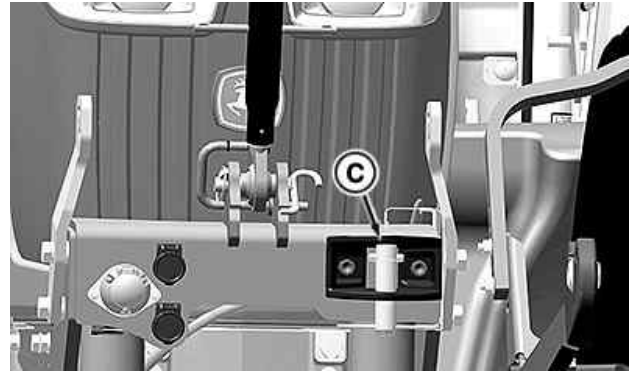
RXA0151018—UN—19JAN16

Oil Pan Tow Points (weights installed)



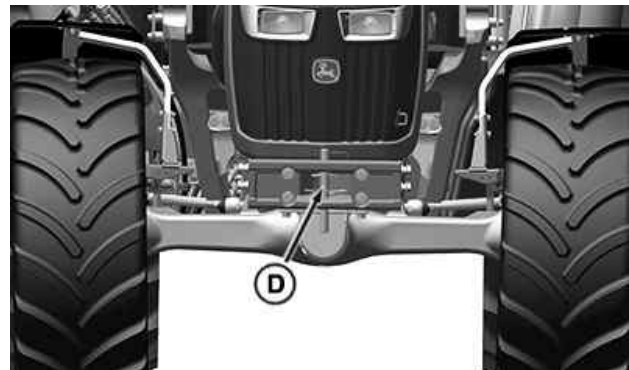
RXA0151020—UN—19JAN16

Front Tow Point (without weight bracket)



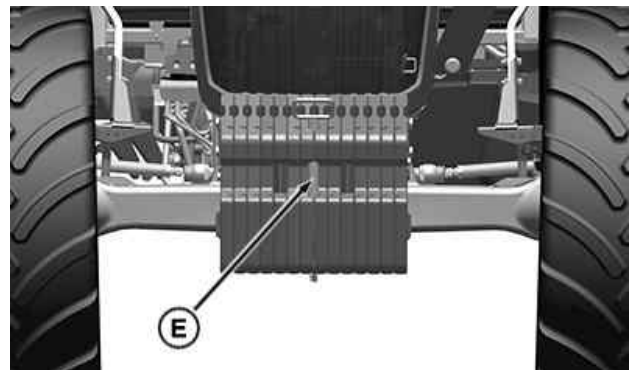
RXA0151069—UN—06DEC16

Front Hitch Tow Point



RXA0151311—UN—11NOV16

Front Tow Point (weight bracket without weights)



RXA0155033—UN—18OCT16

Front Tow Point With Weight

- A—Oil Pan Tow Points
- B—Front Tow Point
- C—Front Hitch Tow Point
- D—Front Weight Bracket Tow Point
- E—Front Weight Tow Point

**⚠ CAUTION:** Using improper towing devices can result in device failure and personal injury. If towing or freeing a mired machine is required, use pins, clevises, tow straps, or chains which are rated higher than the machine and implement weight. See your John Deere dealer.

Connect towing device to tow points (A—E) as necessary. Oil pan tow points (A) can be used on any

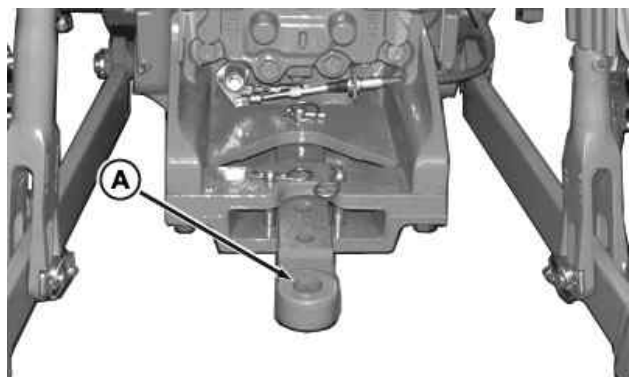
machine if a chain with hooks on both ends is secured to both points.

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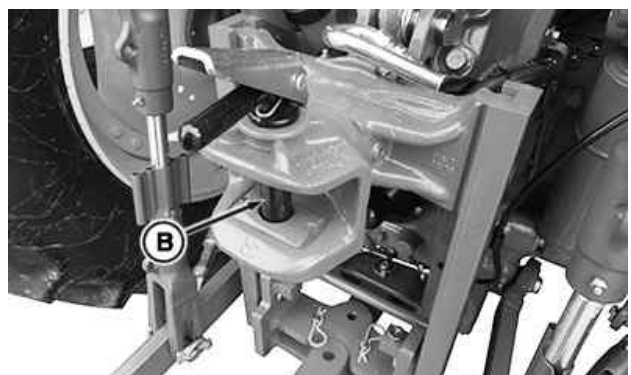
Connect towing device to the points (A—C) as necessary.

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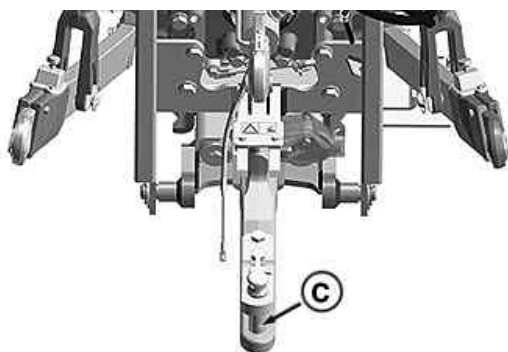
## Rear Tow Points



PULV004940—UN—19JUN09



RXA0151070—UN—26JAN16



RXA0155075—UN—19OCT16

A—Rear Drawbar Tow Point  
B—Rear Wagon Hitch Tow Point  
C—Pickup Hitch Tow Point

**CAUTION:** Using improper towing devices can result in device failure and personal injury. If towing or freeing a mired machine is required, use pins, clevises, tow straps, or chains which are rated higher than the machine and implement weight. See your John Deere dealer.

## Machine Storage

**IMPORTANT:** Whenever machine is not used for several months, use this procedure to minimize corrosion and deterioration. Use an engine storage kit and an extra 0.95 L (1 pt) of corrosion inhibitor. See your John Deere dealer.

**NOTE:** Whenever possible, store machine in a building or under a roof to avoid damage resulting from prolonged exposure to the elements.

**Perform the following steps to place machine into storage:**

1. Service air cleaner, (see Air, Fuel, Coolant, and Exhaust Maintenance section.)
2. Change engine oil and filter, see Engine Maintenance section.
3. If coolant has not been changed within the last 2 years, flush cooling system. (See your John Deere dealer.) Add 50% antifreeze/water mixture. Test coolant for adequate cold-weather protection.
4. Add 0.5 L (16 oz) of corrosion inhibitor to engine at the oil fill cap.
5. Add 0.25 L (9 oz) of corrosion inhibitor to the transmission/hydraulic reservoir at the oil fill cap.
6. Drain fuel and add back 4 L (1 gal) of fuel. Then add 0.5 L (16 oz) of corrosion inhibitor to fuel tank.
7. Depress clutch and start engine. Run engine until it reaches operating temperature. Also raise and lower front and rear hitches several times. When done, fully lower rear hitch and raise front hitch to retract cylinders.
8. Shut off engine.
9. Remove air intake hose at the manifold. Pour 0.1 L (3 oz) of inhibitor into manifold and replace hose.
10. Disconnect crankshaft position sensor wiring connector. (Preventing engine from starting while engaging the starter.)
11. Pull hand throttle back to low idle position. Crank engine only a few revolutions.
12. Release tension on auxiliary drive belts. Remove belt from the air conditioner pulley and fan pulley.
13. Remove and clean battery. Store in a cool, dry place. Keep battery charged. Disconnect battery ground cable for short-term storage periods (30 to 90 days). See Electrical and Lighting Maintenance section.

14. Coat exposed metal surfaces, such as steering cylinder rods, if extended, with grease or a corrosion inhibitor.
15. Seal air inlets, exhaust, crankcase fill cap, fuel tank cap, radiator overflow hose, and transmission and hydraulic system fill cap using plastic bags and tape.
16. Protect tires from heat and sunlight:
  - Raise tires off the ground (move machine once a month if tires are not raised off the ground).
  - Cover wheels with waterproof tarpaulin.
  - Avoid storing at temperatures greater than 29°C (85°F).
  - Avoid direct sunlight.
17. Thoroughly clean machine. Touch up any painted surfaces that are scratched or chipped.
18. Wax entire machine.
19. If machine is stored outside, follow additional precaution: Cover instrument panel, controls, and seat with sheets of material or cardboard, or cover entire machine with waterproof material to protect against sunlight.

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**IMPORTANT: Do NOT operate starter more than 20 seconds at a time, and wait at least 2 minutes for starter to cool before trying again.**

13. Start the engine.
14. Operate engine at low idle for some time.
15. Check air conditioning system.
16. Operate air conditioning system at low idle for 2 minutes.
17. Check all other system functions.

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HK75640,0001068-19-14SEP20

## Remove Machine from Storage

To remove machine from storage, perform the following steps:

1. Remove all coverings placed in or on machine while storing it.
2. Inspect tires and check tire inflation pressure, see Wheels and Tires Maintenance section.
3. Unseal all openings sealed before storing.
4. Charge and install battery.
5. Check that air conditioner compressor pulley moves freely and is not seized.
6. Install auxiliary belt drive on the air compressor pulley and fan pulley.
7. Check levels of engine oil and add transmission/hydraulic oil and engine coolant if necessary.
8. To purge any moisture condensation that has collected, drain a small amount of fuel from the fuel tank.
9. Fill fuel tank.
10. Check all instruments and indicators by turning ignition switch to ON position.
11. Connect crank position sensor connector.
12. Crank engine for a few revolutions.