

# John Deere

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MODEL:

301

Tractor and Loader

OPERATOR'S  
MANUAL



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**John Deere  
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**MANUAL PREVIEW**

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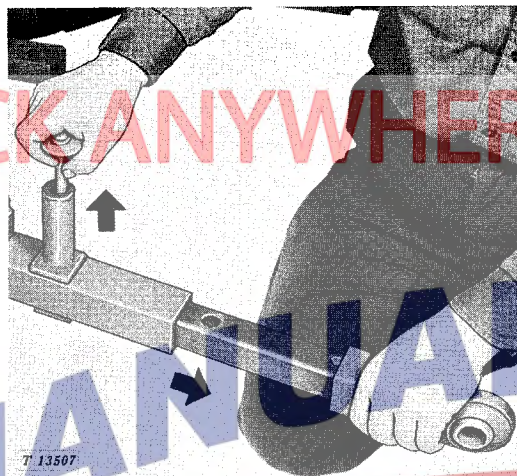
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T27217

JD301 Tractor

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Extending Telescoping Draft Link to Hook Up Equipment

**Telescoping Draft Links.** Place range shift lever in park "P" and dismount. Lift up lock pins and extend links to rear for easy hook-up (see above).

5. Slip draft link sockets over equipment hitch pins. Lock with Quik-Lock pins (stored on lift links).

6. Telescoping Draft Links Only. Lock in place by backing up tractor and working hitch up and down using rockshaft control lever. Be sure lock pins snap into place.

### Attaching Center Link To Equipment



A—Adjusting Handle B—23-5/16 to 28-1/2 inches

Unhook center link from transport bracket and drop it into tool mast. If necessary, pull up adjusting handle (above) and rotate center link body. Keep length of center link within limits shown in chart. After adjusting, push down handle over square neck of forward link end to lock handle and to prevent rotation.

Insert attaching pin through tool mast and center link. Secure with Quik-Lock pin.

Raise tool slowly and check for interference. Adjust hitch if necessary (see following).

### Adjusting Lift Links



A—Lock

B—Adjusting Handle

Adjust the lift links to level a mounted tool from side to side, or for more transport clearance or extra working depth.

The right lift link has an adjusting handle (see above). To adjust, raise handle and rotate it. Then drop handle into the lock as shown.

The left lift link is adjustable by removing lower pin and screwing yoke end in or out. Reinstall pin.

Keep the length of the lift links and center link within the limits shown in the chart below to avoid damage to hitch parts.

#### APPROVED LENGTH LIMITS FOR ADJUSTABLE HITCH LINKS (Measured Between Centers of Attaching Pins)

| Type                                            | Minimum Inches | Maximum Inches |
|-------------------------------------------------|----------------|----------------|
| Lift Links (Regular)                            | 23-7/8         | 28-5/8         |
| Lift Links<br>(With Telescoping<br>Draft Links) | 21-3/8         | 26-1/8         |
| Center Link                                     | 23-5/16        | 28-1/2         |

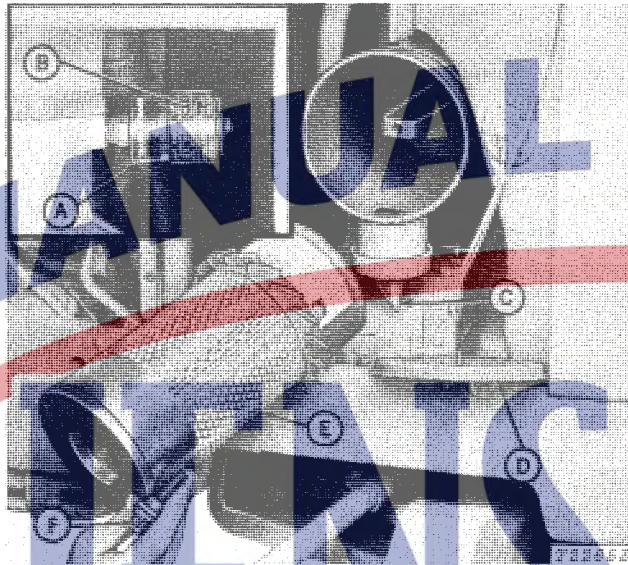
**NOTE:** The lift link dimensions given above are with float locked out.

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## DETAILED PERIODIC SERVICE

### AS REQUIRED

#### 1. Servicing Air Cleaner

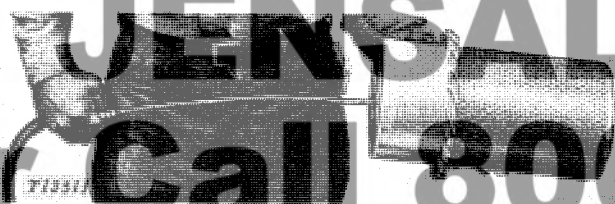


A—Restriction Indicator (optional)  
B—Red Signal  
C—Dust Unloading Valve

D—Cover  
E—Element  
F—Wing Nut

Clean air cleaner filter element at the following times: (1) Units with restriction indicator (under left grille screen): Clean element whenever indicator red signal locks in full view. A portion of the red signal may be visible at times during operation (this is normal). (2) Units without indicator: Clean element each 200 hours, or as often as operating conditions warrant. Excessive smoke or power loss indicates a restriction.

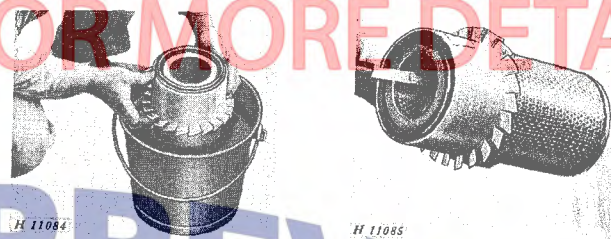
**Dusty Element:** Remove filter element. Tap element on the palm of your hand to remove dust, NOT ON A HARD SURFACE.



Cleaning Element Using Compressed Air

If tapping element does not remove dust, use compressed air to clean element. Direct clean dry air up and down the pleats, blowing from the inside to outside. DO NOT RUPTURE ELEMENT.

**Oily or Sooty Element:** Soak and wash element in solution of lukewarm water (no hotter than your hand



Washing Element

Rinsing Element

can stand) and R36757 Filter Element Cleaner or an equivalent nonsudsing detergent. Rinse element thoroughly with clean water from hose having maximum water pressure of 40 psi. Shake excess water from element and allow it to air dry (usually requires 24 hours). Protect element from freezing until dry.

**CAUTION:** Never wash element in fuel oil, oil, gasoline or solvent. Never use compressed air to dry element.

After cleaning the element, inspect it for damage by placing a bright flashlight inside the filter. Discard any filter that shows the slightest rupture.

Inspect filter element gasket for damage. Replace element if gasket is missing or damaged.

**IMPORTANT: Replace filter element:** (1) if damaged; (2) after one year of service or (3) when filter is not responding to cleaning (indicated by excessive smoke or loss of power).

Thoroughly clean inside of air cleaner body with clean damp cloth. Place element in cleaner body with fins and gasket in first and secure with wing nut and gasket washer. Be sure gasket is in place between element and wing nut. Be sure cover is drawn up tight on cleaner. Reset restriction indicator (if used) by pressing reset button.

Inspect rubber dust unloading valve for cracks, clogging or fatigue. Clean or replace it as necessary.

#### 2. Bleeding Brakes

Whenever braking action is poor or erratic, or pedal action feels spongy, bleed the hydraulic brakes. For procedure, see page 64.

#### 3. Adjusting Clutch Pedal Free Travel

Periodically check the clutch pedal free travel at the pad. See page 63 for details.

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## Specifications

|                                                            | Gasoline     | Diesel       |
|------------------------------------------------------------|--------------|--------------|
| <b>ENGINE (net)</b>                                        |              |              |
| Flywheel horse-power (observed) at 2500 rpm                | 43.0         | 43.0         |
| Maximum torque in lb.-ft. at 1300 rpm (observed) (nominal) | 110.0        | 110.0        |
| Number of cylinders                                        | 3            | 3            |
| Bore and stroke, inches                                    | 3.86 x 3.86  | 3.86 x 4.33  |
| Displacement in cubic inches                               | 135.0        | 152.0        |
| Compression ratio                                          | 7.5 to 1*    | 16.2 to 1    |
| Firing order                                               | 1-2-3        | 1-2-3        |
| N.A.C.C. or A.M.A. horsepower rating for tax purposes      | 17.88        | 17.88        |
| Intake valve clearance                                     | 0.014-in.    | 0.014-in.    |
| Exhaust valve clearance                                    | 0.022-in.    | 0.018-in.    |
| Slow idle                                                  | 600 rpm      | 800 rpm      |
| Fast idle                                                  | 2680 rpm     | 2650 rpm     |
| Full engine power                                          | 2500 rpm     | 2500 rpm     |
| Governed speed range                                       | 600-2680 rpm | 800-2650 rpm |

### ELECTRICAL SYSTEM

|                                                         |          |
|---------------------------------------------------------|----------|
| Battery voltage (nominal)                               | 12 volts |
| Battery specific gravity at full charge (80 degrees F.) | 1.260    |
| Battery terminal grounded                               | negative |

### CAPACITIES (U.S. Standard Measures)

|                                     |            |
|-------------------------------------|------------|
| Fuel tank                           | 16.5 gals. |
| Engine cooling system               | 2.75 gals. |
| Engine crankcase (including filter) | 1.5 gals.  |
| Transmission-hydraulic system       | 10 gals.   |

**CLUTCH** ..... Single or dual stage, spring-loaded, dry-disk, foot-operated.

### REVERSER

Hydraulic wet clutches; no clutching required. Provides reverse speeds for gear selections 1 through 4 which are 35 percent faster than corresponding forward speeds.

### TRANSMISSION

Collar-shift type, 8 forward speeds, 4 reverse (with helical gears and mechanical shuttle).

**TRAVEL SPEEDS** ..... See chart on page 8.

### DIFFERENTIALS AND FINAL DRIVES

Type ..... Planetary-reduction final drives with spiral bevel gear drive differential.

Differential lock ..... Foot- or hand-operated mechanical lock, spring-loaded out of engagement.

### POWER TAKE-OFF

Type ..... Continuous-running, independent, or transmission-driven types available in 540 and/or 1000 rpm options. See page 29 for details.

### HYDRAULIC SYSTEM

Type ..... Closed-center, constant pressure.

Maximum oil pressure ..... 2350 psi

**BRAKES** ..... Hydraulically actuated, wet-disk types.

### FRONT TIRE OPTIONS

See page 16 for list of front tire options.

### REAR TIRE OPTIONS

See page 16 for list of rear tire options.

\* 8.6 to 1 High Altitude Piston

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