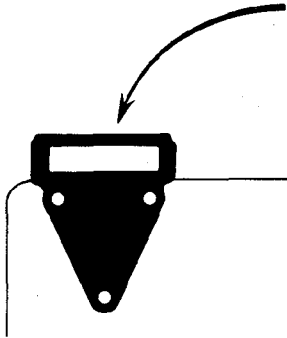


JOHN DEERE
SERVICE MANUAL
JD760
ELEVATING
SCRAPER



**SCRAPER
ELEVATING, JD760**

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SERVICE MANUAL

JOHN DEERE JD760 ELEVATING SCRAPER

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INTRODUCTION



Section 20 of this service manual contains trouble shooting information which lists symptoms, causes, and remedies for troubles encountered. It will be helpful in diagnosing the trouble; then, reference can be made to the section applying to that particular unit for recommended service procedures.

This manual was planned and written for the Service Department; its place is in the shop. Use the manual whenever in doubt about correct maintenance procedures. Use it as a text book for training new Service Department personnel who are unfamiliar with the JD760 Elevating Scraper.

Daily use of the Service Manual as a guide for any and all service problems will reduce error and costly delay to a minimum and assure you the best in finished service work. In many instances your customer's confidence in your work will be improved when he sees you using the service manual. He knows you are following approved maintenance procedures and making proper adjustments. There is no guesswork when you use the manual.

This service manual contains complete service and maintenance information on the John Deere JD760 Elevating Scraper. The JD760 Elevating Scraper operates in conjunction with the John Deere JD760 Industrial Wheel Tractor.

For information on service and maintenance of the John Deere JD760 Industrial Wheel Tractor, see the appropriate tractor service manual.

**Thanks very much for your reading,
Want to get more information,
Please click here, Then get the complete
manual**

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Section 10

DESCRIPTION AND SPECIFICATIONS

Group 5 DESCRIPTION

The John Deere JD760 Elevating Scraper (Fig. 10-5-1) operates in conjunction with the John Deere JD760 Industrial Wheel Tractor.

The scraper is self-loading and does not require a pusher to obtain a full load.

CAUTION: Never use a pusher tractor for loading. Push against the rear frame only to move the scraper in an emergency.

All hydraulic functions of the scraper are powered by the tractor hydraulic system. The

elevator is powered by the tractor power take-off shaft. Controls for all scraper operations are located in the operator console to the right of the operator's seat.

The hydraulic scraper brakes are controlled by a lever on the tractor steering wheel column.

The JD760 Elevating Scraper is ideally suited for the intermediate range earthmoving jobs. A variety of earthmoving and leveling jobs can be done by using the adjustments built into the machine.

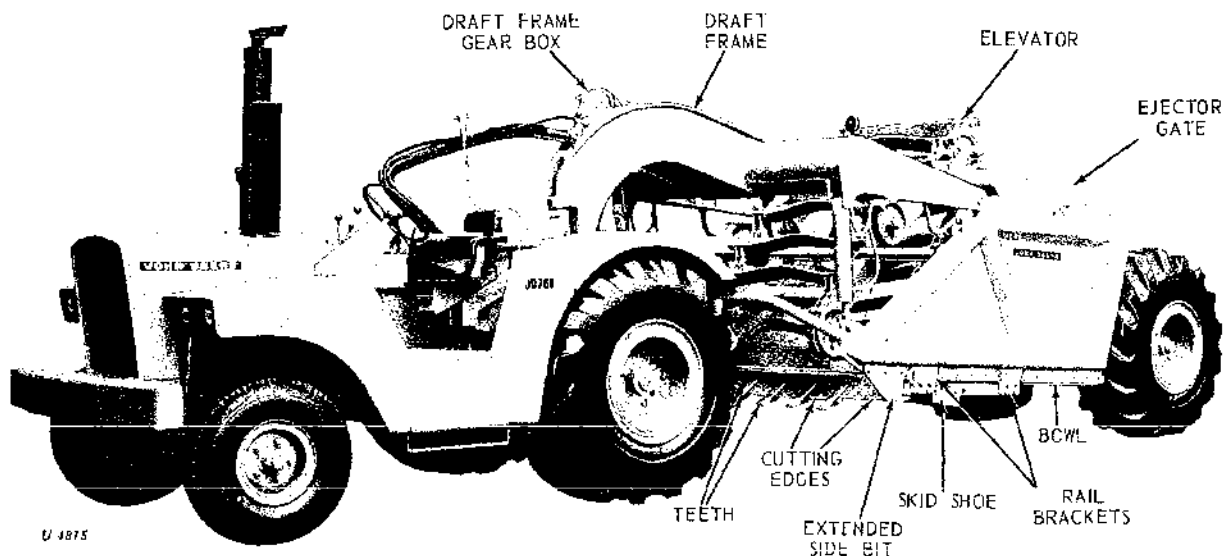


Fig. 10-5-1—John Deere JD760 Elevating Scraper

Group 10 SPECIFICATIONS

<p>CAPACITY, SAE heaped. 9 cu. yd. or 22,500 lb.</p> <p>EJECTION (Hydraulically controlled): Sliding floor. Boxed, reinforced; high carbon, heat treated sliding rails.</p> <p>Ejection tail gate . Reinforced steel plate.</p> <p>ELEVATOR PTO-driven</p> <p>ELEVATOR DRIVE Powered by 1,000 rpm tractor PTO, through telescoping vertical and horizontal shaft; sealed gear boxes.</p> <p>CUTTING EDGE . . . 90 inches wide; 3 sections, reversible and replaceable, high-carbon steel. Each section is adjustable vertically two inches.</p> <p>Center section . . 5/8-in. x 10-in. x 54-in.</p> <p>Each end section . 5/8-in. x 10-in. x 18-in.</p>	<p>HYDRAULIC CYLINDERS (ground, polished, hard-chromed piston rods; neoprene seals): Lift cylinder. . . . 2, 4-in. dia. bore, 18-inch stroke, 2-in. dia. piston rod.</p> <p>Sliding floor. . . . 1, 4-1/2-in. dia. bore, 30-1/4-in. stroke, 2-1/4-in. dia.</p> <p>Ejector gate. . . . 2, 2-1/2-in. dia. bore, 33-5/8-in. stroke, 1-1/2-in. dia. piston rod.</p> <p>SCRAPER BRAKES Hand-lever operated, hydraulically actuated shoe type.</p> <p>TIRES 18.00-25, 12-ply tubeless, earthmover 23.50-25, 12-ply tubeless, earthmover</p>
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WEIGHT DISTRIBUTION, (lbs.)	18.00-25 Tires	23.50-25 Tires
Empty: Front axle.	6,420	6,420
Drive axle.	13,855	14,080
Scraper axle	10,375	10,600
Total	30,650	31,100
Loaded: Front axle	6,760	6,760
Drive axle	20,075	20,300
Scraper axle.	26,315	26,540
Total	53,150	53,600

DIMENSIONS	Bowl Up	Bowl Down
Over-all width	95-3/4 in.	95-3/4 in.
Over-all length.	32 ft. 9-3/4 in.	33 ft. 6-3/4 in.
Scraper-to-swivel length	21 ft. 8-1/4 in.	22 ft. 3-1/4 in.
Tractor length	13 ft. 7 in.	13 ft. 7 in.
Over-all height (not including muffler) .	8 ft. 9 in.	8 ft. 5 in.
Over-all height (to top of muffler)	9 ft. 2-5/8 in.	9 ft. 2-5/8 in.
Clearance at cutting edge, max. with drop center.	17-3/4 in.	
Clearance under rear frame	16-1/4 in.	13-1/2 in.
Wheelbase, tractor front wheel to scraper wheel	26 ft. 7-1/8 in.	27 ft. 4-3/4 in.
Wheelbase, tractor	96 in.	96 in.
Wheel tread, front wheels.	69-3/4 in.	69-3/4 in.
Wheel tread, drive wheels.	72 in. (18.00-25 tires) 72-3/16 in. (23.5-25 tire)	
Wheel tread, scraper wheels.	72 in. (18.00-25, 12-ply tires) 72-3/16 in. (23.5-25, 12-ply tires)	

NOTE: For more specifications covering the tractor portion of the JD760 Scraper see SM-2075. (Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with IEMC and SAE Standards.)

**Section 20****TROUBLE SHOOTING****Group 5****SYMPTOMS, CAUSES AND REMEDIES**

The following chart is a list of troubles that could develop in the elevating scraper. For each trouble, the possible cause and remedy are given. Diagnose trouble by an orderly process of elimi-

nating the most likely trouble first.

Then, if the trouble persists, test for all other probable causes until the one responsible for the trouble is found.

BRAKES**BRAKES OPERATE INEFFECTIVELY**

<i>Possible Cause</i>	<i>Remedy</i>
Worn brake lining.	Adjust brakes. See page 40-5-6. Replace linings. See page 40-5-4.
Leaking or broken oil line.	Tighten or replace. See page 40-5-5.
Worn or scored drums.	Machine or replace drums. See page 40-5-5.
Leaking wheel cylinders.	Repair or replace. See page 40-5-4.
Grease or oil on linings.	Clean or replace. See page 40-5-4.
Air in system.	Bleed brakes. See page 40-5-6.

BRAKES OPERATE NOISILY

Worn or loose wheel bearings.	Adjust or replace. See pages 30-10-4 and 70-10-1.
Scored brake drum.	Machine or replace. See page 40-5-5.
Loose brake lining.	Replace lining. See page 40-5-5.
Dirty brakes.	Clean.
Dragging shoes.	Inspect for broken springs and replace if necessary. See page 40-5-3.

BRAKES—Continued**BRAKES LOCK OR GRAB**

<i>Possible Cause</i>	<i>Remedy</i>
Worn or loose wheel bearings.	Adjust or replace. See pages 30-10-4 and 70-10-1.
Lining loose on shoes.	Replace lining. See page 40-5-5.
Uneven adjustment.	Loosen adjustment on wheel that brakes first. See page 40-5-6.
Air in system.	Bleed brakes. See page 40-5-6.
Grease or oil on linings.	Clean or replace. See page 40-5-4.
Brake drum loose.	Tighten. See page 70-10-1.
Shoe return springs broken or fatigued.	Replace springs. See page 40-5-3.

CYLINDERS**CYLINDERS OPERATE SLOWLY**

Cold oil.	Allow oil to warm up.
Insufficient engine speed.	Open tractor throttle.
Oil leaking past packings.	Repair cylinder. See page 60-5-2.
Hose or connection leaking.	Tighten or replace hose.

ELEVATOR AND ELEVATOR DRIVE

DRIVE SHAFT CHATTERS

Possible Cause

Remedy

Universal joint yokes not in same plane. Reposition yokes. See page 50-5-2.

IDLERS DO NOT TURN

Bearings worn or dry. Lubricate bearings. See page 30-10-1. Service bearings. See page 50-20-3 or 50-20-4.

CHAIN DOES NOT RIDE ON IDLERS

Drive sprockets out of time. Time drive sprockets. See page 50-20-2.

CHAIN WEARS ABNORMALLY

Chain too tight. Adjust chain tension. See page 50-20-2.

Drive sprockets out of time. Time drive sprockets. See page 50-20-2.

Bent flights. Straighten or replace flights. See page 50-20-2.

CHAIN DOES NOT ROTATE

Broken shear pin in horizontal drive shaft assembly. Replace pin. See page 50-5-1.

BOWL

BOWL FILLS UNEVENLY

Tires not inflated correctly. Inflate tires to specified psi. See page 30-10-5.

Skid shoes out of adjustment. Adjust skid shoes.

Bowl not level. Level bowl. See page 70-5-1.

CUTTING EDGE WEARS ABNORMALLY

Edge not hard faced. Hard face edge. See page 70-5-3.

EJECTOR DRAGS

Rollers out of adjustment. Adjust rollers. See page 70-5-3.

FLOOR DRAGS

Rail guides out of adjustment. Adjust rail guides. See page 70-5-4.

SIDE RAILS DO NOT CLEAN PROPERLY

Rub bars worn or improperly installed. Replace or reinstall rub bars. See page 70-5-4.

**Section 30****LUBRICATION AND PERIODIC SERVICES****Group 5****LUBRICATION AND PERIODIC SERVICE CHART**

Lubrication and periodic service periods are daily or every 10 hours, every 50 hours, every 200 hours, every 1200 hours, and as required. These intervals are based on operation under normal operating conditions. When operated under unusual conditions, such as excessive heat, cold, or dust, the scraper should be checked and serviced at more frequent intervals.

The charts which follow, list in condensed form, the components to be serviced at each interval and the service to be performed. Detailed instructions for performing each service are given in Group 10 of this Section, "Detailed Periodic Services."

Each item in the chart is numbered, with the corresponding detailed procedure in Group 10 bearing the same number.

PERIODIC SERVICE CHART**DAILY OR EVERY 10 HOURS**

Item No.	Component	Service	Capacity or Measurement	Type of Lubricant
1	Upper elevator shaft	Lubricate fitting	Several shots of grease	SAE multipurpose-type grease
2	Elevator and draft frame pivots	Lubricate fittings	Several shots of grease	SAE multipurpose-type grease
3	Lower idler pivot pin	Lubricate fittings	Several shots of grease	SAE multipurpose-type grease
4	Chain	Lubricate links	Brush or pour on oil	Same as engine oil
5	Draft frame swivel, lift cylinder pivots, and vertical shaft	Lubricate fittings	Several shots of grease	SAE multipurpose-type grease
6	Horizontal drive shaft	Lubricate fitting	Several shots of grease	SAE multipurpose-type grease
7	Ejector gate rollers	Lubricate fittings	Several shots of grease	SAE multipurpose-type grease
8	Sliding floor link	Lubricate fittings	Several shots of grease	SAE multipurpose-type grease
9	Yoke pivots	Lubricate fittings	Several shots of grease	SAE multipurpose-type grease

EVERY 50 HOURS

Item No.	Component	Service	Capacity or Measurement	Type of Lubricant
10	Vertical drive shaft	Lubricate fittings	Several shots of grease	SAE multipurpose-type grease
11	Horizontal drive shaft	Lubricate fittings	Several shots of grease	SAE multipurpose-type grease

EVERY 200 HOURS

12	Center idler	Lubricate fittings	Several shots of grease	SAE multipurpose-type grease
13	Lower idler	Check oil level	To horizontal center of shaft	SAE 30 ML non-additive straight mineral oil

EVERY 1200 HOURS

14	Wheel bearings	Clean, pack, and adjust Preload See page 30-10-4.	Wheel bearing grease
15	Draft frame and elevator gear boxes	Drain and refill	Fill to oil level plugs	Hypoid 140-EP oil

AS REQUIRED

16	Axle housing nuts	Check torque.	300 ft-lbs.
17	Side rails	Lubricate	SAE multipurpose-type grease
18	Tires	Tire pressure	See page 30-10-5.
19	Wheel nuts	Check torque.	300 ft-lbs.
20	Elevator flights	Straighten or replace	See page 30-10-6.

Group 10 DETAILED PERIODIC SERVICES

DAILY OR 10-HOUR SERVICE

1. UPPER ELEVATOR SHAFT

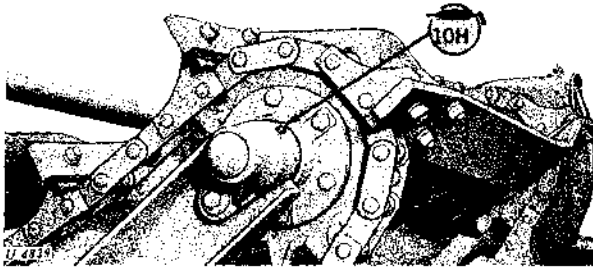


Fig. 30-10-1—Upper Elevator Shaft

Apply several shots of SAE multipurpose-type grease to the upper elevator shaft.

2. ELEVATOR AND DRAFT FRAME PIVOTS

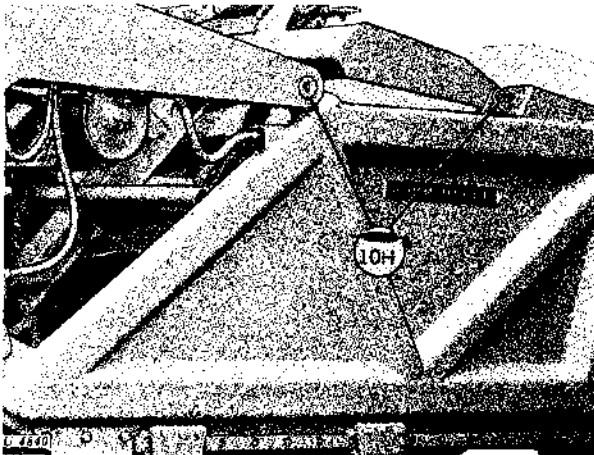


Fig. 30-10-2—Elevator and Draft
Frame Pivots

Grease fittings in elevator and draft frame pivots with SAE multipurpose-type grease.

3. LOWER IDLER PIVOT PIN

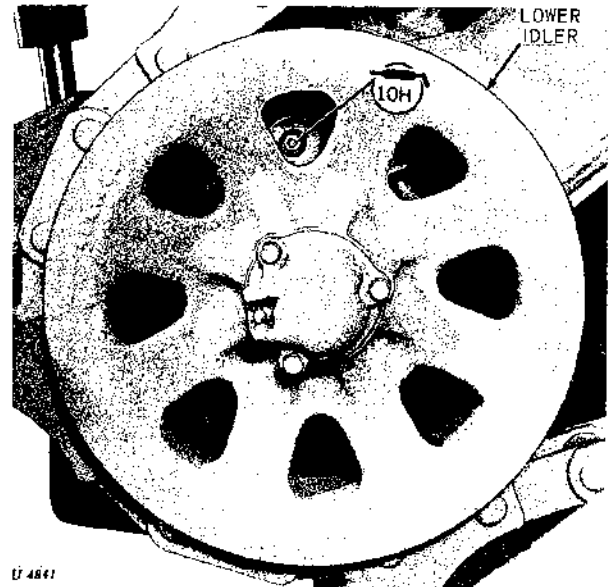


Fig. 30-10-3—Lower Idler Pivot Pin

Use SAE multipurpose-type grease when lubricating the lower idler pivot pin.

4. CHAIN

Pour or brush same type oil used in the engine on the elevator chain daily or every ten hours.

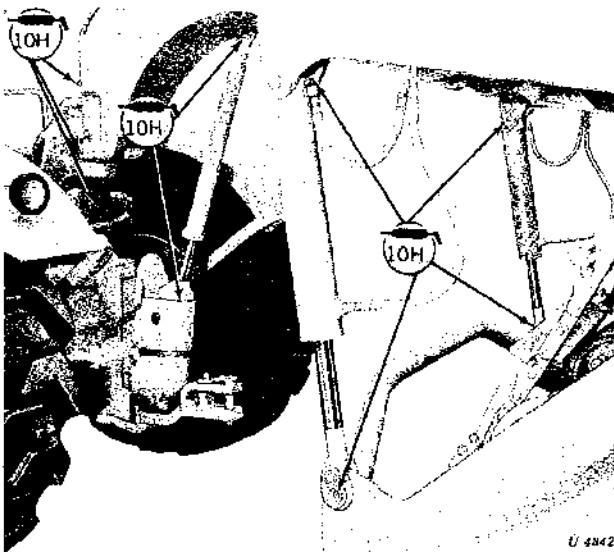
5. DRAFT FRAME SWIVEL, LIFT CYLINDER
PIVOTS, AND VERTICAL DRIVE SHAFT

Fig. 30-10-4—Draft Frame, Lift Cylinder
Pivots and Vertical Drive Shaft

Use several shots of SAE multipurpose-type grease on the fittings (Fig. 30-10-4).

6. HORIZONTAL DRIVE SHAFT

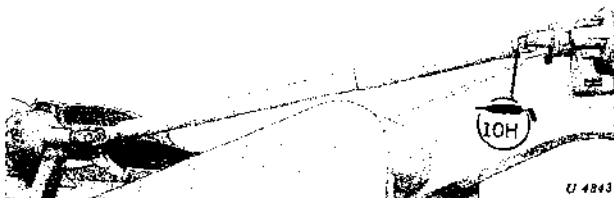


Fig. 30-10-5—Horizontal Drive Shaft

Grease fittings in horizontal drive shaft (Fig. 30-10-5) daily or every 10 hours with SAE multipurpose-type grease to lubricate splines.

7. EJECTOR GATE ROLLERS

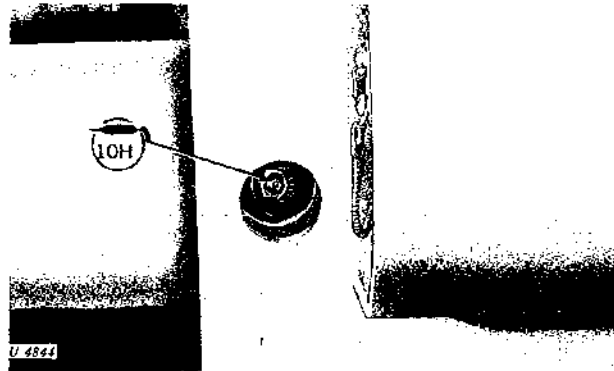


Fig. 30-10-6—Ejector Gate Rollers

Lubricate ejector gate roller grease fittings (Fig. 30-10-6) with several shots of SAE multipurpose-type grease.

8. SLIDING FLOOR LINK

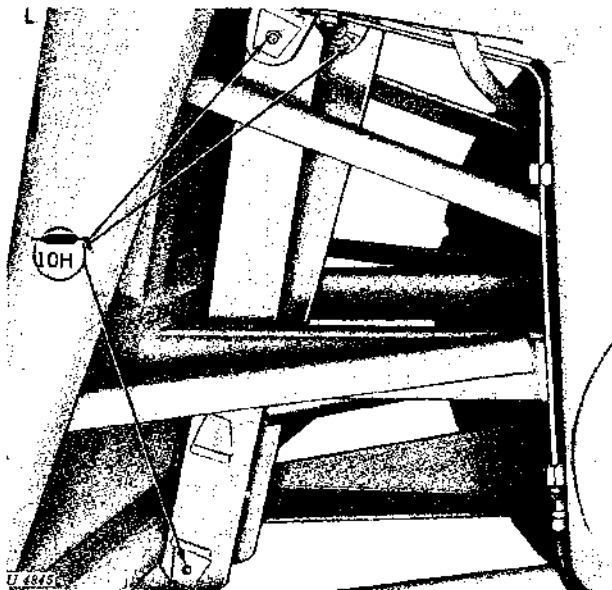


Fig. 30-10-7—Sliding Floor Linkage

Grease fittings (Fig. 30-10-7) with SAE multipurpose-type grease.

9. YOKE PIVOTS

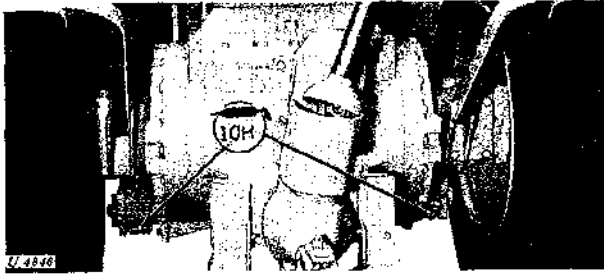


Fig. 30-10-8—Yoke Pivots

Apply several shots of SAE multipurpose-type grease to the yoke pivots (Fig. 30-10-8).

EVERY 50 HOURS

10. VERTICAL DRIVE SHAFT

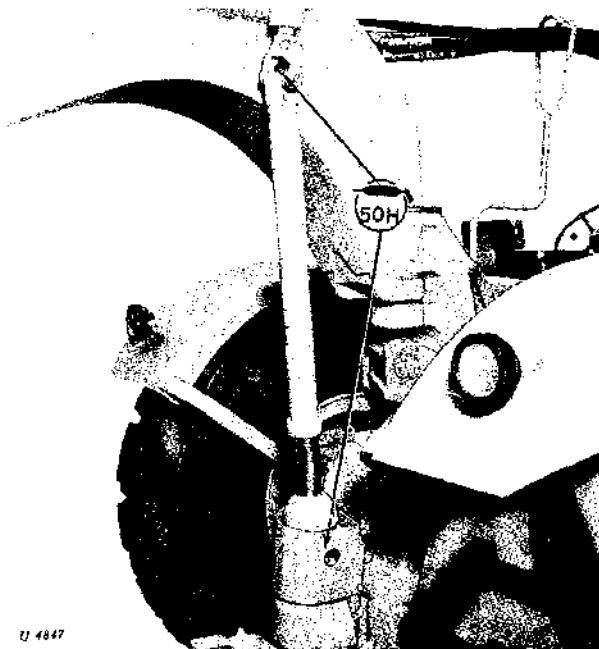


Fig. 30-10-9—Vertical Drive Shaft

Lubricate vertical drive shaft universal joints (Fig. 30-10-9) with SAE multipurpose-type grease.

11. HORIZONTAL DRIVE SHAFT



Fig. 30-10-10—Horizontal Drive Shaft

Use SAE multipurpose-type grease to lubricate the horizontal drive shaft universal joints (Fig. 30-10-10).

EVERY 200 HOURS

12. CENTER IDLER

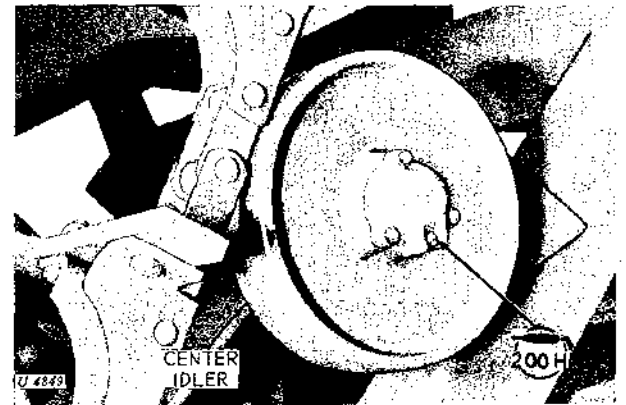
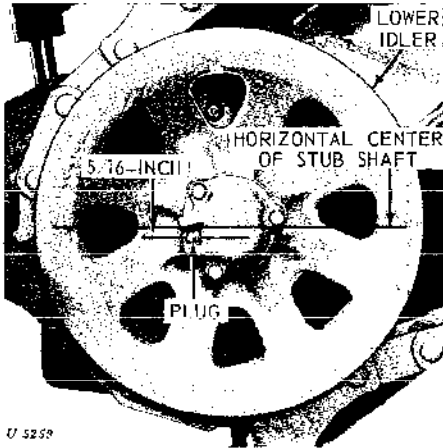


Fig. 30-10-11—Center Idler

Grease the center idler shaft (Fig. 30-10-11) with multipurpose-type grease.

13. LOWER IDLER



U 5252

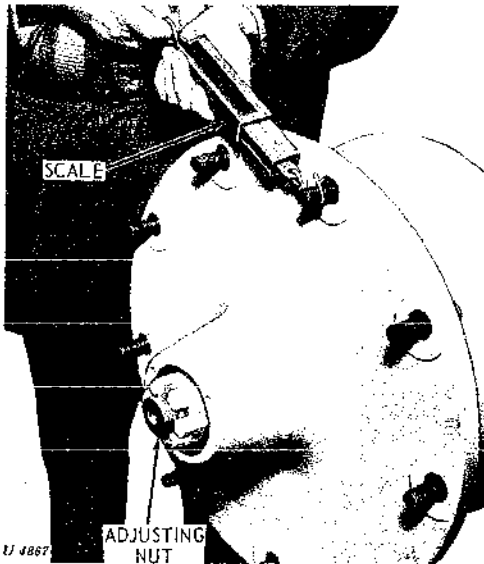
Fig. 30-10-12—Lower Idler

If oil level in lower idler is more than 5/16-inch below horizontal center of stub shaft (Fig. 30-15-12), fill to horizontal center of shaft.

IMPORTANT: Oil level must not be above horizontal center of shaft or more than 5/16-inch below horizontal center of shaft. Use only oil designated SAE 30 ML non-additive straight mineral oil.

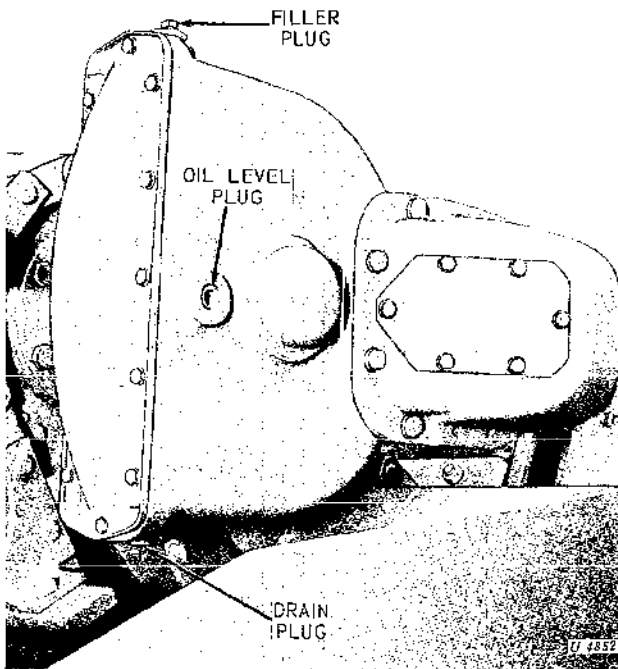
EVERY 1200 HOURS

14. WHEEL BEARINGS



U 4867

Fig. 30-10-13—Adjusting Bearing Preload



U 4852

Fig. 30-10-14—Elevator Gear Box

For accurate adjustment of the wheel bearing preload, first remove the wheel and tire.

Pack the inside wheel bearing with a generous amount of wheel bearing grease. Place not more than 3 pounds and not less than 2-1/2 pounds of wheel bearing grease in the hub cavity between the wheel bearings. Then pack the outside bearing with grease and install.

Tighten the adjusting nut while rotating the hub until a force of 20 to 25 pounds (rolling torque) is required to turn the hub. Use a scale as shown in Figure 30-10-13. Back the adjusting nut off one castellation or 1/6 turn to the nearest cotter pin hole; insert and secure the cotter pin. Install the wheel and tire on the hub.

CAUTION: Do not overtighten the bearings, or attempt to tighten them with the wheel and tire mounted on the hub. The weight of the wheel and tire will permit the hub to spin freely even though the bearings are tightened excessively. Bearing failure may then result.

15. DRAFT FRAME AND ELEVATOR GEAR BOXES

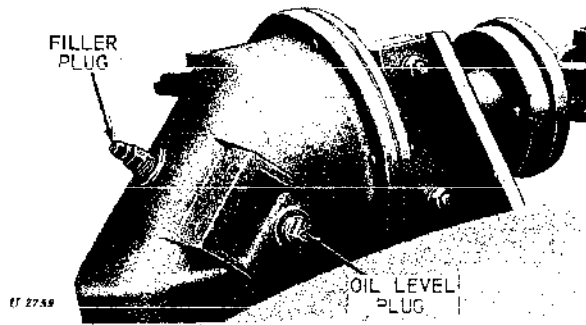


Fig. 30-10-15—Draft Frame Gear Box

Drain both gear boxes (Figs. 30-10-14 and 30-10-15) and refill to the oil level check plug with Hypoid 140-EP oil.

The draft frame gear box must be removed to drain. See page 50-10-1 for removal instructions.

AS REQUIRED

16. AXLE HOUSING NUTS

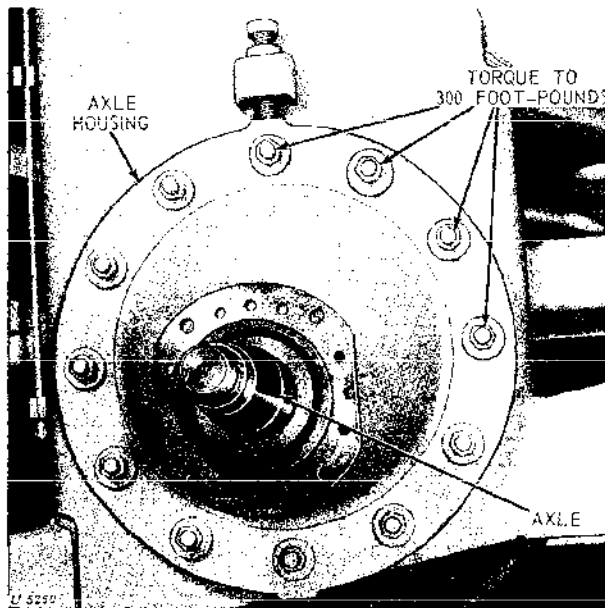


Fig. 30-10-16—Outside Axle Housing Nuts

NOTE: Tire, hub and brake have been removed for illustration purpose only.

Special attention should be given to the tightness of axle housing nuts. Failure to keep them tight could result in costly breakdowns and danger to the operator. Torque the twelve axle housing nuts on each rear wheel (Fig. 30-10-16) to 300 ft-lbs. Pick any nut as number one and tighten in the following order—1, 3, 5, 7, 9, 11, 2, 4, 6, 8, 10, and 12. Follow the same procedure for the inside axle housing nuts.

17. SIDE RAILS

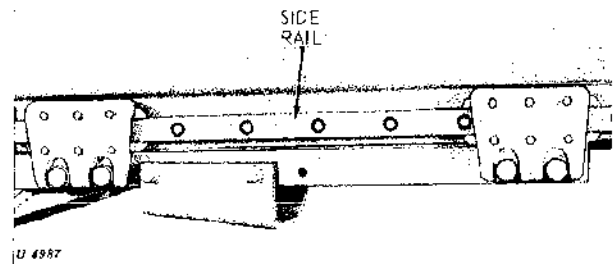


Fig. 30-10-17—Side Rails

Lubricate side rails (Fig. 30-10-17) with SAE multipurpose-type grease for efficient operation.

18. TIRES

Check air pressure in the tires and keep them inflated to pressures specified below.

TIRE SIZE	POUNDS AIR PRESSURE
18:00 x 25	30
23:5 x 25	25