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MODEL:

40 Series Tractor

MANUAL PREVIEW



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**John Deere
Model 40 Series
Tractor**

MANUAL PREVIEW

SERVICE MANUAL

John Deere Model 40 Series
Tractor

SM2013 (01MAY56)

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John Deere Dubuque Works
SM2013 (01MAY56)

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Make: John Deere	Model: 40	Years Made: 1953-1955
HP-PTO: 25.23	HP-Engine:	HP-Drawbar: 22.8
HP-Range: 25	Engine-Make: JD	Engine-Fuel: GAS
Engine-Cyl(s)-CID: 2/101	Transmission-STD:	Optional:
Fwd/Rev Standard: 4/1	Fwd/Rev Optional:	Mfwd-Std/Opt:
Tires-Std Front: 6.00-16	Tires-Std Rear: 10-34	Wheelbase-Inch:
Pto Type:	Pto Speed:	CAT I-3pt Hitch: False
CAT II-3pt Hitch: False	CAT III-3pt Hitch: False	Hitch Lift:
Hydraulics-Type: OPEN	Hyd-Cap:	Hyd-Flow:
Hyd Std Outlets:	Cooling Capacity:	Fuel Tank Capacity:
Cab-Std/A/C; Rops:	Weight: 2941	New Price: 1582

Make: John Deere	Model: 40 SPECIAL	Years Made: N/A
HP-PTO:	HP-Engine:	HP-Drawbar:
HP-Range:	Engine-Make:	Engine-Fuel:
Engine-Cyl(s)-CID:	Transmission-STD:	Optional:
Fwd/Rev Standard:	Fwd/Rev Optional:	Mfwd-Std/Opt:
Tires-Std Front:	Tires-Std Rear:	Wheelbase-Inch:
Pto Type:	Pto Speed:	CAT I-3pt Hitch: False
CAT II-3pt Hitch: False	CAT III-3pt Hitch: False	Hitch Lift:
Hydraulics-Type:	Hyd-Cap:	Hyd-Flow:
Hyd Std Outlets:	Cooling Capacity:	Fuel Tank Capacity:
Cab-Std/A/C; Rops:	Weight:	New Price: 0

Make: John Deere	Model: 40 STANDARD	Years Made: N/A
HP-PTO:	HP-Engine:	HP-Drawbar:
HP-Range:	Engine-Make:	Engine-Fuel:
Engine-Cyl(s)-CID:	Transmission-STD:	Optional:
Fwd/Rev Standard:	Fwd/Rev Optional:	Mfwd-Std/Opt:
Tires-Std Front:	Tires-Std Rear:	Wheelbase-Inch:
Pto Type:	Pto Speed:	CAT I-3pt Hitch: False
CAT II-3pt Hitch: False	CAT III-3pt Hitch: False	Hitch Lift:
Hydraulics-Type:	Hyd-Cap:	Hyd-Flow:
Hyd Std Outlets:	Cooling Capacity:	Fuel Tank Capacity:
Cab-Std/A/C; Rops:	Weight:	New Price: 0

Make: John Deere	Model: 40 TRICYCLE	Years Made: N/A
HP-PTO:	HP-Engine:	HP-Drawbar:
HP-Range:	Engine-Make:	Engine-Fuel:
Engine-Cyl(s)-CID:	Transmission-STD:	Optional:
Fwd/Rev Standard:	Fwd/Rev Optional:	Mfwd-Std/Opt:
Tires-Std Front:	Tires-Std Rear:	Wheelbase-Inch:
Pto Type:	Pto Speed:	CAT I-3pt Hitch: False
CAT II-3pt Hitch: False	CAT III-3pt Hitch: False	Hitch Lift:
Hydraulics-Type:	Hyd-Cap:	Hyd-Flow:
Hyd Std Outlets:	Cooling Capacity:	Fuel Tank Capacity:
Cab-Std/A/C; Rops:	Weight:	New Price: 0

Make: John Deere	Model: 40 TWO ROW UTILITY	Years Made: N/A
HP-PTO:	HP-Engine:	HP-Drawbar:
HP-Range:	Engine-Make:	Engine-Fuel:
Engine-Cyl(s)-CID:	Transmission-STD:	Optional:
Fwd/Rev Standard:	Fwd/Rev Optional:	Mfwd-Std/Opt:
Tires-Std Front:	Tires-Std Rear:	Wheelbase-Inch:
Pto Type:	Pto Speed:	CAT I-3pt Hitch: False
CAT II-3pt Hitch: False	CAT III-3pt Hitch: False	Hitch Lift:
Hydraulics-Type:	Hyd-Cap:	Hyd-Flow:
Hyd Std Outlets:	Cooling Capacity:	Fuel Tank Capacity:
Cab-Std/A/C; Rops:	Weight:	New Price: 0

Make: John Deere	Model: 40 UTILITY	Years Made: N/A
HP-PTO:	HP-Engine:	HP-Drawbar:
HP-Range:	Engine-Make:	Engine-Fuel:
Engine-Cyl(s)-CID:	Transmission-STD:	Optional:
Fwd/Rev Standard:	Fwd/Rev Optional:	Mfwd-Std/Opt:
Tires-Std Front:	Tires-Std Rear:	Wheelbase-Inch:
Pto Type:	Pto Speed:	CAT I-3pt Hitch: False
CAT II-3pt Hitch: False	CAT III-3pt Hitch: False	Hitch Lift:
Hydraulics-Type:	Hyd-Cap:	Hyd-Flow:
Hyd Std Outlets:	Cooling Capacity:	Fuel Tank Capacity:
Cab-Std/A/C; Rops:	Weight:	New Price: 0

LH SIDE OF TRACTOR CENTER FRAME NEAR CLUTCH BELL HOUSING	
Year	Beginning Serial Number
1953	60001-U
1953	60001-TR
1953	60001-CR
1953	60001
1954	72167-TR
1954	67359
1954	63358-CR
1954	60022-U
1954	60001-HC
1954	67359
1954	72167
1954	60022
1955	63140-U
1955	75131-TR
1955	69474
1955	66894-CR
1955	60080-HC
1955	60001-SP
1955	60001-SP
1955	60001-2U
1955	60001
1955	69474
1955	75131
1955	63140

REAR OF TRANS CASE	
Year	Beginning Serial Number
1961	1000
1962	20200
1963	38200
1964	65000
1965	91000
1966	119000
1967	145660
1968	173982
1969	211422
1969	201000
1970	222143
1970	222160
1971	250000
1972	260791
1973	1000
1974	6700
1975	10153
1976	13022
1977	15417
1978	1000
1979	3199
1980	6033

REAR OF TRANS CASE	
Year	Beginning Serial Number
1981	8707
1982	11727
1983	1000
1984	3501
1985	5001
1986	6501
1987	7001
1988	7501
1989	1001
1990	2501
1991	5001
1992	10001

Paint Codes	
BODY	CLASSIC GREEN
BODY	EXPORT GREEN
BODY	NEW AG GREEN
WHEELS & RIMS	CLASSIC YELLOW
WHEELS & TRIM	EXPORT YELLOW
WHEELS & TRIM	CLASSIC YELLOW

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SERVICE MANUAL FOR JOHN DEERE DEALERS

MODEL

40

SERIES

TRACTOR

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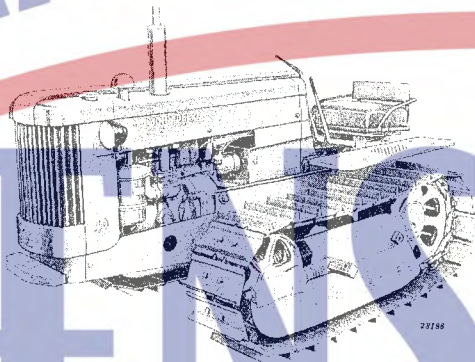
SM-2013 (5-56)

Section 10

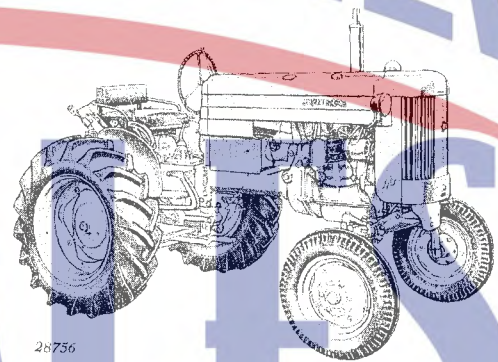
DESCRIPTION AND SPECIFICATIONS**Group 5
DESCRIPTION**

The John Deere Model "40" Series Tractors include a track-type tractor and six basic wheel-type tractors. Figure 10-5-1 illustrates the Model "40" Crawler Tractor equipped with 3-, 4-, and 5-roller track equipment; Model "40" Hi-Crop;

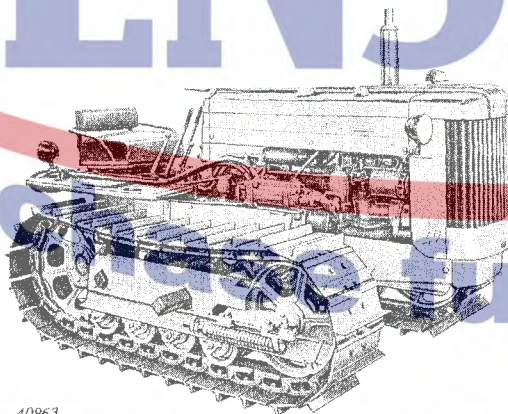
Model "40" Standard; and Model "40" Tricycle Tractors. Figure 10-5-2, on the following page, illustrates the Model "40" Utility, Model "40" Special, and Model "40" Two-Row Utility Tractors.



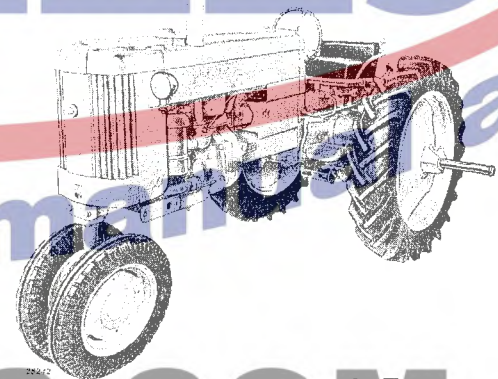
Model "40" Crawler—3-Roller



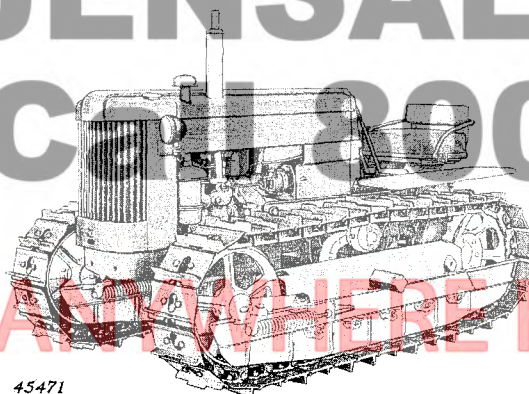
Model "40" Standard



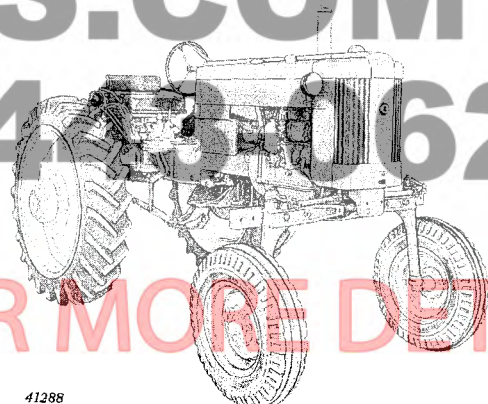
Model "40" Crawler—4-Roller



Model "40" Tricycle-Type

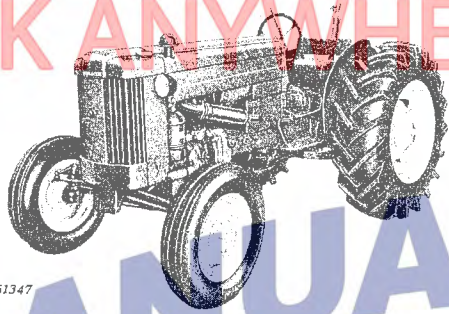


Model "40" Crawler—5-Roller



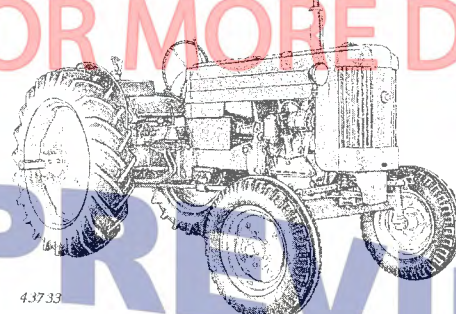
Model "40" Hi-Crop

Figure 10-5-1—Model "40" Series Tractors (Additional Models Illustrated on Following Page)



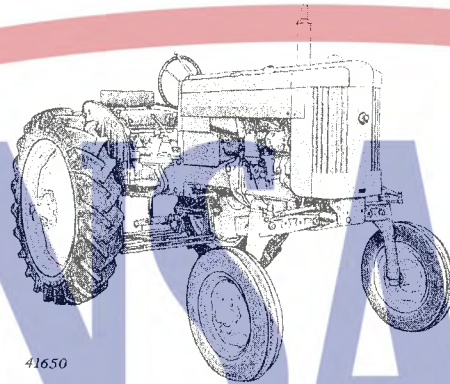
51347

Model "40" Utility



43733

Model "40" Two-Row Utility



41650

Model "40" Special

Figure 10-5-2—Model "40" Series Tractors (Additional Models Illustrated on Preceding Page)

The Model "40" 3-, 4-, and 5-Roller Crawlers, as the name implies, are track-type tractors. They are especially useful wherever good flotation, additional traction, or extra stability is desirable.

Plowing, disking, haying, and logging, as well as numerous industrial jobs, are a few of the applications to which these Crawler Tractors are particularly fitted.

The Model "40" Hi-Crop was designed and built to fulfill requirements for farming tall, bushy, or high-bedded crops. Its all-around clearance provides adequate protection for damage-free work in the tenderest crops such as: tomatoes, gladioli, peppers, potatoes, eggplant, asparagus, cane, and similar crops.

The Model "40" Standard is a general-purpose tractor with an adjustable front axle. It is especially useful for one-row planting and cultivating, mowing, seedbed preparation, and similar jobs.

The Model "40" Tricycle-Type is a general-purpose tractor which can be equipped with dual front wheels, single front wheel, or adjustable front axles. It is especially useful for planting and

cultivating two, four, or six rows; mowing; seedbed preparation and similar jobs.

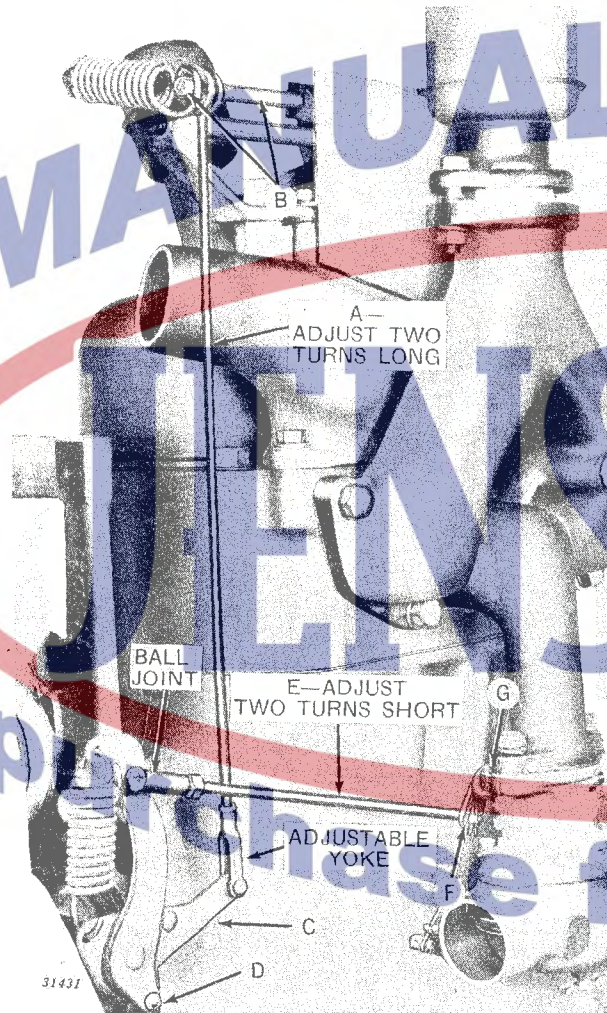
The Model "40" Utility Tractor is, as the name implies, an all-around industrial- and agricultural-type tractor. Its longer wheel base and lower center of gravity provide excellent stability even when working under adverse conditions. It is especially suited for use by highway departments, park commissions, citrus growers, orchardists, vineyardists, hay growers, and general farmers.

The Model "40" Special Tractor is an "intermediate-clearance" type tractor. This important feature gives good protection to tall, bushy, or bedded crops without sacrificing the tractor stability so necessary on rough, uneven land, especially in the narrow wheel settings. Some of the crops to which this tractor is particularly well adapted are: cotton, sweet potatoes, and peanuts.

The Model "40" Two-Row Utility Tractor is a low-built, two-row cultivating, general-purpose tractor. It is patterned along the lines of the Model "40" Utility Tractor and, therefore, offers the same excellent stability and ground-hugging features provided by the Utility Tractor.

GOVERNOR-TO-CARBURETOR
CONNECTING ROD.

Detach governor-to-carburetor connecting rod ("E," Figure 40-5-14) from carburetor throttle shaft arm (F).



- A—Governor Control Connecting Rod
B—Governor Control Rod
C—Governor Lever
D—Governor Lever Stop Pin
E—Governor-to-Carburetor Connecting Rod
F—Carburetor Throttle Shaft Arm
G—Throttle Stop Screw

Figure 40-5-14—Governor and Carburetor Linkage

Push speed control lever all the way to the right (full-open position).

Hold carburetor throttle shaft arm (F) as far forward as possible.

Adjust length of connecting rod (E) until it will fit in hole in throttle shaft arm. Then turn rod into ball joint two complete turns. Tighten lock nut and attach connecting rod to carburetor throttle shaft arm.

GOVERNOR CONTROL CONNECTING ROD.

Now remove spring and slide upper end of governor control connecting rod (A) from governor control rod (B).

Push speed control lever all the way to the left or to the closed position.

Push governor lever (C) down as far as possible.

Turn governor control connecting rod (A) in yoke at bottom until hole at top of rod lines up with end of governor control rod (B).

Now lengthen connecting rod two complete turns and install it on governor control rod. This adjustment insures that governor lever (C) is tight against stop pin (D) when governor control rod (B) is against stop on control rod bracket.

ENGINE SPEEDS

Correct engine speeds are as given in the chart below. Engine speed can conveniently be measured by using a revolution counter on the end of the power take-off shaft or on the belt pulley (Figure 40-5-15).

NOTE: On tractors not equipped with PTO attachment, engine speed can be checked by using an electric tachometer.

	Engine Speed	PTO Speed	Belt Pulley Speed
Fast Idle	2025 rpm*	612 rpm	1390 rpm
Slow Idle	550 rpm	167 rpm	378 rpm
Rated Load	1850 rpm	560 rpm	1270 rpm

*Plus or minus 25 rpm.



Figure 40-5-15—Measuring Speed of Power Take-Off Shaft

Point of MeasurementDimension of New Part or Other Specification**EXHAUST VALVES—(Continued)****Valve Guides.**

Guide to bottom face of cylinder head (Gasoline)	2-3/32 inches
Guide to bottom face of cylinder head (All-Fuel)	2-3/8 inches
Guide to valve stem clearance	.002- to .0045-inch
Inside diameter	.3745- to .376-inch

Valve Springs.

Compressed length	2 inches
Minimum pressure to compress to 2 inches	39 pounds

Valve Clearance.

When cold	.012-inch
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Valves.

Head diameter	1-9/16 inches
Stem diameter	.3715- to .3725-inch
Length, over-all	5-3/4 inches
Angle of face	45 degrees
Opens before bottom dead center	45 degrees
Closes after top dead center	5 degrees
Exhaust period	230 degrees

ROCKER ARMS AND SHAFT

Shaft diameter	.810- to .8105-inch
Rocker arm bore (inside diameter)	.812- to .813-inch

PISTONS

Skirt diameter (major diameter)	3.996 to 3.997 inches
Piston to cylinder clearance	.003- to .005-inch
Piston pin bore	1.1880 to 1.1883 inches

PISTON PINS

Diameter	1.1877 to 1.1879 inches
Fit in piston	"Thumb press fit"
Fit in piston pin bushing	To give .0004- to .0009-inch clearance

CONNECTING RODS AND BEARINGS

Bearing insert oil clearance	.001- to .0035-inch
Piston pin bushing bore (inside diameter)	1.1883 to 1.1886 inches
Connecting rod bearing bore (inside diameter)	2.500 to 2.5016 inches

REAR OIL SEAL

Concentricity with crankshaft	.005-inch
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**TRANSMISSION REAR COVER
ON CRAWLER TRACTORS**

Due to the design of the transmission rear cover on the Crawler Tractor (Figure 130-15-1), detailed service instructions are unnecessary. If it is necessary to replace the power shaft bushings or oil seal on Crawlers (60001-62263), follow instructions on page 130-21-2.

**TRANSMISSION REAR COVER AND LOAD-
AND-DEPTH CONTROL ASSEMBLY ON
HI-CROP, UTILITY, AND TWO-ROW
UTILITY TRACTORS****REMOVAL**

Disconnect battery ground strap. Drain transmission. Remove upper link assembly from load control yoke. Remove power shaft guard or power shaft attachment from transmission rear cover. Disconnect ball joint linkage from equalizer lever.

Hi-Crop Tractor.

Remove the four attaching cap screws and take off spring housing assembly (Figure 130-15-1). Remove the Touch-o-matic support. Remove cap screws and tap transmission rear cover from dowels.

Utility Tractors.

If Load-and-Depth Control is to be serviced, disconnect ball joint linkage and remove control arm from anchor yoke (Figure 130-15-1). Remove the four cap screws which attach spring housing assembly to rockshaft housing. Remove Touch-o-matic attaching cap screws and block unit high enough to allow removal of the transmission rear cover. Remove attaching cap screws and tap rear cover from dowels.

Two-Row Utility Tractors.

Disconnect ball joint linkage and remove spring housing assembly (Figure 130-15-1). Remove rear cover attaching cap screws. Remove Touch-o-matic and transmission cover attaching cap screws and raise Touch-o-matic system sufficiently to allow rear cover to be tapped from locating dowels.

DISASSEMBLY

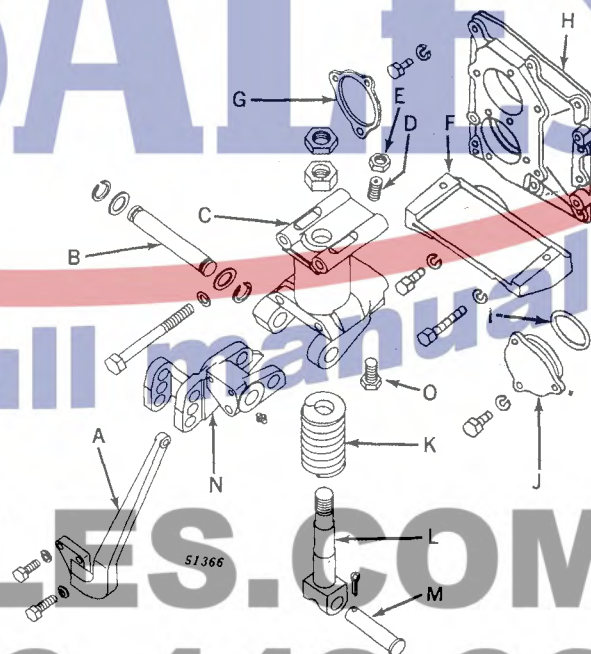
Disassemble transmission case rear cover and Load-and-Depth Control assembly as necessary for inspection and replacement of parts. For identification of parts, refer to the exploded views (Figures 130-15-2 and 130-15-3).

INSPECTION AND REPAIR**TRANSMISSION REAR COVER.**

Check cover (H) for cracks and make sure gasket surface on cover is not warped and that it is free from excessive roughness.

LOAD-AND-DEPTH CONTROL.

If extreme wear is present in the spring housing (C) or anchor yoke pivot areas, replace the worn parts. Also, examine the anchor yoke pin (B) and tension link (L) for wear and replace if necessary. Check all threaded members for thread damage.



- | | |
|-------------------------|---|
| A—Control Arm | H—Transmission Rear Cover |
| B—Anchor Yoke Pin | I—Oil Seal |
| C—Spring Housing | J—Power Shaft Cover |
| D—Set Screw | K—Spring |
| E—Jam Nut | L—Tension Link |
| F—Touch-o-matic Support | M—Tension Link Pin |
| G—Gasket | N—Anchor Yoke |
| | O—Load-and-Depth-Control Lock-Out Screw |

Figure 130-15-2—Exploded View of Rear Cover and Parts for Hi-Crop Tractor

NOTE: To facilitate the tightening operation on the bracket-to-roller shaft attaching nuts, it is advisable to install the roller assembly on the track carrier first and then tighten the attaching nuts on both ends of the shaft to 147-152 foot-pounds (Figure 166-15-16).

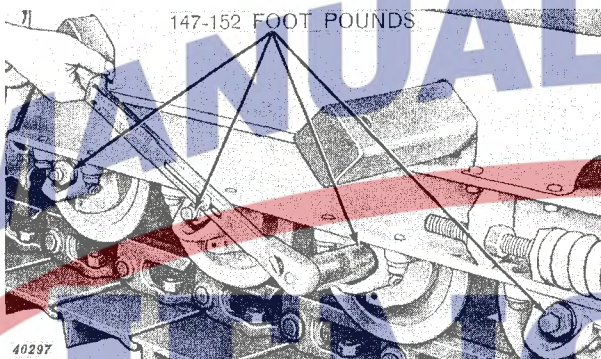


Figure 166-15-16—Tightening Bracket-to-Roller Shaft Attaching Nut

Install grease fitting in outer end of roller shaft.

Front Idlers.

For identification and correct location of parts refer to Figure 166-15-17.

NOTE: Since the assembly and shaft end play adjustment for the front idler is the same as for the roller assembly, follow roller assembly procedure when assembling front idler. Be sure to tighten the bracket to idler shaft attaching nuts on both ends of shaft to 147-152 foot-pounds (Figure 166-15-18).

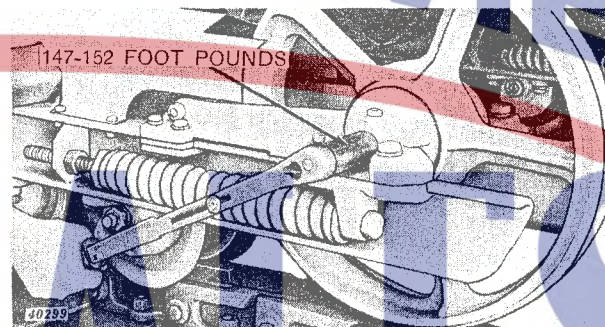
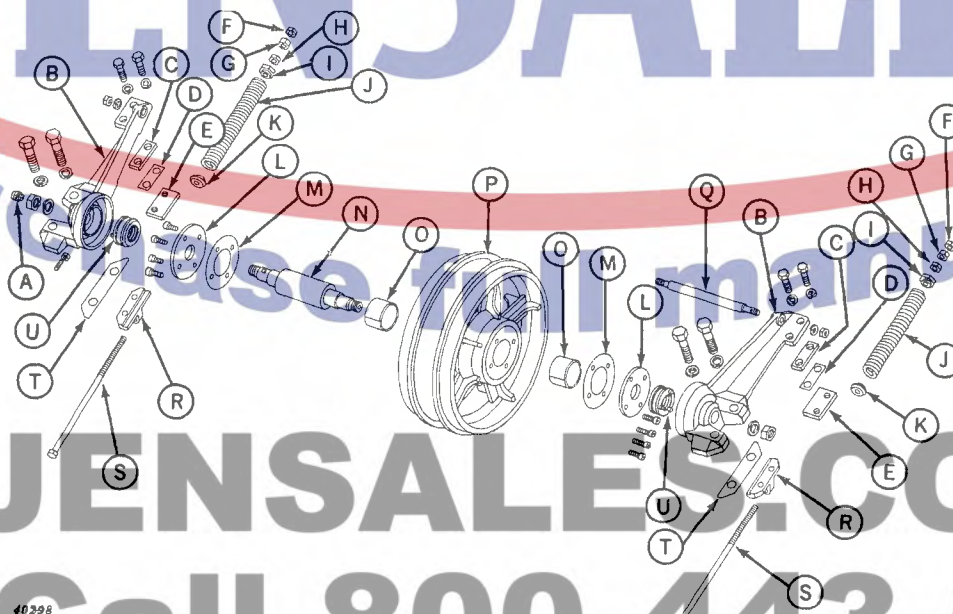


Figure 166-15-18—Tightening Bracket-to-Roller Shaft Attaching Nut



A —Grease Fitting
B —Idler Bracket
C —Guide Spacer
D —Spacer Shim (.010")
E —Guide
F —Track Adjusting Lock Nut
G —Track Adjusting Nut

H —Spring Adjusting Lock Nut
I —Spring Adjusting Nut
J —Idler Spring
K —Spring Retaining Washer
L —Thrust Plate
M —Shim (.005")
N —Idler Shaft

O —Bronze Bushing
P —Idler Wheel
Q —Spacer
R —Idler Spring Bracket
S —Tension Bolt
T —Idler Bracket Shim (.010")
U —Oil Seal

Figure 166-15-17—Exploded View of Front Idler Assembly