

## TRANSMISSION (Continued)

### Torque Values (ft-lb)

#### Gearbox and Bevel Gear

Ring Nut, High Range Driving Gear on Primary Shaft	137-152
Ring Nut, Gearbox Driven Gear on Bevel Gear Pinion	144-166
Ring Nut, Bevel Gear Pinion Taper Roller Bearings	170-191
Self-locking Nuts, Bevel Gear Crown and Differential Half-Housings	79-94

#### PTO And Belt Pulley

Ring Nut, Driven Bevel Pinion	137-152
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## FINAL DRIVES, BRAKES AND WHEELS

Final Drive Pinion and Bull Gear Tooth Backlash	0.006-0.010
Thickness of Brake Disc without Linings	0.236
Thickness of Linings	0.236
Total Thickness of Disc Complete with Linings	0.70-0.72
Minimum Thickness of Worn Linings	0.0394
Assembly Clearance between Bushing and Brake Pedal Shafts	0.002-0.007
Torque Values (ft-lbs)	
Nuts, Final Drive Housing Studs	79-94
Nuts, Drive Wheel Rim Screws	173-188
Screws, Drive Wheel Disc to Wheel Hub	325-361
Nut, Final Drive Shaft Hub	823-910

## FRONT AXLE AND STEERING

### Steering Box

Type	Worm and nut
Reduction ratio	1:22.4
Worm Shaft Bearings	2, roller type
Nut Shaft Bushings	3, bronze
Bearing Adjustment	Lower rings and upper plates

### Worm - Nut Backlash Adjustment

#### Assembly Clearance between Nut Shaft and Bushings

On Steering Box Side Cover	0.0005-0.0024
On Steering Box	0.0010-0.0029

#### Thickness of:

Worm Bearing Adjustment Shims	0.002, 0.004, 0.006, 0.012, 0.020
Worm-and-nut Setting Adjustment Shims	0.004

#### Diameter of Steering Lever Pivot

Inside Diameter of Bushings (fitted)	1.3770-1.3780
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Assembly Clearance between Pivot and Bushings	1.3799-1.3824
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Torque Values (ft-lb)	0.0020-0.0054
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#### Bolts, Steering Box Upper Cover

Bolts, Steering Box Side Cover	29-32.5
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Bolts, Steering Box to Tractor:	29-32.5
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Rear Bolts	72-79
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Front Bolts	105-115
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Nut, Steering Arm to Shaft	130-144
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## FRONT AXLE AND STEERING (Continued)

### Power Steering

Hydraulic System of Power Steering Independent from Power Lift Filter

#### Pump

Type  
Model  
Make  
Drive  
Rotation (looking from Drive Side)  
Engine/Pump rpm Ratio  
Max. Speed with Engine at 2100 rpm  
Nominal Output at Max. Speed  
Delivery on Test Bench 1445 rpm at 1350-1430 psi  
New or Overhauled  
Used  
Testing Oil Viscosity  
Diameter of Gear Shafts  
Diameter of Bearing Bores  
Running Clearance of Shafts in Bearing Bores  
Wear Limit  
Drive and Driven Gear Widths  
Wear Limit  
End Clearance of Gear and Bushings in Pump Body  
Radial Clearance of Gears in Pump Body  
Max. Wear on Pump Body on Suction Side in Correspondence to Gears

Metal Cartridge, in oil reservoir

Gear  
C18X  
Fiat, Plessey license  
By engine timing gears  
CW  
1:1, 148  
2410 rpm  
4-1/4 gpm

Above 3 gal.  
Above 2, 125 gal.  
SAE 20W  
0.6850-0.6860  
0.6870-0.6878  
0.0010-0.0027  
0.009  
0.5192-0.5202  
0.5092  
0.0039-0.0078  
0.0039-0.0078  
0.0093  
CALZONI  
Spool, secured to cylinder  
1350-1420 psi  
0.0002-0.0014  
FB 1/12  
2.75  
8.84  
0.98

### Valve

Type  
Setting of Safety Valve  
Assembly Clearance between Spool and Body

### Cylinder

Bore  
Stroke  
Piston Rod Diameter

### Linkage

Outside Diameter of Distributor Control Lever Bushing  
Bore of Bushing Seat in Control Lever

### Interference Fit of Bushing in Its Seat

Bore of Distributor Control Lever Bushing  
Diameter of Hub on Control Lever  
Assembly Clearance between Bushing and Lever Hub  
Diameter of Pivot Pin Connecting Cylinder to Steering Arm  
Inside Diameter of Cylinder Barrel Pivot Bushing  
Assembly Clearance between Pivot Pin and Bushing  
Diameter of Cylinder Axle Bracket Attachment Pin  
Inside Diameter of Attachment Pin Location  
Assembly Clearance between Pin and Location  
Diameter of Control Lever Pin  
Bore of Control Lever Bushings (fitted)  
Assembly Clearance between Bushings and Pin  
Interference Fit of Bushings in Their Seats

1.8504-1.8511  
1.8465-1.8484  
0.0019-0.0047  
1.6544-1.6569  
1.6525-1.6535  
0.0009-0.0044  
0.9961-0.9981  
0.9988-1.000  
0.0008-0.0040  
0.5591-0.5603  
0.5630-0.5669  
0.0027-0.0079  
1.3769-1.3780  
1.3799-1.3824  
0.0019-0.0054  
0.0019-0.0047

## FRONT AXLE AND STEERING (Continued)

### Front Axle

Front Wheel Toe-In

Adjust the tie-rods so that, calling "A" the distance between the front inner edges of the rims at axle height, the distance between the rear edges is A + (0-.197 inches)

Caster Angle	2°
Diameter of Axle Trunnion	1.5738-1.5748
Inside Diameter of Bushings (fitted)	1.5755-1.5787
Assembly Clearance between Trunnion and Bushings	0.00078-0.00492
Outside Diameter of Trunnion Bushings	1.8071-1.8090
Inside Diameter of Bushing Seats on Axle Body	1.8110-1.8117
Interference Fit of Bushings	0.002-0.0047
Diameter of Wheel Spindle Inside Upper Bushings	1.4950-1.4961
Inside Diameter of Upper Bushing (fitted)	1.4969-1.500
Assembly Clearance between Spindle and Upper Bushing	0.0008-0.0050
Outside Diameter of Spindle Upper Bushing	1.8504-1.8523
Diameter of Bushing Seat on Axle End	1.8465-1.8484
Interference Fit of Upper Bushing in Its Seat	0.002-0.0047
Diameter of Spindle Shaft Inside Lower Bushing	1.7707-1.7717
Inside Diameter of Lower Bushing (fitted)	1.7725-1.7756
Assembly Clearance between Spindle and Lower Bushings	0.0008-0.0050
Outside Diameter of Spindle Lower Bushing	2.0472-2.0479
Diameter of Bushing Seat on Axle End	2.0432-2.0451
Interference Fit of Lower Bushing in Its Seat	0.002-0.0047
Thickness of Wheel Spindle Lower Thrust Washers	0.194-0.197
Thickness of Upper Washer	0.2333-0.2362
Wheel Spindle End Play	0.016-0.031
<b>Torque Values (ft-lbs)</b>	
Nut, Tie Rod Collar Screws	41.2-45.5
Self-Locking Nuts, Tie Rod Ball Joints	79-94
Nuts, Lever Screws on Spindle	173-188
Screws, Front Axle Trunnion Pin	41.2-45.5
Nuts, Beam Extension Set Screws	159-173
Screws, Front Axle to Engine	231 253
Screws, Front Axle Disc to Hub	325-361

## FRONT AXLE SPECIFICATIONS - FOUR-WHEEL DRIVE

### Transfer Gear Unit

Make	SILMS
Type of Gear	Spur
Unit Gear Backlash	0.004-0.008
Side Play on Splines of Power Take-Off Engagement and Fixed Engagement Gear on Shaft	0.0004-0.0042
Outside Diameter of Transfer Unit Output Shaft Gear Bushing	2.3609-2.3617
Bore of Bushing Seat in Gear	2.3646-2.3657
Assembly Clearance between Gear and Bushing	0.0027-0.0047
Length of Bushing w/o Flange	2.2834-2.2908
Thickness of Gear in Bushing Location	2.2775-2.2795
End Play of Gear	0.0039-0.0134
Diameter of Engagement Sliding Sleeve Rod	0.9821-0.9834
Bore of Seat for Engagement Sliding Sleeve Rod	0.9850-0.9863
Assembly Clearance between Rod and Its Seat	0.0015-0.0041

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## FRONT AXLE SPECIFICATIONS – FOUR-WHEEL DRIVE (Continued)

Transfer Gear Unit (Continued)	
Specifications of Sliding Sleeve Control Spring	
Free Length	1.4094
Length Under Test Load	1.1220
Test Load	22 lb.
Bevel Gear (Main Reduction)	
Reduction Ratio	Taper -helical teeth
Backlash of Bevel Gear Teeth	1:2.5
	0.008
Differential	
Differential Pinions	4
Thickness of Differential Gear Thrust Washers	0.059-0.063
Thickness of Differential Pinion Thrust Washers	0.057-0.059
Diameter of Pinion Axles	0.9440-0.9449
Bore of Differential Pinion Bushings (fitted and reamed)	0.9527-0.9657
Assembly Clearance between Differential Pinion Bushings and Axles	0.0008-0.0291
Backlash between Differential Pinion and Gear Teeth	0.008
Final Drives	
	Epicyclic, incorporated
	in wheel hub
Planet Gears in Each Final Drive	3
Thickness of Driven Gear End Washers	0.0578-0.0602
Backlash of Sun Gear, Planet Gear, and Internal Gear Teeth	0.004-0.008
Axle Shafts	
Backlash of Sun Gear, Planet Gear, and Axle Shaft Spline Teeth	0.0004-0.0042
Outside Diameter of Wheel Shaft Bushings	1.8898-1.9805
Bore of Seat for Bushings in Wheel Shaft	1.8858-1.8877
Interference Fit of Bushings in Their Seats	0.0019-0.0047
Bore of Wheel Shaft Bushings (fitted, not reamed)	1.7759-1.7775
Diameter of Axle Shafts in Bushings	1.5737-1.5748
Assembly Clearance of Axle Shaft in Its Bushing	0.00118-0.00374
Front Axle Trunnion	
Diameter of Trunnion Pin	1.5738-1.5748
Bore of Trunnion Bushings	1.5758-1.5782
Assembly Clearance between Trunnion Pin and Bushings	0.0010-0.0044
Thickness of Trunnion Thrust Washer	0.2008-0.2067
Torque Values (ft-lb) Front Wheel Drive	
Bolts, Bevel Gear Pinion Support Housing	123-134
Bolts, Bevel Gear Differential Housing to Axle Body	123-134
Bolts, Planet Gear Set Planet Carrier	79-87
Bolts, Differential Cap	123-134
Nut, Bevel Gear Pinion Shaft Sleeve	206-228
Bolt, Front Wheel	181-202
Bolts, Wheel Shaft to Spindle	123-134
Self-locking Screws, Bevel Gear Crown	94-98
Ring Nuts, Wheel Shaft Bearings	376-419
Nuts, Prop-Shaft Rear Flange	104-108
Bolts, Prop-Shaft Rear Flange	104-108
Nuts, Front Drive Transmission Box Studs on Gear Box	41.2-45.5
Bolts, Front Drive Transmission Box to Gear Box	41.2-45.5
Ring Nut, Transmission Box Shaft Bearings	94-108
Capacities	
Differential	6-1/4 qts.
Planetary	2-1/2 qts.



## HYDRAULIC SYSTEM

Pump		Gear Type
Rotational Speed at 2100 Engine RPM		2427 RPM
Capacity (gpm)		
@ 2133 psi		6.05
Three-Point Hitch Cylinder		
Bore & Stroke		3.74 in. x 5.40 in.
Displacement		59.25 cu. in.
Safety Valve Setting		2845-2987 psi
Pressure Relief Valve Setting		2062-2205 psi

## CLEARANCES AND DIMENSIONS

Piston in Cylinder Bore		0.0014-0.0036
Spool and Control Valve in Control Valve Block		0.0010-0.0014
Remote Control Ram Spool		0.0006-0.0008
Rocker Shaft in Bushings		
Right End		0.0040-0.0079
Left End		0.0040-0.0079
Manual Control Lever Clutch Plate Thickness		0.0787
Thickness of Maximum Lift Arm Adjustment Screw Washers		0.018-0.021
Control Spring Load Adjustment Shim Thickness		0.010-0.014
Spring		
Free Length	<u>Control Valve</u>	<u>Cylinder Discharge Valve</u>
Compressed	1.81	0.87
Torque Values - Foot Pounds (Oiled)	0.79 in. @ 4.0-4.8 lbs.	0.39 in. @ 5.0-5.7 lbs.
Cylinder Safety Valve		22-29
Drain Valve Plug		43-51
Rear Cover Stud Nuts		94-105
Lift Body Stud Nuts and Hydraulic Lift Stud Nuts and Cap Screws		108-119
Top Link Spring Self-Locking Nuts		
M12 x 1.75		69-76
M14 x 1.5		98-105
Draft Control Setting Cam Nut		21-23