SECTION 1. SPECIFICATIONS

1.1 CAPACITIES

Hydraulic Oil Tank

Approximately 36.5 U.S. gallons (138.17 liters) w/10% air space.

Hydraulic System (Including Tank)

Approximately 44 U.S. gallons (166.56 liters).

Fuel Tank

Approximately 15 U.S. gallons (56.8 liters)

Engine Crankcase

Gasoline Engine

3.4 quarts (3.2 liters) w/filter

2.9 quarts (2.7 liters) w/o filter

Diesel Engine

6.34 quarts (6.0 liters) w/filter

5.8 quarts (5.5 liters) w/o filter

Coolant Capacity (Gasoline Engine)

3.5 U.S. gallons (13.2 liters)

1.2 COMPONENT DATA

Gasoline Engine

Displacement - 4.5 liter

Manufacturer/Model - Ford LRG-425

Oil Capacity

4.5 quarts (4.3 liters) w/ filter
4.0 quarts (3.8 liters) w/o filter

Low RPM - 750

Mid RPM - 2200

High RPM - 3000

Alternator - 55 Amp external

Battery - 85 Amphour, 550 Cold Cranking Amps

Fuel Consumption

Low RPM - 1.8 gph (6.7 lph)

High RPM - 3.0 gph (11.4 lph)

Horsepower - 70 @ 2800 RPM

Coolant Capacity - 3.5 U.S. gallons (13.2 liters)

Diesel Engine

Manufacturer/Model - Deutz F3L-1011

Oil Capacity

6.34 quarts (6.0 liters) w/filter

5.8 quarts (5.5 liters) w/o filter

Mid RPM - 2000

High RPM - 3000

Alternator - 60 Amphour

Battery - 60 Amphour, 1000 Cold Cranking Amps

Fuel Consumption

Low RPM - 1.9 gph (7.19 lph)

High RPM - 2.5 gph (9.46 lph)

Horsepower - 42 @ 3000 RPM

Drive/Steer System

Tires 400RTS

Standard - 31 - 15.5 x 15 NHS, 8 ply, pneumatic, inflate to 60 PSI (4.1bar)

Optional - 12 - 16.5 NHS, 6 ply, foam filled

Tires 500RTS

Standard - 12 x 16.5 NHS, 8 ply, pneumatic, inflate to 45 PSI (3.1 bar)

Optional - 31 - 15.5 x 15 NHS, 8 ply, pneumatic, inflate to 60 PSI (4.1 bar)

Optional - 12 - 16.5 NHS, 6 ply, foam filled

Steer System

Toe-In - Adjust to 1/4 inch (6.4 mm) overall

Drive Motors/Hubs/Brakes

Drive Motor - 2.48 in.3 (6.3 cm3) displacement

Drive Hub (2WD Gasoline and Diesel Engine - Rear) - Hub ratio 35:1

Drive Hub (4WD Rear) - Hub ratio 24:1

Drive Hub/Brake (4WD Front) - Hub ratio 24:1; brake - spring applied, hydraulic release, release pressure - 160 psi (11 bar) initial, 190 psi (13 bar) full

Drive Brake (2WD/4WD Rear) - Spring applied, hydraulic release, release pressure - 150 psi (10 bar) initial, 170 psi (12 bar) full

NOTE: *Wheel lugs should be torqued to 80 ft lb (112 Nm) at 50 hour intervals.*

When maintenance becomes necessary or a fastener has loosened, refer to the Torque Chart, Figure 1-1, to determine proper torque value.

Hydraulic Filter - Inline

Return - Bypass Type

25 Micron Nominal

1.3 PERFORMANCE DATA

Travel Speed

2 Wheel Drive - 3.5 mph (5.6 kmh)

4 Wheel Drive - 2.8 mph (4.5 kmh)

Gradeability

2 Wheel Drive - 25% (14°)

4 Wheel Drive - 45% (24°)

Turning Radius (Outside)

2 Wheel Steer - 13 ft 2 in (4.0 meters)

4 Wheel Steer - 6 ft 6 in (2.0 meters)

Lift Speed - 400RTS

Up - 42 - 50 seconds

Down - 60 - 70 seconds

Lift Speed - 500RTS

Up - 65 - 80 seconds

Down - 70 - 80 seconds

Platform Capacity - Fixed Platform

400RTS - 2,000 lb. (907 kg)

500RTS - 2,500 lb. (1134 kg)

Platform Capacity - Traversing Platform Extension (If Equipped)

400RTS (With Deck Extended)

Main Deck - 1,500 lb (680 kg)

Extension - 500 lb (227 kg)

500RTS (With Deck Extended)

Main Deck - 2,000 lb (907 kg)

Extension - 500 lb (227 kg)

With Deck Retracted

400RTS - 1,500 lb (680 kg)

500RTS - 2,000 lb (907 kg)

Platform Capacity - Wide Deck, Dual Extensions (500RTS Only)

500RTS - 1500 lb (680 kg)

Machine Weight

400RTS - Approx. 14,985 lb (6,797kg)

500RTS - Approx. 15,300 lb (6,940 kg)

Machine Height (Platform Lowered)

400RTS - 116.625 in (2.9 m)

500RTS - 126.3125 in (3.15 m)

Machine Length

15 ft 5 in (4.72 meters)

Machine Width

Standard Tires - 7 ft 6 in (2.3 meters)

Foam Filled Tires - 7 ft 7 in (2.3 meters)

1.4 LUBRICATION

Table 1-1. Hydraulic Oil

HYDRAULIC SYSTEM OPERATING TEMPERATURE RANGE	SAE VISCOSITY GRADE
0 to +23 degrees F (-18 to -5 degrees C)	10W
0 to +210 degrees F (-18 to +100 degrees C)	10W-20,10W-30
+50 to +210 degrees F (+10 to +100 degrees C)	20W-20

NOTE: *Hydraulic oils must have anti-wear qualities at least to API Service Classification GL-3, and sufficienthemical stability for mobile hydraulic system service. JLG Industries recommends Mobil 424 hydraulic oil, which has an SAE viscosity of 10W-20 and viscosity index of 152.*

NOTE: *Aside from JLG recommendations, it is not advisable to mix oils of different brands or types, as they may not contain the same required additives or be of comparable viscosities. If use of hydraulic oil other*

than Mobil 424 is desired, contact JLG Industries for proper recommendations.

1.5 LUBRICATION SPECIFICATIONS

Table 1-2. Lubrication Specifications

KEY	SPECIFICATIONS
MPG	Multipurpose Grease having a minimum dripping point of 350 degrees F. Excellent water resistance and adhesive qualities, and being of extreme pressure type. (Timken OK 40 pounds minimum.)
EPGL	Extreme Pressure Gear Lube (oil) meeting API service classification GL-5 or MIL-Spec MIL-L-2105.
EO	Engine (crankcase) Oil. Gas - API SF/SG class, MIL-L-2104. Diesel - API CC/CD class, MIL-L-2104B/ MIL-L-2104C.
HO	Hydraulic Oil. API service classification GL-3, e.g. Mobil 424.

NOTE: *Refer to Figure 1-2 for specific lubrication procedures.*

1.6 PRESSURE SETTINGS

NOTE: *All pressures are given in pounds per square inch (psi), with the metric equivalent, bar, in parentheses.*

400RTS

Rexroth/Hydraforce Valve

Main Relief - 2250 psi (156 bar)

Steer Relief - 1500 psi (103 bar)

Steer Relief 4-W/S (If Equipped) - 1500 psi (103 bar)

Platform Extension (If Equipped) - 500 psi (34 bar)

500RTS

Rexroth/Hydraforce Valve

Main Relief - 2800 psi (193 bar)

Steer Relief - 1500 psi (103 bar)

Steer Relief 4-W/S (If Equipped) - 1500 psi (103 bar)

Platform Extension (If Equipped) - 500 psi (34 bar)

1.7 LIMIT SWITCHES

The machine is equipped with the following limit switches:

High Drive Speed Cut-Out

High drive speed is cut out when platform is raised above stowed (fully lowered) position.

Lift Cut-Out (If Equipped)

Lift is cut out at 22 ft (6.8 m) when leveling jacks are in the stowed position.

Drive Cut-Out (If Equipped)

Drive is cut out when platform is at 22 ft (6.8 m) above stow position, or when leveling jacks are in the set position.

400RTS Tilt Alarm - 5 ° (If Equipped)

A horn is sounded and a warning light is illuminated when the machine is operated on a slope that exceeds 5 ° with the platform raised. If the machine is operated on a 5 ° slope with the platform completely lowered, only the warning light is illuminated.

500RTS - Tilt Alarm - 2 °

A horn is sounded and a warning light is illuminated when the machine is operated on a slope that exceeds 2 ° with the platform raised. If the machine is operated on a 2 ° slope with the platform completely lowered, only the warning light is illuminated.

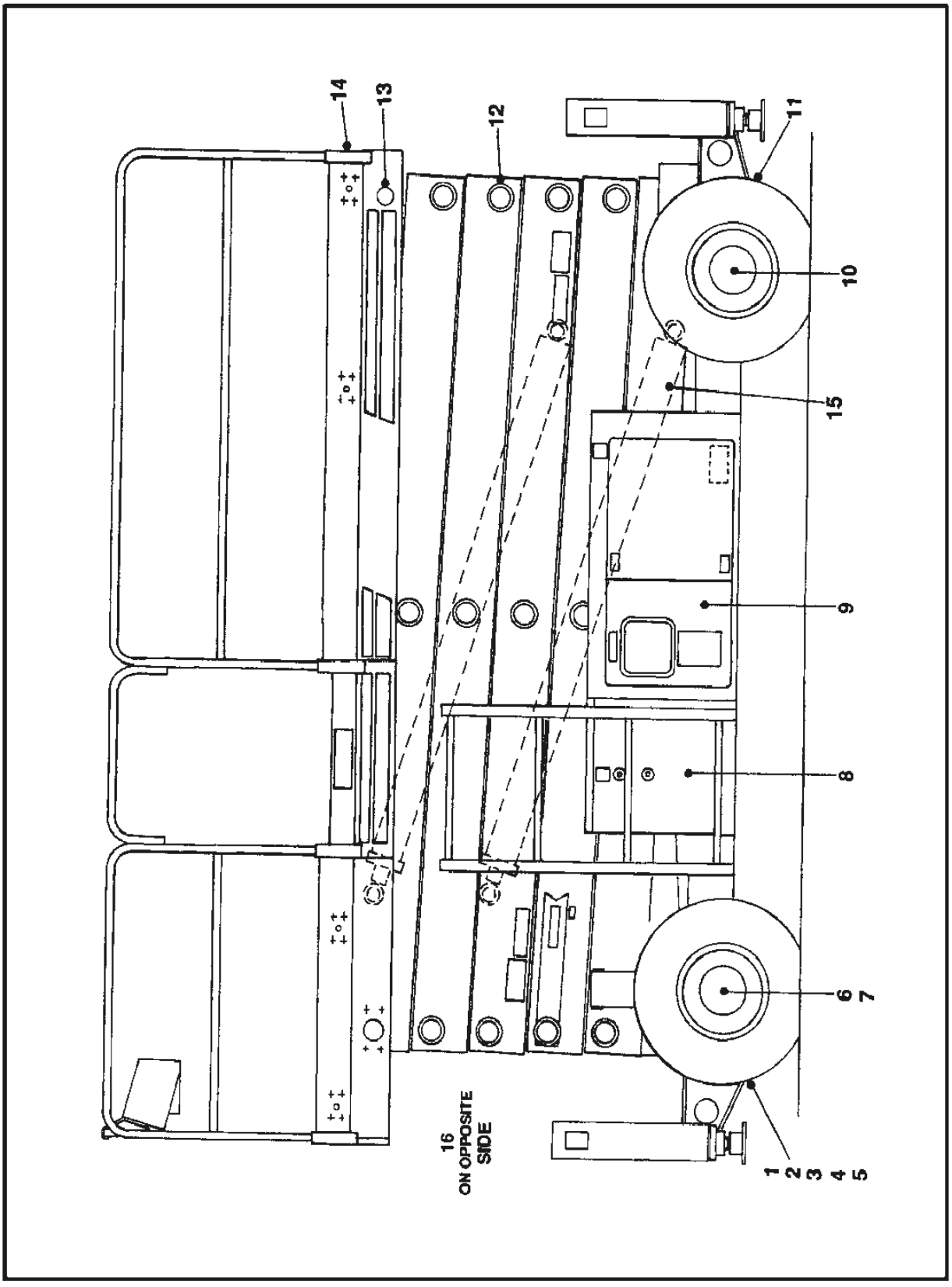

Figure 1-1. Lubrication Diagram

Table 1-3. Lubrication Chart

INDEX NO	COMPONENT	NUMBER/TYPE LUBE POINTS	LUBE METHOD	INTERVAL HOURS
1	Oscillating Axle Pivot Point (Optional)	1 Grease Fitting	MPG - Pressure Gun	100
2	Lockout Cylinders (Optional)	2 Grease Fittings (1 each cylinder)	MPG - Pressure Gun	100
3	Front Steering Spindles (2-W/D)	2 Grease Fittings	MPG - Pressure Gun	100
4	Front Steering Spindles (4-W/D) (Optional)	2 Grease Fittings	MPG - Pressure Gun	100
5	Tow Bar Hitch (Optional)	1 Grease Fitting	MPG - Pressure Gun	100
6	Wheel Bearings (2-W/D)	N/A	MPG - Repack	2000
7	*Wheel Drive Hub (4-W/D) (Optional)	Fill Plug	EPGL (SAE 90)	500
8	Hydraulic Oil Reservoir	Fill Cap/Drain Plug	HO - Check HO Level (See note 4)/ HO - Change HO	10/500
9	** Hydraulic Filter Element	N/A	Initial Change - 40 Hours	250
10	*Wheel Drive Hub	Fill Plug	EPGL (SAE 90)	500
11	Rear Steering Spindles (4-W/S) (Optional)	2 Grease Fittings	MPG - Pressure Gun	100
12	400 RTS Sizzor Arm Pivot Pins 500 RTS Sizzor Arm Pivot Pins	30 Grease Fittings (400 RTS) 38 Grease Fittings (500RTS)	MPG - Pressure Gun MPG - Pressure Gun	100
13	Rail Slides	N/A	MPG - Brush	100
14	Platform Extension Slides (Optional)	N/A	MPG - Brush	100
15	Lift Cylinder	4 Grease Fittings	MPG - Pressure Gun	100
16	Engine Crankcase	Fill Cap/Drain Plug	Check Engine Oil Level	10/100

KEY TO LUBRICANTS:

MPG - Multi-purpose Grease

EPGL - Extreme Pressure Gear Lube

HO - Hydraulic Oil (Mobil 424)

*Torque Hubs should be 1/2 full of lubricant

** JLG Industries recommends replacing the hydraulic filter after the first 40 hours of operation and every 250 hours thereafter.

⚠ WARNING

TO AVOID PERSONAL INJURY, USE SAFETY PROP FOR ALL MAINTENANCE REQUIRING PLATFORM TO BE ELEVATED.

NOTE: ***1.*** *Be sure to lubricate like items on each side*

2. *Recommended lubricating intervals are based on machine operations under normal conditions. For machines used in multi-shift operations and/ or exposed to hostile environments or conditions, lubrication frequencies must be increased accordingly.*

3. *Operate hydraulic functions through one complete cycle before checking hydraulic oil level in tank. Oil should be visible in ADD sight window on hydraulic tank. If oil is not visible, add oil until oil is visible in both ADD and FULL sight windows on tank. Do not overfill tank.*

4. *Any time the pump coupling is removed, coat splines of coupling with Texaco Code 1912 grease prior to assembly. (gasoline or diesel engine only).*

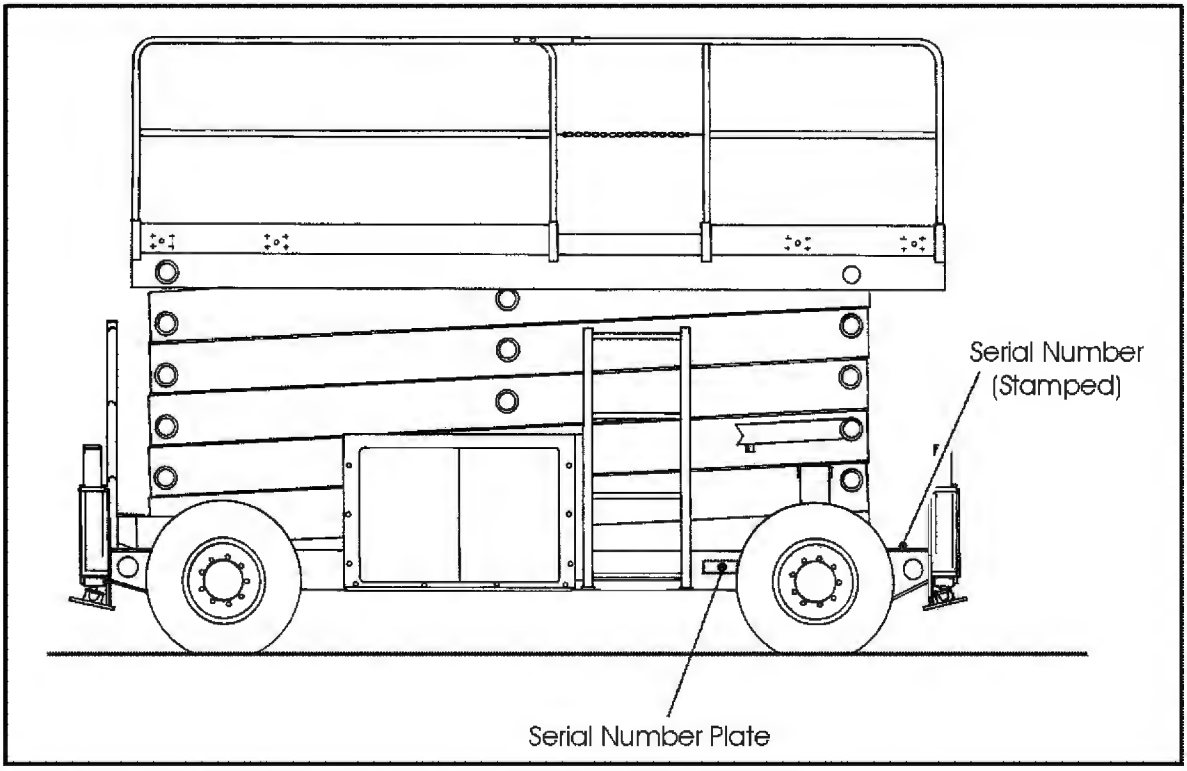

Figure 1-2. Serial Number Location

1.8 SERIAL NUMBER LOCATIONS

For machine identification, a serial number plate is affixed to the machine. On gasoline or diesel powered machines, the plate is located on the right front side of the frame rail. In addition, should the serial number plate be damaged or missing, the machine serial number is stamped on the top of frame between the front wheels.

1.9 CYLINDER SPECIFICATIONS

NOTE: *All dimensions are given in inches (in), with the metric equivalent, centimeters (cm), in parentheses.*

Table 1-4. Cylinder Specifications

Description	Bore	Stroke	Rod Dia
Lift Cylinder (400RTS/500RTS)	5.0 (12.7)	78.5 (199)	3.5 (8.9
Steer Cylinder	3.0 (7.6)	7.5 (19.05)	1.5 (3.8)
Lockout Cylinder (Oscillating Axle)	3.0 (7.6)	3.75 (9.5)	1.25 (3.2)
Leveling Jack Cylinder	3.0 (7.6)	18.75 (47.6)	2.0 (5.0)
Traversing Platform Cylinder	1.5 (3.8)	48 (121)	1.00 (2.5)