60, 90 AND 125 SKID-STEER LOADERS

60 Skid-Steer Loader with utility bucket

90 Skid-Steer Loader with light material bucket

125 Skid-Steer Loader with dirt and foundry bucket and teeth
LARGE OPERATING CAPACITIES
Model 60-600 lb.
Model 90-700 lb.
Model 125 Gas-1325 lb.
Model 125 Diesel-1410 lb.
Good productivity.

COMPACT DESIGN
Narrow width and short overall length allows working in tight areas.

VARIETY OF BUCKETS AND FORKS AVAILABLE
Handles many applications.

OPERATIONAL AND PARKING DISK BRAKES
Provide safety and precise control.

ROPS ROLL-GARD - STANDARD
Comes with canopy, side screens and built-in lift arm lock. — Operator Safety.

RUGGED ENGINES
Model 60 has 17-h.p., Model 90 has 23.0-h.p. and Model 125 has 37-h.p. gas or 40-h.p. diesel engines. All engines have proven themselves as reliable power plants.

HYDROSTATIC DRIVES
Quick and responsive for greater productivity. Requires less maintenance than belt-driven machines.
PRODUCT FEATURES

Compact and Maneuverable
John Deere skid-steer loaders are compact in design for greater maneuverability in tight, close-quarter areas. They will operate in areas in which the conventional, tractor-mounted loaders are too large to fit. Narrow and able to turn within their own radiuses, these machines are fully at home inside calf pens, milking barns and poultry houses. Other applications include: general contractors, foundries, fertilizer plants, barge lines, nurseries and rental.

The little 60 Loader is only 35-1/4 inches wide; the 90 is 47 inches wide; and the Model 125 is 59-1/2 inches wide. These dimensions apply to those loaders equipped with standard-equipment tires, and without buckets. For further information on size, see “Specifications”.

Another reason that these machines will provide such outstanding maneuverability is their four-wheel drive features. Left and right wheels operate independently of each other, and can counter-rotate so that the loader can turn 360 degrees in its own track.

Engines
John Deere skid-steer loaders use engines that are designed for the rugged, tough use to which skid-steer loaders are subjected.

125 Skid-Steer Loader
The 125 is available with a liquid-cooled gasoline or diesel engine. Both engines are compact and smooth in operation. The 125 gasoline engine develops 37 horsepower at 2800 rpm. The continental engine has earned its reputation in forklift trucks and other heavy-duty, industrial-type equipment. It provides a 21 percent torque rise.

The 125 Diesel engine develops 40 horsepower at 2800 rpm. The Isuzu Diesel has provided years of dependable service for refrigeration units in semi-trailer trucks. John Deere was the first to use Isuzu in a skid-steer loader. Today it sets the standard for the industry.

90 Skid-Steer Loader
The 90 uses a proven, two-cylinder, 23-horsepower, gasoline engine. This engine is well matched for the size of the 90 and is designed to give excellent reliability throughout years of service.

60 Skid-Steer Loader
The engine used in the 60 is a two-cylinder, 17-horsepower, air-cooled, gasoline engine.

Hydrostatic Drive
All three models utilize hydrostatic drive, for immediate response and increased productivity. The hydrostatic system is totally independent of the hydraulic system. Hydrostatic drive also means less maintenance than for loaders with variable drive systems. Hydrostatic drive eliminates gear boxes, clutches, and variable drive belts, all high maintenance parts. This lower maintenance requirement will help to increase productivity potential.

Hydrostatic Drive Operation—60 and 90 Loaders

The hydrostatic variable displacement, piston pumps are mounted, side by side, under the loader seat. Drive pulleys are located on the back of each pump behind the mounting plate.

The two top pulleys are attached to the hydrostatic pumps, and the lower pulley is attached to the engine crankshaft. A drive belt is routed around the pulleys. A belt idler, activated by the drive clutch lever, takes up the slack in the belt when the pumps are engaged.

(Continued on next page)
Hydrostatic Drive Operation—
60 and 90 Loaders—Continued

Each pump is connected by hose routing to a hydrostatic gear motor. Hydraulic fluid is drawn by the pumps from the reservoir through a filter. The pumps then deliver the pressurized fluid to the motors.

Sprockets on the output shaft of each motor are connected to each axle drive sprocket by a one-step drive chain, in order to obtain four-wheel drive.

The motors and chains of the 60 Skid-Steer Loader are located under the floor panel, in the 18-U.S.-gallon reservoir, for cooling and lubrication.

On the 90 Skid-Steer Loader, the ratio between engine horsepower, hydrostatic motor size and reservoir size is such that the motors have sufficient cooling without being placed in the hydraulic reservoir. The chains are located in 1.5-U.S.-gallon chain cases for lubrication (“A” above).

The 90 Loader features a T-bar, and the 60 Loader uses two levers to control the direction and ground speed of the loader. Two-lever control is necessary on the 60, in order to allow easy entry and exit of its narrow operator station.

A neutral start safety switch is provided at the base of the drive clutch lever. This means that the pumps must be disengaged before the engine will crank.
Hydrostatic Drive Operation—125 Loader

Engine power is transmitted to the hydrostatic, variable-displacement-piston pumps. This is achieved by coupling the rear hydrostatic pump input shaft with a splined hub that is bolted to the engine flywheel.

The front pump is coupled in tandem to the rear pump by a splined input shaft. Each pump is connected by hose-routing to a fixed-displacement-piston hydrostatic motor. Hydraulic fluid is drawn by the pumps from the oil reservoir through a filter. The pumps then deliver the fluid, under pressure, to the motors through the dark colored hoses. One hose is for forward motion and one is for rearward motion.

A sprocket on the output shaft of each motor is connected to the axles by a two-step chain drive, in order to obtain four-wheel drive. Each side of the loader houses a 9-U.S.-gallon hydraulic reservoir that also acts as a chain case to lubricate the drive chains.

A neutral-start safety switch prevents the Model 125 from being started while the T-bar control lever is activated.

Hydraulics

The hydraulic power for loader operation is supplied by a 15-gpm, gear-type pump on the 125 and a 7.5-gpm pump on the 60 and 90. The hydraulic system has a 1500-psi relief setting on the 60; 1750-psi on the 90; and 2000-psi on the 125. The standard spool valve directs oil flow to the lift and tilt cylinders by actuating the foot pedals. The left pedal controls the up and down motion of the boom, with a heel-toe movement; and the right pedal controls the bucket, in the same fashion. The boom pedal (left) can be pushed down with the toe and locked in a detent position, allowing the boom to float with the contour of the ground when back-dragging with the bucket. An auxiliary hydraulic valve kit can be ordered as an attachment for field conversion. This kit is standard on 125 (SN120,001- ). This valve is used to operate front-mounted attachments requiring hydraulic power.
Lift Capacity

Although these machines are compact and able to work in confined areas, they have large lift capacities. The operating capacities are: 600 pounds for the 60 Loader; 700 pounds for the 90 Loader; a big, 1325 pounds for the 125 Gas; and 1410 pounds for the 125 Diesel.

Operating Capacity, sometimes referred to as rated lift capacity, is the safe load the loader can realistically handle while operating. (SAE states it is not to exceed 50 percent of the tipping load.)

It is important not to confuse operating capacity with tipping load. Tipping Load is defined as the amount of weight that causes the back wheels to come off the ground under the following conditions:

(a) loader at operating weight
(b) loader on a hard level surface
(c) loader stationary
(d) maximum bucket rollback
(e) center of gravity of the load is at the maximum forward position in the raising cycle. (see specifications for specified height.)

Durability

Skid-steer loaders are commonly used in abusive conditions and applications. For this reason, it is essential that they be well built and durable. The John Deere skid-steer loaders feature unitized main-frame construction. The booms are of box construction, which gives maximum strength with minimum weight.

A full length belly pan, standard on all units, provides protection to the undercarriage.

Easy Servicing

Because of the compact size of skid-steer loaders, some competitors do not provide easy access to their engines. This is not the case with the John Deere skid-steer loaders. Routine engine maintenance can be performed easily at the rear of the machine.

The operator’s seat can be removed in order to expose the hydrostatic pumps and linkages on all units, and also the hydrostatic motors on the 125.

The cover for the hydraulic reservoir can be removed to provide access to the drive chains on the 125; and to the drive chains, drive motors and brakes on the 60 (as pictured on page 25-1-4 showing the 60’s motors and chains).

(Continued on next page)
The motors are under the floor panel on the Model 90. The reservoir is located in the crossbeam between the boom tower and in the boom towers. A convenient fill tube is located on top of the crossbeam with a visible sight gauge showing when the reservoir is full or when additional fluid is needed. Access to the motors on the Model 90 is obtained by pulling two clip pins to remove the seat, and removing four capscrews to remove the one-piece T-bar cowl and floor panel.

ENGINE SLIDE RAIL
(125 Loader Only)

A slide rail system is used to remove the 125 Skid-Steer Loader engine and hydrostatic pumps for major repair work. The time required to remove these components from major competitive loaders can take up to twice as long. The slide rail feature saves the operator costly downtime by allowing repair work to be done outside of the loader.

QUICK-TATCH HOOK-UP

The Quick-Tatch feature allows attachments to be changed quickly and easily.

PLASTIC FUEL LINERS

Removable plastic fuel tank liners are used on all three models. This liner became standard equipment on 60 and 125 (SN120,001- ) and 90 (SN155,001- ). Plastic liners eliminate rust due to condensation. Also, if a foreign substance gets into the tank, cleaning and flushing is easier.

Safety

A Roll-Gard® ROPS with seat belt, canopy and side screens is standard equipment on all models. This Roll-Gard is also certified by the state of California. The ROPS canopy and side screens will protect the operator in case of roll-over.

Lift arm locks are built into the ROPS. They must be used to lock the lift arms up for safe servicing.

A three-way braking system is standard on all machines. First, the hydrostatic drive provides a dynamic brake when the engine is running—when the steering controls are in neutral, the machine will not move. Second, a foot pedal activates a disk brake mounted on the output shaft of the drive motor on all three models, in case the engine should stall. Third, the brake pedal can be locked for parking.

Neutral-start switches are standard equipment, in order to prevent the engine from starting unless the controls are in the neutral position.

Convenient Instrumentation

The throttle, ignition switch, choke and instrument gauges are located within easy reach of the operator. On the 60 and 90, a lever is used to engage and disengage the hydrostatic pump drive belt for easier cold-weather starting.
### ENGINE:

- **Make and model**: Kohler KT17
- **Fuel**: Gasoline (unleaded)
- **Cooling System**: Air
- **Displacement**: 42.18 cu. in. (691 cm³)
- **Bore**: 3.125 in. (79 mm)
- **Stroke**: 2.75 in. (70 mm)
- **Horsepower (Net)**: 17 @ 3400 rpm
- **Maximum Governed rpm**: 3400
- **Torque**: 29-1/2 ft-lbs (40 N·m) @ 2400 rpm
- **Compression Ratio**: N/A

### Capacities:

- **Fuel Tank, U.S. Gal.**: 5 (18.9 L)
- **Crankcase, U.S. Qt.**: 1.9 (1.8 L)
- **Hydraulic System, U.S. Gal.**: 18 (68 L)
- **Cooling System, Imp. Qt.**: --
- **Tires**: 5.70-12 (Std.)
- **Drive**: Hydrostatic

### HYDRAULIC SYSTEM:

- **Type**: Open-Center
- **Pump Capacity**: 7.5 gpm (28.4 L/min.)
- **Motors (Hydrostatic)**: Ross TRW (MAB Series)
- **Relief Setting**: 1500 psi (103.35 bar)
- **Lift Cylinder Bore**: 2 in. (51 mm)
- **Lift Cylinder Stroke**: 22 in. (559 mm)
- **Tilt Cylinder Bore**: 2.5 in. (63.5 mm)
- **Tilt Cylinder Stroke**: 13 in. (333.4 mm)

### Electrical System:

- **Voltage**: 12-Volt
- **Tires**: 5.70-12 (Std.)
- **Drive Type**: Hydrostatic
- **Travel Speed**: 0-4.25 mph (6.5 km/h)
- **Turning**: 360° in its own length
- **Chains**: No. 60

### ELECTRICAL SYSTEM:

- **Voltage**: 12-Volt
- **Tires**: 5.70-12 (Std.)
- **Drive Type**: Hydrostatic
- **Travel Speed**: 0-4.25 mph (6.5 km/h)
- **Turning**: 360° in its own length
- **Chains**: No. 60

(Continued on next page)
### Operational Specifications (with Utility Bucket):

**Operating Capacity:** 600 lb. (272 kg)  
**Tipping Load:** 1200 lb. (544 kg)  
**Weight Distribution:**
- Front: 20%  
- Rear: 80%  
**Cycle Times with Empty Bucket, In Seconds (Approx.):**
- Boom Raising: 5.67  
- Boom Lowering: 3.78  
- Bucket Dumping: 2.83  
- Bucket Rollback: 1.89

**Operating Weight:**
- 60: 2076 lb. (942 kg)  
- 90: 2825 lb. (1281 kg)  
- 125G: 30-200-9  
- 125D: 30-200-9

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### Bucket Specifications

**Dimensions (in accordance with SAE Standards):**

#### 60 Skid-Steer Loader
- Earth: 35 in. (890 mm)  
- Earth: 44 in. (1118 mm)  
- Utility: 47 in. (1194 mm)  
- 36-in. Pallet Fork: 38 in. (965 mm)  
- Utility Fork: 35 in. (889 mm)  
- Utility Fork: 39 in. (991 mm)

#### 90 Skid-Steer Loader
- Earth: 47 in. (1193.8 mm)  
- Earth & Foundry: 49 in. (1245 mm)  
- Utility: 47 in. (1194 mm)  
- Light Material: 52 in. (1321 mm)  
- Light Material: 64 in. (1626 mm)  
- 36-in. Pallet Fork: 30 in. (965.2 mm)  
- Utility Fork: 39 in. (990.6 mm)  
- (28 in. length)

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### Tipping Load Capacities with Pallet Forks

<table>
<thead>
<tr>
<th>Model</th>
<th>Tipping Load with Forks</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>500 lb. (227 kg)</td>
</tr>
<tr>
<td>90</td>
<td>600 lb. (272 kg)</td>
</tr>
<tr>
<td>125G</td>
<td>1240 lb. (562 kg)</td>
</tr>
<tr>
<td>125D</td>
<td>1240 lb. (562 kg)</td>
</tr>
</tbody>
</table>

---

### PALLET FORK RATINGS

*(Specifications in accordance with ANSI B56.1-1975)*

<table>
<thead>
<tr>
<th>Model</th>
<th>Tipping Load with Forks</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>500 lb. (227 kg)</td>
</tr>
<tr>
<td>90</td>
<td>600 lb. (272 kg)</td>
</tr>
<tr>
<td>125G</td>
<td>1240 lb. (562 kg)</td>
</tr>
<tr>
<td>125D</td>
<td>1240 lb. (562 kg)</td>
</tr>
</tbody>
</table>

**NOTE:** Tipping load capacities with pallet forks are considerably less than buckets, for the following reasons:

- **a)** The bucket capacity is rated at maximum curlback, which shifts the load center back for better stability. The forks are maintained at a level position, which shifts the load center forward for less stability.
- **b)** The bucket calculations are obtained with the loader on a level surface. With the pallet forks, the loader is tested at various degrees of slope.
- **c)** The load center of gravity is further out with the pallet forks than with a bucket. This moves the center of gravity of the loaded vehicle forward and reduces stability.

*ANSI B56.1-1975 is a lift-truck rating specification with 24-inch load center of gravity.*
DIMENSIONS

Specifications are in accordance with IEMC standards. Dimensions are with standard tires and 35-inch earth bucket (60), or 47-inch utility bucket (90), or 56-inch earth and foundry bucket (125).

<table>
<thead>
<tr>
<th>Dimension</th>
<th>60</th>
<th>90</th>
<th>125</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Overall Height—Lift Arms Raised</td>
<td>124.75 in. (3169 mm)</td>
<td>125 in. (3175 mm)</td>
<td>146.25 in. (3715 mm)</td>
</tr>
<tr>
<td>B - Height to Hinge Pin (max.)</td>
<td>95.25 in. (2419 mm)</td>
<td>98 in. (2489 mm)</td>
<td>108.25 in. (2749 mm)</td>
</tr>
<tr>
<td>C - Overall Height (without Roll Gard)</td>
<td>51 in. (1295 mm)</td>
<td>54 in. (1372 mm)</td>
<td>59.88 in. (1521 mm)</td>
</tr>
<tr>
<td>D - Overall Length w/Bucket</td>
<td>95.75 in. (2432 mm)</td>
<td>102 in. (2591 mm)</td>
<td>118.75 in. (3016 mm)</td>
</tr>
<tr>
<td>E - Dump Angle</td>
<td>38°</td>
<td>38°</td>
<td>42°</td>
</tr>
<tr>
<td>F - Dump Height</td>
<td>72.75 in. (1848 mm)</td>
<td>73 in. (1854 mm)</td>
<td>77.62 in. (1971 mm)</td>
</tr>
<tr>
<td>G - Reach @ Max. Height</td>
<td>13.5 in. (343 mm)</td>
<td>18 in. (457 mm)</td>
<td>19.5 in. (495 mm)</td>
</tr>
<tr>
<td>H - Specified Height</td>
<td>50 in. (1270 mm)</td>
<td>51.5 in. (1308 mm)</td>
<td>57 in. (1448 mm)</td>
</tr>
<tr>
<td>I - Reach @ &quot;H&quot;</td>
<td>17.75 in. (451 mm)</td>
<td>27 in. (686 mm)</td>
<td>22.25 in. (565 mm)</td>
</tr>
<tr>
<td>1. Reach - Bucket on Ground</td>
<td>38 in. (965 mm)</td>
<td>26 in. (600 mm)</td>
<td>52 in. (1321 mm)</td>
</tr>
<tr>
<td>J - Max. Rollback @ Ground</td>
<td>26°</td>
<td>28°</td>
<td>28°</td>
</tr>
<tr>
<td>K - Carry Position</td>
<td>10.25 in. (260 mm)</td>
<td>7 in. (178 mm)</td>
<td>8.5 in. (216 mm)</td>
</tr>
<tr>
<td>L - Max. Rollback @ Carry Position</td>
<td>26°</td>
<td>29°</td>
<td>31°</td>
</tr>
<tr>
<td>M - Max. Rollback Fully Raised</td>
<td>103°</td>
<td>86°</td>
<td>100°</td>
</tr>
<tr>
<td>N - Digging Depth</td>
<td>0.25 in. (6 mm) above ground</td>
<td>0.56 in. (14 mm) above ground</td>
<td>0 in.</td>
</tr>
<tr>
<td>O - Height to Seat</td>
<td>36 in. (914 mm)</td>
<td>33.5 in. (851 mm)</td>
<td>2.75 in. (1086 mm)</td>
</tr>
<tr>
<td>P - Wheelbase</td>
<td>29.19 in. (741 mm)</td>
<td>30.75 in. (781 mm)</td>
<td>35 in. (889 mm)</td>
</tr>
<tr>
<td>Q - Overall Height w/Roll Gard</td>
<td>74.5 in. (1892 mm)</td>
<td>74 in. (1880 mm)</td>
<td>82.75 in. (2102 mm)</td>
</tr>
<tr>
<td>R - Overall Length Less Bucket</td>
<td>73 in. (1854 mm)</td>
<td>80 in. (2032 mm)</td>
<td>90.25 in. (2292 mm)</td>
</tr>
<tr>
<td>S - Ground Clearance</td>
<td>5 in. (127 mm)</td>
<td>6.75 in. (171 mm)</td>
<td>7 in. (178 mm)</td>
</tr>
<tr>
<td>T - Maximum Grading Angle</td>
<td>100°</td>
<td>108°</td>
<td>94°</td>
</tr>
<tr>
<td>U - Angle Departure</td>
<td>19°</td>
<td>23°</td>
<td>22°</td>
</tr>
<tr>
<td>V - Clearance Circle Radius</td>
<td>45.75 in. (1162 mm)</td>
<td>47 in. (1194 mm)</td>
<td>51.25 in. (1306 mm)</td>
</tr>
<tr>
<td>W - Wheel Tread</td>
<td>29.5 in. (749 mm)</td>
<td>37 in. (940 mm)</td>
<td>48.87 in. (1211 mm)</td>
</tr>
<tr>
<td>X - Overall Width Less Bucket</td>
<td>35.5 in. (902 mm)</td>
<td>45.5 in. (1156 mm)</td>
<td>59.12 in. (1502 mm)</td>
</tr>
</tbody>
</table>
## Equipment for Base Machine

<table>
<thead>
<tr>
<th>Equipment</th>
<th>60</th>
<th>90</th>
<th>125</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kohler 17-hp air-cooled engine</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onan 23-hp air-cooled engine</td>
<td>--</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Continental 37-hp liquid-cooled engine (or)</td>
<td>--</td>
<td>--</td>
<td>X</td>
</tr>
<tr>
<td>Isuzu 40-hp liquid-cooled engine</td>
<td>--</td>
<td>--</td>
<td>X</td>
</tr>
<tr>
<td>Four-wheel drive</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hydrostatic drive</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>T-bar control</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two-lever control</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drive clutch lever</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two hydraulic oil filters</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Front hydraulic outlets</td>
<td>--</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Dry-type engine air cleaner</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Engine oil filter</td>
<td>--</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Engine heat shield</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Full-length belly pan</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Twelve-volt electrical system</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Roll-Gard ROPS and canopy, with</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>side screens with integral boom locks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjustable seat with seat belt</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-adjustable seat with seat belt</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Disk brakes</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>Parking brakes</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Quik-Tatch bar</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Toolbar</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four 5.70-12 flotation tires</td>
<td>X</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Four 8.50-15, 4 PR tires</td>
<td>--</td>
<td>X</td>
<td>--</td>
</tr>
<tr>
<td>Four 10-16.5, 6 PR flotation tires</td>
<td>--</td>
<td>--</td>
<td>X</td>
</tr>
<tr>
<td>Less bucket or fork</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

### Instrument Panel:
- Fuel gauge: X
- Oil pressure indicator: X
- Coolant temperature indicator: X
- Hourmeter: X
- Ammeter: X