

# FIELD & TRAIL MOWER



<b>Product</b>	
Manufacturer	John Deere
Factory	Mexico, Sabin Waldenberg, Germany

#### John Deere 45 (2014)

John Deere 45, 4-cyl -diesel

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<b>Capacity</b>	
Fuel	48 gal (181 L)
Hydraulic system	63 gal (237 L)

<b>Driveline</b>	
Driveline	4x2

<b>Hydraulics</b>	
Valve Type	ISO
Control	electrohydraulic, load sensing
Flow (at 2000rpm)	234 gal (891 L)
	647 gal (2458 L) (optional)

<b>Power Take-Off (PTO)</b>	
Type PTO	Independent
Max RPM	540/1080 (120)
Eng. RPM	540/1080
	900/1800

<b>Dimensions &amp; Weight</b>	
Wheelbase	51.8 inches (1316 mm)
Weight	1288 lbs (584 kg)
Track dia	6.00-16
Rear tire	400/80R14 (3WD)

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#### John Deere 45 (2014) Serial Numbers

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<b>John Deere 45 (2014) Power</b>	
Engine (gross)	115 hp (83.5 kW)
Engine (net)	110 hp (80.7 kW)
PTO (claimed)	85 hp (61.8 kW)

<b>Mechanical</b>	
Chassis	4x2 2WD 4x4 MFWD 4WD
Differential lock	Electro-hydraulic rear Anti-slip front (4WD)
Steering	hydrostatic power
Brakes	hydraulic wheel disc
Cab	Two-post foldable ROPS. Cab optional with air-conditioning. OverStar (optional) AutoTrac (optional)

<b>Hydraulics</b>	
Type	open center pressure compensated closed center load sensing pressure and flow compensated (optional)
Capacity	13.7 gal (51.8 L)
Pressure	2900 psi (200.0 bar)
Rear valves	1 to 2
Mid valves	2 or 3 (optional)
Pump flow	21.1 gpm (79.5 lpm)
	30 gpm (113.5 lpm) (optional)
SCV flow	21.1 gpm (79.5 lpm)

<b>Battery</b>	
Ground	negative
Charging system	alternator
Charging amper	80 150 (optional)
Charging volts	14

Purchase of a 100+ HP tractor with rear and side flail mower attachments. This tractor with mowing attachments will facilitate the cutting of tall grass as well as heavy brush areas located both in and along side of numerous Parks properties including six natural areas and a multitude of trails, roadways, parking lots and ditch lines.

100 -120 HP tractor full cab with side and rear flail mowers

Tractor approx. \$125000

Rear Mower \$25000

Side Mower \$30000

**Total \$180000**

**Justification and alternatives considered: (Attach additional sheets as needed and label as Attachment 3):**

Parks has over 20 miles of trails and over 100 acres of prairie and grassland that require mowing on a regular basis. Due to the rough nature of the terrain in these areas, the department must make use of its insufficient older mowers to perform cutting operations. Because this type of mowing takes place in remote high grass areas with uneven terrain and steep embankments, workers encounter many hazards during the cutting process as there are oftentimes obscured objects present in the cutting paths left there by people or by natural causes. A flail mower is needed to properly and safely mow these areas so that damage to equipment can be minimized and hazards from flying objects can be avoided. Additionally, in order to prevent invasive plants and trees from taking over prairies and certain rough grass areas, the department needs to cut these sites down at strategic times of the year. None of the Parks' current mower equipment can effectively cut these areas. Instead, Parks must work with the Hwy. Department and its schedule in order gain access to a flail mower. While this arrangement helps Parks to address a portion of its yearly cutting needs, the inability to have the equipment available at key times and for extended periods has proven to be a major impediment to the department's being able to effectively maintain its properties. Further, an assessment of the Hwy. Department's inventory of flail mowers would indicate that the equipment is at the end of its operational life and is prone to breakdown when used.

As an alternative to purchasing a tractor with flail mower attachments, Parks will be forced to continue to depend upon its aging mower equipment to perform cutting in the limited amount of areas accessible to these units. In addition, Parks will need to remain dependent upon use of the Hwy. Department's equipment and the limited periods of time that its mowers are available to maintain Parks properties. The continued reduction in the ability to address the Parks field and brush cutting tasks will adversely effect the department's efforts to both control invasive species and maintain adequate drainage in key areas.