

Construction Equipment Model Creep

Winter Operations Conference
2014 Gaylord, Michigan

1973 Deere 644 A



- 131 hp
- Tipping cap.
16,000 lb.
- BUCKET
2.75
- Weight
25,220 lb.
- Dump
Clearance
9'2"

Deere 644 Wheel Loader

Year	Model	Dump Clearance	BUCKET	FULL TURN TIPPING	NET HP	WEIGHT
1970	644 A	9'2"	2.75 cu. yard	16,000	131	25,200
1975	644 B	9'4"	3.0 cu. yard	19,000	145	28,200
1985	644 D	9'5"	3.5 cu. yard	21,800	155	30,000
1990	644 E	9'6"	3.25– 4.0	23,800	160	34,000
2000	644 H	9'6"	3.5– 4.5	26,900	180	39,000
2013	644K	9'6"	4.25	28,400	232	40,500

2013	624K	9'6"	3.5–4.25	26,408	186	34,134
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Daniel Novak AIS Construction

Equipment Corp. 11/3/2014

DEERE 644K versus DEERE 624K

Owning and Operating COST

Based on 10 years/8000 operating hours

▶ Purchase price difference	\$30,000
▶ Fuel economy difference (1,5GPH)	\$42,000
▶ Maintenance difference \$1.0/hour (fluids, warranty cost, tires)	\$8,000
TOTAL	\$80,000

The cost difference of owning and operating
ONE SIZE LARGER loader is on average
\$10/hour



MOTOR GRADER – Did you know?

- ▶ 1885 J.D. Adams – Little Wonder
 - Pull behind, fixed angle blade and one way angle wheel
- ▶ 1896 J.D. Adams – Road King
 - Four wheels, angle, 8' blade pull behind
- ▶ 1919 Russell Grader Manufacturing Co.
 - FIRST SELF PROPELLED GRADER on Allis–Chalmers tractor
- ▶ 1955 Galion Iron T-700 Grader
 - 40,000 lb. , 190 hp , power shift and torque conv.
- ▶ 1975 Dominion Road Machinery, 100-T model
 - 202,000 lb., 700 hp Cummins and 24' moldboard

DEERE and MOTOR GRADER

- ▶ What was the biggest DEERE contribution to Motor Grader INNOVATION in the 20th CENTURY?

COUNTY ROAD COMMISSION GRADERS

John Deere 770 B

- ▶ 1980's to early 90's
- ▶ 28' long, 8' wide
- ▶ MAX 155 hp
- ▶ 25.2 MPH
- ▶ 466 cu. In (7.6 liter) engine
- ▶ 32,000 lb. operating weight



Model Creep in NUMBERS

YEAR	MODEL	NET HP	Displace · In L.	Weight – typical	Weight to hp ratio
1970	670A	125	6.8	30,000	212
1980	670B	135	6.8	33,000	215
2000	670CH	140	6.8	36,000	219
2008	670D	189	6.8	38,000	172
2013	670G	220	9.0	42,000	160

What Do we care ABOUT ?

- ▶ OPERATOR ?

- What is the hp of the machine? – SIZE

- ▶ EQUIPMENT MANAGER?

- Model repair/uptime – dealer support, experience

- ▶ CRC, MDOT or Municipal Manager?

- Cost to your Municipality (BID PRICE)

- ▶ Commissioners

???



2008 DEERE 770 D

- ▶ NET 215 hp
- ▶ Typical machine weight 39,180 lb.
- ▶ Engine displacement 8.1 liters (494 cu.in.)



2013 DEERE 670 G

- ▶ NET 220 hp
- ▶ Typical machine weight 42,340 lb.
- ▶ Engine displacement 9.0 liters (548 cu.in.)

SIZE MATTERS

- ▶ Original Purchase Price
 - \$15,000 difference between 670 and 770 G
- ▶ Owning and Operating Cost
 - 1 gal/hour over 6000 operating hours = \$24,000
 - Cost of extended warranty and warranty related travel time
 - Service and parts availability – minimize downtime
- ▶ Proven Resale Value History
- ▶ References from other Counties operating same model

DEERE 672G Grader

No. 1

PURCHASED in 2009 – BID PRICE \$188,302

Second Deere 672G purchased in 2010

4,762 OPERATING HOURS with 4.5 gal./hour LIFETIME average

		Auction Prices	Equipment For Sale Prices
Highest price found:	Highest price found:	US \$197,500	US \$275,000
Lowest price found:	Lowest price found:	US \$122,500	US \$149,000
Average price:	Average price:	US \$171,667	US \$200,500
Average w/out High & Low:	Average w/out High & Low:	US \$195,000	US \$197,214



FIXING OUR ROAD – LAST RESORT





???FOOTBAL TRIVIA QUESTION ???

- ▶ FIRST FORWARD PASS (“projectile pass”)

- WHEN

or

- WHO (team or player)

FOOTBAL TRIVIA ANSWER

- ▶ FIRST FORWARD PASS (“projectile pass”) was used on Sept. 5th 1906 by Saint Louis University player Bradbury Robinson tossed the pigskin to teammate Jack Schneider.
- ▶ FIRST PRO GAME FORWARD PASS October 27nd 1906 George (Peggy) Parratt of Massillon threw a completion to Dan (Bullet) Riley

THANK YOU FOR YOUR ATTENTION and
PATRONAGE
to AIS and JOHN DEERE Equipment.

DEERE THE OLDEST US BRAND
STILL BUILD IN USA

LAST QUESTION: What YEAR did John Deere
opened his business in Grand Detour, Illinois ?