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Test 1063: John Deere 7020

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### NEBRASKA TRACTOR TEST 1063 - JOHN DEERE 7020 DIESEL

		10	WER	IAKE	J-O1	F PER	TOKI	MANC	E		
	(	Crank- shaft	Fuel Co Gal	nsumptio Lb	n	Hp-hr	Temp	erature D			Barometer
I	[p	speed	per	per		per	Cooling	Air wet	Ai di		inches of
		rpm	hr	hp-h	r	gal	medium	bulb	bu	ĺb	Mercury
		MAXI	MUM	POWER	AN	D FUE	L CONS	SUMPT	ION		
	Ra	ated En	gine Sp	eed-Tv	vo H	ours (F	TO Sp	eed-10	ll rp	m)	
146	.17	2200	10.236	0.48	2	14.28	184	58	7	5	28.780
				AND							8
127		2260	9.270	0.50	0	13.76	178	60	7		
	.00	2412	3.027				176	_ 57	7		
	.04	2340	6.256	0.65		10.56	180	58	7		
145		2200	10.221	0.482		14.27	180	60	7		
	.62	2382	4.720	0.968		7.12	178	58	7		
97		2309	7.800	0.548		12.54	182	59	7		00.740
4 v 78	.49	2317	6.882	0.60	3	11.41	179	59	7	5	28.743
			DRA	WBAR	R PI	ERFOR	RMAN	CE			
	Draw- bar	Speed miles	Crank- shaft	Slip of F	uel Co Gal	nsumptio Lb	on Hp-hr		Degre Air	es F Air	Baromete
Hр	pull	per	speed	drivers	per	per	per	ing	wet	dry	inches o
	lbs	hr	rpm	%	hr	hp-hr	gal	med	bulb	bulb	
VARY:	ING D	RAWBA	R POV	VER AN	VD F	UEL CO	ONSUM	PTION	WIT	H B	ALLAST
	M	(aximun	n Avail:	able Po	wer-	Two H		h <b>G</b> ear	(4 L	,	
127.72	8969	5.34	2196	3.98	9.960	0.536	12.82	180	49	60	28.600
	75%	of Pul	l at Ma	aximum	Pow	er <b>–Ten</b>	Hours-	–7th G	ear (4	Lo)	
105.32	6962	5.67	2309	2.92	8.921	0.582	11.81	179	45	55	28.822
	50%	of Pul	lat Ma	aximum	Pow	er Two	Hours-	-7th G	ear (4	Lo)	
70.98	4594	5.79	2334	2.00	7.466	0.723	9.51	180	40	46	28.945
5	0% of	Pull at	Reduc	ed Engi	ne Sr	eed-T	wo Hou	rs—10th	Gea	r (5	Hi)
72.30	4677	5.80	1628	1.77	5.601			179	51	65	28.920
			MAXIN	IUM P	OWE	R WIT	H BAL	LAST			
03.79	18726	2.08	2276	14.91		Gear (1		183	57	73	28.650
128.97	11794	4.10	2201	5.36	5th	Gear (3	Lo)	181	44	52	28.600
29.56	10214	4.76	2197	4.42	6th	Gear (3	Hi)	180	47	56	28.590
131.50	9234	5.34	2198	4.06	7th	Gear (4	Lo)	180	47	58	28.590
129.63	7007	0.00	2203			004, (1		100			
130.22	7837	6.20	4400	3.39		Gear (4		179	48	59	28.590
	7280	6.71	2198	3.39 3.02	8th		Hi) .			59 59	
		6.71	2198		8th 9th	Gear (4 Gear (5	Hi) . Lo)	179 181	48 48		28.590
		6.71	2198	3.02	8th 9th LL <b>V</b>	Gear (4 Gear (5	Hi) . Lo) UT BA	179 181 LLAST	48 48		28.590
97.55	7280 17629	6.71 <b>M</b> 2.08	2198 <b>AXIMU</b> 2270	3.02 JM PU 14.68 PULL A	8th 9th LL V 2nd	Gear (4 Gear (5 VITHO Gear (1 TRAVE	Hi) Lo) UT BA Hi)	179 181 <b>LLAST</b> 186	48 48 54	59 68	28.590 28.590 28.900
97.55 <sub>.</sub> <b>VA</b>	7280 17629 RYING	6.71 <b>M</b> 2.08	2198 AXIMU 2270 VBAR 1	3.02 JM PU 14.68 PULL A 7th	8th 9th LL V 2nd ND Gea	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo	Hi) Lo) UT BA Hi) L SPEI	179 181 <b>LLAST</b> 186 ED WIT	48 48 54 <b>TH B</b>	59 68 ALL	28.590 28.590 28.900 <b>AST</b> —
97.55. <b>VA</b> Pound	7280 17629 <b>RYING</b>	6.71 <b>M</b> 2.08	2198 AXIMU 2270 VBAR 1	3.02 JM PU 14.68 PULL A 7th 34	8th 9th LL V 2nd ND Gea	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo	Hi) LO) UT BA Hi) L SPEI )	179 181 <b>LLAST</b> 186 ED WIT	48 48 54 <b>FH B</b>	59 68 <b>ALL</b>	28.590 28.590 28.900 <b>AST</b> —
97.55. VA Pound Horsep	7280 17629 RYING s Pull	6.71 M 2.08 DRAV	2198 AXIMU 2270 VBAR 1 92 131.	3.02 JM PUI 14.68 PULL A 7th 34 50 13	8th 9th LL V 2nd ND Gea 9939 26.35	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 1066 120.	Hi) Lo) UT BA Hi) L SPEI ) 63 1 75 16	179 181 <b>LLAST</b> 186 ED WIT 0928	48 48 54 <b>TH B</b> 1045 89.1	59 68 <b>ALL</b> 58	28.590 28.590 28.900 <b>AST</b> — 9374 67.55
97.55. VA: Pound: Horsep Cranks	7280  17629  RYING  s Pull  bower  haft Sp	6.71  M 2.08  DRAV	2198 AXIMU 2270 VBAR 1 92 131. m 2	3.02 JM PUI 14.68 PULL A 7th 34 50 19	8th 9th LL V 2nd ND Gea 9939 26.35	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 1060 120.	Hi)	179 181 <b>LLAST</b> 186 <b>ED WI</b> 0928 08.15 1542	48 48 54 ΓΗ Β 1045 89.1	59 68 ALL 58 11 326	28.590 28.590 28.900 <b>AST</b> — 9374 67.55
97.55.  VA: Pound: Horsep Cranks Miles	7280 17629 RYING s Pull bower haft Sp	6.71  M 2.08  DRAV	2198 AXIMU 2270 VBAR 1 92 131. m 2 5.	3.02 JM PU 14.68 PULL A 7th 34 50 1: 198 34	8th 9th LL V 2nd ND Gea 9939 26.35 1971 4.77	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 120.1 14.1	Hi) Lo)  Hi)  Hi)  L SPEI  )  63 1  75 16  762	179 181 <b>LLAST</b> 186 <b>ED WI</b> 0928 08.15 1542 3.71	48 48 54 TH B 1045 89.1	59 68 ALL 58 11 326 20	28.590 28.590 28.900 <b>AST</b> — 9374 67.55 1116 2.70
97.55.  VA:  Pound: Horsep Cranks Miles	7280  17629  RYING  s Pull  bower  haft Sp	6.71  M 2.08  DRAV	2198 AXIMU 2270 VBAR I  92 131. m 2 5. 4.	3.02 JM PU 14.68 PULL A 7th 34 50 15 198 34 06	8th 9th LL V 2nd ND Gea 9939 26.35 1971 4.77 4.28	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 1066 120. 1' 4.	Hi)	179 181 <b>LLAST</b> 186 <b>ED WI</b> 0928 08.15 1542	48 48 54 ΓΗ Β 1045 89.1	59 68 ALL 58 11 326 20	28.590 28.590 28.900 <b>AST</b> — 9374 67.55 1116 2.70 4.13
97.55.  VA: Pound: Horsep Cranks Miles	7280 17629 RYING S Pull bower haft Sp Per Ho	6.71  M 2.08  DRAV	2198 AXIMU 2270 VBAR 1 92 131. m 2 5. 4. IRACT	3.02 14.68 PULL A 7th 34 50 1: 198 34 06 OR SO	8th 9th LL V 2nd ND Gea 9939 26.35 1971 4.77 4.28	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 1066 120. 1' 4.	Hi)	179 181 <b>LLAST</b> 186 <b>ED WI</b> 0928 08.15 1542 3.71	48 48 54 TH B 1045 89.1	59 68 ALL 58 11 326 20 71 <b>dB</b> (	28.590 28.590 28.900 <b>AST</b> — 9374 67.55 1116 2.70 4.13
97.55.  VA: Pound: Horsep Cranks Miles Slip of	7280  17629  RYING  8 Pull  bower  haft Sp  Per Ho  Drive	6.71  M 2.08  DRAV	2198  AXIMU 2270  VBAR 1  92  131. m 2  5. 4.  TRACT  Power	3.02 JM PU 14.68 PULL A 7th 34 50 1: 198 34 06 COR SO 2 Hour	8th 9th LL V 2nd ND Gea 9939 26.35 1971 4.77 4.28 UND	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 1066 120. 1' 4.	Hi)	179 181 <b>LLAST</b> 186 <b>ED WI</b> 0928 08.15 1542 3.71	48 48 54 TH B 1045 89.1	59 68 ALL 58 11 326 20 71 <b>dB</b> (	28.590 28.590 28.900 <b>AST</b> — 9374 67.55 1116 2.70 4.13
97.55.  VA:  Pound: Horsep Cranks Miles Slip of Maxim 75% o	7280  17629  RYING  S Pull  Power  haft Sp  Per Ho  Drive  um Av  f Pull	6.71  M 2.08  DRAV	2198  AXIMU 2270  VBAR 1  92  131. m 2  5. 4.  IRACT  Power  Power	3.02 JM PU 14.68 PULL A 7th 50 1: 198 34 06 OR SO 2 Hour 10 Hou	9th  LL V 2nd  ND Gea 9939 26.35 1971 4.77 4.28 UND s	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 1066 120. 1' 4.	Hi)	179 181 <b>LLAST</b> 186 <b>ED WI</b> 0928 08.15 1542 3.71	48 48 54 TH B 1045 89.1	59 68 ALL 58 11 326 20 71 dB( 9 9	28.590 28.590 28.900 <b>AST</b> — 9374 67.55 1116 2.70 4.13 <b>A)</b>
97.55.  VA: Pound: Horsep Cranks Miles Slip of	7280  17629  RYING  S Pull  Fower  Per Ho  Drive  Lum Av  f Pull  f Pull	6.71  M 2.08  DRAV	2198  AXIMU 2270  VBAR 1  92  131. m 2  5. 4.  TRACT  Power  Power  Power	3.02  JM PU  14.68  PULL A  7th  34  50  1:98  34  06  OR SO  2 Hour  10 Hou  2 Hou  2 Hou	9th  LL V  2nd  ND  Gea  9939  26.35  1971  4.77  4.28  UND  cs	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 1066 120. 1' 4 LEVE	Hi)	179 181 <b>LLAST</b> 186 <b>ED WI</b> 0928 08.15 1542 3.71	48 48 54 TH B 1045 89.1	59 68 ALL 68 11 326 71 dB( 9 9	28.590 28.590 28.900 <b>AST</b> — 9374 67.55 1116 2.70 4.13 <b>A)</b> 7.0 6.0
97.55.  VA:  Pound: Horsep Cranks Miles Slip of Maxim 75% of 50% o	7280  17629  RYING  S Pull  Power haft Sp Per Ho  Drive  um Av  f Pull  f Pull	6.71  M 2.08  DRAV  Deed rp. our rs %  vailable at Max. at Max at Redu	2198  AXIMU 2270  VBAR 1  92 131. m 2 5. 4.  TRACT Power Power Power Power Power Ced En	3.02 JM PU 14.68 PULL A 7th 50 1: 198 34 06 OR SO 2 Hour 10 Hou	9th  LL V  2nd  ND  Gea  9939  26.35  1971  4.77  4.28  UND  cs	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 1066 120. 1' 4 LEVE	Hi)	179 181 <b>LLAST</b> 186 <b>ED WI</b> 0928 08.15 1542 3.71	48 48 54 TH B 1045 89.1	59 68 68 61 68 61 620 71 68 9 9 9	28.590 28.590 28.900 <b>AST</b> — 9374 67.55 1116 2.70 4.13 <b>A</b> ) 7.0 6.0
97.55.  VA: Pound: HorsepCranks Miles Slip of Maxim 75% of 60% of 80% of	17629 RYING s Pull bower haft Sp Per Ho Drive tum Av f Pull f Pull der 16t	6.71  M 2.08  DRAV  Deed rp. our rs %  vailable at Max. at Max at Redd h gear	2198  AXIMU 2270  VBAR 1  92  1311  m 2  5.  4.  TRACT  Power  Power  Power  Red En (8 Hi)	3.02  JM PU  14.68  PULL A  7th  34  50  198  34  60  COR SO  2 Hour  10 Hou  2 Hour  gine Sp	9th  LL V  2nd  ND  Gea  9939  26.35  1971  4.77  4.28  UND  cs	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 1066 120.' 1' 4 LEVE	Hi)	179 181 LLAST 186 ED WI 0928 08.15 1542 3.71 4.86	48 48 54 TH B 1045 89.1 13 3.2 4.7	59  68  ALL  68  11  326  20  71  dB(  9  9  9  9  8	28.590 28.590 28.900 <b>AST</b> — 9374 67.55 1116 2.70 4.13 <b>A)</b> 7.0 6.0 6.5 2.5
97.55.  VA: Pound: HorsepCranks Miles Slip of Maxim 75% o 60% o Bystan	7280  17629  RYING  S Pull  Per Ho  Drive  Lum Av  f Pull  f Pull  der 16t  6, BAL	6.71  M 2.08  DRAV  Deed rp.  our  rs %  vailable at Max. at Max at Redd h gear  LAST a	2198  AXIMU 2270  VBAR 1  92 1311  m 2 5. 4.  TRACT  Power Power Power Red En (8 Hi)	3.02  JM PU  14.68  PULL A  7th  34  550 1: 198  34  606  COR SO  2 Hour  10 Hou  2 Hou  gine Sp	8th 9th 1LL V 2nd ND Gea 9939 26.35 1971 4.77 4.28 UND s IIIs rrs eeed 2	Gear (4 Gear (5 WITHO Gear (1 TRAVE r (4 Lo 1060 120.' 1' 4.: LEVE	Hi) LO Hi) LY SPEI  63 1  775 10  7762  225  886  L	179 181 LLAST 186 ED WI 0928 08.15 1542 3.71 4.86	48 48 54 TH B 1048 89.1 13 3.2 4.7	59  68  ALL  68  11  326  20  71  dB(  99  99  98  8thout	28.590 28.590 28.900 <b>AST</b> — 9374 67.55 1116 2.70 4.13 <b>A)</b> 7.0 6.0 6.5 2.5 7.0
97.55.  VA: Pound: HorsepCranks Miles Slip of Maxim 75% of 50% of Bystan TIRES	17629 RYING s Pull bower haft Sp Per Ho Drive tum Av f Pull f Pull der 16t	6.71  M 2.08  DRAV  Deed rp. our rs %  vailable at Max. at Max at Reddh gear— LAST a	2198  AXIMU 2270  VBAR 1  92  131.  m 2  5.  4.  IRACT Power Power Power Roed En  (8 Hi) and WE No, siz Liquid	3.02  JM PU  14.68  PULL A 7th  34  50 1:  198  34  06  OR SO 2 Hour  10 Hou 2 Hou gine Sp  IGHT  tee, ply &	8th 9th 1LL V 2nd ND Gea 9939 26.35 1971 4.77 4.28 UND s IIIs rrs eeed 2	Gear (4 Gear (5 VITHO Gear (1 TRAVE 1066 120. 11 4.: 4.: LEVE  Hours Witt	Hi) LO UT BA Hi) 6 LO) Hi) 63 1 75 10 762 225 86 L L h Balla 18.4-84;	179 181 LLAST 186 ED WI 0928 08.15 1542 3.71 4.86	48 48 54 TH B 1048 89.1 13 3.2 4.7	59 68 ALL 58 11 326 20 71 dB( 9 9 9 9 8 8thout 18.4-	28.590 28.590 28.900 <b>AST</b> — 9374 67.55 1116 2.70 4.13 <b>A)</b> 7.0 6.0 6.5 2.5 7.0
97.55.  VA: Pound: HorsepCranks Miles Slip of Maxim 75% of 50% of Bystan TIRES	7280  17629  RYING  S Pull  Cower haft Sp Per Ho  Drive  Lum Av  f Pull  f Pull  der 16t  G, BAL  tires	6.71  M 2.08  DRAV  Deed rp. our rs %  vailable at Max. at Max at Reddh gear— LAST a	2198  AXIMU 2270  VBAR 1  92  131.  m 2 5. 4.  TRACT Power Power Power Power Red En  (8 Hi) and WE No, size	3.02  JM PU  14.68  PULL A 7th  34  50 1:  198  34  06  OR SO 2 Hour  10 Hou 2 Hou gine Sp  IGHT  tee, ply &	8th 9th 1LL V 2nd ND Gea 9939 26.35 1971 4.77 4.28 UND s IIIs rrs eeed 2	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 1066 120. 11 4.: 4.: LEVE  Hours Wite Four None 23	Hi) LO UT BA Hi) CL SPEI ) 63 1 75 10 762 25 86 L  th Balla 18.4-34; lb each	179 181 LLAST 186 ED WI 0928 08.15 1542 3.71 4.86	48 48 54 1048 89.1 18 3.2 4.7	59  68  ALL  68  11  326  9  9  9  8  thould 18.4-	28.590 28.590 28.900 <b>AST</b> — 9374 67.55 1116 2.70 4.13 <b>A)</b> 7.0 6.0 6.5 2.5 7.0
97.55.  VA:  Pound: Horsep Cranks Miles Slip of  Maxim 75% of 50% of 50% of Bystan FIRES Rean Ba	7280  17629  RYING  S Pull  Dower  haft Sp Per Ho  Drive  Um Av  f Pull  f Pull  der 16t  G, BAL  tires  titres	6.71  M 2.08  DRAV  Deed rpour rs %  vailable at Max. at Max at Redu h gear— LAST a	2198  AXIMU 2270  92  131. m 2 5. 4.  IRACT Power Power Locad En-(8 Hi) md WE No, siz Cast i No. siz	3.02  JM PUI  14.68  PULL A 7th  34  50 19  198  34  06  OR SO 2 Hour 10 Hour gine Sp  IGHT ee, ply & 1  ron ee, ply &	8th 9th LL V 2nd ND Gea 9939 26.35 1971 4.77 4.28 UND s ITS eeed 2	Gear (4 Gear (5 VITHO Gear (1) TRAVE r (4 Lo 106 120. 11 4. 4. LEVE  Hours Wite Four None 23 Four	Hi) LO UT BA Hi) CL SPEI ) 63 1 75 10 762 25 86 L  th Balla 18.4-34; lb each 18.4-34;	179 181 LLAST 186 ED WI 0928 08.15 1542 3.71 4.86	48 48 54 TH B 1048 89.1 18 3.2.2 4.7 Wiff Four None Four	59  68  ALL  58  11  326  20  71  dB(  9  9  8  8  8  8  8  8  8  8  11  18.4-	28.590 28.590 28.900 AST— 9374 67.55 1116 2.70 4.13 A) 7.0 6.0 6.5 2.5 7.0 t Ballast 34; 8; 12
97.55.  VA:  Pound: Horsep Cranks Miles Slip of  Maxim 75% of 50% of 50% of Bystan Frires Rear Ba	7280  17629  RYING  S Pull  cower  thaft Sp  Per Ho  Drive  tum Av  f Pull  f Pull  der 16t  G, BAL  tires  tlast	6.71  M 2.08  DRAV  Deed rpour rs %  vailable at Max. at Max at Redu h gear— LAST a	2198  AXIMU 2270  VBAR 1  92  131. m 2  5. 4.  TRACT  Power Power Power Lied En-(8 Hi)  Ind WE  No, siz  Liquid  Cast i  No, siz  Liquid	3.02  JM PU  14.68  PULL A  7th  34  550 19  198  34  06  COR SO  2 Hour  10 Hou  2 Hour  gine Sp  IGHT  ze, ply & leader  te, ply & leader  10 to the control of the contr	8th 9th LL V 2nd ND Gea 9939 26.35 1971 4.77 4.28 UND s ITS eeed 2	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 1066 120.  1' 4.  LEVE  Hours  Wit Four None 23 Four 246	Hi) LO UT BA Hi) CL SPEI ) 63 1 75 10 762 25 86 L  th Balla 18.4-34; lb each	179 181 LLAST 186 ED WI 0928 08.15 1542 3.71 4.86	48 48 54 1045 89.1 13 3.2 4.7 Wir Four None Four None	59 68 ALL 68 68 11 926 71 dB( 99 99 88 thout18.4-	28.590 28.590 28.900 AST— 9374 67.55 1116 2.70 4.13 A) 7.0 6.0 6.5 2.5 7.0 t Ballast 34; 8; 12
97.55.  VA:  Pound: Horsep Cranks Miles Slip of  Maxim 75% o 50% o Bystan FIRES Real Ba From	7280  17629  RYING  S Pull  Power  haft Sp  Per Ho  Drive  Mum Av  f Pull  f Pull  der 16t  S, BAL  tires  illast  at tires	6.71  M 2.08  DRAV  Deced rp.  our  rs %  vailable at Max. at Max. at Redu h gear— LAST a	2198  AXIMU 2270  VBAR 1  92  131. m 2  5. 4.  TRACT  Power  Power  Power  Liquid Cast i  No. siz  Liquid Cast i	3.02  JM PU  14.68  PULL A  7th  34  550 19  198  34  06  COR SO  2 Hour  10 Hou  2 Hour  gine Sp  IGHT  ze, ply & leader  te, ply & leader  10 to the control of the contr	8th 9th LL V 2nd ND Gea 9939 26.35 1971 4.77 4.28 UND s ITS eeed 2	Gear (4 Gear (5 VITHO Gear (1 TRAVE (4 Lo 1060 120.' 4.: 4.: LEVE) Hours Wite Four None 23 Four 246 None	Hi) Lo Lo Hi) Hi) CL SPEI ) 63	179 181 LLAST 186 ED WI 0928 08.15 1542 3.71 4.86	48 48 54 1042 89.11 3.2 4.7 Wir Four None None	59  68  ALL  68  11  326  71  dB(  9  9  9  8  thout 18.4	28.590 28.590 28.900 AST— 9374 67.55 1116 2.70 4.13 A) 7.0 6.0 6.5 2.5 7.0 t Ballast 34; 8; 12
97.55.  VA:  Pound: Horsep Cranks Miles Slip of  Maxim 75% o 50% o Bystan TIRES Reai Ba From Ba Heig	7280  17629  RYING  S Pull  Power  haft Sp  Per Ho  Drive  Mum Av  f Pull  f Pull  der 16t  S, BAL  tires  illast  at tires  illast	6.71  M 2.08  DRAV  Deed rp.  Dur  rs %  vailable at Max. at Max at Redu h gear  LAST a	2198  AXIMU 2270  VBAR 1  92  1311. m 2  5.  4.  TRACT  Power Power Power Liquid Cast i  No. siz  Liquid Cast i	3.02  JM PU  14.68  PULL A  7th  34  550 19  198  34  06  COR SO  2 Hour  10 Hou  2 Hour  gine Sp  IGHT  ron  te, ply & I  ron  ron	8th 9th 1LL V 2nd ND Gea 9939 26.35 1971 4.28 UND s urs eed 2	Gear (4 Gear (5 VITHO Gear (1 TRAVE r (4 Lo 1066 120.' 1' 4.: 4.: LEVE  Hours  Wit Four None 23 Four 246 None 14	Hi) Lo Lo Hi) Hi) CL SPEI ) 63	179 181 LLAST 186 ED WI 0928 08.15 1542 3.71 4.86	48 48 54 1042 89.13 3.2 4.7 Wir Four None None None	59 68 ALL 68 68 61 67 68 68 68 67 69 99 98 8 68 68 68 68 68 68 68 68 68 68 68 68	28.590 28.590 28.900 AST— 9374 67.55 1116 2.70 4.13 A) 7.0 6.0 6.5 2.5 7.0 t Ballast 34; 8; 12
97.55.  VA:  Pound: Horsep Cranks Miles Slip of  Maxim 75% o 50% o Bystan TIRES Reai Ba From Ba Heig	7280  17629  RYING  S Pull  Power  haft Sp  Per Ho  Drive  Mum Av  f Pull  f Pull  der 16t  S, BAL  tires  illast  at tires  illast	6.71  M 2.08  DRAV  Deed rp.  Dur  rs %  vailable at Max. at Max at Redu h gear  LAST a	2198  AXIMU 2270  VBAR 1  92  1311. m 2  5.  4.  TRACT  Power Power Power Liquid Cast i  No. siz  Liquid Cast i	3.02  JM PU  14.68  PULL A  7th  34  550 19  198  34  06  COR SO  2 Hour  10 Hou  2 Hour  gine Sp  IGHT  ze, ply & leader  te, ply & leader  10 to the control of the contr	8th 9th LL V 2nd ND Gea 9939 26.35 1971 4.77 4.28 UND s rrs rs eed 2	Gear (4 Gear (5 VITHO Gear (1 TRAVE (4 Lo 1060 120.' 4.: 4.: LEVE) Hours Wite Four None 23 Four 246 None	Hi) Lo) UT BA Hi) 6 Lo) UT BA Hi) 63 1 75 10 762 225 86 L L h Balla 18.4-34; 1b each 18.4-34; 1b each inches lb	179 181 LLAST 186 ED WI 0928 08.15 1542 3.71 4.86	48 48 54 1042 89.11 3.2 4.7 Wir Four None None	59 68 ALL 68 11 326 20 71 dB( 9 9 9 8 thout 18.4- inch lb	28.590 28.590 28.900 AST— 9374 67.55 1116 2.70 4.13 A) 7.0 6.0 6.5 2.5 7.0 t Ballast 34; 8; 12

Department of Agricultural Engineering

Dates of Test: April 20 to May 4, 1971

Manufacturer: John Deere Waterloo Tractor Works, Waterloo, Iowa

FUEL, OIL and TIME Fuel No 2 Diesel Cetane No 53.5 (rating taken from oil company's typical inspection data) Specific gravity converted to 60°/60° 0.8261 Weight per gallon 6.878 lb Oil SAE 30 API service classification MS, DG, DM, DS to motor 4.381 gal Drained from motor 3.925 gal Transmission and final drive lubricant SAE John Deere Special 303 oil Total time engine was operated 471/2 hours.

ENGINE Make John Deere Diesel Type 6 cylinder vertical with turbo-charger and intercooler Serial No 6404AR-01-297215R Crankshaft Mounted lengthwise Rated rpm 2200 Bore and stroke 4.25" x 4.75" Compression ratio 15.7 to 1 Displacement 404 cu in Cranking system 12 volt electric (two 6 volt batteries) Lubrication pressure Air cleaner precleaner and two dry type in series with replaceable treated paper elements Oil filter full flow with replaceable paper cartridge Oil Cooler engine coolant heat exchanger for crankcase oil and radiator for transmission and hydraulic system Fuel filter sediment bowl with screen and replaceable paper primary and secondary filter elements Muffler was used Cooling medium temperature control thermostat.

CHASSIS Type four-wheel drive Serial No T773R001431R Tread width rear 72" to 89" front 72" to 89" Wheel base 120" Center of gravity (without operator or ballast, with minimum tread, with fuel tank filled and tractor serviced for operation) Horizontal distance forward from center-line of rear wheels 62.7" Vertical distance above roadway 52.0" Horizontal distance from center of rear wheel tread 0" to the right/left Hydraulic control system direct engine drive Transmission selective gear fixed ratio with partial range syncro-mesh Advertised speeds mph first 1.99 second 2.29 third 3.18 fourth 3.66 fifth 4.20 sixth 4.83 seventh 5.40 eighth 6.21 ninth 6.72 tenth 7.73 eleventh 8.80 twelfth 10.13 thirteenth 11.40 fourteenth 13.11 fifteenth 18.59 sixteenth 21.40 reverse 4.09, 5.70, 6.54 and 7.53 Clutch single plate dry disc operated by foot pedal Brakes wet disc hydraulically power actuated by a foot pedal Steering hydrostatic power Turning radius (on concrete surface without brake) right 206" left 206" Turning space diameter (on concrete surface without brake) right 485" Power take-off 1011 rpm at 2200 engine rpm.

**REPAIRS and ADJUSTMENTS:** No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with SAE and ASAE test code or official Nebraska test procedure. First gear was not run as it was necessary to limit the pull in record gear to avoid excessive wheel slippage. Third, fourth, eleventh, twelfth, thirteenth, fourteenth, fifteenth, and sixteenth gears were not run as test procedure requires only six gears.

We, the undersigned, certify that this is a true and correct report of official Tractor Test 1063.

#### F. L. LARSEN

Engineer-in-Charge

G. W. STEINBRUEGGE, Chairman W. E. SPLINTER D. E. LANE Board of Tractor Test Engineers

The University of Nebraska Agricultural Experiment Station E. F. Frolik, Dean; H. W. Ottoson, Director; Lincoln, Nebraska

## EXPLANATION OF TEST REPORT

#### GENERAL CONDITIONS

Each tractor is a production model equipped for common usage. Power consuming accessories can be disconnected only when it is convenient for the operator to do so in practice. Additional weight can be added as ballast if the manufacturer regularly supplies it for sale. The static tire loads and the inflation pressures must conform to recommendations in the Tire Standards published by the Society of Automotive Engineers.

#### PREPARATION FOR PERFORMANCE RUNS

The engine crankcase is drained and refilled with a measured amount of new oil conforming to specifications in the operators manual. The fuel used and the maintenance operations must also conform to the published information delivered with the tractor. The tractor is then limbered-up for 12 hours on drawbar work in accordance with the manufacturer's published recommendations. The manufacturer's representative is present to make appropriate decisions regarding mechanical adjustments

The tractor is equipped with approximately the amount of added ballast that is used during maximum drawbar tests. Prior to the maximum power run the tire tread-bar height must be at least 65% of new tread height.

#### POWER TAKE-OFF PERFORMANCE

Maximum Power and Fuel Consumption. The manufacturer's representative makes carburetor, fuel pump, ignition and governor control settings which remain unchanged throughout all subsequent runs. The governor and the manually operated governor control lever is set to provide the high-idle speed specified by the manufacturer for maximum power. Maximum power is measured by connecting the power take-off to a dynamometer. The dynamometer load is then gradually increased until the engine is operating at the rated speed specified by the manufacturer for maximum power. The corresponding fuel consumption is measured.

Varying Power and Fuel Consumption. Six different horsepower levels are used to show corresponding fuel consumption rates and how the governor causes the engine to react to the following changes in dynamometer load: 85% of the dynamometer torque at maximum power; minimum dynamometer torque, ½ of the 85% torque; maximum power, ¼ and ¾ of the 85% torque. Since a tractor is generally subjected to varying loads the average of the results in this test serve well for predicting the fuel consumption of a tractor in general usage.

#### DRAWBAR PERFORMANCE

All engine adjustments are the same as those used in the belt or power take-off tests.

Varying Power and Fuel Consumption With Ballast. The varying power runs are made to show the effect of speed-control devices (engine, governor, automatic transmission, etc.) on horsepower, speed and fuel consumption. These runs are made around the entire test course which has two 180 degree turns with a minimum radius of 50 feet. The drawbar pull is set at 4 different runs as follows: (1) as near to the pull at maximum power as possible and still have the tractor maintain the travel speed at maximum horsepower on the straight sections of the test course; (2) 75% of the pull at maximum

power; (3) 50% of the pull at maximum power; and (4) maintaining the same load and travel speed as in (3) by shifting to a higher gear and reducing the engine rpm.

Maximum Power with Ballast. Maximum power is measured on straight level sections of the test course. Data are shown for not more than 6 different gears or travel speeds. Some gears or travel speeds may be omitted because of high slippage of the traction members or because the travel speed may exceed the safe limit for the test course. The manufacturer's representative has the option of selecting one gear or speed over eight miles per hour. The maximum safe speed for the Nebraska Test Course has been set at 15 miles per hour. The slippage limits have been set at 15% and 7% for pneumatic tires and steel tracks or lugs, respectively. Higher slippage gives widely varying results.

Maximum Pull without Ballast. All added ballast is removed from the tractor. The drawbar pull is determined at slip limits of 15% for pneumatic tires or 7% for steel tracks or lugs. The tractor is operated at the fastest possible travel speed.

Varying Drawbar Pull and Travel Speed with Ballast. Travel speeds corresponding to drawbar pulls beyond the maximum power range are obtained to show the "lugging ability" of the tractor. The run starts with the pull at maximum power; then additional drawbar pull is applied to cause decreasing speeds. The run is ended by one of three conditions: (1) maximum pull is obtained, (2) the maximum slippage limit is reached, or (3) some other operating limit is reached.

#### SOUND MEASUREMENT

Sound is recorded during each of the Varying Power and Fuel Consumption runs as the tractor travels on a straight section of the test course. The dB(A) sound level is obtained with the microphone located near the right ear of the operator. Bystander sound readings are taken with the microphone placed 25 feet from the line of travel of the tractor.

An increase of 10 dB(A) will approximately double the loudness to the human ear.

For additional information about the Nebraska Tractor Tests write to the Department of Agricultural Engineering, University of Nebraska, Lincoln, Nebraska 68503.



JOHN DEERE 7020 DIESEL