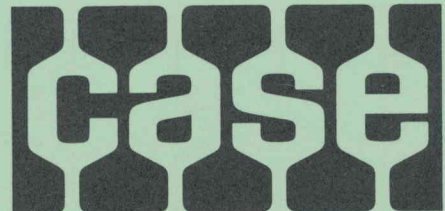


Competitive Information Wheel Loaders

CONFIDENTIAL

August, 1977

UD 78177



Yale



That's Leadership!

W-14 AND COMPETITION

WHEEL LOADERS	W-14	CAT 910+	FIAT ALLIS 345B	HOUGH 510	JOHN DEERE 444	MF 33AWS*
Engine: Make/Model	Case A336BD	Cat 3204	AC 2800	IH D268	JD 329	Perkins A4-248
SAE Net HP @ Gov. RPM	83 @ 2200	65 @ 2400	80 @ 2500	74 @ 2500	85 @ 2400	73 @ 2300
Number of Cylinders	4	4	6	4	6	4
Cubic Inch Displacement	336	318	301	268	329	248
Electrical System (Standard)	24 Volt	12 Volt	12 Volt	24 Volt	12 Volt	12 Volt
Transmission	Planetary	Planetary	Ctr. Shaft	Ctr. Shaft	Planetary	Ctr. Shaft
Torque Converter	Twin Turbine	Sgl. Stage	Sgl. Stage	Sgl. Stage	Twin Turbine	Sgl. Stage
Speeds: Fwd & Rev	4 - 2	3 - 1	3 - 3	3 - 3	4 - 2	4 - 4
Axle Differential	Torque Prop.	Conv.	Torque Prop.	Conv.	Conv.	Conv.
Wheelbase	100"	92"	96"	96"	94-1/2"	83-1/2"
Breakout Force	14,022	10,000	12,160	11,035	17,735	14,300
Turn Radius (Over Bucket)	16'3"	---	16'1"	16'2"	16'0"	15'11"
Bucket Range	1-1/4 - 1-3/4	1 - 1-1/4	1-1/2 - 1-3/4	1-1/4 - 1-3/4	1-1/2	1 - 1-1/2
Tipping Load - Straight	10,556	10,000	10,744	10,275	12,835	8,500
35° Turn	9,601	9,400	9,584	---	---	Rigid Frame
40° Turn	9,321	---	9,245	8,735	11,145	Rigid Frame
Max. Hinge Pin Height	11'2"	10'2"	11'4"	11'2"	11'2"	11'4"
Reach @ Max. Hgt. - 45° Dump	2'8"	2'10"	3'3"	3'2"	2'11"	2'5"
Max. Dump Clear @ 45° Dump	8' 10-1/2"	8'1"	9'4"	8'11"	8'11"	9'2"
Reach @7' Hgt. - 45° Dump	4' 1-1/2"	---	4'10-1/2"	4'3"	---	4'1"
Approximate Operating Weight	14,665	14,300	16,095	14,490	18,560	15,300

UNITS ARE EQUIPPED WITH 1-1/2 YD.³ BUCKET, 15.5 x 25 TIRES, ROPS CAB

+1-1/4 yd.³ bucket

*1-3/8 yd.³ bucket and 13.00 x 24 tires

W14 COMPETITION (CON'T)

WHEEL LOADERS	MICH 35AWS	OWATONNA 880	YALE 1500C	
Engine: Make/Model	Perkins 4.248	Perkins 4.248	GM 3-53N50	Perkins 4.248
SAE Net HP @ Gov. RPM	74 @ 2300	83 @ 2450**	85 @ 2600	75 @ 2500
Number of Cylinders	4	4	3	4
Cubic Inch Displacement	248	248	159	248
Electrical System (Standard)	12 Volt	12 Volt	12 Volt	12 Volt
Transmission	Ctr. Shaft	Ctr. Shaft	Planetary	Planetary
Torque Converter	Sgl. Stage	Sgl. Stage	Twin Turbine	Twin Turbine
Speeds: Fwd & Rev	4 - 4	3 - 3	4 - 2	4 - 2
Axle Differential	Torque Prop.	Torque Prop.	Torque Prop.	Torque Prop.
Wheelbase	83-1/2"	82"	101"	101"
Breakout Force	8,770	12,000	16,790	16,790
Turn Radius (Over Bucket)	15'5"	15'6"	17'11"	17'11"
Bucket Range	1 - 2	1-1/8 - 1-3/4	1-1/2 - 2-1/4	1-1/2 - 2-1/4
Tipping Load - Straight	8,375	9,000	11,620	11,620
35° Turn	Rigid Frame	---	10,575	10,575
40° Turn	Rigid Frame	8,000	---	---
Max. Hinge Pin Height	11'5"	11'1"	11'4"	11'4"
Reach @ Max. Hgt. - 45° Dump	2'3"	3'7"	2'9"	2'9"
Max. Dump Clear @ 45° Dump	8'5"	8'8"	9'0"	9'0"
Reach @ 7' Height - 45° Dump	3'6"	---	4'5"	4'5"
Approximate Operating Weight	12,940	15,000	15,942	15,942

UNITS ARE EQUIPPED WITH 1-1/2 YD.³ BUCKET, 15.5 x 25 TIRES, ROPS CAB

● 1-1/8 Yd.³ bucket, 16.9 x 24 tires with ballast
 **Max. gross horsepower

W-18 AND COMPETITION

WHEEL LOADERS	W-18	CAT 920*	FIAT ALLIS 545B	FORD A62	HOUGH 515*	JOHN DEERE 544B
Engine: Make/Model	Case A401BD	Cat 3304	AC 2900	Ford 256DT	IH D-360	JD 414
SAE Net HP @ Gov. RPM	103 @ 2200	80 @ 2200	102 @ 2400	92 @ 2100	95 @ 2500	105 @ 2200
Number of Cylinders	6	4	6	4	6	6
Cubic Inch Displacement	401	425	301	256	360	414
Electrical System (Standard)	24 Volt	24 Volt	12 Volt	12 Volt	24 Volt	12 Volt
Transmission	Planetary	Planetary	Planetary	Planetary	Ctr. Shaft	Planetary
Torque Converter	Twin Turbine	Sgl. Stage	Twin Turbine	Twin Turbine	Sgl. Stage	Twin Turbine
Speeds: Fwd & Rev	4 - 2	4 - 3	4 - 2	4 - 2	3 - 3	4 - 2
Axle Differential	Torque Prop.	Conv.	Torque Prop.	Conv.	Conv.	No Spin Frt. Conv. Rear
Wheelbase	108"	100"	110"	103"	100"	94-1/2"
Breakout Force	22,440	16,560	23,700	17,000	15,200	18,030
Turn Radius (Over Bucket)	17'8"	18'4"	16'6"	14'11"	16'9"	16'3"
Bucket Range	1-3/4 - 2-1/2	1-1/2 - 1-3/4	1-3/4 - 3-1/2	1-1/2 - 2	1-1/2 - 2	1-3/4 - 3
Tipping Load - Straight	13,077	12,200	13,787	11,322	13,185	13,715
35° Turn	11,981	11,180	12,431	9,987	---	---
40° Turn	11,658	---	12,036	9,783	11,205	11,895
45° Turn	---	---	11,601	9,505	---	---
Max. Hinge Pin Height	11'7-1/2"	11'7"	11'4"	11'11"	11'3-1/2"	11'3"
Reach @ Max. Hgt. - 45° Dump	2'11"	2'6"	2'7"	2'10"	3'4-1/2"	2'11"
Max. Dump Clear @ 45° Dump	9'2"	9'0"	9'3"	9'2"	8'10-1/2"	8'10"
Reach @ 7' Height - 45° Dump	4'4"	4'1"	4'8"	---	4'7-1/2"	---
Approximate Operating Weight	19,144	17,950	19,350	18,220	17,230	19,957

UNITS ARE EQUIPPED WITH 1-3/4 YD.³ BUCKET, 14.00 x 24 TIRES AND ROPS CAB

*Equipped with 15.5 x 25 tires

W18 COMPETITION (CON'T)

	WHEEL LOADERS	MICH. 45B*	YALE 1700C
Engine: Make/Model		Perkins 6-354	GM 4-53
SAE Net HP @ Gov. RPM		100 @ 2400	118 @ 2600
Number of Cylinders		6	4
Cubic Inch Displacement		354	212
Electrical System (Standard)		12 Volt	12 Volt
Transmission		Ctr. Shaft	Planetary
Torque Converter		Sgl. Stage	Twin Turbine
Speeds: Fwd & Rev		3 - 3	4 - 2
Axle Differential		Torque Prop.	Torque Prop.
Wheelbase		98-1/2"	106"
Breakout Force		13,850	20,300
Turn Radius (Over Bucket)		18'5"	19'3"
Bucket Range		1-1/2 - 2	1-3/4 - 2-1/2
Tipping Load - Straight		12,215	14,170
35° Turn		11,110	12,895
40° Turn		---	---
45° Turn		---	---
Max. Hinge Pin Height		11'7"	11'8"
Reach @ Max. Hgt. - 45° Dump		2'6"	2'10"
Max. Dump Clear @ 45° Dump		9'0"	9'4"
Reach @ 7' Height - 45° Dump		4'1"	4'7"
Approximate Operating Weight		18,180	19,020

UNITS ARE EQUIPPED WITH 1-3/4 YD.³ BUCKET, 14.00 x 24 TIRES AND ROPS CAB

*15.5 x 25 tires

W20 AND W20B AND COMPETITION

WHEEL LOADERS	W20/20B	CAT 930	FIAT ALLIS 605B*	FORD A64	HOUGH 60E	MF 44C
Engine: Make/Model	Case A401BD	Cat 3304	AC 2900	Ford 401D	IH D-360	MF D943B
SAE Net HP @ Gov. RPM	103 @ 2200	100 @ 2200	108 @ 2400	121.8 @ 2300	100 @ 2500	113 @ 2200
Number of Cylinders	6	4	6	6	6	4
Cubic Inch Displacement	401	425	301	401	360	440
Electrical System (Standard)	24 Volt	24 Volt	12 Volt	12 Volt	24 Volt	24 Volt
Transmission	Planetary	Planetary	Planetary	Planetary	Ctr. Shaft	Ctr. Shaft
Torque Converter	Twin Turbine	Sgl. Stage	Twin Turbine	Twin Turbine	Sgl. Stage	Sgl. Stage
Speeds: Fwd & Rev	4 - 2	4 - 3	4 - 2	4 - 2	3 - 3	6 - 6
Axle Differential	Torque Prop.	Conv.	Torque Prop.	Conv.	Pwr. Transfer	Torque Prop.
Wheelbase	108"	108"	110"	111"	100"	105"
Breakout Force	20,438	19,190	19,560	20,900	21,340	18,400
Turn Radius (Over Bucket)	17'9"	19'4"	16'8"	16'6"	18'8"	17'6"
Bucket Range	1-3/4 - 2-1/2	2 - 2-1/4	2-1/4 - 3-1/2	2 - 2-1/2	1-1/2 - 3-1/2	2 - 3-1/2
Tipping Load - Straight	15,725	14,060	17,255	14,391	15,025	14,750
35° Turn	14,388	12,950	15,310	12,619	13,510	---
40° Turn	13,995	---	14,748	12,215	---	13,100
45° Turn	---	---	14,126	11,931	---	---
Max. Hinge Pin Height	11'7-1/2"	11'11"	11'4"	12'5"	11'3"	11'11"
Reach @ Max. Hgt. - 45° Dump	3'1"	2'8"	3'0"	2'11"	3'10"	3'3"
Max. Dump Clear @ 45° Dump	9'0"	9'4"	8'11"	9'6"	8'8"	9'3"
Reach @ 7' Height - 45° Dump	4'5"	4'3"	4'11"	---	4'9"	---
Approximate Operating Weight	21,183	20,020	22,095	22,740	21,184	23,100

UNITS ARE EQUIPPED WITH 2YD.³ BUCKET, 17.5 x 25 TIRES AND ROPS CAB

*2-1/4 Yd.³ bucket

W20 AND W20B COMPETITION (CON'T)

WHEEL LOADERS	MICHIGAN 55B		YALE 1900C	
Engine: Make/Model	GM 4-53N	Cummins V378C	GM4-53	Perkins 6.354
SAE Net HP @ Gov. RPM	114 @ 2500	120 @ 2500	117 @ 2600	101 @ 2500
Number of Cylinders	4	6	4	6
Cubic Inch Displacement	212	378	212	354
Electrical System (Standard)	12 Volt	12 Volt	12 Volt	12 Volt
Transmission	Ctr. Shaft	Ctr. Shaft	Planetary	Planetary
Torque Converter	Sgl. Stage	Sgl. Stage	Twin Turbine	Twin Turbine
Speeds: Fwd & Rev	3 - 3	3 - 3	4 - 2	4 - 2
Axle Differential	Torque Prop.	Torque Prop.	Torque Prop.	Torque Prop.
Wheelbase	110"	110"	106"	106"
Breakout Force	18,250	18,250	22,650	22,650
Turn Radius (Over Bucket)	19'7"	19'7"	19'3"	19'3"
Bucket Range	2 - 3-1/2	2 - 3-1/2	2 - 3	2 - 3
Tipping Load - Straight	14,550	14,550	14,560	14,560
35° Turn	13,460	13,460	13,250	13,250
40° Turn	---	---	---	---
45° Turn	---	---	---	---
Max. Hinge Pin Height	11'9"	11'9"	11'8"	11'8"
Reach @ Max. Hgt. - 45° Dump	2'8"	2'8"	2'10"	2'10"
Max. Dump Clear @ 45° Dump	9'0"	9'0"	9'4"	9'4"
Reach @ 7' Hgt. - 45° Dump	4'5"	4'5"	4'7"	4'7"
Approximate Operating Weight	22,410	22,410	19,340	19,340

UNITS ARE EQUIPPED WITH 2 YD.³ BUCKET, 17.5 x 25 TIRES AND ROPS CAB

W24B AND COMPETITION

WHEEL LOADERS	W-24B	CAT 950	FIAT ALLIS 645B	FORD A66	HOUGH 530	JOHN DEERE 644B
Engine: Make/Model	Case A504BD	Cat 3304	AC 3500	Ford 401DT	IH DT-414	JD 531
SAE Net HP @ Gov. RPM	132 @ 2200	130 @ 2150	151 @ 2200	146 @ 2200	155 @ 2500	145 @ 2200
Number of Cylinders	6	4	6	6	6	6
Cubic Inch Displacement	504	425	426	401	414	531
Electrical System (Standard)	24 Volt	24 Volt	24 Volt	12 Volt	24 Volt	12 Volt
Transmission	Planetary	Planetary	Planetary	Planetary	Ctr. Shaft	Planetary
Torque Converter	Twin Turbine	Sgl. Stage	Twin Turbine	Twin Turbine	Sgl. Stage	Twin Turbine
Speeds: Fwd & Rev	4 - 2	4 - 4	4 - 2	4 - 2	3 - 3	4 - 2
Axle Differential	Torque Prop.	Conv.	Torque Prop.	Conv.	Pwr. Transfer	No Spin Front Conv. Rear
Wheelbase	121-1/2	115"	116"	111"	108"	104"
Breakout Force	21,200	22,760	30,790	23,000	31,288	24,120
Turn Radius (Over Bucket)	19'8"	20'4"	17'6"	16'8"	21'0"	17'11"
Bucket Range	2-1/2 - 3	2-1/4 - 3-1/2	2-1/2 - 3-1/2	2-1/2 - 3	2-1/2 - 3-1/2	2-1/2 - 4-1/2
Tipping Load - Straight	19,480	21,470	20,678	17,525	20,220	18,040
35° Turn	17,718	19,850	18,433	14,695	18,179	---
40° Turn	17,201	---	17,782	14,369	---	15,470
45° Turn	---	---	17,060	14,048	---	---
Max. Hinge Pin Height	12'6"	12'2"	11'9"	12'8"	12'2"	12'0"
Reach @ Max. Hgt. - 45° Dump	3'0"	2'5"	2'9"	2'11"	3'3"	2'11"
Max. Dump Clear @ 45° Dump	9'2"	9'3"	9'4"	9'6"	9'4"	9'4"
Reach @ 7' Height - 45° Dump	4'3"	4'1"	4'11"	---	4'10"	---
Approximate Operating Weight	23,525	28,500	26,715	25,860	27,565	25,105

UNITS ARE EQUIPPED WITH 2-1/2 YD.³ BUCKET, 20.5 x 25 TIRES AND ROPS CAB

W24B COMPETITION (CON'T)

WHEEL LOADERS	MF 55C**	MICHIGAN 75B	YALE 2000C	V555-	
Engine: Make/Model	MF D962B	GM 4-71N	Cummins V504C	Cummins C230	
SAE Net HP @ Gov. RPM	144 @ 2200	142 @ 2300	154 @ 3000	165 @ 2500	
Number of Cylinders	6	4	8	8	
Cubic Inch Displacement	580	284	504	284	555
Electrical System (Standard)	24 Volt	24 Volt	24 Volt	24 Volt	24 Volt
Transmission	Ctr. Shaft	Ctr. Shaft	Ctr. Shaft	Planetary	Planetary
Torque Converter	Sgl. Stage	Sgl. Stage	Sgl. Stage	Twin Turbine	Twin Turbine
Speeds: Fwd & Rev	6 - 6	4 - 4	4 - 4	4 - 2	4 - 2
Axle Differential	Torque Prop.	Torque Prop.	Torque Prop.	Torque Prop.	Torque Prop.
Wheelbase	113"	112"	112"	116"	116"
Breakout Force	20,700	18,900	18,900	25,800	25,800
Turn Radius (Over Bucket)	18'5"	20'6"	20'6"	19'0"	19'0"
Bucket Range	2-3/4 - 5	2-1/2 - 4	2-1/2 - 4	2-1/2 - 4	2-1/2 - 4
Tipping Load - Straight	21,300	19,340	19,340	21,255	21,255
35° Turn	---	17,500	17,500	---	---
40° Turn	18,650	---	---	18,490	18,490
45° Turn	---	---	---	---	---
Max. Hinge Pin Height	12'1"	12'0"	12'0"	12'8"	12'8"
Reach @ Max. Hgt. - 45° Dump	3'5"	2'10"	2'10"	3'2"	3'2"
Max. Dump Clear @ 45° Dump	9'5"	9'0"	9'0"	9'6"	9'6"
Reach @ 7' Height - 45° Dump	---	4'4"	4'4"	4'11"	4'11"
Approximate Operating Weight	28,100	27,250	27,250	28,260	28,260

UNITS ARE EQUIPPED WITH 2-1/2 YD.³ BUCKET, 20.5 x 25 TIRES AND ROPS CAB
 **2-3/4 Yd.³ bucket

W36 AND COMPETITION

WHEEL LOADERS	W-36	CAT 966C	FIAT ALLIS 745C	HOUGH 80B	MF 66C*	MICHIGAN 125B	YALE 2500**
Engine: Make/Model	Case A504 BDTI	Cat 3306	AC 11000	IH DT-466	MF D9638	GM 6V- Cummins 71N65 VT555C	GM 6V-71N
SAE Net HP @ Gov. RPM	185 @ 2200	170 @ 2200	202 @ 2200	184 @ 2500	180 @ 2200	212 @ 210 @ 2300 2850	182 @ 2300
Number of Cylinders	6	6	6	6	6	6 8	6
Cubic Inch Displacement	504	638	516	466	660	426 555	426
Electrical System (Standard)	24 Volt	24 Volt	24 Volt	24 Volt	24 Volt	24 Volt	24 Volt
Transmission	Ctr. Shaft	Planetary	Planetary	Ctr. Shaft	Ctr. Shaft	Ctr. Shaft	Ctr. Shaft
Torque Converter	Sgl. Stage	Sgl. Stage	Twin Turbine	Sgl. Stage	Sgl. Stage	Sgl. Stage	Sgl. Stage
Speeds: Fwd & Rev	4 - 4	4 - 4	4 - 2	3 - 3	4 - 4	4 - 4	4 - 4
Axle Differential	Torque Prop.	Conv.	Torque Prop.	Pwr. Transfer	Torque Prop.	Ltd. Slip	Torque Prop.
Wheelbase	127"	122"	130"	117"	118"	128"	126"
Breakout Force	29,500	28,150	39,690	31,014	27,100	30,100	38,000
Turn Radius (Over Bucket)	20'7"	22'2"	19'10"	21'8"	19'8"	22'11"	21'0"
Bucket Range	3-1/2 - 4	3 - 4-1/2	3-1/2 - 4-1/2	3-1/2 - 6	3-1/2 - 6-3/4	3-1/2 - 5	3-1/4 - 5
Tipping Load - Straight	25,400	28,170	26,300	24,635	27,700	26,280	23,190
35° Turn	22,550	25,900	23,560	22,171	---	23,900	---
40° Turn	21,700	---	22,780	---	24,400	---	20,175
45° Turn	---	---	21,890	---	---	---	---
Max. Hinge Pin Hgt. - 45° Dump	13'0"	13'1"	13'4"	13'7"	13'3"	13'4"	13'4"
Reach @ Max. Hgt. - 45° Dump	3'4"	2'7"	2'9"	3'6"	4'2"	3'1"	3'3"
Max. Dump Clear @ - 45° Dump	9'11"	9'10"	10'4"	10'5"	10'0"	10'0"	10'2"
Reach @ 7' Height - 45° Dump	5'1"	4'6"	5'8"	5'3"	---	4'10"	5'5"
Approximate Operating Weight	33,150	36,900	38,570	34,127	40,500	39,440	35,050

UNITS ARE EQUIPPED WITH 3-1/2 YD.³ BUCKET, 23.5 x 25 TIRES AND ROPS CAB

*4 Yd.³ bucket

**Equipped with 3-1/4 Yd.³ bucket

CASE WHEEL LOADER FEATURES

- ENGINES:** Built by Case, Serviced by Case
Replaceable Wet Sleeves
Multiple Heads
Direct Injection
- TRANSMISSION:** Planetary Powershift
Twin Turbine Torque Converter - W14 thru W24B
4 speeds forward - 2 speeds reverse accomplished
with one shift
Modulation for Directional Changes
Single Stage Torque Converter - W36
4 speeds forward - 4 speeds reverse
- AXLES:** Torque Proportioning Differentials Standard Front and Rear
Outboard Planetaries for Ease in Servicing
- STEERING:** Hydrostatic Power, Center Pivot Steering
Double Acting Cylinders with 80° Total Articulation
- HYDRAULICS:** Closed, Pressurized System - Providing Clean System and
Protection from Pump Cavitation.
- CAB:** Integral Frame with ROPS and FOPS Protection
Sound Suppression and Pressurization - Standard
Up Front Operator
Walk Thru Design
27 Square Feet of Safety Glass
Tinted Front Windshield - Standard
Dome Light - Standard
Ash Tray - Standard
Front Windshield Wiper - Standard
Solid State, Tamper Proof, Replaceable Gauges
Resetting Electrical Circuit Breakers
Rear View Mirror - Standard
Variety of Options; 24,000 BTU Air Conditioner
31,900 BTU Heater

CASE REPORT ORDER
FEARLESS

