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LOCTITE PRODUCT CHART

Product	Color	Similar Products	Gap (In Inches)	Strength (Steel/Steel)	Working Temperature Range-Fahrenheit	Fixture/Full Cure (Steel/Steel) Time	Primer	Description
#3	Dark Brown					24 hr	N/A	Form a Gasket (works with oil, fuel or grease) Pliable
80	Yellow					Fast	N/A	Weatherstrip Adhesive
123	Clear					N/A	N/A	Parts Cleaner Fluid
220	Blue	290	0.003	57/143 in lbs	-65 to +250	6 min/24 hrs	747	Wicking Threadlocker
221	Purple	222	0.005	75/44 in lbs	-65 to +300	2 min/24 hrs	747	Low Strength Threadlocker
222	Purple		0.005	53/30 in lbs	-65 to +300	20 min/24 hrs	764	Low Strength Threadlocker (Small Screws)
225	Brown	222	0.010	45/25 in lbs	-65 to +300	7 min/24 hrs	747	Low Strength Threadlocker
242	Blue		0.005	80/50 in lbs	-65 to +300	10 min/24 hrs	764	Medium Strength Threadlocker
262	Red	271	0.005	160/190 in lbs	-65 to +300	5 min/24 hrs	747	High Strength Threadlocker
270	Green	271	0.007	160/320 in lbs	-65 to +300	3 min/24 hrs	747	High Strength Threadlocker
271	Red	262	0.007	160/320 in lbs	-65 to +300	10 min/24 hrs	764	High Strength Threadlocker
272	Red	620	0.007	180/220 in lbs	-65 to +300	30 min/24 hrs	764	High Strength Threadlocker
275	Green	277	0.010	210/300 in lbs	-65 to +300	3 min/24 hrs	747	High Strength Threadlocker
277	Red		0.010	225/300 in lbs	-65 to +300	60 min/24 hrs	764	High Strength Threadlocker
290	Green		0.003	85/350 in lbs	-65 to +300	6 min/24 hrs	764	Wicking Threadlocker
*404	Clear	495	0.006	3200 psi	-65 to +180	30 sec/24 hrs	NA	Instant Adhesive
*406	Clear		0.004	3200 psi	-65 to +180	15 sec/24 hrs	N/A	Surface Insensitive Adhesive
*409	Clear	454	0.008	2500 psi	-65 to +180	50 sec/24 hrs	N/A	Gel Instant Adhesive
*414	Clear		0.006	2500 psi	-65 to +180	30 sec/24 hrs	N/A	Instant Adhesive
*415	Clear	454	0.010	2500 psi	-65 to +180	50 sec/24 hrs	N/A	Gap Filling Instant Adhesive (Metals)
*416	Clear	454	0.010	2500 psi	-65 to +180	50 sec/24 hrs	N/A	Gap Filling Instant Adhesive (Plastics)
*420	Clear		0.002	2500 psi	-65 to +180	15 sec/24 hrs	N/A	Wicking Instant Adhesive
*422	Clear	454	0.020	2800 psi	-65 to +180	60 sec/24 hrs	N/A	Gap Filling Instant Adhesive
*430	Clear		0.005	2500 psi	-65 to +180	20 sec/24 hrs	N/A	Metal Bonding Adhesive
*445	White/Black		0.250	2000 psi	-65 to +180	5 min/24 hrs	N/A	Fast Setting 2 Part Epoxy
*454	Clear		0.010	3200 psi	-65 to +180	15 sec/24 hrs	N/A	Surface Insensitive Gen Instant Adhesive
*495	Clear		0.004	2500 psi	-65 to +180	20 sec/24 hrs	N/A	General Purpose Instant Adhesive
*496	Clear		0.005	2500 psi	-65 to +180	20 sec/24 hrs	N/A	Metal Bonding Adhesive
504	Brt Orange	515	0.030	750 psi	-65 to +300	90 min/24 hrs	None	Rigid Gasket Eliminator
509	Light Blue		0.020	750 psi	-65 to +320	6 hr/72 hrs	764	Flange Sealant
510	Red		0.020	1000 psi	-65 to +400	30 min/24 hrs	764	High Temperature, Gasket Eliminator
515	Purple		0.010	750 psi	-65 to +300	1 hr/24 hrs	764	Gasket Eliminator 515

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* Products 404-496 (except for #445) are all instant adhesives (super glues) they differ mostly in viscosity

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LOCTITE PRODUCT CHART

Product	Color	Similar Products	Gap (In Inches)	Strength (Steel/Steel)	Working Temperature Range-Fahrenheit	Fixture/Full Cure (Steel/Steel) Time	Primer	Description
518	Red	515	0.030	500psi	-65 to +300	1 hr/24 hrs	764	Gasket Eliminator 518 for Aluminum
542	Brown	569	N/A	132/92 in lbs	-65 to +300	2 hr/24 hrs	747	Hydraulic Sealant
545	Purple		N/A	25/20 in lbs	-65 to +300	4 hr/24 hrs	747	Low Strength Pneumatic/Hydraulic Sealant
549	Orange	504	0.020	2500 psi	-65 to +300	2 hr/24 hrs	747	Instant Seal Plastic Gasket
554	Red	277	0.015	240/240 in lbs	-65 to +300	2 to 4 hrs/24 hrs	764	Refrigerant Sealant
567	White	592	N/A	500 psi	-65 to +400	4 hrs/24 hrs	764	Pipe Sealant for Stainless Steel
568	Orange	277	0.015	2500 psi	-65 to +300	12 hrs/24 hrs	764	Plastic Gasket
569	Brown	545	0.010	40/25 in lbs	-65 to +300	1 hr/24 hrs	764	Hydraulic Sealant
570	Brown	592	N/A	25/40 in lbs	-65 to +300	6 hrs/72 hrs	764	Steam Sealant
571	Brown	592	0.015	40/20 in lbs	-65 to +300	2 to 4 hrs/24 hrs	764	Pipe Sealant
572	White	578.575	N/A	80/27 in lbs	-65 to +300	24 hrs/72 hrs	None	Gasketing
592	White		0.020	500 psi	-65 to +400	4 hrs/72 hrs	736	Pipe Sealant with Teflon
593	Black		0.250	400 psi	-95 to +400	30 min/24 hrs	N/A	RTV Silicone
601	Green	609	0.005	3000 psi	-65 to +300	10 min/24 hrs	764	Current PIN #609
609	Green		0.005	3000 psi	-65 to +300	10 min/24 hrs	764	General Purpose Retaining Compound
620	Green	640	0.015	3000 psi	-65 to +450	30 min/24 hrs	747	High Temperature Retaining Compound
635	Green	680	0.010	4000 psi	-65 to +300	1 hr/24 hrs	747	High Strength Retaining Compound
638	Green	680	0.015	4100 psi	-65 to +300	10 min/24 hrs	747	High Strength Retaining Compound
640	Green	620	0.007	3000 psi	-65 to +400	1 hr/24 hrs	747	High Temperature Retaining Compound
660	Silver		0.020	3000 psi	-65 to +300	20 min/24 hrs	764	Quick Metal
675	Green	609	0.005	3000 psi	-65 to +300	20 min/24 hrs	747	General Purpose Retaining Compound
680	Green	635	0.015	4000 psi	-65 to +300	10 min/24 hrs	747	High Strength Retaining Compound
706	Clear	755	N/A	N/A	N/A	N/A	N/A	Cleaning Solvent
707	Amber		N/A	N/A	N/A	N/A	N/A	Activator for Structural Adhesives
736	Amber		N/A	N/A	N/A	N/A	N/A	Primer NF
738	Amber		N/A	N/A	N/A	N/A	N/A	Depend Activator
747	Yellow	N/A	N/A	N/A	N/A	N/A	N/A	Primer T
751	Clear		N/A	N/A	N/A	N/A	N/A	Activator for Structural Adhesives
755	Clear		N/A	N/A	N/A	N/A	N/A	Cleaning Solvent
764	Green		N/A	N/A	N/A	N/A	N/A	Primer N
767	Silver		N/A	N/A	-65 to +1600	N/A	N/A	Anti-Seize Lubricant

Section 1001

GENERAL INFORMATION AND SPECIFICATIONS

For 9310 - 9330 Series Tractor

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



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NOTE: Case Corporation reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.

GENERAL TORQUE SPECIFICATION TABLE SAE FASTENER TORQUE CHART




NOTE: Use these torques, unless special torques are specified. Values are for UNC and UNF thread fasteners, plated or unplated, as received from supplier. Fasteners can be dry or lubricated with normal engine oil. Values do not apply if graphite, moly-disulphide or other extreme pressure lubricant is used.

SAE Grade No.	2				5				8*					
Bolt head identification (See Note 1)														
Bolt Size	LB FT		Nm		LB FT		Nm		LB FT		Nm			
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max		
1/4	5	6	7	8	9	11	12	15	12	15	16	20		
5/16	10	12	14	16	17	20.5	23	28	24	29	33	39		
3/8	20	23	27	31	35	42	48	57	45	54	61	73		
7/16	30	35	41	47	54	64	73	87	70	84	95	114		
1/2	45	52	61	70	80	96	109	130	110	132	149	179		
9/16	65	75	88	102	110	132	149	179	160	192	217	260		
5/8	95	105	129	142	150	180	203	244	220	264	298	358		
3/4	150	185	203	251	270	324	366	439	380	456	515	618		
7/8	160	200	217	271	400	480	542	651	600	720	814	975		
1	250	300	339	406	580	696	787	944	900	1080	1220	1464		
1-1/8					800	880	1085	1193	1280	1440	1736	1953		
1-1/4					1120	1240	1519	1681	1820	2000	2468	2712		
1-3/8					1460	1680	1980	2278	2380	2720	3227	3688		
1-1/2					1940	2200	2631	2983	3160	3560	4285	4827		

NOTE: Bolt head identification marks as per grade. Manufacturing marks will vary. *Thick nuts must be used with Grade 8 bolts.

METRIC FASTENER (ISO) TORQUE CHART

NOTE: Use these torques, unless special torques are specified. Values are for UNC and UNF thread fasteners, plated or unplated, as received from supplier. Fasteners can be dry or lubricated with normal engine oil. Values do not apply if graphite, moly-disulphide or other extreme pressure lubricant is used.

ISO Grade No.	8.8				10.9				12.9			
Bolt head identification (See Note 1)												
Bolt Size	LB FT		Nm		LB FT		Nm		LB FT		Nm	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
M4	3	4	2	3	4	5	3	4				
M5	6.5	8	5	6	9.5	11	7	8				
M6	10.5	12	8	9	15	17.5	11	13				
M8	26	31	19	23	37	43	27	32				
M10	52	61	38	45	73	87	54	64				
M12	90	107	66	79	125	150	93	112				
*M14	144	172	106	127	200	245	149	179				
M16	217	271	160	200	310	380	230	280				
M20	434	515	320	380	610	730	450	540				
M24	675	815	500	600	1050	1275	780	940				
M30	1250	1500	920	1100	2000	2400	1470	1770				
M36	2175	2600	1600	1950	3500	4200	2580	3090				

Because of the low ductility of these fasteners, the torque range is to be determined individually for each application. As a general rule, the torque ranges specified for grade 10.9 fasteners can be used satisfactorily on

*M14 is not a preferred size

NOTE: Bolt head identification marks as per grade. Manufacturing marks will vary.

STANDARD TORQUE DATA FOR HYDRAULIC TUBES AND FITTINGS

TUBE NUTS FOR 37° FLARED FITTINGS								O-RING BOSS PLUGS, ADJUSTABLE FITTING LOCK NUTS, SWIVEL JIC - 37° SEATS			
SIZE	TUBING O.D.		THREAD SIZE	LB FT		Nm		LB FT		Nm	
	Inches	mm		Min	Max	Min	Max	Min	Max	Min	Max
4	1/4	6.4	7/16-20	9	12	12	16	6	10	8	14
5	5/16	7.9	1/2-20	12	15	16	20	10	15	14	20
6	3/8	9.5	9/16-18	21	24	29	33	15	20	20	27
8	1/2	12.7	3/4-18	35	40	47	54	25	30	34	41
10	5/8	15.9	7/8-14	53	58	72	79	35	40	47	54
12	3/4	19.1	1-1/16-12	77	82	104	111	60	70	81	95
14	7/8	22.2	1-3/16-12	90	100	122	136	70	80	95	109
16	1	25.4	1-5/16-12	110	120	149	163	80	90	108	122
20	1-1/4	31.8	1-5/8-12	140	150	190	204	95	115	129	156
24	1-1/2	38.1	1-7/8-12	160	175	217	237	120	140	163	190
32	2	50.8	2-1/2-12	225	240	305	325	250	300	339	407

Above torque figures are recommended for plain, cadmium or zinc plated fittings, dry or wet installations and swivel nuts either swaged or brazed. These torques are not recommended for tubes 1/2 inch (12.7 mm) O.D. and larger with wall thickness of 0.035 inch (0.889 mm) or less. The torque is specified for 0.035 inch (0.889 mm) wall tubes on each application individually.

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FLUID CAPACITIES AND TYPES

All fluid capacities listed are a guide to the quantities required. Always use dipsticks or level plugs to ensure that the units are filled to the correct level.

ENGINE

Crankcase Capacity.....	22 quarts (21.0 L)
Oil Type.....	Case No. 1 Multi-Viscosity Engine Oil
Cooling system Capacity (9110).....	6.5 U.S. gallons (25.0 L)
Cooling system Capacity (9130).....	7.25 U.S. gallons (28 L)
Fluid Type.....	50 Percent Ethylene Glycol and Water

ADJUSTABLE AXLE (Bar Type)

Oil Capacity.....	9.0 U.S. gallons (34.0 L)
Oil Type.....	Hy-Tran Plus

TRANSMISSION

Oil Capacity (with filter).....	9.5 U.S. gallons (36.0 L)
Oil Type.....	Hy-Tran Plus

HYDRAULIC SYSTEM

Reservoir Capacity.....	18 U.S. gallons (68 L)
Oil Type.....	Hy-Tran Plus

PTO DROP BOX

Oil Capacity.....	1.7 U.S. quarts (1.6 L)
Oil Type.....	Hy-Tran Plus

BRAKE SYSTEM

Oil Capacity.....	1 U.S. quarts (0.946 L)
Oil Type.....	SAEJ1703 (DOT 3)

FUEL SYSTEM

Oil Capacity.....	115 U.S. gallons (435 L)
Oil Type.....	Hy-Tran Plus

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SPECIFICATIONS

TRANSMISSION

Model..... Full PowerShift
 Type 12 Forward and 2 Reverse
 Shift Control..... Electrically Controlled with Hydraulically Actuated Clutches

BRAKES

Type Hydraulic Operated, single caliper, disc
 Disc Size 15 inch (381 mm)
 Park Brake..... Hand Lever Actuated

AXLE

Model..... K693 Adjustable Bar
 Type..... Single Reduction Inboard Planetary, Spiral Bevel Ring Gear and Pinion
 Bar Diameter..... 4 inch (101.6 mm)
 Bar Length 119.5 inch (3 035.3 mm)
 Ratio..... 25.283:1

POWER TAKEOFF (If Equipped)

Type..... Live Independent System Integral with Transmission
 Clutch Type..... Modulatable, Hydraulic
 Control..... Hand Lever Actuated
 Rotation (from rear of tractor)..... Clockwise
 Shaft Size 1.75 inch Diameter, 20 Splines
 Speed 1000 RPM at 2100 Engine RPM

HYDRAULIC SYSTEM

Type..... Closed Center, Load Sensing, Pressure Compensating
 Steering..... Full Priority, System
 Remote Valve..... Closed Center Stack Type With Float Position and Flow Control
 Pump Capacity at 2200 RPM 28 GPM (109.0 L/min)
 Maximum System Pressure..... 2900 PSI (197 Bar)
 Couplings..... ISO Standard Lever Type

HITCH SYSTEM

Type Hitch..... Category III
 Hitch Coupler..... Category III
 Hitch Control..... Hand Lever Actuated, Electronic Position Control System
 Hitch Valve..... 3-Position, Lift, Hold and Lower
 Lift Capacity 24 inches back (OECD static) 12750 lb (5783 Kg)

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DIESEL ENGINE

Engine Make	Case
Model	
9310	6T8.3
9330	6TA8.3
Type	In-Line Six Cylinder, Four Stroke Cycle
Displacement	504.5 Cubic Inch (8.27 L)
Cylinder Sleeves	Removable, Wet Type
Bore	114 mm
Stroke	(135 mm)
Governed Speed (No load)	2350 to 2500 RPM
Rated Speed	1700 to 2200 RPM
Idle Speed	800 to 1000 RPM
Engine Operating Torque	
9310 at 2100 RPM	475 lb ft (644 Nm)
9330 at 2100 RPM	550 lb ft (746 Nm)
Torque Rise	30%
Compression Ratio	16.5:1
Firing Order	1-5-3-6-2-4
Valve Setting (cold)	
Intake	0.30 mm
Exhaust	0.61 mm
Number of Flywheel Teeth	138
Oil Pressure (warm at 2100 RPM)	43 to 54 PSI (296 to 372 kPa)
Air Induction System	Dry Type, 2 Stage Aspirator
Fuel Injection Pump	
9310	Robert Bosch, Type A
9330	Robert Bosch, Type MW
Thermostat	180 to 202°F (82 to 94° C)
Radiator Cap	7 PSI (62 kPa)

ELECTRICAL SPECIFICATIONS

Type of System	12 Volt Negative Ground
Batteries	Two 12 Volt, 625 CCA Hybrid Batteries, Group Size 31
Alternator	Delco Remy, 125 Amp
Cranking Motor	Nippendenso, 12 Volt, 4 kw

LAMPS AND BULBS

Sealed Beam Lamps	
Headlamps	H6545
Flood Lamps	74595

LAMPS

Tail Lamps	168
Warning Lamps	1156
Gauge Panel	1893
Dome Lamp	1141
Console Lamp	168
Instrument Cluster	194

CIRCUIT BREAKERS (Overhead Console)

Cab Field Lamps	30 Amp
Rear Field Lamps	30 Amp
HVAC System	40 Amp
Head Lamps	15 Amp
Tail Lamps	5 Amp
Dome Lamp and Cigar Lighter	20 Amp
Ignition Switch B1 and Radio	15 Amp
Front Windshield Wiper and Washer	10 Amp
Auxiliary Power	30 Amp
Ignition Switch B2	15 Amp
Ignition Switch B3	20 Amp
Warning Lamp Flasher Module	20 Amp
Front Frame Field Lamps	15 Amps

CIRCUIT BREAKERS RH CONSOLE

Air Seat	15 Amp
PowerShift Solenoid	10 Amp
Three Point Hitch	5 Amp
Differential Lock	30 Amp
Steerable Axle Controller	15 Amp

APPROXIMATE TRACTOR SHIPPING WEIGHTS

Model 9310 Tractor with 18.4 x 38R1 Tires,
Steerable Front Axle, PTO and
Three Point Hitch with Quick Coupler

Single Tires	21 530 lbs (9 775 kg)
Hub Style Duals	24 518 lb (11 107 kg)

Model 9330 Tractor with 18.4 x 38R1 Tires,
Steerable Front Axle, PTO and Three Point
Hitch with Quick Coupler

Single Tires	21 530 lbs (9 775 kg)
Hub Style Duals	24 518 lbs (11 107 kg)

NOTE: *Estimated shipping weights listed are less fuel, operator or other operational equipment.*

MAXIMUM TRACTOR OPERATING WEIGHT

The maximum recommended tractor operating weight includes the operator, tractor, tractor equipment and ballast. The maximum weight is with a 60% front and 40% rear static weight distribution.

Maximum Tractor Operating Weight	26 000 lbs (11 778 kg)
--	------------------------

WHEEL BOLT TORQUES

- Split bushing to Hub Bolts (Dry)..... 256 to 289 lb ft (347 to 392 Nm)
- *Wheel Disc Bolts to Split Bushing Hub (Dry)..... 510 to 590 lb ft (692 to 800 Nm)
- *390 to 430 lb ft (529 to 583 Nm) when lubricated with engine oil.

IMPORTANT: Tighten wheel bolts after the first 3 hours of operation and every 10 hours until the correct torque is maintained. Retorque wheels every 250 hours of operation on tractors used for high vertical drawbar load applications such as scrapers, planters, potato and beet harvesters, grain carts, etc.

TRAVEL SPEEDS

MPH/KPH at Rated Engine Speed

The following travel speeds are approximate at rated engine speed. No allowance is made for wheel slip.

12 Speed Power Shift

Gear	MPH	KPH
1	2.0	3.3
2	2.5	3.9
3	3.0	4.9
4	3.7	5.9
5	4.4	7.1
6	5.5	8.8
7	6.5	10.5
8	7.8	12.5
9	9.6	15.4
10	11.7	18.9
11	14.1	22.7
12	17.3	27.9
R1	2.7	4.3
R2	4.8	7.8
R3	8.5	13.7

MPH/KPH at Other Engine Speeds

To determine travel speed for other than rated engine speed, use the following formula:

$$\text{MPH/KPH} = \frac{(\text{Ground Speed}) \times \text{Engine RPM}}{\text{Rated RPM}}$$

Example:

If chart speed was 14.1 MPH (22.6 KPH) and tractor has engine with rated speed of 2100 RPM and MPH/KPH wanted at 1800 RPM,

$$\text{Then: MPH} = \frac{14.1 \times 1800}{2100} = 12.0 \text{ MPH}$$

$$\text{KPH} = \frac{22.6 \times 1800}{2100} = 19.4 \text{ KPH}$$

To determine speed for other tire sizes use the following chart multipliers:

Average Static Loaded R.R.	Tire Size	Factor
30.7	20.8 x 34 R1	0.96
33.5	20.8 x 38 R2	1.05
33.7	18.4 x 42 R1	1.05
34.6	20.8 x 42 R1	1.09
33.0	30.5L x 32 R2	1.03
32.5	30.5L x 32 LS2	1.02

Example of Use:

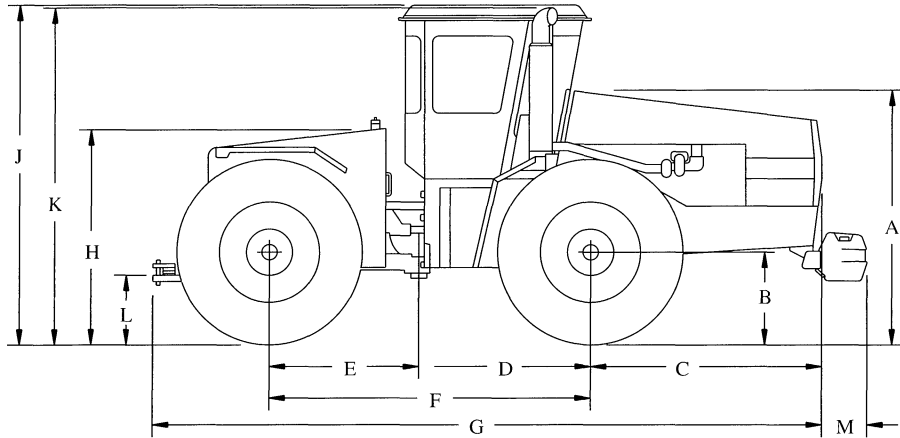
If ground speed was 14.1 MPH (22.6 KPH) and tractor was equipped with 20.8 x 34 R1 tires,

Then: MPH/KPH = (Ground Speed) x (Factor)

$$\text{MPH} = 14.1 \times 0.96 = 13.5 \text{ MPH}$$

$$\text{KPH} = 22.6 \times 0.96 = 21.7 \text{ KPH}$$

APPROXIMATE OVERALL MEASUREMENTS



95F53

Tire and Wheel Equipment for Data Shown Below	
Tire Size 20.8 x 38 R1	
A. 81.9 inch (2 080 mm)	G. 241.7 inch (6 139 mm)
B. 30.8 inch (732 mm)	H. 74.8 inch (1 900 mm)
C. 67.3 inch (1 709 mm) steerable axle 71.8 inch (1 824 mm) non-steerable axle	J. 128.7 inch (3 269 mm)
D. 51.0 inch (1 295 mm)	K. 16.2 inch (411 mm)
E. 73.9 inch (1 877 mm) steerable axle 69.4 inch (1 763 mm) non-steerable axle	L. 18.3 inch (465 mm)
F. 124.9 inch (3 172 mm) non-steerable axle 120.4 inch (3 058 mm) steerable axle	

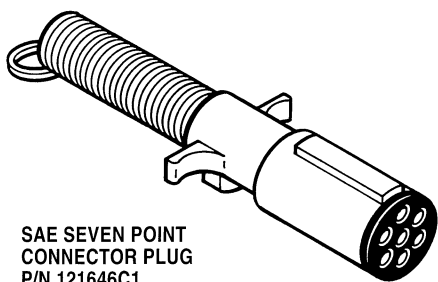
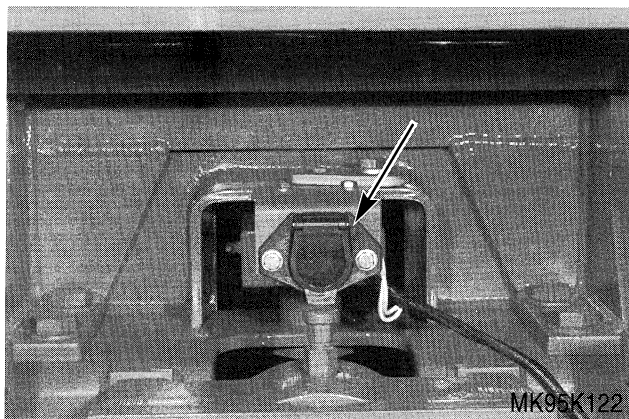
GENERAL DIMENSIONS:

- Wheel Base:** Steerable Axle - 124.9 inch (3 172 mm)
Non Steerable Axle - 120.4 inch (3 058 mm)
- Width:** 88.9 inch (2 258 mm) Outside of Front Fenders
- Turning Radius:** Drawpin center line to center of circle
158.6 inch (4 028 mm) Steerable axle
175.2 inch (4 450 mm) Non steerable axle
- Frame Articulation:** 40 Degrees Left/Right
- Frame Oscillation:** 11 Degrees (22 Degrees Total)
- Steerable Axle (Optional):** 6 Degrees Left/Right
- Drawbar Height:** 18.3 inch (489 mm) top of Main Drawbar To Ground

AUXILIARY POWER CONNECTIONS

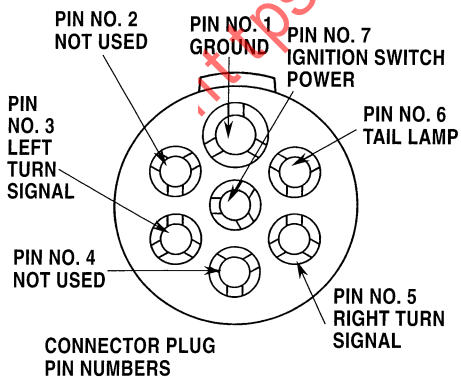
SEVEN TERMINAL OUTLET

A seven terminal electrical outlet is located on the rear of the tractor. The outlet conforms to SAE J560 for interchangeability. The outlet provides power for auxiliary left turn signal, right turn signal and tail lamp, and ignition switch power.



364L9

Use a mating seven terminal connector plug for connecting the implement wiring.



367L9

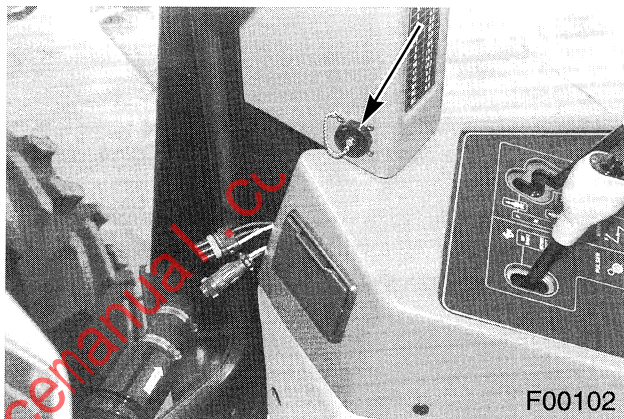
The diagram shows the connector plug pin numbers and usage.

NOTE: If the connector plug on the implement wiring is not a seven point SAE connector plug, the plug must be changed.

AUXILIARY POWER CONNECTOR

A 3-pin receptacle is provided on the lower end of the RH front ROPS post. This connector can be used to connect power and ground to in-cab monitors. The receptacle will provide key switch power (Pin 1) or battery power (Pin 2) and ground (Pin 3).

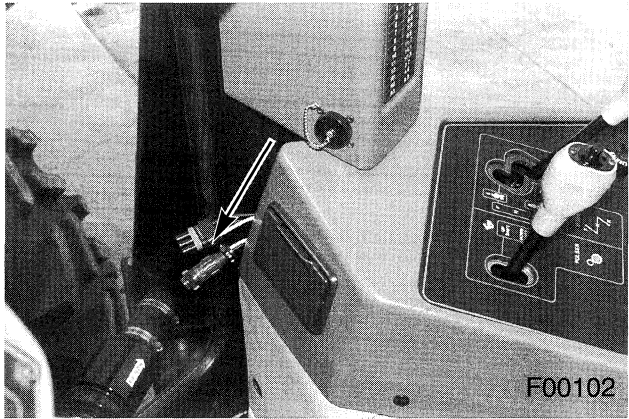
Power connector part number 187103A1 may be ordered to connect to the receptacle.



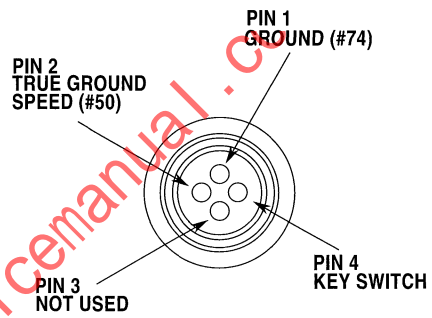
Three additional connectors are located inside the RH side control console to provide 12 volt power to operate other monitors or remote equipment.

AUXILIARY POWER SUPPLY

Three 12 volt, circuit breaker protected male connector power leads are provided inside the RH side control console for connecting monitors or other equipment.



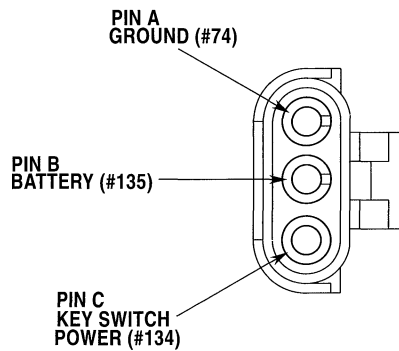
One 4-pin Amp connector is provided for monitors requiring true ground speed input. The diagram shows the connector pin numbers and usage.



95F59

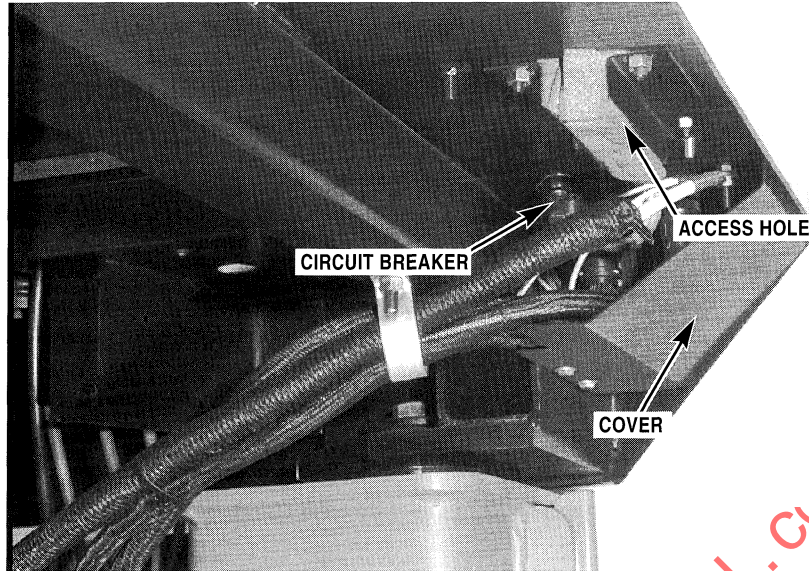
Two 3-pin, circuit breaker protected Weather Pack connectors are also available to provide key switched, or battery power and ground. The diagram shows the connector pin usage.

The control console wraparound cover must be removed to access these power leads.



95F60

ACCESSORY WIRE HARNESS ACCESS



F00254

A 150 amp main circuit breaker is located at the lower RH corner of the cab. Approximately 10 amps of power is available as needed for auxiliary power to implements.

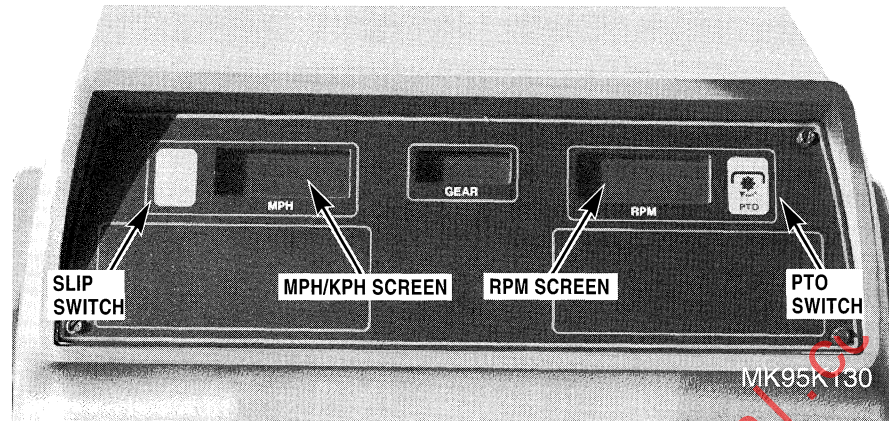
Direct battery power of 12 volts is also available to supply power to implements protected by separate fuses or circuit breakers.

Remove the cover for access to the circuit breaker.

An access hole is provided in the cab floor on the right rear side of the cab. Use the access hole to route wire harness for other equipment from the cab to the rear of the tractor or implement. Route the harness under the floormat or cut a hole in the floormat at the access hole location.

TRANSMISSION CONTROLLER AND INSTRUMENT CLUSTER CALIBRATION

The digital instrument cluster has been calibrated at the factory. Calibration will only be required again when there has been a change in tire size, transmission controller, instrument cluster, or true ground speed sensor. The calibration can be checked or changed anytime the operator questions the accuracy of the ground speed or wheel slip readings on the instrument.



The slip switch, MPH/KPH screen and PTO switch are all used in the calibration procedure.

POWER SHIFT TRANSMISSION PROCEDURE

To check or change the calibration of the transmission controller, do the following:

1. Engage the park brake, put the transmission forward/reverse lever in NEUTRAL position and start the engine.

NOTE: DO NOT push the inching pedal down at this time.

2. Push the SLIP and PTO switches at the same time. The MPH/KPH screen will read ENG. The RPM screen will momentarily read in sequence CAL, C5.1 and then the current engine code number.

NOTE: Controller revision level numbers (C5.1) are subject to change.

3. Push the PTO switch until the correct engine code is shown on the RPM screen.

Engine codes for the tractor models requiring MPH are as follows:

- A. Code C8.3 = 6T-830 or 6TA-830 Engine - Model 9310, 9330
- B. Code L10 = L10 or MTA-11-A Engine - Model 9350
- C. Code C855 = 855 or N14 Engine - Model 9370, 9380

Engine codes for the tractor models requiring MPH are as follows:

- D. Code C8.3 = 6T-830 or 6TA-830 Engine - Model 9310, 9330
- E. Code L10 = L10 or MTA-11-A Engine - Model 9350
- F. Code C855 = 855 or N14 Engine - Model 9370, 9380

4. Push the SLIP switch until the word TIRE is shown on the MPH/KPH screen and the current tire code number is shown on the RPM screen.

NOTE: The tire code number is based on the tire rolling radius. The tire rolling radius can be different for the same tire size from different manufacturers.

5. Push the PTO switch to change the tire code number as required for your tractor.

NOTE: See the Tire Code Chart which gives the rolling radius and manufacturer for various tire sizes. Also see dynamic Rolling Radius for alternate method of determining rolling radius.

6. Push the SLIP switch until the word HORN (I.E. True Ground Speed Sensor) is shown on the MPH/KPH screen. YES or NO will be shown on the RPM screen.

7. Push the PTO switch to get NO for tractors WITHOUT true ground speed sensor or YES for tractors WITH true ground speed sensor. For tractors without true ground speed, press the slip switch to exit calibration. Engine RPM and MPH will appear on the instrument cluster to indicate the controller is calibrated.

NOTE: Continue to Step 8 to complete the calibration procedure for tractors with true ground speed sensor.

8. Push the SLIP switch to get CAL on the RPM screen.

9. Push the inching pedal down and move the transmission forward/reverse lever to forward direction.
10. Operate the tractor on a smooth dry surface in gear 10, 11 or 12 at 8 MPH (13 KPH) or greater. CAL will flash ON and OFF on the RPM screen.
11. Maintain a constant travel speed for two (2) seconds minimum. Engine RPM will then appear on the RPM screen to indicate that the cluster is calibrated.

NOTE: To get a true ground speed calibration, the engine and tire codes must be correct and there must be NO wheel slip during calibration.

DYNAMIC ROLLING RADIUS

The tire rolling radius numbers shown in the Tire Code Number Chart represents the calibrated rolling radius for various tire sizes and manufacturers. The actual rolling radius can vary a small amount depending on tire pressure, tire wear and the weight and load on the tractor.

If a higher degree of accuracy is required, dynamic rolling radius can be established as follows:

1. Put a mark on the side of the tractor tire.
2. Operate the fully loaded tractor on a dry flat surface.
3. Count ten (10) revolutions of the wheel.
4. Measure the distance traveled in inches.
5. Use the following formula to determine the dynamic rolling radius.

$$\text{Dynamic Rolling Radius} = \frac{\text{Distance Traveled in Inches}}{62.83}$$

6. Use the dynamic rolling radius as specified in Step 5 of the instrument cluster calibration procedure.

TIRE CODE NUMBERS

Use the following code numbers for cluster calibration.

Tire Size	Tire Type	Tire Code Number (Rolling Radius)	
		Firestone	Goodyear
14.9R x 46R1	Radial	35.0	34.4
420/80R x 46R1	Radial	35.0	34.8
18.4R x 46R1	Radial	36.8	37.0
710/70R x 38R1	Radial	37.0	36.2
18.4 x 38R1	Bias	32.4	33.2
18.4R x 38R1	Radial	32.8	33.2
18.4R x 38R1W	Radial	32.6	32.6
18.4 x 38R2	Bias	32.6	33.6
18.4 x 42R1	Bias	34.2	35.0
18.4R x 42R1	Radial	34.8	34.6
20.8 x 38R1	Bias	33.4	33.8
20.8R x 38R1	Radial	34.0	34.6
20.8R x 38R1W	Radial	34.2	34.4
20.8 x 38R2	Bias	33.8	34.6
20.8 x 42R1	Bias	35.2	36.2
20.8R x 42R1	Radial	36.0	36.6
20.8R x 42R1W	Radial	36.2	36.2
23.1 x 34R1	Bias	32.4	33.0
23.1 x 34R2	Bias	34.6	34.8
24.5 x 32R1	Bias	32.4	33.4
24.5R x 32R1	Radial	33.0	33.8
24.5 x 32R2	Bias	33.8	33.4
24.5 x 32LS2	Bias	33.2	
30.5 x 32R1	Bias	33.6	33.2
30.5R x 32R1	Radial	33.6	34.0
30.5 x 32R2	Bias	34.4	33.4
30.5 x 32LS2	Bias	35.0	

STEERING SYSTEM CALIBRATION (JEE0036001 and After)

GENERAL INFORMATION

The steering microprocessor controller requires four signal data points be entered and stored in memory; articulation center, front axle center, front axle maximum left steer and maximum right steer. The articulation and front axle potentiometers are used to signal the controller these data points

To CALIBRATE the system means to enter corrected or new data points from the feedback potentiometers in to the controllers memory. The calibration procedure must be done whenever potentiometers are replaced or adjusted or if a controller is replaced.

NOTE: Calibration must also be done when the operator changes tires from singles to duals or from duals to singles.

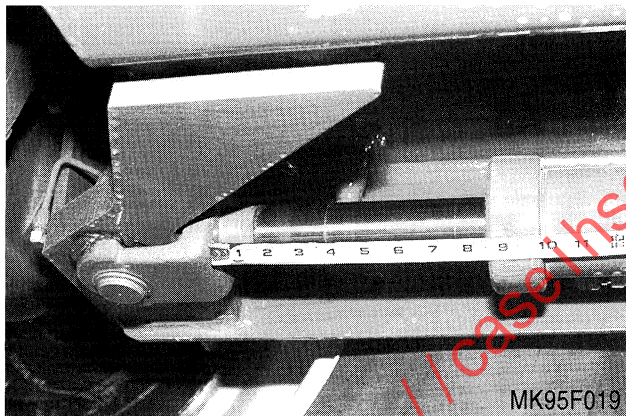
CALIBRATION PROCEDURE



WARNING: When performing the following procedure, be sure area is clear of any persons. Provide adequate room to perform full left or right turns.

M388

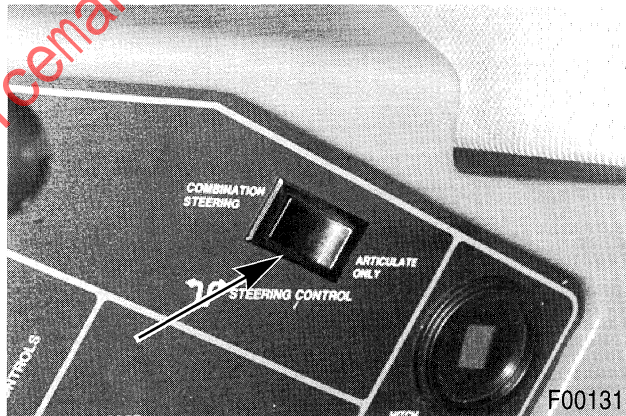
STEP 1



MK95F019

If not already centered, start the engine, put the steering selector switch in the ARTICULATION ONLY steering mode and center the tractor articulation by equalizing the articulation cylinder rod lengths.

STEP 2



F00131

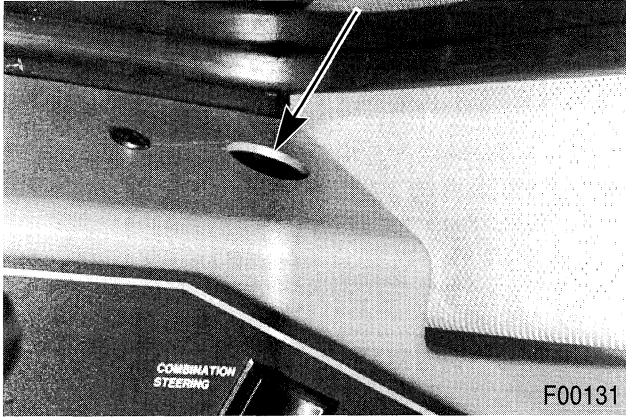
Put the steering selector switch in the COMBINATION steer mode.



WARNING: Shut down the engine and apply the Park Brake before working in the center hinge area.

M426

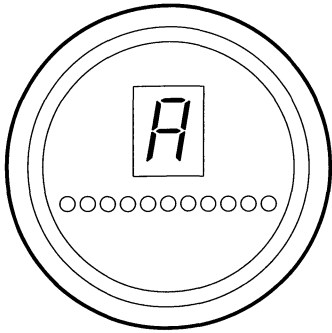
STEP 3



Start the tractor engine while holding down the setup button. Release the button when **C** (calibration) appears on the ROPS post steering display monitor.

IMPORTANT: *Be careful not to move the steering wheel. The tractor must remain centered during the following procedures.*

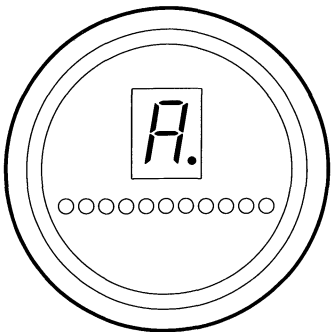
STEP 4



95F57

Press and release the setup button until **A** (articulation center) appears on the display.

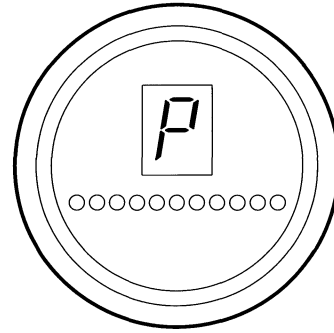
STEP 5



95F57

A decimal point will appear in the display if the articulation potentiometer is within its working range.

STEP 6

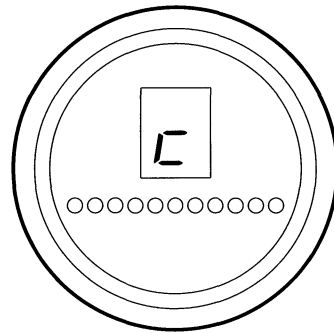


95F57

When the articulation potentiometer is centered and a decimal point appears on the display, hold down the setup button until **P** appears on the display. **P** indicates that articulation center has been recorded in the controller memory. Release the button.

NOTE: *If **F** appears on the display, the center point was not recorded because the articulation potentiometer is not centered.*

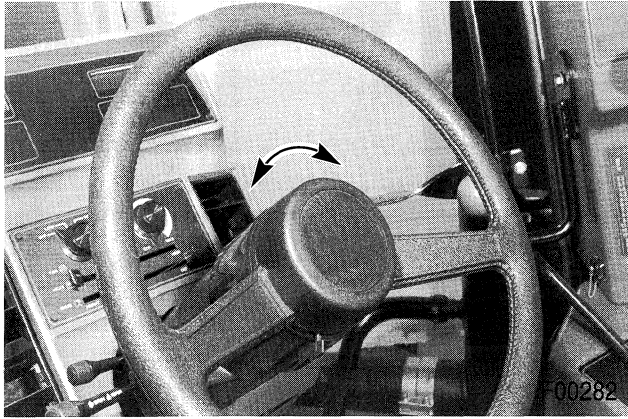
STEP 7



95F57

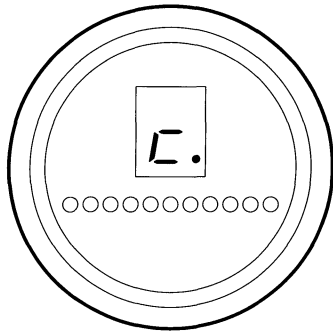
Press and release the setup button until **c** (front axle center) appears on the display.

STEP 8



Steer the front axle to its center position. This position is determined by making sure the front axle is straight.

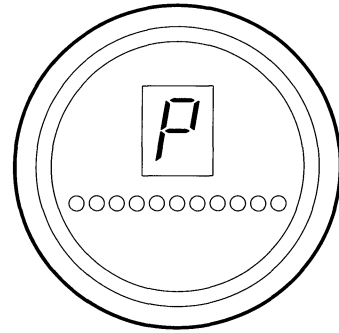
STEP 9



95F57

A decimal point will appear on the display if the front axle potentiometer is within its working range. If the decimal point does not appear, potentiometer adjustment is required.

STEP 10

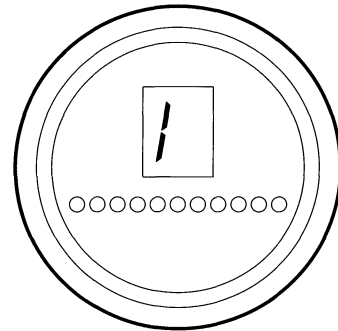


95F57

Once the front axle is centered and the decimal point appears, record this position by holding down the setup button until **P** appears on the display to indicate that the center position has been recorded in the controller memory.

NOTE: If **F** appears on the display, the center position was not recorded because the potentiometer is not centered.

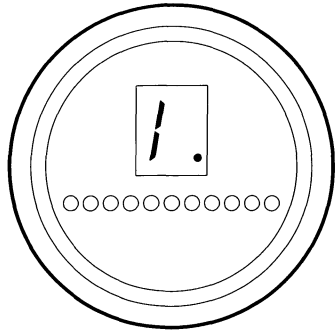
STEP 11



95F57

Press and release the setup button until **I** (left axle stop) appears on the display.

STEP 12

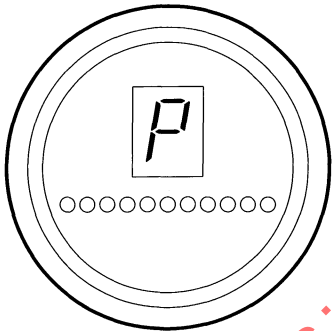


95F57

Steer the front axle to the left to the desired stop position and a decimal point appears on the display. If a decimal point appears on the display. If a decimal point does not appear, potentiometer adjustment is required.

IMPORTANT: Be sure there is 3/4 inch (19 mm) clearance between the tire wall and front frame (Or cab mount) before or at the left stop position.

STEP 13

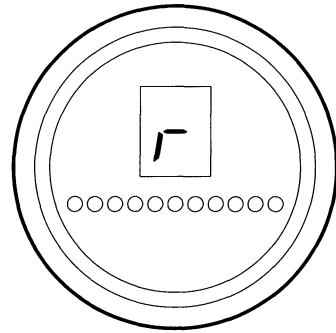


95F57

When the front axle is at the left stop position and a decimal point appears on the display, hold down the setup button until **P** appears on the display. **P** indicates that the left stop position has been recorded in the controller memory.

IMPORTANT: Be careful not to move the steering wheel when holding the setup button to record the left stop position. If **F** appears on the display, the stop position has not been recorded because the axle was moved from the left stop position. Release the button.

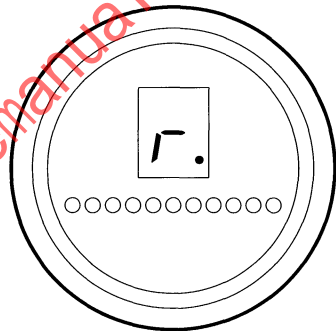
STEP 14



95F57

Press and release the setup button until **r** (right axle stop) appears on the display.

STEP 15



95F57

Steer the front axle to the desired right stop position and a decimal point appears on the display. If the decimal point does not appear potentiometer adjustment is required.

IMPORTANT: Be sure there is 3/4 inch (19 mm) clearance between the tire wall and front frame (or cab mount) before or at the right stop position.