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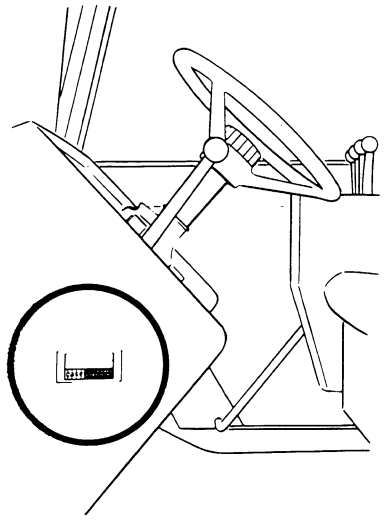
2470 TRACTORS

PRIOR TO SN 8762940

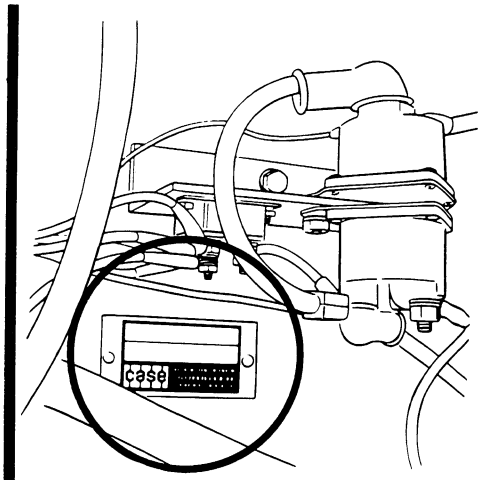
Section 1010

GENERAL SPECIFICATIONS

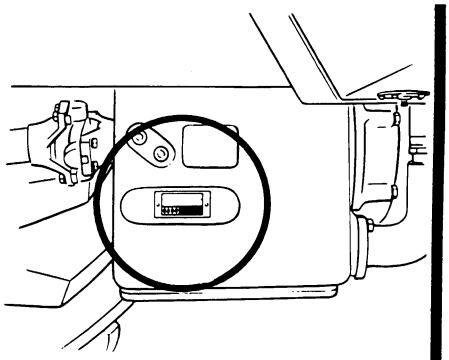
SERIAL NUMBERS



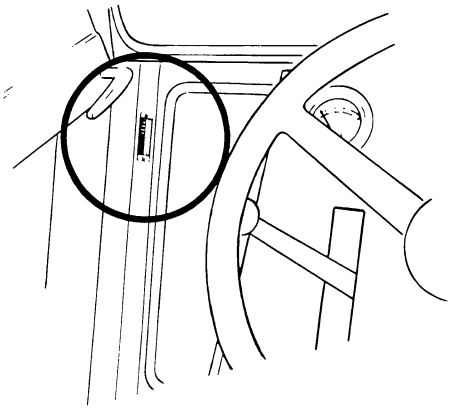
TRACTOR SERIAL NUMBER



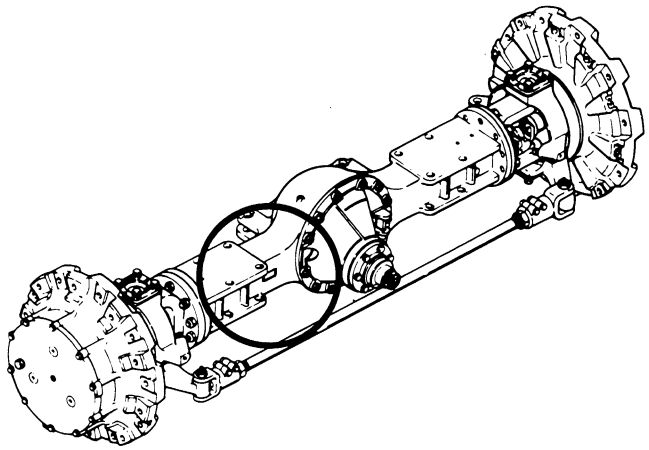
ENGINE SERIAL NUMBER



TRANSMISSION SERIAL NUMBER



CAB SERIAL NUMBER



AXLE SERIAL NUMBER

Rac. Form 9-75405

PRINTED IN U.S.A.

DIESEL ENGINE

General

Type	6 Cylinder, 4 Stroke Cycle, Valve-In-Head Turbocharged Diesel Engine
Firing Order	1-5-3-6-2-4
Bore	4-5/8 Inches (117.5mm)
Stroke	5 Inches (127mm)
Piston Displacement	504 Cubic Inches (8 257cm^3)
Compression Ratio	16.5 to 1
Cylinder Sleeves	Removable Wet Type
No Load Governed Speed	2340-2380 RPM
Rated Engine Speed	2200 RPM
Engine Idling Speed	775-825 RPM
*Valve Tappet Clearance (Exhaust)	(Hot) .020 Inch (0.508mm)
	(Cold) .025 Inch (0.635mm)
	(Intake) (Hot and Cold) .015 Inch (0.381mm)

*Hot Settings Are Made After The Engine Has Operated At Thermostat Controlled Temperature For At Least Fifteen Minutes.

Piston and Connecting Rod

Rings per Piston	3
Number of Compression Rings	2
Number of Oil Rings	1
Type Pins	Full Floating Type
Type Bearings	Replaceable Precision, Steel Back with Aluminum or Copper-Lead Alloy Liners.

Main Bearings

Number of Bearings	7
Type Bearings	Replaceable Precision, Steel Back with Aluminum or Copper-Lead Alloy Liners.

Engine Lubrication System

Oil Pressure	45 to 60 PSI (3.2 to 4.2 kg/cm^2) with Engine Warm and Operating at Rated Engine Speed.
Type System	Pressure and Spray Circulation
Oil Pump	Gear Type
Oil Filter (2)	Full Flow Spin on Type
Oil Capacity	With Filters, 23 U.S. Qts. (21.8 liters)
	Without Filters, 19 U.S. Qts. (17.9 liters)

DIESEL ENGINE

Fuel System

Fuel Injection Pump ..... Robert Bosch, Type PES (Multiple Plunger).
Pump Timing ..... 30 Degrees Before Top Dead Center (Port Closing).
Fuel Injectors ..... Pencil Type (Opening Pressure 3200 PSI). (225 kg/cm^2)
Fuel Transfer Pump ..... Plunger Type, Integral Part of Injection Pump.
Governor ..... Variable Speed, Fly-Weight Centrifugal Type; Integral Parts of Injection Pump.
1st Stage fuel filter ..... Full Flow Spin on Type
2nd Stage fuel filter ..... Full Flow Spin on Type
Fuel Tank Water Trap and Drain (2) ..... Located in Base of Each Fuel Tank.
Fuel Tank Capacity ..... (55 U.S. Gallons - 208.2 liters - each tank).
Fuel Level Gauge ..... Electric, Located on Instrument Panel.
Hand Primer Pump ..... Located on Top of the Fuel Transfer Pump.
Preliminary Fuel Filter ..... Located At The Bottom Of The Fuel Transfer Pump.

Cooling System

Capacity of System ..... 44 U.S. Quarts (41.6 liters)
Type of System ..... Pressurized, Thermostat Controlled By-Pass Type: Forced Circulation, (Impeller Type Pump).
Radiator ..... Heavy Duty Fin and Tube Type
Thermostat (2) ..... Starts to Open at Approximately 175^{0}F. (79^{0}C), Fully Open at 202^{0}F. (94^{0}C.)
Pressure Cap Required ..... 7 PSI (0.492 kg/cm^2)

Electrical System

Type of System ..... 12 Volt Negative Ground
Batteries ..... (2) 12 Volt Batteries Connected in parallel Group Size 30H, Rated in 1.255 to 1.265 Specific Gravity. Discharge Rate 300 Amps at 0^{0}F. Voltage Drops to 9.2 after 10 seconds. Voltage drops 1.0 Volt per cell after 4 min.
Alternator ..... 12 Volt 55 Amp Output, Negative Ground
Voltage Regulator ..... 12 Volt, Solid Stage, Mounted on Alternator.
Starter Motor ..... 12 Volt with Solenoid Switch
Head Lights (2) ..... 12 Volt, 40/40 Watt Sealed High-Low Beam
Front Flood Lights (2) (optional) ..... 12 Volt, 35 Watt Sealed Beam
L.H. Rear Flood and Tail Light (1) ..... 12 Volt, 60 Watt Sealed Beam Combination Tail and Flood Lamp.
R.H. Rear Flood (optional) (1) ..... 12 Volt, 35 Watt Sealed Beam
Circuit Breaker System over Load Check ..... 12 Volt Twin 40 AMP Breakers connected in parallel, 80 AMP rating. 60 Amp. Min. Continuous capacity.

GENERAL SPECIFICATIONS

Electrical System (Cont'd)

Lights Circuit Breaker ..... 40 Amp., Located on Light Switch
Parking Brake Warning Light ..... 12 Volt, Red Flasher Type
Fuel Shut-Off Solenoid ..... 12 Volt, Rotary Type

Hydraulic Brakes

Type ..... Self-Adjusting Multiple Disc Wet Type Transmission Brakes.

Parking Brake

Type ..... Cable Actuated by over center Type Handle - Adjustable from Operator's Seat. Multiple Disc. Type.

Power Shift Transmission

Type ..... 3 Speed Compound Planetary With Hydraulically Actuated Clutches and a 4 Speed Gear Range Section.
Gear Selection ..... 12 Speeds Forward and 4 Speeds Reverse.
Shifting ..... Hydraulic Power Shifting Controlled By a Lever on Operator's Console. 4 Speed Range Controlled by a Mechanical Shifter From a Lever on Operator's Console.
Oil Type ..... Case TFD (Transmission-Final Drive)
Oil Capacity ..... 56 U.S. Quarts (52.9 liters)

Hydraulic Pump

Type ..... Direct Drive, Gear Type, Triple Hydraulic Pump
First Section ..... Charging Pump, Capacity at 2200 Engine RPM - 39 GPM (147.6 l/mn)
Intermediate Section ..... Supplies oil to the Transmission Hydraulic and PTO. Capactiy at 2200 Engine RPM - 17 GPM (64.4 l/mn)
Third Section ..... Supplies oil to the Steering System. Capacity at 2200 Engine RPM 17 GPM (64.4 l/mn)
Front Steering ..... 7 GPM (26.5 l/mn)
Rear Steering ..... 10 GPM (37.9 l/mn)

Hydrostatic Front Power Steering

Oil Supply ..... Triple Hydraulic Pump
HGA Hydrostatic Type ..... Integral and Bi-Directional Gerotor Metering Section, Actuated By the Steering Wheel.
Front Steering Cylinders ..... Two Double Acting Cylinders

Rear Power Steering

Oil Supply ..... Triple Hydraulic Pump
Control Valve Type ..... 4 Way, Three Position Spool Type.
Rear Steering Cylinders ..... Two Double Acting Cylinders
Controls ..... Hand Lever on Instrument Panel (Manual or Automatic)

Differential and Planetaries

Front and Rear ..... Spiral Bevel with Planetary Reduction in Hub.

3 Point Hitch System

Type Control ..... Hand Lever
Type Valve ..... 3 Positions - Raise - Hold - Lower with Speed Control
Type Draft Arms ..... Rigid Swinging, with Manual Float Adjustment
Type Hitch ..... 3 Point Category III

Single Dual Remote Hydraulic System

Triple Hydraulic Pump (17 gal. Section) ..... Direct Drive Gear Type
Type Remote Valve (R.H. Side) ..... Dual Valve-Individual Hand Lever Control
Portable Cylinder Couplings (L.H. Side) ..... Quick Detachable Break-away Type.
Oil Supply ..... Triple Hydraulic Pump
Relief Valve Pressure ..... 1900 to 2050 PSI (133.6 to 144.1 kg/cm^2)
Portable Cylinders ..... Case Cylinders Available

Twin Dual Remote Hydraulic System

Oil Supply ..... From Single Remote Valve (Connected in Series)
Type Remote Valve (R.H. Side, Forward of Single Valve) ..... Dual Valve- Individual Hand Lever Control.
Oil Supply ..... Triple Hydraulic Pump
Relief Valve Pressure ..... Dependent on Single Remote.
Portable Cylinder Couplings (R.H. Side) ..... Quick Detachable Break-away Type
Portable Cylinders ..... Case Cylinders Available

Power Take-Off

Type Clutch ..... Hydraulically Operated
Rotation ..... Clockwise
Spline Size ..... 21 Splines .....1-3/8 in. (34.9mm) Dia.
Engine Speed 2200 RPM ..... 1000 RPM Shaft Speed

Drawbar

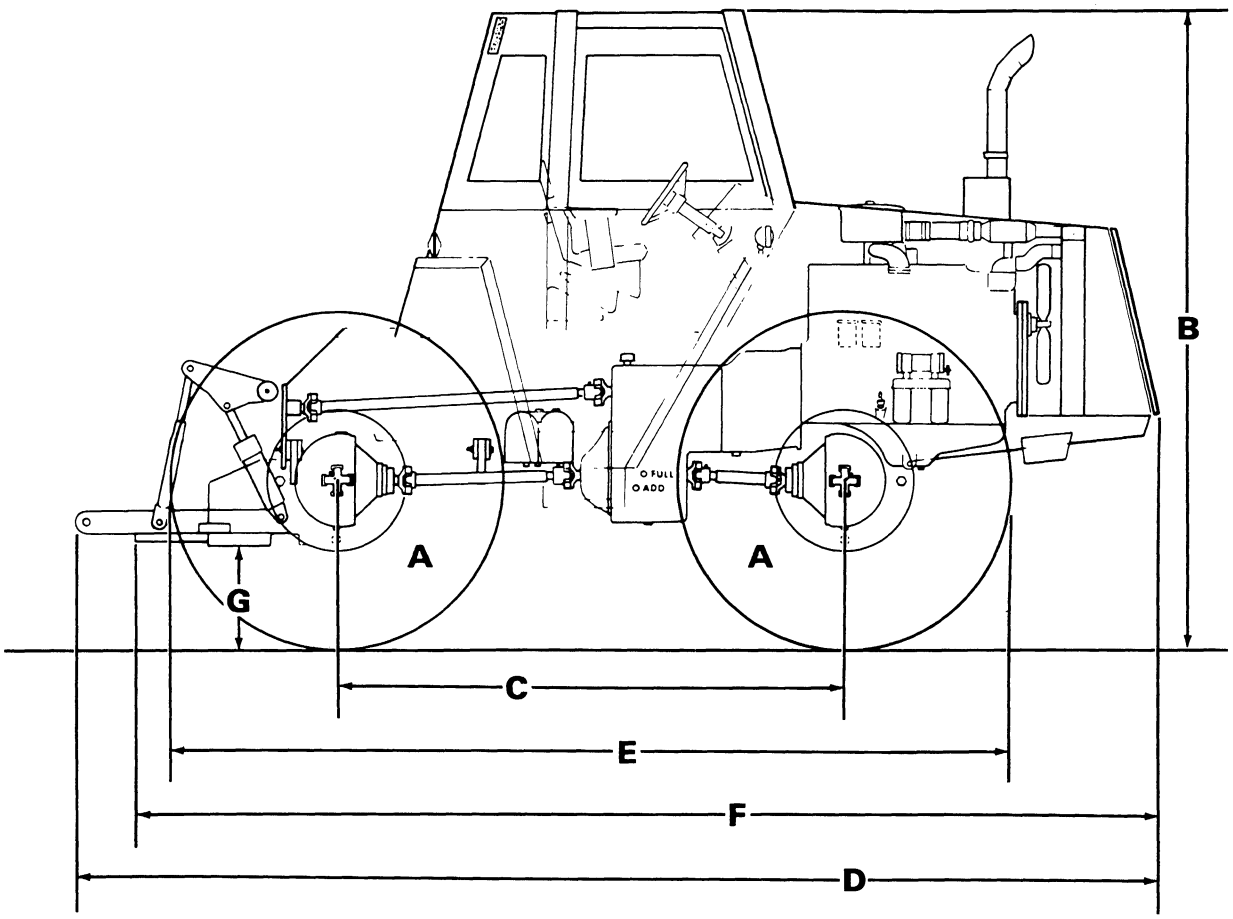
Standard or Yoke Type ..... Full Swinging Roller Mounted, Will Accommodate a 1-1/2 Inch (38.1mm) Dia. Pin.

APPROXIMATE TRAVEL SPEEDS IN MPH & KM/H AT 2200 RPM

12 Speed Power Shift Transmission

TRANSMISSION RANGE	POWER SHIFT			TIRE SIZE
	1	2	3 AND REVERSE	
1	1.9 mph (3.1 km/h)	2.5 mph (4.0 km/h)	3.1 mph (5.0 km/h)	18.4-30
2	2.8 mph (4.6 km/h)	3.8 mph (6.1 km/h)	4.8 mph (7.7 km/h)	
3	4.0 mph (6.4 km/h)	5.4 mph (8.7 km/h)	6.7 mph (10.5 km/h)	
4	7.4 mph (11.9 km/h)	9.8 mph (15.8 km/h)	12.3 mph (19.8 km/h)	
1	2.0 mph (3.2 km/h)	2.7 mph (4.4 km/h)	3.4 mph (5.5 km/h)	23.1-30
2	3.1 mph (5.0 km/h)	4.1 mph (6.6 km/h)	5.1 mph (8.2 km/h)	
3	4.3 mph (6.9 km/h)	5.8 mph (9.3 km/h)	7.2 mph (11.6 km/h)	
4	8.0 mph (12.9 km/h)	10.6 mph (17.1 km/h)	13.3 mph (21.4 km/h)	
1	2.0 mph (3.2 km/h)	2.7 mph (4.4 km/h)	3.3 mph (5.3 km/h)	18.4-34
2	3.0 mph (4.8 km/h)	4.1 mph (6.6 km/h)	5.1 mph (8.2 km/h)	
3	4.3 mph (6.9 km/h)	5.7 mph (9.2 km/h)	7.1 mph (11.4 km/h)	
4	7.9 mph (10.7 km/h)	10.5 mph (16.9 km/h)	13.1 mph (21.1 km/h)	
1	2.1 mph (3.4 km/h)	2.8 mph (4.5 km/h)	3.5 mph (5.6 km/h)	20.8-34
2	3.2 mph (5.2 km/h)	4.2 mph (6.8 km/h)	5.3 mph (8.5 km/h)	
3	4.4 mph (7.1 km/h)	5.9 mph (9.5 km/h)	7.4 mph (11.9 km/h)	
4	8.2 mph (13.2 km/h)	10.9 mph (17.5 km/h)	13.6 mph (21.9 km/h)	

APPROXIMATE OVERALL MEASUREMENTS



	TIRE	WHEEL RIM
A	23.1-30 R1	W20L-30

B	127 Inches (3 226mm)	D	216 Inches (5 486mm)	F	206 Inches (5 232mm)
C	102 Inches (2 591mm)	E	165 Inches (4 191mm)	G	15 Inches (381mm)

Overall Width ..... 108 Inches (2 743mm)
Turning Radius Minimum ..... 192 Inches (4 877mm)
Overall Length (w/Hitch Coupler) ..... 223 Inches (5 664mm)

APPROXIMATE SHIPPING WEIGHT

2 WHEEL STEER W/STD. EQUIPMENT ..... 14,800 Pounds (6 713 kg)

TIRE AND WHEEL EQUIPMENT

Front and Rear

TIRE SIZE	TIRE PLY	RIM SIZE	TREAD TYPE	TIRE PRESSURE
18.4-30	6	W16L-30	R1	16 PSI (1.1 kg/cm²)
18.4-34	6	W16L-34	R1 R2-O	16 PSI (1.1 kg/cm²)
20.8-34	8	W18L-34	R1	16 PSI (1.1 kg/cm²)
23.1-30	8	W20L-30	R1 R2-O	16 PSI (1.1 kg/cm²)

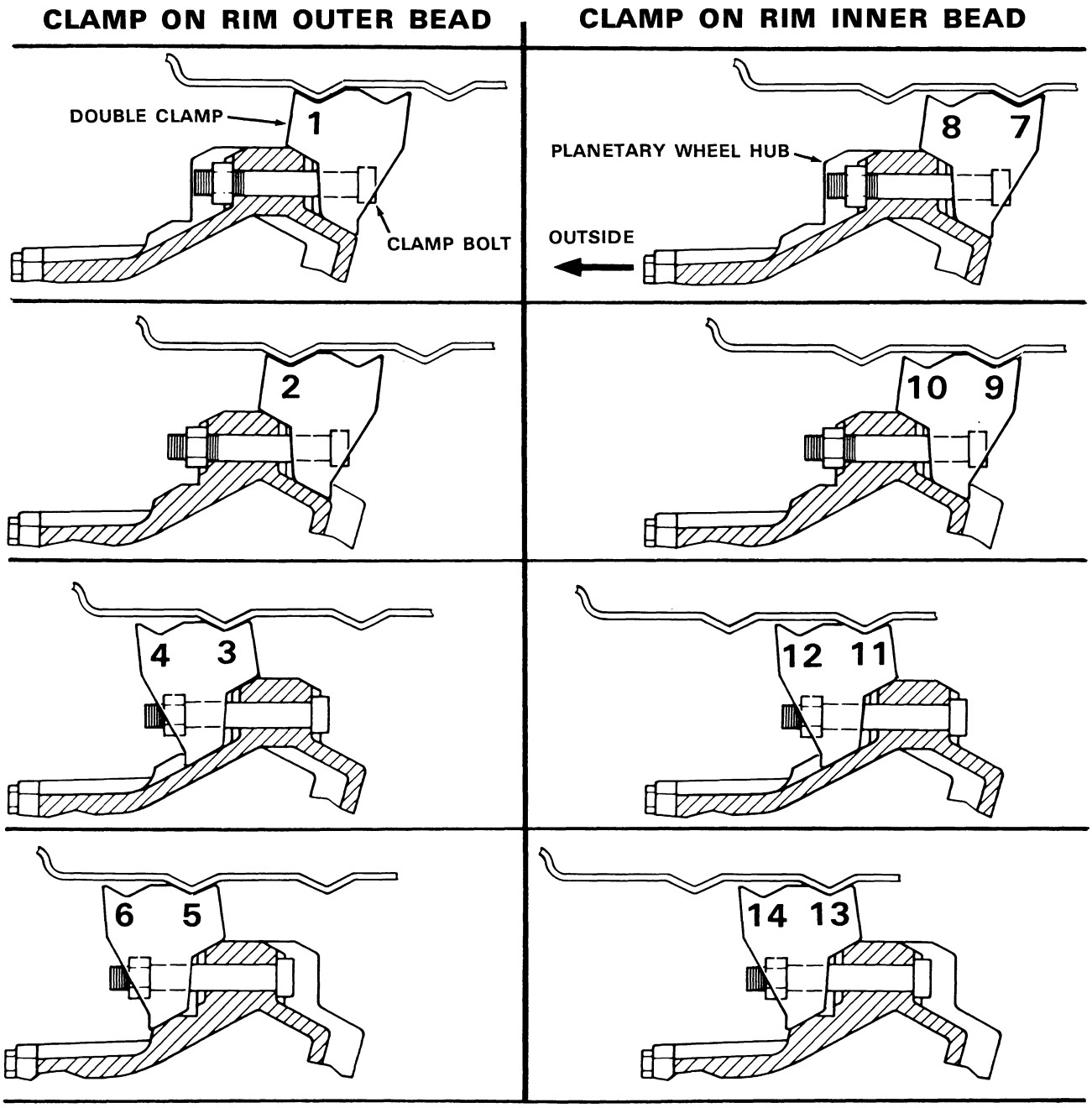
WHEEL TREAD SPACING WITH DOUBLE CLAMP

WHEEL TREAD SPACING	TIRE SIZE & CLAMP LOCATION	
	18.4 X 34 20.8 X 34	23.1 X 30
72 in. (1 828.8mm)	1	1*
74 in. (1 879.6mm)	2	2*
76 in. (1 930.4mm)	7	
78 in. (1 981.2mm)	3 & 9	3 & 7
80 in. (2 032mm)	5 & 8	5 & 9
82 in. (2 082.8mm)	4 & 10	4 & 8
84 in. (2 133.6mm)	6	6 & 10
86 in. (2 184.4mm)	11	
88 in. (2 235.2mm)	13	11
90 in. (2 286mm)	12	13
92 in. (2 336.8mm)	14	12
94 in. (2 387.6mm)		14

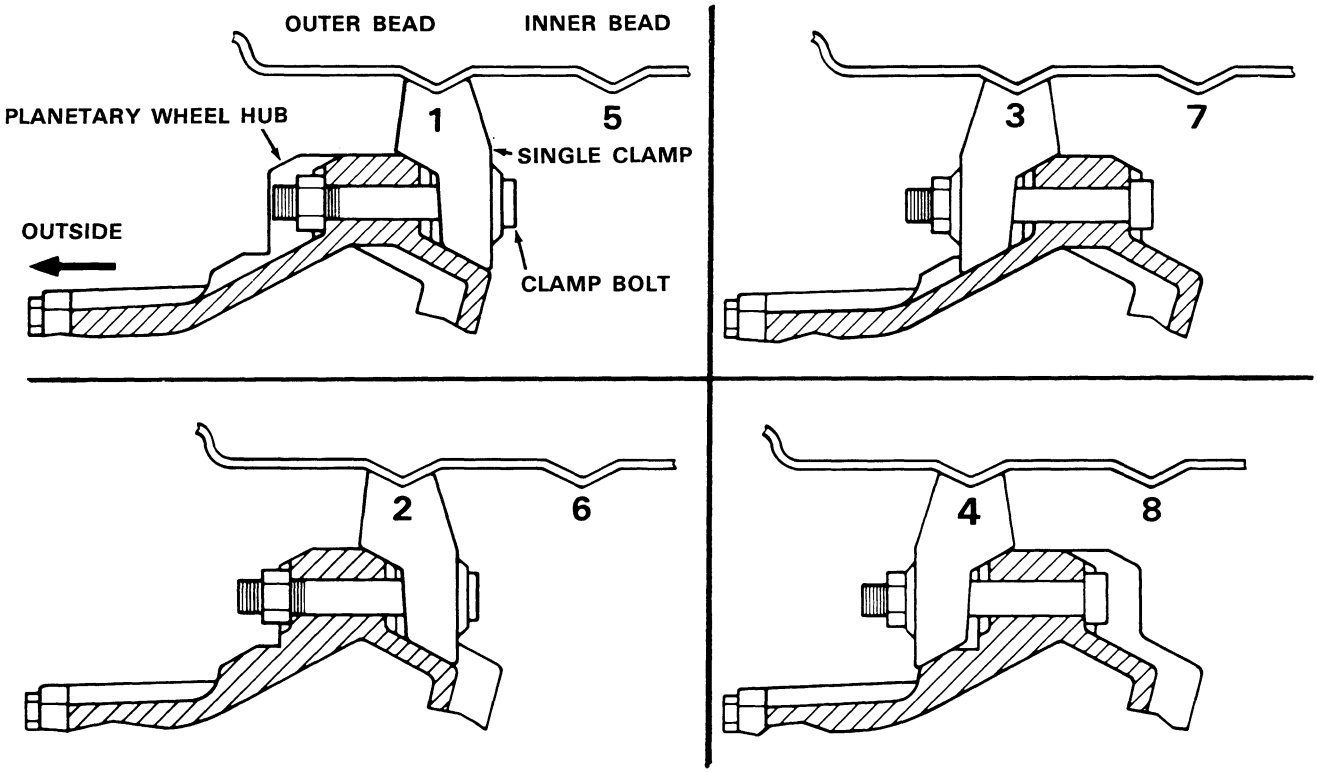
***CAUTION:** This location must not be used or the steering will be greatly reduced and damage to the tires could result.

DOUBLE CLAMP LOCATION

(Use With Page 8)

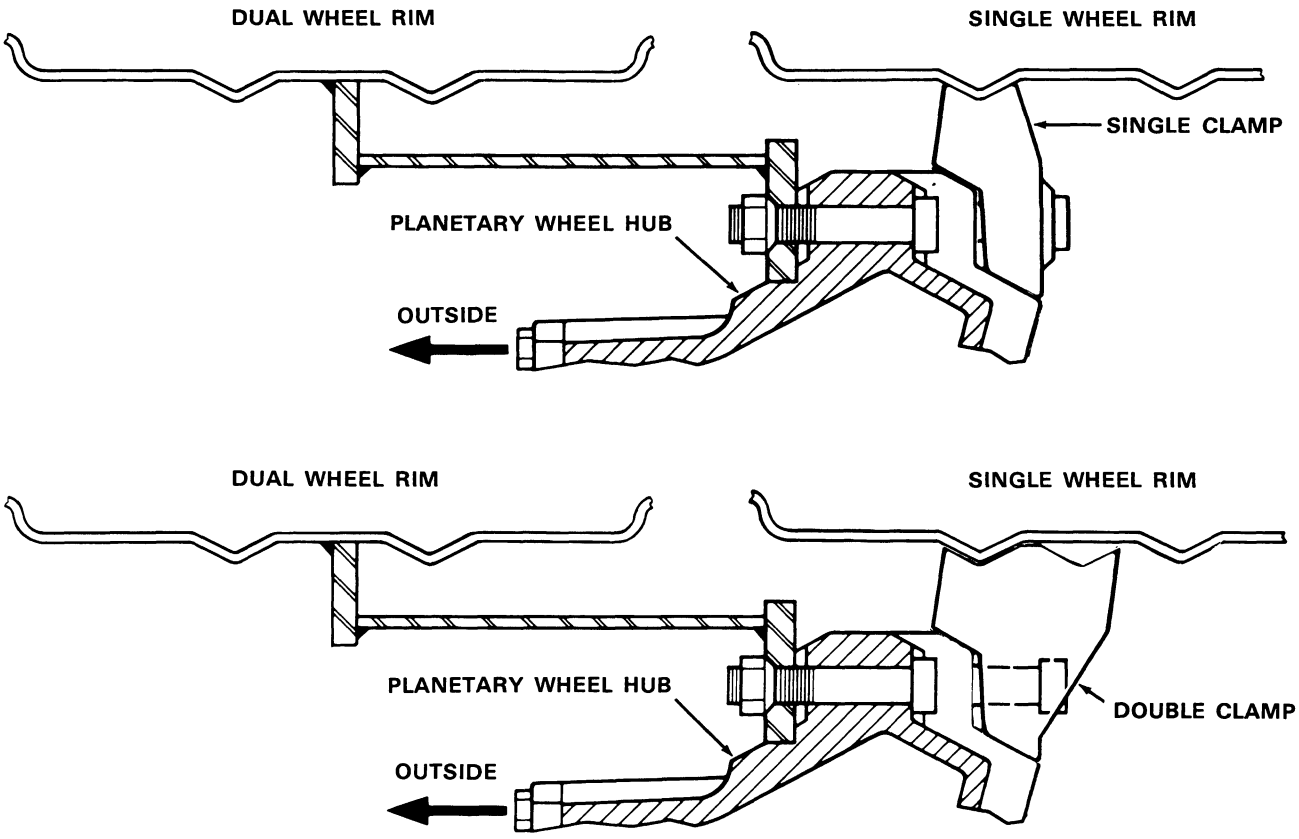


WHEEL TREAD SPACING
WITH SINGLE CLAMP



WHEEL TREAD SPACING	TIRE SIZE & CLAMP LOCATION 18.4 x 30
72 in. (1 828.8mm)	1
74 in. (1 879.6mm)	2
78 in. (1 981.2mm)	3
80 in. (2 032mm)	4 & 5
82 in. (2 082.8mm)	6
86 in. (2 184mm)	7
88 in. (2 235.2mm)	8

DUAL WHEELS



For the 18.4 x 30 or 18.4 x 34 dual wheel tread spacing, the inner wheels and tires must be set at the 72″ tread spacing. Then when the outer dual wheels and tires are installed, the proper running clearance between the tires will be reached.

OPERATOR'S CAB

THIS CASE 2470 OPERATOR'S CAB IS EQUIPPED WITH BUILT IN ROLLOVER PROTECTION AS SPECIFIED IN ASAE STANDARD S-336.

FUEL SPECIFICATIONS

Case Diesel engines are designed to operate most efficiently when using a Number 2 Diesel Fuel. Most well known refiners and distributors market a good grade of Diesel Fuel and there should be no difficulty in obtaining it.

Do not confuse Number 2 Diesel Fuel with Number 2 Furnace Oil, as this does not always meet the fuel specifications for diesel engines.

Specifications

For Suitable Number 2 Diesel Fuel

A.P.I. Gravity (Minimum) 30
Pour Point (Maximum) ..... 10^0 Fahrenheit (5^0C.) below ambient operating temperature.

DISTILLATION:
90% Point ..... 540^0 - 625^0 Fahrenheit (282^0 - 329^0C.)
End point ..... 675^0 Fahrenheit (357^0C.)
FLASH POINT (Minimum) ..... 125^0 Fahrenheit (52^0C.) or legal
Kinematic Viscosity
centistokes@ 100^0 Fahrenheit (38^0C.) ..... 2.0 - 4.3 Seconds*
Cetane No. (Minimum) ..... 40 (45-55 For Winter or high altitude use)
Water and Sediment Vol. (Maximum) ..... .05%
Ash, wt. (Maximum) ..... .01%
Sulphur wt. (Maximum) 5%
Carbon Residue on 10% (Maximum) 2%
Corrosion, Copper Strip,
3 hrs. @ Fahrenheit (100^0C.) ..... No. 3

(*32-40 Saybolt Universal Seconds)

NOTE: The use of Number 1 Diesel Fuel, which is a lighter fuel, may result in a loss of engine power and also increased fuel consumption because it has less heat content and a lower viscosity than Number 2 Diesel Fuel.

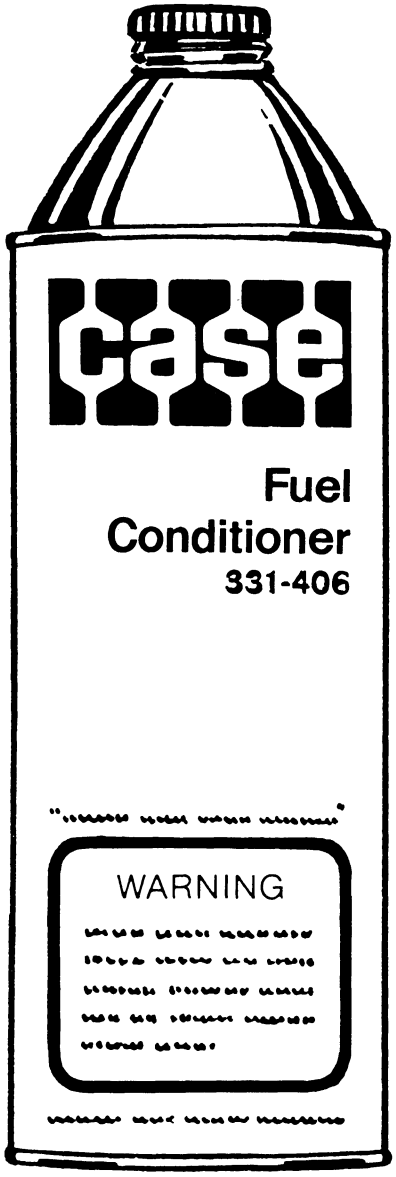
In extremely cold weather, temporary use of No. 1 Diesel Fuel (or a mixture of No. 1 and No. 2 Diesel Fuel) may be necessary. This will keep wax crystals from forming (wax crystals plug fuel filters and prevent fuel flow to the injection pump).

FUEL CONDITIONER

The following fuel conditioner is available from your Authorized Case Dealer to help insure continued fine performance that was designed into your Case Engine.

Case Diesel Fuel Conditioner is recommended for use in all Case Diesel engine fuel systems.

The fuel conditioner should be used as directed on the container.



Prevents gummy deposits from forming in the fuel system.

Eliminates fouling of the injector nozzles and valves.

Helps keep condensation suspended in the fuel, allowing it to be burned with the fuel.

Maintains a higher degree of fuel combustion and higher engine performance from the fuel the engine burns.