

# 521D Loader Service Manual 6-40742 Table of Contents

Description	Section No.	Form No.
<b>General</b> <span style="float: right;"><b>Tab 1</b></span>		
Section Index - General		6-42730
Standard Torque Specifications	1001	8-71602
Fluids and Lubricants	1002	6-40762
Metric Conversion Chart	1003	7-52950
Loctite Product Chart		8-98902
<b>Engines</b> <span style="float: right;"><b>Tab 2</b></span>		
Section Index - Engines		6-42281
Engine and Radiator Removal and Installation	2000	6-42290
Engine and Radiator Removal and Installation P.I.N. JEE0135501 and Above	2000	6-48920
Stall Tests	2002	6-40770
For Engine Repair, See the Engine Service Manual		
<b>Fuel System</b> <span style="float: right;"><b>Tab 3</b></span>		
Section Index - Fuel System		6-42300
For Fuel System Repair, See the Engine Service Manual		
<b>Electrical</b> <span style="float: right;"><b>Tab 4</b></span>		
Section Index - Electrical		6-42311
Removal and Installation of Starter and Alternator	4001	6-42321
Electrical Specifications and Troubleshooting	4002	6-40782
Electrical Specifications and Troubleshooting P.I.N. JEE0135501 and Above	4002	6-48930
Batteries	4003	6-42330
Information and Diagnostic Center	4005	6-42351
Alternator - 65 Ampere	4007	7-12260
Alternator - 45 Ampere	4008	6-42360
<b>Steering</b> <span style="float: right;"><b>Tab 5</b></span>		
Section Index - Steering		6-42370
Removal and Installation of Steering Components	5001	6-42380
Steering Specifications, Pressure Checks, and Troubleshooting	5002	6-40790
Steering Control Valve	5003	6-42390
Steering Priority Valve	5004	6-42400
Steering Cylinders	5005	6-42410
Center Pivot	5006	6-42420
Auxiliary Steering Motor and Pump	5008	6-42430

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## 521D Loader Service Manual 6-40742 Table of Contents

Description	Section No.	Form No.
<b>Power Train</b>		<b>Tab 6</b>
Section Index - Power Train		6-42442
Removal and Installation of Power Train Components	6001	6-42451
Transmission Specifications, Pressure Checks, and Troubleshooting	6002	6-40800
Transmission	6003	6-42460
Front and Rear Axle	6004	6-42470
Front and Rear Axle P.I.N. JEE0135501 and Above	6004	6-48970
Drive Shafts, Center Bearing, and Universal Joints	6005	6-42480
Wheels and Tires	6006	6-42490
Transmission Control Valve	6007	6-42500
<b>Brakes</b>		<b>Tab 7</b>
Section Index - Brakes		6-42510
Removal and Installation of Brake Components	7001	6-42521
Hydraulic Brake Troubleshooting	7002	6-40811
Brake Accumulators	7004	6-42531
Parking Brake	7008	6-42540
<b>NOTE:</b> For parking brake and brake pedal adjustments, see Section 9001.		
<b>Hydraulics</b>		<b>Tab 8</b>
Section Index - Hydraulics		6-42550
Removal and Installation of Hydraulic Components	8001	6-42560
Hydraulic Specifications, Troubleshooting, and Pressure Checks	8002	6-40820
Cleaning the Hydraulic System	8003	7-49640
Cylinders	8006	6-42590
Coupler Solenoid Locking Valve	8007	6-42600
Pilot Pressure Accumulator and Ride Control Accumulator	8013	6-42621
<b>Mounted Equipment</b>		<b>Tab 9</b>
Section Index - Mounted Equipment		6-42640
Pedals and Levers	9001	6-40830
Air Conditioning Troubleshooting and System Checks For Systems with HFC-134a Refrigerant	9002	6-42650
Air Conditioner System Service	9003	6-42660
Removal and Installation of Air Conditioning Components For Systems with HFC-134a Refrigerant	9004	6-42671
Loader	9006	6-42690
ROPS Cab and ROPS Canopy	9007	6-42700
Cab Glass Installation	9010	6-42710

Sample of manual. Download All 1000 pages at:

<https://www.arepairmanual.com/downloads/case-512d-wheel-loaders-service-repair-workshop-manual/>

**521D Loader  
Service Manual  
6-40742  
Table of Contents**

Description	Section No.	Form No.
<b>Electrical Schematic Foldouts and Hydraulic Schematic Foldout</b>	<b>In Rear Pocket</b>	<b>6-40841</b>
<b>Electrical Schematic Foldouts and Hydraulic Schematic Foldout P.I.N JEE0135501 and Above</b>	<b>In Rear Pocket</b>	<b>6-49280</b>

**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.

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# SECTION INDEX

## GENERAL

<b>Section Title</b>	<b>Section Number</b>
Standard Torque Specifications . . . . .	1001
Fluids and Lubricants . . . . .	1002
Metric Conversion Chart . . . . .	1003
Loctite Product Chart	

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# Section 1001

## STANDARD TORQUE SPECIFICATIONS

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## TABLE OF CONTENTS

TORQUE SPECIFICATIONS - DECIMAL HARDWARE .....	3
TORQUE SPECIFICATIONS - METRIC HARDWARE .....	4
TORQUE SPECIFICATIONS - STEEL HYDRAULIC FITTINGS .....	5
TORQUE SPECIFICATIONS - STEEL HYDRAULIC FITTINGS .....	6

**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.

## TORQUE SPECIFICATIONS - DECIMAL HARDWARE

Use the torques in this chart when special torques are not given. These torques apply to fasteners with both UNC and UNF threads as received from suppliers dry, or when lubricated with engine oil. Not applicable if special graphities, Molydisulfide greases, or other extreme pressure lubricants are used.

Grade 5 Bolts, Nuts, and Studs		
		
Size	Pound-Inches	Newton metres
1/4 inch	108 to 132	12 to 15
5/16 inch	204 to 252	23 to 28
3/8 inch	420 to 504	48 to 57
Size	Pound-Feet	Newton metres
7/16 inch	54 to 64	73 to 87
1/2 inch	80 to 96	109 to 130
9/16 inch	110 to 132	149 to 179
5/8 inch	150 to 180	203 to 244
3/4 inch	270 to 324	366 to 439
7/8 inch	400 to 480	542 to 651
1.0 inch	580 to 696	787 to 944
1-1/8 inch	800 to 880	1085 to 1193
1-1/4 inch	1120 to 1240	1519 to 1681
1-3/8 inch	1460 to 1680	1980 to 2278
1-1/2 inch	1940 to 2200	2631 to 2983

Grade 8 Bolts, Nuts, and Studs		
		
Size	Pound-Inches	Newton metres
1/4 inch	144 to 180	16 to 20
5/16 inch	288 to 348	33 to 39
3/8 inch	540 to 648	61 to 73
Size	Pound-Feet	Newton metres
7/16 inch	70 to 84	95 to 114
1/2 inch	110 to 132	149 to 179
9/16 inch	160 to 192	217 to 260
5/8 inch	220 to 264	298 to 358
3/4 inch	380 to 456	515 to 618
7/8 inch	600 to 720	814 to 976
1.0 inch	900 to 1080	1220 to 1465
1-1/8 inch	1280 to 1440	1736 to 1953
1-1/4 inch	1820 to 2000	2468 to 2712
1-3/8 inch	2380 to 2720	3227 to 3688
1-1/2 inch	3160 to 3560	4285 to 4827
<b>NOTE:</b> Use thick nuts with Grade 8 bolts.		

## TORQUE SPECIFICATIONS - METRIC HARDWARE

Use the following torques when specifications are not given.

These values apply to fasteners with coarse threads as received from supplier, plated or unplated, or when lubricated with engine oil. These values do not apply if graphite or Molydisulfide grease or oil is used.

<b>Grade 8.8 Bolts, Nuts, and Studs</b>		
		
Size	Pound-Inches	Newton metres
M4	24 to 36	3 to 4
M5	60 to 72	7 to 8
M6	96 to 108	11 to 12
M8	228 to 276	26 to 31
M10	456 to 540	52 to 61
Size	Pound-Feet	Newton metres
M12	66 to 79	90 to 107
M14	106 to 127	144 to 172
M16	160 to 200	217 to 271
M20	320 to 380	434 to 515
M24	500 to 600	675 to 815
M30	920 to 1100	1250 to 1500
M36	1600 to 1950	2175 to 2600

<b>Grade 10.9 Bolts, Nuts, and Studs</b>		
		
Size	Pound-Inches	Newton metres
M4	36 to 48	4 to 5
M5	84 to 96	9 to 11
M6	132 to 156	15 to 18
M8	324 to 384	37 to 43
Size	Pound-Feet	Newton metres
M10	54 to 64	73 to 87
M12	93 to 112	125 to 150
M14	149 to 179	200 to 245
M16	230 to 280	310 to 380
M20	450 to 540	610 to 730
M24	780 to 940	1050 to 1275
M30	1470 to 1770	2000 to 2400
M36	2580 to 3090	3500 to 4200

### Grade 12.9 Bolts, Nuts, and Studs



Usually the torque values specified for grade 10.9 fasteners can be used satisfactorily on grade 12.9 fasteners.

## TORQUE SPECIFICATIONS - STEEL HYDRAULIC FITTINGS

Tube OD Hose ID	Thread Size	Pound- Inches	Newton metres
<b>37 Degree Flare Fitting</b>			
1/4 inch 6.4 mm	7/16-20	72 to 144	8 to 16
5/16 inch 7.9 mm	1/2-20	96 to 192	11 to 22
3/8 inch 9.5 mm	9/16-18	120 to 300	14 to 34
1/2 inch 12.7 mm	3/4-16	180 to 504	20 to 57
5/8 inch 15.9 mm	7/8-14	300 to 696	34 to 79
Tube OD Hose ID	Thread Size	Pound- Inches	Newton metres
3/4 inch 19.0 mm	1-1/16-12	40 to 80	54 to 108
7/8 inch 22.2 mm	1-3/16-12	60 to 100	81 to 135
1.0 inch 25.4 mm	1-5/16-12	75 to 117	102 to 158
1-1/4 inch 31.8 mm	1-5/8-12	125 to 165	169 to 223
1-1/2 inch 38.1 mm	1-7/8-12	210 to 250	285 to 338

Tube OD Hose ID	Thread Size	Pound- Inches	Newton metres
<b>Straight Threads with O-ring</b>			
1/4 inch 6.4 mm	7/16-20	144 to 228	16 to 26
5/16 inch 7.9 mm	1/2-20	192 to 300	22 to 34
3/8 inch 9.5 mm	9/16-18	300 to 480	34 to 54
1/2 inch 12.7 mm	3/4-16	540 to 804	57 to 91
Tube OD Hose ID	Thread Size	Pound- Inches	Newton metres
5/8 inch 15.9 mm	7/8-14	58 to 92	79 to 124
3/4 inch 19.0 mm	1-1/16-12	80 to 128	108 to 174
7/8 inch 22.2 mm	1-3/16-12	100 to 160	136 to 216
1.0 inch 25.4 mm	1-5/16-12	117 to 187	159 to 253
1-1/4 inch 31.8 mm	1-5/8-12	165 to 264	224 to 357
1-1/2 inch 38.1 mm	1-7/8-12	250 to 400	339 to 542

<b>Split Flange Mounting Bolts</b>		
Size	Pound- Inches	Newton metres
5/16-18	180 to 240	20 to 27
3/8-16	240 to 300	27 to 34
7/16-14	420 to 540	47 to 61
Size	Pound- Feet	Newton metres
1/2-13	55 to 65	74 to 88
5/8-11	140 to 150	190 to 203

## TORQUE SPECIFICATIONS - STEEL HYDRAULIC FITTINGS

Nom. SAE Dash Size	Tube OD	Thread Size	Pound-Inches	Newton metres	Thread Size	Pound-Inches	Newton metres
<b>O-ring Face Seal End</b>					<b>O-ring Boss End Fitting or Lock Nut</b>		
-4	1/4 inch 6.4 mm	9/16-18	120 to 144	14 to 16	7/16-20	204 to 240	23 to 27
-6	3/8 inch 9.5 mm	11/16-16	216 to 240	24 to 27	9/16-18	300 to 360	34 to 41
-8	1/2 inch 12.7 mm	13/16-16	384 to 480	43 to 54	3/4-16	540 to 600	61 to 68
					Thread Size	Pound-Inches	Newton metres
-10	5/8 inch 15.9 mm	1-14	552 to 672	62 to 76	7/8-14	60 to 65	81 to 88
Nom. SAE Dash Size	Tube OD	Thread Size	Pound-Inches	Newton metres	1-1/16-12	85 to 90	115 to 122
					1-3/16-12	95 to 100	129 to 136
-12	3/4 inch 19.0 mm	1-3/16-12	65 to 80	90 to 110	1-5/16-12	115 to 125	156 to 169
-14	7/8 inch 22.2 mm	1-3/16-12	65 to 80	90 to 110	1-5/8-12	150 to 160	203 to 217
-16	1.0 inch 25.4 mm	1-7/16-12	92 to 105	125 to 140	1-7/8-12	190 to 200	258 to 271
-20	1-1/4 inch 31.8 mm	1-11/16-12	125 to 140	170 to 190			
-24	1-1/2 inch 38.1 mm	2-12	150 to 180	200 to 254			

# Section 1002

1002

## FLUIDS AND LUBRICANTS

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## TABLE OF CONTENTS

CAPACITIES AND LUBRICANTS .....	3
CONVERSION FORMULAS .....	3
ENGINE OIL RECOMMENDATIONS .....	4
DIESEL FUEL SYSTEM .....	5
Fuel Storage .....	5
Specifications for Acceptable No. 2 Diesel Fuel .....	5
MAINTENANCE SCHEDULE .....	6
Model 521D .....	6
MAINTENANCE SCHEDULE .....	7
Model 521D .....	7

## CAPACITIES AND LUBRICANTS

### Engine Oil

Capacity with Filter Change ..... 11.3 litres (12 U.S. quarts)  
 Type of oil ..... Case No. 1 engine oil - see engine oil recommendations on page 4

### Engine Cooling System

Capacity ..... 34.1 litres (36 U.S. quarts)  
 Type of Coolant ..... Ethylene glycol and water mixed for lowest ambient temperature (at least 50/50 mix)

### Fuel Tank

Capacity ..... 189 litres (50 U.S. gallons)  
 Type of Fuel ..... See Diesel fuel specifications on page 5

### Hydraulic System

Hydraulic Reservoir Refill Capacity with Filter Change ..... 68.5 litres (72 U.S. quarts)  
 Total System Capacity ..... 113.6 litres (30 gallons)  
 Type of Oil ..... MS-1209 Hy-Tran® Ultra

### Transmission

Refill Capacity with Filter Change ..... 18.9 litres (20 U.S. quarts)  
 Total System Capacity ..... 26 litres (27.5 U.S. quarts)  
 Type of Oil ..... MS-1209 Hy-Tran® Ultra

### Axles

Capacity  
 Front ..... 21.8 litres (23 quarts)  
 Rear ..... 20.8 litres (22 quarts)  
 Type of Lubricant ..... SAE 80W140

### Brake System

Type of Fluid (Same as Hydraulic System) ..... MS-1209 Hy-Tran® Ultra

**NOTE:** *DO NOT use an alternate oil in the axles. The brake components in the axles could be damaged as a result of using an alternate oil.*

## CONVERSION FORMULAS

Imperial quart = litres x 0.879877

Imperial gallons = litres x 0.219969

## ENGINE OIL RECOMMENDATIONS

Case IH No. 1 Engine oil is recommended for use in your Case engine. Case IH No. 1 Engine Oil will lubricate your engine correctly under all operating conditions.

If Case No. 1 Multi-Viscosity or Single Grade Engine Oil is not available, use only oil meeting API engine oil service category CH.



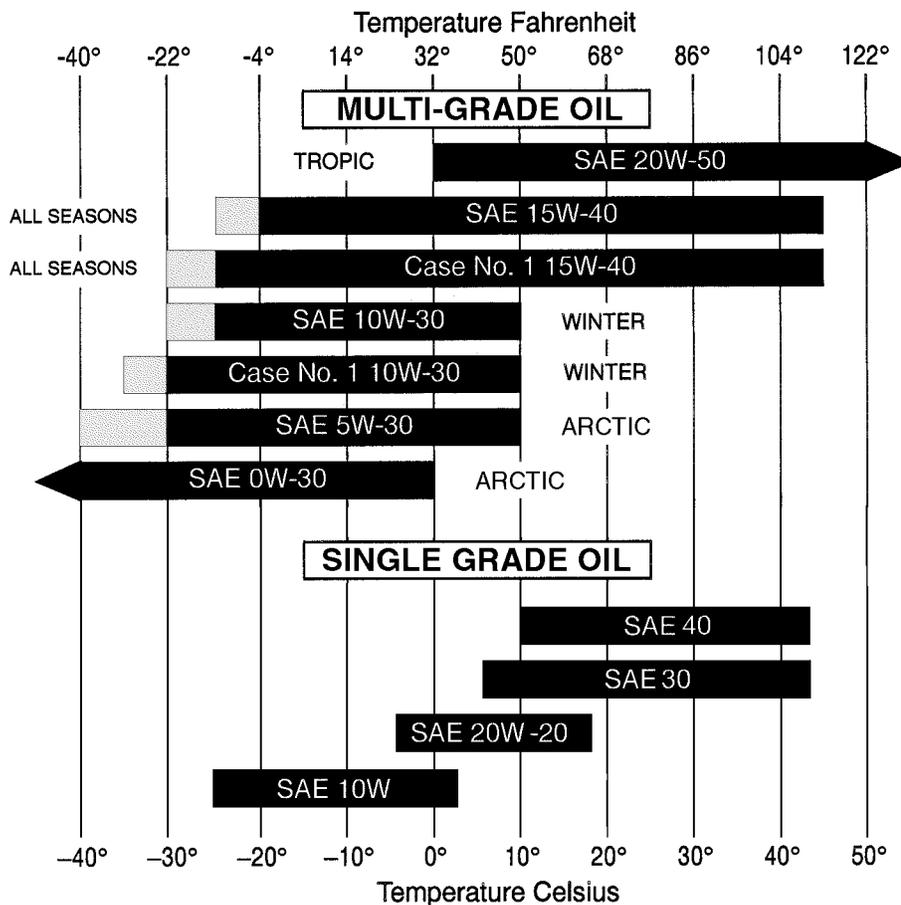
BP99J241



RH99K130

See the chart below for recommended viscosity at ambient air temperature ranges.

**NOTE:** Do not put performance additives or other oil additive products in the engine crankcase. The oil change intervals given in this manual are according to tests with Case lubricants.



■ Indicates use of an engine oil heater or a jacket water heater is required.

## DIESEL FUEL SYSTEM

Use No. 2 diesel fuel in the engine of this machine. The use of other fuels can cause the loss of engine power and high fuel consumption.

In very cold temperatures, a mixture of No. 1 and No. 2 diesel fuels is temporarily permitted. See the following Note.

**NOTE:** See your fuel dealer for winter fuel requirements in your area. If the temperature of the fuel lowers below the cloud point (wax appearance point), wax crystals in the fuel will restrict the fuel filter and cause the engine to lose power or not start.

The diesel fuel used in this machine must meet the specifications as shown below in, "Specifications for Acceptable No. 2 Diesel Fuel", or "Specification D975-81" of the American Society for Testing and Materials.

### Specifications for Acceptable No. 2 Diesel Fuel

API gravity, minimum .....	34
Flash point, minimum .....	60°C (140°F)
Cloud point (wax appearance point), maximum .....	-20°C (-5°F) See Note above
Pour point, maximum .....	-26°C (-15°F) See Note above
Distillation temperature, 90% point .....	282 to 338°C (540 to 640°F)
Viscosity, at 38°C (100°F)	
Centistokes .....	2.0 to 4.3
Cetane number, minimum .....	43 (45 to 55 for winter or high altitudes)
Water and sediment, by volume, maximum .....	0.05%

### Fuel Storage

If you keep fuel in storage for a period of time, you can get foreign material or water in the fuel storage tank. Many engine problems are caused by water in the fuel.

Keep the fuel storage tank outside and keep the fuel as cool as possible. Remove water from the storage container at regular periods of time.

Fill the fuel tank at the end of the daily operating period to prevent condensation in the fuel tank.

# MAINTENANCE SCHEDULE

## Model 521D

### Instructions

#### AS REQUIRED

- 22 SERVICE THE AIR CLEANER IF THE AIR CLEANER WARNING LAMP ILLUMINATES..... SEE OPERATORS MANUAL  
 30 REPLACE THE TRANSMISSION FILTER  
     IF THE TRANSMISSION FILTER RESTRICTION WARNING LAMP ILLUMINATES ..... USE CASE FILTER  
 19 CHECK THE RADIATOR COOLANT LEVEL IF THE WARNING LAMP ILLUMINATES ..... SEE OPERATORS MANUAL  
 6 REPLACE THE HYDRAULIC FILTER IF THE HYDRAULIC FILTER WARNING LAMP ILLUMINATES..... USE CASE FILTER  
     CHECK THE AIR CONDITIONING DRIVE TENSION (IF EQUIPPED) NOT SHOWN .....ADJUST AS REQUIRED

#### EVERY 10 HOURS OF OPERATION OR EACH DAY - WHICHEVER OCCURS FIRST

- 16 CHECK THE ENGINE OIL LEVEL ..... SEE OPERATORS MANUAL

#### EVERY 50 HOURS OF OPERATION

- 1 CHECK THE COOLANT RESERVOIR FLUID LEVEL ..... ETHYLENE GLYCOL AND WATER  
 29 CHECK THE TRANSMISSION OIL LEVEL (ENGINE RUNNING AND OIL WARM)..... SEE OPERATORS MANUAL  
 5 CHECK THE HYDRAULIC RESERVOIR FLUID LEVEL ..... SEE OPERATORS MANUAL  
 38 LUBRICATE THE BUCKET AND BELLCRANK PIVOT POINTS (10 FITTINGS) XT ..... CASE MOLYDISULFIDE GREASE  
 39 LUBRICATE THE BELLCRANK AND BUCKET PIVOTS (6 FITTINGS) Z-BAR ..... CASE MOLYDISULFIDE GREASE

#### EVERY 100 HOURS OF OPERATION

- 7 LUBRICATE THE STEERING CYLINDER PIVOTS - ROD AND CLOSED END (4 FITTINGS) ..... CASE MOLYDISULFIDE GREASE  
 40 LUBRICATE THE LOADER LIFT ARM AND CYLINDER PIVOTS (7 FITTINGS) Z-BAR ..... CASE MOLYDISULFIDE GREASE  
 26 LUBRICATE THE FRONT DRIVE SHAFT SUPPPORT BEARING (1 FITTING) ..... CASE MOLYDISULFIDE GREASE  
 8 LUBRICATE THE LOADER LIFT ARM AND CYLINDER PIVOTS (14 FITTINGS) XT ..... CASE MOLYDISULFIDE GREASE

#### EVERY 250 HOURS OF OPERATION

- 19 CHECK THE RADIATOR COOLANT LEVEL ..... ETHYLENE GLYCOL AND WATER  
 2 CHANGE THE ENGINE OIL AND REPLACE THE ENGINE OIL FILTER ..... SEE OPERATORS MANUAL  
 34 CHECK THE BATTERY FLUID LEVEL ..... SEE OPERATORS MANUAL  
 36 CHECK THE TIRE CONDITION AND AIR PRESSURE ..... SEE OPERATORS MANUAL  
 12 CLEAN THE CAB AIR FILTERS (IF EQUIPPED) ..... SEE OPERATORS MANUAL

#### EVERY 500 HOURS OF OPERATION

- 3 REPLACE THE FUEL FILTER ..... USE CASE FILTER  
 33 DRAIN WATER AND SEDIMENT FROM THE FUEL TANK ..... SEE OPERATORS MANUAL  
 14 REPLACE THE IN-LINE FUEL FILTER ..... USE CASE FILTER

#### EVERY 1000 HOURS OF OPERATION

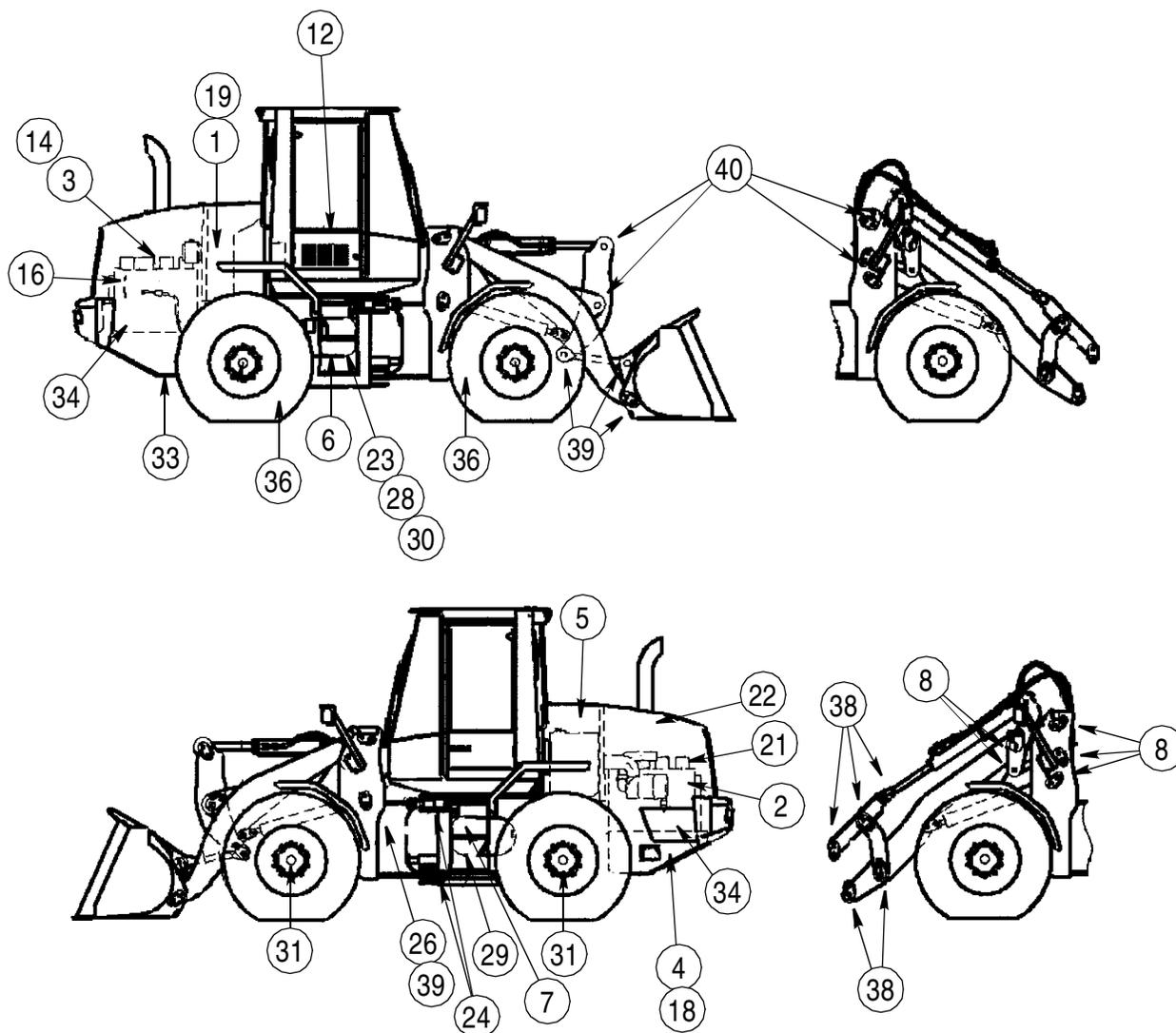
- 21 CHECK THE ENGINE VALVE CLEARANCES .....SEE SERVICE MANUAL  
 6 REPLACE THE HYDRAULIC FILTER ..... USE CASE FILTER  
 30 REPLACE THE TRANSMISSION OIL FILTER ..... USE CASE FILTER  
 28 CHANGE THE TRANSMISSION OIL ..... SEE OPERATORS MANUAL  
 23 CLEAN THE TRANSMISSION BREATHER ..... CLEAN WITH SOLVENT  
 24 LUBRICATE THE UPPER AND LOWER CHASSIS PIVOTS (2 FITTINGS) ..... CASE MOLYDISULFIDE GREASE  
 31 CHANGE THE FRONT/REAR AXLE OIL ..... SEE OPERATORS MANUAL

#### EVERY 2000 HOURS OF OPERATION OR EACH YEAR - WHICHEVER OCCURS FIRST

- 4 CHANGE THE HYDRAULIC OIL ..... SEE OPERATORS MANUAL  
 18 DRAIN, FLUSH AND REFILL THE ENGINE COOLING SYSTEM ..... ETHYLENE GLYCOL AND WATER  
 22 REPLACE THE AIR CLEANER ELEMENTS ..... USE CASE FILTERS

# MAINTENANCE SCHEDULE

## Model 521D



BS01B021

If you operate the machine in severe conditions, lubricate and service the machine more frequently. It is recommended that you see your Case dealer for information on the System Guard Lubrication Analysis System.

See your Operators manual for maintenance of safety related items and for detailed information of the service items on this chart. Operators and service manuals are available for this machine from your Case dealer.

**NOTES**

# Section 1003

1003

## METRIC CONVERSION CHART

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## TABLE OF CONTENTS

CONVERSION FACTORS .....	3
Metric to U.S. ....	3
U.S. to Metric .....	4

## CONVERSION FACTORS Metric to U.S.

	<u>MULTIPLY</u>	<u>BY</u>	<u>TO OBTAIN</u>
<b>Area:</b>	sq. meter hectare	10.763 91 2.471 05	square foot acre
<b>Force:</b>	newton newton	3.596 942 0.224 809	ounce force pound force
<b>Length:</b>	millimeter meter kilometer	0.039 370 3.280 840 0.621 371	inch foot mile
<b>Mass:</b>	kilogram	2.204 622	pound
<b>Mass/Area:</b>	kilogram/hectare	0.000 466	ton/acre
<b>Mass/Energy:</b>	gr/kW/hr.	0.001 644	lbs/hp/hr.
<b>Mass/Volume:</b>	kg/cubic meter	1.685 555	lb/cubic yd.
<b>Power:</b>	kilowatt	1.341 02	horsepower
<b>Pressure:</b>	kilopascal bar	0.145 038 14.50385	lb/sq. inch lb/sq. inch
<b>Temperature:</b>	degree C	1.8 x C +32	degree F
<b>Torque:</b>	newton meter newton meter	8.850 748 0.737 562	lb/inch lb/foot
<b>Velocity:</b>	kilometer/hr.	0.621 371	miles/hr.
<b>Volume:</b>	cubic centimeter cubic meter cubic meter milliliter litre litre litre litre	0.061 024 35.314 66 1.307 950 0.033 814 1.056 814 0.879 877 0.264 172 0.219 969	cubic inch cubic foot cubic yd. ounce (US fluid) quart (US liquid) quart (Imperial) gallon (US liquid) gallon (Imperial)
<b>Volume/Time:</b>	litre/min. litre/min.	0.264 172 0.219 969	gallon/min. (US liquid) gallon/min. (Imperial)

## U.S. to Metric

	<b><u>MULTIPLY</u></b>	<b><u>BY</u></b>	<b><u>TO OBTAIN</u></b>
<b>Area:</b>	square foot acre	0.092 903 0.404 686	square meter hectare
<b>Force:</b>	ounce force pound force	0.278 014 4.448 222	newton newton
<b>Length:</b>	inch foot mile	25.4 * 0.304 8 * 1.609 344 *	millimeter meter kilometer
<b>Mass:</b>	pound ounce	0.453 592 28.35	kilogram gram
<b>Mass/Area:</b>	ton/acre	2241 702	kilogram/hectare
<b>Mass/Energy:</b>	lb/hp/hr	608.277 4	gr/kW/hr
<b>Mass/Volume:</b>	lb/cubic yd.	0.593 276	kg/cubic meter
<b>Power:</b>	horsepower	0.745 700	kilowatt
<b>Pressure:</b>	lbs/sq. in. lbs/sq. in. lbs/sq. in.	6.894 757 0.069 0.070 303	kilopascal bar kg/sq. cm
<b>Temperature:</b>	degree F	1.8 F - 32	degree C
<b>Torque:</b>	pound/inch pound/foot	0.112 985 1.355 818	newton meter newton meter
<b>Velocity:</b>	miles/hr.	1.609 344 *	kilometer/hr.
<b>Volume:</b>	cubic inch cubic foot cubic yard ounce (US fluid) quart (US liquid) quart (Imperial) gallon (US) gallons (Imperial)	16.387 06 0.028 317 0.764.555 29.573 53 0.946 353 1.136 523 3.785 412 4.546 092	cubic centimeter cubic meter cubic meter milliliter litre litre litre litre
<b>Volume/Time:</b>	gallon/min.	3.785 412	litre/min.

\* = exact

# 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 +450	30 min/24 hrs	764	High Temperature, High Strength
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		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 hr	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

# 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	1hr/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 INDEX

## ENGINES

<b>Section Title</b>	<b>Section Number</b>
Engine and Radiator Removal and Installation .....	2000
Engine and Radiator Removal and Installation P.I.N. JEE0135501 and Above .....	2000
Stall Tests .....	2002

**FOR ENGINE REPAIR, SEE THE ENGINE SERVICE MANUAL**

**CASE CORPORATION**  
700 State Street  
Racine, WI 53404 U.S.A.

**CASE CANADA CORPORATION**  
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# Section 2000

## ENGINE AND RADIATOR REMOVAL AND INSTALLATION

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2000

## TABLE OF CONTENTS

ENGINE .....	3
Removal .....	3
Installation .....	15
RADIATOR .....	27
Removal .....	27
Installation .....	29

## SPECIFICATIONS

Cooling System Capacity .....	34.1 Liters (9 Gallons)
Engine Oil	
Capacity with Filter Change .....	10.5 Liters (11 Quarts)
Type of Oil .....	Case No. 1 Engine Oil (SAE 15W-40)
Hydraulic Reservoir	
Refill Capacity with Filter Change .....	68.5 Liters (18 Gallons)
Type of Oil .....	MS-1209 Hy-Tran Ultra®

## SPECIAL TORQUES

Engine Mounting Bolts .....	.244 to 298 Nm (180 to 220 lb-ft)
Engine Drive Shaft Mounting Bolts .....	.53 to 62 Nm (39 to 46 lb-ft)
Radiator Hose Clamps .....	10.1 to 11.3 Nm (90 to 100 lb-inch)
Counterweight Mounting Nuts .....	.693 to 780 Nm (510 to 575 lb-ft)
Counterweight Mounting Bolts .....	.955 to 1075 Nm (704 to 793 lb-ft)
Charge Air Tube Hose Clamps .....	10.1 to 11.3 Nm (90 to 100 lb-inch)
Muffler Front Mounting Bracket Mounting Bolts .....	.118 to 133 Nm (87 to 98 lb-ft)
Muffler Rear Mounting Bracket Mounting Bolts .....	.34 to 39 Nm (25 to 28 lb-ft)
Turbocharger Elbow Clamp at Muffler .....	.20 to 25 Nm (15 to 18 lb-ft)
Turbocharger Elbow Clamp at Turbocharger .....	.4.8 to 5.2 Nm (42.5 to 46 lb-inch)
Air Cleaner Hose Clamp at Turbocharger .....	10.1 to 11.3 Nm (90 to 100 lb-inch)
Air Cleaner Inlet Hose Clamp .....	3.6 to 4.5 Nm (32.9 to 39.6 lb-inch)
Hood Mounting Bolts at Cooling Frame Pivot Points .....	.36 to 45 Nm (26.5 to 32.5 lb-ft)
Screen Hinge Mounting Bolts .....	.27 to 33 Nm (19.8 to 24.4 lb-ft)
Coupler to Flywheel Mounting Bolts .....	.53 to 62 Nm (39 to 46 lb-ft)