570MXT Loader Landscaper

Service Manual
6-43571

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Reprinted

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

Bur 6-43581

Issued July, 2001 Revised October, 2004

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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.

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GENERAL

CASE CORPORATION
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Printed in U.S.A.
July, 2001

Section

1001

STANDARD TORQUE SPECIFICATIONS

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Printed in U.S.A.
September, 1998

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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	Newton metres	Pound-Inches
1/4 inch	10 to 12	91 to 103
5/16 inch	21 to 24	188 to 212
3/8 inch	38 to 43	336 to 378
		Pound-Feet
7/16 inch	61 to 69	45 to 51
1/2 inch	94 to 104	68 to 76
9/16 inch	132 to 149	98 to 110
5/8 inch	183 to 210	138 to 155
3/4 inch	325 to 370	242 to 270
7/8 inch	530 to 595	390 to 435
1.0 inch	790 to 890	585 to 655
1-1/8 inch	980 to 1100	725 to 805
1-1/4 inch	1385 to 1555	1020 to 1145
1-3/8 inch	1810 to 2030	1335 to 1495
1-1/2 inch	2400 to 2700	1770 to 1990

Grade 8 Bolts, Nuts, and Studs

Size	Newton metres	Pound-Inches
1/4 inch	15 to 16	130 to 145
5/16 inch	30 to 34	268 to 301
3/8 inch	54 to 60	474 to 534
		Pound-Feet
7/16 inch	86 to 97	63 to 71
1/2 inch	132 to 149	96 to 110
9/16 inch	191 to 213	140 to 155
5/8 inch	260 to 293	190 to 215
3/4 inch	480 to 515	340 to 380
7/8 inch	745 to 835	550 to 615
1.0 inch	1120 to 1280	825 to 925
1-1/8 inch	1585 to 1785	1170 to 1315
1-1/4 inch	2215 to 2235	1650 to 1855
1-3/8 inch	2930 to 3295	2160 to 2430
1-1/2 inch	3895 to 4375	2870 to 3225

NOTE: *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 both coarse and fine 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. Use of a click type torque wrench, or better is required.

Grade 8.8 Bolts, Nuts, and Studs

Size	Newton metres	Pound-Inches
M4	3 to 4	31 to 35
M5	5 to 6	49 to 55
M6	10 to 11	84 to 94
M8	23 to 26	229 to 277
M10	46 to 51	408 to 460
		Pound-Feet
M12	80 to 90	59 to 66
M14	128 to 145	94 to 106
M16	200 to 220	149 to 161
M20	400 to 450	293 to 330
M24	690 to 780	510 to 575
M30	1375 to 1545	1010 to 1140
M36	2400 to 2700	1770 to 1990

Grade 10.9 Bolts, Nuts, and Studs

Size	Newton metres	Pound-Inches
M4	5 to 6	44 to 49
M5	8 to 9	71 to 79
M6	14 to 15	120 to 136
M8	33 to 37	293 to 329
		Pound-Feet
M10	65 to 74	48 to 54
M12	114 to 128	85 to 94
M14	183 to 205	136 to 153
M16	285 to 320	208 to 235
M20	555 to 620	406 to 460
M24	955 to 1075	705 to 790
M30	1900 to 2140	1400 to 1580
M36	3315 to 3730	2445 to 2750

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

37 Degree Flare Fitting

Nom. SAE Dash Size	Tube OD/Hose ID	Thread Size	Newton metres	Pound-Inches
-2		5/16 - 24	8 to 9	72 to 84
-3		3/8 - 24	11 to 12	96 to 108
-4	6.4 mm (1/4 inch)	7/16 - 20	14 to 16	120 to 144
-5	7.9 mm (5/16 inch)	1/2 - 20	18 to 21	156 to 192
-6	9.5 mm (3/8 inch)	9/16 - 18	27 to 33	240 to 300
-8	12.7 mm (1/2 inch)	3/4 - 16	46 to 56	408 to 504
-10	15.9 mm (5/8 inch)	7/8 - 14	77 to 85	684 to 756
				Pound-Feet
-12	19.0 mm (3/4 inch)	1-1/16 - 12	107 to 119	79 to 88
-14	22.2 mm (7/8 inch)	1-3/16 - 12	127 to 140	94 to 103
-16	25.4 mm (1.0 inch)	1-5/16 - 12	131 to 156	97 to 117
-20	31.8 mm (1-1/4 inch)	1-5/8 - 12	197 to 223	145 to 165
-24	38.1 mm (1-1/2 inch)	1-7/8 - 12	312 to 338	230 to 250

Straight Threads with O-ring

Nom. SAE Dash Size	Tube OD/Hose ID	Thread Size	Newton metres	Pound-Inches
-2		5/16 - 24	8 to 9	72 to 84
-3		3/8 - 24	11 to 12	96 to 108
-4	6.4 mm (1/4 inch)	7/16-20	20 to 25	180 to 228
-5	7.9 mm (5/16 inch)	1/2-20	27 to 33	240 to 300
-6	9.5 mm (3/8 inch)	9/16-18	43 to 54	384 to 480
-8	12.7 mm (1/2 inch)	3/4-16	73 to 90	648 to 804
				Pound-Feet
-10	15.9 mm (5/8 inch)	7/8-14	100 to 124	74 to 92
-12	19.0 mm (3/4 inch)	1-1/16-12	138 to 173	102 to 128
-14	22.2 mm (7/8 inch)	1-3/16-12	173 to 216	128 to 160
-16	25.4 mm (1.0 inch)	1-5/16-12	203 to 253	150 to 187
-20	31.8 mm (1-1/4 inch)	1-5/8-12	308 to 357	227 to 264
-24	38.1 mm (1-1/2 inch)	1-7/8-12	492 to 542	363 to 400

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

O-Ring Face Seal End					O-Ring Boss End Fitting or Lock Nut		
Nom. SAE Dash Size	**Tube OD**	**Thread Size**	**Newton metres**	**Pound-Inches**	**Thread Size**	**Newton metres**	**Pound-Inches**
-4	6.4 mm (1/4 inch)	9/16-18	23 to 26	204 to 228			
-6	9.5 mm (3/8 inch)	11/16-16	34 to 40	300 to 348	9/16-18	48 to 54	432 to 480
-8	12.7 mm (1/2 inch)	13/16-16	52 to 57	456 to 504	3/4-16	70 to 78	612 to 684
							Pound-Feet
-10	15.9 mm (5/8 inch)	1-14	81 to 90	720 to 792	7/8-14	102 to 114	75 to 84
				Pound-Feet			
-12	19.0 mm (3/4 inch)	1-3/16-12	117 to 128	86 to 94	1-1/16-12	142 to 160	105 to 117
-16	25.4 mm (1.0 inch)	1-7/16-12	152 to 174	112 to 128	1-5/16-12	237 to 254	175 to 187
-20	31.8 mm (1-1/4 inch)	1-11/16-12	179 to 201	132 to 148			
-24	38.1 mm (1-1/2 inch)	2-12	213 to 235	157 to 173			

Pipe fittings		
Nom. SAE Dash Size	**Thread Size**	**TFFT (Turns For Finger Tight)**
-2	1/8 - 27	2.0 - 3.0
-3	1/8 - 27	2.0 - 3.0
-4	1/8 - 27	2.0 - 3.0
-5	1/8 - 27	2.0 - 3.0
-6	1/4 - 18	1.5 - 3.0
-8	3/8 - 18	2.0 - 3.0
-10	1/2 - 14	2.0 - 3.0
-12	3/4 - 14	2.0 - 3.0
-14	3/4 - 14	2.0 - 3.0
-16	1 - 11 1/2	1.5 - 2.5
-20	1 1/4 - 11 1/2	1.5 - 2.5
-24	1 1/2 - 11 1/2	1.5 - 2.5
-32	2 - 11 1/2	1.5 - 2.5

NOTE: *Apply sealant/lubricant to male pipe threads. The first two threads should be left uncovered to avoid system contamination. Screw pipe fitting into female pipe port to the finger tight position. Wrench tighten fitting to the appropriate turns from finger tight (TFFT) shown in table above, making sure the tube end of an elbow or tee fitting is aligned to receive incoming tube or hose fitting.*

Section 1002

FLUID AND LUBRICANTS

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Printed in U.S.A.
May, 2001

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CAPACITIES AND LUBRICANTS

Engine Crankcase
- Capacity with filter change ..... 11 litres (11.6 U.S. quarts)
- Specifications ..... Case No. 1 15W-40 API CG-4 or CF-4

Fuel Tank
- Capacity, usable ..... 117 litres (31.0 U.S. gallons)
- Optional tank ..... 151 litres (40 U.S. gallons) usable
- Specifications ..... See page 5

Cooling System
- Capacity with heater ..... 16.5 litres (17.4 U.S. quarts)
- Capacity without heater ..... 15.8 litres (16.7 U.S. quarts)
- Specifications ..... 50% water and 50% ethylene glycol

Hydraulic System
- Total System ..... 77 litres (20.3 U.S. gallons)
- Capacity with filter change ..... 55 litres (14.5 U.S. gallons)
- Capacity without filter change ..... 53 litres (14 U.S. gallons)
- Specifications ..... MS-1209, Hy-Tran® Ultra

Transmission
- Standard Transmission
  - 2 Wheel Drive
    - Total system capacity ..... 18.5 litres (19.5 U.S. quarts)
    - Refill capacity with or without filter change ..... 11.9 litres (12.6 U.S. quarts)
    - Type of Fluid ..... MS-1209, Hy-Tran® Ultra
  - 4 Wheel Drive
    - Total system capacity ..... 21.0 litres (22.2 U.S. quarts)
    - Refill capacity with or without filter change ..... 14.4 litres (15.2 U.S. quarts)
    - Type of Fluid ..... MS-1209, Hy-Tran® Ultra

Front Drive Axle - 4 Wheel Drive
- Capacity - center bowl ..... 5.5 litres (5.8 U.S. quarts)
- Capacity - each wheel end ..... 0.7 litres (0.75 U.S. quarts)
- Type of Fluid ..... MS-1209, Hy-Tran® Ultra

Rear Axle
- Capacity - center bowl ..... 14.0 litres (15 U.S. quarts)
- Capacity - each wheel end ..... 1.5 litres (1.6 U.S. quarts)
- Type of Fluid ..... MS-1209, Hy-Tran® Ultra

Brake Master Cylinder ..... (Brake fluid supplied by hydraulic reservoir, see Hydraulic System.)

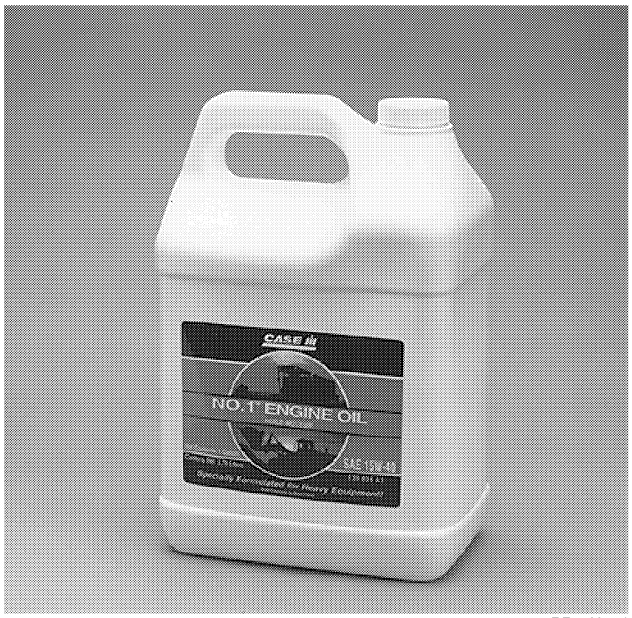
ENGINE OIL RECOMMENDATIONS

Case IH No.1 Engine Oil is recommended for use in your Case IH Engine. Case IH No.1 Engine Oil will lubricate your engine correctly under all operating conditions. If Case IH No. 1 Multi-Viscosity Engine Oil is not available, Case IH No. 1 Single Grade Engine Oil can be used.

RH99K130

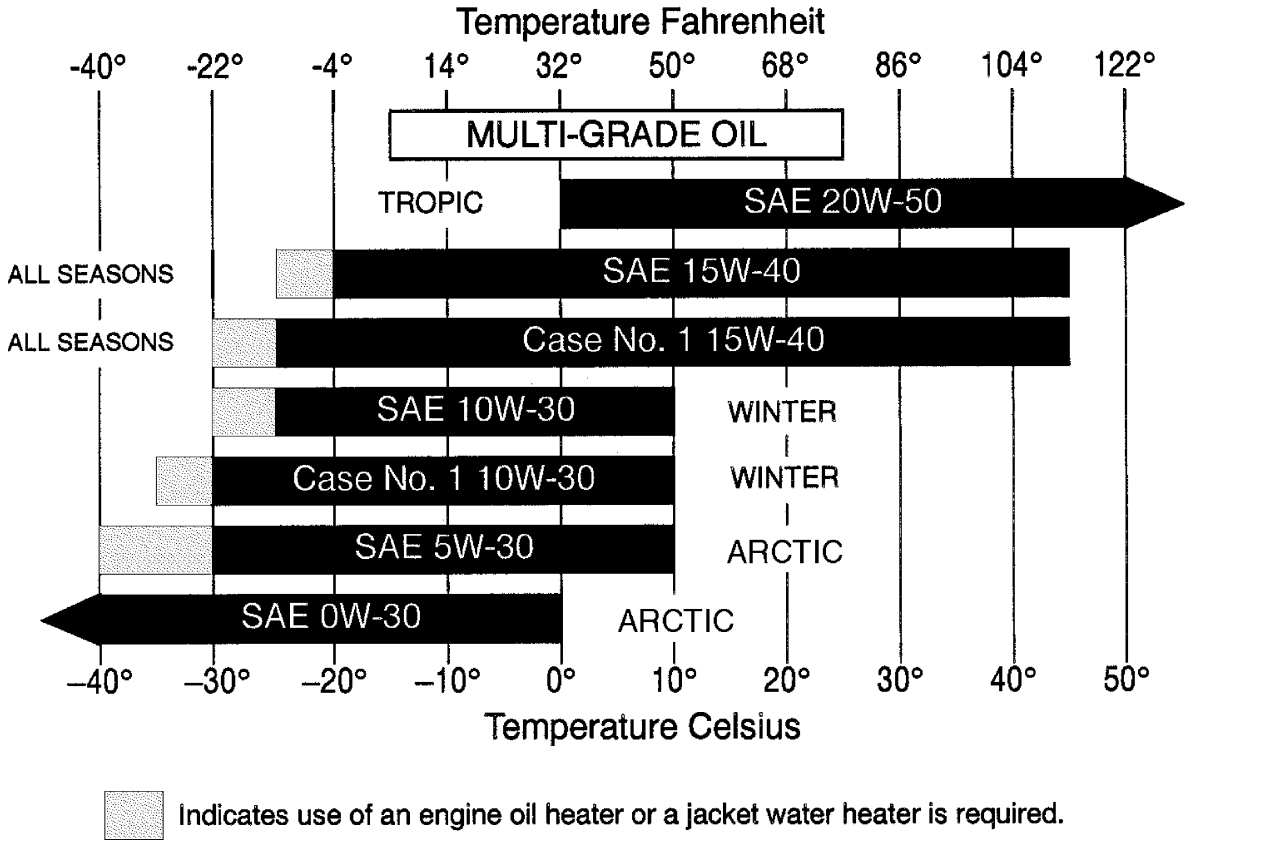
If Case IH No.1 Multi-Viscosity or Single Grade Engine Oil is not available, use only oil meeting API engine oil service category CE.

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



BP97H064

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



BS99N019

DIESEL FUEL

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 is below the cloud point (wax appearance point), wax crystals in the fuel will cause the engine to lose power or not start.*

The diesel fuel used in this machine must meet the specifications in the chart below or Specification D975-81 of the American Society for Testing and Materials.

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.

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
Viscosity, at 100° F (88° C)	
Centistokes	2.0 to 4.3
Saybolt Seconds Universal	32 to 40

NOTES

Section

1003

METRIC CONVERSION CHART

CNH AMERICA LLC
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Bur 7-52950

Printed in U.S.A.
June, 1997

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CONVERSION FACTORS
Metric to U.S.

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

U.S. to Metric

	MULTIPLY	BY	TO OBTAIN
Area:	square foot acre	0.092 903 0.404 686	square meter hectare
Force:	ounce force pound force	0.278 014 4.448 222	newton newton
Length:	inch foot mile	25.4 * 0.304 8 * 1.609 344 *	millimeter meter kilometer
Mass:	pound ounce	0.453 592 28.35	kilogram gram
Mass/Area:	ton/acre	2241 702	kilogram/hectare
Mass/Energy:	lb/hp/hr	608.277 4	gr/kW/hr
Mass/Volume:	lb/cubic yd.	0.593 276	kg/cubic meter
Power:	horsepower	0.745 700	kilowatt
Pressure:	lbs/sq. in. lbs/sq. in. lbs/sq. in.	6.894 757 0.069 0.070 303	kilopascal bar kg/sq. cm
Temperature:	degree F	1.8 F - 32	degree C
Torque:	pound/inch pound/foot	0.112 985 1.355 818	newton meter newton meter
Velocity:	miles/hr.	1.609 344 *	kilometer/hr.
Volume:	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
Volume/Time:	gallon/min.	3.785 412	litre/min.

* = exact

SECTION INDEX

ENGINES

Section Title **Section Number**

For Engine Repair, see the Engine Service Manual

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July, 2001

2000

Section 2000

Engine and Radiator Removal and Installation

CASE CORPORATION
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Bur 6-43820

Printed in U.S.A.
June, 2001

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SPECIAL TOOLS

B430842

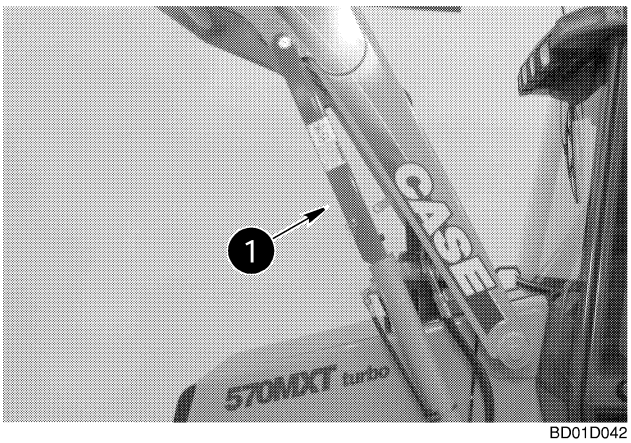
The CAS1690A is used to rotate the flywheel on the engine.

RADIATOR REMOVAL

Put identification tags on all disconnected hoses and wires. Close disconnected hoses and fittings with caps and plugs.

NOTE: ***The photos in this procedure may be different from your machine and are for reference only.***

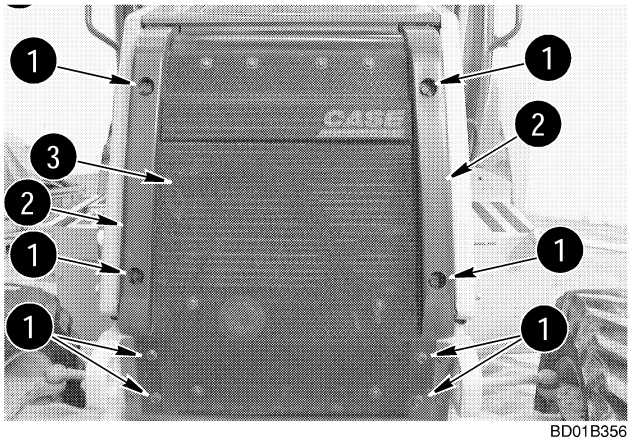
STEP 1



BD01D042

Park the machine on a level surface. Raise the loader and lock the support strut (1) to hold the loader. Stop the engine and apply the parking brake.

STEP 2



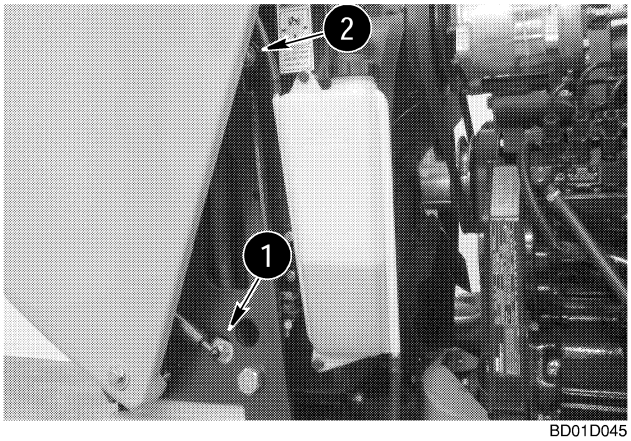
BD01B356

Remove the bolts (1), bumpers (2), and the grille (3) from the front of the machine.

STEP 3

Open the hood. Connect acceptable lifting equipment to the hood.

STEP 4



BD01D045

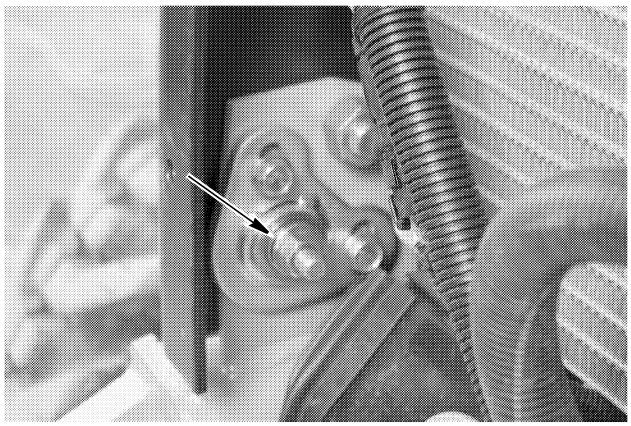
Do the following procedure to remove the hood.

A. Remove the retainers from the hood struts (1) and disconnect the hood struts from the stud.

B. Disconnect the hood cable (2) from the radiator shroud.

C. Carefully lower the hood back to the closed position.

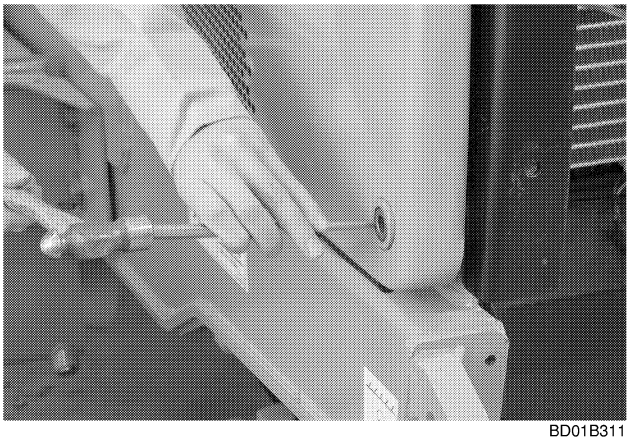
STEP 5



BD01B311

Remove the bolts, washers, and nuts from the pivot point on the hood.

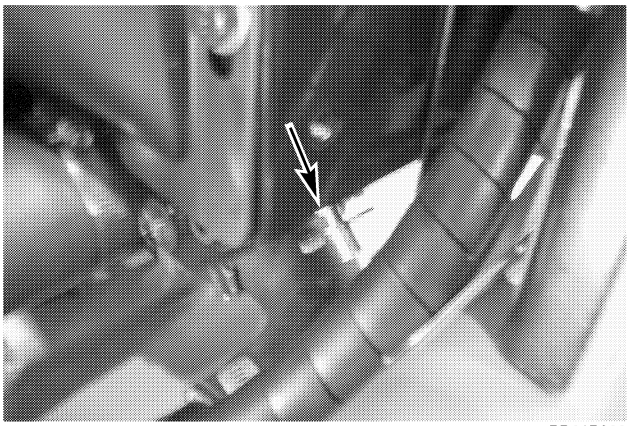
STEP 6



BD01B311

Drive the pivot tubes out of the hood pivot point. Remove the hood from the machine.

STEP 7

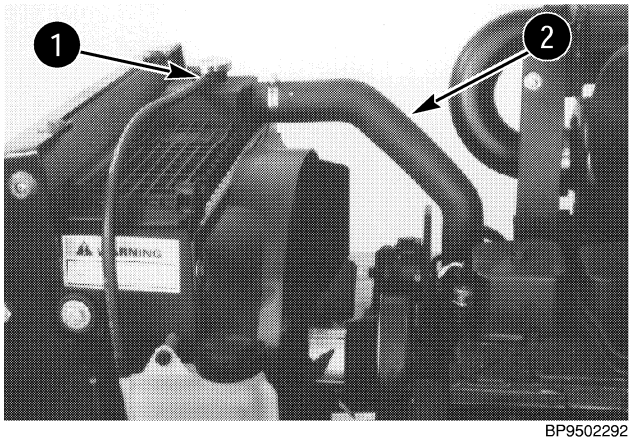


BD01B322

Slowly remove the radiator cap. Install a hose on the drain valve and drain the radiator into a clean container that holds approximately 17 litres (18 U.S. quarts).

NOTE: *During installation, fill the radiator and coolant reservoir completely. See Section 1002 for coolant specifications. Start and run the engine until the coolant is at operating temperature. Stop the engine and check for leakage. When the coolant is cold, check the coolant reservoir level. Add coolant as required.*

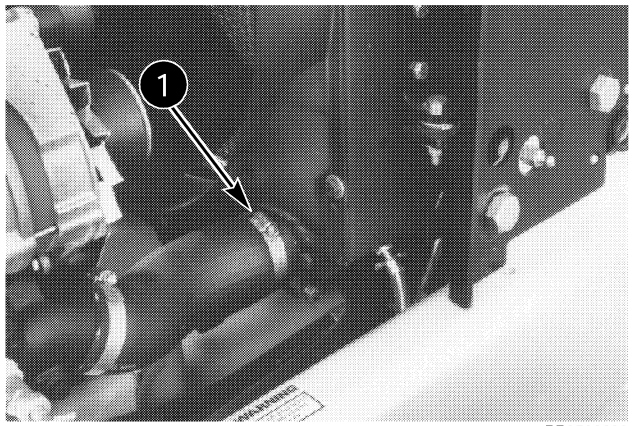
STEP 8



BP9502292

Disconnect the overflow hose (1) from the radiator neck. Loosen the clamp and disconnect the upper radiator hose (2).

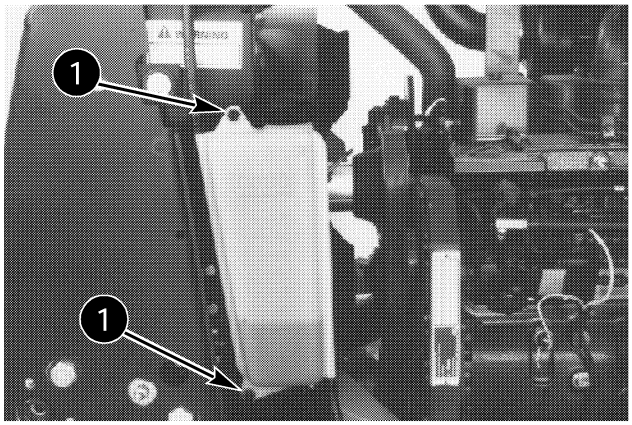
STEP 9



BP9502290

Loosen the clamp (1) and disconnect the lower radiator hose.

STEP 10

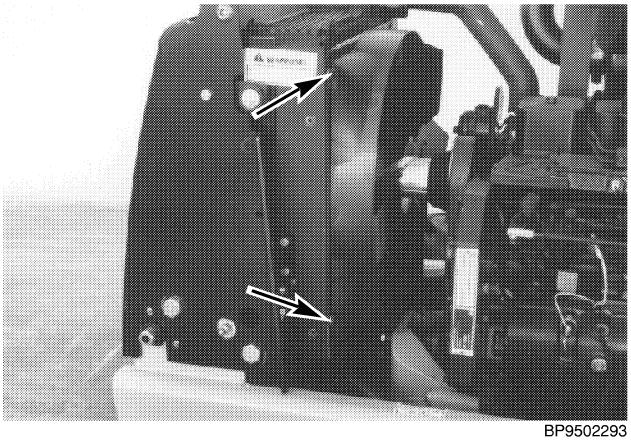


BP9502291

Remove the bolts (1), spacers, washers, and coolant reservoir from the machine.

NOTE: *During installation tighten the bolts to a torque of 5 to 6 Nm (44 to 53 pound-inches).*

STEP 11

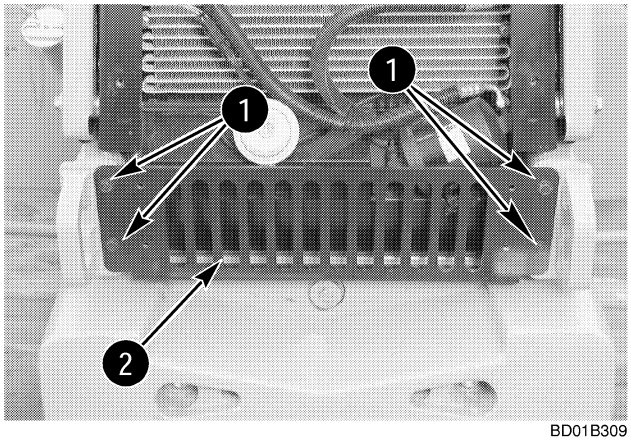


BP9502293

Remove the hardware from the fan shroud. Move the fan shroud away from the radiator.

NOTE: *During installation tighten the bolts to a torque of 26 to 31 Nm (19 to 23 pound-feet).*

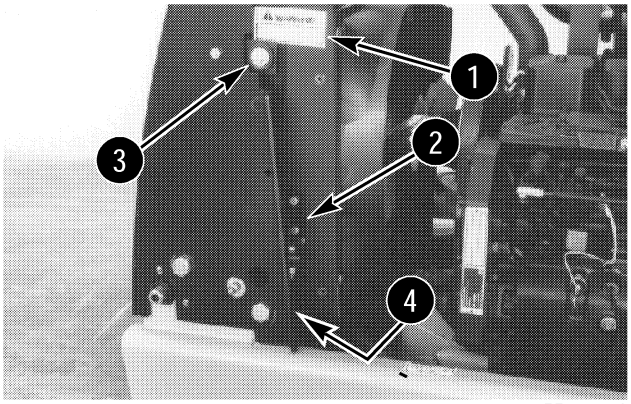
STEP 12



BD01B309

Remove the bolts (1) and pump guard (2) from the machine.

STEP 13



BP9502293

Use a sharp knife and cut the warning decal (1). Remove the bolts that fasten the lower brackets (2) to the radiator. Remove the hardware and the lower brackets (2) from the radiator shroud. Remove the bolts and flat washers that fasten the upper brackets (3) to the radiator. Remove the bolts and flat washers (4) that fastens the condenser if equipped and oil cooler to the radiator. Lift the radiator straight up and remove the radiator from the machine.

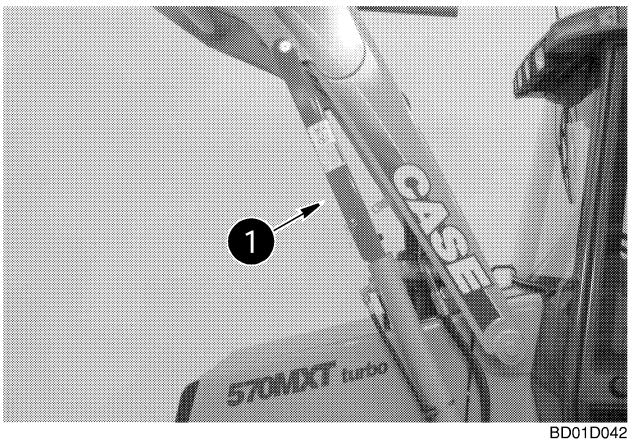
NOTE: *Installation of the radiator is the reverse of removal.*

ENGINE REMOVAL

Put identification tags on all disconnected hoses and wires. Close disconnected hoses and fittings with caps and plugs.

NOTE: ***The photos in this procedure may be different from your machine and are for reference only.***

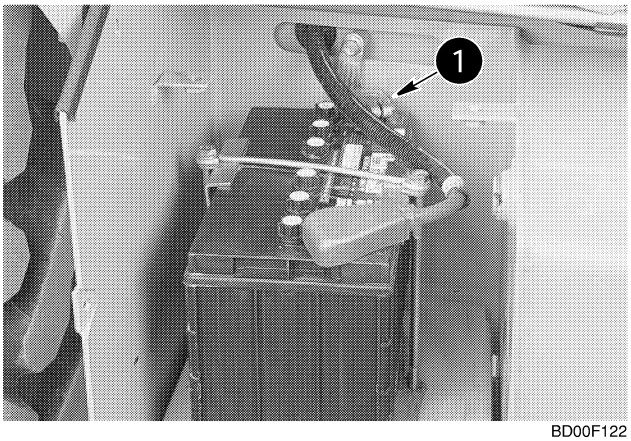
STEP 1



BD01D042

Park the machine on a level surface. Raise the loader and lock the support strut to hold the loader.

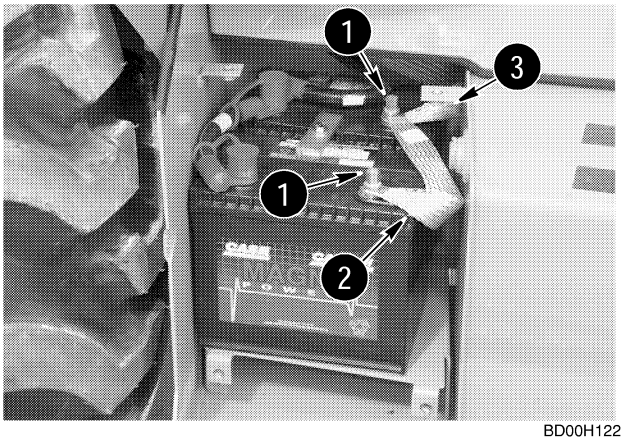
STEP 2



BD00F122

Remove the battery cover from the right step. If the machine has only one battery, disconnect the negative battery cable from the battery.

STEP 3



BD00H122

If the machine has two batteries, remove the terminal nuts (1). Remove the jumper cable (2) from the batteries. Remove the negative ground strap (3) from the battery.

STEP 4

Drain the oil from the hydraulic reservoir.

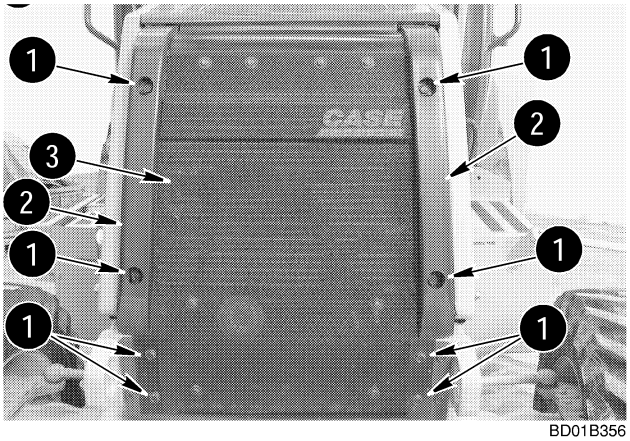
NOTE: *During installation fill the hydraulic reservoir with the oil specified in section 1002 of this manual.*

STEP 5

If the machine is equipped with air conditioning. See Section 9004 and recover the coolant from the air conditioning system.

NOTE: *During installation see Section 9004 and recharge the air conditioning system.*

STEP 6



BD01B356

Remove the bolts (1), bumpers (2), and the grille (3) from the front of the machine.