580LE-SLE-LSP-LPS 590SLE-LSP LOADER BACKHOES
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*Refer to the Engine Service Manual

Reprinted

6 TRANSMISSION

7 BRAKES

8 HYDRAULIC SYSTEM

9 CHASSIS/ATTACHMENT

[redacted] Section to be distributed at a later date.

Cre 7-79443GB Edition 04-00 Printed inFrance.

Section

1001

STANDARD TORQUE SPECIFICATIONS AND LOCTITE PRODUCT CHART

Case

Cre 7-79450GB

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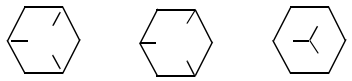
TORQUES SPECIFICATIONS (DECIMAL HARDWARE)

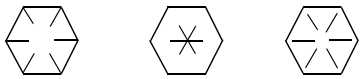
Use the torques in this chart when special torques are not given. These torques apply to fasteners with both UNC and UNF threads as received from suppliers dry, or when lubricated with engine oil. Not applicable if special graphities, Molydisulfide greases, or other extreme pressure lubricants are used.

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
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 inchs	800 to 880	1085 to 1193
1-1/4 inchs	1120 to 1240	1519 to 1681
1-3/8 inchs	1460 to 1680	190 to 2278
1-1/2 inchs	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
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 inchs	1280 to 1440	1736 to 1953
1-1/4 inchs	1820 to 2000	2468 to 2712
1-3/8 inchs	2380 to 2720	3227 to 3688
1-1/2 inchs	3160 to 3560	4285 to 4827

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

Grade 8.8 Bolts, Nuts and Studs		
		
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
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

Grade 10.9 Bolts, Nuts and Studs		
		
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
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
37 Degree flare fitting			
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 92	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	7/8-14	300 to 696	34 to 79
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
Straight threads with O-ring			
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
5/8 inch/ 15.9	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

Split flange mounting screws		
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
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
O-ring face seal end					**O-ring boss end fitting or lock nut**		
-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
-10	5/8 inch/ 15.9 mm	1-14	552 to 672	62 to 76	7/8-14	60 to 65	81 to 88
-12	3/4 inch/ 19.0 mm	1-3/16-12	65 to 80	90 to 110	1-1/16-12	85 to 90	115 to 122
-14	7/8 inch/ 22.2 mm	1-3/16-12	65 to 80	90 to 110	1-3/16-12	95 to 100	129 to 136
-16	1.0 inch/ 25.4 mm	1-7/16-12	92 to 105	125 to 140	1-5/16-12	115 to 125	156 to 169
-20	1-1/4 inch/ 31.8 mm	1-11/16-12	125 to 140	170 to 190	1-5/8-12	150 to 160	203 to 217
-24	1-1/2 inch/ 38.1 mm	2-12	150 to 180	200 to 254	1-7/8-12	190 to 200	258 to 271

LOCTITE PRODUCT CHART

Product	Color	Similar products	Gap (inches)	Strength (steel/steel)	Working temperature range-fahrenheit	Fixture/full cure (steel/steel) time	Primer	Description
#3	Dark brown					24 h	764	Form a Gasket (works with oil, fuel or greas) Pliable
80	Yellow					Fast	764	Weatherstrip adhesive
123	Clear					-	-	Parts cleaner fluid
220	Blue	290	0.076	65/164 in lbs	-54 to +122	6 min/24 h	747	Wicking threadlocker
221	Purple	222	0.127	86/50 in lbs	-54 to +150	2 min/24 h	747	Low strength threadlocker
222	Purple		0.127	51/28 in lbs	-54 to +150	10 min/24 h	747	Low strength threadlocker (small screws)
225	Brown	222	0.254	51/28 in lbs	-54 to +150	7 min/24 h	747	Low strength threadlocker
242	Blue		0.127	92/57 in lbs	-54 to +150	10 min/24 h	747	Medium strength threadlocker
262	Red	271	0.127	184/218 in lbs	-54 to +150	5 min/24 h	747	High strength threadlocker
270	Green	271	0.177	184/368 in lbs	-54 to +150	3 min/24 h	747	High strength threadlocker
271	Red	262	0.177	184/368 in lbs	-54 to +150	10 min/24 h	747	High strength threadlocker
272	Red	620	0.254	207/311 in lbs	-54 to +234	30 min/24 h	747	High temperature, high strength
275	Green	277	0.254	241/345 in lbs	-54 to +150	3 min/24 h	747	High strength threadlocker
277	Red		0.254	241/345 in lbs	-54 to +150	60 min/24 h	747	High strength threadlocker
290	Green		0.076	97/403 in lbs	-54 to +150	6 min/24 h	747	Wicking threadlocker
*404	Clear	495	0.156	224 psi	-54 to +82	30 sec/24 h	-	Instant adhesive
*406	Clear		0.101	224 psi	-54 to +82	15 sec/24 h	-	Surface insensitive adhesive
*409	Clear	454	0.203	175 psi	-54 to +82	50 sec/24 h	-	Gel instant adhesive
*414	Clear		0.156	175 psi	-54 to +82	30 sec/24 h	-	Instant adhesive
*415	Clear	454	0.254	175 psi	-54 to +82	50 sec/24 h	-	Gap filling instant adhesive (metals)
*416	Clear	454	0.254	175 psi	-54 to +82	50 sec/24 h	-	Gap filling instant adhesive (plastics)
*420	Clear		0.05	175 psi	-54 to +82	15 sec/24 h	-	Wicking instant adhesive
*422	Clear	454	0.05	196 psi	-54 to +82	60 sec/24 h	-	Gap filling instant adhesive
*430	Clear		0.127	175 psi	-54 to +82	20 sec/24 h	-	Metal bonding adhesive

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

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Product	Color	Similar products	Gap (inches)	Strength (steel/steel)	Working temperature range-fahrenheit	Fixture/full cure (steel/steel) time	Primer	Description
*445	White/ Black		6.35	140 psi	-54 to +82	5 min/24 h	-	Fast setting 2 part epoxy
*454	Clear		0.254	224 psi	-54 to +82	15 sec/24 h	-	Surface insensitive gel instant adhesive
*495	Clear		0.101	175 psi	-54 to +82	20 sec/24 h	-	General purpose instant adhesive
*496	Clear		0.127	175 psi	-54 to +82	20 sec/24 h	-	Metal bonding adhesive
504	Brt orange	515	0.076	52 psi	-54 to +150	90 sec/24 h	None	Rigid gasket eliminator
510	Red		0.05	70 psi	-54 to +206	30 min/24 h	764	High temperature, gasket eliminator
515	Purple		0.254	52 psi	-54 to +150	1 hr/24 h	764	Gasket eliminator 515
518	Red	515	0.076	35 psi	-54 to +150	1 hr/24 h	764	Gasket eliminator 578 for aluminum
542	Brown	569	-	152/106 in lbs	-54 to +150	2 hr/24 h	747	Hydraulic sealant
545	Purple		-	28/23 in lbs	-54 to +150	4 hr/24 h	747	Low strength pneumatic/hydraulic sealant
549	Red	504	0.05	175 psi	-54 to +150	2 hr/24 h	747	Instant seal plastic gasket
554	White	277	0.381	276/240 in lbs	-54 to +150	2 to 4 hr/24 h	764	Refrigerant sealant
567	Orange	592	-	35 psi	-54 to +206	4 hr/24 h	764	Pipe sealant for stainless steel
568	Brown	277	0.381	175 psi	-54 to +150	12 hr/24 h	764	Plastic gasket
569	Brown	545	0.254	28/46 in lbs	-54 to +150	1 hr/24 h	764	Hydraulic sealant
570	Brown	592	-	28/46 in lbs	-54 to +150	6 hr/24 h	764	Steam sealant
571	White	592	0.381	46/23 in lbs	-54 to +150	2 to 4 hr/24 h	764	Pipe sealant
572	White	578. 575	-	92/31in lbs	-54 to +150	24 hr/24 h	None	Gasketing
592	Black	-	0.05	35 psi	-54 to +206	4 hr/24 h	736	Pipe sealant with teflon
593	Green	-	6.35	28 psi	-54 to +206	30 min/24 h	-	RTV silicone
601	Green	609	0.127	210 psi	-54 to +150	10 min/24 h	747	Current PIN #609
609	Green	-	0.127	210 psi	-54 to +150	10 min/24 h	747	General purpose retaining compound
620	Green	640	0.381	210 psi	-54 to +234	30 min/24 h	747	High temperature. Retaining coumpound
635	Green	680	0.254	280 psi	-54 to +150	1 hr/24 h	747	High strength retaining compound
638	Green	680	0.381	287 psi	-54 to +150	10 min/24 h	747	High strength retaining compound
640	Green	620	0.177	210 psi	-54 to +206	1 hr/24 h	747	High temperature retaining compound
660	Silver	-	0.05	210 psi	-54 to +150	20 min/24 h	764	Quick metal
675	Green	609	0.127	210 psi	-54 to +150	20 min/24 h	747	General purpose retaining compound
680	Green	635	0.381	280 psi	-54 to +150	10 min/24 h	747	High strength retaining compound
706	Clear	755	-	-	-	-	-	Cleaning solvent
707	Amber	-	-	-	-	-	-	Activator for structual adhesives
736	Amber	-	-	-	-	-	-	Primer NF
738	Amber	-	-	-	-	-	-	Depend activator

Product	Color	Similar products	Gap (inches)	Strength (steel/steel)	Working temperature range-fahrenheit	Fixture/full cure (steel/steel) time	Primer	Description
747	Yellow	-	-	-	-	-	-	Primer T
751	Clear	-	-	-	-	-	-	Activator for structural adhesives
755	Clear	-	-	-	-	-	-	Cleaning solvent
764	Green	-	-	-	-	-	-	Primer N
767	Silver	-	-	-	-54 to +878	-	-	Anti-seize lubricant

Section 1002

FLUIDS AND LUBRICANTS

Cre 7-79461GB

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NOTE : Case France 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.

CAPACITIES AND LUBRICANTS

Engine Oil
- Capacity with filter replacement ..... 11 litres
- Type of oil ..... refer to “Engine oil recommendations”

Engine cooling system
- Capacity without heating system ..... 15.8 litres
- Capacity with heating system ..... 16.5 litres
- Type of collant solution ..... refer to “Fluids and lubricants”

Fuel tank
- Capacity ..... 128 litres
- Type of fuel ..... refer to “Fluids and lubricants"

Hydraulic system
- Total hydraulic system capacity Model 580SLE ..... 125 litres
- Total hydraulic system capacity Model 580LE ..... 106 litres
- Total hydraulic system capacity Model 590SLE ..... 136 litres
- Hydraulic reservoir filling capacity with filter replacement ..... 54.5 litres
- Hydraulic reservoir filling capacity without filter replacement ..... 52.6 litres
- Type of fluid ..... CASE MS1210 or CASE Hydraulic Fluid

Transmission

580LE, 580SLE and 580LSP gearbox
- 2 Wheel Drive
  - Total system ..... 18.5 litres
  - Filling with or without filter replacement ..... 16 litres
  - Type of oil ..... CASE Hy-Tran Plus MS1207
- 4 Wheel Drive
  - Total system ..... 21 litres
  - Filling with or without filter replacement ..... 18.5 litres
  - Type of oil ..... CASE Hy-Tran Plus MS1207

580LPS and 590SLE Powershift gearbox
- Total system ..... 21 litres
- Filling with filter ..... 18.5 litres
- Type of oil ..... Elfmatic G3

4 wheel drive front axle - 580LE, 580SLE and 580LSP
- Differential capacity ..... 6.5 litres
- Planetary capacity (each) ..... 1 litre
- Type of oil ..... CASE Wet Brake Lubricant MS1317 or SAE 85W140

Rear axle - 580LE, 580SLE and 580LSP
- Differential capacity ..... 14.2 litres
- Planetary capacity (each) ..... 2 litres
- Type of oil - Axle serial numbers before 586 ..... CASE Wet Brake Lubricant MS1317 or SAE 85W140
- Type of oil - Axle serial number 586 and on ..... CASE Hy-Tran Plus MS1207

Brake fluid reservoir ..... (automatically supplied with fluid from the hydraulic system)

ENGINE OIL RECOMMENDATIONS

CASE No. 1 engine oil is recommended for your engine. This oil gives correct lubrication for your engine under all operating conditions.

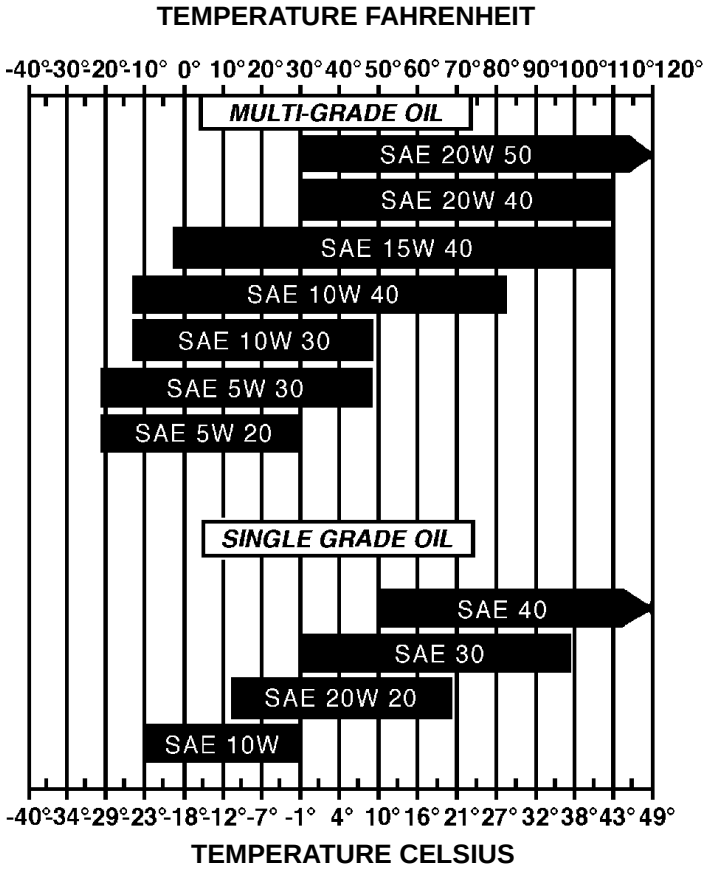
If CASE No. 1 Multiperformance or Performance engine oil cannot be obtained, use only oil corresponding to API/CE category.

NOTE : *Never add any performance or other additive product to the engine oil sump. Engine oil change intervals are shown in this manual in accordance with tests performed on CASE lubricants.*

EO1730

654L9

Oil viscosity/Oil operating range



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FLUIDS AND LUBRICANTS

Fluids and lubricants must have the correct properties for each application.

The conditions of use for individual fluids and lubricants must be respected.

Hydraulic fluid

Type of oil to be used :
CASE MS1210 or CASE hydraulic fluid

CASE hydraulic fluid is specially designed for the high pressure and the hydraulic system used on CASE machines. The type of fluid to be used depends on the ambient temperature.

Temperate climates

-20°C to +40°C
Fluid type : ISO VG 46
CASE reference : POHYDR

Hot climates

0°C to +60°C
Fluid type : ISO VG 100
CASE reference : POHYPC

Cold climates

-40°C to +20°C
Fluid type : ISO VG 22
CASE reference : POHYPF

IMPORTANT : *These various grades of fluid must be in conformity with CASE FRANCE specification P9903201Z.*

Biodegradable fluid

This yellow-coloured fluid can be mixed with standard fluid. When using this fluid, it is recommended to drain the hydraulic system completely.
Fluid type : ISO VG 46
CASE reference : CASYNTH 46

IMPORTANT : *This grade of fluid must be in conformity with CASE FRANCE specification P9903203B*

Anti-freeze/anti-corrosion

Use anti-freeze in all seasons to protect the cooling system from corrosion and all risk of freezing.

For environments with a temperature higher than -36°C, use a mixture of 50% ethylene-glycol based anti-freeze.

For environments with a temperature lower than -36°C, a mixture of 40% water with 60% anti-freeze is recommended.

Fuel

The fuel to be used must be in conformity with the D975 standard of the American Society for Testing and Materials (ASTM).

Use No. 2 type fuel. The use of other fuels may cause a loss of engine power and excessive fuel consumption.

In cold weather, a mixture of No. 1 fuel and No. 2 fuel is temporarily permitted. Consult your fuel supplier.

If the temperature falls below the fuel cloud point (point at which wax appears), wax crystals in the fuel will cause a loss of engine power or make it impossible to start the engine.

IMPORTANT : *In cold weather, fill the fuel tank after each day's work, to prevent the formation of condensation.*

Fuel storage

Prolonged fuel storage causes foreign bodies or condensation water to accumulate in the storage tank. Many engine failures are caused by the presence of water in fuel.

The storage tank should be placed outdoors and the fuel should be kept at as low a temperature as possible. Condensation water should be drained off at regular intervals.

Section

2000

REMOVING AND INSTALLING THE ENGINE AND THE RADIATOR

March 2000

Case

Cre 7-79471GB

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WARNING: *This symbol is used in this manual to show important safety messages. Whenever you see this symbol, carefully read the message which follows, since it shows there is a risk of serious injury.*

SPECIFICATIONS

Cooling system capacity :
- With heater ..... 16.5 litres
- Without heater ..... 15.8 litres

Thermostat opening
- Begins to open ..... 83°C
- Fully open at ..... 95°C

Radiator cap opening pressure ..... 1 bar

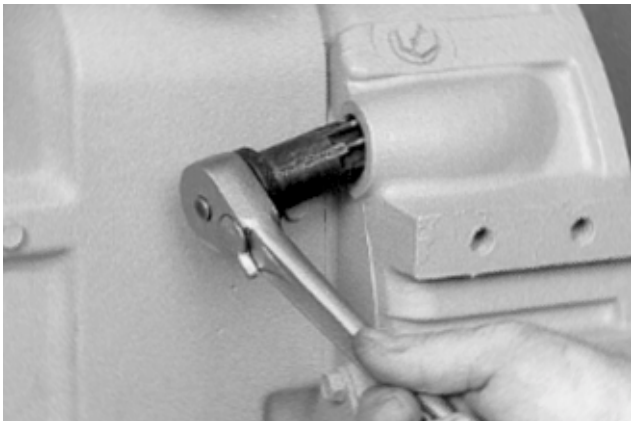
Coolant solution ..... See Section 1002

SPECIAL TORQUE SETTINGS

Front engine bracket self-locking nuts ..... 41 to 47 Nm
Torque converter retaining screws ..... 52 to 57 Nm
Engine front bracket retaining screws ..... 89 to 107 Nm

WARNING: *Boiling coolant solution may escape if the radiator cap is removed while the system is still hot. To remove the cap. First allow the system to cool, then turn the cap to the first notch and wait until there is no more pressure. Then remove the cap.*

TOOLS REQUIRED



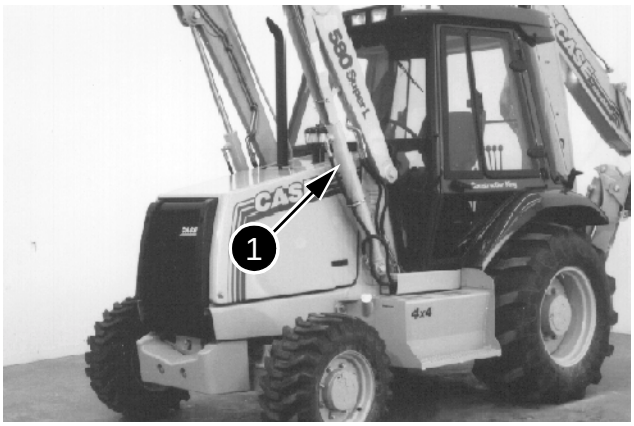
T91222

CAS 1690 Engine turn-over tool

REMOVING THE RADIATOR

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

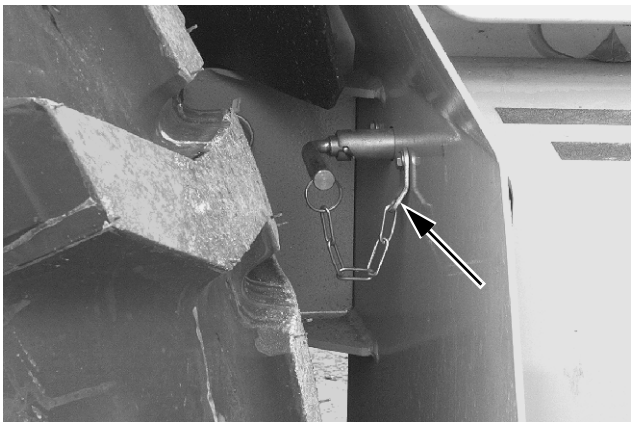
STEP 1



BP9502285

Park the machine on a level surface. Raise the loader attachment, shut down the engine, then install the locking bar (1) to maintain the loader attachment in position.

STEP 2



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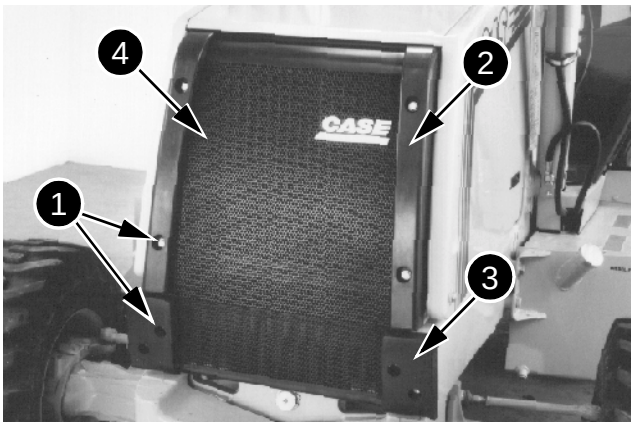
Place the battery master switch in the "Off" position (circuit isolated from battery).

STEP 3



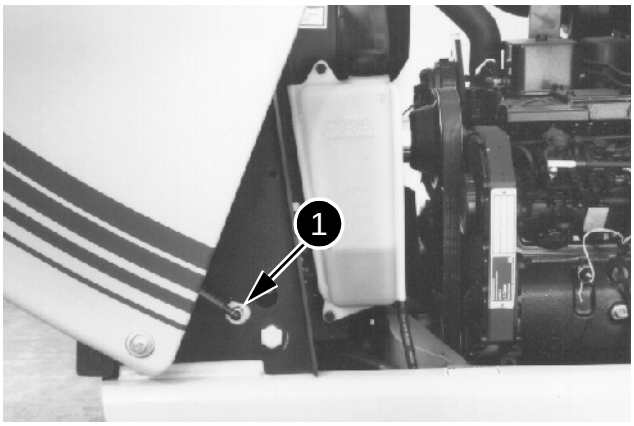
BP9502315

Remove the caps screws (1), upper (2) and lower bumpers (3), and the grille (4) from the front of the machine.

STEP 4

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

STEP 5



BP9502286

Have another person help with the following procedure:

A. Open the hood.

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

C. Hold the hood in place and disconnect the hood cable from the radiator shroud on the other side of the machine.

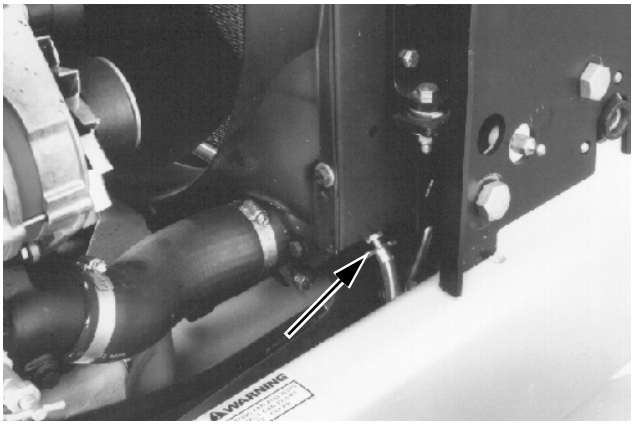
D. Carefully lower the hood back to the closed position.

STEP 6

BP9502288

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

STEP 7



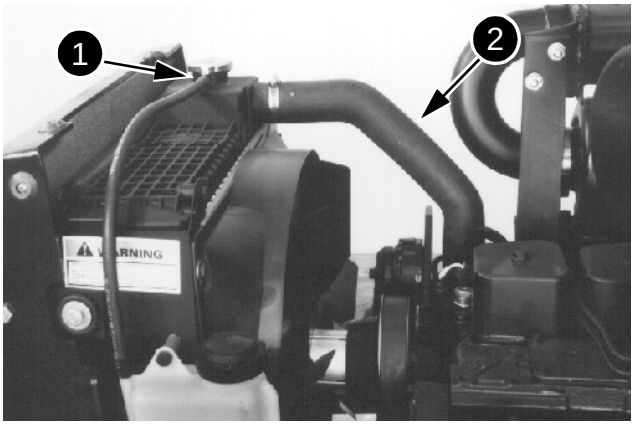
BP9502290

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.
Once the radiator is completely drained, close the drain valve.

> **WARNING:** *Do not remove the cap when the engine is hot. The circuit is still under pressure and you could be scalded.*

NOTE: *During installation, fill the radiator and coolant reservoir completely. See Section 1002 for coolant solution 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. Never remove the radiator cap to check the coolant level in the radiator.*

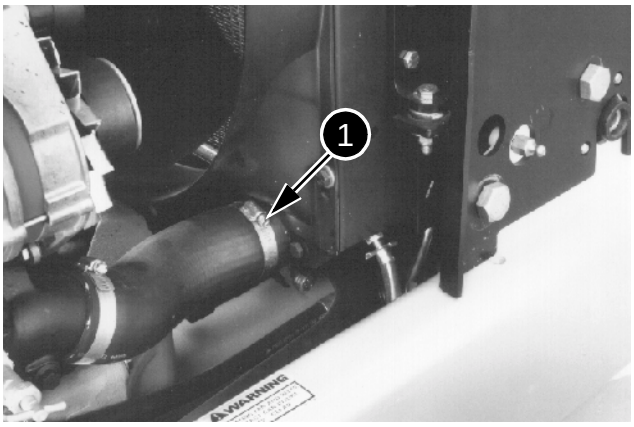
STEP 8



BP9502292

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

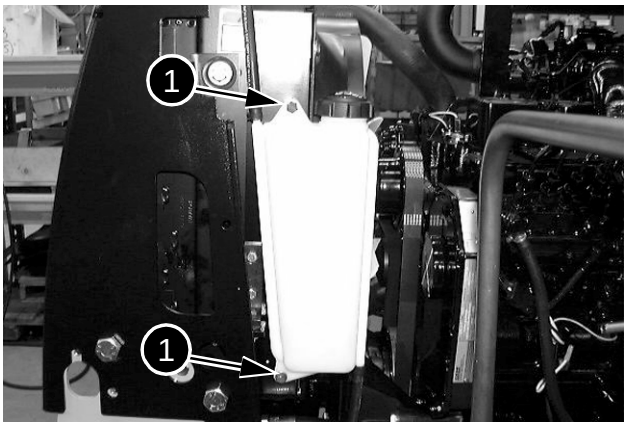
STEP 9



BP9502290

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

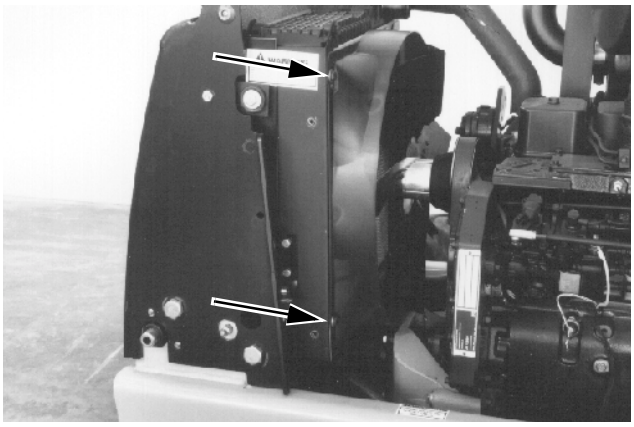
STEP 10



CD00C003

Remove the screws (1), spacers and washers from the coolant solution reservoir, then remove it from the machine.

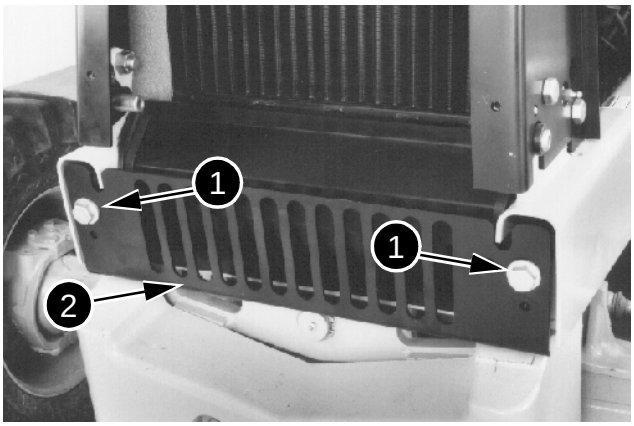
STEP 11



BP9502293

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

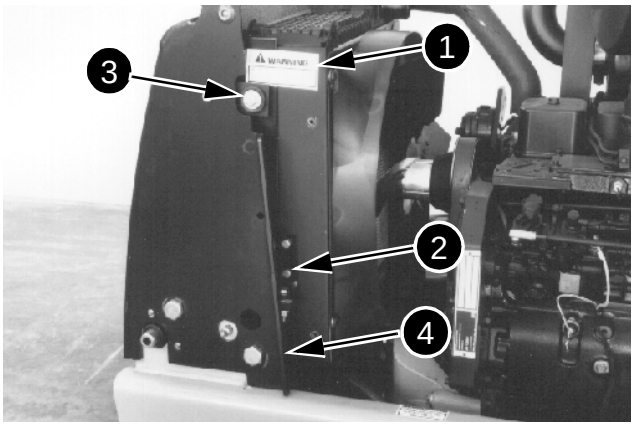
STEP 12



BP9502314

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

STEP 13



BP9502293

Remove the cap screws that fasten the lower brackets (2) to the radiator. Remove the hardware and the lower brackets (2) from the radiator shroud (1). Remove the cap screws and flat washers that fasten the upper brackets (3) to the radiator. Remove the cap screws 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.*

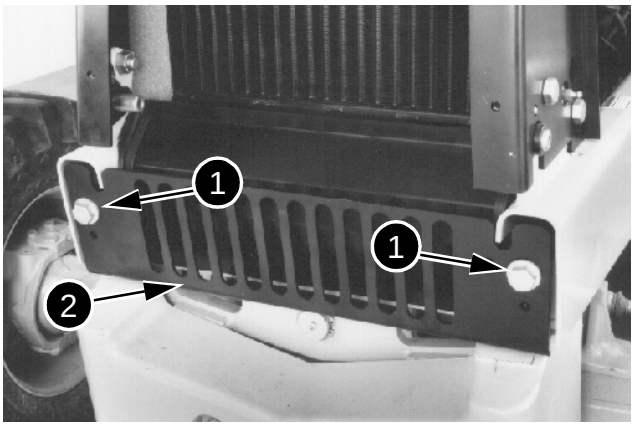
REMOVING THE ENGINE

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

STEP 1

Carry out Steps 1 to 11 "Radiator Removal".

STEP 2



BP9502314

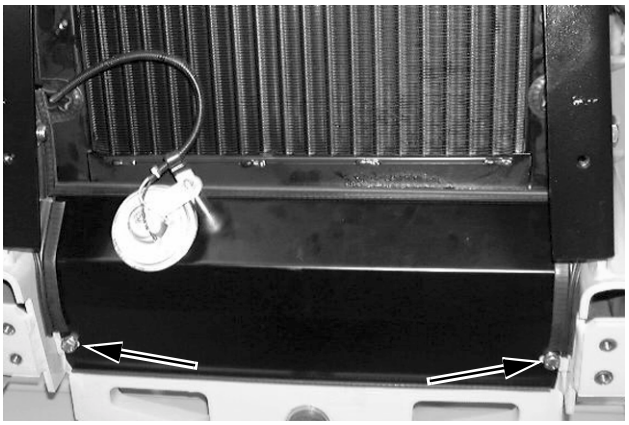
Remove the cap screws (1) and pump guard (2) from the machine.

STEP 3

If a horn is fitted to the machine's deflector, disconnect the cable from the horn.

NOTE: *If the machine is equipped with air conditioning and with a baffle plate with a notch provided fro the dryer hose, pass on to Step 12. If the machine is equipped with air conditioning and with a baffle plate in which no notch is provided for the dryer hose, carry out Steps 9 to 11 to avoid having to discharge the air conditioning system. For machines without air conditioning, carry out Steps 4 to 8.*

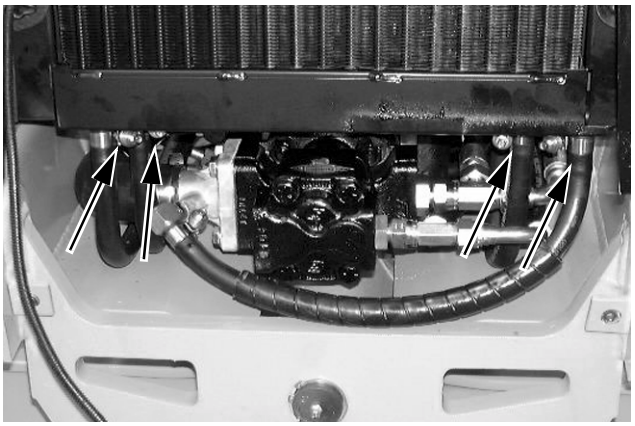
STEP 4



CD00C004

Loosen and remove the cap screws, flat washers, and if equipped, lock washers that fasten the baffle plate to the front of the machine.

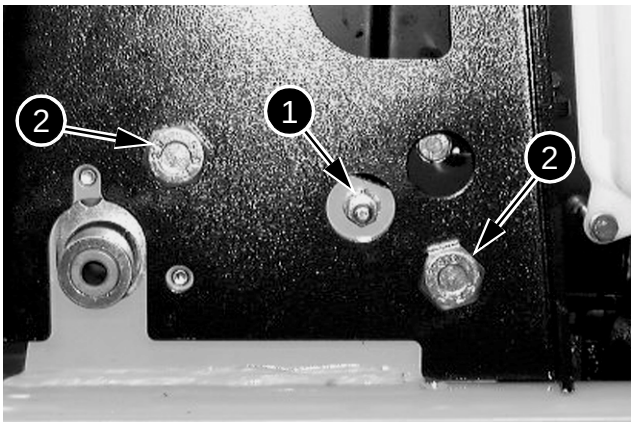
STEP 5



CD00C005

Disconnect the hoses from the oil cooler. Plug the hoses.

STEP 6



CD00C006

Remove the studs (1). Remove the bolts (2) and nuts that fasten the radiator shroud to the frame.

STEP 7

Remove the radiator shroud, radiator, and oil cooler as an assembly.

STEP 8

Go to Step 23.

NOTE: *Do steps 9 to 11 for machine with air conditioning and a baffle plate without a slot.*

STEP 9

Remove all straps that hold the hose for the air conditioning system drier from the front of the machine back to the cab. It is important to have as much hose as possible at the front of the machine to do the next step.

STEP 10

Loosen and remove the cap screws, flat washers, and if equipped, lock washers that fasten the baffle plate to the front of the machine.

STEP 11

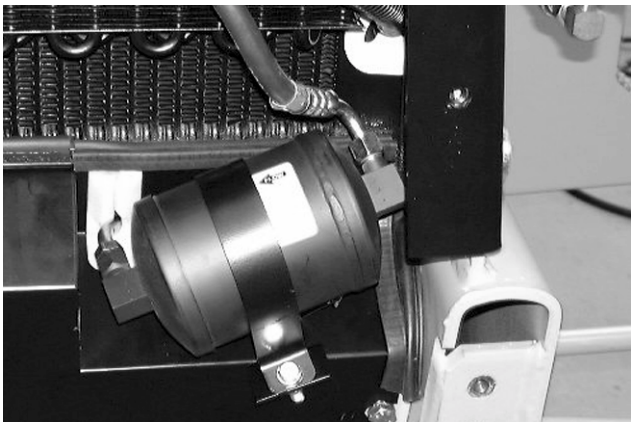
Move the baffle plate and drier for access to the hoses on the left side of the oil cooler.

STEP 12

Go to Step 15.

NOTE: *Do steps 13 and 14 for machines with air conditioning and a baffle plate with a slot.*

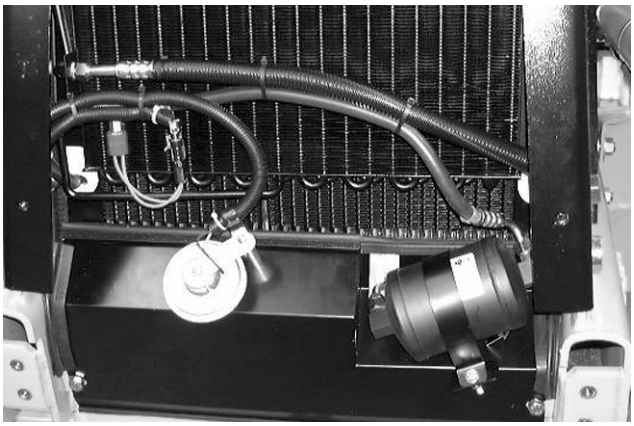
STEP 13



CD00C007

Remove the self-locking nut and the clamp from the dryer.

STEP 14



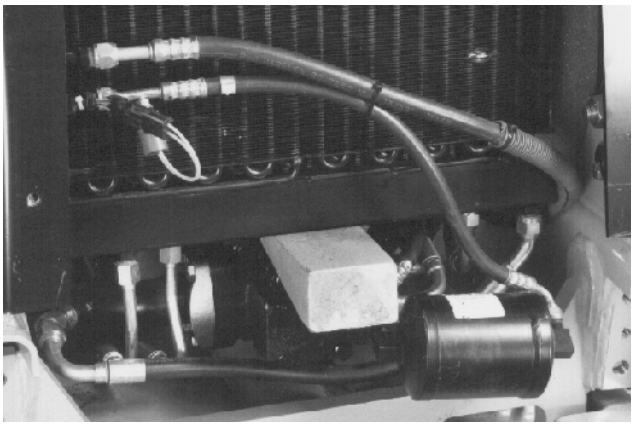
CD00C008

Remove the cap screws, flat washers, and if equipped, lock washers that fasten the baffle plate to the front of the machine. Remove the baffle plate from the dryer and from the machine.

NOTE: *Do the remaining steps for all machines.*

NOTE: *The photo shown below does not correspond to this model of machine, but the procedure is the same.*

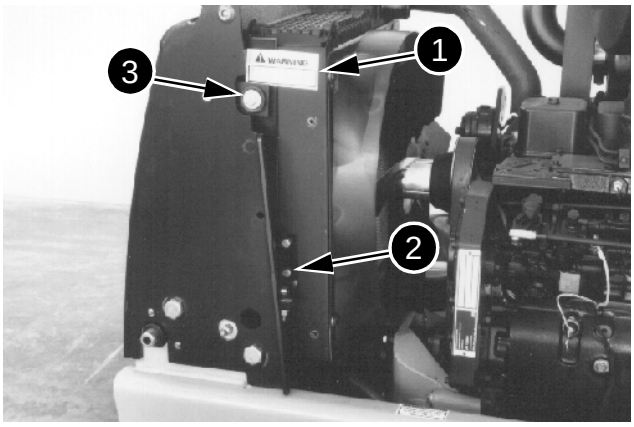
STEP 15



BP9503106

Put a block under the oil cooler to hold the radiator, oil cooler, and condenser in place when the radiator shroud is removed.

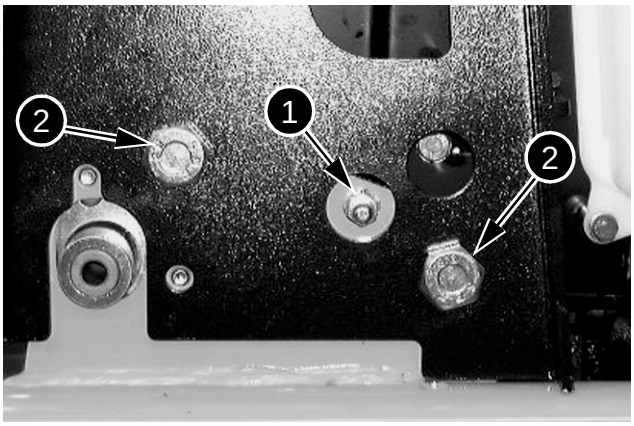
STEP 16



BP9502293

Remove the cap screws that fasten the lower brackets (2) to the radiator (1). Remove the hardware and the lower brackets (2) from the radiator shroud. Remove the cap screws and flat washers that fasten the upper brackets (3) to the radiator.

STEP 17



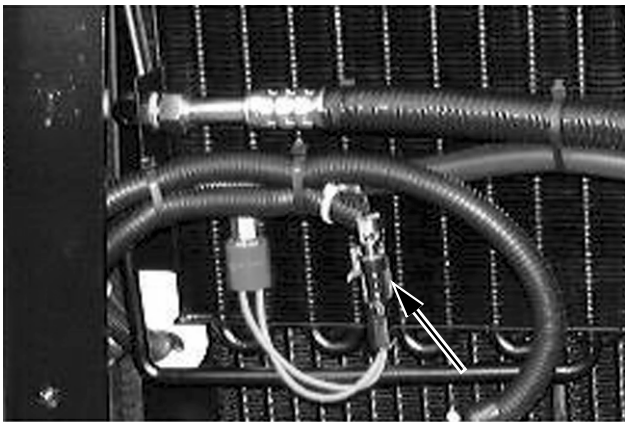
CD00C006

Remove the studs (1) from the frame. Remove the bolts and nuts (2) that fasten the radiator shroud to the frame.

STEP 18

Remove the radiator shroud from the radiator, oil cooler, and condenser.

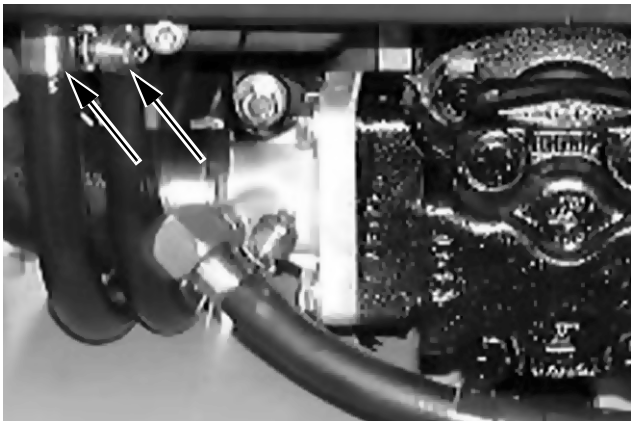
STEP 19



CD00C009

Disconnect the electrical connector for the drier.

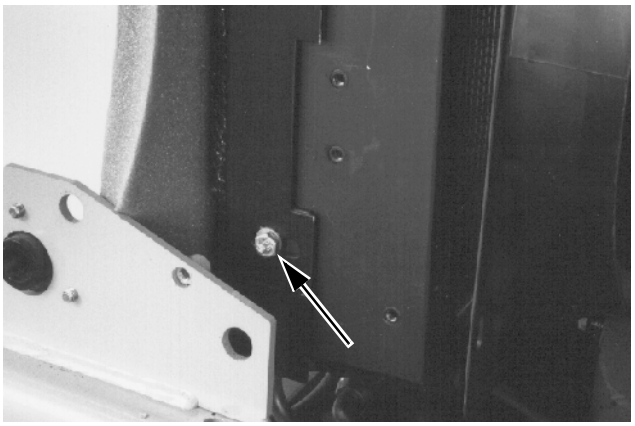
STEP 20



CD00C010

Disconnect the hoses on either side of the oil cooler. Plug the hoses.

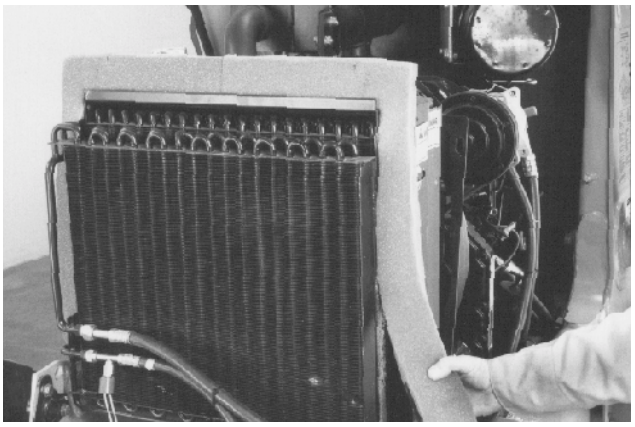
STEP 21



BP9503107

Remove the cap screws and flat washers that fasten the condenser and oil cooler to the radiator.

STEP 22



BP9503110

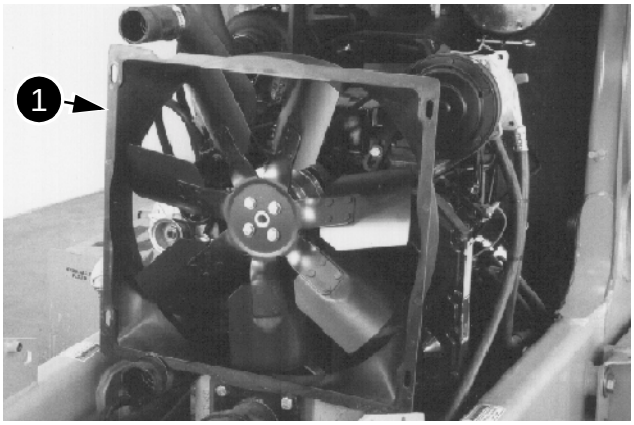
Pull the foam baffle away from the condenser.

STEP 23

BP9503111

For machines with a slot in the baffle plate, move the condenser and drier assembly out of the way as shown. For machines without a slot in the baffle plate, have another person help to move the condenser, baffle plate, and drier assembly away from the radiator and oil cooler assembly. Fasten the assembly in position to the side.

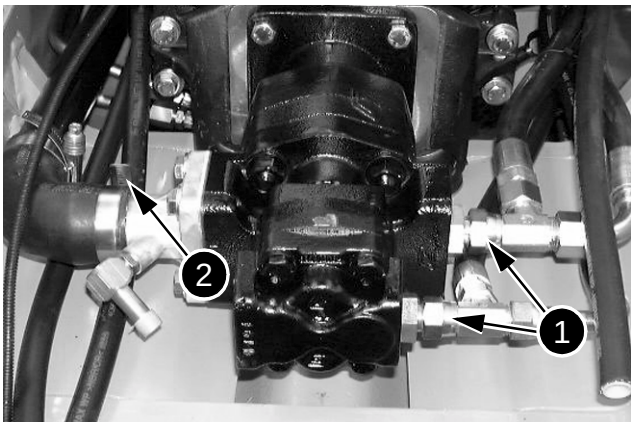
STEP 24



BP9503112

Remove the radiator and oil cooler. Remove the fan shroud (1) from the fan.

STEP 25



CD00C011

Disconnect the hoses (1) from the LH side of the pump. Loosen the clamp (2) and disconnect the hose from the RH side of the pump.

NOTE: *The photo shown below does not correspond to this model of machine, but the procedure is the same.*

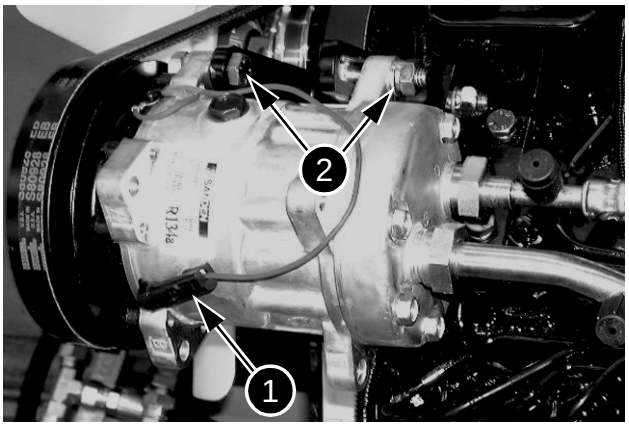
STEP 26

BP9502311

Loosen and remove the cap screws that fasten the pump to the pump mounting bracket.

NOTE: *Do Steps 27 to 29 for machines with air conditioning.*

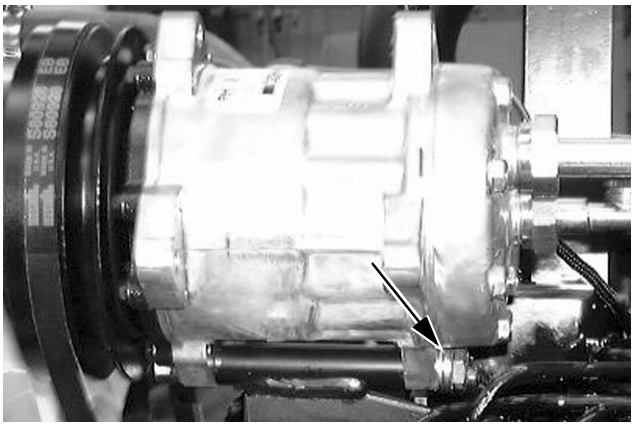
STEP 27



CD00C012

Disconnect the electrical connector (1). Remove the hardware (2) from the adjusting straps.

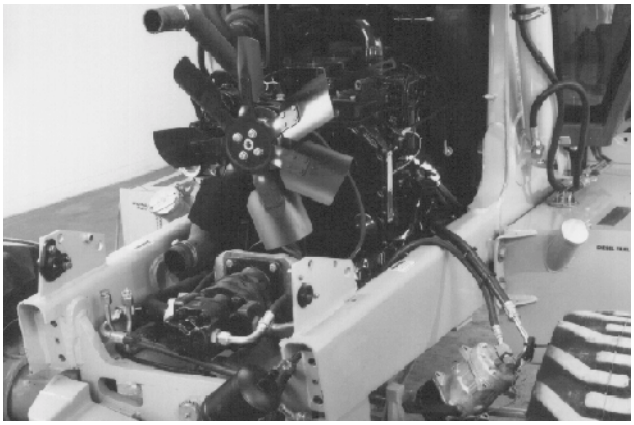
STEP 28



CD00C013

Remove the hardware that fastens the compressor to the bracket.

STEP 29

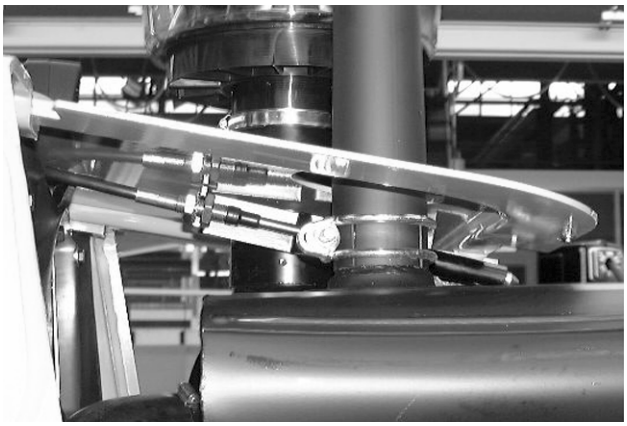


BP9503120

Remove the belt and place the compressor in the position shown in the photograph.

NOTE: *During installation, adjust the drive belt according the instructions in Section 9003.*

STEP 30

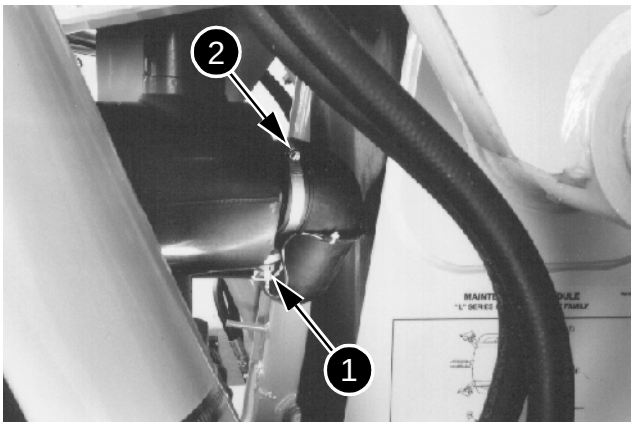


CD00C014

Loosen the clamp for the exhaust pipe at the muffler. Remove the exhaust pipe from the muffler.

NOTE: *When installing, tighten the clamp to a torque of between 53 and 61 Nm.*

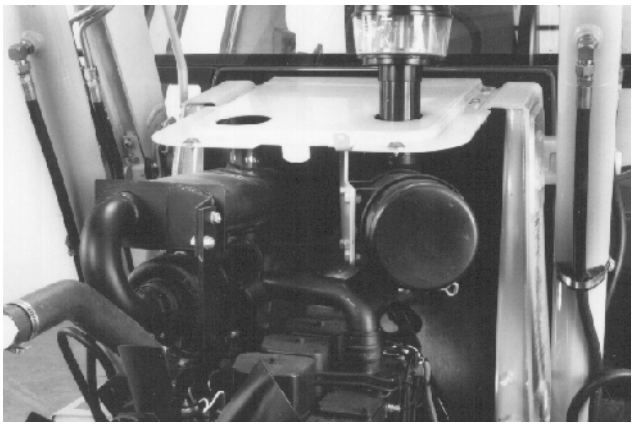
STEP 31



BP9502308

Remove the electrical connectors (1) from the air filter restriction warning lamp. Loosen the air filter hose clamp (2). Disconnect the air filter hose.

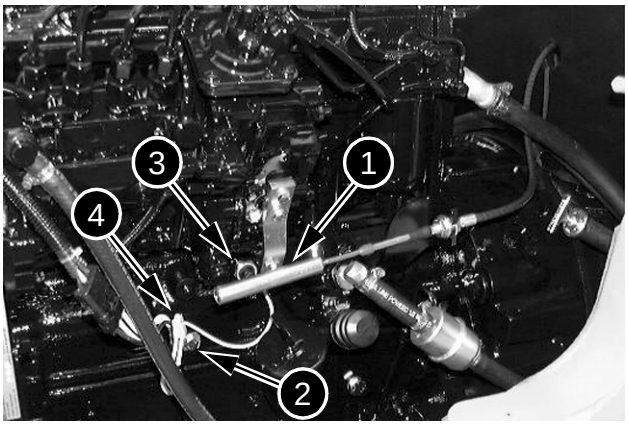
STEP 32



BP9502306

Remove the cap screws and flat washers that fasten the cover to uprights. Remove the cover and air cleaner as an assembly.

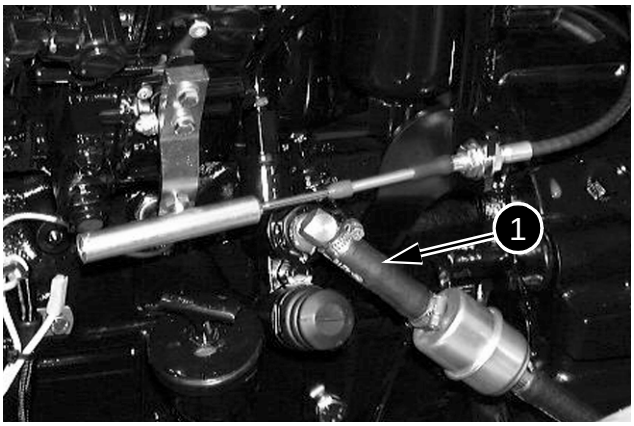
STEP 33



CD00C015

Remove the tie straps (1). Disconnect the wiring harness clamp (2). Disconnect the cable from the oil pressure sender (3). Disconnect the fuel stop cable (4).

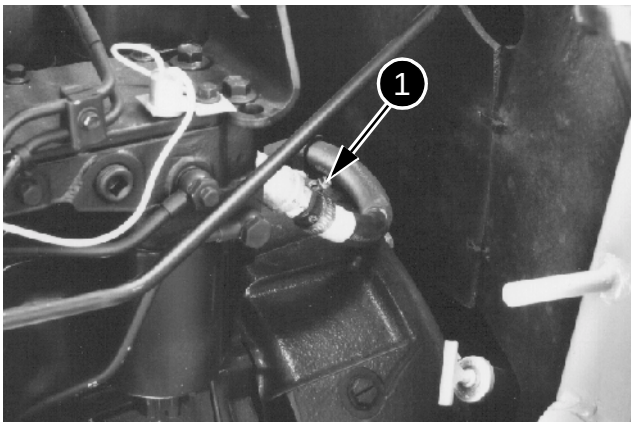
STEP 34



CD00C016

Disconnect the fuel pipe (1) and plug it.

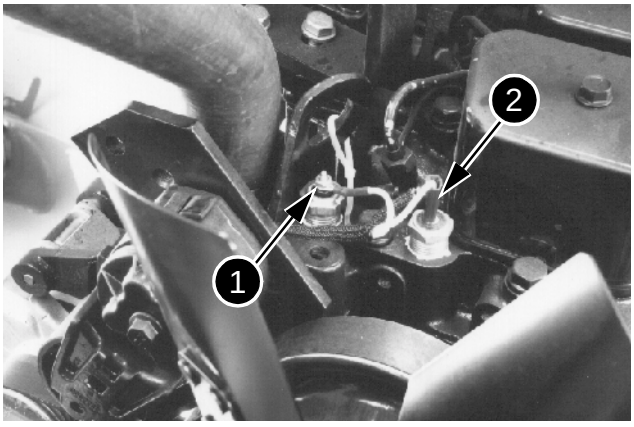
STEP 35



BP9502301

Disconnect and cap the heater hose (1).

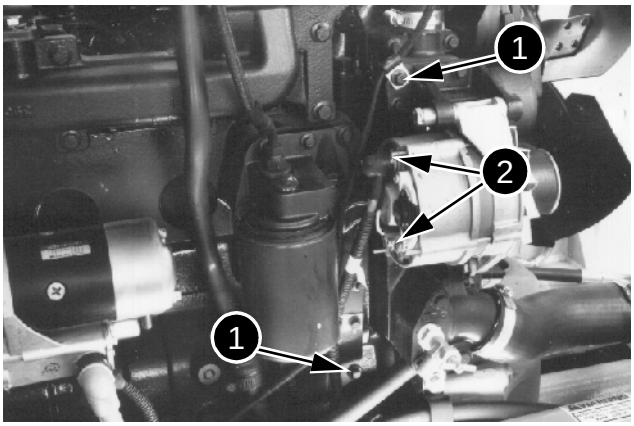
STEP 36



BP9502298

Disconnect the coolant temperature sender (1) and coolant temperature switch (2).

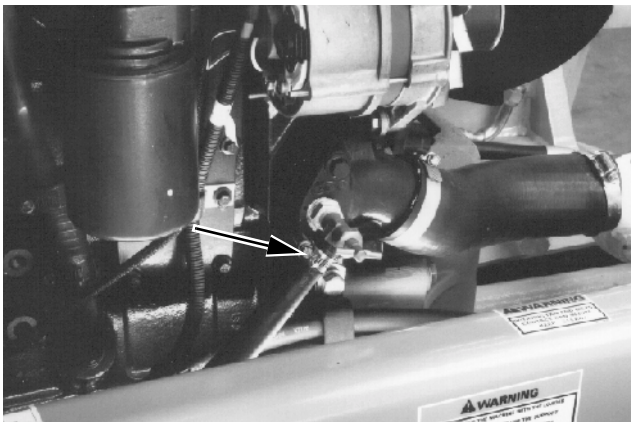
STEP 37



BP9502296

Remove the harness clamps (1). Disconnect the cables (2) from the alternator.

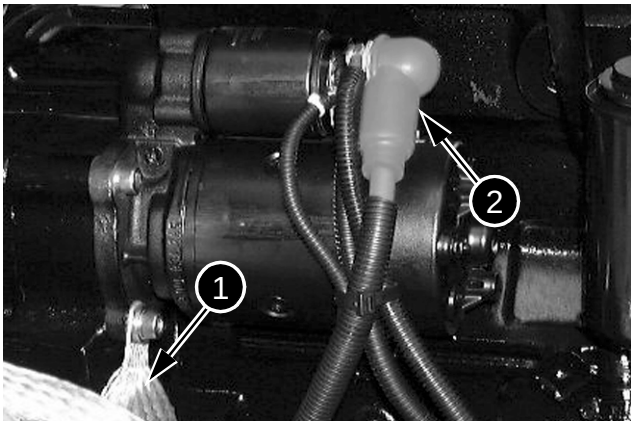
STEP 38



BP9502297

Loosen the clamp. Disconnect and plug the heater hose.

STEP 39

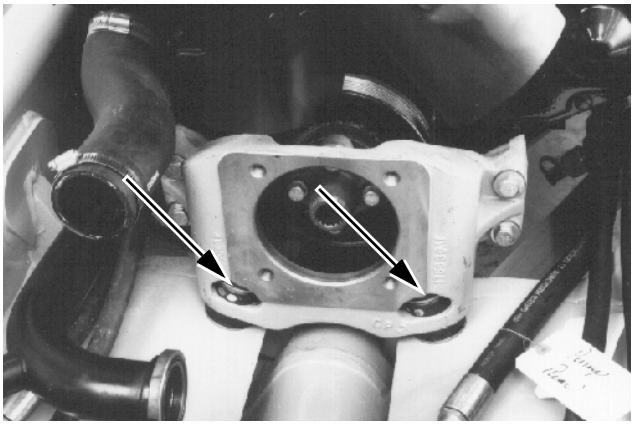


CD00C017

Disconnect the earth strap (1). Put identification tags on the starter cables (2). Disconnect the cables (2).

NOTE: *The photo below does not correspond to this model of machine but the procedure is the same.*

STEP 40

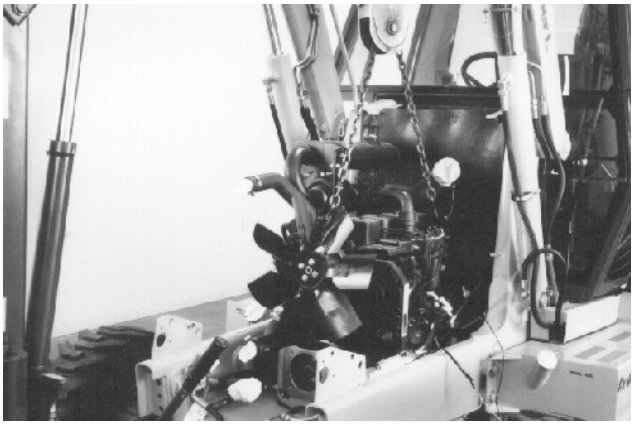


BP9502310

Remove the bolts, flat washers, and nuts from the front engine mount.

NOTE: *When installing, tighten the self-locking nuts to a torque of between 41 and 47 Nm.*

STEP 41



BP9502305

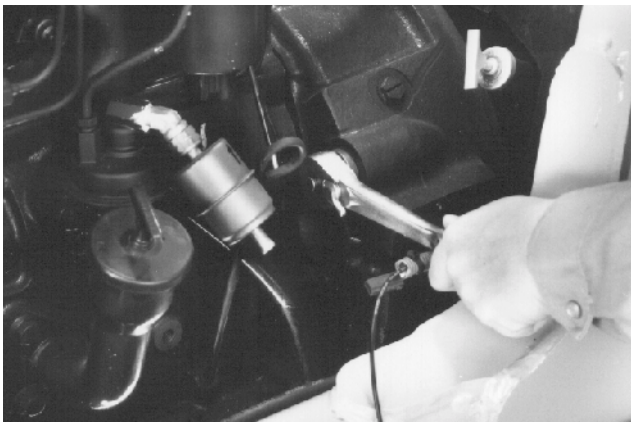
Connect lifting equipment to the lifting eyes on the engine to hold the engine in place.

NOTE: *There are six cap screws with lock washers that fasten the torque converter to the flywheel. Rotate the engine to align each cap screw with the access hole in the flywheel housing at the left side of the engine.*

STEP 42

Remove the plastic plug from the flywheel housing. Remove the hose from the bracket and remove the cover and gasket from the access hole for the cap screws.

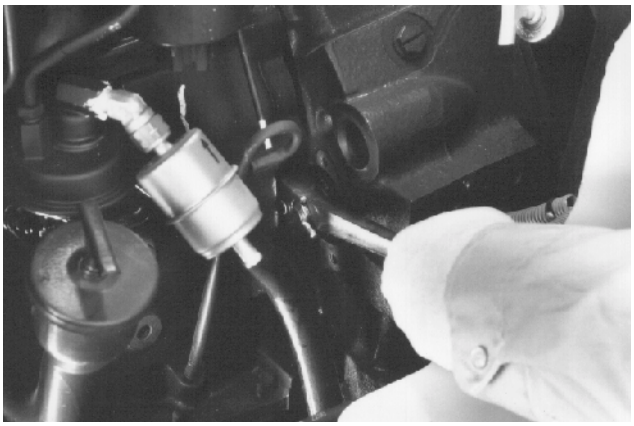
STEP 43



BP9502299

Install the CAS 1690 tool to turn the flywheel.

STEP 44



BP9502300

Loosen and remove all six cap screws and washers that fasten the torque converter to the flywheel.

NOTE: *Be careful during installation when installing the cap screws and lock washers that fasten the torque converter to the flywheel. Tighten the screws to a torque of between 52 and 57 Nm.*

STEP 45

Loosen and remove the 12 cap screws and flat washers that fasten the transmission to the engine. Move the heater hose and clamps out of the way.

STEP 46

Move the engine forward and raise the engine. Remove the engine from the machine.

NOTE: *Installation of the engine is the reverse of removal. Before starting the engine, do the following:*

1. Fill the turbocharger with oil. Disconnect the fuel shut-off solenoid cable. Operate the starter motor for 1à to 20 seconds to fill the turbo-charger with oil. Connect the wire to the fuel shut-off solenoid.
2. It is essential that the hydraulic pump is filled with oil. Carry out the following procedure to fill the hydraulic pump with oil:

    A. Make sure that the oil level in the reservoir is correct.

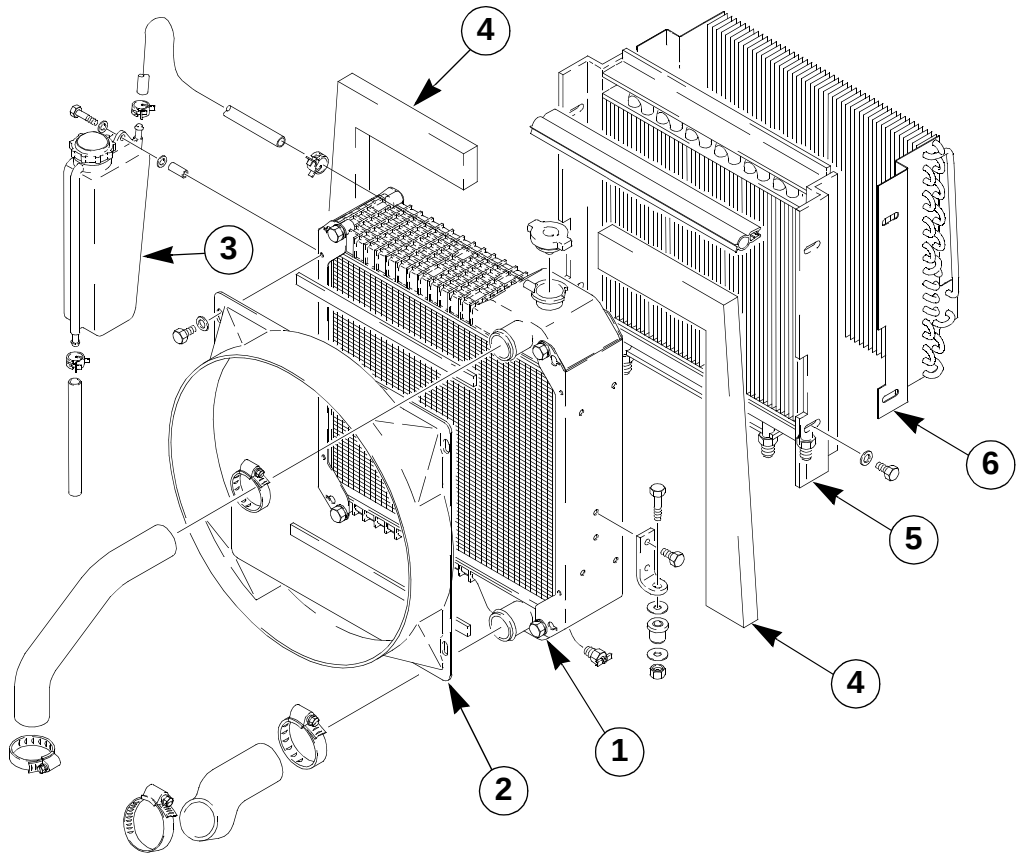
    B. Remove the cap from the hydraulic reservoir.

    C. Use a compressed air nozzle to pressurize the hydraulic reservoir. Wrap a cloth around the end of the hose at the nozzle.

NOTE: *34.5 kPa to 69.0 kPa is all that is required to move the oil. Pressure above 69.0 kPa can damage the hydraulic reservoir.*

    D. Have another person start and run the engine at low idle while the hydraulic reservoir is being pressurised.

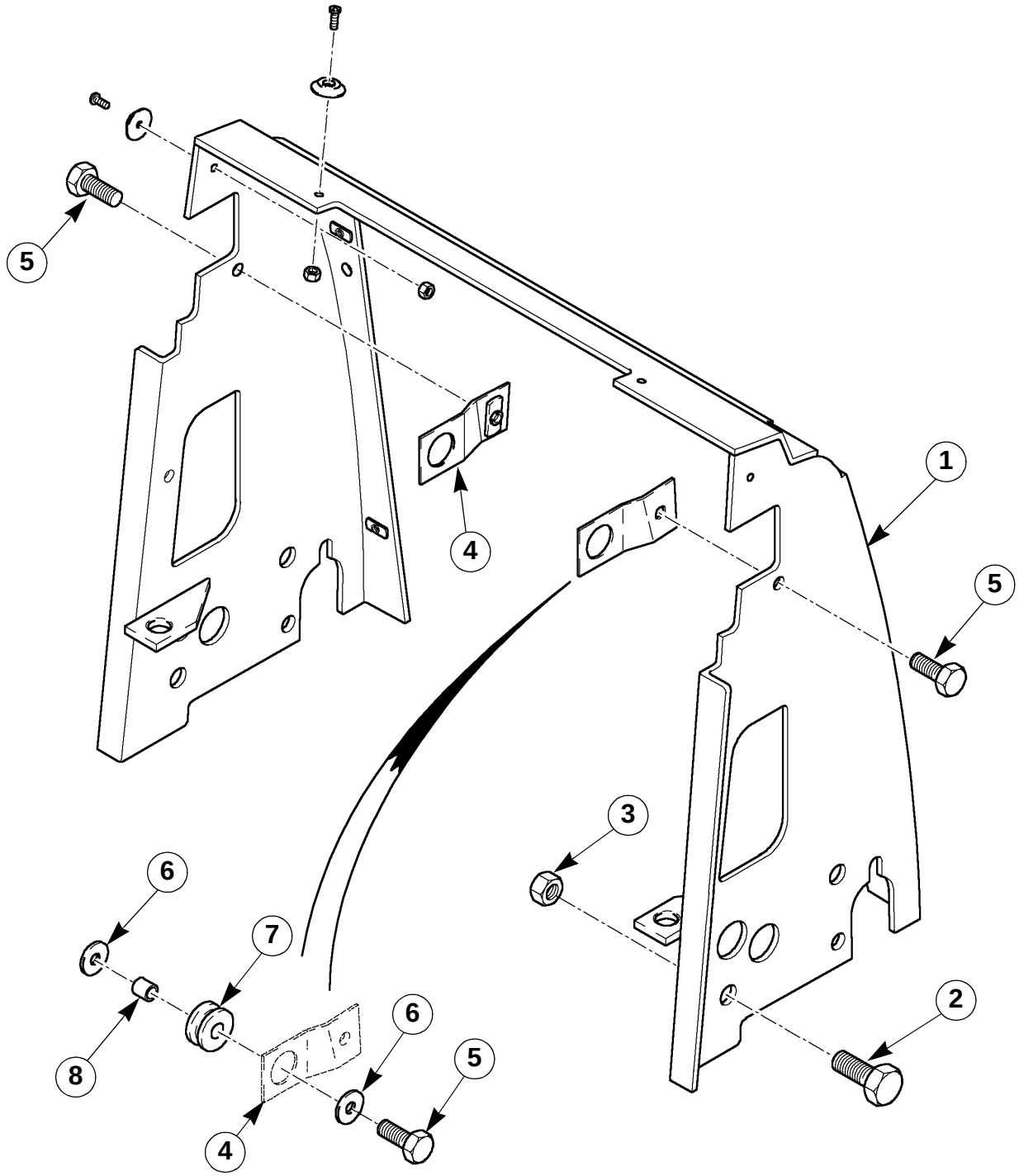
RADIATOR INSTALLATION



B9503081T

1 RADIATOR
2 FAN SHROUD
3 COOLANT RECOVERY RESERVOIR
4 SCREEN
5 OIL COOLER
6 AIR CONDITIONING CONDENSER

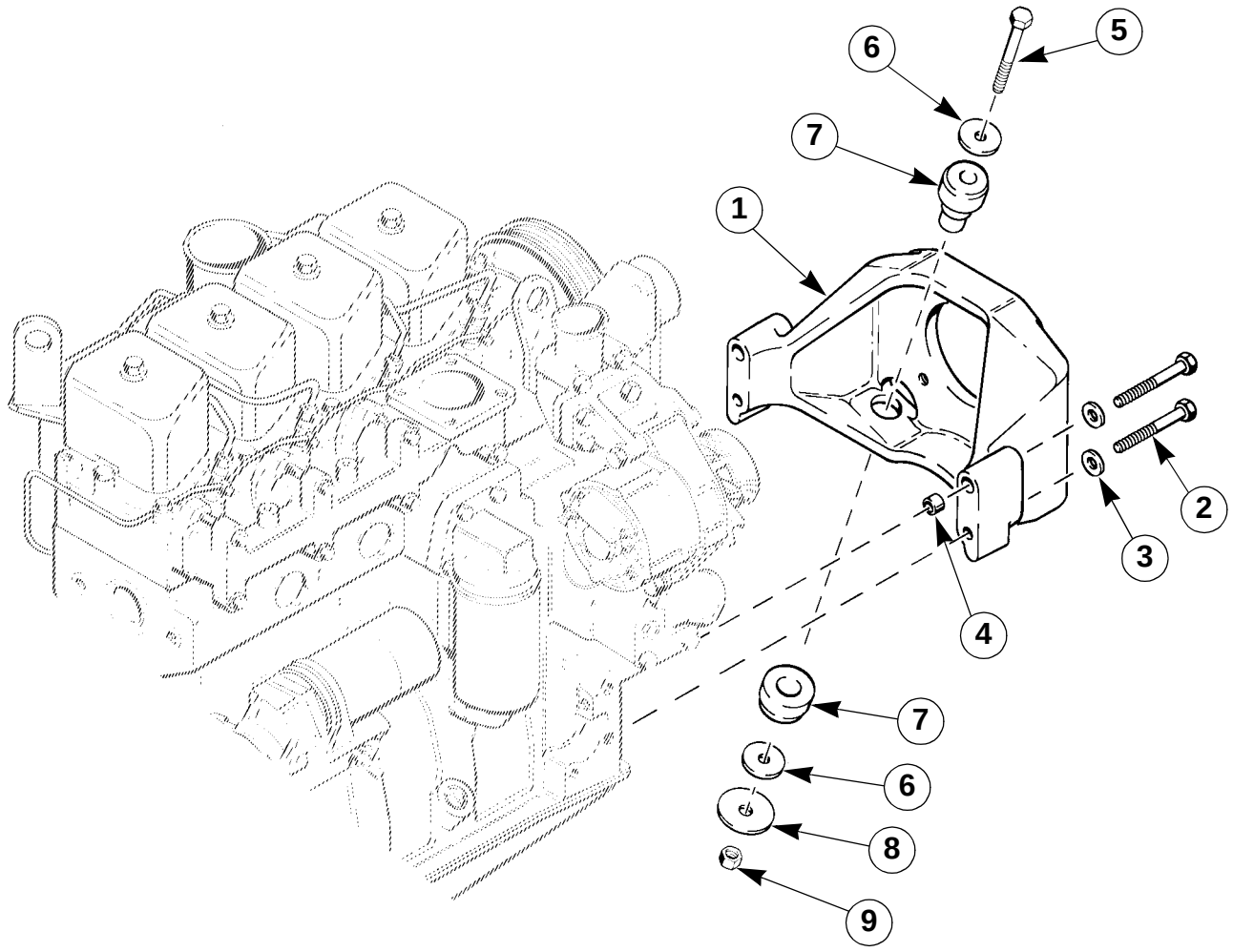
RADIATOR SHROUD



CI00C508

1 RADIATOR SHROUD
2 SCREWS RETAINING RADIATOR ON MACHINE UNDERCARRIAGE
3 NUT
4 BRACKET, RADIATOR SHROUD TO RADIATOR
5 SCREW
6 FLAT WASHER, SPECIAL
7 SHOCK ABSORBER
8 SPACER

FRONT ENGINE MOUNT INSTALLATION



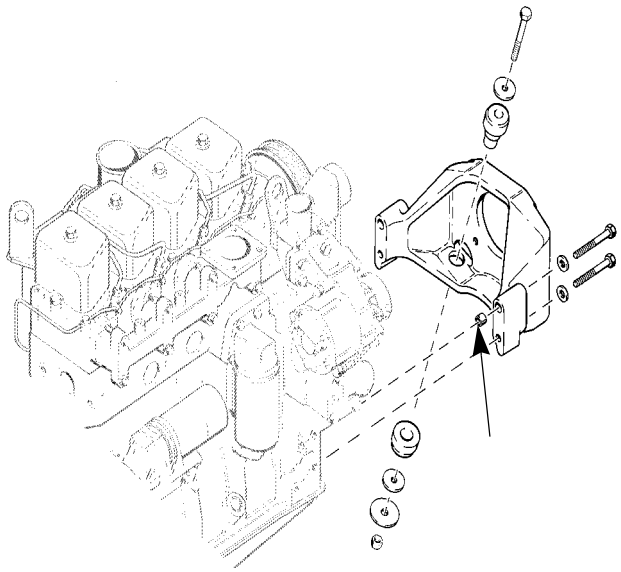
B9503083

1 ENGINE MOUNT
2 CAP SCREW
3 HARDENED WASHER
4 SPACER
5 SCREW
6 HARDENED WASHER
7 GROMMET
8 HARDENED WASHER
9 SELF-LOCKING NUT

INSTALLING THE ENGINE FRONT BRACKET

NOTE: *If the front engine support was removed for any reason, the front engine support must be aligned with the crankshaft of the engine. If the front engine support is not aligned with the crankshaft of the engine, the pump can be damaged.*

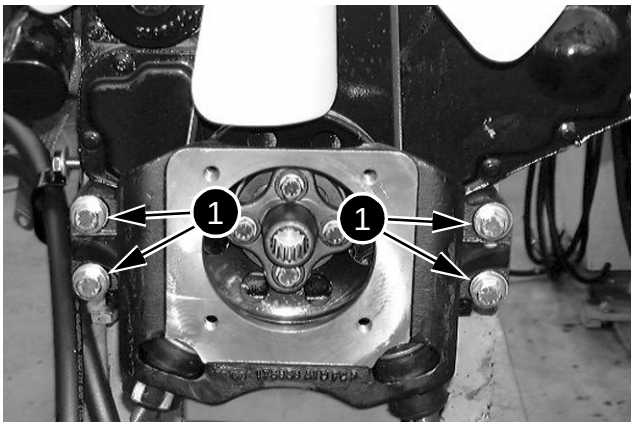
STEP 1



B9503083

Install a spacer in each top hole in the front engine support. Install the front engine support with the hardware shown.

STEP 2



CD00C018

When the front engine support is centred, tighten the screws (1) to a torque of between 89 and 107 Nm.

Section

2002

STALL TESTS

April 2000

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SPECIFICATIONS

NOTE: *The specifications below refer to an engine which has operated for over 50 hours.*

580LE:

Idle ..... 1000 to 1100 rpm

Full speed (without load) ..... 2300 to 2410 rpm

Hydraulic stall speed (loader only) ..... 2235 to 2305 rpm

Torque converter stall speed ..... 2235 to 2310 rpm

Mixed stalling *

* On this model it is not possible to measure mixed stalling.

580SLE - 91 hp:

Idle ..... 1000 to 1100 rpm

Full speed (without load) ..... 2285 to 2410 rpm

Hydraulic stall speed (loader only) ..... 2225 to 2320 rpm

Torque converter stall speed ..... 2150 to 2280 rpm

Mixed stalling ..... 1485 to 1790 rpm

580SLE - air conditioned:

Idle ..... 1000 to 1100 rpm

Full speed (without load) ..... 2280 to 2400 rpm

Hydraulic stall speed (loader only) ..... 2220 to 2310 rpm

Torque converter stall speed ..... 2090 to 2270 rpm

Mixed stalling ..... 1365 to 1705 rpm

580LPS - Powershift:

Idle ..... 1000 to 1100 rpm

Full speed (without load) ..... 2295 to 2420 rpm

Hydraulic stall speed (loader only) ..... 2220 to 2315 rpm

Torque converter stall speed ..... 2090 to 2200 rpm

Mixed stalling ..... 1400 to 1650 rpm

580LPS - air conditioned:

Idle ..... 1000 to 1100 rpm

Full speed (without load) ..... 2275 to 2395 rpm

Hydraulic stall speed (loader only) ..... 2215 to 2300 rpm

Torque converter stall speed ..... 2030 to 2150 rpm

Mixed stalling ..... 1400 to 1650 rpm

580LXT - 91 hp:

Idle ..... 1000 to 1100 rpm

Full speed (without load) ..... 2285 to 2415 rpm

Hydraulic stall speed (loader only) ..... 2225 to 2325 rpm

Torque converter stall speed ..... 2170 to 2285 rpm

Mixed stalling ..... 1510 to 1815 rpm

590SLE - LPS:

Idle ..... 1060 to 1110 rpm

Full speed (without load) ..... 2355 to 2475 rpm

Hydraulic stall speed (loader only) ..... 2260 to 2355 rpm

Torque converter stall speed ..... 2125 to 2285 rpm

Mixed stalling ..... 1515 to 1795 rpm

GENERAL

Carry out the stall tests to try to find the cause of poor output.

With the engine running at full speed, the transmission circuit and the hydraulic system are first engaged separately, then together.

To find the cause of the problem, compare the engine speeds obtained after the stall tests with the inspection sheets which start on page 6. It may be necessary to check one circuit separately to detect the exact cause of the problem.

To obtain the most reliable results from the stall tests, use a photographic tachometer or a tachometer of another type but of equivalent accuracy. Before carrying out the stall tests, make sure that the engine, the transmission circuit and the hydraulic system are at normal operating temperature. Warm up the oil as per the instructions given in this section.

PREPARING THE MACHINE FOR THE STALL TESTS

1. Check engine idle speed and full speed.
   580LE:
   At idle, without load: 1000 to 1100 rpm.
   At full speed, without load: 2300 to 2410 rpm.
   580SLE:
   At idle, without load: 1000 to 1100 rpm.
   At full speed, without load: 2285 to 2410 rpm.
   580SLE (air conditioned):
   At idle, without load: 1000 to 1100 rpm.
   At full speed, without load: 2280 to 2400 rpm.
   580LPS (powershift):
   At idle, without load: 1000 to 1100 rpm.
   At full speed, without load: 2295 to 2420 rpm.
   580LPS (air conditioned):
   At idle, without load: 1000 to 1100 rpm.
   At full speed, without load: 2275 to 2395 rpm.
   580LXT:
   At idle, without load: 1000 to 1100 rpm.
   At full speed, without load: 2285 to 2415 rpm.
   590SLE - LPS:
   At idle, without load: 1000 to 1100 rpm.
   At full speed, without load: 2355 to 2475 rpm.
2. Engage the parking brake.
3. With the engine running at idle, move the transmission control lever to fourth speed and the direction of travel control lever to FORWARD (the audible warning device sounds).
4. Gradually increase engine speed up to full speed.
5. If the machine starts to move at any given moment, reduce the engine speed to idle and shut it down.
6. Adjust or repair the parking brake as required. Refer to Section 7002 or Section 9001 as required.

PROCEDURE FOR WARMING UP THE TORQUE CONVERTER AND THE HYDRAULIC OIL

1. Engage the parking brake.
2. Start the engine and run it at idle speed.
3. With the engine running at full throttle, hold the loader control lever in the ROLLBACK position for 15 seconds.
4. Put the loader control lever in the NEUTRAL position for 15 seconds.
5. Repeat Steps 3 and 4 until the oil reaches a temperature of 52°C. At this temperature, the side of the reservoir will be noticeably hot.
6. With the engine running at idle, move the transmission control lever to fourth speed and the direction of travel control lever to FORWARD (the audible warning device sounds).
7. Run the engine at full speed for 15 seconds.
8. Reduce the engine speed to idle and move the direction of travel control lever to NEUTRAL for 15 seconds.
9. Repeat Steps 6 to 8 until the transmission oil temperature gauge needle stabilises in the middle of the green area of the gauge.

580LE INSPECTION PROCEDURE

1. Prepare the machine for the stall tests as per the instructions in this section.
2. Warm up the hydraulic oil as per the instructions in this section.
3. Apply the parking brake and start the engine.
4. With the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the first line of the inspection sheet.
5. Reduce the engine speed to idle.
6. Move the transmission control lever to second speed and the direction of travel control lever to the FORWARD position.
7. Gradually increase engine speed up to full speed and read the tachometer. Note the reading on the second line of the inspection sheet.
8. Reduce the engine speed to idle (over a period of 2 min with turbo-charger) and stop the engine.
9. Refer to the inspection sheet to interpret the results of the stall tests.

580LE INSPECTION SHEET

1. _____ rpm = hydraulic stall speed (specifications between 2235 and 2305 rpm)

2. _____ rpm = torque converter stall speed (specifications between 2235 and 2310 rpm)

rpm	
1. 2235 to 2305 2. 2235 to 2310	Torque converter, transmission, hydraulic system and engine assumed to be in good condition.
1. Over 2305 2. Over 2310	Problem with the engine. Check the engine speeds. Refer to specifications in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410.
1. Under 2235 2. Under 2235	Problem with engine. Check the engine speeds as per instructions in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410. Change the fuel filter and the air filter.
1. Under 2235 2. 2235 to 2310	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test.
1. Over 2305 2. 2235 to 2310	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test. Check for leaks at the loader control valve.
1. 2235 to 2305 2. Over 2310	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.
1. 2235 to 2305 2. Under 2235	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.

580SLE INSPECTION PROCEDURE (91 hp)

1. Prepare the machine for the stall tests as per the instructions in this section.
2. Warm up the hydraulic oil as per the instructions in this section.
3. Apply the parking brake and start the engine.
4. With the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the first line of the inspection sheet.
5. Reduce the engine speed to idle.
6. Move the transmission control lever to second speed and the direction of travel control lever to the FORWARD position.
7. Gradually increase engine speed up to full speed and read the tachometer. Note the reading on the second line of the inspection sheet.
8. With the transmission lever in second speed, the direction of travel control lever in the FORWARD travel position (the audible warning device sounds), and with the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the third line of the inspection sheet.
9. Reduce the engine speed to idle (over a period of 2 min with turbo-charger) and shut down the engine.
10. Refer to the inspection sheet to interpret the results of the stall tests.

580SLE INSPECTION SHEET (91 hp)

1. _____ rpm = hydraulic stall speed (specifications between 2225 and 2320 rpm)
2. _____ rpm = torque converter stall speed (specifications between 2150 and 2280 rpm)
3. _____ rpm = torque converter stall speed and hydraulic stall (specifications between 1485 and 1790 rpm)

rpm	
1. 2225 to 2320 2. 2150 to 2280 3. 1485 to 1790	Torque converter, transmission, hydraulic system and engine assumed to be in good condition.
1. Over 2320 2. Over 2280 3. Over 1790	Problem with the engine. Check the engine speeds. Refer to specifications in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410.
1. Under 2225 2. Under 2150 3. Under 1485	Problem with engine. Check the engine speeds as per instructions in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410. Change the fuel filter and the air filter.
1. Under 2225 2. 2150 to 2280 3. Under 1485	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test.
1. Over 2320 2. 2150 to 2280 3. Over 1790	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test. Check for leaks at the loader control valve.
1. 2225 to 2320 2. Over 2280 3. Over 1790	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.
1. 2225 to 2320 2. Under 2150 3. Under 1485	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.

580SLE INSPECTION PROCEDURE (Air conditioned)

1. Prepare the machine for the stall tests as per the instructions in this section.
2. Warm up the hydraulic oil as per the instructions in this section.
3. Apply the parking brake and start the engine.
4. With the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the first line of the inspection sheet.
5. Reduce the engine speed to idle.
6. Move the transmission control lever to second speed and the direction of travel control lever to the FORWARD position.
7. Gradually increase engine speed up to full speed and read the tachometer. Note the reading on the second line of the inspection sheet.
8. With the transmission lever in second speed, the direction of travel control lever in the FORWARD travel position (the audible warning device sounds), and with the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the third line of the inspection sheet.
9. Reduce the engine speed to idle (over a period of 2 min with turbo-charger) and shut down the engine.
10. Refer to the inspection sheet to interpret the results of the stall tests.

580SLE INSPECTION SHEET (Air conditioned)

1. _____ rpm = hydraulic stall speed (specifications between 2220 and 2310 rpm)
2. _____ rpm = torque converter stall speed (specifications between 2090 and 2270 rpm)
3. _____ rpm = torque converter stall speed and hydraulic stall (specifications between 1365 and 1705 rpm)

rpm	
1. 2220 to 2310 2. 2090 to 2270 3. 1365 to 1705	Torque converter, transmission, hydraulic system and engine assumed to be in good condition.
1. Over 2310 2. Over 2270 3. Over 1705	Problem with the engine. Check the engine speeds. Refer to specifications in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410.
1. Under 2220 2. Under 2090 3. Under 1365	Problem with engine. Check the engine speeds as per instructions in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410. Change the fuel filter and the air filter.
1. Under 2220 2. 2090 to 2270 3. Under 1365	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test.
1. Over 2310 2. 2090 to 2270 3. Over 1705	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test. Check for leaks at the loader control valve.
1. 2220 to 2310 2. Over 2270 3. Over 1705	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.
1. 2220 to 2310 2. Under 2090 3. Under 1365	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.

580LPS INSPECTION PROCEDURE (Powershift)

1. Prepare the machine for the stall tests as per the instructions in this section.
2. Warm up the hydraulic oil as per the instructions in this section.
3. Apply the parking brake and start the engine.
4. With the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the first line of the inspection sheet.
5. Reduce the engine speed to idle.
6. Move the transmission control lever to second speed and the direction of travel control lever to the FORWARD position.
7. Gradually increase engine speed up to full speed and read the tachometer. Note the reading on the second line of the inspection sheet.
8. With the transmission lever in second speed, the direction of travel control lever in the FORWARD travel position (the audible warning device sounds), and with the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the third line of the inspection sheet.
9. Reduce the engine speed to idle (over a period of 2 min with turbo-charger) and shut down the engine.
10. Refer to the inspection sheet to interpret the results of the stall tests.

580LPS INSPECTION SHEET (Powershift)

1. _____ rpm = hydraulic stall speed (specifications between 2220 and 2315 rpm)
2. _____ rpm = torque converter stall speed (specifications between 2090 and 2200 rpm)
3. _____ rpm = torque converter stall speed and hydraulic stall (specifications between 1400 and 1650 rpm)

rpm	
1. 2220 to 2315 2. 2090 to 2200 3. 1400 to 1650	Torque converter, transmission, hydraulic system and engine assumed to be in good condition.
1. Over 2315 2. Over 2200 3. Over 1650	Problem with the engine. Check the engine speeds. Refer to specifications in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410.
1. Under 2220 2. Under 2090 3. Under 1400	Problem with engine. Check the engine speeds as per instructions in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410. Change the fuel filter and the air filter.
1. Under 2220 2. 2090 to 2200 3. Under 1400	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test.
1. Over 2315 2. 2090 to 2200 3. Over 1650	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test. Check for leaks at the loader control valve.
1. 2220 to 2315 2. Over 2200 3. Over 1650	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.
1. 2220 to 2315 2. Under 2090 3. Under 1400	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.

580LPS INSPECTION PROCEDURE (Air conditioned)

1. Prepare the machine for the stall tests as per the instructions in this section.
2. Warm up the hydraulic oil as per the instructions in this section.
3. Apply the parking brake and start the engine.
4. With the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the first line of the inspection sheet.
5. Reduce the engine speed to idle.
6. Move the transmission control lever to second speed and the direction of travel control lever to the FORWARD position.
7. Gradually increase engine speed up to full speed and read the tachometer. Note the reading on the second line of the inspection sheet.
8. With the transmission lever in second speed, the direction of travel control lever in the FORWARD travel position (the audible warning device sounds), and with the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the third line of the inspection sheet.
9. Reduce the engine speed to idle (over a period of 2 min with turbo-charger) and shut down the engine.
10. Refer to the inspection sheet to interpret the results of the stall tests.

580LPS INSPECTION SHEET (Air conditioned)

1. _____ rpm = hydraulic stall speed (specifications between 2215 and 2300 rpm)
2. _____ rpm = torque converter stall speed (specifications between 2030 and 2150 rpm)
3. _____ rpm = torque converter stall speed and hydraulic stall (specifications between 1400 and 1650 rpm)

rpm	
1. 2215 to 2300 2. 2030 to 2150 3. 1400 to 1650	Torque converter, transmission, hydraulic system and engine assumed to be in good condition.
1. Over 2300 2. Over 2150 3. Over 1650	Problem with the engine. Check the engine speeds. Refer to specifications in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410.
1. Under 2215 2. Under 2030 3. Under 1400	Problem with engine. Check the engine speeds as per instructions in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410. Change the fuel filter and the air filter.
1. Under 2215 2. 2030 to 2150 3. Under 1400	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test.
1. Over 2300 2. 2030 to 2150 3. Over 1650	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test. Check for leaks at the loader control valve.
1. 2215 to 2300 2. Over 2150 3. Over 1650	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.
1. 2215 to 2300 2. Under 2030 3. Under 1400	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.

580LXT INSPECTION PROCEDURE

1. Prepare the machine for the stall tests as per the instructions in this section.
2. Warm up the hydraulic oil as per the instructions in this section.
3. Apply the parking brake and start the engine.
4. With the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the first line of the inspection sheet.
5. Reduce the engine speed to idle.
6. Move the transmission control lever to second speed and the direction of travel control lever to the FORWARD position.
7. Gradually increase engine speed up to full speed and read the tachometer. Note the reading on the second line of the inspection sheet.
8. With the transmission lever in second speed, the direction of travel control lever in the FORWARD travel position (the audible warning device sounds), and with the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the third line of the inspection sheet.
9. Reduce the engine speed to idle (over a period of 2 min with turbo-charger) and shut down the engine.
10. Refer to the inspection sheet to interpret the results of the stall tests.

580LXT INSPECTION SHEET

1. _____ rpm = hydraulic stall speed (specifications between 2225 and 2325 rpm)
2. _____ rpm = torque converter stall speed (specifications between 2170 and 2285 rpm)
3. _____ rpm = torque converter stall speed and hydraulic stall (specifications between 1510 and 1815 rpm)

rpm	
1. 2225 to 2325 2. 2170 to 2285 3. 1510 to 1815	Torque converter, transmission, hydraulic system and engine assumed to be in good condition.
1. Over 2325 2. Over 2285 3. Over 1815	Problem with the engine. Check the engine speeds. Refer to specifications in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410.
1. Under 2225 2. Under 2170 3. Under 1510	Problem with engine. Check the engine speeds as per instructions in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410. Change the fuel filter and the air filter.
1. Under 2225 2. 2170 to 2285 3. Under 1510	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test.
1. Over 2325 2. 2170 to 2285 3. Over 1815	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test. Check for leaks at the loader control valve.
1. 2225 to 2325 2. Over 2285 3. Over 1815	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.
1. 2225 to 2325 2. Under 2170 3. Under 1510	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.

590SLE - LPS INSPECTION PROCEDURE

1. Prepare the machine for the stall tests as per the instructions in this section.
2. Warm up the hydraulic oil as per the instructions in this section.
3. Apply the parking brake and start the engine.
4. With the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the first line of the inspection sheet.
5. Reduce the engine speed to idle.
6. Move the transmission control lever to second speed and the direction of travel control lever to the FORWARD position.
7. Gradually increase engine speed up to full speed and read the tachometer. Note the reading on the second line of the inspection sheet.
8. With the transmission lever in second speed, the direction of travel control lever in the FORWARD travel position (the audible warning device sounds), and with the engine running at full speed, keep the loader control lever in the RAISE position and read the tachometer. Note the reading on the third line of the inspection sheet.
9. Reduce the engine speed to idle (over a period of 2 min with turbo-charger) and shut down the engine.
10. Refer to the inspection sheet to interpret the results of the stall tests.

590SLE - LPS INSPECTION SHEET

1. _____ rpm = hydraulic stall speed (specifications between 2260 and 2355 rpm)
2. _____ rpm = torque converter stall speed (specifications between 2125 and 2285 rpm)
3. _____ rpm = torque converter stall speed and hydraulic stall (specifications between 1515 and 1795 rpm)

rpm	
1. 2260 to 2355 2. 2125 to 2285 3. 1515 to 1795	Torque converter, transmission, hydraulic system and engine assumed to be in good condition.
1. Over 2355 2. Over 2285 3. Over 1795	Problem with the engine. Check the engine speeds. Refer to specifications in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410.
1. Under 2260 2. Under 2125 3. Under 1515	Problem with engine. Check the engine speeds as per instructions in Section 9001. Check the fuel injection pump setting as per instructions in Section 3410. Change the fuel filter and the air filter.
1. Under 2260 2. 2125 to 2285 3. Under 1515	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test.
1. Over 2355 2. 2125 to 2285 3. Over 1795	Problem(s) with the hydraulic system. Refer to Section 8002. Check the relief valve setting. Do the pump test. Check for leaks at the loader control valve.
1. 2260 to 2355 2. Over 2285 3. Over 1795	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.
1. 2260 to 2355 2. Under 2125 3. Under 1515	Problems with the transmission or torque converter. Refer to Section 6002 and check the transmission and the torque converter.

Section

4000

REMOVAL AND INSTALLATION OF ELECTRICAL COMPONENTS

Case

Cre 7-79490GB

Issued March 1996

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NOTE: Case France 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.

SPECIFICATIONS

Alternator pulley shaft nut ..... 68 Nm

Crankshaft pulley cap screws ..... 95 to 114 Nm