W270B Wheel Loader Service Manual
87661531

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CNH Italia S.p.A.
Viale delle Nazioni, 55
41100 Modena
Italia

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SECTION INDEX

GENERAL

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Section 1001

GENERAL TORQUE SPECIFICATIONS

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Section 1001

GENERAL TORQUE SPECIFICATIONS

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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	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

NOTE: *Use thick nuts with Grade 8 bolts.*

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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

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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
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Size	Pound-Feet	Newton metres
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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

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 if graphite or Molydisulfide grease or oil is used.

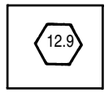
Grade 8.8 Bolts, Nuts, and Studs

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
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

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
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.

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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.

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
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

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
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
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 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
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
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

Split Flange Mounting Bolts		
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

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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 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
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
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

Split Flange Mounting Bolts		
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
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
					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			

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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
					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

CNH Italia S.p.A.
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Section 1002

1002

FLUIDS AND LUBRICANTS

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CAPACITIES AND LUBRICANTS

Engine Oil
- Capacity with Filter Change ..... 37 liters (39 U.S. quarts)
- Type of oil ..... AMBRA Mastergold HSP SAE 15W-40, see engine oil recommendations on page 4

Engine Cooling System
- Capacity ..... 56.8 liters (15.0 U.S. Gallons)
- Type of Coolant ..... AMBRA Agriflù 50% water and 50% Ethylene Glycol

Fuel Tank
- Capacity ..... 393.6 liters (104 U.S. Gallons)
- Type of Fuel ..... See Diesel fuel specifications

Hydraulic System
- Hydraulic Reservoir Refill Capacity with Filter Change ..... 130 liters (34 U.S. Gallons)
- Total System Capacity ..... 242 liters (63.93 U.S. Gallons)
- Type of Oil ..... AMBRA Hydrosystem 46HV

Transmission
- Refill Capacity with Filter Change ..... 22 litres (5.81 U.S. Gallons)
- Type of Oil ..... AMBRA Supergold HSP SAE 10W-30

Axles
- Capacity
  - Front ..... 47.3 litres (12.50 U.S. Quarts)
  - Rear ..... 53 litres (14 U.S. Quarts
- Type of Lubricant ..... AMBRA TRX Transaxle Fluid, 80W-140

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. Machines are shipped from the factory with break-in oil.*

Brake System
- Type of Fluid (Same as Hydraulic System) ..... AMBRA Hydrosystem 46HV

ENGINE OIL RECOMMENDATIONS

New Holland AMBRA Engine oil is recommended for use in your New Holland engine. New Holland AMBRA Engine Oil will lubricate your engine correctly under all operating conditions.

If New Holland AMBRA Multi-Viscosity Oil is not available, use only oil meeting API engine oil service category CH-4 (preferred) or CG-4.

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 New Holland AMBRA lubricants.*

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CAPACITIES AND LUBRICANTS

Engine Oil
- Capacity with Filter Change ..... 37 liters (39 U.S. quarts)
- Type of oil ..... AMBRA Mastergold HSP SAE 15W-40, see engine oil recommendations on page 4

Engine Cooling System
- Capacity ..... 56.8 liters (15.0 U.S. Gallons)
- Type of Coolant ..... AMBRA Agriflù 50% water and 50% Ethylene Glycol

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- Capacity ..... 393.6 liters (104 U.S. Gallons)
- Type of Fuel ..... See Diesel fuel specifications

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Axles
- Capacity
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  - Rear ..... 53 litres (14 U.S. Quarts
- Type of Lubricant ..... AMBRA TRX Transaxle Fluid, 80W-140

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. Machines are shipped from the factory with break-in oil.*

Brake System
- Type of Fluid (Same as Hydraulic System) ..... AMBRA Hydrosystem 46HV

ENGINE OIL RECOMMENDATIONS

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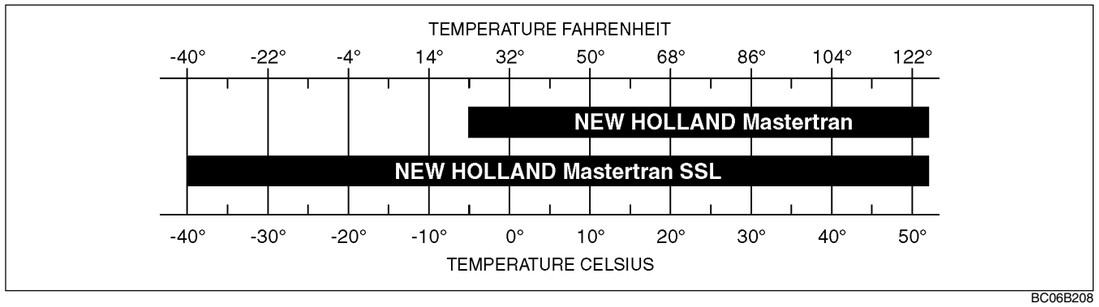
If New Holland AMBRA Multi-Viscosity Oil is not available, use only oil meeting API engine oil service category CH-4 (preferred) or CG-4.

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 New Holland AMBRA lubricants.*

HYDRAULIC OIL TEMPERATURE CHART



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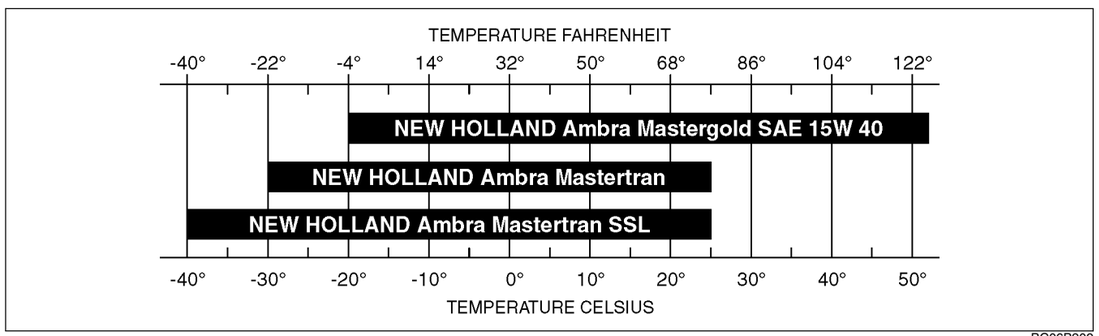
TRANSMISSION OIL TEMPERATURE CHART



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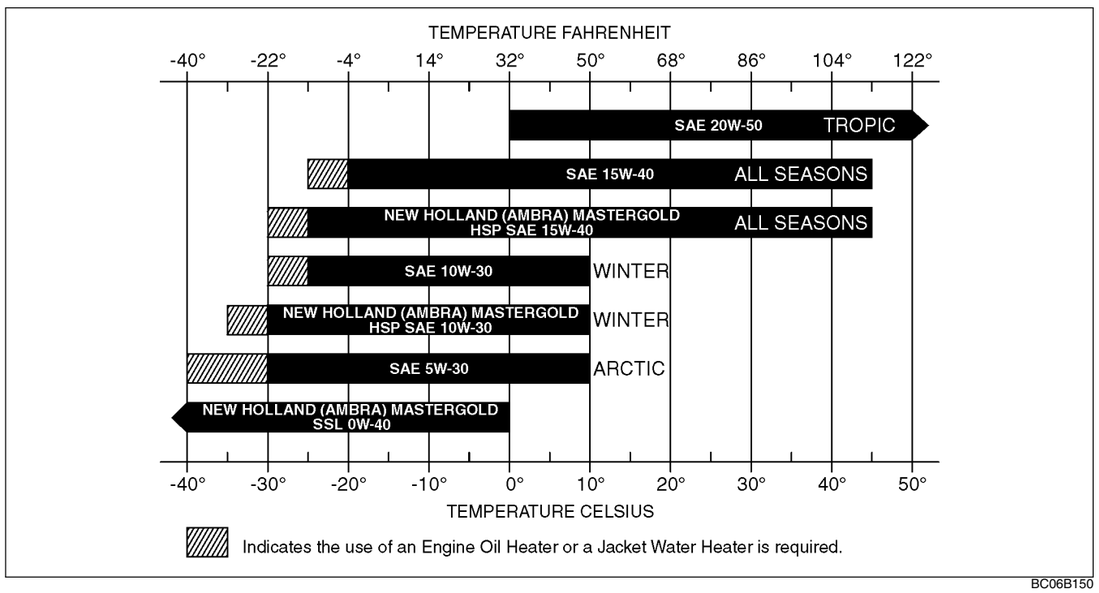
ENGINE OIL TEMPERATURE CHART



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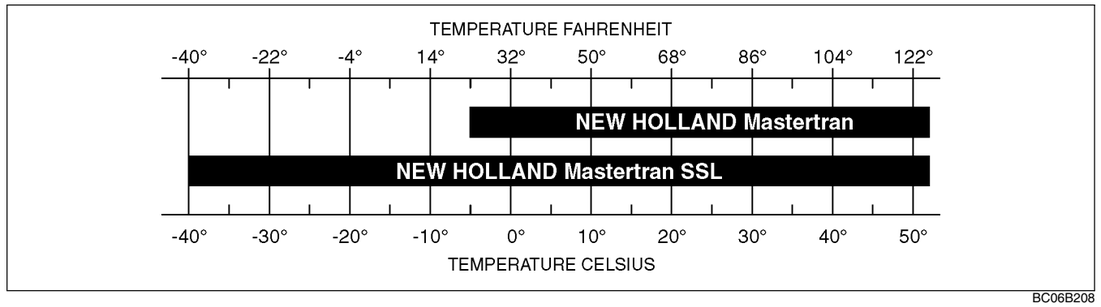
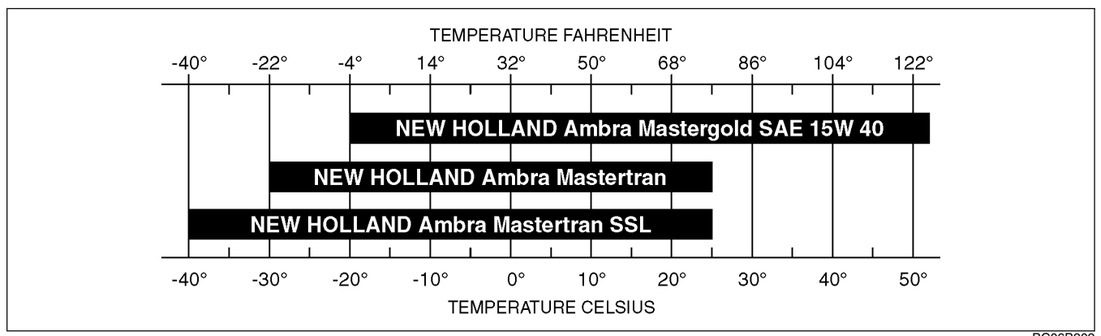
HYDRAULIC OIL TEMPERATURE CHART



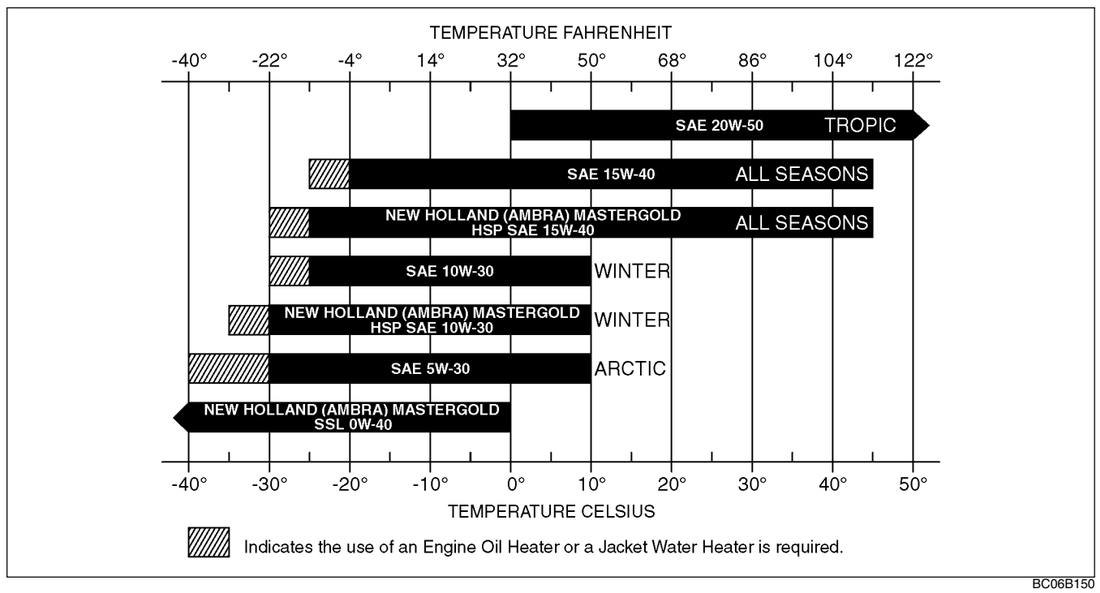
BC06B208

TRANSMISSION OIL TEMPERATURE CHART



BC06B209

ENGINE OIL TEMPERATURE CHART



BC06B150

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.

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.

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%

1002-5

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.

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.

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%

MAINTENANCE SCHEDULE
Model W270B

SERVICE INTERVALS	PAGE	SERVICE POINTS	INITIAL NEW MACHINE	INTERVALS IN HOURS				
				CLEAN	CHECK	REPLACE	LUBRICATE	DRAIN
Every 10 Hours	5-16	Engine oil level			10			
	5-16	Drain fuel filter						10
	5-17	Checking the tension of belts			10			
Every 50 Hours	5-18	Engine coolant level			50			
	5-18	Radiator and oil cooler			50			
	5-19	Transmission oil level			50			
	5-19	Hydraulic oil level			50			
	5-20	Bucket/Attachments grease fittings					50	
	5-20	Grease articulation fittings					50	
Every 100 Hours	5-21	Grease points					100	
Every 250 Hours	5-23	Recirculation air filter			250			
	5-23	Engine coolant filter				250		
	5-24	Tire pressure			250			
	5-26	Replace fuel filter				250		
Every 500 Hours	5-27	Axle oil level			500			
	5-27	Battery electrolyte level			500			
	5-28	Change engine oil and filter				500		
	5-29	Drain fuel tank condensation						500
Every 1000 Hours	5-30	Replace hydraulic oil filters				1000		
	5-31	Grease articulation fittings					1000	
	5-31	Change front and rear axle oil				1000		
	5-32	Replace cab air filters				1000		
	5-33	Change transmission oil and filters				1000		
Every 1500 Hours		Check valve adjustment	See your New Holland Dealer or refer to Service Manual					
Every 2000 Hours	5-34	Change hydraulic oil				2000		
	5-35	Change coolant				2000		
	5-36	Replace engine air cleaner				2000		
Every 6000 Hours		Engine Injectors	See your New Holland Dealer or refer to Service Manual					
		Fuel pump	See your New Holland Dealer or refer to Service Manual					

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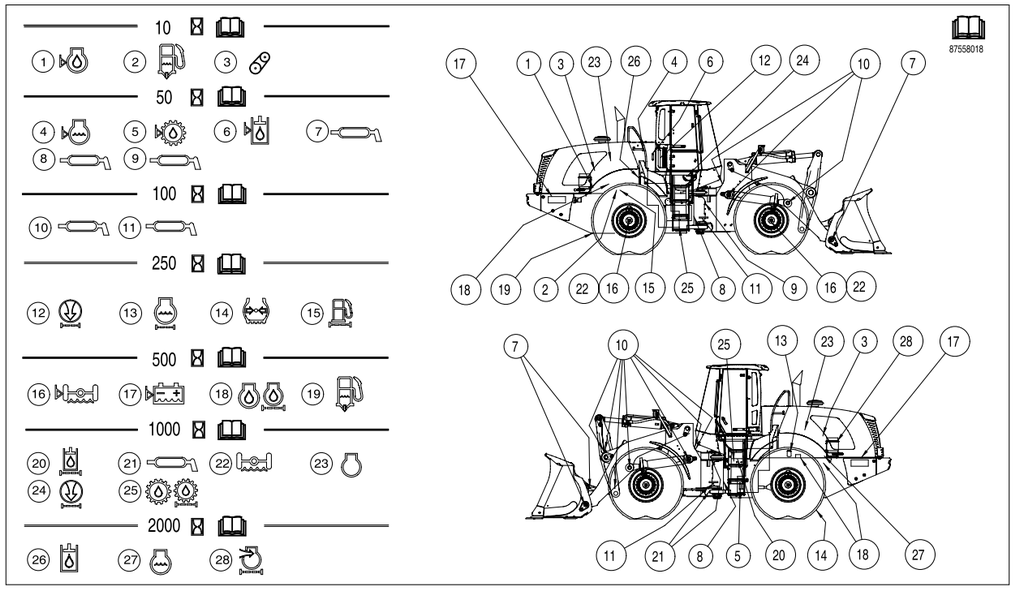
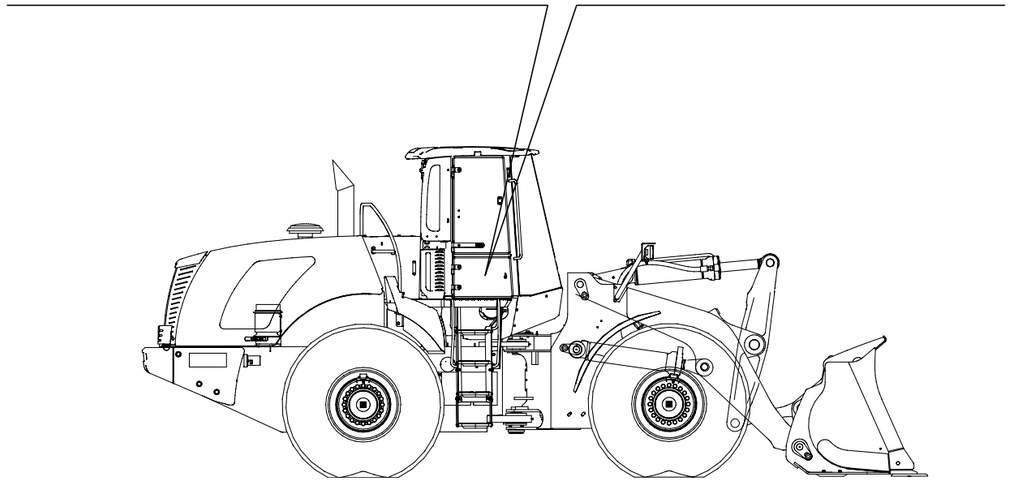
MAINTENANCE SCHEDULE
Model W270B

SERVICE INTERVALS	PAGE	SERVICE POINTS	INITIAL NEW MACHINE	INTERVALS IN HOURS				
				CLEAN	CHECK	REPLACE	LUBRICATE	DRAIN
Every 10 Hours	5-16	Engine oil level			10			
	5-16	Drain fuel filter						10
	5-17	Checking the tension of belts			10			
Every 50 Hours	5-18	Engine coolant level			50			
	5-18	Radiator and oil cooler			50			
	5-19	Transmission oil level			50			
	5-19	Hydraulic oil level			50			
	5-20	Bucket/Attachments grease fittings					50	
	5-20	Grease articulation fittings					50	
Every 100 Hours	5-21	Grease points					100	
Every 250 Hours	5-23	Recirculation air filter			250			
	5-23	Engine coolant filter				250		
	5-24	Tire pressure			250			
	5-26	Replace fuel filter				250		
Every 500 Hours	5-27	Axle oil level			500			
	5-27	Battery electrolyte level			500			
	5-28	Change engine oil and filter				500		
	5-29	Drain fuel tank condensation						500
Every 1000 Hours	5-30	Replace hydraulic oil filters				1000		
	5-31	Grease articulation fittings					1000	
	5-31	Change front and rear axle oil				1000		
	5-32	Replace cab air filters				1000		
	5-33	Change transmission oil and filters				1000		
Every 1500 Hours		Check valve adjustment	See your New Holland Dealer or refer to Service Manual					
Every 2000 Hours	5-34	Change hydraulic oil				2000		
	5-35	Change coolant				2000		
	5-36	Replace engine air cleaner				2000		
Every 6000 Hours		Engine Injectors	See your New Holland Dealer or refer to Service Manual					
		Fuel pump	See your New Holland Dealer or refer to Service Manual					

MAINTENANCE POINTS
Model W270B





W270M115

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 dealer.

If you operate the machine in severe conditions, lubricate and service the machine more frequently.

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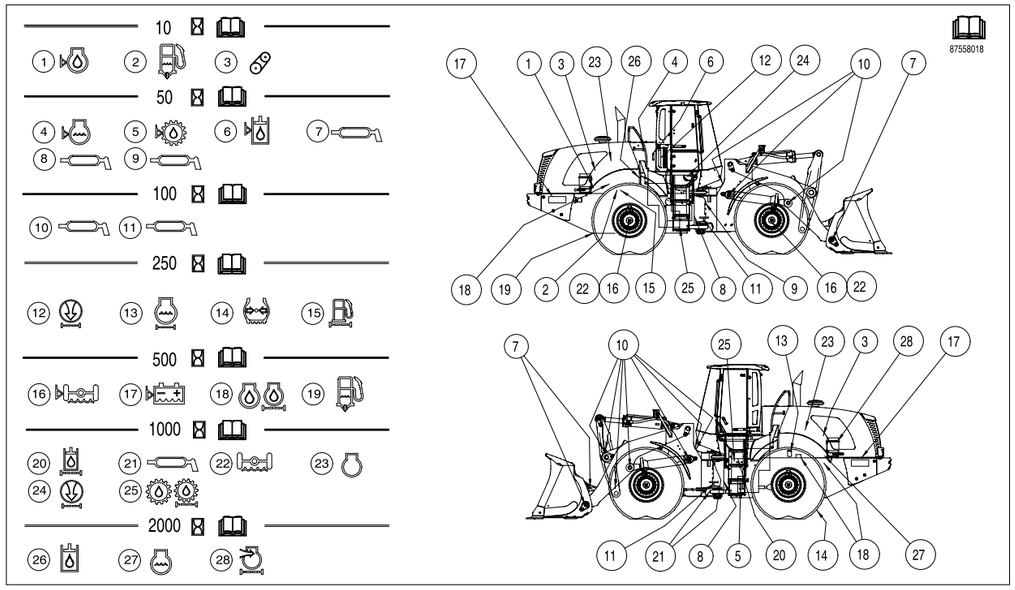
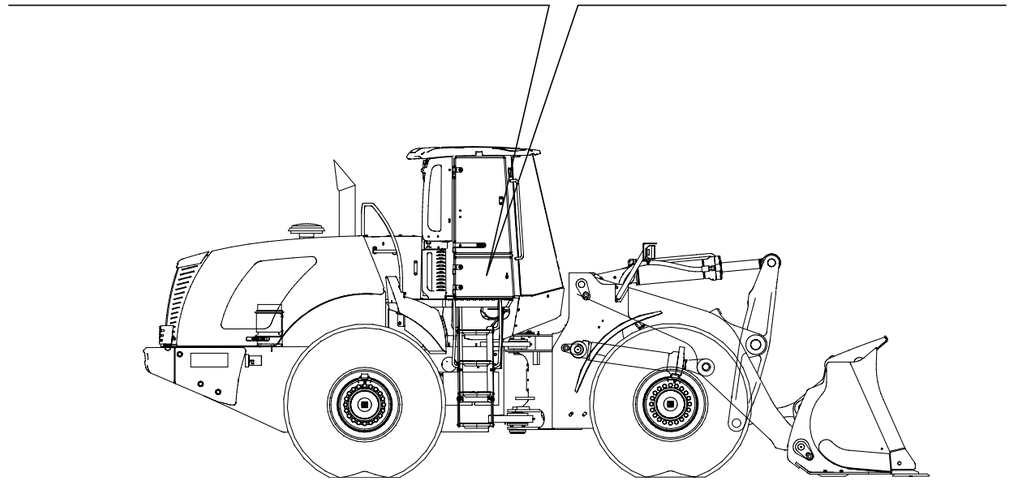
MAINTENANCE POINTS
Model W270B





W270M115

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 dealer.

If you operate the machine in severe conditions, lubricate and service the machine more frequently.

NOTES

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NOTES

Section 1003

METRIC CONVERSION CHART

CNH Italia S.p.A.
Viale delle Nazioni, 55
41100 Modena
Italia

Printed in E.C.
Issued III-2007

Section 1003

1003

METRIC CONVERSION CHART

CNH Italia S.p.A.
Viale delle Nazioni, 55
41100 Modena
Italia

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U.S. to Metric 4

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)

1003-3

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

1003-4

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

FOR THE REMOVAL, INSPECTION, OVERHAUL AND REINSTALLATION OF THE ENGINE, PLEASE REFER TO THE SPECIFIC MANUALS FOR THIS TYPE OF ENGINE AVAILABLE FROM THE SERVICE NETWORK.

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ENGINES

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Engine and Radiator Removal and Installation	2000
Aftercooler	2003

FOR THE REMOVAL, INSPECTION, OVERHAUL AND REINSTALLATION OF THE ENGINE, PLEASE REFER TO THE SPECIFIC MANUALS FOR THIS TYPE OF ENGINE AVAILABLE FROM THE SERVICE NETWORK.

Section
2000

ENGINE AND RADIATOR REMOVAL AND INSTALLATION

CNH Italia S.p.A.
Viale delle Nazioni, 55
41100 Modena
Italia

Issued III-2007

2000

Section
2000

ENGINE AND RADIATOR REMOVAL AND INSTALLATION

CNH Italia S.p.A.
Viale delle Nazioni, 55
41100 Modena
Italia

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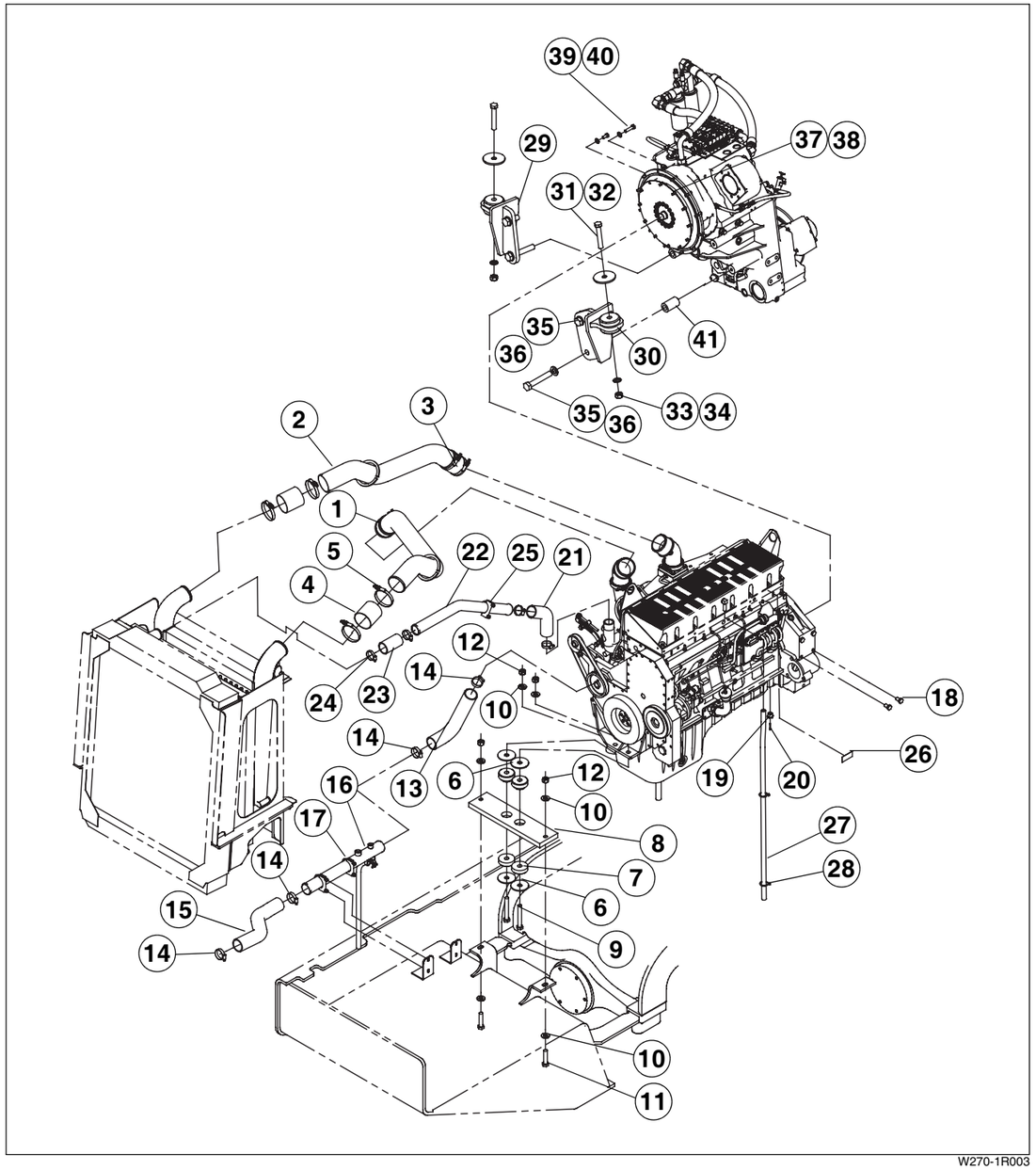
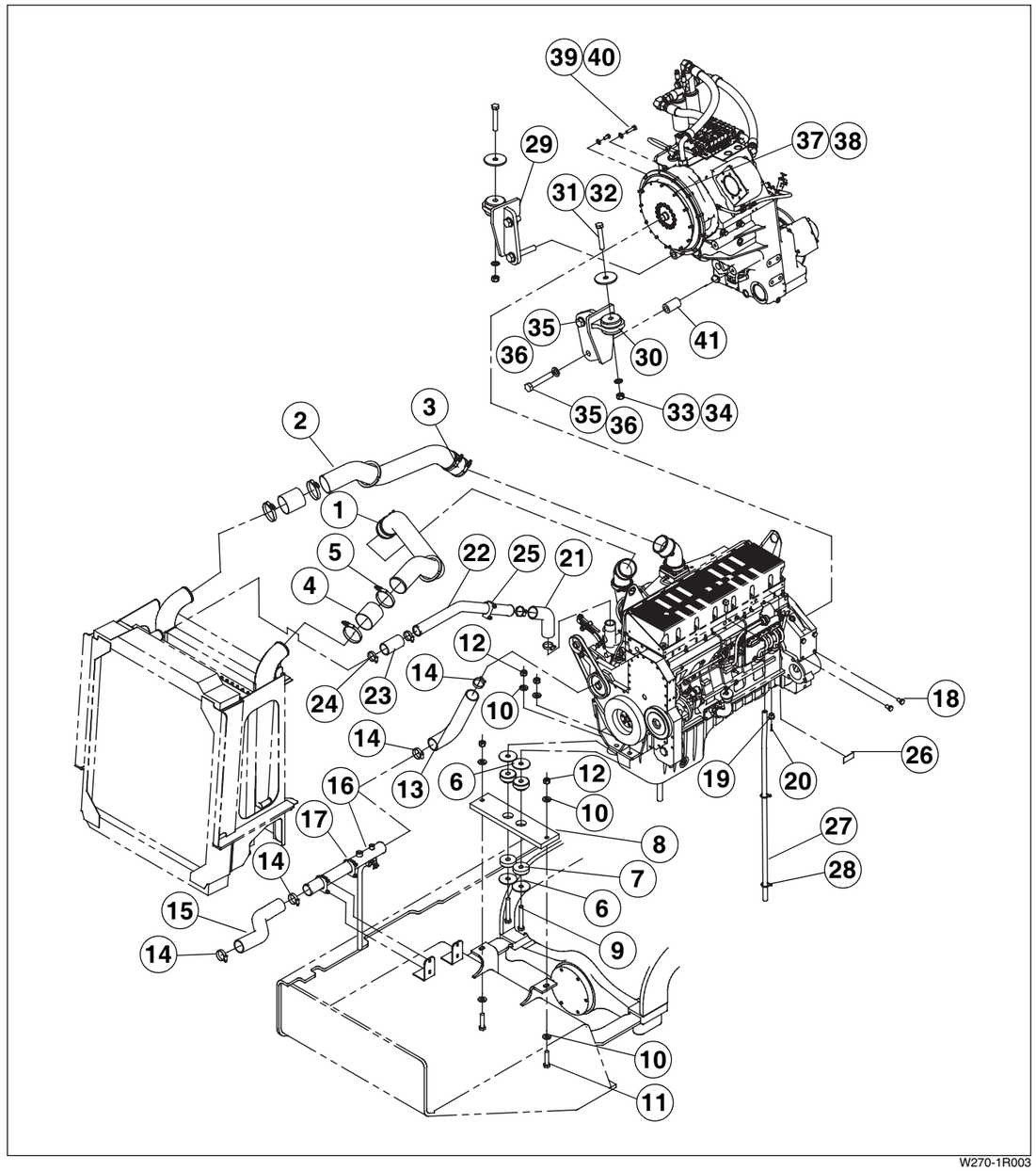


W270-1R003

1. RIGHT AFTERCOOLER TUBE
2. LEFT AFTERCOOLER TUBE
3. HOSE
4. HOSE
5. HOSE CLAMP
6. WASHER
7. MOUNT
8. PLATE
9. BOLT
10. WASHER
11. BOLT
12. NUT
13. HOSE
14. CLAMP
15. HOSE
16. PIPE
17. CLAMP
18. BOLT
19. BUSHING
20. PIN
21. HOSEE
22. TUBE
23. HOSE
24. CLAMP
25. CLAMPA
26. TAPE ADESIVE
27. HOSE
28. STRAP
29. BRACKET
30. MOUNT
31. WASHER
32. BOLT
33. WASHER
34. NUT
35. WASHER
36. BOLT
37. WASHER
38. BOLT
39. WASHER
40. BOLT
41. SPACER

2000-3



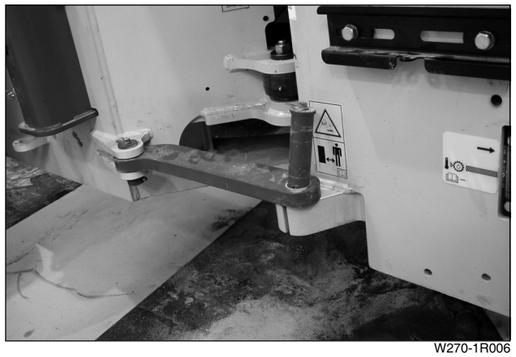
W270-1R003

1. RIGHT AFTERCOOLER TUBE
2. LEFT AFTERCOOLER TUBE
3. HOSE
4. HOSE
5. HOSE CLAMP
6. WASHER
7. MOUNT
8. PLATE
9. BOLT
10. WASHER
11. BOLT
12. NUT
13. HOSE
14. CLAMP
15. HOSE
16. PIPE
17. CLAMP
18. BOLT
19. BUSHING
20. PIN
21. HOSEE
22. TUBE
23. HOSE
24. CLAMP
25. CLAMPA
26. TAPE ADESIVE
27. HOSE
28. STRAP
29. BRACKET
30. MOUNT
31. WASHER
32. BOLT
33. WASHER
34. NUT
35. WASHER
36. BOLT
37. WASHER
38. BOLT
39. WASHER
40. BOLT
41. SPACER

ENGINE

Removal

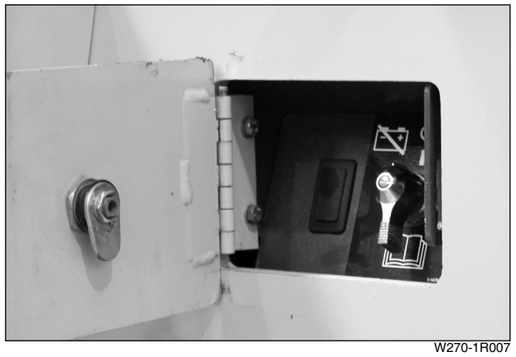
STEP 1



W270-1R006

Park the machine on a flat surface and lower the bucket to the round. Place the articulation block in BLOCK position.

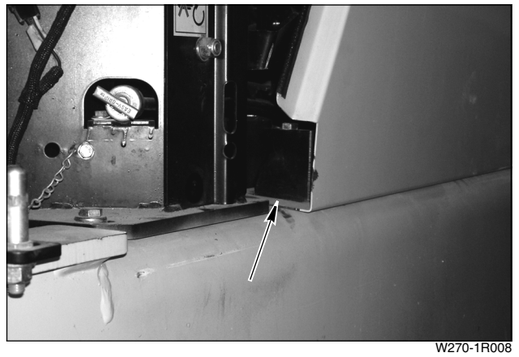
STEP 2



W270-1R007

Cut-off the engine. Actuate the brake pedal a few times to discharge the brake accumulators. Rotate the starter key into "contact" position and move the loader control levers forward and backward to bleed the pressure from the hydraulic circuit. Rotate the battery cut-off switch into position OFF, as indicated in the figure.

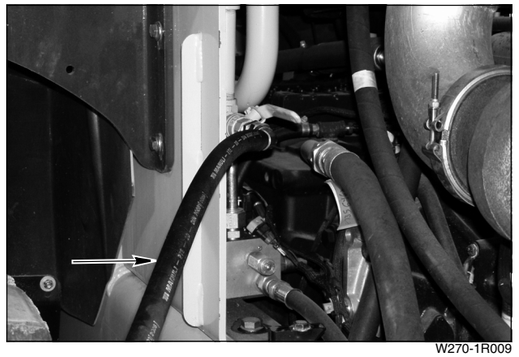
STEP 3



W270-1R008

Open the engine hood upper side panels and remove the engine hood lower side panels, by turning the two plastic blocks indicated in the figure.

STEP 4



W270-1R009

Drain the hydraulic oil from the reservoir using a hose from the draining valve into a container of appropriate capacity (130 litres - 34 US Gal) to keep the liquid drained. To facilitate the operation, loosen the filler cap on the hydraulic tank.

2000-4

ENGINE

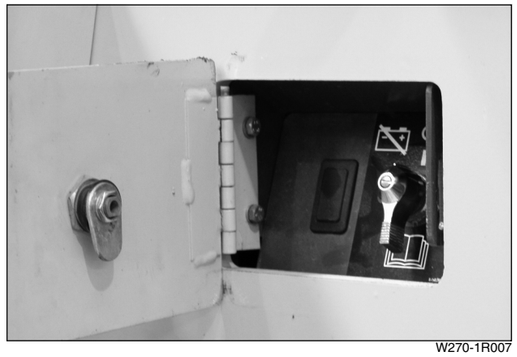
Removal

STEP 1

W270-1R006

Park the machine on a flat surface and lower the bucket to the round. Place the articulation block in BLOCK position.

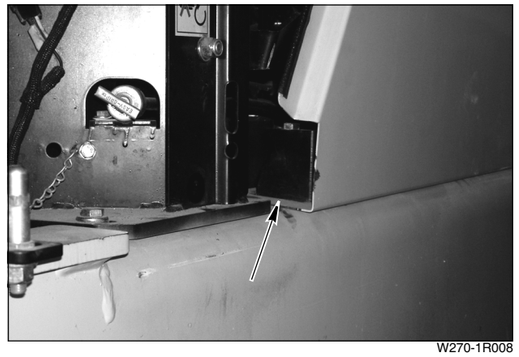
STEP 2



W270-1R007

Cut-off the engine. Actuate the brake pedal a few times to discharge the brake accumulators. Rotate the starter key into "contact" position and move the loader control levers forward and backward to bleed the pressure from the hydraulic circuit. Rotate the battery cut-off switch into position OFF, as indicated in the figure.

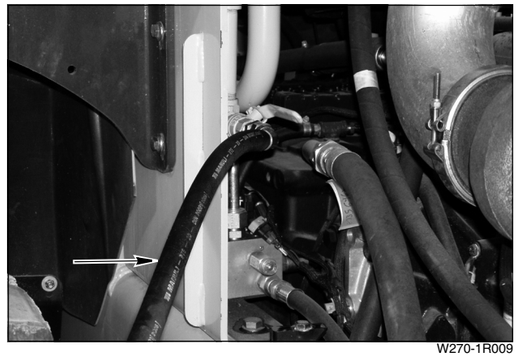
STEP 3



W270-1R008

Open the engine hood upper side panels and remove the engine hood lower side panels, by turning the two plastic blocks indicated in the figure.

STEP 4



W270-1R009

Drain the hydraulic oil from the reservoir using a hose from the draining valve into a container of appropriate capacity (130 litres - 34 US Gal) to keep the liquid drained. To facilitate the operation, loosen the filler cap on the hydraulic tank.