


Lubrication and Service Chart

SERVICE DATA											
No.	Items to Check		Service	Qty.	Service Interval (hr)						
					10	50	250	500	1000	2000	4500
1	Arm, Bucket Joint Pin		Grease	6	F100	W10					
2	Dozer Blade Pin (If Equipped)		Grease	6	F100	W10					
3	Swing Bearing		Grease	2		W10					
4	Boom, Arm Joint Pin	One - Piece Boom	Grease	11	F100		W10				
		Two - Piece Boom		15	F100		W10				
5	Breaker Filter(If Equipped)		Cartridge	1							
6	Engine Oil		Engine Oil	27 L	V						
7	Engine Oil Filter		Cartridge	1							
8	Water Separator and Pre Fuel Filter		Cartridge	1	V, D						
9	Air Compressor Filter(If Equipped)		Element	1				C			
10	Pinion Gear (Swing)		Grease	1							
11	Main Fuel Filter		Cartridge	1							
12	Swing Reduction Gear		Grease	1					W10		
			Gear Oil	5 L	V			F			
13	Hydraulic Oil Return Filter		Element	1			F				
14	Pilot Filter		Element	1			F				
15	Travel Reduction Gear		Gear Oil	2 x 4 L				F, V			
16	Air Conditioner Filter (Outer)		Element	1				C			
	Air Conditioner Filter (Inner)		Element	1				C			
17	Hydraulic Oil Tank Breather		Element	1							
18	Fuel Cap Filter		Element	1							
19	Hydraulic Oil Tank		Hydraulic Oil	131 L	V						
20	Radiator	Non Diesel heater	Coolant	29.7L	V						
		With Diesel heater		30.3L	V						
21	Air Cleaner (Outer)		Element	1				C			
	Air Cleaner (Inner)		Element	1							
22	DEF (AdBlue®) Filter		Element	1							
23	DEF (AdBlue®) Breather Filter		Element	1							
24	DEF (AdBlue®) Tank		DEF	31.5 L	V						
25	Fuel Tank		Diesel	392 L	V	D					
26	Track Spring		Grease	2				W10, V			
27	Hydraulic Oil Suction Strainer		Strainer	1					C		
28	DPF		Soot Filter	1							C
	Radiator Core		Core	1				C			
	Oil Cooler Core		Core	1				C			
	Intercooler Core		Core	1				C			
	Fuel Cooler core		Core	1				C			
	Aircon Condenser Core		Core	1				C			

V: Maintenance and Refill. / **C:** Cleaning. / **D:** Drain Water. / **F:** First Time Exchange Only.

F100: Every 10 Hours For First 100 Hours. / **W10:** Every 10 Hours If Operating In Water.

: Replacement On Every Interval.

NOTE: For additional service items see list of "Maintenance Intervals" on page 4-21.

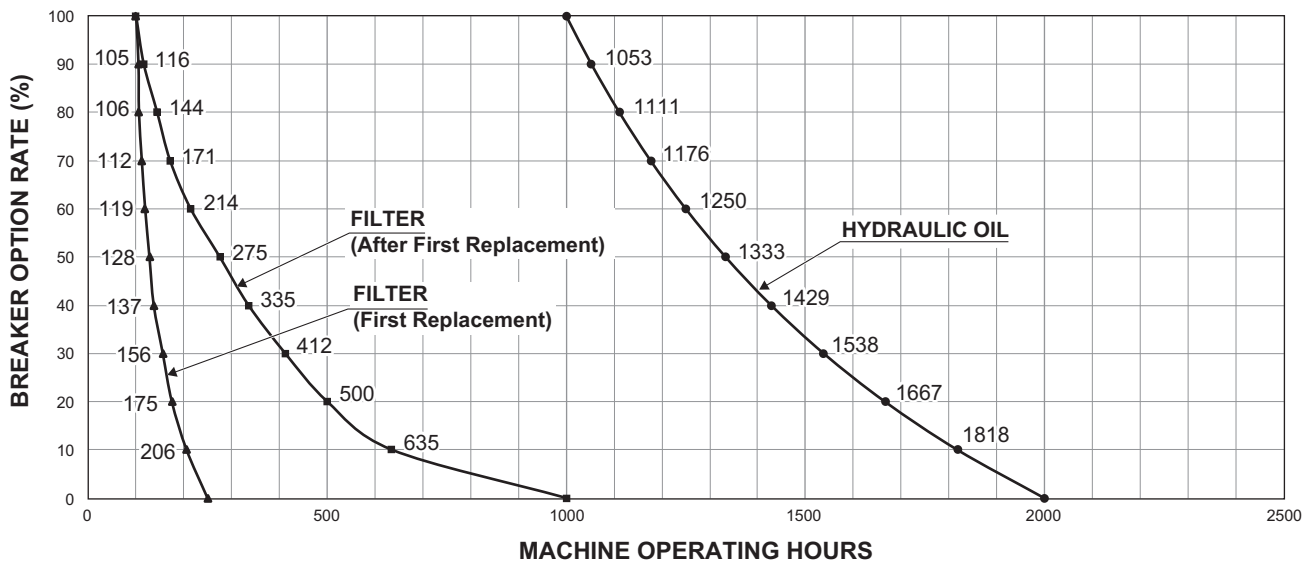
*: When the machine is operated under dusty work sites, the hydraulic oil tank breather needs to be cleaned or replaced regularly even before the expected replacement date.

Hydraulic Oil and Filter Service Intervals

When using a hydraulic breaker, the viscosity breakdown and contamination of hydraulic oil is faster because the work condition is more severe than during normal digging work. To prevent the hydraulic components (especially pump) from having a shortened life cycle, replace the hydraulic oil and main hydraulic oil return filter using the following schedule.

Attachment	Operation Rate	Hydraulic Oil	Filter
Bucket Work	100%	2,000 Hours	250 Hours (First Replacement) 1,000 Hours (After First Replacement)
Hydraulic Breaker Work	100%	1,000 Hours	100 Hours

* These service intervals only apply, when genuine DEVELON hydraulic oil and filter are used. If any other brands are used, the guaranteed change interval must be reduced in half.



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Figure 3

NOTE: The replacement intervals of hydraulic oil and filter depend upon amount of time hydraulic breaker is being used. These service intervals must be followed as opposed to regularly scheduled maintenance.

Fluid Capacities

Component		Capacity
Engine	Oil Pan with Filter	27 L (7.1 U.S. gal.)
	Cooling System	Non Diesel Heater (7.8 U.S. gal.)
		With Diesel Heater (8.0 U.S. gal.)
Fuel Tank		392 L (103.6 U.S. gal.)
DEF (AdBlue®) Tank		31.5 L (8.3 U.S. gal.)
Hydraulic Oil	Tank Level	131 L (34.6 U.S. gal.)
	System	230 L (60.8 U.S. gal.)
Travel Reduction Gear (Each)		4 L (1.1 U.S. gal.)
Swing Reduction Gear		5 L (1.3 U.S. gal.)

NOTE: *If the level is between lower limit line and upper limit line of the gauge, the level is correct.
If the level is low, open the cover on the tank and add hydraulic oil.*

Table of Recommended Lubricants



NOTICE

It is highly recommend to use DEVELON Genuine Products or products which meet the following specifications. Using other products can damage the equipment.

NOTE: Refer to the "Lubrication and Service Chart" on page 4-15 for locations.

Reservoir	Kind of Fluid	Ambient Temperature											
		-58	-40	-22	-4	14	32	50	68	86	104	122 °F	
		-50	-40	-30	-20	-10	0	10	20	30	40	50 °C	
Engine Oil Pan	5) Engine Oil												
Swing Drive Case	Gear Oil												
Final Drive Case													
Hydraulic Oil Tank	6) Hydraulic Oil												

Fuel Tank	Diesel Fuel	1) ASTM D975 No. 2									
		ASTM D975 No. 1									
Grease Fitting	Grease	DIN 51502 KP-1K-30 / NLGI No.1									
		DIN 51502 KP-2K-10 / NLGI No.2									
		DIN 51502 KP-3K-10 / NLGI No.3									
Cooling System	Coolant	<p>Add Antifreeze 1) (50% antifreeze - 50% distilled water) (Note that mixing ratio is for reference purpose only, and is not an absolute standard.) Make sure to use Develon's genuine antifreeze. If Develon's genuine antifreeze is not available, see the "Type of Antifreeze" page.</p>									
1) Installed at factory.											
2) (5W40) - Recommended for use at extremely low temperature below -20°C.											
3) (10W40) - Filled at factory. Develon genuine engine oil is recommended for use.											
4) (15W40) - Develon genuine engine oil is recommended for use.											
5) (Engine oil) - Engine oil must meet API CJ-4/ACEA E9.											
6) Note that oil grade is for reference purpose only, and is not an absolute standard.											
API: American Petroleum Institute.											
ACEA: Association des Constructeurs Européens d'Automobiles.											
ASTM: American Society of Testing and Materials.											
ISO: International Organization for Standardization.											
NLGI: National Lubricating Grease Institute.											
SAE: Society of Automotive Engineers.											
DIN: Deutsche Industrie Normen											

 **NOTICE**

Do not mix oils from different manufacturers. DEVELON does not endorse specific brands but recommends that owners select quality oils whose manufacturers provide assurance that required standards will always be met or exceeded.

 **NOTICE**

Fluctuating daily or weekly extremes of temperature, or operation in subzero freezing temperatures, may make it impractical to use straight weight lubricants. Select lubricants that are appropriate for climate conditions.