

<p><b>GMK 4100L-1</b> <b>1000-hour Maintenance Kit</b> <b>Part Number 04181392</b></p>
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Manitowoc Crane Care congratulates you for making the purchase of this maintenance kit. Good maintenance at the right time will make a difference in the daily reliability and long-term life of your GMK.

We offer this guide to help you utilize this kit efficiently.

Should you have any feedback or questions regarding this maintenance kit, please contact Manitowoc Crane Care.

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The 1000-hour kit basically follows the 12-month maintenance plan (M12) as shown in chapter 5 of the Maintenance manual. Please refer to the given Maintenance manual (**3 302 364**) for specific details and requirements.






















Please note that there may appear to be some discrepancies with the part numbers given in the Maintenance manual compared to those in the kit. The kit contains the latest recommendations, where any discrepancies are a function of our continuous improvement program. For example, superseded part numbers may be for Engineering Design changes, improved technology, more cost-effective solutions or a different supply chain.

Consider additional maintenance items when completing, Y2, Y3, Y5, Y6 or Y10 intervals, such as transmission oil and filter, hoist inspection, slewing sensor, cable drums etc. – please refer to the Maintenance manual for more details

## 5.2.6

## Maintenance plan M 12

## M 12

<b>Maintenance work on the CARRIER:</b> every 12 months/after 20,000 – 25,000 km ( 12,430 – 15,530 mi)	
<b>Engine</b> – Notes;  <i>Engine manufacturer's documentation</i> – Have the radiator checked/cleaned – Checking the V-belt tension	 p. 7 - 13  p. 7 - 18  p. 7 - 23
<b>Fuel system</b> – Replacing fuel filter 2	 p. 7 - 31
<b>Exhaust system with exhaust emission control</b> – Having the AdBlue system checked	 p. 7 - 37
<b>Transmission</b> – Checking the oil level	 p. 7 - 41
<b>Axle lines</b> – Axle centre drives – changing the oil – Final drives – Changing the oil	 p. 7 - 57  p. 7 - 62
<b>Suspension</b> – Pressure accumulator – checking the gas pressure	 p. 7 - 87
<b>Compressed air system</b> – Replacing the filter cartridge of the compressed air drier	 p. 7 - 95
<b>Hydraulic system</b> – Changing the ventilation filter – Taking oil samples: depending on the oil sample test results: – Changing the hydraulic oil – Changing the hydraulic oil filter	 p. 7 - 101  p. 7 - 102  p. 7 - 107  p. 7 - 111
<b>Air-conditioning system</b> – Cleaning the condenser fins – Checking the entire air-conditioning system – Changing the pollen filter	 p. 7 - 128  p. 7 - 128  p. 7 - 130
<b>Other maintenance work</b> – Lubricating the cab door – Lubricating the connecting and socket pins – Renewing the corrosion protection	 p. 7 - 141  p. 7 - 142  p. 7 - 143

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**M 12**

<b>Maintenance work on the SUPERSTRUCTURE:</b> every 12 months/after 1,000 oper. hrs.	
<b>Hoists</b> – Changing the oil/checking the oil	➡ p. 8 - 11
<b>Slewing gear</b> – Changing the oil/checking the oil	➡ p. 8 - 19
<b>Slewing bearing</b> – Lubricating the locking of turntable	➡ p. 8 - 30
<b>Hydraulic system</b> – Changing the ventilation filter – Pressure accumulator – checking the gas pressure – Taking oil samples: depending on the oil sample test results: – Changing the hydraulic oil – Changing the hydraulic oil filter	➡ p. 8 - 36 ➡ p. 8 - 37 ➡ p. 8 - 37 ➡ p. 8 - 42 ➡ p. 8 - 39
<b>Main boom</b> – Checking the locking system	➡ p. 8 - 50
<b>Hook blocks</b> – Lubricating	➡ p. 8 - 71
<b>Air conditioning system</b> – Checking the entire air conditioning system – Changing the pollen filter	➡ p. 8 - 76 ➡ p. 8 - 78
<b>Other maintenance work</b> – Lubricating the crane cab door – Lubricating the step – Lubricating the connecting and socket pins – Renewing the corrosion protection	➡ p. 8 - 81 ➡ p. 8 - 82 ➡ p. 8 - 83 ➡ p. 8 - 84

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## 1. What's in the box?



### List of contents

01576026	Breather	1
03134932	Breather	1
03135866	Pipe Filter	1
03140253	Filter Element, pressure	2
03142356	Filter Element	1
03254375	Filter	1
03329152	Filter Element, hydraulic	2
04156358	Filter Element	1
04286260	Filter, Air Dryer	1
04163013	Replacement Filter	1
04183793	Set of parts, Fuel Filter	1
04241120	Air Filter	1
04241157	Main Filter Element	1
04241158	Safety Filter Element	1

04161529	Screw Plug (engine oil drain)	1
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00117125	Sealing ring (slewing gear)	2
00117132	Sealing ring (slewing gear)	2
00117134	Seal (transfer case)	1
00117145	Seal (axle center drives, final drives, transmission)	10
00117151	Seal (axle center drives, transfer case, angle drive)	6
01371208	Seal (axle center drives)	4
03135867	Gasket set complete (chassis hydraulic oil filter 3 & 4)	2
03326049	Seal kit (super hydraulic oil filter 2)	1
04161645	Gasket set complete (angle drive)	1
04163599	Gasket set complete (chassis hydraulic oil filter 1 & 2)	2
04165792	Gasket set (super hydraulic oil filter 1)	1



## 2. The Filters

1x 01576026 Chassis hydraulic oil tank breather



1x 03134932 Super hydraulic oil tank breather



1x 03135866 Angle drive oil filter



2x 03140253 Chassis hydraulic oil filter 3 & 4



1x 03142356 Super hydraulic oil filter 2



1x 03254375 Chassis cab pollen filter





2x 03329152 Chassis hydraulic oil filter 1 & 2



1x 04156358 Super hydraulic oil filter 1



1x 04286260 Air Dryer filter with oil coalescer



1x 04163013 Engine oil filter

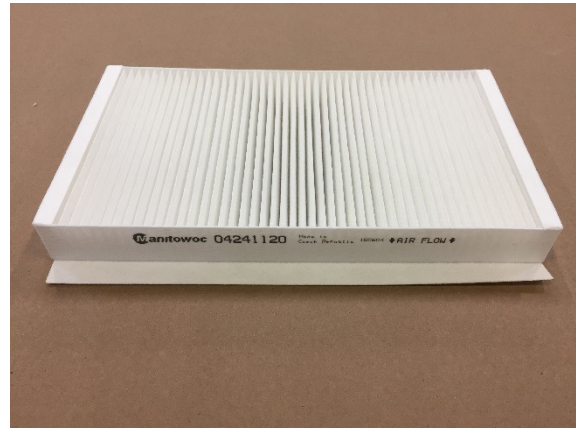


1x 04183793 Fuel filter kit





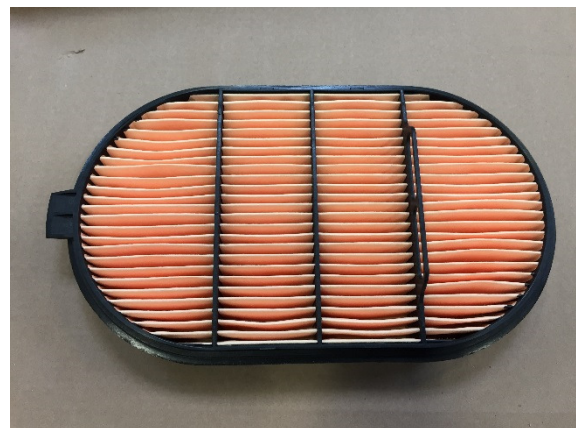
1x 04241120 Super cab pollen filter



1x 04241157 Engine main air filter



1x 04241158 Engine back-up air filter



### 3. Other items

1x 04161529 Engine oil drain plug



### 4. The Seals

(see contents list for usage)





## 5. Additional maintenance items (not in the kit)

### Oil condition analysis:

As part of the annual maintenance, you should take a sample from the hydraulic system (7.15.6 and 8.6.8) to determine the condition of the hydraulic oil.

We recommend our oil analysis kit, which is available under part number 03141012. The kit contains: an oil sample bottle, oil description form (to be completed) and return envelope. The price of this kit includes laboratory analysis of the sample and report that will be sent to your email address.



### DEF (Ad-Blue) Filter:

GMK 4100L-1: 1x 04158759



### Oils and Greases

Many oils and greases will be available locally to you, we strongly recommend that the specifications given in chapter 6 of the Maintenance manual be followed when selecting any local equivalents.

These oils and greases have no equivalent and should be ordered from Manitowoc Crane Care as required:

- Sliding surface boom grease
  - 400 gr. cartridge for spray gun 03329071
  - 10 kg can 01373458
  - 25 kg bucket 02314698
- Cylinder rod corrosion protection (400ml spray) 01929824
- Boom pinning bolt grease (400g cartridge) 03313195
- Suspension lubricant (1-liter bottle) 02310863



## Suspension pressure accumulators

To perform the check of nitrogen pressure in the accumulators as explained in 7.12.4 and 8.6.7 of the Maintenance manual, Manitowoc Crane Care offers a test kit P/No 02257617 (gas bottle adapter and pressure regulator also required). Reference service bulletin SB D15-022 GMK suspension hydraulic accumulators.

## Maintenance video

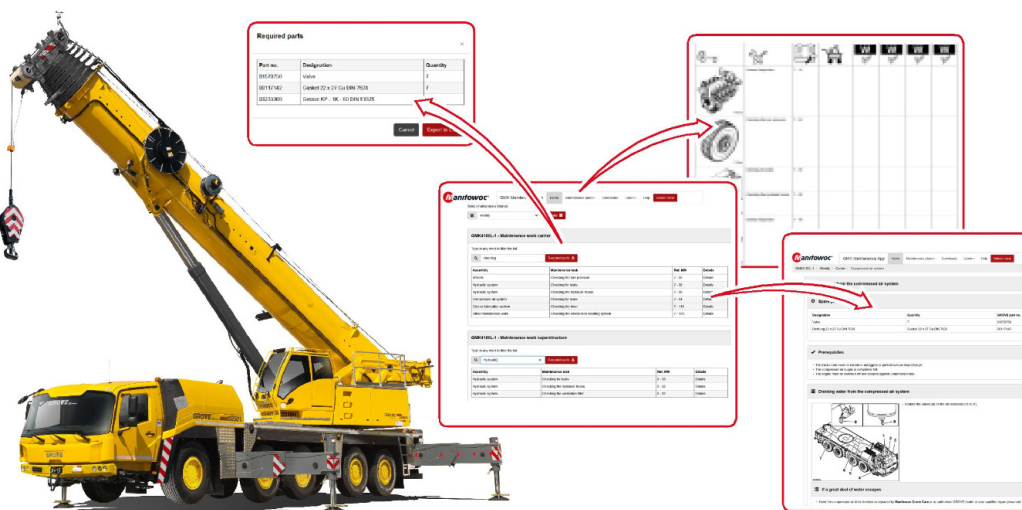
You may also find our video outlining some simple maintenance procedures useful, under the following link:

<https://www.manitowoccranes.com/en/Resources/videos/2016/Grove-GMKpreventive-maintenance>

## Maintenance App

When planning routine crane maintenance, consider utilizing our GMK Maintenance App.

- Freely accessible giving all details for current GMK production models
- Individual maintenance plans by interval or engine hours / mileage
- Including a description of the relevant tasks from the maintenance manual



Visit our dedicated website: <https://eu100.manitowoc.com/GMKMaintenance/>

Read the Quick Start Guide for using the App:

