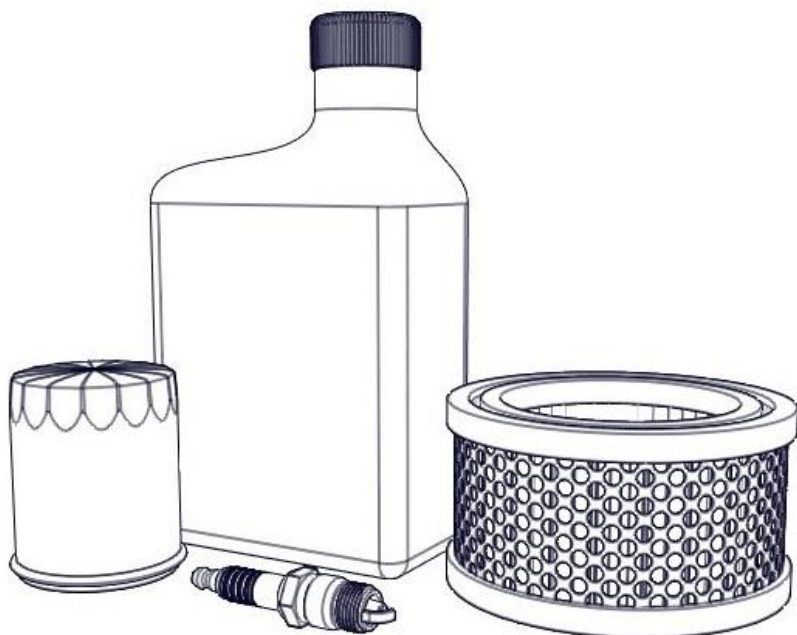


**VMAC**<sup>®</sup>  
VEHICLE MOUNTED AIR COMPRESSORS  
**COMPACT. POWERFUL.**



**Installation and Operation  
Manual for VMAC  
Accessory**

**A500045**

**300 Hour Honda Engine Tune Up Kit**

[www.vmacair.com](http://www.vmacair.com)



# **Owner / Installation Manual for VMAC Accessory A500045 300 Hour Honda Engine Tune Up Kit**

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Revision	Revision Details	Revised by	Checked by				Implemented
			Eng.		Tech.	Qual.	
			Mech.	Elec.			
A	Initial Release	MSP	JRK	N/A	BDJ	AMG	1 Sept 2017

## Additional Application Information

- For use with VMAC G300003 Gas Engine Driven 30 CFM Air Compressors.

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**Honda®** is a registered trademark of Honda Motor Co., Ltd.

## Important Information

The information in this manual is intended for certified VMAC installers who have been trained in installation procedures and/or for people with mechanical trade certification who have the tools and equipment to properly and safely perform the installation. Do not attempt this installation without the appropriate mechanical training, knowledge and experience.

Follow all safety precautions for mechanical work. Any fabrication for correct fit in modified vehicles must follow industry standard “best practices”.

## Notice

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# Safety

## Important Safety Notice

The information contained in this manual is based on sound engineering principles, research, extensive field experience and technical information. Information is constantly changing with the addition of new models, assemblies, service techniques and running OEM changes. If a discrepancy is found in this manual, contact VMAC prior to initiating or proceeding with installation, service or repair. Current information may clarify the issue. Any person with knowledge of such discrepancies, who proceeds to perform service and repair assumes all risks.

Only proven service procedures are recommended. Anyone who departs from the specific instructions provided in this manual must first assure that their safety and that of others is not being compromised and that there will be no adverse effects on the operational safety or performance of the equipment.

VMAC will not be held responsible for any liability, consequential damages, injuries, loss or damage to individuals or to equipment as a result of the failure of any person to properly adhere to the procedures set out in this manual or standard safety practices. Safety should be the first consideration when performing any service operations. If there are any questions concerning the procedures in this manual or more information is required, please contact VMAC before beginning repairs.

## Safety Messages

This manual contains various warnings, cautions and notices that must be observed to reduce the risk of personal injury during installation, service or repair and the possibility that improper installation, service or repair may damage the equipment or render it unsafe.



This symbol is used to call attention to instructions concerning personal safety. Watch for this symbol; it points out important safety precautions, it means, "Attention, become alert! Your personal safety is involved". Read the message that follows and be aware of the possibility of personal injury or death. As it is impossible to warn of every conceivable hazard, common sense and industry standard safety practices must be observed.



This symbol is used to call attention to instructions on a specific procedure that if not followed may damage or reduce the useful life of the compressor or other equipment.



This symbol is used to call attention to additional instructions or special emphasis on a specific procedure.

# Warranty

## VMAC Standard Warranty (Limited)

For complete warranty information, including both VMAC Standard Warranty (Limited) and VMAC Lifetime Warranty (Limited) requirements, please refer to our current published warranty located at:



[www.vmacair.com/warranty](http://www.vmacair.com/warranty)

If you do not have access to a computer, please contact us and we will be happy to send you our warranty.

VMAC's warranty is subject to change without notice.

## VMAC Lifetime Warranty (Limited)

A VMAC Lifetime Limited Warranty is offered on the base air compressor only and only on UNDERHOOD, Hydraulic Driven, Transmission Mounted, Gas and Diesel Engine Driven Air Compressors, Multifunction Power Systems, and other products as defined by VMAC, provided that (i) the purchaser fully



completes and submits a warranty registration form within 3 months of purchase, or 200 hours of operation, whichever occurs first; (ii) services are completed in accordance with the Owner's Manual; (iii) proof of purchase of applicable service kits are made available to VMAC upon request.

The VMAC Lifetime Warranty is applicable to new products shipped on or after 1 October, 2015.

## Warranty Registration

The VMAC warranty registration form is located near the back of this manual. This warranty registration form must be completed and sent to VMAC at the time of installation for any subsequent warranty claim to be considered valid.

There are 4 ways the warranty can be registered with VMAC:

### Online

[www.vmacair.com/warranty](http://www.vmacair.com/warranty)

### Email

[warranty@vmacair.com](mailto:warranty@vmacair.com)

### Fax

(250) 740-3201

### Mail

VMAC - Vehicle Mounted Air Compressors  
1333 Kipp Road, Nanaimo, BC, Canada V9X 1R3

# General Information

## Before Starting

Read this manual prior to servicing the Honda GX390 engine to ensure familiarity with the components and servicing requirements. VMAC also recommends reading the Honda GX390 Owner's Manual supplied with the G300003 Gas Engine Driven 30 CFM Air Compressor (VMAC P/N: 1901066) to ensure that all recommended services and checks not mentioned in this manual are completed. Open the package, unpack the components and identify them using the included IPL on page 6.

## Ordering Parts

To order parts, contact a VMAC dealer. The dealer will ask for the VMAC serial number, part number, description and quantity. Locate the nearest dealer online at [www.vmacair.com/dealer-locator](http://www.vmacair.com/dealer-locator) or call 1-877-912-6605.



## Torque Specifications

All fasteners must be torqued to specifications. Use manufacturers' torque values for OEM fasteners. **Apply Loctite 242 (blue) or equivalent on all engine mounted fasteners.** Torque values are with Loctite applied unless otherwise specified.

STANDARD GRADE 8 NATIONAL COARSE THREAD								
Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4
Foot-pounds (ft•lb)	9	18	35	55	80	110	170	280
Newton meter (N•m)	12	24	47	74	108	149	230	379

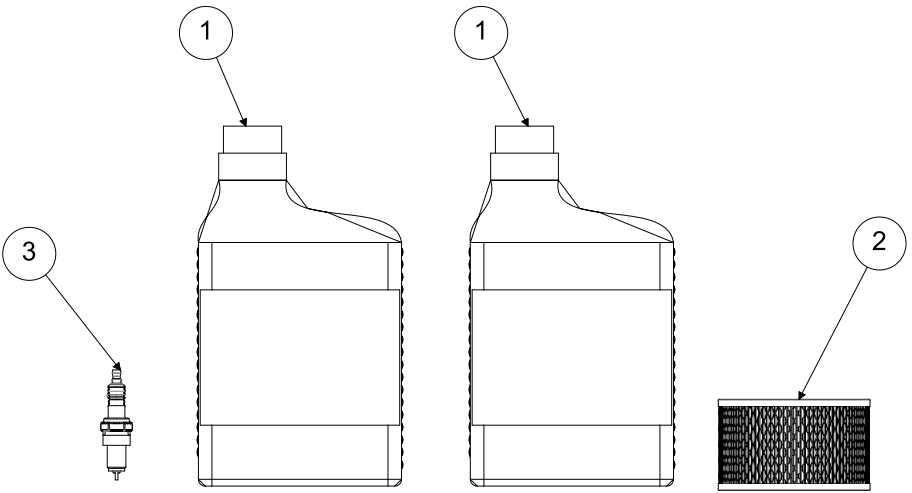
STANDARD GRADE 8 NATIONAL FINE THREAD					
Size	3/8	7/16	1/2	5/8	3/4
Foot-pounds (ft•lb)	40	60	90	180	320
Newton meter (N•m)	54	81	122	244	434

METRIC CLASS 10.9						
Size	M6	M8	M10	M12	M14	M16
Foot-pounds (ft•lb)	4.5	19	41	69	104	174
Newton meter (N•m)	6	25	55	93	141	236

Table 1 – Torque Table

# Illustrated Parts List



Item	QTY	Part#	Description
1	2	5400729	OIL, 10W30, 1L
2	1	5800156	AIR CLEANER, DUAL ELEMENT
3	1	5800157	SPARK PLUG



# General Safety Precautions



## Moving Parts Hazard

- Before performing any service, disconnect the negative battery cable and the spark plug wire to prevent the engine from starting unexpectedly
- Do not operate the compressor without the guards in place. If the guards are damaged or missing, replace them before operating the equipment.



## Burn Hazard







- The engine, exhaust and the compressor system get very hot during operation, contact with the components or the oil may cause serious injury. Allow sufficient time for the system to cool before performing service.
- Never allow any body parts to contact the engine or compressor components while they are hot.



## General Warnings

- Disconnect the spark plug wire before attempting any repair or service.
- Be attentive for unexplained changes in operation parameters and record any changes.
- Check the compressor oil level and condition before starting the system. Do not add or change oil while the system is running. Use only approved oil.
- The compressor operates anytime the engine is running. Avoid contact with the compressor, hoses, or engine during operation.
- Keep hoses and wiring away from hot, sharp, or moving components.
- Use only approved hoses and replacement parts.
- Do not modify the equipment.
- Do not operate the air compressor when fatigued or under the influence of alcohol or drugs.
- Know how to operate the compressor, fully read the manual.
- Check equipment before every use.
- Never bypass or disable any of the safety equipment.
- Never adjust or attempt to make any repairs to the compressor system while the engine is running. Components and hoses under pressure could fail and cause serious injury or death.

# Maintenance and Repair Safety

	<p><i>It is impossible to warn of all the possible hazards that may result from operating, servicing, or repairing this system. Wear all appropriate Personal Protective Equipment and follow all industry standard safety practices.</i></p>
	<p><i>The negative battery cable and spark plug wire <u>must</u> be disconnected prior to performing any service or repair work. Failure to perform this step may result in the engine starting unexpectedly if the crankshaft is rotated. Only reconnect the battery cable and spark plug wire once service or repair has been completed.</i></p>
	<p><i>Confirm that the system is depressurized and has cooled (unless otherwise directed) prior to performing any service work.</i></p>
	<p><i>Never use flammable solvents to clean any components. If a flammable solvent has been used, rinse the component thoroughly with water and dry it before reinstalling it to prevent the possibility of explosion.</i></p>
	<p><i>Use only genuine VMAC replacement parts to maintain the system. Genuine VMAC replacement parts are designed to work with the high pressure and heat generated by the compressor. Substituting genuine VMAC replacement parts will void the warranty and could fail causing equipment damage, injury, or death.</i></p>
	<p><i>This information is intended for people with mechanical trade certification who have the tools and equipment to properly and safely perform the service or repair. Do not attempt to service or repair this system without the appropriate mechanical training, knowledge and experience. Follow all safety precautions and industry standard “best practices”.</i></p>

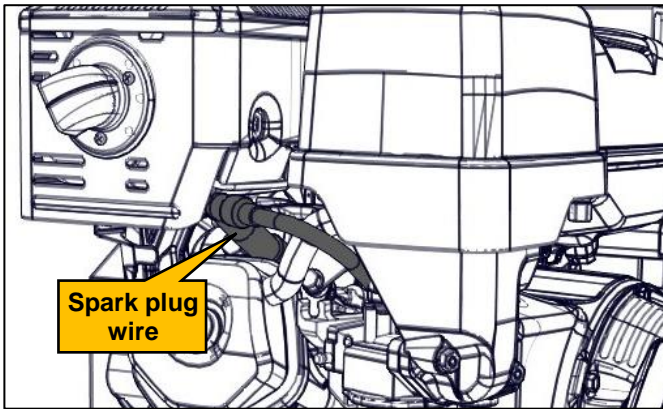
# Installation

## Changing the Oil



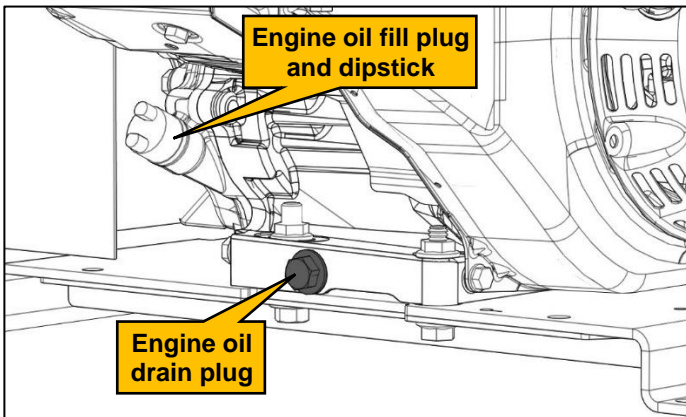
*These instructions are taken from the Honda GX390 Owner's Manual and are included for convenience. VMAC strongly recommends reading the Honda GX390 Owner's Manual to ensure that all system checks and services are completed as per Honda's recommendations in order to maintain the Honda engine warranty.*

- Ensure the ignition key switch is in the "OFF" position.
- Disconnect the negative battery cable.
- Disconnect the spark plug wire (Figure 1).



**Figure 1 – Spark plug wire**

- Locate the engine oil drain and clean the area around the drain plug and dipstick to prevent contamination (Figure 2).



**Figure 2 – Engine oil drain plug**



**Drain the used oil when the engine is warm. Warm oil drains quickly and completely.**

- Drain the engine oil into a receptacle large enough to hold at least 1/2 USG (2 L) .
- Remove the oil filler cap/dipstick, oil drain plug and washer.
- Allow the used oil to drain completely, then reinstall the oil drain plug and new washer (not supplied), and tighten the oil drain plug securely.

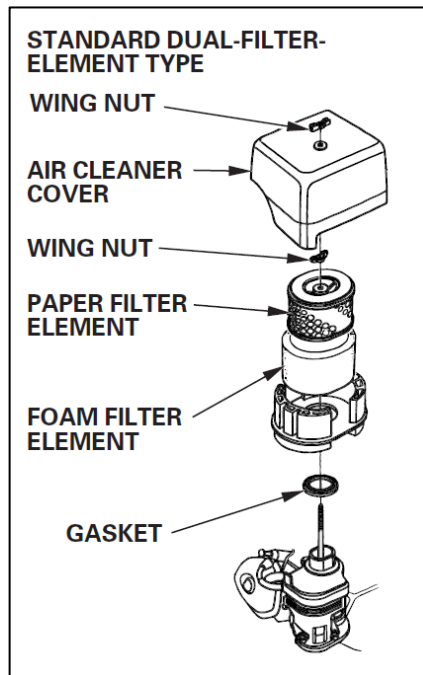


***To check the oil level, insert and remove the dipstick without screwing it into the filler hole.***

- With the engine in a level position, fill to the upper limit mark on the dipstick. Engine oil capacity is 1.2 US qt (1.1 L).
- Screw in the oil filler cap/dipstick and tighten securely.

## Replacing the Dual Element Air Filter

- Remove the wing nut from the air cleaner cover, and remove the cover (Figure 3).



**Figure 3 – Replacing the dual element air filter**

- Remove the wing nut from the air filter, and remove the filter.
- Remove the foam filter from the paper filter.
- Install the new dual element air filter.
- Reinstall in the reverse order.

## Replacing the Spark Plug

- Remove any dirt from around the spark plug area.
- Remove the spark plug with a 13/16-inch spark plug wrench.
- Measure the new spark plug's electrode gap with a wire type feeler gauge. Correct the gap, if necessary, by carefully bending the side electrode. The gap should be: 0.028 - 0.031 in (0.70 - 0.80 mm)
- Install the spark plug carefully, by hand, to avoid cross threading.
- After the spark plug is seated, tighten with a 13/16-inch spark plug wrench 1/2 turn after the spark plug seats to compress the washer.



***A loose spark plug can overheat and damage the engine. Overtightening the spark plug can damage the threads in the cylinder head.***

## Completing the service

- Attach the spark plug cap to the spark plug.
- Connect the negative battery cable.
- Start the Start the Gas Engine Driven 30 CFM Air Compressor and verify there are no leaks.
- Once the system has reached normal operating temperature and built to full system pressure, shut the system down.
- Check the engine oil level after the engine has been shut down and the oil level has had time to stabilize.

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