



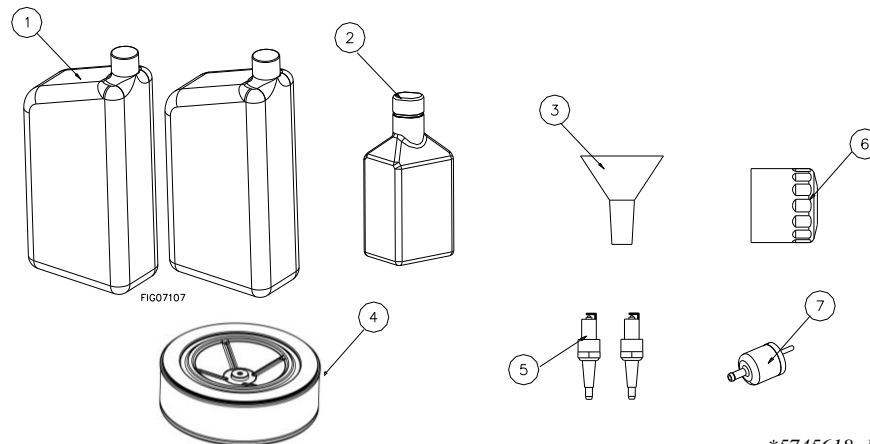
M805629B

KIT NUMBER: 5745642, 5745626, 5745651,
5745634, 5745618
SERIAL NUMBER: _____

Owner's Manual

Instructions for Proper Use of NorthStar Maintenance Kits

KIT #	DESCRIPTION	USED ON
5745642	Maintenance Kit for NorthStar 180/225 engines	2681733, 1108003, 1109003, 1571223, 114654 (804311), 114655 (804312)
5745626	Maintenance Kit for NorthStar 300 engines	1571243, 1064713, 459223, 114593 (804313)
5745651	Maintenance Kit for NorthStar 420 engines	1571343, 1571153, 114594 (804314), 114656 (804315)
5745634	Maintenance Kit for NorthStar 420 generator engines	1654402
5745618	Maintenance Kit for NorthStar 670/740/825 engines	1575973, 1654405, 1654407



*5745618 shown

REF	PART#	DESCRIPTION	QTY	USED ON
1	115086	NorthStar Conventional 10W30 Oil	2	ALL
2	52588	NTE Fuel Additive 12oz	1	ALL
3	785290	Funnel	1	ALL
4	805542	Engine Air filter, 180/225	1	5745642
	805543	Engine Air filter, 300	1	5745626
	805544	Engine Air filter, 420	1	5745651
	805545	Engine Air filter, 420 generator	1	5745634
	805546	Engine Air filter, 670/740/825	1	5745618
5	805618	Spark plug	1	5745642, 5745626, 5745651, 5745634
			2	5745618
6	805616	Oil filter	1	5745618
7	805617	Fuel strainer	1	5745618

Any Questions, Comments, Problems, or Parts Orders
Call NorthStar Product Support 1-800-270-0810

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Maintenance Schedule & Safety



WARNING: Maintenance hazards

ALWAYS shut off the engine, disconnect the spark plug wire from spark plug (power cord on electric motors) and release air pressure from the receiver tank before cleaning, adjusting, or servicing the compressor. Make sure all guards and shields are replaced before re-starting.

Item	Maintenance period	Each use	First month or 20 hours	Every 3 months or 50 hours	Every 6 months or 200 hours	Every year or 300 hours	
Engine oil	Check level	√					
	Change		√		√		
Air filter element	Inspection	√					
	Clean			√			
	Replace				√*		
Spark plug	Replace					√**	
		* Service more frequently when used in dusty environments.					
		** If necessary.					

No modifications. Never modify or alter the engine in any way. Modifications can create serious safety hazards and will also void the warranty.

Improper maintenance or failure to perform pre-operation checks before operation will result in malfunctions that could cause serious injury to you or others.

Follow Safety Rules

Read and follow these safety rules whenever you will be servicing the engine:

- **Turn off.** Always turn off before inspection or maintenance. Remove spark plug or spark plug wire to prevent accidental starting.
- **Replace guards.** Make sure all guards and cover shields are replaced after servicing.
- **Major repair.** Major service, including the installation or replacement of parts, should be performed only by a qualified service technician. Obtain factory approved parts from NorthStar Product Support at 1-800-270-0810.
- **Replacement parts.** If a part needs replacement, only use factory approved repair parts. Replacement parts that do not meet specifications may result in a safety hazard or poor operation of the engine and will void the warranty.

Maintenance: Keeping Engine Clean & Changing Engine Oil

Keeping Engine Clean

If dust or debris accumulates on the engine, clean with a damp cloth or soft bristle brush. Do not allow air intakes to become blocked.

DANGER

Carbon Monoxide Hazard

Exhaust fumes from the engine contain carbon monoxide (CO), a poisonous gas you cannot see, smell, or taste. The CO generated by the engine can rapidly accumulate, even in areas that appear to be well ventilated, resulting in dangerous and fatal concentrations within minutes. NEVER run engine inside any enclosed or semi-enclosed spaces, including homes, garages, basements, sheds, boxes, pick-up truck beds, RVs, or boats. These spaces can trap poisonous gases, EVEN if you run a fan or open windows. If you start to feel sick, dizzy, or weak while using the engine, shut off the engine and get to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.

Improper maintenance or failure to perform pre-operation checks before operation will result in malfunctions that could cause serious injury to you or others.

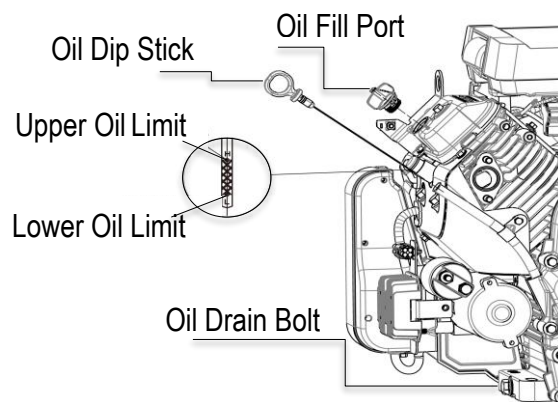
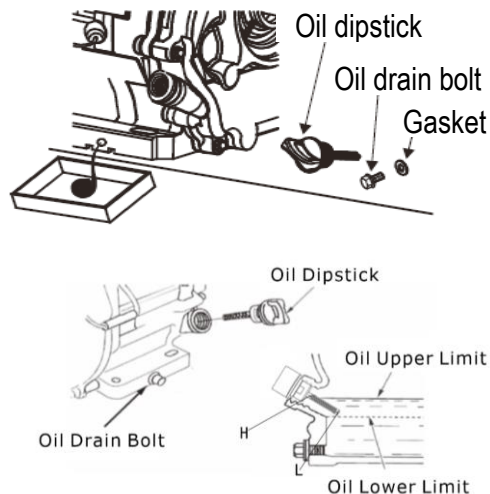
Changing Engine Oil

WARNING

Burn Hazard

Never open oil port while engine is running. Hot oil can spray over face and body.

- 1) Drain the oil when the engine is warm to ensure quick and thorough draining
- 2) Unscrew the oil dipstick and oil drain bolt to drain the oil. Replace the oil drain bolt and tighten it.
- 3) Refill the recommended oil and check the oil level.
 - a) Oil Capacity:
 - i. 180/225 engines: 0.58 qt. (18.6 oz)
 - ii. 300 engines: 1.06 qt. (33.8oz.)
 - iii. 420 engines: 1.17 qt. (37.2oz)
 - iv. 670/740/825 engines: 1.69 qt. (54oz.)
- 4) Reinstall the oil dipstick.



NOTICE:

Dispose of used motor and pump oil in a manner that is compatible with the environment and in accordance with local, state, and federal laws and regulations.

- Take used oil in a sealed container to your local recycling center or service station for reclamation.
- Do not throw it in the trash, pour it on the ground, or pour it down the drain.

Maintenance: Air Filter

Air Filter Maintenance

A dirty air filter may restrict air from entering the engine. To prevent engine failure, the air filter should be maintained regularly. If the engine is operated in a dusty place, it needs to be maintained more frequently.

⚠ WARNING

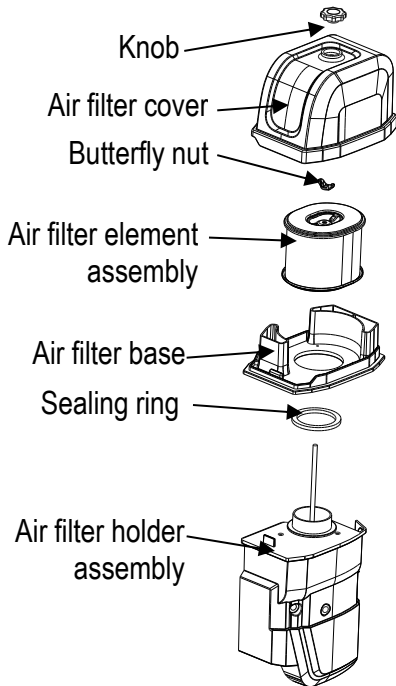
Never use fuel or a solvent with a low ignition point to clean the air filter element, doing so may cause explosion. Please clean the element with warm soapy water or non-flammable solvents.

CAUTION

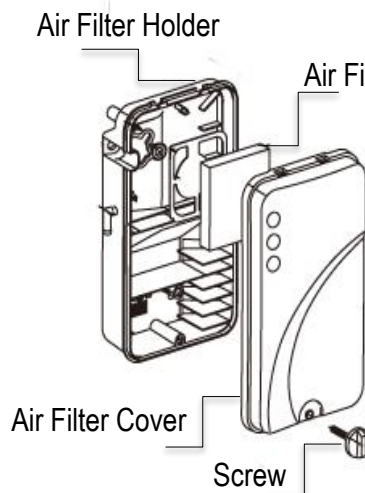
Never run the engine without the air filter and cover installed or damage to the engine could result. Damage to the engine by not having the air filter and cover installed is not covered under warranty.

- 1) Remove the air filter cover and air filter element assembly.
- 2) Clean off dust on the air filter cover and inner surface with a wet rag. Be careful not to allow dust to enter the engine.
- 3) Install the filter element assembly and the air filter cover.

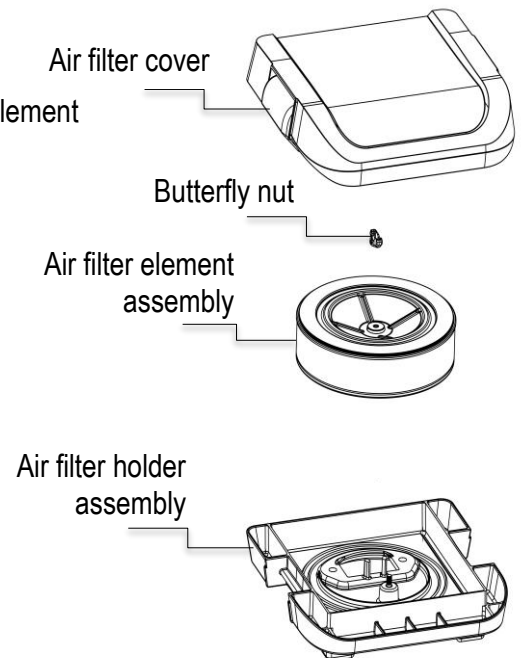
NorthStar 180/225/300/420 Engines



NorthStar 420 Generator Engines



NorthStar 670/740/825 Engines

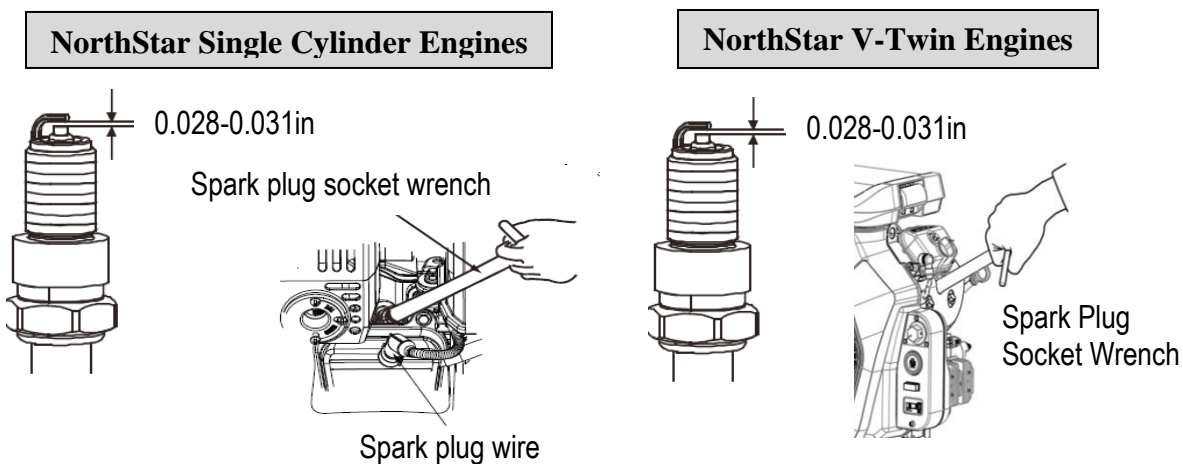


Maintenance: Spark Plug

Spark Plug Maintenance

To ensure proper operation of the engine, the spark plug must be provided with proper clearance and be free of deposits.

- 1) Remove the spark plug wire.
- 2) Clean the dirt around the spark plug holder.
- 3) Remove the spark plug with a spark plug socket wrench.
- 4) Visually inspect the spark plug. If it is damaged, replace it with a new one. If the spark plug can still be used, clean it with a wire brush.
- 5) Measure the spark plug gap.



- 6) To prevent misalignment of the threads, screw the spark plug into the screw hole by hand.
- 7) After the spark plug is screwed to the end, tighten it with spark plug socket wrench.
 - a) To install a new spark plug, the user should replace it according to the original spark plug type. Thread the spark plug into the engine until hand tight, then an additionally 1/2 turn (after hand tight).
 - b) If a used spark plug is reinstalled, thread the spark plug into the engine until hand tight, then an additionally 1/8-1/4 turn (after hand tight).

CAUTION

The spark plug must be tightened properly, or it may be extremely hot and damage the engine.

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Manufactured by
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