Genuine Toyota Oil Filters

2 layer element is composed of pulp, polyester & rayon fibers

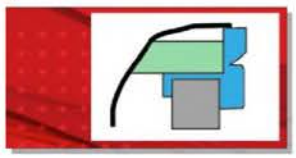
Integrated safety valve assembly (specific pressure release for engine type)

Thick steel case (13% thicker than the average filter*)

Larger element surface area (67% larger than the average aftermarket filter*)

Sealed and lubricated gasket

Custom-molded to hold O-Ring in during removal Seals better and minimizes leaks

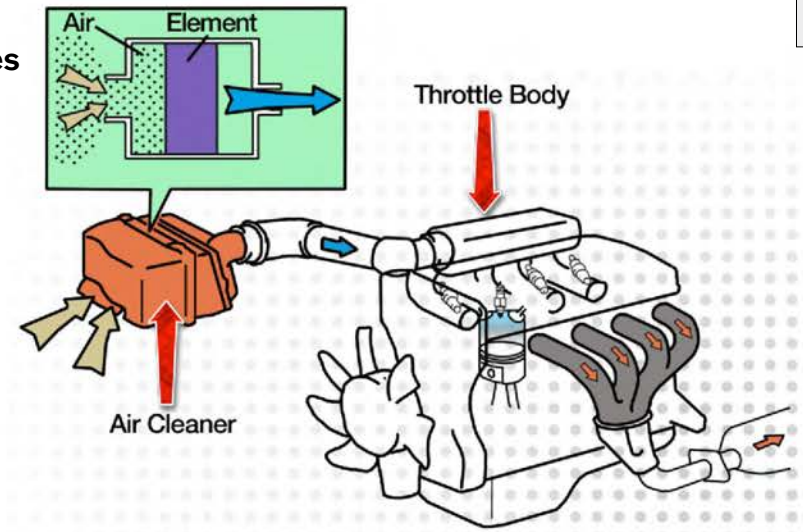


Example of a typical aftermarket "cut" gasket

Integrated torque stopper

Genuine Toyota Air Filters

- The Air Filter removes particles prior to the combustion process



What happens when you use aftermarket air filter

•Filter Element	•Filtering Performance	•Dust Holding capacity	Lack of air • Decreased engine performance
		•Filter Efficiency	Engine wear
	•High Flow Pressure	•Drop	Lack of air • Decreased engine Performance • Lower MPG
•Gasket	•Sealing	•Gaps in seal	Engine wear False DTC

•A. Filter Element

•Genuine Air Filter

• Toyota recommends replacing every 30K miles

•Result = Great Performance

•Aftermarket Air Filter

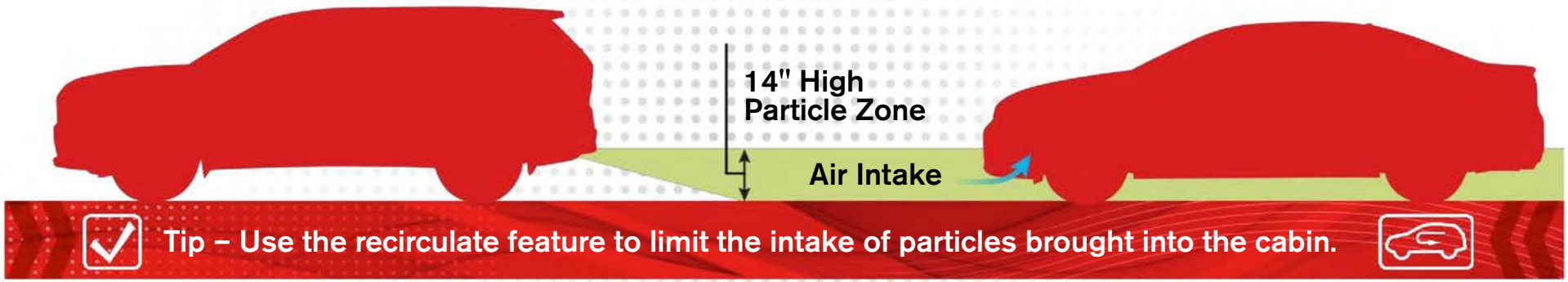
•Most aftermarket brands recommend replacing every 12K miles

•Result = Low Performance

Genuine Toyota Cabin Air Filters

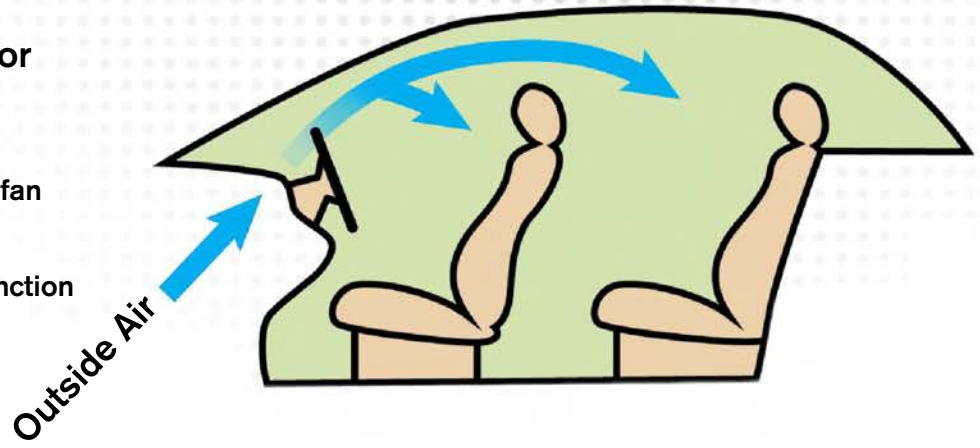
How Cabin Air Filter Works

- **The Cabin Air Filter removes particles prior to being vented into the passenger compartment**
  - Particles are prevented from entering the cabin (allergens, soot, dust,) as air circulates through Vehicles blower motor assembly
  - HVAC performance is maximized
- **Pollution tends to gather near the road surface and get sucked into the vehicle interior**



- **Vehicle Cabin Interior**
  - Affects of a clogged cabin air filter:

- ❑ **Lower air pressure from fan**
- ❑ **Slower window defrost**
- ❑ **Reduced AC/Heating function**



- **Due to the cabin being sealed, particles are up to 6X greater**

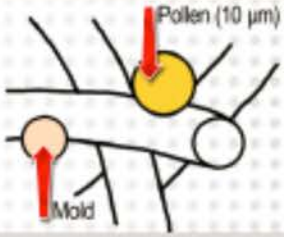
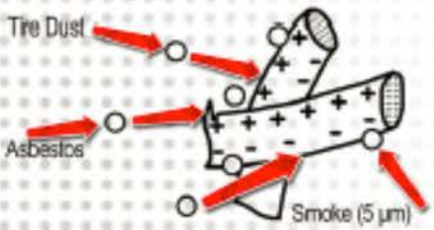
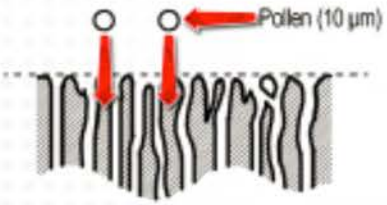
  inside the vehicle cabin vs. outside!

- **Cabin Air Filters are important to keep the air safer to breathe and the HVAC system at its optimum efficiency.**

Genuine Toyota Cabin Air Filters

Continued

How Cabin Air Filter Works

Filter Type	Pollen Filter	Pollen + Electrostatic Filter	Charcoal Filter
Method to Filter	Physical collection	Electrostatic + physical collection	Physical + chemical collection
Visual of Filtering Method			
Cross Section of Filtering	Air / Fibers	Air / Substrate / Fibers	Air / Substrate / Charcoal/Fibers

Features

- Filter is specific for application
- Electrostatically charged fibers
- Odor absorption with charcoal

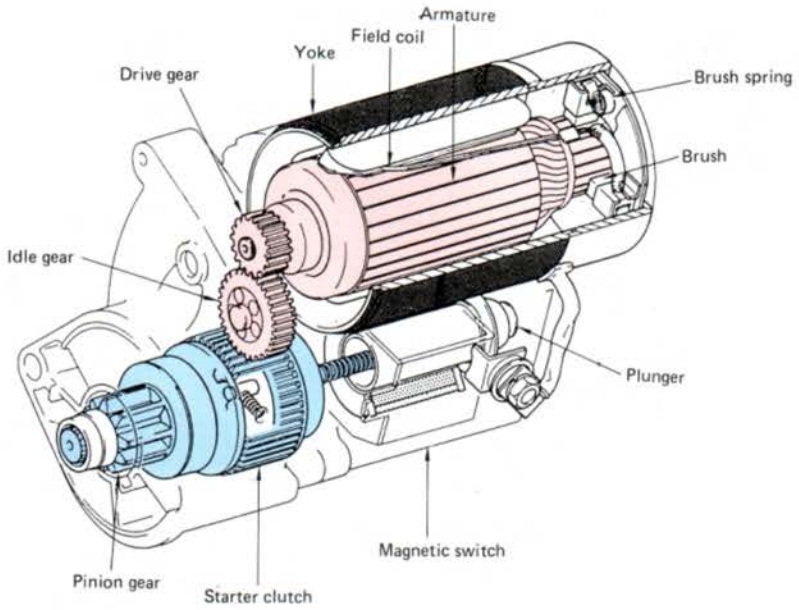
Benefits

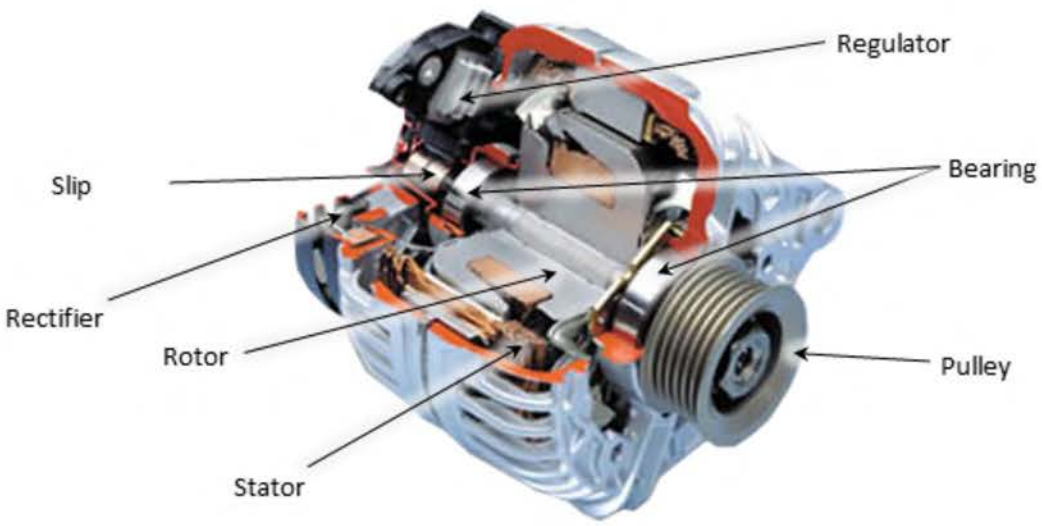
- Best HVAC & defrost performance
- Captures extremely small particles (dust, pollen and engine combustion by products
- Cleaner smelling car

Genuine Toyota Reman Starter & Alternator

Reman Starter

- New, OE-specified components replace 100% of the normal wear parts
- Clutch and plunger assemblies re-lubricated with OE-specified lubricant
- Each unit is put through a 30K start/stop test to measure endurance
- Everything is inspected to ensure OE quality and performance





Reman Alternator

- New, OE-specified components replace 100% of the normal wear parts
- Ready to install, complete with pulley
- Each unit is put through an 18K RPM test to measure endurance
- Everything is inspected to ensure OE quality and performance

Genuine Toyota Reman Starter & Alternator

Continued

Genuine Toyota

VS.

Aftermarket

- Engineered and built to meet OE specifications
- Perfect fit (virtually 0 comebacks)
- 100% of the wear parts are replaced
- Final quality assurance testing on 100% of the parts
- Customers can rely on the entire Toyota dealer support network

- Built against a lesser than OE quality spec
- Increased rate of comebacks due to part number consolidation
- Parts are cleaned up and re-packaged
- Typically no quality testing
- If purchased at a private shop, customers have NO support network

Genuine Toyota Spark Plugs - TYPES

Standard / Resistor (Nickel)

Available in Resistor or Non-resistor

Used in automotive and small engine applications

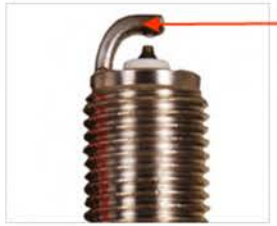
Primary OE type plug prior to 1990

U-Groove on the ground electrode allows for a larger flame front and improved ignitability.

Double Platinum

Increased life versus U-Groove plug, up to 60,000 miles

Pt. center electrode is 1.1mm compared to 2.5mm on U-Groove



1.1mm Pt center and ground electrodes result in extended life.

Iridium

Increased longevity versus platinum, up to 100,000 miles

Iridium 0.55 to 0.7mm center electrode takes less voltage to fire than conventional platinum plug

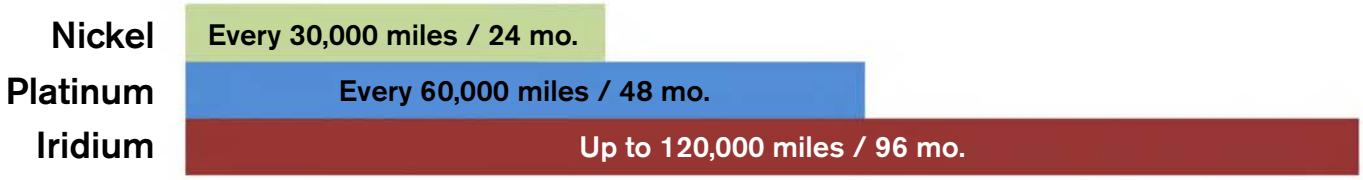
Primary OE type plug for 2000MY and newer vehicles

SIP (Super Ignition Plug) / Needle to Needle

Pt. on the ground electrode extends life.

Iridium alloy center electrode extends life and increases firing performance.

Maintenance Interval Comparison



Genuine Toyota Spark Plugs - DESIGN

Continued

Terminal

Insulator:
(95% Purified Alumina Gives strength during high temperatures and removal)

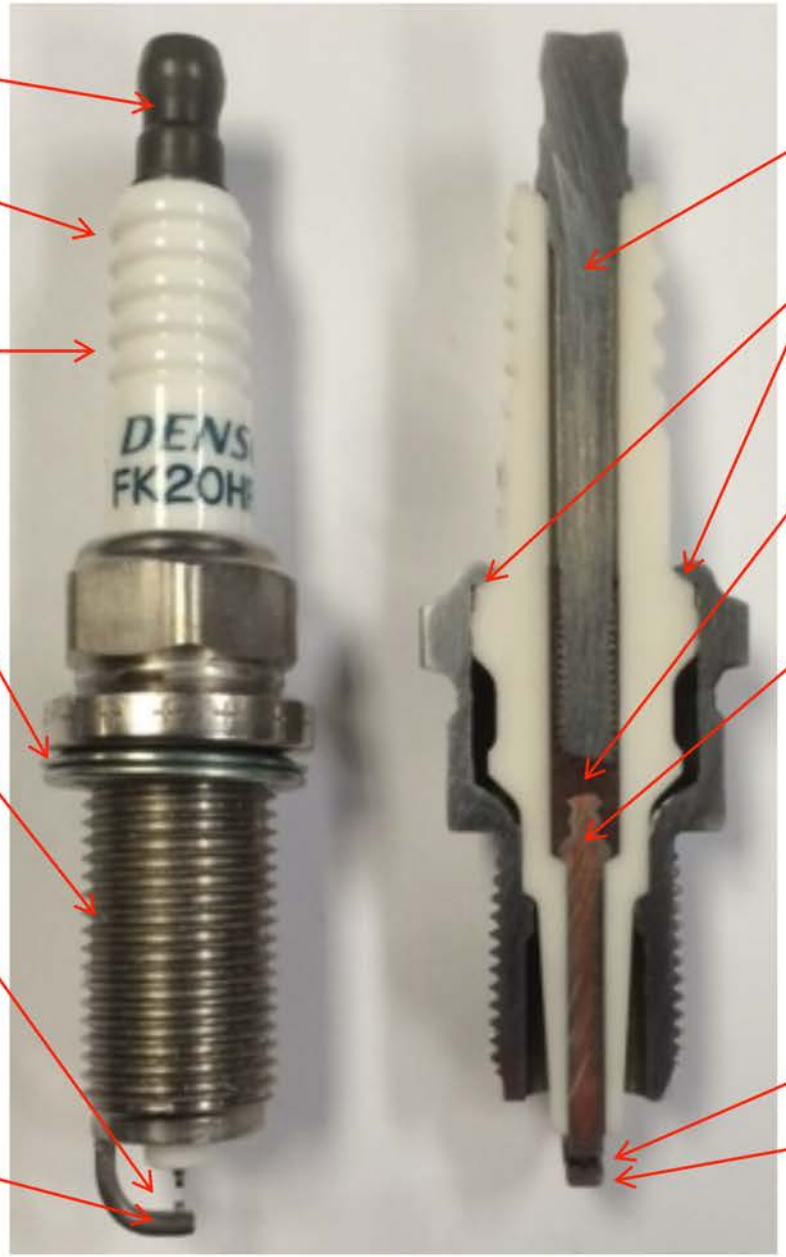
Ribbed Insulator:
(Minimizes Flashover & decreases voltage loss)

Gasket:
Maintains air tight seal to the combustion chambers

Long reach plug:
Allows more space for coolant channels to cool the head

Super Ignition Technology:
Allows the fire kernel to grow faster and in a complete circle, maximizes fuel brut in the combustion chambers

Platinum needled:
Helps to achieve 120K service interval



Steel Center Shaft:
Allows High Voltage to flow to Electrode with out energy loss

Ring, Packing Washers:
Creates a tight fit between the Insulator and the housing and keeps it air tight

Copper Glass Seal:
Maintains an airtightness and does not allow air pockets to form under harsh conditions.

Electrode with copper:
A copper core improves thermal conductivity to prevent melt down

U-groove ground electrode:
Increases ignitability and larger flame sizes

Tapered cut ground electrode:
Reduces quenching effect which improves ignition performance

Diagnosis of a Used Spark Plugs

Continued

Tell-Tale Signs: Any engine is a finely tuned mix of components and processes working together in harmony. Most inefficiencies or malfunctions in an engine's operation will leave some sign on the spark plugs which can help point you to a solution. If you pull your used spark plugs and find any of the conditions pictured here, this guide will provide insight into the possible causes.








	Carbon Fouling	Oil Fouling	Pre-Ignition	Over Heating	Broken Insulator	Torched Seat	Mechanical Damage	Normal
Description	Dry, soft black carbon on the insulator electrode	Wet oily black deposits on the insulator and electrode	A melted or burned center electrode and/ or ground electrode, blistered insulator and aluminum or other metallic deposits on the insulator	An extremely white insulator with small black deposits and premature electrode erosion	Insulator is cracked or split	Melted in the thread and seat area of the plug housing	Bent electrode and a broken insulator, dents often present on electrode	Light gray or tan deposits and slight electrode erosion
Symptoms	Poor starting, misfiring, faulty acceleration	Poor starting, misfiring	Loss of power causing engine damage, pre-ignition occurs when combustion begins before the timed spark occurs	Loss of power at high speeds or during heavy load	Misfiring	Loss of power causing engine damage	Misfiring	None
Causes	Faulty choke-overly rich air/fuel mixture • Delayed ignition timing • Bad ignition leads • Plug heat range to cold	Worn piston rings, cylinders and valve guides • New or recently overhauled engines • Fuel mixture oil content too high (two-stroke engines)	Plug insufficiently tightened • Engine insufficiently cooled ignition timing too advanced • Plug heat range to hot	Plug insufficiently tightened • Engine insufficiently cooled ignition timing too advanced • Plug heat range to hot	Severe detonation • Incorrect tool/ torque applied during installation or removal • Careless gap setting	Plug insufficiently tightened	Plug nose is too long for engine head • Foreign object (bolt/ nut) in combustion chamber	None

Genuine Toyota Spark Plugs

Continued

Genuine Toyota vs. Aftermarket

Comparison	Genuine	Aftermarket	Example
Quality	Genuine QA Standard	Less than OE QA	Genuine is Pre fired at factory, Multi-Stage QA checks, Silicone Protectant (resists corrosion during transport and storage)
Application	Specific for each Engine/Engine Tune	Consolidated to work multiple applications.	Gap Differences Heat ranges Technology Application Consolidation (Q16R-U11 is also a Lawn Mower Plug)
Counterfeit	None	Widespread	Can not guarantee source in the After Market
Center Electrode	0.55 mm Center electrode with OE Specified Iridium/Rhodium Alloy Durability and performance Specifications.	.6 mm Center electrode with lower grade Iridium/Yttrium Alloys, lower Iridium content, and lower manufacturing quality.	Genuine = 120,000 miles A/M = 30,000-50,000 miles
Ground Electrode	Latest Technology Needle to Needle. Platinum Needle, Double Platinum Tabs. Higher Grade nickel plating.	Older Technology, lower Platinum Content, lower grade Nickel Plating.	Wear resistance for Aftermarket less than Genuine.

Genuine Toyota Compressor

Modern Swash-plate Compressor:

1. Complete with OE-specified oil.

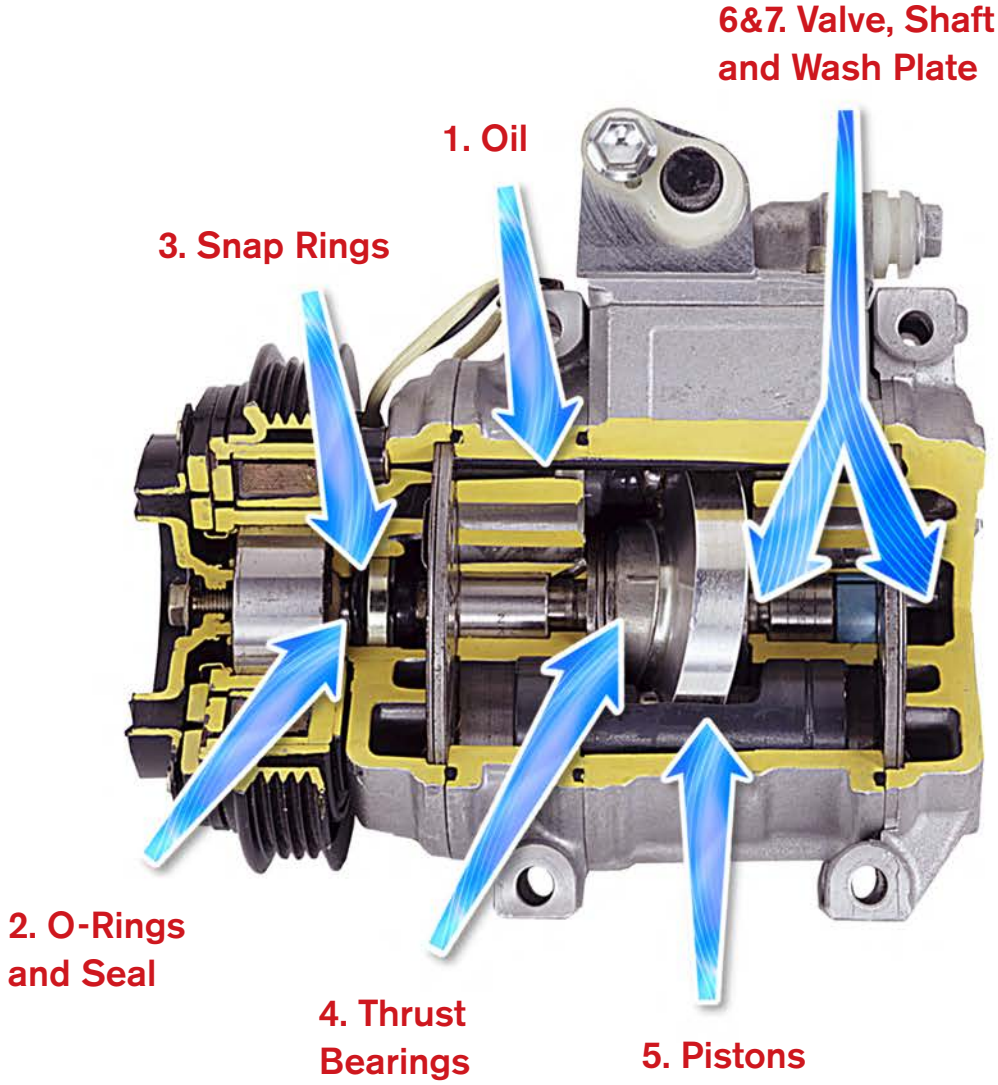
2. OE-specified O-Rings & Seals prevent leakage and ensure proper installation.

3. Snap Rings designed to withstand fatigue under extreme heat.

4. Thrust Bearings structured to withstand tension and stress for maximum durability.

5. Pistons surface treated for smooth, efficient operation.

6. & 7. Valve, Shaft, & Swash Plates with lightweight aluminum alloy for added strength.



Genuine Toyota Compressor

Continued

Genuine Toyota vs. Aftermarket

- **Genuine products signify Quality, Dependability and Value**
- **Built to OE specifications in the same plants as OE parts**
- **Compressor is 100% factory new, no re-used components**
- **OE fit, ready to install, no forced fitment**
  - Correct amount of oil
  - Correct length wire harness
  - Correct clutch
- **Customer can rely on the entire Toyota dealer support network**
- **Warranty includes parts and labor**
- **Customers can now purchase Genuine compressors at aftermarket prices**

- **Built using lower quality components in plants with lower than OE standards**
- **Not guaranteed to fit OE, due to part number consolidation**
  - Oil amount averaged, may be too little for some vehicles
  - Long wire harnesses require non-OE splicing or fastening to vehicles
  - Clutch diameter often differs from OE requiring accessory belt tensioning
- **If purchased at a private shop, customers have no support network**