KAKI MOTORS

ISUZU

Why Genuine/Best Value Parts?

Genuine/Best Value Parts vs. Commercial Parts

INTRODUCTION

Automobiles, as consumer durables, must be in a state where they can always provide thorough performance during a long period of use.
Unless properly serviced, automobiles may cause trouble and may result in loss of life or properties.

To allow automobiles to run at their full capacity and for safe use, periodic inspection and maintenance as well as parts replacement are required as "care."

On the other hand, many commercial parts are available on the market, and there have even been cases where their use is suspected to have caused trouble.

To ensure that Isuzu vehicles exhibit the best possible performance and run both safely and comfortably, we ask that genuine/best value parts be used to maintain the vehicles.

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1 What Are Active Parts?

"Active parts," which are also commonly referred to as "consumable parts," are parts that need to be frequently replaced, and they require periodic replacement when safety inspections are performed or based on the number of miles driven.



Items Classified As Active Parts
Oil filter element/cartridge
Air cleaner element
Fuel filter element/cartridge
Clutch disc
Clutch cover
Brake lining
Rebuilt shoe
Disc pad
Cup set (wheel cylinder repair kit)
Oil seal
Fan belt

2 Genuine/Best Value Parts and Commercial Parts

Isuzu's Genuine/Best Value Parts

Parts that meet the following three conditions are referred to as Isuzu Genuine/Best Value Parts.

1. Parts which have been manufactured based on drawings designed or approved by Isuzu Motors
2. Parts which have passed Isuzu Motors' inspection
3. Parts which will be sold through the supply channel of Isuzu Motors

ISUZU GENUINE PARTS

ISUZU BEST VALUE PARTS

Comparison of Genuine/Best Value Parts and Commercial Parts

	Genuine/Best Value parts	Commercial parts (example)
Quality	• The same as or equivalent to parts assembled on production lines. • Parts made to fit Isuzu vehicles perfectly to deliver the vehicle performance fully.	There may be problems with the performance and durability of these parts due to differences in the equipment used and processing methods.
Quality	• The quality and performance indicated on the drawings are guaranteed. • They have passed Isuzu's strict inspection, and have a longer service life.	The raw materials and machining precision of these parts may vary significantly, resulting in uneven performance.
Availability	• All parts and components of vehicles are to be supplied. • Parts for old models and with low demand are to be supplied.	These high-demand parts are made only while their high demand lasts.
Availability	• Parts are to be supplied promptly from repair parts channels.	No party takes any responsibility for supplying them.

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3 Oil Filter Element/Cartridge

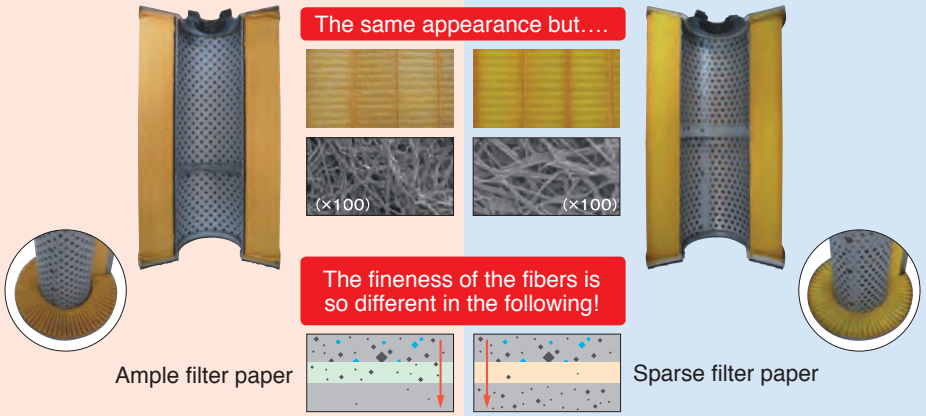
Function of Oil Filter



The oil filter removes contaminants in engine oil.

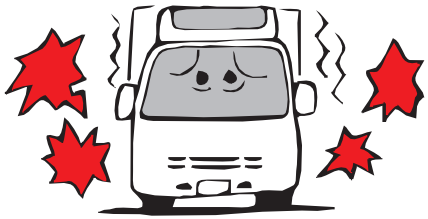
Genuine/Best Value Parts and Commercial Parts

Genuine/Best Value Parts	Commercial parts (example)
• High proportion of dust is trapped • Ample surface area for filtration • Reliable sealing performance maintained	• Thin material with coarse fibers • Small surface area for filtration • Unreliable sealing performance



CHECK

Does your engine have less power?
Are you getting less mileage?



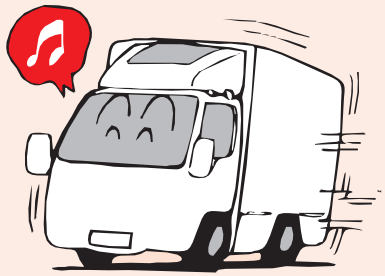
Wear of engine
(cylinder liner, piston ring, etc.)



Increase in fuel consumption

It is better for the filter to be replaced earlier rather than later.

- Replace the filter before it is clogged.
- Replacing the filter ahead of time is regarded as preventive maintenance.



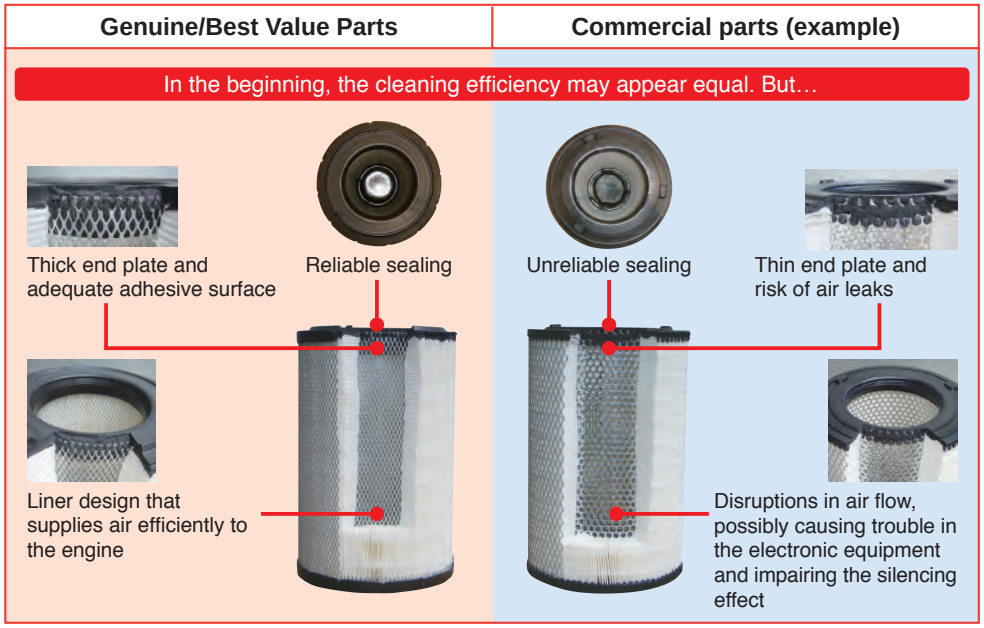
4 Air Cleaner Element

Function of Air Cleaner



The air cleaner removes contaminants from the intake air.

Genuine/Best Value Parts and Commercial Parts



CHECK

Does your engine have less power?

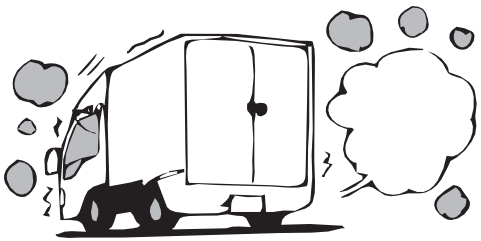
When the air cleaner is clogged, the amount of intake air is reduced. As a result, the engine's output power and the mileage may drop by 5% to 10%, and possibly create black smoke pollution. In the worst-case scenario, engine damage may result as well.

Is the air cleaner not only cleaned but also replaced?

Every time an air cleaner is cleaned, the fibers of its filter paper are damaged, and its performance deteriorates little by little. A dry-type air cleaner element needs to be replaced after it has been cleaned six times or after a certain period of time has elapsed.



Increase in fuel consumption



CO levels increase and black smoke is emitted.

5 Fuel Filter Element/Cartridge

Function of Fuel Filter



The fuel filter removes contaminants from the fuel.

Genuine/Best Value Parts and Commercial Parts

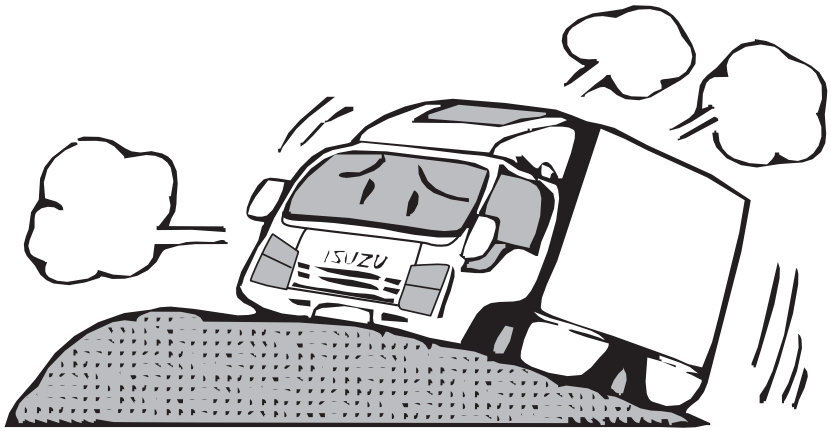
Comparison points	Genuine/ Best Value Parts	Commercial parts (example)	Advantages of Genuine/Best Value Parts
Material of filter paper	Plant fibers for high-precision use	Used paper/ wood waste	Genuine/Best Value Parts use plant fibers with superior filtration properties and precision to deliver high performance and long service life.
Surface area of filter paper	Appropriate	Insufficient	Genuine/Best Value Parts have a filtration surface area ideally suited to the engine specifications and guaranteed performance.
Quality of adhesive agent	Heat treatment of PCV-based materials	Natural drying of epoxy-based materials	As a result of being heat-treated, Genuine/ Best Value Parts feature improved strength and prevent leakage from adhesive surfaces.
Quality of packing	Oil-resistant rubber	Common rubber	Genuine/Best Value Parts use high-grade oil-resistant materials to maintain their elasticity and provide reliable sealing.
Flatness of plate	Appropriate	Significant curvature	Genuine/Best Value Parts are kept at the appropriate level of flatness to allow the gasket to provide reliable sealing.

CHECK

Does your engine have less power?

When the fuel filter is clogged, fuel supply becomes insufficient and the engine output drops.

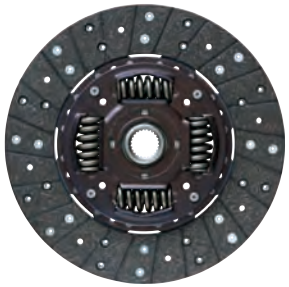
If the fuel filter continues to be used in this state, the fuel flow will drop and, in the end, fuel will no longer be supplied, causing the engine to stop.



Drop in engine power

6 Clutch Disc/Clutch Cover

Function of Clutch



The clutch transmits power from the engine or shuts it off.

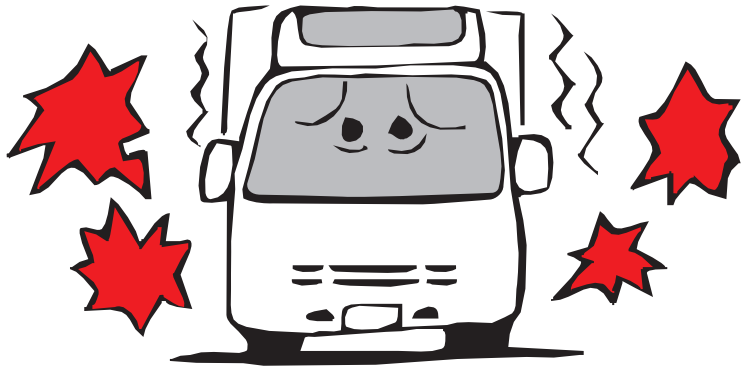
Genuine/Best Value Parts and Commercial Parts

Comparison points	Genuine/Best Value Parts	Commercial parts (example)
Applicable models	Wide range of options tailored to many different kinds of models	Some parts are not applicable.
Durability	Service life of over 80,000 km based on Isuzu internal tests	The service life of some parts is less than half that of Genuine/ Best Value Parts.
Start-off characteristics	Stable torque transmission to enable smooth starting	Unstable torque transmission, making judder more likely to occur
Heat resistance	Appropriate friction coefficient and resistant to not change over long periods of time	Some parts have a poor friction coefficient where the facing temperature rises to about 300°C in a state of partial clutch engagement.

CHECK

Use of a worn clutch disc leads to reduced driving force and deterioration in gas mileage.

Continued use in such a state may damage the facing and, in the worst case, make driving impossible or lead to trouble on the road.



Engine trouble

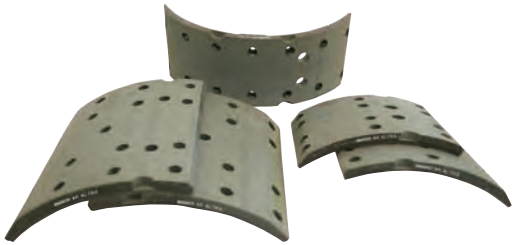






7 Brake Lining/Brake Shoe

Function of Brake Lining



The brake lining is a friction material that causes the vehicle to decelerate or come to a stop.

Genuine/Best Value Parts and Commercial Parts

Genuine/Best Value Parts	Commercial parts (example)
Material properly matched to the vehicle and not conducive to squealing	Only one or two kinds of materials are used for all types of vehicles, and they tend to cause squealing.
Safety ensured with minimal changes in effectiveness	Unstable effectiveness and tendency to cause fading and pulling
Long service life and economical	Tendency to wear out depending on the type of vehicle

CHECK

One Point Advice

The service life of the lining can be extended by driving in a way that makes full use of the engine brake, exhaust brake, and retarder.

The lining is the most important part of the brake for safe deceleration and stopping of your vehicle.

If you fail to replace it …

- The braking effect will be lost and a normal braking force will not be obtained, possibly resulting in an accident.
- The insides of the brake drum will be damaged, and replacing the drum will incur costs.



Cause of accidents

8 Disc Pad

Function of Disc Pad



The disc pad is a friction material that causes the vehicle to decelerate or come to a stop.

Genuine/Best Value Parts and Commercial Parts

Genuine/Best Value Parts	Commercial parts (example)
Material properly matched to the vehicle and not conducive to squealing	Only one or two kinds of materials are used for all types of vehicles, and they tend to cause squealing.
Safety ensured with minimal changes in effectiveness	Unstable effectiveness and tendency to cause fading and pulling
Long service life and economical	Tendency to wear out depending on the type of vehicle

CHECK

The disc pad is the most important part of the brake for safe deceleration and stopping of your vehicle.

If you fail to replace it …

- The braking effect will be lost and a normal braking force will not be obtained, possibly resulting in an accident.
- The surface of the disc rotor will be damaged, and replacing the rotor will incur costs.



Cause of accidents

9 Cup Set

Function of Cup Set



The cup set consists of a cup and boot.

- The cup completely seals in the brake fluid to provide the prescribed internal pressure.
- The boot prevents dust, water, etc. from entering the cylinders.

Genuine/Best Value Parts and Commercial Parts

Comparison points	Genuine/Best Value Parts	Commercial parts (example)
Applicable models	Applicable for each model	Some are not applicable.
Durability	They are designed and manufactured to perfectly fit Isuzu vehicles and have a long service life expectancy.	To make the parts cheaply, rubber and molds that do not meet the original product standards are used, and some may have an inferior durability.
Performance test	Less wear and no leakage after 210 hours of testing	Significant wear and fluid leakage as a result of 210 hours of testing

CHECK

If the periodic replacement is neglected …

Cup

- Wear inside cylinder
- Heat deterioration
- Gradual softening due to brake fluid

↓

Leakage of brake fluid caused by reduced sealing performance

Boot

- Heat deterioration
- Deterioration caused by air, dust, and heat generated by the brakes

↓

Entry of water and foreign particles into cylinders

The brakes will become less effective (or will cease to work in some cases), so early replacement is recommended.



Cause of accidents

10 Hub Oil Seal

Function of Hub Oil Seal



The hub oil seal prevents the lubricating oil from leaking out. It also prevents water, sand, dust, etc. from entering.

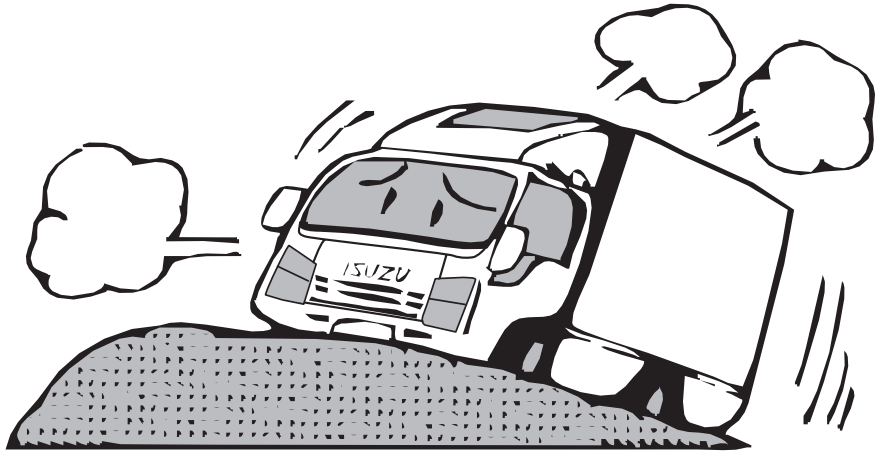
Genuine/Best Value Parts and Commercial Parts

Comparison points	Genuine/Best Value Parts	Commercial parts (example)
Applicable models	Applicable for each model	Some are not applicable.
Durability	They are designed and manufactured to perfectly fit Isuzu vehicles and have a long life expectancy.	To make the parts cheaply, low-cost rubber and molds that do not meet the original product standards are used, and some may have a poor durability.
Performance test	Less wear and no oil leakage after 500 hours of testing	Significant wear and oil leakage as a result of 500 hours of testing

CHECK

Unless the hub oil seal is replaced periodically, grease will leak and the hub bearings will be damaged, making it impossible for the vehicle to continue running.

The parts use rubber material, so they may deteriorate more quickly than usual depending on the environment in which they are used.



What will happen if the hub oil seal is not replaced regularly?

11 Fan Belt

Function of Fan Belt



The fan belt transmits the engine force to the auxiliary parts.

Genuine/Best Value Parts and Commercial Parts

Comparison points	Genuine/Best Value Parts	Commercial parts (example)	Advantages of Genuine/Best Value Parts
Length/size	Optimal length for each engine	Parts with approximate size used	Superior service life and assembly performance; little difference in length between set items
Cogged shape	Measures to prevent the occurrence of abnormal noise have been completed.	Measures to prevent the occurrence of abnormal noise have not been realized.	Quiet
Spec. /material	The optimal specifications for each engine are set.	The specifications are not optimal for each engine.	Perfect match for Isuzu vehicles

CHECK

If the belt is broken or fails to exert sufficient transmission performance due to weak tension, the engine may overheat or the battery may die due to insufficient power generation. Depending on the vehicle, this may result in malfunctions such as a drop in brake force or in a malfunction of the power steering that can cause an accident.



Flat battery



Overheated

12 What Are Periodic Replacement Parts?

A "periodic replacement part" is a part whose materials will unavoidably deteriorate over time and which, regardless of its external appearance, must be replaced after a certain period of time.









Items Classified As Periodic Replacement Parts

Expander
Wedge chamber
Air dryer
Oil separator/element

13 Expander

Purpose



The expander applies air pressure to the wedge chamber to activate the brakes of the vehicle.

Why Does Deterioration Occur?

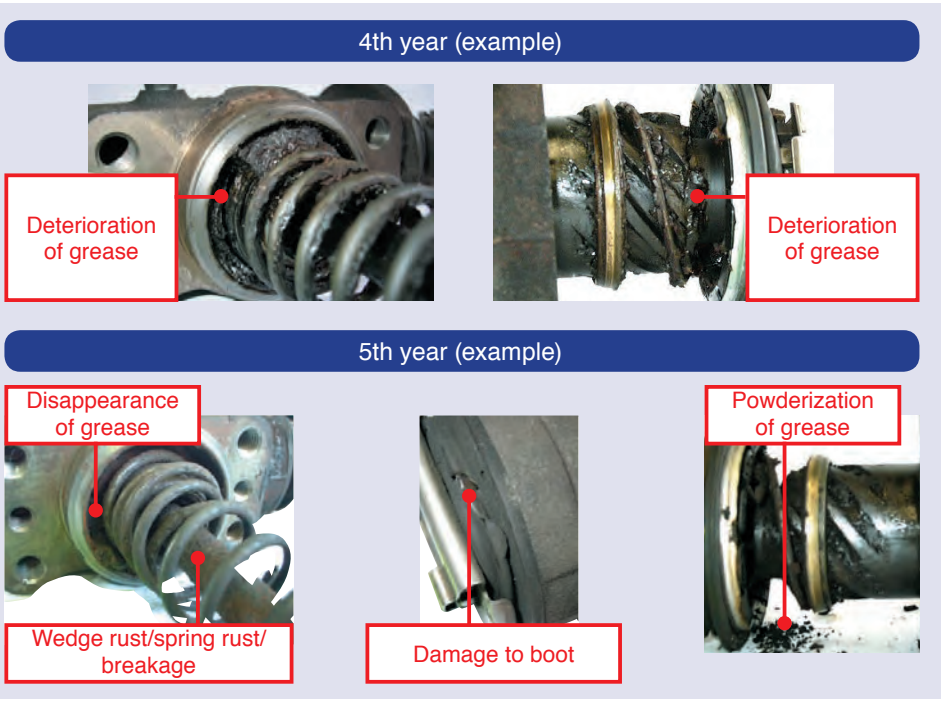
The grease used for lubricating the expander will deteriorate due to heat and moisture absorption with a lapse of time. The rubber will also deteriorate due to heat.

If you use such an expander as it is …

The deterioration of grease may cause sliding failures or wear on each part, hindering smooth operation of the automatic gap adjusting function and wedge mechanism.

In some cases, it may cause inadequate braking force, brake pulling, or dragging. Dragging may overheat the brake drum and lead to a fire in the vehicle.

The grease, rubber parts, and spring will deteriorate with a lapse of time.



14 Wedge Chamber

Purpose



The wedge chamber activates the vehicle brakes using the service brake and parking brake functions.

Why Does Deterioration Occur?

- Deterioration over time and wear of internal rubber parts (such as the diaphragm, seal, boot, elbow, and O-ring)
- Foreign particle entering the chamber

If you use such a wedge chamber as it is …

Defective braking action or dragging of the brake due to air leaks may make it impossible to continue driving the vehicle. Dragging may overheat the brake drum and even lead to a fire in the vehicle.

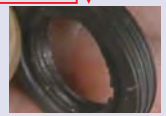
This can happen if you continue to use these parts without maintenance.

[Seal]
Air leakage from the piggyback side or brake dragging may be caused.

New



Deteriorated



[Diaphragm]
This may cause dragging of the brake due to air leakage or malfunction.

New



Deteriorated



[Elbow]
Entry of water due to deterioration

New



Deteriorated



[Each boot]
Entry of water due to deterioration

New

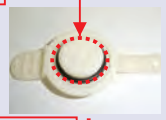


Deteriorated



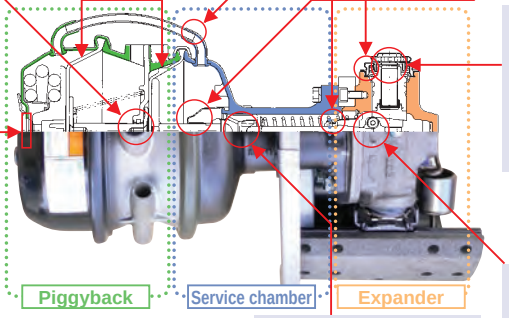
[O-ring]
Entry of water due to deterioration

New



Deteriorated





[Auto adjuster]
Functional or operational failure due to grease deterioration

[Wedge]
Malfunction due to deteriorated grease, wear, or rust

[Bushing]
Malfunction due to deterioration

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15 Air Dryer

Purpose



The air dryer removes moisture generated by the air compressor.

Why Does Deterioration Occur?

Compressed air contains oil from the air compressor, etc. This oil adheres to the surface of the desiccant and gradually lowers its dehumidification effect.

If you use such an air dryer as it is …

If the desiccant deteriorates and fails to provide sufficient dehumidification, water will be retained in the air tank and air system. When rust is produced in the air pipe, etc., this rust may become clogged in the brake valve and cause air leakage or malfunction. During cold months, this water may freeze and clog the air pipe, which can cause an air-filling malfunction that will prevent the car from running.

It can be like this if you use this part without maintenance.



The air dryer uses the desiccant for dehumidification, but the desiccant gradually deteriorates with continued use. If you continue to use the desiccant after it has become unable to provide dehumidification, the desiccant will look like the example below.



Under these conditions, the air dryer cannot perform as designed.

If the desiccant, the deterioration of parts will accelerate to adversely affect the brake. It may also become a cause of air leakage.



Inside of air tank

If drainage (water/oil) is not removed due to the deterioration of the desiccant in the air dryer and is retained in the air tank, a large amount of rust may be produced. Retained drainage may then flow to each valve together with this rust and cause of air leakage.

Brake valve seat **Main piston**



When rust adheres to the brake valve seat and air starts to leak, the brake becomes less effective and may stop working altogether. In addition, the grease may be washed away by the drain fluids, impeding smooth braking.

Air piston **Air cylinder**



When drain fluids enter the brake booster, the grease is washed away, causing rust to form on the inner surfaces. This deteriorates the sliding action of the piston, and the effectiveness of the brakes is severely compromised.

16 Oil Separator/Element

Purpose



The oil separator/element removes oil mist from the blow-by gas and prevents the oil inside the intake pipe from becoming contaminated.

Why Does Deterioration Occur?

As the oil separator is used, carbon and impurities in oil mist are gradually accumulated in the element of the oil separator to cause clogging.

If you use such an oil separator as it is …

Continuing to use the oil separator with the element clogged will cause the bypass valve to close, preventing the blow-by gas from passing through the element and in turn causing oil contamination inside the intake pipe.

This reduces the sensitivity of the boost sensor, cooling efficiency of the intercooler, and engine performance.

Trucks for life

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