

# PROTECT THE RIDE

AVOID CUSTOMER COMEBACKS WITH COMPLETE SYSTEM REPAIRS.

69 £©

# WHEN TO REPLACE THE WHOLE SYSTEM?

IF YOU WANT TO PROTECT THE RIDE, BE SYSTEM SMART EVERY TIME.



## WORKING ON AN ALTERNATOR?

# ORDER A BELT + TENSIONER + PULLEY EVERY TIME.

According to the alternator manufacturers, up to 70% of the alternators that are returned to the factory are for a "no charge" situation. Lack of belt tension was the main problem.

## ALTERNATOR OPERATION IS IMPACTED WHEN:

- A worn belt or failing tensioner contribute to reduced power transmission capability of a belt drive.
- A slipping belt causes bearings to overheat or fail.
- Belt slippage from a lack of tension results in a noisy drive.
- A failing tensioner creates premature Overrunning Alternator Pulleys (OAP) failure or vice versa.
- A failing OAP may:
  - 1. Be locked or freewheel in both directions.
  - 2. Produce a buzzing sound upon engine shutdown.
  - 3. Transfer the sound of its failing pulley to another component, like an AC compressor.
  - 4. Turn on the Check Engine light.
- Check that the pulley on the replacement alternator is correct. If the alternator originally had an OAP, the replacement alternator must have the correct OAP installed.





#### **BELT + TENSIONER + PULLEY**

# WORKING ON AN AC COMPRESSOR?



A slipping belt reduces the performance of the compressor and creates heat for the compressor bearings.

### AC COMPRESSOR PERFORMANCE IS AFFECTED WHEN:

- A slipping belt forces the AC compressor to operate at a reduced output.
- Sensors disengage the clutch when it feels belt slippage and heated bearings.
- A slipping belt squeals as the compressor cycles on and off.
  - 1. *Parallel misalignment:* One component of the drive is laterally on a different plane than the rest of the drive.
  - 2. Angular misalignment: One or more pulleys cocked or at a different mounting angle than rest of the drive or worn shafts, pulleys or bearings.
- A failing ADP transfers its noise through the belt to the compressor, giving false failure signals.





#### **BELT + TENSIONER + PULLEY**

# REPLACING A SERPENTINE BELT?



99.8% of serpentine belts are forced to fail by another worn component. There is no real test to know if the idler pulleys have enough grease or to make sure your tensioner is not wearing out. SOURCE: REASONS FOR REPLACEMENT ACCORDING TO IMR INC. AUTOMOTIVE RESEARCH.

### SYSTEMS ONLY PERFORM WHEN ALL PARTS ARE FUNCTIONING PROPERLY:

- SERPENTINE BELT: Transfers power from the crankshaft pulley to all belt-driven accessories.
- **AUTOMATIC TENSIONER:** Maintains the correct tension on the belt and dampens torsional vibration.
- **IDLER PULLEY:** A free-spinning pulley that optimises belt routing and suppresses flutter.
- OVERRUNNING ALTERNATOR PULLEYS: Allows the alternator to "freewheel" or "overrun" when the engine decelerates. Extends the lifespan of the alternator and system components.

### **GO BEYOND THE BELT**

- You may not see anything wrong with a tensioner's metal casing, but the real wear is inside.
- The bush and dampening mechanism inside a tensioner wear at about the same rate as the belt.
- The pivot bush inside the tensioner can wear and can cause misalignment with the belt.

### WHY KITS?

**NOTHING BEATS COMPLETE.** Gates Complete Serpentine Kits offer:

- Increased customer spend and shop profitability.
- Reduced comebacks and warranty returns.
- Maximised customer satisfaction.
- All necessary OE-quality parts for a complete system restoration.
- Simple ordering—no more sourcing parts separately.
- Coverage for approximately 175.5 million vehicles (VIO).

#### KITS INCLUDE:

Gates Micro-V<sup>®</sup> Serpentine Belt(s), related DriveAlign<sup>®</sup> Tensioner(s), Idler Pulley(s) included as required, per system.



#### **PROTECT THE RIDE**

# WORKING ON A WATER PUMP?

# ORDER A BELT + TENSIONER + PULLEY EVERY TIME.

A failed damper in the tensioner will transfer engine torsional vibration through the belt and into the water pump shaft, forcing premature failure of the bearings.

# WATER PUMPS FAIL WHEN:

- Loss of tension will reduce coolant flow on belt driven water pumps.
- An imbalance on the end of a water pump causes bearing or catastrophic shaft failure.
- Poor coolant condition corrodes metal and results in seal failure.
- Proper draining, flushing and refilling of the cooling system is essential to optimum cooling system operation and increased engine efficiency. Save time and money and consider a Gates Timing Belt Kit with Water Pump for a complete serpentine system repair.





**BELT + TENSIONER + PULLEY** 

# WORKING ON A RADIATOR?



Preempt your customers roadside breakdown from radiator hose failure, by having the foresight to replace.

### COOLING SYSTEMS FAIL WHEN:

- Radiator hoses fail.
- Thermostats corrode and malfunction.
- Impacted radiator caps malfunction.
- Electro Chemical Degradation (ECD) causes particulates to be suspended in the coolant, which "sandblast" the inside of the radiator and damage water pump seals.
- Radiator and heater core fail prematurely.
- Poor maintenance practices result in poor coolant condition.
- Non-compatible antifreeze, old coolant or hard water is introduced to the system.





**UPPER + LOWER RAD HOSES** 

# WHAT IS THE CRITERIA FOR A FUNCTIONING BELT?



### **PROTECT AGAINST MISDIAGNOSIS**

### UNDERSTAND THE CLUES AND CONSEQUENCES OF BELT WEAR AND YOU CAN AVOID HAVING A COMEBACK.

It's harder than ever to spot belt wear and just 5% of wear can make the belt slip under load.

#### BELT NOISES AND CHANGES IN APPEARANCE ONLY HAPPEN IN EXTREME CASES

- 1. A noisy belt drive typically results from improper belt tension or misalignment in the drive. Improperly tensioned belts squeal, often caused by a failing tensioner which results in lack of belt tension. Misaligned belt drives chirp and can be caused by improperly-mounted or worn pulley bearings. Other common sources of belt drive noise include a worn belt, a contaminated belt and a belt hydroplane.
- 2. Side fray happens with extreme pulley misalignment or tensioner pivot bushing failure.
- 3. Pilling happens after excessive belt slippage or contaminated pulleys.
- 4. Glazing happens when lack of tension allows continual belt slip and friction.



#### THE BELT TRANSFERS MORE THAN JUST POWER THROUGH THE SYSTEM

- None of the components would move without the belt. The transfer of power is what keeps batteries recharged and accessories working.
- When one part of the system has an issue the belt is affected and so is everything it touches. The result? The other components have to compensate, which accelerates their wear and decreases lifespan.

#### THE CONSEQUENCES OF MISDIAGNOSING A BELT AS THE ONLY REPLACEMENT PART

If you notice any signs of "CAT" in the system, the belt wear will return after you install a new belt by itself. This is because the other worn components will prematurely wear the new belt the same way as the original. Sometimes the belt wear issues can resurface before the driver even needs their next oil change.



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**CONTAMINATION** Grit, rocks, salt, rust and engine fluid can adhere to the pulley ribs and valleys, reducing traction.

**ALIGNMENT** Parallel or angular misalignment between the belt and pulley can damage the bearing and cause an increase in bearing temperature. Increases in bearing temperature



**TENSION** During a typical lifespan, the tensioner will endure millions of impacts resulting in wear of the internal components. This wear can cause the tension to stick or lose damping capability.

# **150,000 KILOMETRES? REPLACE TODAY.**

### **PROTECT AGAINST SYSTEM FAILURE** REPLACE BELTS AND TENSIONERS AT 150,000 KILOMETRES EVERY TIME.

Failure modes are hard to determine, so go beyond visual inspection and base your replacement recommendations on mileage.

### **COOLANT HOSE REPLACEMENT BY MILEAGE**



**DON'T FORGET:** Systems were designed to be replaced together. When a customer is in the red zone, remind them to Be System Smart, and install all new components.

# GATES HAS YOU COVERED.



### **PROTECT AGAINST COVERAGE G**

The past was the BIG THREE – GM, Ford and Toyota; the future is a **WORLD OF PARTS**. Gates evolved with the Carparc and has **DOUBLE** the other makes parts coverage of top competitors.

	J
GATES	
COMPETITORS	

### DID YOU KNOW GATES IS A PREMIER OE SUPPLIER TO ALMOST EVERY AUTOMOTIVE OEM?



2013 - 2017 VW Jetta Timing Belt & Tensioner







2010 - 2014 Mercedes E350 Tensioner & Idler Pulleys



2014 - 2015 Audi Q5 Timing Tensioner



2015 - 2018 BMW X5 <u>Micro-V Belt &</u> Idler Pulley



2014 - 2020 Tesla Model S Oil Cooler Hoses



GLOBAL

EDAC

2018 - 2020 Nissan Altima Timing Belt



Tesla Supercharger Stations Cooling System Hoses

Full **COVERAGE** with the part you need on the shelf.

GATES knows OE because we are the OE supplier to the import nameplates.

Better **PERFORMANCE & WARRANTY** from GATES improvements to OE manufacturer designs.

# BE SYSTEM SMART WITH GATES



#### **INCREASE SALES**

Stop recommending, and provide solid reasoning why customers need a complete system repair. One shop experienced:

- 8% increase in Micro-V<sup>®</sup> Belt Sales
- 24% increase in Tensioner Sales
- 41.5% decline in Warranties

#### COVERAGE

We have the best parts for the most vehicle types in distribution access points across the country.



#### VALUE

Your success is our success, and we want to support all our distributors, resellers and workshop partners with the coverage, quality and education you need to move more inventory and execute more profitable jobs.

### QUALITY

We set the standard for performance, fit and durability in all of our automotive parts.



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