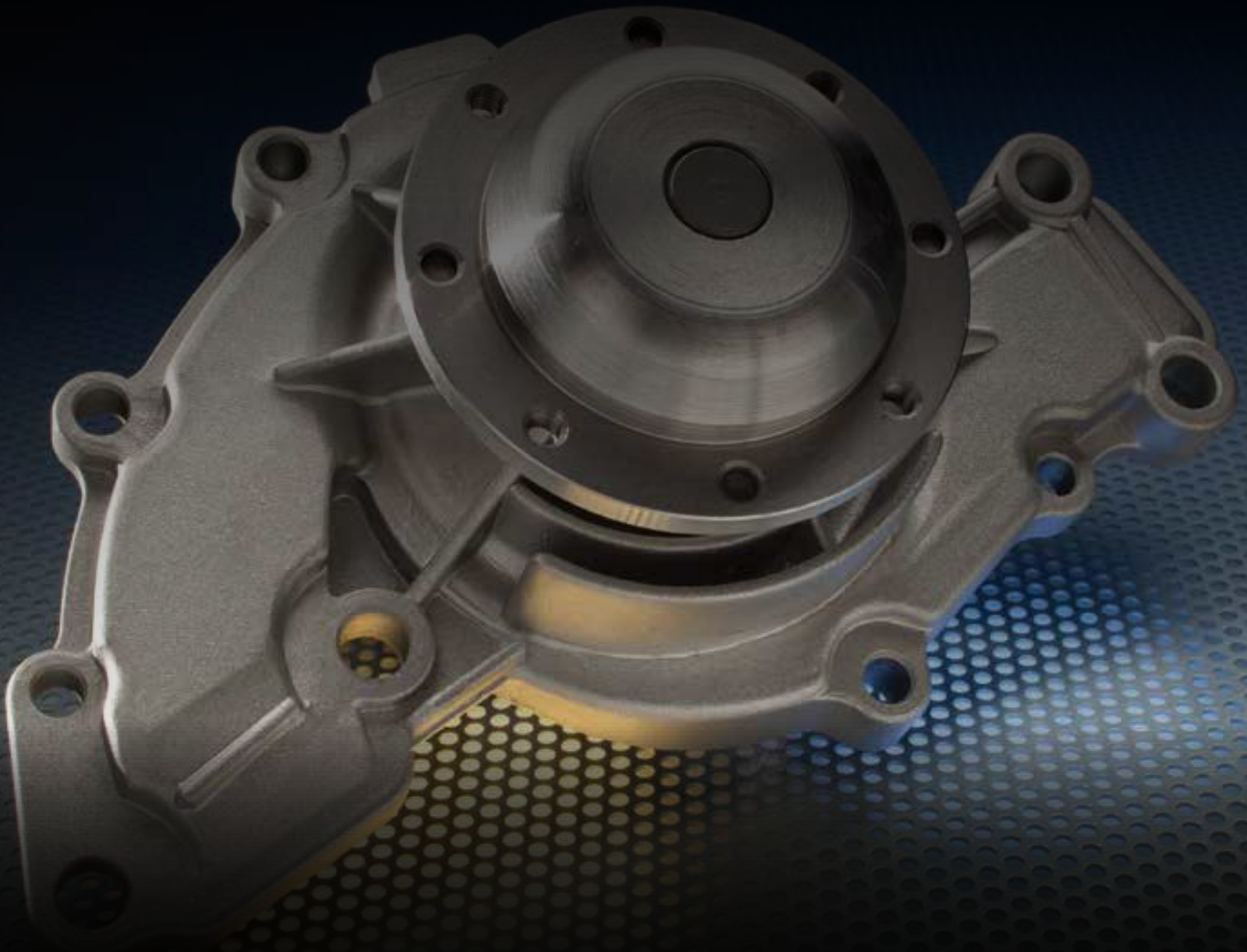




DRIVEN BY POSSIBILITY™



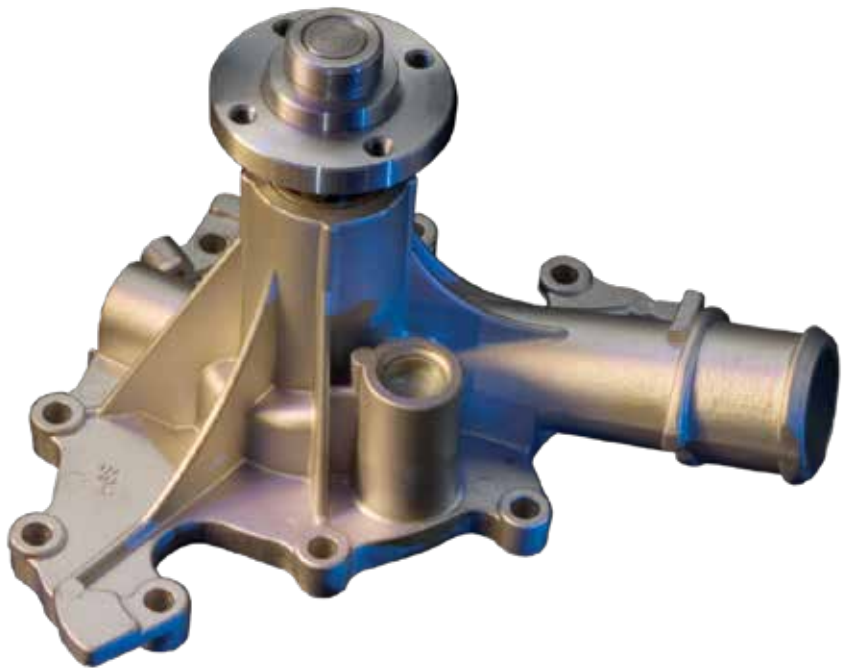
GATES WATER PUMPS

**THE HIGHEST QUALITY
STANDARDS IN THE INDUSTRY
AND THE HIGHEST COVERAGE**

- Pre-Assembled with Back Housing
- Timing-Driven Water Pump Kits
- Hybrid Vehicle Coverage

GATES OFFERS

- New pumps manufactured to ISO TS16949 standards for precise tolerance
- 100% fully-tested unitised bearings / seals for enhanced durability
- 100% inline quality-tested
- Precisely-balanced impeller for OE fit / function
- Computerised-machined surfaces for proper fit / sealing



EVEN THE HIGHEST QUALITY PUMPS NEED “CLEAN” COOLANT

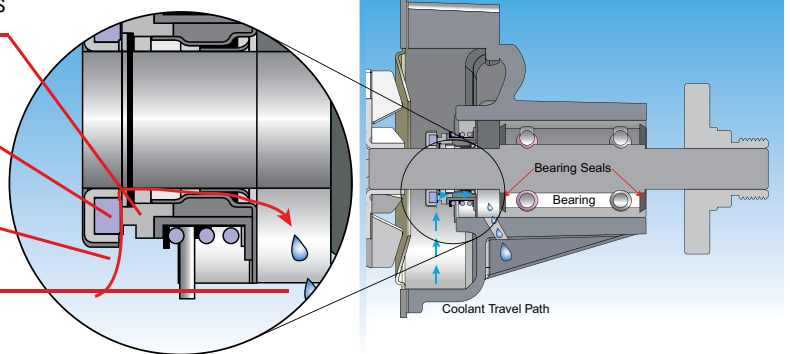
Nothing can destroy a water pump seal faster than contaminated coolant. As the illustration shows, contaminated coolant can easily damage water pump seal rings.

Static seal ring is spring loaded and moves along the axis of the bearing shaft to ensure continuous contact between the two seal rings

Dynamic seal ring rotates with the bearing shaft and impeller

A small amount of coolant is intended to pass between the two seal rings to lubricate and cool the seal ring surfaces

If the coolant is contaminated, the seal rings will be damaged, causing a leak



PROTECT COOLING SYSTEM WARRANTIES

Many Antifreeze/Coolant manufacturers require a complete cooling system flush and fill as a warranty requirement.



50/50 PREDILUTED ANTIFREEZE & COOLANT DO NOT ADD WATER

Prediluted Antifreeze & Coolant can be used to top off cooling systems filled with any automotive antifreeze. However, to realise the 150,000 miles or 5 years of maximum cooling system protection, a complete cooling system flush and fill is required. *Always follow vehicle's owner's manual for top-off requirements and specified maintenance.

NOTHING CLEANS THE ENGINE COOLING SYSTEM LIKE THE TRU-FLOW POWERCLEAN™ FLUSH TOOL.



GATES POWERCLEAN™ FLUSH TOOL

- Performs necessary “complete flush” when replacing water pump.
- Thoroughly cleans contaminated systems including mixed coolants, improper coolant/water mix, and broken down rust inhibitor packages.
- Cleans system to ensure water pump seal isn't compromised resulting in warranty or customer satisfaction issues.
- Excellent revenue stream source as evidenced by professionals currently utilising POWERCLEAN™ on every water pump installation.

See a POWERCLEAN™ demonstration at:
www.gatesaustralia.com.au/powerclean



POWERCLEAN™ FLUSH TOOL KIT (Part #: 91002) INCLUDES:

- Pulsating Gun Assembly with Pre-set Regulator
- Water Line Backflow Preventer
- Large Rubber Tip for Radiator Necks and Direct Flushing of the Engine Block
- Small Rubber Tip on Whip Hose for Direct Access to Heater Core Tube Stubs
- 5/8" and 3/4" Heater Hose Barbs for Flushing Heater Cores or Engine Blocks
- Durable Protective Storage Case with Room for Additional Items

Move beyond dirt, grime and poor performance with the complete Gates solution. Look for signs of debris buildup in the water pump housing. These indicate the need to properly flush the system and refill with NEW recommended coolant.



Deposits /Calcium
Buildup



Incompatible Fluid



Chemical Etching



Rust/Corrosion



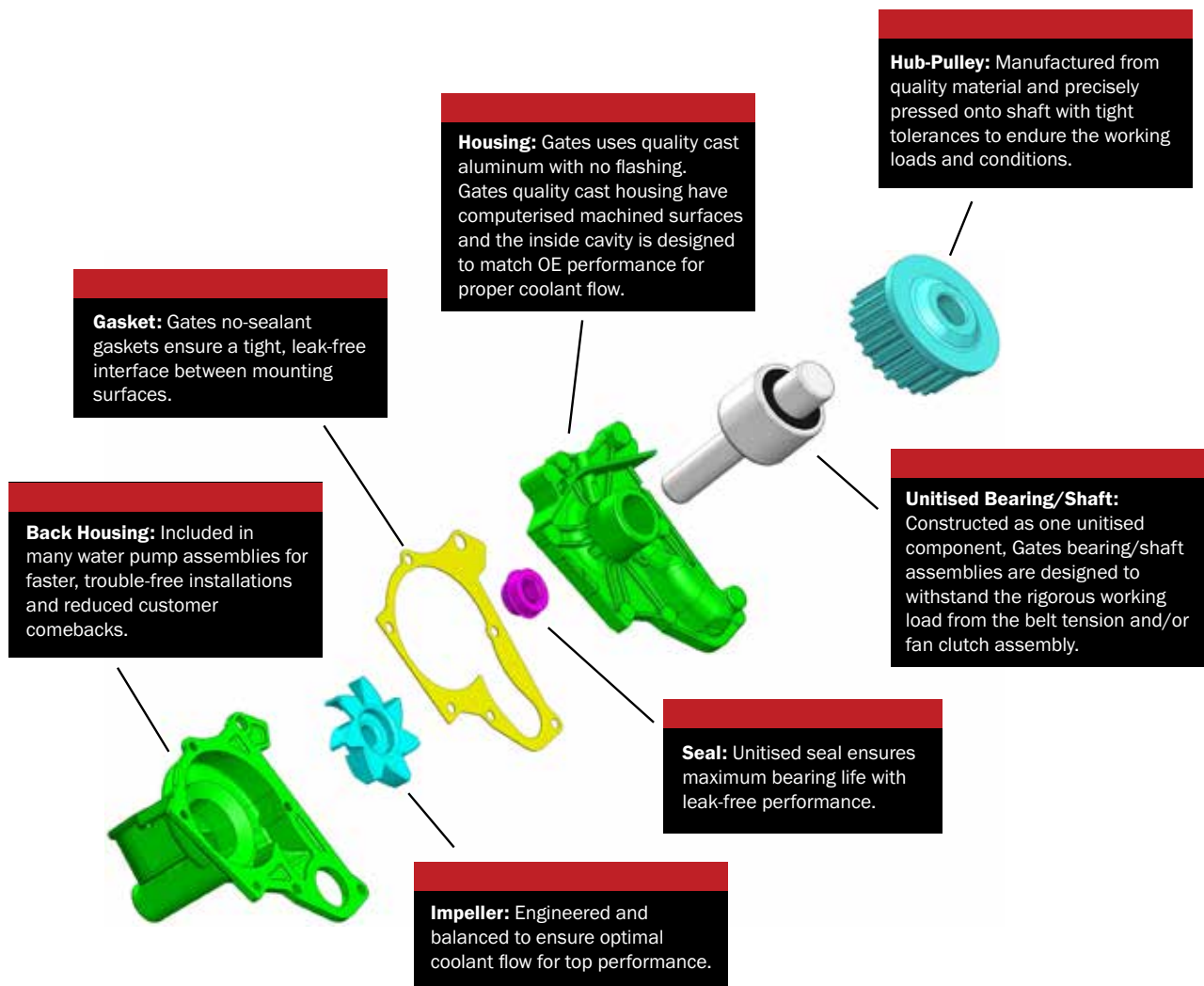
Suspended Debris in
Coolant



Cavitation

GATES OFFERS A WARRANTY AND STATE-OF-THE-ART MANUFACTURING PROCESS.

Gates water pumps are recognised in the industry for their durability and superior quality. Gates water pumps are constructed with premium alloy materials and a 100% functional test of seals and bearings along with a 100% leakage test for both the casting and assembled water pump. We are committed to selling the highest quality new, never remanufactured, water pumps in the aftermarket. Our end goal is to provide our customers with worry-free operation for the life of their vehicle.



INDUSTRY-LEADING FEATURES KEEP YOU AHEAD OF THE COMPETITION

PRE-ASSEMBLED WATER PUMPS AND HOUSINGS

- Easy one-unit installation
- Ensures trouble-free operation and reduced comebacks

ELECTRIC WATER PUMPS

- OE replacement ensures an exact fit and easy installation
- Main engine electric water pumps come with gaskets or rubber seals to eliminate leaks.
- Includes coverage of hybrid vehicles Toyota Prius and Toyota Camry

HEAVY DUTY WATER PUMPS MANUFACTURED TO ISO/TS STANDARDS

- Designed to handle rugged fleet applications
- 100% fully-tested unitised bearings/seals
- Computer-machined surfaces for proper fit/sealing

METAL IMPELLERS

- Where standard on OE pumps, Gates utilises metal gaskets which eliminate the need for RTV or silicone and save installation time.

METAL GASKETS

- Where standard on OE pumps, Gates utilises metal gaskets which eliminate the need for RTV or silicone and save installation time

2 YEAR WARRANTY & STATE OF THE ART MANUFACTURING PROCESS

- Quality cast aluminum housing designed to match OE performance
- Precisely-balanced impeller ensures optimal coolant flow for top performance
- Hub pulley is pressed on to shaft with precise tolerances

TIMING COMPONENT KITS WITH WATER PUMPS

- Convenient, single part number for all the parts needed for a complete repair.
- Timing belt driven water pumps should always be replaced when the timing belt is replaced.
- Gates Timing Component Kits with Water Pumps include: timing belt(s), pulley(s), tensioner(s), hydraulic actuator, water pump, seals, gaskets and other components necessary.

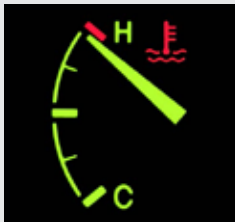
For more information visit www.gatescatalogue.com.au



DRIVEN BY POSSIBILITY™

ENGINE COOLING SYSTEM

TROUBLESHOOTING CHART

PROBLEM	POTENTIAL CAUSE	REASON
OVERHEATING  	Fan Operation	Inoperable fan Fan doesn't operate when it should Defective fan clutch
	Radiator Condition	Clogged internally Contamination Broken fins Air flow obstruction
	Lower Radiator Hose	Leak Collapsed
	Thermostat	Stuck Closed Installed in incorrect direction
	Radiator Cap	Holds incorrect pressure Incorrect PSI rated cap
	Improper Coolant Mixture	Lower boiling point
	Air in System	Trapped air pocket Not bled properly
	Low Coolant Level	Local boiling creates corrosive vapors
	Tensioner	Slack can allow belt slippage
	Improper Belt Routing	Spin water pump in opposite direction of flow
	Clogged Exhaust System	Excess back pressure can cause engine to work harder
	Incorrect Fuel Mixture	Extreme lean condition in fuel system
	Head Gasket/Head Failure	Combustion gases entering the cooling system
BEARING/SHAFT/ PULLEY FAILURES  	Fan Clutch	Defective fan clutch causes excessive vibration Defective fan clutch can cause a sudden load Not properly installed
	Fan Blades	Bent fan blades cause imbalance and excessive vibration Improper blades cause imbalance and excessive vibration Not properly installed
	Tensioner	High load from incorrect belt tension High side load from misalignment
	Faulty/Inadequate Motor Mounts	Engine tilt can occur causing fan blades to interfere with other components
HOUSING BREAKAGE  	Torque	Excessive torque on mounting bolt(s) Improper torque sequence
	Foreign Material	Material wedged between mounting surfaces
	Faulty/Inadequate Motor Mounts	Engine tilt can occur causing fan blades to interfere with other components
LEAKS     	Fan Clutch	Defective fan clutch causes excessive vibration Defective fan clutch can cause a sudden load Not properly installed
	Fan Blades	Bent fan blades cause imbalance and excessive vibration Improper blades cause imbalance and excessive vibration Not properly installed
	Mounting Surface	Surfaces unclean Surfaces uneven or damaged Sealant applied unevenly or excessively Incorrect torque
	Weep Hole	Contamination Excessive load Air pockets/low coolant Improper coolant Insufficient flush Incorrect/Defective radiator cap Incorrect system pressure
	Water Pump Outlet & Hose Connection	Hose cracks or pin holes Incorrect hose

