

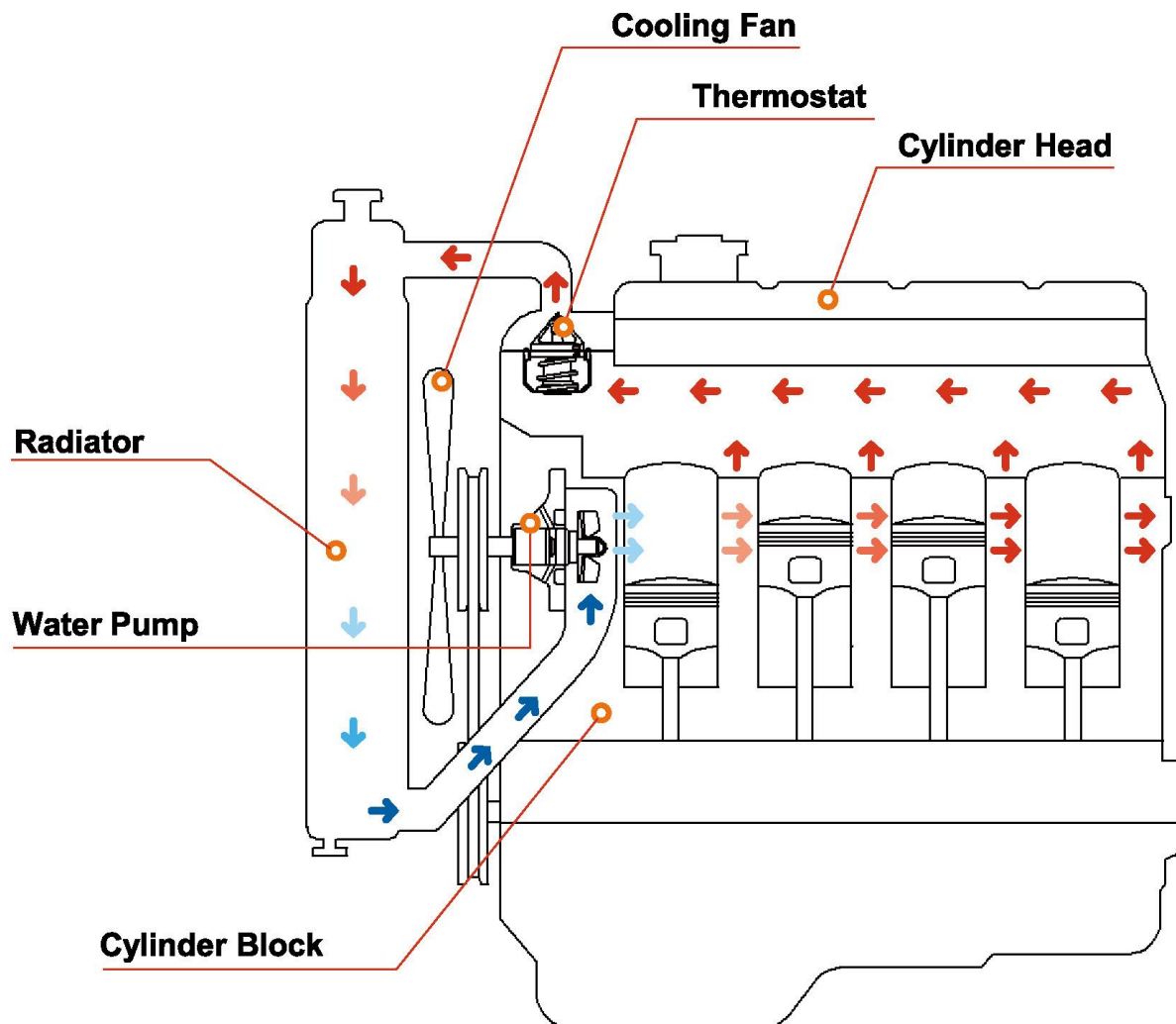
ATC[®]
AUTOTOP CO., LTD.

ATC[®]

**WE GO
TOGETHER**

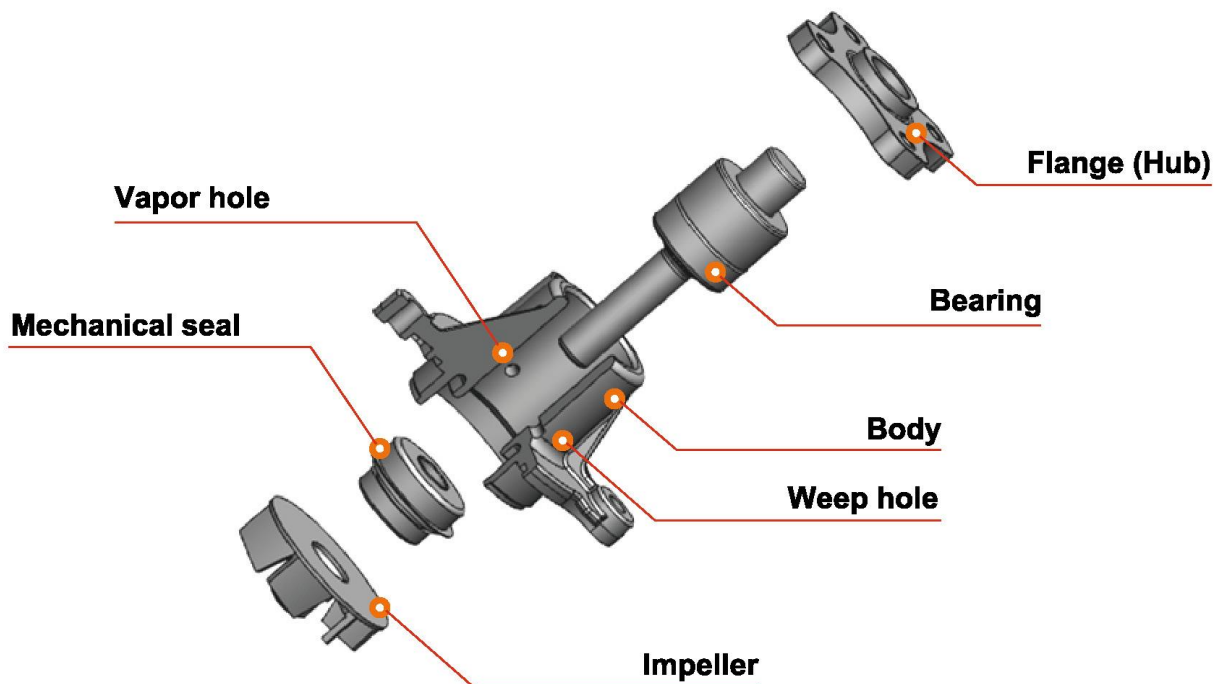
*We'll be the best Business
partner for you*





- The water pump is an essential part in the cooling system, and plays an important role in the engine.
- The water pump circulates engine coolant through the engine water jacket and radiator.
- The water pump is driven forcibly by a belt and rotates the pump impeller to circulate the coolant, and a seal unit is assembled inside to prevent the coolant from leaking.
- The water pump is located between the engine and the radiator.

- Flange (Hub) is equipped with a pulley or pen clutch.
- Bearing is pressed into the water pump body.
There are Ball / Ball and Ball /Roller types.
- Body is aluminum, with Die-Cast, Gravity-Cast and Cast-Iron.
- Mechanical seals prevent the leakage of coolant.
- Impellers are available in pressed steel, cast iron or resin types.



- A water pump consists of flange (Hub), bearing, body, mechanical seal, impeller, etc.
- The power of the rotating crank shaft rotates the bearing shaft and the impeller through the timing belt and the water pump pulley.
- The coolant of the engine water pump rotates together by the impeller and circulates back and forth to the engine water jacket and the radiator by the action of centrifugal force.
- The water pump body has a vapor hole and a weep hole.
The vapor hole emits excess gas pressure that permeates in through mechanical seals.
The weep hole discharges the coolant that leaks out through mechanical seals.
These two holes function to protect the shaft and the bearings from contamination.

01

Please check the car model and OE component number of the water pump.

The engine may be damaged by installing an incorrect but similar-looking model.

02

Bearings, mechanical seals, etc. in the water pump are highly precise parts. Any impact or drop may damage the bearings or the mechanical seals.

03

Since the water pump is a functional component, it must be installed by a certified technician.

04

Do not refill coolant while the engine is hot. Rapid temperature changes may cause damage to the water pump and engine parts.

05

When the engine is hot due to use, the coolant is also very hot and may cause burns.

Make sure to cool the engine down completely before installing the water pump.

06

If you hear abnormal noise, check the radiator cap, pulley fan belt, fan, fan coupling, cover, etc. There may be noise from parts other than the water pump.

07

Do not start the engine without coolant. Doing so may seriously damage the mechanical seal.

08

After installing the water pump, check the components connected to the cooling pipe for any leakage. There may be leaks in other components connected to cooling pipes, rather than the water pump itself.

1 Do not dry turn the flange (Hub)

Do not turn the flange manually before installing the water pump.
Turning it in a dry state can damage the carbon and cause a squeaky sound.
It can make a squeaky sound when it is dry, but the sound stops when the water pump is mounted on the engine and coolant is supplied on the contact surface of the mechanical seal.



2 Check the belt

Make sure the shape fits well with the pulley before installing the belt. If the shape of the belt does not fit the pulley or the hardness of the belt is too hard, the pulley may be damaged.



3 Use only an appropriate amount of liquid sealant

Do not use too much liquid sealant when installing the water pump.
When too much liquid sealant is applied it will float on the coolant and penetrate between the carbon and ceramic of the mechanical seal, causing leakage in a short period of time.



01

Before installing a new water pump, please discharge all coolant from the engine and clean the engine and the radiator two to three times with water to remove residues. Foreign substances such as scale and rust may penetrate the mechanical seal and cause leakage.

02

Remove the old water pump and remove any foreign substances such as gasket, rust, and scale remaining on the mounting surface. If the foreign substance is not removed completely, a leak may occur.

03

Evenly apply an appropriate amount of liquid sealant on both sides of the new gasket. Do not apply liquid sealant to O-rings or metal gaskets. Excessive use of liquid sealant may cause leakage in a short period of time.

04

Install the new water pump and tighten the fixing bolts in diagonal (star) order. Please tighten the bolt with the torque specified by the manufacturer. Excessive torque may cause damage to the housing.

05

Make sure there is no rust or damage to the Fan coupling. Replace it if any damage is confirmed. Backlash or shaking of the fan coupling will damage the bearing, flange, and body of the water pump. After installing the fan coupling, check for the runtime errors specified by the manufacturer.

06

Install the belt on the water pump pulley and adjust it to the tension specified by the manufacturer. Excessive tension can cause damage the bearings, flanges, and body of the water pump within a short period of time.

07

Use new coolant at the concentration and volume specified by the automobile manufacturer. Reusing old coolant or using poor quality coolant will result in cavitation and corrosion and abrasion of the impeller and the mechanical seal

08

Refill the coolant up to the amount specified by the automobile manufacturer and discharge the air completely. Starting the engine with insufficient coolant may damage the mechanical seal of the water pump and cause a leak.

1 Body weep hole coolant leak

Symptom

- The weep hole prevents corrosion to the bearings caused by coolant leaking from the mechanical seals.
- Traces of dried coolant around the weep hole are normal. If there is wet coolant around the weep hole or the water level of the coolant storage tank drops within a short period of time, there may be a coolant leak.

Cause

- The mechanical seal is damaged or its performance is degraded due to contamination and sludge in the coolant.

Prevention

- Replace the coolant regularly with new coolant at the concentration and volume specified by the automobile manufacturer.
- Use an appropriate amount of liquid sealant and do not allow it to enter the inside of the water pump.
- Before installing a new water pump, fully discharge the coolant from the engine and clean the engine and the radiator two to three times with water to remove residues. Foreign substances such as scale and rust may penetrate the mechanical seal and cause leakage.



Traces of dried coolant are normal.



If the surroundings are wet or water flows, the engine is damaged.

1 Body weep hole coolant leak

Sludge has accumulated due to contaminated coolant.



Rust or foreign substances floating in the coolant have penetrated and adhered.



liquid sealant has penetrated into the mechanical seal.



Hard foreign substances in the coolant have penetrated into the seal, and the carbon has become worn out.

2 Leakage from body surface

Symptom

- There is a leak between the mounting surface of the engine and the bottom surface of the water pump.
- There is a leak on the surface of the body.

Cause

- Foreign substances remaining on the mounting surface of the water pump, such as gasket, rust, scale, etc. were not removed completely.
- The gasket has been damaged or deformed.
- The liquid sealant was not applied.
- There is a dent in the gasket joint due to careless handling.
- Using the wrong liquid sealant may degrade the sealing function.
- Using air tools to fasten bolts may damage the body or cause cracks.
- For O-rings or metal gaskets, the sealing function is reduced when liquid sealants are applied.

Prevention

- Completely remove any foreign substances such as gasket, rust, and scale remaining on the mounting surface of the water pump.
- Please use the liquid sealant specified by the manufacturer, if one is specified.
- Do not use glue instead of gaskets or liquid sealant.
- Do not use an air tool when fastening the bolts. Using a torque wrench, fasten them to the specified torque, tightening successively in a star pattern.
- Do not apply liquid sealant to O-ring or metal gaskets.
- Do not reuse a gasket.

2 Leakage from body surface



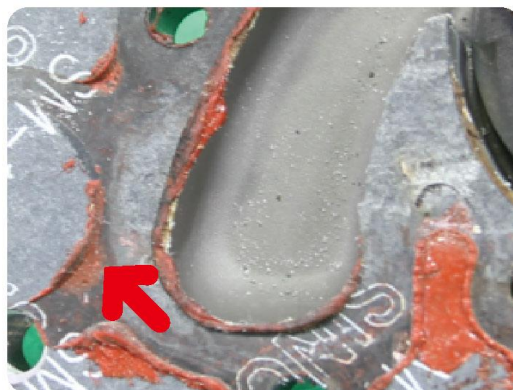
The body was damaged by using an air tool to fasten the bolt.



The sealing function was degraded by applying liquid sealant to the O-ring.



Foreign substances remaining on the mounting surface such as rust, scale, etc. were not removed completely.



The sealing function was degraded due to excessive application of liquid sealant.

3 Overheating

Symptom

- The impeller is idling.
- The inside of the water pump body is corroded.
- The impeller is damaged or corroded.

Cause

- The antifreeze has become oxidized because the coolant has not been replaced for too long.
- Either the coolant is not mixed with antifreeze or the concentration of the antifreeze is insufficient.
- The coolant is frozen.
- The amount of coolant is insufficient.
- The radiator pipe is clogged.
- There is a leak in the coolant circulation pipe.

Prevention

- Use mixtures and fluids specified by the manufacturer for coolant.
- Do not use or recycle old coolant.
- Check the coolant level regularly.
- Before replacing the water pump, replace the coolant in the radiator and the engine water jacket and flush it completely.
- Please completely discharge the air from the cooling system.

3 Overheating



The coolant deteriorated (contaminated) and the impeller in the water pump became corroded.



The coolant deteriorated (contaminated) and the water pump body became corroded.



The coolant deteriorated (contaminated) and the impeller melted and disintegrated.

Prevention

- Only use coolant mixtures and fluids specified by the manufacturer.
- Do not reuse or recycle old coolant.
Before replacing the water pump, replace the coolant in the radiator and the engine water jacket and flush it completely.
- Please completely discharge the air from the cooling system.

4 Noise and Fan coupling installation

Symptom

- Bearing rattles when turning the water pump manually.
- The mechanical seal makes a squeaking sound.
- The belt makes a squeaking sound.

Cause

- Coolant has penetrated into the bearing due to failure of the mechanical seal.
- If the fan coupling or pulley is installed incorrectly or damaged, the body or the bearing of the water pump will be damaged.
- Bearings are damaged due to excessive belt tension.
- Bolts in the fan coupling and pulley were loosened due to incorrect fastening, causing excessive vibration and damage to the bearings or the body.
- Foreign substances were not removed from the mounting surface of the fan coupling and pulley, causing excessive vibration and damage to the bearings.

Prevention

- Replace coolant regularly, using only the mixtures and fluids specified by the manufacturer.
- When reusing the fan coupling or pulley, check the runout with a dial indicator.
- Keep the tension of the belt within the range specified by the automobile manufacturer.
- On older vehicles or engines with high mileage, replace the fan couplings and pulleys with new ones.

4 Noise and Fan coupling installation



- Due to failure of the mechanical seal, coolant penetrated into the bearing and the bearing was damaged.
- Replace the coolant regularly.



The pulley dislodged due to excessive belt tension.



- The bearing in the fan coupling is damaged or broken. If used continuously, the body or the bearing of the water pump will be damaged.



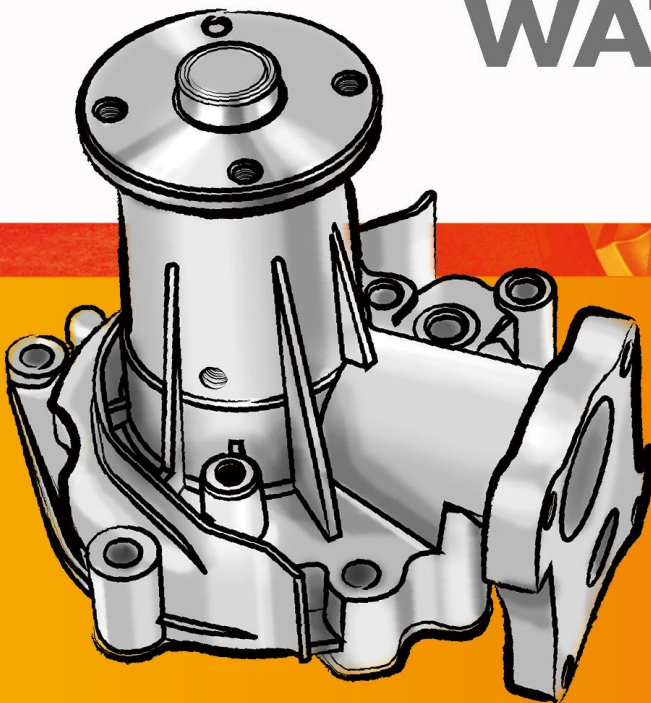
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WATER PUMP










PRODUCTS LIST



















Water Pump










AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW1001	2510042000	2510042001	PORTER 91	
ATW1002	2510042540		New PORTER	
ATW1003	2510041000	2510041001	Mighty	
ATW1004	2510041700		MYGHTY II	
ATW1005	2510032568	2510032553	SONATA SOHC	
ATW1006	2510033132	2510033112	SONATA DOHC	
ATW1007	2510038002	2510038001	EF SONATA	
ATW1008	2510002502	2510002400	ATOS	
ATW1009	2510022650	2510021000	ACCENT SOHC	










AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW1010	2510026902	2510026015	AVANTE 1.5	
ATW1011	2510023002	251002300	AVANTE 1.8	
ATW1012	2510023530	2510023010	BETA ENGINE	
ATW1013	0K65B15100B	0K65A15100A	BONGO 2.7	
ATW1014	0145615010B	0K75615010	BONGO 2.4	
ATW1015	0SL0115100F	0SL0115100	JUMBO TITAN 2.5	
ATW1016	0K63115100	0K61415010A	JUMBO TITAN 1.4	
ATW1017	0K93015-010A	KKY0115010B	PRIDE	
ATW1018	0VN0115100B	0VN0115100	HI-BESTA	
ATW1019	251002Y010	0K24715010	CREDOS 1.8	











AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW1020	251004X300	0K55115100A	CARNIVAL DEISEL	
ATW1021	0K85015100		RHINO	
ATW1022	2510037201	2510037102	GRANDEUR XG 2.5	
ATW1023	2510039012	2510039010	GRANDEUR XG 3.0	
ATW1024	2510036050	2510036000	GALLOPER 3.0	
ATW1025	2510032033	2510032010	PORTER GASOLINE	
ATW1026	2510033020	2510033001	ELANTRA	
ATW1027	AA10015010	AA10015010AS1	TOWNER	
ATW1028	0K93715010		SEPHIA DOHC	
ATW1029	251003X000	0FE3N15010E	CREDOS 2.0 DOHC	

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW1030	0FE1H15010G	0FE1H15010H	CREDOS 2.0 SOHC	
ATW1031	0K71015010		BESTA 2.2	
ATW1032	0K59015010	0K59015010A	POWER BONGO	
ATW1033	251003E000	251003E001	GRANDEUR TG	
ATW1034	2510035550	2510035520	NEW GRANDEUR 3.0	
ATW1035	2510025002	2510025000	NF SONATA	
ATW1036	251003C120	251003C100	NF SONATA 3.3	
ATW1037	251002A000	251002A001	AVANTE XD DIESEL	
ATW1038	251004A300	251004A000	SORENTO	
ATW1039	2510027000	2510027010	TUCSON	








AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW1040	251004X800	GWHY-114A	TERRACAN 2.9 NEW	
ATW1041	2510039802	2510039800	TERRACAN 3.5	
ATW1042	2510045002	2510045001	E MIGHTY	
ATW1043	2510041750	2510041760	COUNTY	
ATW1044	OJE2615010A		NEW POTENTIA 2.5	
ATW1045	251002X100	0K30C15010A	RIO SOHC	
ATW1046	251002X200	0K30E15010	RIO DOHC	
ATW1047	0K95E15010	0K95B15010	ENTERPRISE 2.5	
ATW1048	0K95G15010	0K95F15010	ENTERPRISE 3.6	
ATW1049	0K9BV15010	GWK-21A	CANIVAL 2.5	

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW1050	251004X700	251004X701	GRAND CARNIVAL 2.9	
ATW1051	0K04R15-010	0K04R15010A	SPORTAGE	
ATW1052	0K70615100	0K65V15100	WIDE BONGO 2.4	
ATW1053	072725100EP02	15202020H	POWER COMBI	
ATW1054	251004X500		BONGO III	
ATW1055	2510041500	2510041420	CHORUS	
ATW1056	0K80015010A/C		COMBI	
ATW1057	2510035050	2510035010	NEW GRANDEUR SOHC	
ATW1059	0K05415010A		RETONA	
ATW1060	251002B000		i30	

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW1061	0K88R15100		TERRACAN 2.9	
ATW1062	0K81015010		BOXER	
ATW1063	2510027400		TUCSON NEW	
ATW1064	2510002566	2510002577	MORNING	
ATW1065	2510042700	2510042541	PORTER2	
ATW1066	251002F000	251002F700	SORENTO R	
ATW1067	2510004010	2510004000	MORNING NEW	
ATW1068	251002B700	251002B710	i30 NEW	
ATW1069	251002A200	251002A201	AVANTE DIESEL NEW	
ATW1070	2510003010	2510003100	i10	

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW1071	0K68A15010A		CERES	
ATW1072	251004Z000		PREGIO NEW	
ATW1073	2510038450	2510038400	PORTER GASOLINE NEW	
ATW1074	251004X900		GRAND CARNIVAL	
ATW1075	251002G800		OPTIMA	
ATW1076	251002G500	251002G510	NF SONATA NEW	
ATW1077	251002E000	251002E005	SOUL	
ATW1078	251002F700	251002F000	SORENTO R NEW	
ATW1079	251202C000		STAREX 07MY	
ATW1080	251004A800		BONGO3 NEW	

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW1081	251003F310		MOHAVE	
ATW1082	251102C000		GRAND STAREX	
ATW1083	2510003800		VELOSTER	
ATW1084	2510002588	2510002566	EON	
ATW1085	251004X600		BONGO3 06MY	
ATW1086	2510042P00		H1	
ATW1087	251003A000	251003A100	VERACRUZ	
ATW1088	251002M011		K3	
ATW1089	251202C400	251202C500	GENESIS	
ATW1090	251003BA00	251003B002	EQUUS	

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW1092	251004A700	251004A710	SORENTO NEW	
ATW1093	251002C400	251202C500	GENESIS COUPE SET	
ATW1094	251002B710	251002B700	SOLARIS	
ATW1095	2510003HB0		IONIQ HYBRID	
ATW1096	251003F000	251003F300	NEW EQUUS	
ATW1097	251102C400	251202C500	GENESIS COUPE	
ATW1098	251102C500		GENESIS COUPE PREMIUM	
ATW1099	2510048000		HD65	
ATW1100	251102J650		SONATA ETC	
ATW1101	251002GTA0	251002G500	OPTIMA 16MY	

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW1102	251004A850		PORTER2 06MY	
ATW1103	251003CAC0	251003C120	GENESIS 3.8	
ATW1104	251002E272		SONATA HYBRID	
ATW1105	251004A855		PORTER2 15MY	
ATW1106	2510003HZ0		NIRO	
ATW1107	251002E271		LF SONATA HYBRID	
ATW1108	251002M011		VENUE	
ATW1109	369002B000		IONIQ HYBRID16MY	
ATW1110	369003D670		GRANDEUR HYBRID 17MY	
ATW1111	369103D010		YF SONATA HYBRID 11MY	

AUTOTOP Co., Ltd.

HYUNDAI / KIA

Water Pump

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Water Pump










CHEVROLET

AUTOTOP Co., Ltd.

Water Pump

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW2001	90220568	90284802	91 PRINCE	
ATW2002	96353150	90466943	96 PRINCE SOHC	
ATW2003	96353151	92064250	96 PRINCE DOHC	
ATW2004	90325661B		LEMANS	
ATW2005	96352648	96872704	CIELO	
ATW2006	96352650	96930074	NUBIRA DOHC	
ATW2007	96352649		ESPERO 1.5	
ATW2008	96518977	96666219	TICO	
ATW2009	94581872	25194438	DAMAS	

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW2010	96499089		TOSCA 1.8	
ATW2011	96307717	96307716	TOSCA 2.0	
ATW2012	96440224	25183429	CAPTIVA	
ATW2013	96416294	25188341	MATIZ CREATIVE	
ATW2014	24405895	25194312	CRUZE	
ATW2015	12673412	12681172	CRUZE 17MY	
ATW2016	25191164		SPARK 1.25	
ATW2017	1334066		CORSA	
ATW2018	96230587		REZZO	
ATW2019	92149009	95711070	CAPTIVA NEW	

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW2021	25186662	25184365	ORLANDO	
ATW2022	25189645	25186663	ORLANDO EURO	
ATW2023	12667387	12681169	THE NEXT SPARK	
ATW2024	12630084	12585226	CAPTIVA 2.0	
ATW2025	25191468		COBALT	
ATW2026	25192709	1334128	SONIC	
ATW2027	94149009		TRAX	
ATW2028	12667384		SPARK 14MY	
ATW2029	12591894	12624936	MALIBU	
ATW2030	55579016	25193406	AVEO 12MY	

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW2031	9025153	24104743	SAIL	
ATW2032	24515010	24537098	SAIL1.2	
ATW2033	12566029		CAPTIVA3.0	
ATW2034	24106088		SAIL 1.5	
ATW2035	12637479	12657499	ALPHEON	
ATW2036	12657499	92149009	ALPHEON VS300	
ATW2037	12663910		MALIBU 2	
ATW2038	12681168	12681265	MALIBU2 1.5	

Water Pump

SSANGYONG

AUTOTOP Co., Ltd.

Water Pump

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW3001	6612004220	6612004120	MUSO	
ATW3002	6612004101	6652000401	MUSO (TURBO)	
ATW3003	6652000502		ACTYON	
ATW3004	6642000520		ACTYON SPORT Q100	
ATW3005	1612003701		KYRON E2.3 /Q100	
ATW3006	1622004101	1622005101	KYRON E3.2 / RADIUS	
ATW3007	6712000101		REXTON	
ATW3008	1612003501	1612003901	KORANDO	
ATW3009	1112000701	1612003701	ACTYON SPORTS	

AUTOTOP NO.	OEM NO.	REF NO.	VEHICLE	IMAGE
ATW3010	1612003901		KORANDO E20	
ATW3011	1622005901		REXTON E32	
ATW3012	6642000501	6642000601	KORANDO 96MY	
ATW3013	6642000601		ACTYON EURO4	
ATW3014	1622003401		REXTON 02MY	
ATW3015	1622006201		RODIUS A100	
ATW3016	2110001000		KORANDO OLD	
ATW3017	1732000101		TIVOLI	



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