

VEHICLE GENERAL

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VEHICLE GENERAL

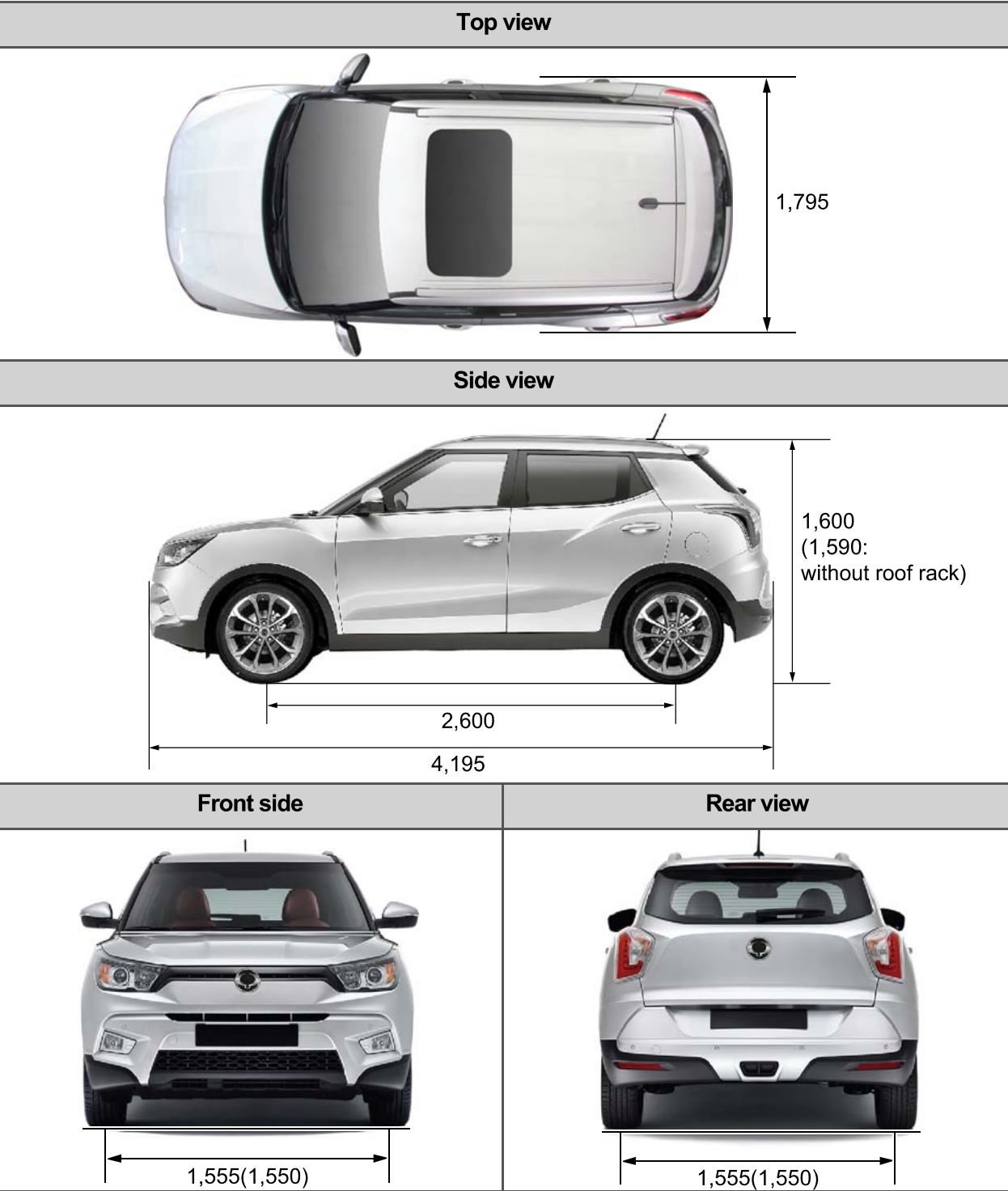
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GENERAL INFORMATION

1. SPECIFICATIONS AND IDENTIFICATION

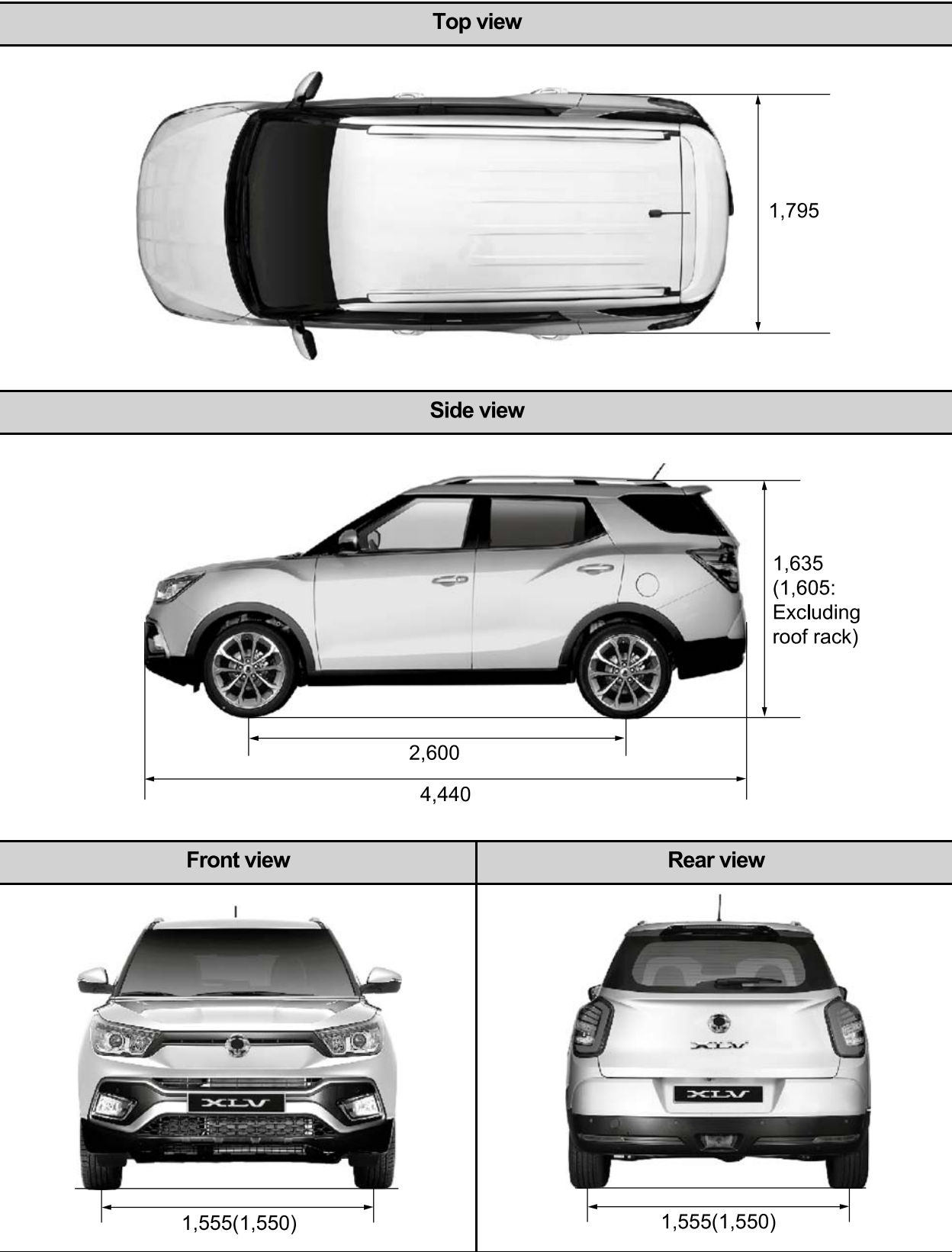
1) Exterior Dimensions (TIVOLI)

Unit: mm



2) Exterior Dimensions (XLV)

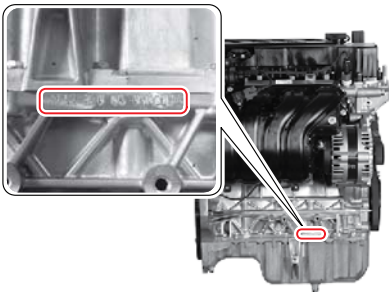
Unit: mm



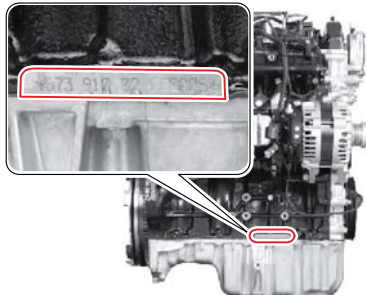
Modification basis	
Application basis	
Affected VIN	

3) Vehicle (Engine) Identification

1. Engine number

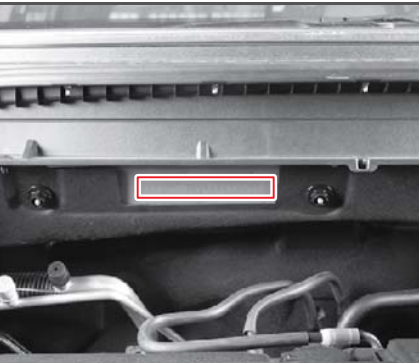


**Gasoline engine:** The engine number is stamped lower area of cylinder block in intake manifold side.



**Diesel engine:** The engine number is stamped on the lower area of cylinder block in intake manifold side.

2. VIN Number



The VIN number is stamped on the passenger side fire wall.



3. Visual VIN Label



Visual VIN label is located on the driver's side instrument panel.

4. Certification Label

Type A	Type B																												
<table><tr><td colspan="2">SsangYong Motor Co., Ltd.</td></tr><tr><td>GROSS VEHICLE WEIGHT RATING</td><td>KG</td></tr><tr><td>GROSS VEHICLE WEIGHT TRAILER WITH BRAKE</td><td>KG</td></tr><tr><td>FRONT AXLE MAX WEIGHT RATING</td><td>KG</td></tr><tr><td>REAR AXLE MAX WEIGHT RATING</td><td>KG</td></tr><tr><td>BODY PAINT COLOR</td><td></td></tr><tr><td>DATE OF MANUFACTURE</td><td></td></tr></table>	SsangYong Motor Co., Ltd.		GROSS VEHICLE WEIGHT RATING	KG	GROSS VEHICLE WEIGHT TRAILER WITH BRAKE	KG	FRONT AXLE MAX WEIGHT RATING	KG	REAR AXLE MAX WEIGHT RATING	KG	BODY PAINT COLOR		DATE OF MANUFACTURE		<table><tr><td colspan="2">SsangYong Motor Co., Ltd.</td></tr><tr><td></td><td>kg</td></tr><tr><td></td><td>kg</td></tr><tr><td>1 -</td><td>kg</td></tr><tr><td>2 -</td><td>kg</td></tr><tr><td>BODY PAINT COLOR</td><td></td></tr><tr><td>DATE OF MANUFACTURE</td><td></td></tr></table>	SsangYong Motor Co., Ltd.			kg		kg	1 -	kg	2 -	kg	BODY PAINT COLOR		DATE OF MANUFACTURE	
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BODY PAINT COLOR																													
DATE OF MANUFACTURE																													

The certification label is located on the driver's door sill.

► Vehicle identification number

	K	P	T	2	0	B	1	V	S	F	P	XXXXXX
Country code : Korea												Production serial number : XXXXXX
Manufacturer : Ssangyong Motor Company												Plant : Pyeongtaek
Vehicle type : Passenger car												Model year : F : 2015 G : 2016 H : 2017
Line & Model : 2 : LHD 3 : RHD												Check digit : S : All Area Except North America/China/GCC/India
Body style 0 : 5 Door 1 : 4 Door 6 : 5 Door Long Body(XLV)												Engine type : U : D16(1,597cc) V : G16(1,597cc)
Detailed vehicle type : A : STD B : DLX												Other : 1 : 3 Point Seatbelt 2 : 2 Point Seatbelt

► Engine identification number

	173	910	0	0	999	999
Engine version 673 910 : D16DTF 173 910 : G16DF						Production sequence number : determined by engine model, version, steering type and transmission type
Steering type 1. 0 : Commonly used for LHD and RHD 2. 1 : LHD 3. 2 : RHD						Transmission : 0(Manual transmission) 2(Automatic transmission)

Modification basis	
Application basis	
Affected VIN	

2. SPECIFICATIONS AND CHECK ITEMS

1) Specifications for Each Unit

► TIVOLI

Descriptions			Diesel 1.6 Engine	Gasoline 1.6 Engine
General	Overall length (mm)		4202	←
	Overall width (mm)		1798	←
	Overall height (mm)		1590 (1600: including roof rack)	←
	Gross vehicle weight (kg)		4WD: 2010, 2WD: 1920	4WD: 1900, 2WD: 1810
	Curb vehicle weight (kg)	A/T	4WD: 1480, 2WD: 1390	4WD: 1400, 2WD: 1300
		M/T	4WD: 1455, 2WD: 1355	4WD: 1370, 2WD: 1270
	Fuel		Diesel	Gasoline
Engine	Fuel tank capacity (ℓ)		47	←
	Engine		D16DTF	G16DF
	Number of cylinders / Compression ratio		4 / 15.5:1	4 / 10.5:1
	Total displacement (cc)		1597	←
	Camshaft arrangement		DOHC	←
	Max. power		115 ps / 3400~4000 rpm	128 ps / 6000 rpm
	Max. torque		300 Nm / 1500~2500 rpm	160 Nm / 4600 rpm
	Idle speed	A/T	780 ± 50 rpm	690 ± 50 rpm
		M/T	780 ± 50 rpm	690 ± 50 rpm
	Cooling system		Water-cooled / forced circulation	←
	Coolant capacity (ℓ)		7.5	6.5
	Lubrication type		Vane Pump feeding type, forced circulation	←
	Max. oil capacity (ℓ) (when shipping)		5.0	4.0
	Turbocharger and cooling type		Turbocharger, Air-cooled	-

\* ( ) The options, vehicle weight and gross vehicle weight listed here are the maximum value of each item and vary depending on the vehicle options and specifications.

Descriptions			Diesel 1.6 Engine	Gasoline 1.6 Engine
Manual Transaxle	Operating type		Floor change type	←
	Gear ratio	1st	3.538	3.769
		2nd	1.913	2.080
		3rd	1.152	1.387
		4th	0.829	1.079
		5th	0.689	0.927
		6th	0.587	0.791
		Reverse	3.000	3.077
Automatic Transaxle	Model		Electronic 6-speed	←
	Operating type		Floor change type	←
	Gear ratio	1st	4.148	4.044
		2nd	2.370	2.371
		3rd	1.556	1.556
		4th	1.155	1.159
		5th	0.859	0.852
		6th	0.686	0.672
		Reverse	3.394	3.193
Transfer Case	Model		AWD	←
	Type		On demand type	←
Clutch (M/T)	Operating type		Hydraulic (CSC) type	←
	Disc type		Dry single diaphragm type	←
Power Steering	Type		Rack and pinion (EPS)	←
	Steering angle	Inner	37.67°	←
		Outer	31.10°	←
Rear Axle	Drive shaft type	Independent suspension	Ball joint type	←
	Axle housing type		IRDA type	←

Modification basis	
Application basis	
Affected VIN	

Descriptions			Diesel 1.6 Engine	Gasoline 1.6 Engine
Brake	Master cylinder type		Tandem type	←
	Booster type		Vacuum assisted booster type	←
	Brake type	Front wheel	Disc	←
		Rear wheel	Disc	←
	Parking brake		Mechanical type	←
Suspension	Front suspension		Macpherson + Coil spring	←
	Rear suspension		Torsion bar/Multi link + Coil spring	←
Air Conditioner	Refrigerant (capacity)	EU	R-1234yf (500 ± 30g)	←
		GEN	R-134a (500 ± 30g)	←
Electrical	Battery type / Capacity (V-AH)	ISG	AGM / 12 - 70	←
		NON-ISG	MF / 12 - 80	MF / 12 - 60
	Starter capacity (V-KW)	ISG	12 - 1.8	12 - 1.4
		NON-ISG	12 - 1.7	12 - 0.9
	Alternator capacity (V-A)	ISG	14V - 140A	14V - 120A
		NON-ISG	14V - 120A	←

► XLV

Descriptions			Diesel 1.6 Engine	Gasoline 1.6 Engine
General	Overall length (mm)		4440	←
	Overall width (mm)		1798	←
	Overall height (mm)		1605 (1635: including roof rack)	←
	Gross vehicle weight (kg)		4WD: 2060, 2WD: 1970	4WD: 1950, 2WD: 1870
	Curb vehicle weight (kg)	A/T	4WD: 1535, 2WD: 1425	4WD: 1450, 2WD: 1345
		M/T	4WD: 1505, 2WD: 1405	4WD: 1415, 2WD: 1315
	Fuel		Diesel	Gasoline
Engine	Fuel tank capacity (ℓ)		47	←
	Engine		D16DTF	G16DF
	Number of cylinders/ Compression ratio		4 / 15.5:1	4 / 10.5:1
	Total displacement (cc)		1597	←
	Camshaft arrangement		DOHC	←
	Max. power		115 ps / 3400~4000 rpm	128 ps / 6000 rpm
	Max. torque		300 Nm / 1500~2500 rpm	160 Nm / 4600 rpm
	Idle speed	A/T	780 ± 50 rpm	690 ± 50 rpm
		M/T	780 ± 50 rpm	690 ± 50 rpm
	Cooling system		Water-cooled / forced circulation	←
	Coolant capacity (ℓ)		7.5	6.5
	Lubrication type		Variable oil pump with ON/OFF solenoid valve, forced circulation	←
	Max. oil capacity (ℓ) (when shipping)		5.0	4.0
	Turbocharger and cooling type		Turbocharger, Air-cooled	-

\* ( ) The options, vehicle weight and gross vehicle weight listed here are the maximum value of each item and vary depending on the vehicle options and specifications.

Modification basis	
Application basis	
Affected VIN	



Descriptions			Diesel 1.6 Engine	Gasoline 1.6 Engine
Manual Transaxle	Operating type		Floor change type	←
	Gear ratio	1st	3.538	3.769
		2nd	1.913	2.080
		3rd	1.152	1.387
		4th	0.829	1.079
		5th	0.689	0.927
		6th	0.587	0.791
		Reverse	3.000	3.077
Automatic Transaxle	Model		Electronic 6-speed	←
	Operating type		Floor change type	←
	Gear ratio	1st	4.148	4.044
		2nd	2.370	2.371
		3rd	1.556	1.556
		4th	1.155	1.159
		5th	0.859	0.852
		6th	0.686	0.672
		Reverse	3.394	3.193
Transfer Case	Model		AWD	←
	Type		On demand type	←
Clutch (M/T)	Operating type		Hydraulic (CSC) type	←
	Disc type		Dry single diaphragm type	←
Power Steering	Type		Rack and pinion (EPS)	←
	Steering angle	Inner	37.67°	←
		Outer	31.10°	←
Rear Axle	Drive shaft type	Independent suspension	Ball joint type	←
	Axle housing type		IRDA type	←


Descriptions			Diesel 1.6 Engine	Gasoline 1.6 Engine
Brake	Master cylinder type		Tandem type	←
	Booster type		Vacuum assisted booster type	←
	Brake type	Front wheel	Disc	←
		Rear wheel	Disc	←
	Parking brake		Mechanical type	←
Suspension	Front suspension		Macpherson + Coil spring	←
	Rear suspension		Torsion bar/Multi link + Coil spring	←
Air Conditioner	Refrigerant (capacity)	EU	R-1234yf (500 ± 30g)	←
		GEN	R-134a (500 ± 30g)	←
Electrical	Battery type / Capacity (V-AH)	ISG	AGM / 12 - 70	←
		NON-ISG	MF / 12 - 80	MF / 12 - 60
	Starter capacity (V-KW)	ISG	12 - 1.8	12 - 1.4
		NON-ISG	12 - 1.7	12 - 0.9
	Alternator capacity (V-A)	ISG	14V - 140A	14V - 120A
		NON-ISG	14V - 120A	←

Modification basis	
Application basis	
Affected VIN	

2) Fluid Specifications And Capacity

► TIVOLI


Descriptions			Capacity	Specifications
Engine Oil	Diesel Engine	D16DTF	≐ 5.0 ℓ	Quality class (DPF): Ssangyong genuine engine oil or Approved by MB 229.51 5W30 or MB 229.52 5W30
	Gasoline Engine	G16DF	≐ 4.0 ℓ	Quality class: Ssangyong genuine engine oil or Approved by MB 229.51 5W30 or MB 229.52 5W30 or API SN / ILSAC GF-5 5W20
Engine Coolant	Diesel Engine	D16DTF	≐ 7.5 ℓ	Ssangyong genuine coolant Anti-Freeze: SYC-1025 Anti-Freeze:Water = 50:50 ORGANIC ACID TYPE, COLOR:BLUE
	Gasoline Engine	G16DF	≐ 6.5 ℓ	
Automatic Transaxle Fluid	Diesel Engine	D16DTF	≐ 7.0 ℓ	Ssangyong genuine oil (AW-1)
	Gasoline Engine	G16DF	≐ 6.1 ℓ	
Manual Transaxle Fluid			≐ 1.95 ℓ	Ssangyong genuine oil (SAE 70W)
Transfer Case (PTU) Fluid (AWD)	Diesel Engine	A/T (M/T)	≐ 0.25 ℓ (≐ 0.5 ℓ)	Ssangyong genuine oil (SAE 80W/90, API GL-5)
	Gasoline Engine	A/T (M/T)	≐ 0.6 ℓ (≐ 0.5 ℓ)	
Rear Axle Oil		AWD	≐ 0.6 ℓ	Ssangyong genuine oil (SAE 80W/90, API GL-5)
Brake / Clutch Fluid			As required	Ssangyong genuine oil (DOT4)

**WARNING**

- Use only Ssangyong recommended fluids and lubricants.
- Do not mix any different types or brands of oils or fluids. This may cause damages.
- Keep the specified levels when adding or replacing the fluids.

► XLV

Descriptions			Capacity	Specifications
Engine Oil	Diesel Engine	D16DTF	≐ 5.0 ℓ	Quality class (DPF): Ssangyong genuine engine oil or Approved by MB 229.51 5W30 or MB 229.52 5W30
	Gasoline Engine	G16DF	≐ 4.0 ℓ	Quality class: Ssangyong genuine engine oil or Approved by MB 229.51 5W30 or MB 229.52 5W30 or API SN / ILSAC GF-5 5W20
Engine Coolant	Diesel Engine	D16DTF	≐ 7.5 ℓ	Ssangyong genuine coolant Anti-Freeze: SYC-1025 Anti-Freeze:Water = 50:50 ORGANIC ACID TYPE, COLOR:BLUE
	Gasoline Engine	G16DF	≐ 6.5 ℓ	
Automatic Transaxle Fluid	Diesel Engine	D16DTF	≐ 7.0 ℓ	Ssangyong genuine oil (AW-1)
	Gasoline Engine	G16DF	≐ 6.1 ℓ	
Manual Transaxle Fluid			≐ 1.95 ℓ	Ssangyong genuine oil (SAE 70W)
Transfer Case (PTU) Fluid (AWD)	Diesel Engine	A/T (M/T)	≐ 0.25 ℓ (≐ 0.5 ℓ)	Ssangyong genuine oil (SAE 80W/90, API GL-5)
	Gasoline Engine	A/T (M/T)	≐ 0.6 ℓ (≐ 0.5 ℓ)	
Rear Axle Oil		AWD	≐ 0.6 ℓ	Ssangyong genuine oil (SAE 80W/90, API GL-5)
Brake / Clutch Fluid			As required	Ssangyong genuine oil (DOT4)

**WARNING**

- Use only Ssangyong recommended fluids and lubricants.
- Do not mix any different types or brands of oils or fluids. This may cause damages.
- When changing or topping up each oil (fluid), use the oil level gauge.

Modification basis	
Application basis	
Affected VIN	

3) Periodic Checkup And Change Interval (TIVOLI/XLV)

(1) Diesel Engine(EU)

\* Use only approved Ssangyong genuine parts.

Maintenance service and record retention are the owner's responsibility. You should retain evidence that proper maintenance has been performed on your vehicle in accordance with the scheduled maintenance service chart.

MAINTENANCE INTERVAL  MAINTENANCE ITEM	Kilometers (miles) or time in months, whichever comes first								
	x1000 km	20	40	60	80	100	120	140	160
	x1000 miles	12.5	25	37.5	50	62.5	75	87.5	100
	Months	12	24	36	48	60	72	84	96

ENGINE CONTROL SYSTEM

Drive belt	I	I	I	I	I	I	I	I
* Engine oil & filter * <sup>1</sup> (1)* (3)* (4)*	R	R	R	R	R	R	R	R
	Shorten the service interval under severe conditions							
Cooling system hose & connections	I	I	I	I	I	I	I	I
Engine coolant (3)* (4)	Change every 200000 km or 5 years. And, inspect and replenish if necessary.							
Fuel filter (1)*	I	R	I	R	I	R	I	R
	Drain the water from fuel filter when the warning light comes on							
Fuel line & connections	I	I	I	I	I	I	I	I
Air cleaner (2)*	I	R	I	R	I	R	I	R
	Shorten the service interval under severe conditions							

Chart Symbols:

- I - Inspect these items and their related parts. If necessary, correct, clean, replenish, adjust or replace.  
\*<sup>1</sup> Check the engine oil level and leak every 3000 km (2000 miles) or before starting a long trip.  
R- Replace or change.  
(1)\*If vehicle is operated under severe condition:  
Shorten the service interval.  
- Frequent stop-and-go traffic, extended idling, short driving distance below 6 km, driving distance below 16 km when the outside temperature remains below freezing  
- Driving in a hilly or mountainous terrain, sandy, or dusty area  
- High load driving such as trailer towing  
- Taxi, patrol service or delivery service (extended idling and excessive driving with low speed)  
(2)\* If vehicle is operated under severe condition, driving in dusty condition or sandy condition, pollutant area or off-road driving, frequently inspect the air cleaner, if necessary, change the air cleaner.  
(3)\*More frequent maintenance is required if under dusty driving condition.  
(4)\*Refer to "Recommended fluids, coolant and lubricants".

MAINTENANCE INTERVAL  MAINTENANCE ITEM	Kilometers (miles) or time in months, whichever comes first								
	x1000 km	20	40	60	80	100	120	140	160
	x1000 miles	12.5	25	37.5	50	62.5	75	87.5	100
	Months	12	24	36	48	60	72	84	96

CHASSIS AND BODY

Exhaust pipes & mountings	I	I	I	I	I	I	I	I
Brake / Clutch fluid (3)*	Change every 2 years (inspect frequently)							
Parking brake / Brake pads (Front & Rear) (4)*	I	I	I	I	I	I	I	I
Brake line & connections (including booster)	I	I	I	I	I	I	I	I
Manual transaxle oil (5)*	Inspect and replenish every 60000 km (or 3 years) (Severe driving condition: Change every 120000 km)							
Clutch & brake pedal free play	I	I	I	I	I	I	I	I
Power transfer unit oil (6)*	I	I	I	I	I	I	I	I
	Severe driving condition: Change every 60000 km							
Rear axle oil	Inspect every 20000 km, change every 100000 km (Frequent check of oil leak)							
Automatic transaxle fluid (6)*	Change every 100000 km under severe condition							
Check play/tightness for lower bolt/nut and ball joint grease leak on chassis and body (6)*	Check frequently and adjust or replace if necessary							

Chart Symbols:

- I - Inspect these items and their related parts. If necessary, correct, clean, replenish, adjust or replace.  
R- Replace or change.  
(3)\*Refer to "Recommended fluids and lubricants".  
(4)\*More frequent maintenance is required if the vehicle is operated under any of the following conditions:  
- In heavy city traffic where the outside temperature regularly reaches 32°C (90°F) or higher, or  
- In hilly or mountainous terrain, or  
- When doing frequent trailer towing, or  
- Uses such as found in taxi, police or delivery service.  
(5)\*Inspect and replenish every 60000 km (or 3 years)  
Normal driving condition: Fill for Life  
(Severe driving condition: Change every 120000 km)  
(6)\*If vehicle is operated under severe condition: Shorten the service interval.  
- Towing a trailer or off-road driving (Inspect the leak of fluid at any time, occasionally)  
- Taxi, patrol service or delivery service (extended idling and excessive driving with low speed)  
- Frequent stop-and-go traffic, extended idling, short driving distance  
- Driving in a hilly or mountainous terrain, sandy, or dusty area  
- Driving frequently at high speed over 170 km/hour  
- Driving frequently in area where heavy traffic under the ambient temperature above 32°C

Modification basis	
Application basis	
Affected VIN	



MAINTENANCE INTERVAL  MAINTENANCE ITEM	Kilometers (miles) or time in months, whichever comes first								
	x1000 km	20	40	60	80	100	120	140	160
	x1000 miles	12.5	25	37.5	50	62.5	75	87.5	100
	Months	12	24	36	48	60	72	84	96

CHASSIS AND BODY

Tire condition & inflation pressure	Check frequently and adjust or replace if necessary							
Wheel alignment (7)*	Inspect when abnormal condition is noted							
Steering wheel & linkage	I	I	I	I	I	I	I	I
Outer ball joint inspection and replacement	I	I	I	I	R	I	I	I
Drive shaft boots (8)*	I	I	I	I	I	I	I	I
Seat belts, buckles & anchors	I	I	I	I	I	I	I	I
Lubricate locks, hinges & bonnet latch	Check frequently and adjust or replace if necessary							
Wheel bearing grease	I	I	I	I	I	I	I	I
Propeller shaft grease - Front / Rear (9)*	I	I	I	I	I	I	I	I
Air conditioner filter (10)*	R	R	R	R	R	R	R	R
	Shorten the service interval under severe conditions							

Chart Symbols:

- I - Inspect these items and their related parts. If necessary, correct, clean, replenish, adjust or replace.  
R- Replace or change.
- (7)\*If necessary, rotate and balance wheels.  
(8)\*After completion of off-road operation, the drive shaft boots should be inspected.  
(9)\*Inspect propeller shaft grease every 5000 km or 3 months if the vehicle is mainly driven under severe condition.  
- In off-road or dusty road, or  
- In heavy city traffic where the outside temperature regularly reaches 32°C (90°F) or higher, or  
- In hilly or mountainous terrain.  
(10)\*Severe Conditions in Air Conditioner Filter  
- Pollutant area or off-road driving, extended air conditioner or heater operation

(2) Diesel Engine(GEN)

\* Use only approved Ssangyong genuine parts.

Maintenance service and record retention are the owner's responsibility. You should retain evidence that proper maintenance has been performed on your vehicle in accordance with the scheduled maintenance service chart.

MAINTENANCE INTERVAL  MAINTENANCE ITEM	Kilometers (miles) or time in months, whichever comes first								
	x1000 km	15	30	45	60	75	90	105	120
	x1000 miles	10	20	30	40	50	60	70	80
	Months	12	24	36	48	60	72	84	96

ENGINE CONTROL SYSTEM

Drive belt	I	I	I	I	I	I	I	I
* Engine oil & filter * <sup>1</sup> (1)* (3)* (4)* (11)* (Initial change: 7500 km)	R	R	R	R	R	R	R	R
	Shorten the service interval under severe conditions							
Cooling system hose & connections	I	I	I	I	I	I	I	I
Engine coolant (3)* (4)	Change every 200000 km or 5 years. And, inspect and replenish if necessary.							
Fuel filter (1)*	I	R	I	R	I	R	I	R
	Drain the water from fuel filter when the warning light comes on							
Fuel line & connections	I	I	I	I	I	I	I	I
Air cleaner (2)*	I	R	I	R	I	R	I	R
	Shorten the service interval under severe conditions							

Chart Symbols:

- I - Inspect these items and their related parts. If necessary, correct, clean, replenish, adjust or replace.  
\*<sup>1</sup> Check the engine oil level and leak every 3000 km (2000 miles) or before starting a long trip.  
R- Replace or change.
- (1)\*If vehicle is operated under severe condition:  
Shorten the service interval.  
- Frequent stop-and-go traffic, extended idling, short driving distance below 6 km, driving distance below 16 km when the outside temperature remains below freezing  
- Driving in a hilly or mountainous terrain, sandy, or dusty area  
- High load driving such as trailer towing  
- Taxi, patrol service or delivery service (extended idling and excessive driving with low speed)  
(2)\* If vehicle is operated under severe condition, driving in dusty condition or sandy condition, pollutant area or off-road driving, frequently inspect the air cleaner, if necessary, change the air cleaner.  
(3)\*More frequent maintenance is required if under dusty driving condition.  
(4)\*Refer to “Recommended fluids, coolant and lubricants”.  
(11)\*EURO5 or EURO6 emission regulation countries:  
Initial change 15000 km (severe conditions: 7500 km)

Modification basis	
Application basis	
Affected VIN	

MAINTENANCE INTERVAL  MAINTENANCE ITEM	Kilometers (miles) or time in months, whichever comes first								
	x1000 km	15	30	45	60	75	90	105	120
	x1000 miles	10	20	30	40	50	60	70	80
	Months	12	24	36	48	60	72	84	96

CHASSIS AND BODY

Exhaust pipes & mountings	I	I	I	I	I	I	I	I	I
Brake / Clutch fluid (3)*	Change every 2 years (inspect frequently)								
Parking brake / Brake pads (Front & Rear) (4)*	I	I	I	I	I	I	I	I	I
Brake line & connections (including booster)	I	I	I	I	I	I	I	I	I
Manual transaxle oil (5)*	Inspect and replenish every 60000 km (or 3 years) (Severe driving condition: Change every 120000 km)								
Clutch & brake pedal free play	I	I	I	I	I	I	I	I	I
Power transfer unit oil (6)*	I	I	I	I	I	I	I	I	I
	Severe driving condition: Change every 60000 km								
Rear axle oil	Inspect every 15000 km, change every 100000 km (Frequent check of oil leak)								
Automatic transaxle fluid (6)*	Change every 100000 km under severe condition								
Check play/tightness for lower bolt/nut and ball joint grease leak on chassis and body (6)*	Check frequently and adjust or replace if necessary								

Chart Symbols:

I - Inspect these items and their related parts. If necessary, correct, clean, replenish, adjust or replace.

R- Replace or change.

(3)\*Refer to "Recommended fluids and lubricants".

(4)\*More frequent maintenance is required if the vehicle is operated under any of the following conditions:

- In heavy city traffic where the outside temperature regularly reaches 32°C (90°F) or higher, or
- In hilly or mountainous terrain, or
- When doing frequent trailer towing, or
- Uses such as found in taxi, police or delivery service.

(5)\*Inspect and replenish every 60000 km (or 3 years)

Normal driving condition: Fill for Life

(Severe driving condition: Change every 120000 km)

(6)\*If vehicle is operated under severe condition: Shorten the service interval.

- Towing a trailer or off-road driving (Inspect the leak of fluid at any time, occasionally)
- Taxi, patrol service or delivery service (extended idling and excessive driving with low speed)
- Frequent stop-and-go traffic, extended idling, short driving distance
- Driving in a hilly or mountainous terrain, sandy, or dusty area
- Driving frequently at high speed over 170 km/hour
- Driving frequently in area where heavy traffic under the ambient temperature above 32°C

MAINTENANCE INTERVAL  MAINTENANCE ITEM	Kilometers (miles) or time in months, whichever comes first								
	x1000 km	15	30	45	60	75	90	105	120
	x1000 miles	10	20	30	40	50	60	70	80
	Months	12	24	36	48	60	72	84	96

CHASSIS AND BODY

Tire condition & inflation pressure	Check frequently and adjust or replace if necessary								
Wheel alignment (7)*	Inspect when abnormal condition is noted								
Steering wheel & linkage	I	I	I	I	I	I	I	I	I
Outer ball joint inspection and replacement	I	I	I	I	I	R	I	I	I
Drive shaft boots (8)*	I	I	I	I	I	I	I	I	I
Seat belts, buckles & anchors	I	I	I	I	I	I	I	I	I
Lubricate locks, hinges & bonnet latch	Check frequently and adjust or replace if necessary								
Wheel bearing grease	I	I	I	I	I	I	I	I	I
Propeller shaft grease - Front / Rear (9)*	I	I	I	I	I	I	I	I	I
Air conditioner filter (10)*	R	R	R	R	R	R	R	R	R
	Shorten the service interval under severe conditions								

Chart Symbols:

I - Inspect these items and their related parts. If necessary, correct, clean, replenish, adjust or replace.

R- Replace or change.

(7)\*If necessary, rotate and balance wheels.

(8)\*After completion of off-road operation, the drive shaft boots should be inspected.

(9)\*Inspect propeller shaft grease every 5000 km or 3 months if the vehicle is mainly driven under severe condition.

- In off-road or dusty road, or
- In heavy city traffic where the outside temperature regularly reaches 32°C (90°F) or higher, or
- In hilly or mountainous terrain.

(10)\*Severe Conditions in Air Conditioner Filter

- Pollutant area or off-road driving, extended air conditioner or heater operation

(3) Gasoline Engine

\* Use only approved Ssangyong genuine parts.

Maintenance service and record retention are the owner's responsibility. You should retain evidence that proper maintenance has been performed on your vehicle in accordance with the scheduled maintenance service chart.

MAINTENANCE INTERVAL  MAINTENANCE ITEM	Kilometers (miles) or time in months, whichever comes first								
	x1000 km	15	30	45	60	75	90	105	120
	x1000 miles	10	20	30	40	50	60	70	80
	Months	12	24	36	48	60	72	84	96

ENGINE CONTROL SYSTEM

Drive belt	I	I	I	I	I	I	I	I
Engine oil & engine oil filter (1)* (3)* (Initial check: 7500 km)	R**	R	R	R	R	R	R	R
	Shorten the service interval under severe conditions							
Cooling system hose & connections	I	I	I	I	I	I	I	I
Engine coolant (3)*	Change every 200000 km or 5 years. And, inspect replenish if necessary.							
Fuel filter (2)*	Inspect every 30000 km (if using poor quality of fuel, replace every 50000 km)							
Fuel line & connections	I	I	I	I	I	I	I	I
Air cleaner (2)*	I	R	I	R	I	R	I	R
	Shorten the service interval under severe conditions							
Ignition timing	I	I	I	I	I	I	I	I
Spark plugs (G16DF)	Change every 100000 km or 5 years.							
Charcoal canister & vapor lines	-	I	-	I	-	I	-	I

Chart Symbols:

I - Inspect these items and their related parts. If necessary, correct, clean, replenish, adjust or replace.  
R- Replace or change.

\*\* - In order to secure engine long life and effective break-in, first oil (factory filled) would be recommended to drain within 10000 km.

(1)\* If vehicle is operated under severe condition:

Shorten the service interval.

- Frequent stop-and-go traffic, extended idling, short driving distance below 6 km, driving distance below 16 km when the outside temperature remains below freezing
- Driving in a hilly or mountainous terrain, sandy, or dusty area
- High load driving such as trailer towing
- Taxi, patrol service or delivery service (extended idling and excessive driving with low speed)

(2)\* If vehicle is operated under severe condition, pollutant area or off-road driving, driving in dusty condition or sandy condition, frequently inspect the air cleaner, if necessary, change the air cleaner.

(3)\* Refer to "Recommended fluids and lubricants".

MAINTENANCE INTERVAL  MAINTENANCE ITEM	Kilometers (miles) or time in months, whichever comes first								
	x1000 km	15	30	45	60	75	90	105	120
	x1000 miles	10	20	30	40	50	60	70	80
	Months	12	24	36	48	60	72	84	96

CHASSIS AND BODY

Exhaust pipes & mountings	I	I	I	I	I	I	I	I
Brake / Clutch fluid (3)*	Change every 2 years (inspect frequently)							
Parking brake / Brake pads (Front & Rear) (4)*	I	I	I	I	I	I	I	I
Brake line & connections (including booster)	I	I	I	I	I	I	I	I
Manual transaxle oil (5)*	Inspect and replenish every 60000 km (or 3 years) (Severe driving condition: Change every 120000 km)							
Clutch & brake pedal free play	I	I	I	I	I	I	I	I
Power transfer unit oil (6)*	I	I	I	I	I	I	I	I
	Severe driving condition: Change every 60000 km							
Rear axle oil	Inspect every 15000 km, change every 100000 km (Frequent check of oil leak)							
Automatic transaxle fluid (6)*	Change every 100000 km under severe condition							
Check play/tightness for lower bolt/nut and ball joint grease leak on chassis and body (6)*	Check frequently and adjust or replace if necessary							

Chart Symbols:

I - Inspect these items and their related parts. If necessary, correct, clean, replenish, adjust or replace.  
R- Replace or change.

(3)\* Refer to "Recommended fluids and lubricants".

(4)\* More frequent maintenance is required if the vehicle is operated under any of the following conditions:

- In heavy city traffic where the outside temperature regularly reaches 32°C (90°F) or higher, or
- In hilly or mountainous terrain, or
- When doing frequent trailer towing, or
- Uses such as found in taxi, police or delivery service.

(5)\* Inspect and replenish every 60000 km (or 3 years)

Normal driving condition: Fill for Life

(Severe driving condition: Change every 120000 km)

(6)\* If vehicle is operated under severe condition: Shorten the service interval.

- Towing a trailer or off-road driving (Inspect the leak of fluid at any time, occasionally)
- Taxi, patrol service or delivery service (extended idling and excessive driving with low speed)
- Frequent stop-and-go traffic, extended idling, short driving distance
- Driving in a hilly or mountainous terrain, sandy, or dusty area
- Driving frequently at high speed over 170 km/hour
- Driving frequently in area where heavy traffic under the ambient temperature above 32°C

Modification basis	
Application basis	
Affected VIN	

MAINTENANCE ITEM \ MAINTENANCE INTERVAL	Kilometers (miles) or time in months, whichever comes first								
	x1000 km	15	30	45	60	75	90	105	120
	x1000 miles	10	20	30	40	50	60	70	80
	Months	12	24	36	48	60	72	84	96

CHASSIS AND BODY

Tire condition & inflation pressure	Check frequently and adjust or replace if necessary								
Wheel alignment (7)*	Inspect when abnormal condition is noted								
Steering wheel & linkage	I	I	I	I	I	I	I	I	I
Outer ball joint inspection and replacement	I	I	I	I	I	R	I	I	I
Drive shaft boots (8)*	I	I	I	I	I	I	I	I	I
Seat belts, buckles & anchors	I	I	I	I	I	I	I	I	I
Lubricate locks, hinges & bonnet latch	Check frequently and adjust or replace if necessary								
Wheel bearing grease	I	I	I	I	I	I	I	I	I
Propeller shaft grease - Front / Rear (9)*	I	I	I	I	I	I	I	I	I
Air conditioner filter (10)*	R	R	R	R	R	R	R	R	R
	Shorten the service interval under severe conditions								

Chart Symbols:

I - Inspect these items and their related parts. If necessary, correct, clean, replenish, adjust or replace.

R- Replace or change.

(7)\*If necessary, rotate and balance wheels.

(8)\*After completion of off-road operation, the drive shaft boots should be inspected.

(9)\*Inspect propeller shaft grease every 5000 km or 3 months if the vehicle is mainly driven under severe condition.

- In off-road or dusty road, or

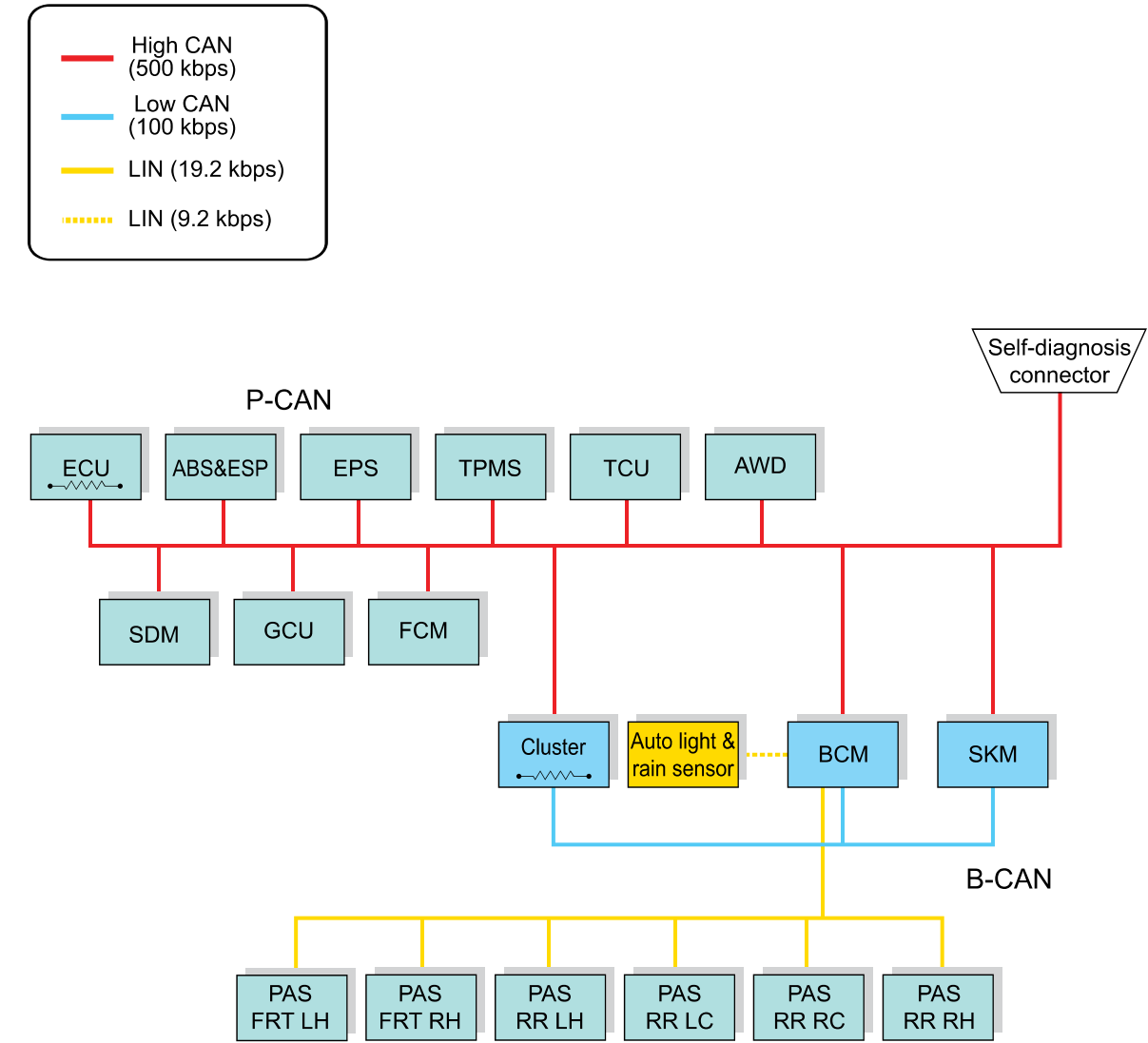
- In heavy city traffic where the outside temperature regularly reaches 32°C (90°F) or higher, or

- In hilly or mountainous terrain.

(10)\*Severe Conditions in Air Conditioner Filter

- Pollutant area or off-road driving, extended air conditioner or heater operation

3. CAN COMMUNICATION CONFIGURATION



The CAN topology communicate with system units. There are 2 types of CAN communication according to the communication speed: P-CAN and B-CAN. Communication speed of the former is faster than that of the latter.

The SKM, instrument cluster, BCM, and diagnostic connectors use both CAN communications to communicate with other units. Other components such as ECU, ABS with ESP, TCU, EPS unit use only P-CAN. Terminating resistors are installed in ECU and instrument cluster.