

**3.1. GENERAL TECHNICAL INFORMATION**

**3.1.1. TECHNICAL DATA**

**Aprilia RXV 450 – 550**

<b>DIMENSIONS</b>	
Max. length	2240 mm (88.19 in.)
Max. width	830 mm (32.68 in.)
Max. height (front fairing included)	1250 mm (49.21 in.)
Seat height	950 mm (37.40 in.)
Wheelbase	1485 mm (58.46 in.)
Minimum ground clearance	320 mm (12.60 in.)
Dry weight	123 kg (271.12 lb)

<b>ENGINE</b>	
Model (RXV 450)	45RX
Model (RXV 550)	55RX
Type	twin-cylinder, 4-stroke with 4 valves per cylinder, single overhead camshaft
Number of cylinders	2
Total displacement (RXV 450)	449 cu. cm (27.40 cu in.)
Total displacement (RXV 550)	553 cu. cm (33.75 cu in.)
Bore/stroke (RXV 450)	76 mm x 49.5 mm (2.99 in x 1.95 in)
Bore/stroke (RXV 550)	80 mm x 55.0 mm (3.15 in x 2.16 in)
Compression ratio (RXV 450)	13 ± 0.5
Compression ratio (RXV 550)	12.5 ± 0.5
Starting	electric
Engine idling rpm	1800 ÷ 2000 rpm
Clutch	Multiplate in oil bath.
Lubricating system	Double separate lubrication with external reservoir
Air filter	with dry filter cartridge
Cooling system	liquid-cooled

<b>TRANSMISSION</b>	
Type	mechanical, 5 gears with foot control on the left side of the engine

<b>CAPACITIES</b>	
Fuel (including reserve)	7.5 l (1.98 gal)
Fuel reserve	2.2 l (0.58 gal)
Engine oil	1.3 l (0.34 gal)
Fork oil	100 mm (3.94 in.) of air (per leg, measured without spring and compressed rod)
Coolant	1.1 l (0.29 gal) (50% water + 50% coolant with ethylene glycol)
Seat	1

<b>GEAR RATIOS</b>				
Ratio	Primary	Secondary	Final ratio	Total ratio
1st	22/56 = 1: 2.545	12/31 = 1: 2.583	15/48 = 1: 3.200	1 : 21.042
2nd		13/25 = 1: 1.923		1 : 15.664
3rd		15/23 = 1: 1.533		1 : 12.489
4th		19/24 = 1: 1.263		1 : 10.288
5th		21/22 = 1: 1.047		1 : 8.533

<b>DRIVE CHAIN</b>	
Type	with master link

FUEL SYSTEM	
Type	electronic injection
Throttle (RXV 450)	ø 38 mm (1.49 in)
Throttle (RXV 550)	ø 40 mm (1.57 in)

FUEL SYSTEM	
Fuel	premium grade unleaded petrol, min. O.N. 95 (RON) and 85 (MON).

FRAME	
Type	Aluminium stanchion and steel tubes trellis

SUSPENSIONS	
Front	telescopic Ø 45 mm (ø 1.77 in) fork with hydraulic operation
Travel	298.5 mm (11.75 in)
Rear	swinging arm and hydraulic adjustable monoshock
Wheel stroke	300 mm (11.81 in) (usable)

BRAKES	
Front	disc brake – Ø 270 mm (ø 10.63 in), with hydraulic transmission
Rear	disc brake – Ø 240 mm (ø 9.45 in), with hydraulic transmission

WHEEL RIMS	
Type	spoke-type
Front	1.60 x 21"
Rear	2.15 x 18"

FRONT TYRE	
Type	90/90 21 54R
Inflating pressure	100 kPa (1.0 bar)

REAR TYRE	
Type	140/80 18 70R
Inflating pressure	110 kPa (1.1 bar)

IGNITION	
Type	Digital, electronic

SPARK PLUGS	
Standard	NGK CR8EB
Spark plug electrode gap	0.7 – 0.8 mm (0.028 – 0.031 in.)
Resistance	5 kΩ

ELECTRIC SYSTEM	
Battery	12 V – 6 Ah
Auxiliary fuses	5 A, 15 A, 20 A
Generator (with permanent magnet)	12 V – 350 W

BULBS	
Low beam	12 V – 55 W
High beam	12 V – 60 W
Front parking light	12 V – 3 W
Turn indicators bulb	With micro lamps
Number plate light	12 V – 5 W
Rear parking lights/Stoplight	LED
Instrument panel lights	LED

WARNING LIGHTS	
Gear in neutral	LED
Engine oil pressure	LED
Engine control system	LED
Fuel reserve	LED
High beam	LED
Turn indicators	LED
Red line	LED

**Aprilia SXV 450 – 550**

<b>DIMENSIONS</b>	
Max. length	2165 mm (85.23 in.)
Max. width	815 mm (32.08 in.)
Max. height (front fairing included)	1170 mm (46.06 in.)
Seat height	880 mm (34.64 in.)
Wheelbase	1470 mm (57.87 in.)
Minimum ground clearance	270 mm (10.63 in.)
Dry weight	125 kg (275.58 lb)

<b>ENGINE</b>	
Model (SXV 450)	45SX
Model (SXV 550)	55SX
Type	twin-cylinder, 4-stroke with 4 valves per cylinder, single overhead camshaft
Number of cylinders	2
Total displacement (SXV 450)	449 cu. cm (27.40 cu in.)
Total displacement (SXV 550)	553 cu. cm (33.75 cu in.)
Bore/stroke (SXV 450)	76 mm x 49.5 mm (2.99 in x 1.95 in)
Bore/stroke (SXV 550)	80 mm x 55.0 mm (3.15 in x 2.16 in)
Compression ratio (SXV 450)	13±0.5
Compression ratio (SXV 550)	12.5±0.5
Starting	electric
Engine idling rpm	1800 ÷ 2000 rpm
Clutch	Multiplate in oil bath.
Lubricating system	Double separate lubrication with external reservoir
Air filter	with dry filter cartridge
Cooling system	liquid-cooled

<b>TRANSMISSION</b>	
Type	mechanical, 5 gears with foot control on the left side of the engine

<b>CAPACITIES</b>	
Fuel (including reserve)	7.5 l (1.98 gal)
Fuel reserve	2.2 l (0.58 gal)
Engine oil	1.3 l (0.34 gal)
Fork oil	125 mm (4.92 in.) of air (per leg, measured without spring and compressed rod)
Coolant	1.1 l (0.29 gal) (50% water + 50% coolant with ethylene glycol)
Seat	1

<b>SXV 450 GEAR RATIOS</b>				
Ratio	Primary	Secondary	Final ratio	Total ratio
1st	22/56 = 1: 2.545	13/30 = 1: 2.307	15/46 = 1: 3.067	1 : 18.013
2nd		15/27 = 1: 1.800		1 : 14.050
3rd		16/23 = 1: 1.437		1 : 11.221
4th		20/23 = 1: 1.150		1 : 8.976
5th		21/21 = 1: 1.000		1 : 7.806

<b>SXV 550 GEAR RATIOS</b>				
Ratio	Primary	Secondary	Final ratio	Total ratio
1st	22/56 = 1: 2.545	13/30 = 1: 2.307	16/46 = 1: 2.875	1 : 16.888
2nd		15/27 = 1: 1.800		1 : 13.172
3rd		16/23 = 1: 1.437		1 : 10.519
4th		20/23 = 1: 1.150		1 : 8.415
5th		21/21 = 1: 1.000		1 : 7.318

<b>DRIVE CHAIN</b>	
Type	endless (with no connection link) with sealed links

FUEL SYSTEM	
Type	electronic injection
Throttle (SXV 450)	ø 38 mm (1.49 in)
Throttle (SXV 550)	ø 40 mm (1.57 in)

FUEL SYSTEM	
Fuel	premium grade unleaded petrol, min. O.N. 95 (RON) and 85 (MON).

FRAME	
Type	Aluminium stanchion and steel tubes trellis

SUSPENSIONS	
Front	telescopic Ø 48 mm (ø 1.89 in) fork with hydraulic operation
Travel	275 mm (10.83 in.)
Rear	swinging arm and hydraulic adjustable monoshock
Wheel stroke	252 mm (9.92 in) (usable)

BRAKES	
Front	disc brake – Ø 320 mm (ø 12.60 in), with hydraulic transmission
Rear	disc brake – Ø 240 mm (ø 9.45 in), with hydraulic transmission

WHEEL RIMS	
Type	spoke-type
Front	3.50 x 17"
Rear	5.50 x 17"

FRONT TYRE	
Type	120/70 ZR17 (58W)
Inflating pressure	180 kPa (1.8 bar)

REAR TYRE	
Type	180/55 ZR17 (73W)
Inflating pressure	200 kPa (2.0 bar)

IGNITION	
Type	Digital, electronic

SPARK PLUGS	
Standard	NGK CR8EB
Spark plug electrode gap	0.7 – 0.8 mm (0.028 – 0.031 in.)
Resistance	5 kΩ

ELECTRIC SYSTEM	
Battery	12 V – 6 Ah
Auxiliary fuses	5 A, 15 A, 20 A
Generator (with permanent magnet)	12 V – 350 W

BULBS	
Low beam	12 V – 55 W
High beam	12 V – 60 W
Front parking light	12 V – 3 W
Turn indicators bulb	With micro lamps
Number plate light	12 V – 5 W
Rear parking lights/Stoplight	LED
Instrument panel lights	LED

WARNING LIGHTS	
Gear in neutral	LED
Engine oil pressure	LED
Engine control system	LED
Fuel reserve	LED
High beam	LED
Turn indicators	LED
Red line	LED

2.1. TECHNICAL INFORMATION

2.1.1. TECHNICAL DATA

<b>ENGINE 450</b>	
<b>ENGINE</b>	
Model (SXV 450)	45SX
Model (RXV 450)	45RX
Type	Twin-cylinder, 4-stroke with 4 valves, single overhead camshaft
Number of cylinders	2
Total displacement	449 cu. cm (27.40 cu in).
Bore/stroke	76 mm x 49.5 mm (2.99 in x 1.95 in)
Compression ratio	(13 ÷ 1) ± 0.5
Idling speed	(1800 ÷ 2000) ± 100 rpm
Valve timing (SXV 450)	
Intake opens at	18° BTDC
Intake closes at	48° ABDC
Exhaust opens at	49° BBDC
Exhaust closes at	15° ATDC
Valve timing (RXV 450)	
Intake opens at	18° BTDC
Intake closes at	30° ABDC
Exhaust opens at	31° BBDC
Exhaust closes at	19° ATDC
Intake valve clearance	0.07 ÷ 0.12 mm (0.0027 ÷ 0.0047 in)
Exhaust valve clearance	0.17 ÷ 0.22 mm (0.0067 ÷ 0.0087 in)
Ignition	Digital, electronic
Starting	Electric starter
Spark advance	Variable, controlled by CDI
Air filter	With dry filter cartridge
<b>Clutch</b>	
Type	Multiplate, wet clutch with control on the left side of the handlebar
Driving plates 1	# plates: 2
	Thickness: 1.5 mm (0.059 in)
Driving plates 2	# plates: 5
	Thickness: 2 mm (0.079 in)
Clutch plates	# plates: 8
	Thickness: 2.75 mm (0.108 in)
Clutch springs	Uncompressed length: xxxx mm (xxx in)
	# springs: 6
<b>Lubricating system</b>	
Type	Gearbox splash lubrication with special fluid; engine forced lubrication with scavenge pump and external reservoir
Oil filter	Paper type
Engine oil quantity	After overhaul, 1400 cu.cm (0.37 gal) (0.31 UKgal)
	Periodic oil change: 1300 cu.cm (0.34 gal) (0.28 UKgal)
<b>Cooling system</b>	
Type	Liquid
Water pump	Centrifugal pump with single intake
	Reduction ratio: 44/22

<b>SXV450 TRANSMISSION</b>				
Gear ratios				
Ratio	Primary	Secondary	Final ratio	Total ratio
1st	22/56 = 1: 2.545	12/30 = 1: 2.307	15/48 = 1: 3.067	1 : 18.013
2nd		15/27 = 1: 1.800		1 : 14.050
3rd		16/23 = 1: 1.437		1 : 11.221
4th		20/23 = 1: 1.150		1 : 8.897
5th		21/21 = 1: 1.000		1 : 7.806
<b>RXV450 TRANSMISSION</b>				
Gear ratios				
Ratio	Primary	Secondary	Final ratio	Total ratio
1st	22/56 = 1: 2.545	12/31 = 1: 2.583	15/48 = 1: 3.200	1 : 21.042
2nd		13/25 = 1: 1.923		1 : 15.664
3rd		15/23 = 1: 1.533		1 : 12.489
4th		19/24 = 1: 1.263		1 : 10.288
5th		21/22 = 1: 1.047		1 : 8.533
<b>FUEL SYSTEM</b>				
Type	Electronic injection			
Throttle	Ø 38 mm (1.49 in)			
<b>FUEL</b>				
Fuel	Premium-grade unleaded petrol, minimum octane rating 95 (RON) and 85 (MON), as per DIN 51 607.			
<b>SPARK PLUGS</b>				
Standard	NGK CR8EB			
Spark plug electrode gap	0.7 – 0.8 mm (0.028 – 0.031 in.)			
Resistance	5 KΩ			
<b>ELECTRIC SYSTEM</b>				
Generator (with permanent magnet)	12 V – 350 W			
Starter motor	12 V – 480 W			
<b>ENGINE 550</b>				
<b>ENGINE</b>				
Model (SXV 550)	55SX			
Model (RXV 550)	55RX			
Type	Twin-cylinder, 4-stroke with 4 valves, single overhead camshaft			
Number of cylinders	2			
Total displacement	553 cu. cm (33.75 cu in).			
Bore/stroke	80 mm x 55.0 mm (3.15 in x 2.16 in)			
Compression ratio	(12.5 ÷ 1) ± 0.5			
Idling speed	(1800 ÷ 2000) ± 100 rpm			
Valve timing (SXV 550)				
Intake opens at	18° BTDC			
Intake closes at	48° ABDC			
Exhaust opens at	49° BBDC			
Exhaust closes at	15° ATDC			
Valve timing (RXV 550)				
Intake opens at	18° BTDC			
Intake closes at	30° ABDC			
Exhaust opens at	31° BBDC			
Exhaust closes at	19° ATDC			
Intake valve clearance	0.07 ÷ 0.12 mm (0.0027 ÷ 0.0047 in)			
Exhaust valve clearance	0.17 ÷ 0.22 mm (0.0067 ÷ 0.0087 in)			
Ignition	Digital, electronic			
Starting	Electric starter			
Spark advance	Variable, controlled by CDI			
Air filter	With dry filter cartridge			

<b>Clutch</b>				
Type	Multiplate, wet clutch with control on the left side of the handlebar			
Driving plates 1	# plates: 2			
	Thickness: 1.5 mm (0.059 in)			
Driving plates 2	# plates: 5			
	Thickness: 2 mm (0.079 in)			
Clutch plates	# plates: 8			
	Thickness: 2.75 mm (0.108 in)			
Clutch springs	Uncompressed length: 46 mm (1.81 in)			
	# springs: 6			
<b>Lubricating system</b>				
Type	Gearbox splash lubrication with special fluid; engine forced lubrication with scavenge pump and external reservoir			
Oil filter	Paper type			
Engine oil quantity	After overhaul, 1400 cu.cm (0.37 gal) (0.31 UKgal)			
	Periodic oil change: 1300 cu.cm (0.34 gal) (0.28 UKgal)			
	After overhaul, 1400 cu.cm (0.37 gal) (0.31 UKgal)			
<b>Cooling system</b>				
Type	Liquid			
Water pump	Centrifugal pump with single intake			
	Reduction ratio: 44/22			
<b>SXV550 TRANSMISSION</b>				
Gear ratios				
Ratio	Primary	Secondary	Final ratio	Total ratio
1st	22/56 = 1: 2.545	12/30 = 1: 2.307	15/48 = 1: 2.875	1 : 16.888
2nd		15/27 = 1: 1.800		1 : 13.172
3rd		16/23 = 1: 1.437		1 : 10.519
4th		20/23 = 1: 1.150		1 : 8.415
5th		21/21 = 1: 1.000		1 : 7.318
<b>RXV550 TRANSMISSION</b>				
Gear ratios				
Ratio	Primary	Secondary	Final ratio	Total ratio
1st	22/56 = 1: 2.545	12/31 = 1: 2.583	15/48 = 1: 3.200	1 : 21.042
2nd		13/25 = 1: 1.923		1 : 15.664
3rd		15/23 = 1: 1.533		1 : 12.489
4th		19/24 = 1: 1.263		1 : 10.288
5th		21/22 = 1: 1.047		1 : 8.533
<b>FUEL SYSTEM</b>				
Type	Electronic injection			
Throttle	Ø 40 mm (1.57 in)			
<b>FUEL</b>				
Fuel	Premium-grade unleaded petrol, minimum octane rating 95 (RON) and 85 (MON), as per DIN 51 607.			
<b>SPARK PLUGS</b>				
Standard	NGK CR8EB			
Spark plug electrode gap	0.7 – 0.8 mm (0.028 – 0.031 in.)			
Resistance	5 KΩ			
<b>ELECTRIC SYSTEM</b>				
Generator (with permanent magnet)	12 V – 350 W			
Starter motor	12 V – 480 W			