



## SHRIRAM PISTONS & RINGS

MD: TS: 24/JAN'23

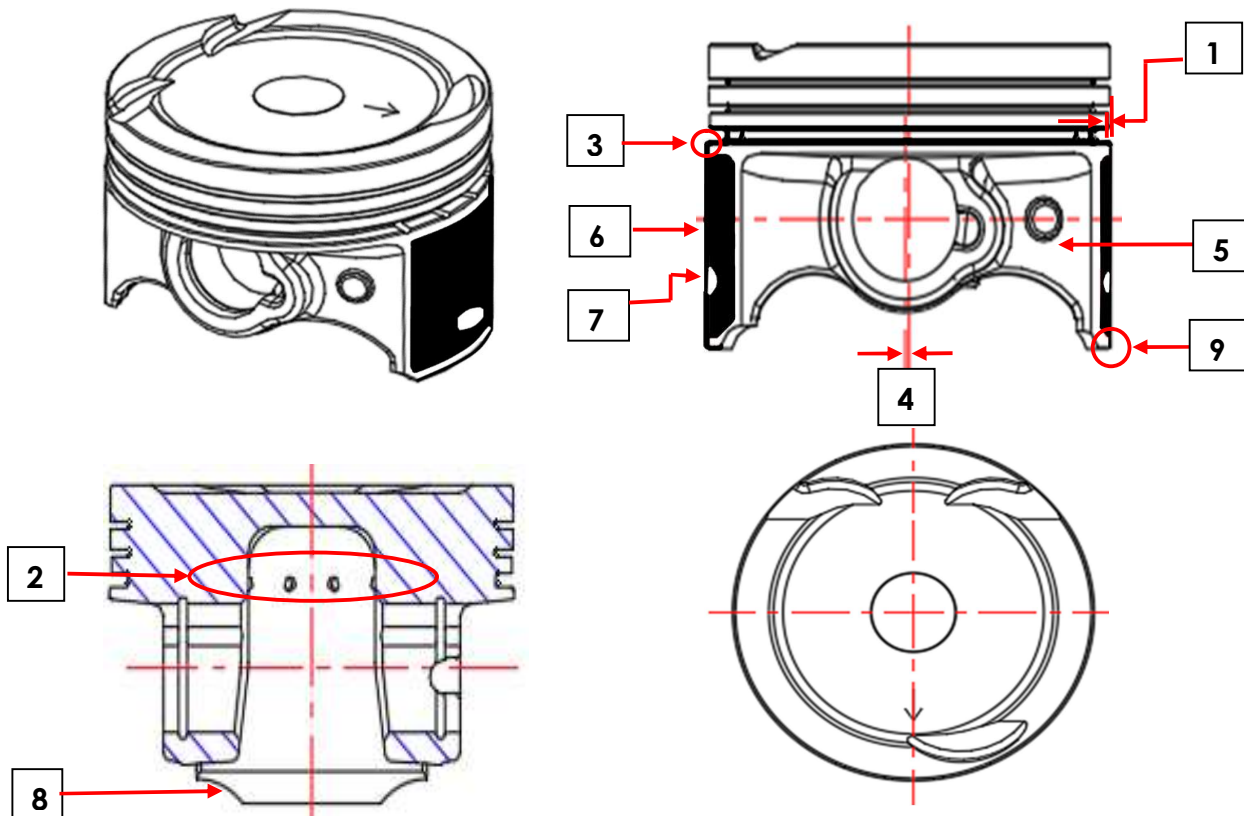
INTRODUCTION CIRCULAR – **TVS NTORQ 125cc BS-VI – PISTON ASSEMBLY**

USHA is pleased to launch **TVS NTORQ 125cc BS-VI** piston assembly in its Bi-wheeler product range.



This piston assembly has following special features:-

### PISTON:-



Unique features of USHA 'TVS NTORQ 125cc BS-VI' piston are as follows:-

SL. NO.	SPECIAL FEATURE	BENEFITS TO CUSTOMER
1)	<b>CUT BACK IN SECOND RING LAND:</b> TVS NTORQ 125cc BS-VI piston is provided with a cut back in second ring land for better seating, stability & functioning of intermediate ring.	<ul style="list-style-type: none"> <li>• Helps in controlling blow-by &amp; reducing oil consumption</li> </ul>
2)	<b>HOLES IN OIL RING GROOVE AREA:</b> This piston has been provided with 04 nos. of oil holes on each side of piston, half in the oil ring groove & half in the skirt.	<ul style="list-style-type: none"> <li>• Faster drainage of excess oil</li> <li>• Reduced oil consumption</li> </ul>
3)	<b>CHAMFER AT BOTTOM OF OIL RING GROOVE:</b> TVS NTORQ 125cc BS-VI piston has an all-round chamfer just below the oil ring groove area.	<ul style="list-style-type: none"> <li>• Provides all time lubrication to piston skirt</li> <li>• No piston seizure in extreme limits of normal working conditions</li> </ul>
4)	<b>PISTON - PIN BORE OFFSET:</b> This piston is provided with piston pin bore offset to avoid piston slap. Piston pin bore offset means that the centre line of piston is slightly offset from the centre line of pin bore. Due to this offset, piston tilts at TDC & BDC smoothly & prevents slapping with cylinder surface.	<ul style="list-style-type: none"> <li>• Reduced engine noise</li> </ul>
5)	<b>AS CAST RELIEF IN PIN BORE AREA:</b> TVS NTORQ 125cc BS-VI piston is provided with as cast relief in pin bore area which not only helps in faster drainage of oil towards sump but also in avoiding chances of seizure on minor axis.	<ul style="list-style-type: none"> <li>• Low oil consumption</li> <li>• Longer life</li> </ul>
6)	<b>'Nano-friKS' COATING ON PISTON SKIRT:</b> This piston is provided with 'Nano-friKS' coating on its skirt.	<ul style="list-style-type: none"> <li>• Helps in initial lubrication &amp; seizure free operation</li> <li>• Better wear resistance</li> <li>• Reduces engine noise</li> </ul>
7)	<b>MEASURING POINTS ON PISTON SKIRT:</b> Two points on both sides of piston skirt.	<ul style="list-style-type: none"> <li>• Provided for easy diameter verification</li> </ul>
8)	<b>SLIPPER DESIGN:</b> TVS NTORQ 125cc BS-VI is provided with Slipper design which helps in reducing piston weight.	<ul style="list-style-type: none"> <li>• Improves fuel efficiency</li> <li>• Low noise during engine working</li> </ul>
9)	<b>SCRAPPING CHAMFER:</b> A smooth chamfer is provided at the bottom end of the piston skirt.	<ul style="list-style-type: none"> <li>• Helps in regulating oil supply, reduces skirt wear &amp; hence longer life</li> </ul>

**TECHNICAL DATA – 'TVS NTORQ 125cc BS-VI' PISTON**

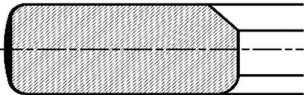
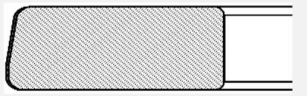
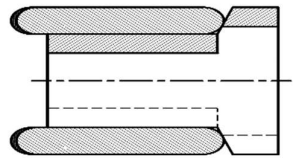
**USHA CODE → NCS82**

Nominal Bore Diameter	mm	53.50
Piston Diameter	STD Size mm	53.465
Recommended Piston-Liner Clearance	mm	00.035
Compression Height	mm	19.90
Total Height	mm	34.65
Gudgeon Pin Length X OD	mm	33.20 X 14.0

**PISTON RINGS:-**

USHA '**TVS NTORQ 125cc BS-VI**' piston is supplied with a unique **All steel, Ion Plated rails & Top ring, '3S IPVENT'** low close gap ring set for no smoke, low oil & fuel consumption. The technical details of '3S IPVENT' ring set are as under:

**TECHNICAL DATA – 'TVS NTORQ 125cc BS-VI' – '3S IPVENT' RINGS**

Ring	Ring Configuration	Axial Thickness (mm)	Closed Gap		Surface Treatment	Cross Section
			(mm)	(Thou)		
Top	Steel Inside Bevel (HPIBIP)	0.80	0.10-0.25	04-10	Ion Plating/ Parkerising	
Second	Steel Taper (HPCRT)	0.80	0.25-0.40	10-16	Chrome Plating/ Parkerising	
Oil	RIKVENT	1.50	0.10-0.40 (Rails)	04-16	Ion Plating on Rails/ Parkerising	

Above features make USHA '**TVS NTORQ 125cc BS-VI**' piston assembly unique, produced to give better performance & longer life.



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