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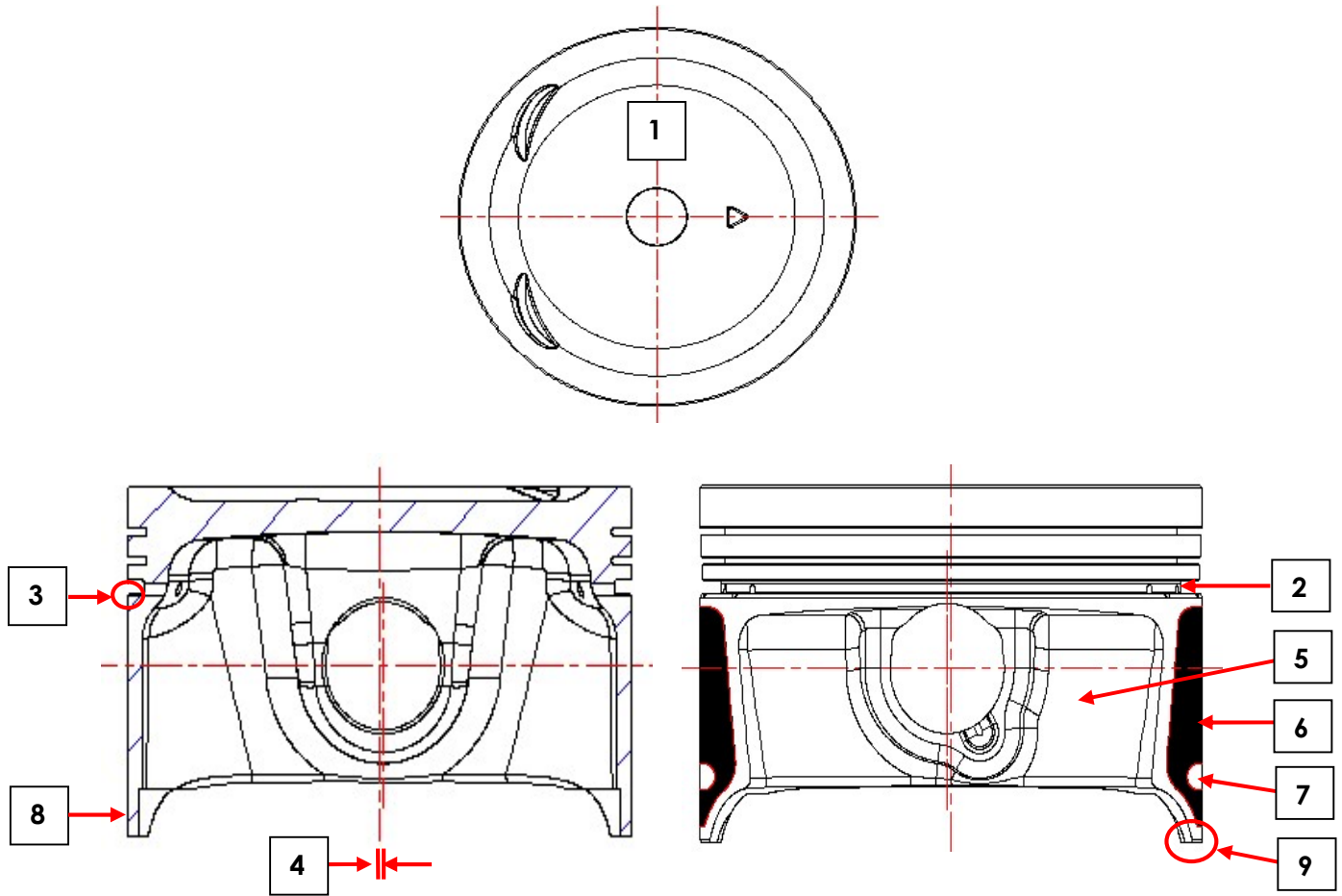
JUN'2021

An update from SHRIRAM PISTONS & RINGS LTD.

USHA[®] is pleased to launch 'TVS Apache 200cc 4V' piston assembly in its Bi-wheeler range.

This piston assembly has following special features:-

PISTON:-



Unique features of USHA 'TVS APACHE 200cc 4V' piston are as follows:-

SL. NO.	SPECIAL FEATURE	BENEFITS TO CUSTOMER
1)	AS CAST CROWN:- USHA Apache 200cc 4V piston has as cast crown i.e. no machining is done on crown of piston. As cast crown has better grain structure which increases the strength, heat resistance etc. of piston.	<ul style="list-style-type: none"> Improves piston life
2)	OIL HOLES IN RING GROOVE:- This piston has been provided with 04 nos. of oil holes on either side in oil ring groove.	<ul style="list-style-type: none"> Faster drainage of excess oil Reduced oil consumption
3)	CHAMFER AT BOTTOM FLANK OF OIL RING GROOVE:-	<ul style="list-style-type: none"> Better drainage of oil Reduces skirt wear

4)	PISTON - PIN BORE OFFSET:- USHA Apache 200cc 4V piston is provided with a 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 liner.	<ul style="list-style-type: none"> • Reduced engine noise
5)	AS CAST RELIEF IN PIN BORE AREA:- This piston is provided with as cast relief in pin bore which avoids the chances of seizure on minor axis & also helps in faster drainage of oil towards sump.	<ul style="list-style-type: none"> • Longer life • Low oil consumption
6)	'NANO-FRIKS COATING' ON PISTON SKIRT:- USHA Apache 200cc 4V piston is provided with a 'Nano-friKS' coating on its skirt.	<ul style="list-style-type: none"> • Helps in initial lubrication & seizure free operation • Better wear resistance • Reduces engine noise
7)	MEASURING POINTS ON PISTON SKIRT:-	<ul style="list-style-type: none"> • Provided for easy diameter verification
8)	SLIPPER DESIGN:- Slipper design helps in reducing piston weight & provides better guidance to piston movement.	<ul style="list-style-type: none"> • Improved fuel efficiency • Better guidance to rings • Low noise during engine working
9)	SCRAPPING CHAMFER:- A smooth chamfer is provided at the bottom end of the piston.	<ul style="list-style-type: none"> • Helps in regulating oil supply, reduces skirt wear & hence longer life

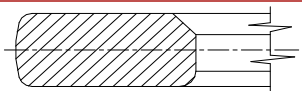
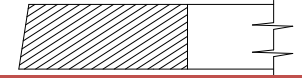
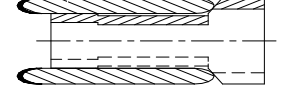
TECHNICAL DATA – 'TVS APACHE 200cc 4V' PISTON

		USHA CODE → S72
Nominal Bore Diameter	mm	66.000
Piston Diameter	STD Size mm	65.965
Recommended Piston-Liner Clearance	mm	00.035
Compression Height	mm	21.300
Total Height	mm	41.300
Piston Pin- Pin Bore Clearance	mm	+0.002 to +0.013 (Clearance fit)

PISTON RINGS:-

USHA 'APACHE 200cc 4V' piston is supplied with a unique 'HPVENT' ring set for low oil & fuel consumption. The technical details of 'HPVENT' ring set are as under:-

TECHNICAL DATA – 'TVS APACHE 200cc 4V' – 'HPVENT' RINGS

Ring	Ring Configuration	Axial Thickness (mm)	Closed Gap		Surface Treatment	Cross Section
			(mm)	(Thou)		
Top	Inside Bevel Steel	0.80	0.15-0.30	06-12	Gas Nitrided	
Second	Taper Special Steel	0.80	0.35-0.50	14-20	Parkerised	
Oil Ring	RIKVENT	1.50	0.20-0.70 (Rails)	08-28	Rails Chrome Plated/ Parkerised	



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