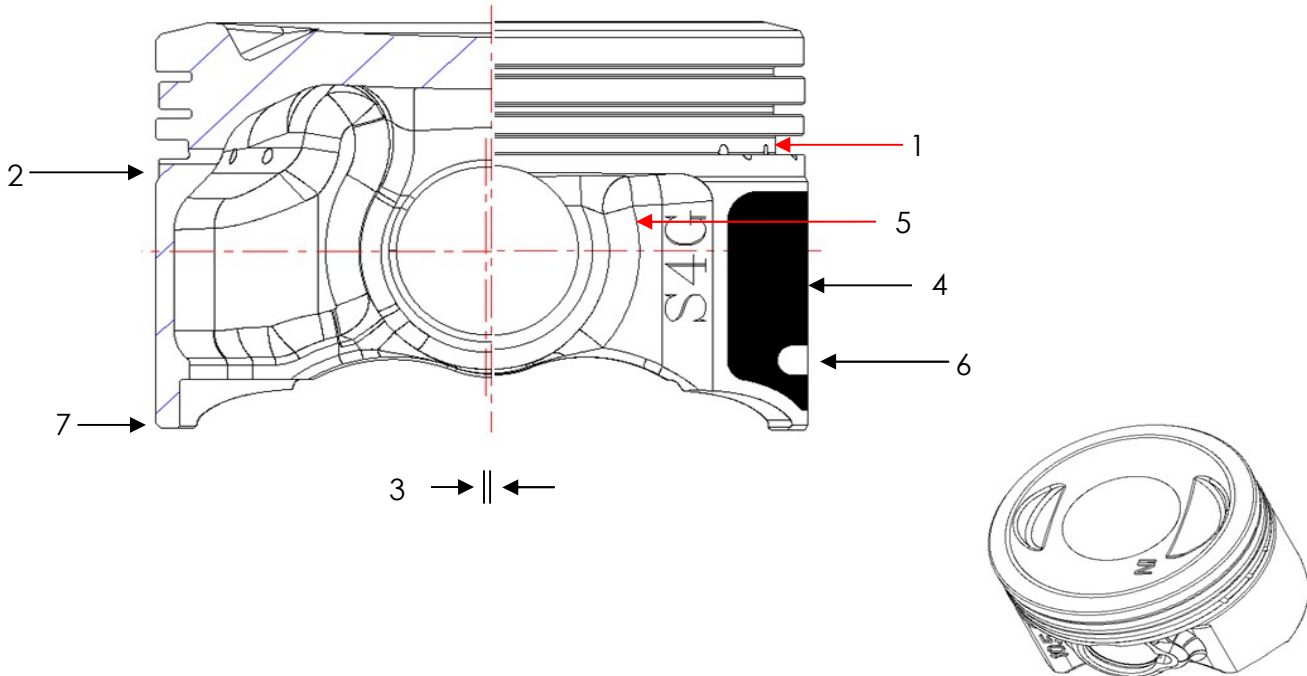


TECHNICAL BULLETIN - COMPACT BS-IV CNG PISTON ASSEMBLY

USHA is pleased to introduce COMPACT BS-IV CNG piston assembly in our three wheeler product range.

This piston assembly has following special features:



PISTON:

Unique features of USHA COMAPCT BS-IV CNG piston are as follows:

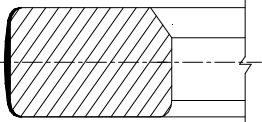
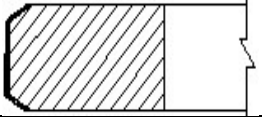
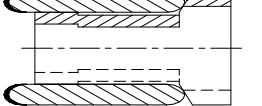
S.No.	SPECIAL FEATURES	BENEFITS TO CUSTOMERS
1)	OIL HOLES IN RING GROOVE	<ul style="list-style-type: none"> • Faster drainage of excess oil. • Lesser oil consumption.
2)	“J” CUT: This piston has been provided with a unique 'J' cut below the oil ring groove area.	<ul style="list-style-type: none"> • 'J' cut provides all time lubrication to Skirt. • No piston seizure in extreme limits of normal working conditions.
3)	PISTON- PIN BORE OFFSET: USHA Compact BS-IV pistons are 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 & slapping with liner is prevented.	<ul style="list-style-type: none"> • Reduced engine noise.
4)	SKIRT COATED WITH NEW “D-10” COATING:	<ul style="list-style-type: none"> • D-10 permanent coating provides better wear resistance & helps in initial lubrication to avoid piston scuffing/seizure etc.

5)	AS CAST RELIEF IN PIN BORE AREA: USHA Compact BS-IV pistons are provided with as cast relief in pin bore area which helps in better drainage of oil.	<ul style="list-style-type: none"> Less oil consumption.
6)	MEASURING POINTS ON THE SKIRT:	<ul style="list-style-type: none"> Provided for easy diameter verification.
7)	BOTTOM CHAMFER: A smooth chamfer is provided at the bottom end of piston which provides better hydrodynamic oil film.	<ul style="list-style-type: none"> Helps in regulating oil supply, reduced skirt wear and hence longer life.

TECHNICAL DATA- COMPACT BS-IV CNG PISTON		
		USHA CODE→ S55
Nominal Bore Diameter	mm	63.50
Piston Diameter	STD Size mm	63.464
Recommended Piston-Liner Clearance	mm	0.036
Compression Height	mm	23.12
Total Height	mm	41.12
Piston Pin- Pin Bore Clearance	mm	+0.015 to +0.016 (Clearance fit)

PISTON RINGS:

USHA Compact BS-IV CNG pistons are provided with HPVENT ring set for low oil consumption & blow-by. The technical details of HPVENT ring set are as under:

TECHNICAL DATA- COMPACT BS-III CNG RINGS: HPVENT						
Ring	Ring Configuration	Axial Thickness (mm)	Closed Gap		Surface Treatment	Cross Section
			(mm)	(Thou)		
Top*	HPIBCR	1.0	0.15-0.30	6-12	O.D Chrome Plated	
Second*	CRTSS	1.0	0.30-0.45	12-18	O.D Chrome Plated	
Oil Ring	RIKVENT	2.0	0.20-0.70 (Rails)	8-28	Rails Chrome Plated	

*Both top & second rings are Tough Rik coated which improves the ring performance at elevated temperature & prevents micro-welding.