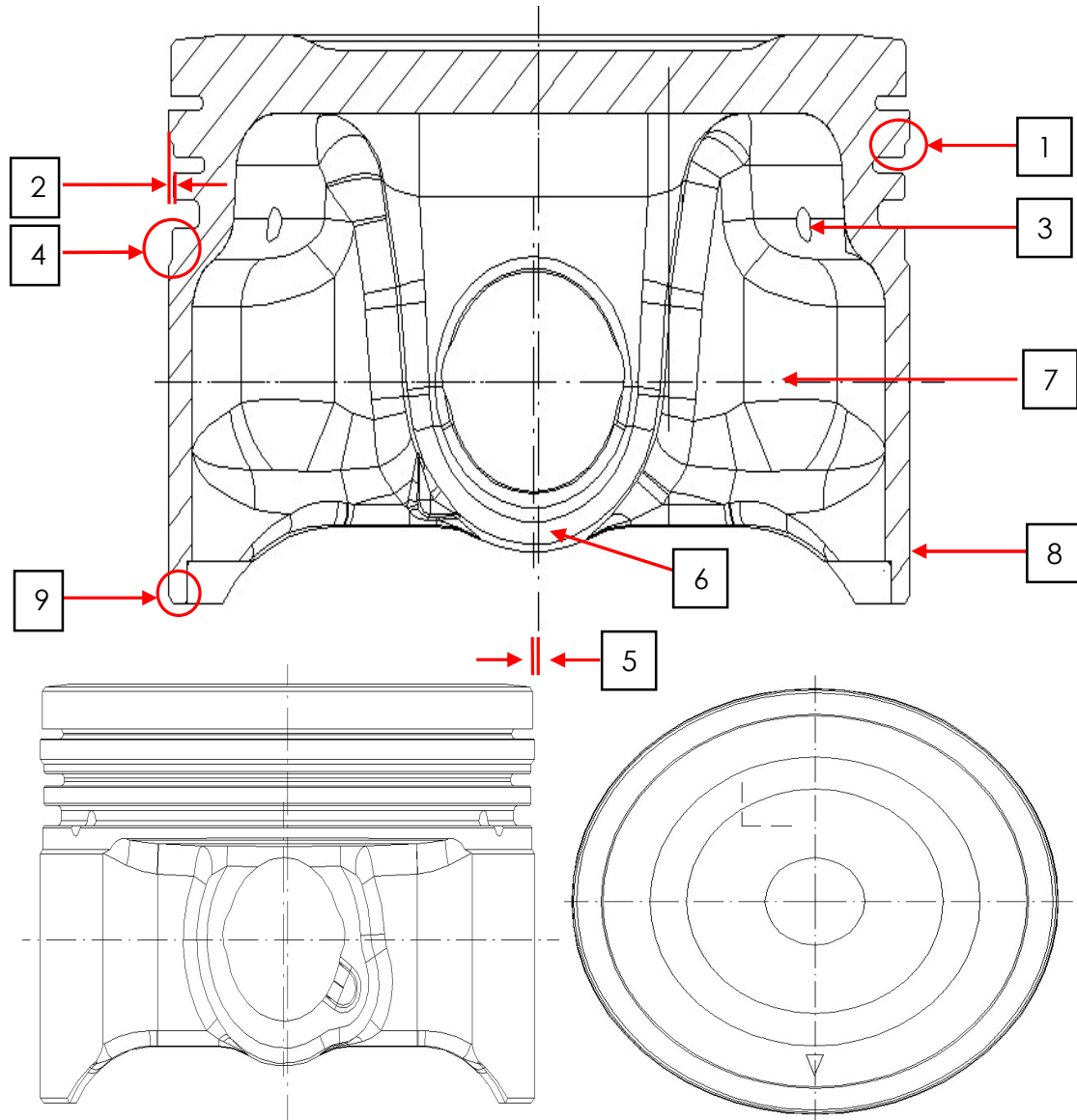


TECHNICAL BULLETIN – MARUTI ALTO 800cc NEW (YE-3) PISTON ASSEMBLY

USHA is pleased to introduce Maruti Alto 800cc New (YE-3) piston assemblies in our car product range.

PISTON:

USHA Maruti Alto 800cc New (YE-3) piston set has following special features:



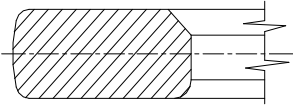
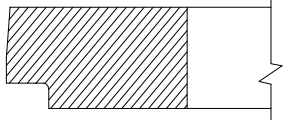
S.No.	SPECIAL FEATURES	BENEFITS TO CUSTOMERS
1)	STEP CUT IN RING LAND: Helps in perfect seating of the top ring on the bottom surface.	<ul style="list-style-type: none"> • Reduction in blow-by. • Lesser oil consumption.

2)	CUT BACK IN SECOND RING LAND: Land is slightly undersize to provide more space for faster drainage of oil scrapped by the second ring.	<ul style="list-style-type: none"> Helps in reducing oil consumption.
3)	OIL HOLES IN RING GROOVE: 02 holes each are provided on either sides of the oil ring groove.	<ul style="list-style-type: none"> Faster drainage of excess oil. Lesser oil consumption.
4)	"J" CUT: This piston is 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.
5)	PISTON- PIN BORE OFFSET: This 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 & slapping with liner is prevented.	<ul style="list-style-type: none"> Reduced engine noise.
6)	FORMBOLO: This piston is provided with a special formbolo profile in pin bore area.	<ul style="list-style-type: none"> Easy insertion of gudgeon pin in pin bore. Improved lubrication of gudgeon pin resulting in lesser pin-pin bore wear.
7)	AS CAST RELIEF IN PIN BORE AREA: This piston is provided with as cast relief in pin bore area which helps in better drainage of oil.	<ul style="list-style-type: none"> Lesser oil consumption. Improved strength in pin bore area.
8)	SLIPPER DESIGN: Slipper design in skirt helps in reducing piston weight & provides better guidance for piston movement.	<ul style="list-style-type: none"> Improved fuel efficiency. Better guidance to rings. Low noise during engine working.
9)	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- USHA MARUTI ALTO 800cc NEW (YE-3) PISTON SET		
		USHA CODE→C18
Nominal Bore Diameter	mm	68.50
Piston Diameter	STD Size mm	68.475
Recommended Piston-Liner Clearance	mm	0.025
Compression Height	mm	25.00
Total Height	mm	41.00
Gudgeon Pin (D X d X L)	mm	16.00 X 10.00 X 48.00

PISTON RINGS:

MARUTI ALTO 800cc NEW (YE-3) pistons are supplied with unique design HPVENT ring sets for low oil & fuel consumption. The technical details of HPVENT ring set are as follows:-

TECHNICAL DATA- MARUTI ALTO 800cc NEW (YE-3) RINGS : HPVENT						
Ring	Ring Configuration	Axial Thickness (mm)	Closed Gap		Surface Treatment	Cross Section
			(mm)	(Thou)		
Top	Inside Bevel Steel	1.20	0.12-0.26	5-10	Gas Nitrided	
Second	Taper OD Step	1.20	0.30-0.50	12-20	Parkerised	
Oil Ring	RIKVENT	2.00	0.20-0.50 (Rails)	8-20	Gas Nitrided Rails OD Chrome Plated	