



# SHRIRAM PISTONS & RINGS

MD: TS: 04/MAY'23

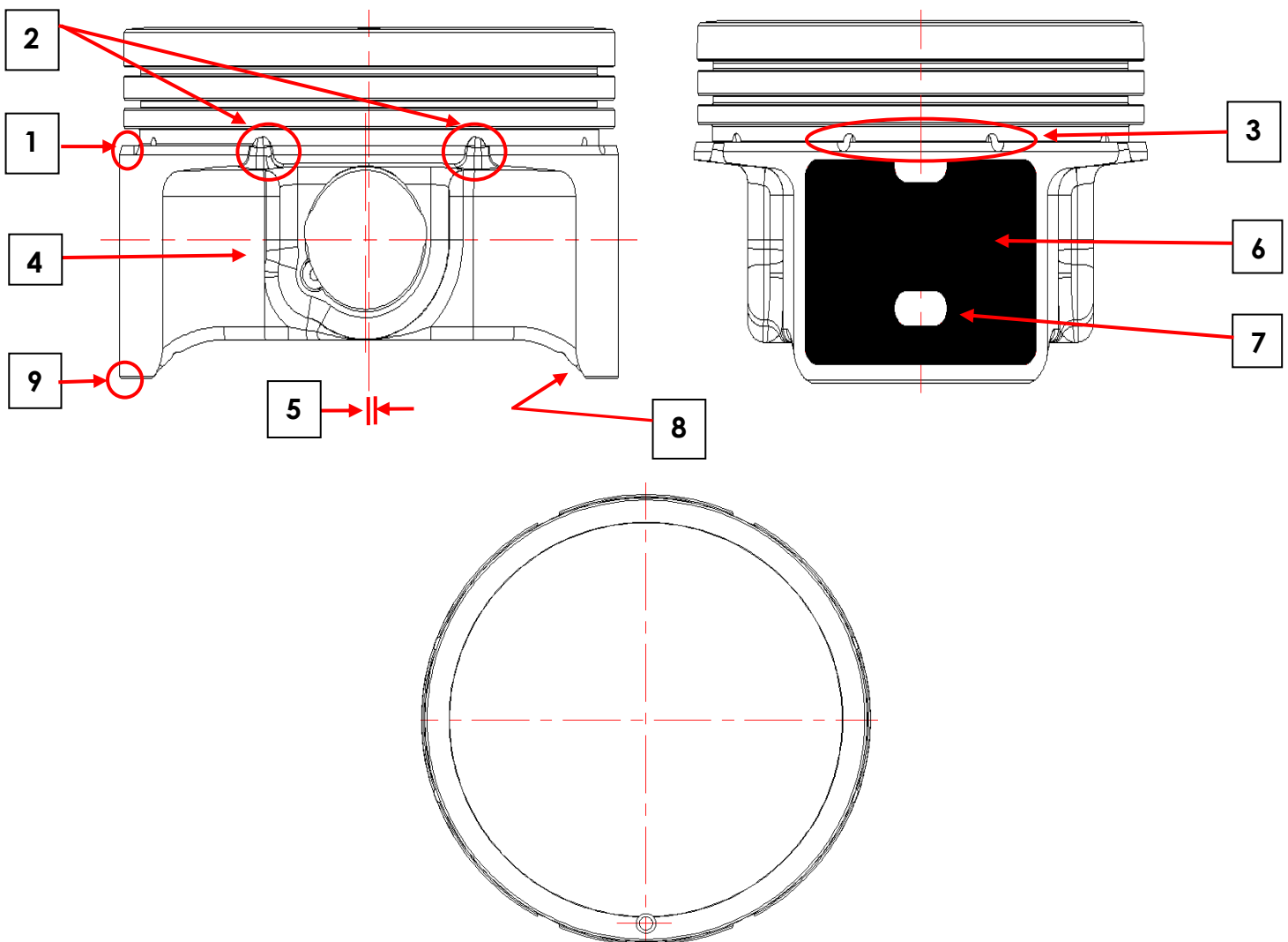
INTRODUCTION CIRCULAR – **MARUTI ALTO 800 (YE-3) MC** (2017 onwards) – **PISTON ASSEMBLY**

USHA is pleased to launch **Maruti Alto 800 (YE-3) MC** (2017 onwards) piston assembly in its Car product range.



This piston assembly has following special features:

## **PISTON:**



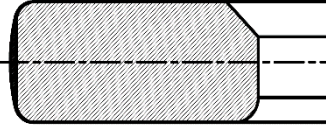

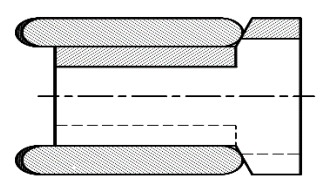
Unique features of this piston are as follows: -

SL. NO.	SPECIAL FEATURE	BENEFITS TO CUSTOMER
1)	<b>CHAMFER AT BOTTOM OF OIL RING GROOVE:</b> USHA Maruti Alto 800 (YE-3) MC 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>
2)	<b>QUICK OIL RETURN SLOTS (QORS):</b> Two nos. of Quick Oil Return Slots (QORS) are provided on either side of piston above the pin bore, half in groove & half in window.	<ul style="list-style-type: none"> <li>Quick drainage of oil, hence low oil consumption</li> </ul>
3)	<b>HOLES IN OIL RING GROOVE AREA:</b> In addition to QORS, 02 nos. of holes are also provided on either side of piston, half in groove & half in window.	<ul style="list-style-type: none"> <li>Faster drainage of excess oil</li> <li>Reduced oil consumption</li> </ul>
4)	<b>AS CAST RELIEF IN PIN BORE AREA:</b> As cast relief in pin bore area 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>
5)	<b>PISTON - PIN BORE OFFSET:</b> Piston pin bore offset is provided 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, that prevents slapping with liner.	<ul style="list-style-type: none"> <li>Reduced engine noise</li> </ul>
6)	<b>'D-10 COATING' ON PISTON SKIRT:</b>	<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>	<ul style="list-style-type: none"> <li>Provided for easy diameter verification</li> </ul>
8)	<b>SLIPPER DESIGN:</b> Slipper design 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 – 'MARUTI ALTO 800 (YE-3) MC (2017 onwards)' PISTON		
USHA CODE → C26		
Nominal Bore Diameter	mm	68.50
Piston Diameter	STD Size mm	68.48
Recommended Piston-Liner Clearance	mm	0.020
Compression Height	mm	24.50
Total Height	mm	40.50
Piston Pin length X diameter	mm	46.0 X 16.0
Piston Pin- Pin Bore Clearance	mm	+0.006 to +0.014 (Clearance fit)

**PISTON RINGS:-**

USHA 'Maruti Alto 800 (YE-3) MC (2017 onwards)' piston is supplied with a unique '3S IPVENT' ring set for low oil & fuel consumption. The technical details of '3S IPVENT' ring set are as under:

TECHNICAL DATA – 'MARUTI ALTO 800 (YE-3) MC (2017 onwards)' - '3S IPVENT' RINGS						
Ring	Ring Configuration	Axial Thickness (mm)	Closed Gap		Surface Treatment	Cross Section
			(mm)	(Thou)		
Top	Steel Inside Bevel (HPIPIB)	1.0	0.14-0.28	06-11	Ion Plating	
Second	Steel Outside Step Taper (HPTOS)	1.0	0.30-0.50	12-20	Parkerising	
Oil	RIKVENT	2.0	0.20-0.50 (Rails)	08-20	Ion Plating on Rails/ Parkerising	

Above features make USHA 'Maruti Alto 800 (YE-3) MC' piston assembly unique, produced to give better performance & longer life.



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