



## SHRIRAM PISTONS & RINGS LTD.

MD: TS: 40/JAN'25

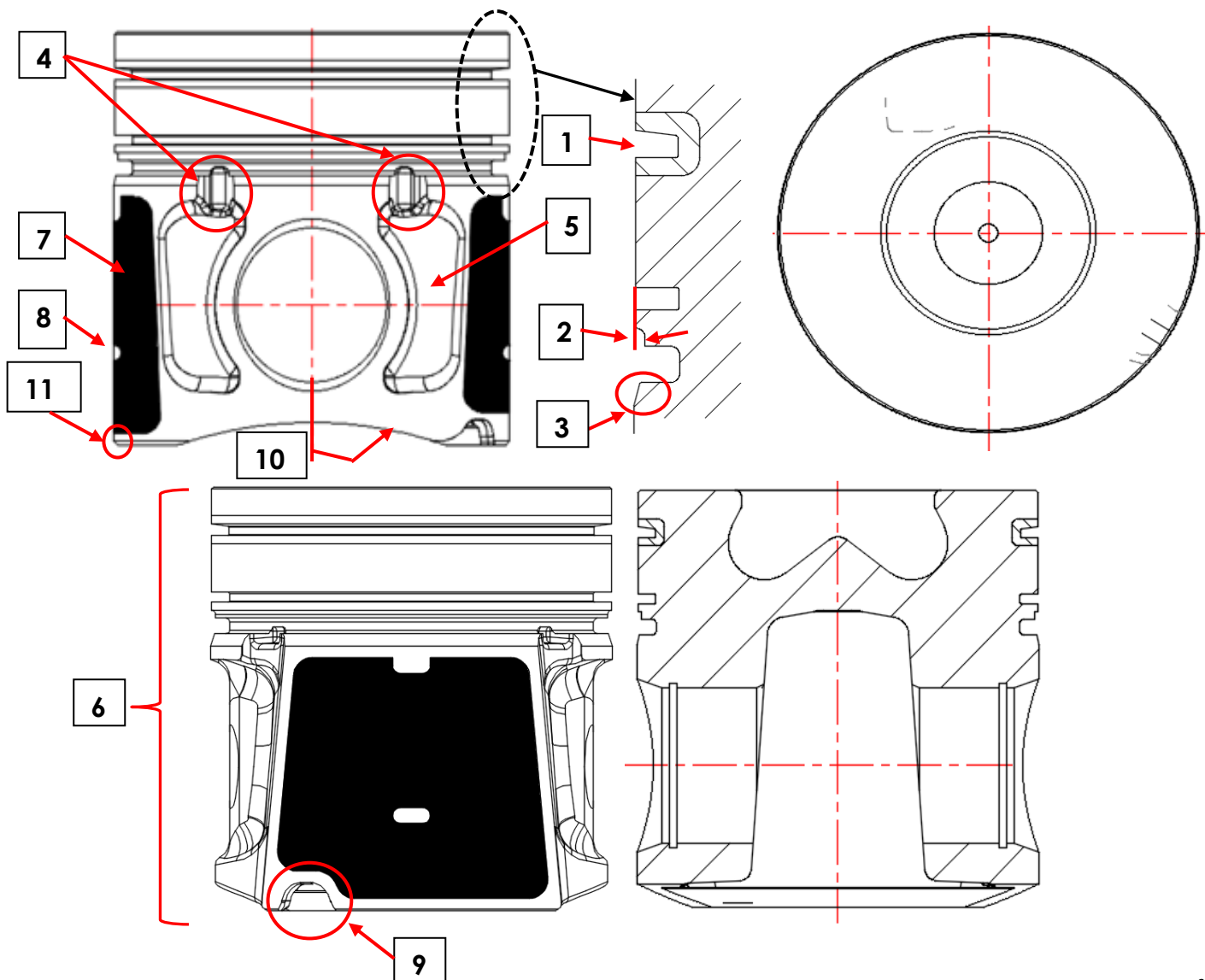
INTRODUCTION CIRCULAR – JCB 3DX - PISTON SET

USHA is pleased to launch **JCB 3DX** piston set in its aftermarket Construction/ Off-road equipment product range.



This piston set has following special features: -

### PISTON:-



Unique features of USHA **JCB 3DX** piston are as follows: -

SL. NO.	SPECIAL FEATURE	BENEFITS TO CUSTOMER
1)	<p><b>HIGH NICKEL WEAR RESISTANT RING CARRIER (RCP):</b> Top groove of this piston is made of high nickel wear resistant ring carrier insert which is manufactured using latest centrifugal casting technology.</p> <p><b>HALF KEYSTONE RING GROOVE GEOMETRY:</b> Upper flank of top ring groove has keystone geometry which helps in squeezing out excess oil from the groove preventing carbon deposition &amp; sludge formation. Bottom flank is kept flat which enables better seating of ring on groove.</p>	<ul style="list-style-type: none"> <li>• Longer life of piston due to negligible wear of top groove</li> <li>• Lesser blow-by towards sump</li> </ul>
2)	<p><b>STEP CUT IN 2ND RING LAND:</b> This piston is provided with a step cut in second ring land for better seating, stability &amp; functioning of intermediate ring.</p>	<ul style="list-style-type: none"> <li>• Helps in controlling blow-by &amp; reducing oil consumption</li> </ul>
3)	<p><b>CHAMFER AT BOTTOM OF OIL RING GROOVE:</b> An all-round chamfer is provided just below the oil ring groove area.</p>	<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)	<p><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 &amp; half in window.</p>	<ul style="list-style-type: none"> <li>• Faster drainage of excess oil, hence low oil consumption</li> </ul>
5)	<p><b>'AS CAST' WINDOW:</b> This window not only provides more space for oil drainage, but also provides more skirt area for piston ring guidance &amp; acts as reservoir for oil.</p>	<ul style="list-style-type: none"> <li>• Faster drainage of excess oil towards sump for low oil consumption</li> <li>• Reduces chances of seizure at minor axis, hence longer piston life</li> </ul>
6)	<p><b>PISTON SURFACE COMPLETELY BONDERISED:</b></p>	<ul style="list-style-type: none"> <li>• Bonderising helps in preventing oxidation of piston</li> <li>• Also provides porous surface for oil retention, thereby reducing wear</li> </ul>
7)	<p><b>'Nano-friKS COATING' ON PISTON SKIRT:</b></p>	<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>
8)	<p><b>MEASURING POINTS ON PISTON SKIRT:</b></p>	<ul style="list-style-type: none"> <li>• Provided for easy diameter verification</li> </ul>

9)	<b>SLOT FOR PISTON COOLING NOZZLE (PCN) JET:</b> Provides room for oil cooling jet.	<ul style="list-style-type: none"> <li>Helps in directing oil flow underneath piston combustion cavity for faster dissipation of heat.</li> </ul>
10)	<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>
11)	<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 – JCB 3DX PISTON	
USHA CODE→ <b>T40</b>	
Nominal Bore Diameter	106.00
Piston Diameter	105.84
Recommended Piston-Liner Clearance	0.16
Compression Height	70.78
Total Height	107.18
Gudgeon Pin Length X OD	85.00 X 40.00
All dimensions in 'mm'	

Above features make USHA **JCB 3DX** piston set unique, produced to give better performance & longer life especially when fitted with USHA '**CPC**' ring set of subject model.



Technical Product News is an exclusive update of product & information from  
 Shriram Pistons & Rings Ltd., 3rd Floor, Himalaya House, 23, Kasturba Gandhi Marg, New Delhi-110001  
 Tel: 011-46451100, 23315941, Email: [tss@shrirampistons.com](mailto:tss@shrirampistons.com), Website: [www.shrirampistons.com](http://www.shrirampistons.com)