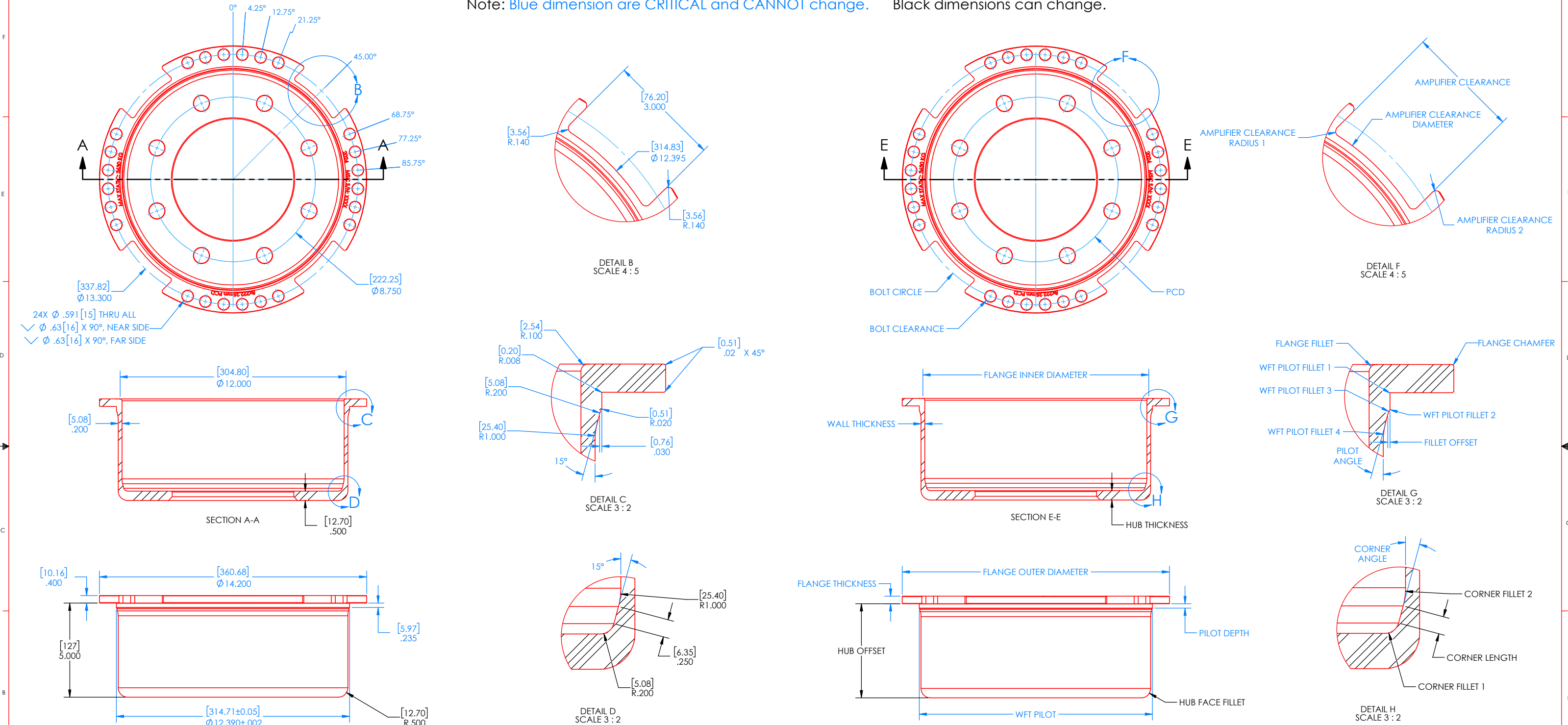


LW-2T-30K/40K Hub Adapter Design Guide

Note: Blue dimension are CRITICAL and CANNOT change. Black dimensions can change.



It is essential that the adapters match the recommended guidelines. This will ensure the system can withstand the rated loads and provide the most accurate results. The critical features are shown in blue. Customers may change all other geometry. Examples of permitted changes are shown on the second sheet.

The "HUB THICKNESS" should not be less than 0.350 in (8.89 mm).

Detail D shows geometry that reduces the material stresses to increase the adapter fatigue life.

Michigan Scientific Corporation (MSC) machines hub adapters from 4340 Q&T steel. The material should have a yield strength of at least 690 MPa (100 ksi) and a hardness between 30 and 40 HRC. If a weaker material is used, the thickness of the hub adapter sections might need to increase. MSC recommends a surface roughness ≤63 µin (1.6 µm).

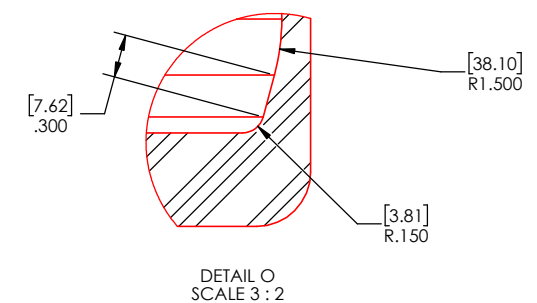
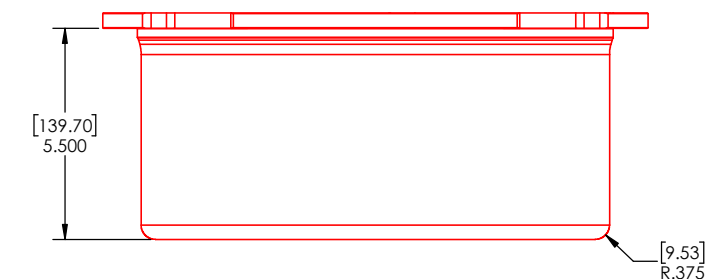
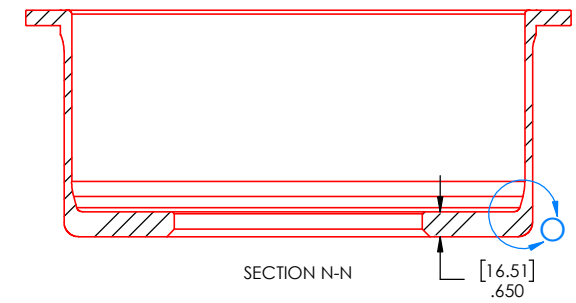
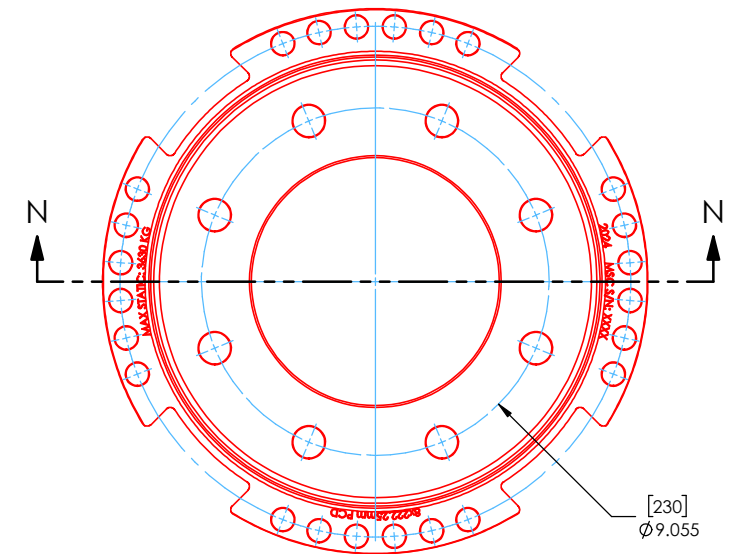
MSC verifies all rim and hub adapter assemblies using FEA to simulate the SAE J328 wheel durability standard. This should be done with all adapter systems to verify the load ratings and fatigue life of the adapters. The LW-2T-30K has an SAE J328 static load rating of 6,000 lbs (2,720 kg.) The LW-2T-40K has an SAE J328 static load rating of 8,000 lbs (3,630 kg.) This should never be exceeded.

MSC can check your adapter designs at no cost. Contact MSC online at michsci.com/contact-us or via phone at 1-231-547-5511.

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UNLESS OTHERWISE SPECIFIED:		DATE	NAME	 MICHIGAN SCIENTIFIC CORPORATION 8500 ANCE ROAD CHARLEVOIX, MICHIGAN 49720 www.michsci.com
DIMENSIONS ARE IN INCHES		03/08/24	J.P. BAILEY	
TOLERANCES:		DESIGNED	07/31/24	J.P. BAILEY
XXX ±.005		CHECKED	07/31/24	J.P. BAILEY
XX ±.01		ENG APPR	07/31/24	J.P. BAILEY
XX ±.01		MFG APPR	07/31/24	J.P. BAILEY
ANGULAR: MATCH		CUSTOMER CODE		PROJECT CODE
BEND ±		DESCRIPTION		
WEIGHT		DWG. NO.		REV
MATERIAL		LW-2T-30K & -40K Hub Adapter Design Guide		A
FINISH		SCALE: 2:5		SHEET 1 OF 3
PROPRIETARY AND CONFIDENTIAL		THIS DRAWING IS THE SOLE PROPERTY OF MICHIGAN SCIENTIFIC CORPORATION. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF MICHIGAN SCIENTIFIC CORPORATION IS PROHIBITED.		

Note: Blue dimension are CRITICAL and CANNOT change. Black dimensions can change.

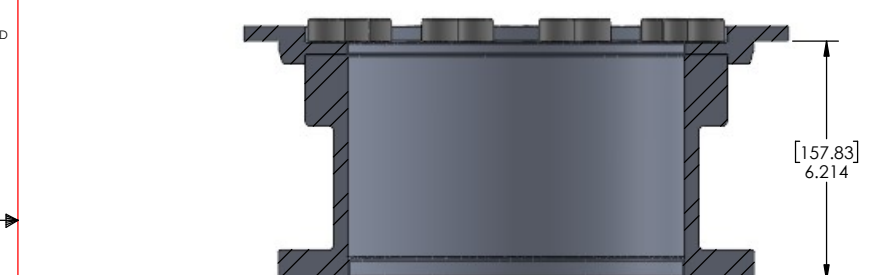
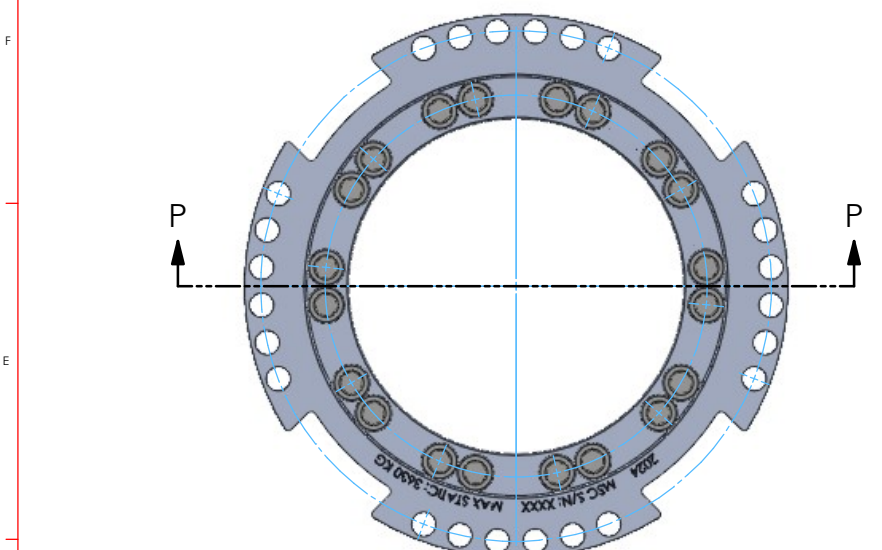


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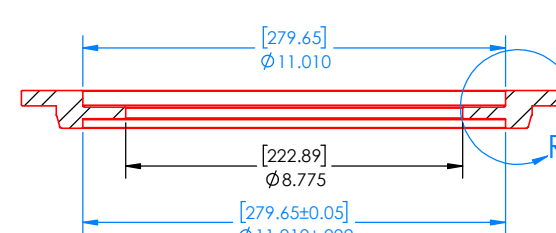
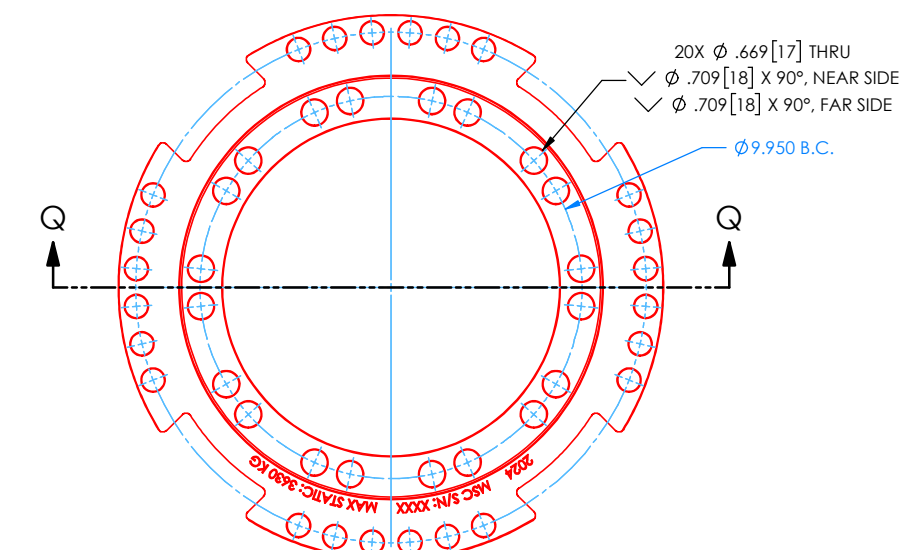
NEEDS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: .XXXX ±.0010 .XXX ±.005 .XX ±.01 FRACTIONAL: ANGULAR: MACH ± BEND ± WEIGHT		DATE 03/06/24 DESIGNED 07/31/24 CHECKED 07/31/24 ENG APPR 07/31/24 MFG APPR 07/31/24	NAME JPBALAY - JPBALAY - JPBALAY - JPBALAY	 MICHIGAN SCIENTIFIC CORPORATION 8500 ANGER ROAD CHARLEVOIX, MICHIGAN 49720 www.michsci.com	
		PRODUCT TYPE: LW-2T-30K & LW-2T-40K		CUSTOMER CODE:	PROJECT CODE:
MATERIALS ASQ 3400 IRV Q&T FINISH		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MICHIGAN SCIENTIFIC CORPORATION. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF MICHIGAN SCIENTIFIC CORPORATION IS PROHIBITED.		SIZE  DWG. NO. LW-2T-30K & 40K Hub Adapter Design Guide	REV 
		SCALE: 2:5		SHEET 2 OF 3	

A horizontal number line with tick marks labeled 1 through 8. A downward-pointing arrow is located between the numbers 4 and 5.

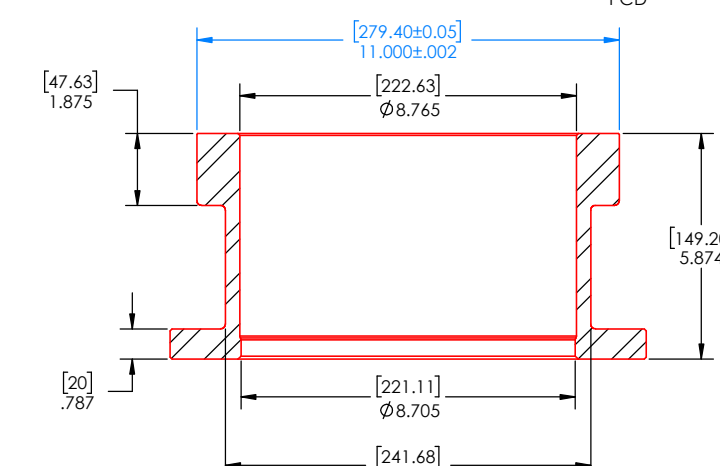
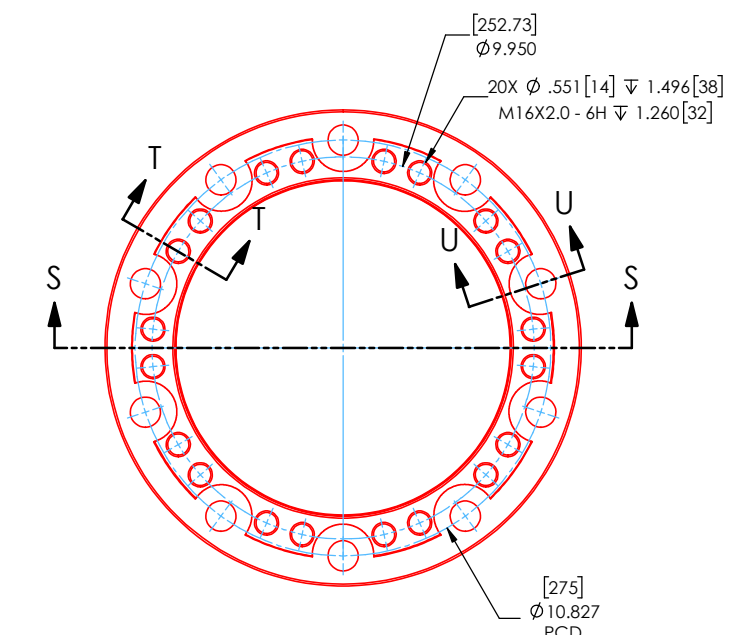
Note: Blue dimension are CRITICAL and CANNOT change. Black dimensions can change.



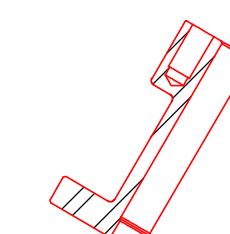
SECTION P-P



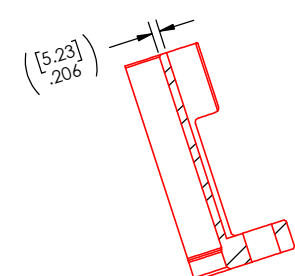
SECTION Q-Q



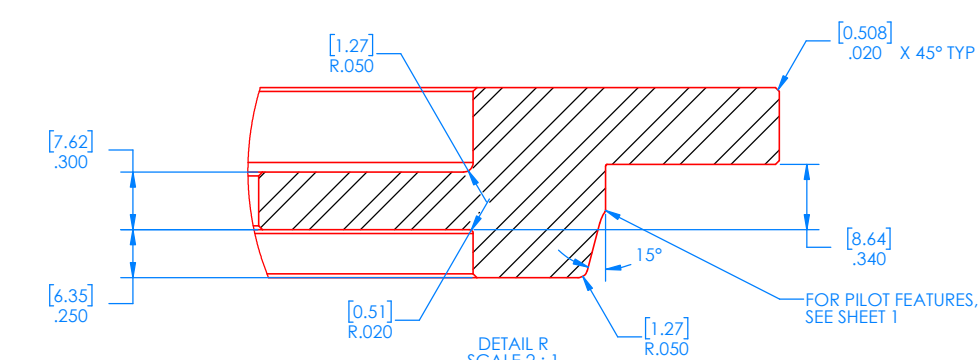
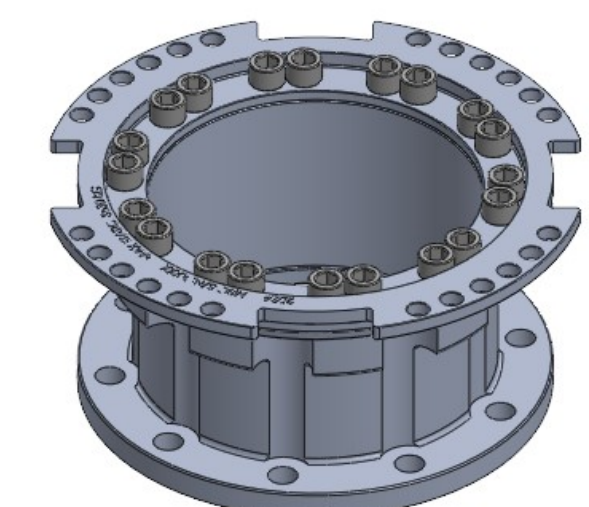
9.515
SECTION S-S



SECTION T-T



SECTION U-U



DETAIL R
SCALE: 2:1

If the vehicle's PCD approaches 275 mm [10.827 in], a two-piece hub adapter is required. This is shown above with specific dimensions called out. For all other dimensions, reference Sheet 1. This design has a few special challenges.

- Check that the lug nuts do not interfere with the rim adapter.
- Check that there is enough clearance to properly tighten & torque the lug nuts. Machining clearance for the lug nut could require special tooling.
- Check that there is enough material between the lug nut clearance and inner diameter of the hub adapter. (Section U-U)

Please contact MSC with any questions.

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DIMENSIONS ARE IN INCHES TOLERANCES: XXXX ±.010 XXX ±.005 XX ±.01 REACTORIAL ANGLE: MACH ±.010 BEND ±.010 NEC'D		DRAWN 03/08/24	JBRULEY	
		DESIGNED 03/01/24	JBRULEY	PROJECT NO: FW-2T-30K & LW-2T-40K
		CHECKED 07/31/24	JBRULEY	
		ENG APPR. 07/31/24	JBRULEY	CUSTOMER CODE:
		MFG APPR. 07/31/24	JBRULEY	PROJECT CODE:
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MATERIAL:	SIZE		DWG. NO.	REV
FRESH	D		LW-2T-30K & -40K Hub Adapter Design GIG	A
	SCALE: 2:5		SHEET 3 OF 3	