

REVISION CONTROL SHEET

LETTER	DESCRIPTION	DATE	AUTHOR	APPROVED BY	CURRENT OVERSIGHT
A	First Issue, created from an uncontrolled document from P. Kroon files, formalized with this issue to be deactivated and maintained for future reference	3/26/2007	D. Lynch	n/a	D. Lynch
De-activated	Installation completed long ago. This procedure may be revised/re-activated in the future when and as necessary for maintenance/upgrade or decommissioning purposes.	3/26/2007	D. Lynch	D. Lynch, R. Pisani, P. Giannotti for PHENIX	D. Lynch

Central Magnet Coil Installation

Preparation

Before installing any of the coils, both poles of the central magnet must be prepared in the following manner.

1. Mylar tape is to be placed on the back wall of each coil slot.
2. Stack 10 1' X 8' X 0.03" sheets of G-10 on the top quadrant of the central magnet.
3. 1/32" of G-10 is to be placed on the back wall of the coil lead slot.
4. Silver plate the exposed copper on the tab of both sides of each coil. This is to be done as per the proper safety precautions.

Coil Installation

I. North Pole: DWG AAA93-101878-0B

1. Install BUS BAR #2 (item 8) and FLAG CONTACT PAD (item #3) onto cross lead coil (item #2).
2. Transport coil to north pole of central magnet as per "Central Magnet Coil Lifting Fixture" procedures. Make sure that the coil is stamped cross lead. Note that the side reading FRONT should be facing away from the pole. These identifications are stamped in blue ink near the tab of the coil.
3. Secure the first coil (with bus bar) flush against the wall of the north pole.
4. Shim the two side quadrants with 2 inch strips of G-10 until secure. Do not force the shim.
5. Repeat step 2 for remaining 5 coils alternating crossed lead-open lead. Each coil is to be separated by a FLAG CONTACT PAD (item #3) and bolted according to proper bolt specifications.
6. The full assembly is shown on DWG # 93-101878.

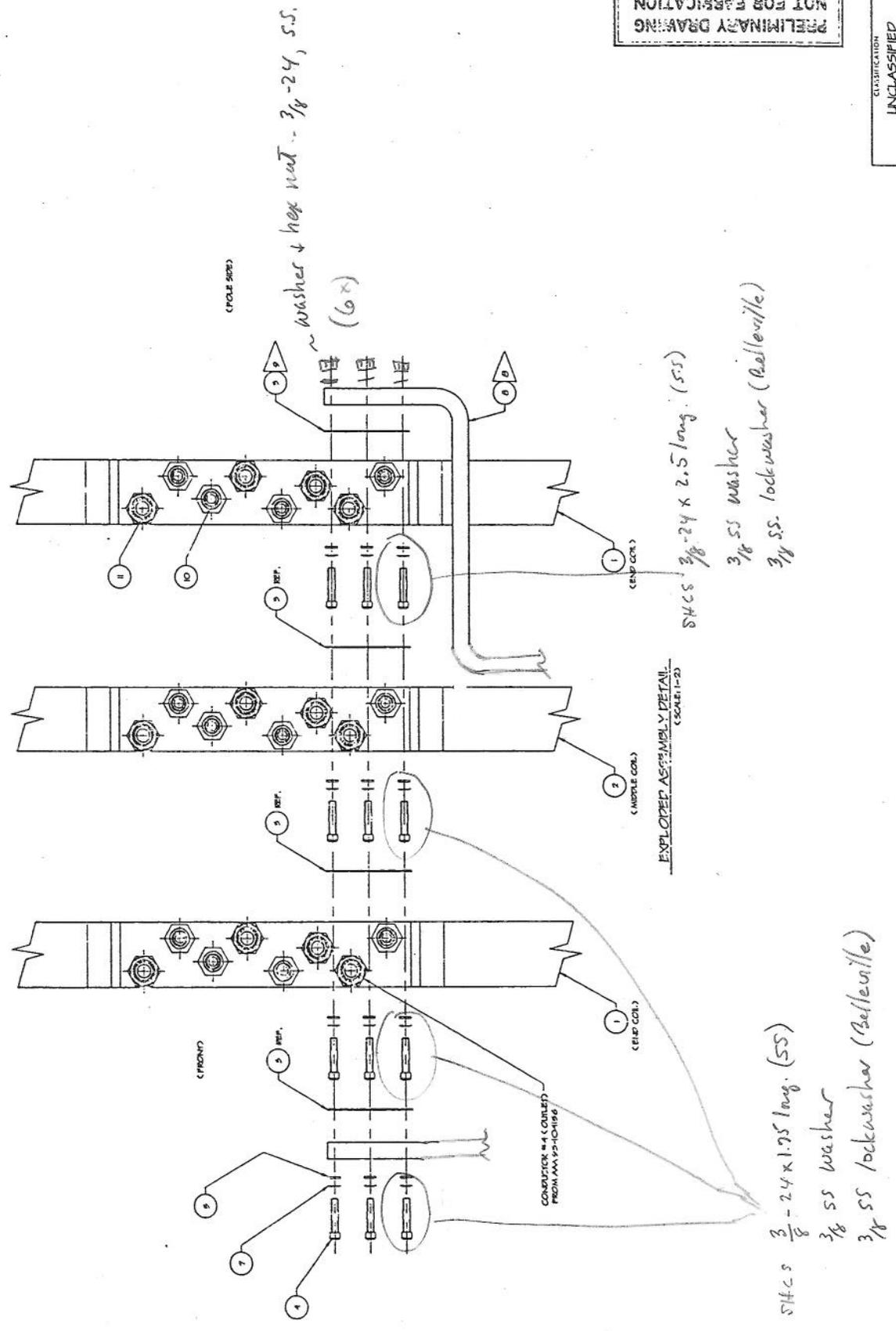
II. South Pole: DWG AAA93-101879-0B

1. The procedures for the south pole remain the same, however the first coil in this case would be an open lead coil.
2. The full assembly is shown on DWG # 93-101879

GENERAL NOTES: (SEE SHEET 1,2)
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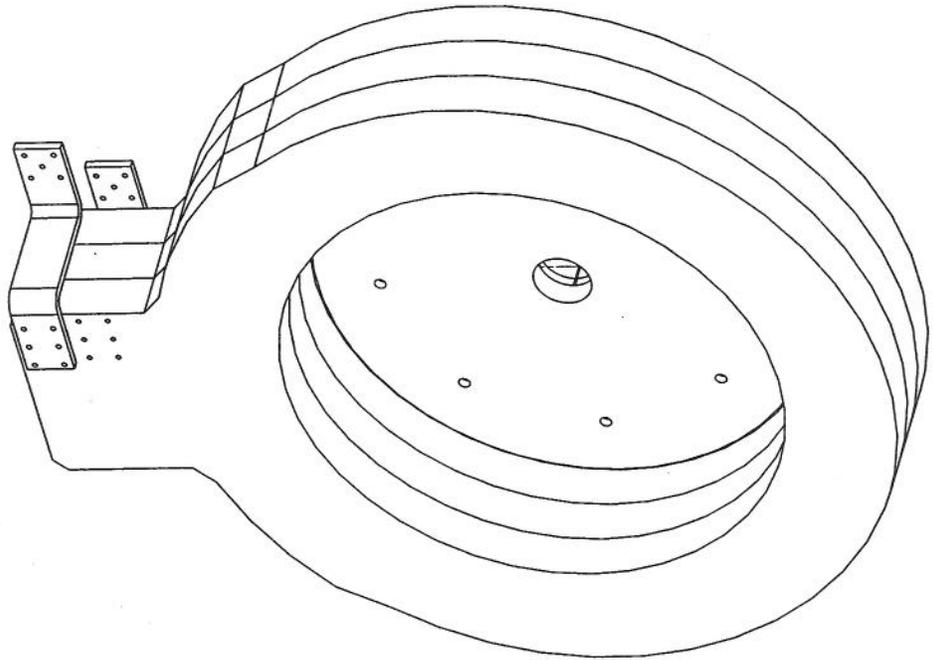
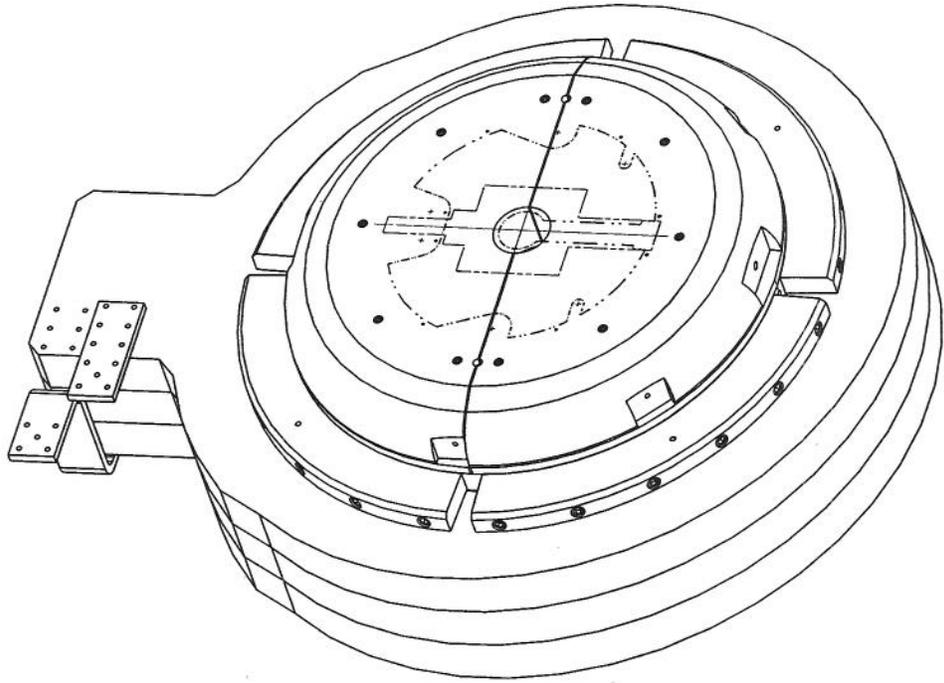
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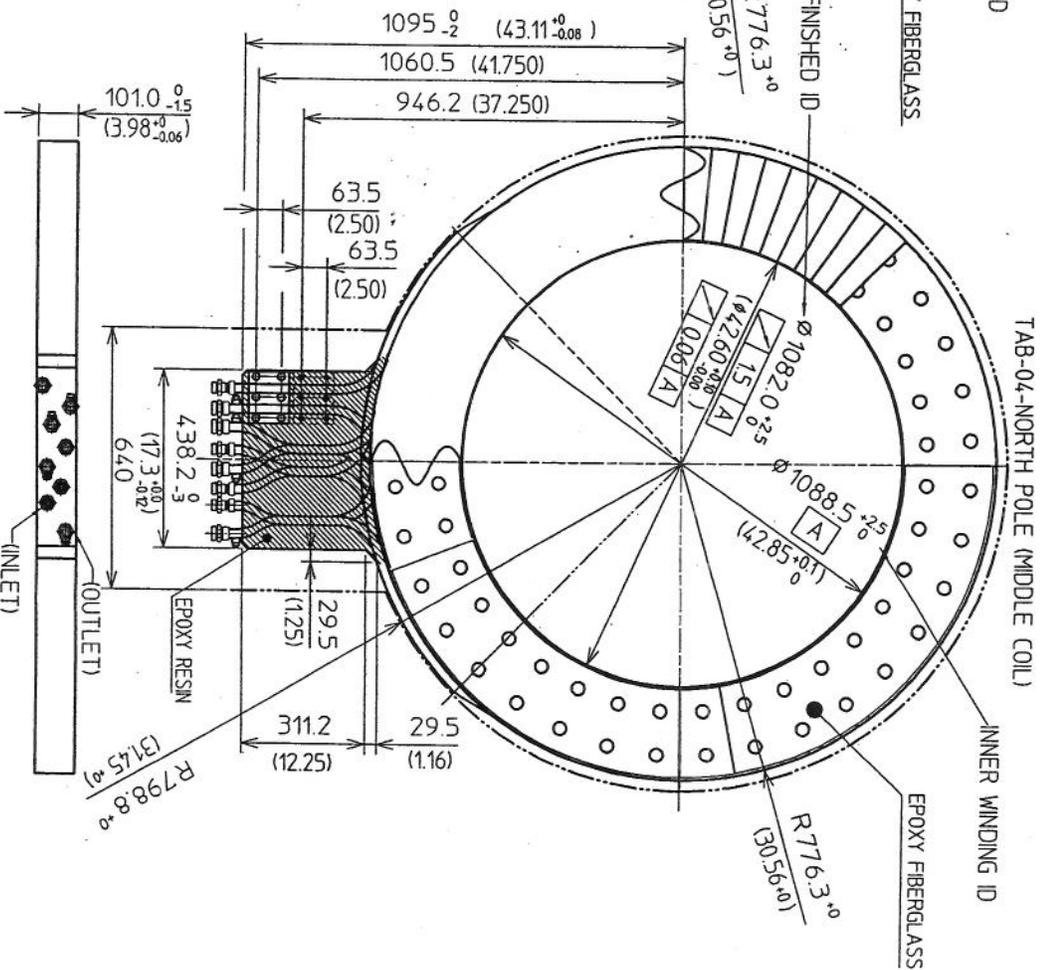
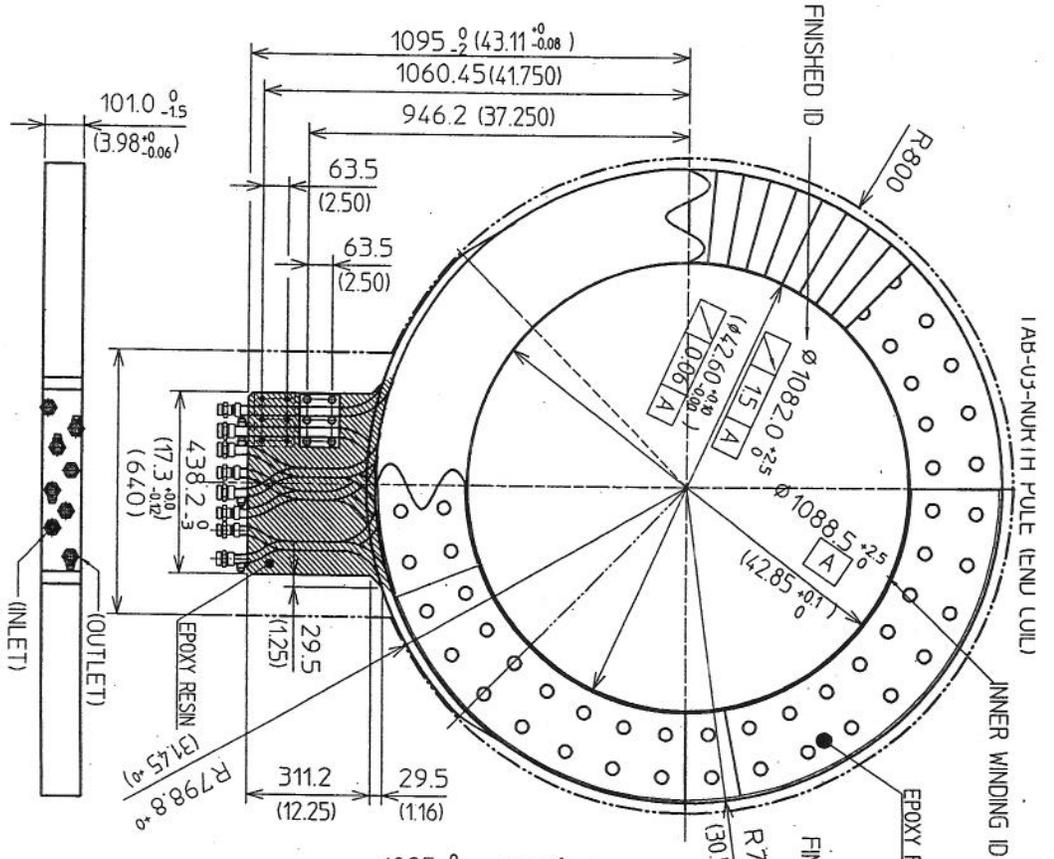
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Coil Installation – CM Inner coils

1. **Coil weight = 1055 Lb.(Calculated)**
2. .010 to .020 inch Mylar on vertical surfaces behind coils and connection flags (west side only), beside Hall probe assembly.
3. Each coil has a specific position in the stack up. Coils 1 to 3 in one set (south), installed in that order, and 4 to 6 in the other (north), installed in that order. In all cases the face labeled “FRONT” faces the IP.
4. Before inserting first coil on north or south (Coil # 1 and #4), attach buss bar per drawing, with connection pad – torque to 30 Ft-Lb. Also use 30 Ft. Lb. In connecting coils to each other, with connection pads between.
5. Adjust coil support bracket on face of pole piece such that coil inner surface is above shim heights, so it will slide in and drop.
6. Use FR-4 shims at top pole surface to shim coils to provide nominal 5/16 radial clearance at top. Use 45 inch long shims for first ¼ inch, then a 33 inch long shim for last 1/16 inch. Shims should be centered on top. Watch clearance at bottom of coil on outside, where coil is thicker in radius. There should be at least 1/16 clearance to outside of coil slot. If necessary, add more shimming on top.
7. Shim the two side quadrants with 3.5-inch wide strips of G-10 until secure. Shim lengths about 12 inch placed between 3 and 4 o'clock and 8 and 9 o'clock. Do not force the shims.





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APVD	SCALE 1 : 12	UNIT	mm
CHK			
DWN			
TOKIN		NORTH POLE COIL	
Tokin Corporation		KEK-COIL-INNER-03	

