



Fermilab

8/31/90

To: Reid Rihel
 From: Jim Strait *Jim Strait*
 Subject: DC0302 Collaring Shims and Spot Heaters

In addition to the normal ground insulation adhesive backed Kapton strips of the following thicknesses should be added to the pole faces of the inner coil and the outer coil. (The thickness listed here refers to the label written on the tape spool by Imre Gonczy. The actual thickness in the magnet is not precisely known at this point because of uncertainties in the thickness of the adhesive layer under the high stresses in the coil.)

Inner coil: 2 layers of 5 mil + 1 layer of 1 mil Kapton

Outer coil: 2 layers of 5 mil Kapton

The extra Kapton should be extended as far as possible into the end of the coil with the ends of the different Kapton layers staggered by about 3/16".

This memo supercedes the one from me on the same subject dated 8/22/90.

cc: Rodger Bossert
 John Carson
 Steve Delchamps
 Wayne Koska
 Gale Pewitt
 Gary Sliwicki
 Masayohsi Wake

To File:

For 2nd attempt, with replaced inner coil, use

inner: 2 layers of "5" mil Kapton

outer: 1 layer of "5" mil, 1 layer of "3.5" mil

Per discussion with John Carson 9/17/90.

Jim Strait

	base	ball	flat	IMRE
DSO30P inner:	4.9	5.8	6.7	
	<u>4.7</u>	<u>5.8</u>	<u>6.7</u>	
	9.8	11.6	13.4	12.2

→ correct pressures	+1.5	+1.5	+1.5	
	<u>11.3</u>	<u>13.1</u>	<u>14.9</u>	

DSO30P inner				
DSO311-DC0302	-0.8	-0.8	-0.8	
Desired	<u>10.5</u>	<u>12.3</u>	<u>14.1</u>	
Closest choice	9.8	11.6	13.4	

Choice - Desired	-0.7	-0.7	-0.7
Alt	10.3	12.5	15.0
(Alt - Desired)	-0.2	+0.2	+0.9

	base	ball	flat	
DSO311 outer	4.9	5.8	6.7	
	<u>0.5</u>	<u>0.9</u>	<u>1.6</u>	
	5.4	6.7	8.3	7.4

correct pressures	+0.5	+0.5	+0.5	
	<u>5.9</u>	<u>7.2</u>	<u>8.8</u>	

DSO311-DC0302	+3.7	+3.7	+3.7	
Desired	<u>9.6</u>	<u>10.9</u>	<u>12.5</u>	

Closest choice	9.8	11.6	13.4	
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Choice - Desired	+0.2	+0.5	+0.9
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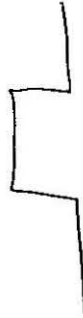
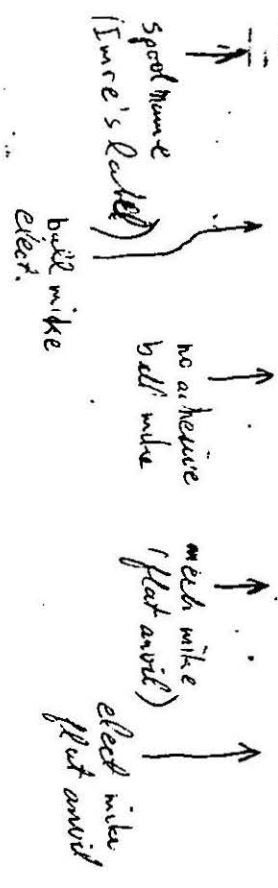
Alt Choice	6.7	8.5	10.4
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Alt - Desired	-2.9	-2.4	-2.1
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<u>Shims</u>	<u>√</u>	
(12/7) "Desired"	10.6/8.7	
(11.3/7.2) - 0.7/+0.2	9.1/9.4	
(11.3/7.5) - 0.7/+0.5	8.9/9.8	
(11.3/7.9) - 0.7/+0.9	8.7/10.4	
(11.3/4.1) - 0.7/-2.9	11.1/5.1	} used for 2nd attempt.
(11.3/4.6) - 0.7/-2.4	10.7/5.8	
(11.3/4.9) - 0.7/2.1	10.6/6.2	
(11.8/7.2) - 0.2/+0.2	10.1/9.1	} used for first attempt
(12.2/7.5) + 0.2/+0.5	10.6/9.3	
(12.9/7.9) + 0.9/+0.9	11.7/9.4	

2.7 = 1.8
 3.8
 3.7
 APT = 2 m | Comp 1 m |
 root = 1 m | Comp 0.6 m |

5.0 = 5.8 4.9
 6.0 6.7
 APT = 1.7 m | Comp 1 m |
 APT = 2 m | Comp 1 m |



3.5 w/5' stand and w/ FDIH w/ FDIH

1.0

5.0 6.4

4.7

.2 From Kaplan

2.5

Steve Delchamps 406-1463

8-11 = 3
 7-11 4 9.5
 8-13 5 10.5

PAOK B