

November 19 2020 by Felix Archampong

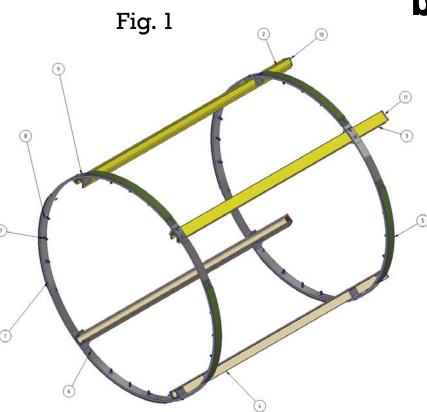


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 - SS Ring Assembly
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Tia 2

		E I	lg. Z
4	11	END CAPS	HALLOW RAIL STOP CAPS
8	10	93615A380_McMASTER	SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE_10-32 X 1/2L
16	9	93615A410_McMASTER	SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE
32	8	94805A029_McMASTER	HEX NUT_TYPE 316 STAINLESS STEEL THIN
24	7	62126362 OAL VLIER_MSC	SWIVEL PADSTAINLESS STEEL_1/4-20
16	6	99637A430_McMASTER	BINDING BARREL AND SCREW_18-8 STAINLESS STEEL
8	5	Support Collar	ADJUSTABLE COLLAR_ CONE_INST.
2	4	Slotted Rail	HALLOW RAIL
1	3	Slotted Rail-2BR	RIGHT HALLOW RAIL MODIFIED
1	2	Slotted Rail-2B	LEFT HALLOW RAIL MODIFIED
2	1	SS Ring-WH	SUPPORT RING ASSY
ΩΤΥ	ITEM	PART NUMBER	DESCRIPTION
			BILL OF MATERIALS

SS RING ASSEMBLY

Steps

4.

- Identify all the items needed for installation. 1. See fig 1 & 2.
- Place item 1 on a flat surface by keeping the 2. threaded holes side face down (Face "A").





- Align items 2, 3 and 4 to the matching holes on item land fasten the parts together. Use items 9 screws. See fig. 2
- Install all Hallow Rail Stop Caps to items 2,3 5. and 4 as noted on fig 1. Use item 10 screws.
- Repeat steps 3 and 4 to install the second 6. Supporting Ring Assembly (item1) as shown in fig 4.

Fig. 3 Fig. 4



Fig. 1

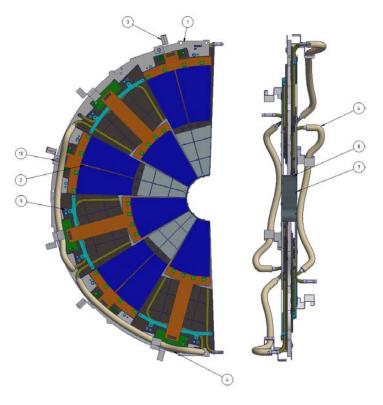


Fig. 2

6				
-	10	93615A113_McMASTER	SOCKET HEAD SCREWS_18-8 SS LOW-PROFILE	
12	9	90278A319McMASTER	PRECISION SHOULDER SCREW_18-8 STAINLESS STEEL	
1	8	Center Brace 2020.08.20	CONNECTING DISK BRACE	
6	7	CB	CENTER BRACE SCREW	
1	4	Tubing Run 01	COOLING TUBE (CONNECTING DISK)	
6	3	Piping & Cable Channel Bracket	BRACKET	
6	2	FST_module_0330	Pi Disk	
1	1	Aluminum_FST_Ring	FST- 0323_NCKU-2a	
QTY	ITEM	PART NUMBER	DESCRIPTION	

HALF PI DISK ASSEMBLY

Steps

- 1. Identify all the items needed for installation. See fig 1 & 2.
- 2. Place item 1 on a flat surface with the side labeled Front- Up facing upwards. See fig 4.
- 3. Rotate PI Disk and align with the Pin & Slot feature on the Aluminum structure. **Note:** Skip the first Pin & Slot located close to the marking (Front- UP). See fig. 1, 3 & 5.
- 4. Orient the Pi Disk in such a way that the Slot feature on the aluminum structure and the cooling inlet and outlet (Barbed Hose fittings) are on the same side. See fig 1 & 3.
- 5. Fasten with screws using (item10). See fig 2.
- 6. Repeat steps 3 thru 5 for the two remaining Pi Disk. **Note:** Pi Disk installation alternates by skipping each Pin & Slot feature on the installation side. See fig. 1
 - Flip the Aluminum Structure to complete the installation of the three additional Pi Disk on the opposite side of the aluminum structure labeled "Back –DN".
 - Repeat steps step 3 thru 6
 - Connect the cooling tubes (item 4) as shown in Fig. 1

Fig. 3

Fig. 4

Fig. 5

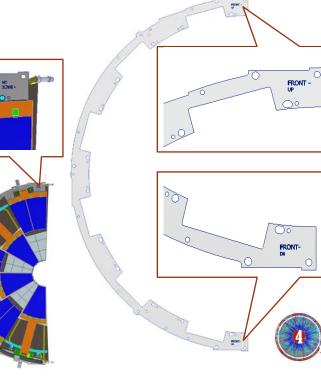


Fig. 1

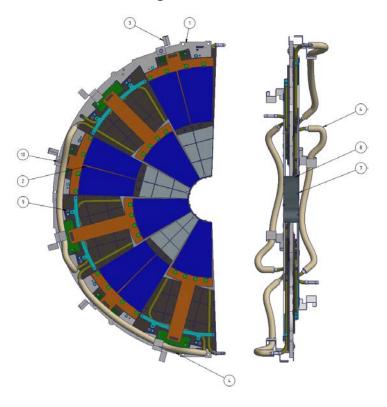


Fig. 2

6	10	93615A113_McMASTER SOCKET HEAD SCREWS_18-8 SS LOW-PROFILE					
12	9	278A319_McMASTER PRECISION SHOULDER SCREW_18-8 STAINLESS STEEL					
1	8	Center Brace 2020.08.20	CONNECTING DISK BRACE				
6	7	CB	CENTER BRACE SCREW				
1	4	Tubing Run 01	COOLING TUBE (CONNECTING DISK)				
6	3	Piping & Cable Channel Bracket	BRACKET				
6	2	FST_module_0330 Pi Disk					
1	1	Aluminum_FST_Ring	FST- 0323_NCKU-2a				
QTY	ITEM	PART NUMBER	DESCRIPTION				
			BILL OF MATERIALS				

HALF PI DISK ASSEMBLY

Steps

- Install the Connecting Disk Brace (item 8) using the screws provided (item 7 by NCKU). See fig 1.
- Install the Brackets (item 3) as shown. Note:
 The screw side is opposite the Pi Disk. See fig
 1.
- 12. Install the T-boards and connect the Hybrid connectors. Note: T-board grounding to Aluminum structure is achieved by grounding the closest two T-board to a grounding hole hole indicated as 1 thru 3.
- 13. Dress the cables as shown. CND to AL Structure Threaded Hole 1 CND to AL Structure Threaded Hole 3 Threaded Hole 3

GND to AL Structure

Threaded Hole 2



3 HALF PI DISK ASSEMBLY Steps

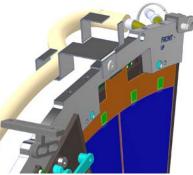
- 1. Identify all the items needed for installation. See fig 1 & 2.
 - Rotate the Pi Disk Assembly to have the side marked "Front - UP" facing you and install items 9 and 11. **Note:** Each bracket consist of a left and right part. Select the "Right Brackets" for the first half installation.
 - гч Г Г Г Г
 - Top-Solid Rail Holding Bracket

2.

3.

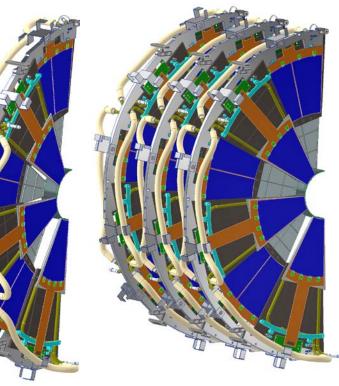
Bottom-Solid Rail Holding Bracket

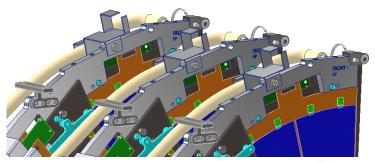
Align the holes of the Pi Disk to the slot of the Right bracket as shown and fasten with screws (Item 19).



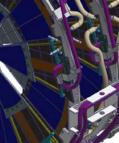
- 4. Repeat the same process for the bottom part and install using item 9 and 19.
- 5. Repeat steps 2 thru 4 for the remaining two Pi Disk as shown. See Fig. 3

Fig. 3









9001k923 McMASTER

FST Disk 0419

CONE ASSEMBLY

OTY ITEM

FST Plane Holding Bracket-3

PART NUMBER

Fig. 2

SOCKET HEAD CAP SCREW TYPE 316 SS LOW PROFILE

SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE_10-32 X 1/2L

DESCRIPTION

SOLID RAIL ASSY

COOLING LINES

FST Plane Holding Bracket-2 BOTTOM - SOLID RAIL HOLDING BRACKET - RIGHT

Full Disk Assy

FST CONE

ARCHIT. 6061 ALUMINUM U-CHANNEL

TOP - SOLID RAIL HOLDING BRACKET - RIGH

ARCHIT, 6063 AL, U-CHANNEL

BILL OF MATERIALS

Fig. 1

3 HALF PI DISK ASSEMBLY Steps

6.

8.

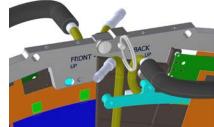
9.

Align the holes of the Brackets (items 9 & 11) to the Solid Rail Assembly (item 20) and fasten with item 19 screws as shown.

Repeat the same process for the Top and bottom parts as shown to complete the whole installation of the 3 Pi Disk.

Install all the U Channels as shown and fasten with item 35 screws. Route the cooling lines and cables as shown. See Fig 1, 2 & 3.

Repeat steps 2 thru 9 to complete the installation for the left side. Note: The left side installation, the Pi Disk should be oriented as shown in the picture below.



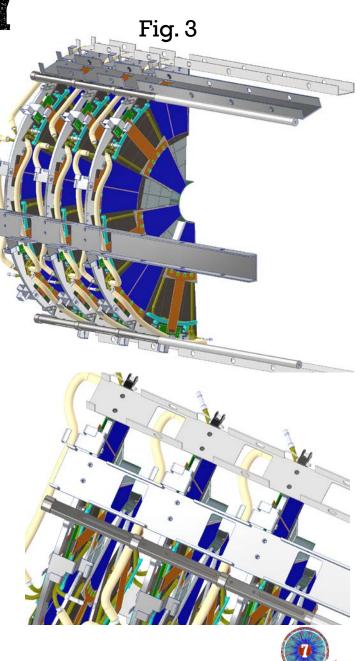


	Fig. 2
66A016_McMASTER	SOCKET HEAD CAP SCREW_TYPE 316 SS LOW PROFILE
id Rail-3	SOLID RAIL ASSY
15A380_McMASTER	SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE_10-32 X 1/2L
1k923_McMASTER	ARCHIT. 6061 ALUMINUM U-CHANNEL
1K784_McMaster	ARCHIT. 6063 AL. U-CHANNEL
02	COOLING LINES
Assembly-2.Harness4	CABLE SYSTEM
Plane Holding Bracket-3	TOP - SOLID RAIL HOLDING BRACKET - RIGHT
F Plane Holding Bracket-2	BOTTOM - SOLID RAIL HOLDING BRACKET - RIGHT
[_Disk_0415	Full Disk Assy
E ASSEMBLY	FST CONE

DESCRIPTION

Fig. 1

BILL OF MATERIALS

Fig. l

3 HALF PI DISK ASSEMBLY

- Steps
- 10. Place the cooling lines in the small U channels as shown. See Fig 3.

Note:

- Top cooling lines are outlet lines and the bottom are inlet lines for the Right side installation.
- The left side installation is opposite of the right side installation (Top cooling lines are inlet lines and bottom are outlet lines).
- 11. Place the cables in the large U channels as shown. See Fig. 3.

Note:

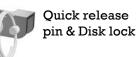
- The top 3 Pi Disk cables runs are to be placed on the top U Channel. A total of 9 cables are placed in the top U Channel.
- The remaining 9 on the bottom are routed to the side (3 O'clock).

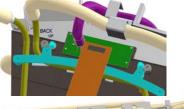
12. Dress all cables and cooling lines as shown in Fig 3.

 Repeat steps 10 thru 12 for the other half of the Pi Disk Assembly.

FRON

14. Clip in Pi Disk lock and the quick release pin as shown.





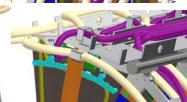
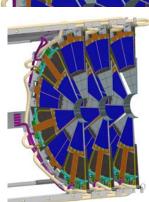
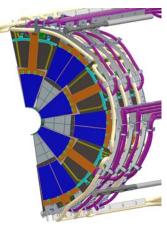
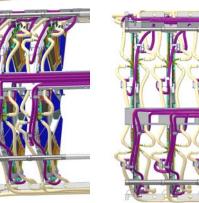


Fig. 3









			J
8	35	90666A016_McMASTER	SOCKET HEAD CAP SCREW_TYPE 316 SS LOW PROFILE
4	20	Solid Rail-3	SOLID RAIL ASSY
60	19	93615A380_McMASTER	SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE_10-32 X 1/2L
4	18	9001k923_McMASTER	ARCHIT. 6061 ALUMINUM U-CHANNEL
2	16	9001K784_McMaster	ARCHIT. 6063 AL. U-CHANNEL
1	15	Run 02	COOLING LINES
1	13	FST Assembly-2.Harness4	CABLE SYSTEM
3	11	FST Plane Holding Bracket-3	TOP - SOLID RAIL HOLDING BRACKET - RIGHT
3	9	FST Plane Holding Bracket-2	BOTTOM - SOLID RAIL HOLDING BRACKET - RIGHT
3	7	FST_Disk_0415	Full Disk Assy
1	1	CONE ASSEMBLY	FST CONE
TΥ	ITEM	PART NUMBER	DESCRIPTION

Fig. 2



INSTALLATION TOOLS & SETUP

Fig. 3

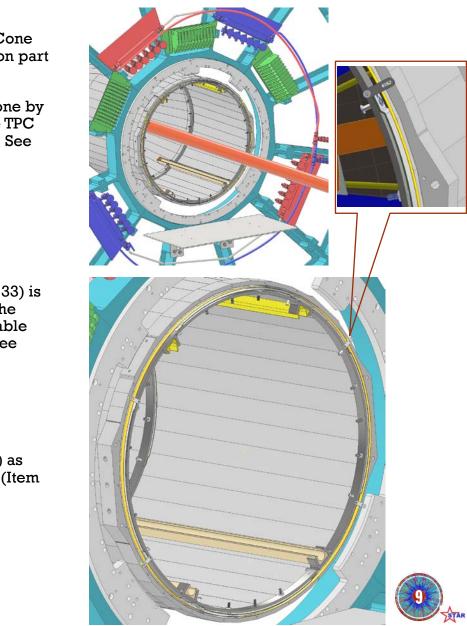


Fig. 1 1. 2. 3.

Fig. 2

DETAIL B

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		BILL OF MATERIALS				BLL OF MATERIALS
ITY ITE	M PART NUMBER	DESCRIPTION	0TY	ITEM	PART NUMBER	DESCRIP
1 1	CONE ASSEMBLY	FST CONE	- 4	20	Solid Rail-3	SOLID RAIL ASSY
1 2	TPC Wheel	TPC WHEEL ASSY	2	21	Carry Handle	CARRY HANDLE
1 3	TPC IFC	STAR IFC End Ring (WEST)	- 1 i	22	Solid Rail Support Ring-2	INSTALLATION SUPPORT RING
				23	Solid Rail Support Ring-2L	INST. SUPPORT RING - LEFT
1 4	Beam Pipe	BEAM PIPE ASSY		25	Stoper	INST. OUTER RAIL STOPPER
1 5	Inner Rail Structure Assembly		2	26	Back Plate Outer Rail	INST. SAFETY BRACKET (SOLID RAIL)
4 6	ROTATION STOPPER	ROTATIONAL PREVENTION (SS RING)		27	OuterPartial Ring-2 Back Plate	INST. SUPPORT RING (RIGHT)
3 7	FST Disk 0415	Full Disk Assy	1	28	OuterPartial Ring-2L	INST. SUPPORT RING (LEFT)
3 8	FST Plane Holding Bracket-2L	BOTTOM - SOLID RAIL HOLDING BRACKET - LEFT	2		Back Plate-Top	INST. SAFETY BRACKET (SOLID RAIL)
3 9	FST Plane Holding Bracket-2	BOTTOM - SOLID RAIL HOLDING BRACKET - RIGHT	1	30	Installation Table-2	TABLE FOR FST INST.
3 10	FST Plane Holding Bracket-3L	TOP - SOLID RAIL HOLDING BRACKET - LEFT	2	31	Bench -Slide Stopper	INST. SAFETY HOLDER (FST)
3 11	FST Plane Holding Bracket-3	TOP - SOLID RAIL HOLDING BRACKET - RIGHT	2	32	1658T82_McMASTER	ARCHIT. 6063 ALUM ROUND TUBE
4 12	SlideLock	STATIONARY LOCK SYSTEM (FST)	2	33	9967T640_McMASTER	BENCH-TOP ADJ. POS. STAND
1 13	FST Assembly-2.Harness4	CABLE SYSTEM	8	34	93615A390_ McMASTER	SOCKET CAP SCREW_TYPE 18-8 SS LO
1 14	IST Services External-Simple	COOLING LINES SYSTEM	48	35	90666A016_McMASTER	SOCKET HEAD CAP SCREW_TYPE 316 S
1 15	Run 02	COOLING LINES	~	~	UNC - 0.5. HBI	nex buil - uni, pregnar lineau - mut
2 16	9001K784_McMaster	ARCHIT. 6063 AL. U-CHANNEL	10		ANSI/ 618-2.2 = 174 = 20, HM ANSI/ASME 818.2.1 = 1/4-20	Hex Bolt - UNC (Regular Thread - Inch
2 17	9001K784_L_McMASTER	ARCHITECTURAL 6053 AL. U-CHANNEL_LEFT	2	37	1, PHWHMSI ANSI 818.2.2 - 1/4 - 20, HNI	Hex Nuts (Inch Series) Hex Nut
4 18	9001k923_McMASTER	ARCHIT. 6061 ALUMINUM U-CHANNEL	4	38	ANSI B18.6.3 - 1/4-20 UNC x	Hexagon Head Screw
60 15	93615A380_McMASTER	SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE_10-32 X 1/2L	4		AS 2465 - 1/2 x 1 UNC	Unified hexagon bolts, screws and nuts

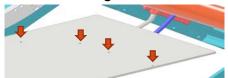
Steps

4.

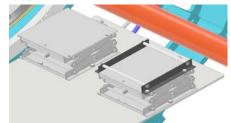
- Install the SS Ring Assembly into the Cone and install all four Rotational Prevention part (items 6) as shown in fig 1, 2 & 3.
- Installation of the Table (item 30) is done by aligning the table with the hole on the TPC face and fasten with screws (item 39). See Fig. 3.



Installation of Adjustable Bench (item 33) is done by matching the screw hole on the Table (item 30) with that of the adjustable bench. Fasten with screws (item 36). See below and Fig 1, 2 & 3.

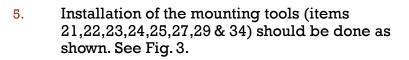


Install the Inst. Safety Holder (item 31) as shown with screws (item 37). The Rod (Item 32) will be will be installed later.

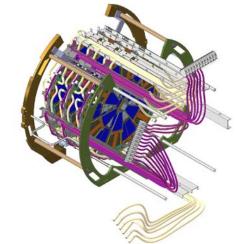


INSTALLATION TOOLS & SETUP Steps

Fig. 3



Install the FST Disk Assembly to the mounting 6. tools as shown. Use items 26 & 29 and fasten with screws (item 34) and carry to the TPC face.



Insert the two Rods (Item 32) through the slotted hole provided to prevent FST Disk from tipping. Fasten with screws on front and back as shown using (item 37). See Fig 4.

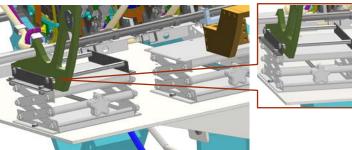




Fig. 4

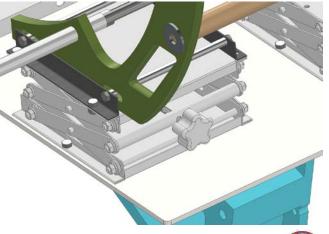






Fig. 1

			BILL OF MATERIALS		
ŕ	ITEM	PART NUMBER	DESCRIPTION	0TY	ITE
	1	CONE ASSEMBLY	FST CONE		20
	2	TPC Wheel	TPC WHEEL ASSY	2	21
	3	TPC IFC	STAR IFC End Ring (WEST)		23
	4	Beam Pipe	BEAM PIPE ASSY	4	24
	5	1	DISK STRUCTURAL SUPPORTS ASSY.	4	25
	6	ROTATION STOPPER	ROTATIONAL PREVENTION (SS RING)	2	24
	7	FST_Disk_0415	Full Disk Assy	1	27
	8	FST Plane Holding Bracket-2L	BOTTOM - SOLID RAIL HOLDING BRACKET - LEFT	1	28
	9	FST Plane Holding Bracket-2	BOTTOM - SOLID RAIL HOLDING BRACKET - RIGHT	2	28
	10		TOP - SOLID RAIL HOLDING BRACKET - LEFT	2	3
	11	FST Plane Holding Bracket-3	TOP - SOLID RAIL HOLDING BRACKET - RIGHT	2	33
	12	SlideLock	STATIONARY LOCK SYSTEM (FST)	2	33
	13	FST Assembly-2.Harness4	CABLE SYSTEM	8	34
	14	IST Services External-Simple	COOLING LINES SYSTEM	48	35
	15	Run 02	COOLING LINES	~	17
	16	9001K784_McMaster	ARCHIT. 6063 AL. U-CHANNEL	2 10	34
	17	9001K784_L_McMASTER	ARCHITECTURAL 6063 AL. U-CHANNEL_LEFT		37
	18	9001k923_McMASTER	ARCHIT. 6061 ALUMINUM U-CHANNEL	4	38
	19	93615A380_McMASTER	SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE_10-32 X 1/2L	4	31

Fig. 2

	2		
4	2		
			how an
4		AS 2465 - 1/2 x 1 UNE	Unified hexagon bolts, screws and nut
4	38	ANSI 818.6.3 - 1/4-20 UNC x 1. PHWHMSI	Hexagon Head Screw
2	37	ANSI 818.2.2 - 1/4 - 20, HNI	Hex Nuts (Inch Series) Hex Nut
10	36	ANSI/ASME 818.2.1 - 1/4-20 UNC - 0.5, HBI	Hex Bolt - UNC (Regular Thread - Incl
48	35	90666A016_McMASTER	SOCKET HEAD CAP SCREW_TYPE 316 1
8	34	93615A390_ McMASTER	SOCKET CAP SCREW_TYPE 18-8 SS LO
2	33	9967T640_McMASTER	BENCH-TOP ADJ. POS. STAND
2	32	1658T82_HcMASTER	ARCHIT. 6953 ALUM ROUND TUBE
2	31	Bench -Slide Stopper	INST. SAFETY HOLDER (FST)
1	30	Installation Table-2	TABLE FOR FST INST.
2	29	Back Plate-Top	INST. SAFETY BRACKET (SOLID RAIL)
1	28	OuterPartial Ring-2L	INST. SUPPORT RING (LEFT)
1	27	OuterPartial Ring-2	INST. SUPPORT RING (RIGHT)
2	26	Back Plate	INST. SAFETY BRACKET (SOLID RAIL)

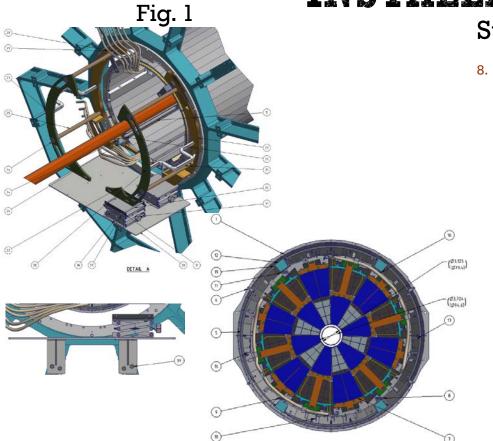
BILL OF MATERIAL

DETAIL B

7.

INSTALLATION TOOLS & SETUP

Fig. 3



DETAIL B

lack Plat Outer Rai Solid Rail S Solid Rail S Carry Hand olid Rail-PART NIMPE

DESCRIPTION	_	ΔTY	ITEM	PAR
	- 1	4	20	Solid Rail-3
	_	2	21	Carry Handle
		÷	22	Sold Ral Su
				Stopper Solid Rail Su
				Outer Rail Stooper
				Back Plate
		1	27	OuterPartial
	- [1	28	OuterPartial
	- 0	2	29	Back Plate-T
	- 1	1	30	Installation T
	- 1	2	31	Bench -Slide
		2	32	1658T82_McH
STATIONARY LOCK SYSTEM (FST)				9967T640_M
CABLE SYSTEM				
COOLING LINES SYSTEM	-			UNC - 0.5, H 90666A016_P
COOLING LINES		10	36	
ARCHIT. 6063 AL. U-CHANNEL				ANSI 818.2.2
ARCHITECTURAL 6063 AL. U-CHANNEL_LEFT				1, PHWHMSI
ARCHIT. 6061 ALUMINUM U-CHANNEL		4	38	ANSI 818.6.3
SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE_10-32 X 1/2L		4	39	AS 2465 - 1/
	ARCHE AGH ALUHRUM U-CHANNEL ARCHTECTURAL (663 AL: U-CHANNEL_LEFT ARCHTECTURAL (663 AL: U-CHANNEL COOLING LINES COOLING LINES SYSTEM COOLING LINES SYSTEM	AROHE AND ALUPRANU U-UNANNEL AROHETECTURAL 6663 AL U-UNANNEL_LEFT AROHETECTURAL 6663 AL U-UNANNEL_LEFT AROHET. 6663 AL U-UNANNEL COOLING LINES COOLING LINES SYSTEM CABLE SYSTEM STATOMARY LOCK SYSTEM (FSTI TOP - SOLID RAL HOLDING BRACKET - DEAT TOP - SOLID RAL HOLDING BRACKET - LEFT TOP - SOLID RAL HOLDING BRACKET - LEFT BOTTOM - SOLID RAL HOLDING BRACKET - LEFT BOTTOM - SOLID RAL HOLDING BRACKET - LEFT TUT Dask Assy BOTATIONAL PERVENTION ISS BRAG BRACKET STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO TSTAR UT CHA RING INTO TSTAR UT CHA RING INTO TSTAR UT CHA RING INTO TSTAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO STAR UT CHA RING INTO	ABOHT SORIA LUCHANNIL 4 ARCHTECTURAL 6695 AL U-SHANNEL_LEFT 2 ARCHTECTURAL 6695 AL U-SHANNEL_LEFT 9 CORUME LINES SYSTEM 68 CORUME LINES SYSTEM 68 CARLE SYSTEM 68 TOP - SOLID RAL HOLDING BRACKET - ROHT 7 TOP - SOLID RAL HOLDING BRACKET - ROHT 7 TOP - SOLID RAL HOLDING BRACKET - ROHT 1 BOTTOM - SOL ORAL HOLDING BRACKET - LEFT 1 DIST SHOL RAL HOLDING BRACKET - LEFT 1 STARLE VERAL SUPPORTS ASSY. 4 BAT PET ASSY 4 STARL FOLDING ISS RING) 1 STARL VELO RING ISS RING) 1 STARLE VELO RING ISS RING) 1 STARL VELO RING RINGST 1 TFT COME 2	ARCHET. 6061 ALLPRINCH U-CHANNELL 4 19 ARCHITECTIGAL 6053 AL. U-CHANNEL_LEFT 2 32 ARCHITECTIGAL 6053 AL. U-CHANNEL_LEFT 8 16 CORUMO LINES 70 16 CORUMO LINES SYSTEM 6 55 CABLE SYSTEM 8 56 STATIORARY LOCK SYSTEM IPS11 2 32 TOP - SQUD RAK HOLDING BRACKET - RIGHT 2 32 DOTIOM - SQUD RAK HOLDING BRACKET - RIGHT 2 32 DOTIOM - SQUD RAK HOLDING BRACKET - LIFT 1 37 Fall Dak Assys 1 172 DISK STRUTURAK, SUPPORTS ASSY. 4 35 STAR ØC KOR ING INST 1 32 TAR ØC KOR ING INSTANCING 34 4 STAR ØC KOR ING INSTANCING 35 1 STAR ØC KOR ING INSTANCING INSTANCING 1 1 STAR ØC KOR ING INSTANCING 1 1 STAR ØC KOR ING INSTANCING 1 1 1 TOR LOUND INSTANCING INSTANCING 1 1 1 1

1/2 x 1 UNC	Unified hexagon bolts, screws and nuts (UNC and UNF threads)
- 1/4-20 UNC x	Hexagon Head Screw
2 - 1/4 - 20, HNI	Hex Nuts (Inch Series) Hex Nut
818.2.1 - 1/4-20 HBI	Hex Bolt - UNC (Regular Thread - Inch)
McMASTER	SOCKET HEAD CAP SCREW_TYPE 316 SS LOW PROFILE
MCMASTER	SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE
1cMASTER	BENCH-TOP ADJ. POS. STAND
MASTER	ARCHIT. 6063 ALUM ROUND TUBE
e Stopper	INST. SAFETY HOLDER (FST)
Table-2	TABLE FOR FST INST.
Төр	INST. SAFETY BRACKET (SOLID RAIL)
l Ring-2L	INST. SUPPORT RING (LEFT)
L Ring-2	INST. SUPPORT RING (RIGHT)
	INST. SAFETY BRACKET (SOLID RAIL)
	INST. OUTER RAIL
	INST. OUTER RAIL STOPPER
upport Ring-2L	INST. SUPPORT RING - LEFT
upport Ring-2	INSTALLATION SUPPORT RING
*	CARRY HANOLE
	SOLID RAIL ASSY

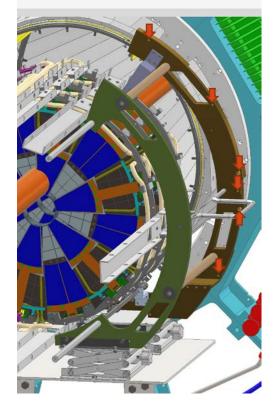
DESCRIPTION

BILL OF MATERIALS

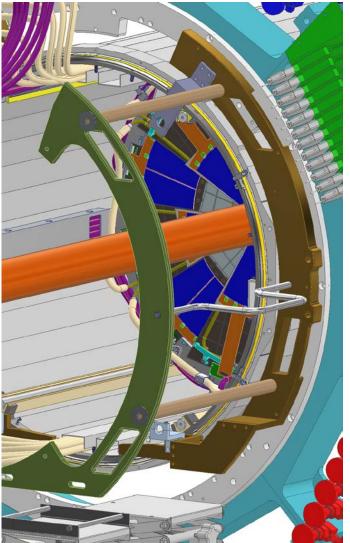
9.

Steps

Remove the Carry Handle (item 21) and jack up the whole assembly to align with the holes on the TPC face. Fasten with screws. Note: Install one half before installing the other half.



Remove the two Rods and jacks. Repeat steps 6 & 7 for the other side.





INSTALLATION TOOLS & SETUP Steps

- Install all four Stationary Lock System (item 12) and fasten with screws (item19). See fig 1,2 & 3.
- 11. Remove all installation tools from the TPC face as shown. Connect the cables and the cooling lines as shown below for each Half Pi Disk Assembly.

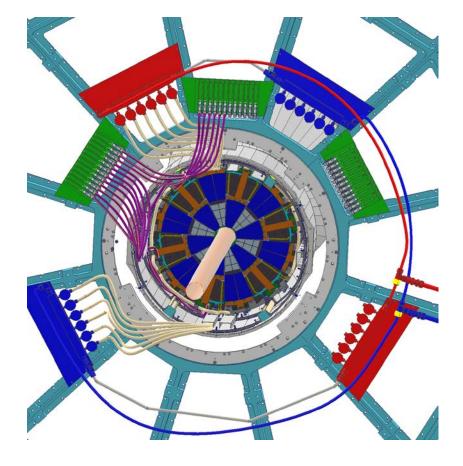


Fig. 3

12 \$12

<u>DETAIL B</u>

	2		
4	39	AS 2465 - 1/2 x 1 UNE	Unified hexagon bolts, screws and nuts (UNC and U
4	38	ANSI 818.6.3 - 1/4-20 UNC x 1. PHWHMSI	Hexagon Head Screw
2	37	ANSI 818.2.2 - 1/4 - 20, HNI	Hex Nuts (Inch Series) Hex Nut
10	36	ANSI/ASME 818.2.1 - 1/4-20 UNC - 0.5, HBI	Hex Bolt - UNC (Regular Thread - Inch)
48	35	90666A016_McMASTER	SOCKET HEAD CAP SCREW_TYPE 316 SS LOW PROF
	34	93615A390_ McMASTER	SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE
2	33	99671640_McMASTER	BENCH-TOP ADJ. POS. STAND
2	32	1658T82_HcMASTER	ARCHIT. 6063 ALUM ROUND TUBE
2	31	Bench -Slide Stopper	INST. SAFETY HOLDER (FST)
1	30	Installation Table-2	TABLE FOR FST INST.
2	29	Back Plate-Top	INST. SAFETY BRACKET (SOLID RAIL)
1	28	OuterPartial Ring-2L	INST. SUPPORT RING (LEFT)
1	27	OuterPartial Ring-2	INST. SUPPORT RING (RIGHT)
2	26	Back Plate	INST. SAFETY BRACKET (SOLID RAIL)
4	25	Outer Rail	INST. OUTER RAIL
4	24	Stopper	INST. OUTER RAIL STOPPER
1	23	Solid Rail Support Ring-2L	INST. SUPPORT RING - LEFT
1	22	Solid Rail Support Ring-2	INSTALLATION SUPPORT RING
2	21	Carry Handle	CARRY HANOLE
4	20	Solid Rail-3	SOLID RAIL ASSY
OTY	ITEM	PART NUMBER	DESCRIPTION

SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE_10-32 X 1/ 9 93615A380 McMAS 18 0101k023 M-MACTE DON'T KOST ALLMINUM LLOHANNEL 17 9001K784 L McMAST PCHITECTURAL 6053 AL IL-CHANNEL TOOLING LINES ST TOP - SOLID RAIL HOLDING BRACKET 8 FST Plane Holding 7 FST Disk 041 DISK STRUCTURAL SUPPORTS ASSY Inner Rail Structure Ass REAM DIDE ASS STAR IFC End Ring (WEST 3 TPC IFC TPC WHEEL ASSY TPC Whee CONE ASSEMB ST CONF OTY ITEM PART NUMBE DESCRIPTION BILL OF MATERIALS



Fig. 1

G

REPAIR/ACCESSIBILITY OF KEY COMPONENTS

Fig. 1

Fig. 2

SOCKET HEAD CAP SCREW TYPE 316 SS LOW PROFIL

SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE_10-32 X 1/2L

DESCRIPTION

SOLID RAIL ASSY

Full Disk Assy

BILL OF MATERIALS

FST CONE

Plane Holding Bracket-2

PART NUMBER

FST Disk 041

CONE ASSEMBL

ARCHIT, 6061 ALUMINUM U-CHANNEL ARCHIT, 6063 AL, U-CHANNE COOLING LINE

TOP - SOLID RAIL HOLDING BRACKET - RIGH

BOTTOM - SOLID RAIL HOLDING BRACKET - RIGHT

Steps for Changing a Pi Disk Assembly

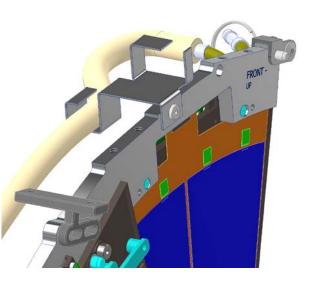
- When the FST Disk is outside of the Cone, 1. identify the disk assembly that is needed to be replaced.
 - Remove the screws that holds the U-Channels, Center Brace, Top and Bottom Solid Rails. Slide and rotate the assembly away from the beam pipe towards the mounting tools. If need be, remove the cable from the bracket.

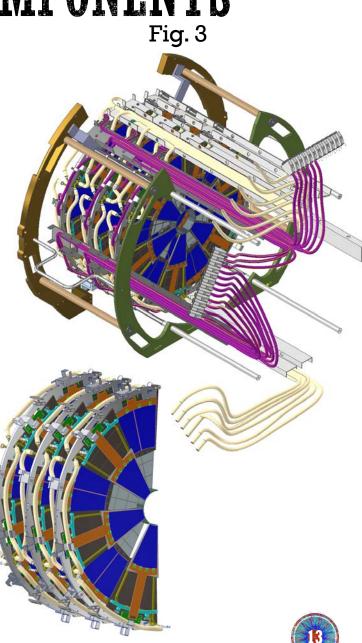


Top-Solid Rail Holding Bracket

2

Bottom-Solid Rail Holding Bracket





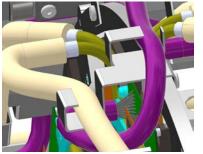




REPAIR / ACCESSIBILITY OF KEY COMPONENTS

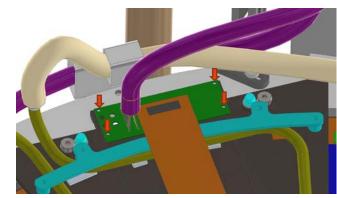
Steps for Changing T-board

- 1. When the FST Disk is outside of the Cone, identify the disk assembly that needs T-board replacement. See fig 3.
- 2. Remove the cable from the Bracket to give some slack if needed.



Disconnect the Hybrid cable from the Tboard.

Remove the four screws that holds the Tboard to the Aluminum Structure and replace with functional part. Note: However, if you cannot get to the defected part, repeat steps 1 & 2 from page 13 before steps for changing the T-board.



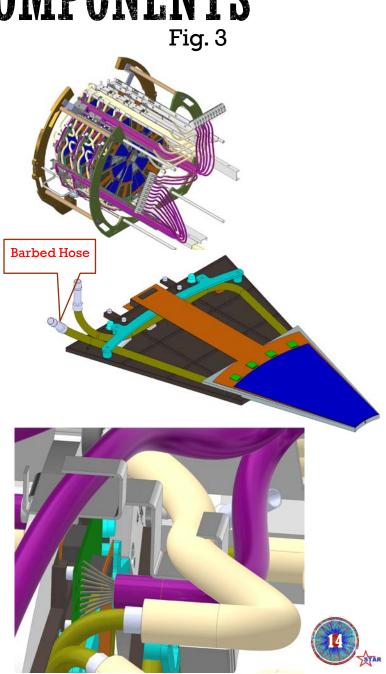


Fig. 1 3. Fig. 2 SOCKET HEAD CAP SCREW TYPE 316 SS LOW PROFIL SOLID RAIL ASSY SOCKET CAP SCREW_TYPE 18-8 SS LOW PROFILE_10-32 X 1/2L ARCHIT, 6061 ALUMINUM U-CHANNEL ARCHIT. 6063 AL. U-CHANNE COOLING LINE TOP - SOLID RAIL HOLDING BRACKET - RIGH lane Holding Bracket-3 FST Plane Holding Bracket-2 BOTTOM - SOLID RAIL HOLDING BRACKET - RIGHT FST Disk 041 Full Disk Assy CONE ASSEMBLY FST CONE

DESCRIPTION

BILL OF MATERIALS

PART NUMBER