

LHCb Readiness for LS1

LHCb VSC Technical Responsible:
Cédric Garion

‘Assumption is working on two experiments in parallel. Any new requests to be discussed with Mark Gallilee for compatibility with manpower’.

- **Procedures**
- **LS1 Interventions and Dates**
- **Conclusions**

Procedures

3. DÉMONTAGE VC8BB SOUFFLETS ALUMINIUM.

Responsible Engineer: C Garion

Contact: 165257

Responsible Technician: JChauré

Contact: 169477



Equipment and Personnel requirements	
Lifting Equipment	
Boxes/storage	VC8BB Shielded Storage Box
Mechanical tooling	Set de clé allen, Set de clé plate, clé dynamométrique 1-10Nm + embouts
Personnel (number/type)	2 x TE/VSC-EIV, RP, 2 x EN/HE
Vacuum Components	Feuille aluminium et kaptan Visserie : 32* Vis M5*40 (scem : 47.62.71.925.9) 32* Ecrou M5 (scem : 47.43.78.105.7) 64* Rondelles 5mm (scem : 47.78.15.110.1) 2 x brides bouchon OD86 et 2 joints HNV200 Ext 66.5/59.7 int/ Tore 3.4 2 x brides bouchon OD84 et 2 joints HNV 200 Ext 73/int 66.2 Tore 3.4
Other tools	Lampe, appareil photo, outillage soufflets
Consumables	UHV gants (sans poudre), alcool, UHV tissues

Procedures have been written and all components have been purchased on the basis of each intervention to remove chambers

Task Number	Task Description	Location	Time (mins)	Time near pipe (mins)
1	Vérifier que l'ensemble des chambres UX85, jusqu'à la vanne de secteur VVGSF.221.1R8.X, ont été ventilées sous néon et sont à la P Atmo.			
2	Une plateforme de travail dans l'aimant doit être installée à -60cm en dessous de l'axe de faisceau.	UX85 Magnet		
3	Démonter l'outillage de protection de la chambre VC8BC. Positionner une feuille de kaptan autour de la chambre VC8BC afin d'avoir aucune surface de béryllium visible. Les protections du soufflet VC8BD et de la chambre VC8BE doivent rester en place.	UX85 Magnet	15min	15min
4	Le support de la chambre VC8BA doit rester en place.			
5	Installer les outillages de protection et de bridage des soufflets VC8BB et du soufflet VC8BD. (conception et dessin à réaliser)	UX85 Magnet	10min	10min



Interventions and Dates - Removal



Experimental Planning LS1_Rev09

Oct 23 2012

J Chauré, M Gallilee, P Lepeule, E Kos, H Bar

LBV section will intervene on vacuum

Procedures established for removal

LHCb - PT 8														
Temps {mois}*	Taches					Date	Durée (nb de jours)	Personnel and Material Requirements						
	#	Impact #	Task type	Task				EIV	ICM	LBV	Transport	Survey	RP	Leak Det
	0		Neon	Neon Injection + VELO to vac injection		14-Feb-13	4			2+Nikhef				
Feb-13														
Mar-13														
Apr-13	1			Standard opening			?	2						
	2			Ux85/2			4	2		Yes				
	3		D e t	soufflet Inox			2	2		Yes		Yes		
	4		m a	Ux 85/4 (shielding already removed)			6	3		Yes	Yes	Yes		
	5		g o n	Ux 85/3			5	2		Yes				
May-13														
Jun-13														
Jul-13														
Aug-13														

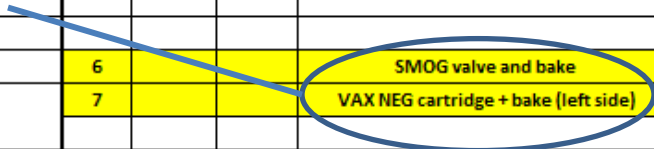
Support from LHCb is required for platform/scaffolding and detector opening. Vacuum chambers are stored by LHCb at point 8.



Interventions and Dates - VAX

LHCb - PT 8												
Temps (mois)*	Taches			Date	Durée (nb de jours)	Personnel and Material Requirements						
	#	Impact #	Task type			Taches	EIV	ICM	LBV	Transport	Survey	RP
Apr-14	6			SMOG valve and bake	5		1	2				
May-14	7			VAX NEG cartridge + bake (left side)	10		1	2				
Jun-14	8	R e m o n t a g e		Ux 85/3	6	2			Yes	Yes		
	9			Ux 85/4	6	3			Yes	Yes		
	10			soufflet Inox	3	2			Yes	Yes		
	11			Ux 85/2 + aluminium bellows	5	2			Yes	Yes		
Jul-14	12			Detection de fuite UX85/2-3-4	4	2						Yes
	13			montage soufflet UX85/1-UX85/2	1	2						
	14			global leak test	5	2	2 (sup. For Velo)					Yes
Aug-14	15	bakeout		Partial bakeout and Neon injection + VAX right bakeout	25	1	1	2				Yes
	16			VELO vac reconnection		1	1	2+Nikhef				Yes
	17			Closing	?	2						

LBV section will intervene on vacuum





Interventions and Dates - Installation



LHCB - PT 8													
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	9			Ux 85/4	6	3			Yes	Yes			
	10			soufflet inox	3	2			Yes	Yes			
	11			Ux 85/2 + aluminium bellows	5	2			Yes	Yes			
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	13			montage soufflet UX85/1-UX85/2	1	2							
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	17			Closing	?	2							

Support from LBV for the pumping through the VELO

Design of the supports almost frozen (and significantly improved since the EDR).
 Beryllium parts already received.
 Aluminum bellows manufacturing ongoing.
 Installation procedures – to be done.



Interventions and Dates - Installation



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Vacuum system
commisionning



Conclusions



- Schedule written outlined;
- Removal procedures established and procurement of critical items ongoing or completed;
- Storage foreseen at point 8;
- Any outstanding items or interventions missing?.