INTERFACE CONTROL DOCUMENT TITLE AND APPROVAL PAGE

(Page 1)

ICD Number: ICD-130-310-0002	**Primary Author:** B. Stratton
Impacted WBS Elements: WBS-3 toWBS-13	**Type of Interface:** Mechanical/Envelope Interface

Description of Interface:

Diagnostic magnetic field sensor loops shall be placed on the TF, PF (including solenoid), and external trim coils. One sensor loop is required for each of the TF, PF, and external trim coils. These loops shall be on the side of the coil facing the plasma. One sensor loop shall be placed in each gap between the top and bottom of the solenoid coils.

Record of Revisions

Revision Number	Description	Date
0	Initial Issue	April 14, 2003
1	Defined responsibilities of WBS3 and WBS13	April 28, 2003
2	Defined requirement for sensor loop termination	May 23, 2003

Approvals

WBS Manager: ? David Johnson Signature Not Verified — Digitally signed by David Johnson DN: cn=David Johnson, c=US Date: 2003.05.23 16:28:48 -04'00'	**WBS Manager:** ? David Williamson 2003.05.29 09:12:27 -04'00'
Project Engineer: ? Larry Dudek Signature Not Verified — Digitally signed by Larry Dudek DN: cn=Larry Dudek, c=US Date: 2003.05.27 09:18:39 -04'00'	**Project Engineer:** ? Brad Nelson 2003.05.28 18:26:10 -04'00'

Systems Engineering Support Manager: Bob Simmons — Digitally signed by Bob Simmons DN: cn=Bob Simmons, c=US Reason: I have reviewed this document Date: 2006.05.31 08:36:12 -04'00'

ICD DETAIL SHEET

(Page 2)

(Use Continuation Sheets as Necessary to Include the Following Applicable Information)

Scope of Interface:

This interface impacts the design and fabrication of the TF, PF (including solenoid), and external trim coils (WBS13) and magnetics diagnostics (WBS3).

Equipment and Responsibility List:

Conventional Coils (WBS 13): Kalish
Magnetics Diagnostics (WBS 3): Johnson

Related ICDs:

Notes and Abbreviations:

Interface Block Diagrams:

Installation Information:

The co-wound sensor loops will be installed as part of the fabrication of the TF, PF (including solenoid), and external trim coils. The sensor loops will be held in place by either the epoxy impregnation or insulating tape used in the coil fabrication. Installation of the sensor loops will be the responsibility of WBS14. This installation, as part of coil manufacture, shall include lead termination at the coil casing (or boundary). The leads are to be terminated in a heavy duty structure, rigidly attached to the coil and capable of protecting the leads from breakage for the coil lifetime. The dual sensors are for redundancy and the terminating structures should be appropriate to this function. All other work related to these sensor loops (e. g., connections to instrumentation) will be the responsibility of WBS3.

Other Pertinent Information:

Cable type for sensor loops to be determined. The reliability of the sensor loops shall be at the same level as the reliability of the TF, PF, and trim coils.