

**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
**Bid Receiving Public Works and Government  
Services Canada/Réception des soumissions Travaux  
publics et Services gouvernementaux Canada**  
**1713 Bedford Row**  
**Halifax, N.S./Halifax, (N.É.)**  
**B3J 1T3**  
**Bid Fax: (902) 496-5016**

**SOLICITATION AMENDMENT**  
**MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**  
**THIS DOCUMENT CONTAINS A SECURITY  
REQUIREMENT**

**Vendor/Firm Name and Address**  
**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**  
Atlantic Region Acquisitions/Région de l'Atlantique  
Acquisitions  
1713 Bedford Row  
Halifax, N.S./Halifax, (N.É.)  
B3J 3C9  
Nova Scot

<b>Title - Sujet</b> Hydraulic Test Facility Upgrade	
<b>Solicitation No. - N° de l'invitation</b> W3554-156124/A	<b>Amendment No. - N° modif.</b> 006
<b>Client Reference No. - N° de référence du client</b> W3554-15-6124	<b>Date</b> 2015-02-12
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$HAL-219-9424	
<b>File No. - N° de dossier</b> HAL-4-73149 (219)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-02-24</b>	<b>Time Zone</b> Fuseau horaire Atlantic Standard Time AST
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Richard, Linda K.	<b>Buyer Id - Id de l'acheteur</b> hal219
<b>Telephone No. - N° de téléphone</b> (902) 496-5261 ( )	<b>FAX No. - N° de FAX</b> (902) 496-5016
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm (type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

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## AMENDMENT 006

This amendment is issued to reflect the following:

### 1. Bid Closing Date

Delete: February 17, 2015 2:00 p.m. AST

Insert: February 24, 2015 2:00 p.m. AST

### 2. Optional Site Visit

It is recommended that the Bidder or a representative of the Bidder visit the work site. Arrangements have been made for the site visit to be held at FMF Cape Scott on **February 17, 2015**. The site visit will begin at 2:00 p.m. Bidders are to meet at the Rainbow Gate of CFB Halifax - Dockyard.

Bidders are requested to communicate with the Contracting Authority no later than 10:00 a.m. **Monday, February 16, 2015** to confirm attendance and provide the name(s) of the person(s) who will attend. Bidders may be requested to sign an attendance sheet. Bidders who do not attend or do not send a representative will not be given an alternative appointment but they will not be precluded from submitting a bid. Any clarifications or changes to the bid solicitation resulting from the site visit will be included as an amendment to the bid solicitation

### 3. Documents - Sections 7B and 7C

See attached documents.

All other terms and conditions remain unchanged.

Section 07-B  
Test Stand Panel and Wiring Changes

## DRAWING SCHEDULE

DWG. NO.	DWG. TITLE	DWG. NO.	DWG. TITLE
J305/1-A-001	BLOCK DIAGRAM	J305/1-A-301	CONSOLE 3 LAYOUT
J305/1-A-002	ELECTRICAL SCHEMATIC	J305/1-A-302	CONSOLE 3 – MODULE 0, SLOT 1 WIRING
J305/1-A-101	CONSOLE 1 LAYOUT	J305/1-A-303	CONSOLE 3 – MODULE 1, SLOT 2 WIRING
J305/1-A-102	CONSOLE 1 – MODULE 0, SLOT 1 WIRING	J305/1-A-401	CONSOLE 4 LAYOUT
J305/1-A-103	CONSOLE 1 – MODULE 1, SLOT 2 WIRING	J305/1-A-402	CONSOLE 4 – MODULE 0, SLOT 1 WIRING
J305/1-A-104	CONSOLE 1 – MODULE 3, SLOT 4 WIRING	J305/1-A-403	CONSOLE 4 – MODULE 1, SLOT 2 WIRING
J305/1-A-105	CONSOLE 1 – MODULE 5, SLOT 6 WIRING	J305/1-A-404	CONSOLE 4 – MODULE 3, SLOT 4 WIRING
J305/1-A-201	CONSOLE 2 LAYOUT		
J305/1-A-202	CONSOLE 2 – MODULE 0, SLOT 1 WIRING		
J305/1-A-203	CONSOLE 2 – MODULE 1, SLOT 2 WIRING		
J305/1-A-204	CONSOLE 2 – MODULE 3, SLOT 4 WIRING		
J305/1-A-205	CONSOLE 2 – MODULE 5, SLOT 6 WIRING		

**Trihedral** ENGINEERING LIMITED

1160 Bedford Highway, Suite 400  
Bedford, Nova Scotia B4A 1C1

Phone: (902) 835-1575  
Fax: (902) 835-0369

TITLE

-- INDEX --

PROJECT

HYDRAULIC TEST FACILITY  
TEST STAND MODIFICATION

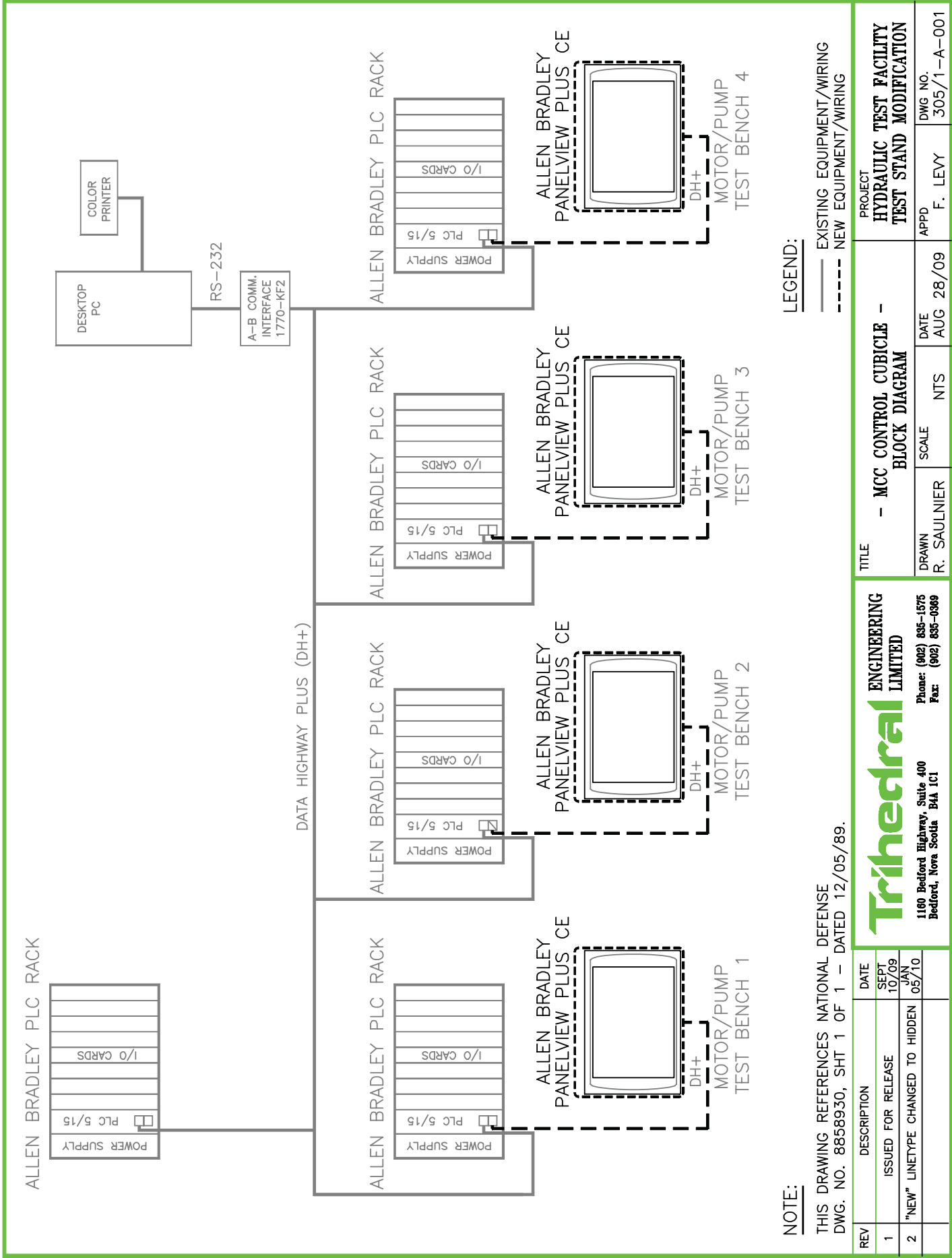
DRAWN  
R. SAULNIER

SCALE  
NTS

SEPT 10/09

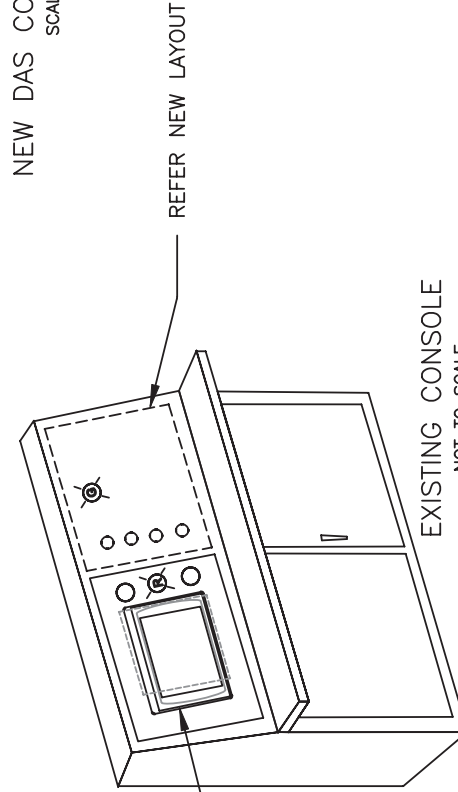
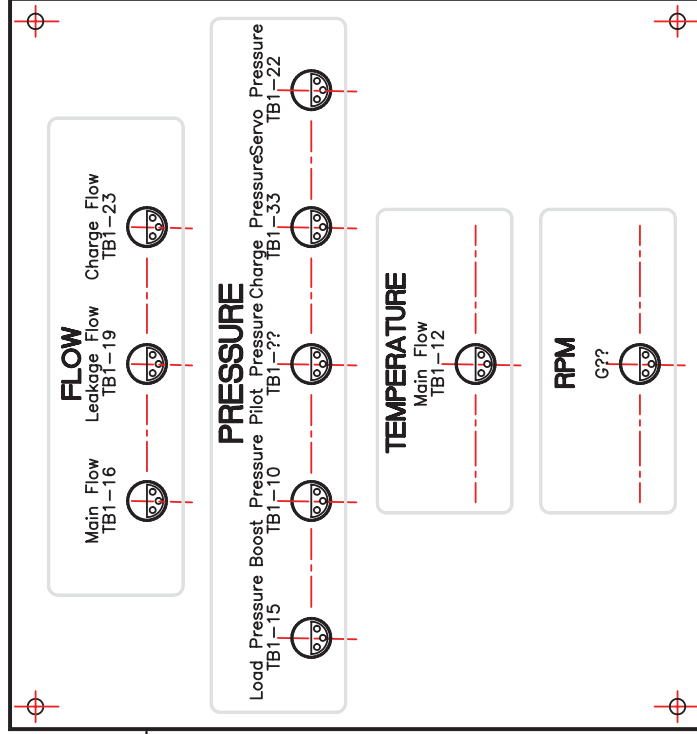
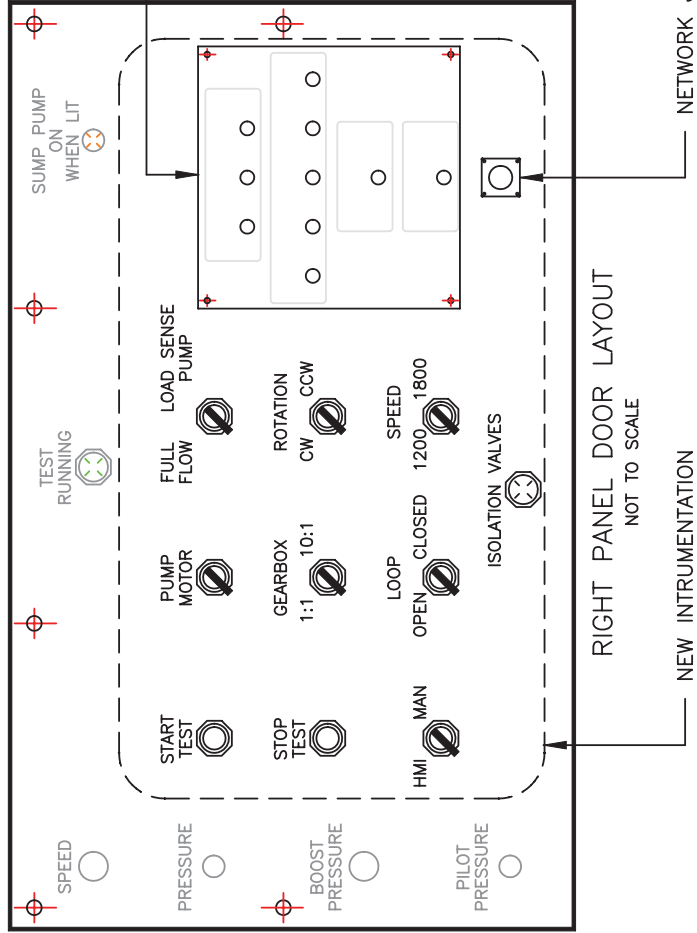
APPD  
F. LEVY

DWG NO.  
305/1-A-000



REV	DESCRIPTION	DATE	TITLE				PROJECT			
1	ISSUED FOR RELEASE	SEPT 10/09	- MCC CONTROL CUBICLE - BLOCK DIAGRAM				HYDRAULIC TEST FACILITY TEST STAND MODIFICATION			
2	"NEW" LINETYPE CHANGED TO HIDDEN	JAN 05/10	DRAWN R. SAULNIER	SCALE NTS	DATE AUG 28/09	APPD F. LEVY	DWG NO. 305/1-A-001			

PROJECT	HYDRAULIC TEST FACILITY TEST STAND MODIFICATION
APPD	DWG NO. 305/1-A-002 E. LEW



# NOTE:

THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858933, SHT 1 OF 4 - DATED 03/05/89.

REV	DESCRIPTION	DATE	TITLE				PROJECT			
1	ISSUED FOR RELEASE	SEPT 10/09	- CONSOLE 1 - CONSOLE MODIFICATIONS				HYDRAULIC TEST FACILITY TEST STAND MODIFICATION			
			DRAWN R. SAULNIER	SCALE AS SHOWN	DATE SEPT 8/09	APPD F. LEVY	DWG NO. 305/1-A-101			

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THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858932, SHT 4 OF 17 - DATED 02/05/89.

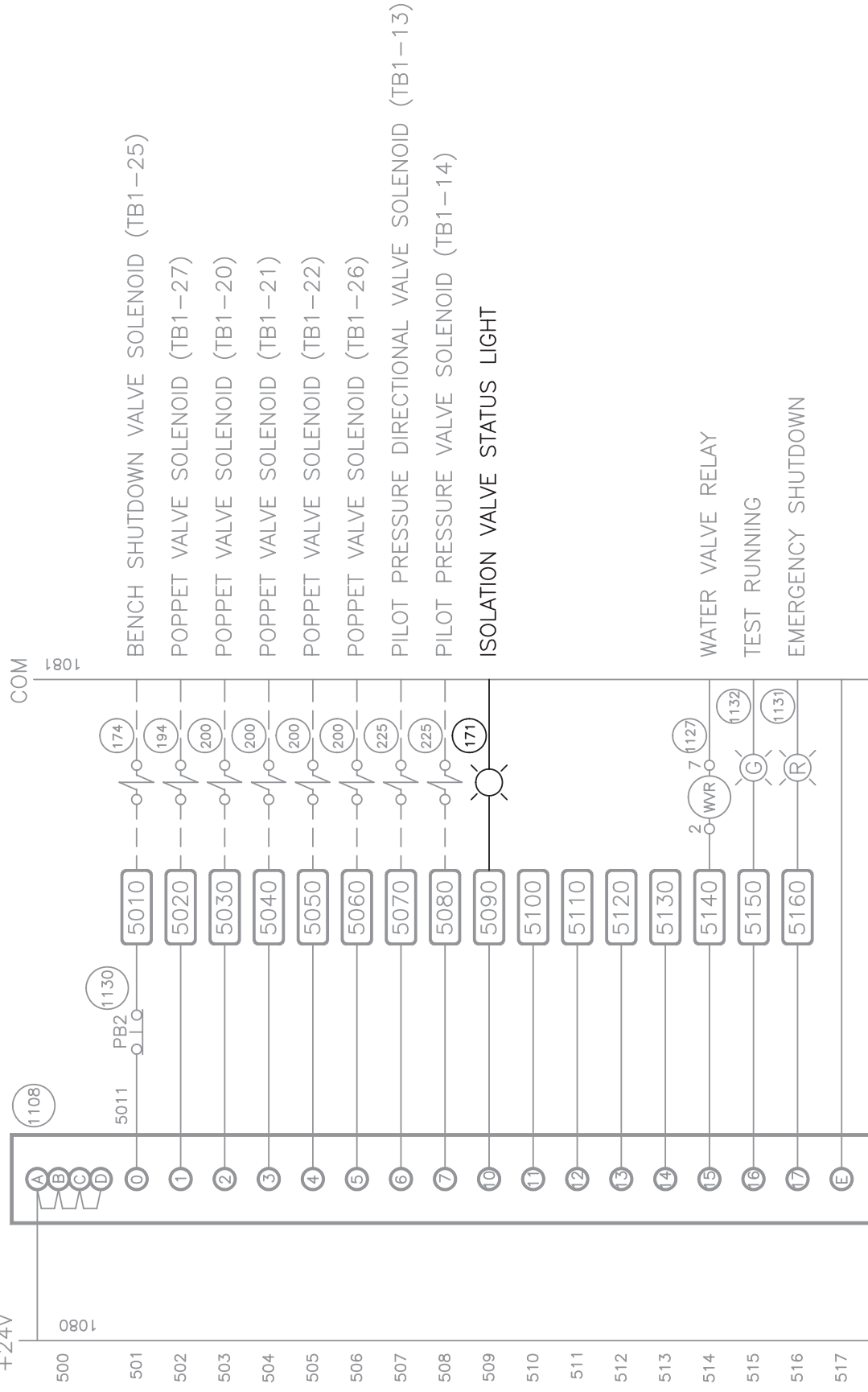
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Bedford, Nova Scotia B4A 1C1

Phone: (902) 835-1575  
Fax: (902) 835-0369

# MODULE 1 - SLOT 2

+24V



NOTE:

THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858932, SHT 5 OF 17 - DATED 03/05/89.

LEGEND:

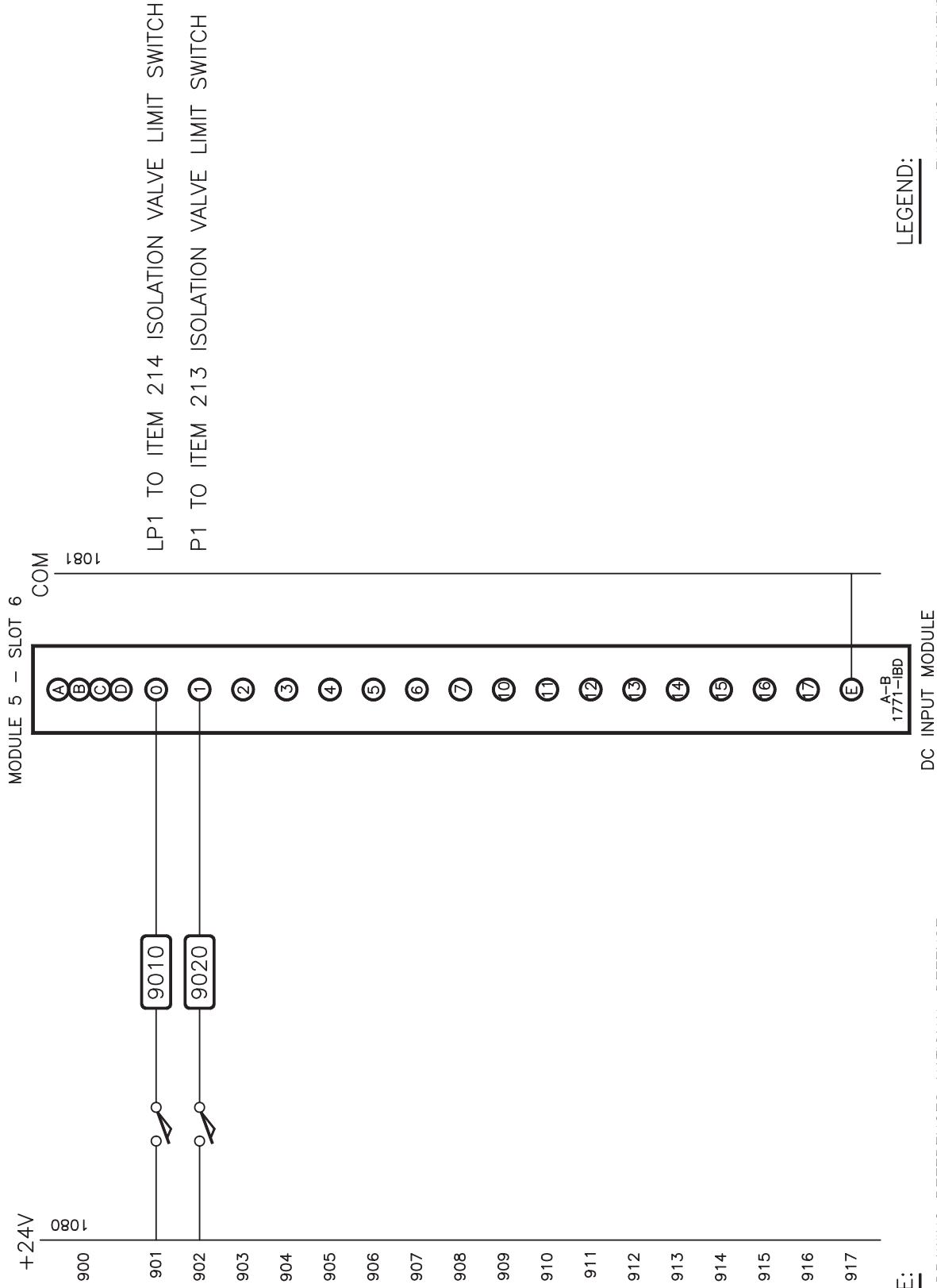
— EXISTING EQUIPMENT/WIRING  
— NEW EQUIPMENT/WIRING

REV	DESCRIPTION	DATE	PROJECT			PROJECT		
1	ISSUED FOR RELEASE	SEPT 10/09	- CONSOLE 1 - MODULE 1, SLOT 2 WIRING			HYDRAULIC TEST FACILITY TEST STAND MODIFICATION		
			DRAWN R. SAULNIER	SCALE NTS	DATE SEPT 8/09	APPD F. LEVY	DWG NO. 305/1-A-103	

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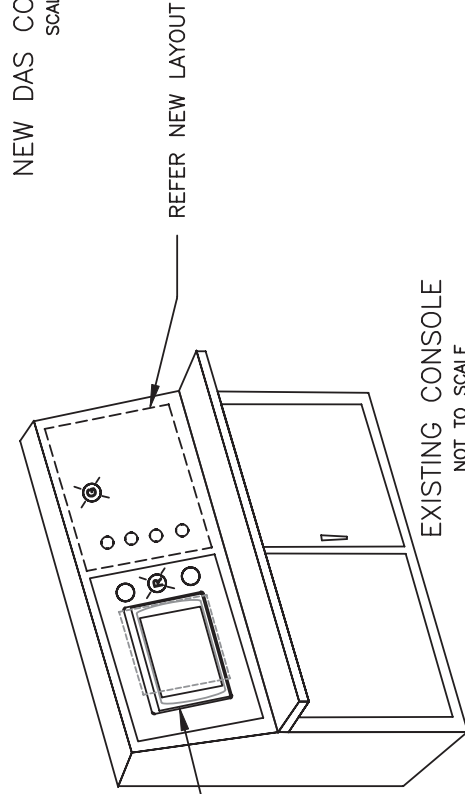
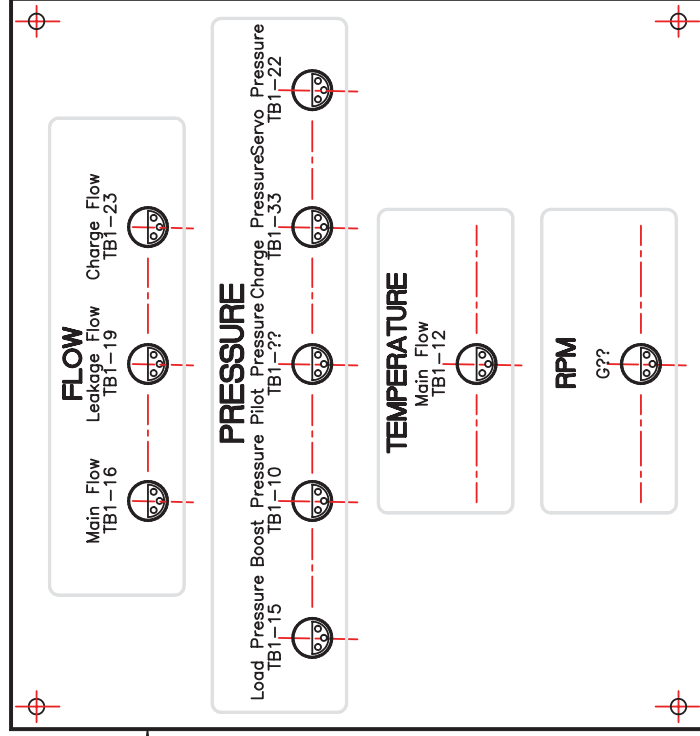
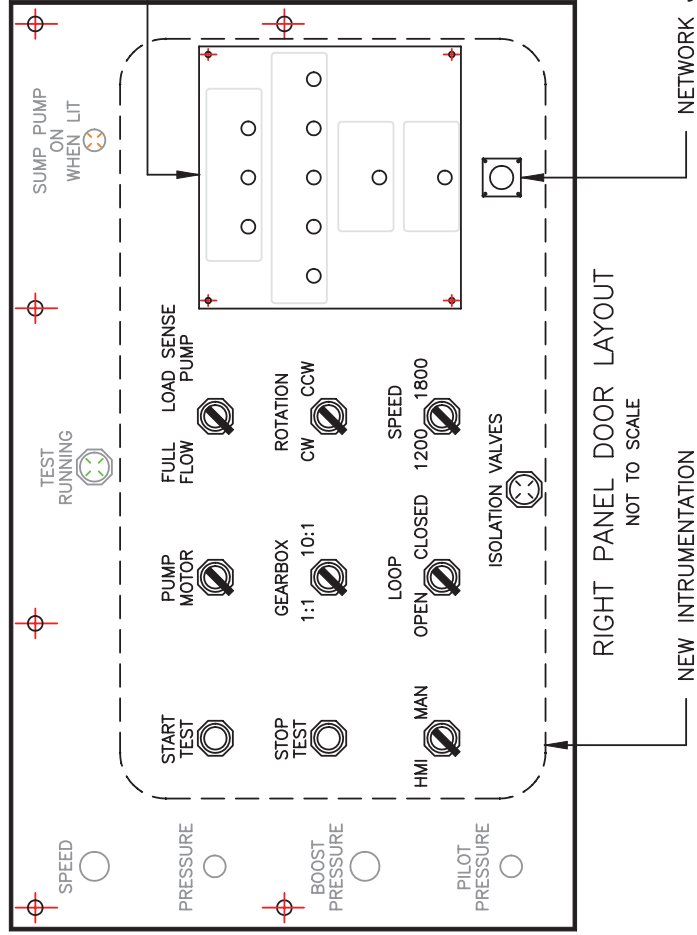
NOTE:

THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858932, SHT 9 OF 17 - DATED 02/05/89.

TITLE		PROJECT	
- CONSOLE 1 - MODULE 5, SLOT 6 WIRING		HYDRAULIC TEST FACILITY TEST STAND MODIFICATION	
DRAWN R. SAULNIER	SCALE NTS	DATE SEPT 8/09	APPD F. LEVY
DWG NO. 305/1-A-105			

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# NOTE:

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DWG. NO. 8858933, SHT 1 OF 4 - DATED 03/05/89.

REV	DESCRIPTION	DATE	TITLE				PROJECT			
1	ISSUED FOR RELEASE	SEPT 10/09	- CONSOLE 2 - CONSOLE MODIFICATIONS				HYDRAULIC TEST FACILITY TEST STAND MODIFICATION			
			DRAWN R. SAULNIER	SCALE AS SHOWN	DATE SEPT 8/09	APPD F. LEVY	DWG NO. 305/1-A-201			

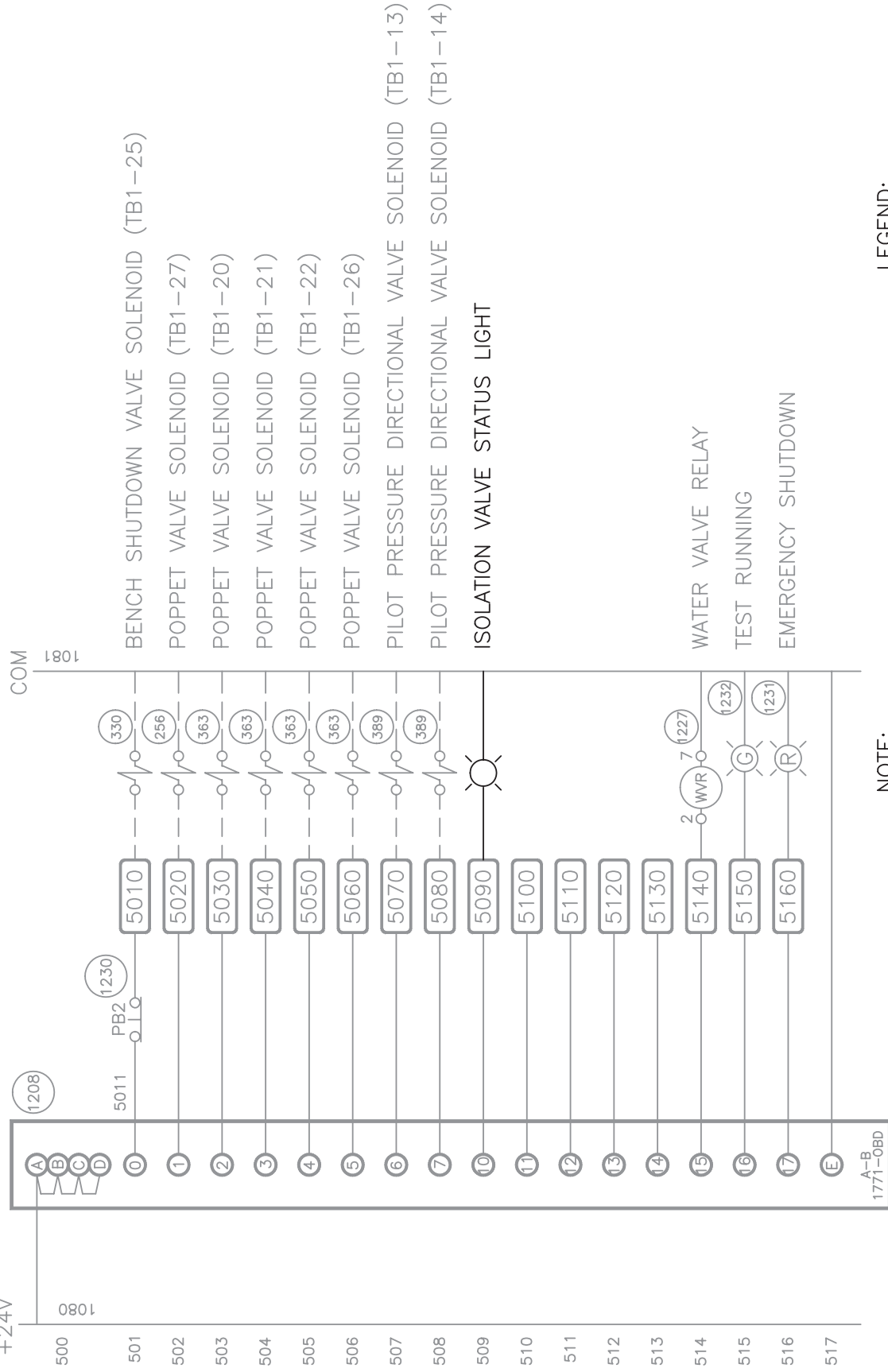
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Phone: (902) 835-1575  
Fax: (902) 835-0369



# MODULE 1 - SLOT 2

+24V



NOTE:

THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858934, SHT 5 OF 17 - DATED 03/05/89.

LEGEND:

— EXISTING EQUIPMENT/WIRING  
— NEW EQUIPMENT/WIRING

REV	DESCRIPTION	DATE	TITLE			PROJECT		
1	ISSUED FOR RELEASE	SEPT 10/09	- CONSOLE 2 - MODULE 1, SLOT 2 WIRING			HYDRAULIC TEST FACILITY TEST STAND MODIFICATION		
			DRAWN R. SAULNIER	SCALE NTS	DATE SEPT 8/09	APPD F. LEVY	DWG NO. 305/1-A-203	

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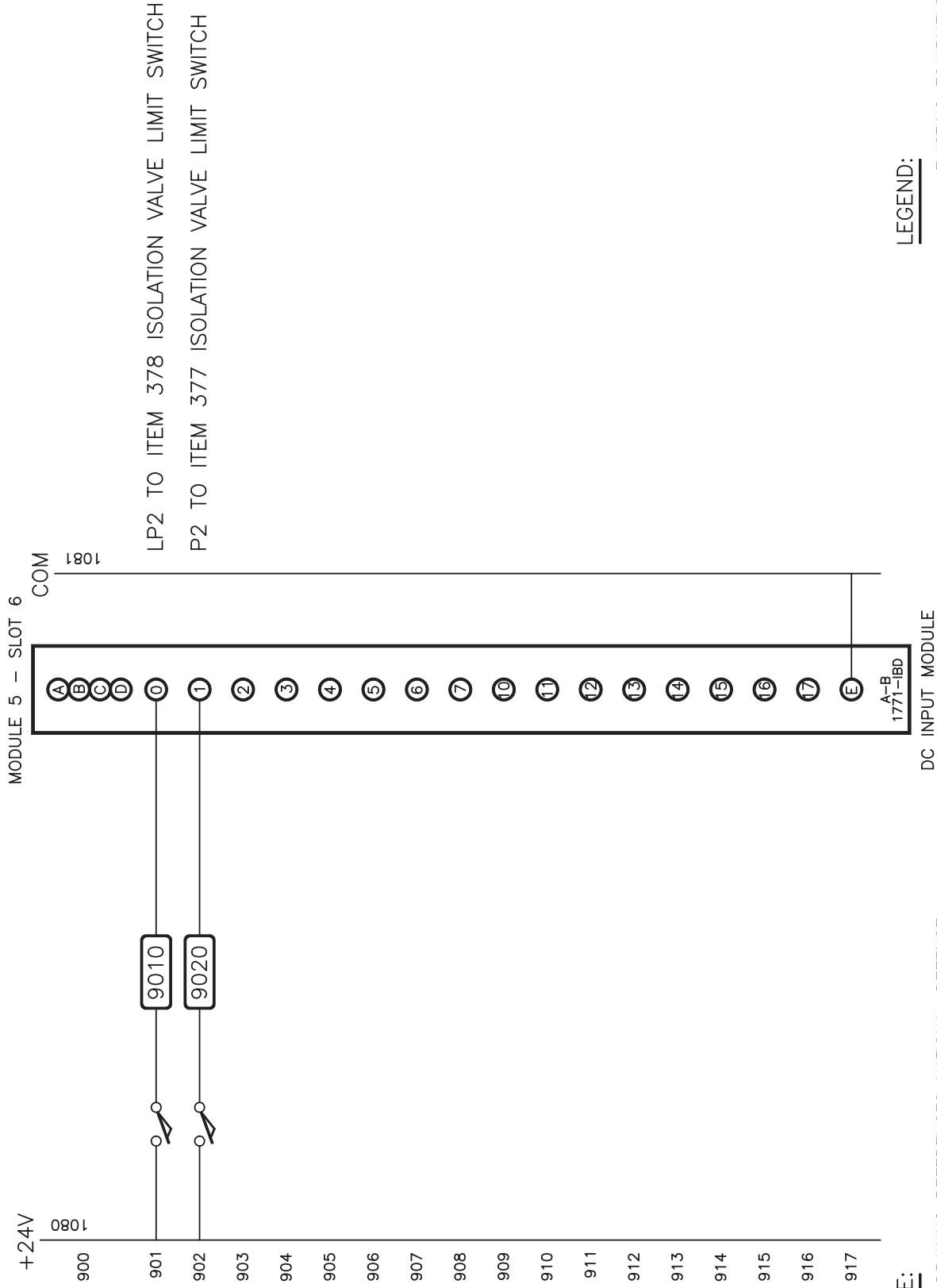
— EXISTING EQUIPMENT/WIRING  
— NEW EQUIPMENT/WIRING

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TITLE		- CONSOLE 2 - MODULE 3, SLOT 4 WIRING		PROJECT HYDRAULIC TEST FACILITY TEST STAND MODIFICATION	
DRAWN R	SAUJ NIFR	SCALE	DATE AUG 27 /09	APPD F I EVY	DWG NO. 305 /1 -A-204



NOTE:

THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858934, SHT 9 OF 17 - DATED 03/05/89.

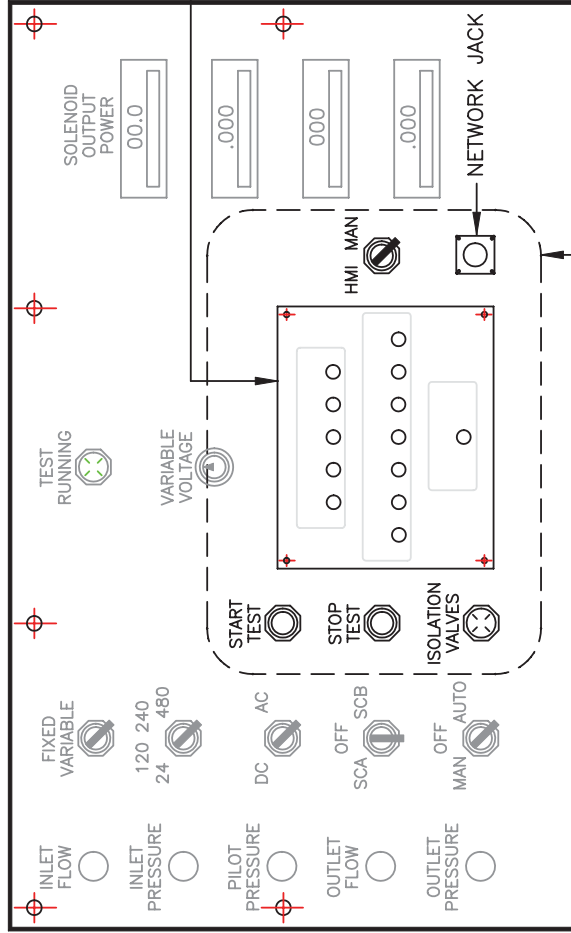
REV		DESCRIPTION	DATE
1		ISSUED FOR RELEASE	SEPT 10/09

TITLE		PROJECT	
- CONSOLE 2 - MODULE 5, SLOT 6 WIRING		HYDRAULIC TEST FACILITY TEST STAND MODIFICATION	
DRAWN R. SAULNIER	SCALE NTS	DATE SEPT 8/09	APPD F. LEVY
		DWG NO. 305/1-A-205	

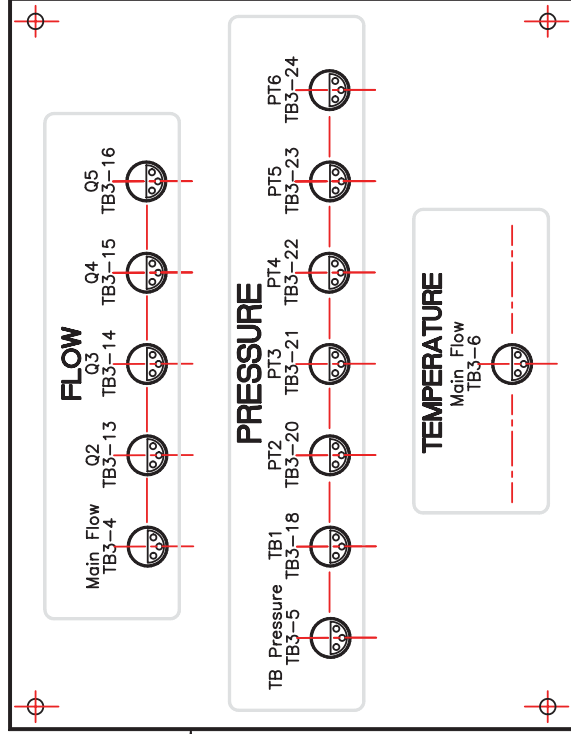
**Trihedral** ENGINEERING LIMITED

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Bedford, Nova Scotia B4A 1C1

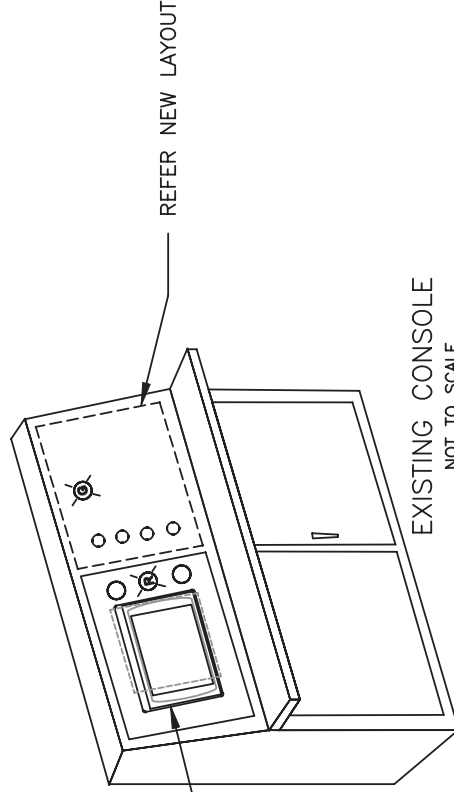
Phone: (902) 835-1575  
Fax: (902) 835-0369



RIGHT PANEL DOOR LAYOUT  
NOT TO SCALE



NEW DAS CONNECTOR ASSY  
SCALE: HALF



NEW HMI,  
ALLEN-BRADLEY PANELVIEW TOUCH SCREEN  
16 3/8" WIDE X 13" HIGH

NOTE:

THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858935, SHT 1 OF 4 - DATED 04/05/89.

REV		DESCRIPTION	DATE
1		ISSUED FOR RELEASE	SEPT 10/09

TITLE		PROJECT	
- CONSOLE 3 - CONSOLE MODIFICATIONS		HYDRAULIC TEST FACILITY TEST STAND MODIFICATION	
DRAWN R. SAULNIER	SCALE AS SHOWN	DATE SEPT 9/09	APPD F. LEVY
			DWG NO. 305/1-A-301

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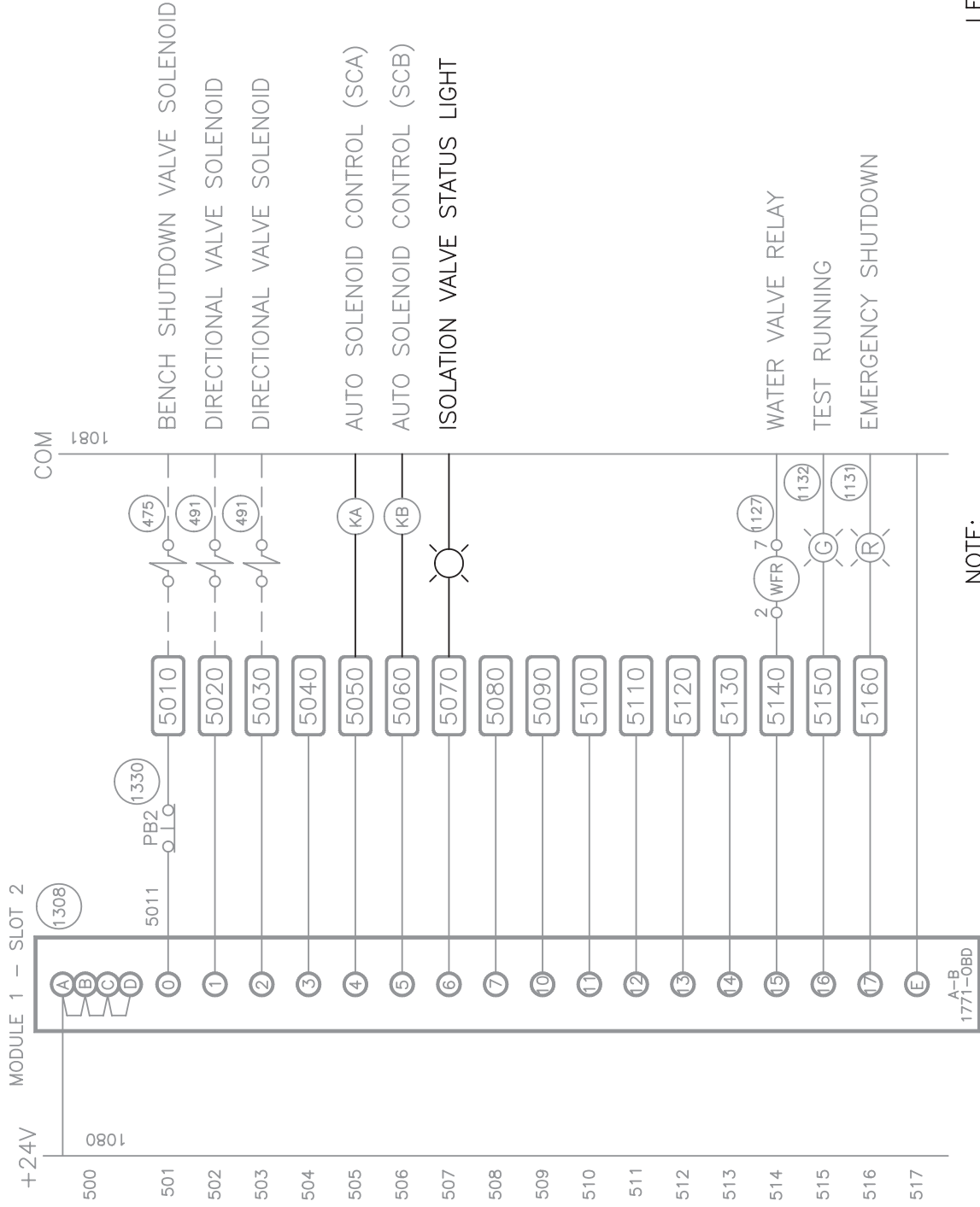
1160 Bedford Highway, Suite 400  
Bedford, Nova Scotia B4A 1C1

Phone: (902) 835-1575  
Fax: (902) 835-0369



THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858936, SHT 4 OF 20 - DATED 04/05/89.

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1160 Bedford Highway, Suite 400  
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Phone: (902) 835-1575  
Fax: (902) 835-0369

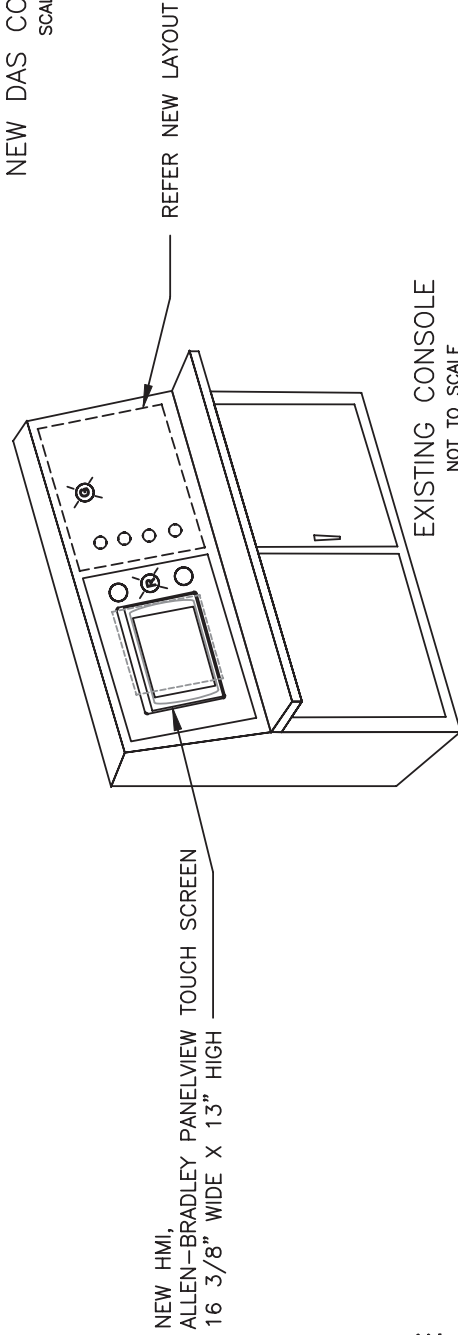
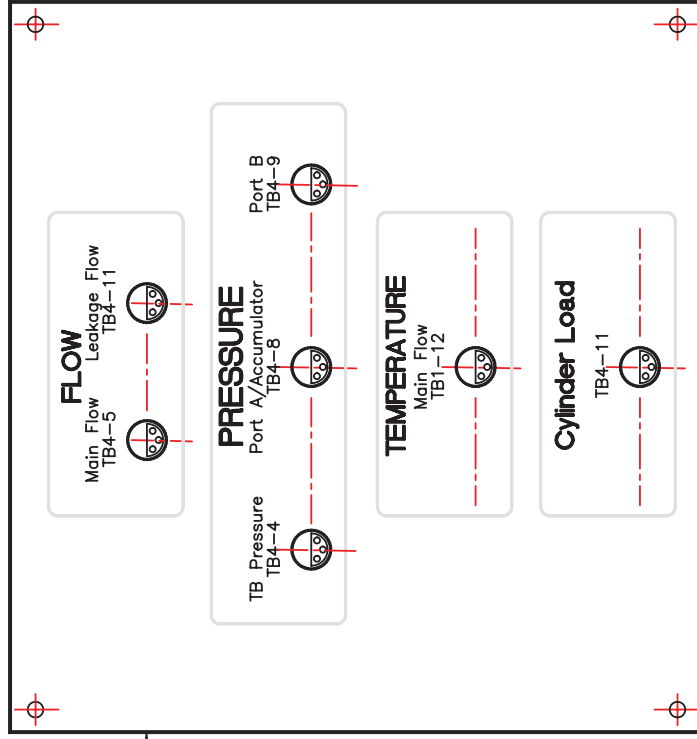
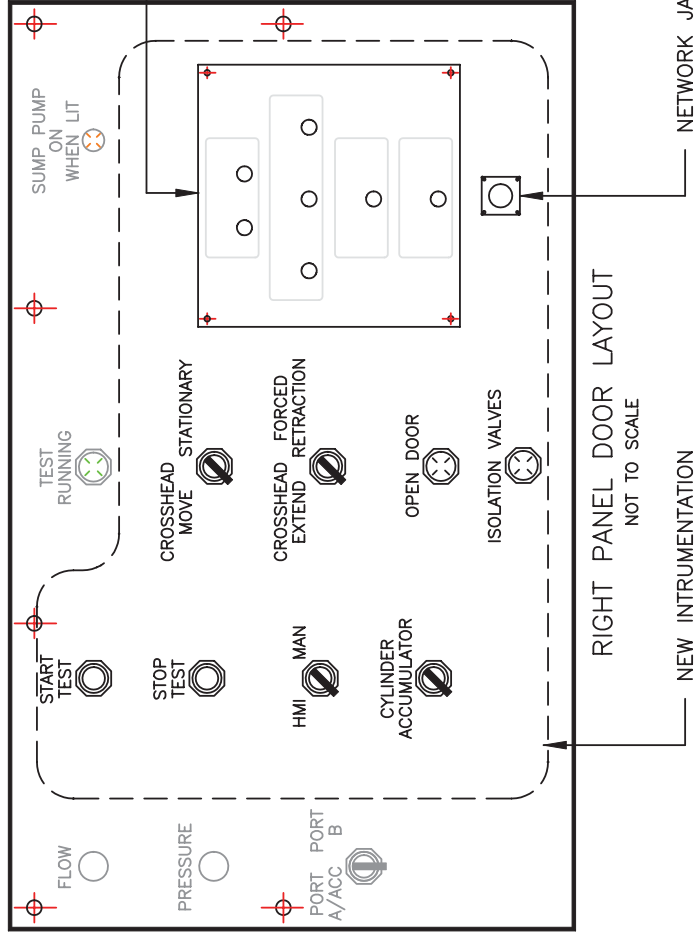


NOTE:

THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858936, SHT 5 OF 20 - DATED 03/05/89.

LEGEND:

REV	DESCRIPTION	DATE	TITLE			PROJECT		
1	ISSUED FOR RELEASE	SEPT 10/09	- CONSOLE 3 - MODULE 1, SLOT 2 WIRING			HYDRAULIC TEST FACILITY TEST STAND MODIFICATION		
			DRAWN R. SAULNIER	SCALE NTS	DATE SEPT 8/09	APPD F. LEVY	DWG NO. 305/1-A-303	



**NOTE:**

THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858937, SHT 1 OF 4 - DATED 08/05/89.

REV	DESCRIPTION	DATE	TITLE				PROJECT			
1	ISSUED FOR RELEASE	SEPT 10/09	- CONSOLE 4 - CONSOLE MODIFICATIONS				HYDRAULIC TEST FACILITY TEST STAND MODIFICATION			
			DRAWN R. SAULNIER	SCALE AS SHOWN	DATE SEPT 9/09	APPD F. LEVY	DWG NO. 305/1-A-401			

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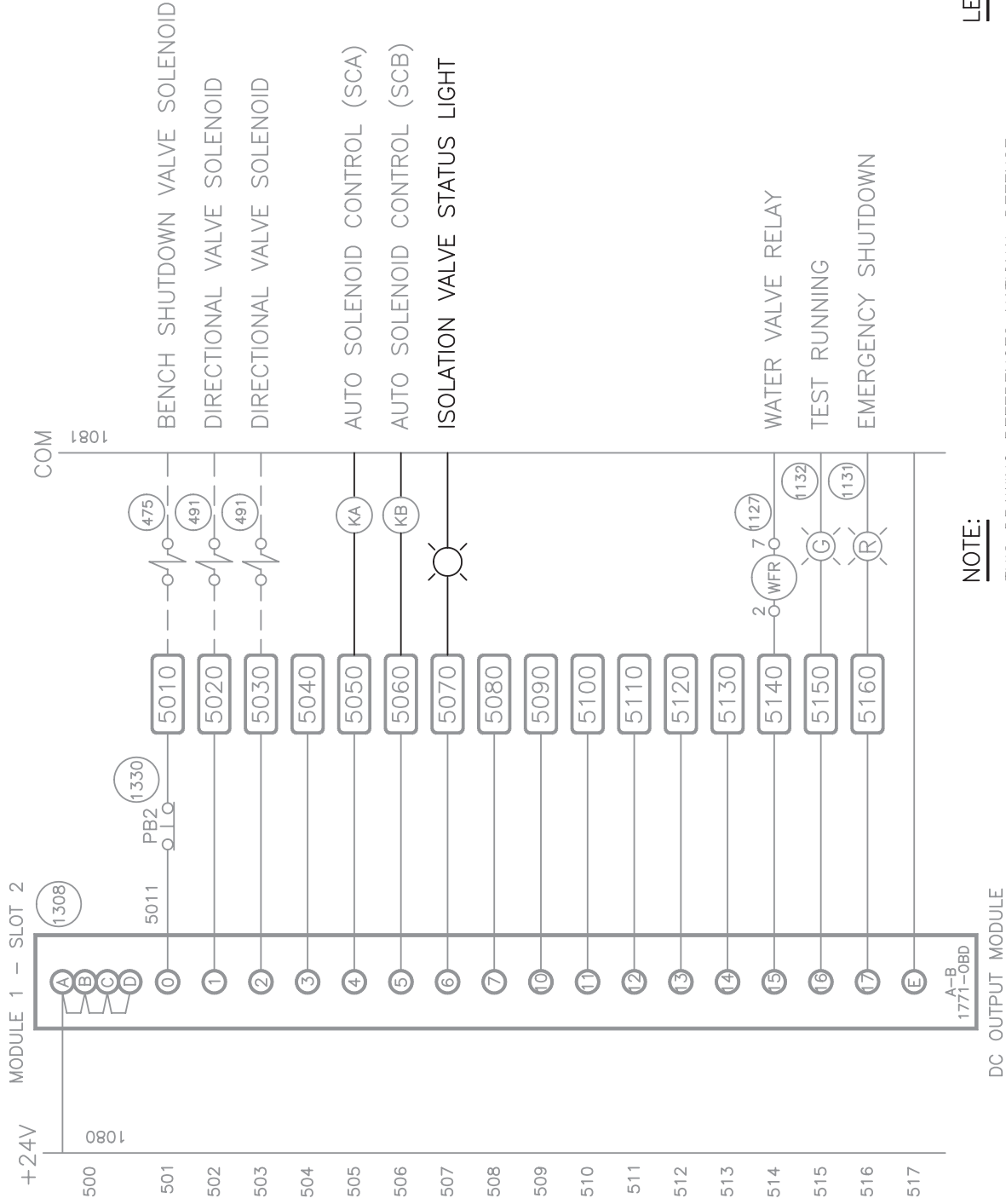
THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858938, SHT 4 OF 15 - DATED 11/05/89.

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Phone: (902) 835-1575  
Fax: (902) 835-0369

TITLE		- CONSOLE 4 - MODULE 0, SLOT 1 WIRING		PROJECT HYDRAULIC TEST FACILITY TEST STAND MODIFICATION	
DRAWN R	SAUJ NIFR	SCALE	DATE AUG 27/09	APPD F	DWG NO. 305/1-A-402

LEGEND:

— EXISTING EQUIPMENT/WIRING  
— NEW EQUIPMENT/WIRING



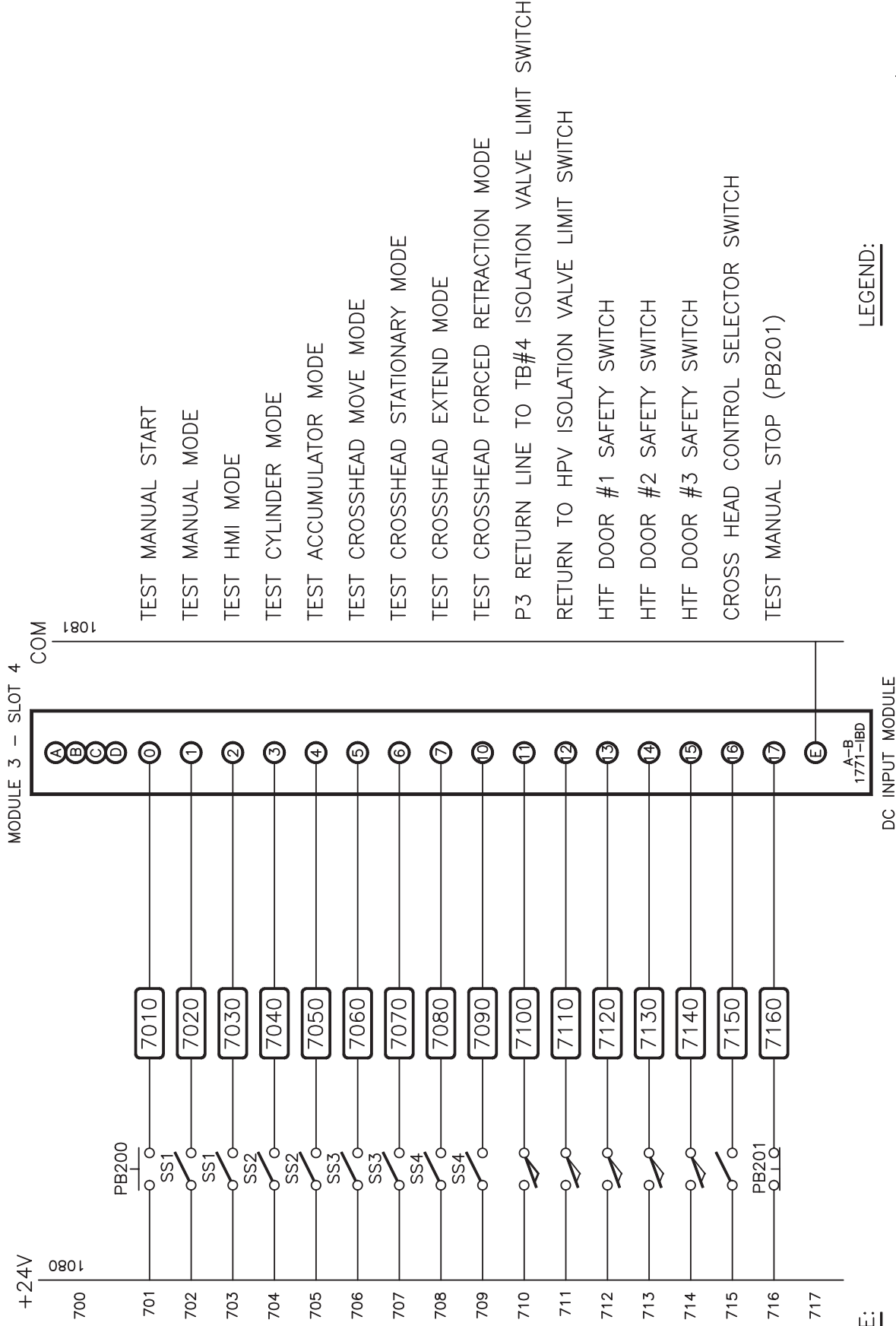
NOTE:

THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858936, SHT 5 OF 20 - DATED 03/05/89.

LEGEND:

— EXISTING EQUIPMENT/WIRING  
— NEW EQUIPMENT/WIRING

REV	DESCRIPTION	DATE	TITLE			PROJECT		
1	ISSUED FOR RELEASE	SEPT 10/09	MODULE 1, SLOT 2 WIRING			HYDRAULIC TEST FACILITY		
			MODULE 1, SLOT 2 WIRING			TEST STAND MODIFICATION		
			DRAWN R. SAULNIER	SCALE NTS	DATE SEPT 8/09	APPD F. LEVY	DWG NO. 305/1-A-403	



NOTE:

THIS DRAWING REFERENCES NATIONAL DEFENSE  
DWG. NO. 8858938, SHT 7 OF 15 - DATED 03/05/89.

LEGEND:

— EXISTING EQUIPMENT/WIRING  
— NEW EQUIPMENT/WIRING

REV		DESCRIPTION	DATE
1		ISSUED FOR RELEASE	SEPT 10/09

TITLE		PROJECT	
- CONSOLE 4 - MODULE 3, SLOT 4 WIRING		HYDRAULIC TEST FACILITY TEST STAND MODIFICATION	

DRAWN	SCALE	DATE	APPD	DWG NO.
R. SAULNIER	NTS	AUG 27/09	F. LEVY	305/1-A-404

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Section 07-C  
Sample Test Result Graphical Print Outs

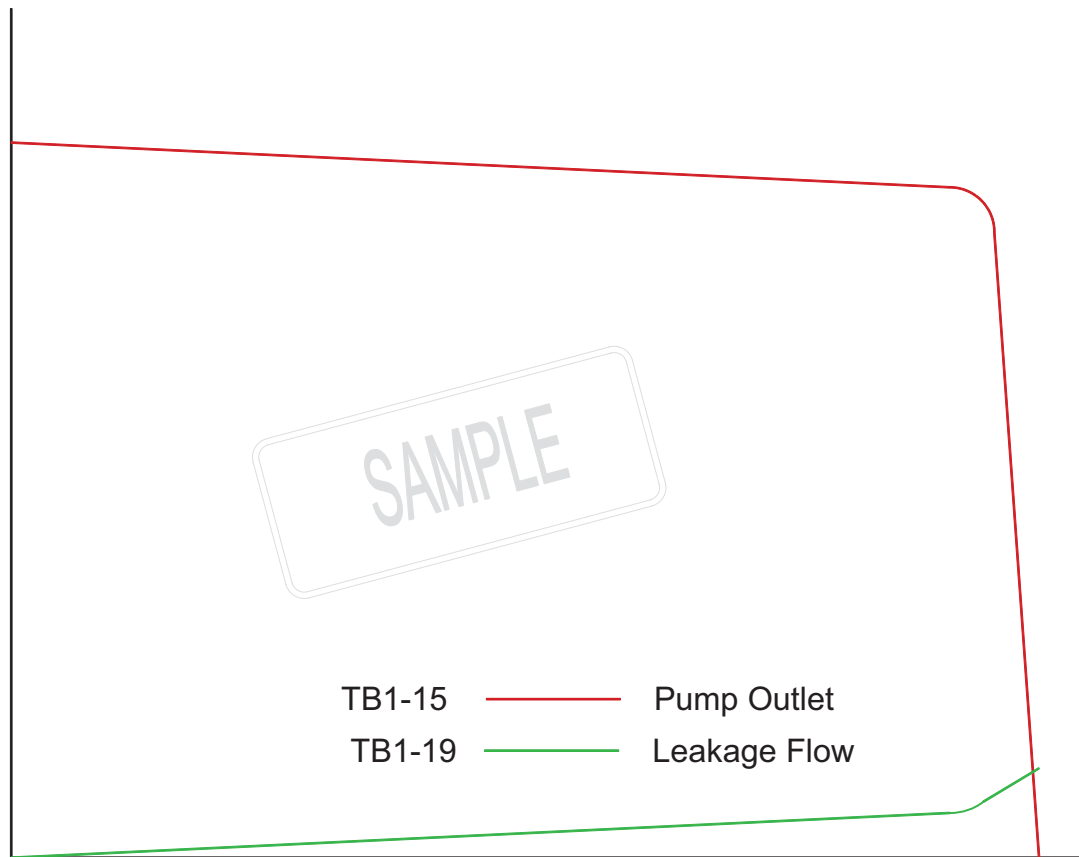
Open Loop Pump Test

System:  
Vessel/Machine:

Brand:  
Part #:  
Serial Number:  
Test Temperature:

Test RPM

Flow  
USgpm  
TB1-16



Test performed by:

Date:

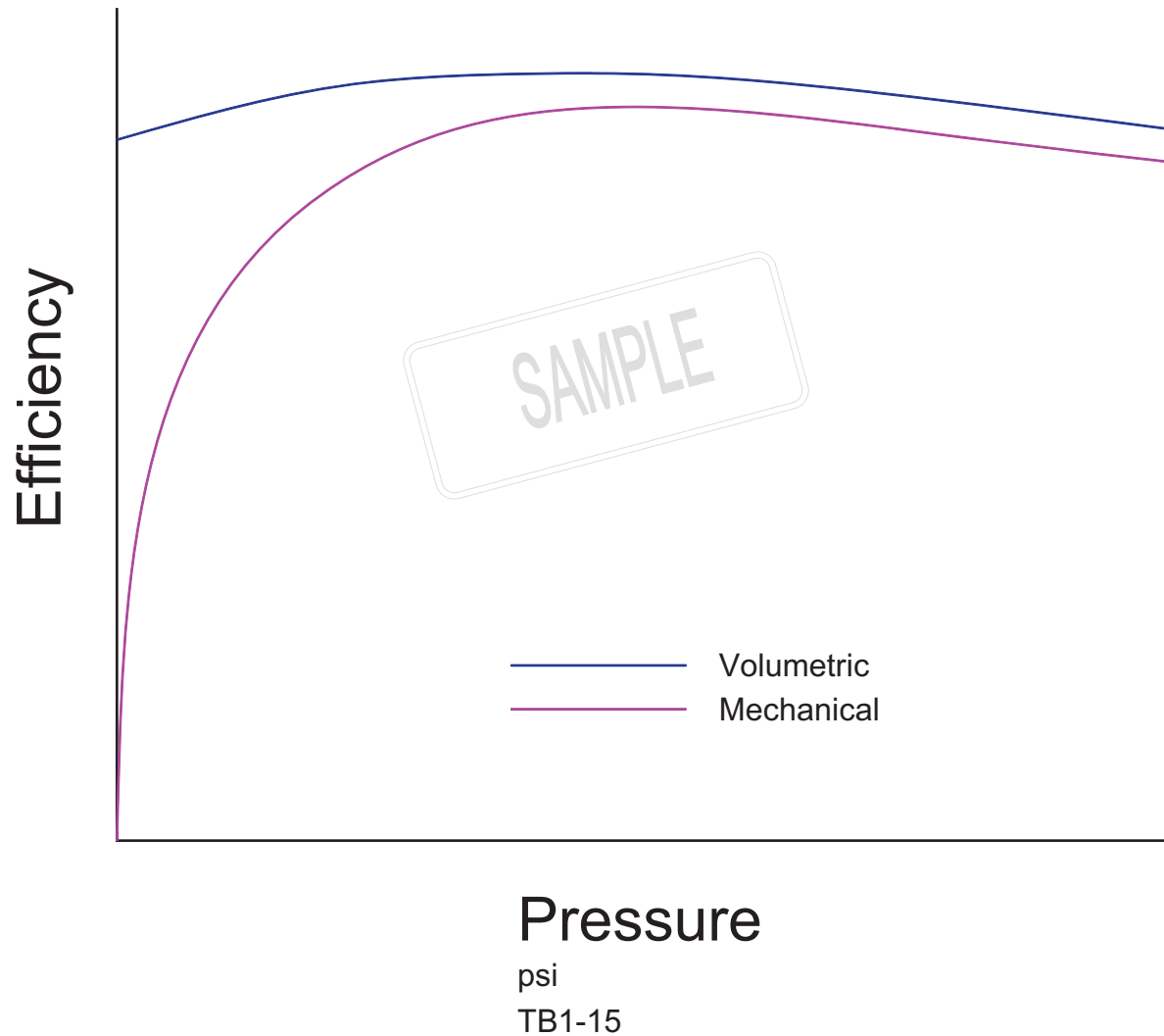
Notes: Pressure Compensated pump test

Open Loop Pump Test

System:  
Vessel/Machine:

Brand:  
Part #:  
Serial Number:  
Test Temperature:

Test RPM



Test performed by:

Date:

Notes: Pressure Compensated pump test

Open Loop Pump Test

System:  
Vessel/Machine:

Brand:  
Part #:  
Serial Number:

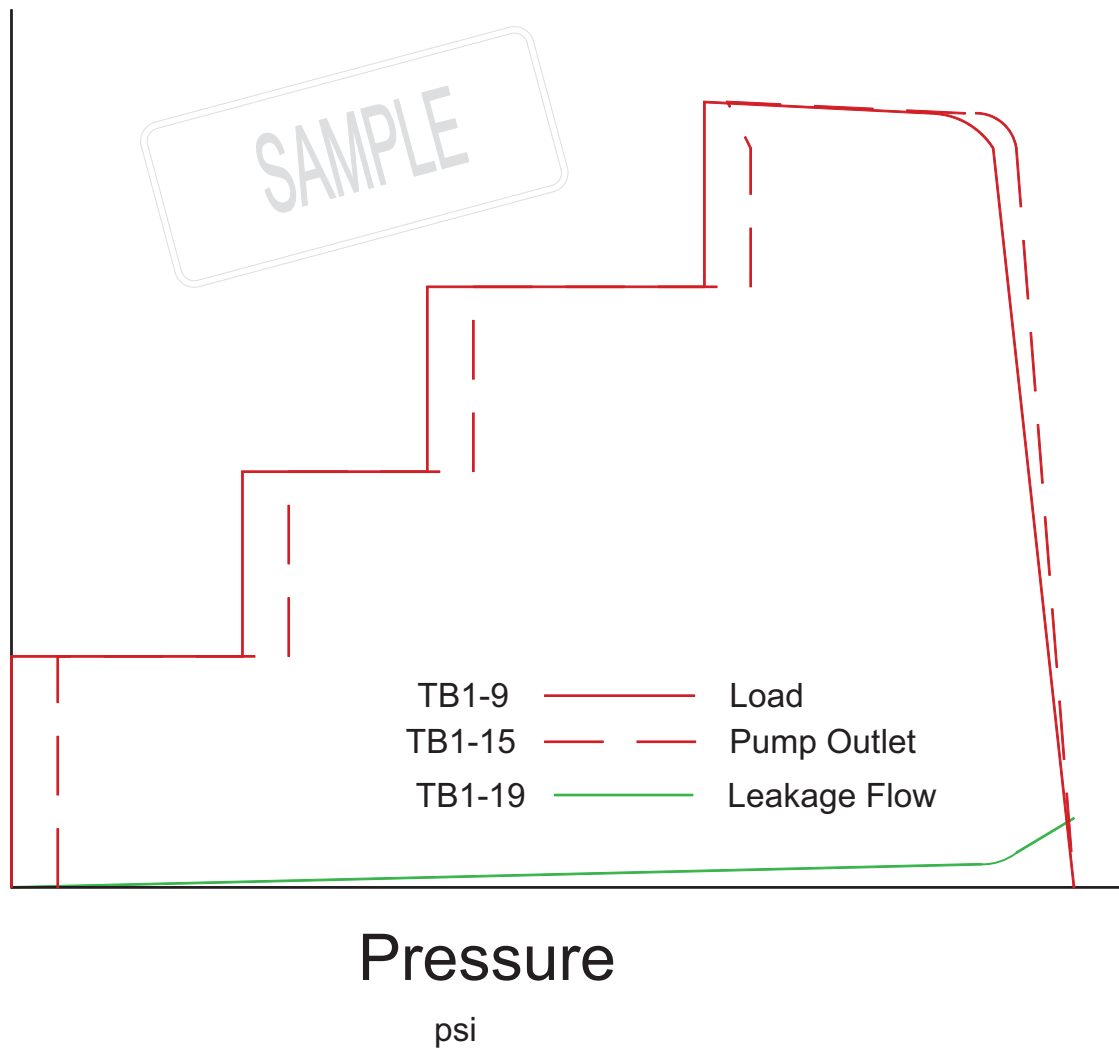
Test RPM

Test Temperature:

Flow

USgpm

TB1-16



Test performed by:

Date:

Notes: Pressure Compensated & Load Sensing pump test

System:  
Vessel/Machine:

Brand:  
Part #:  
Serial Number:

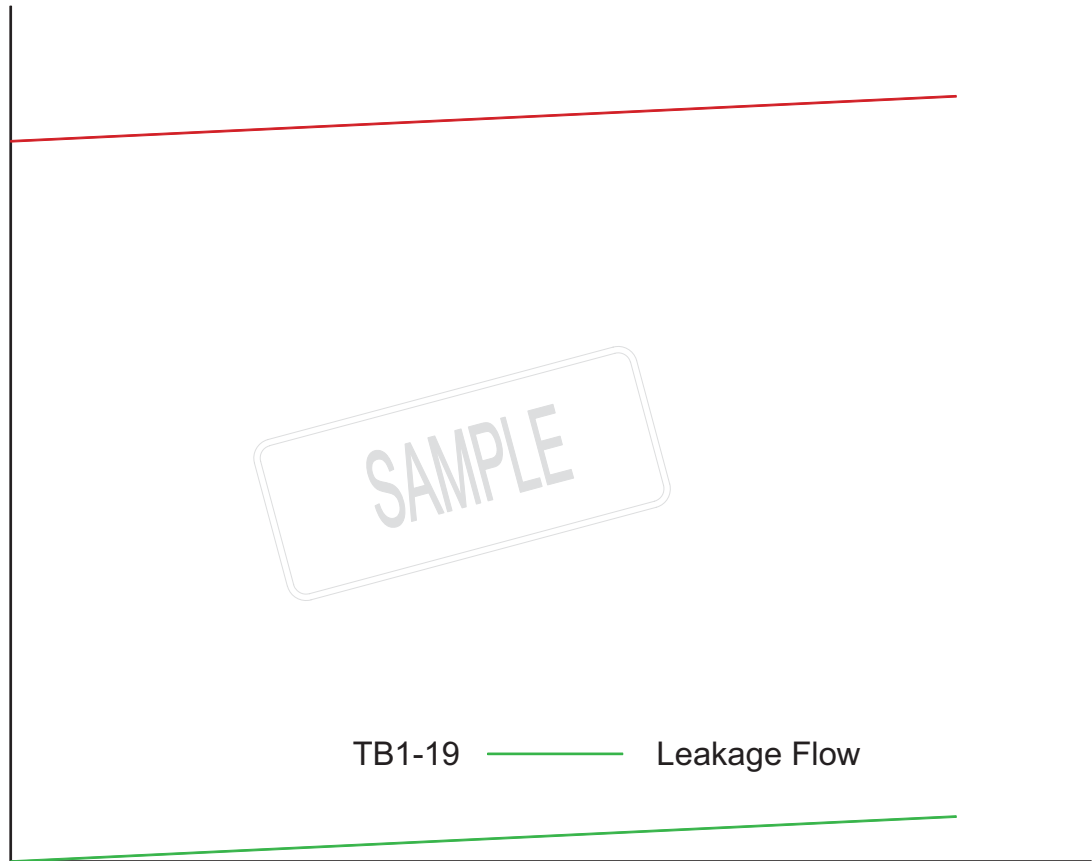
Test RPM

Test Temperature:

Flow

USgpm

TB1-16



TB1-19 ——— Leakage Flow

Pressure

psi

TB1-15

Test performed by:

Date:

Notes: Fixed displacement motor  
Flow in Port A - CW rotation

Closed Loop Pump Test

System:

Brand:

Vessel/Machine:

Part #:

Serial Number:

Test RPM

Test Temperature:

Flow

USgpm

TB1-16

Charge

Pressure

psi

TB1-33

SAMPLE

Servo (Pilot) Pressure

psi TB1-32

Test performed by:

Date:

Notes:

Displacement Control Test - Flow out port A

Pump equipped with Pressure Override (Cut Off)

Servo Pressure - Port X1

Test Bench #3  
Valve Test

System:  
Vessel/Machine:

Brand:  
Part #:  
Serial Number:  
Test Temperature:

Pressure

psi  
TB3-5



Flow

USgpm  
TB3-14

Test performed by:

Date:

Notes: Relief Valve

FMF Cape Scott

Hydraulic Test Facility

System:

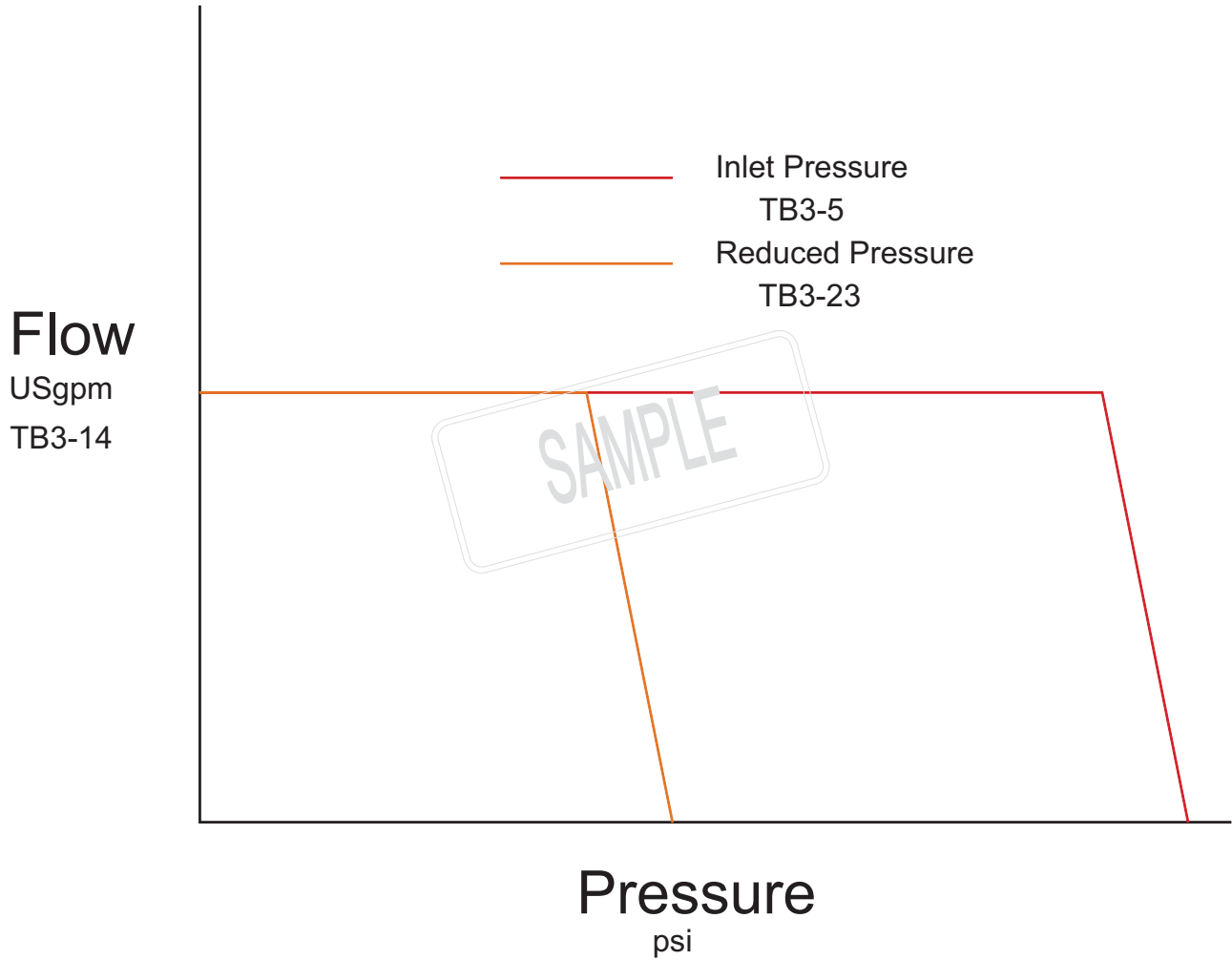
Vessel/Machine:

Brand:

Part #:

Serial Number:

Test Temperature:



Test performed by:

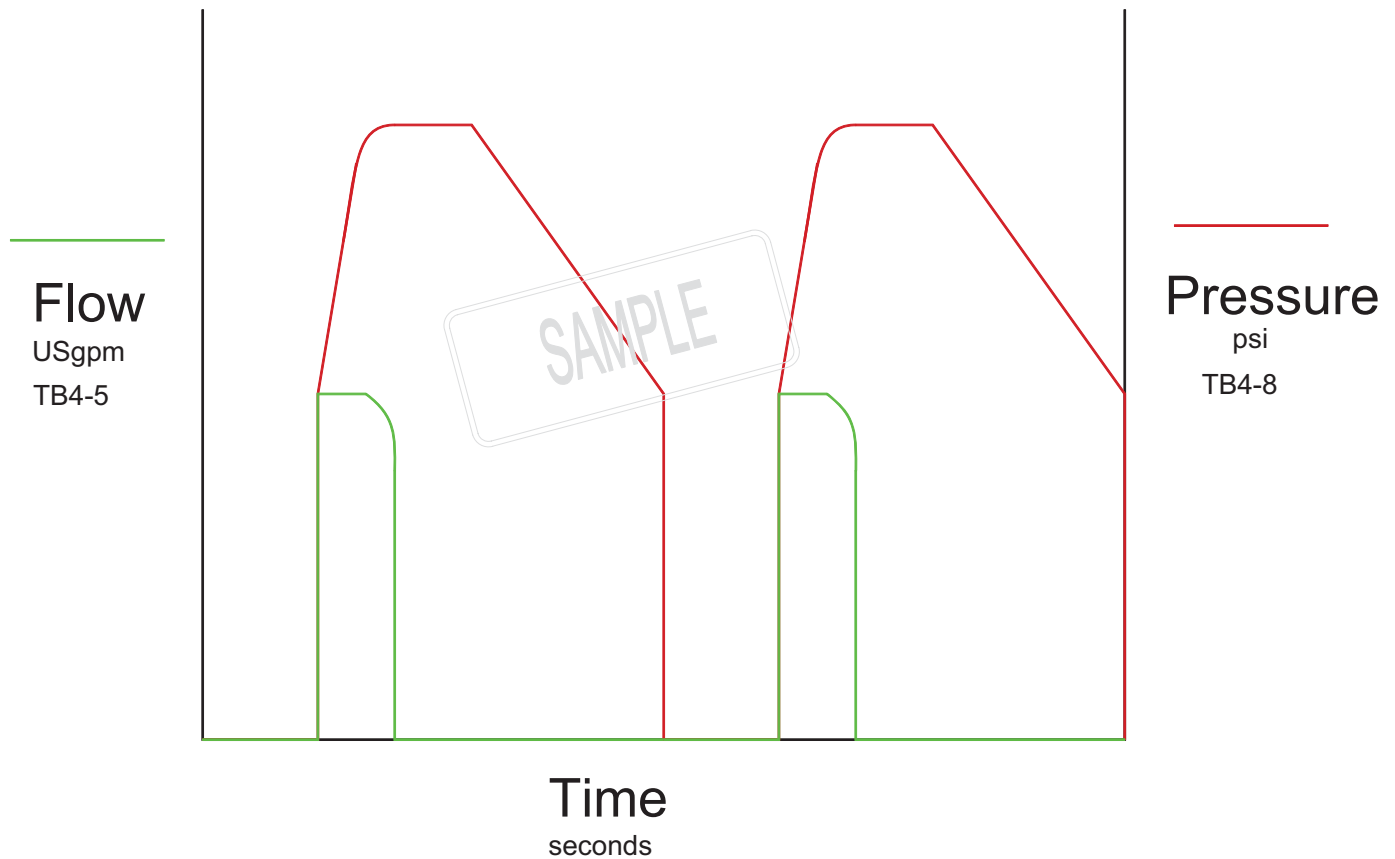
Date:

Notes: Pressure Reducing Valve

Test Bench #4  
Accumulator Test

System:  
Vessel/Machine:

Brand:  
Part #:  
Serial Number:  
Test Temperature:



Test performed by:

Date:

Notes: Charge-Discharge Cycle Test  
Precharge \_\_\_\_\_ psi

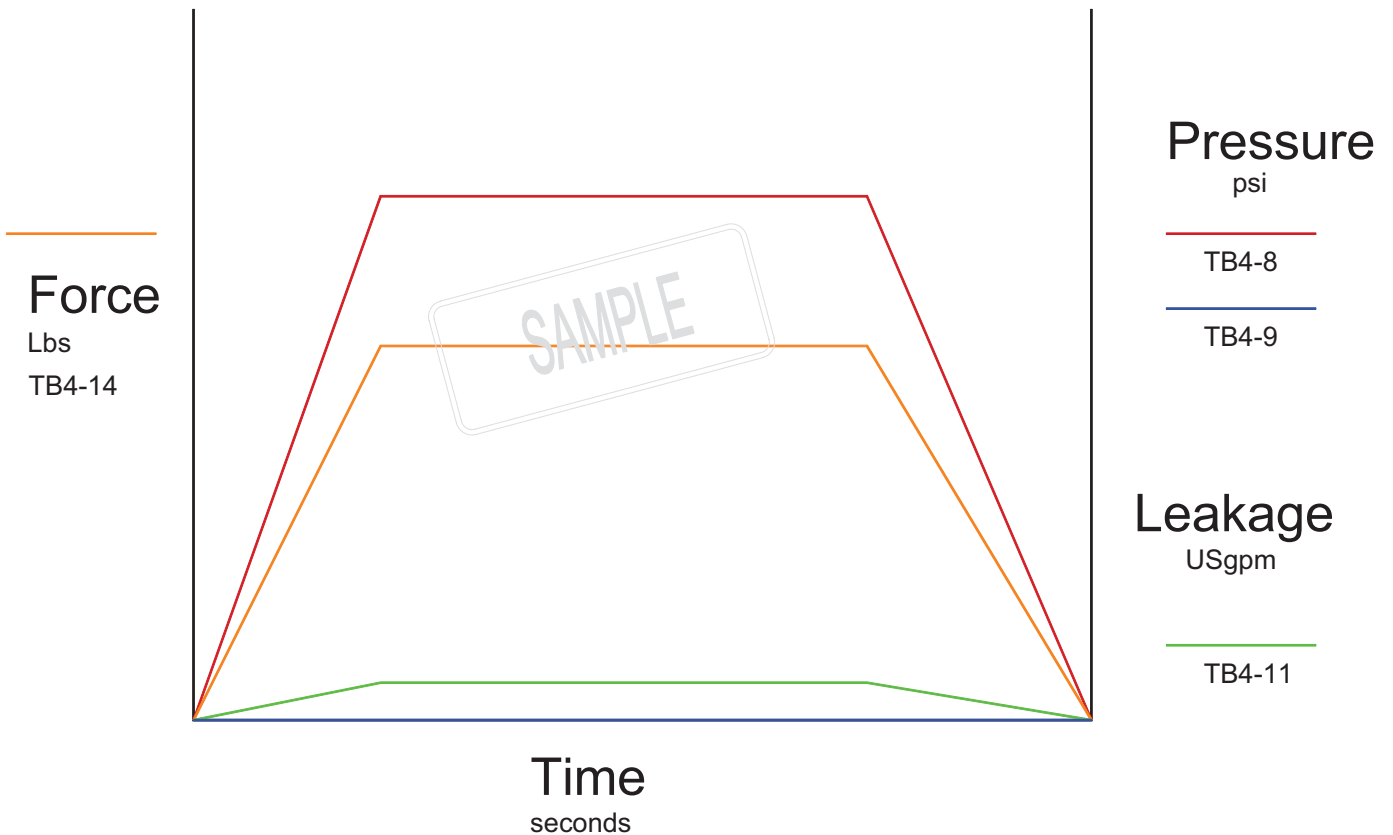
FMF Cape Scott

Hydraulic Test Facility

Test Bench #4  
Cylinder Test

System:  
Vessel/Machine:

Brand:  
Part #:  
Serial Number:  
Test Temperature:



Bore: \_\_\_\_\_ Stroke: \_\_\_\_\_ Rod: \_\_\_\_\_

Test performed by:

Date:

Notes: Static Leak Test  
Test performed at mid-stroke

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Hydraulic Test Facility