

Installation Manual



Automated Fuel Maintenance System

FTI-10A & FTI-20A



FUEL TECHNOLOGIES INTERNATIONAL LLC

Replacement Manuals Available on Website: www.fueltech.us

07/01/2010 - Fuel Technologies - FTI-10A and 20A

Installation Manual

Contents

<i>Overview</i> -----	<i>Page 2</i>
<i>Installation Notes</i> -----	<i>Page 3</i>
<i>Identifying Parts FT-I-10A & 20A</i> -----	<i>Page 4</i>
<i>Stand Alone Installation</i> -----	<i>Page 5</i>
<i>Electrical Drawings</i> -----	<i>Page 6 - 11</i>
<i>Cabinet Drawings</i> -----	<i>Page 12 & 13</i>

OVERVIEW

1. The complete automated diesel fuel maintenance system with cabinet shall be designed for wall or pedestal mounting

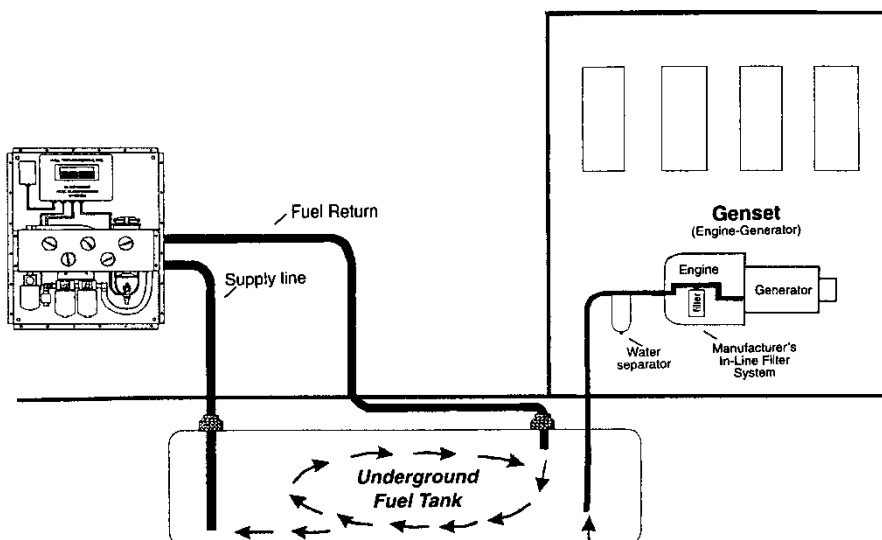
Supply line to be installed at the sump end of the storage tank 1” from the bottom and plumbed to the automated fuel maintenance system. A **FOOT VALVE** must be installed on supply line to keep system primed.

2. A return line to be installed to the opposite end of the storage tank.
3. Caution should be taken not to exceed the 15-ft. suction lift capability of the fuel circulation pump.

Should vertical suction lift exceed 15 ft. the circulation pump in FTI cabinet can be removed and replaced with a submersible pump in the storage tank. The submersible pump shall be wired to the FTI control panel. A flow control valve and a flow meter may be required to set fuel flow at 10 or 20 GPM, depending on the system. (**The FTI inline Flow Switch (Flow or No Flow) will not be required, and is removed for this application.**)

4. Fuel conditioner stabilizer to be added to the existing fuel tank, and proportionally when additional fuel is added to the storage tank.
5. Fuel Biocide to be added to stored diesel fuel annually.

HOW IT WORKS



INSTALLATION NOTES

1. FTI systems operate on either above ground or underground tanks. Any installation should be completed by a qualified plumbing contractor and qualified electrician.
2. Wall mount or pedestal mount should be bolted into place.
3. 240V AC, Single Phase, 20 Amp. Power supply must be available at system location.
4. A Disconnect switch is provided on the FTI Control Panel for power shut off.
5. Pipe plugs were installed in the supply and return line for shipping purposes only, and must be removed prior to installation.
6. Holes will need to be added in cabinet for electrical, Fuel supply line, and Fuel return line.
7. All FTI models are factory tested using lightweight oil. Some of this fluid may remain in the unit. It will not interfere with the performance of the system.
8. On initial start up, if the system does not fill with fluid, the pump may require priming.
(SEE PRIMING TEE LOCATION ON NEXT PAGE)

INSTALLATION PRECAUTIONS:

IF POWER TO THE FTI CONTROL PANEL IS TO BE TURNED OFF AFTER IT IS INSTALLED, THEN THE INSTALLER SHALL PROVIDE FOR THERMAL EXPANSION PROTECTION.

AFTER INSTALLATION, ALL MANUAL BALL VALVES SHALL REMAIN OPEN.

THE FTI CONTROL PANEL WILL AUTOMATICALLY OPEN ALL ELECTRICALLY CONNECTED VALVES WHEN THE FTI PRESSURE GAUGE REACHES 45 PSI. THIS FEATURE OPERATES AUTOMATICALLY ONLY WHEN POWER IS ON AND THE CONTROL PANEL IS SET TO AUTO OR MANUAL OFF MODES

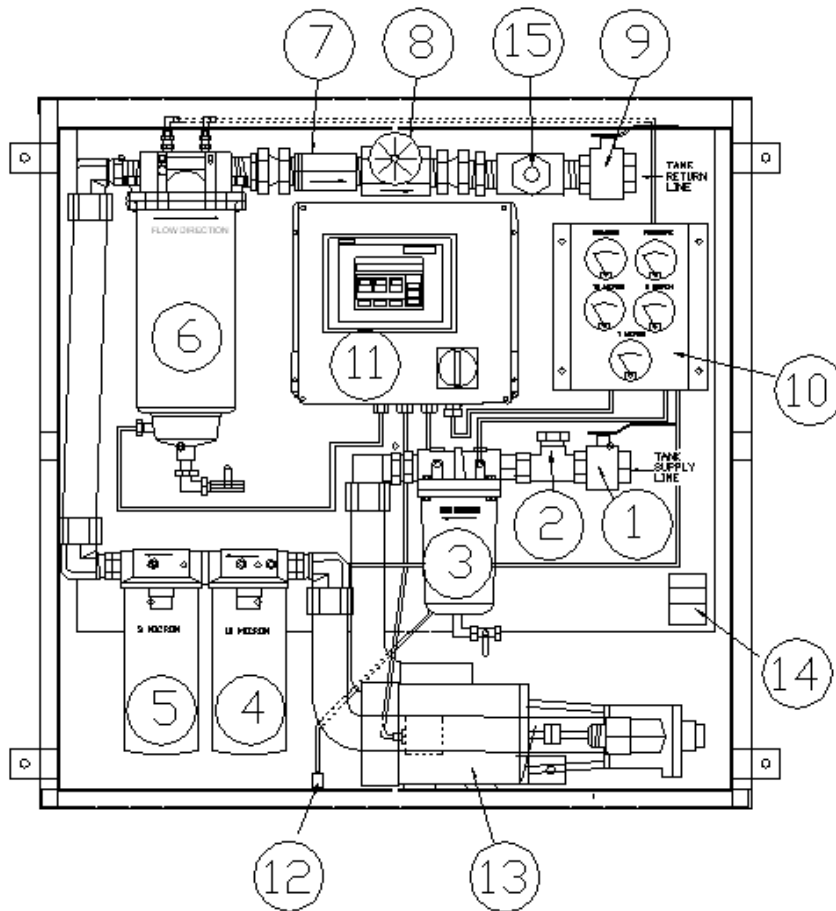
FTI WILL NOT BE RESPONSIBLE FOR ANY THERMAL EXPANSION DAMAGE DUE TO EXCESSIVE PRESSURE.

**DO NOT RUN LONGER THAN THREE MINUTES
WITHOUT FLUIDS**

9. To *prime the pump, fill supply line with fuel.* Remove the priming Tee Cap and fill system. Restart the system.
10. For starting system see operations manual.

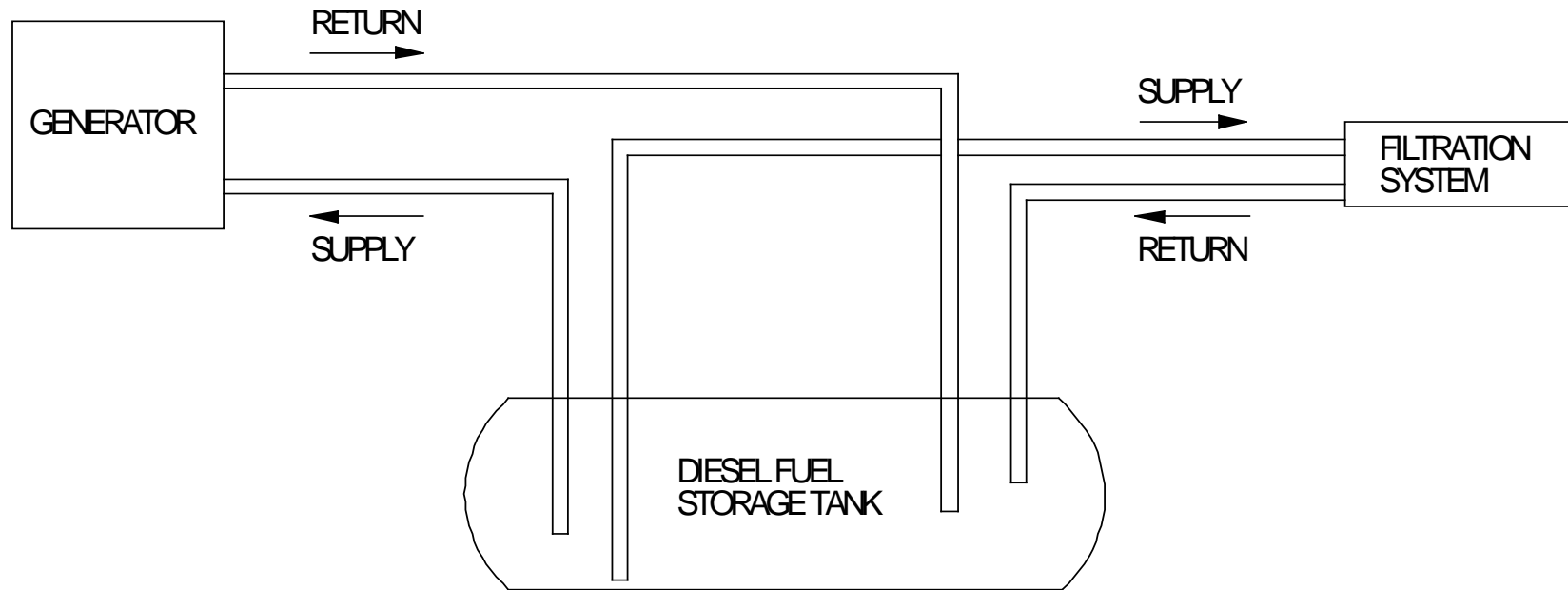
IDENTIFYING PARTS

FTI-10A & FTI-20A



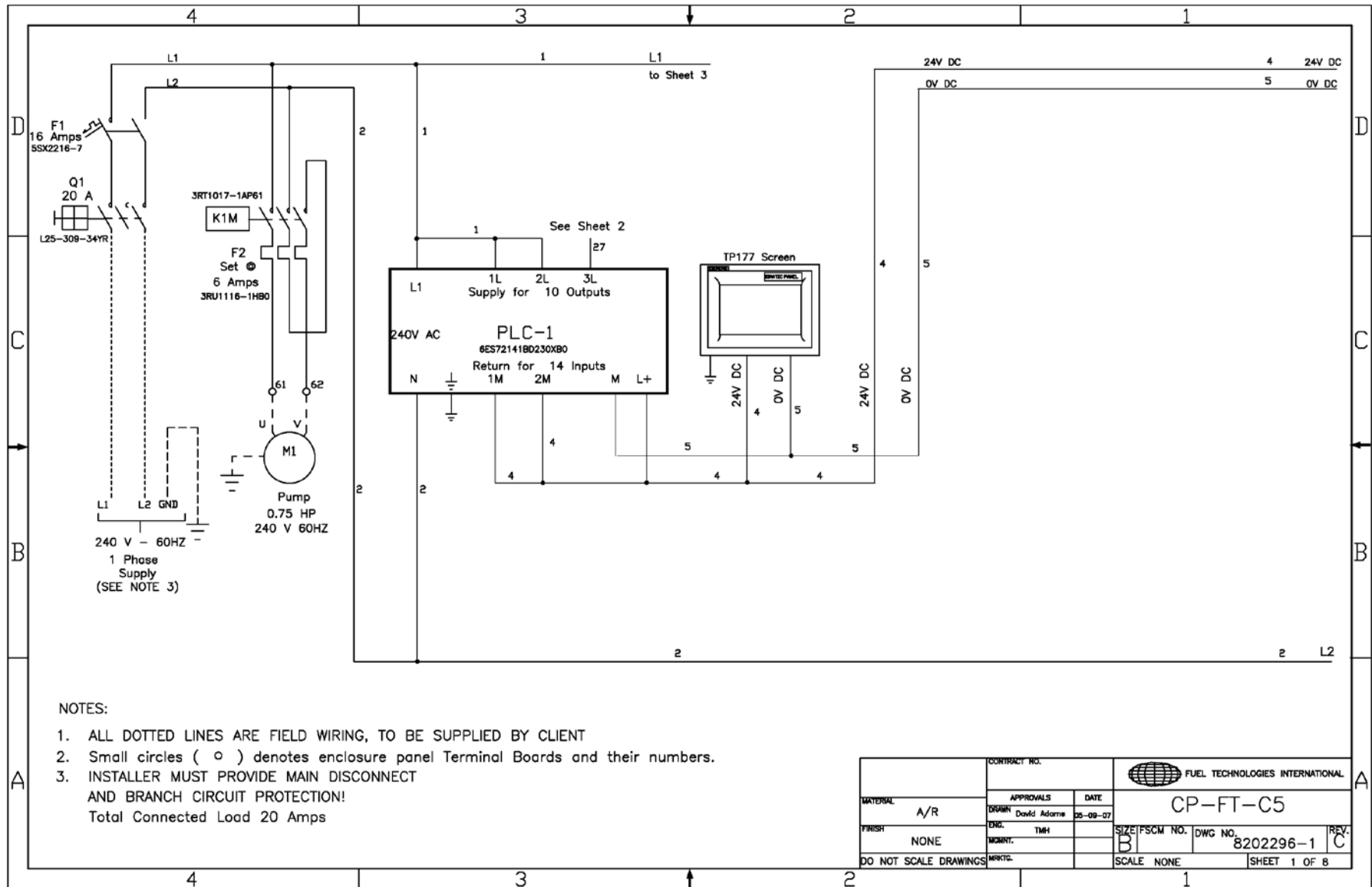
- 1) Supply Line Hookup - NPT Ball Valve, (1 1/4" model 10A, 1 1/2" model 20A)
- 2) Priming Tee (Remove Cap and fill with Fuel if needed)
- 3) Strainer – Cartridge Type with 100 Mesh, 149 Micron Element
- 4) 10 Micron Pre Filter, Spin On Type
- 5) 3 Micron Pre Filter, Spin On Type
- 6) 1 Micron element and Water Separator
- 7) Check Valve
- 8) Site Glass
- 9) Return line Hookup with NPT Ball Valve (1 1/4" model 10A, 1 1/4" model 20A)
- 10) Switch Gauge's
- 11) Control Panel
- 12) Leak Detector
- 13) Pump / Motor Assembly
- 14) Serial Number, Model Number, FM Approved Tags
- 15) Flow Switch (Flow or no Flow Sensor)

PREFERRED STAND ALONE INSTALLATION

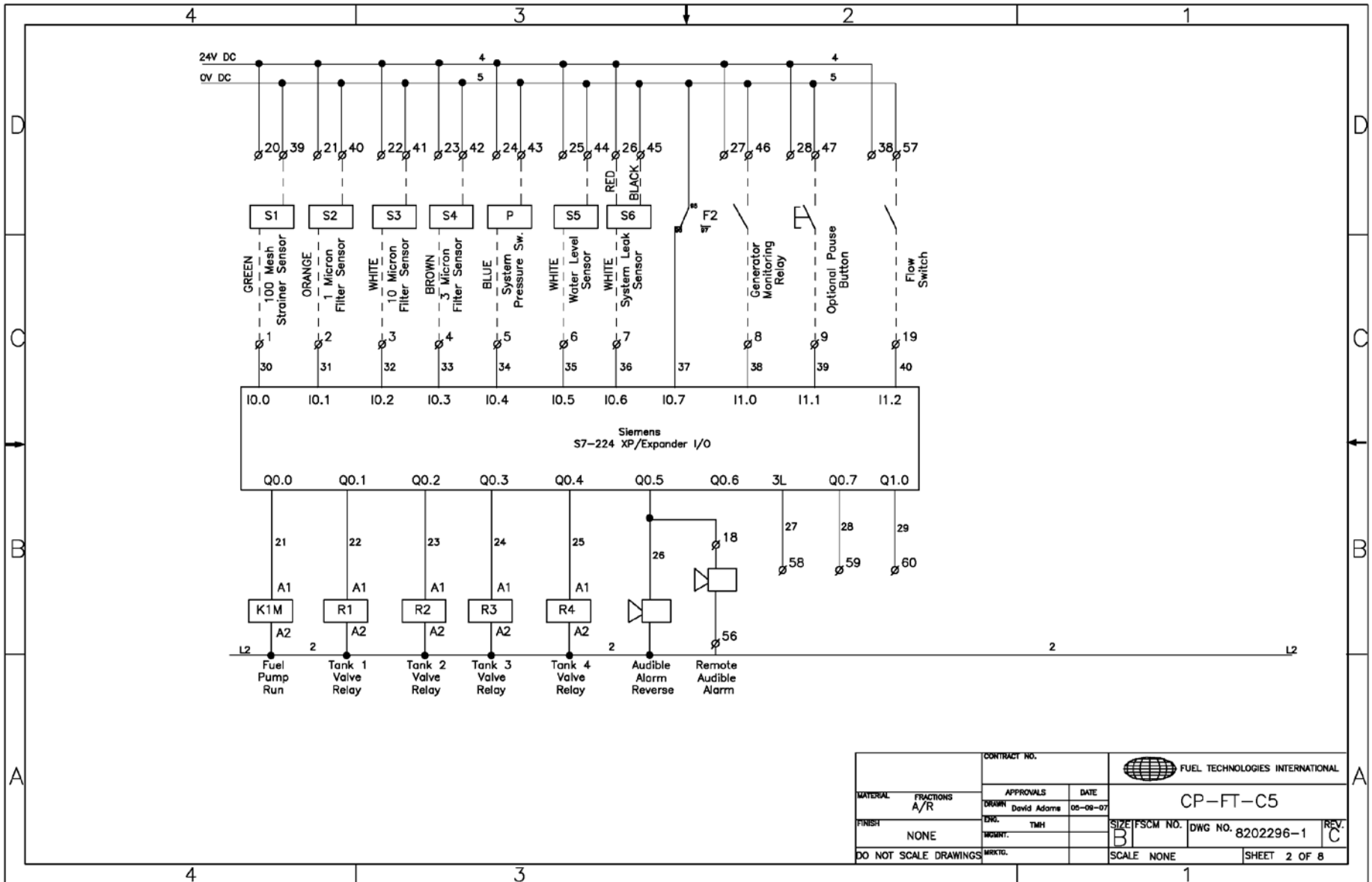


Notes:

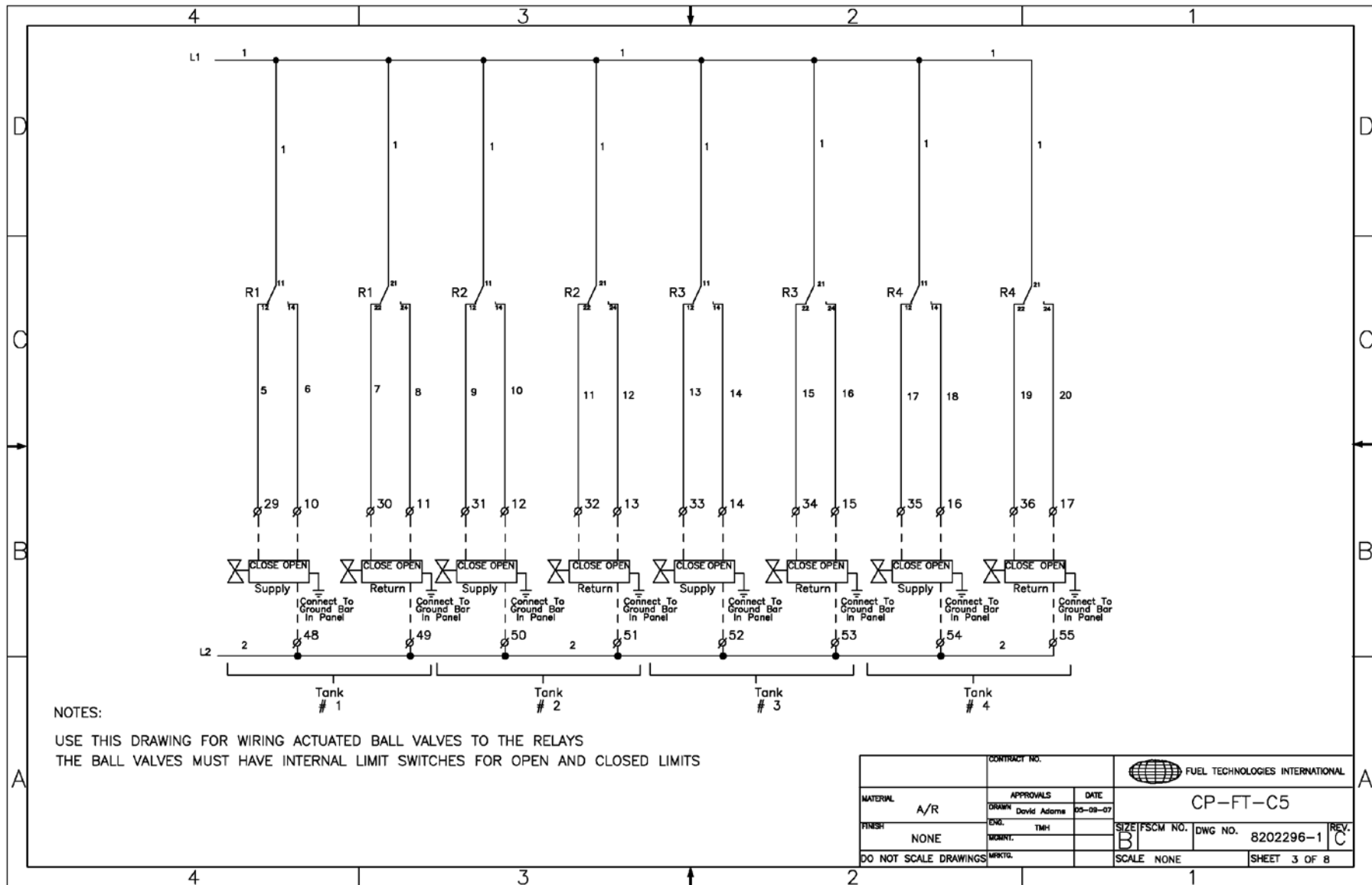
1. FTI supply line should be installed 1" from bottom of storage tank, at sump end.
2. A foot valve must be installed on supply line to keep system primed.



CONTRACT NO.		FUEL TECHNOLOGIES INTERNATIONAL	
MATERIAL	A/R	APPROVALS	DATE
FINISH	NONE	DRW: David Adams	20-09-07
DO NOT SCALE DRAWINGS	MRKTG.	ENG. TMB	MONIT.
SIZE/FSCM NO.		DWG NO.	REV.
B		8202296-1	C
SCALE NONE		SHEET 1 OF 8	



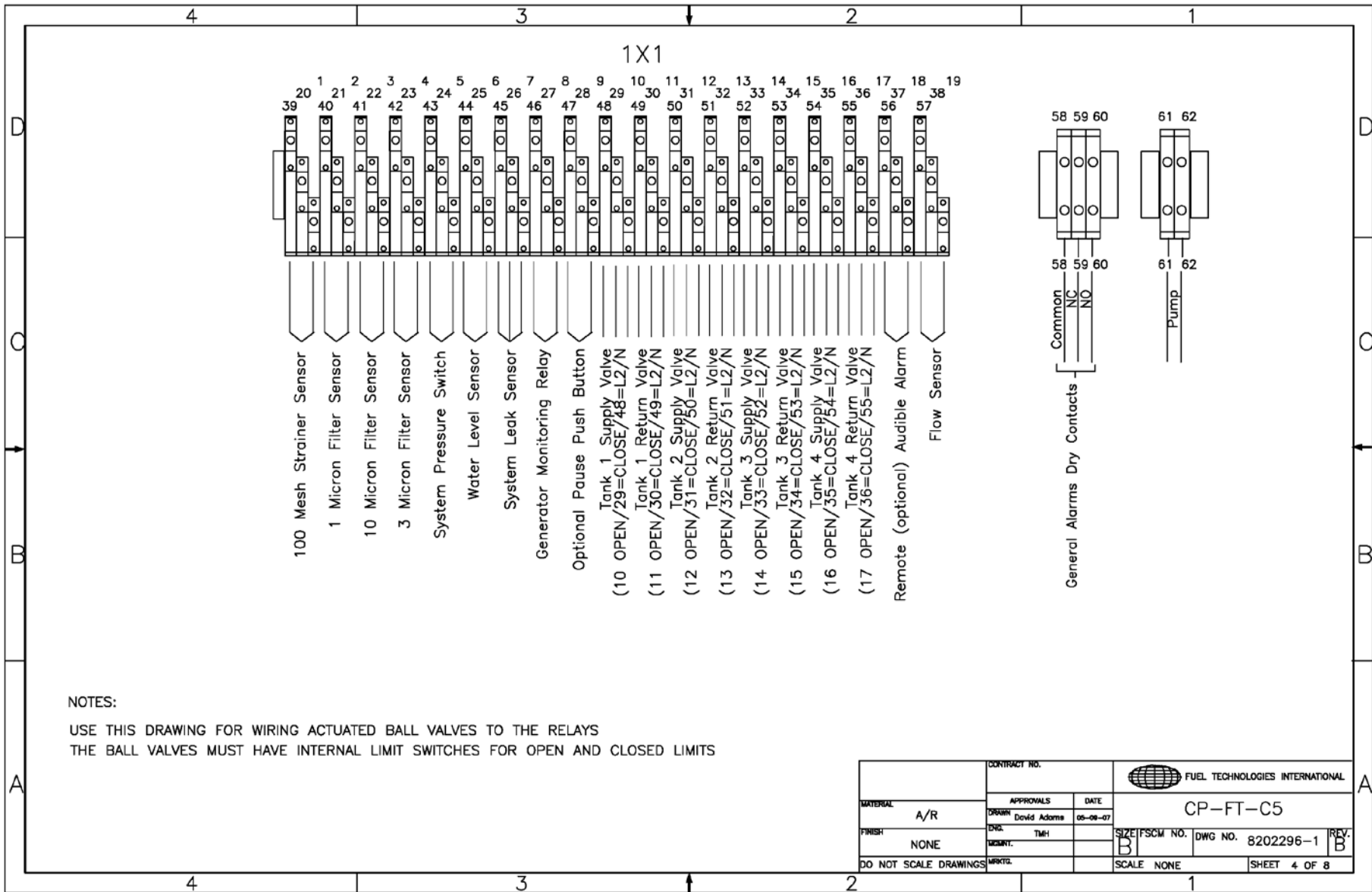
CONTRACT NO.		FUEL TECHNOLOGIES INTERNATIONAL	
MATERIAL	FRACTIONS A/R	APPROVALS	DATE
FINISH	NONE	DRAWN David Adams	05-09-07
DO NOT SCALE DRAWINGS		SIZE B	FSCM NO. DWG NO. 8202296-1
		SCALE NONE	SHEET 2 OF 8

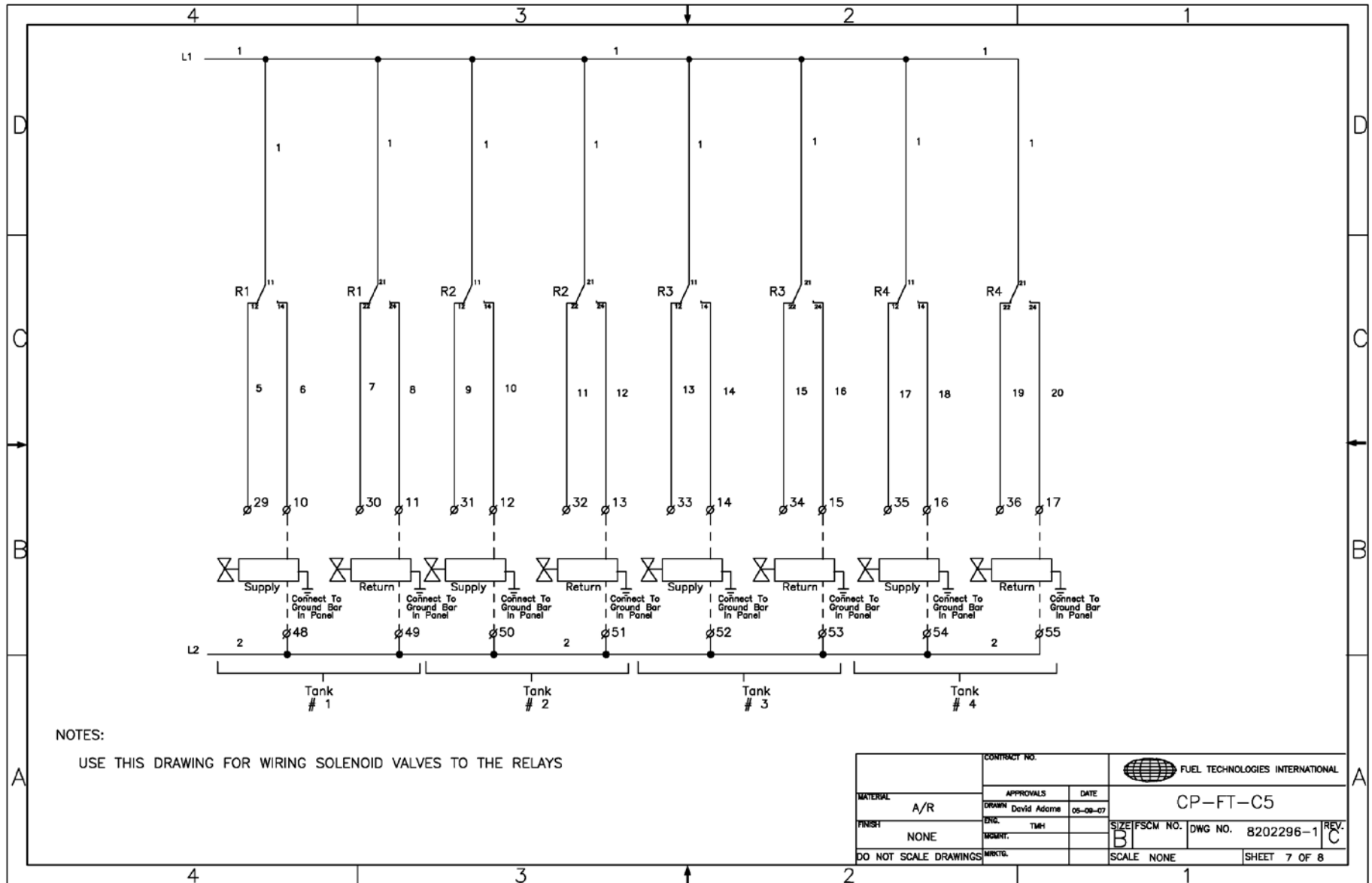


NOTES:

USE THIS DRAWING FOR WIRING ACTUATED BALL VALVES TO THE RELAYS
 THE BALL VALVES MUST HAVE INTERNAL LIMIT SWITCHES FOR OPEN AND CLOSED LIMITS

CONTRACT NO.		FUEL TECHNOLOGIES INTERNATIONAL	
MATERIAL	A/R	APPROVALS	DATE
FINISH	NONE	DRAWN	David Adams 05-09-07
DO NOT SCALE DRAWINGS		CHKD.	TMH
		MRKTG.	
		SIZE	FSCM NO. DWG NO. 8202296-1
		SCALE	NONE SHEET 3 OF 8

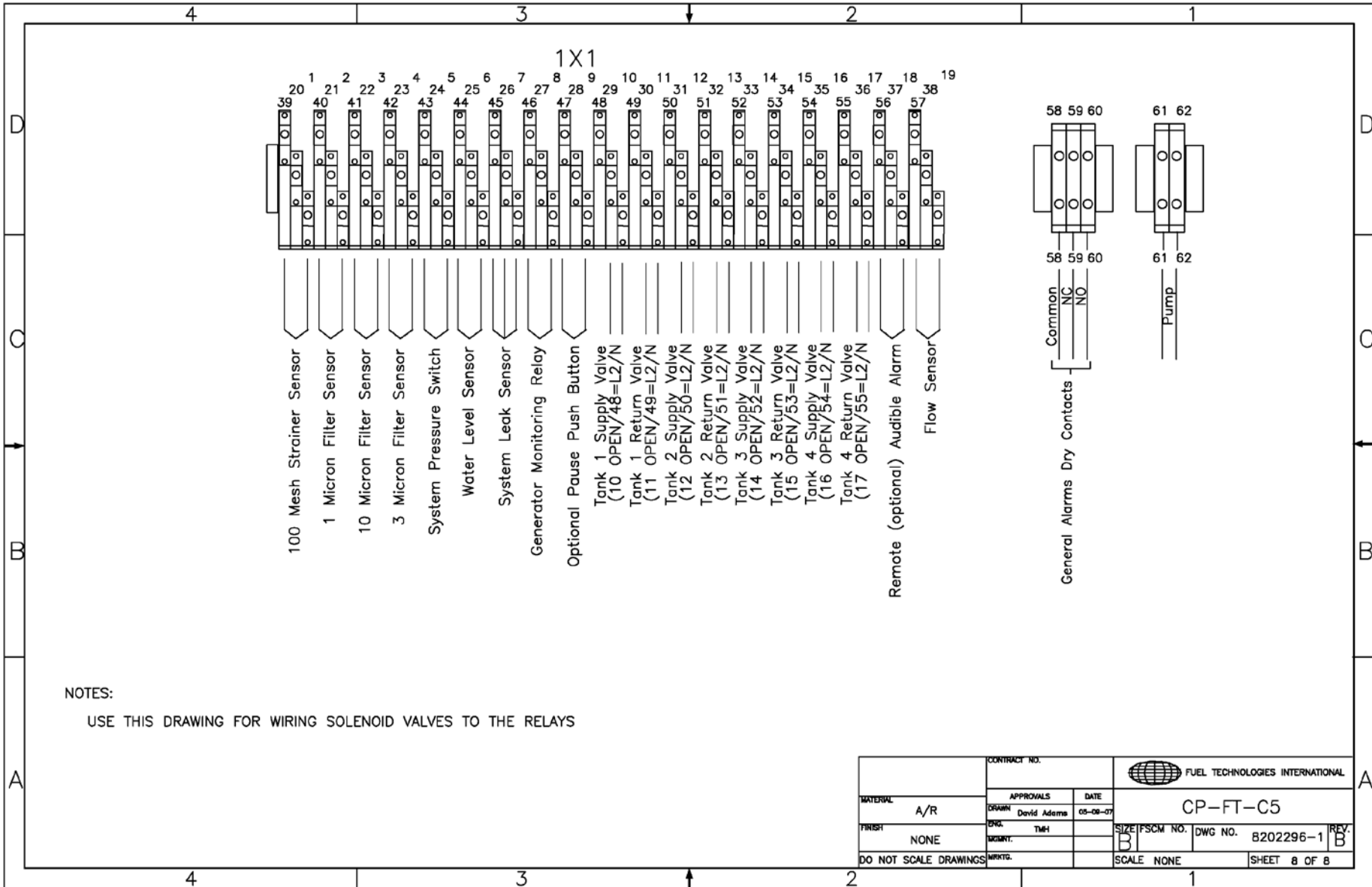


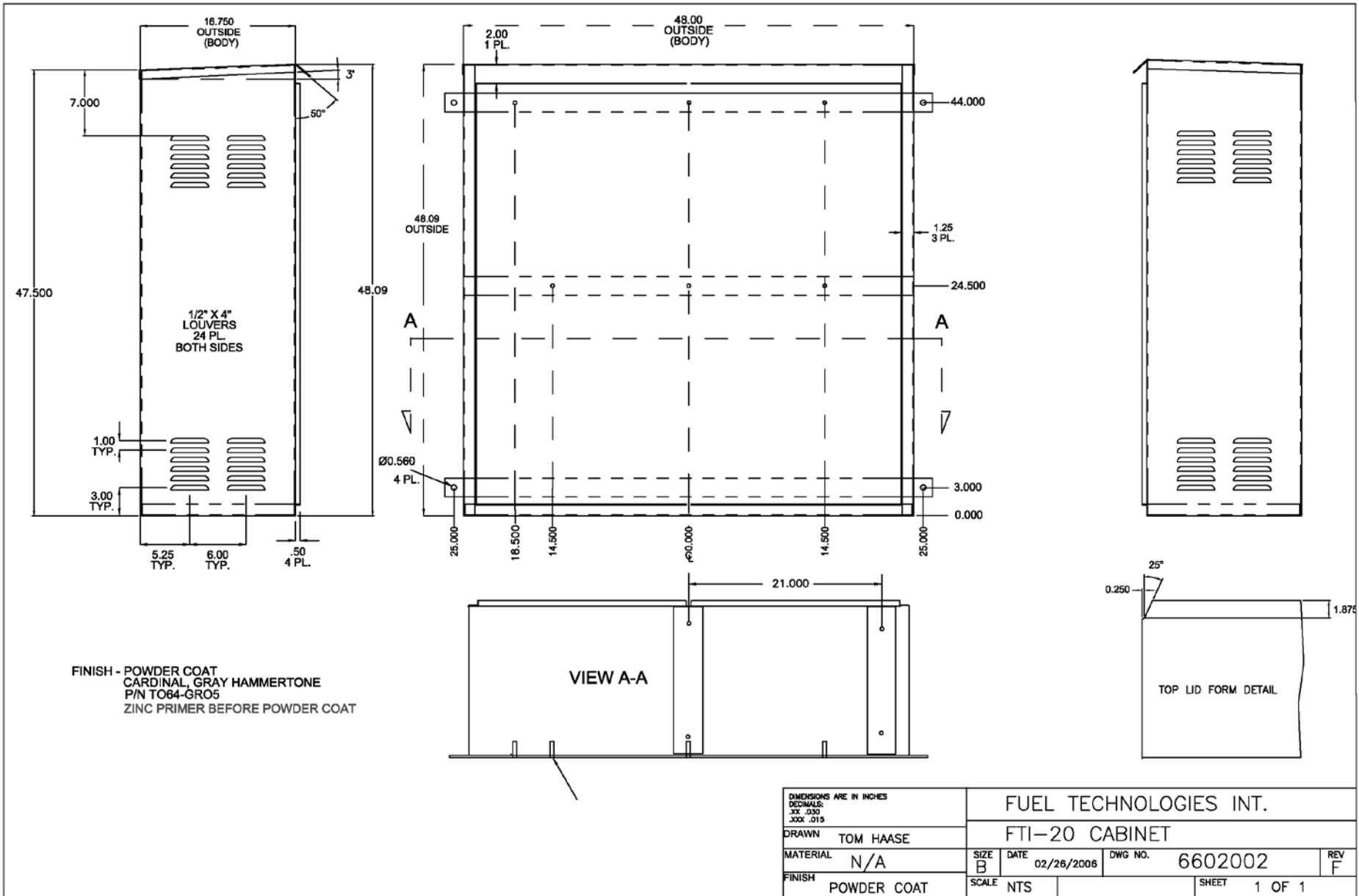


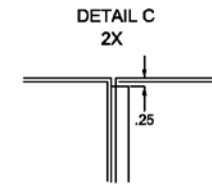
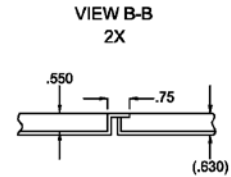
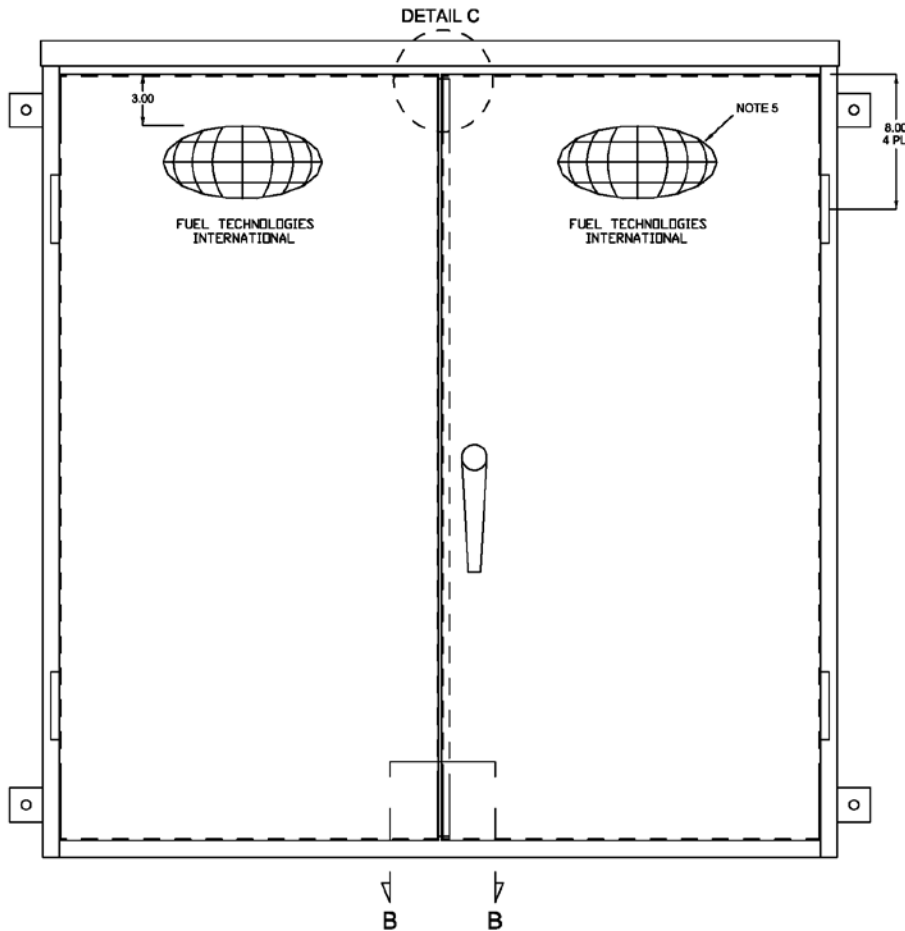
NOTES:

USE THIS DRAWING FOR WIRING SOLENOID VALVES TO THE RELAYS

		CONTRACT NO.		FUEL TECHNOLOGIES INTERNATIONAL	
MATERIAL		APPROVALS	DATE	CP-FT-C5	
A/R		DRAWN David Adams	05-08-07		
FINISH		ENG. TMH		SIZE B	FSCM NO. DWG NO. 8202296-1
NONE		INSTR.		REV. C	
DO NOT SCALE DRAWINGS		MKTG.		SCALE NONE	SHEET 7 OF 8







- NOTES: 1 FABRICATE 14 GA. CRS DOORS PER DETAILS. INSIDE DIMS. TO CLEAR CAB. LIP .06/SIDE. APPLY WEATHERSTRIP 2 PL. AFTER FINISH.
- 2 HANDLE - STAINLESS, 3 POINT LATCH, PADDLE LOCKABLE
- 3 HINGES - STAINLESS, SCREW ON, LIFT OFF
- 4 FINISH -POWDER COAT
CARDINAL, GRAY HAMMERTONE
P/N T064-GR05
ZINC PRIMER BEFORE POWDER COAT
- 5 SILKSCREEN 2 PL.

DIMENSIONS ARE IN INCHES DECIMALS: XX .030 XXX .015		FUEL TECHNOLOGIES INT.			
DRAWN TOM HAASE		FTI-10 & 20 CABINET			
MATERIAL A/R	SIZE B	DATE 02/26/2006	DWG NO. 6602002 PG2	REV B	
FINISH POWDER COAT	SCALE NTS				SHEET 2 OF 2