

**Figure 5.2 – Left Bank Side 1000kW Generator Part Location**

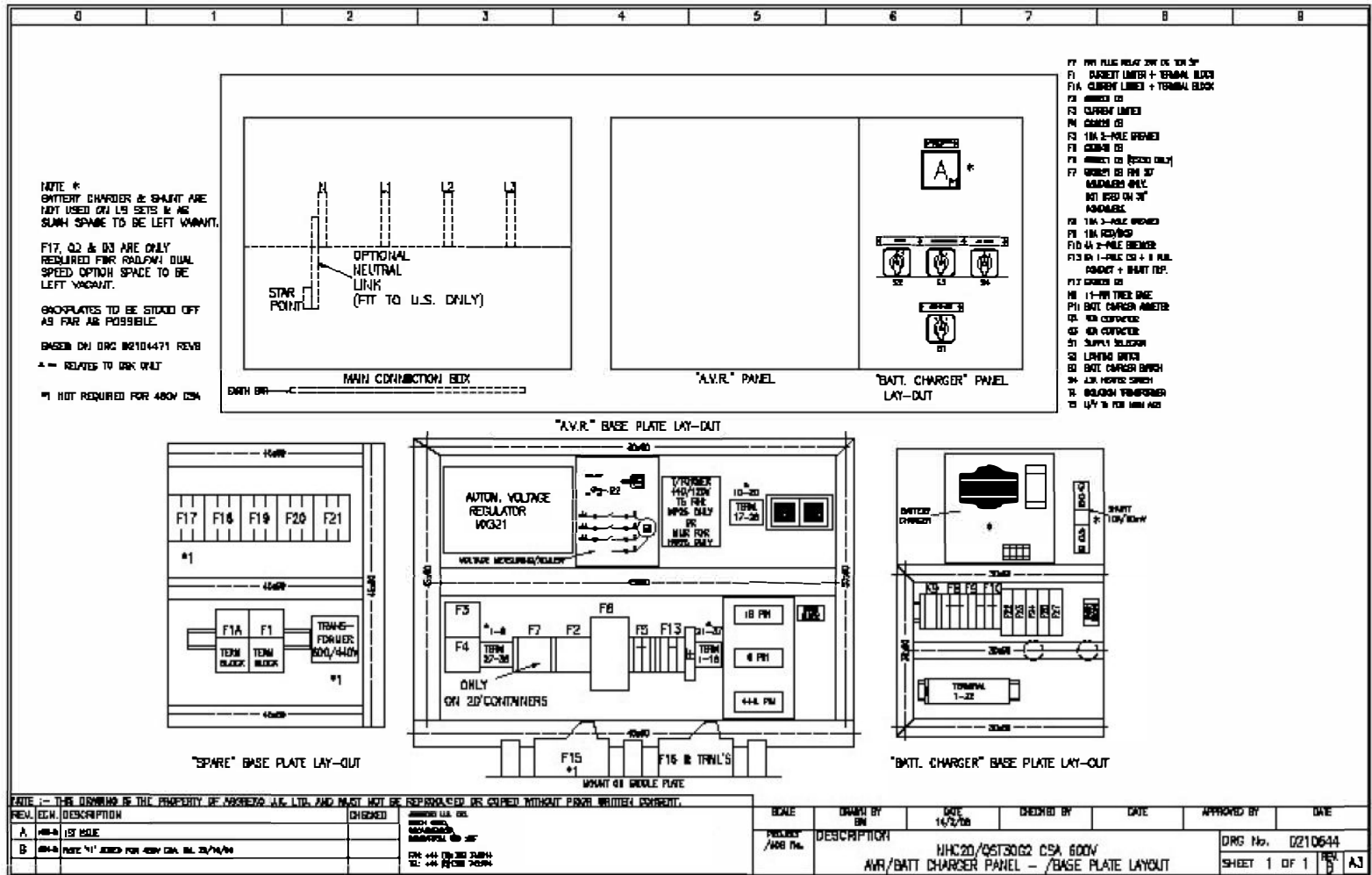
1	Model	Ref	NHC20/QST30G5 NR2 (480V UL) CSA
2	Part Number	Ref	602107
3	Specification	Ref	G32.0016
4	Installation Drawing	Ref	A05.0001
5	Maximum Ambient	°C (°F)	45 (113)
6	Electrical Output	Hz	60
	ISO 8528-1		
	- Continuous Power (COP)	kW (kVA)	772 (965)
	- Prime Power (PRP)	kW (kVA)	938 (1173)
	- Permissible average of PRP	%	70
	ISO3046/1		
	- Fuel Stop Power/Standby	kW (kVA)	1038 (1298)
	Single Step load application	%	56
7	Alternator		
	Class F Temp. Rise (105°C)		
	- Three phase	kW (kVA)	1050 (1313)
	- Single phase	kW (kVA)	-
	Ends Out		6
	Make & Type		Newage AVK-SEG HCI634K2
	AVR		MX321
	Regulation	%	±0.5
8	Circuit Breaker		
	Make & Type		Merlin Gerin Masterpact NW25
	Number of poles		4
	Rating	Amps	2500
	Trip Unit Type		Micrologic 5.0
	Overload Protection Range	Amps	1000 – 2500 (adjustable by selector)
	Short Circuit Protection Range	Amps	1000 – 25000 (adjustable by selector)

9	Load Terminals			
	Type		Busbar M12	
10	Fuel Consumption			
	Standby/Fuel Stop	lit/hr(US gal/hr)		267 (70.5)
	100% Prime Power	" "		240 (63.4)
	75%	" "		177 (46.7)
	50%	" "		119 (31.4)
11	Running Hours			
	100% Prime Power	Hours		5.4
	75%	"		7.3
	50%	"		10.8
12	Exhaust Emissions			
	Measurement Method			EPA Tier 2
	Specific Load			ISO8178-1
	NOx – Oxides of Nitrogen			6.0g/kW.h
	PM - Particulate Matter			0.2g/kW.h
	CO - Carbon Monoxide			3.5g/kW.h
	HC - Unburnt Hydrocarbons + NOx			6.4g/kW.h
13	Exhaust Silencer			
	Make & Type		Universal Silencers	
	Certificate	No	M-9561	
	Permissible back pressure	mm (ins) Hg	13 (0.5")	13 (0.5")
14	Noise			
	Sound Power – EEC	dBA (Lw)	N/A	
	Certificate	No	Not available	
	Sound Pressure at 1 metre	dBA		88
	Sound Pressure at 7 metre	dBA		81

15	Engine			
	Make & Type			QST30G5 NR2 CPL 41175
	Cylinders & Form			V12 50°
	Aspiration			Turbocharged & Aftercooled
	Fuel Pump			Bosch P8500 LLA Direct Injection
	Governor Type			Electronic
	Make & Model			Cummins Dominion
	Steady State frequency	%		±0.25
	Battery Voltage	Volts		24
16	Overall Dimensions			
	- Length	Metres (feet)		6.06 (20'0")
	- Width	Metres (feet)		2.44 (8'0")
	- Height	Metres (feet)		2.60 (8'6")
17	Weight			
	- Without fuel	Kg (lbs)		16500 (36376)
	- With fuel	Kg (lbs)		17716 (39057)
18	Capacities			
	- Fuel	gross	Litres (US gall)	1431 (378.1)
		usable		1288 (340.3)
	- Lub oil	total		154 (40.7)
		pan		133-114 (35-30)
	- Coolant			271 (71.6)
19	External fuel supply			
	- maximum above base	Metres (feet)		2.40 (7'10")
	- maximum below base	Metres (feet)		1.50 (4'11")

**CONTROL PANEL LAYOUT**

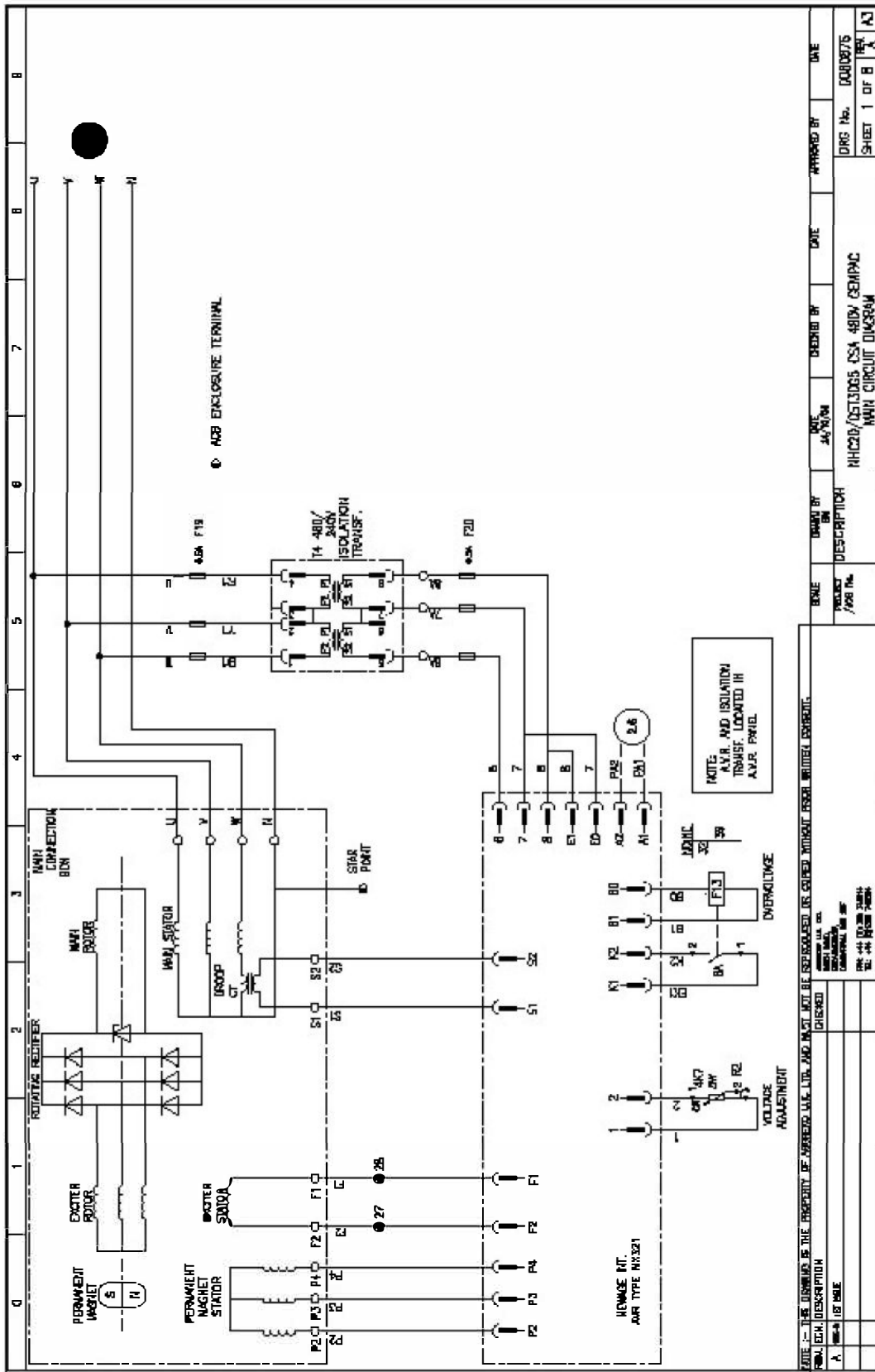




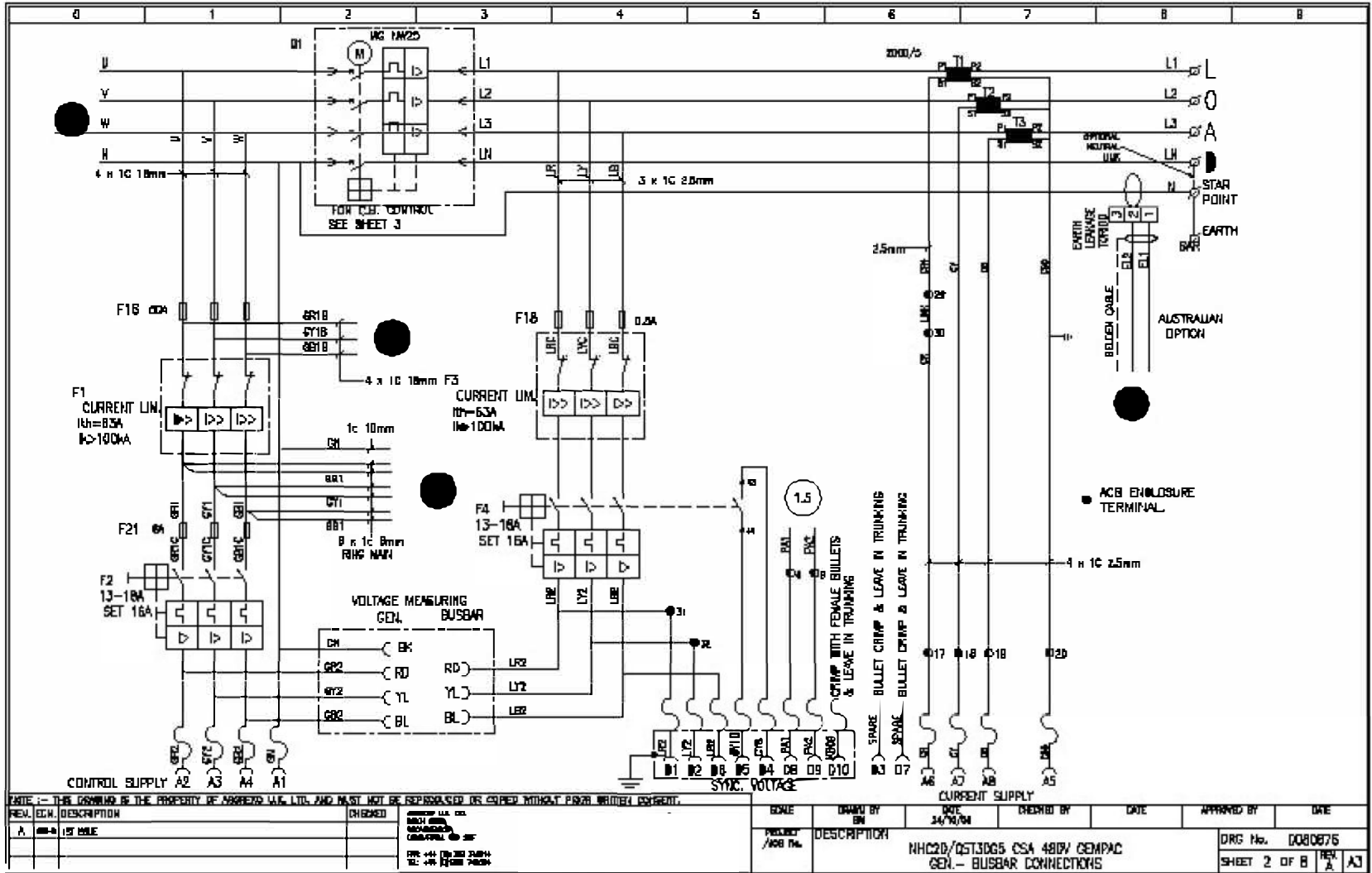
**ELECTRICAL SCHEMATICS**





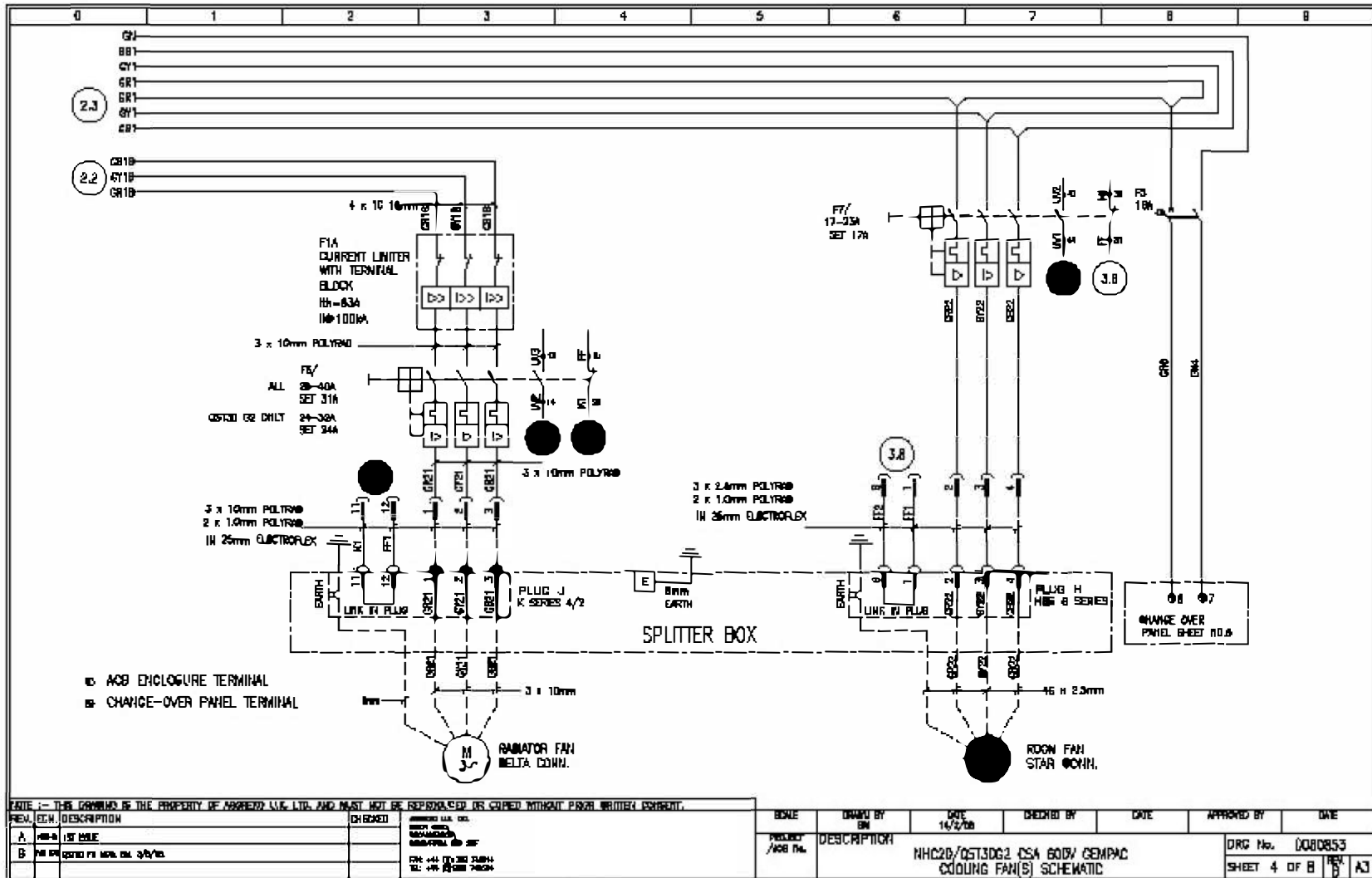


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DRAWN BY		CHK'D BY	DATE	DESIGNED BY	DATE
PROJECT / JOB NO.		DESCRIPTION		DRG No. 0000975	
REV. NO.		REV. DATE		SHEET 1 OF 1	
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REV. ECH. DESCRIPTION	(CHECKED)	ISSUED	BY	24/10/04				
A	1ST ISSUE	PREPARED / ABB No.	DESCRIPTION	NHC20/05T3005 CSA 480V CEMFAC GEN - BUSBAR CONNECTIONS			DRG No.	0080676
							SHEET 2 OF 8	REV. A



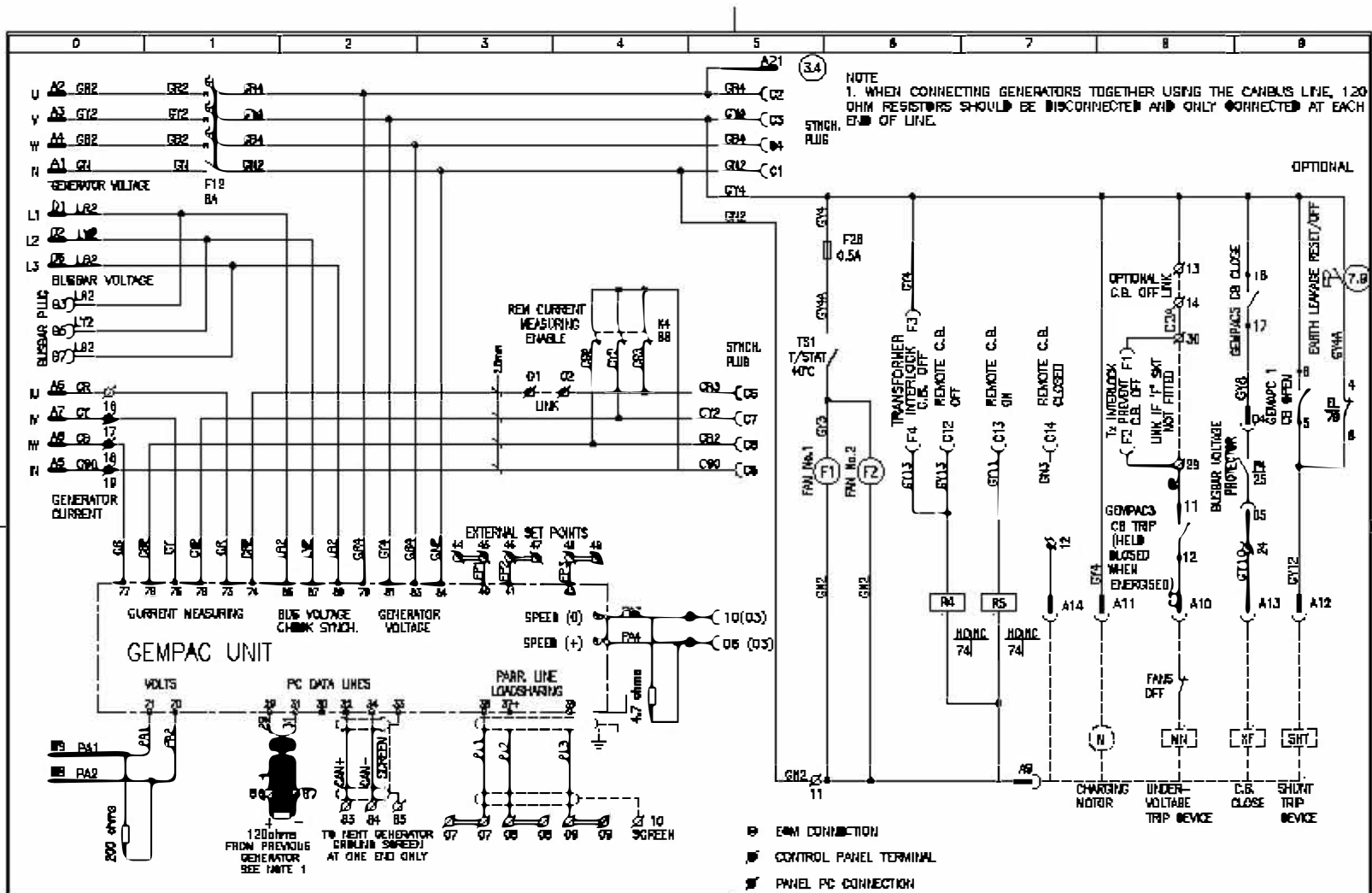


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REV.	TECH. DESCRIPTION	CHECKED	DRAWN BY	DATE	DATE	DATE	DATE	DATE
A	1ST ISSUE							
B	REVISED FOR MVA. ON 3/5/76							

SCALE	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
PRODUCT / JOB No.	DESCRIPTION	NHC20/OSTSDG1 CSA 600V COMPAC COOLING FAN(S) SCHEMATIC		DRG No.	0080853	
				SHEET	4 OF 8	REV B A3



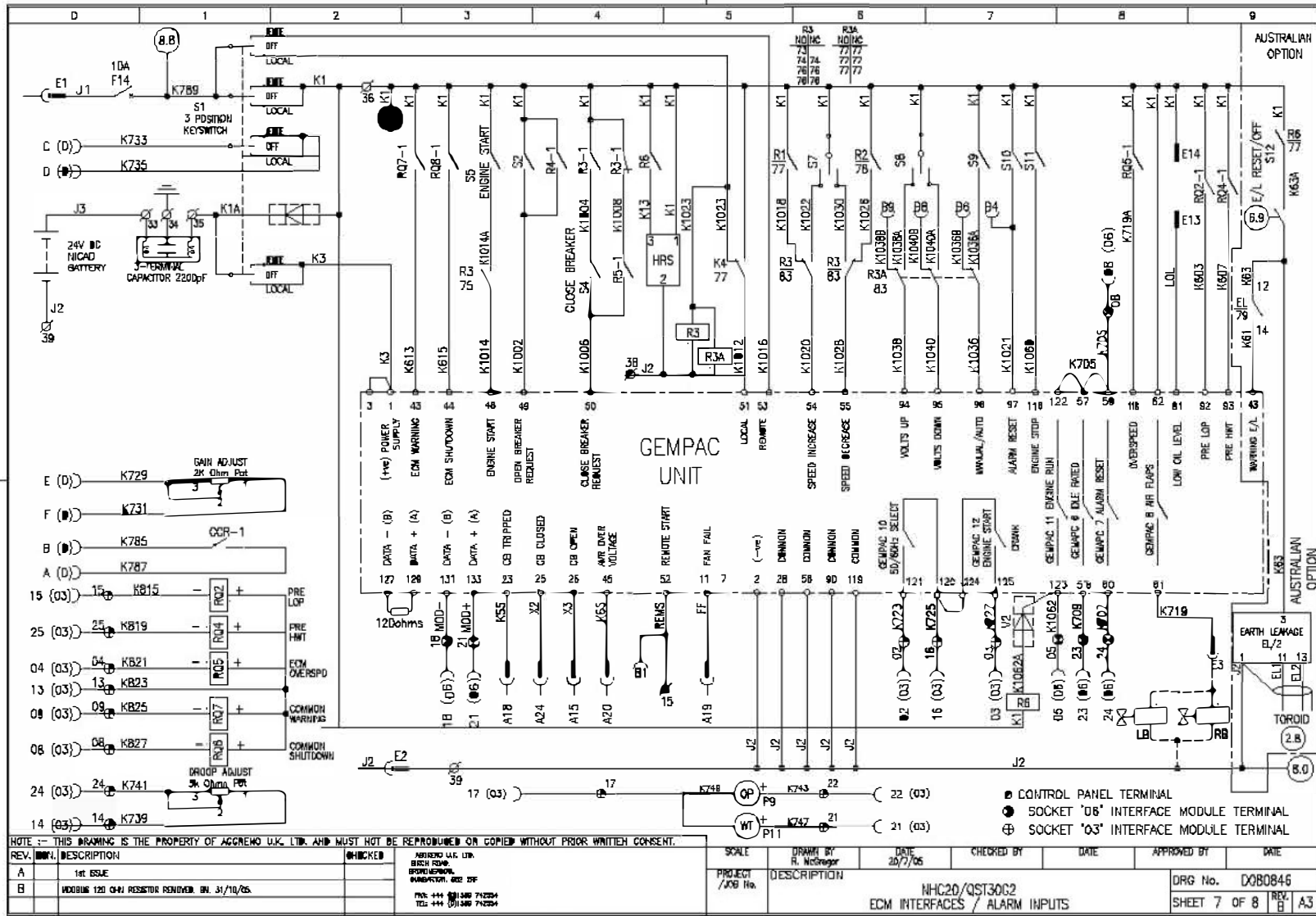


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REV.	DESCRIPTION	DRAWN BY	CHECKED BY
A	1	W. B. RICE	

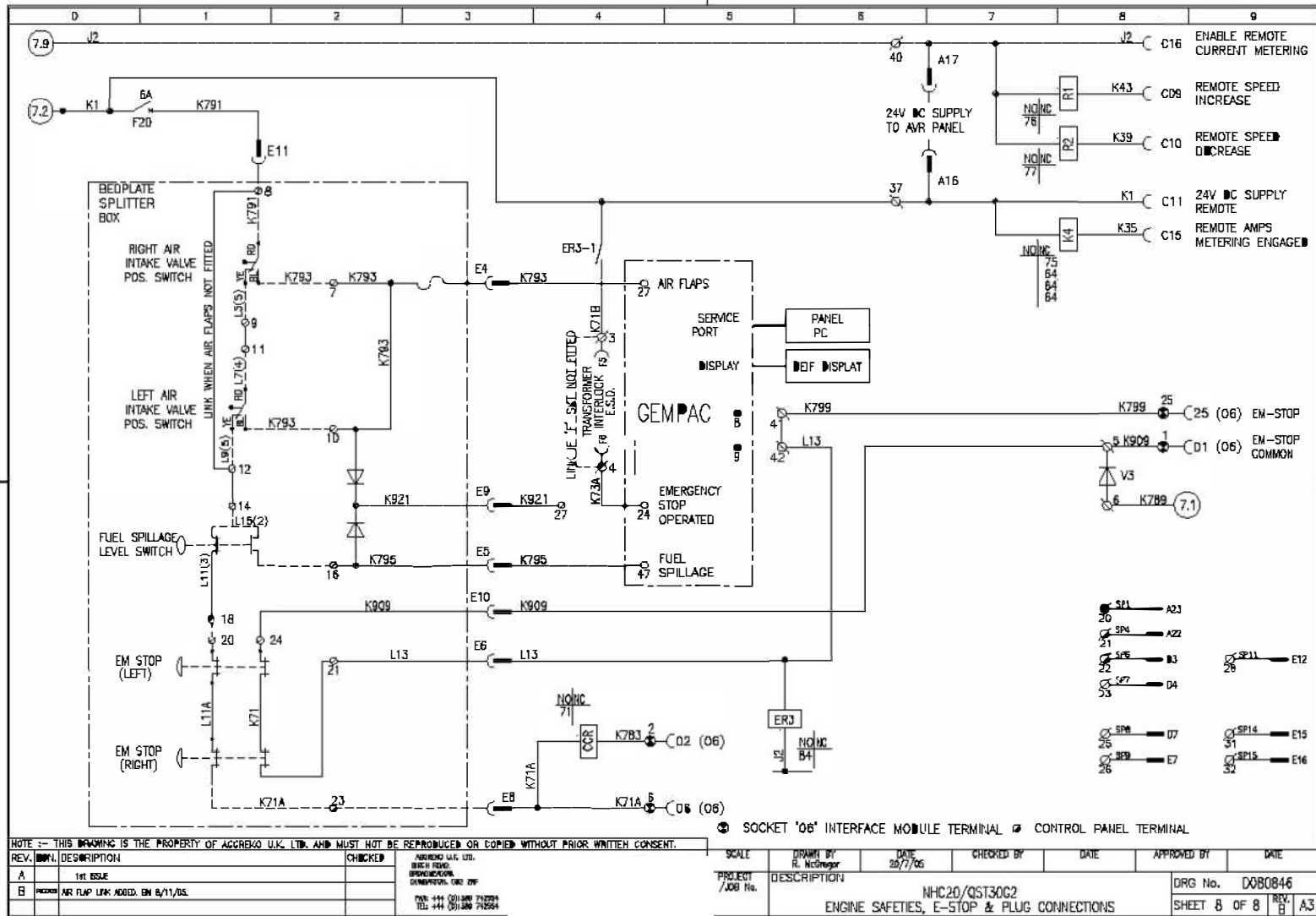
120 OHM FROM PREVIOUS GENERATOR SEE NOTE 1  
 TO PREVENT GENERATOR TRIPPING SPEED AT ONE END ONLY  
 PC DATA LINES  
 CAN+ CAN- SCREEN  
 PAIR LINE LOADSHARING  
 10 SCREEN  
 4.7 OHM  
 200 OHM

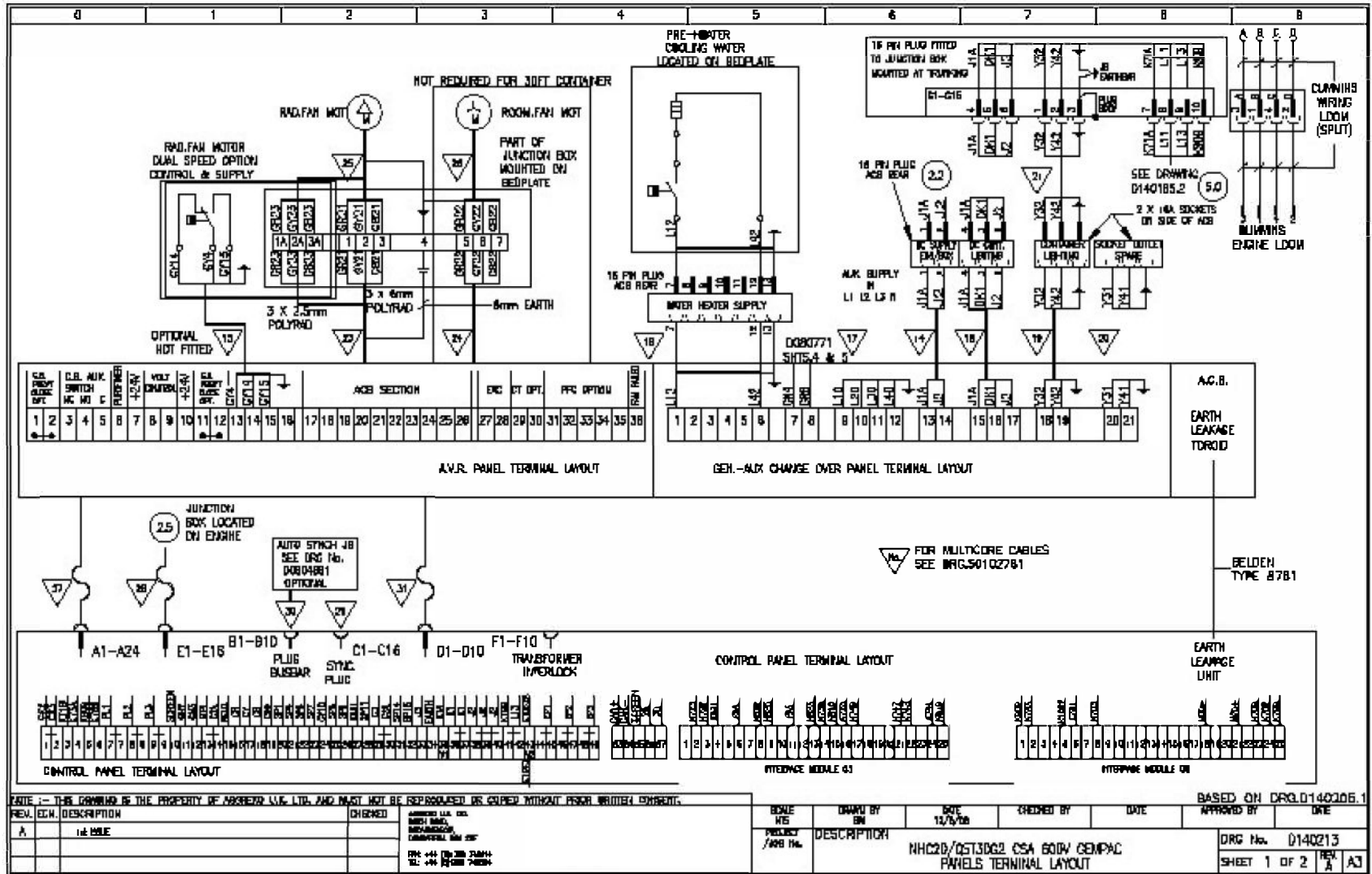
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	R. HODGSON	20/7/00				
PROJECT / SHEET NO.	DESCRIPTION				ORG. No.	REV.
	HHC20/QST3DC2 VOLTS CONTROL, SPEED CONTROL & CAN BUS CONNECTION				0080853	A3
					SHEET 8 OF 8	

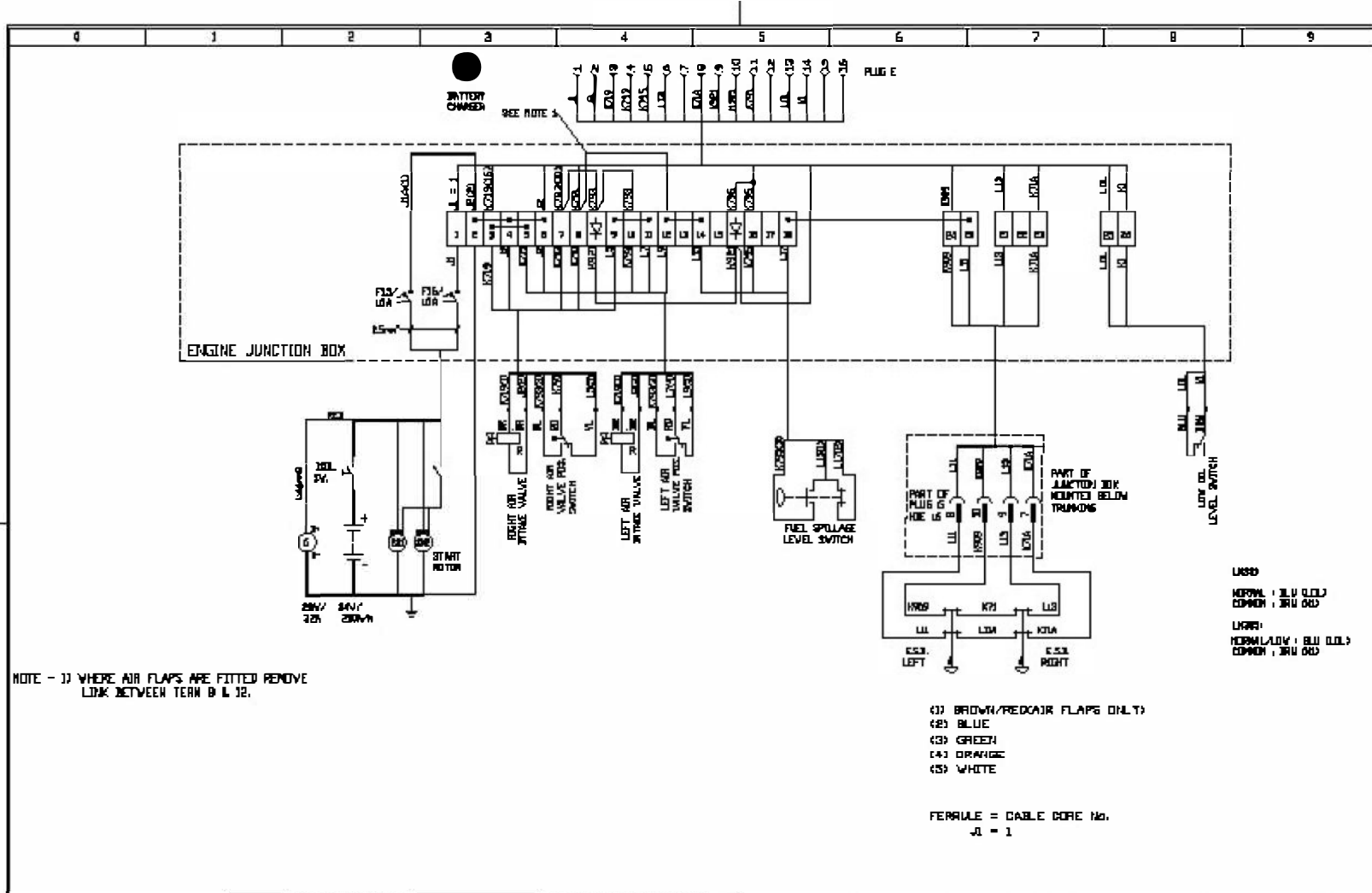


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● CONTROL PANEL TERMINAL  
 ● SOCKET '06' INTERFACE MODULE TERMINAL  
 ⊕ SOCKET '03' INTERFACE MODULE TERMINAL







NOTE - 1) WHERE AIR FLAPS ARE FITTED REMOVE LINK BETWEEN TERM B & 12.

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REV.	DESCRIPTION					PROJECT / JOB No.	DESCRIPTION	DRG No.	DL40205	
1	LEFT AIR WORKS MODIFIED IN 9/8/76									
2	AIR FLAP LINK ADDED IN 8/24/76									
3	RIGHT AIR WORKS MODIFIED IN 26/1/76									
							MHC20/GST30G2		SHEET 2 OF 2	
							ENGINE TERMINAL BOX LAYOUT		REV D A3	