

CHAPTER

21

AIR CONDITIONING



CHAPTER 21
AIR CONDITIONING

CH-SC-SU	Schem	Page	Sheet	Date	CH-SC-SU	Schem	Page	Sheet	Date
21-EFFECTIVE PAGES					21-30-00				
		1 thru 5		May 06/2009	R		101	1	May 06/2009
		6		BLANK	R			2	May 06/2009
21-CONTENTS					21-31-01				
R		1		May 06/2009			101	1	Aug 01/2005
R		2		May 06/2009				2	Jan 21/2005
R		3		May 06/2009			102	1	Aug 01/2005
R		4		May 06/2009				2	Jan 21/2005
R		5		May 06/2009			103	1	Aug 01/2005
O		6		BLANK				2	Jan 21/2005
D		7		May 06/2009	D		104	1	May 06/2009
D		8		May 06/2009	D			2	May 06/2009
21-ALPHABETICAL INDEX					21-31-02				
		1		Dec 18/2007			101	1	Aug 01/2005
		2		Dec 18/2007				2	Jan 21/2005
	21-00-00						102	1	Aug 01/2005
R		101	1	May 06/2009				2	Jan 21/2005
R			2	May 06/2009			103	1	Aug 01/2005
	21-20-01							2	Jan 21/2005
R		101		May 06/2009			104	1	May 06/2009
D		102		May 06/2009	D			2	May 06/2009
	21-25-03				D				
R		101		May 06/2009			101		Jan 21/2005
R		101.1		May 06/2009			102		Jan 21/2005

A = Added, R = Revised, D = Deleted, O = Overflow

21-EFFECTIVE PAGES



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AIR CONDITIONING

CH-SC-SU	Schem	Page	Sheet	Date	CH-SC-SU	Schem	Page	Sheet	Date
	21-31-03 (cont.)					21-51-01 (cont.)	102		
D		103		Jan 21/2005	D			2	May 06/2009
		104		May 06/2009		21-51-02			
R	21-33-01				R		101	1	May 06/2009
		101		May 06/2009	R			2	May 06/2009
	21-43-01					21-51-03			
R		101		May 06/2009	R		101	1	May 06/2009
D		102		May 06/2009	R			2	May 06/2009
	21-44-01				R			3	May 06/2009
R		101	1	May 06/2009	R			4	May 06/2009
R			2	May 06/2009	R			5	May 06/2009
D		102	1	May 06/2009	D		102	1	May 06/2009
D			2	May 06/2009	D			2	May 06/2009
	21-45-01				D			3	May 06/2009
R		101		May 06/2009	D			4	May 06/2009
		102		Jan 21/2005	D			5	May 06/2009
		103		Dec 18/2007		21-51-04			
	21-51-00				R		101	1	May 06/2009
R		101	1	May 06/2009	R			2	May 06/2009
R			2	May 06/2009	R			3	May 06/2009
	21-51-01				R			4	May 06/2009
R		101	1	May 06/2009	R			5	May 06/2009
R			2	May 06/2009	D		102	1	May 06/2009
D		102	1	May 06/2009	D			2	May 06/2009

A = Added, R = Revised, D = Deleted, O = Overflow

21-EFFECTIVE PAGES



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AIR CONDITIONING

CH-SC-SU	Schem	Page	Sheet	Date	CH-SC-SU	Schem	Page	Sheet	Date
21-51-04 (cont.)		102			21-51-08				
D			3	May 06/2009	R		101	1	May 06/2009
D			4	May 06/2009	R			2	May 06/2009
D			5	May 06/2009	D		102	1	May 06/2009
21-51-05					D			2	May 06/2009
R		101	1	May 06/2009	21-51-09				
R			2	May 06/2009	R		101		May 06/2009
R			3	May 06/2009	D		102		May 06/2009
D		102	1	May 06/2009	21-51-10				
D			2	May 06/2009	R		101		May 06/2009
D			3	May 06/2009	D		102		May 06/2009
21-51-06					21-52-01				
R		101	1	May 06/2009	R		101		May 06/2009
R			2	May 06/2009	D		102		May 06/2009
R			3	May 06/2009	21-52-02				
D		102	1	May 06/2009	R		101		May 06/2009
D			2	May 06/2009	21-52-03				
D			3	May 06/2009	R		101		May 06/2009
21-51-07					O		102		Jan 21/2005
R		101	1	May 06/2009	21-58-00				
R			2	May 06/2009	R		101		May 06/2009
D		102	1	May 06/2009	O		101.1		Jan 21/2005
D			2	May 06/2009	D		102		May 06/2009
					D		102.1		May 06/2009

A = Added, R = Revised, D = Deleted, O = Overflow

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AIR CONDITIONING

CH-SC-SU	Schem	Page	Sheet	Date	CH-SC-SU	Schem	Page	Sheet	Date
	21-58-01					21-61-01 (cont.)	101		
R		101		May 06/2009	R			2	May 06/2009
O		101.1		Jan 21/2005	R			3	May 06/2009
D		102		May 06/2009	R			4	May 06/2009
D		102.1		May 06/2009	D		102	1	May 06/2009
	21-58-02				D			2	May 06/2009
R		101	1	May 06/2009	D			3	May 06/2009
R			2	May 06/2009	D			4	May 06/2009
D		102	1	May 06/2009		21-61-02			
D			2	May 06/2009	R		101	1	May 06/2009
	21-58-06				R			2	May 06/2009
R		101		May 06/2009	R			3	May 06/2009
		101.1		Jan 21/2005	R			4	May 06/2009
D		102		May 06/2009	D		102	1	May 06/2009
D		102.1		May 06/2009	D			2	May 06/2009
	21-58-10				D			3	May 06/2009
R		101		May 06/2009	D			4	May 06/2009
A		101.1		May 06/2009		21-61-03			
O		102		Jan 21/2005	R		101	1	May 06/2009
	21-58-11				R			2	May 06/2009
R		101		May 06/2009	R			3	May 06/2009
D		102		May 06/2009	R			4	May 06/2009
	21-61-01				D		102	1	May 06/2009
R		101	1	May 06/2009	D			2	May 06/2009

A = Added, R = Revised, D = Deleted, O = Overflow

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AIR CONDITIONING

CH-SC-SU	Schem	Page	Sheet	Date	CH-SC-SU	Schem	Page	Sheet	Date
		21-61-03 (cont.)		102					
D			3	May 06/2009					
D			4	May 06/2009					
		21-61-04							
R			101	May 06/2009					
		21-61-05							
R			101	May 06/2009					
D			102	May 06/2009					
		21-64-01							
R			101	May 06/2009					
		21-65-01							
R			101	May 06/2009					
D			102	May 06/2009					
		21-65-02							
R			101	May 06/2009					

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May 06/2009

D280N032S



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AIR CONDITIONING

Title	CH-SC-SU	Schem	Page	Sheet	Date	Effectivity
<u>AIR CONDITIONING</u>						
AIR CONDITIONING SYSTEM - SIMPLIFIED	21-00-00		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
<u>DISTRIBUTION</u>						
CONDITIONED AIR DISTRIBUTION	21-20-01		101		May 06/2009	ALL
<u>CABIN AIR RECIRCULATION SYSTEM</u>						
EQUIPMENT COOLING - RECIRCULATION SYSTEM	21-25-03		101		May 06/2009	ALL
			101.1		May 06/2009	001-011
<u>PRESSURIZATION CONTROL</u>						
CABIN PRESSURIZATION CONTROL SYSTEM - SIMPLIFIED	21-30-00		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
<u>PRESSURIZATION CONTROL SYSTEM</u>						
PRESSURIZATION CONTROL AUTO 1	21-31-01		101	1	Aug 01/2005	001-003 005 007-008
				2	Jan 21/2005	001-003 005 007-008
			102	1	Aug 01/2005	004 006
				2	Jan 21/2005	004 006
			103	1	Aug 01/2005	009-099
				2	Jan 21/2005	009-099
PRESSURIZATION CONTROL AUTO 2	21-31-02		101	1	Aug 01/2005	001-003 005 007-008
				2	Jan 21/2005	001-003 005 007-008
			102	1	Aug 01/2005	004 006
				2	Jan 21/2005	004 006



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AIR CONDITIONING

Title	CH-SC-SU	Schem	Page	Sheet	Date	Effectivity
PRESSURIZATION CONTROL AUTO 2 (cont.)	21-31-02		103	1	Aug 01/2005	009-099
				2	Jan 21/2005	009-099
MANUAL PRESSURIZATION CONTROL	21-31-03		101		Jan 21/2005	001-003 005 007-008
					Jan 21/2005	004 006
					Jan 21/2005	009-099
<u>PRESSURIZATION INDICATING AND WARNING SYSTEM</u>						
I CABIN PRESSURE INDICATION AND WARNING	21-33-01		101		May 06/2009	ALL
<u>FORWARD CARGO COMPARTMENT HEATING SYSTEM</u>						
I FORWARD CARGO HEATING	21-43-01		101		May 06/2009	ALL
<u>AFT/BULK CARGO COMPARTMENT HEATING SYSTEM</u>						
I AFT CARGO HEATING	21-44-01		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
<u>SUPPLEMENTAL HEATING SYSTEM</u>						
I FLIGHT DECK SUPPLEMENTAL HEATING	21-45-01		101		May 06/2009	001-002
					Jan 21/2005	003-009
					Dec 18/2007	010-099
<u>AIR COOLING PACK SYSTEM</u>						
I AIR CONDITIONING PACKS - SIMPLIFIED	21-51-00		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
I LEFT PACK FLOW CONTROL	21-51-01		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
I RIGHT PACK FLOW CONTROL	21-51-02		101	1	May 06/2009	ALL
				2	May 06/2009	ALL



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Title	CH-SC-SU	Schem	Page	Sheet	Date	Effectivity
LEFT PACK CONTROL - AUTO	21-51-03		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
				3	May 06/2009	ALL
				4	May 06/2009	ALL
				5	May 06/2009	ALL
RIGHT PACK CONTROL - AUTO	21-51-04		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
				3	May 06/2009	ALL
				4	May 06/2009	ALL
				5	May 06/2009	ALL
LEFT PACK CONTROL - STANDBY	21-51-05		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
				3	May 06/2009	ALL
RIGHT PACK CONTROL - STANDBY	21-51-06		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
				3	May 06/2009	ALL
LEFT PACK LOW LIMIT VALVE CONTROL	21-51-07		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
RIGHT PACK LOW LIMIT VALVE CONTROL	21-51-08		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
LEFT PACK PROTECTION	21-51-09		101		May 06/2009	ALL
RIGHT PACK PROTECTION	21-51-10		101		May 06/2009	ALL



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Title	CH-SC-SU	Schem	Page	Sheet	Date	Effectivity
<u>COOLING PACK TEMPERATURE INDICATION</u>						
AIR CONDITIONING PACK TEMPERATURE INDICATION	21-52-01		101		May 06/2009	ALL
PACK DOOR AND VALVE POSITION INDICATION	21-52-02		101		May 06/2009	ALL
PACK FLOW INDICATION	21-52-03		101		May 06/2009	001-008
			102		Jan 21/2005	009-099
<u>EQUIPMENT COOLING SYSTEM</u>						
EQUIPMENT COOLING - SIMPLIFIED	21-58-00		101		May 06/2009	ALL
			101.1		Jan 21/2005	001-011
EQUIPMENT COOLING FAILURE - LOW FLOW DETECTION	21-58-01		101		May 06/2009	ALL
			101.1		Jan 21/2005	001-011
EQUIPMENT COOLING - SMOKE CONTROL	21-58-02		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
EQUIPMENT COOLING - AUTOMATIC TEST	21-58-06		101		May 06/2009	ALL
			101.1		Jan 21/2005	001-011
EQUIPMENT COOLING - AUXILIARY FAN	21-58-10		101		May 06/2009	001-002
			101.1		May 06/2009	001
			102		Jan 21/2005	003-099
EQUIPMENT COOLING - FANS	21-58-11		101		May 06/2009	ALL
<u>PRIMARY (ZONE) TEMPERATURE CONTROL SYSTEM</u>						
FLIGHT DECK ZONE TEMPERATURE CONTROL	21-61-01		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
				3	May 06/2009	ALL



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Title	CH-SC-SU	Schem	Page	Sheet	Date	Effectivity
FLIGHT DECK ZONE TEMPERATURE CONTROL (cont.)	21-61-01			4	May 06/2009	ALL
FORWARD PASSENGER CABIN ZONE TEMPERATURE CONTROL	21-61-02		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
				3	May 06/2009	ALL
				4	May 06/2009	ALL
AFT PASSENGER CABIN ZONE TEMPERATURE CONTROL	21-61-03		101	1	May 06/2009	ALL
				2	May 06/2009	ALL
				3	May 06/2009	ALL
				4	May 06/2009	ALL
TRIM AIR PRESSURE REGULATION	21-61-04		101		May 06/2009	ALL
ZONE TEMPERATURE CONTROLLER	21-61-05		101		May 06/2009	ALL
<u>VALVE POSITION INDICATION SYSTEM</u>						
ZONE TRIM VALVE POSITION INDICATION	21-64-01		101		May 06/2009	ALL
<u>CABIN (ZONE) TEMPERATURE INDICATION SYSTEM</u>						
CABIN ZONE TEMPERATURE INDICATION	21-65-01		101		May 06/2009	ALL
ZONE DUCT TEMPERATURE INDICATION	21-65-02		101		May 06/2009	ALL

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CH-SC-SU	Title
21-44-01	AFT CARGO HEATING
21-61-03	AFT PASSENGER CABIN ZONE TEMPERATURE CONTROL
21-52-01	AIR CONDITIONING PACK TEMPERATURE INDICATION
21-51-00	AIR CONDITIONING PACKS - SIMPLIFIED
21-00-00	AIR CONDITIONING SYSTEM - SIMPLIFIED
21-33-01	CABIN PRESSURE INDICATION AND WARNING
21-30-00	CABIN PRESSURIZATION CONTROL SYSTEM - SIMPLIFIED
21-65-01	CABIN ZONE TEMPERATURE INDICATION
21-20-01	CONDITIONED AIR DISTRIBUTION
21-58-06	EQUIPMENT COOLING - AUTOMATIC TEST
21-58-10	EQUIPMENT COOLING - AUXILIARY FAN
21-58-11	EQUIPMENT COOLING - FANS
21-25-03	EQUIPMENT COOLING - RECIRCULATION SYSTEM
21-58-00	EQUIPMENT COOLING - SIMPLIFIED
21-58-02	EQUIPMENT COOLING - SMOKE CONTROL
21-58-01	EQUIPMENT COOLING FAILURE - LOW FLOW DETECTION
21-45-01	FLIGHT DECK SUPPLEMENTAL HEATING
21-61-01	FLIGHT DECK ZONE TEMPERATURE CONTROL

CH-SC-SU	Title
21-43-01	FORWARD CARGO HEATING
21-61-02	FORWARD PASSENGER CABIN ZONE TEMPERATURE CONTROL
21-51-03	LEFT PACK CONTROL - AUTO
21-51-05	LEFT PACK CONTROL - STANDBY
21-51-01	LEFT PACK FLOW CONTROL
21-51-07	LEFT PACK LOW LIMIT VALVE CONTROL
21-51-09	LEFT PACK PROTECTION
21-31-03	MANUAL PRESSURIZATION CONTROL
21-52-02	PACK DOOR AND VALVE POSITION INDICATION
21-52-03	PACK FLOW INDICATION
21-31-01	PRESSURIZATION CONTROL AUTO 1
21-31-02	PRESSURIZATION CONTROL AUTO 2
21-51-04	RIGHT PACK CONTROL - AUTO
21-51-06	RIGHT PACK CONTROL - STANDBY
21-51-02	RIGHT PACK FLOW CONTROL
21-51-08	RIGHT PACK LOW LIMIT VALVE CONTROL
21-51-10	RIGHT PACK PROTECTION
21-61-04	TRIM AIR PRESSURE REGULATION
21-65-02	ZONE DUCT TEMPERATURE INDICATION

21-ALPHABETICAL INDEX

CHAPTER 21
AIR CONDITIONING

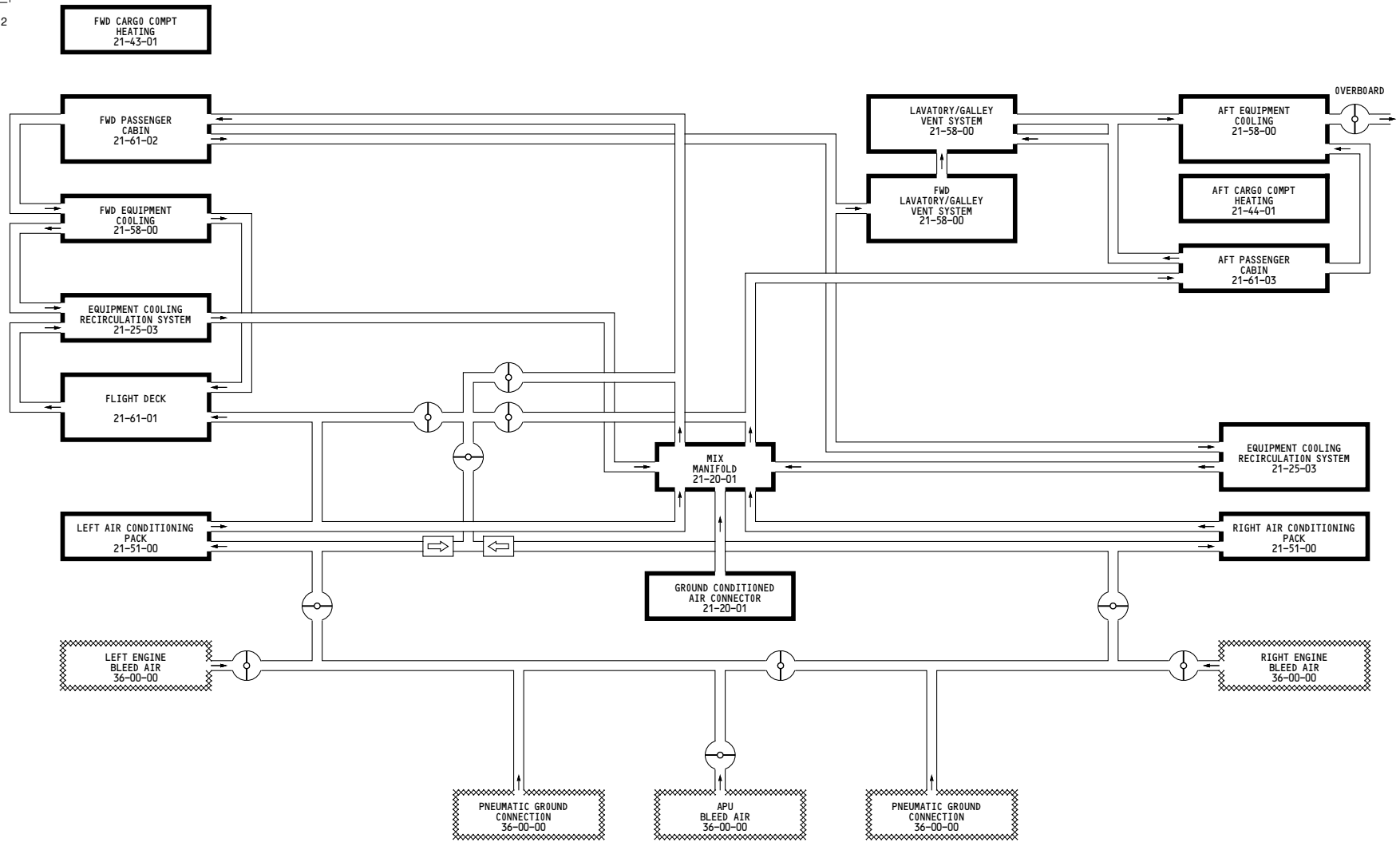
CH-SC-SU	Title
21-61-05	ZONE TEMPERATURE CONTROLLER
21-64-01	ZONE TRIM VALVE POSITION INDICATION

CH-SC-SU	Title
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21-ALPHABETICAL INDEX

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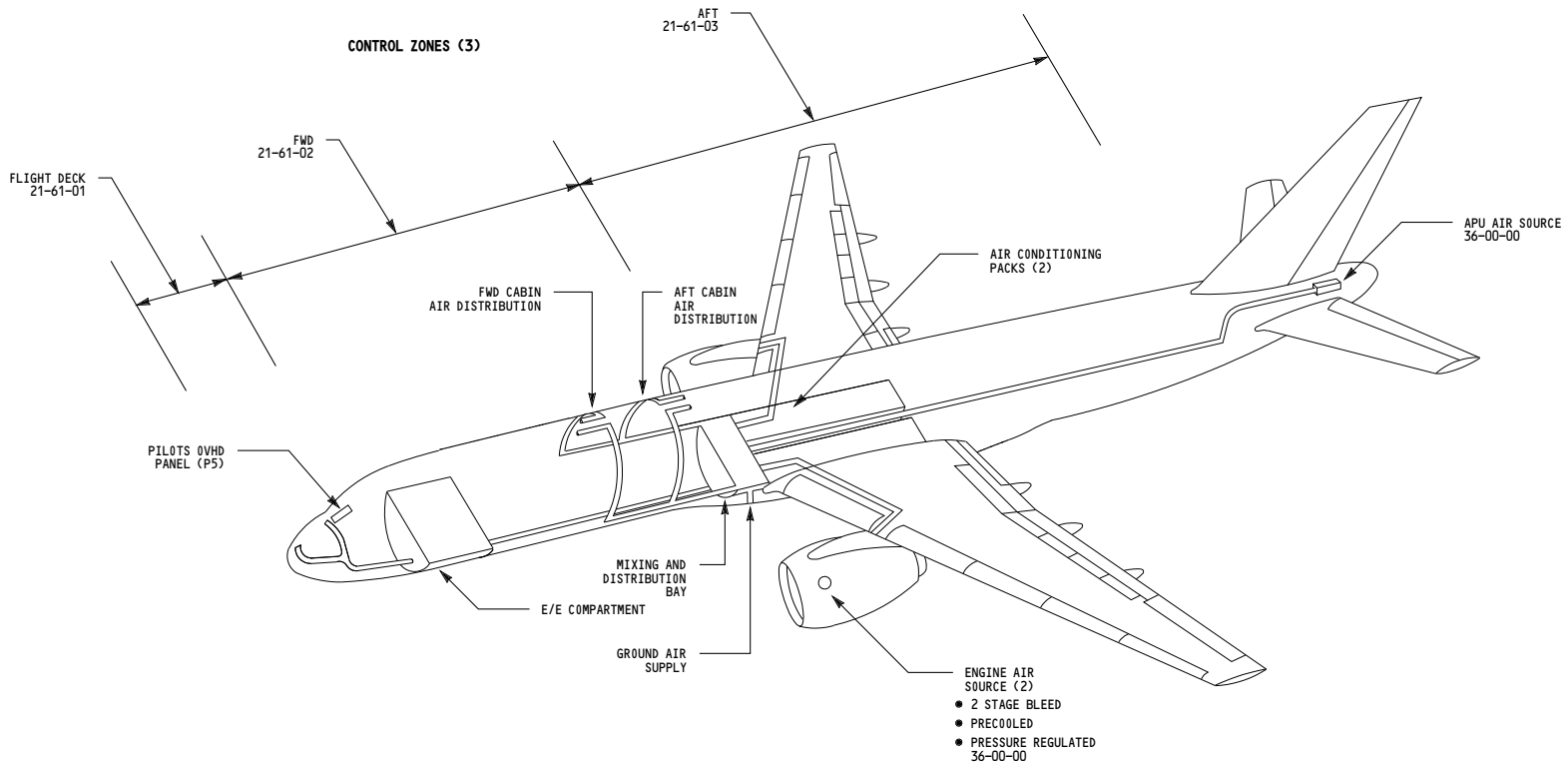
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ALL	AIR CONDITIONING SYSTEM - SIMPLIFIED D280N032S
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21-00-00

5000



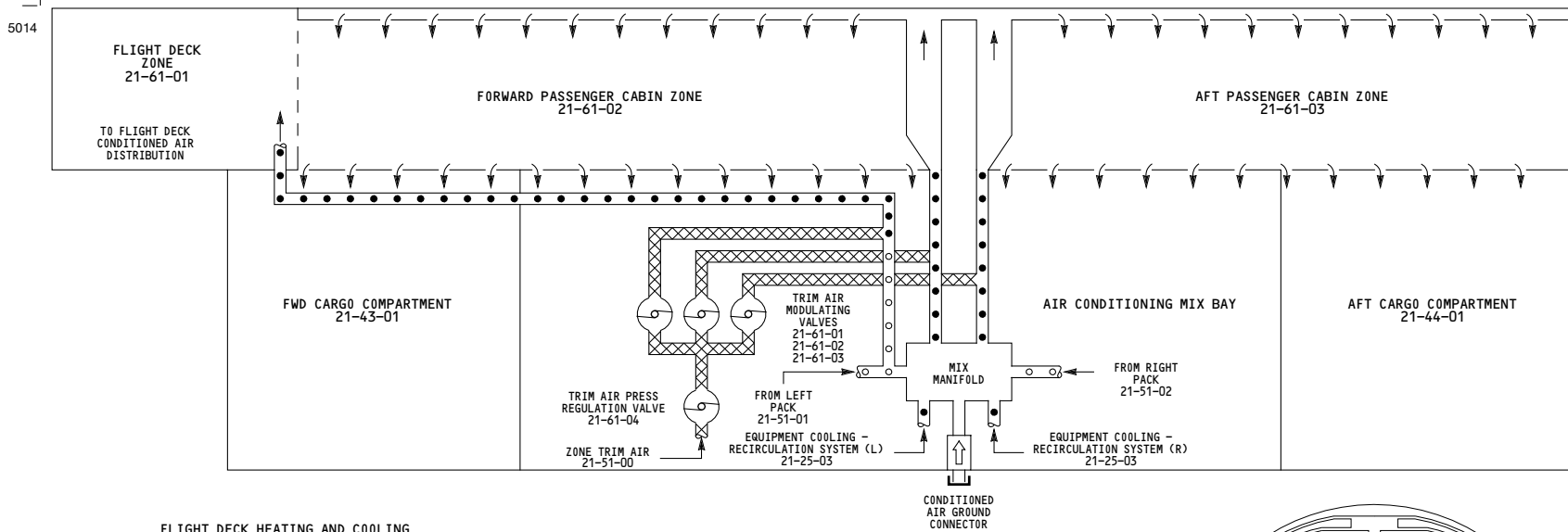
ALL

AIR CONDITIONING SYSTEM - SIMPLIFIED

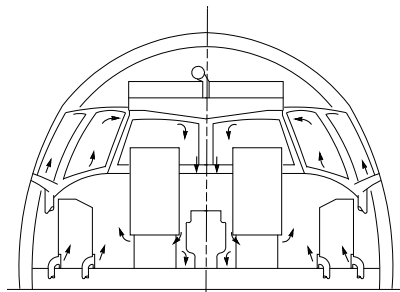
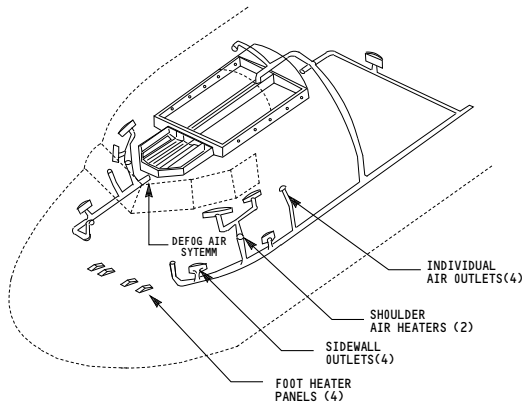
D280N032S

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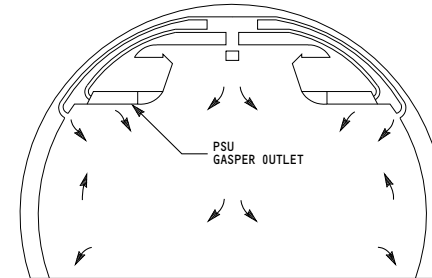
Page 101
Sheet 2
May 06/2009



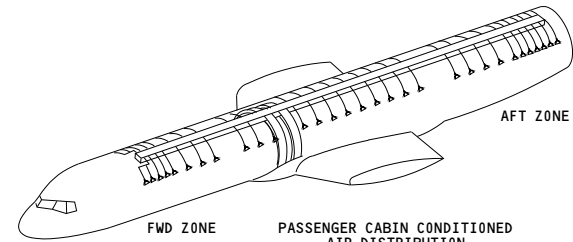
FLIGHT DECK HEATING AND COOLING



FLIGHT DECK AIRFLOW



PASSENGER CABIN AIRFLOW



FWD ZONE

PASSENGER CABIN CONDITIONED AIR DISTRIBUTION

21-20-01

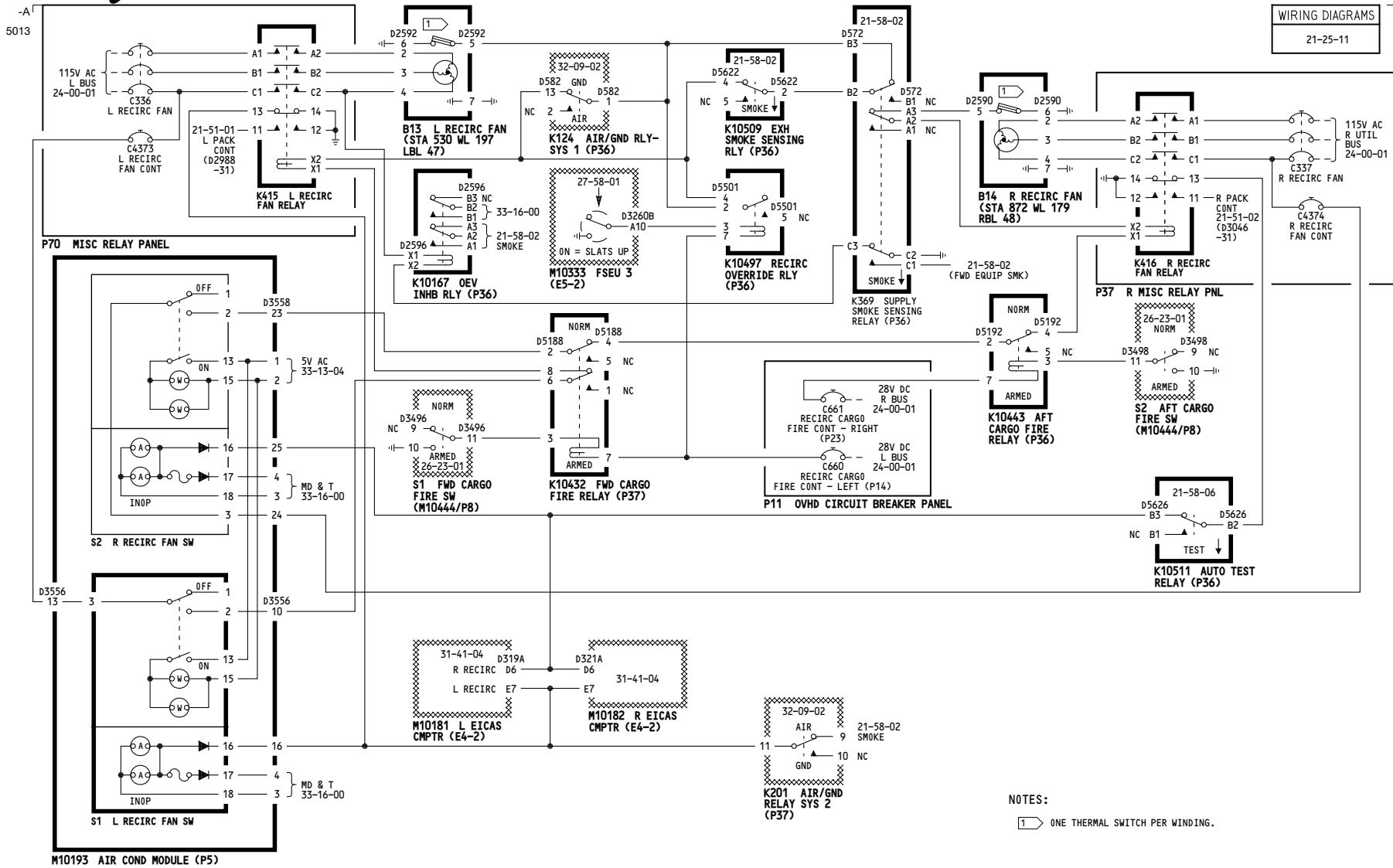
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- ○ CONDITIONED AIR
- ○ COLD AIR
- ⊗ ⊗ HOT AIR

ALL	<p>CONDITIONED AIR DISTRIBUTION</p> <p>D280N032S</p>
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WIRING DIAGRAMS
21-25-11



M10193 AIR COND MODULE (P5)

ALL

**EQUIPMENT COOLING -
RECIRCULATION SYSTEM**

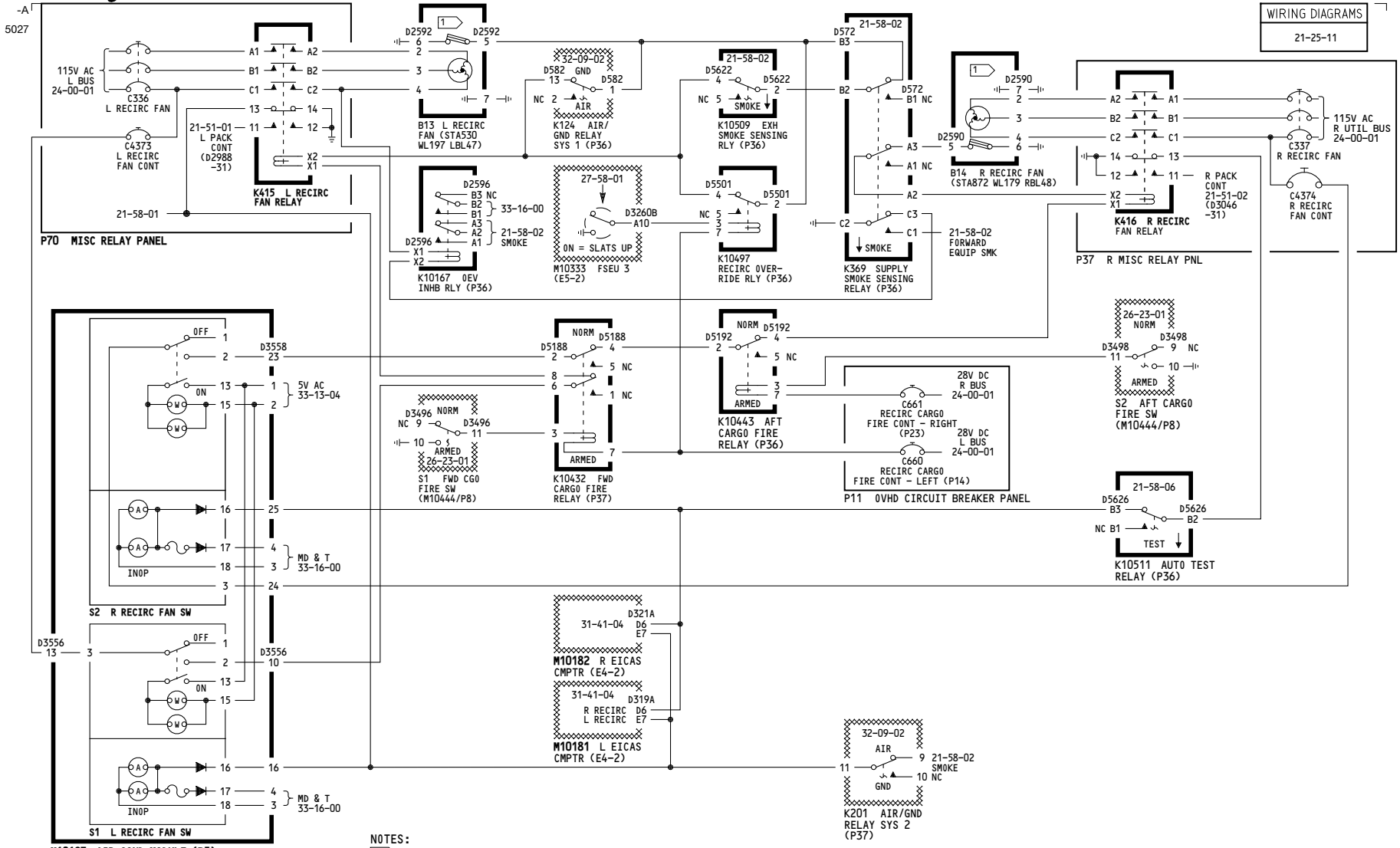
D280N032S

NOTES:
① ONE THERMAL SWITCH PER WINDING.

21-25-03

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NOTES:
① ONE THERMAL SWITCH PER WINDING.

001-011

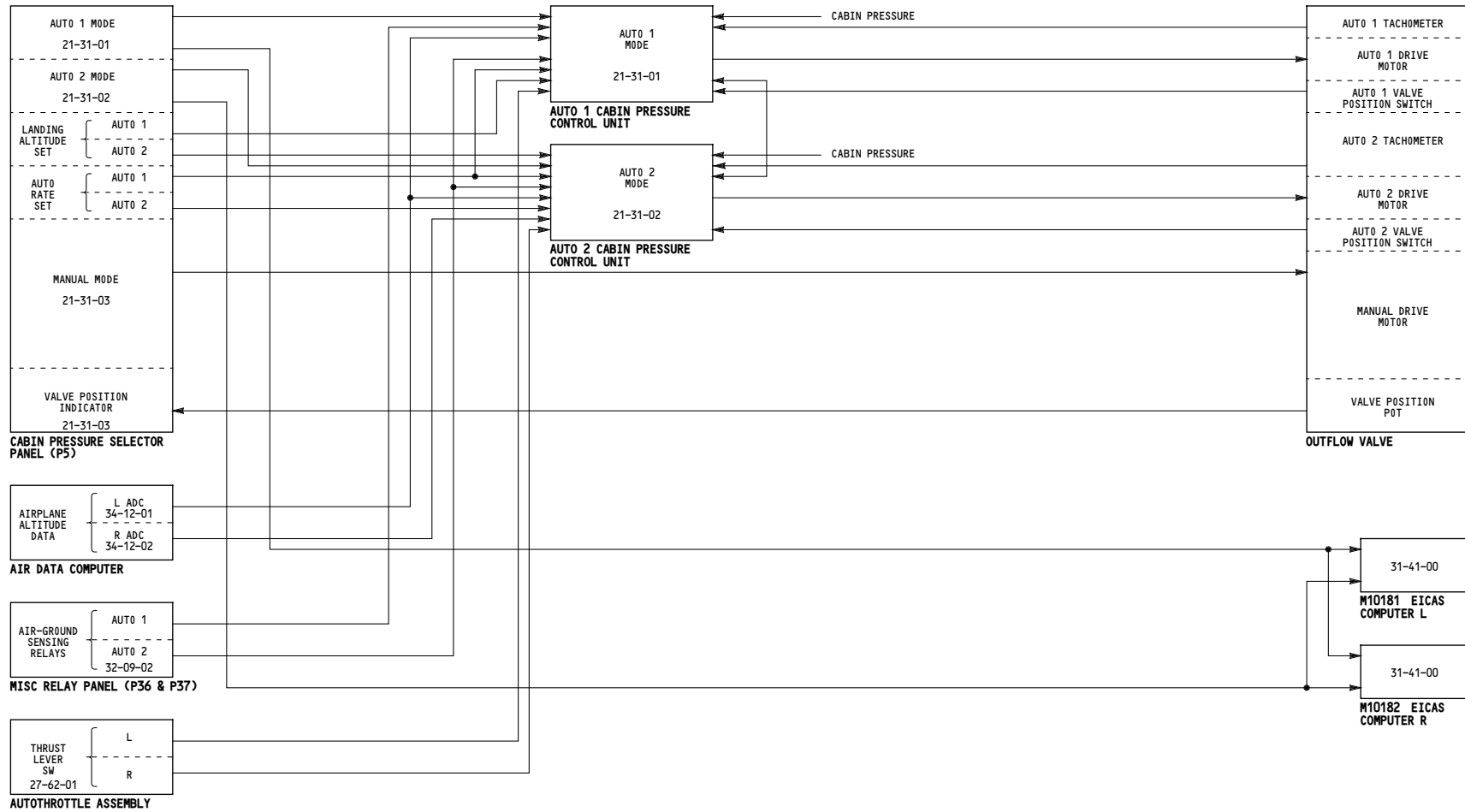
EQUIPMENT COOLING - RECIRCULATION SYSTEM

D280N032S

Incorporates
21-0061 R01

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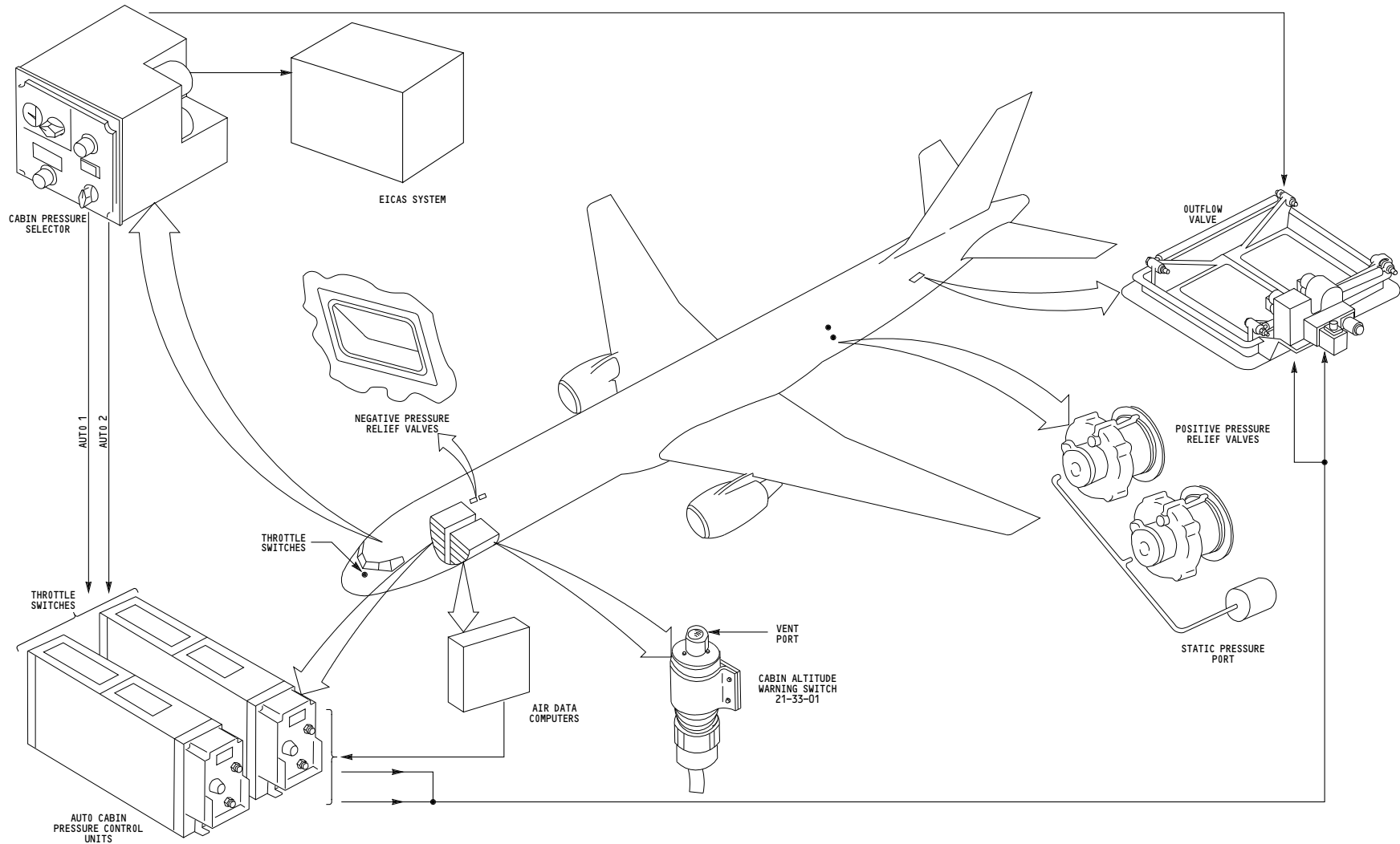


ALL	<p>CABIN PRESSURIZATION CONTROL SYSTEM - SIMPLIFIED</p> <p>D280N032S</p>
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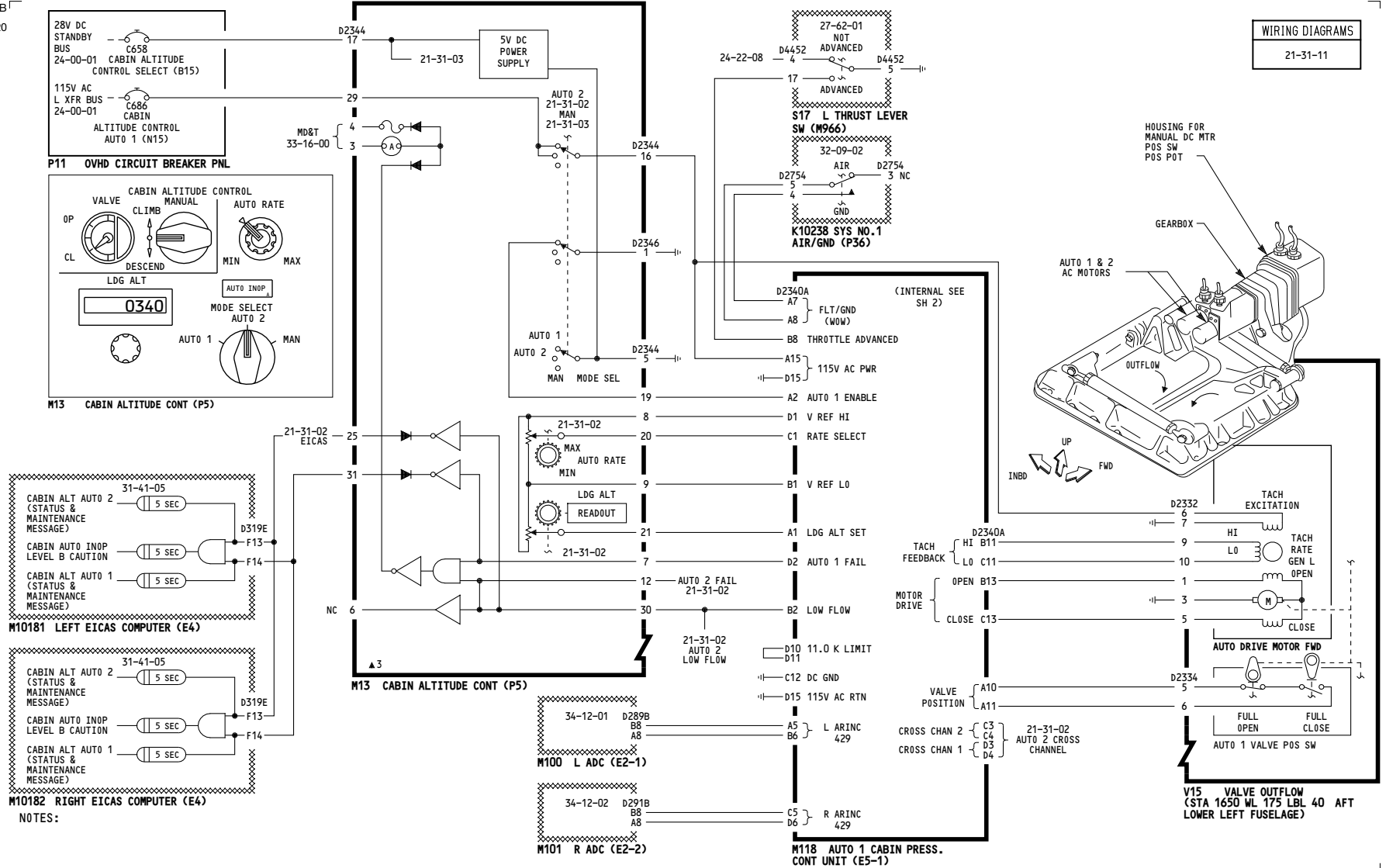
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21-30-00

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Sheet 2
May 06/2009

-B
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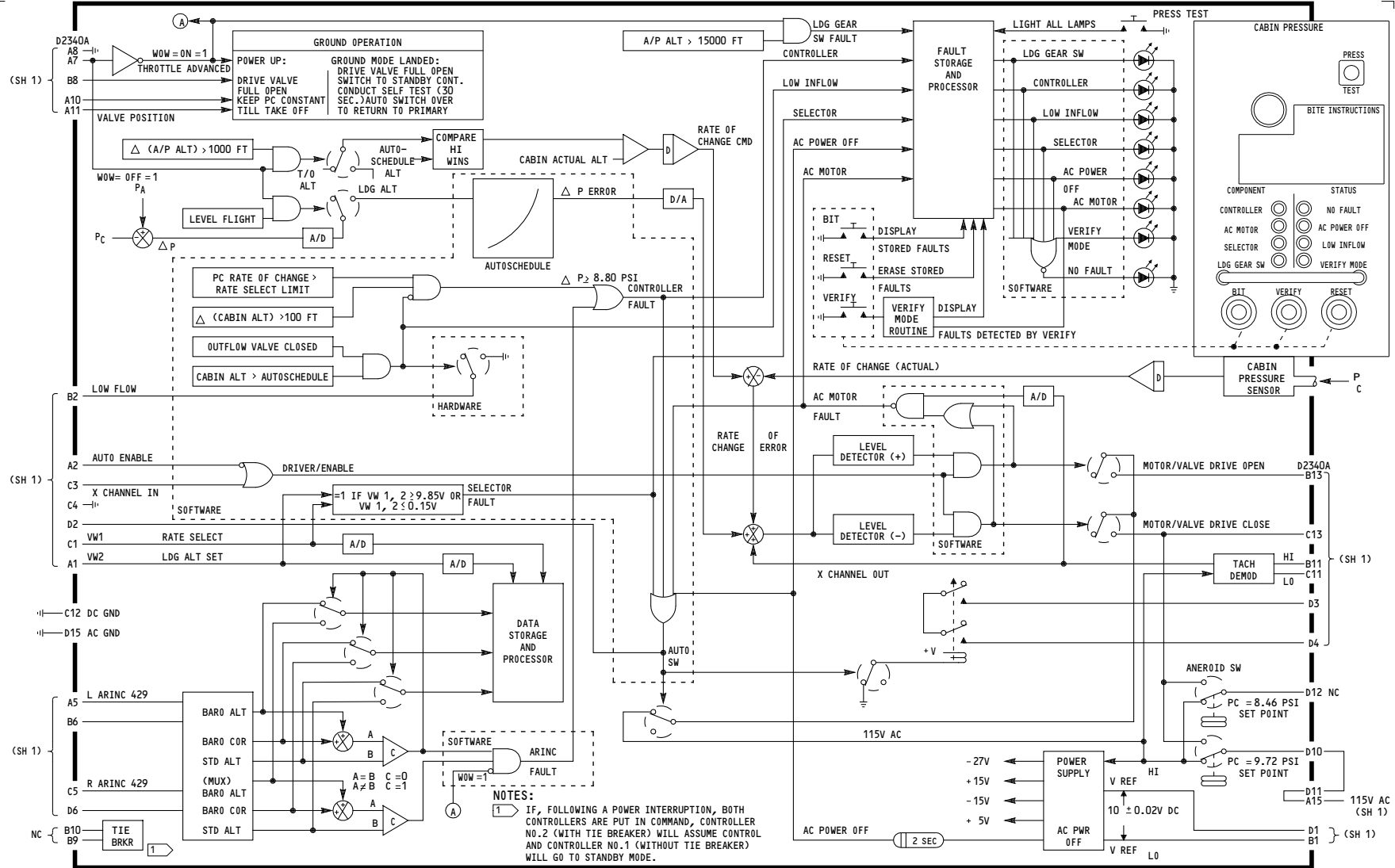
WIRING DIAGRAMS
21-31-11



001-003, 005, 007-008	PRESSURIZATION CONTROL AUTO 1
	D280N032S

21-31-01

5011



M118 AUTO 1 CABIN PRESS CONT UNIT (E5-1)

001-003, 005, 007-008

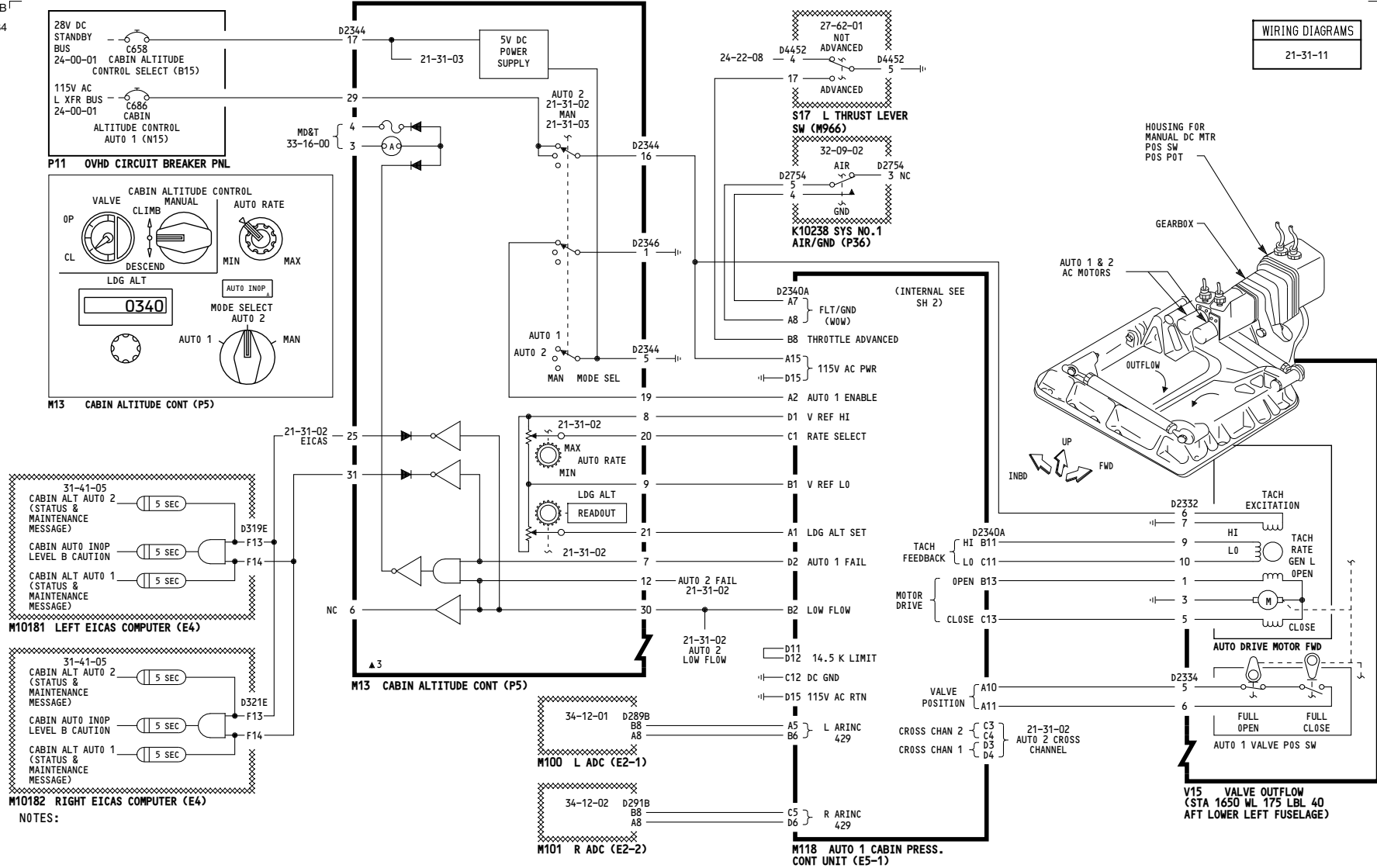
**PRESSURIZATION CONTROL
 AUTO 1**

D280N032S

21-31-01

-B-
5034

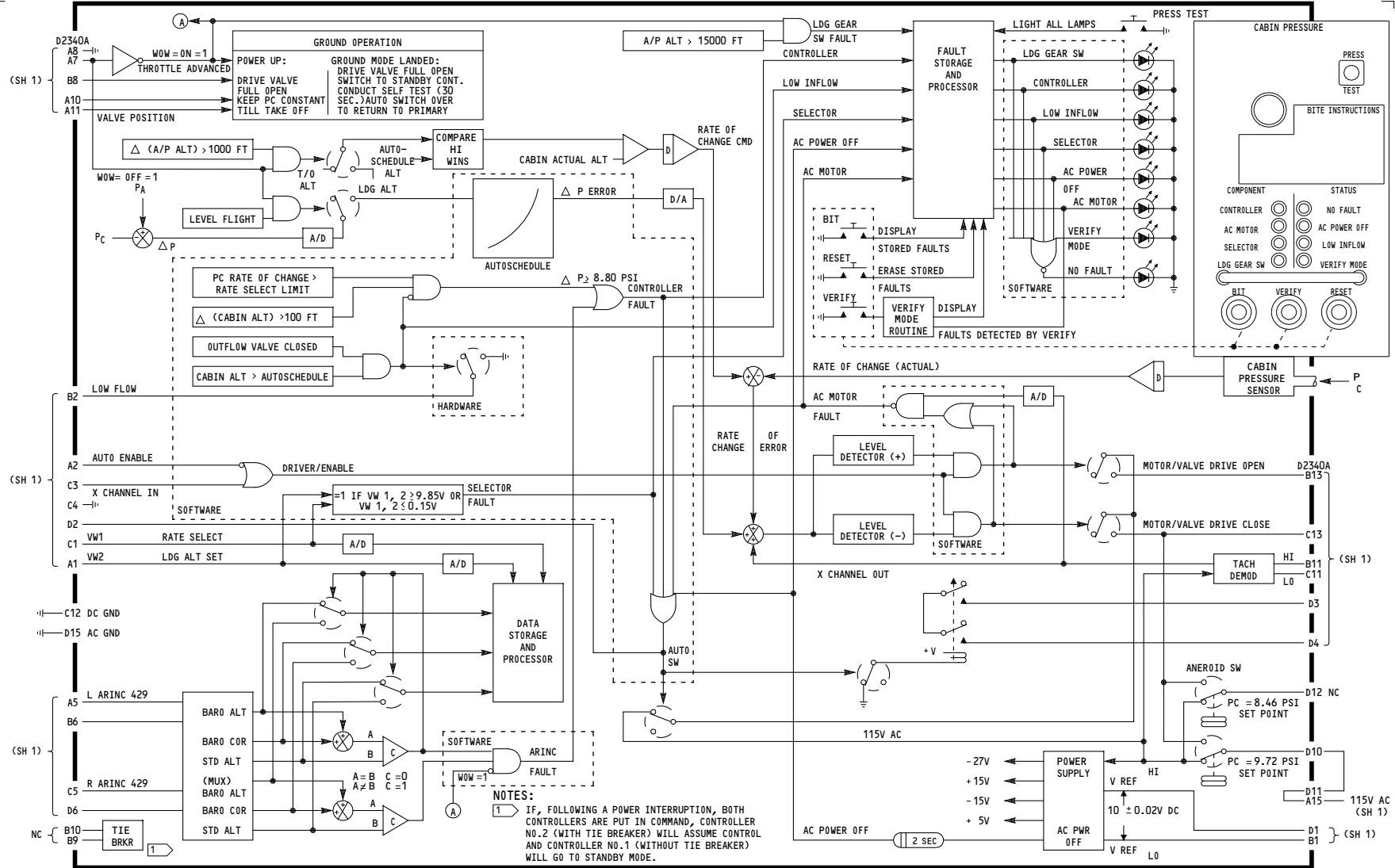
WIRING DIAGRAMS
21-31-11



004, 006	<p>PRESSURIZATION CONTROL AUTO 1</p> <p style="text-align: center;">D280N032S</p>
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21-31-01

5011



M118 AUTO 1 CABIN PRESS CONT UNIT (E5-1)

004, 006

**PRESSURIZATION CONTROL
 AUTO 1**

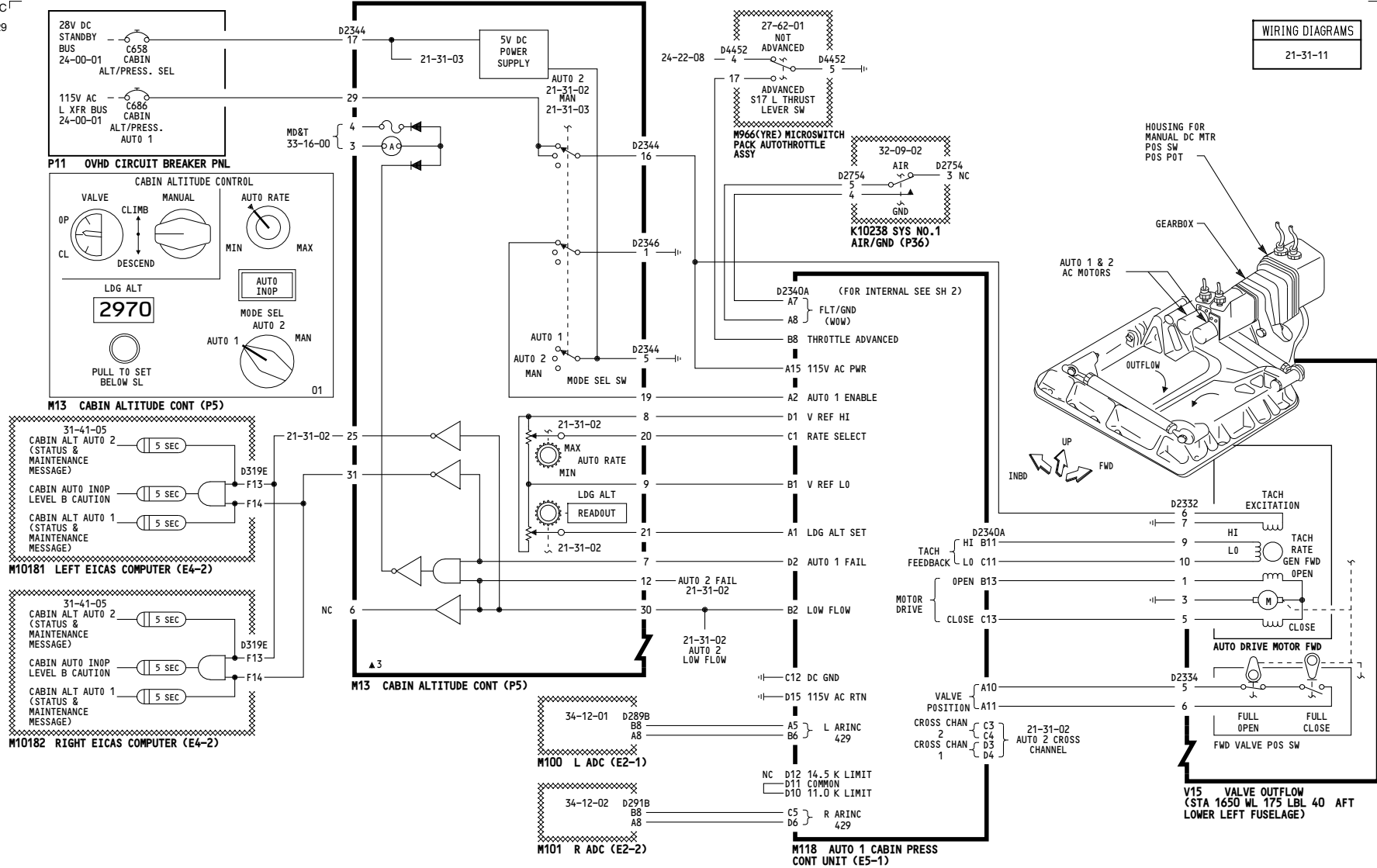
D280N032S

21-31-01

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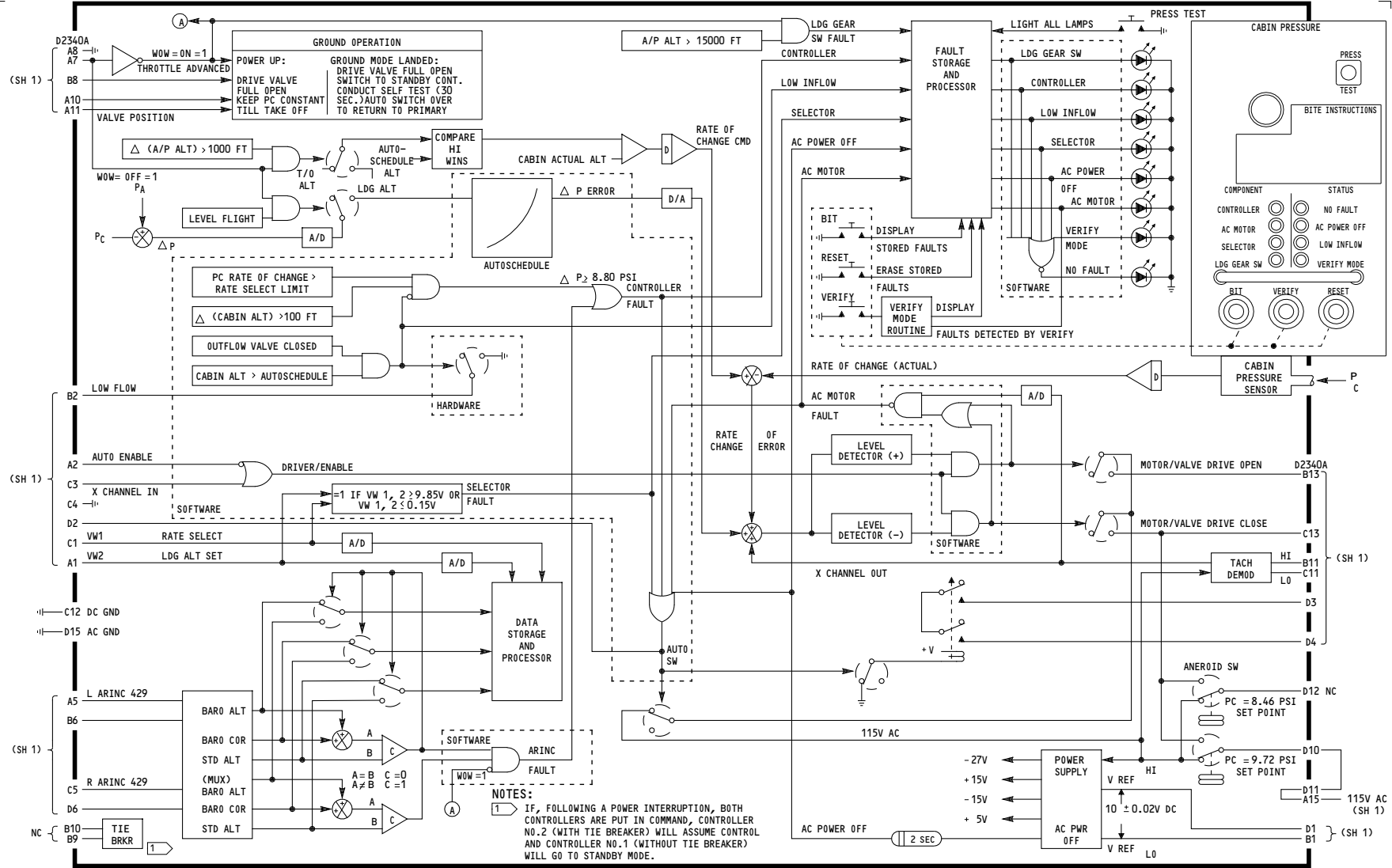
WIRING DIAGRAMS
21-31-11



009-099	<p>PRESSURIZATION CONTROL AUTO 1</p> <p>D280N032S</p>
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21-31-01

5011



M118 AUTO 1 CABIN PRESS CONT UNIT (E5-1)

009-099

**PRESSURIZATION CONTROL
AUTO 1**

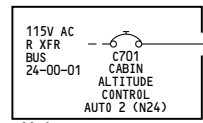
D280N032S

21-31-01

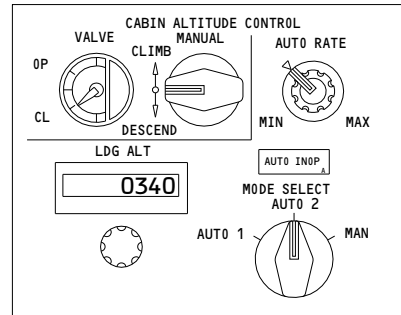
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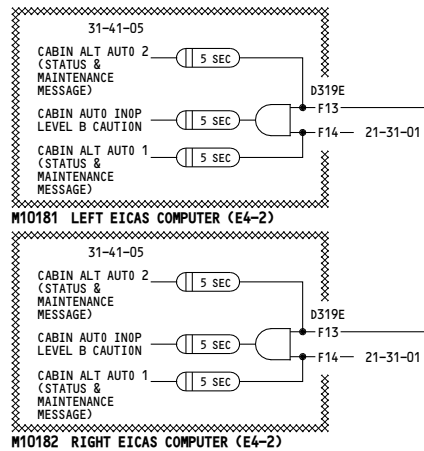
WIRING DIAGRAMS
21-31-21



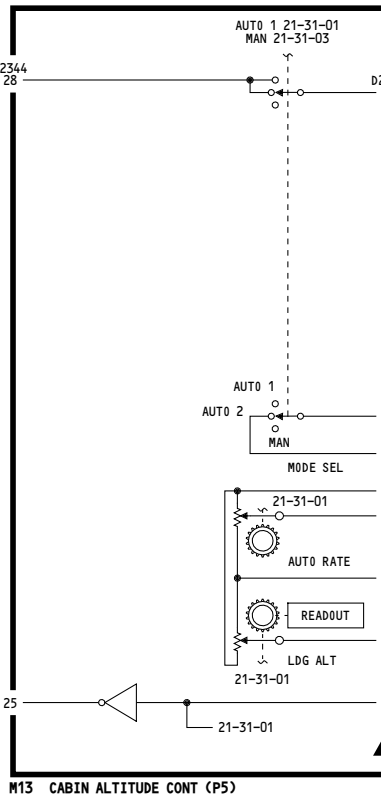
P11-4 OVERHEAD CIRCUIT BREAKER PANEL



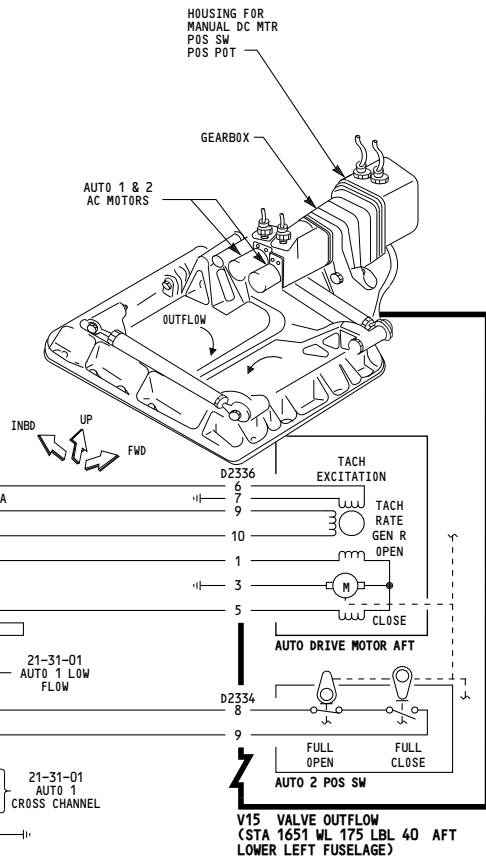
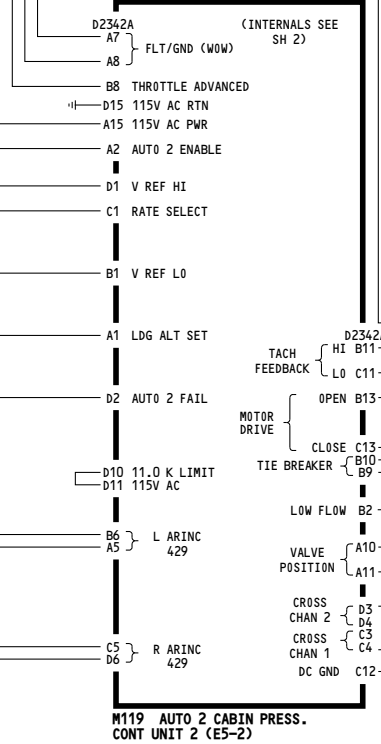
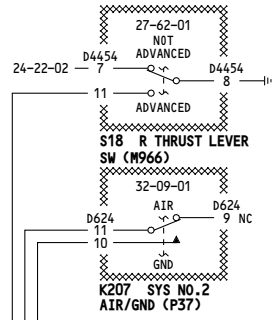
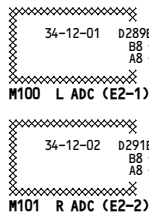
M13 CABIN ALTITUDE CONT



M10182 RIGHT EICAS COMPUTER (E4-2)



M13 CABIN ALTITUDE CONT (P5)



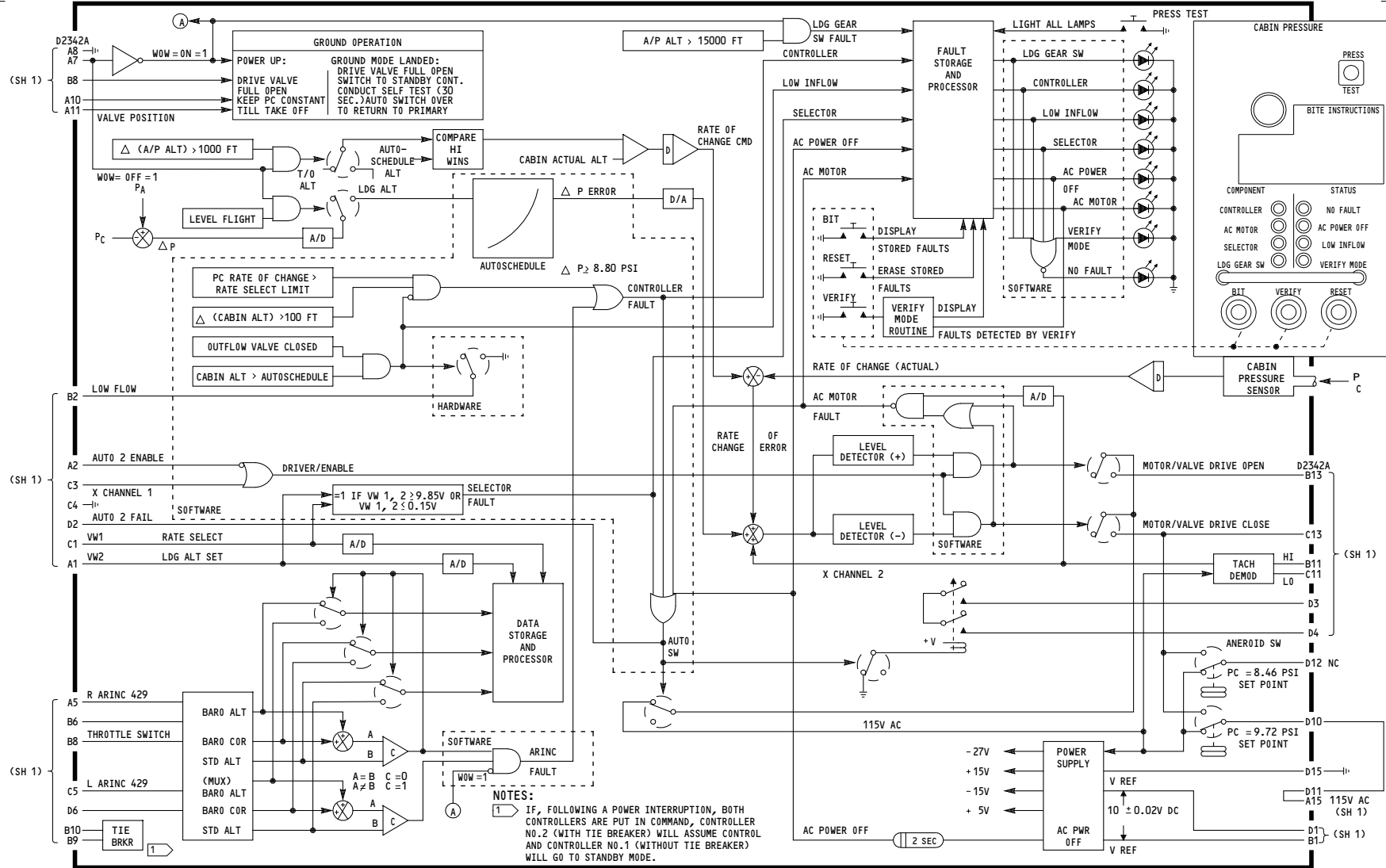
001-003, 005, 007-008

**PRESSURIZATION CONTROL
AUTO 2**

D280N032S

21-31-02

5011



M119 AUTO 2 CABIN PRESS CONT UNIT (E5-2)

001-003, 005, 007-008

**PRESSURIZATION CONTROL
 AUTO 2**

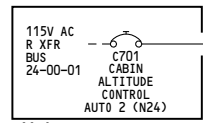
D280N032S

21-31-02

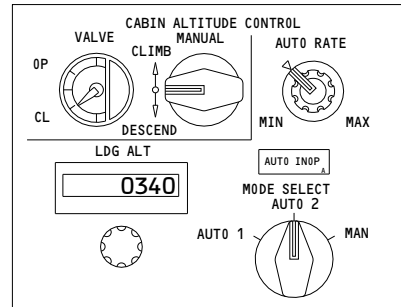
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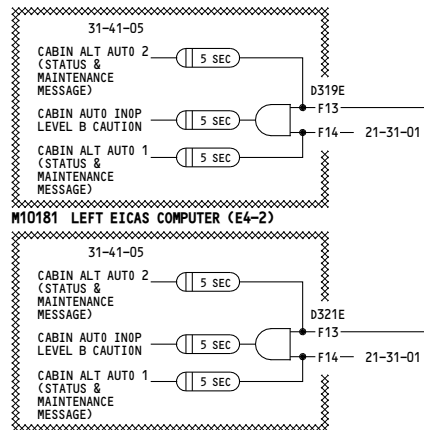
WIRING DIAGRAMS
21-31-21



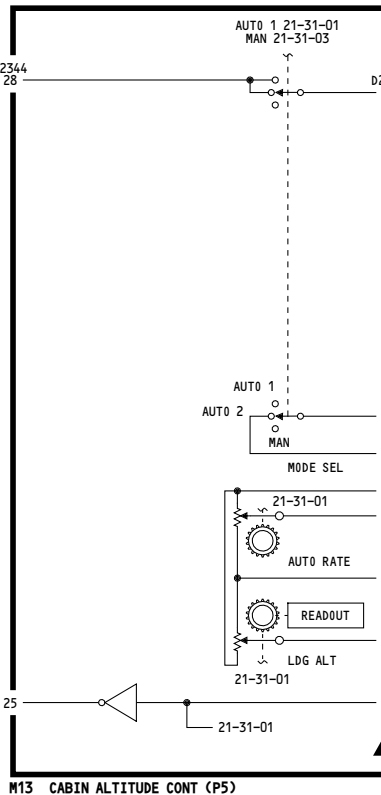
P11-4 OVERHEAD CIRCUIT BREAKER PANEL



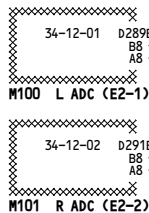
M13 CABIN ALTITUDE CONT



M10182 RIGHT EICAS COMPUTER (E4-2)

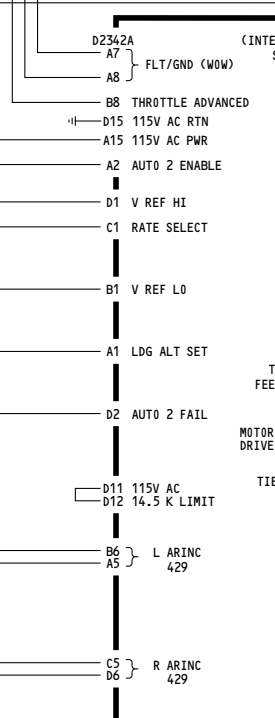
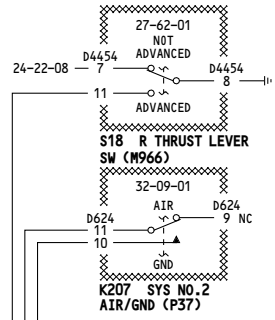


M13 CABIN ALTITUDE CONT (P5)

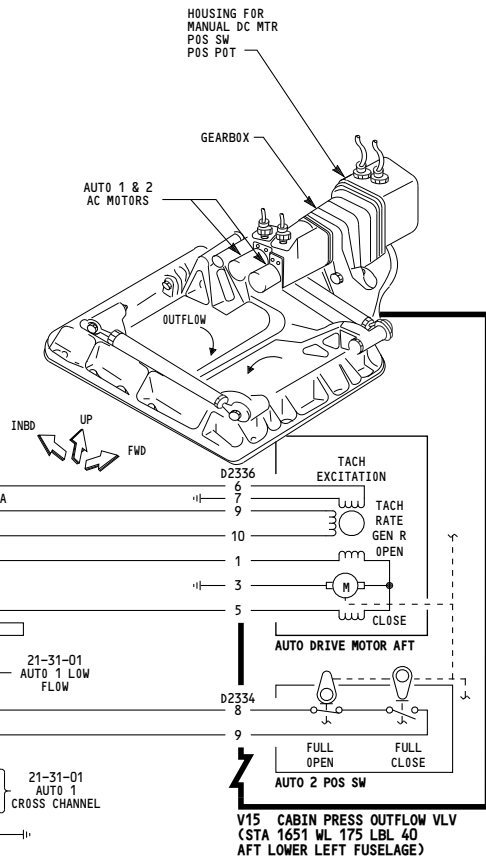


M100 L ADC (E2-1)

M101 R ADC (E2-2)



M119 AUTO 2 CABIN PRESS. CONT UNIT 2 (E5-2)

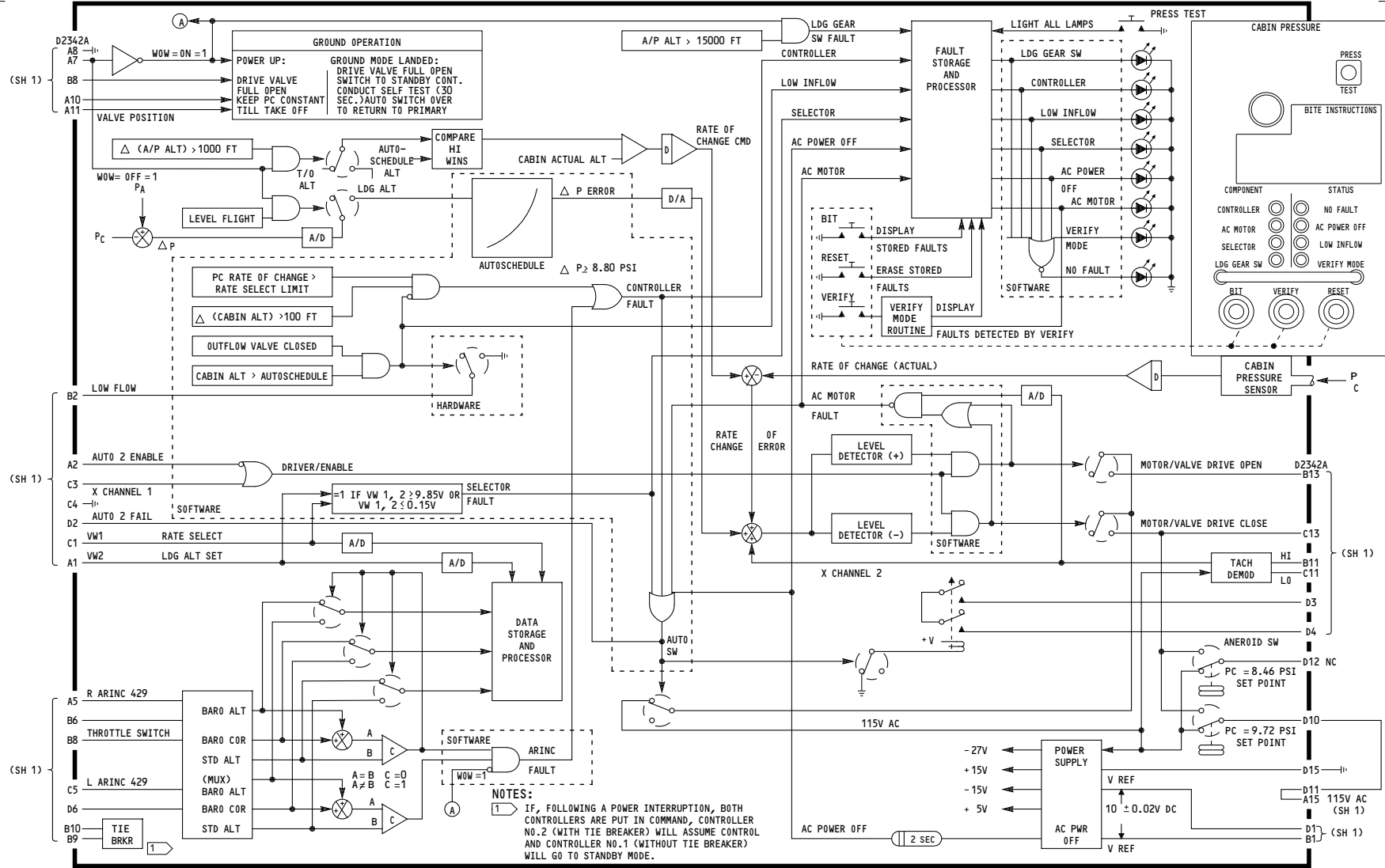


M15 CABIN PRESS OUTFLOW VLV (STA 1651 WL 175 LBL 40 AFT LOWER LEFT FUSELAGE)

004, 006	<p>PRESSURIZATION CONTROL AUTO 2</p> <p>D280N032S</p>
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21-31-02

5011



M119 AUTO 2 CABIN PRESS CONT UNIT (E5-2)

004, 006

**PRESSURIZATION CONTROL
AUTO 2**

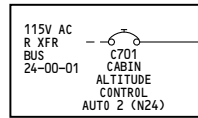
D280N032S

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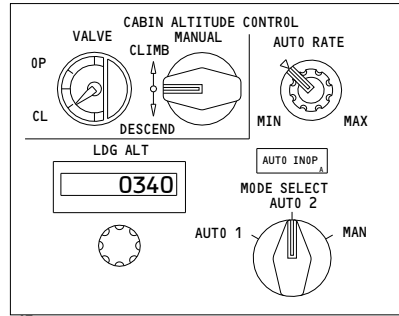
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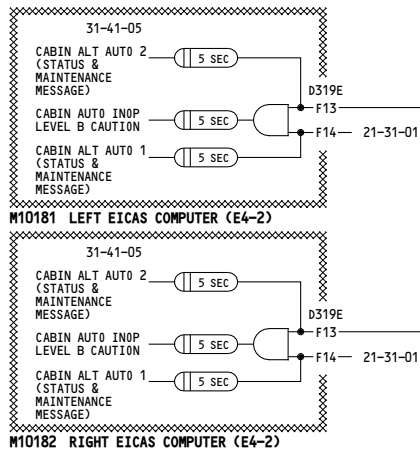
WIRING DIAGRAMS
21-31-21



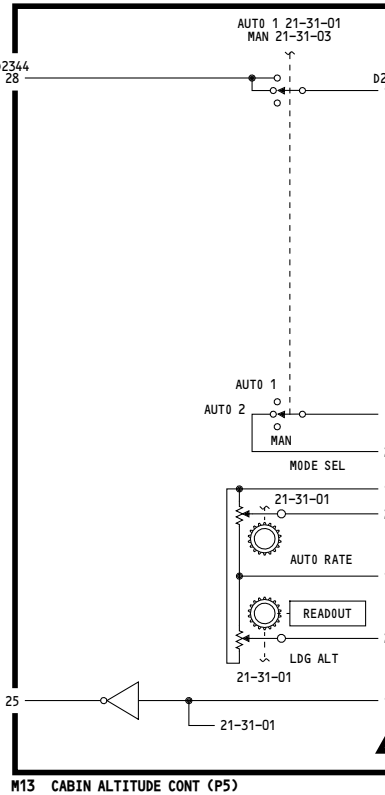
P11-4 OVERHEAD CIRCUIT BREAKER PANEL



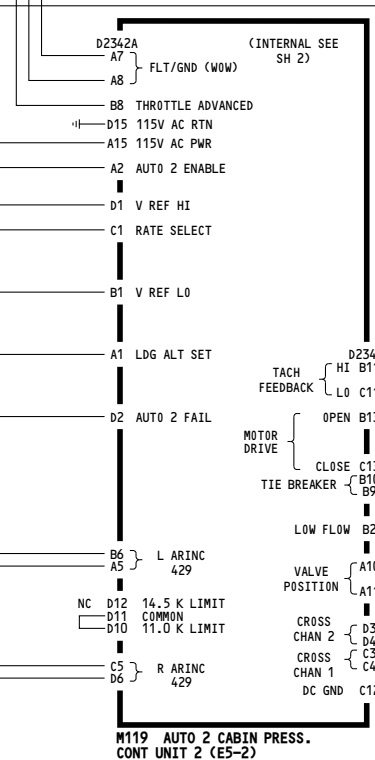
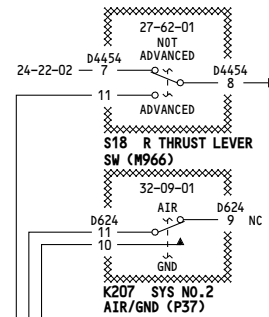
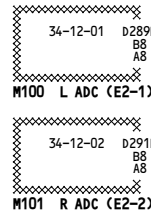
M13 CABIN ALTITUDE CONT



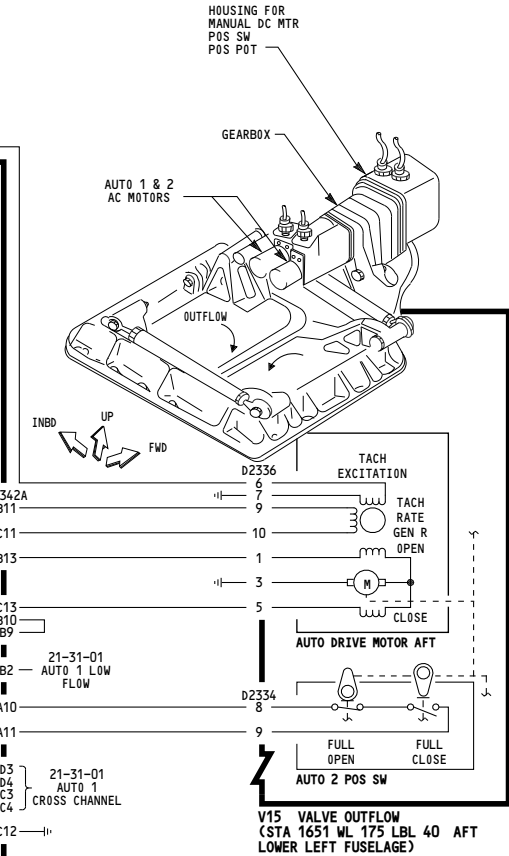
M10182 RIGHT EICAS COMPUTER (E4-2)



M13 CABIN ALTITUDE CONT (P5)



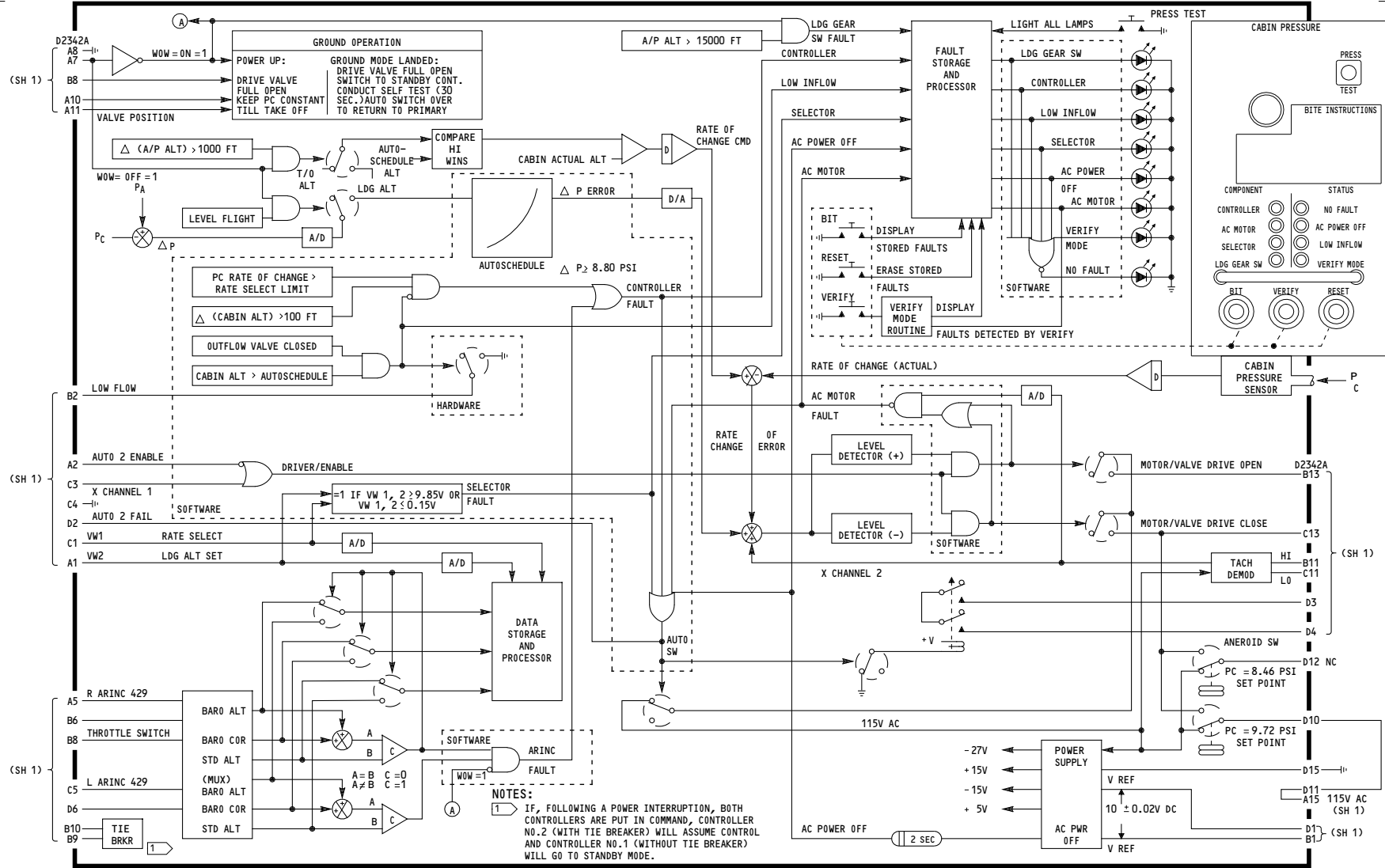
M119 AUTO 2 CABIN PRESS. CONT UNIT 2 (E5-2)



009-099	PRESSURIZATION CONTROL AUTO 2
	D280N032S

21-31-02

5011



M119 AUTO 2 CABIN PRESS CONT UNIT (E5-2)

009-099

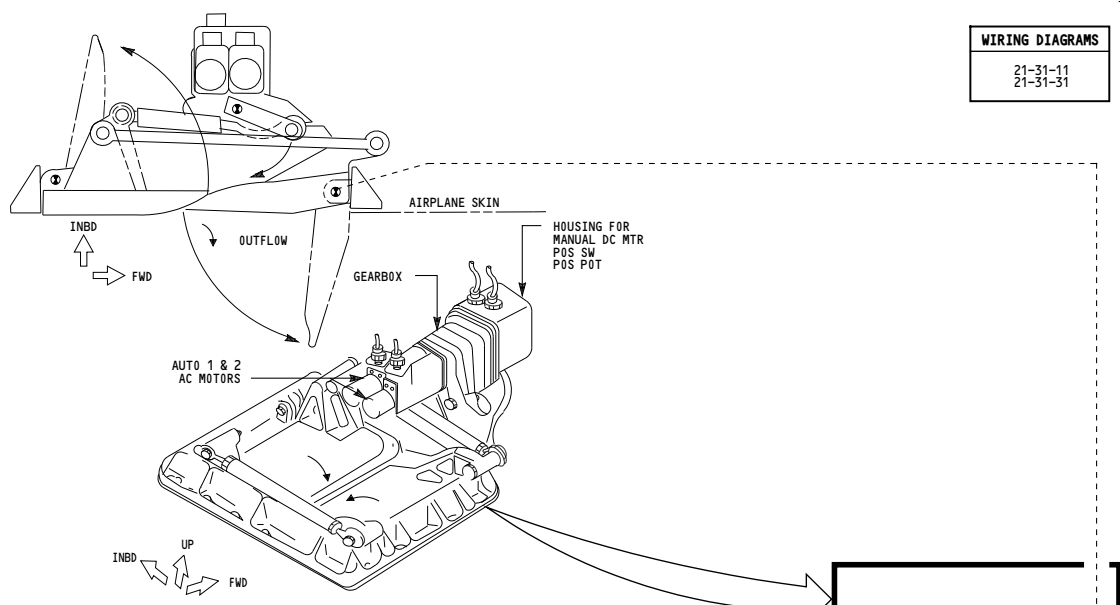
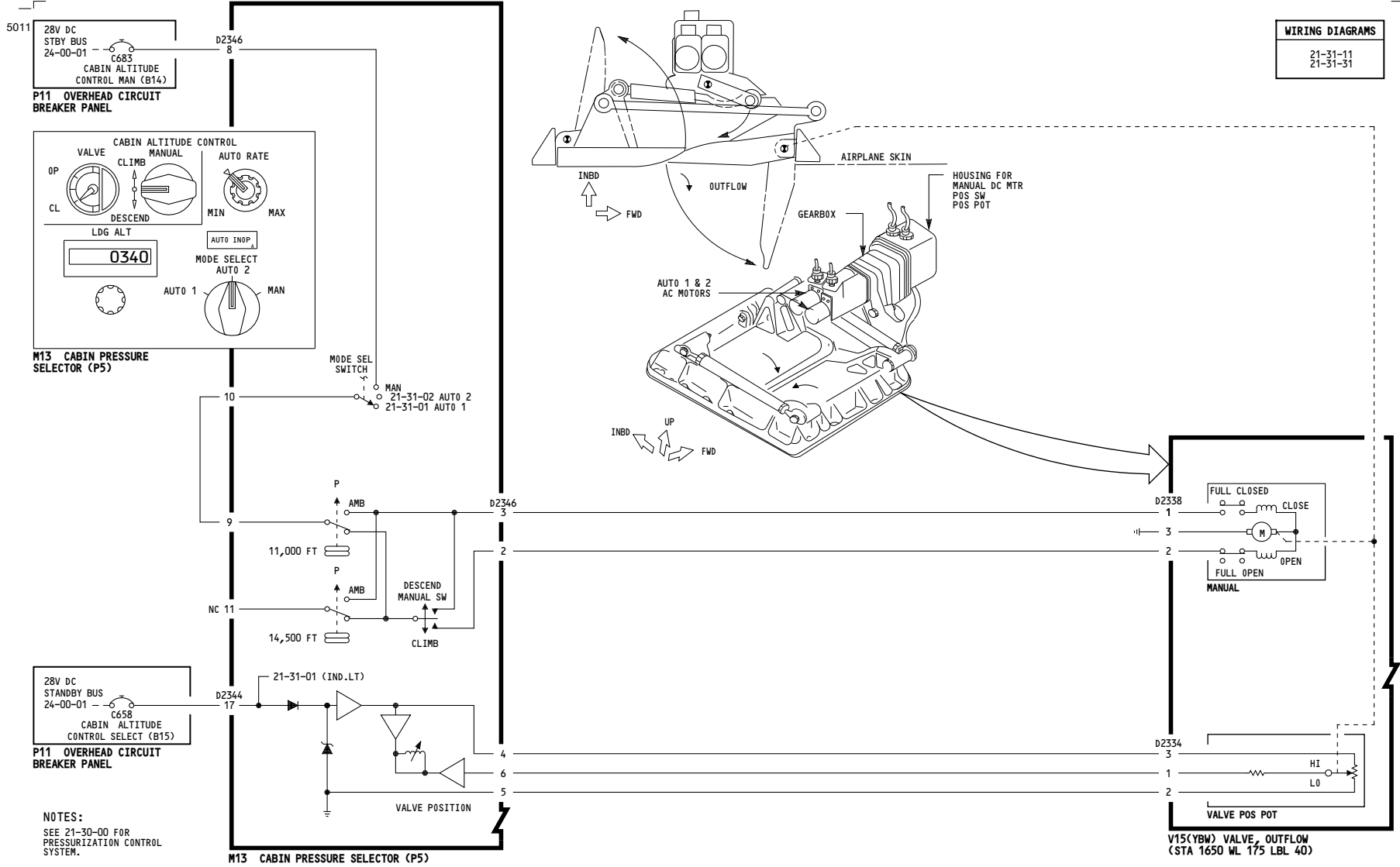
**PRESSURIZATION CONTROL
AUTO 2**

D280N032S

21-31-02

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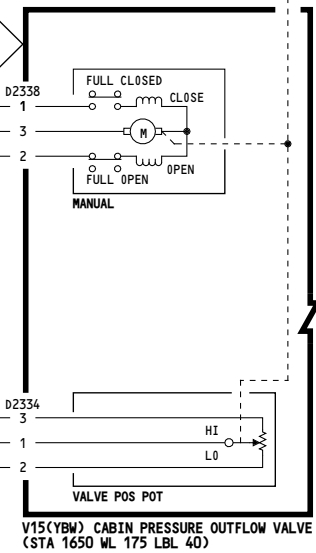
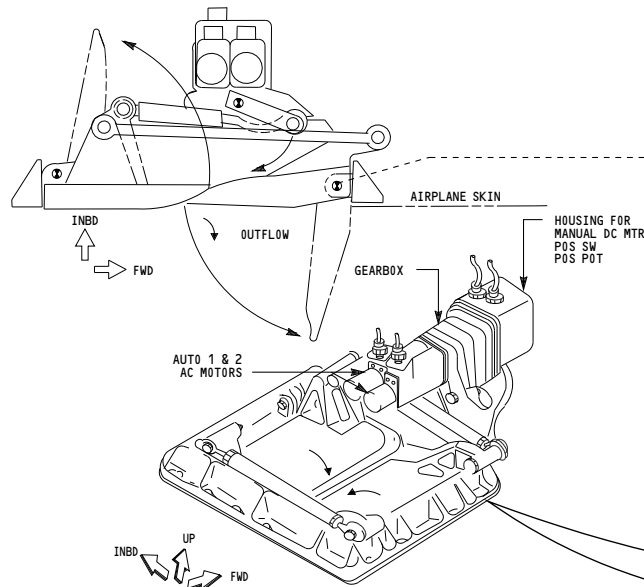
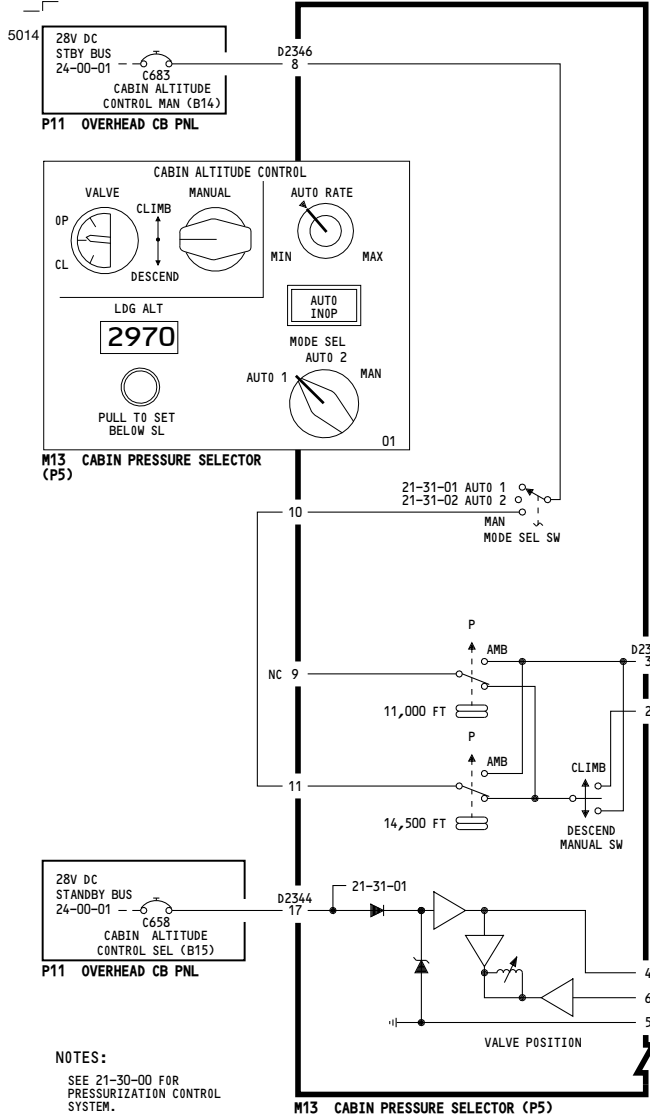
WIRING DIAGRAMS
21-31-11
21-31-31



<p>001-003, 005, 007-008</p>	<p>MANUAL PRESSURIZATION CONTROL</p> <p>D280N032S</p>
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21-31-03

WIRING DIAGRAMS
21-31-31

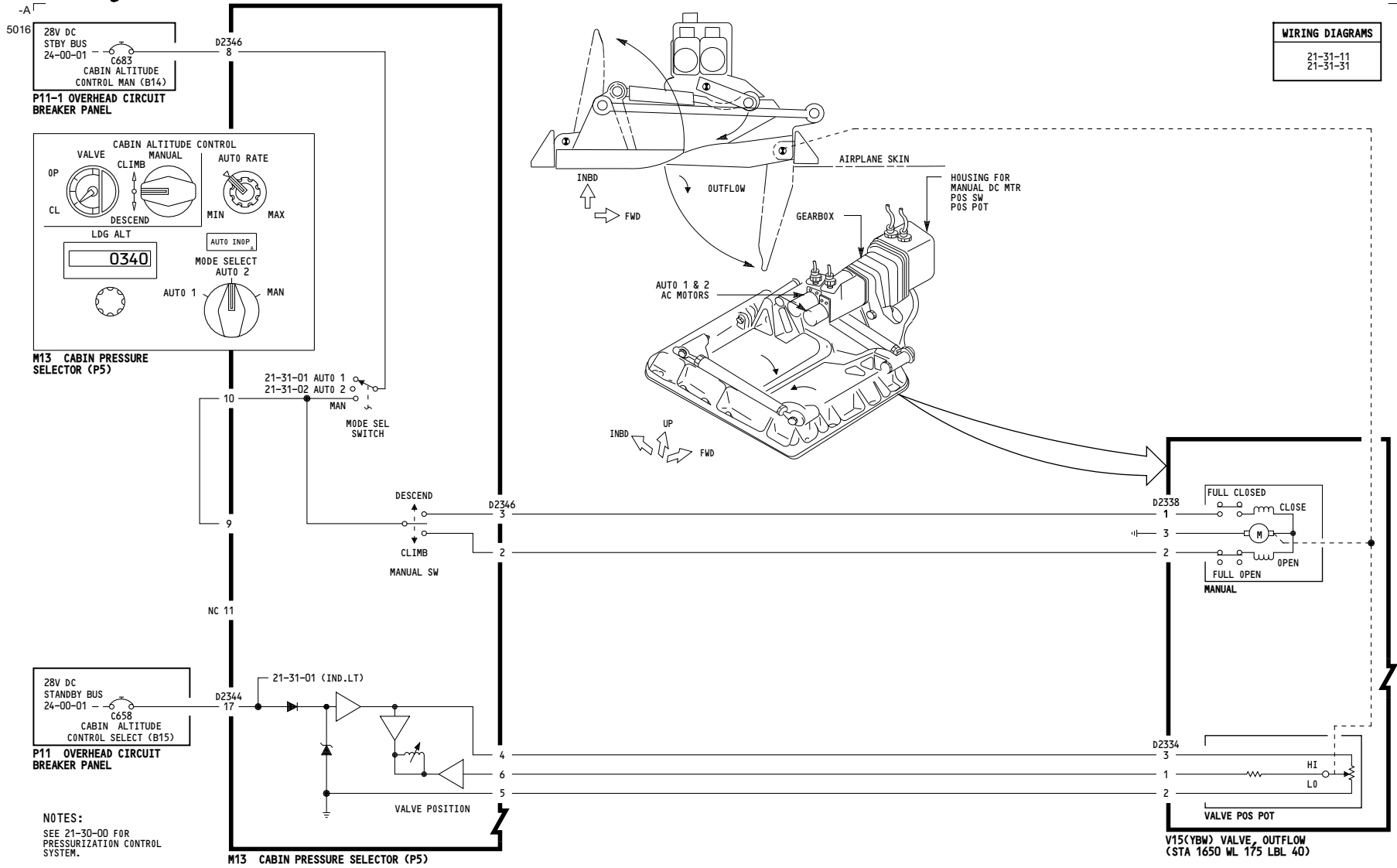


NOTES:
SEE 21-30-00 FOR PRESSURIZATION CONTROL SYSTEM.

004, 006	<p>MANUAL PRESSURIZATION CONTROL</p> <p>D280N032S</p>
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21-31-03

WIRING DIAGRAMS
21-31-11
21-31-31



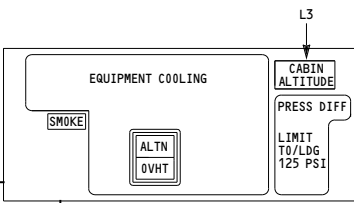
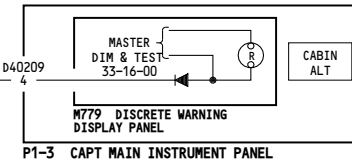
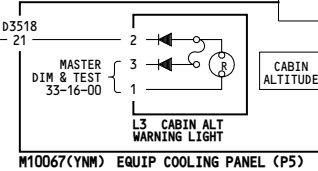
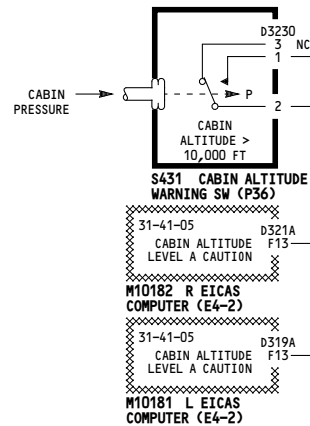
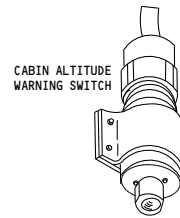
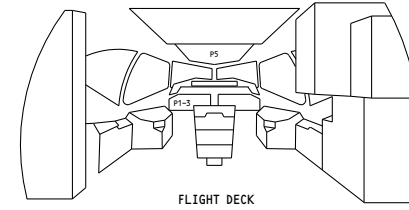
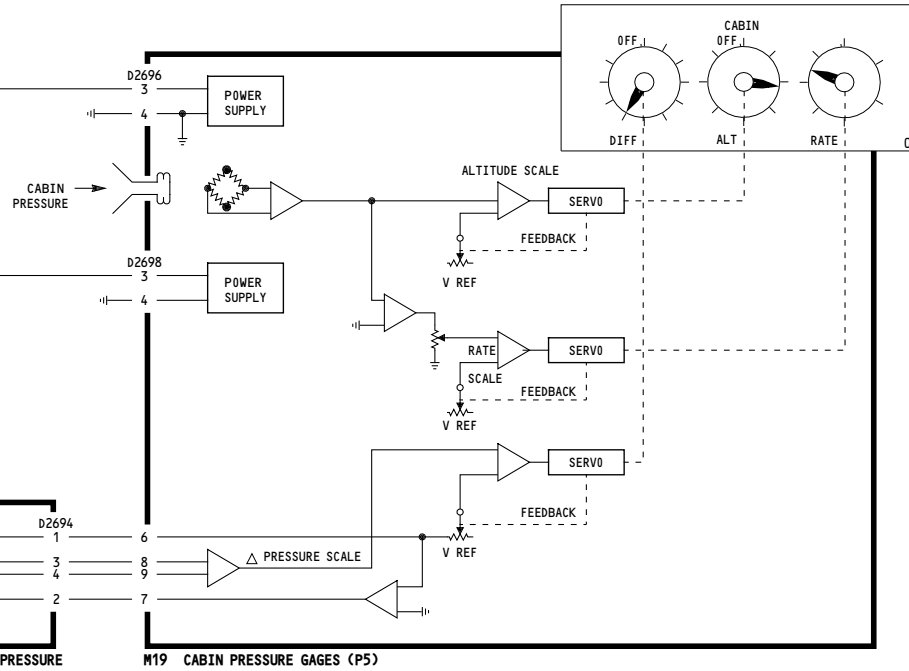
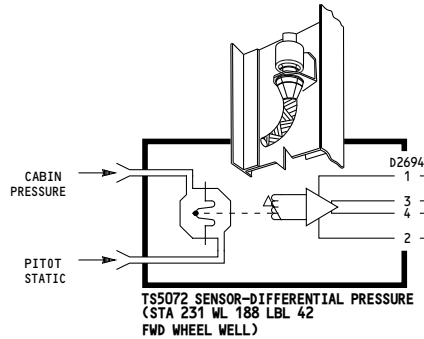
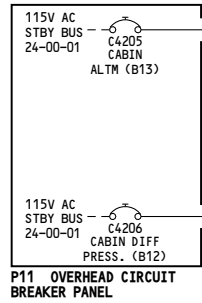
NOTES:
SEE 21-30-00 FOR PRESSURIZATION CONTROL SYSTEM.

009-099	<p align="center">MANUAL PRESSURIZATION CONTROL</p> <p align="center">D280N032S</p>
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21-31-03

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5012

WIRING DIAGRAMS
21-33-11
21-33-12



FIRE	CONFIG
PROX GND	A/P DISC.
CABIN ALT	OVSPD

M779

ALL	CABIN PRESSURE INDICATION AND WARNING
	D280N032S

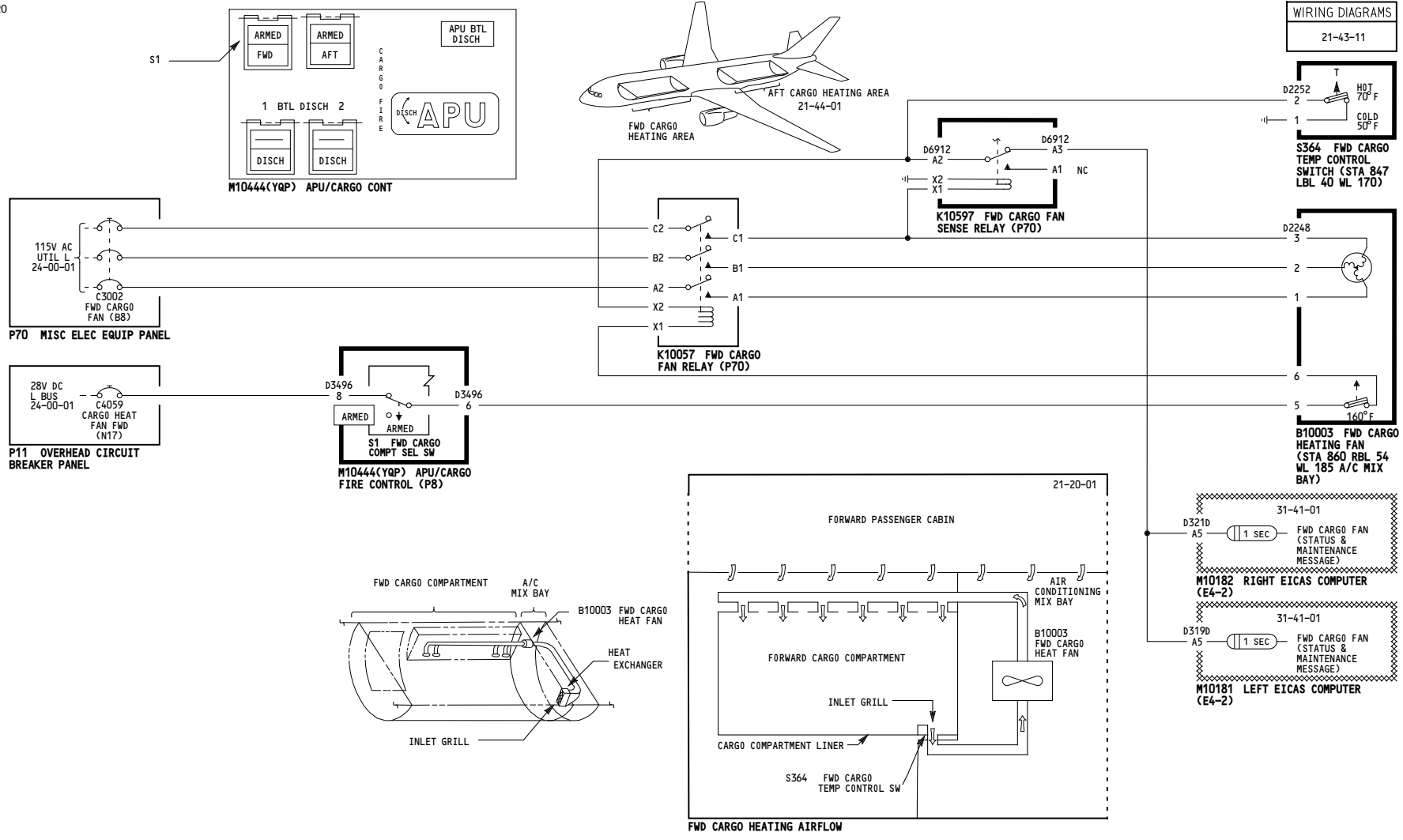
21-33-01

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WIRING DIAGRAMS
21-43-11



ALL	FORWARD CARGO HEATING
	D280N032S

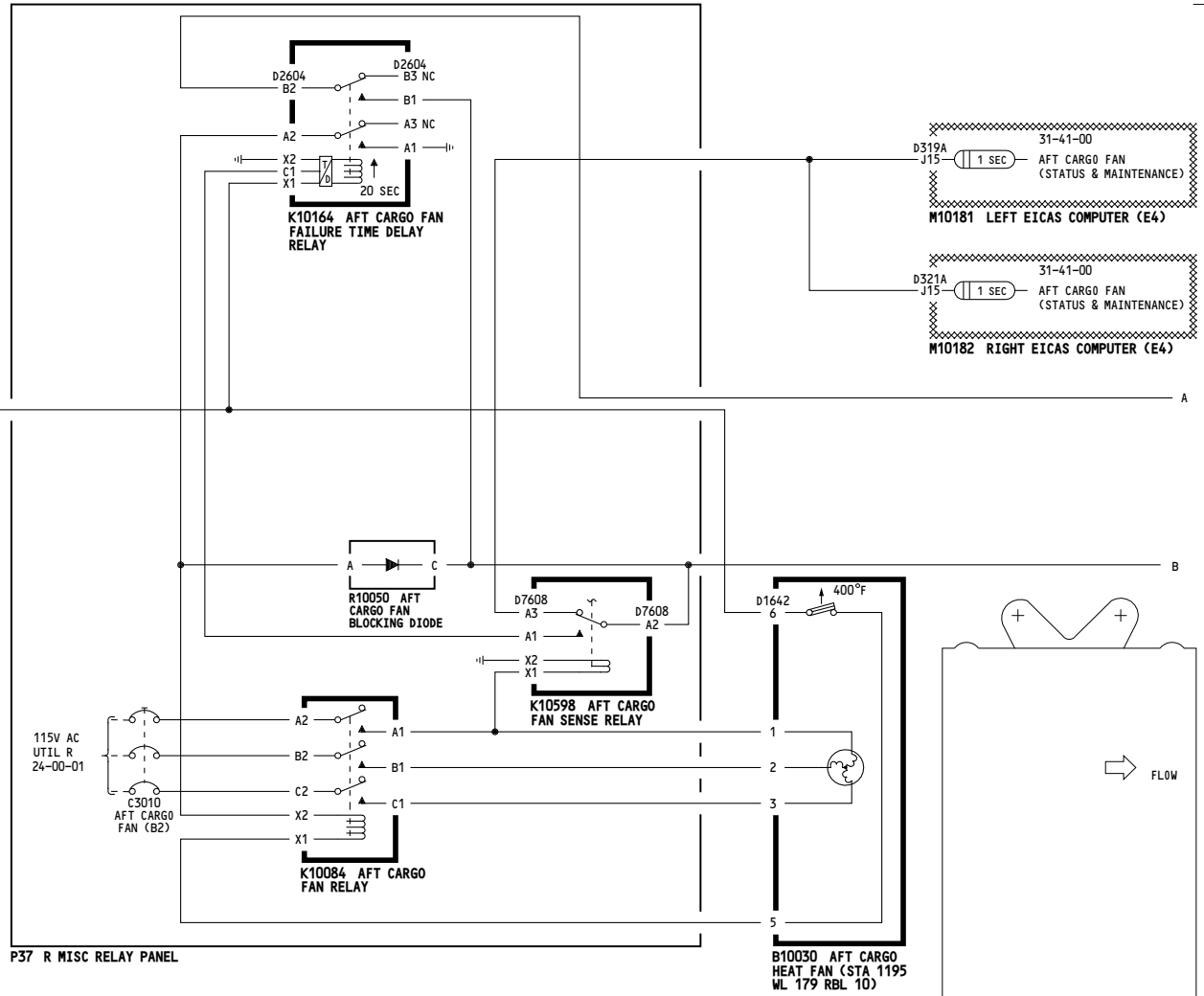
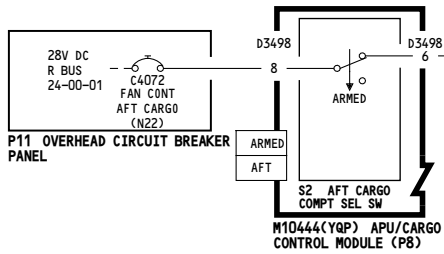
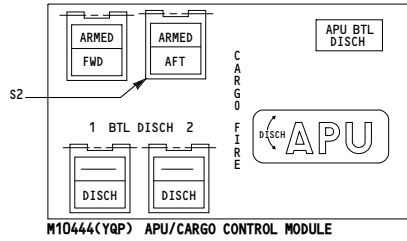
21-43-01

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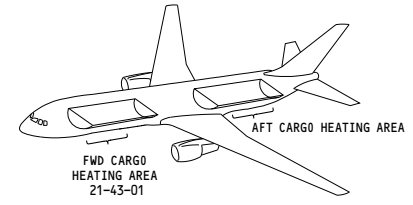
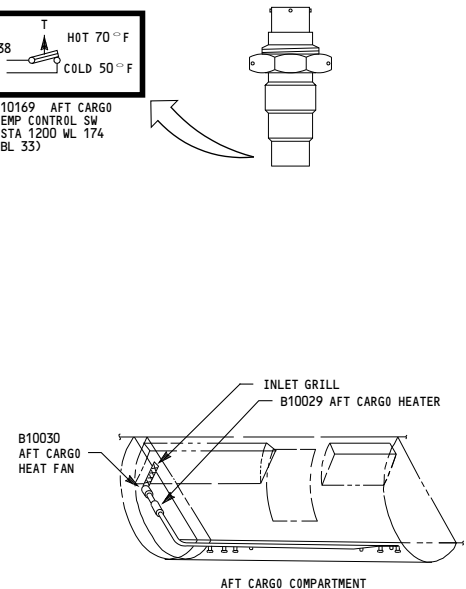
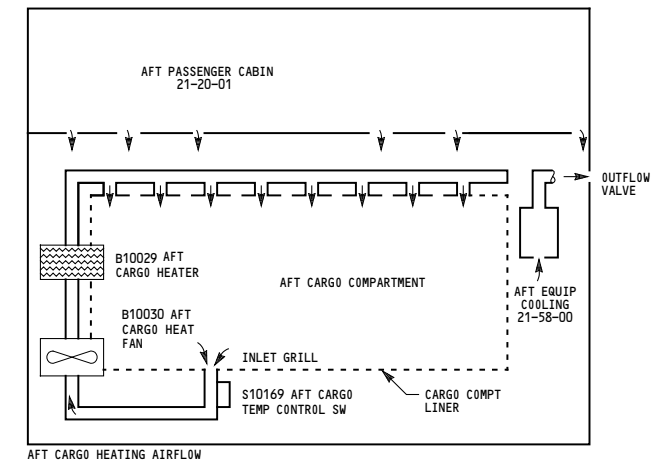
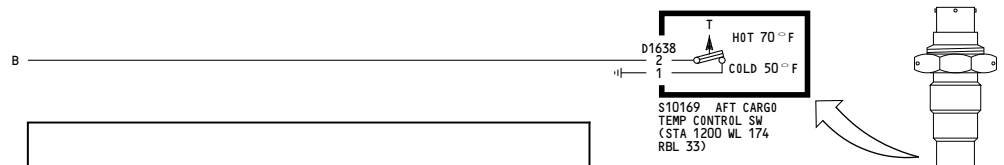
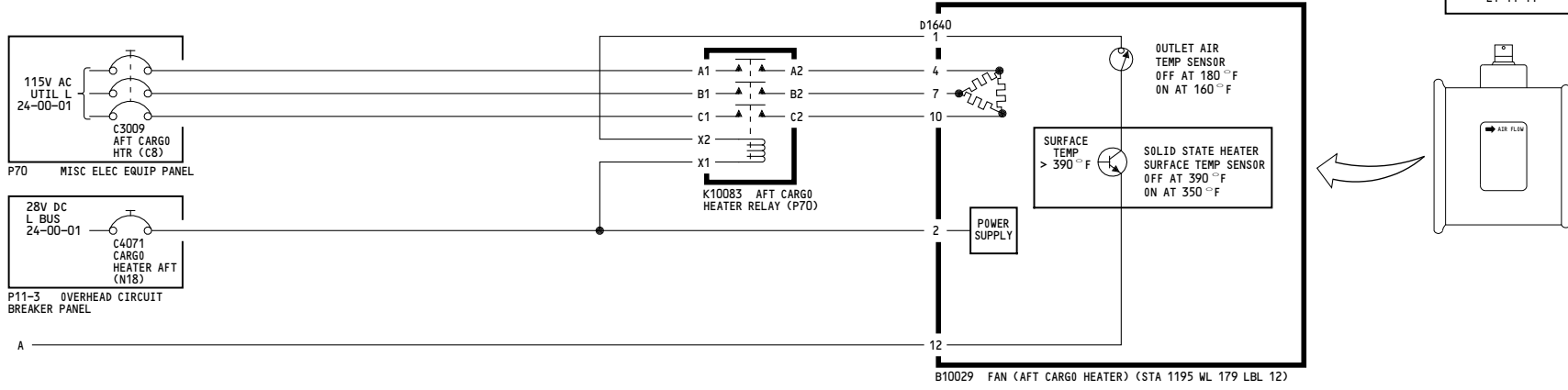


ALL	AFT CARGO HEATING
	D280N032S

21-44-01

5013

WIRING DIAGRAMS
21-44-11

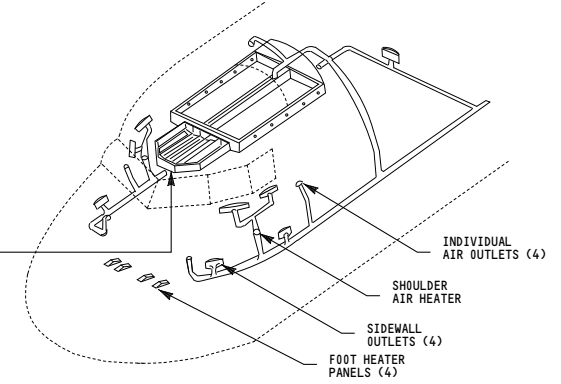
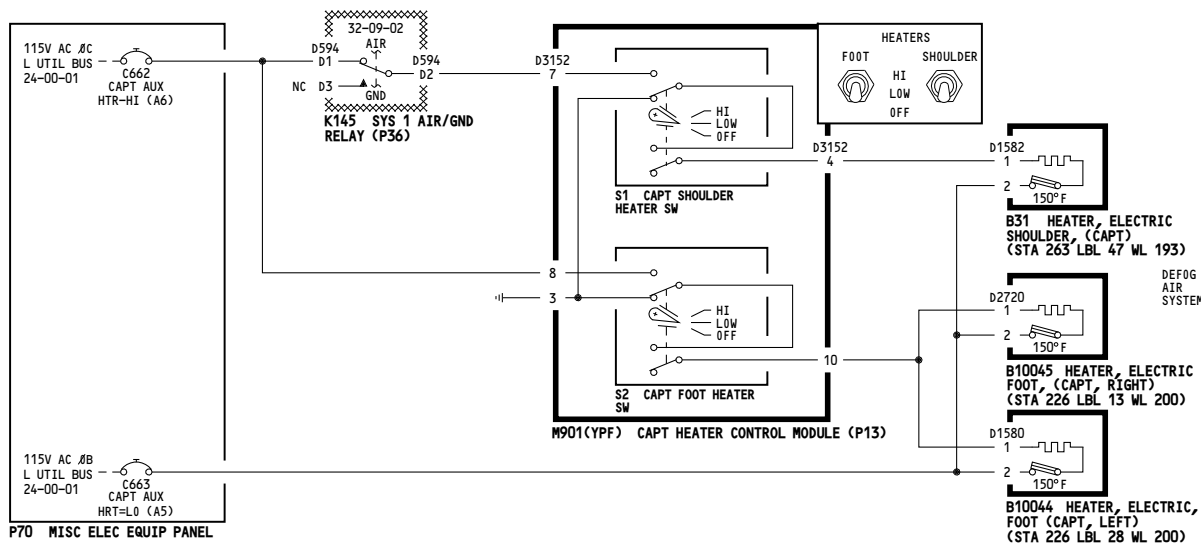
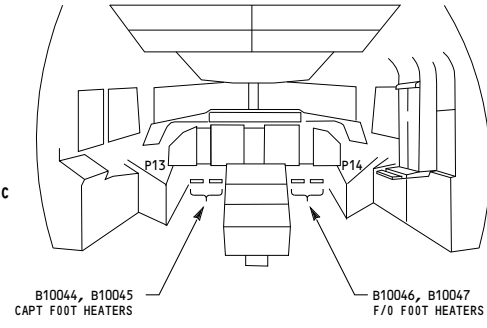
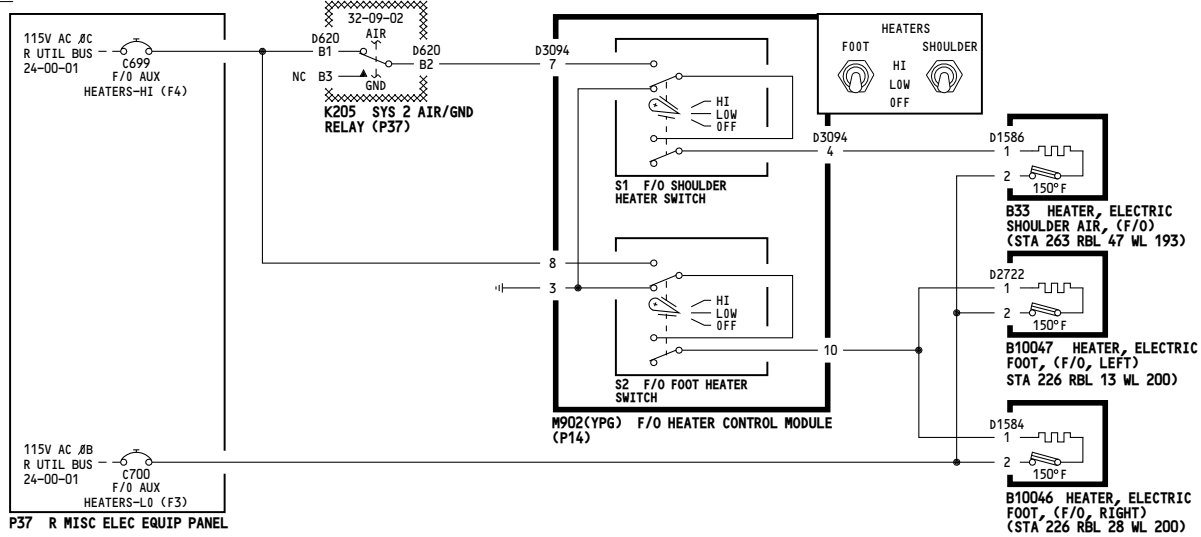


ALL	<p>AFT CARGO HEATING</p> <p>D280N032S</p>
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21-44-01

WIRING DIAGRAMS
21-45-11

5011



001-002

FLIGHT DECK SUPPLEMENTAL HEATING

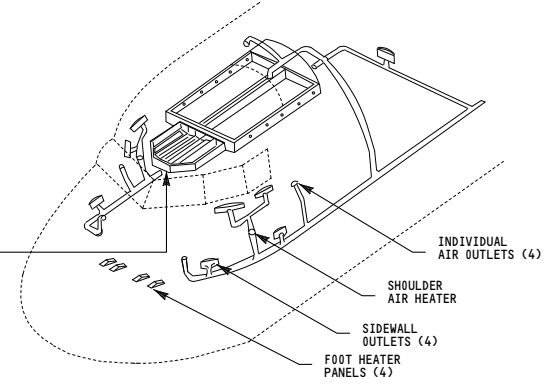
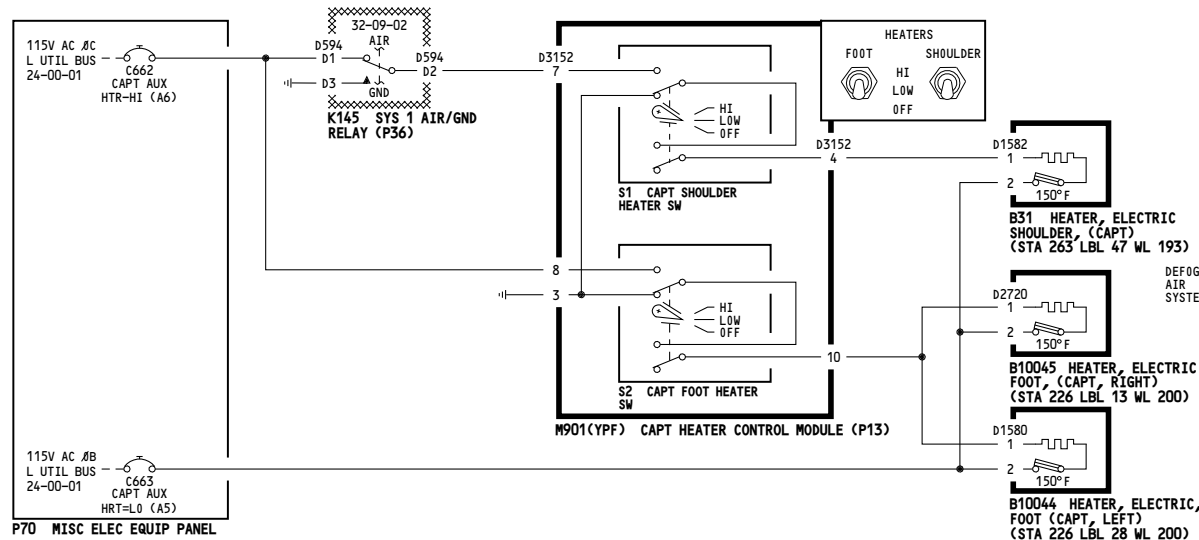
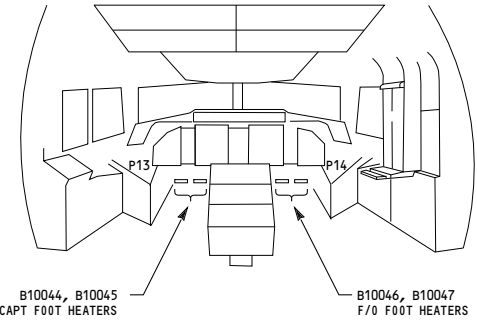
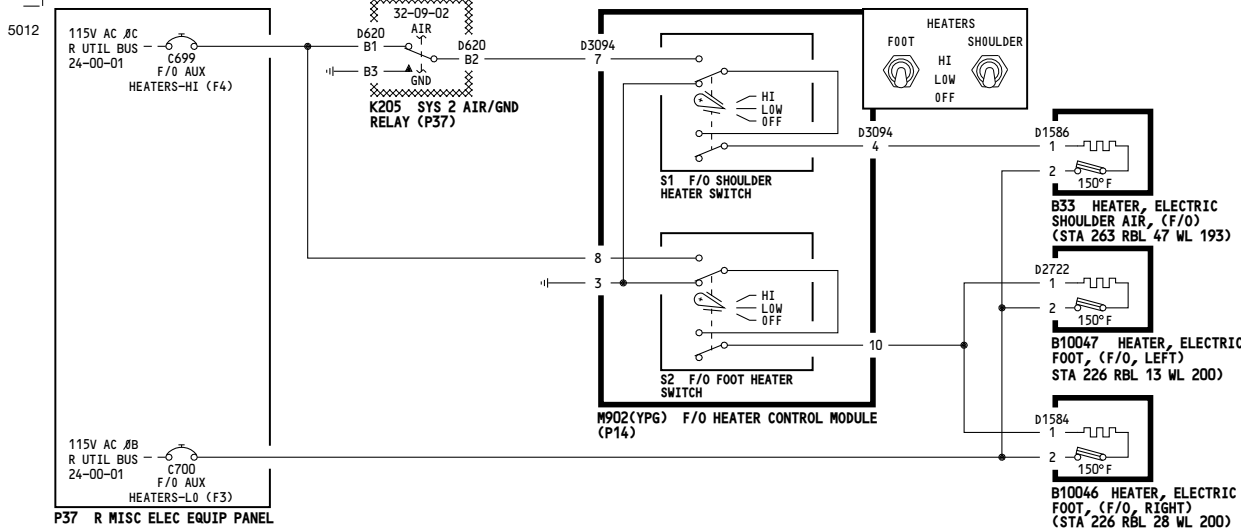
D280N032S

21-45-01

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WIRING DIAGRAMS
21-45-11



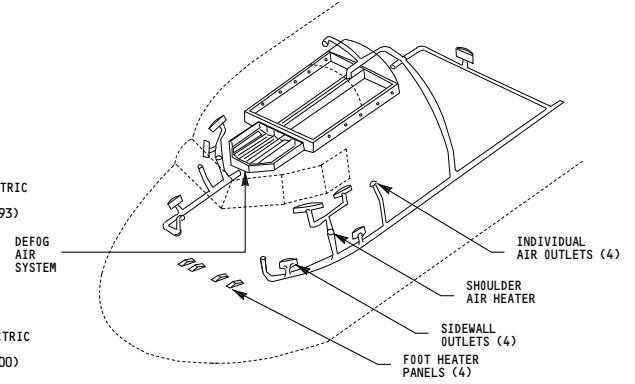
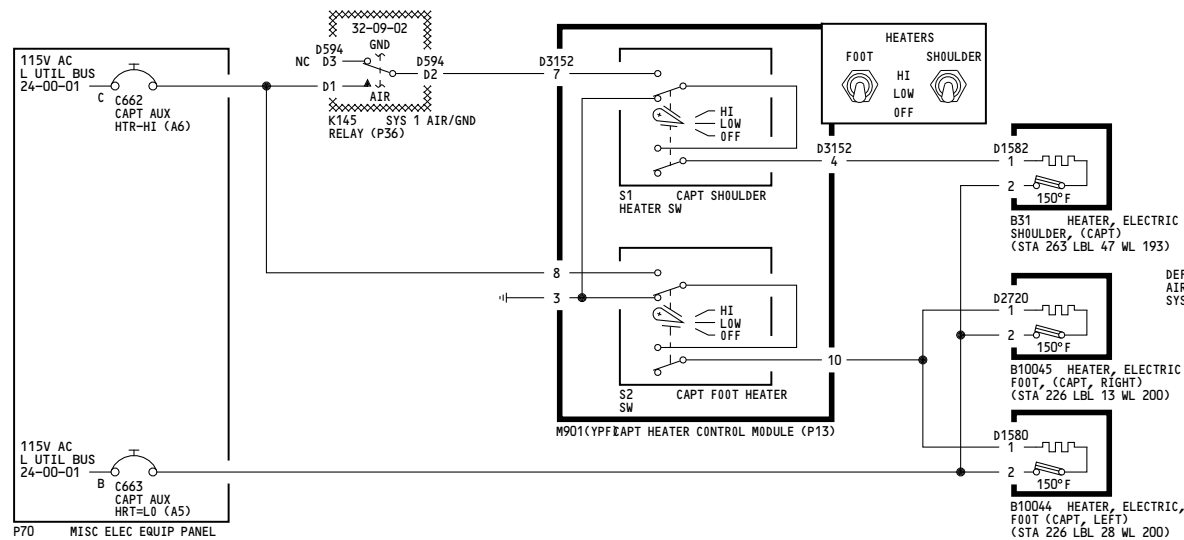
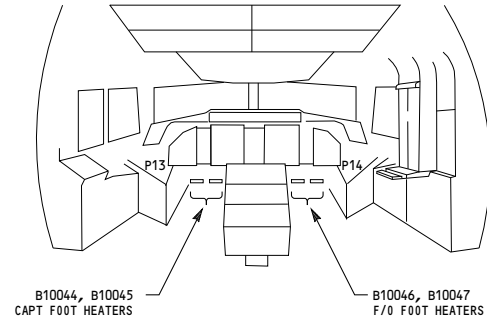
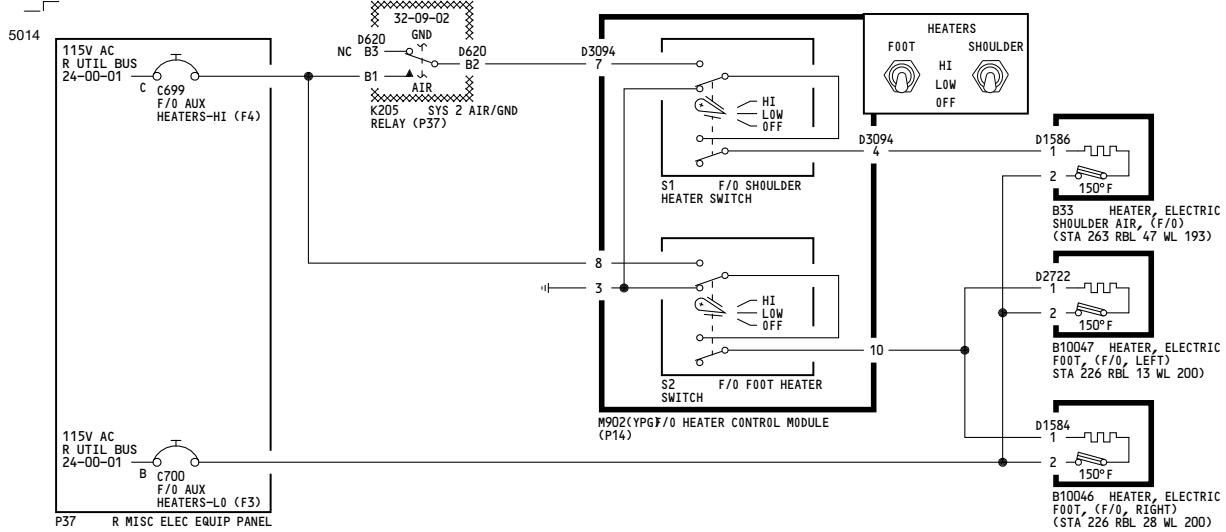
003-009

FLIGHT DECK SUPPLEMENTAL HEATING

D280N032S

21-45-01

WIRING DIAGRAMS
21-45-11



010-099

FLIGHT DECK SUPPLEMENTAL HEATING

D280N032S

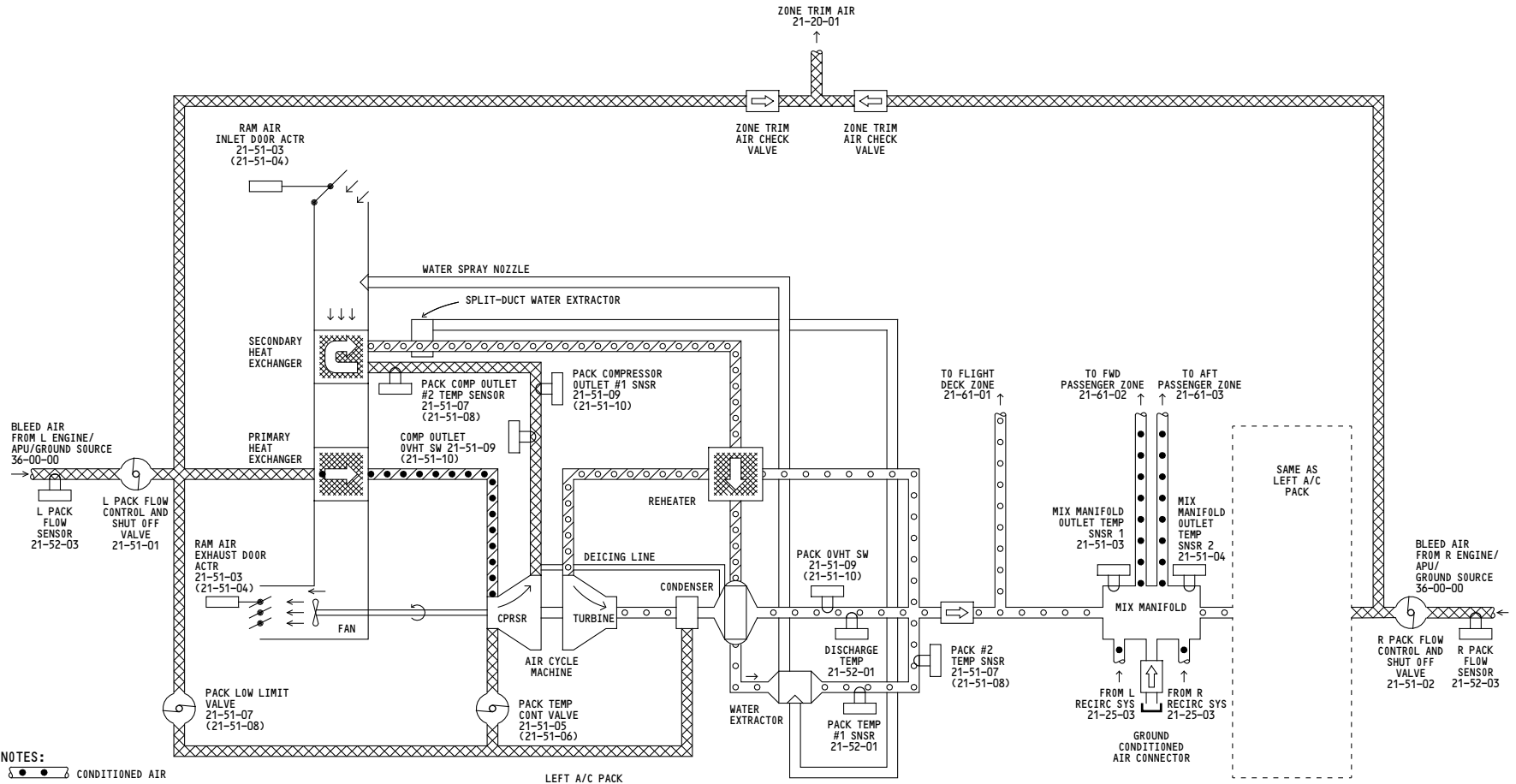
21-45-01

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NOTES:

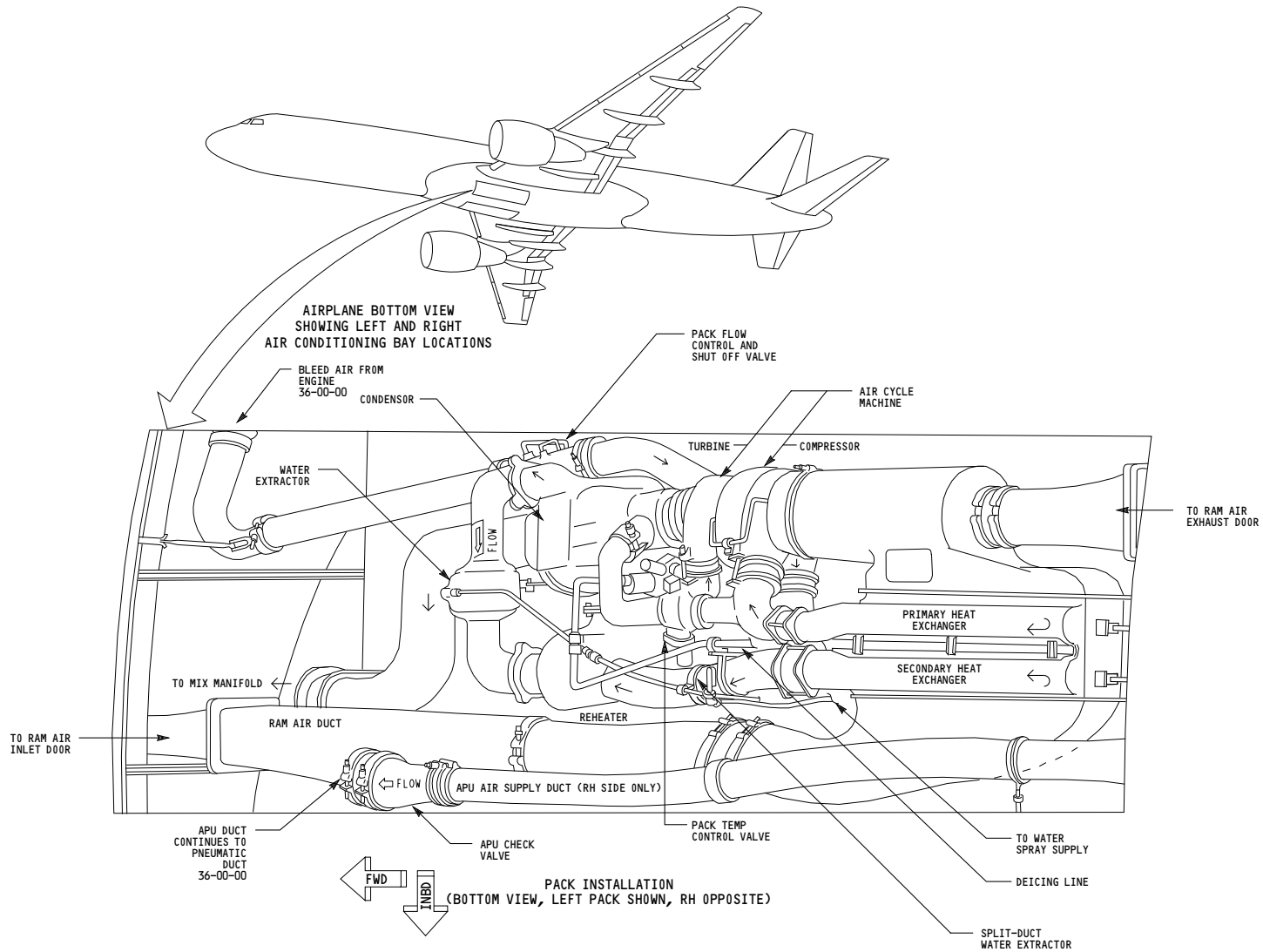
- CONDITIONED AIR
- ○ ○ ○ ○ COLD AIR
- /○/○/○ COOL AIR
- /●/○/○ WARM AIR
- /○/○/○ HOT AIR

REFERENCES IN PARENTHESES REFER TO CORRESPONDING R A/C PACK COMPONENTS.

ALL	<p>AIR CONDITIONING PACKS - SIMPLIFIED</p> <p>D280N032S</p>
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21-51-00

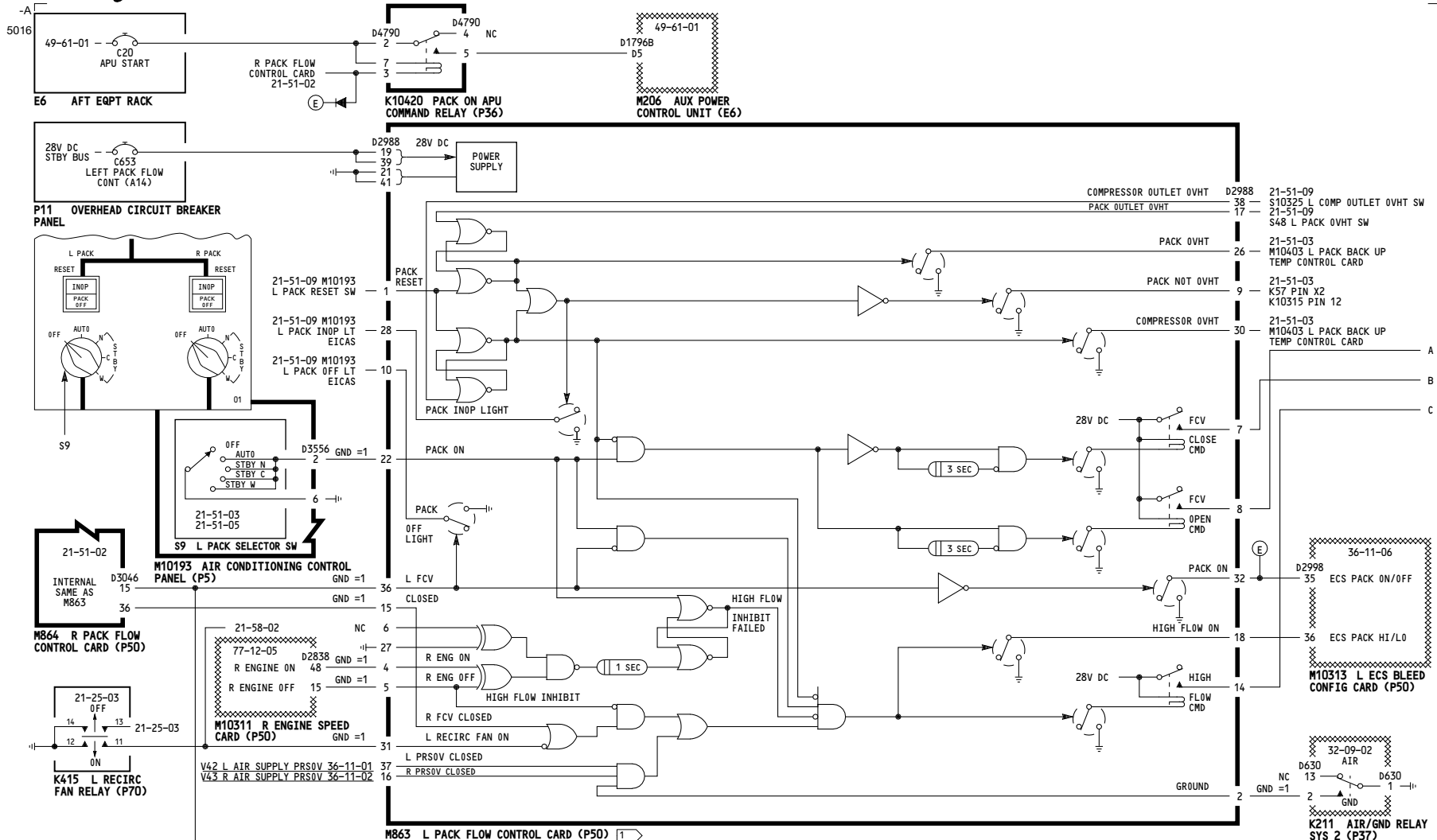
5000



ALL	<p>AIR CONDITIONING PACKS - SIMPLIFIED</p> <p>D280N032S</p>
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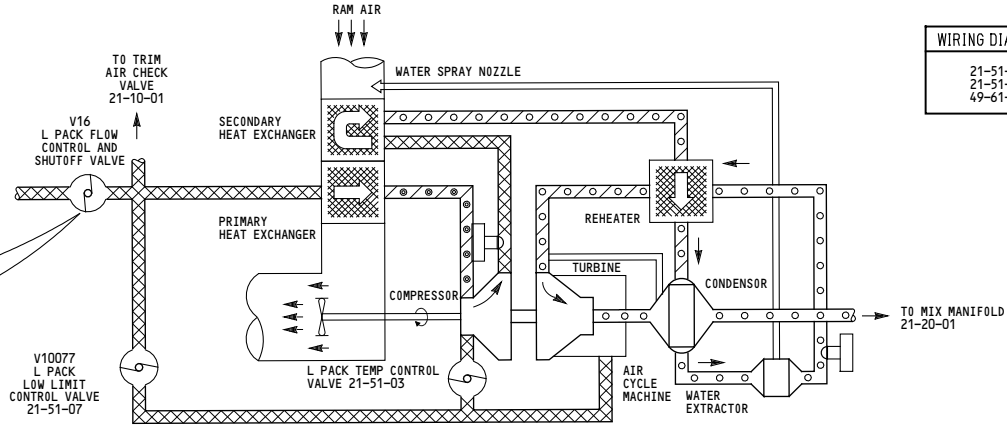
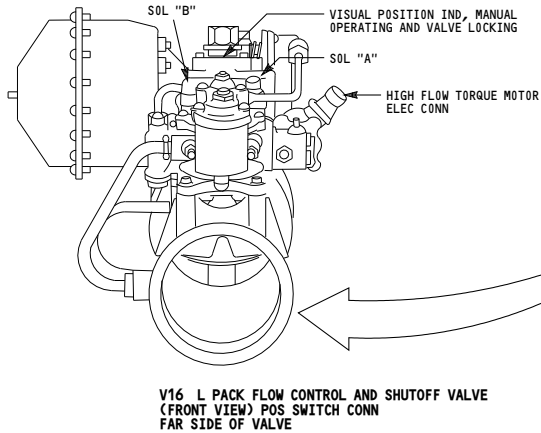
NOTES:
 1 ALL INPUTS: SIGNAL NAME = LOGIC "1"

ALL	LEFT PACK FLOW CONTROL
D280N032S	

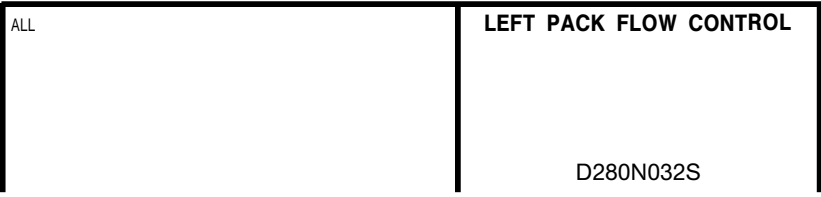
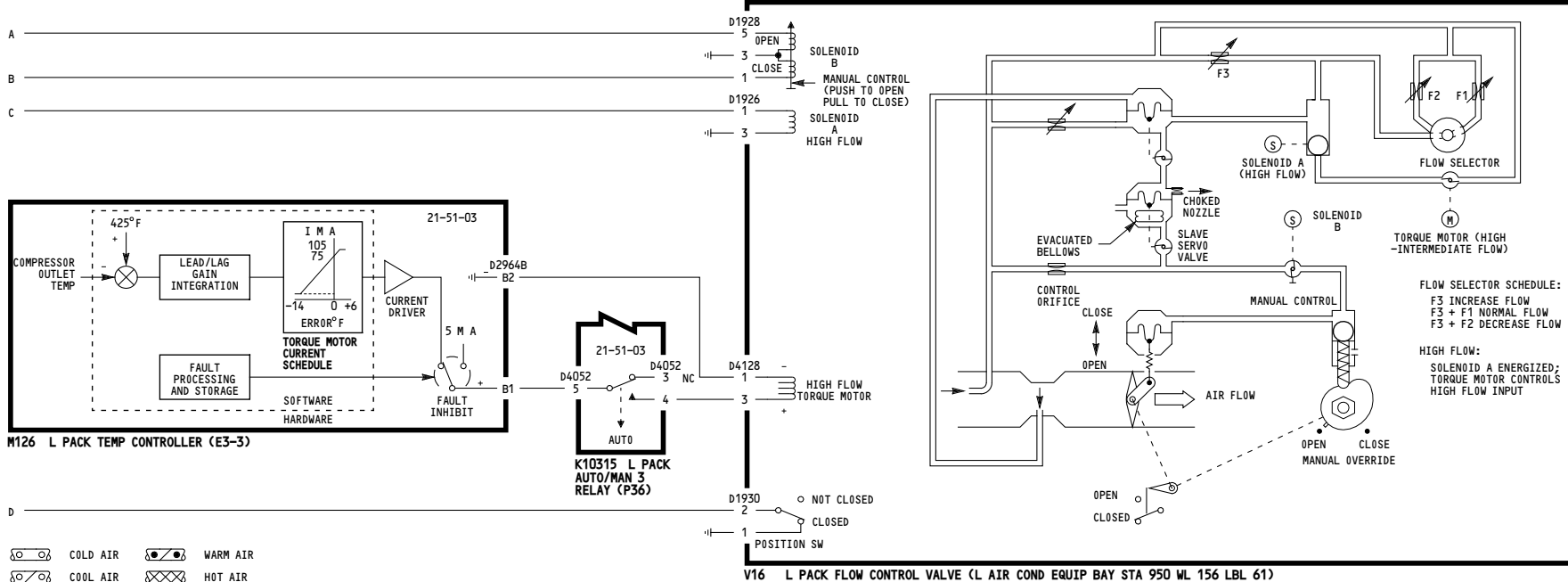
21-51-01

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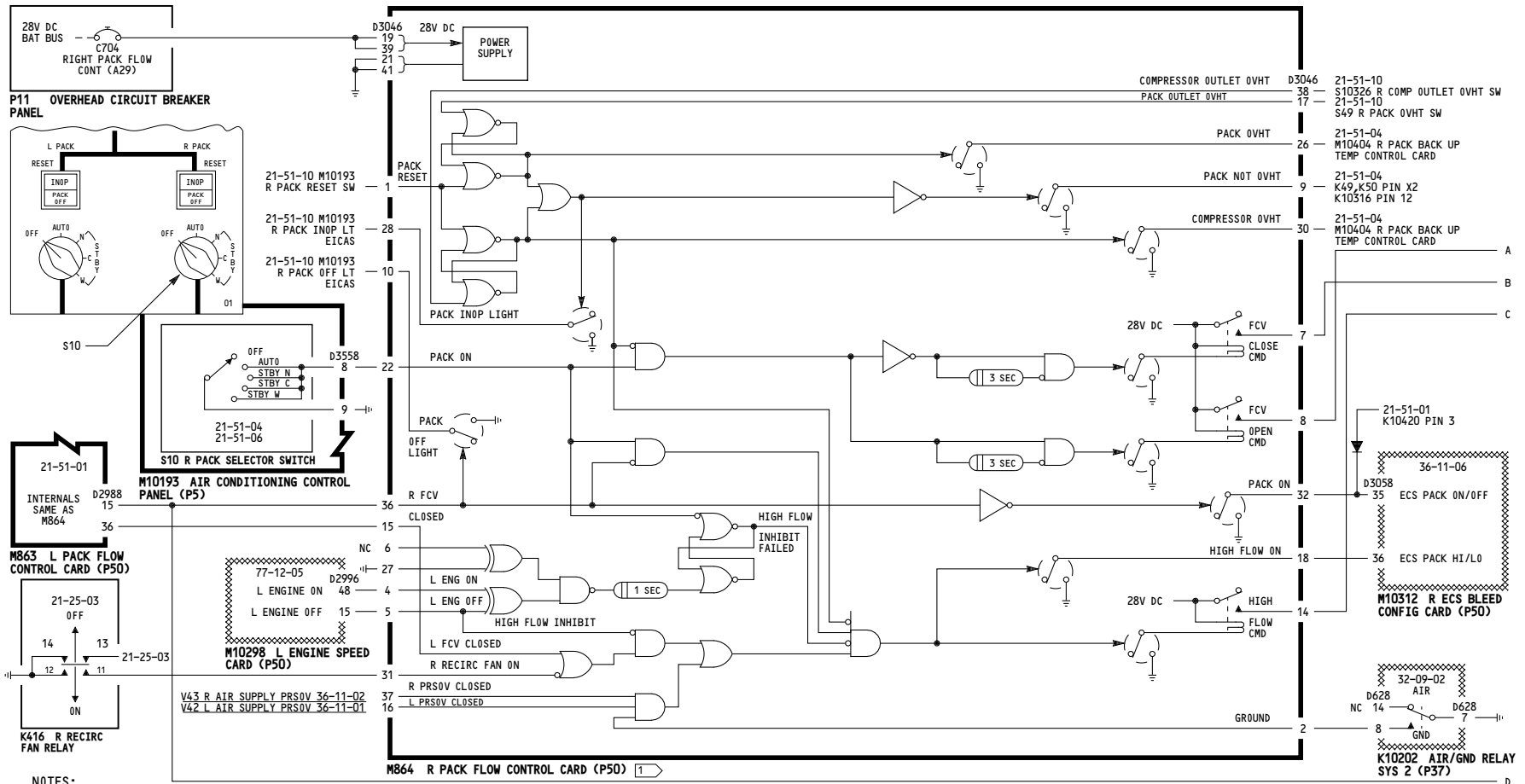


WIRING DIAGRAMS	
21-51-11	
21-51-12	
49-61-11	



21-51-01

5012



NOTES:
 1 ALL INPUTS INVERTED GROUND INPUT = LOGIC "1".

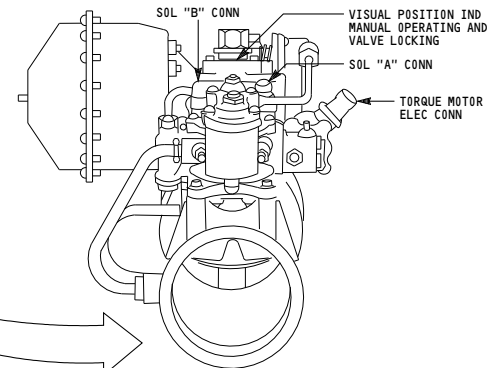
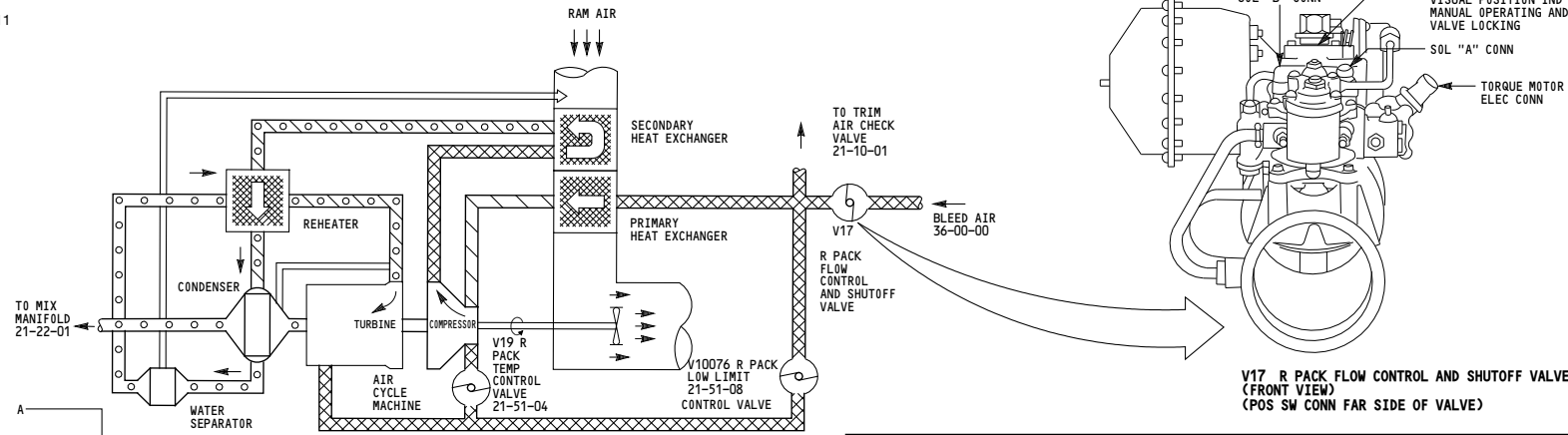
ALL	<p>RIGHT PACK FLOW CONTROL</p> <p>D280N032S</p>
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21-51-02

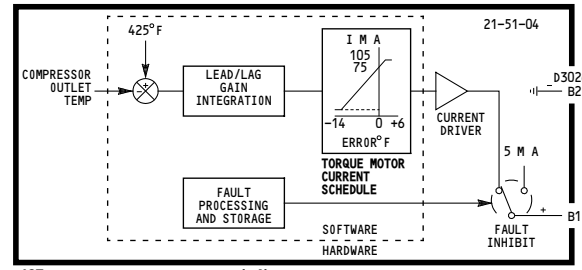
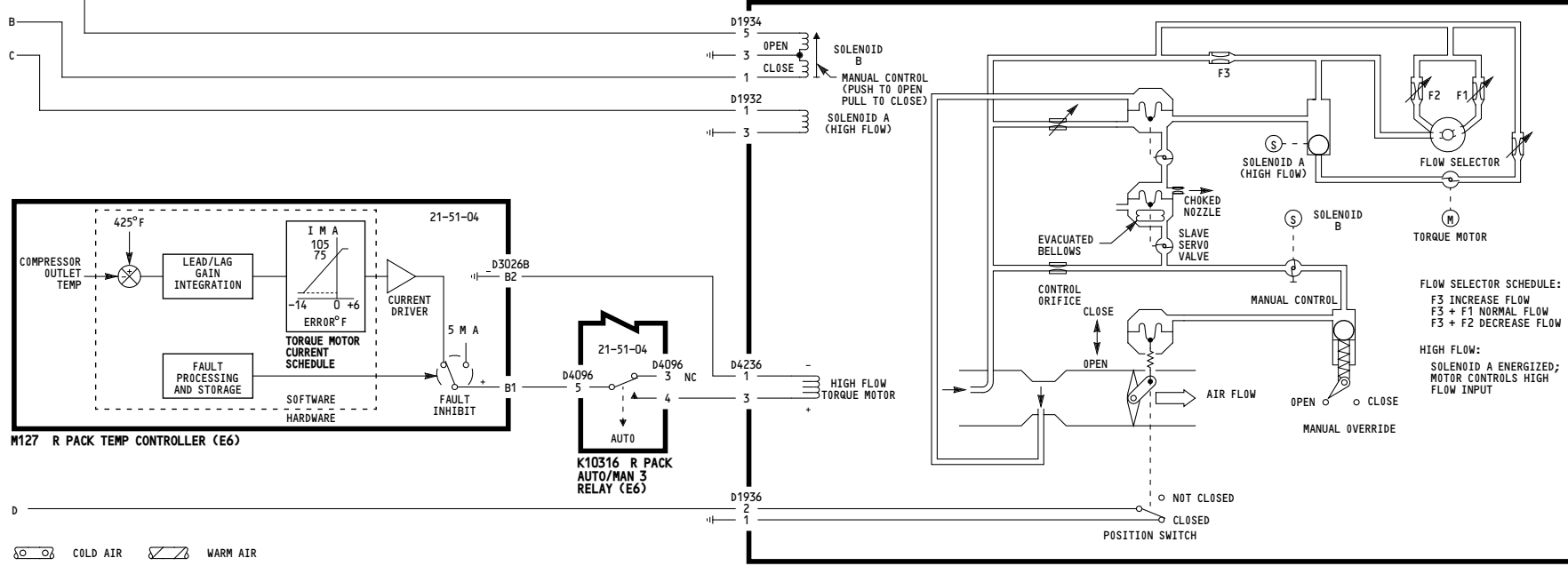
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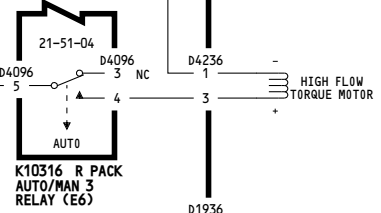
WIRING DIAGRAMS
21-51-21
21-51-22



V17 R PACK FLOW CONTROL AND SHUTOFF VALVE (FRONT VIEW)
(POS SW CONN FAR SIDE OF VALVE)

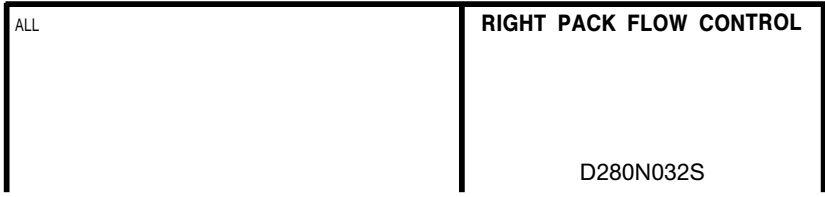


M127 R PACK TEMP CONTROLLER (E6)



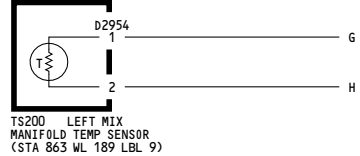
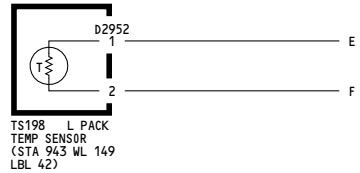
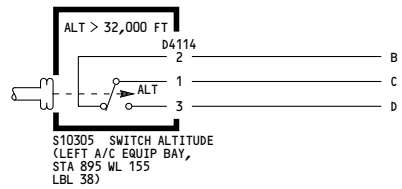
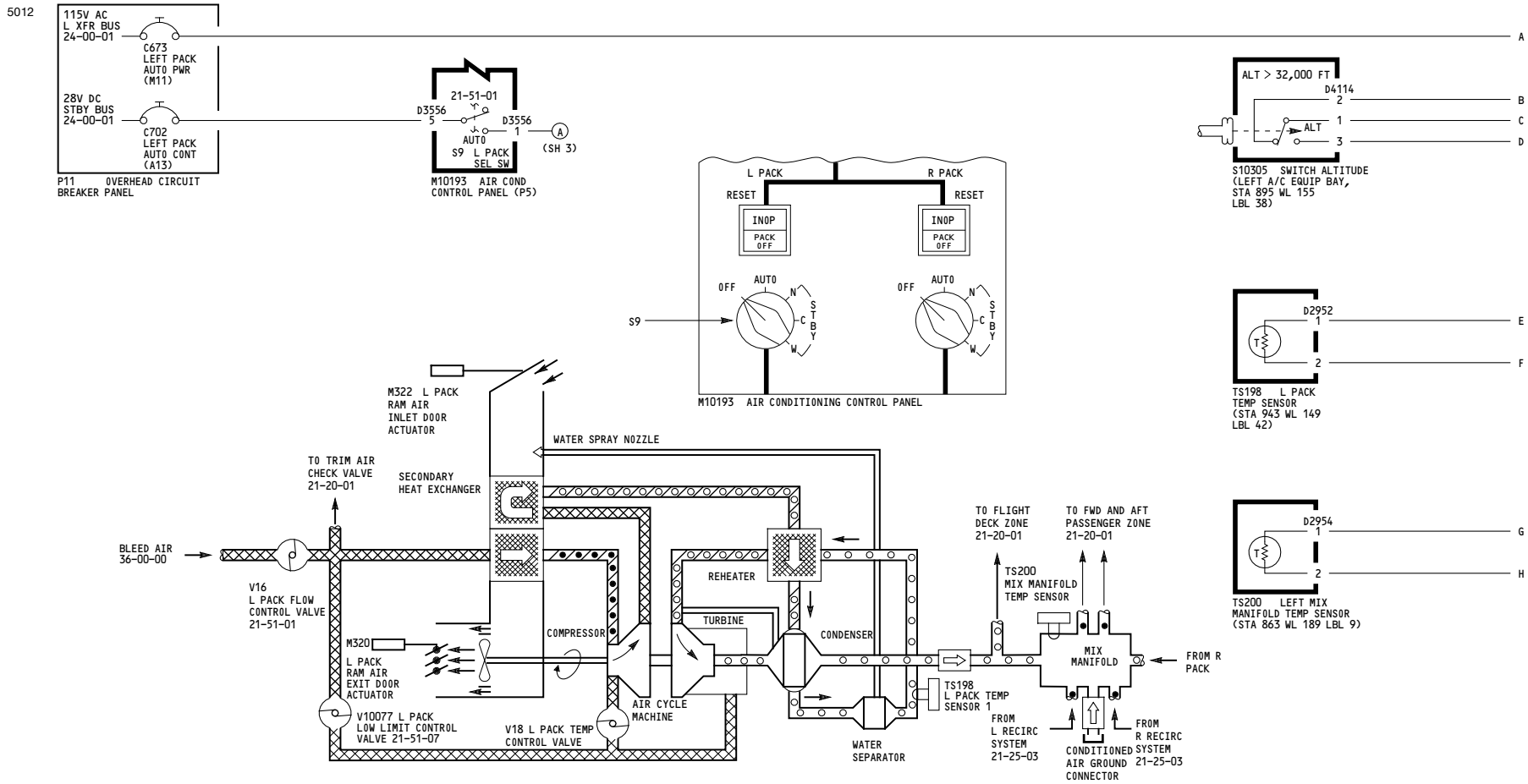
K10316 R PACK AUTO/MAN 3 RELAY (E6)

- COLD AIR
- WARM AIR
- COOL AIR
- HOT AIR



D280N032S

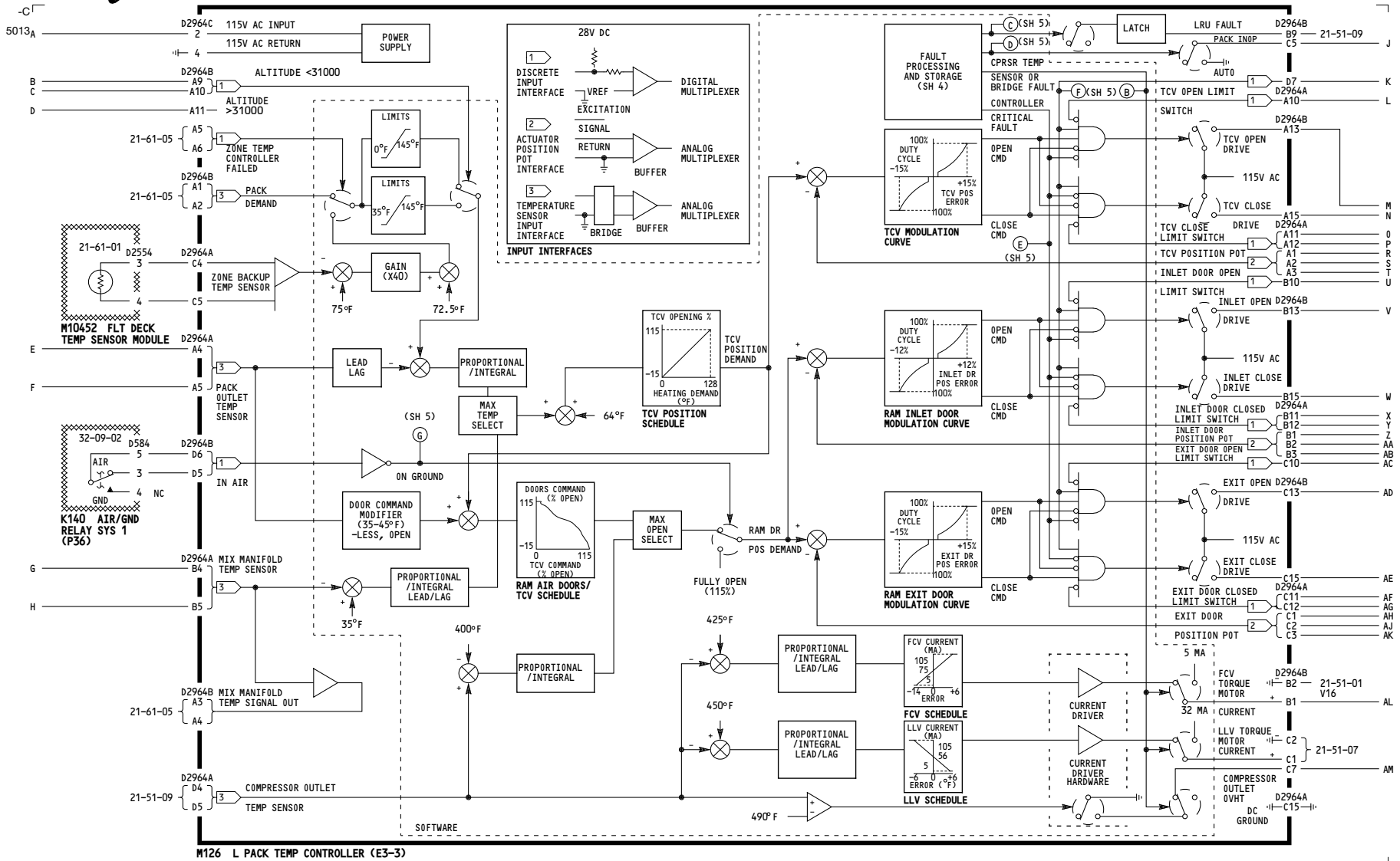
21-51-02



- NOTES:**
- CONDITIONED AIR
 - COLD AIR
 - COOL AIR
 - WARM AIR
 - HOT AIR

ALL	LEFT PACK CONTROL - AUTO
D280N032S	

21-51-03

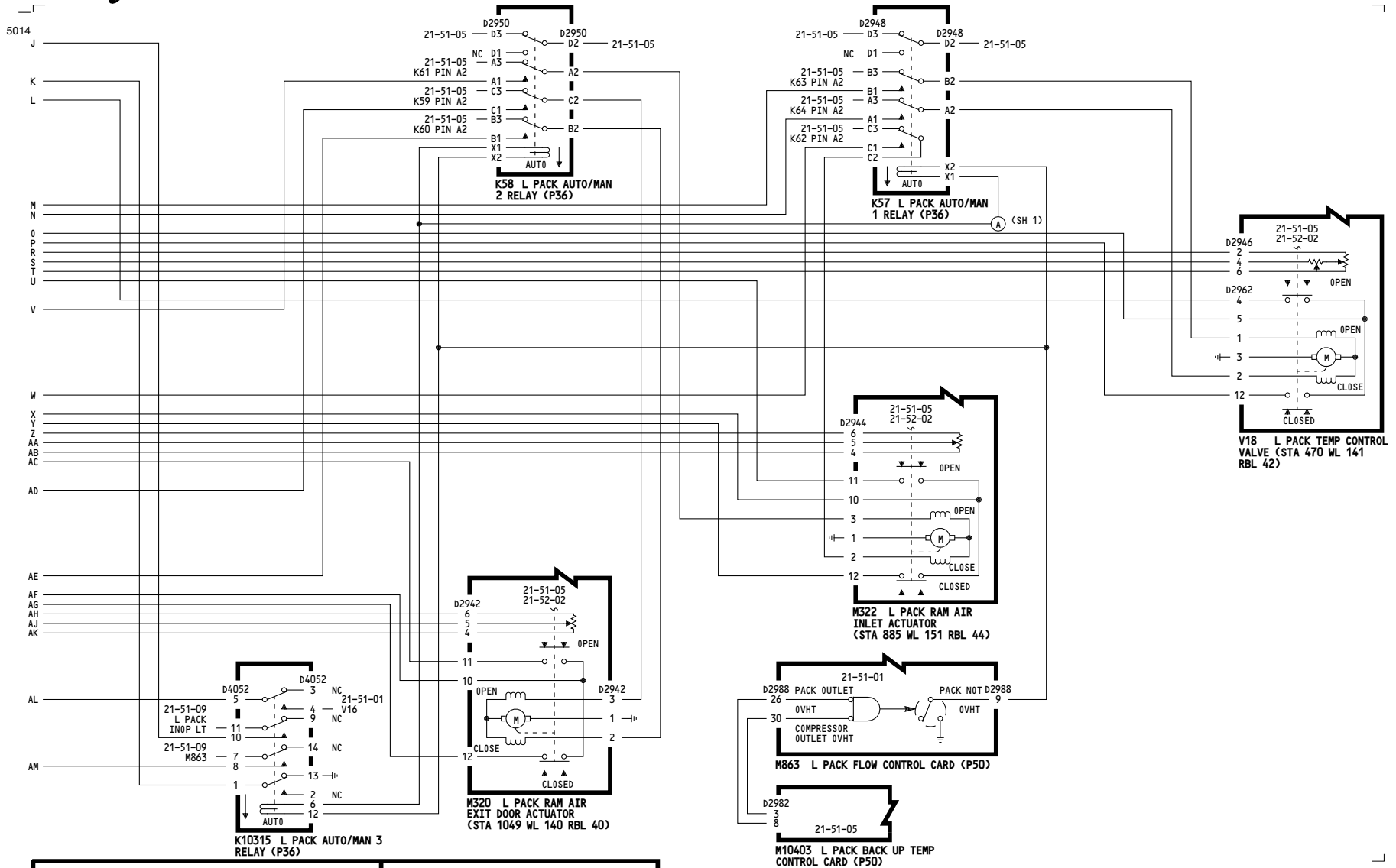


ALL

LEFT PACK CONTROL - AUTO

D280N032S

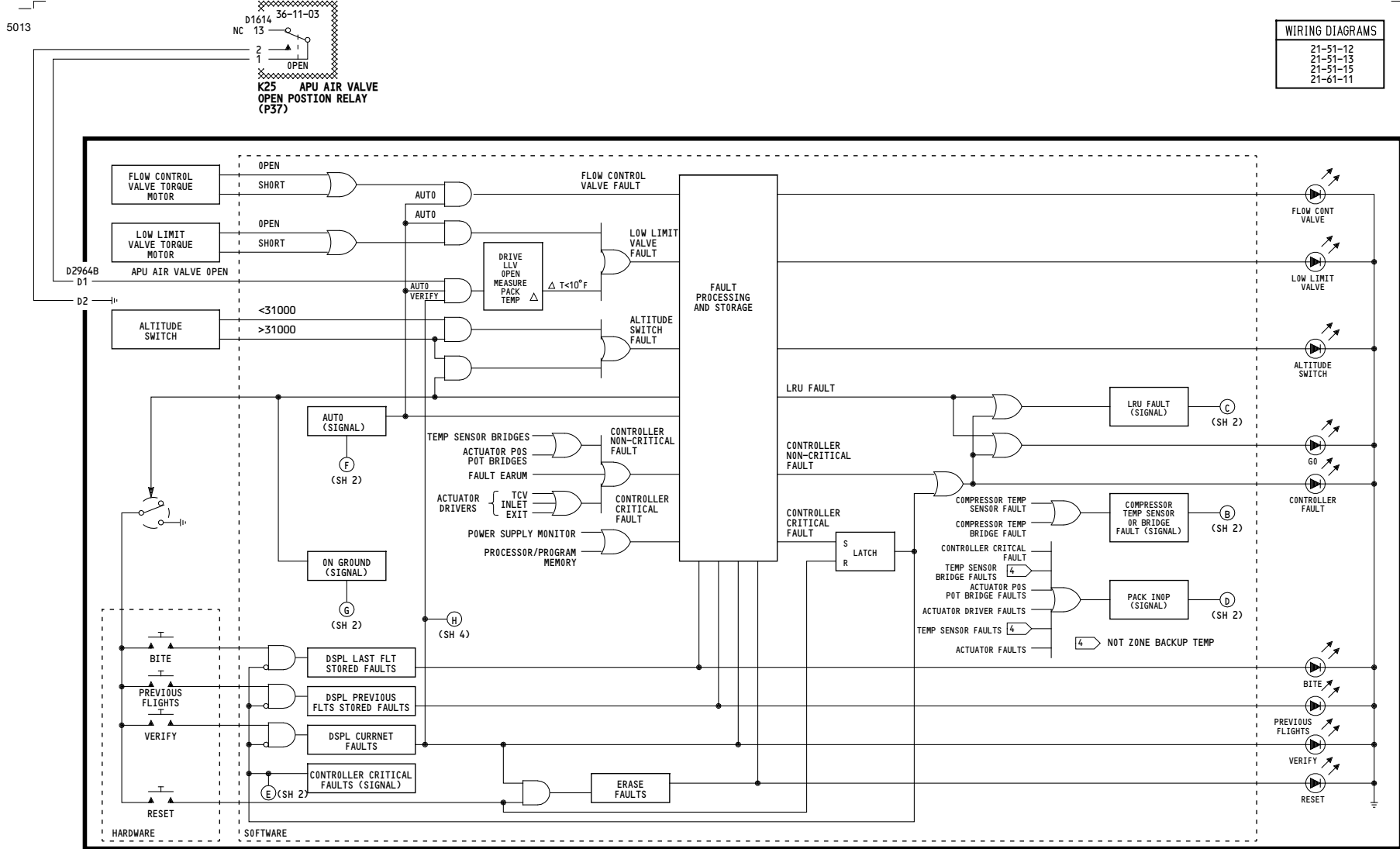
21-51-03



ALL LEFT PACK CONTROL - AUTO
D280N032S

21-51-03

WIRING DIAGRAMS	
21-51-12	
21-51-13	
21-51-15	
21-61-11	



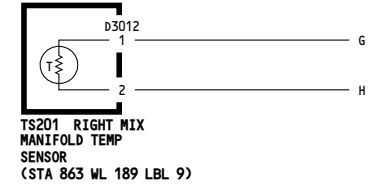
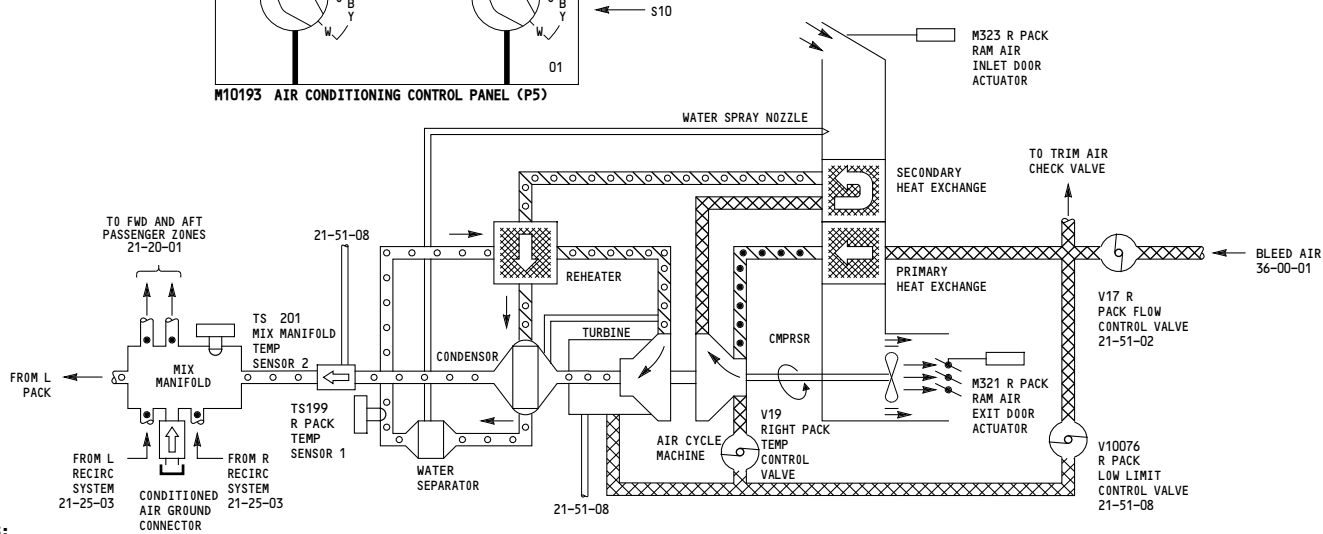
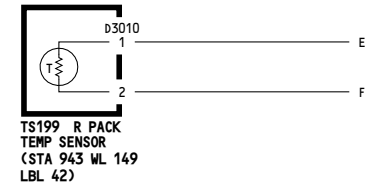
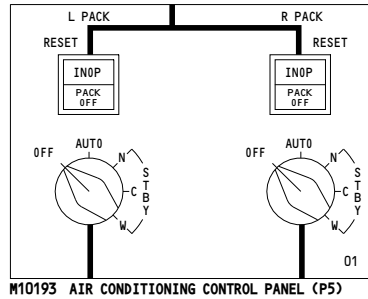
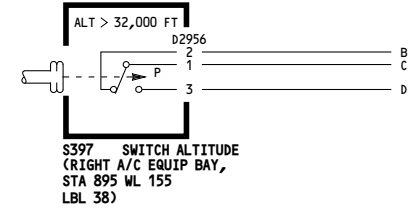
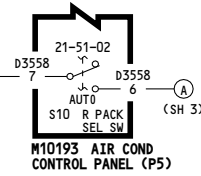
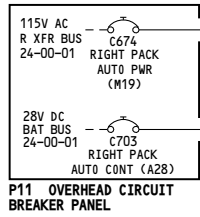
M126 L PACK TEMP CONTROLLER (E3-3)

ALL	LEFT PACK CONTROL - AUTO
	D280N032S

21-51-03

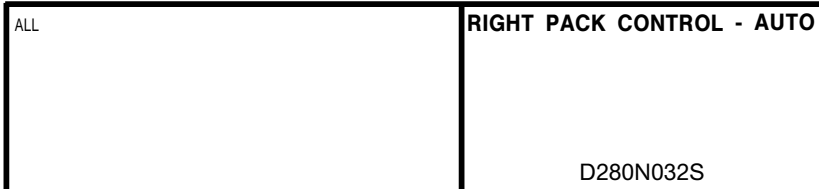
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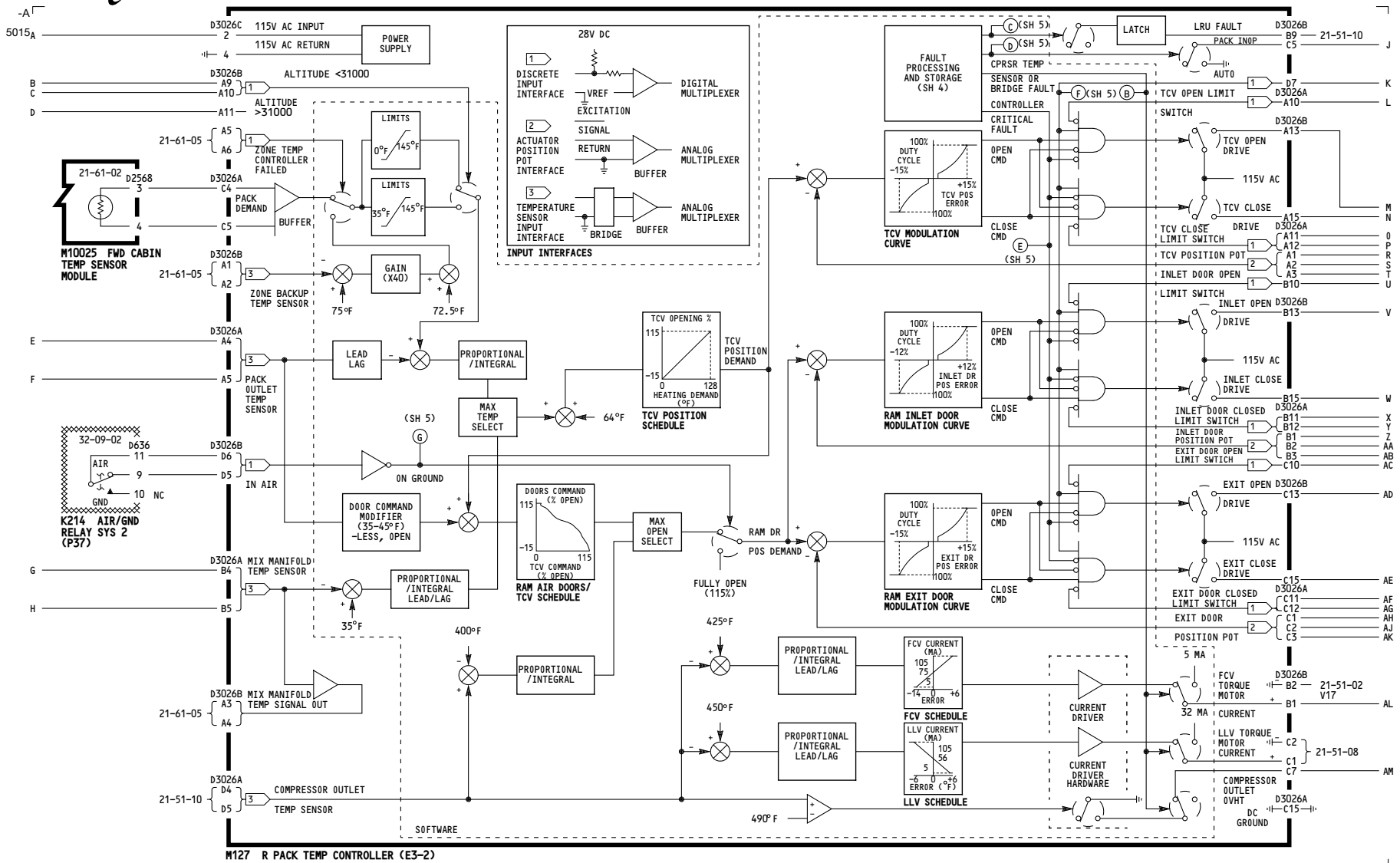


NOTES:

- CONDITIONED AIR
- COLD AIR
- COOL AIR
- WARM AIR
- HOT AIR



21-51-04

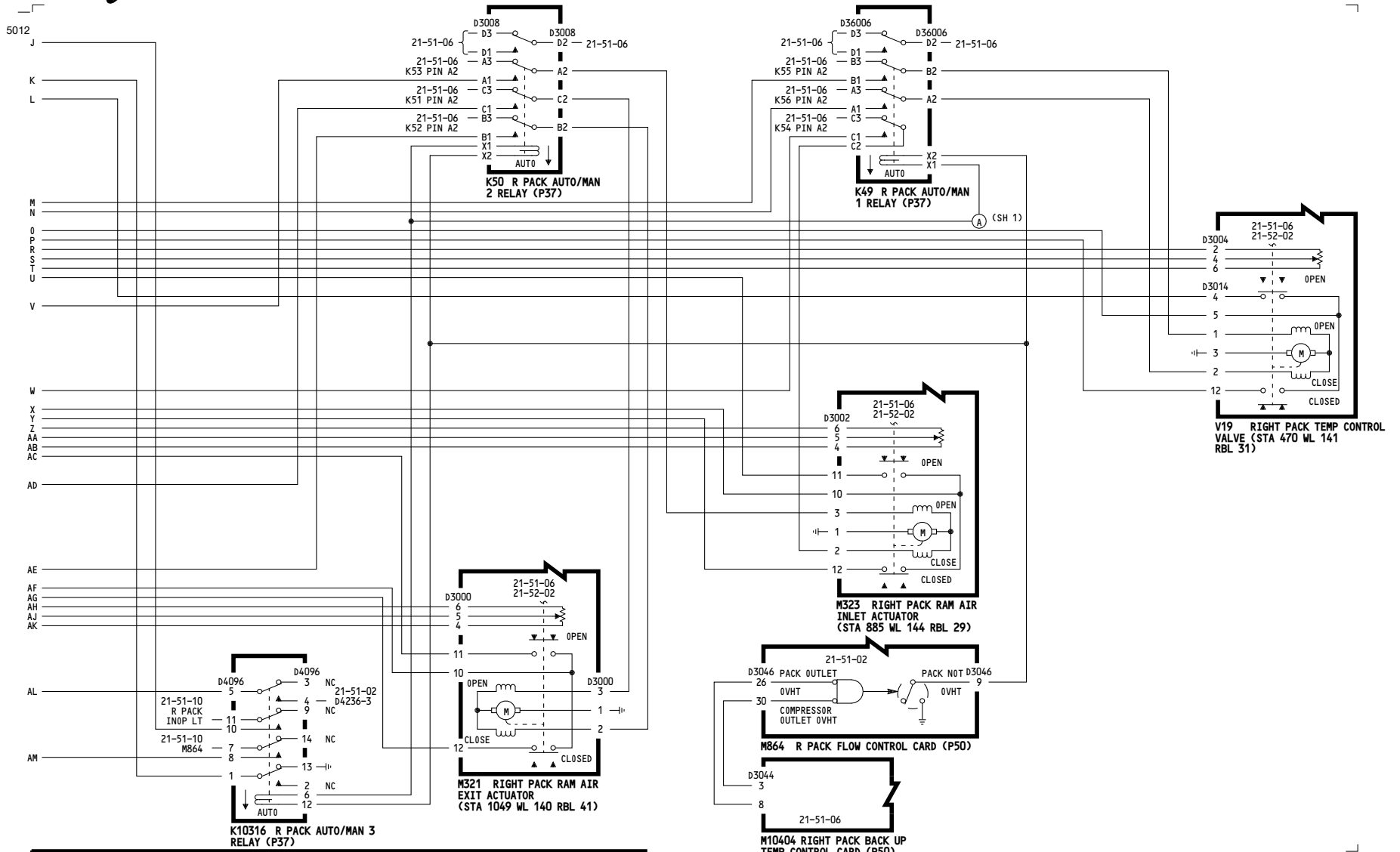


ALL

RIGHT PACK CONTROL - AUTO

D280N032S

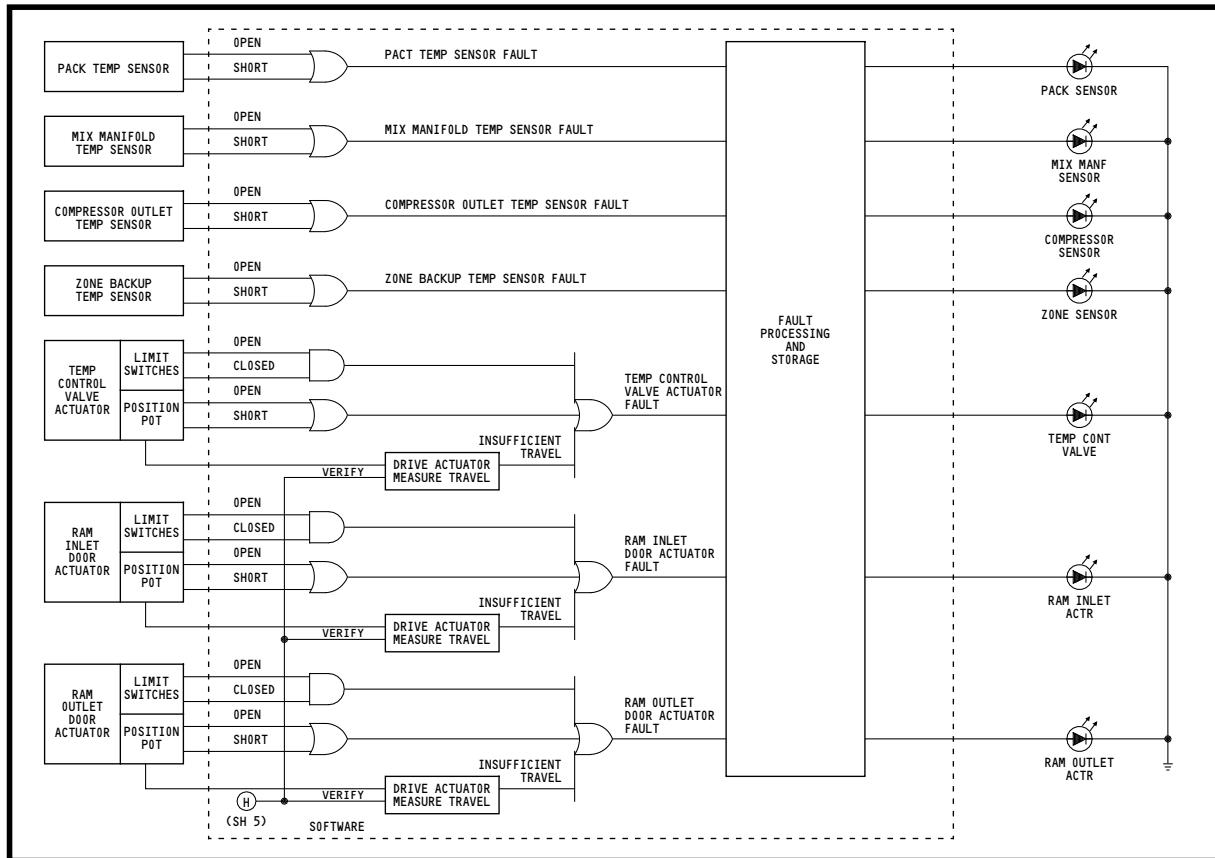
21-51-04



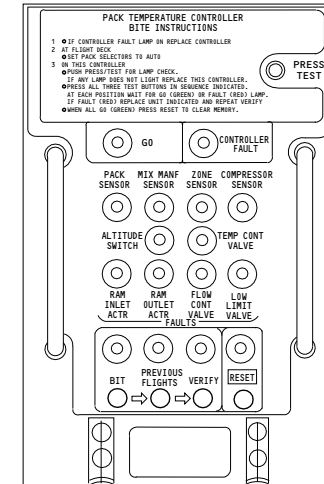
ALL	RIGHT PACK CONTROL - AUTO
	D280N032S

21-51-04

5012



M127 R PACK TEMP CONTROLLER (E3-2)

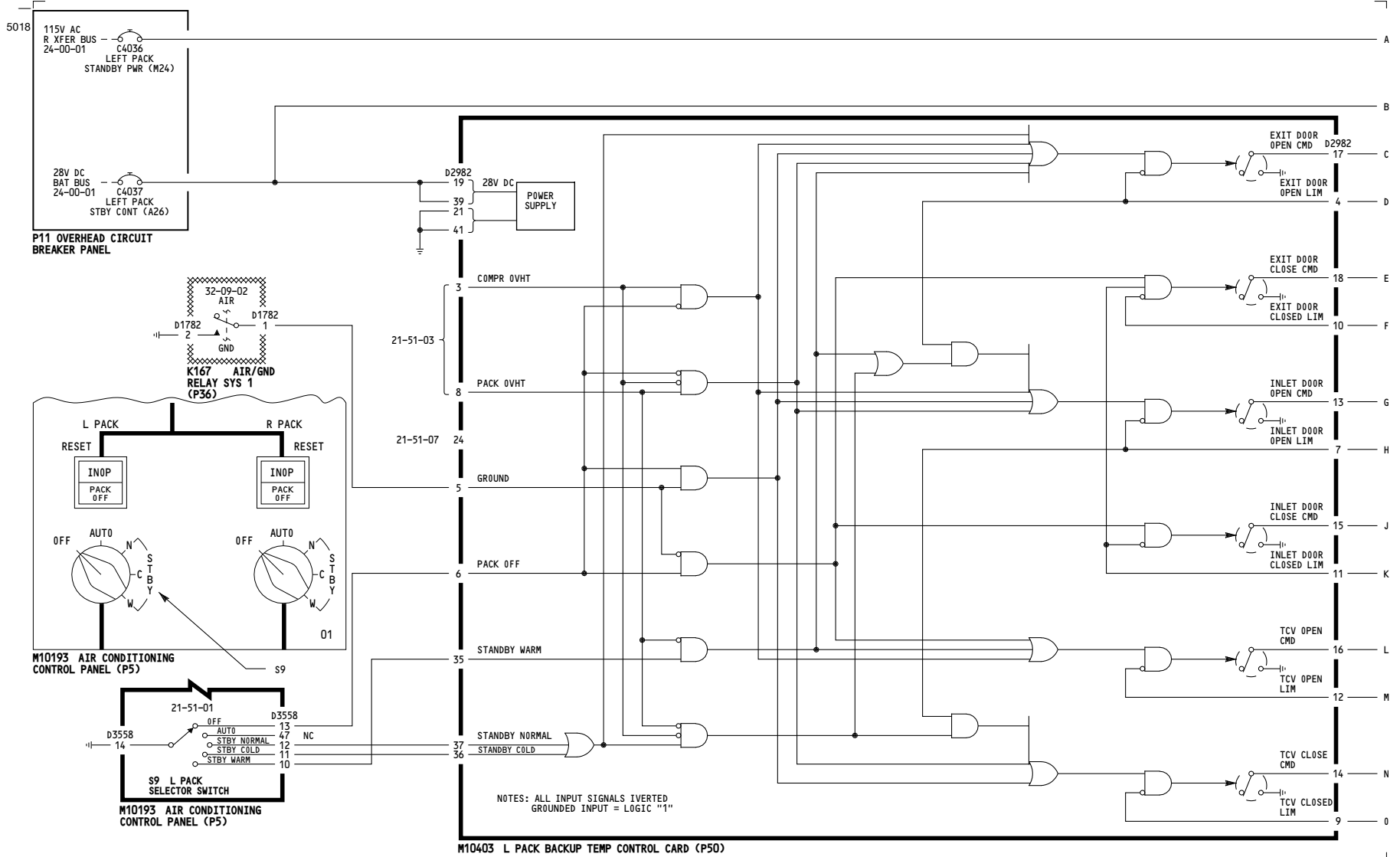


ALL	RIGHT PACK CONTROL - AUTO
	D280N032S

21-51-04

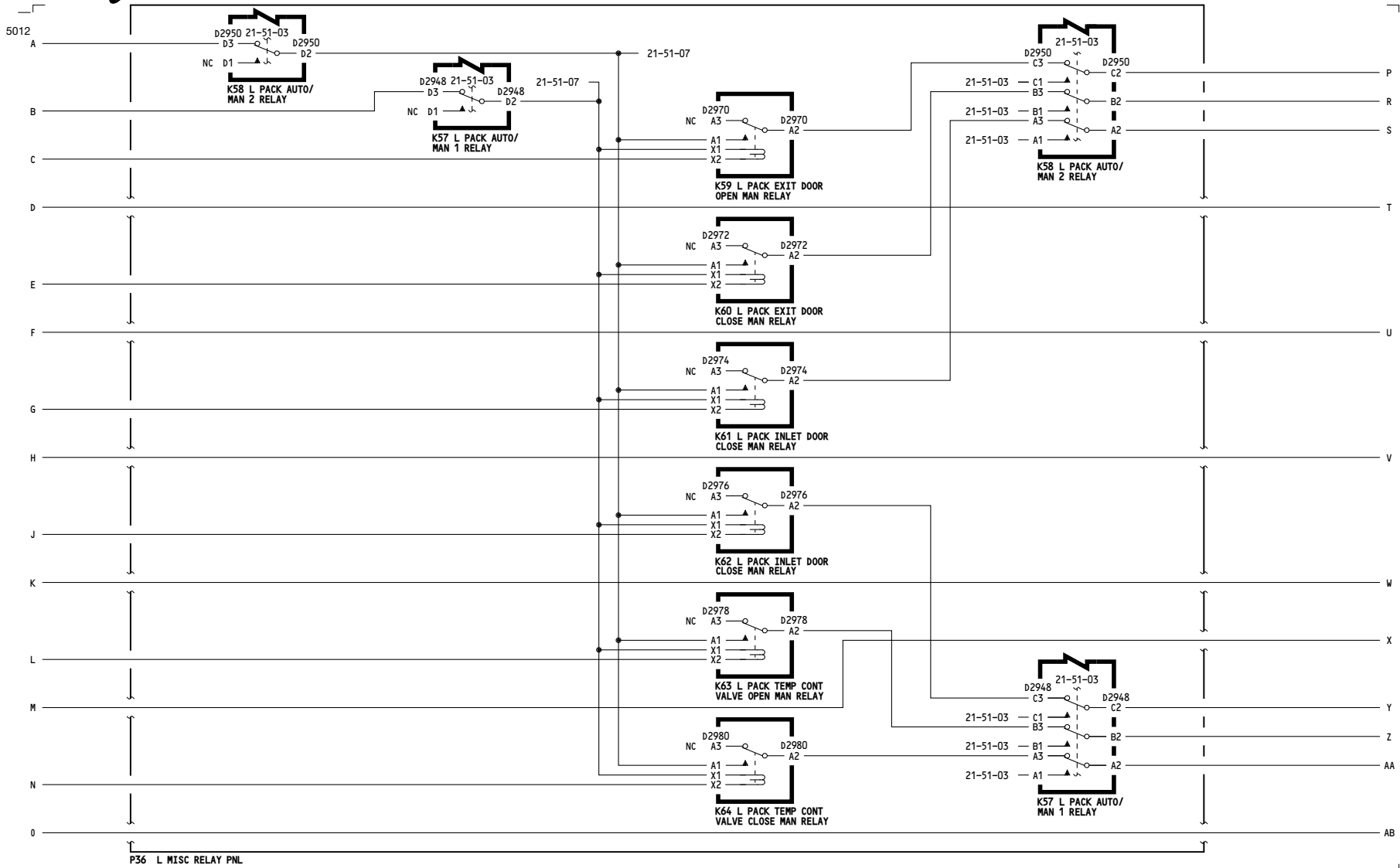
Page 101
Sheet 4
May 06/2009

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ALL	<p>LEFT PACK CONTROL - STANDBY</p> <p>D280N032S</p>
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21-51-05



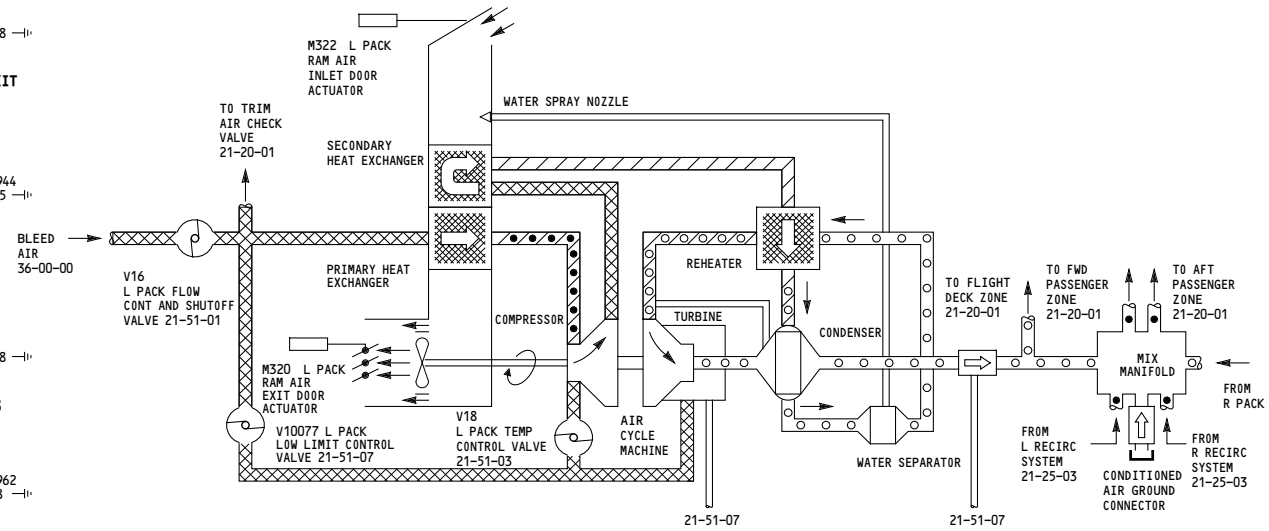
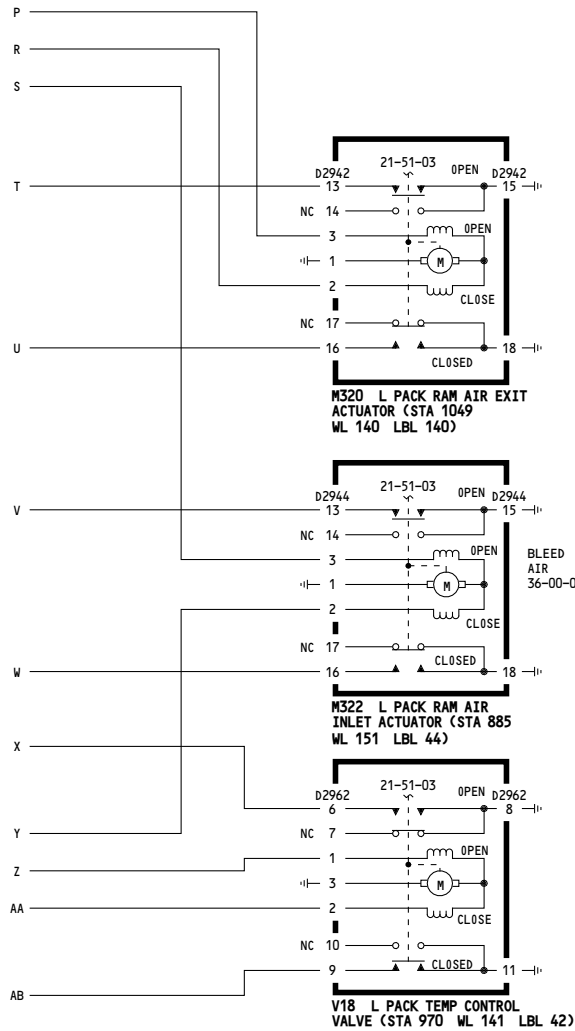
P36 L MISC RELAY PNL

ALL	<p>LEFT PACK CONTROL - STANDBY</p> <p>D280N032S</p>
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21-51-05

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Sheet 2
May 06/2009

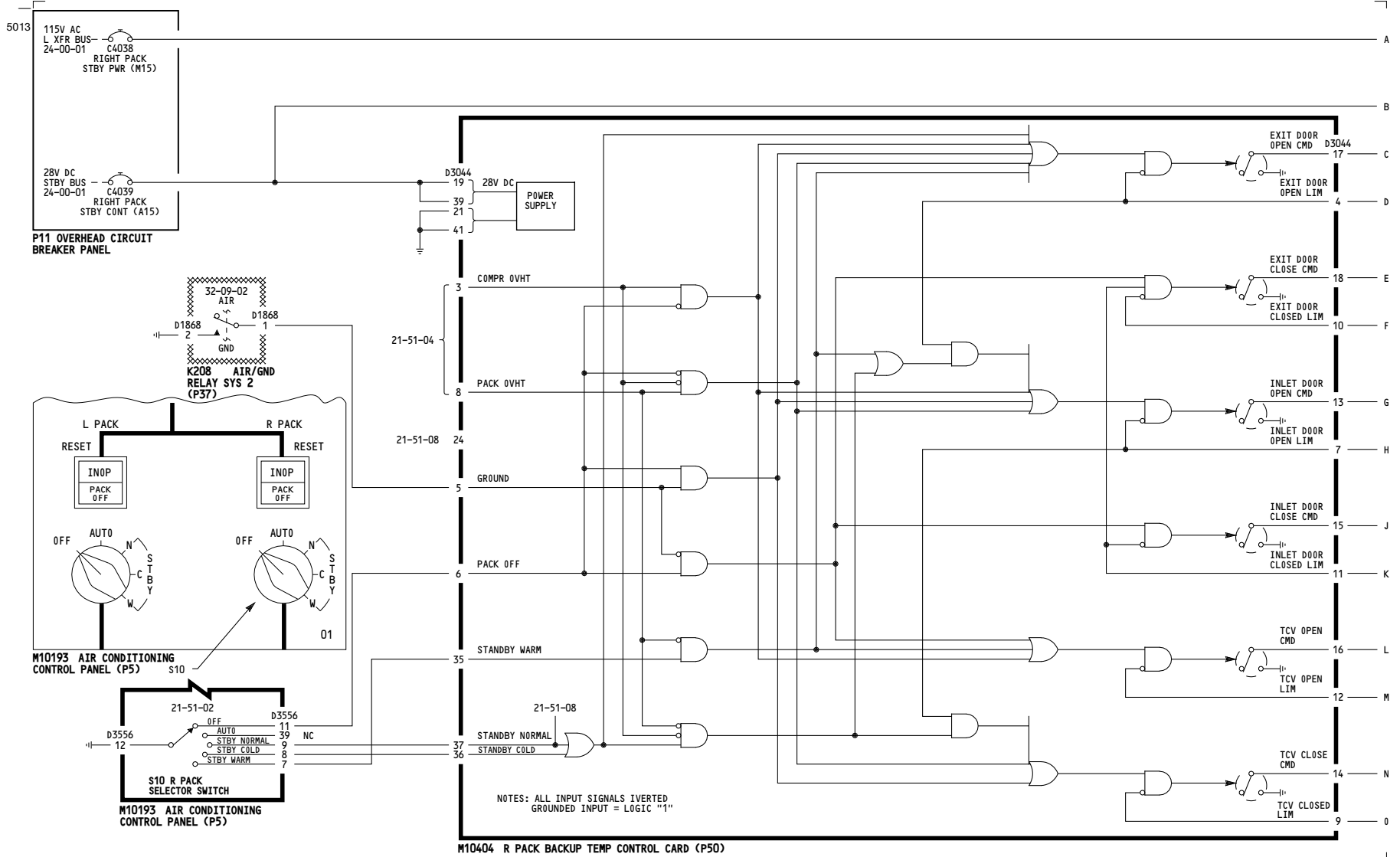
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ALL	LEFT PACK CONTROL - STANDBY
	D280N032S

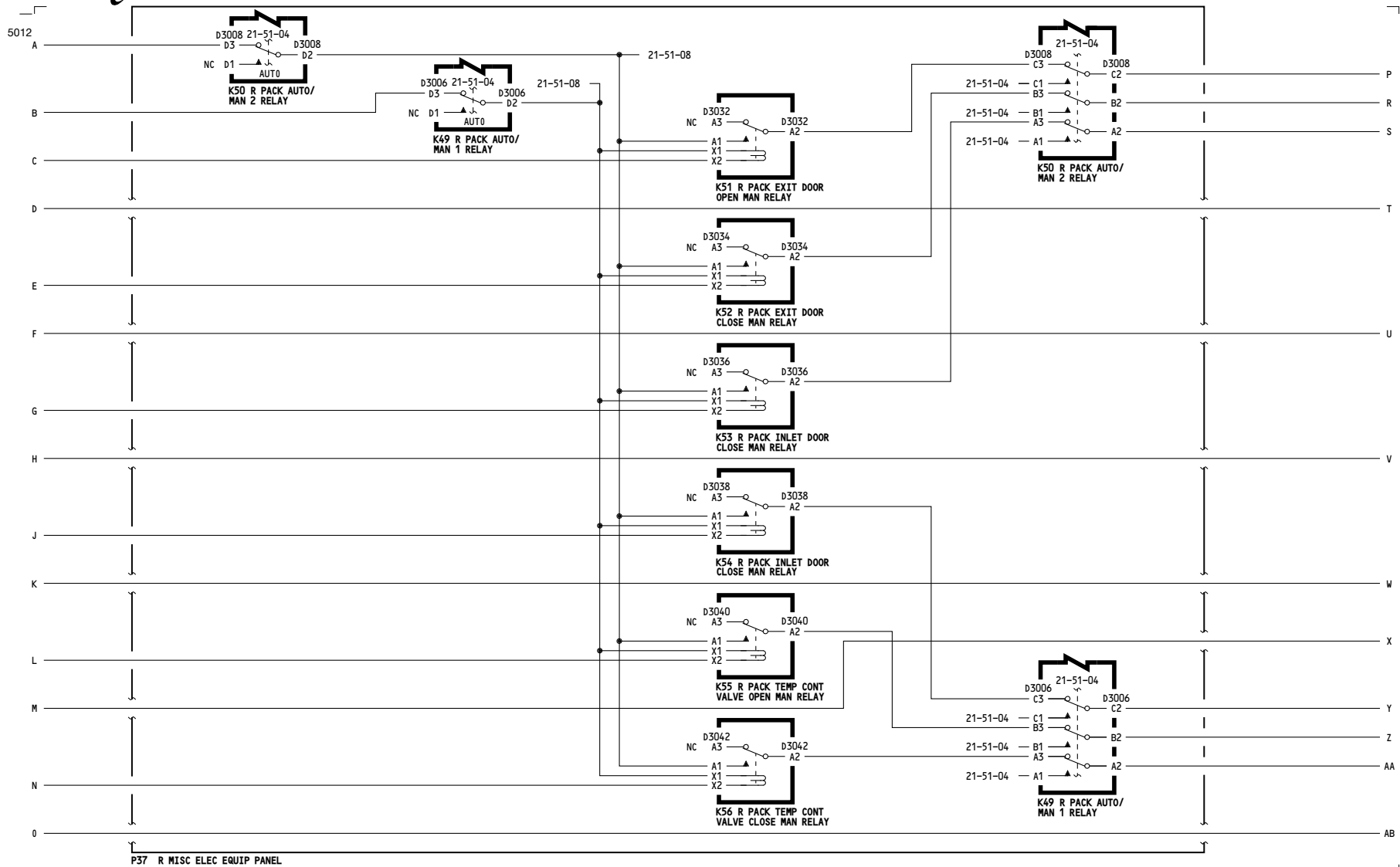
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ALL	RIGHT PACK CONTROL - STANDBY
	D280N032S

21-51-06

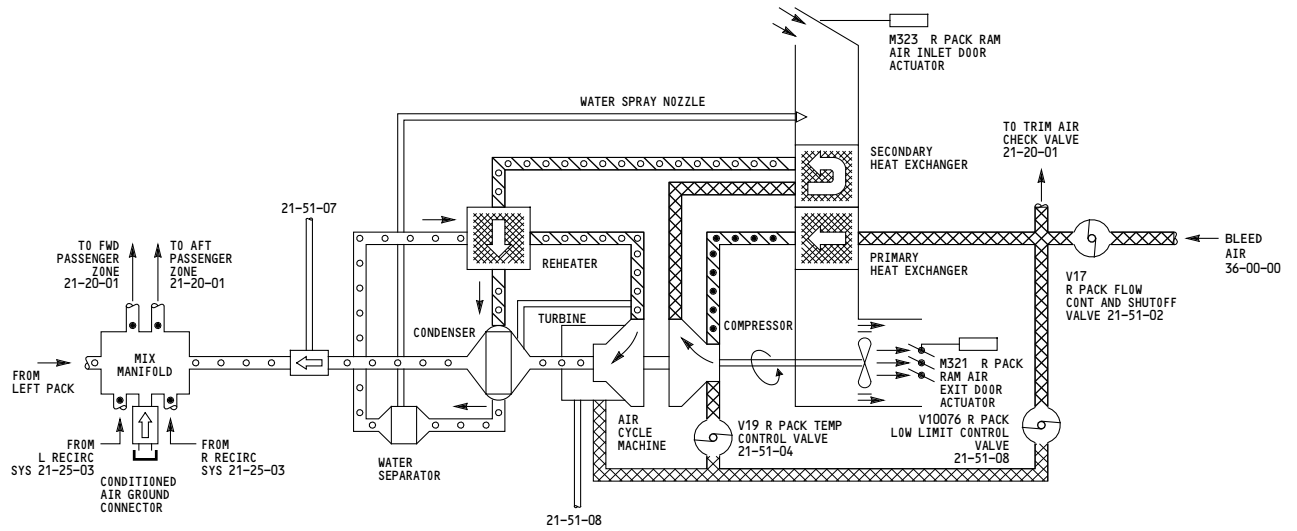
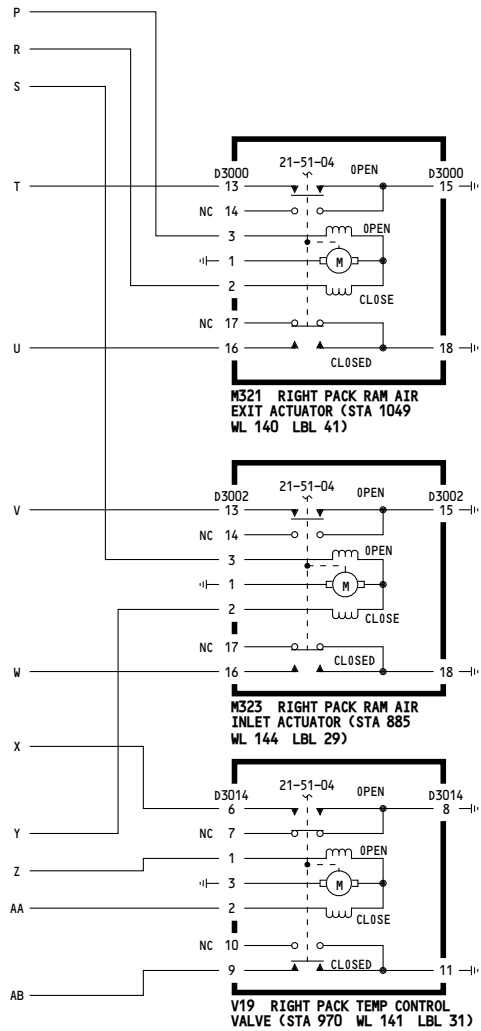


P37 R MISC ELEC EQUIP PANEL

ALL	<p align="center">RIGHT PACK CONTROL - STANDBY</p> <p align="center">D280N032S</p>
-----	---

21-51-06

5011

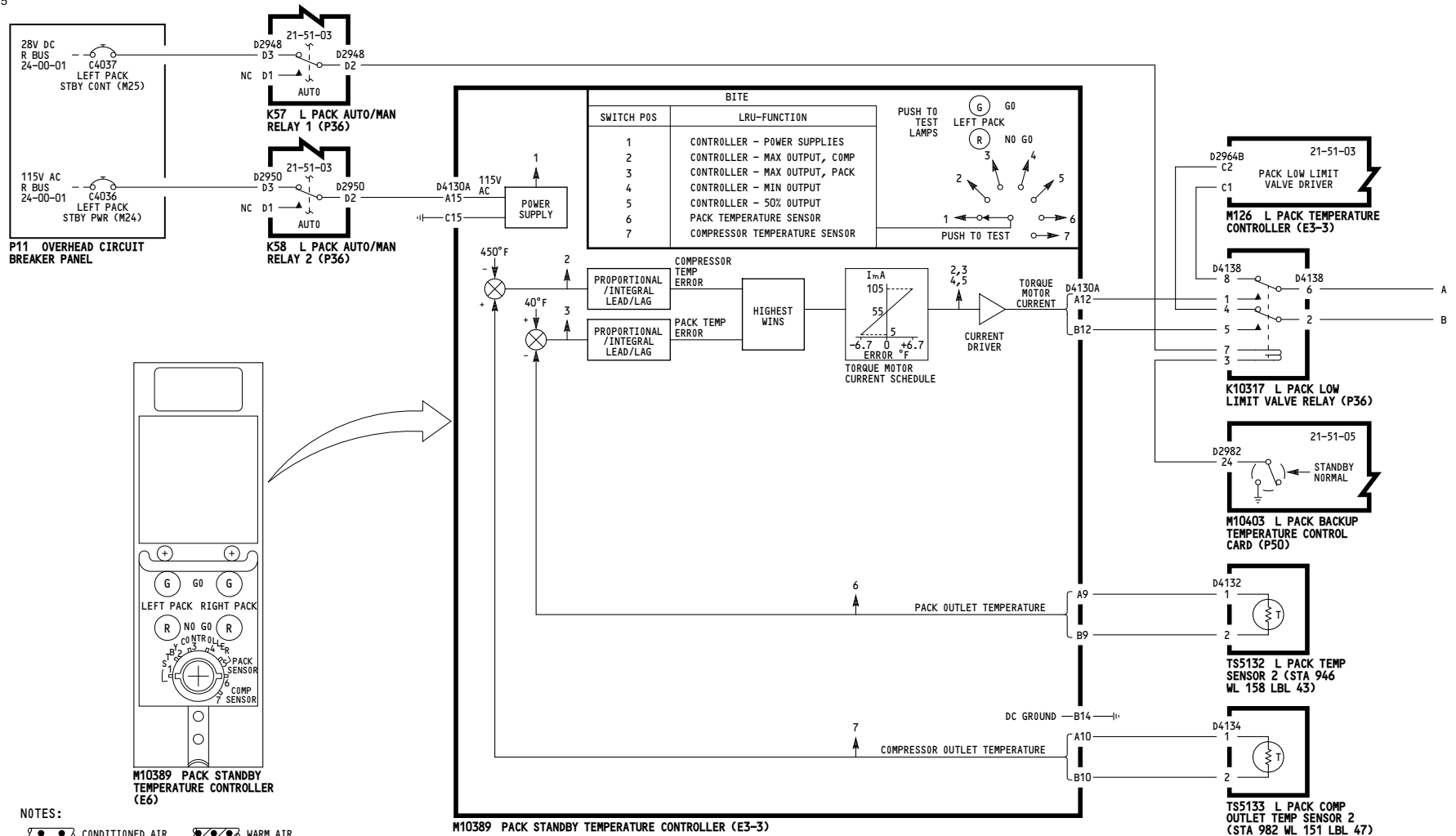


ALL	<p>RIGHT PACK CONTROL - STANDBY</p> <p>D280N032S</p>
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21-51-06

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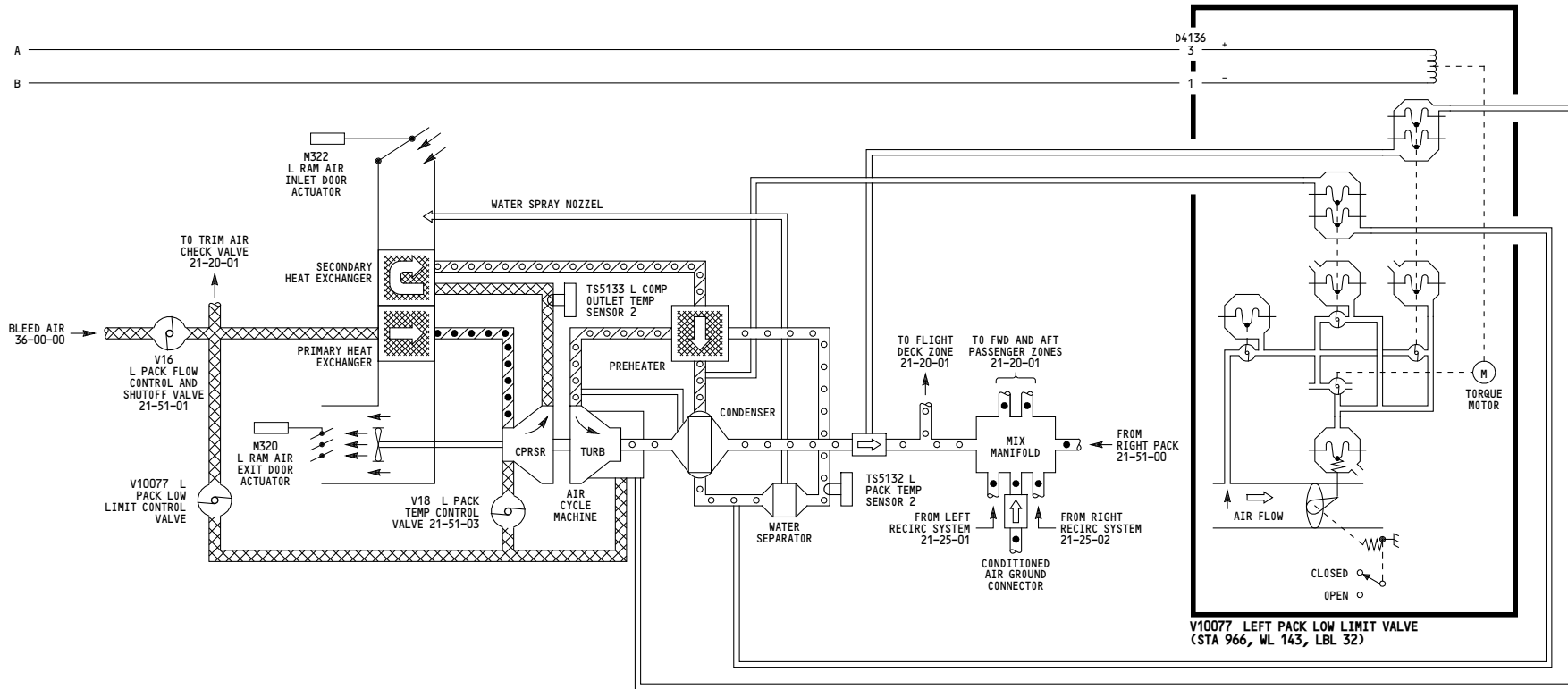


ALL

LEFT PACK LOW LIMIT VALVE CONTROL

D280N032S

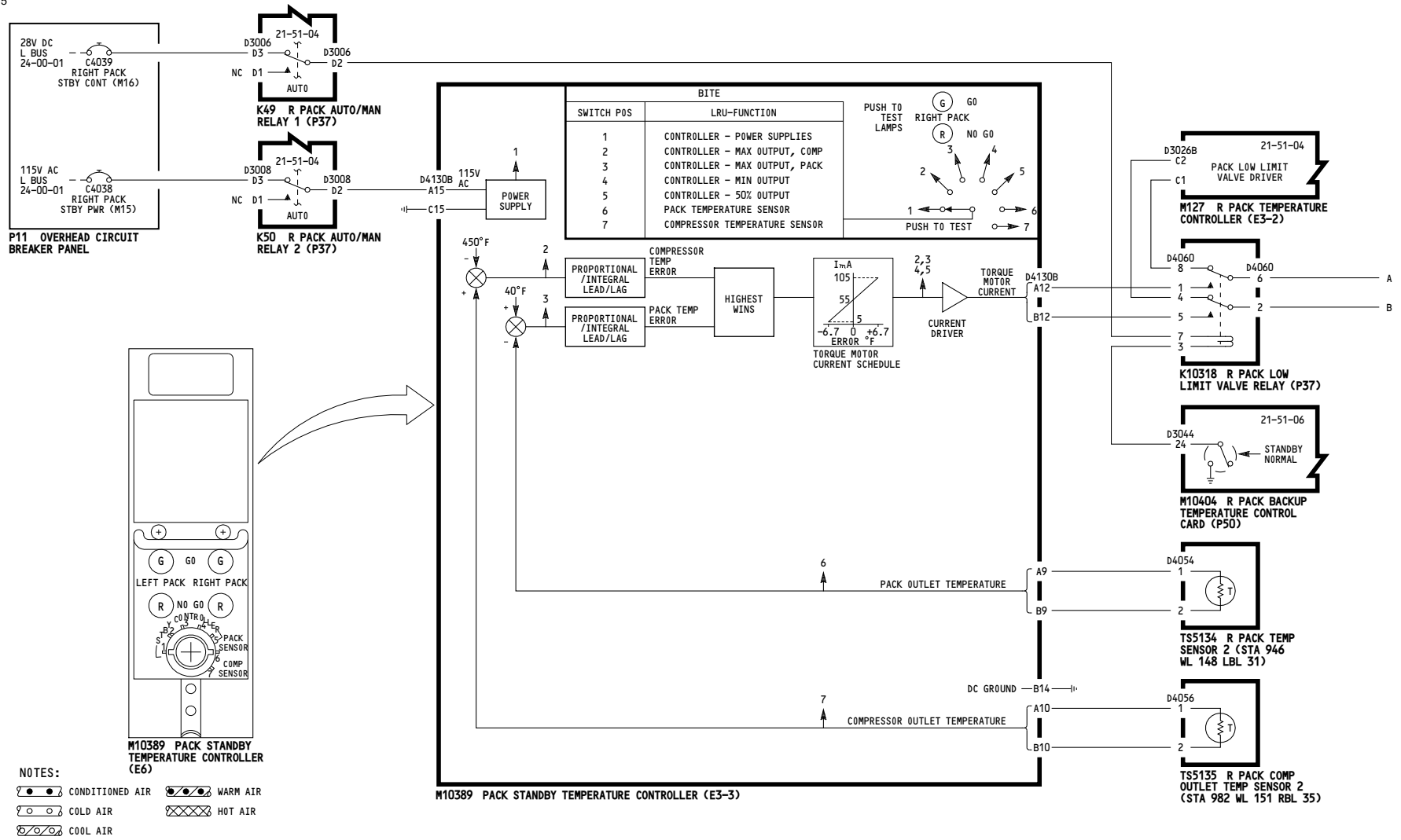
21-51-07



ALL	LEFT PACK LOW LIMIT VALVE CONTROL
	D280N032S

21-51-07

5015

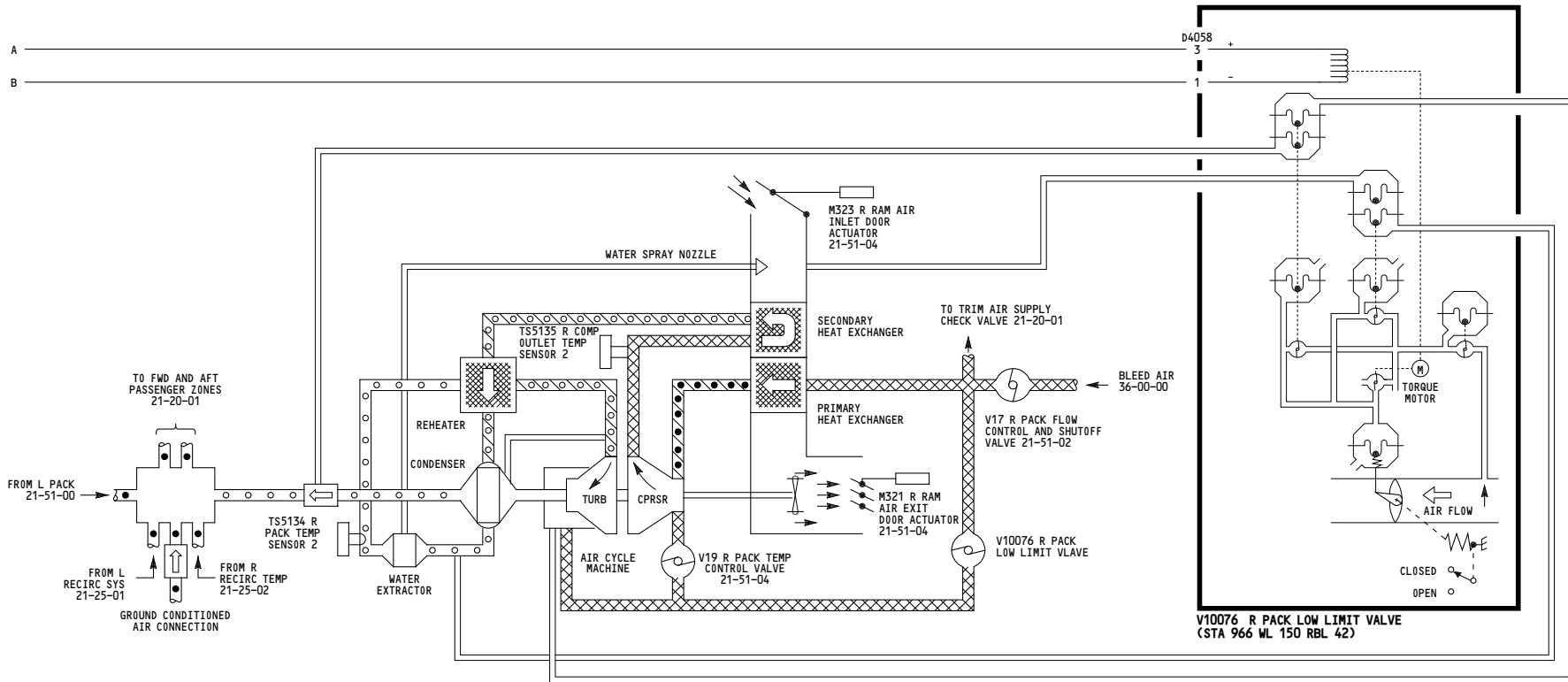


ALL

RIGHT PACK LOW LIMIT VALVE CONTROL

D280N032S

21-51-08



ALL

RIGHT PACK LOW LIMIT VALVE CONTROL

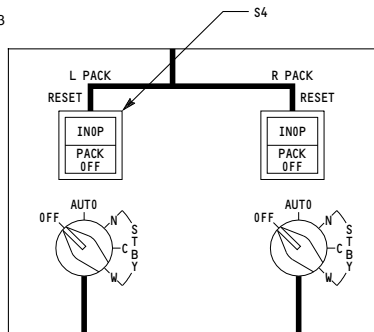
D280N032S

21-51-08

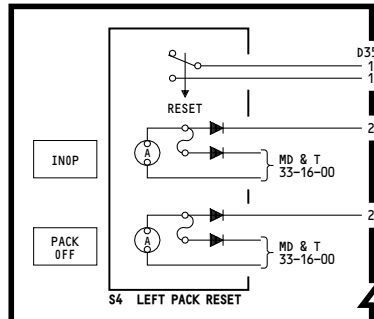
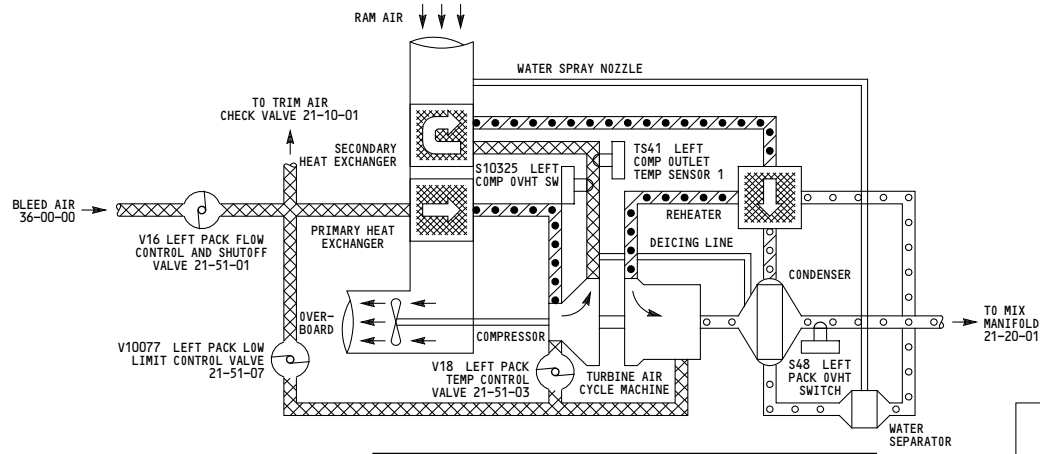
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5013

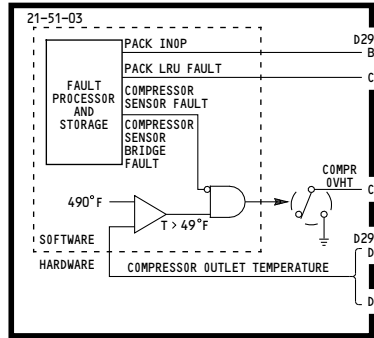
WIRING DIAGRAMS
21-51-15



M10193 AIR CONDITIONING CONTROL PANEL (P5)

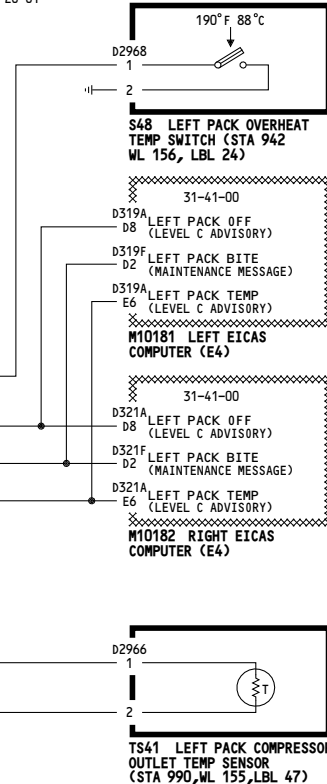
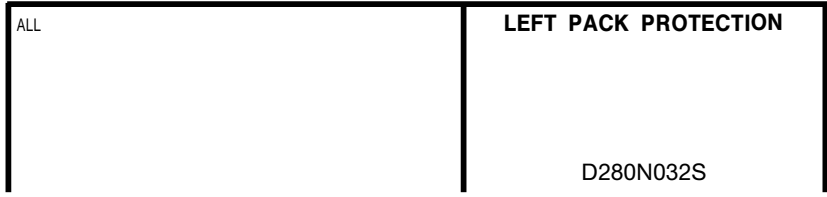
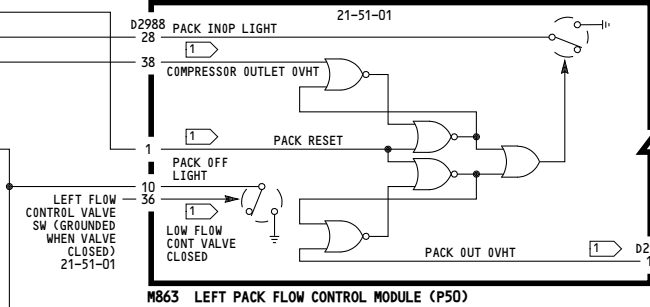


M10193 YNR AIR CONDITIONING CONTROL PANEL (P5)



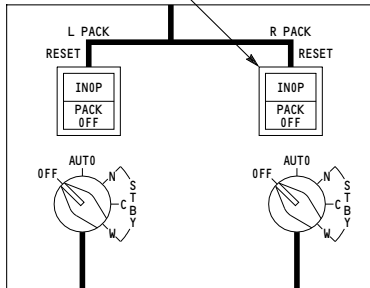
M126 LEFT PACK TEMPERATURE CONTROLLER (E3-3)

NOTES:
 [Symbol] INPUT INVERTED - GROUNDED
 [Symbol] COOL AIR
 [Symbol] WARM AIR
 [Symbol] COLD AIR
 [Symbol] HOT AIR

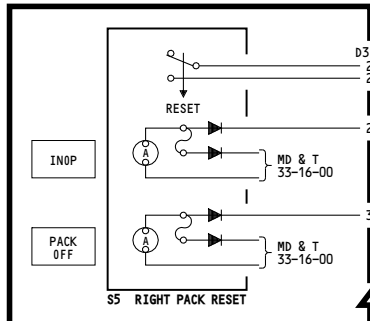


21-51-09

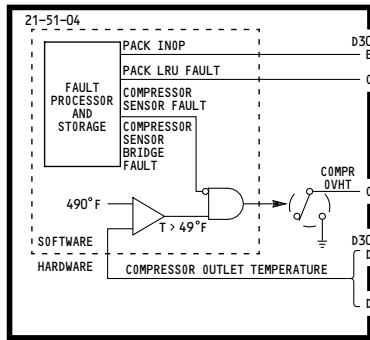
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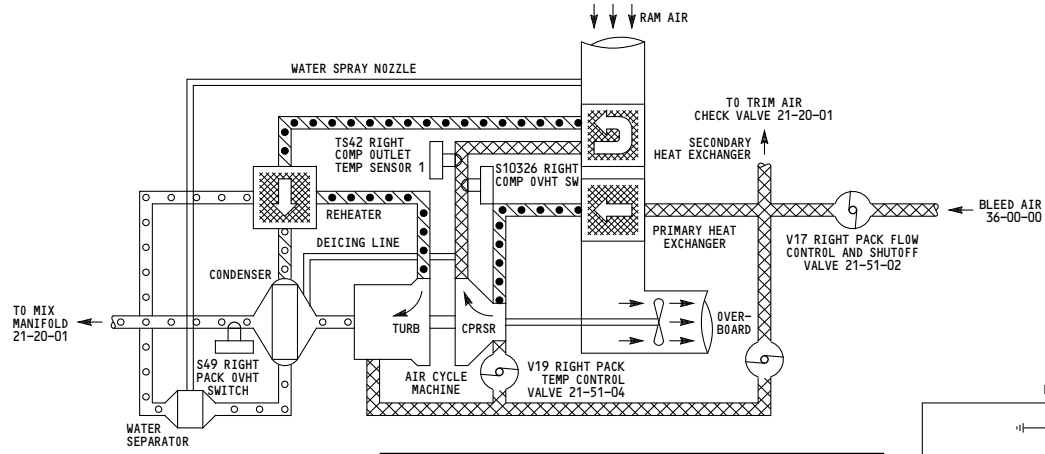
M10193 AIR CONDITIONING CONTROL PANEL (P5)



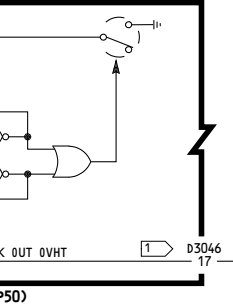
M10193 (YNR) AIR CONDITIONING CONTROL PANEL (P5)



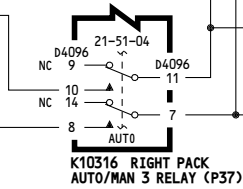
M127 RIGHT PACK TEMPERATURE CONTROLLER (E3-2)



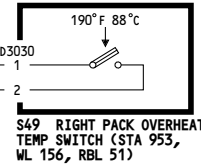
TO MIX MANIFOLD 21-20-01



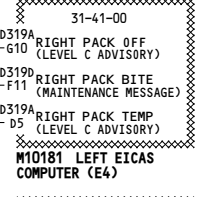
M864 RIGHT PACK FLOW CONTROL MODULE (P50)



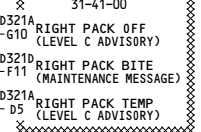
K10316 RIGHT PACK AUTO/MAN 3 RELAY (P37)



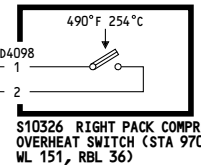
S49 RIGHT PACK OVERHEAT TEMP SWITCH (STA 953, WL 156, RBL 51)



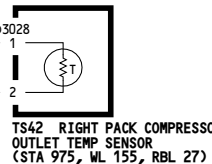
M10181 LEFT EICAS COMPUTER (E4)



M10182 RIGHT EICAS COMPUTER (E4)

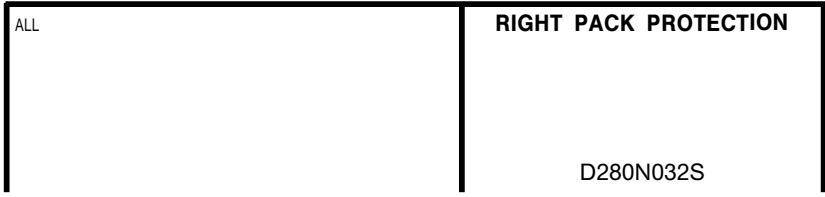


S10326 RIGHT PACK COMPRESSOR OVERHEAT SWITCH (STA 970 WL 151, RBL 36)



TS42 RIGHT PACK COMPRESSOR OUTLET TEMP SENSOR (STA 975, WL 155, RBL 27)

NOTES:
 COOL AIR WARM AIR INPUT INVERTED -
 COLD AIR HOT AIR GROUNDED INPUT = LOGIC "1"



D280N032S



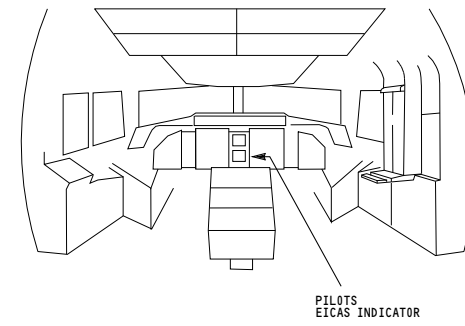
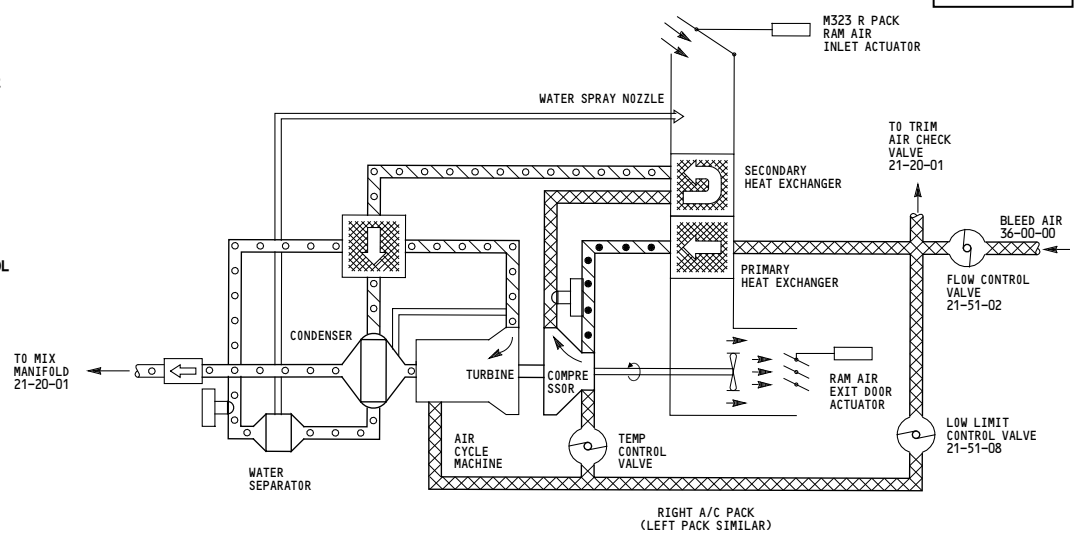
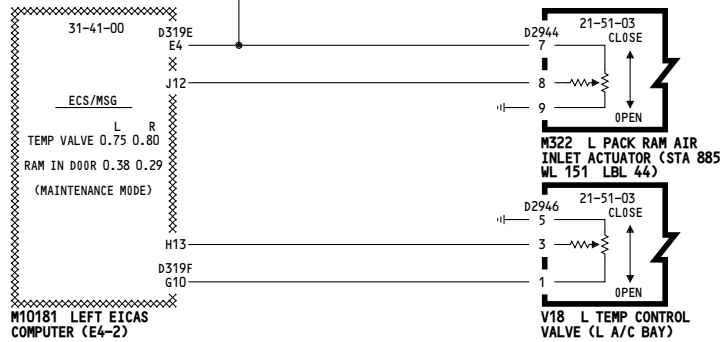
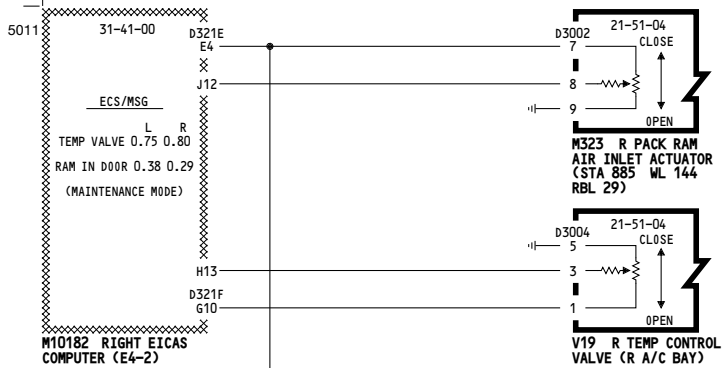
ALL	<p>AIR CONDITIONING PACK TEMPERATURE INDICATION</p> <p>D280N032S</p>
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21-52-01

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WIRING DIAGRAMS
21-52-21

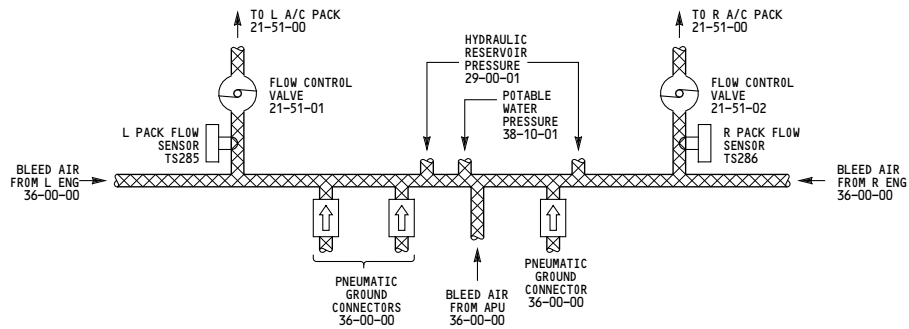
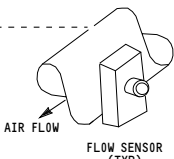
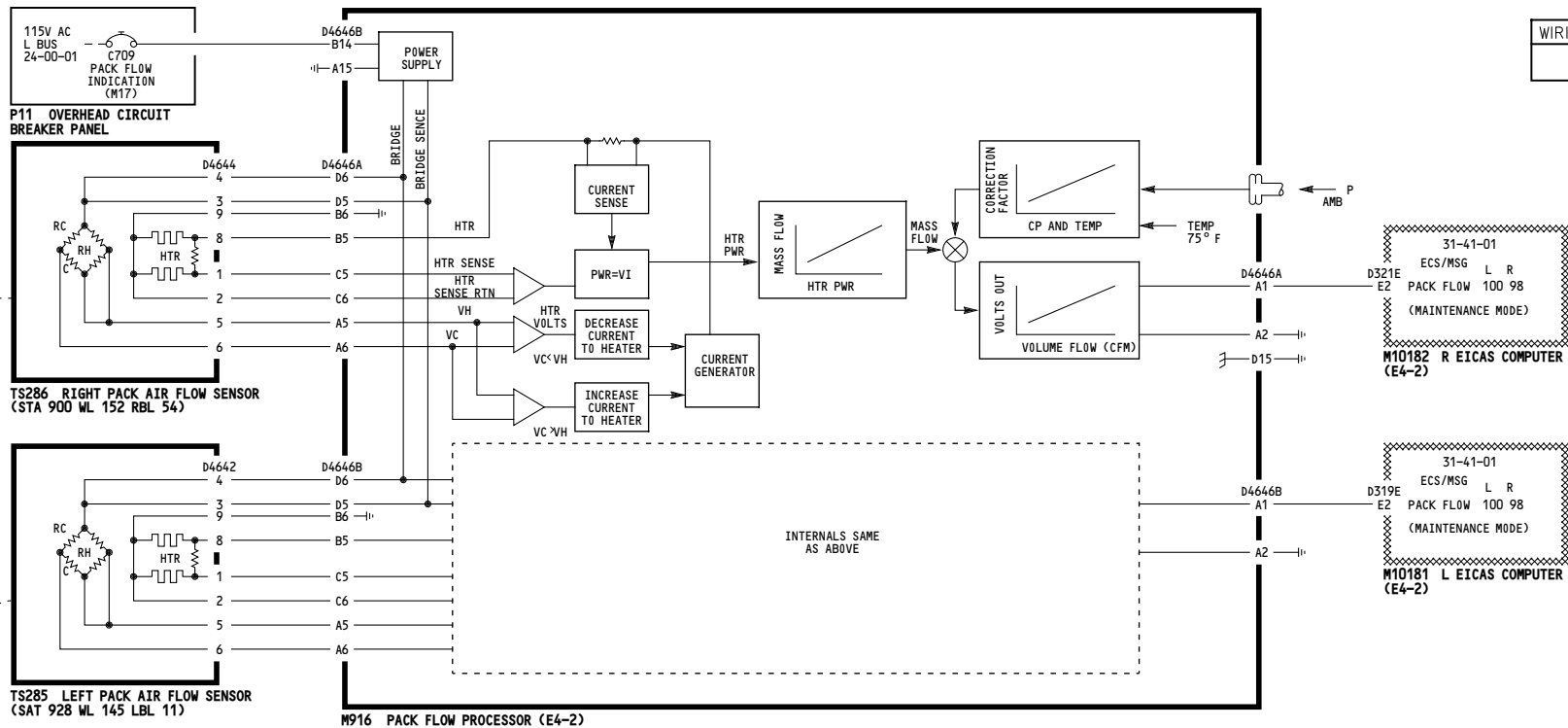


- NOTES:
- COLD AIR
 - COOL AIR
 - WARM AIR
 - HOT AIR

ALL	<p>PACK DOOR AND VALVE POSITION INDICATION</p> <p>D280N032S</p>
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WIRING DIAGRAMS
21-52-31

5011



☒ BLEED AIR

001-008

PACK FLOW INDICATION

D280N032S

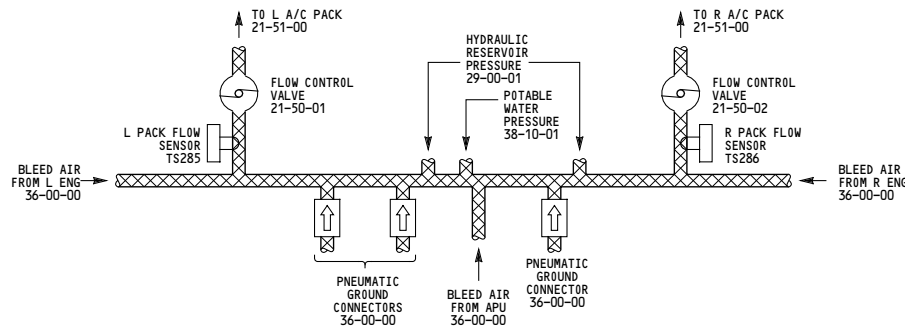
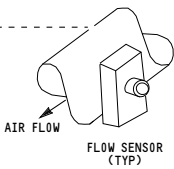
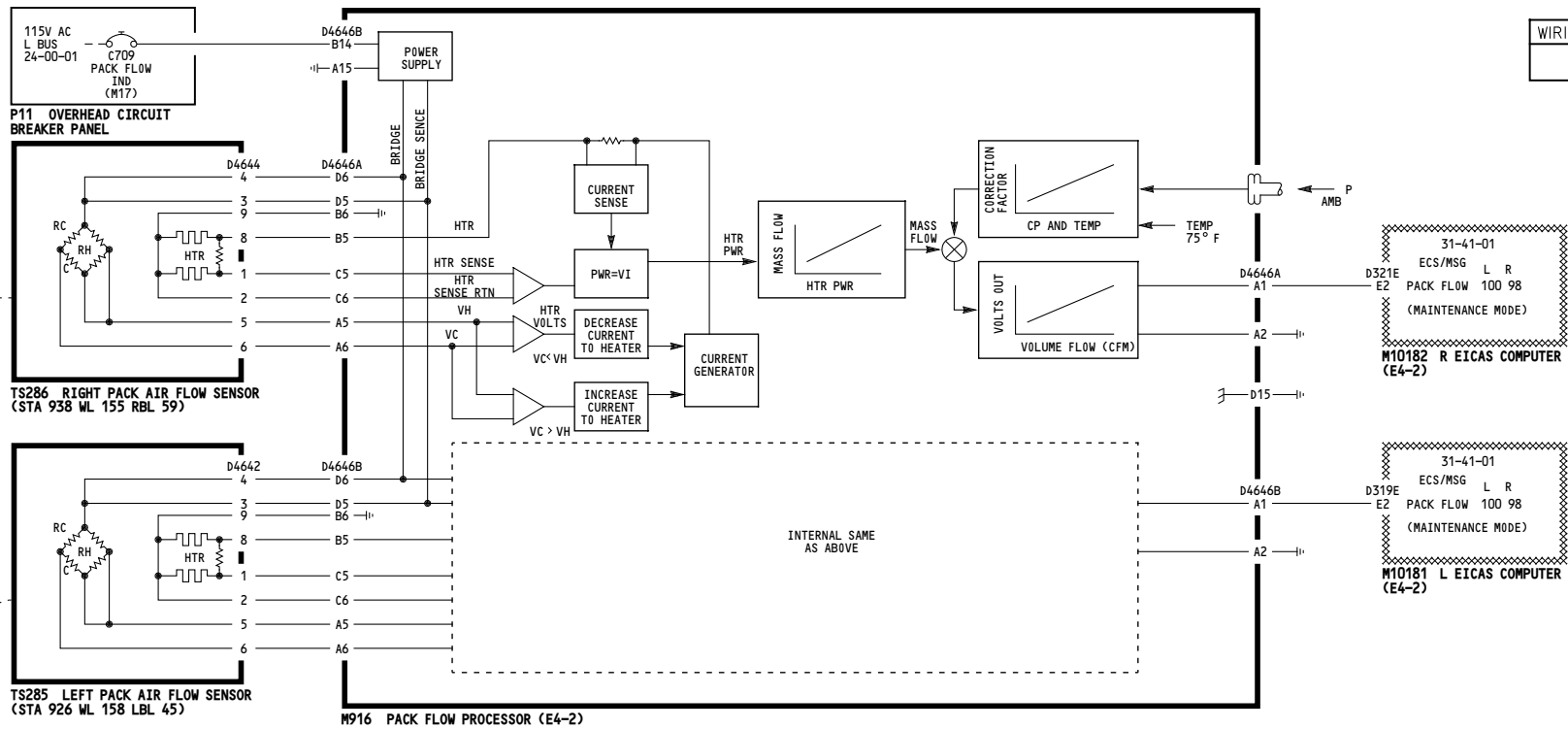
21-52-03

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WIRING DIAGRAMS
21-52-31



NOTES:
 BLEED AIR

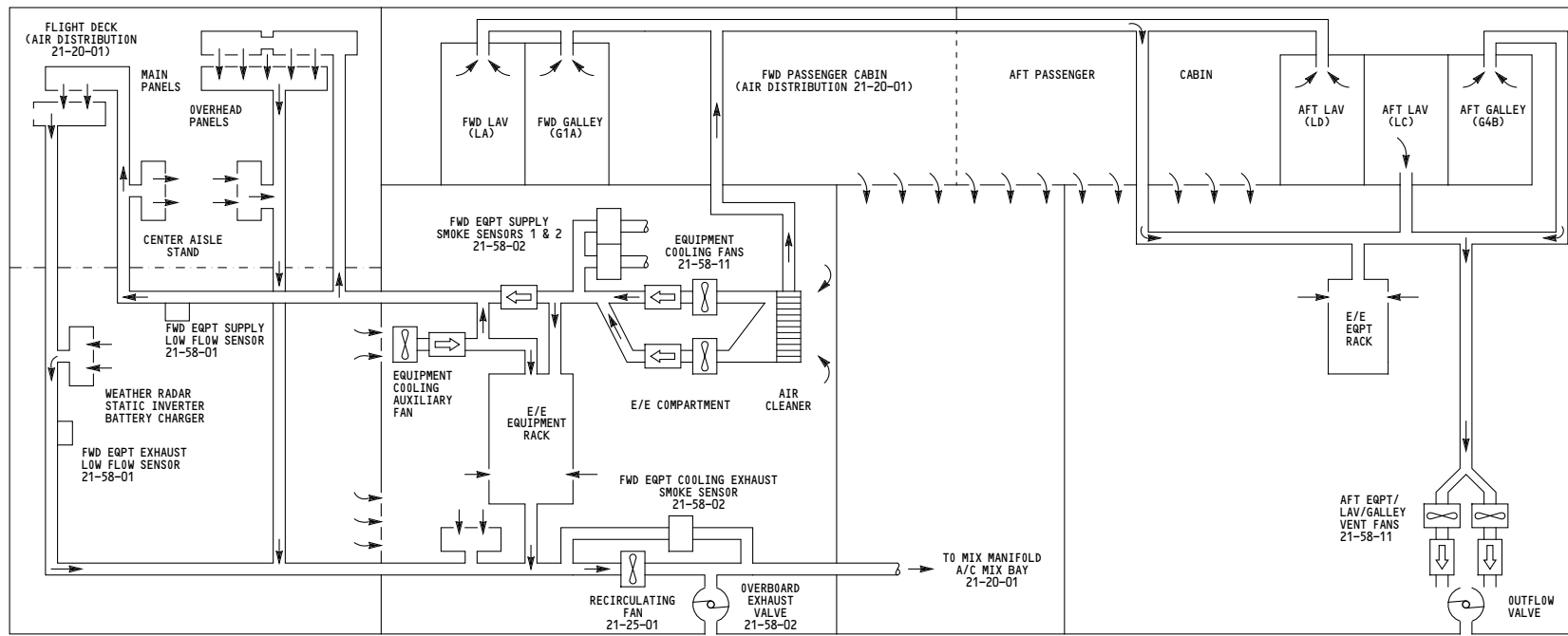
009-099	PACK FLOW INDICATION
D280N032S	

21-52-03

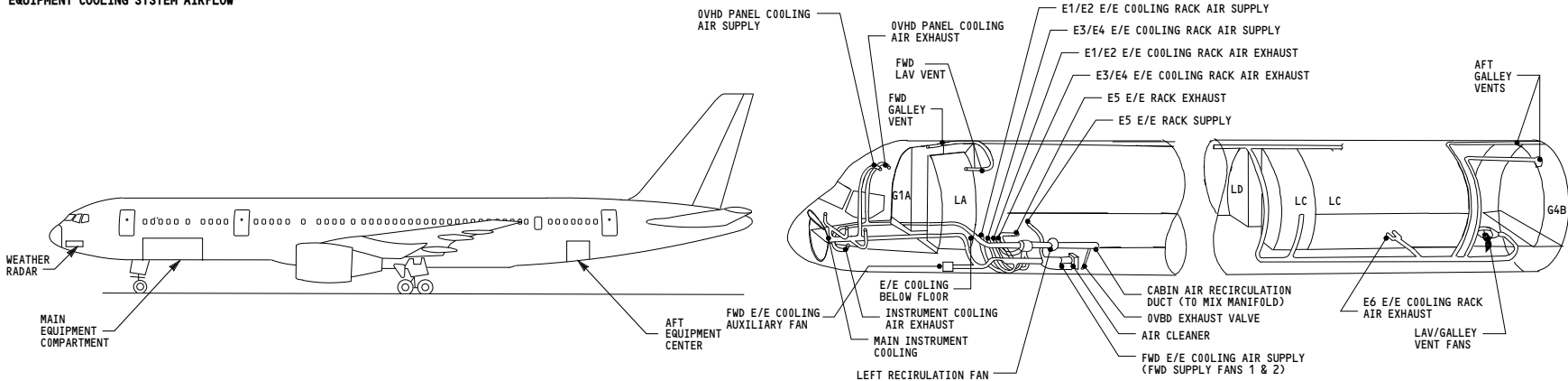
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5093



EQUIPMENT COOLING SYSTEM AIRFLOW



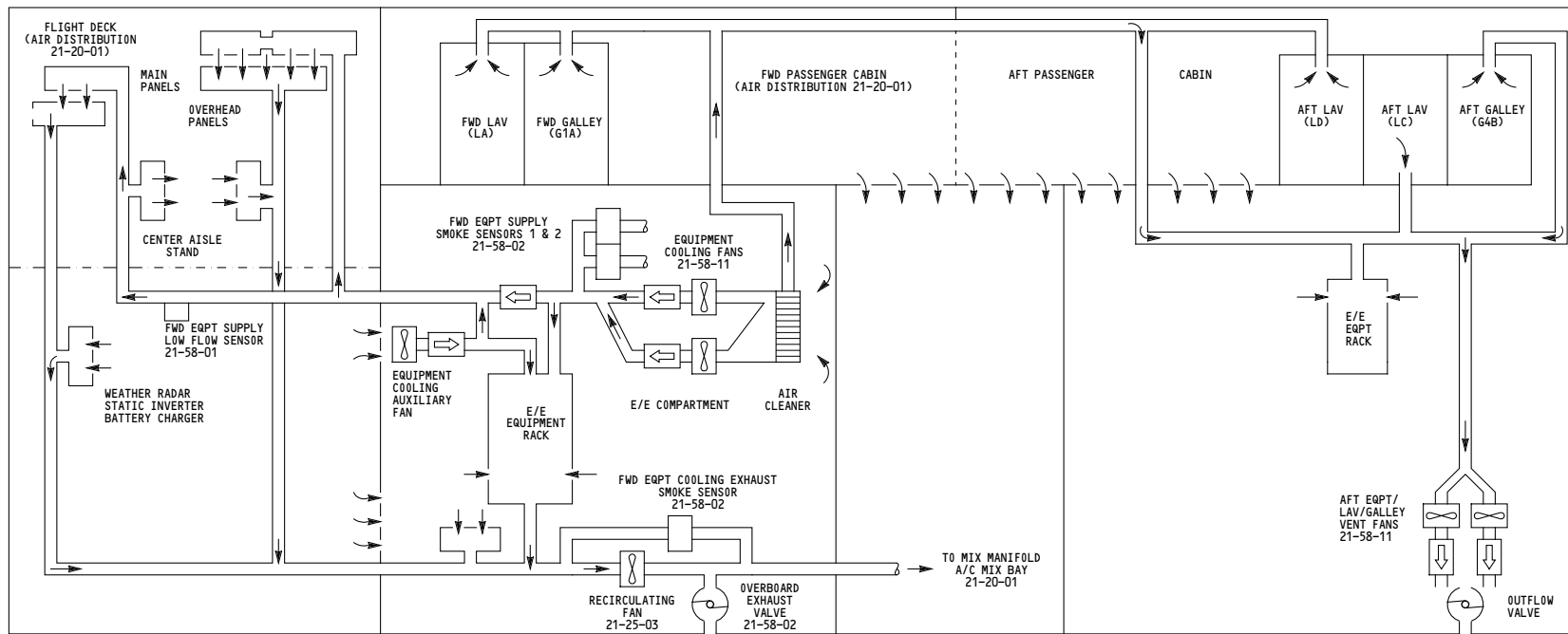
ALL	<p>EQUIPMENT COOLING - SIMPLIFIED</p> <p>D280N032S</p>
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21-58-00

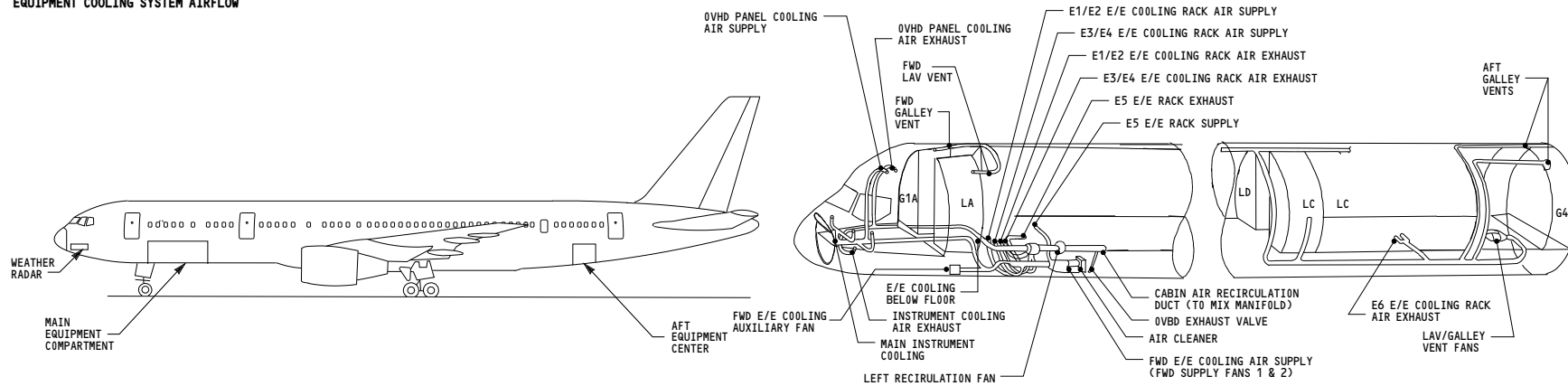
Page 101

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5122



EQUIPMENT COOLING SYSTEM AIRFLOW



001-011	<p align="center">EQUIPMENT COOLING - SIMPLIFIED</p> <p align="center">D280N032S</p>
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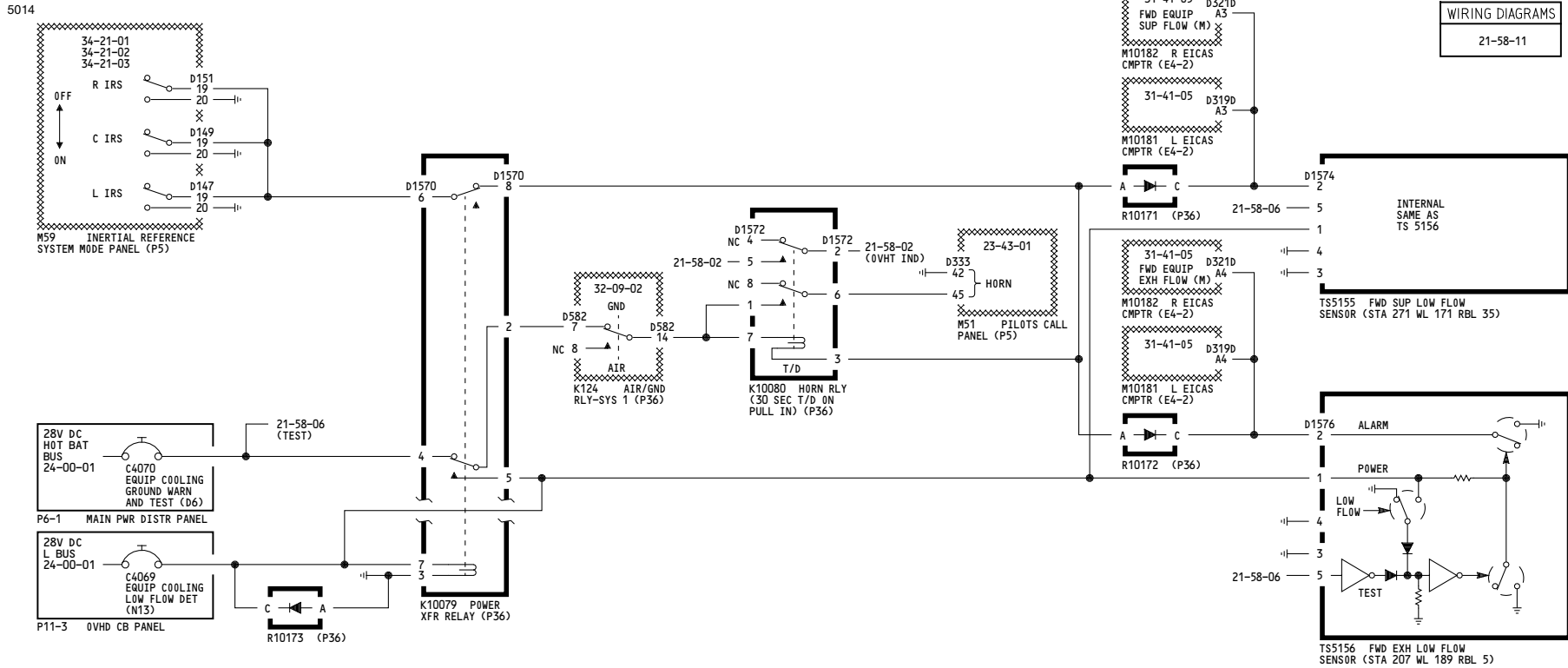
Incorporates
 21-0061 R01

21-58-00

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WIRING DIAGRAMS
21-58-11

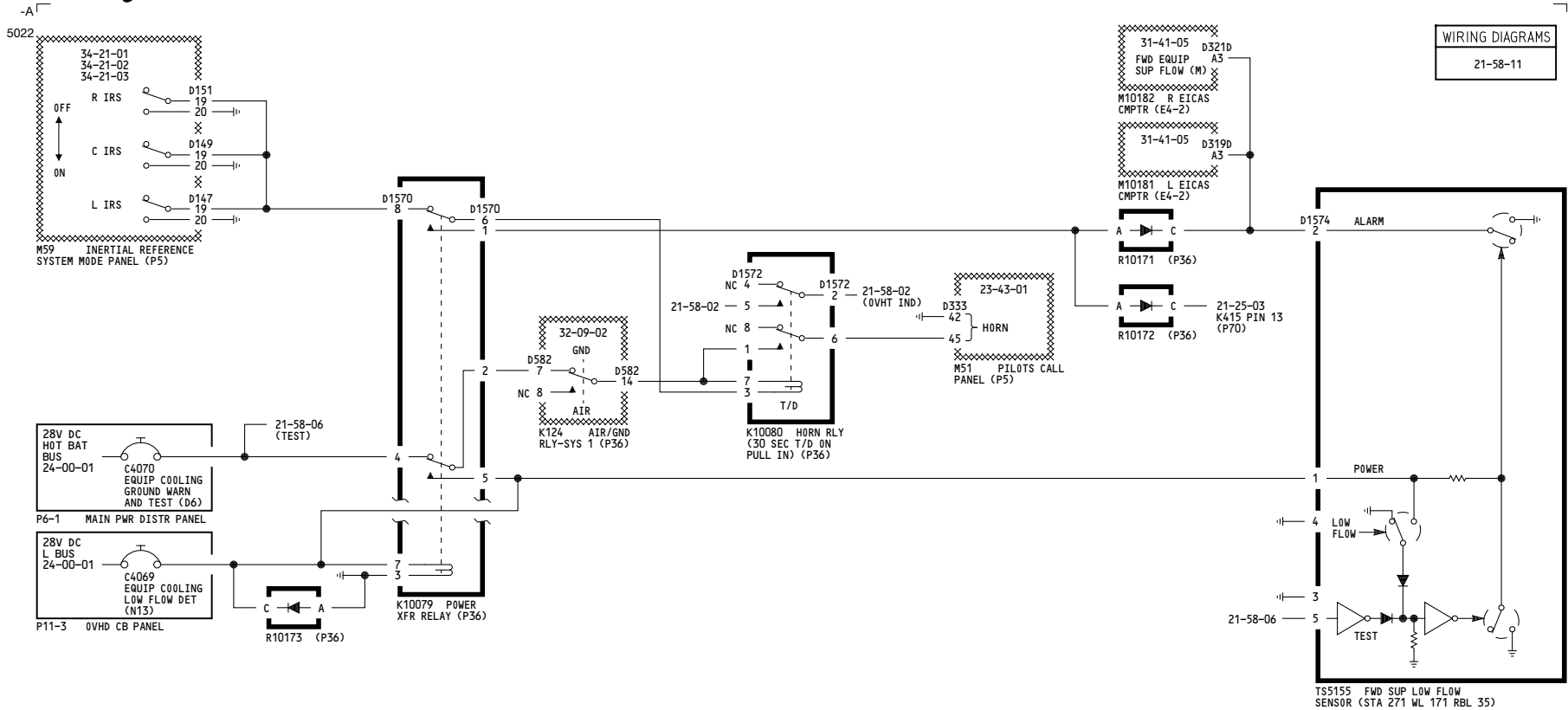


ALL	EQUIPMENT COOLING FAILURE - LOW FLOW DETECTION
	D280N032S

21-58-01

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001-011

EQUIPMENT COOLING FAILURE - LOW FLOW DETECTION

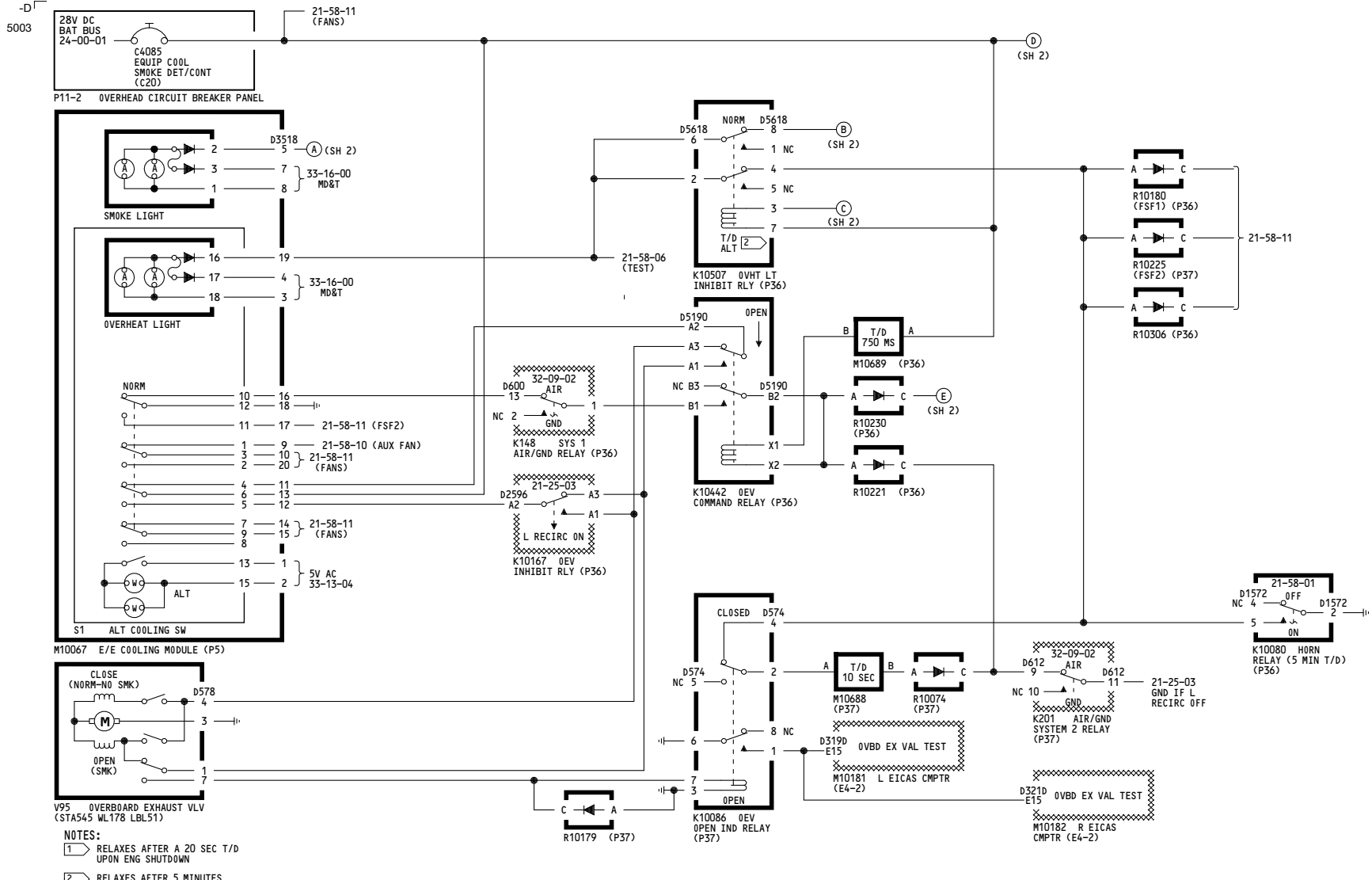
Incorporates
21-0061 R01

D280N032S

21-58-01

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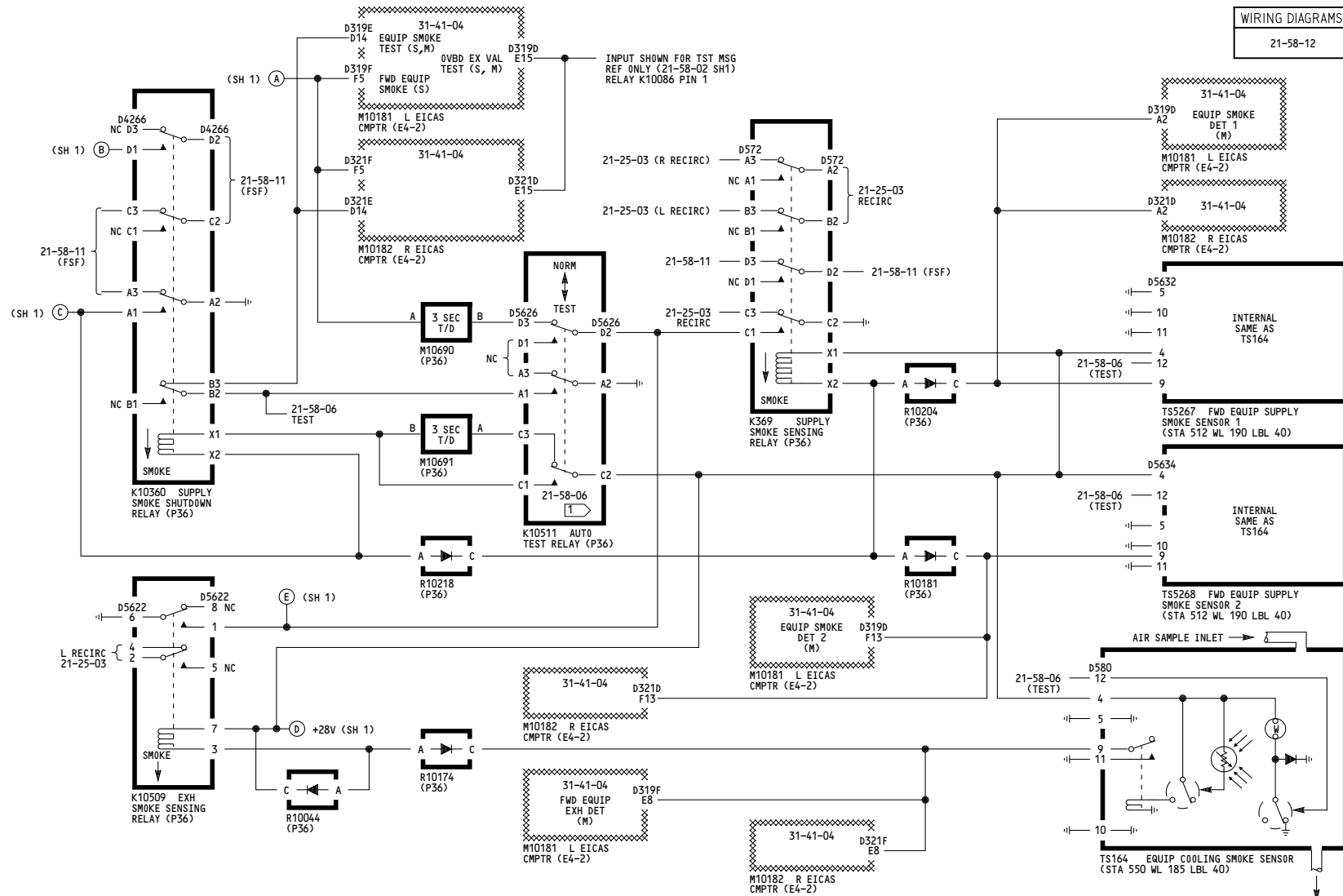
NOTES:
 [1] RELAXES AFTER A 20 SEC T/D UPON ENG SHUTDOWN
 [2] RELAXES AFTER 5 MINUTES

ALL	<p>EQUIPMENT COOLING - SMOKE CONTROL</p> <p>D280N032S</p>
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21-58-02

-A
5004

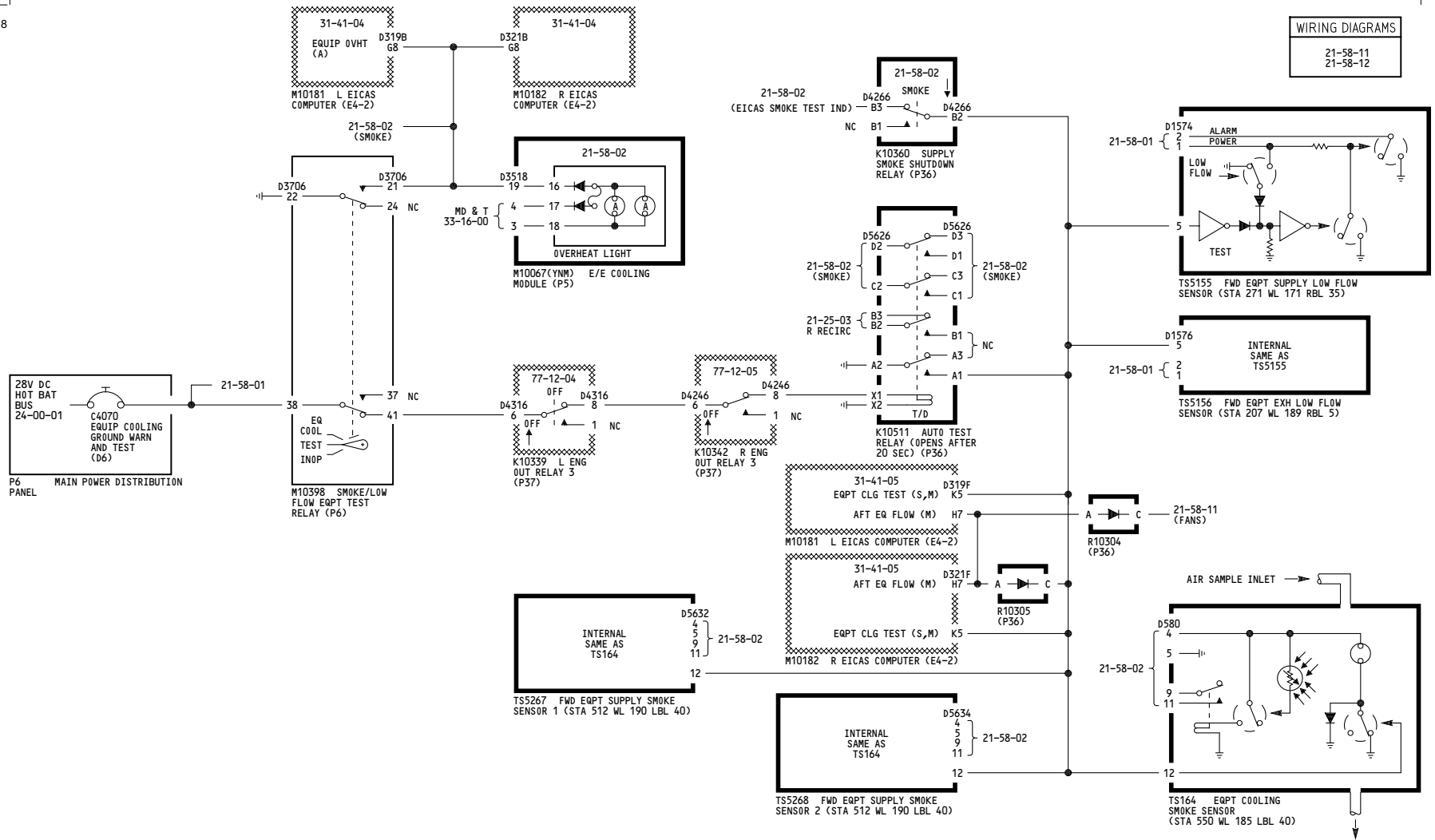
WIRING DIAGRAMS
21-58-12



ALL	<p>EQUIPMENT COOLING - SMOKE CONTROL</p> <p>D280N032S</p>
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21-58-02

5018



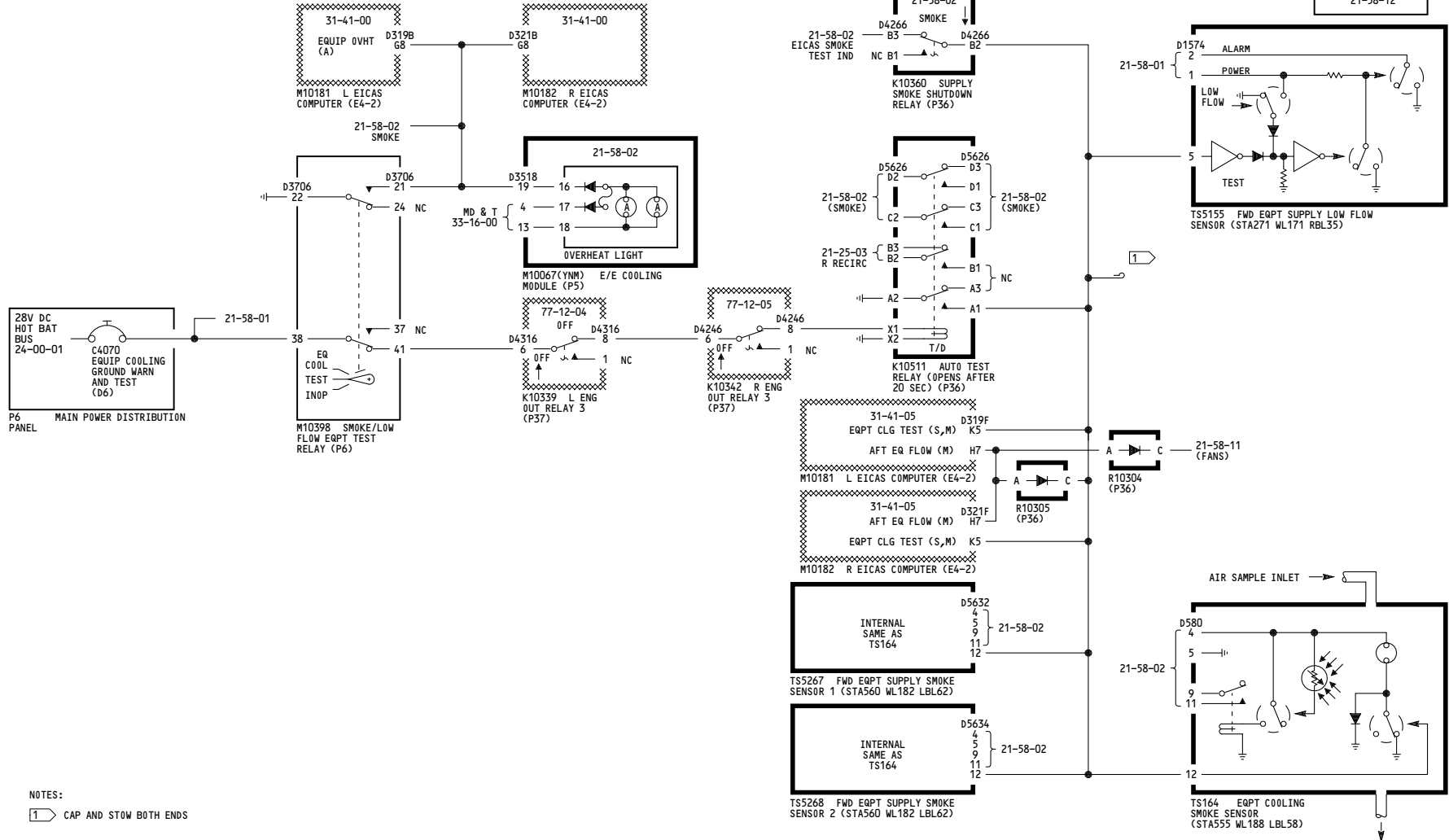
WIRING DIAGRAMS
21-58-11
21-58-12

ALL	EQUIPMENT COOLING - AUTOMATIC TEST
	D280N032S

21-58-06

-B
5040

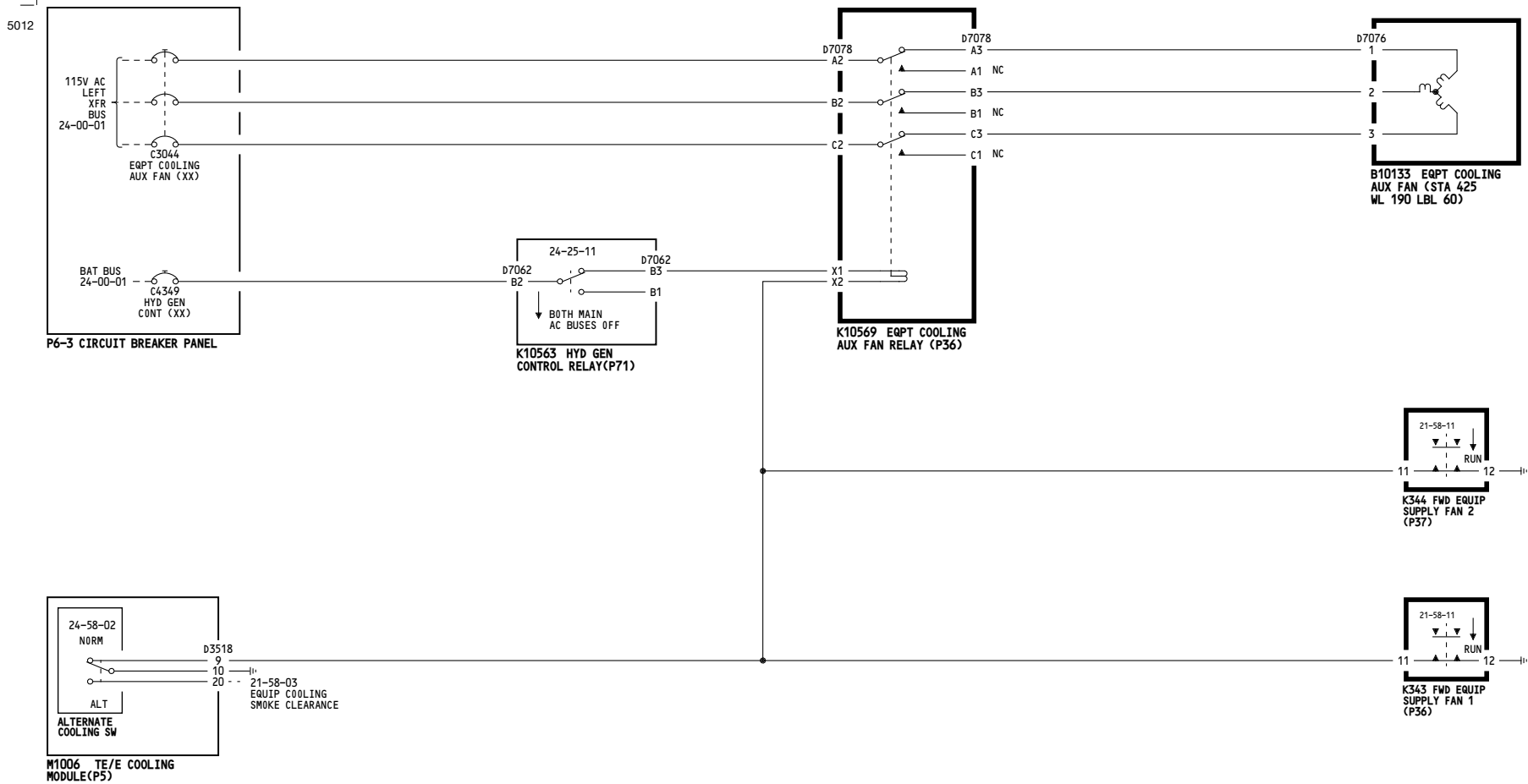
WIRING DIAGRAMS
21-58-11
21-58-12



NOTES:
1 CAP AND STOW BOTH ENDS

001-011	<p>EQUIPMENT COOLING - AUTOMATIC TEST</p> <p>Incorporates 21-0061 R01</p> <p>D280N032S</p>
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21-58-06



001-002	<p>EQUIPMENT COOLING - AUXILIARY FAN</p> <p>D280N032S</p>
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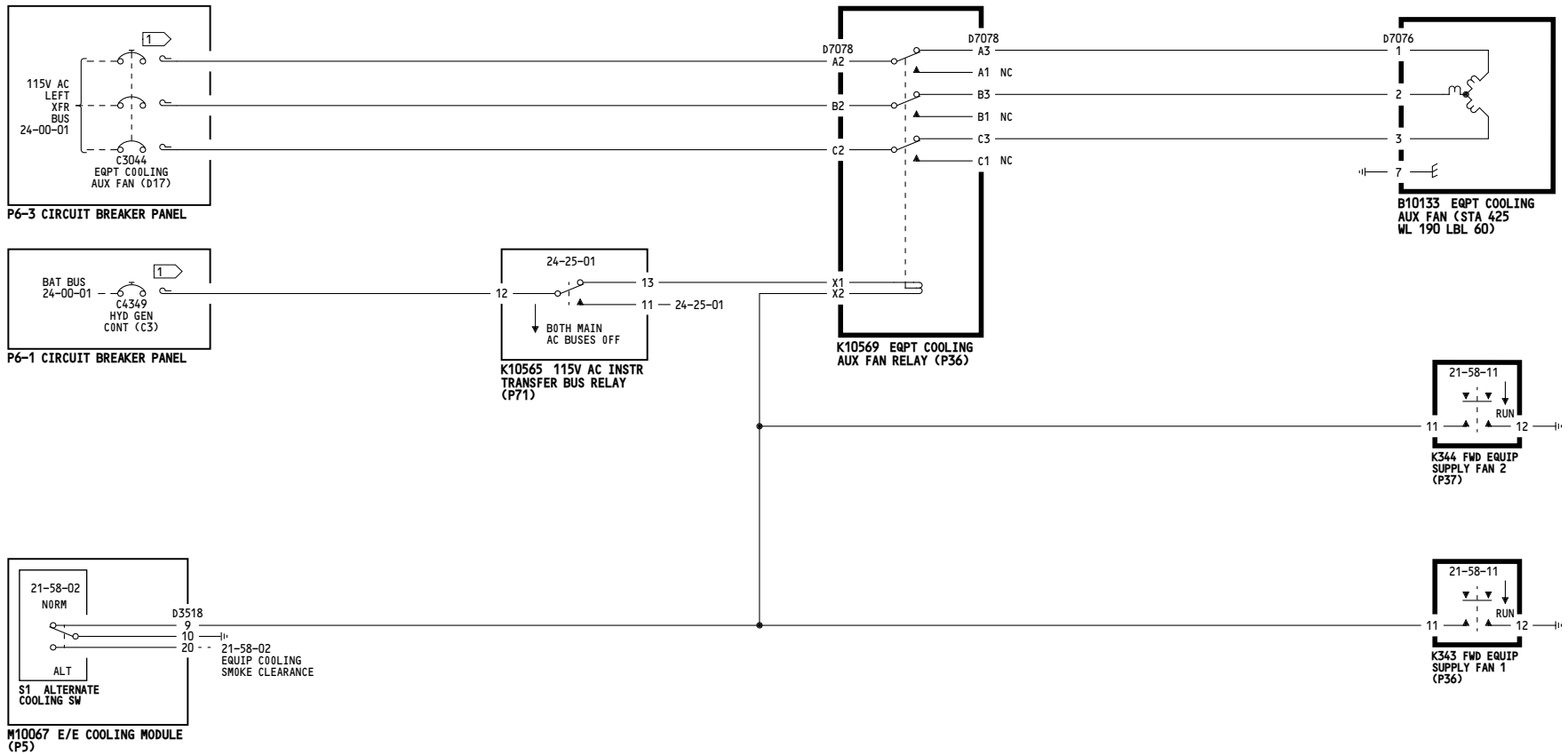
21-58-10

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5032

WIRING DIAGRAMS
21-58-15
24-25-11



1 COLLARED AND LABELED "INOP".

001	EQUIPMENT COOLING - AUXILIARY FAN D280N032S
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Incorporates
24-0131

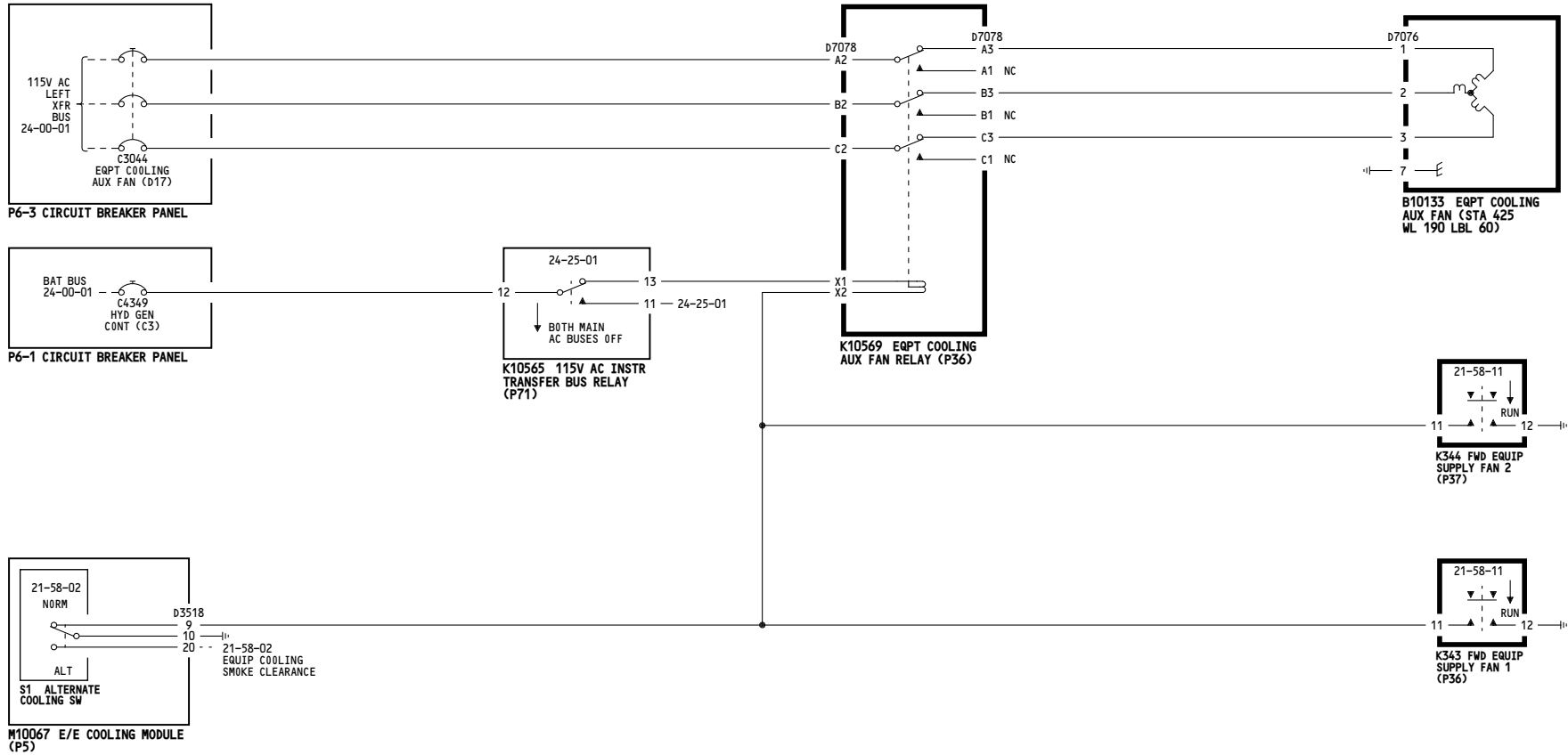
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5013

WIRING DIAGRAMS
21-58-15
24-25-11

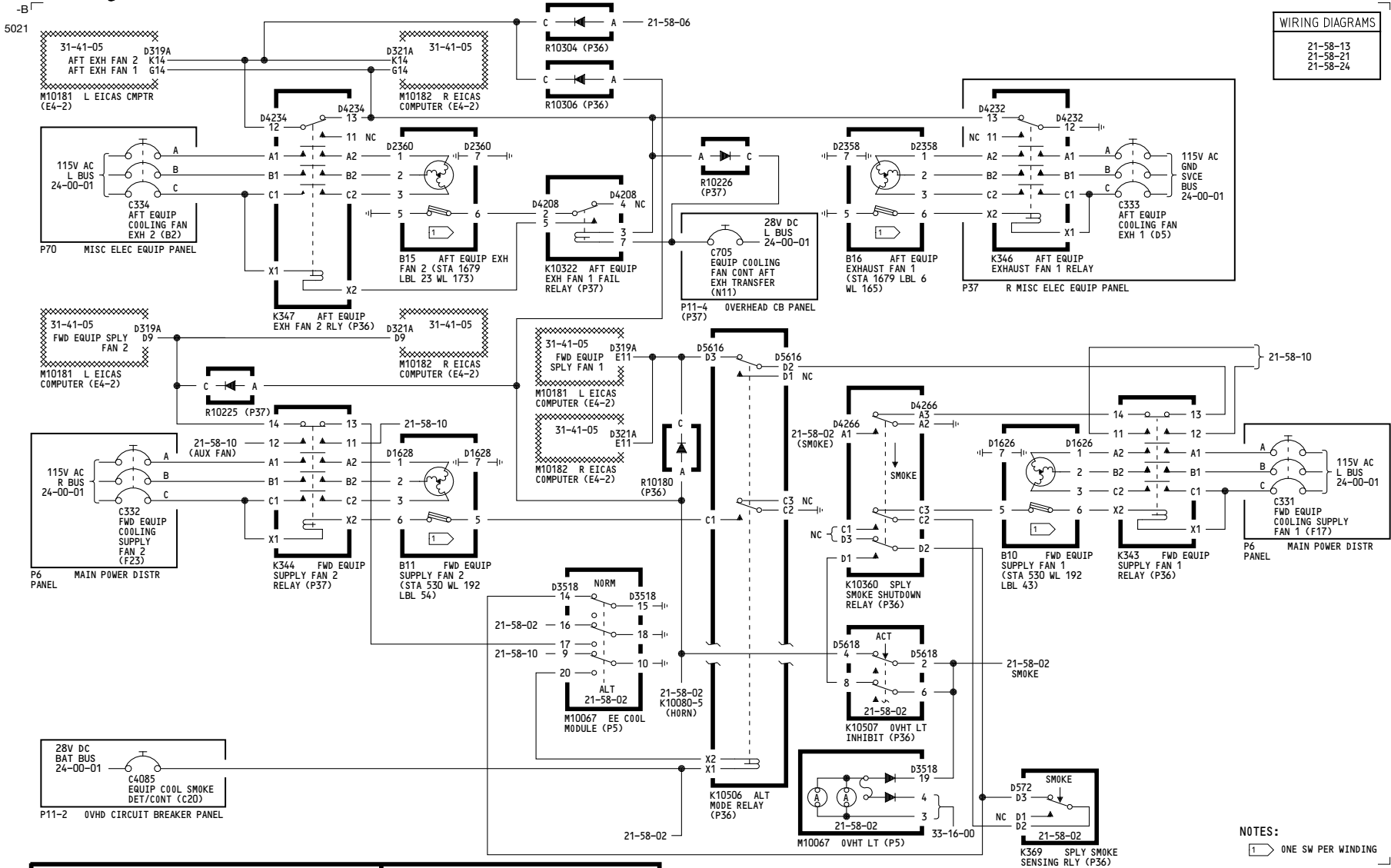


003-099	<p align="center">EQUIPMENT COOLING - AUXILIARY FAN</p> <p align="center">D280N032S</p>
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21-58-10

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Jan 21/2005



WIRING DIAGRAMS

21-58-13
21-58-21
21-58-24

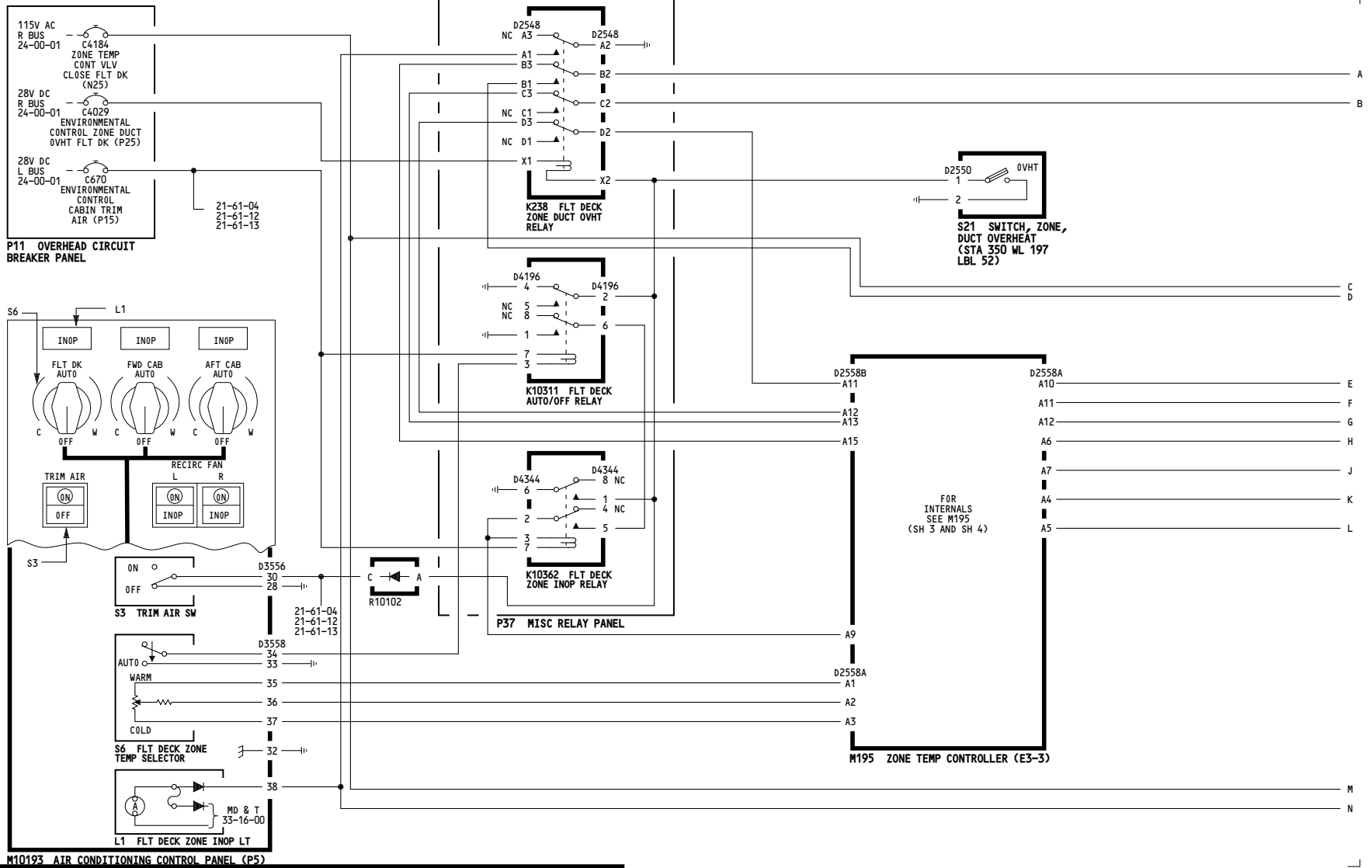
NOTES:
1 ONE SW PER WINDING

21-58-11

ALL	EQUIPMENT COOLING - FANS
	D280N032S

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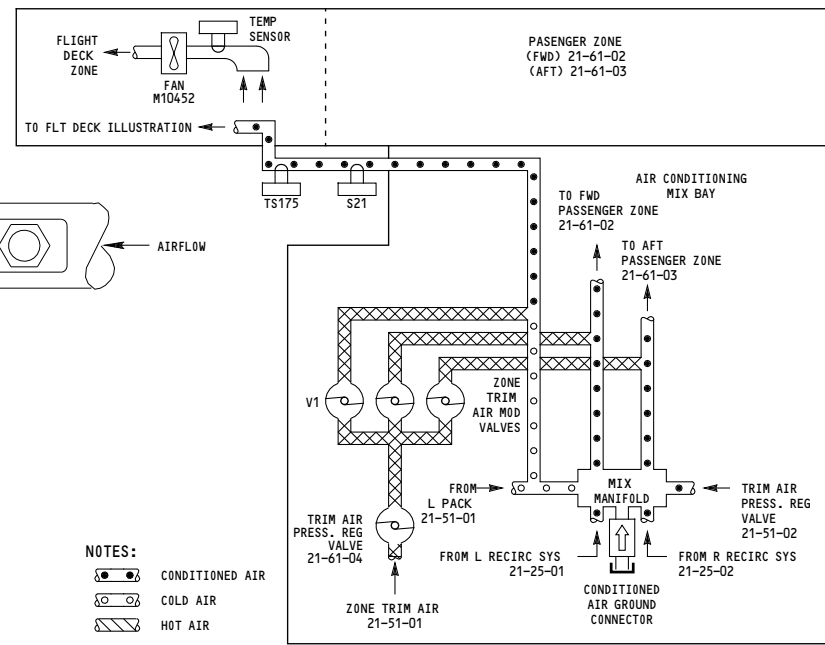
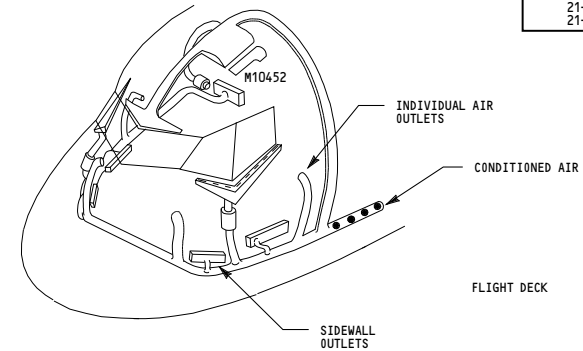
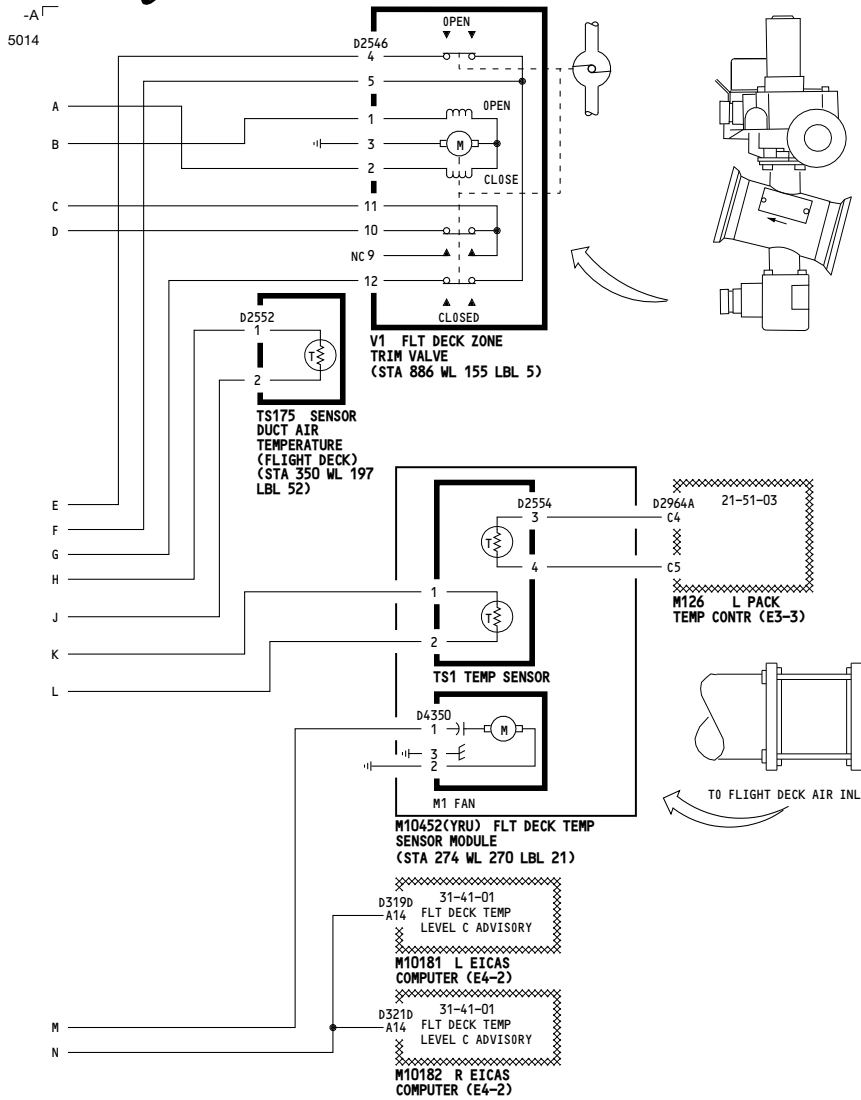
5017



ALL	<p>FLIGHT DECK ZONE TEMPERATURE CONTROL</p> <p>D280N032S</p>
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21-61-01

WIRING DIAGRAMS
21-61-51
21-61-11

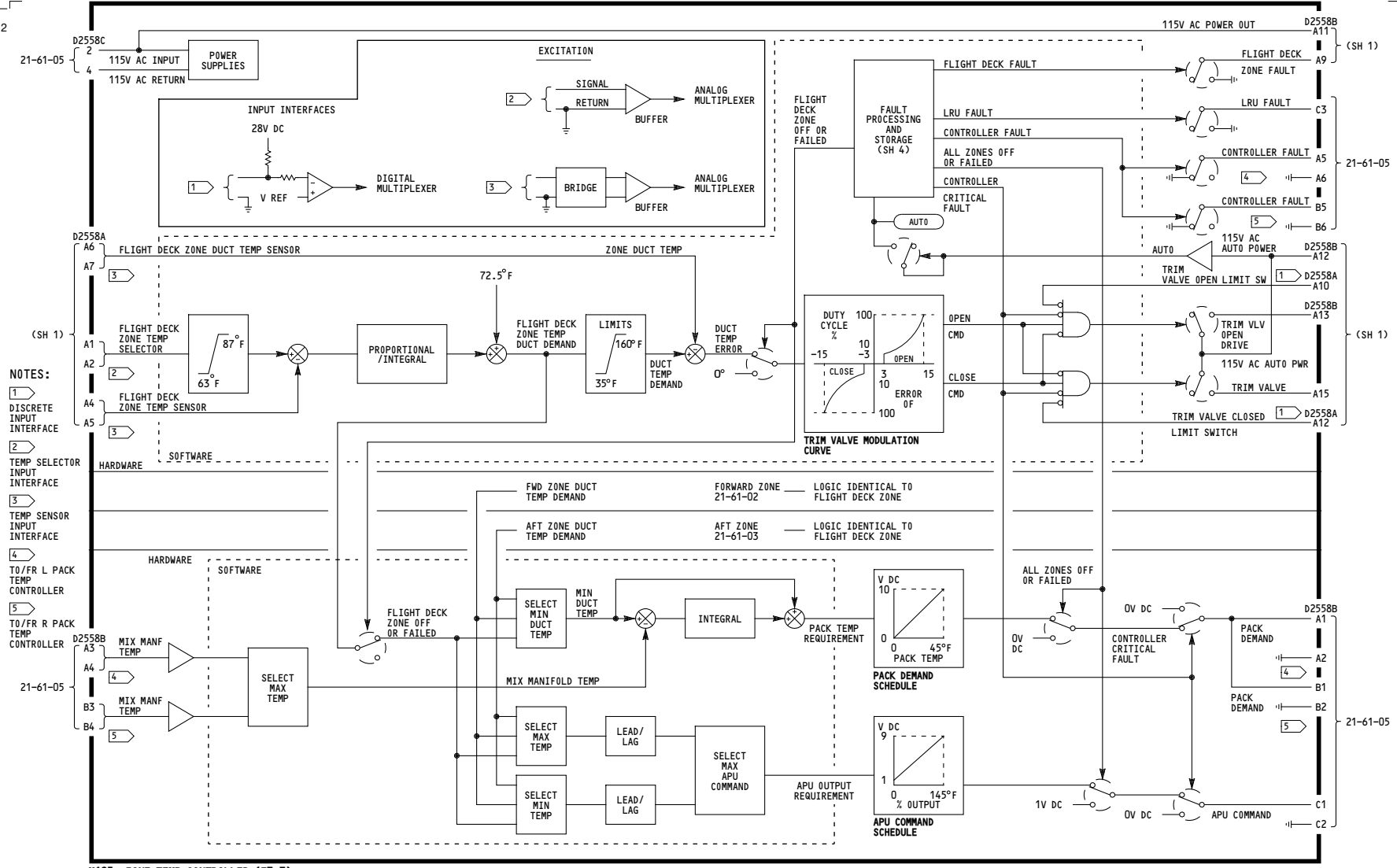


- NOTES:**
- CONDITIONED AIR
 - COLD AIR
 - HOT AIR

ALL	FLIGHT DECK ZONE TEMPERATURE CONTROL
D280N032S	

21-61-01

5012

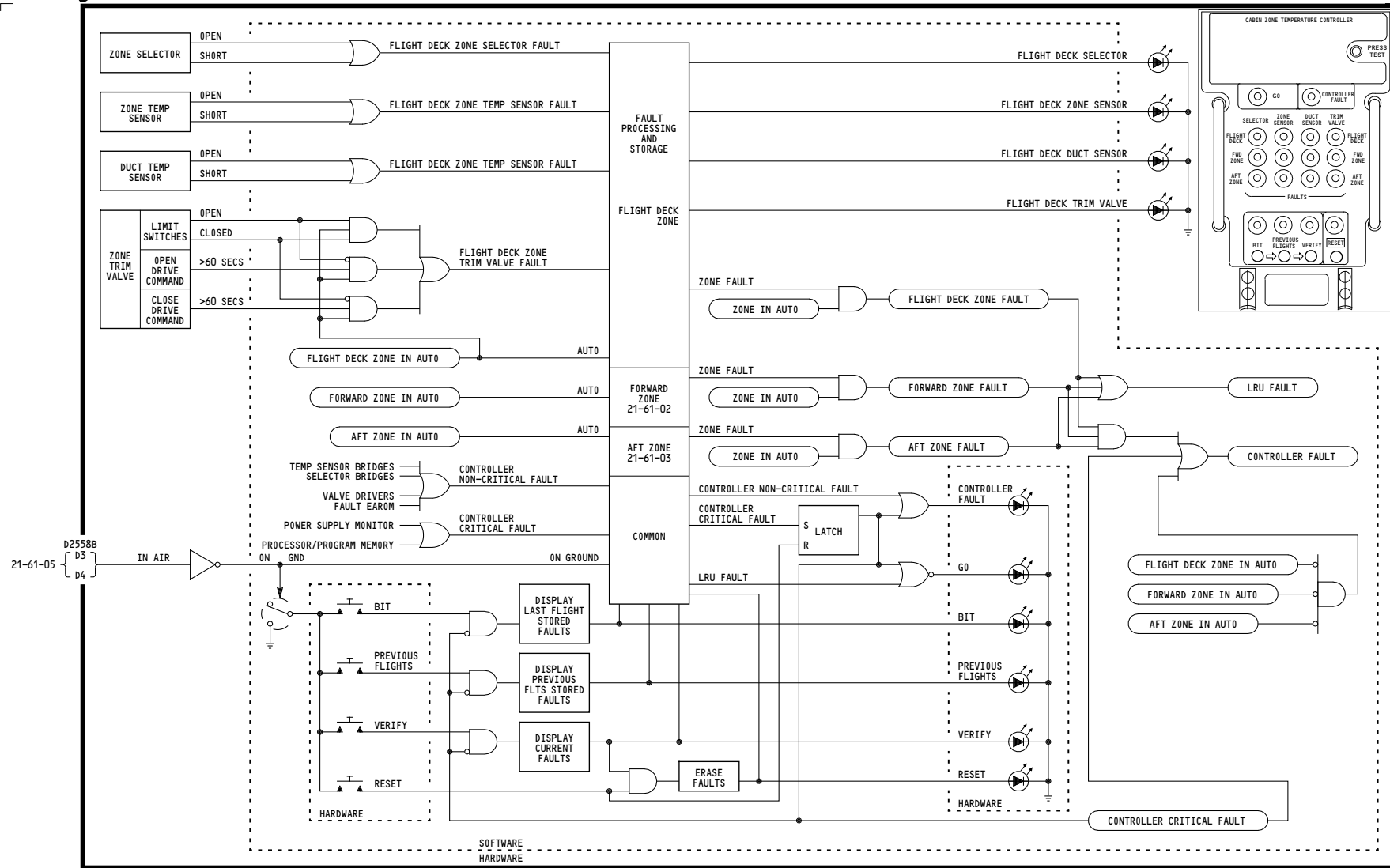


M195 ZONE TEMP CONTROLLER (E3-3)

ALL	<p>FLIGHT DECK ZONE TEMPERATURE CONTROL</p> <p>D280N032S</p>
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21-61-01

5012



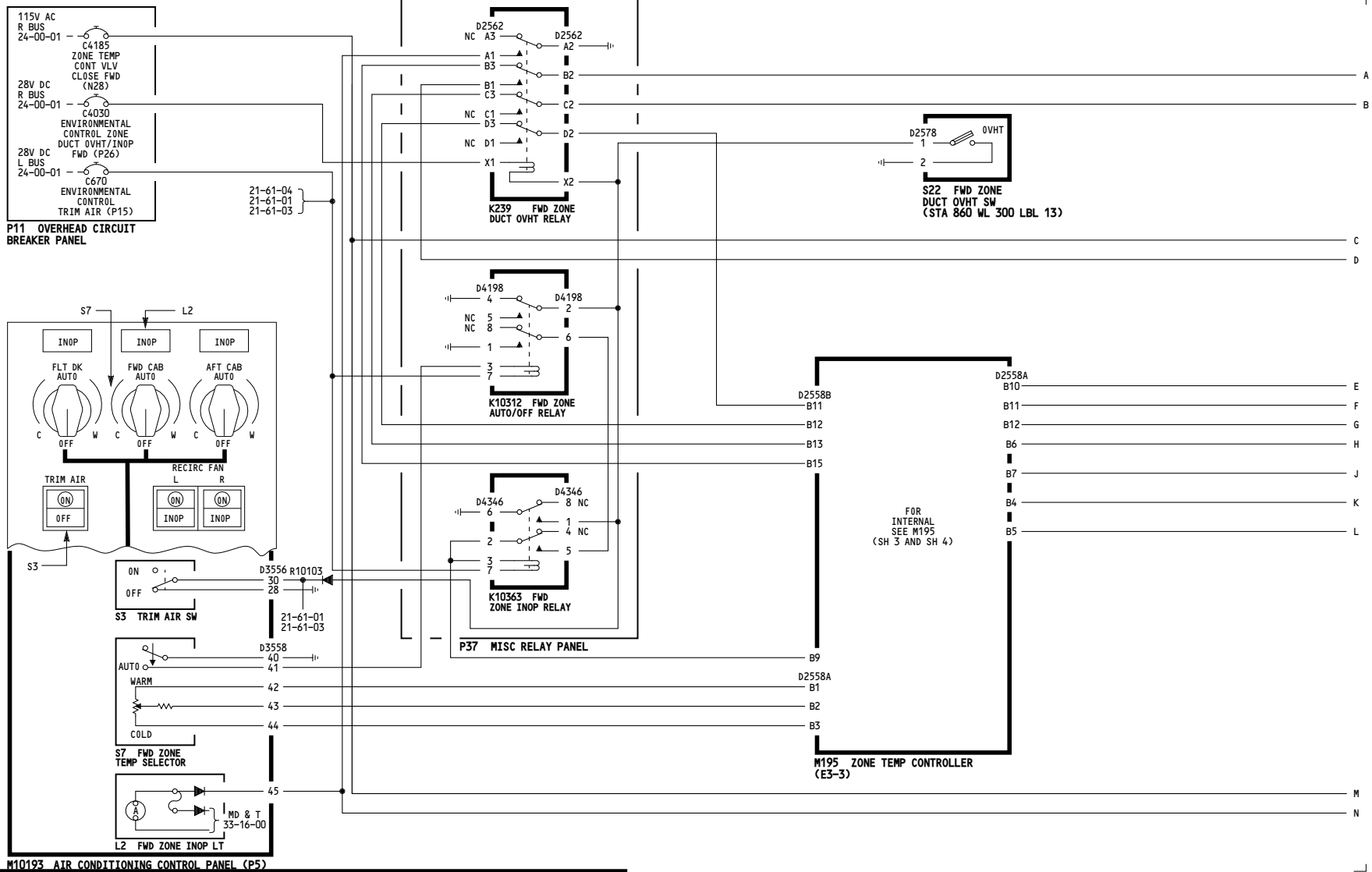
ALL

FLIGHT DECK ZONE TEMPERATURE CONTROL

D280N032S

21-61-01

5018

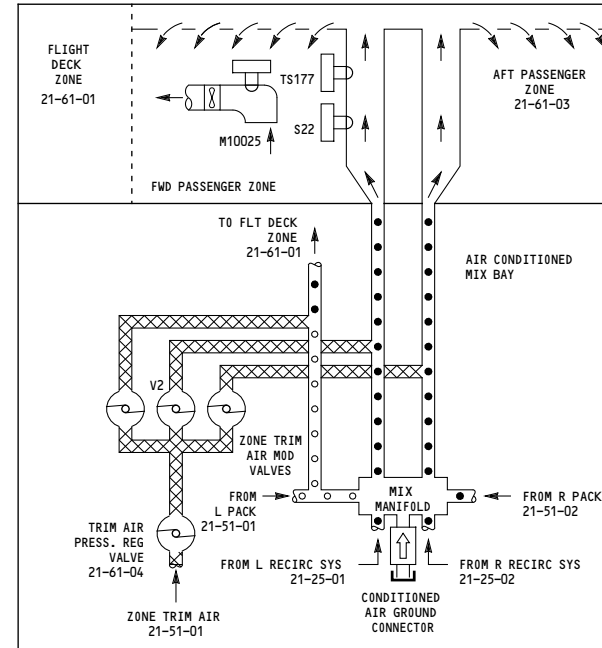
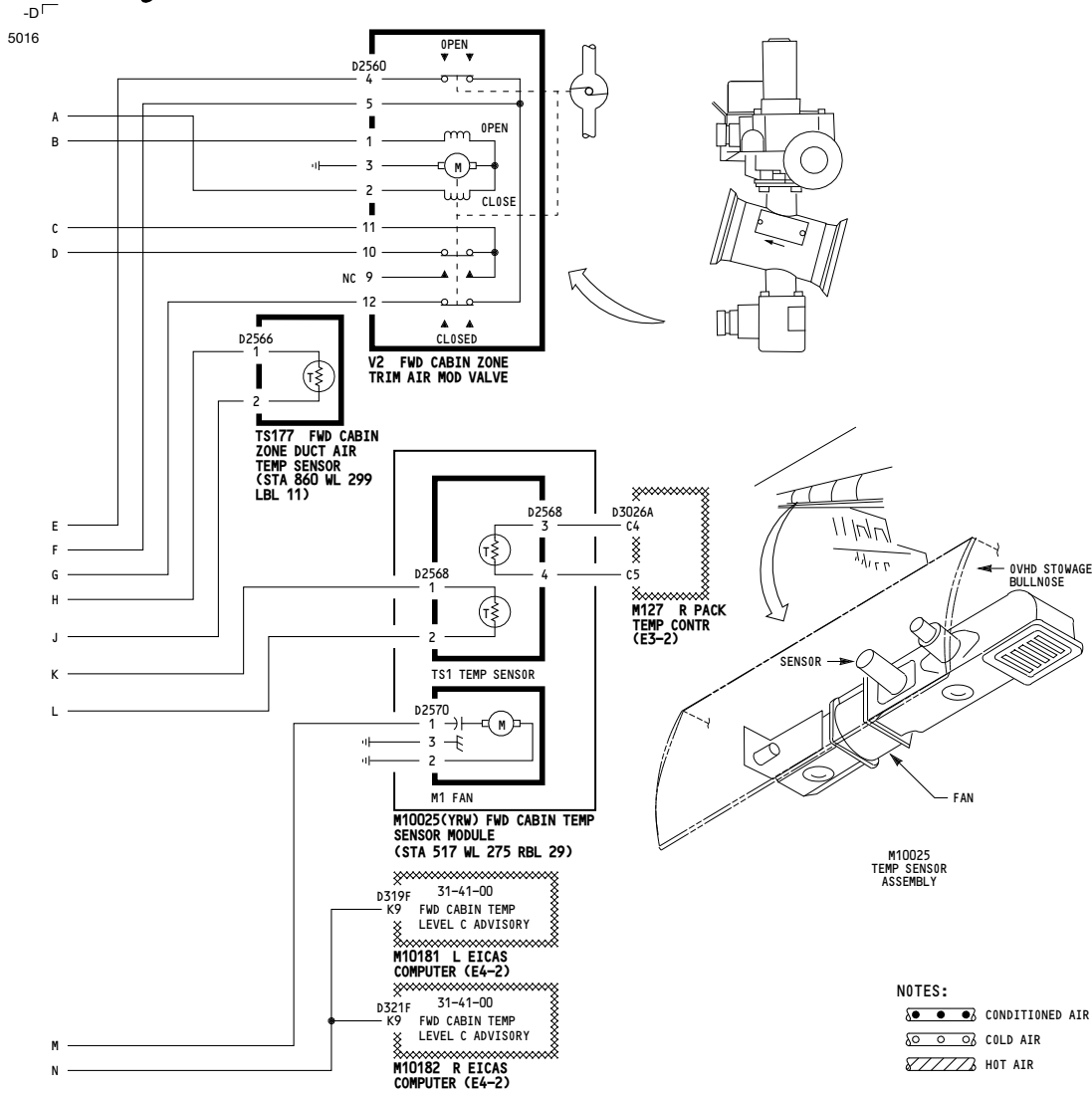


ALL

FORWARD PASSENGER CABIN ZONE TEMPERATURE CONTROL

D280N032S

21-61-02



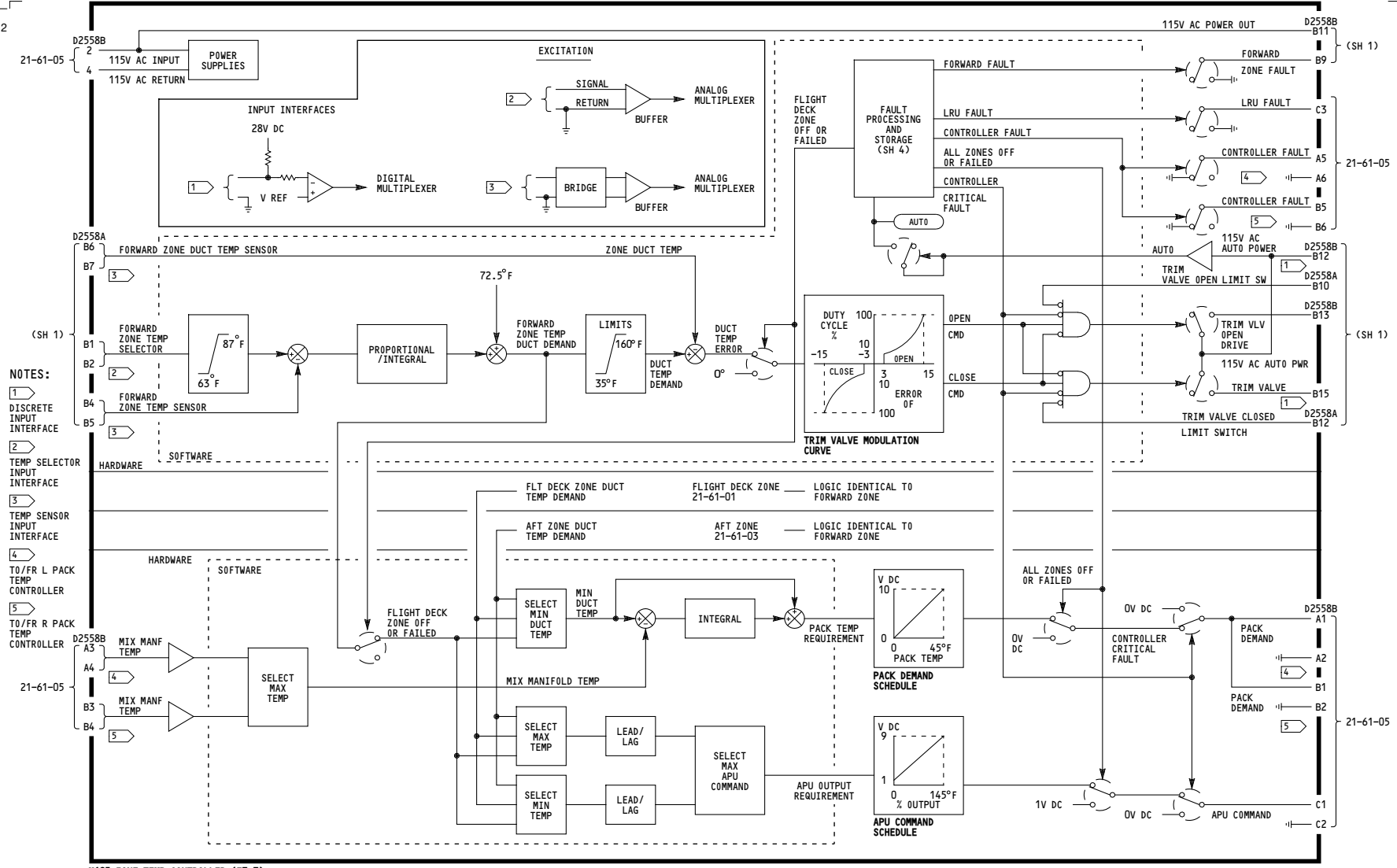
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FORWARD PASSENGER CABIN ZONE TEMPERATURE CONTROL

D280N032S

21-61-02

5012



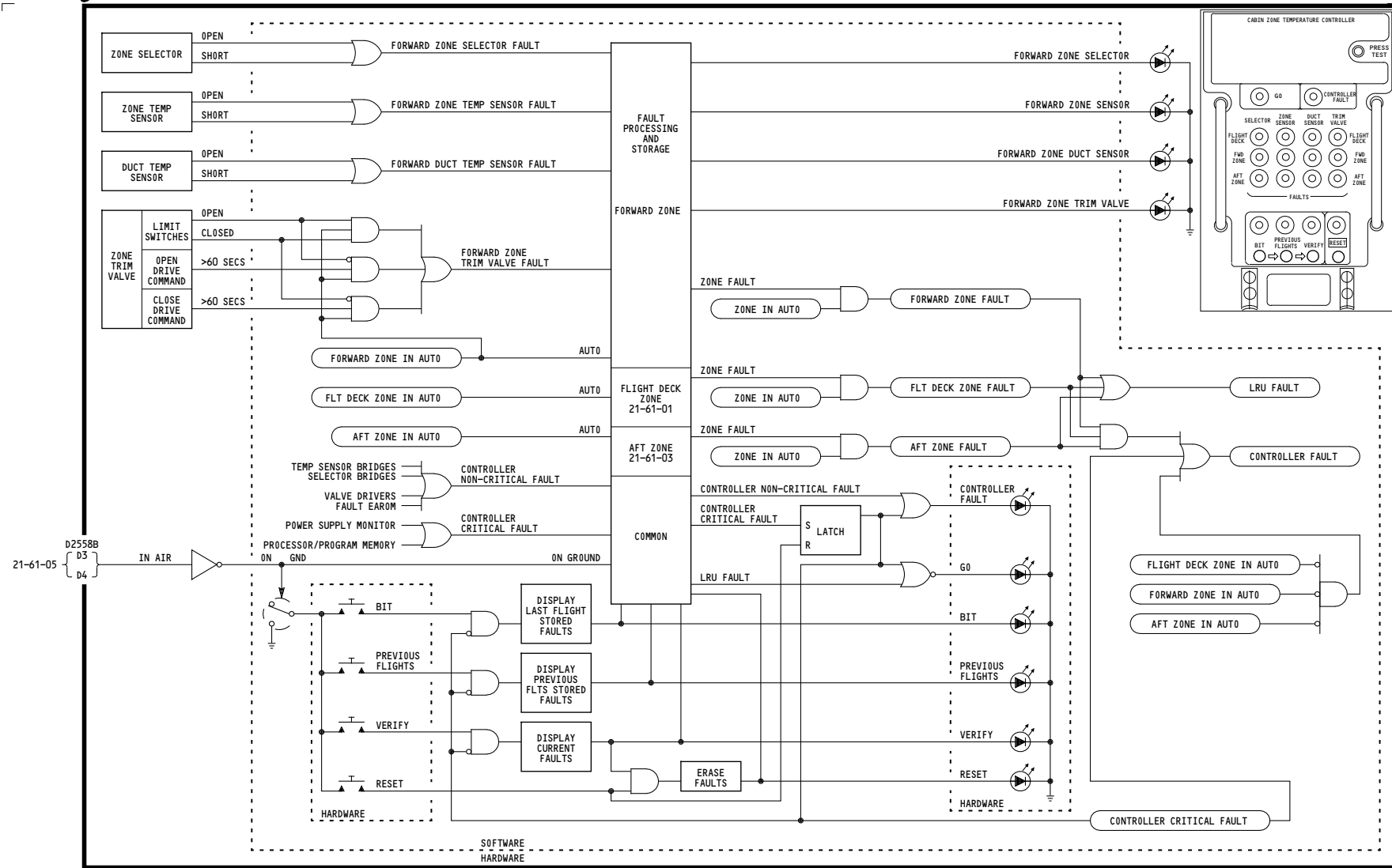
ALL

**FORWARD PASSENGER CABIN
ZONE TEMPERATURE CONTROL**

D280N032S

21-61-02

5012



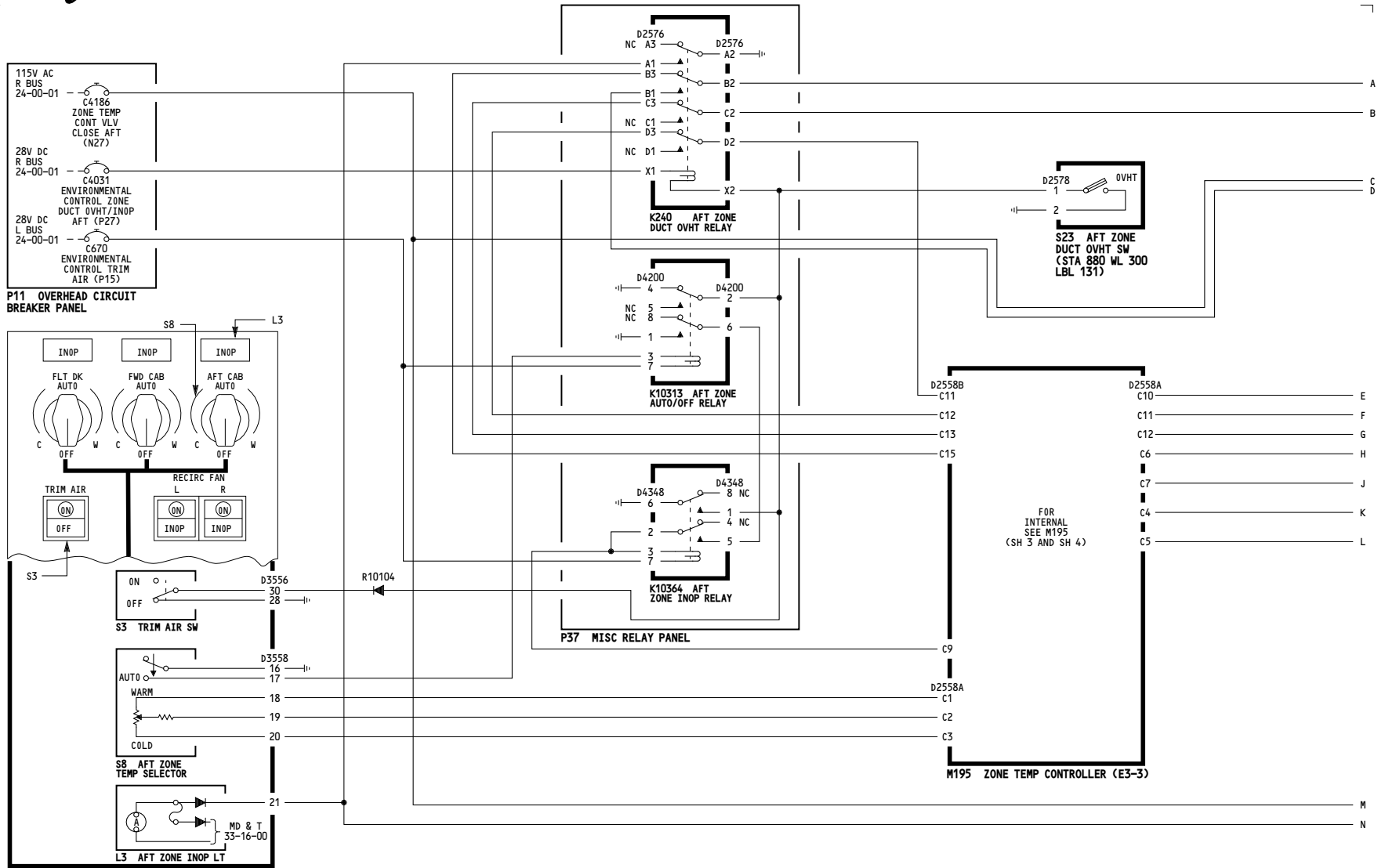
M195 ZONE TEMPERATURE CONTROLLER (E3-3)

ALL	<p>FORWARD PASSENGER CABIN ZONE TEMPERATURE CONTROL</p> <p>D280N032S</p>
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21-61-02

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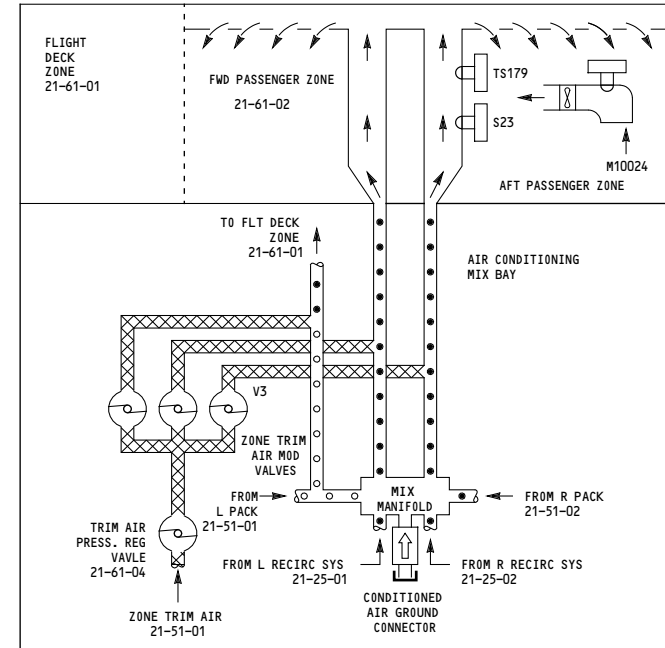
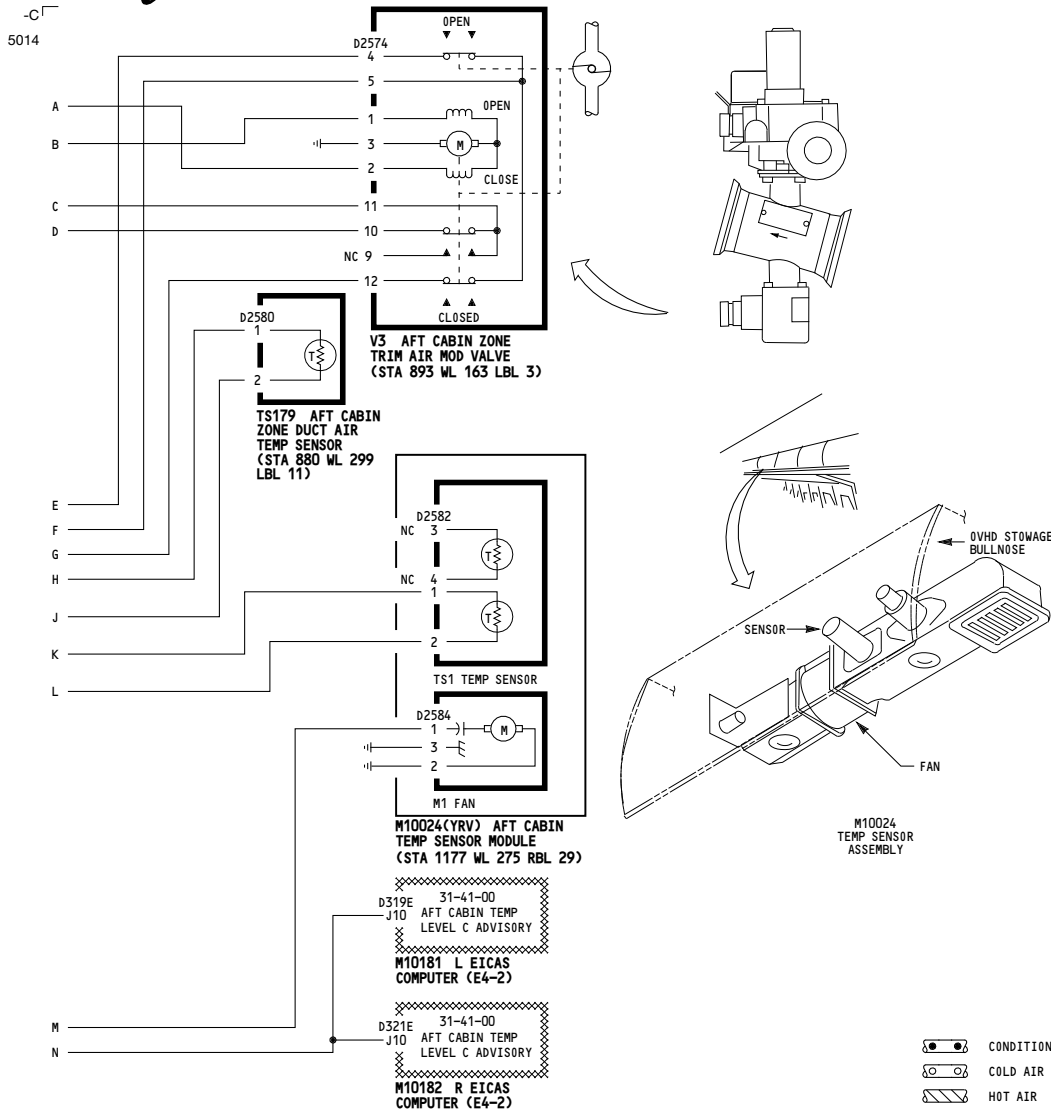
5018



<p>ALL</p>	<p>AFT PASSENGER CABIN ZONE TEMPERATURE CONTROL</p> <p>D280N032S</p>
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21-61-03

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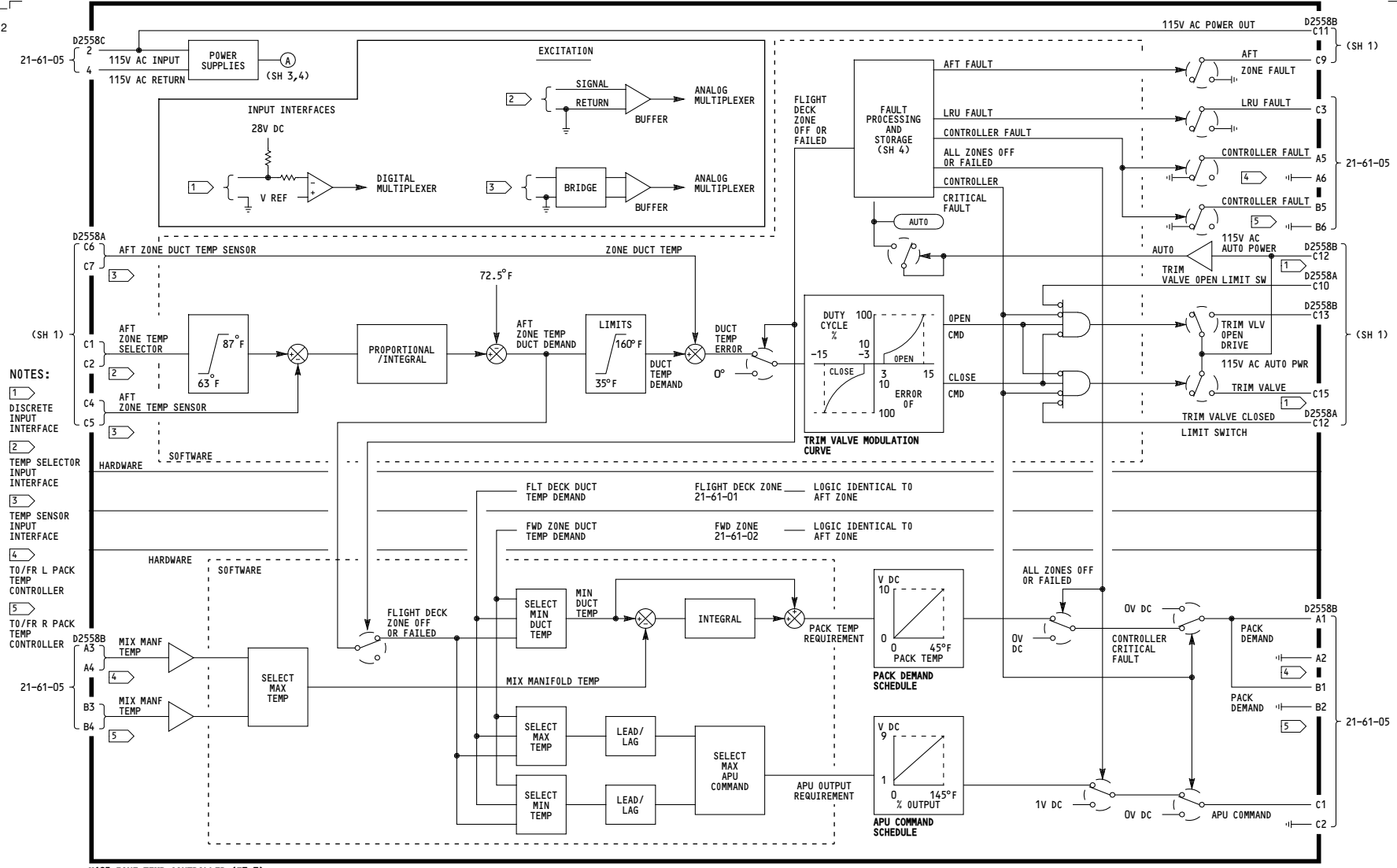
ALL

AFT PASSENGER CABIN ZONE TEMPERATURE CONTROL

D280N032S

21-61-03

5012



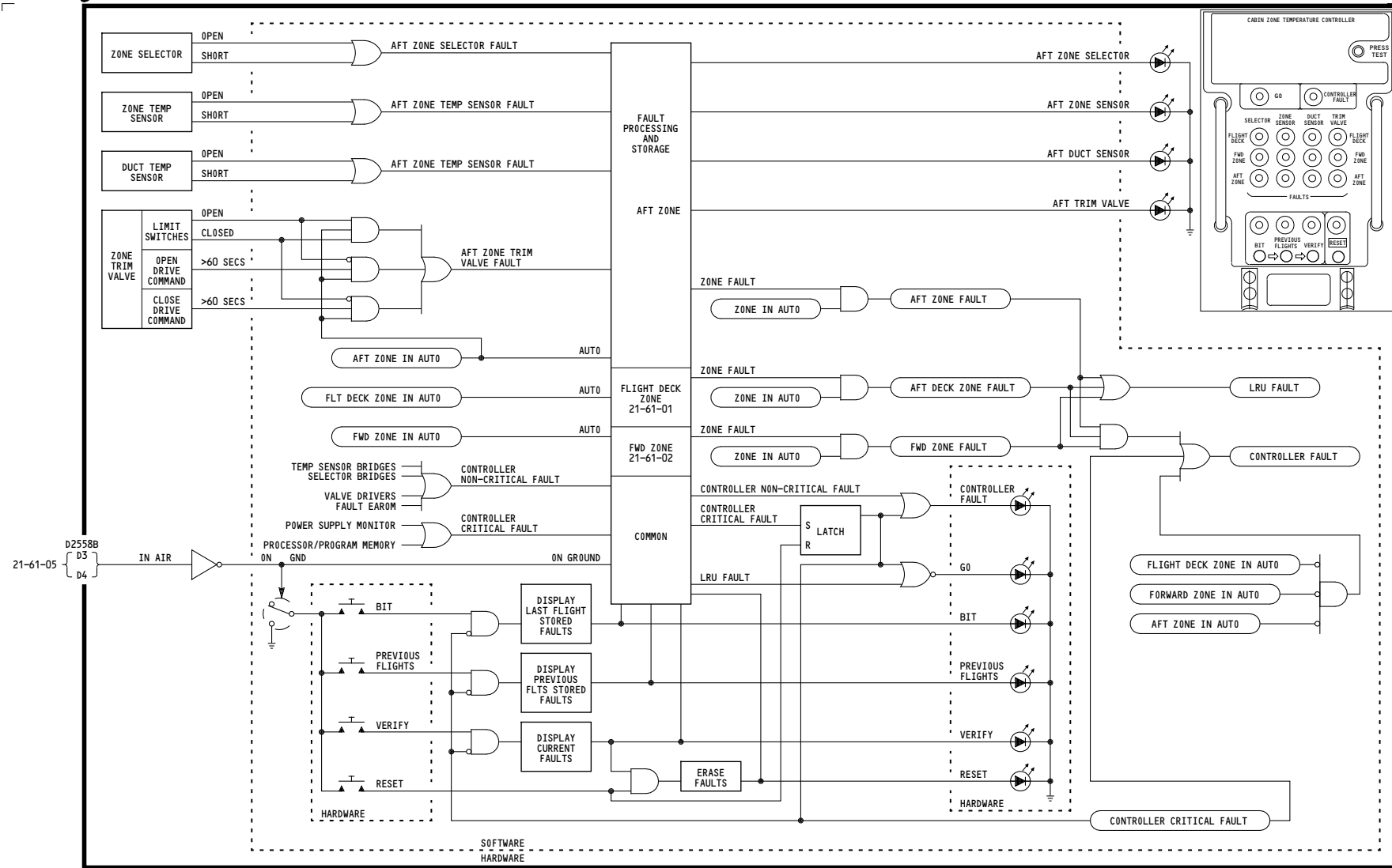
- NOTES:**
- 1 DISCRETE INPUT INTERFACE
 - 2 TEMP SELECTOR INPUT INTERFACE
 - 3 TEMP SENSOR INPUT INTERFACE
 - 4 TO/FR L PACK TEMP CONTROLLER
 - 5 TO/FR R PACK TEMP CONTROLLER

M195 ZONE TEMP CONTROLLER (E3-3)

ALL	AFT PASSENGER CABIN ZONE TEMPERATURE CONTROL
D280N032S	

21-61-03

5012

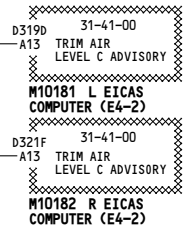
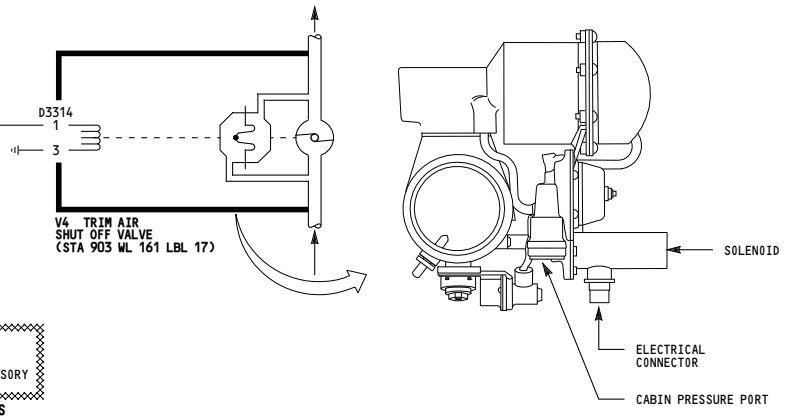
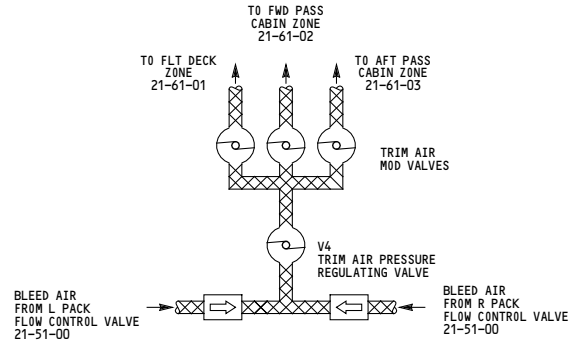
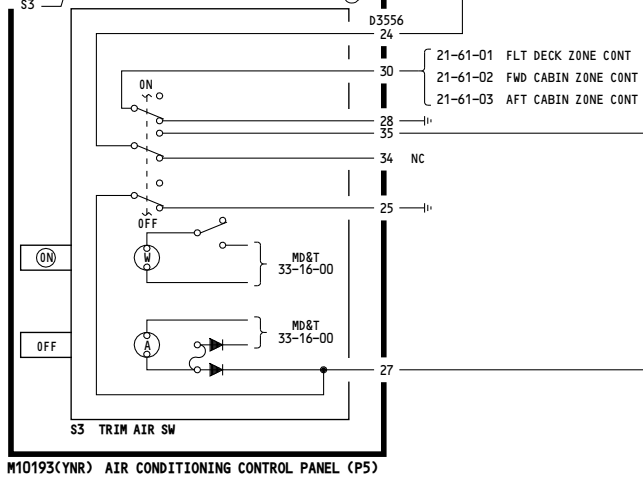
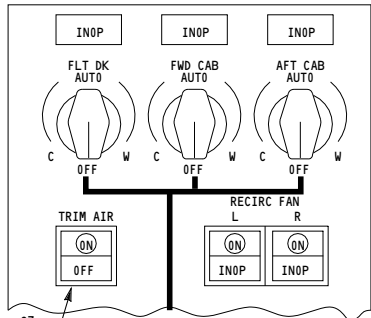
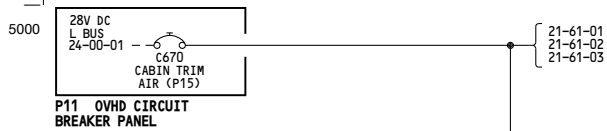


M195 ZONE TEMPERATURE CONTROLLER (E3-3)

ALL	<p>AFT PASSENGER CABIN ZONE TEMPERATURE CONTROL</p> <p>D280N032S</p>
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21-61-03

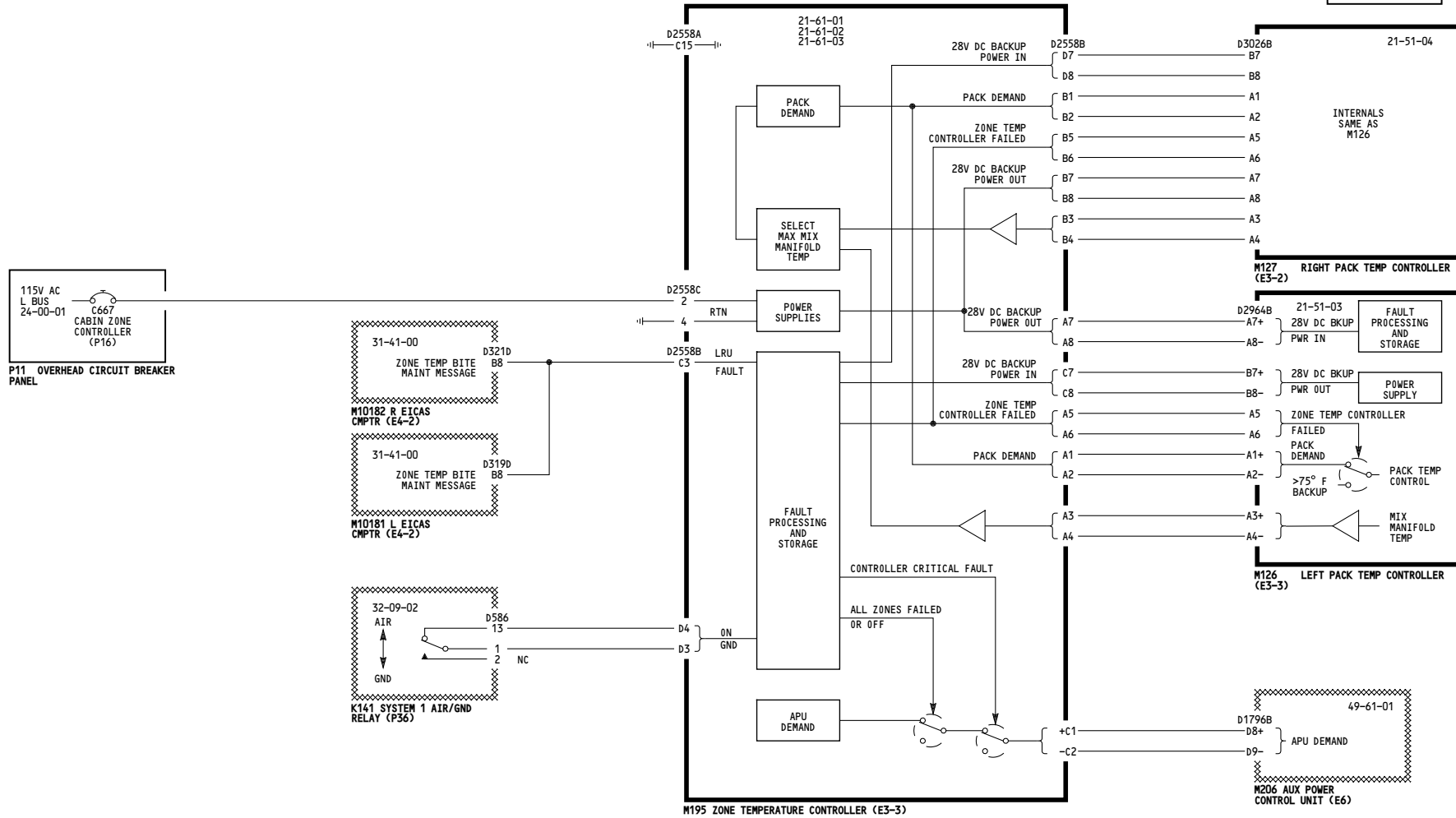
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NOTES:
HOT AIR

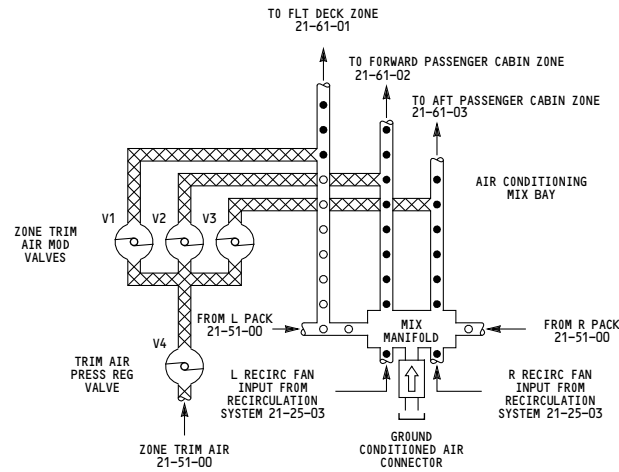
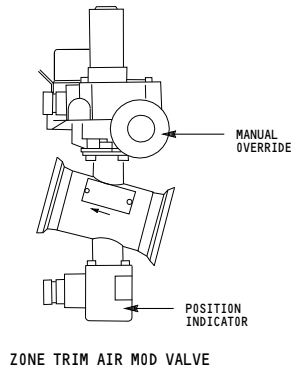
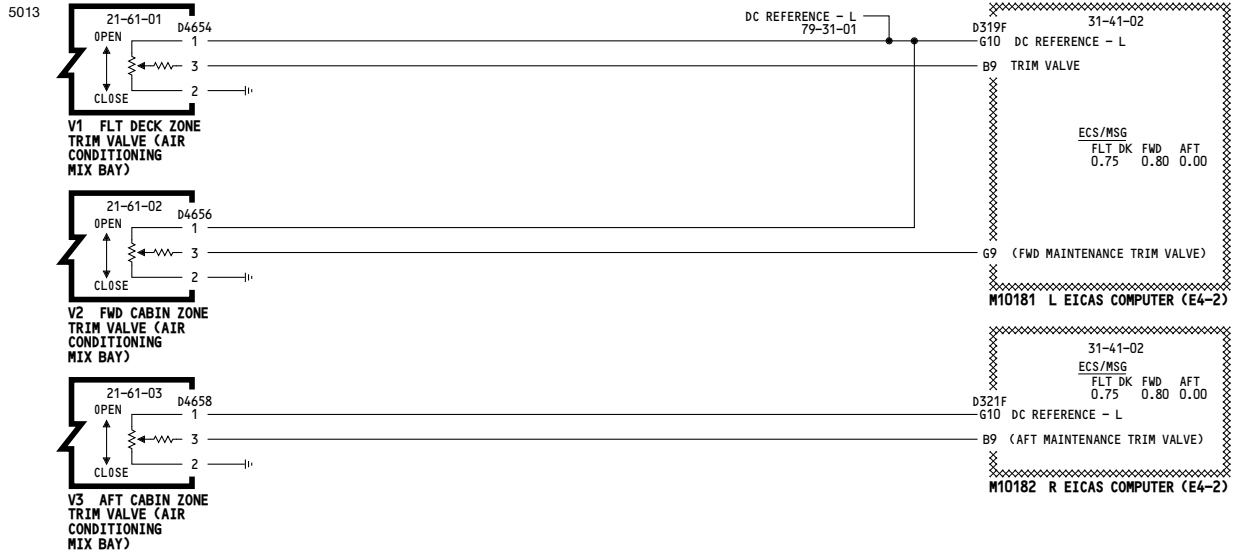
ALL	TRIM AIR PRESSURE REGULATION
	D280N032S

WIRING DIAGRAMS
21-61-51



ALL	ZONE TEMPERATURE CONTROLLER
	D280N032S

21-61-05



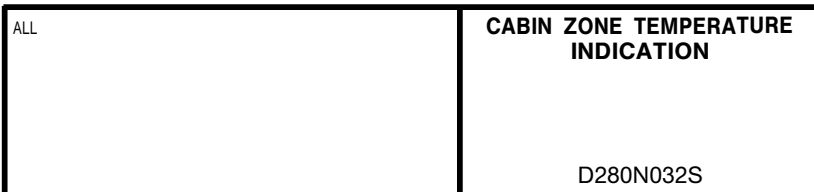
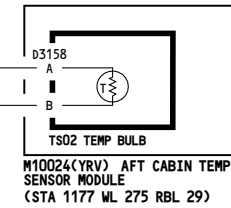
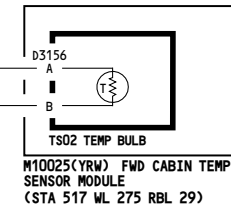
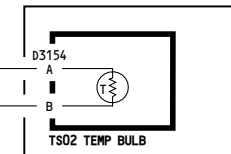
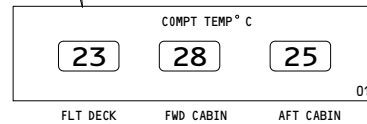
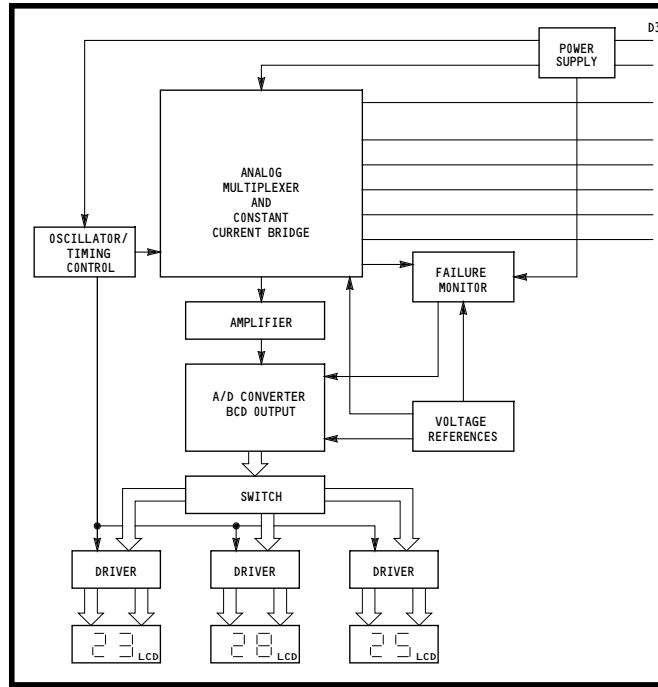
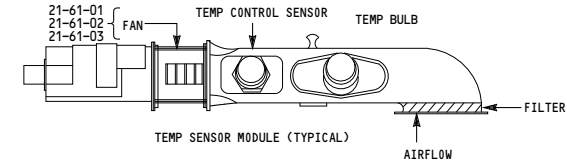
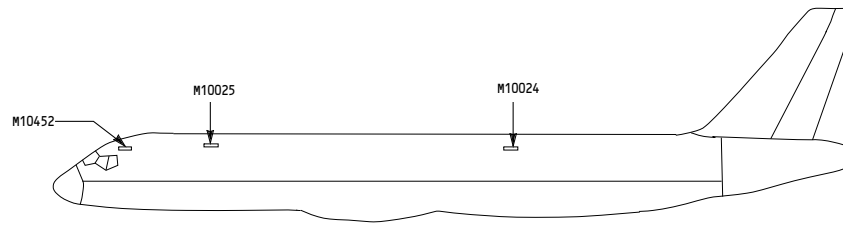
NOTES:

- CONDITIONED AIR
- COLD AIR
- HOT AIR

ALL	<p>ZONE TRIM VALVE POSITION INDICATION</p> <p>D280N032S</p>
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-B
5013

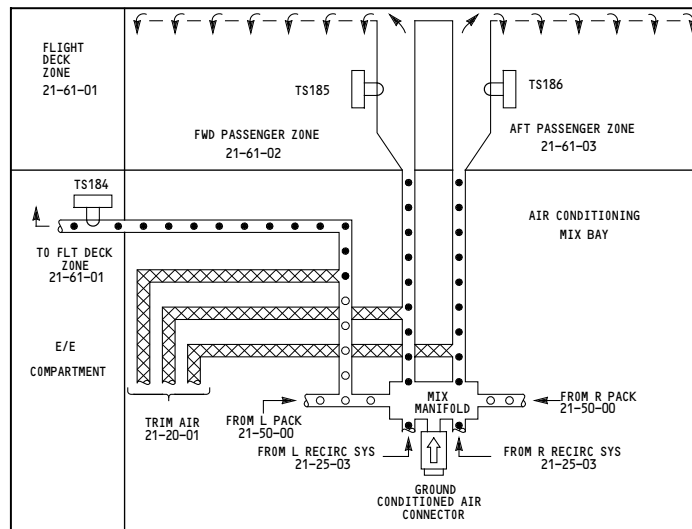
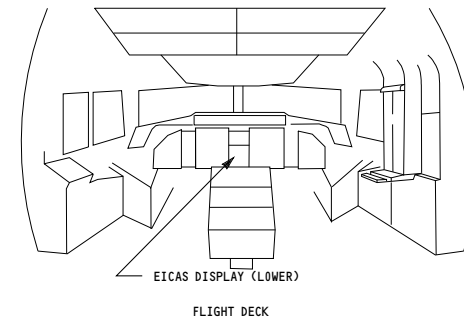
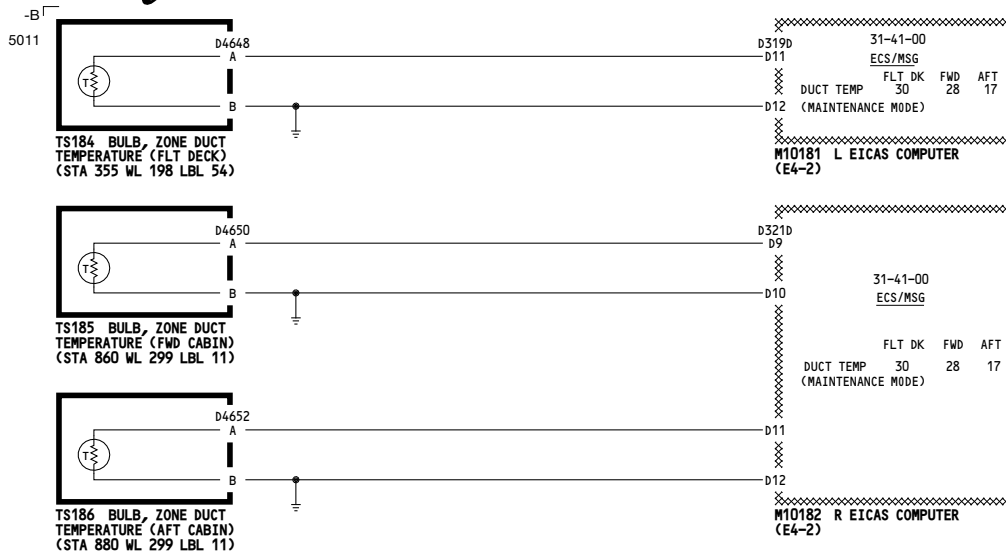
WIRING DIAGRAMS
21-65-11



21-65-01

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●●●●● CONDITIONED AIR
○ ○ ○ ○ ○ COLD AIR
XXXXXXX HOT AIR

ALL	<p>ZONE DUCT TEMPERATURE INDICATION</p> <p>D280N032S</p>
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