



# ASPC Project



<b>END CUSTOMER</b>	: Arya Sasol Polymer Company
<b>CONTRACTOR</b>	: DYPNF Co., Ltd.
<b>VENDOR NAME</b>	: Airpack Netherlands BV
<b>EQUIPMENT DESCRIPTION</b>	: Screw Compressor & Roots Blower
<b>PURCHASE ORDER NUMBER</b>	: PO-PC2312-08

Customer Document : 3944-VD-0171-DYP-RE-400-DIA-0082  
Number

Airpack Document Number : 23383-27

Document Title : Cause & Effect diagram

Review Code and Status		Contractor Initials/Signature	Date signed
<input checked="" type="checkbox"/>	<b>Code 1</b> <b>REJECTED</b> - Vendor to revise and Resubmit. Work cannot proceed		6 Aug 2025
<input type="checkbox"/>	<b>Code 2</b> Comments As Noted - Work May proceed, subject to compliance with and incorporation of comments		
<input type="checkbox"/>	<b>Code 3</b> No Comments - Work may proceed.		
<input type="checkbox"/>	<b>Code 4</b> Information only - Review not required.		

01	Issued for Approval	25-06-2025	SC	SC	JJ
00	Issued for Approval	13-05-2025	SC	SC	JJ
Rev. No.	Description	Date	Prepared by	Checked by	Approved by



**DOCUMENT TITLE: 23383-27**  
**Cause & Effect chart Nitrogen Screw Compressor**

CAUSE				EFFECT	Tag. Number	N/A	T.B.A.	T.B.A.	T.B.A.	T.B.A.	T.B.A.
Instrument Tag	Signal	Type	Description		Component	displ. readout on DCS	Compressor	Compressor	Compressor	Common trip	Common trip (to DCS)
T.B.A.	ESD	BUTTON	EMERGENCY SHUT DOWN (LPS)						x	x	x
T.B.A.	ESD	ESD	EMERGENCY SHUT DOWN (DCS)						x	x	x
T.B.A.	STOP	BUTTON	STOP BUTTON (LPS)				x				
T.B.A.	STOP	BUTTON	STOP BUTTON (DCS)				x				
T.B.A.	START	BUTTON	START BUTTON (LPS)			x					
T.B.A.	START	BUTTON	START BUTTON (DCS)			x					
44PI-4001003 44PI-4002003	TRIP	LL	COMPRESSOR INLET PRESSURE			x			x	x	x
44TI-4001056 44TI-4002056	TRIP	HH	COMPRESSOR OIL TEMPERATURE			x			x	x	x
44PI-4001054 44PI-4002054	TRIP	LL	COMPRESSOR OIL PRESSURE			x			x	x	x
44PI-4001011 44PI-4002011	TRIP	HH	COMPRESSOR DISCHARGE TEMPERATURE			x			x	x	x
44TI-4001057 44TI-4001057	TRIP	HH	COMPRESSOR DISCHARGE TEMPERATURE			x			x	x	x
NOTE 1: This nitrogen screw compressor cause & effect is applicable for 44C-40001A/B											

Please clarify why compressor takes no action from high/low alarms?  
 Are they just alarm and has no any other actions?

The main motor or Ventilation Fan motor or Oil Demister motor should provide information about the condition of other motors when it is turned off.  
 For example, if the ventilation fan motor is turned off, the airpack should provide information about whether the main motor and oil demister motor should be turned off.

Trip lamp deleted from LCP.



**DOCUMENT TITLE: 23383-27**  
**Cause & Effect chart Air Screw Compressor**

CAUSE				EFFECT						
				Component	Tag. Number	N/A	T.B.A.	T.B.A.	T.B.A.	T.B.A.
Instrument Tag	Signal	Type	Description	displ. readout on DCS	Compressor	Compressor	Compressor	Common trip	Common trip (to DCS)	
				READOUT	START	STOP	TRIP	TRIP SIGNAL	TRIP LAMP	
T.B.A.	ESD	BUTTON	EMERGENCY SHUT DOWN (LPS)	x			x	x	x	
T.B.A.	ESD	ESD	EMERGENCY SHUT DOWN (DCS)	x			x	x	x	
T.B.A.	STOP	BUTTON	STOP BUTTON (LPS)	x		x				
T.B.A.	STOP	BUTTON	STOP BUTTON (DCS)	x		x				
T.B.A.	START	BUTTON	START BUTTON (LPS)	x	x					
T.B.A.	START	BUTTON	START BUTTON (DCS)	x	x					
44PI-8004001 44PI-8004003 44PI-8004013 44PI-8004016 44PI-8005001 44PI-8005004 44PI-8005006	TRIP	LL	COMPRESSOR INLET PRESSURE	x			x	x	x	
44TI-8004041 44TI-8004042 44TI-8004043 44TI-8004044 44TI-8005041 44TI-8005042 44TI-8005043	TRIP	HH	COMPRESSOR OIL TEMPERATURE	x			x	x	x	
44PI-8004041 44PI-8004042 44PI-8004043 44PI-8004044 44PI-8005041 44PI-8005042 44PI-8005043	TRIP	LL	COMPRESSOR OIL PRESSURE	x			x	x	x	
44PI-8004002 44PI-8004004 44PI-8004014 44PI-8004017 44PI-8005002 44PI-8005005 44PI-8005007	TRIP	HH	COMPRESSOR DISCHARGE PRESSURE	x			x	x	x	
44TI-8004001 44TI-8004003 44TI-8004009 44TI-8004011 44TI-8005001 44TI-8005003 44TI-8005004	TRIP	HH	COMPRESSOR DISCHARGE TEMPERATURE	x			x	x	x	
NOTE 1: This air screw compressor cause & effect is applicable for 44C-80001A/B, 44C-80004A/B and 44C-80005A/B/C										

Trip lamp deleted from LCP.



**DOCUMENT TITLE: 23383-27**  
**Cause & Effect chart Roots Blower**

CAUSE			
Instrument Tag	Signal	Type	Description
T.B.A.	ESD	BUTTON	EMERGENCY SHUT DOWN (LPS)
T.B.A.	ESD	ESD	EMERGENCY SHUT DOWN (DCS)
T.B.A.	STOP	BUTTON	STOP BUTTON (LPS)
T.B.A.	STOP	BUTTON	STOP BUTTON (DCS)
T.B.A.	START	BUTTON	START BUTTON (LPS)
T.B.A.	START	BUTTON	START BUTTON (DCS)
44PI-8004005	TRIP	LL	BLOWER INLET PRESSURE
44PI-8004009	TRIP	HH	BLOWER DISCHARGE PRESSURE
44PI-8004010	TRIP	HH	BLOWER DISCHARGE TEMPERATURE
44TI-8004005			
44TI-8004007			
NOTE 1: This roots blower cause & effect is applicable for 44C-80002A/B			

EFFECT	Tag. Number	N/A	T.B.A.	T.B.A.	T.B.A.	T.B.A.	T.B.A.
	Component	displ. readout on DCS	Blower	Blower	Blower	Common trip	Common trip (to DCS)
	READOUT	START	STOP	TRIP	TRIP SIGNAL	TRIP LAMP	
	x			x	x	x	
	x			x	x	x	
	x		x				
	x		x				
	x	x					
	x	x					
	x			x	x	x	
	x			x	x	x	

Trip lamp deleted from LCP.