

# PA 32: INVITATION TO BID **PART A**

YOU ARE HEREBY INVITED TO BID	OR REQUIREME	NTS OF	THE (NAME OF	- DEPA	ARIMEN	1/ PUBLIC EI	VIIIY)		
BID NUMBER: ID 3170931	CLOSIN	NG DATE	29/01/29	024		CLOSING T	ME:	11:00	)
SERVICE AN	D REPAIR	2X (	COMPRESS	SORS	AT	DEPART	MENT	OF	LABOUR
DESCRIPTION SILVERTON									
THE SUCCESSFUL BIDDER WILL BE				ITTEN	CONTR	ACT FORM (	DPW04.1	GS or D	PW04.2 GS).
BID RESPONSE DOCUMENTS MAY		IN THE	BID						
BOX SITUATED AT (STREET ADDRES 251 NANA SITA STREET	SS)								
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PRETORIA,	J SETTOME S	TIXE	1						
OR POSTED TO:									
PRIVATE BAG X229									
PRETORIA, 0001									
SUPPLIER INFORMATION			Twintin.	111		HIVE BY	1711120	ATINA.	Sund-o-1
NAME OF BIDDER									
POSTAL ADDRESS									
STREET ADDRESS		ų.							
TELEPHONE NUMBER	CODE				NUMB	ER			
CELLPHONE NUMBER									
FACSIMILE NUMBER	CODE				NUMB	ER			
E-MAIL ADDRESS									
VAT REGISTRATION NUMBER									
	TCS PIN:			OR	CSD N	lo:			
CICNATURE OF RIDDER				DATE					
SIGNATURE OF BIDDER CAPACITY UNDER WHICH THIS BID	S			DATE				_	
SIGNED (Attach proof of authority to									
sign this bid; e.g. resolution of									
directors, etc.)									
DTAL			TOTAL	BID					
JMBER OF			PRICE	(¹ALL					
SMC SMS			ADDI 10	ARIE	:1				

TOTAL NUMBER OF ITEMS OFFERED		TOTAL BID PRICE (¹ALL APPLICABLE TAXES)	R
BIDDING PROCE	EDURE ENQUIRIES MAY BE DIRECTED TO:	TECHNICAL IN	IFORMATION MAY BE DIRECTED TO:
DEPARTMENT/ PUBLIC ENTITY CONTACT PERSON TELEPHONE	PUBLIC WORKS & INFRASTRUCTURE  MS. M. MANALA  012 492 3020	CONTACT PERSON TELEPHONE NUMBER FACSIMILE	LM MABITSELA 082 802 9072 N/A
NUMBER FACSIMILE NUMBER	N/A	NUMBER E-MAIL ADDRESS	LESIBA.MABITSELA@DPW.GOV.ZA
E-MAIL ADDRESS	MMABORE.MANALA@DPW.GOV.ZA		

# PART B TERMS AND CONDITIONS FOR BIDDING

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PA-32: Invitation to Bid

1.1.	BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2.	ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED-(NOT TO BE RE-TYPED) OR ONLINE
1.3.	BIDDERS MUST REGISTER ON THE CENTRAL SUPPLIER DATABASE (CSD) TO UPLOAD MANDATORY INFORMATION NAMELY: (BUSINESS REGISTRATION/DIRECTORSHIP/ MEMBERSHIP/IDENTITY NUMBERS; TAX COMPLIANCE STATUS; AND BANKING INFORMATION FOR VERIFICATION PURPOSES).
1.4.	WHERE A BIDDER IS NOT REGISTERED ON THE CSD, MANDATORY INFORMATION NAMELY: (BUSINESS REGISTRATION/DIRECTORSHIP/ MEMBERSHIP/IDENTITY NUMBERS; TAX COMPLIANCE STATUS MAY NOT BE SUBMITTED WITH THE BID DOCUMENTATION.
1.5.	THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT 2000 AND THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER LEGISLATION OR SPECIAL CONDITIONS OF CONTRACT.
2.	TAX COMPLIANCE REQUIREMENTS
2.1	BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2	BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3	APPLICATION FOR TAX COMPLIANCE STATUS (TCS) OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.
2.4	BIDDERS MAY ALSO SUBMIT A PRINTED TCS TOGETHER WITH THE BID.
2.5	IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A

3.1. IS THE BIDDER A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?

3.2. DOES THE BIDDER HAVE A BRANCH IN THE RSA?

3.3. DOES THE BIDDER HAVE A PERMANENT ESTABLISHMENT IN THE RSA?

3.4. DOES THE BIDDER HAVE ANY SOURCE OF INCOME IN THE RSA?

3.5. YES NO

3.6. DOES THE BIDDER HAVE ANY SOURCE OF INCOME IN THE RSA?

3.7. YES NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN, IT IS NOT A REQUIREMENT TO OBTAIN A TAX COMPLIANCE STATUS / TAX COMPLIANCE SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3

2.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD

# NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID. Note Well:

SEPARATE PROOF OF TCS / PIN / CSD NUMBER.

NUMBER MUST BE PROVIDED.

ABOVE.

- a) In respect of non VAT vendors the bidders may not increase the bid price under Section 67(1) of the Value Added Tax Act of 1991 where the relevant transaction would become subject to VAT by reason of the turnover threshold being exceeded and the bidder becomes liable for VAT.
- b) All delivery costs must be included in the bid price, for delivery at the prescribed destination.
- c) The price that appears on this form is the one that will be considered for acceptance as a firm and final offer.
- d) The grand total in the pricing schedule(s), inclusive of VAT, attached to the bid offer must correlate and be transferred to this form (PA32).
- e) Where there are inconsistencies between the grand total price offer in the pricing schedule(s) and the PA32 price offer, the price offer on the PA32 shall prevail and deemed to be firm and final. No further correspondence shall be entered into in this regard.

<sup>1</sup> All applicable taxes" includes value- added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies

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Any reference to words "Bid" or Bidder' herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender' or "Tenderer".

THIS FORM IS ALIGNED TO SB01

For Internal Use

Version: 2023/01



# PA-03 (EC): NOTICE AND INVITATION FOR QUOTATION

#### THE DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE INVITES QUOTATIONS FOR:

Project title:	SERVICE AND REPA	NR 2X COMPRESSORS	AT DEPARTMENT OF LABOUR		
Quotation no:	ID 3170931	Reference no:	ID 3170931		
Advertising date:	22/01/2024	Closing date:	29/01/2024		
Closing time:	11:00	Validity period:	84 Calendar days		

#### 1. REQUIRED CIDB GRADING

It is estimated that tenderers should have a CIDB contractor grading designation of 1 ME or higher, or select tender value range select class of construction works\* or higher.

It is estimated that potentially emerging enterprises should have a CIDB contractor grading designation of **Not applicable Not applicable PE** or higher, or **Not applicable Not applicable PE**\* or higher.

# 2. FUNCTIONALITY CRITERIA APPLICABLE YES NO NO Note 1: Failure to meet minimum functionality score will result in the tenderer being disqualified.

Functionality criteria <sup>1</sup> :	Weighting factor:
Total	100 Points

#### 3. METHOD TO BE USED TO CALCULATE POINTS FOR SPECIFIC GOALS

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer".

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<sup>\*</sup>Select tender value range and select class of construction works" or select "Not applicable" where only one class of construction works is applicable.

<sup>\*</sup>Select tender value range and select class of construction works" or select "Not applicable" where no or only one class of construction works is applicable.

<sup>&</sup>lt;sup>1</sup>The points allocated to each functionality criterion should not be generic but should be determined separately for each tender on a case by case basis.



## 3.1. For procurement transaction with rand value greater than R2 000, 00 and up to R1 Million (Inclusive of all applicable taxes) the specific goals listed in table 1 below are applicable.

Serial No	Specific Goals	Preference Points Allocated out of 20	Documentation to be submitted by bidders to validate their claim
1.	An EME or QSE which is at least 51% owned by black people (Mandatory)	10	SANAS Accredited BBBEE     Certificate or Sworn Affidavit where applicable.
2.	Located in a specific Local Municipality or District Municipality or Metro or Province area for work to be done or services to be rendered in that area (Mandatory)	2	<ul> <li>Official Municipal Rates Statement which is in the name of the bidder.</li> <li>Or</li> <li>Any account or statement which is in the name of the bidder.</li> <li>Or</li> <li>Permission to Occupy from local chief in case of rural areas (PTO) which is in the name of the bidder.</li> <li>Or</li> </ul>
0	As FME as OCE which is a		Lease Agreement which is in the name of the bidder.
3.	An EME or QSE which is at least 51% owned by black women (Mandatory)	4	<ul> <li>SANAS Accredited BBBEE         Certificate or Sworn Affidavit where applicable.     </li> </ul>
4.	An EME or QSE which is at least 51% owned by black people with disability (Mandatory)	2	SANAS Accredited BBBEE     Certificate or Sworn Affidavit where applicable.  and
			Medical Certificate indicating that the disability is permanent.
			<ul> <li>South African Social Security         Agency (SASSA) Registration         indicating that the disability is         permanent.</li> </ul>
			<ul> <li>National Council for Persons with Physical Disability in South Africa registration (NCPPDSA).</li> </ul>
5.	An EME or QSE which is at least 51% owned by black youth (Mandatory)	2	<ul> <li>ID Copy and SANAS Accredited BBBEE Certificate or Sworn Affidavit where applicable.</li> </ul>



#### 4. RESPONSIVENESS CRITERIA

# 4.1. Indicate substantive responsiveness criteria applicable for this tender. Failure to comply with the criteria stated hereunder shall result in the tender offer being disqualified from further consideration:

1	$\boxtimes$	Only those tenderers who satisfy the eligibility criteria stated in the Tender Data may submit tenders.
2		Tender offer must be properly received on the tender closing date and time specified on the invitation, completed either electronically (if issued in electronic format), or by writing legibly in non-erasable ink. (All as per Standard Conditions of Tender).
3	$\boxtimes$	Use of correction fluid is prohibited. Corrections to be crossed out and initialled.
4	$\boxtimes$	Submission of a signed bid offer as per the DPW-07 (EC).
5	$\boxtimes$	Submission of DPW-09 (EC): Particulars of Tenderer's Projects.
6		Bidders must comply with DPW-21 (EC): Record of Addenda to tender documents, if any.
7	$\boxtimes$	The tenderer shall submit his fully priced Bills of Quantities / Lump Sum Document (complete document inclusive of all parts) together with his tender.
8		Submission of DPW-16.1 signed by the authorised official and completion of bid briefing attendance register.  insert motivation why the tender clarification meeting is declared compulsory
9		The tenderer shall submit his fully priced and completed sectional summary- and final summary pages with the tender.
10		Submission of Active CIDB grading of 1ME
11		
12		

4.2. Indicate administrative responsiveness requirements applicable for this tender.

The Employer reserves the right to request further information regarding the undermentioned criteria. Failing to submit further clarification and/or documentation within seven (7) calendar days from request will disqualify the tender offer from further consideration.

1		Any correction to be initialled by the person authorised to sign the tender documentation as per PA 15.1 or PA 15.2 resolution of board/s of directors / or PA15.3 Special Resolution of Consortia or JV's.
2	$\boxtimes$	Submission of applicable (PA-15.1, PA-15.2, PA-15.3): Resolution by the legal entity, or consortium / joint venture, authorising a dedicated person(s) to sign documents on behalf of the firm / consortium / joint venture.
3	$\boxtimes$	Submission of (PA-11): Bidder's disclosure
4	$\boxtimes$	Submission of PA-16.1 (EC): Ownership Particulars
5		Submission of documentation relating to <b>risk assessment criteria</b> as contained in C 2.1 of T1.2 Tender Data.
6		Data provided by the Service Provider (C1.2.3) completed.
7	$\boxtimes$	Submission of proof of Registration on National Treasury's Central Supplier Database (CSD). Insert the Supplier Registration Number on the form of offer, including proposed sub-contractors if any
8	$\boxtimes$	All parts of tender documents submitted must be fully completed in ink and signed where required.
9		Upon request, submission of fingerprints obtainable from local SAPS including any other additional documentation and information required for vetting purposes.

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#### PA-03 (EC): NOTICE AND INVITATION FOR QUOTATION

	10		Upon request, submission of a fully completed security clearance application form with supporting documentation and information as required. The security clearance form will be provided by the Employer for projects requiring a security clearance.						
	11	11 Specify other responsiveness criteria							
	12	12 Specify other responsiveness criteria							
	13		Specify other responsiveness criteria						
	14		Specify other responsiveness criteria						
15 Specify other responsiveness criteria									
t	o sub	mit th	ninistrative requirements applicable for specific goals, Tenderers will not be required e below documents if not provided in the original tender proposals, Failure to comply teria stated hereunder shall result in the tenderer not allocated points for specific						
1	$\boxtimes$		mission of (PA-16): Preference Points Claim Form in terms of the Preferential curement Regulations 2022						
2		A tr	A trust, consortium or joint venture (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE Certificate issued by a SANAS accredited service provider						
. Th	ie fo	LLOW	ING EVALUATION METHOD FOR RESPONSIVE BIDS WILL BE APPLICABLE:						

Method 1 (Financial offer)	

5.1. This bid will be evaluated according to the 80/20 Preference points scoring system:

#### 6. ELIGIBILITY IN RESPECT OF RISK TO THE EMPLOYER:

Standard risk management assessment criteria in respect of tenders received for routine projects in the engineering and construction works environments:

Tender offers will be evaluated by an Evaluation Committee based on the technical and commercial risk criteria listed hereunder. Each criterion carries the same weight / importance and will be evaluated individually based on reports presented to the Bid Evaluation Committee by the Professional Team appointed on the project. A tender offer will be declared non-responsive and removed from any further evaluation if any one criterion is found to present an unacceptable risk to the Employer.

In order for the evaluation reports to be prepared by the Professional Team, the Tenderer is obliged to provide comprehensive information on form DPW-09 (EC). Failure to complete the said form will cause the tender to be declared non-responsive and removed from any further consideration. The Employer reserves the right to request additional information over and above that which is provided by the Tenderer on said form. The information must be provided by the Tenderer within the stipulated time as determined by the Bid Evaluation Committee, failing which the tender offer will mutatis mutandis be declared non-responsive.

#### 6.1 Technical risks:

Criterion 1: Experience on comparable projects during the past specify between 5 and 10 years.

The tendering Service Provider's experience on comparable projects during the past specify between 5 and 10 years. The number of current and previous comparable projects performed by the Tenderer as per the

Any reference to words "Bid" or Bidder" herein and/or in any other documentation shall be construed to have the same meaning as the words "Tender" or "Tenderer". Page 4 of 7 For Internal & External Use Effective date: July 2023 Version: 2023/07



evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer, not reflected on form DPW-09 (EC). Failing to provide contactable references will result in the tender offer will be *mutatis mutandis* declared non-responsive.

Aspects to be regarded as "comparable" includes (but may be extended according to circumstances): size of projects (measured against monetary value or other project quantifying parameters), nature of projects (building, engineering, high/low rise, etc.), locality/area of execution (site-specific influences, knowledge of local conditions, etc.), complexity of project, projects for similar client department irrespective of end purpose of buildings/facilities created or in progress of being created and time scales of projects (normal, fast track, etc.) and stage of its/their development.

# Criterion 2: Contractual commitment and quality of performance on comparable projects during the past specify between 5 and 10 years.

Adherence to contractual commitments and quality of performance of comparable current and previous projects performed by the Tenderer during the past specifiy between 5 and 10 years as per the evaluation report prepared by the Consultant Team, based on its research and inspection of a representative sample of the Tenderer's current and previous work as reflected on form DPW-09 (EC), as well as, if necessary, of any additional work executed by the Tenderer.

Aspects to be considered include, but are not limited to the following:

- 1. The level of progress on current projects in relation to the project programme or, if such is not available/applicable, to the contractual construction period in general;
- 2. The degree to which previous projects have been completed within the contractual completion periods and/or extensions thereto, and the extend of penalties imposed;
- Project performance: time management & programming of works, timeous ordering of materials and appointment of subcontractors;
- 4. Financial management: payment to suppliers and cash flow problems;
- 5. Quality of workmanship: extent of reworks and timeous attention to remedial works;
- 6. Personnel resources: suitably qualified and experienced, turnover in site staff and labour force, specifically site manager and foreman;
- 7. Personnel management: extent of labour disputes and ability to resolving labour disputes amicably;
- 8. Sub-contractors: extent of turnover in subcontractors, general liaison and payment problems experienced;
- Contract administration: contractual aspects such as complying to laws and regulations, insurances, security, submission of required documentation timeously, reaction to written contract instructions, appointments of subcontractors, etc. as can generally be expected in standard/normal conditions of contract.
- 10. Health & Safety: adherence to regulations and compliance, and number of transgressions & serious incidents.
- 11. Plant & equipment: sufficient resources on site and in time.
- Delays: extent of causing delays, submission of claims timeously, and abuse of or exaggerated delay claims.
- 13. Final account: extent to which the contractor assisted in finalising the final account.

#### Criterion 3: Suitably qualified and appropriately experienced human resources

Allocation of suitably qualified and appropriately experienced human resources, both in respect of principals and/or other staff (contract manager, site agent, site foreman including other professional, technical and/or administrative) of the tendering Service Provider to the project, as proof that the tendering Service Provider will be able to react/respond appropriately to the Services required herein. The Company Organogram with CV's and certified ID's of all principals and employed workforce as well as proof of Professional Registration will be verified. Current and future workload of the tenderer in relation to capacity and capability will also be considered. The tenderer should demonstrate that he or she possesses the necessary professional and technical qualifications and -competence in relation to the scope of work and work to be undertaken.

#### Criterion 4: Attendance of compulsory bid clarification meeting, if applicable



If applicable, submission of confirmation of DPW-16.1 (PSB) attendance of compulsory bid clarification meeting or proof of attending the compulsory virtual meeting by a suitably qualified and experienced representative of the tenderer in terms of PA-04 (EC): Notice and Invitation to Tender.

#### 6.2 Commercial risks:

The financial viability assessment evaluates the risk over the life of the construction period, as to whether the tenderer will be able to deliver the goods and services which are specified in the contract and / or be able to fulfil guarantees or warranties provided for in the contract in order to complete the project successfully for the amount tendered.

Aspects to be considered include but are not limited to, the respective rates tendered, bank rating, financial capability and capacity whether the tenderer has or has access to sufficient financial resources to deliver the goods or services described in the tender documentation (including fulfilling any guarantees or warranty claims), whether the tenderer is not subject to any current or impending legal action (either formal proceedings or notification of legal action) which could impact on the financial standing of the tenderer or the delivery of the goods or services, financial report from auditors as proof of current liquidity, and company or any parent company or investor guarantee/s and financial statements.

PROPERTY.	$\sim$	OF OUGT		DOCUMENTS
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16 .		OI GUUI	A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	DOCUMENTS

Quotation documents are available for collection during working hours
Alternatively; quotation documents may be collected during working hours at the following address insert physical address. A non-refundable bid deposit of R insert amount payable (cash only) on collection of the bid documents.

#### 8. SITE INSPECTION MEETING

Compulsory briefing session will be held in respect of this quotation.

The particulars for compulsory briefing session or virtual briefing session are:

Venue:	(type in here the place or "N/A")		
Virtual meeting Link:	(type in here the place or "N/A")		
Date:	(type in here the date or "N/A")	Starting time:	(type in here the time or "N/A")

#### 9. ENQUIRIES

#### 9.1. Technical enquiries may be addressed to:

DPWI Project Manager	LM MABITSELA	Telephone no:	012 310 5972
Cellular phone no	082 802 9072	Fax no:	NA
E-mail	MACKSON.MABITSELA@dpw.gov.za	a .	



9.2. SCM enquiries may be addressed to:

SCM Official	Ms. M. Manala	Telephone no:	012 492 3020
Cellular phone no	N/A	Fax no:	
E-mail	mmabore.manala@dpw.gov.za		

#### 10. DEPOSIT / RETURN OF QUOTATION DOCUMENTS

Telegraphic, telephonic, telex, facsimile, electronic and / or late tenders will not be accepted.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data

All tenders must be completed in non-erasable ink and submitted on the official forms – (forms not to be retyped).

Tender documents may be posted to:		Deposited in the tender box at:
The Director-General Department of Public Works and Infrastructure Private Bag X x229 pretoria 0001	OR	cnr Nana Sita & Thabo Sehume AVN building Pretoria 0001
Attention: Procurement section: Room G03		

#### SCOPE OF WORK

CIYT/TOWN

: Pretoria

DEPARTMENT/BUILDING: Department of Labour Silverton

DESCRIPTION

: Servicing and repair 2x of GA75VSD Screw Air Compressors

COMPLAINT NO

: ID 3170931

The following publications must be read in conjunction with this specification: -

- 1 Occupation Health and Safety Act (Act No. 85 of 1994) As amended.
- 2 Standard Specifications for Electrical Installations Pertaining to Mechanical Equipment.
- 3 SABS 099 1974 the construction of air receivers.
- 4 SABS 460 1975 Copper and copper alloy tubing.
- 5 SABS 763 1977 Hot-dip (galvanised) zinc coatings.
- 6 SABS 948 1978 Three phase induction motors part 1 low voltage standard motors.
- 7 SABS 1091 1975 National colour standard for paint.
- 8 SABS 1189 1978 Single phase induction motors.
- 9 SABS 1062 = 1985 Vacuum and pressure gauges.
- 10 SABS 1409 1986 Outlet sockets and probes for medical services used in hospitals.
- 11 SABS 0224 Non-flammable medical gas pipeline systems.
- 12 SABS 0142 Wiring of Premises
- 13 CKS 64 1967 Compressed Air for breathing.
- 14 CKS 332 1977 Industrial V-belts.
- 15 CKS 605 1987 Medical gas regulators.
- 16 R158 Regulation Hospital norms.

## Competence of Technicians

It is a requirement that all pipe fitters employed in medical gas and vacuum installations

are able to show proof of knowledge of, and experience in such installations

Commencing work on a medical gas and vacuum system.

# SCOPE OF WORK ID 3170931

# **Maintenance Checks for Your Compressor**

On an industrial air compressor, preventive maintenance is crucial to ensure the functionality of the system and its various attachments. Key parts include the filters, vents, belts and bearings, all of which could become troublesome to the system if dirt and grime accumulate. Moreover, you must apply and reapply lubricant at timely intervals on all applicable parts of an air compressor.

The following components are the most important to inspect, clean and lubricate according to schedule:

#### 1. Air Filter

The purpose of an air compressor is to produce clean, pure, compressed air that will ultimately power numerous functions. To ensure the quality of air that comes out at the end, the ambient air that goes into the compressor must be filtered of impurities before it leaves the machines. None of that could be possible without a clean air filter.

If the air filter is dirty, impurities and particulates could corrupt the compressed air and degrade the quality of end-point applications. Therefore, clean the air filter regularly. Change it out at regular intervals, which vary based on the environment.

#### 2. Oil Filter

Oil can degrade the quality of compressed air if it passes through the system and gets carried to the end of an application. Some of the worst-affected processes would include pneumatic spray painters, air cleaners and anything else where oil could corrupt the surface in question. Therefore, it is crucial to ensure oil, when present in the system, is removed from the compressed air before the air leaves the machine.

Check oil filters weekly, regardless of whether the compressor is lubricated or non-lubricated. Moreover, replace the oil filter entirely at recommended intervals, which can range from 4,000 to 8,000 hours of use depending on your unit. If the oil filter gets heavily covered in oily residue before that time, replace it sooner.

#### 3. Lubricant

<u>Lubricant</u> is one of the most vital elements in the function of an air compressor. On all the internal metal parts and joints, lubricant allows for smooth, non-corrosive movement. Without lubrication, tension occurs between the touching metal surfaces, which leads to the corrosion of parts and joints. Once corrosion takes hold, rust is liable to spread and eat through certain mechanical parts.

However, even when lubricant is present, it can lose its viscosity and become corrosive if it gets too old. Check the lubricant level daily to ensure the health of your air compressor.

Every three to six months, wipe off old lubricant and reapply a fresh coat. Each time you replace the lubricant, be sure you also change out the separator element.

#### 4. Motor Bearings

For a motor to run, the bearings must have proper lubrication. The tiny metal balls are constantly rolling against each other, as well as against the interior walls of the round encasement. Consequently, rust could form on the bearings-without proper-lubrication. If rust forms, the bearings will gradually slow and ultimately become stuck in place. When this happens, the motor fails.

To protect the health and performance of the air compressor motor, grease the bearings every 4,000 hours. Be sure to inspect the bearings at quarterly intervals between each greasing to ensure they remain sufficiently lubricated.

#### 5. Belts

For an air compressor to go about its internal motions, the belts must have proper tension. The rubber of each belt must also remain firm, yet flexible, to ensure balanced movement between the pulleys of connected parts. Over time, however, the rubber on a belt will inevitably wear down and crack in certain places. Therefore, it is crucial to replace the belts before they lose their tension or, even worse, snap in the middle of an operation.

Inspect each belt once per week to verify they are free of wear. Adjust the tension if necessary and replace each belt once wear takes hold.

#### 6. Intake Vents

An air compressor performs the magic feat of transforming ambient air into something that can power heavy-duty machinery and effectively serve as a replacement for electrical power. That said, the compressor itself can only do so much to turn mundane air into something powerful. While internal components do their job to purify the air for end-point use, that job is harder for the machine to perform if the intake vents become lined with dirt and grime.

To ensure the incoming air remains as clean as possible and to prevent dirt from getting sucked into the system, inspect the intake vents weekly and clean them when necessary.

#### 7. Other Parts to Check

In addition to the periodic cleaning, lubrication and replacement of parts, check various points along the air compressor and its attachments at regular intervals. Inspect the following every week:

- Air dryer performance
- Amps
- Oil level
- Temperatures
- Vibration
- Voltage

Inspect the air compressor for signs of oil or air leaks. Also, check the pneumatic hoses for air leaks, as leakage severely reduces the efficiency of an air compressor. Furthermore, make sure the coolers are free of dirt.

# **Preventive Maintenance Checklist**

When you make an air compressor preventive maintenance checklist, you need to first take into account the type of compressor in question.

# 1. Air-Cooled Reciprocating Compressor

To service an air-cooled reciprocating compressor, perform the following steps every day, or after every eight hours of use:

- Check the lubricant level to verify it never drops below the mid-range of the bayonet gauge. If the lubricant becomes discolored, empty and refill it.
- Empty water out of the receiver tank.
- Visually inspect the compressor and verify the safeguards are in place.
- Check for leaks and vibrations.

Every week, or after every 40 hours of use, complete these maintenance tasks:

- Check the pressure relief valves.
- Clean the surfaces of the compressor and intercooler.
- Inspect the compressor and hoses for air leaks.
- Clean out the air intake filter.

If you face humid or dusty weather, perform these steps twice each week, or after every 20 hours.

Follow these steps for periodic maintenance:

- Monthly: After a month or 160 hours of use, inspect the belt tension inside the air compressor.
- Quarterly: Every three months, or after every 500 hours of use, you should change the lubricant and inspect the filter. If needed, change the oil filter. You should also inspect the torque on the pulley nuts and screws.
- **Biannually:** Every six months, or after every 1,000 hours of use, you should change the compressor's lubricant. You should also check valves for indications of leaks or carbon prints. In addition, clean the crankcase and its strainer screen. Examine the motor-area contact points and pressure switch diaphragm.

#### 2. Lubricant-Injected Rotary Compressor

- Monitor all gauges and indicators for normal operation.
- Check fluid level.
- Observe for fluid leaks.
- Observe for unusual noise or vibration.
- Drain water from the air and fluid reservoirs.

Every four weeks, perform the following tasks:

- Service air filter as needed. This should be a daily or weekly task if extremely dirty conditions exist.
- Clean aftercooler and fluid cooler fins, for air-cooled units only.
- Wipe the entire unit down to maintain appearance.

Every six months, or after every 1,000 hours of use, complete these maintenance needs:

- Take fluid samples.
- Change fluid filters.
- Check the pressure relief valve.

After a year of use, follow these guidelines:

- Go over the unit and check all bolts for tightness.
- Change the air and fluid separator.
- Change the air filter.
- Lubricate the motors.
- Test the pressure relief valve for proper operation.
- Check the safety (HAT) shutdown system.

# 3. Lubricant-Free Rotary Screw Compressor

For daily maintenance, or after every eight hours of use, perform the following tasks:

- Check displayed readings.
- Check if condensate is discharged during operation.
- Drain condensate manually (when applicable).
- On compressors with integrated dryers, check the dew point.

Every three months, or after 500 hours of running use, perform the following tasks:

- Check the pressure drop over the (optional) filters.
- Inspect the air inlet filters: check for cleanness and damage. Replace a dirty or damaged filter with a new one.
- Check the coolers. Clean by air jet if necessary.

After every six months or every 1,000 hours of use, complete these maintenance jobs:

- Operate the safety valve.
- Clean the compressor.
- On compressors with an integrated dryer, brush or blow off the finned surface of the condenser. Inspect and clean the electronic drain.

Perform these tasks every year:

- Replace the air inlet filters.
- Test the safety valves.
- Have temperature protection and motor overload tested.

• Check the tension and condition of the V-belts.

After two years of use, replace the V-belts and check valves.

#### Perform the following steps

- Check the lubricant level to verify it never drops below the mid-range of the bayonet gauge, if the lubricant becomes discoloured, empty and refill it.
- Empty water out of the receiver tank.
- Visually inspect the compressor and verify the safeguards are in place.
- Check for leaks and vibrations.
- Check the pressure relief valves.
- Clean the surface of the compressor and intercooler.
- Inspect the compressor and hoses for air leaks.
- Clean out the air intake filter.
- Inspect the belt tension inside the air compressor.
- Change out lubricant-this also applies if lubricant is synthetic, which last twice as long as regular.
- Check valves for signs of leaks or carbon prints
- Clean crankcase.
- Clean strainer screen of the crankcase.
- Examine the motor-area contact points and pressure switch diaphragm.
- Monitor all gauges and indicators for normal operation
- Check fluid levels and observe for fluid leaks.
- Observe unusual noise and vibrations.
- Drain water from air/fluid reservoir.
- Service air filters as manufacture's specification.
- Clean after- cooler and fluid cooler fins, for air-cooled units only.
- Wipe entire unit down to maintain appearance.
- Take fluid sample.
- Change fluid filter.
- Check pressure relief valve.
- Go over unit and check all bolts for tightness.
- Change air/fluid separator.
- Change air filter.
- Change oil filter.
- Lubricate motors.
- Test pressure relief valve for proper operation.
- Check safety valve (HAT) shutdown system.

#### Note

- 1. All minor and incidental repairs such as the replacement of nuts, bolts, washers, self-tapping screws, pop rivets, etc. shall form part of the servicing. The contractor shall allow for such repairs, (material and labour costs), in the price for servicing.
- 2. LABOUR and parts such as filters and lubricants MUST FORM PART OF SERVICING, PLEASE INCULDE IN PRICE FOR SERVICING.

COMPLAINT NO: ID 3170931

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