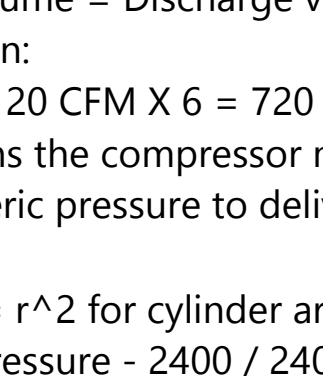
261

2025-09-19 22:52

1. E - Safety glass standers in the Canada - CSA
2. H - Vernier caleper (Need to look the drawing) - 0.466
3. E - When is the tool-box meeting shall be attended and how it should be - Before starting of the shift and it should be short (quick)
4. M - What does the following indicate that apprentice has understood the instruction - If listens carefully and having verbal confirmation from apprentice
5. M - A compressor decommissioned and stored in the high vibration area then what will be the effect on the bearing - False brinrlling of bearing
   Pitting=ખાડો
   Brinelling=dent
6. E - Blade for 1/16" = 24 TPI
7. M - Which one of the following is the preferred method to detect the internal cracks in aluminum fan - Ultrasonic testing (UT)
   It works by sending high-frequency sound waves into the material and analyzing the reflections from flaws inside.
8. M - Method to find defects in pipes - Ultrasonic
   Magnetic Partical - for ferromeganetic material (steel or iron)
9. E - Primary cause of error in magnetic from electric circuit of leaser alignment - Electromagnetic interference or nearby heat source
10. M - Answer would be decided after inspecting figure
11. E - In a hydraulic system to operate 17 GPM pump there is 17 gallon fluid in the reservoir and system is running hot what is the reason - Insufficient reservoir capacity - it should be 2 to 3 times pumps capacity
12. M - Drawing to refer while installing a new machine - installation drawing
13. E - Thing use to protect sling from the sharp objects - soft corners
14. E - To lift loose load for long time - double wrap
15. E - Non-sensators method - infra-red / sensatory - vibration, visual and auditory
16. E - Load on the skin in the figure 1000 lb load with 45 deg angle with sling -sin45 x 1000 = 707 lb
17. M - To Multiply pulley system machenical advantage can be increased by - add more pulleys if not in option add more ropes or line is the right answer
18. E - Ep2 in 2 is showing penetration rating for grease
19. H - At normal atmospheric pressure, a reciprocating compressor delivers 120 CFM with 6:1 reduction at 100 psi.
   How much intake is required? — or — What volume does it need?
   Options:
   1. 720 cfm
   2. 720 kPa
   3. 20 psi
   4. 20 cfm

   Given:
   - Discharge = 120 CFM
   - Compression ratio = 6:1

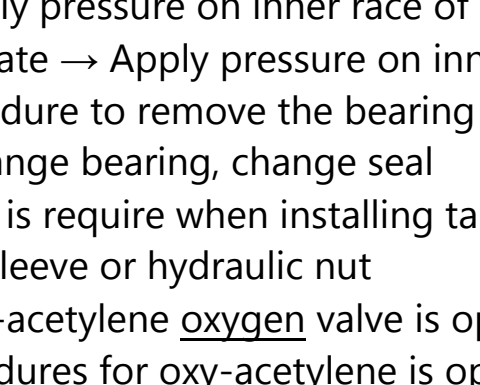
   That means:
   Intake volume = Discharge volume X Compression ratio
   Calculation:
   Intake = 120 CFM X 6 = 720 CFM
   This means the compressor must take in 720 cubic feet of air per minute at atmospheric pressure to deliver 120 CFM at 100 psi (after compressing it by a 6:1 ratio).
20. E - Area = r^2 for cylinder area / diameter for the cylinder for 2400 lbs force and 240 psi pressure - 2400 / 240 = 10 = D^2 | A^2 = 40/3.14 =12.739 | A= 3.56
21. E - Meaning of the signal - Dog everything



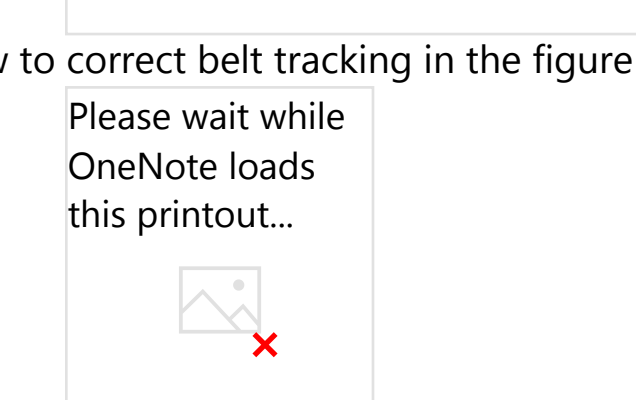
22. E - Correct belt tracking - tightening pulley B (tight the side where belt is going rather than center)

Please wait while OneNote loads this printout...

23. E - For first 3/8 = 2000lbs and additional 1/8 = 2000lbs
   So, for 1/2 = 3/8+1/8 = 4000lbs
24. M - Pushing the bearing on the shaft - apply light coat of oil in the bearing boar and shaft, apply pressure on inner race of bearing, check the position , secure and lock it - Lubricate → Apply pressure on inner race → Check alignment → Secure & lock
25. M - Procedure to remove the bearing of the motor - Support the shaft, remove the cover, change bearing, change seal
26. M - What is require when installing taper bore bearing randomly on the shaft - Adaptor sleeve or hydraulic nut
27. E - In oxy-acetylene oxygen valve is open fully and acetylene valve open 1/4 and 1/2
28. H - Procedures for oxy-acetylene is open oxygen valve full, 1-1/2 acetylene and the ignite and adjust
29. M - Lubrication system best for gear - Splash lubrication
30. E - Use to measure clearance in spherical roller bearing - feeler gauge
31. E - Name of the valve 3 position, 4 ways, tondom center - One side of ports are connected

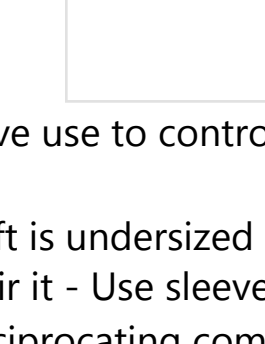


32. E - Reason for slow engagement of pneumatic system - in sufficient air pressure
33. M - Steps to repair the leak in outer flange in pump or compressor - release pressure, change gasket, tighten the flange
34. E - Repair a gasket leaking - Tight all the gasket bolt evenly in criss-cross manner
35. Answer can be decided by seeing the image (NF)
36. E - GFCI (ground fault circuit interrupt or) - for working in wet location by drill
37. M - The process of light coating of oil in the tank - Fogging refers to the tendency of a material (usually plastic, rubber, or lubricant) to release volatile substances (VOC – volatile organic compounds) that condense on nearby cooler surfaces, forming a fog-like film, Resilience- rubber, Immersion- oil and rubber ring, Viscosity- resistance for the liquid to flow
38. E - The accuracy of the micrometer is adjusted - by thimble
39. H - The procedure for test run of machine after installation - Recheck all lubrication, complete check list, Flush all the line and vessel, rotate parts by hand
40. E - Procedure to clean fan blades properly - Lock out system, clean, check for damage and restart
41. M - Reason for gravel found regularly in the vacuum pump - elevated suction
42. How to check mineral deposits in pneumatic system
   1. Solvent (to clean)
   2. Acidic solution (to clean)
   3. Needle pin -
   4. Fin comb
43.
44. H - What will be the frequency of vibration analysis in the machine where vibration caused by mechanical looseness due to machine base problem - many time RPM
45. M - During aligning motor with existing pump using dial indicator is put on rim at 12 o'clock was rotated 180 we get reading .16 how much shim required at the bottom of the motor to bring it zero level position - 0.8
   When aligning a motor using a rim (vertical) reading on a dial indicator:
   - The indicator is placed at the top (12 o'clock) position and then rotated to the bottom (6 o'clock) position (180° apart).
   - The total indicator reading (TIR) = 0.16 mm.
   - To correct the alignment, only half of the TIR is used for shimming, because the dial indicator measures the total difference between the two ends (top and bottom).
46. E - Check the alignment in the pump and motor with dial indicator - rotate pump and motor in same direction
47. E - Meaning of C3 marking in the bearing - more than normal clearance
48. E - Rating of steel chain used in the rigging - 100
   Grade 80 and 100 Both are safe and approved, but Grade 100 is stronger and lighter, while Grade 80 is more economical and perfectly fine for most rigging tasks
49. E - The shackle screw and pin is used in - Screw pin anchor shackle
50. E - Hardness check of the material faster - File
   - ✔ File = acceptable for a quick check only.
   - ❌ File ≠ acceptable for accurate hardness testing.
   - ✔ For exact hardness → use Rockwell, Brinell, or Vickers tester.
51. E - A "RIG" test is used for - Bearing Check
   A RIG (Run-In-Gear / Run Test / Test Rig) is used to test the entire rotating assembly, which may include:
   - Motor or engine
   - Pump or gearbox
   - Couplings and shafts
   - Bearings
   - Seals and lubrication systems
52. E - What to use to check bearing shaft clearance in splits bearing - Plastic Gauge
53. E - Who will get the benefit of the first aid training in the company - All person Om site
54. E - Procedure to clean Hydraulic Oil on the floor - Secure area, Inform Supervisor, PPE and clean
55. E - Which one is the right sequence of components in pneumatic system - Inter cooler, after cooler and Dryer
   Compressor → Intercooler → Aftercooler → Air Receiver → Air Dryer → Filter → Regulator → Lubricator → Control Valve → Actuator
56. E - Right Sequence of Trio (FRL) Unit in the Pnuematic System - Filter, Regulator, Lubricator
57. E - Where to connect a pneumatic line in the new system - off the top
58. E - What will the load on the sling in fig, which have sling on 45 deg and wait of the load is 2000lbs, sin45 x 2000 =1414
59. M - What is the load factor in the single basket hitch in the figure lift 100 Lb load with 12inch length and 11 inch height - Load factor = L / H - 12/11=1.0909 = 1.1
60. E - To correct vertical angular misalignment in the fig - B, move to A direction

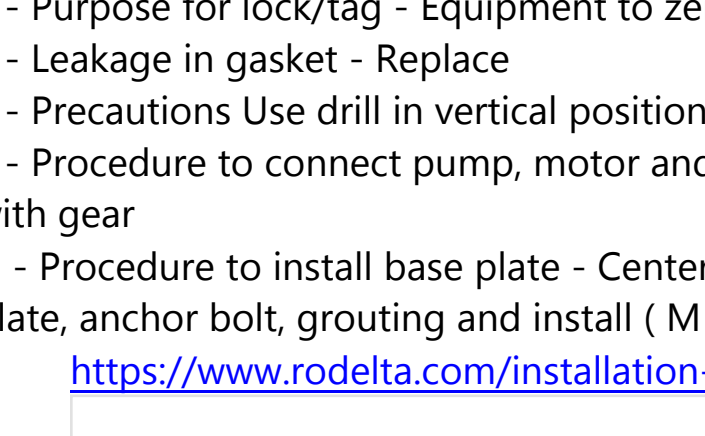


61. E - How to correct belt tracking in the figure - Loose A

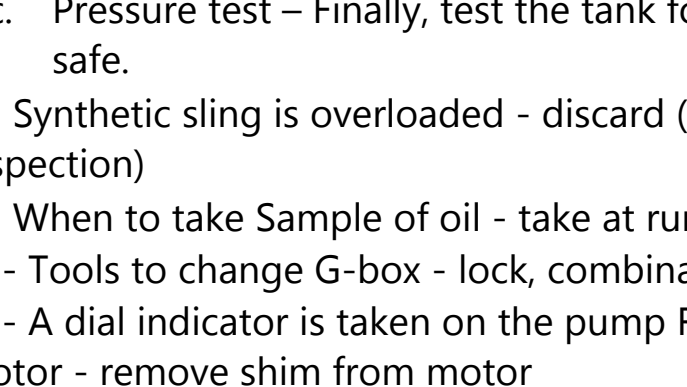
Please wait while OneNote loads this printout...

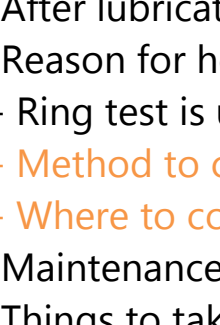


62. H - Valve use to control extension of the cylinder 2 but full retraction shown in the fig (NF)
63. E - Shaft is undersized by machining and new shaft is not easily available then how to repair it - Use sleeve on General Bearing
64. M - Reciprocating compressor is rotating in the reverse then what to do to make it perfect - Reverse shaft, reverse cam by 180°
65. M - How to check mineral deposit in the intercooler in pneumatic system - Use MFG. recommended solvent
66. E - A small turbine is making a noise and vibration then how to solve it - Tie wire and fix it or use shroud
67. E - If a steel plate are .019 x 2.4 x 1.2 m one cubic meter of steel plate weighs 7846 Kg then what will be the total weight of 40 plates - the weight should be given for one cubic meter steel - 17173 Kg
68. E - What to do first while carrying out a decommissioning of a pump handling chemicals - throughly flush internal lines
69. M - What is the procedure for mounting vibration prob on machine - Install, hold, secure
70. E - Vibration Analysis is based on what - Cycle / min
71. E - Where is the drip lubrication system is used in chain and sprocket - Between drive and driven sprocket on slack side
72. H - In a newly installed chain a sprocket is worn, how to maintain the drive at the same speed in unidirection - Reverse sprocket
73. E - What is used to check deflection in chain and hook - Link gauge
74. M - Diameter of the wire rope to lift 5.5 ton load with spreader beam - spreader beam means load divider in two slings so one sling has to lift 2.75 tons, first 1 ton for 3/8 in diameter and for other 2 tons 1/8+1/8, total is = 5/8 inch
75. E - What not to use while lifting the load to angle - Plain shoulder less eye bolt
76. E - Which anchor bolt will broke with incorrect orientation of lifting - Plain or shoulder less anchor bolt
77. E - What will be used for the longer life of the wire rope - Soft corner
78.
79. E - What can cause the problem in laser alignment - magnetic field effect on near by electrical equipment
80. E - Type of oil used in hypoid gear - EP type (Extreme pressure)
81. M - Procedure to remove bearing from the shaft- hold inner race and push from the end of the shaft
82. E - Location of lanturn ring - At center of seal water inlet



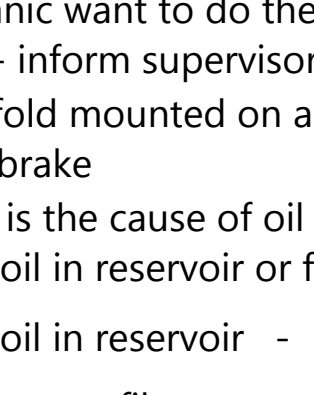
83. E - Effect of Increase temp of oil - Decrease viscosity
84. E - Purpose for lock/tag - Equipment to zero energy
85. E - Leakage in gasket - Replace
86. E - Precautions Use drill in vertical position - Use safe safety restrain device
87. E - Procedure to connect pump, motor and gear box - gear with pump and motor with gear
88. H - Procedure to install base plate - Centerline, clean baseplate, level with meta plate, anchor bolt, grouting and install (M 22 - 27)
   https://www.rodelta.com/installation-extended-sole-plate/



89. M - Correct tracking of long unloading belt - adjust head pulley
90. M - checking Newly install tank - clean, purge and pressure test
   a. Clean – Remove dirt, welding residue, oil, or debris from inside and outside the tank.
   b. Purge – Flush out air, gas, or contaminants to make the tank safe and ready for testing.
   c. Pressure test – Finally, test the tank for leaks or weaknesses after it's clean and safe.
91. E - Synthetic sling is overloaded - discard (Metal and wire sling can be use after inspection)
92. E - When to take Sample of oil - take at running or after stop immediately
93. M - Tools to change G-box - lock, combination wrench, lubricant, empty pale, Rug
94. M - A dial indicator is taken on the pump Rim reading +0.014, what to do with motor - remove shim from motor
95. E - Formula to join perpendicular belt y and z - mar base line and use 3-4-5 rule
96. M - Grease melting - use high NLGI number
97. E - Stethoscope on running bearing - continue humming sound
98. M - Oil leak from the pump shaft while stop not while pump is running - wrong size of seal
99. E - Fuel level indicator - check quantity of fuel
100. E - Precaution for laser - eye protection
101. M - Install industrial fan the first step would be - bench mark and center line marking
102. E - Install vice in vertical milling machine - vice and head in center line
103. E - Check welding Surface - dye penetration
104. E - Final tacking after starting conveyor - by running it without load
105. E - Track long conveyor belt - by adjusting a head pulley
106. E - Sticky material in lower side of the belt - alignment of scrapper
107. M - Reason for moisture in newly installed lubricant-ion system - air vent is block
108. E - Fluid leak from joint in hydraulic system - loose ferrule connection
   a. 
109. M - Bearing in wind turbine - float bearing
110. E - 1/64" steel plate - 32 TPI
111. E - Displacement measurement unit - thousand of mm - mills
112. E - Lift heavy load for long time - double wrap basket hitch
113. E - Max strength in left - double warp basket hitch
114. E - First two digit mark on bolt indicates - tensile strength

Parameter	Formula	Calculation	Meaning
Ultimate tensile strength (UTS)	First two digits × 100 MPa	8 × 100 = 800 MPa	Bolt will break if tension exceeds 800 MPa
Yield strength (YS)	First × Second × 100 MPa	8 × 0.8 × 100 = 640 MPa	Bolt starts to permanently deform at 640 MP

115. E - After lubrication - clean the near by surface
116. E - Reason for heating of 3phase motor - single phase
117. M - Ring test is use for - integrity of grinding wheel
118. M - Method to collect vibration reading constantly - Trending
119. M - Where to collect sample of oil in centrifugal pump - at mid stream
120. E - Maintenance of stainer - clean it
121. E - Things to take care in oil change in robot - type and amount of oil
122. E - Prediction for gear box failing - vibration monitoring (Predictive maintenance)
123. E - Reason for V belt glazing - loose tension
124. H - Procedure for oxyacetylene - open oxygen valve, adjust oxygen, open fuel valve, ignite, adjust fuel valve
125. E - Taking sample of oil - use glass container or immediately after running
126. M - Install new blade in band saw - cut length, grind both end and make it square, use resistance welder for heating and cooling the blade, grind the bend
127. E - Overhead drilling with magnetic drill press - strap the drill to the structure
128. M - Change fan procedure for thermal expansion - adjust coupling clearance, install ring on inner bearing housing close to coupling
129. E - Blue smoke for diesel engine - worn piston rings
130. H - Industrial environmental control fan and motor are to be installed on a concrete foundation. After setting the base, bearings, and motor soleplates, what is the next step? - Mount and level motor, leaving mounting bolts loose and align to fan coupling
   - Mount and level the motor: Ensures the motor sits properly and is aligned with the shaft line.
   - Leave mounting bolts loose: This allows small positional adjustments for precision alignment later.
   - Align to fan coupling: Critical step to ensure smooth transmission of power, prevent vibration, and reduce bearing load.
131. M - The most vacuum pumps unable to achieve the theoretical maximum value of 760 mm (29.92") Hg above sea level - There is excessive internal leakage
132. M - Pump housing rattles (knocking sound) what would cause this problem - Arration or leaking in the inlet piping
133. E - Procedure to change hydraulic pipe for small leak - isolate, bring to zero energy state, drain, remove, clean and replace
134. M - Change bladder accumulator- close isolate valve, close bleed valve, charge bladder, open isolate valve
135. E - Change clutch - isolate, make sure all energy force locked and replace clutch
136. E - When nylon or synthetic sling is inoperable - tender and illegible sling identification
137. E - Where will the Person guiding crane located - in front of load
138. H - First step to do the balancing of machine - bring the machine up to the operating speed
139. H - Packing and seal are slightly bigger - use EP type oil lubrication
140. E - Rope for fast and speedy lift in crane - 6x37
141. H - In installation process heating pipeline is near by then what will be the procedure - continue installing machine, measure from one side, change machine to other side of reference line and check two points
142. E - First two number of welding electrode - tensile strength in psi (Ksi)
   Example 1: E7018
   - 70 → 70,000 psi tensile strength
   - 1 → all positions
   - 8 → low hydrogen coating, suitable for AC/DC
143. E - Precaution while using a chemical adhesive (Ex-wood glue) - bonding clean
144. E - Horizontal component (x) have maximum weight on - 0 deg angle



145. H - First step for installing machine first time - datum, benchmark, reference line, centerline, install base plate
   - Datum & Benchmark: Reference points for measurement and elevation.
   - Reference line & Centerline: Guides for proper horizontal and rotational alignment.
   - Base plate: The foundation for stable and level installation.
146. M - Reason for slow movement in hydraulic system - excessive pre load or air in the fluid

Possible Cause	Effect on Speed	Explanation
Air in fluid	Yes – slows movement	Causes compressibility and energy loss
Excessive preload	Maybe slightly	Adds mechanical resistance, not hydraulic issue

147. E - Reason for vibration and noise in just installed C.P - inlet line too small (it creates cavitation and that makes noise)
148. E - Mechanic want to do the alignment of impeller fan of the pump then what is the first step - inform supervisor
149. E - A scaffold mounted on a castor roller is need to be fixed at one position - use provided brake
150. M - What is the cause of oil found in the receiver of a wet screw compressor - Excessive oil in reservoir or faulty separator filter

Excessive oil in reservoir	-	Causes oil carryover due to high oil level
Faulty separator filter	-	Allows oil mist to pass into air line

151. M - What precaution you will take while doing commissioning of compressor first time - inlet filter is proper
152. E - Right way to install a V belt on sheave - the V-belt should be flush (level) with the sheave (pulley) groove.
153. H - How to check soft foot with dial indicator - Loosen all the bolts and tight each one individually
154. M - The purpose of the valve shown in figure - the figure is not clear - discharge the flow back to the tank
155. M - What to do in the routine maintenance of a metallic grid coupling - Grease the coupling
156. E - What will the total weight of a 40 steel plate of 3/4 in x 4 feet x 8 feet if one cubic feet of steel weigh 490 lb - 39200 lb
157. E - A tank is full and temperature of the fluid is very high wat is the cause - vent block - Blocked vent = trapped pressure = increased fluid temperature
158. M - A solenoid is not working what to do - Replace broken spring
159. E - What is the number of teeth on drive gear (input) if driven gear (output) has 90 teeth to maintain the speed ratio of 2:1 - 45 teeth / Gear ratio = Driven gear teeth / Drive gear teeth
160. E - What is the procedure to install motor-gear-compressor - install motor with gear and gear with compressor
161. H - What is the cause in the figure if double acting hydraulic cylinder is moving right at full speed - (NF)
162. H - What is the name of component at point number 2 located in fig 7 - Pressure relief valve
163. M - What is the first step for installation of equipment or repair - Analyze technical drawing
164. M - While working on a drive gear reducer with V belt what is the last step before removing safety lock - Put the belt guard
165. E - Oil and air filter is changed during regular maintenance in hydraulic system but now pump is cavitate on startup - Check leakage in inlet
166. M - What should be done while removing motor from compressor to prevent compressor from contamination - Put filter on inlet
167. M - Which valve is used to unload the load from motor in compressor - Unloading Valve