DIMENSION BID

CTS PRESENTATION ASSESSMENT FORM

Presenter's Name	MUHAMMAD ALIFF BIN ZULKEFLI	**Date**	3/11/2024
Position	EQUIPMENT OPERATOR 2	**SCORE**	
Topic	CENTRIFUGAL PUMP		
Objective	PROMOTION		
Assessor (s)	MOHD SYUKRI BIN AWANG		

	Assessment Criteria	Rating *(Please √ where appropriate)*								
		STRONG			ADEQUATE			IMPROVEMENT NEEDED		
		10	9	8	7	6	5	4	3	2
A	**Presentation Skill (20%)**									
	a. The presenter was well prepared and delivered the material in a clear and structured manner.		✓							
	b. The presenter was knowledgeable about the topic and able to relate the importance of the subject matter to his job			✓						
	c. The presentation contained practical examples and useful techniques that applied to current work.			✓						
B	**Creativity (20%)**									
	a. Did the presenter show creative thinking in the method of development and presentation?			✓						
	b. Did presenter get audience involved in "learning" the material?			✓						
C	**Content (60%)**									
	a. Did the presenter cover all the key points of the subject matter			✓						
	b. Did the presentation incorporate strong, effective supporting material throughout?			✓						
	c. Did the presenter give clear and concert explanation and example?				✓					
	d. Was the presenter able to answer questions on subject matter? Answers were correct and corresponded with the required understanding?			✓						

Additional Comments:

* need to reed the manual move
* overall good

Assessed By:	Verified By:
Name: MOHD SYUKRI BIN AWANG	Name: M. KHAIRUL RIDHWAN AZU
Position: Eg 2	Position: CTS FIELD SERVICE MANA
Date: 5-11-2024	Date: 3/11/24

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ATTENDANCE FORM

Purpose: ☐ Meeting ☑ Training / Seminar / Workshop

Type of Training: ☐ Classroom ☐ Practical / Hands On ☐ Technical Sharing

Training Facilitator / Trainer: MUHAMMAD ALIFF B. ZULKEFLI

Topic/Subject	CENTRIFUGAL PUMP	**Date**	3/11/2024
Venue	MEETING ROOM	**Time**	2.30 PM
Meeting Coordinator		**Meeting/ Training Duration**	

No.	Name	Position	Signature
1	MUHAMMAD NOOR HAMKA	EOT	[signature]
2	AIDIL HANAFRUL	FC	[signature]
3	Mohd Hisyam B. Mat	FO	[signature]
4	ENGKU NAZRI	GFO	[signature]
5	HAFRIZ HELMI	FC	[signature]
6	HAFIZUDDIN	FOT	[signature]
7	AHMAD SHAHMEER BIN MOHAMAD	EOT	[signature]
8	AHMAD SHAFRI BIN MOHAMAD	GEO	[signature]
9	SHAHRIL IZHAM B. ILIAS	EOT	[signature]
10	MUHAMMAD AINUDIN	EOT	[signature]
12	M. Ikmal Hani bin Saleh	FOX	[signature]
13	MOHAMAD AMIR B. MOHD JUANDA	EOT	[signature]
14	Muhammad afnan B. Yusran	EOT	[signature]
15	M. Haikal Resli	EOT	[signature]
16.	NUR IZZAH	JFO	[signature]

Remark / Comment

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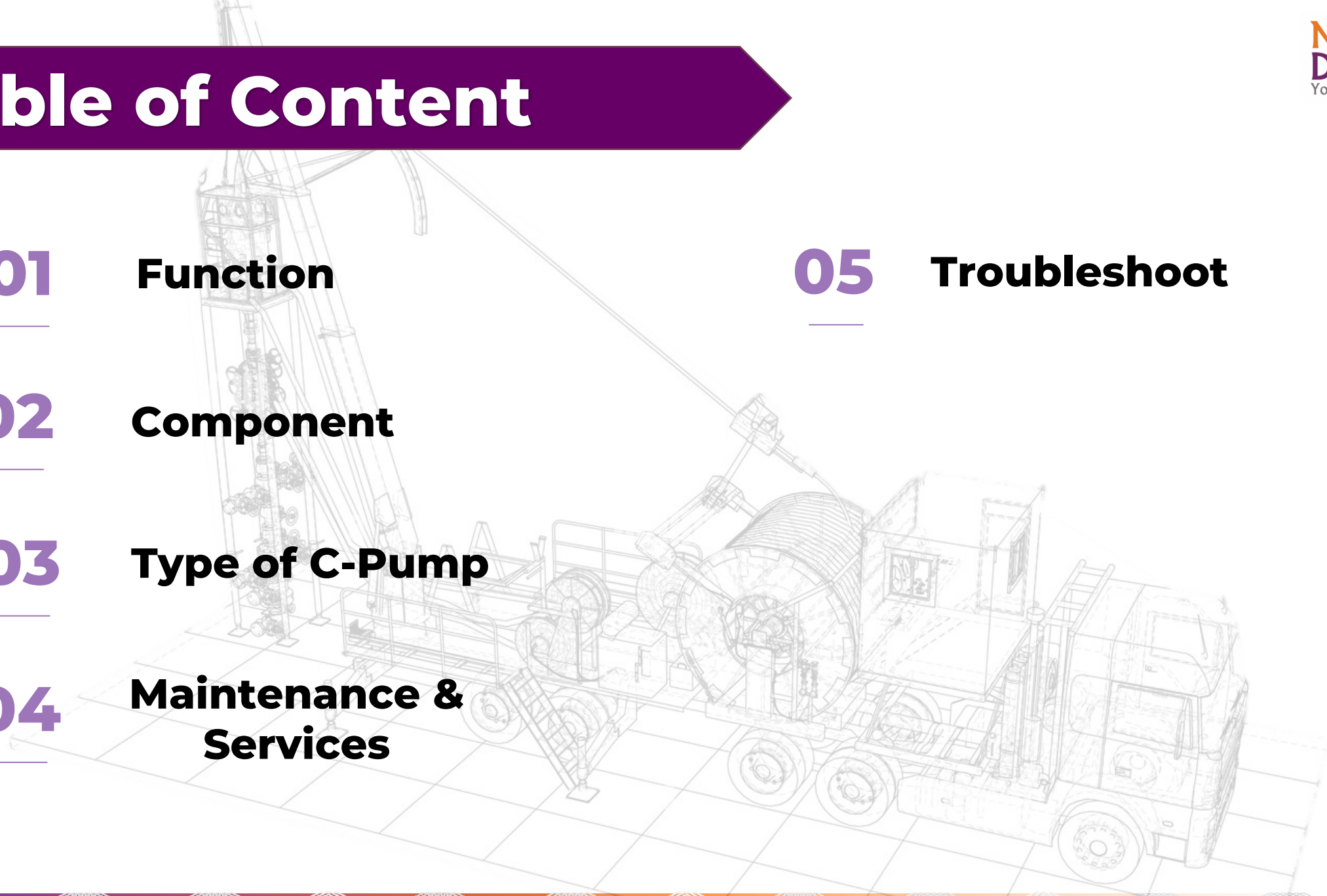
Centrifugal Pump

Prepared by:
Muhammad Aliff bin Zulkefli

Department:
Coiled Tubing Services

Table of Content



Objectives

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01 Explain the function of a centrifugal pump

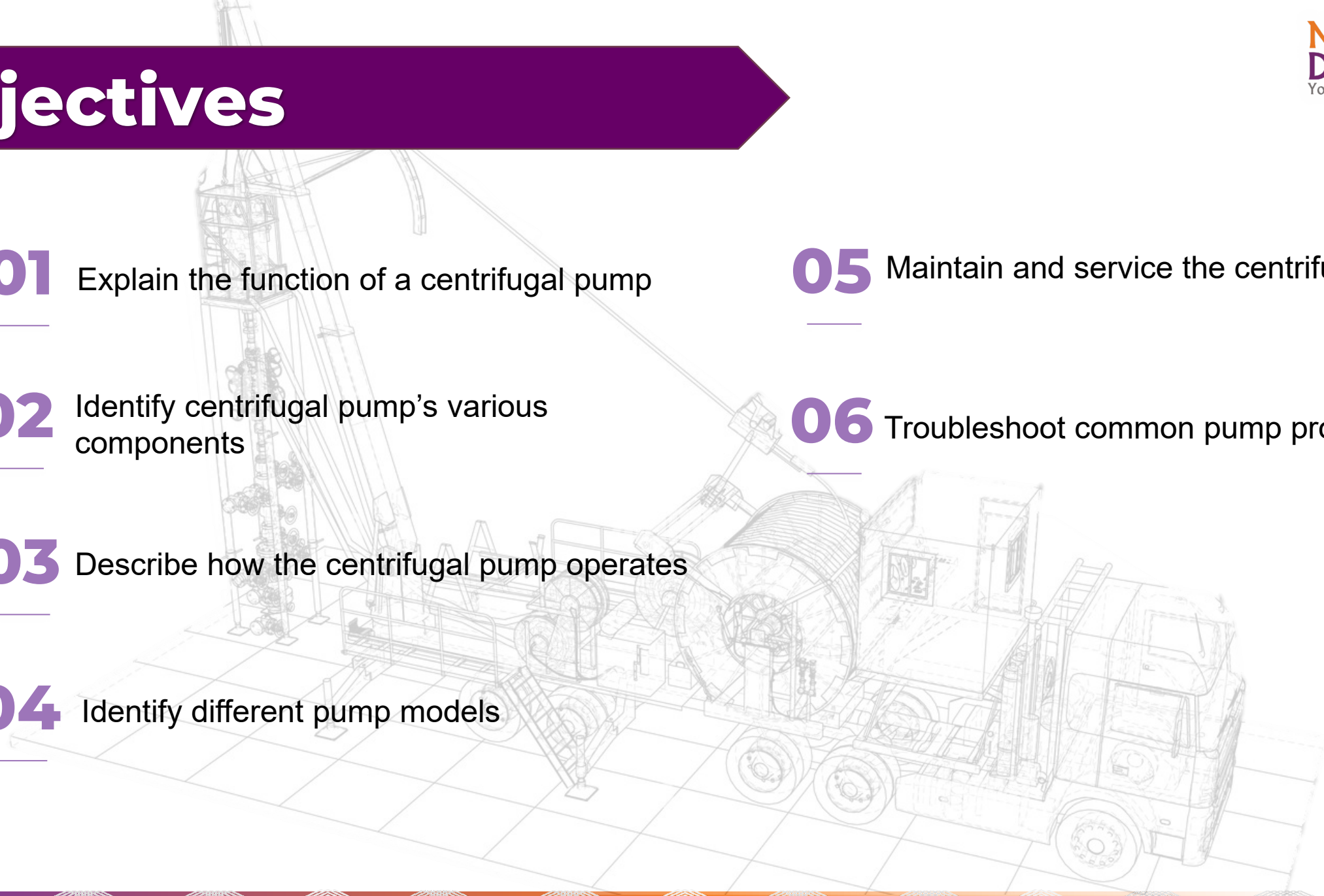
02 Identify centrifugal pump's various components

03 Describe how the centrifugal pump operates

04 Identify different pump models

05 Maintain and service the centrifugal pump

06 Troubleshoot common pump problems



01 Function

C-Pump

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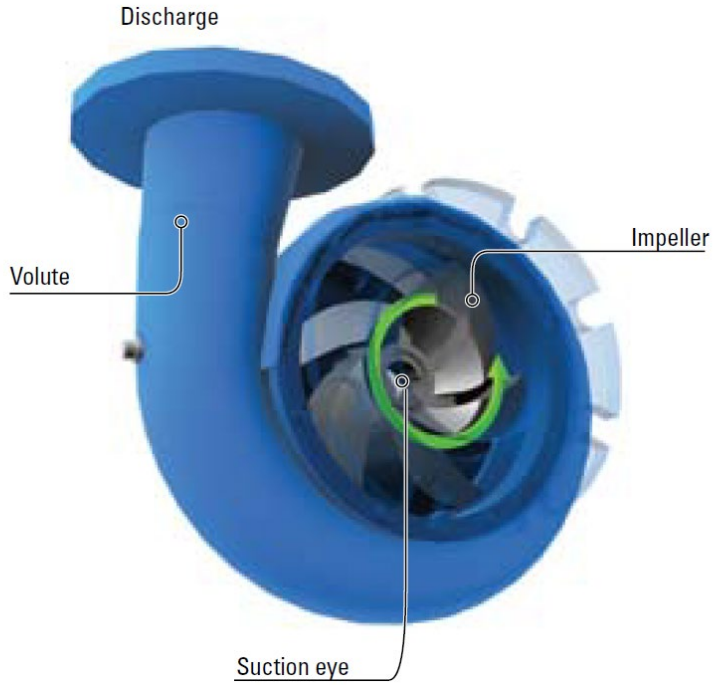
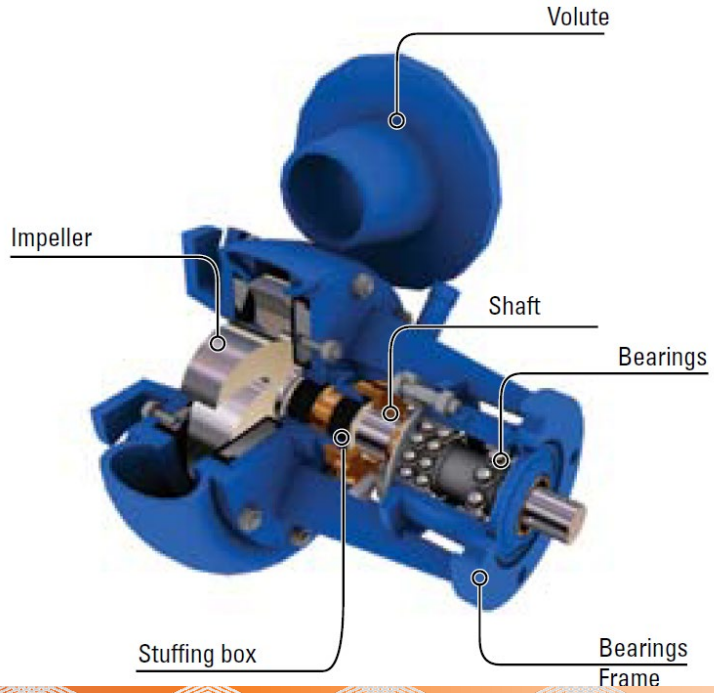
- A centrifugal pump employs a centrifugal forceto develop a pressure that moves a fluid.

02 Component in C-Pump

C-Pump

- **Component:**
- **Impeller**
  - Open impeller
- **Wear Plates**
  - Shims : ideal clearance between impeller & front wear plate is 1/16 inch
- **Wear Rings**
- **Shaft**
- **Volute**
- **Bearings**
- **Bearing Frame**
- **Stuffing Box**
- **Packing Seals**





Stuffing Box

Types of Impeller

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01

Open

02

Semi-Closed

03

Close

03 Types of C-Pump

Types of C-Pump

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- **Types of C-Pump:**

  1. Serva (5x6)

     - Shut in Pressure: 50-60 psi

  2. Gardner Denver (4x5)

     - Shut in Pressure: 40-50 psi

04 Maintenance & Services

Maintenances

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- Ensure adequate lubrication for packing
- Do not over-tighten the packing nut.
- Drain the packing lube system.
- Periodically add a small amount of grease to lubricate the bearings.

05 Troubleshoot

Symptom	Solution
Pump will not prime.	a. The pump is too high above the fluid source. b. The seals or packing are taking in air around the shaft. c. Too much clearance between the impeller and front wear plate. d. The pump speed is too slow. e. There is restriction or blockage in the suction. f. There are worn parts, impeller, wear plates, or volute. g. The impeller is loose on the shaft or the key is broken.
Low discharge pressure.	a. There are worn parts, impeller, wear plates, or volute. b. There is restriction in the suction. c. The pump speed is too slow. d. There is too much clearance between impeller, and front wear plates.
Pump is noisy or vibrates.	a. Cavitation b. Worn bearings c. Out of balance d. Loose mounting bolts e. Misaligned coupling f. Speed too high g. Broken impeller vane h. Aeration
Pump leaks around bolts at volute.	a. Wear plates are not sealing at the volute. b. There is excessive clearance between the volute and frame.