

Instruction Sheet for the Candidate

Qualification	Agricultural Machinery Technician (Level-04)
Competency Standard	Maintain Fuel Supply System
Purpose of Assessment	Formative Assessment
Candidate Details	Name_____
	Registration/Roll Number_____
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within 03 Hrs. time frame (for practical demonstration & assessment):</p> <ul style="list-style-type: none"> • Clean the Fuel tank • Replace the fuel pump • Service the carburetor • Service Fuel injection Pump • Remove the air locking from air filter • Remove the air locking from injection pump • Replace the fuel injectors
Time: 03 Hrs.	During a practical assessment, under observation by an assessor, you are required to
Minimum Evidence Required	<p>Clean the Fuel tank</p> <ol style="list-style-type: none"> 1. Remove the earth lead of Battery 2. Clean the mounting bolts of fuel tank 3. Remove the connections of fuel gauge 4. Drain the fuel tank 5. Remove the fuel pipe 6. Remove the fuel tank from Prime Mover 7. Clean the Fuel tank with the petrol from inner side 8. Dry the fuel tank with air gun 9. Install the Fuel tank in Prime Mover <p>Replace the fuel pump</p> <ol style="list-style-type: none"> 1. Close the fuel supply with valve 2. Remove the both pipes of fuel pump 3. Cover the opening ends of fuel pump 4. Remove the nuts of fuel pump 5. Remove the fuel pump from Prime Mover 6. Install the Fuel pump in Prime Mover <p>Service the carburetor</p> <ol style="list-style-type: none"> 1. Remove the air intake & fuel supply from carburetor 2. Remove the carburetor from engine 3. Dismantle the carburetor

4. Remove the folate and needle valve
5. Remove the main jet and idling adjuster
6. Service the parts of carburetor
7. Assemble the carburetor
8. Install the Carburetor

Service Fuel injection Pump

1. Remove the intake air connector and air intake
2. Remove the timing cover
3. Place the first piston at top of compression
4. Enline the timing point with pulley and pointer
5. Place the valves of fourth cylinder on overlap position
6. Remove the injection pipes
7. Adjust the compression of valves by rotating crank shaft
8. Loosen the union bolt and nuts of pump
9. Remove the injection pump
10. Adjust the retard/Advance timing of pump
11. Install the injection pump with Prime Mover P12. Tight the nuts of Fuel pump

Remove the air locking from air filter

1. Tight the connections of fuel supply line
2. Remove the bleed screw from filter
3. Operate the lift pump for air removing
4. Place and tighten the bleed screw by pressing the pump plunger

Remove the air locking from injection pump

1. Open the bleed valve of injection pump
2. Operate the fuel lift pump
3. Remove the fuel injectors from engine
4. Crank the engine for air removing through injectors
5. Tighten the bleed screw and line nuts

Replace the fuel injectors

1. Clean the injectors
2. Separate leak of lines and return lines from each injector
3. Remove the fuel pipes from injection pump
4. Remove the injectors by opening their nuts and using puller
5. Place copper seat washer
6. Place the dust seal/gasket on injector body
7. Install the injector on seat
8. Install leak off and high pressure fuel pipes

Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	Agricultural Machinery Technician (Level-04)
Competency Standard	Maintain Fuel Supply System
Purpose of Assessment	Formative Assessment
Assessment Task	<ul style="list-style-type: none"> Clean the Fuel tank Replace the fuel pump Service the carburetor Service Fuel injection Pump Remove the air locking from air filter Remove the air locking from injection pump Replace the fuel injectors

I can.....

Performance Criteria	Yes	No
1. Remove the earth lead of Battery	<input type="checkbox"/>	<input type="checkbox"/>
2. Clean the mounting bolts of fuel tank	<input type="checkbox"/>	<input type="checkbox"/>
3. Remove the connections of fuel gauge	<input type="checkbox"/>	<input type="checkbox"/>
4. Drain the fuel tank	<input type="checkbox"/>	<input type="checkbox"/>
5. Remove the fuel pipe	<input type="checkbox"/>	<input type="checkbox"/>
6. Remove the fuel tank from Prime Mover	<input type="checkbox"/>	<input type="checkbox"/>
7. Clean the Fuel tank with the petrol from inner side	<input type="checkbox"/>	<input type="checkbox"/>
8. Dry the fuel tank with air gun	<input type="checkbox"/>	<input type="checkbox"/>
9. Install the Fuel tank in Prime Mover	<input type="checkbox"/>	<input type="checkbox"/>
10. Close the fuel supply with valve	<input type="checkbox"/>	<input type="checkbox"/>
11. Remove the both pipes of fuel pump	<input type="checkbox"/>	<input type="checkbox"/>
12. Cover the opening ends of fuel pump	<input type="checkbox"/>	<input type="checkbox"/>

13. Remove the nuts of fuel pump	<input type="checkbox"/>	<input type="checkbox"/>
14. Remove the fuel pump from Prime Mover	<input type="checkbox"/>	<input type="checkbox"/>
15. Install the Fuel pump in Prime Mover	<input type="checkbox"/>	<input type="checkbox"/>
16. Remove the air intake & fuel supply from carburetor	<input type="checkbox"/>	<input type="checkbox"/>
17. Remove the carburetor from engine	<input type="checkbox"/>	<input type="checkbox"/>
18. Dismantle the carburetor	<input type="checkbox"/>	<input type="checkbox"/>
19. Remove the float and needle valve	<input type="checkbox"/>	<input type="checkbox"/>
20. Remove the main jet and idling adjuster	<input type="checkbox"/>	<input type="checkbox"/>
21. Service the parts of carburetor	<input type="checkbox"/>	<input type="checkbox"/>
22. Assemble the carburetor	<input type="checkbox"/>	<input type="checkbox"/>
23. Install the Carburetor	<input type="checkbox"/>	<input type="checkbox"/>
24. Remove the intake air connector and air intake	<input type="checkbox"/>	<input type="checkbox"/>
25. Remove the timing cover	<input type="checkbox"/>	<input type="checkbox"/>
26. Place the first piston at top of compression	<input type="checkbox"/>	<input type="checkbox"/>
27. Align the timing point with pulley and pointer	<input type="checkbox"/>	<input type="checkbox"/>
28. Place the valves of fourth cylinder on overlap position	<input type="checkbox"/>	<input type="checkbox"/>
29. Remove the injection pipes	<input type="checkbox"/>	<input type="checkbox"/>
30. Adjust the compression of valves by rotating crank shaft	<input type="checkbox"/>	<input type="checkbox"/>
31. Loosen the union bolt and nuts of pump	<input type="checkbox"/>	<input type="checkbox"/>
32. Remove the injection pump	<input type="checkbox"/>	<input type="checkbox"/>
33. Adjust the retard/Advance timing of pump	<input type="checkbox"/>	<input type="checkbox"/>
34. Install the injection pump with Prime Mover	<input type="checkbox"/>	<input type="checkbox"/>
35. Tighten the nuts of Fuel pump	<input type="checkbox"/>	<input type="checkbox"/>
36. Tighten the connections of fuel supply line	<input type="checkbox"/>	<input type="checkbox"/>

37. Remove the bleed screw from filter	<input type="checkbox"/>	<input type="checkbox"/>
38. Place and tighten the bleed screw by pressing the pump plunger	<input type="checkbox"/>	<input type="checkbox"/>
39. Open the bleed valve of injection pump	<input type="checkbox"/>	<input type="checkbox"/>
40. Operate the fuel lift pump	<input type="checkbox"/>	<input type="checkbox"/>
41. Remove the fuel injectors from engine	<input type="checkbox"/>	<input type="checkbox"/>
42. Crank the engine for air removing through injectors	<input type="checkbox"/>	<input type="checkbox"/>
43. Tighten the bleed screw and line nuts	<input type="checkbox"/>	<input type="checkbox"/>
44. Clean the injectors	<input type="checkbox"/>	<input type="checkbox"/>
45. Separate leak of lines and return lines from each injector	<input type="checkbox"/>	<input type="checkbox"/>
46. Remove the fuel pipes from injection pump	<input type="checkbox"/>	<input type="checkbox"/>
47. Remove the injectors by opening their nuts and using puller	<input type="checkbox"/>	<input type="checkbox"/>
48. Place copper seat washer	<input type="checkbox"/>	<input type="checkbox"/>
49. Place the dust seal/gasket on injector body	<input type="checkbox"/>	<input type="checkbox"/>
50. Install the injector on seat	<input type="checkbox"/>	<input type="checkbox"/>
51. Place and tighten the bleed screw by pressing the pump plunger	<input type="checkbox"/>	<input type="checkbox"/>
52. Install leak off and high pressure fuel pipes	<input type="checkbox"/>	<input type="checkbox"/>

Candidate's Signature_____ Assessor's Signature_____

Date: _____

Assessors Judgment Guide

Qualification	Agricultural Machinery Technician (Level-04)
Competency Standard	Maintain Fuel Supply System
Purpose of Assessment	Formative Assessment
Candidate Details	Name: _____ Registration/Roll Number: _____ Signature: _____
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor _____ Assessor's code: _____ Signature: _____

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment		✓					
Other Requirement							

Observation Checklist

Assessment Task		<ul style="list-style-type: none"> • Clean the Fuel tank • Replace the fuel pump • Service the carburetor • Service Fuel injection Pump • Remove the air locking from air filter • Remove the air locking from injection pump • Replace the fuel injectors 		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Remove the earth lead of Battery			
2.	Clean the mounting bolts of fuel tank			
3.	Remove the connections of fuel gauge			
4.	Drain the fuel tank			
5.	Remove the fuel pipe			
6.	Remove the fuel tank from Prime Mover			
7.	Clean the Fuel tank with the petrol from inner side			
8.	Dry the fuel tank with air gun			
9.	Install the Fuel tank in Prime Mover			
10.	Close the fuel supply with valve			
11.	Remove the both pipes of fuel pump			
12.	Cover the opening ends of fuel pump			
13.	Remove the nuts of fuel pump			
14.	Remove the fuel pump from Prime Mover			
15.	Install the Fuel pump in Prime Mover			
16.	Remove the air intake & fuel supply from carburetor			
17.	Remove the carburetor from engine			
18.	Dismantle the carburetor			
19.	Remove the float and needle valve			

20.	Remove the main jet and idling adjuster			
21.	Service the parts of carburetor			
22.	Assemble the carburetor			
23.	Install the Carburetor			
24.	Remove the intake air connector and air intake			
25.	Remove the timing cover			
26.	Place the first piston at top of compression			
27.	Enline the timing point with pulley and pointer			
28.	Place the valves of fourth cylinder on overlap position			
29.	Remove the injection pipes			
30.	Adjust the compression of valves by rotating crank shaft			
31.	Loosen the union bolt and nuts of pump			
32.	Remove the injection pump			
33.	Adjust the retard/Advance timing of pump			
34.	Install the injection pump with Prime Mover			
35.	Tight the nuts of Fuel pump			
36.	Tight the connections of fuel supply line			
37.	Remove the bleed screw from filter			
38.	Operate the lift pump for air removing			
39.	Place and tighten the bleed screw by pressing the pump plunger			
40.	Open the bleed valve of injection pump			
41.	Operate the fuel lift pump			
42.	Remove the fuel injectors from engine			
43.	Crank the engine for air removing through injectors			
44.	Tighten the bleed screw and line nuts			

45.	Clean the injectors			
46.	Separate leak of lines and return lines from each injector			
47.	Remove the fuel pipes from injection pump			
48.	Remove the injectors by opening their nuts and using puller			
49.	Place copper seat washer			
50.	Place the dust seal/gasket on injector body			
51.	Install the injector on seat			
52.	Install leak off and high pressure fuel pipes			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Qualification	Agricultural Machinery Technician (Level-04)
Competency Standard	Maintain Fuel Supply System
Purpose of Assessment	Formative Assessment
Candidate Details	Name: _____ Registration/Roll Number: _____ Candidate Signature: _____
Assessment Outcome	<div style="display: flex; justify-content: space-around; align-items: center;"> COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> </div> Name of the Assessor: _____ Assessor's code: _____ Signature of the Assessor: _____

Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		Satisfactory	Not Satisfactory
1.	Identify the components of fuel system		
2.	What is difference between fuel feed pump and fuel injection pump		
3.	How can you remove the air locking		

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Feedback to the Candidate	
Candidate's Signature _____	Assessor's Signature _____