

Instruction Sheet for the Candidate

Qualification	Agricultural Machinery Mechanic (Level 5)
Competency Standard	Maintain Transmission 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 05 Hrs. time frame (for practical demonstration & assessment):</p> <ul style="list-style-type: none"> • Service the clutch assembly • Replace the PTO Clutch Plate • Maintain the Gear Box assembly • Maintain pinion of rear Axle • Maintain Differential case of rear Axle
Time: 05 Hrs.	During a practical assessment, under observation by an assessor, you are required to
Minimum Evidence Required	<p>Service the clutch assembly</p> <ol style="list-style-type: none"> 1. Park the Prime Mover on level surface 2. Place the line jacks 3. Disconnect the electrical connections 4. Open the bolts of transmission and engine assembly 5. Split the Prime Mover 6. Bolt the clutch assembly for dis-engagement 7. Install the clutch centralizer 8. Open the clutch assembly mounting bolts 9. Assemble the Clutch assembly <p>Replace the PTO Clutch Plate</p> <ol style="list-style-type: none"> 1. Remove the pins and locks of Release levers 2. Remove the Bolts 3. Replace the PTO Clutch plate 4. Assemble the PTO Clutch Assembly 5. Assemble the Prime Mover assembly <p>Maintain the Gear Box assembly</p> <ol style="list-style-type: none"> 1. Open the center housing to gear box bolts 2. Remove the clutch paddle and brake paddle with shafts 3. Remove the retainer assembly 4. Remove the cover plate of cover shaft 5. Remove the EP cyclic gear reduction unit 6. Remove the shifting rails and forks 7. Remove the locks and pull the Main shaft 8. Remove PTO drive shaft from counter drive shaft 9. Remove lock of counter shaft

	<p>10. Assemble the Gear box appropriately</p> <p>11. Filed test the accuracy of gearbox</p> <p>Maintain pinion of rear Axel</p> <ol style="list-style-type: none"> 1. Disconnect the brake linkages 2. Open the bolts of transmission and center housing 3. Split the Rear Axel 4. Remove the Nuts & Bolts from center housing to Axel housing 5. Split the Left side Axel housing 6. Remove Bolts of Pinion Assembly 7. Remove the Pinion 8. Fasten the assembly on bench vice 9. Remove the locking pin & locking nut 10. Remove the bearing & Sleeve 11. Clean the assembly parts with kerosene oil 12. Reassemble the Pinion Assembly as per standard procedure 13. Preloading of pinion assembly 14. Install the pinion assembly as per standard procedure <p>Maintain Differential case of rear Axel</p> <ol style="list-style-type: none"> 1. Remove the differential case 2. Remove the differential case bearing 3. Remove the bolts of differential case 4. Remove the planetary gear and thrust washers 5. Remove the nut & bolt of crown wheel and differential case 6. Clean the parts with kerosene oil 7. Reassemble the Crown wheel and differential case Assembly as per standard procedure 8. Assemble the Axel Housing as per standard procedure
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Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	Agricultural Machinery Mechanic (Level 5)
Competency Standard	Maintain Transmission System
Purpose of Assessment	Formative Assessment
Assessment Task	<ul style="list-style-type: none"> Service the clutch assembly Replace the PTO Clutch Plate Maintain the Gear Box assembly Maintain pinion of rear Axle Maintain Differential case of rear Axle

I can.....

Performance Criteria	Yes	No
1. Park the Prime Mover on level surface	<input type="checkbox"/>	<input type="checkbox"/>
2. Place the line jacks	<input type="checkbox"/>	<input type="checkbox"/>
3. Disconnect the electrical connections	<input type="checkbox"/>	<input type="checkbox"/>
4. Open the bolts of transmission and engine assembly	<input type="checkbox"/>	<input type="checkbox"/>
5. Split the Prime Mover	<input type="checkbox"/>	<input type="checkbox"/>
6. Bolt the clutch assembly for dis-engagement	<input type="checkbox"/>	<input type="checkbox"/>
7. Install the clutch centralizer	<input type="checkbox"/>	<input type="checkbox"/>
8. Open the clutch assembly mounting bolts	<input type="checkbox"/>	<input type="checkbox"/>
9. Assemble the Clutch assembly	<input type="checkbox"/>	<input type="checkbox"/>
10. Remove the pins and locks of Release levers	<input type="checkbox"/>	<input type="checkbox"/>
11. Remove the Bolts	<input type="checkbox"/>	<input type="checkbox"/>
12. Replace the PTO Clutch plate	<input type="checkbox"/>	<input type="checkbox"/>

13. Assemble the PTO Clutch Assembly	<input type="checkbox"/>	<input type="checkbox"/>
14. Assemble the Prime Mover assembly	<input type="checkbox"/>	<input type="checkbox"/>
15. Open the center housing to gear box bolts	<input type="checkbox"/>	<input type="checkbox"/>
16. Remove the clutch paddle and brake paddle with shafts	<input type="checkbox"/>	<input type="checkbox"/>
17. Remove the retainer assembly	<input type="checkbox"/>	<input type="checkbox"/>
18. Remove the cover plate of cover shaft	<input type="checkbox"/>	<input type="checkbox"/>
19. Remove the EP cyclic gear reduction unit	<input type="checkbox"/>	<input type="checkbox"/>
20. Remove the shifting rails and forks	<input type="checkbox"/>	<input type="checkbox"/>
21. Remove the locks and pull the Main shaft	<input type="checkbox"/>	<input type="checkbox"/>
22. Remove PTO drive shaft from counter drive shaft	<input type="checkbox"/>	<input type="checkbox"/>
23. Remove lock of counter shaft	<input type="checkbox"/>	<input type="checkbox"/>
24. Assemble the Gear box appropriately	<input type="checkbox"/>	<input type="checkbox"/>
25. Filed test the accuracy of gearbox	<input type="checkbox"/>	<input type="checkbox"/>
26. Disconnect the brake linkages	<input type="checkbox"/>	<input type="checkbox"/>
27. Open the bolts of transmission and center housing	<input type="checkbox"/>	<input type="checkbox"/>
28. Split the Rear Axel	<input type="checkbox"/>	<input type="checkbox"/>
29. Remove the Nuts & Bolts from center housing to Axel housing	<input type="checkbox"/>	<input type="checkbox"/>
30. Split the Left side Axel housing	<input type="checkbox"/>	<input type="checkbox"/>
31. Remove Bolts of Pinion Assembly	<input type="checkbox"/>	<input type="checkbox"/>
32. Remove the Pinion	<input type="checkbox"/>	<input type="checkbox"/>
33. Fasten the assembly on bench vice	<input type="checkbox"/>	<input type="checkbox"/>

34. Remove the locking pin & locking nut	<input type="checkbox"/>	<input type="checkbox"/>
35. Remove the bearing & Sleeve	<input type="checkbox"/>	<input type="checkbox"/>
36. Clean the assembly parts with kerosene oil	<input type="checkbox"/>	<input type="checkbox"/>
37. Reassemble the Pinion Assembly as per standard procedure	<input type="checkbox"/>	<input type="checkbox"/>
38. Preloading of pinion assembly	<input type="checkbox"/>	<input type="checkbox"/>
39. Install the pinion assembly as per standard procedure	<input type="checkbox"/>	<input type="checkbox"/>
40. Remove the differential case	<input type="checkbox"/>	<input type="checkbox"/>
41. Remove the differential case bearing	<input type="checkbox"/>	<input type="checkbox"/>
42. Remove the bolts of differential case	<input type="checkbox"/>	<input type="checkbox"/>
43. Remove the planetary gear and thrust washers	<input type="checkbox"/>	<input type="checkbox"/>
44. Remove the nut & bolt of crown wheel and differential case	<input type="checkbox"/>	<input type="checkbox"/>
45. Clean the parts with kerosene oil	<input type="checkbox"/>	<input type="checkbox"/>
46. Reassemble the Crown wheel and differential case Assembly as per standard procedure	<input type="checkbox"/>	<input type="checkbox"/>
47. Assemble the Axle Housing as per standard procedure	<input type="checkbox"/>	<input type="checkbox"/>

Candidate's Signature _____ Assessor's Signature _____

Date: _____

Assessors Judgment Guide

Qualification	Agricultural Machinery Mechanic (Level 5)
Competency Standard	Maintain Transmission System
Purpose of Assessment	Formative Assessment
Candidate Details	Name: _____ Registration/Roll Number: _____ 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: _____

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">• Service the clutch assembly• Replace the PTO Clutch Plate• Maintain the Gear Box assembly• Maintain pinion of rear Axel• Maintain Differential case of rear Axel		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Park the Prime Mover on level surface			
2.	Place the line jacks			
3.	Disconnect the electrical connections			
4.	Open the bolts of transmission and engine assembly			
5.	Split the Prime Mover			
6.	Bolt the clutch assembly for dis-engagement			
7.	Install the clutch centralizer			
8.	Open the clutch assembly mounting bolts			
9.	Assemble the Clutch assembly			
10.	Remove the pins and locks of Release levers			
11.	Remove the Bolts			
12.	Rplace the PTO Clutch plate			
13.	Assemble the PTO Clutch Assembly			
14.	Assemble the Prime Mover assembly			
15.	Open the center housing to gear box bolts			
16.	Remove the clutch paddle and brake paddle with shafts			
17.	Remove the retainer assembly			
18.	Remove the cover plate of cover shaft			

19.	Remove the EP cyclic gear reduction unit			
20.	Remove the shifting rails and forks			
21.	Remove the locks and pull the Main shaft			
22.	Remove PTO drive shaft from counter drive shaft			
23.	Remove lock of counter shaft			
24.	Assemble the Gear box appropriately			
25.	Filed test the accuracy of gearbox			
26.	Disconnect the brake linkages			
27.	Open the bolts of transmission and center housing			
28.	Split the Rear Axel			
29.	Remove the Nuts & Bolts from center housing to Axel housing			
30.	Split the Left side Axel housing			
31.	Remove Bolts of Pinion Assembly			
32.	Remove the Pinion			
33.	Fasten the assembly on bench vice			
34.	Remove the locking pin & locking nut			
35.	Remove the bearing & Sleeve			
36.	Clean the assembly parts with kerosene oil			
37.	Reassemble the Pinion Assembly as per standard procedure			
38.	Preloading of pinion assembly			
39.	Install the pinion assembly as per standard procedure			
40.	Remove the differential case			

41.	Remove the differential case bearing			
42.	Remove the bolts of differential case			
43.	Remove the planetary gear and thrust washers			
44.	Remove the nut & bolt of crown wheel and differential case			
45.	Clean the parts with kerosene oil			
46.	Reassemble the Crown wheel and differential case Assembly as per standard procedure			
47.	Assemble the Axel Housing as per standard procedure			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Qualification	Agricultural Machinery Mechanic (Level 5)
Competency Standard	Maintain Transmission System
Purpose of Assessment	Formative Assessment
Candidate Details	Name: _____ Registration/Roll Number: _____ Candidate Signature: _____
Assessment Outcome	<div style="display: flex; justify-content: space-between;"> 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)		Satisfactor y	Not Satisfactor y
1.	Name common types of gears		
2.	What is driven gear?		
3.	What dose PTO mean?		
4.	What are planetary gears?		

Feedback to the Candidate

Candidate's Signature_____ **Assessor's Signature** _____