

## Instruction Sheet for the Candidate

<b>Qualification</b>	Agricultural Machinery Technician (AMT) Level-4
<b>Competency Standard</b>	Maintain land preparation implements
<b>Purpose of Assessment</b>	Formative Assessment
<b>Candidate Details</b>	Name_____
	Registration/Roll Number_____
<b>Guidance for Candidate</b>	<p><b>To meet this standard, you are required to complete the following within 03 Hrs. time frame (for practical demonstration &amp; assessment):</b></p> <ul style="list-style-type: none"> <li>• Inspect cultivator</li> <li>• Replace Blades( tine's tips ) of cultivator</li> <li>• Replace tines</li> <li>• Inspect Rotavator</li> <li>• Services Rotavator</li> <li>• Replace single-speed gearbox of Rotavator</li> <li>• Replace multi-speed gear of Rotavator</li> <li>• Replace Blades</li> <li>• Inspect Reversible Mouldboard (RMB) Plough</li> <li>• Maintain rotating mechanism of RMB</li> <li>• Replace components</li> <li>• Inspect chisel plough</li> <li>• Replace share of chisel plough</li> <li>• Inspect Disc plough</li> <li>• Replace disc and hub bearings</li> <li>• Inspect Disc Harrows</li> <li>• Replace gang assembly</li> </ul>
<b>Time: 03 Hrs.</b>	During a practical assessment, under observation by an assessor, you are required to
<b>Minimum Evidence Required</b>	<p><b>Inspect cultivator</b></p> <ol style="list-style-type: none"> <li>1. Inspect cultivator components (main frame, springs, tines, shovels etc.)</li> <li>2. Inspect attachment of cultivator with 3-point linkage system of tractor</li> <li>3. Check alignment of tines</li> <li>4. Check the size of tines</li> </ol>

5. Observe the tillage penetration
6. Replace shovels at wear and tear

#### **Replace Blades( tine's tips ) of cultivator**

1. Select Spanner and special tools (spring installer)
2. Clean components from dust, mud and residue
3. Uplift cultivator on stands 1-2 feet from ground surface
4. Remove the nuts and bolts
5. Remove blades
6. Assemble blades with required torque

#### **Replace tines**

1. Select Spanner and special tools (spring installer)
2. Clean components from dust, mud and residue
3. Uplift cultivator on stands 1-2 feet from ground surface
4. Remove the nuts and bolts
5. Remove tine assembly from frame
6. Remove tine spring with SST
7. Remove tines pins
8. Replace tines
9. Assemble tines with springs

#### **Inspect Rotavator**

1. Clean components from dust, mud, and residue
2. Inspect rotavator components (mainframe with a metal cover sheet, pipes, blades, bearing, gearbox, cross shaft)
3. Inspect rotavator attachment with PTO shaft
4. Check wear and tear of blades, bearings, and both gearbox

#### **Services Rotavator**

1. Uplift rotavator on stand 1-2 feet from the ground surface
2. Change oil single-speed gearbox
3. Change oil multi-speed gearbox
4. Remove clutch nuts and bolts
5. Remove clutch springs

	<ol style="list-style-type: none"> <li>6. Remove friction disk (clutch plate)</li> <li>7. Assemble clutch Assembly with the required torque</li> </ol> <p><b>Replace single-speed gearbox of Rotavator</b></p> <ol style="list-style-type: none"> <li>1. Remove nuts and bolts mainframe to the gearbox</li> <li>2. Remove gearbox</li> <li>3. Remove nuts and bolts drive pinion</li> <li>4. Remove crown wheel and bearings</li> <li>5. Clean with Kerosene oil</li> <li>6. Replace oil seals</li> <li>7. Assemble with special tools</li> <li>8. Top-up lubricant level</li> </ol> <p><b>Replace multi-speed gear of Rotavator</b></p> <ol style="list-style-type: none"> <li>1. Uplift rotavator on stand 1-2 feet from the ground surface</li> <li>2. Drain gearbox oil</li> <li>3. Remove gearbox cover</li> <li>4. Remove idler gear</li> <li>5. Remove drive and driven gear</li> <li>6. Clean with Kerosene oil</li> <li>7. Replace oil seal</li> <li>8. Assemble gears cover with nuts and bolts with required torque</li> <li>9. Top-up lubricant level</li> </ol> <p><b>Replace Blades</b></p> <ol style="list-style-type: none"> <li>1. Uplift rotavator on stand 1-2 feet from the ground surface</li> <li>2. Remove nuts and bolts of blades</li> <li>3. Remove blades</li> <li>4. Assemble blades in sequence from left to right</li> <li>5. Tight nut and bolts with the required torque</li> <li>6. Assemble depth control bracket</li> </ol> <p><b>Inspect Reversible Mouldboard (RMB) Plough</b></p> <ol style="list-style-type: none"> <li>1. Clean components from dust, mud, and residue</li> <li>2. Inspect RMB plough components (share, mould board, land side, frog, tail pieces, marker etc.)</li> </ol>
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	<ol style="list-style-type: none"> <li>3. Inspect attachment of RMB plough with 3-point linkage system of tractor.</li> </ol> <p><b>Maintain rotating mechanism of RMB</b></p> <ol style="list-style-type: none"> <li>1. Select spanner, punch, hammer, torque ranch, brass rod and grease gun</li> <li>2. Remove high-pressure pipes</li> <li>3. Remove hydraulic jack</li> <li>4. Remove center pin from A-frame to the mainframe</li> <li>5. Clean bush and shaft with Kerosene oil</li> <li>6. Assemble locking device and center pin</li> <li>7. Lubricate locking device and center pin</li> </ol> <p><b>Replace components</b></p> <ol style="list-style-type: none"> <li>1. Uplift MB plough on stand 1-2 feet from the ground surface</li> <li>2. Remove nuts and bolts</li> <li>3. Remove mould board, landside, frog, and share</li> <li>4. Assemble mould board, landside, frog, and share</li> <li>5. Tight nut and bolts with the required torque</li> </ol> <p><b>Inspect chisel plough</b></p> <ol style="list-style-type: none"> <li>1. Clean components from dust, mud, and residue</li> <li>2. Inspect chisel plough components (A-frame, tines, share, tines, pin)</li> <li>3. Check wear and tear of tines</li> </ol> <p><b>Replace share Chisel plough</b></p> <ol style="list-style-type: none"> <li>1. Uplift chisel plough on stands 1-2 feet from the ground surface</li> <li>2. Remove hairpin and pin</li> <li>3. Remove tines from A-frame</li> <li>4. Remove share from tine</li> <li>5. Assemble share with tine</li> </ol> <p><b>Inspect Disc plough</b></p> <ol style="list-style-type: none"> <li>1. Identify disc plough</li> <li>2. Clean components from dust, mud, and residue</li> </ol>
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	<ol style="list-style-type: none"> <li>3. Inspect disc plough components (mainframe, hub, discs, and marking wheel).</li> <li>4. Check wear and tear of discs</li> </ol> <p><b>Replace disc and hub bearings</b></p> <ol style="list-style-type: none"> <li>1. Select spanners and torque wrench and grease</li> <li>2. Uplift disc plough on stands 1-2 feet from the ground surface</li> <li>3. Remove nuts and bolts from disc to hub</li> <li>4. Remove nuts and bolts from mainframe to hub</li> <li>5. Remove hub bearing</li> <li>6. Clean with kerosene oil</li> <li>7. Assemble bearing in the hub with required torque</li> <li>8. Assemble hub on main frame</li> <li>9. Attach hub with frame</li> <li>10. Assemble disc with hub with required torque</li> <li>11. Fill Grease on both hubs</li> <li>12. Align discs to each other</li> </ol> <p><b>Inspect Disc Harrows</b></p> <ol style="list-style-type: none"> <li>1. Clean components from dust, mud, and residue</li> <li>2. Inspect disc harrow components (mainframe, drawbar, front gang carrier, rear gang carrier, and frame assembly, offset bar, axle, discs).</li> <li>3. Check wear and tear of discs</li> </ol> <p><b>Replace gang assembly</b></p> <ol style="list-style-type: none"> <li>1. Uplift disc harrow on stands 1-2 feet from the ground surface</li> <li>2. Remove A-frame pins</li> <li>3. Remove offset bar</li> <li>4. Remove gang assembly</li> <li>5. Uplift gang assembly</li> <li>6. Remove nuts and bolts from hub to frame from both sides</li> <li>7. Remove axle shaft nut and bearings</li> <li>8. Clean bearings with kerosene oil</li> <li>9. Replace both seals</li> </ol>
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	<ul style="list-style-type: none"><li>10. Assemble hub</li><li>11. Remove gang axle nut</li><li>12. Assemble both gang assembly</li><li>13. Attach gang assembly with mainframe and A-frame/drawbar</li></ul>
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## Self-Assessment Checklist

<b>Candidate Name</b>	
<b>Registration No.</b>	
<b>Qualification</b>	Agricultural Machinery Technician (AMT) Level-4
<b>Competency Standard</b>	Maintain land preparation implements
<b>Purpose of Assessment</b>	Formative Assessment
<b>Assessment Task</b>	<ul style="list-style-type: none"> <li>• Inspect cultivator</li> <li>• Replace Blades( tine's tips ) of cultivator</li> <li>• Replace tines</li> <li>• Inspect Rotavator</li> <li>• Services Rotavator</li> <li>• Replace single-speed gearbox of Rotavator</li> <li>• Replace multi-speed gear of Rotavator</li> <li>• Replace Blades</li> <li>• Inspect Reversible Mouldboard (RMB) Plough</li> <li>• Maintain rotating mechanism of RMB</li> <li>• Replace components</li> <li>• Inspect chisel plough</li> <li>• Replace share of chisel plough</li> <li>• Inspect Disc plough</li> <li>• Replace disc and hub bearings</li> <li>• Inspect Disc Harrows</li> <li>• Replace gang assembly</li> </ul>

I can.....

<b>Performance Criteria</b>	<b>Yes</b>	<b>No</b>
1. Inspect cultivator components (main frame, springs, tines, shovels etc.)	<input type="checkbox"/>	<input type="checkbox"/>
2. Inspect attachment of cultivator with 3-point linkage system of tractor	<input type="checkbox"/>	<input type="checkbox"/>
3. Check alignment of tines	<input type="checkbox"/>	<input type="checkbox"/>
4. Check the size of tines	<input type="checkbox"/>	<input type="checkbox"/>
5. Observe the tillage penetration	<input type="checkbox"/>	<input type="checkbox"/>
6. Replace shovels at wear and tear	<input type="checkbox"/>	<input type="checkbox"/>
7. Select Spanner and special tools (spring installer)	<input type="checkbox"/>	<input type="checkbox"/>

8. Clean components from dust, mud and residue	<input type="checkbox"/>	<input type="checkbox"/>
9. Uplift cultivator on stands 1-2 feet from ground surface	<input type="checkbox"/>	<input type="checkbox"/>
10. Remove the nuts and bolts	<input type="checkbox"/>	<input type="checkbox"/>
11. Remove blades	<input type="checkbox"/>	<input type="checkbox"/>
12. Assemble blades with required torque	<input type="checkbox"/>	<input type="checkbox"/>
13. Uplift cultivator on stands 1-2 feet from ground surface	<input type="checkbox"/>	<input type="checkbox"/>
14. Remove tine assembly from frame	<input type="checkbox"/>	<input type="checkbox"/>
15. Remove tine spring with SST	<input type="checkbox"/>	<input type="checkbox"/>
16. Remove tines pins	<input type="checkbox"/>	<input type="checkbox"/>
17. Replace tines	<input type="checkbox"/>	<input type="checkbox"/>
18. Assemble tines with springs	<input type="checkbox"/>	<input type="checkbox"/>
19. Inspect rotavator components (mainframe with a metal cover sheet, pipes, blades, bearing, gearbox, cross shaft)	<input type="checkbox"/>	<input type="checkbox"/>
20. Inspect rotavator attachment with PTO shaft	<input type="checkbox"/>	<input type="checkbox"/>
21. Check wear and tear of blades, bearings, and both gearbox	<input type="checkbox"/>	<input type="checkbox"/>
22. Uplift rotavator on stand 1-2 feet from the ground surface	<input type="checkbox"/>	<input type="checkbox"/>
23. Change oil single-speed gearbox	<input type="checkbox"/>	<input type="checkbox"/>
24. Change oil multi-speed gearbox	<input type="checkbox"/>	<input type="checkbox"/>
25. Remove clutch nuts and bolts	<input type="checkbox"/>	<input type="checkbox"/>
26. Remove clutch springs	<input type="checkbox"/>	<input type="checkbox"/>
27. Remove friction disk (clutch plate)	<input type="checkbox"/>	<input type="checkbox"/>
28. Assemble clutch Assembly with the required torque	<input type="checkbox"/>	<input type="checkbox"/>
29. Remove nuts and bolts mainframe to the gearbox	<input type="checkbox"/>	<input type="checkbox"/>
30. Remove gearbox	<input type="checkbox"/>	<input type="checkbox"/>
31. Remove nuts and bolts drive pinion	<input type="checkbox"/>	<input type="checkbox"/>
32. Remove crown wheel and bearings	<input type="checkbox"/>	<input type="checkbox"/>
33. Clean with Kerosene oil	<input type="checkbox"/>	<input type="checkbox"/>
34. Replace oil seals	<input type="checkbox"/>	<input type="checkbox"/>
35. Assemble with special tools	<input type="checkbox"/>	<input type="checkbox"/>
36. Top-up lubricant level	<input type="checkbox"/>	<input type="checkbox"/>



37. Uplift rotavator on stand 1-2 feet from the ground surface	<input type="checkbox"/>	<input type="checkbox"/>
38. Drain gearbox oil	<input type="checkbox"/>	<input type="checkbox"/>
39. Remove gearbox cover	<input type="checkbox"/>	<input type="checkbox"/>
40. Remove idler gear	<input type="checkbox"/>	<input type="checkbox"/>
41. Remove drive and driven gear	<input type="checkbox"/>	<input type="checkbox"/>
42. Assemble gears cover with nuts and bolts with required torque	<input type="checkbox"/>	<input type="checkbox"/>
43. Top-up lubricant level	<input type="checkbox"/>	<input type="checkbox"/>
44. Assemble blades in sequence from left to right	<input type="checkbox"/>	<input type="checkbox"/>
45. Tight nut and bolts with the required torque	<input type="checkbox"/>	<input type="checkbox"/>
46. Assemble depth control bracket	<input type="checkbox"/>	<input type="checkbox"/>
47. Inspect RMB plough components (share, mould board, land side, frog, tail pieces, marker etc.)	<input type="checkbox"/>	<input type="checkbox"/>
48. Inspect attachment of RMB plough with 3-point linkage system of tractor.	<input type="checkbox"/>	<input type="checkbox"/>
49. Select spanner, punch, hamer, torque ranch, brass rod and greace gun	<input type="checkbox"/>	<input type="checkbox"/>
50. Remove high-pressure pipes	<input type="checkbox"/>	<input type="checkbox"/>
51. Remove hydraulic jack	<input type="checkbox"/>	<input type="checkbox"/>
52. Remove center pin from A-frame to the mainframe	<input type="checkbox"/>	<input type="checkbox"/>
53. Clean bush and shaft with Kerosene oil	<input type="checkbox"/>	<input type="checkbox"/>
54. Assemble locking device and center pin	<input type="checkbox"/>	<input type="checkbox"/>
55. Lubricate locking device and center pin	<input type="checkbox"/>	<input type="checkbox"/>
56. Uplift MB plough on stand 1-2 feet from the ground surface	<input type="checkbox"/>	<input type="checkbox"/>
57. Remove mould board, landside, frog, and share	<input type="checkbox"/>	<input type="checkbox"/>
58. Assemble mould board, landside, frog, and share	<input type="checkbox"/>	<input type="checkbox"/>
59. Inspect chisel plough components (A-frame, tines, share, tines, pin)	<input type="checkbox"/>	<input type="checkbox"/>
60. Check wear and tear of tines	<input type="checkbox"/>	<input type="checkbox"/>
61. Uplift chisel plough on stands 1-2 feet from the ground surface	<input type="checkbox"/>	<input type="checkbox"/>

62. Remove hairpin and pin	<input type="checkbox"/>	<input type="checkbox"/>
63. Remove tines from A-frame	<input type="checkbox"/>	<input type="checkbox"/>
64. Remove share from tine	<input type="checkbox"/>	<input type="checkbox"/>
65. Assemble share with tine	<input type="checkbox"/>	<input type="checkbox"/>
66. Identify disc plough	<input type="checkbox"/>	<input type="checkbox"/>
67. Inspect disc plough components (mainframe, hub, discs, and marking wheel).	<input type="checkbox"/>	<input type="checkbox"/>
68. Check wear and tear of discs	<input type="checkbox"/>	<input type="checkbox"/>
69. Select spanners and torque wrench and grease	<input type="checkbox"/>	<input type="checkbox"/>
70. Uplift disc plough on stands 1-2 feet from the ground surface	<input type="checkbox"/>	<input type="checkbox"/>
71. Remove nuts and bolts from disc to hub	<input type="checkbox"/>	<input type="checkbox"/>
72. Remove nuts and bolts from mainframe to hub	<input type="checkbox"/>	<input type="checkbox"/>
73. Remove hub bearing	<input type="checkbox"/>	<input type="checkbox"/>
74. Assemble bearing in the hub with required torque	<input type="checkbox"/>	<input type="checkbox"/>
75. Assemble hub on main frame	<input type="checkbox"/>	<input type="checkbox"/>
76. Attach hub with frame	<input type="checkbox"/>	<input type="checkbox"/>
77. Assemble disc with hub with required torque	<input type="checkbox"/>	<input type="checkbox"/>
78. Fill Grease on both hubs	<input type="checkbox"/>	<input type="checkbox"/>
79. Align discs to each other	<input type="checkbox"/>	<input type="checkbox"/>
80. Inspect disc harrow components (mainframe, drawbar, front gang carrier, rear gang carrier, and frame assembly, offset bar, axle, discs).	<input type="checkbox"/>	<input type="checkbox"/>
81. Uplift disc harrow on stands 1-2 feet from the ground surface	<input type="checkbox"/>	<input type="checkbox"/>
82. Remove A-frame pins	<input type="checkbox"/>	<input type="checkbox"/>
83. Remove offset bar	<input type="checkbox"/>	<input type="checkbox"/>
84. Remove gang assembly	<input type="checkbox"/>	<input type="checkbox"/>
85. Uplift gang assembly	<input type="checkbox"/>	<input type="checkbox"/>
86. Remove nuts and bolts from hub to frame from both sides	<input type="checkbox"/>	<input type="checkbox"/>
87. Remove axle shaft nut and bearings	<input type="checkbox"/>	<input type="checkbox"/>
88. Clean bearings with kerosene oil	<input type="checkbox"/>	<input type="checkbox"/>

89. Replace both seals	<input type="checkbox"/>	<input type="checkbox"/>
90. Assemble hub	<input type="checkbox"/>	<input type="checkbox"/>
91. Remove gang axle nut	<input type="checkbox"/>	<input type="checkbox"/>
92. Assemble both gang assembly	<input type="checkbox"/>	<input type="checkbox"/>
93. Attach gang assembly with mainframe and A-frame/drawbar	<input type="checkbox"/>	<input type="checkbox"/>

Candidate's Signature\_\_\_\_\_ Assessor's Signature\_\_\_\_\_

Date: \_\_\_\_\_

## Assessors Judgment Guide

<b>Qualification</b>	Agricultural Machinery Technician (AMT) Level-4
<b>Competency Standard</b>	Maintain land preparation implements
<b>Purpose of Assessment</b>	Formative Assessment
<b>Candidate Details</b>	Name: _____ Registration/Roll Number: _____ Signature: _____

<b>Assessment Outcome</b>	<b>COMPETENT</b> <input type="checkbox"/> <b>NOT YET COMPETENT</b> <input type="checkbox"/>
	<b>Name of the Assessor</b> _____
	<b>Assessor's code:</b> _____
	<b>Signature:</b> _____

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

<b>Assessment Task</b>	<ul style="list-style-type: none"><li>• Inspect cultivator</li><li>• Replace Blades( tine's tips ) of cultivator</li><li>• Replace tines</li><li>• Inspect Rotavator</li><li>• Services Rotavator</li><li>• Replace single-speed gearbox of Rotavator</li><li>• Replace multi-speed gear of Rotavator</li><li>• Replace Blades</li><li>• Inspect Reversible Mouldboard (RMB) Plough</li><li>• Maintain rotating mechanism of RMB</li><li>• Replace components</li><li>• Inspect chisel plough</li><li>• Replace share of chisel plough</li><li>• Inspect Disc plough</li><li>• Replace disc and hub bearings</li><li>• Inspect Disc Harrows</li><li>• Replace gang assembly</li></ul>				
	<b>During the practical assessment, candidate demonstrated the following:</b>		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
	1.	Inspect cultivator components (main frame, springs, tines, shovels etc.)			
	2.	Inspect attachment of cultivator with 3-point linkage system of tractor			
	3.	Check alignment of tines			
	4.	Check the size of tines			
	5.	Observe the tillage penetration			
	6.	Replace shovels at wear and tear			
	7.	Select Spanner and special tools (spring installer)			
	8.	Clean components from dust, mud and residue			
	9.	Uplift cultivator on stands 1-2 feet from ground surface			
	10.	Remove the nuts and bolts			
	11.	Remove blades			
	12.	Assemble blades with required torque			

13.	Uplift cultivator on stands 1-2 feet from ground surface			
14.	Remove tine assembly from frame			
15.	Remove tine spring with SST			
16.	Remove tines pins			
17.	Replace tines			
18.	Assemble tines with springs			
19.	Inspect rotavator components (mainframe with a metal cover sheet, pipes, blades, bearing, gearbox, cross shaft)			
20.	Inspect rotavator attachment with PTO shaft			
21.	Check wear and tear of blades, bearings, and both gearbox			
22.	Uplift rotavator on stand 1-2 feet from the ground surface			
23.	Change oil single-speed gearbox			
24.	Change oil multi-speed gearbox			
25.	Remove clutch nuts and bolts			
26.	Remove clutch springs			
27.	Remove friction disk (clutch plate)			
28.	Assemble clutch Assembly with the required torque			
29.	Remove nuts and bolts mainframe to the gearbox			
30.	Remove gearbox			
31.	Remove nuts and bolts drive pinion			
32.	Remove crown wheel and bearings			
33.	Clean with Kerosene oil			

34.	Replace oil seals			
35.	Assemble with special tools			
36.	Top-up lubricant level			
37.	Uplift rotavator on stand 1-2 feet from the ground surface			
38.	Drain gearbox oil			
39.	Remove gearbox cover			
40.	Remove idler gear			
41.	Remove drive and driven gear			
42.	Assemble gears cover with nuts and bolts with required torque			
43.	Top-up lubricant level			
44.	Assemble blades in sequence from left to right			
45.	Tight nut and bolts with the required torque			
46.	Assemble depth control bracket			
47.	Inspect RMB plough components (share, mould board, land side, frog, tail pieces, marker etc.)			
48.	Inspect attachment of RMB plough with 3-point linkage system of tractor.			
49.	Select spanner, punch, hamer, torque ranch, brass rod and greace gun			
50.	Remove high-pressure pipes			
51.	Remove hydraulic jack			
52.	Remove center pin from A-frame to the mainframe			
53.	Clean bush and shaft with Kerosene oil			
54.	Assemble locking device and center pin			
55.	Lubricate locking device and center pin			

56.	Uplift MB plough on stand 1-2 feet from the ground surface			
57.	Remove mould board, landside, frog, and share			
58.	Assemble mould board, landside, frog, and share			
59.	Inspect chisel plough components (A-frame, tines, share, tines, pin)			
60.	Check wear and tear of tines			
61.	Uplift chisel plough on stands 1-2 feet from the ground surface			
62.	Remove hairpin and pin			
63.	Remove tines from A-frame			
64.	Remove share from tine			
65.	Assemble share with tine			
66.	Identify disc plough			
67.	Inspect disc plough components (mainframe, hub, discs, and marking wheel).			
68.	Check wear and tear of discs			
69.	Select spanners and torque ranch and grease			
70.	Uplift disc plough on stands 1-2 feet from the ground surface			
71.	Remove nuts and bolts from disc to hub			
72.	Remove nuts and bolts from mainframe to hub			
73.	Remove hub bearing			
74.	Assemble bearing in the hub with required torque			
75.	Assemble hub on main frame			
76.	Attach hub with frame			
77.	Assemble disc with hub with required torque			



78.	Fill Grease on both hubs			
79.	Align discs to each other			
80.	Inspect disc harrow components (mainframe, drawbar, front gang carrier, rare gang carrier, and frame assembly, offset bar, axle, discs).			
81.	Uplift disc harrow on stands 1-2 feet from the ground surface			
82.	Remove A-frame pins			
83.	Remove offset bar			
84.	Remove gang assembly			
85.	Uplift gang assembly			
86.	Remove nuts and bolts from hub to frame from both sides			
87.	Remove axle shaft nut and bearings			
88.	Clean bearings with kerosene oil			
89.	Replace both seals			
90.	Assemble hub			
91.	Remove gang axle nut			
92.	Assemble both gang assembly			
93.	Attach gang assembly with mainframe and A-frame/drawbar			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

## Knowledge Assessment

<b>Qualification</b>	Agricultural Machinery Technician (AMT) Level-4
<b>Competency Standard</b>	Maintain land preparation implements
<b>Purpose of Assessment</b>	Formative Assessment
<b>Candidate Details</b>	Name: _____ Registration/Roll Number: _____ Candidate Signature: _____
<b>Assessment Outcome</b>	<div style="display: flex; justify-content: space-around; align-items: center;"> <span><b>COMPETENT</b> <input type="checkbox"/></span> <span><b>NOT YET COMPETENT</b> <input type="checkbox"/></span> </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.	What are the two categories of pin attachment?		
2.	State main three components of Rotavator		

3.	What is the attachment principle of Rotavator		
4.	What is the blade attachment sequence of rotavator		
5.	What are the two types of PTO shaft?		

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