



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10463454

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/20/2021

Location: Roll Mill

Serial Number: 1A STAND

Job Number: 144888

Description: Roll Stand 1A

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: N/A

Ratio:: N/A

Serial#:: N/A

Type:: Gearbox

Model#:: N/A

Application ID:: 1A

Coupling Type: : Gear

Priorities Found: 1 - Low

### Gearbox Visual Inspection



1. Date Inspection Performed 04/05/2021

2. Oil Condition

P2

Wear

Physical

Contaminants

Acceptable

Unacceptable

Unacceptable

Oil is contaminated with what appears to be rust or some time of flaking material.



3. Gears:

P3

Wear

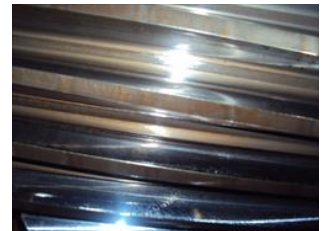
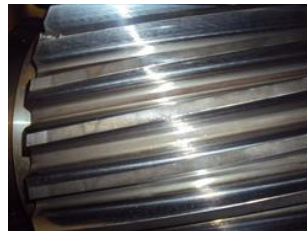
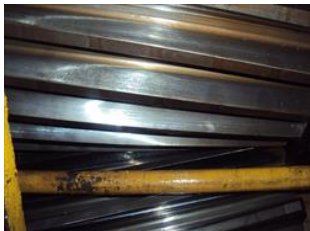
Physical

Contaminants

Acceptable

Acceptable

Acceptable



4. Seals:

Wear


Physical

Contaminants

acceptable

acceptable

acceptable

5.	Environmental Conditions	
	Ambient Temperature (F)	Humidity
	65	60
6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	Ok
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Debris is present in gear case. Gears look ok.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10463453

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/20/2021

Location: Roll Mill

Serial Number: 2 MAIN STAND

Job Number: 144888

Description: Roll Stand 2 Main Gearbox

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: N/A

Ratio:: N/A

Serial#:: N/A

Type:: N/A

Model#:: N/A

Application ID:: 2 Main

Coupling Type: : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

Physical

Contaminants

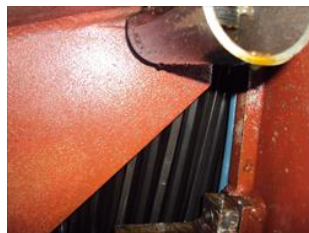
**marginal**

**acceptable**

**marginal**



*Gears appear to have marginal tooth wear.*



4. Seals:

Wear


Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5.	Environmental Conditions	
	Ambient Temperature (F)	Humidity
	65	60
6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	ok
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Small amount of debris in bottom of gear case. Gears look ok with slight wear.</i>	
30.	Technician Signature 	Kevin Maxwell



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10468181

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/20/2021

Location: Roll Mill

Serial Number: 2 STAND INTERMEDIATE

Job Number: 144888

Description: Roll Stand 2 Intermediate

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: N/A

Ratio:: N/A

Serial#:: N/A

Type:: N/A

Model#:: N/A

Application ID:: 2 Intermediate

Coupling Type : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

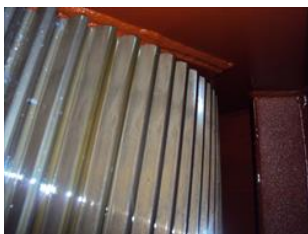
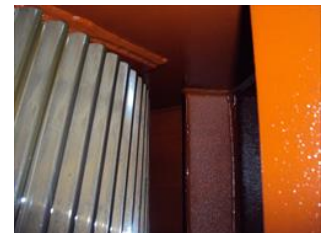
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

Ambient Temperature (F)

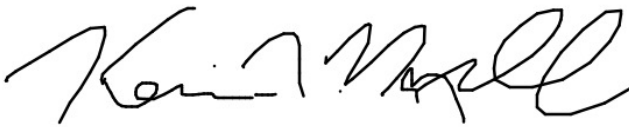
Humidity

**65**

**60**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox	
	<i>Gears look good. No issues to report.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10468239

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/20/2021

Location: Roll Mill

Serial Number: 1 MAIN STAND

Job Number: 144888

Description: Roll Stand 1 Main

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: N/A

Ratio:: N/A

Serial#:: N/A

Type:: N/A

Model#:: N/A

Application ID:: 1 Main

Coupling Type: : Gear

Priorities Found: ● 1 - Low

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

P2

Wear

Physical

Contaminants

acceptable

requires attention

requires attention

Debris found in gear casing.



3. Gears:

P3

Wear

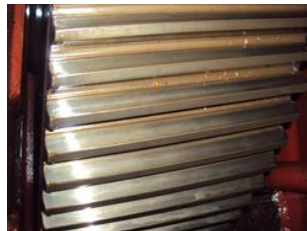
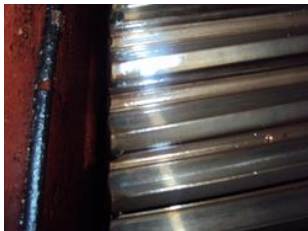
Physical

Contaminants

acceptable

acceptable

acceptable



4. Seals:

Wear

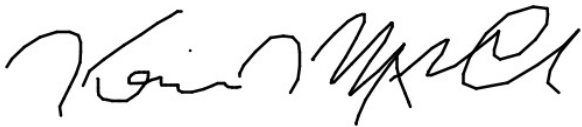
Physical

Contaminants

marginal

marginal

marginal

5.	Environmental Conditions	
	Ambient Temperature (F)	Humidity
	65	60
6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Fail) Unacceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Fail) Unacceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Debris found in bottom of gear casing. Gears have minor wear. Input seal appears to be leaking.</i>	
30.	Technician Signature	Kevin Maxwell
		





## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10469425

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: 3 STAND MAIN

Job Number: 144888

Description: Roll Stand 3 Main

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: N/A

Ratio:: N/A

Serial#:: N/A

Type:: N/A

Model#:: N/A

Application ID:: 3 Stand Main

Coupling Type: : Gear

Priorities Found: ● 1 - Low

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**marginal**

3. Gears:

P3

Wear

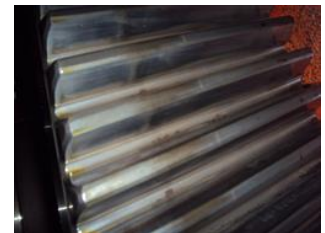
Physical

Contaminants

**marginal**

**marginal**

**marginal**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

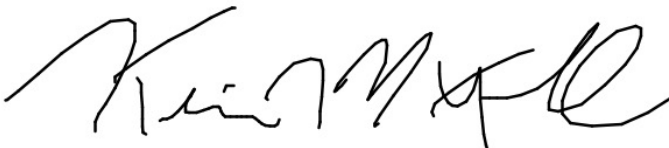
Ambient Temperature (F)

Humidity

**65**

**60**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	<p>Summary of Issues and Overall Condition of the Gearbox</p> <p><i>Nucor personnel is aware of an issue with a gear in this unit. We could not see this gear issue during our inspection but we are including it in this report. Gears do have what appears to be normal wear. There is also trash in bottom of casing.</i></p>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10489305

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: 3 INTERMEDIATE

Job Number: 144888

Description: Roll Stand 3 Intermediate

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: N/A

Ratio:: N/A

Serial#:: N/A

Type:: N/A

Model#:: N/A

Application ID:: 3 Intermediate

Coupling Type: : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

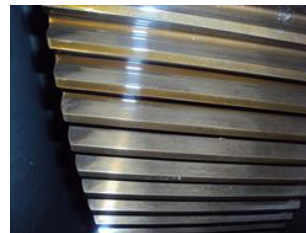
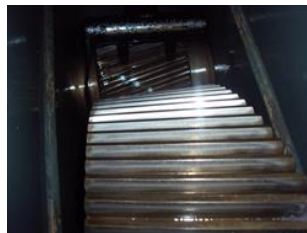
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

Ambient Temperature (F)

Humidity

**65**

**60**

6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

7. Other conditions

Gearbox Temperature (F)

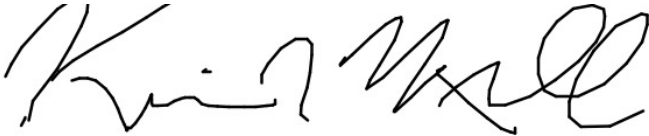
Moisture Presence

### Gearbox Inspection & Evaluation Checklist

8. Primary drive rotates input shaft in correct direction

**(Yes) Yes**

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9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	<p>Summary of Issues and Overall Condition of the Gearbox</p> <p><i>No real issue to mention. Gears looked ok.</i></p>	
30.	<p>Technician Signature</p> 	Kevin Maxwell



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10489361

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: 4 INTERMEDIATE

Job Number: 144888

Description: Roll Stand 4 Intermediate

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: 4 Intermediate

Coupling Type : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

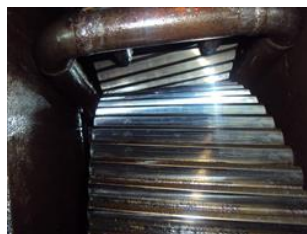
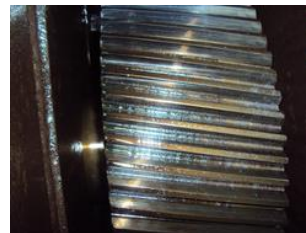
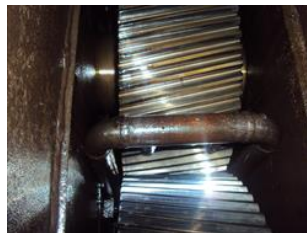
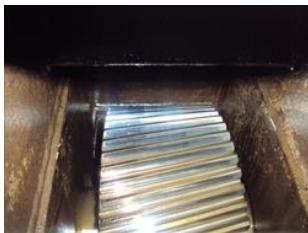
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

Ambient Temperature (F)


Humidity

**68**

**55**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>All looks good. Gears are in good shape.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10489550

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: 4 MAIN

Job Number: 144888

Description: Roll Stand 4 Main

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: 4 Main

Coupling Type : Gear

### Gearbox Visual Inspection

1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

3. Gears:

Wear

Physical

Contaminants

4. Seals:

Wear

Physical

Contaminants

5. Environmental Conditions

Ambient Temperature (F)

Humidity

**68**

**55**

6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

7. Other conditions

Gearbox Temperature (F)

Moisture Presence

### Gearbox Inspection & Evaluation Checklist

8. Primary drive rotates input shaft in correct direction **(Yes) Yes**

9. Condition of Machinery Guards if Present **(NA)**

10. Condition of Coupling Guards if Present **(NA)**

11. Type of Coupler: **gear**


12. Coupling Alignment **acceptable**

13. Condition of Housing **(Pass) Acceptable**

14. Condition of Mounting Hardware **(Pass) Acceptable**

15. Breather Vent Installed: **(Pass) Present/Acceptable**

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16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Missing) Missing/Damaged
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(NA)
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(NA)
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(NA)
27.	Degree of Gear Wear	
28.	Gear tooth Contact	(NA)
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Could not access gearbox because bolts heads were stripped.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10489801

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: 1 INTERMEDIATE

Job Number: 144888

Description: Roll Stand 1 Intermediate

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: 1 Intermediate

Coupling Type: : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

Ambient Temperature (F)

Humidity

**70**

**55**

6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

7. Other conditions

Gearbox Temperature (F)


Moisture Presence

### Gearbox Inspection & Evaluation Checklist

8. Primary drive rotates input shaft in correct direction

**(Yes) Yes**

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9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	<p>Summary of Issues and Overall Condition of the Gearbox</p> <p><i>Some markings on top of gear appear to line up to oil injectors. Gears look good. Minor indication of moisture present in gear casing.</i></p>	
30.	Technician Signature	Kevin Maxwell
		





## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10490818

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: 2A 90 DEGREE

Job Number: 144888

Description: Roll Stand 2A 90 Degree Gearbox

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: 2A 90 Degree Gearbox

Coupling Type : Gear

### Gearbox Visual Inspection

1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear	Physical	Contaminants
<b>acceptable</b>	<b>acceptable</b>	<b>acceptable</b>

3. Gears:

Wear	Physical	Contaminants
<b>acceptable</b>	<b>acceptable</b>	<b>acceptable</b>

4. Seals:

Wear	Physical	Contaminants
<b>acceptable</b>	<b>acceptable</b>	<b>acceptable</b>

5. Environmental Conditions

Ambient Temperature (F)	Humidity
<b>70</b>	<b>55</b>

6. Physical Issues

Signs of Excessive Heat?	Signs of Lubricant Leaks?
--------------------------	---------------------------

7. Other conditions

Gearbox Temperature (F)	Moisture Presence
-------------------------	-------------------

### Gearbox Inspection & Evaluation Checklist

8. Primary drive rotates input shaft in correct direction **(Yes) Yes**

9. Condition of Machinery Guards if Present **(NA)**

10. Condition of Coupling Guards if Present **(NA)**

11. Type of Coupler: **gear**

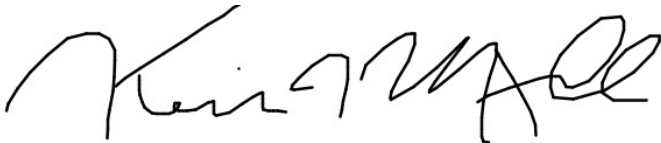
12. Coupling Alignment **acceptable**

13. Condition of Housing **(Pass) Acceptable**

14. Condition of Mounting Hardware **(Pass) Acceptable**

15. Breather Vent Installed: **(NA)**

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16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(None) None/New
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>No good access to this gearbox to inspect gears. Cover that was removed only showed shafts.</i>	
30.	Technician Signature	Kevin Maxwell
		



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7030 Ryburn Dr  
Millington, Tn 38053  
901-873-5300

## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10491214

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 5

Job Number: 144888

Description: Roll Stand 5

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA


Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 5

Coupling Type: : Gear

Priorities Found:  1 - Low

### Gearbox Visual Inspection



- |                              |            |
|------------------------------|------------|
| 1. Date Inspection Performed | 04/05/2021 |
| 2. Oil Condition             |            |

Wear

Physical

Contaminants

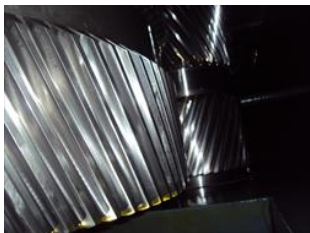
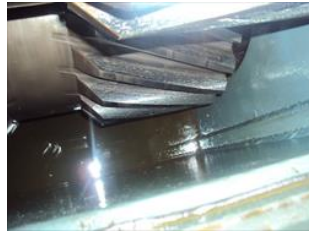
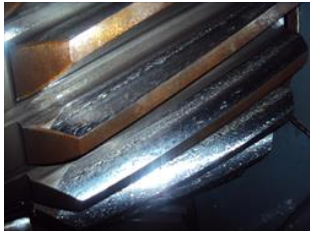
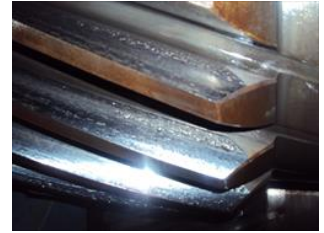
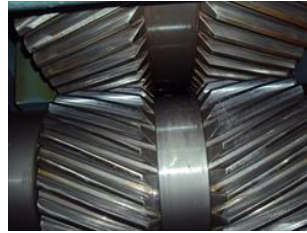
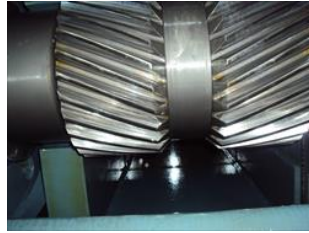
acceptable

acceptable

acceptable

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## 3. Gears:

Wear  
**marginal**Physical  
**marginal**Contaminants  
**acceptable**

## 4. Seals:

Wear  
**acceptable**Physical  
**acceptable**Contaminants  
**acceptable**

## 5. Environmental Conditions

Ambient Temperature (F)

Humidity

**70****55**

## 6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

## 7. Other conditions

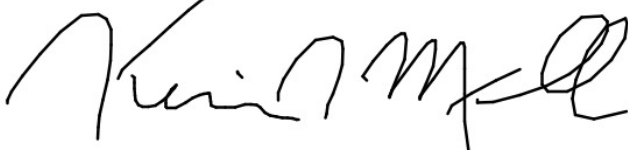
Gearbox Temperature (F)

Moisture Presence

**Gearbox Inspection & Evaluation Checklist**

8. Primary drive rotates input shaft in correct direction	(Yes) Yes
9. Condition of Machinery Guards if Present	(NA)
10. Condition of Coupling Guards if Present	(NA)
11. Type of Coupler:	gear
12. Coupling Alignment	acceptable
13. Condition of Housing	(Pass) Acceptable
14. Condition of Mounting Hardware	(Pass) Acceptable
15. Breather Vent Installed:	(Pass) Present/Acceptable
16. Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17. Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable

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18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Advanced) Advanced
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Output gears appear to have decent wear. Other gears look ok.</i>	
30.	Technician Signature	Kevin Maxwell
		





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7030 Ryburn Dr  
Millington, Tn 38053  
901-873-5300

## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10491693

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 6

Job Number: 144888

Description: Roll Stand 6

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA



Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 6

Coupling Type: : Gear

Priorities Found:  1 - Medium  1 - Low

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**
2. Oil Condition

Wear

Physical

Contaminants

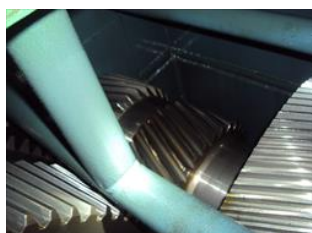
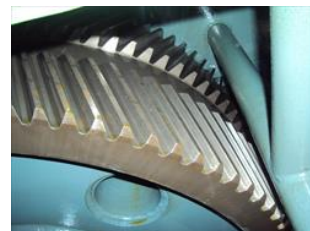
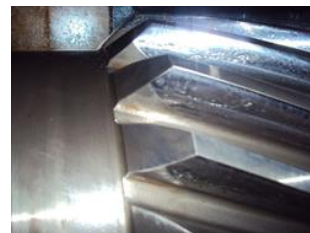
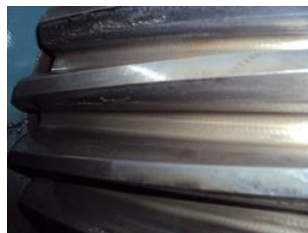
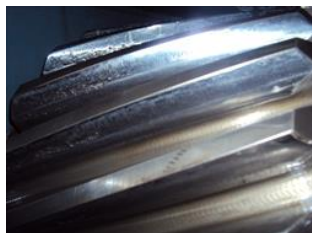
**acceptable**

**acceptable**

**acceptable**

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## 3. Gears:

Wear  
**marginal**Physical  
**marginal**Contaminants  
**marginal**

## 4. Seals:

Wear  
**acceptable**Physical  
**acceptable**Contaminants  
**acceptable**

## 5. Environmental Conditions

Ambient Temperature (F)

Humidity

**70****55**

## 6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

## 7. Other conditions

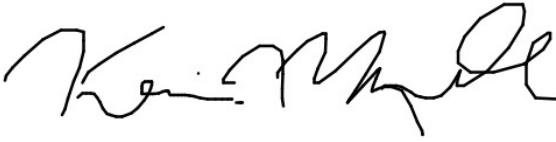
Gearbox Temperature (F)

Moisture Presence

**Gearbox Inspection & Evaluation Checklist**

8. Primary drive rotates input shaft in correct direction	(Yes) Yes
9. Condition of Machinery Guards if Present	(NA)
10. Condition of Coupling Guards if Present	(NA)
11. Type of Coupler:	gear
12. Coupling Alignment	acceptable
13. Condition of Housing	(Pass) Acceptable
14. Condition of Mounting Hardware	(Pass) Acceptable
15. Breather Vent Installed:	(Pass) Present/Acceptable
16. Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17. Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable

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18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Advanced) Advanced
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Output gears appear to have some wear. There also appears to be some wear on the input pinion gear.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10492059

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: CROP SHEAR

Job Number: 144888

Description: Crop Shear

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Crop Shear

Coupling Type: : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

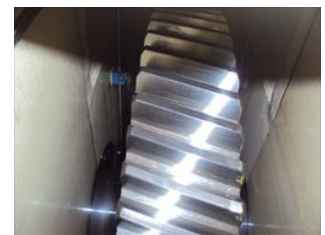
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

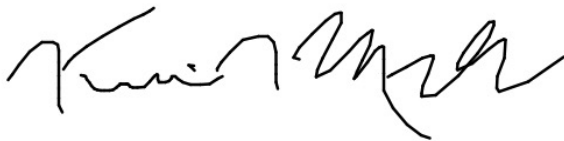
Ambient Temperature (F)

Humidity

**72**

**55**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox	
	<i>Minor sighs of wear on lower pinion gear.</i>	
30.	Technician Signature	Kevin Maxwell
		





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7030 Ryburn Dr  
Millington, Tn 38053  
901-873-5300

## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10492114

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 7

Job Number: 144888

Description: Roll Stand 7

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA


Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 7

Coupling Type: : Gear

Priorities Found:  1 - Good

### Gearbox Visual Inspection



- |                              |            |
|------------------------------|------------|
| 1. Date Inspection Performed | 04/05/2021 |
| 2. Oil Condition             |            |

Wear

Physical

Contaminants

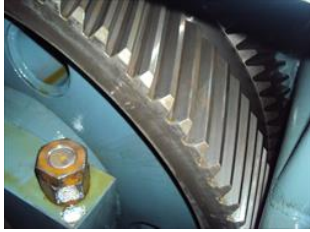
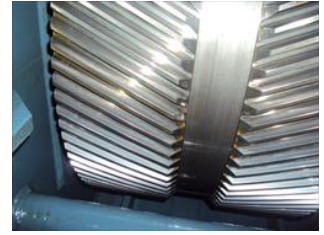
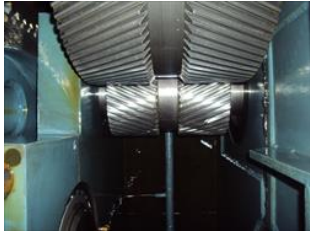
acceptable

acceptable

acceptable

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## 3. Gears:

Wear  
**marginal**Physical  
**marginal**Contaminants  
**marginal**

## 4. Seals:

Wear  
**acceptable**Physical  
**acceptable**Contaminants  
**acceptable**

## 5. Environmental Conditions

Ambient Temperature (F)

Humidity

**72****55**

## 6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

## 7. Other conditions


Gearbox Temperature (F)

Moisture Presence

**Gearbox Inspection & Evaluation Checklist**

8. Primary drive rotates input shaft in correct direction	(Yes) Yes
9. Condition of Machinery Guards if Present	(NA)
10. Condition of Coupling Guards if Present	(NA)
11. Type of Coupler:	gear
12. Coupling Alignment	acceptable
13. Condition of Housing	(Pass) Acceptable
14. Condition of Mounting Hardware	(Pass) Acceptable
15. Breather Vent Installed:	(Pass) Present/Acceptable
16. Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17. Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable

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18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	<p>Summary of Issues and Overall Condition of the Gearbox</p> <p><i>There are some signs of wear on the input pinion.</i></p>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10492199

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 8

Job Number: 144888

Description: Roll Stand 8

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 8

Coupling Type : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

Physical

Contaminants

**marginal**

**marginal**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions


Ambient Temperature (F)

Humidity

**72**

**55**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(Pass) Acceptable
10.	Condition of Coupling Guards if Present	(Pass) Acceptable
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>There does appear to be some wear on the pinion gear.</i>	
30.	Technician Signature	Kevin Maxwell
		





## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10492517

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 9

Job Number: 144888

Description: Roll Stand 9

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 9

Coupling Type : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

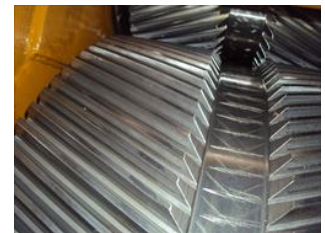
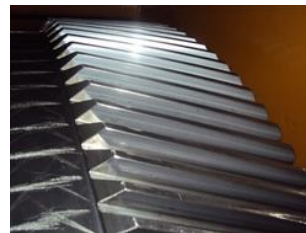
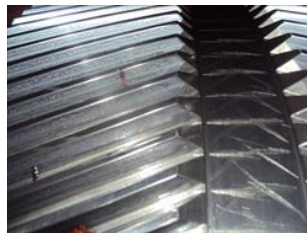
Physical

Contaminants

**marginal**

**marginal**

**marginal**



4. Seals:

Wear

Physical

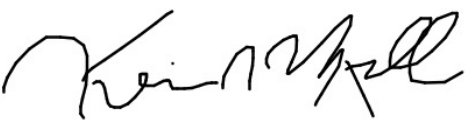
Contaminants

**acceptable**

**acceptable**

**acceptable**



5.	Environmental Conditions	
	Ambient Temperature (F)	Humidity
	72	55
6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>There is visible wear on the pinion and output gears.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10492577

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: 10 INTERMEDIATE 1

Job Number: 144888

Description: Roll Stand 10 1st Intermediate

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: 10 Intermediate 1

Coupling Type: : Gear

Priorities Found: 1 - Low

### Gearbox Visual Inspection



1. Date Inspection Performed 04/05/2021

2. Oil Condition

Wear

Physical

Contaminants

acceptable

acceptable

acceptable

3. Gears:

P3

Wear

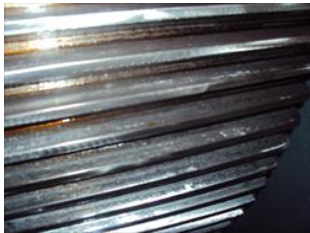
Physical

Contaminants

marginal

marginal

marginal



4. Seals:

Wear

Physical

Contaminants

acceptable

acceptable

acceptable

5. Environmental Conditions

Ambient Temperature (F)

Humidity

72

55

6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

7. Other conditions

Gearbox Temperature (F)


Moisture Presence

### Gearbox Inspection & Evaluation Checklist

8. Primary drive rotates input shaft in correct direction

(Yes) Yes

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9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>There appears to be some flaking type wear on the upper output gear.</i>	
30.	Technician Signature	Kevin Maxwell
		



Hi-Speed Industrial Service  
7030 Ryburn Dr  
Millington, Tn 38053  
901-873-5300

## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10492613

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: 10 INTERMEDIATE 2

Job Number: 144888

Description: Roll Stand 10 2nd Intermediate

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA


Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: 10 Intermediate 2

Coupling Type: : Gear

Priorities Found:  1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**
2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

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## 3. Gears:

Wear

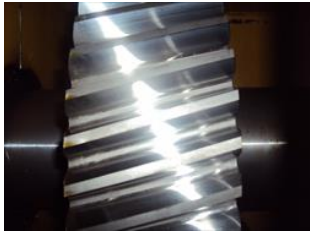
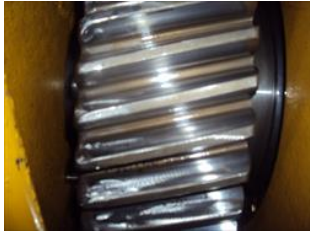
acceptable

Physical

acceptable

Contaminants

acceptable



## 4. Seals:

Wear

acceptable

Physical

acceptable

Contaminants

acceptable

## 5. Environmental Conditions

Ambient Temperature (F)

72

Humidity

55

## 6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

## 7. Other conditions


Gearbox Temperature (F)

Moisture Presence

## Gearbox Inspection &amp; Evaluation Checklist

8. Primary drive rotates input shaft in correct direction	(Yes) Yes
9. Condition of Machinery Guards if Present	(Pass) Acceptable
10. Condition of Coupling Guards if Present	(Pass) Acceptable
11. Type of Coupler:	gear
12. Coupling Alignment	acceptable
13. Condition of Housing	(Pass) Acceptable
14. Condition of Mounting Hardware	(Pass) Acceptable
15. Breather Vent Installed:	(Pass) Present/Acceptable
16. Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17. Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable

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18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	<p>Summary of Issues and Overall Condition of the Gearbox</p> <p><i>Gears look ok. No issues to report.</i></p>	
30.	Technician Signature	Kevin Maxwell
		





## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10492676

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 11

Job Number: 144888

Description: Roll Stand 11

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 11

Coupling Type: : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/23/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

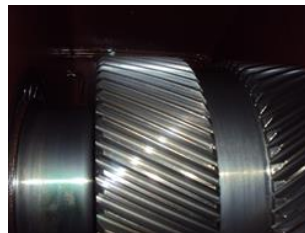
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

Ambient Temperature (F)

Humidity

**72**

**55**

6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

7. Other conditions

Gearbox Temperature (F)


Moisture Presence

### Gearbox Inspection & Evaluation Checklist

8. Primary drive rotates input shaft in correct direction

**(Yes) Yes**

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9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(None) None/New
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
● 29.	Summary of Issues and Overall Condition of the Gearbox <i>Gears look good. No issues to mention here.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10492729

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 12

Job Number: 144888

Description: Roll Stand 12

Customer Name:: Nucor Steel

Location : Flowood , MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 12

Coupling Type : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

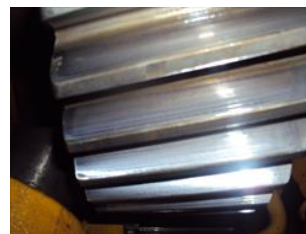
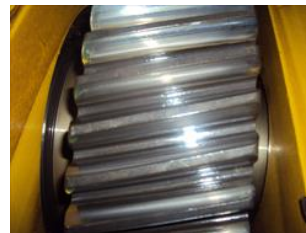
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions


Ambient Temperature (F)

Humidity

**72**

**55**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(Pass) Acceptable
10.	Condition of Coupling Guards if Present	(Pass) Acceptable
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(None) None/New
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox	
	<i>All looked good in this gearbox.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10493414

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 13

Job Number: 144888

Description: Roll Stand 13

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 13

Coupling Type : Gear

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

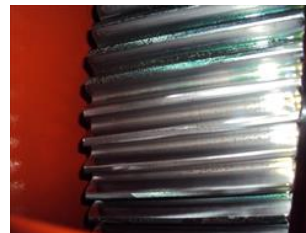
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions


Ambient Temperature (F)

Humidity

**72**

**55**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(Pass) Acceptable
10.	Condition of Coupling Guards if Present	(Pass) Acceptable
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>There appears to be some light pitting on a couple of the gears.</i>	
30.	Technician Signature	Kevin Maxwell
		





## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10493439

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 14

Job Number: 144888

Description: Roll Stand 14

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 14

Coupling Type: : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

Ambient Temperature (F)

Humidity

**72**

**55**

6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

7. Other conditions

Gearbox Temperature (F)

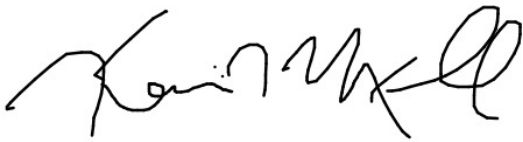
Moisture Presence

### Gearbox Inspection & Evaluation Checklist

8. Primary drive rotates input shaft in correct direction

**(Yes) Yes**

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9.	Condition of Machinery Guards if Present	(Pass) Acceptable
10.	Condition of Coupling Guards if Present	(Pass) Acceptable
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Gears are showing some signs of light wear.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10493541

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 14 90 DEGREE

Job Number: 144888

Description: Roll Stand 14 90 Degree

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 14 90 Degree

Coupling Type: : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/23/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

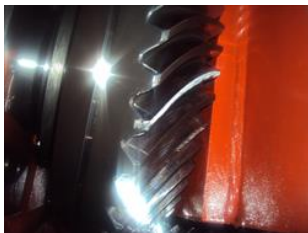
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

Ambient Temperature (F)

Humidity

**72**

**55**

6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

7. Other conditions

Gearbox Temperature (F)

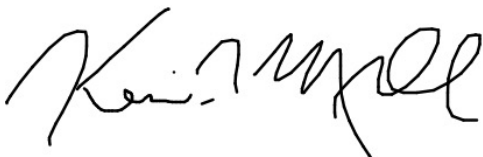
Moisture Presence

### Gearbox Inspection & Evaluation Checklist

8. Primary drive rotates input shaft in correct direction

**(Yes) Yes**

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9.	Condition of Machinery Guards if Present	(Pass) Acceptable
10.	Condition of Coupling Guards if Present	(Pass) Acceptable
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(None) None/New
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Gears looked good. No other issues to note.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10493592

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 15

Job Number: 144888

Description: Roll Stand 15

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 15

Coupling Type : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

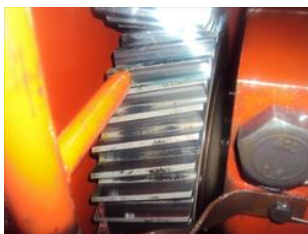
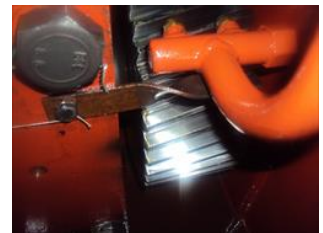
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

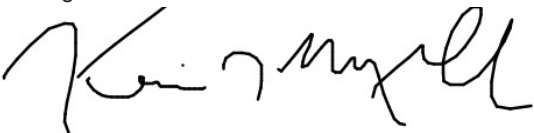
Ambient Temperature (F)

Humidity

**72**

**55**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Gears appear to have normal wear pattern.</i>	
30.	Technician Signature	Kevin Maxwell
		





Hi-Speed Industrial Service  
7030 Ryburn Dr  
Millington, Tn 38053  
901-873-5300

## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10493721

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 16

Job Number: 144888

Description: Roll Stand 16

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA


Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 16

Coupling Type: : Gear

Priorities Found:  1 - Good

### Gearbox Visual Inspection



- |                              |            |
|------------------------------|------------|
| 1. Date Inspection Performed | 04/05/2021 |
| 2. Oil Condition             |            |

Wear

Physical

Contaminants

acceptable

acceptable

acceptable

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## 3. Gears:

Wear

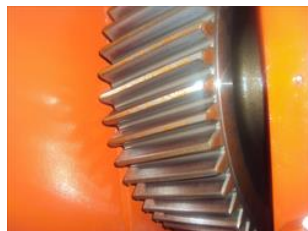
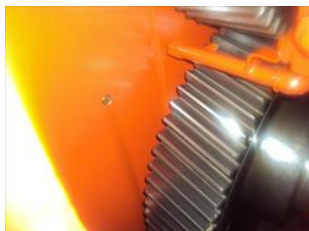
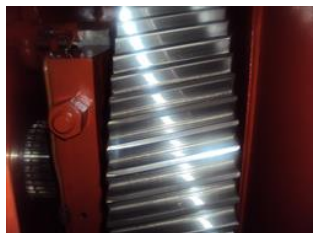
acceptable

Physical

acceptable

Contaminants

acceptable



## 4. Seals:

Wear

acceptable

Physical

acceptable

Contaminants

acceptable

## 5. Environmental Conditions

Ambient Temperature (F)

72

Humidity

55

## 6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

## 7. Other conditions

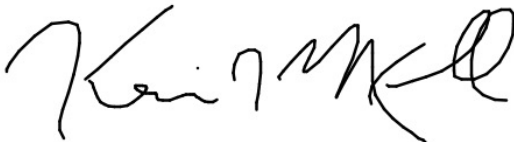
Gearbox Temperature (F)

Moisture Presence

## Gearbox Inspection &amp; Evaluation Checklist

8. Primary drive rotates input shaft in correct direction	(Yes) Yes
9. Condition of Machinery Guards if Present	(NA)
10. Condition of Coupling Guards if Present	(NA)
11. Type of Coupler:	gear
12. Coupling Alignment	acceptable
13. Condition of Housing	(Pass) Acceptable
14. Condition of Mounting Hardware	(Pass) Acceptable
15. Breather Vent Installed:	(Pass) Present/Acceptable
16. Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17. Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable

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18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(None) None/New
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Everything looks good in this gearbox.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10493751

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: STAND 16 90 DEGREE

Job Number: 144888

Description: Roll Stand 16 90 Degree

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Stand 16 90 Degree

Coupling Type : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/05/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

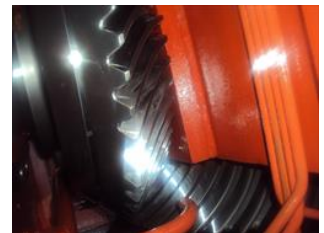
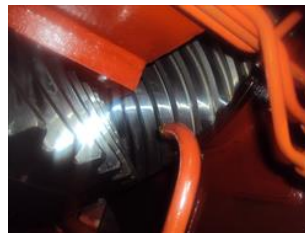
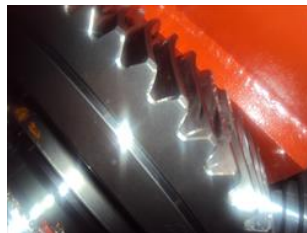
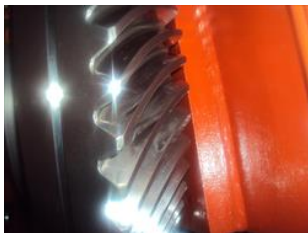
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions


Ambient Temperature (F)

Humidity

**72**

**55**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(Pass) Acceptable
10.	Condition of Coupling Guards if Present	(Pass) Acceptable
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(None) None/New
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Gears looked good in this gearbox.</i>	
30.	Technician Signature 	Kevin Maxwell



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10493859

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: FLYING SHEAR  
INTERMEDIATE

Job Number: 144888

Description: Flying Shear Intermediate

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Flying Shear Intermediate

Coupling Type : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/06/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

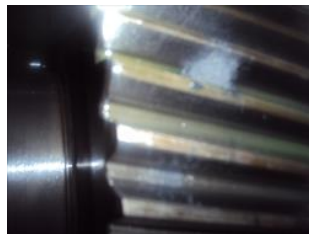
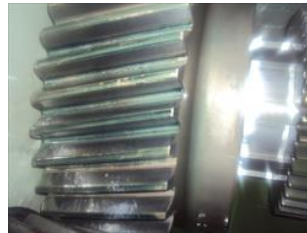
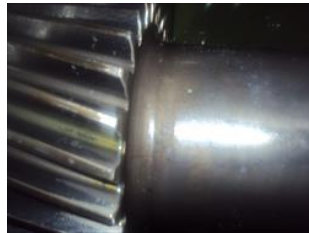
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

Ambient Temperature (F)

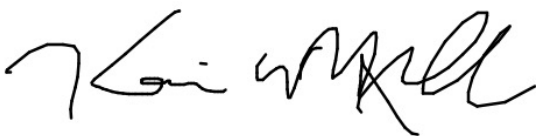
Humidity

**65**

**45**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(Pass) Acceptable
10.	Condition of Coupling Guards if Present	(Pass) Acceptable
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Light wear is present on shear speed gear.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10493946

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: FLYING SHEAR MAIN

Job Number: 144888

Description: Flying Shear Main

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Flying Shear Main

Coupling Type : GeR

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/06/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

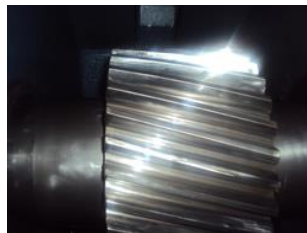
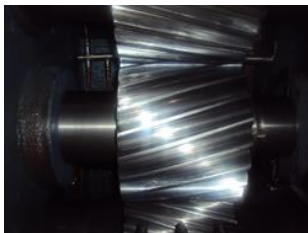
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

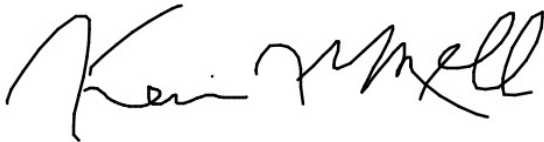
Ambient Temperature (F)

Humidity

**65**

**45**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox	
	<i>Normal wear pattern is present on the gears.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10494033

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: 2A VERTICAL

Job Number: 144888

Description: 2A Vertical Stand

Customer Name:: Nucor Steel

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA


Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: 2A Vertical

Coupling Type: : Gear

Priorities Found:  1 - Low

### Gearbox Visual Inspection



1. Date Inspection Performed 04/06/2021

2. Oil Condition P2

Wear

Physical

Contaminants

acceptable

marginal

marginal



There appears to be some brass flaking in the bottom of the gear case



## 3. Gears:

Wear

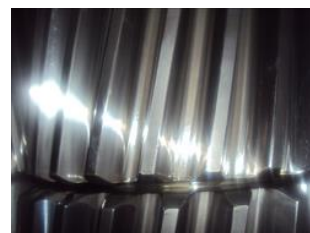
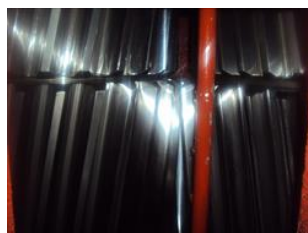
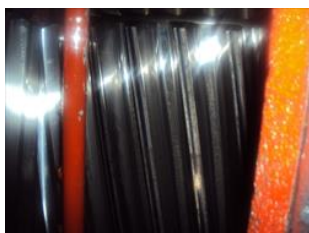
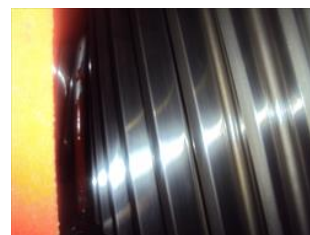
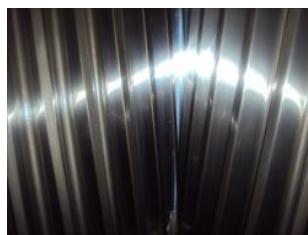
acceptable

Physical

acceptable

Contaminants

acceptable



## 4. Seals:

Wear

acceptable

Physical

acceptable

Contaminants

acceptable

## 5. Environmental Conditions

Ambient Temperature (F)

68

Humidity

50

## 6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

## 7. Other conditions


Gearbox Temperature (F)

Moisture Presence

## Gearbox Inspection &amp; Evaluation Checklist

8. Primary drive rotates input shaft in correct direction	(Yes) Yes
9. Condition of Machinery Guards if Present	(NA)
10. Condition of Coupling Guards if Present	(NA)
11. Type of Coupler:	gear
12. Coupling Alignment	acceptable
13. Condition of Housing	(Pass) Acceptable
14. Condition of Mounting Hardware	(Pass) Acceptable
15. Breather Vent Installed:	(Pass) Present/Acceptable
16. Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17. Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable

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18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Gears look other than normal light wear. There is brass flaking present in the bottom of the gear case. This may be due to the brass spacer shims. Further inspections may be needed.</i>	
30.	Technician Signature	Kevin Maxwell
		





## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10494125

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: 10 VERTICAL

Job Number: 144888

Description: 10 Vertical Stand

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: 10 Vertical

Coupling Type: : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/06/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

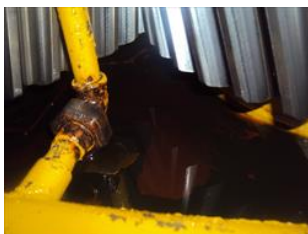
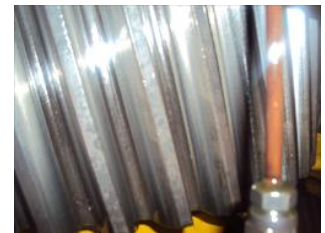
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

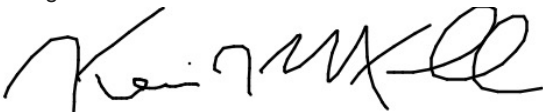
Ambient Temperature (F)

Humidity

**68**

**50**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(None) None/New
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>All looked good inside this gearbox.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10494238

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/23/2021

Location: Roll Mill

Serial Number: 12 VERTICAL STAND

Job Number: 144888

Description: 12 Vertical Stand

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: 12 Vertical

Coupling Type : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/06/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

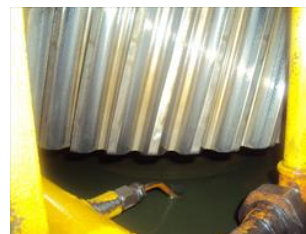
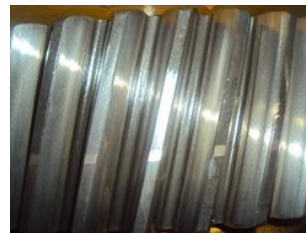
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

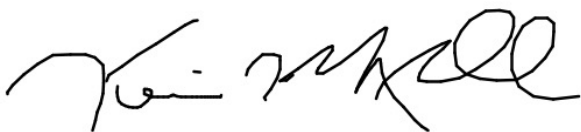
Ambient Temperature (F)

Humidity

**68**

**50**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(Pass) Acceptable
10.	Condition of Coupling Guards if Present	(Pass) Acceptable
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox	
	<i>Gears look good. Very light wear.</i>	
30.	Technician Signature	Kevin Maxwell
		



Hi-Speed Industrial Service  
7030 Ryburn Dr  
Millington, Tn 38053  
901-873-5300

## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10539866

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/30/2021

Location: Roll Mill

Serial Number: 14 VERTICAL

Job Number: 144888

Description: Roll Stand 14 Vertical

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA


Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: 14 Vertical

Coupling Type: : Gear

Priorities Found:  1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/06/2021**
2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

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## 3. Gears:

Wear

acceptable

Physical

acceptable

Contaminants

acceptable



## 4. Seals:

Wear

acceptable

Physical

acceptable

Contaminants

acceptable

## 5. Environmental Conditions

Ambient Temperature (F)

73

Humidity

50

## 6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

## 7. Other conditions

Gearbox Temperature (F)

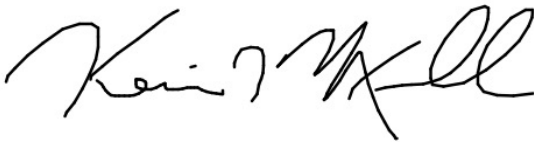
Moisture Presence

## Gearbox Inspection &amp; Evaluation Checklist

8. Primary drive rotates input shaft in correct direction	(Yes) Yes
9. Condition of Machinery Guards if Present	(NA)
10. Condition of Coupling Guards if Present	(NA)
11. Type of Coupler:	gear
12. Coupling Alignment	acceptable
13. Condition of Housing	(Pass) Acceptable
14. Condition of Mounting Hardware	(Pass) Acceptable
15. Breather Vent Installed:	(Pass) Present/Acceptable
16. Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17. Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable

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18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	<p>Summary of Issues and Overall Condition of the Gearbox</p> <p><i>There are some signs of gear wear in this gearbox. Wear pattern seems to be related to backlash. Wear is minor.</i></p>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10540400

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/30/2021

Location: Roll Mill

Serial Number: 16 VERTICAL

Job Number: 144888

Description: Roll Stand 16 Vertical

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: 16 Vertical

Coupling Type: : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/06/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

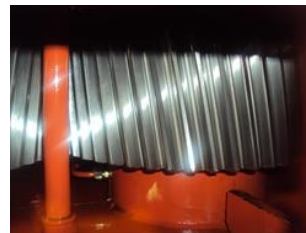
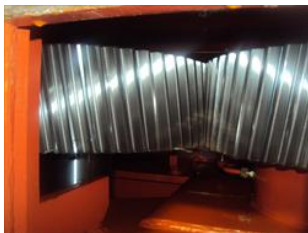
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions


Ambient Temperature (F)

Humidity

**73**

**50**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(None) None/New
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>No issues to mention. Gears looked good.</i>	
30.	Technician Signature	Kevin Maxwell
		



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7030 Ryburn Dr  
Millington, Tn 38053  
901-873-5300

## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10542506

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/30/2021

Location: Roll Mill

Serial Number: STRAIGHTENER

Job Number: 144888

Description: Straightener

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Straightener

Coupling Type: : Gear

Priorities Found:  1 - Medium

### Gearbox Visual Inspection



1. Date Inspection Performed **04/06/2021**
2. Oil Condition

Wear

Physical

Contaminants

**marginal**

**marginal**

**marginal**

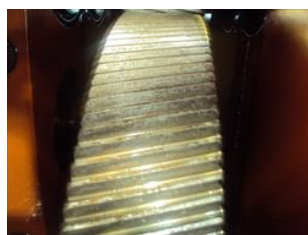
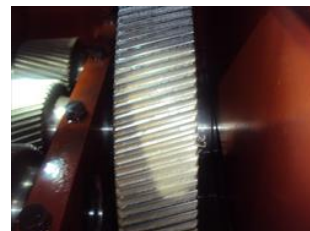
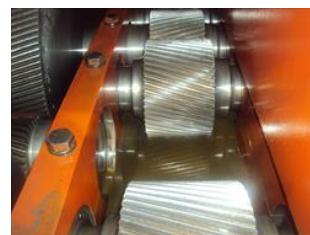
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## 3. Gears:

Wear  
requires attention

Physical  
requires attention

Contaminants  
requires attention



## 4. Seals:

Wear  
acceptable

Physical  
acceptable

Contaminants  
acceptable

## 5. Environmental Conditions

Ambient Temperature (F)

Humidity

74

50

## 6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

## 7. Other conditions


Gearbox Temperature (F)

Moisture Presence

### Gearbox Inspection & Evaluation Checklist

- |   |                           |
|---|---------------------------|
| 8. Primary drive rotates input shaft in correct direction               | (Yes) Yes                 |
| 9. Condition of Machinery Guards if Present                             | (Pass) Acceptable         |
| 10. Condition of Coupling Guards if Present                             | (Pass) Acceptable         |
| 11. Type of Coupler:  | gear                      |
| 12. Coupling Alignment  | acceptable                |
| 13. Condition of Housing  | (Pass) Acceptable         |
| 14. Condition of Mounting Hardware                                      | (Pass) Acceptable         |
| 15. Breather Vent Installed:  | (Pass) Present/Acceptable |
| 16. Condition of Piping & connections (if forced lube system installed) | (Pass) Acceptable         |

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17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Fail) Unacceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Fail) Unacceptable
27.	Degree of Gear Wear	(Extreme) Extreme - Take Action Immediately
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>One gear has a broken tooth. Other gears have wear and oil is contaminated and needs to be changed/flushed out.</i>	
30.	Technician Signature	Kevin Maxwell
		





## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10543931

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/30/2021

Location: Roll Mill

Serial Number: WEST TRANSFER ARM

Job Number: 144888

Description: West Transfer Arm

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: West Transfer Arm

Coupling Type : Gear

Priorities Found: ● 1 - Low

### Gearbox Visual Inspection



1. Date Inspection Performed **04/06/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

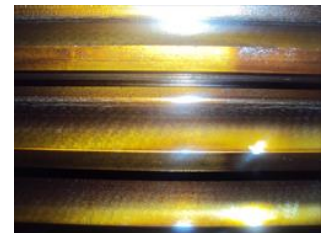
Physical

Contaminants

**marginal**

**marginal**

**marginal**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions


Ambient Temperature (F)

Humidity

**74**

**50**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Brass gear has excessive wear on right side of gear. Bottom gear is in early stage of wearing through hardened surface.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10544065

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/30/2021

Location: Roll Mill

Serial Number: EAST TRANSFER ARM

Job Number: 144888

Description: East Transfer Arm

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: East Transfer Arm

Coupling Type: : Gear

Priorities Found: ● 2 - Low

### Gearbox Visual Inspection



1. Date Inspection Performed **04/06/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

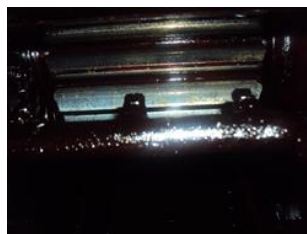
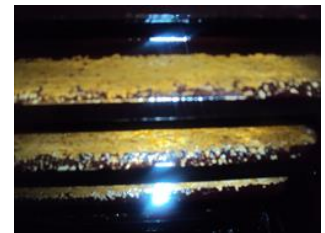
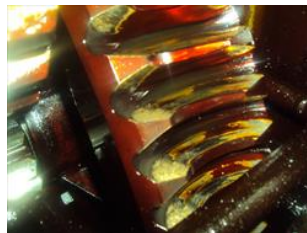
Physical

Contaminants

**marginal**

**marginal**

**marginal**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions


Ambient Temperature (F)

Humidity

**74**

**50**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Brass gear has some wear. Bottom gear is pitted and also has some wear.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10544258

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/30/2021

Location: Roll Mill

Serial Number: NORTH RACK OVER

Job Number: 144888

Description: North Rack Over

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: North Rack Over

Coupling Type : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/06/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

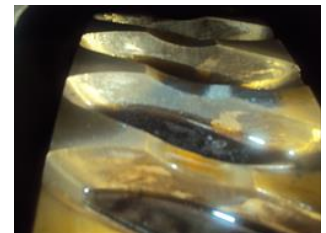
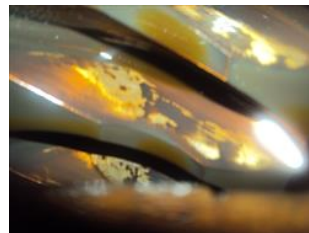
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

Ambient Temperature (F)

Humidity

**75**

**50**

6. Physical Issues

Signs of Excessive Heat?

Signs of Lubricant Leaks?

7. Other conditions

Gearbox Temperature (F)

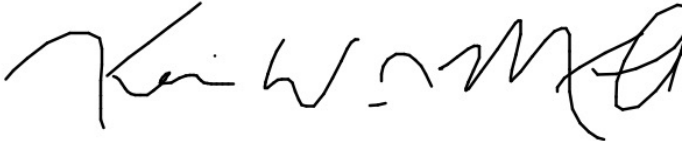
Moisture Presence

### Gearbox Inspection & Evaluation Checklist

8. Primary drive rotates input shaft in correct direction

**(Yes) Yes**

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9.	Condition of Machinery Guards if Present	(NA)
10.	Condition of Coupling Guards if Present	(NA)
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>Minor gear wear. All else looked ok.</i>	
30.	Technician Signature	Kevin Maxwell
		





## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10544387

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/30/2021

Location: Roll Mill

Serial Number: SOUTH RACK OVER

Job Number: 144888

Description: South Rack Over

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA


Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: South Rack Over

Coupling Type : Gear

Priorities Found:  1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed 04/06/2021

2. Oil Condition

Wear

Physical

Contaminants

acceptable

acceptable

acceptable

3. Gears:

P3

Wear

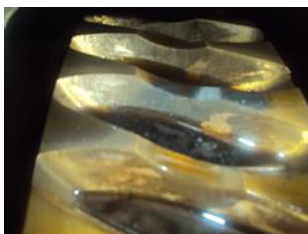
Physical

Contaminants

acceptable

acceptable

acceptable



4. Seals:

Wear

Physical

Contaminants

acceptable

acceptable

acceptable

5. Environmental Conditions


Ambient Temperature (F)

Humidity

75

50

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(Pass) Acceptable
10.	Condition of Coupling Guards if Present	(Pass) Acceptable
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(Mild) Mild
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox <i>No real issues to mention. Normal light wear on gears.</i>	
30.	Technician Signature	Kevin Maxwell
		



## Gearbox Inspection

Nucor Jackson (003555)

3630 Fourth St  
Flowood, MS 39232

FolderID: NUCOR  
FormID: 10544584

### Gearbox Inspection

Completed by: Motor Shop 1 on 04/30/2021

Location: Roll Mill

Serial Number: COLD SHEAR

Job Number: 144888

Description: Cold Shear

Customer Name:: Nucor Steel

Location : Flowood, MS

Contact:: Cliff Johnson

Manufacturer:: NA

Ratio:: NA

Serial#:: NA

Type:: NA

Model#:: NA

Application ID:: Cold Shear

Coupling Type : Gear

Priorities Found: ● 1 - Good

### Gearbox Visual Inspection



1. Date Inspection Performed **04/06/2021**

2. Oil Condition

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

3. Gears:

P3

Wear

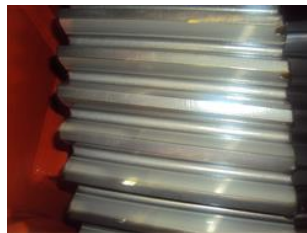
Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**



4. Seals:

Wear

Physical

Contaminants

**acceptable**

**acceptable**

**acceptable**

5. Environmental Conditions

Ambient Temperature (F)

Humidity

**75**

**50**

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6.	Physical Issues	
	Signs of Excessive Heat?	Signs of Lubricant Leaks?
7.	Other conditions	
	Gearbox Temperature (F)	Moisture Presence
<b>Gearbox Inspection &amp; Evaluation Checklist</b>		
8.	Primary drive rotates input shaft in correct direction	(Yes) Yes
9.	Condition of Machinery Guards if Present	(Pass) Acceptable
10.	Condition of Coupling Guards if Present	(Pass) Acceptable
11.	Type of Coupler:	gear
12.	Coupling Alignment	acceptable
13.	Condition of Housing	(Pass) Acceptable
14.	Condition of Mounting Hardware	(Pass) Acceptable
15.	Breather Vent Installed:	(Pass) Present/Acceptable
16.	Condition of Piping & connections (if forced lube system installed)	(Pass) Acceptable
17.	Condition of switches, alarms, heaters, coolers or other devices	(Pass) Present/Acceptable
18.	Condition of inspection covers	(Pass) Present/Acceptable
19.	Condition of seals & bearings	(Pass) Acceptable
20.	Gearbox Oil Level	(Pass) Acceptable
21.	Type and Grade of Specified Lubricant	220
22.	Correct type and grade of specified lubricant	(Pass) Acceptable
23.	Appearance of lubricant	(Pass) Acceptable
24.	Free rotation of shafts	(Yes) Yes
25.	Condition of Input shaft	(Pass) Acceptable
26.	Gear tooth condition	(Pass) Acceptable
27.	Degree of Gear Wear	(None) None/New
28.	Gear tooth Contact	(Pass) Acceptable
<b>Gearbox Summary</b>		
29.	Summary of Issues and Overall Condition of the Gearbox	
	<i>Gears look ok. No issues found.</i>	
30.	Technician Signature	Kevin Maxwell
	