



COLLIER & MILLER

FEEDER SPROCKET ASSEMBLY: WI89

Manual Version 1.0 January 2022



WI SERIES FEEDER HOUSE SPROCKETS

Series	Item code	Fitment	CNH Part Numbers
WI	WI89	CNH – No Rock Trap	84414906 87673520



Collier&Miller

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Contact Collier & Miller for Product Support

Collier & Miller is the quickest most efficient way to access product support for your WI89 Feeder House Sprocket. We recommend for, Technical Assistance & Customer Support Inquiries, please contact Collier & Miller.



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<https://www.colliermiller.com.au>

Collier & Miller will assist you with your product enquires.

Is this your product manual?

IMPORTANT

- We strongly recommend you verify this manual is the correct one for your Feeder Sprocket. The WI89 is a production model; this manual provides general information relating to WI89 Feeder Sprocket. Engineering on your sprocket may differ from this manual. Please confirm model & batch number before using this manual for reference purposes.
- The manufacturing batch number is machined to one of the sprockets welded to the main tube. This gives Collier & Miller detailed information on manufacturing and material details of the sprocket assembly, including date & year of manufacture.
- This manual is for the Item WI89

Table of Contents

LIST OF TABLES.....	3
SECTION 1: INTRODUCTION	4
FEEDER HOUSE SPROCKET PURPOSE	4
SECTION 3: SPROCKET INSTALLATION	5
ASSEMBLY	5
SECTION 4: BATCH INFORMATION.....	10
KIT COMPONENTS.....	10
SECTION 6: WARRANTY.....	11
Warranty Policy.....	11
Conditions of Warranty.....	11

LIST OF TABLES

Table 1 Kit Components.....	10
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SECTION 1: INTRODUCTION

This manual contains valuable information about your new WI89 Feeder House Sprocket. It has been carefully prepared to give you information on batch materials and manufacturing as well as recommended installation details. Keep this manual with the combine harvester for reference and information. All installers must review the manual before fitting the sprockets to ensure correct operation and optimum product life.

FEEDER HOUSE SPROCKET PURPOSE

The WI89 Feeder House Sprocket is designed to be fitted to the appropriate model CASE-NH Combine harvester with the purpose of driving the Feeder House Chain Assembly. This sprocket assembly is designed to be fitted where the feeder house is not equipped with a rock trap. Designed and manufactured by Collier & Miller, 43 Jondaryan Avenue, Griffith NSW 2680.

The WI89 Feeder House Sprocket is a sprocket assembly with the design purpose to:

1. Drive feeder house chain on specific model combine harvesters
2. Be fitted as a replacement product as an alternative to the original CNH product
3. To be used in applications where the feeder house is not equipped with a rock trap
4. Not to replace the CNH original product that is supplied with a radial pin clutch

The purpose of this guide is to give the user a complete understanding of the following:

1. MATERIAL QUALITY & TRACKING
2. INSTALLATION
3. MAINTENANCE

SECTION 3: SPROCKET INSTALLATION

ASSEMBLY

FEEDER SPROCKET INSTALLATION

Feeder conveyor drive gearbox – Alignment

This installation section contains information obtained from the CASE-New Holland installation document. It is reproduced in part in this document. All intellectual property and information remains the property of CNH and is displayed here to assist installers to follow best practice when installing and commissioning the WI89 sprocket assembly.

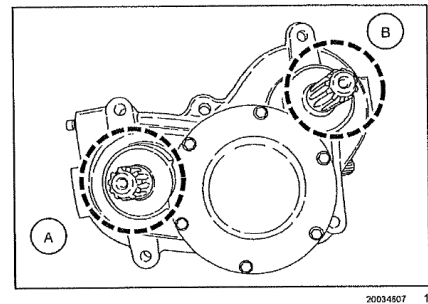
SPROCKET DRIVE SPLINE AND HUB SERVICE LIFE IS DIRECTLY AFFECTED BY INSTALLATION. ACCURATE GEARBOX OUTPUT SHAFT ALIGNMENT PERFORMED IN ACCORDANCE WITH CNH RECOMMENDATIONS WILL ENSURE OPTIMUM SERVICE LIFE.

WEAR OF THE SPLINED HUB AND SHAFT IS DIRECTLY ASSOCIATED WITH THE MISALIGNMENT OF THE GEARBOX AND FEEDER CHAIN TOP SPROCKET DURING INSTALLATION AND/OR OPERATION. ANY WEAR ASSOCIATED WITH THESE PARTS WILL BE CONSIDERED NORMAL WEAR, TEAR OR AN INSTALLATION/OPERATION ISSUE AND WILL NOT BE COVERED BY WARRANTY.

NOTE:

Output shaft **(A)** is the only gearbox output shaft on feeders without the rock trap.

Output shafts **(A)** and **(B)** are present on feeders with the rock trap.

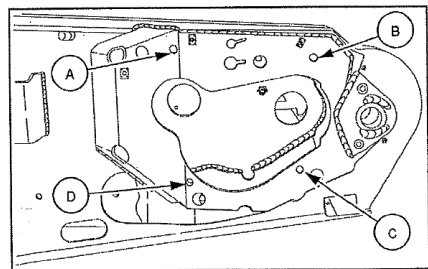


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1. Prepare the proper thickness of shims to be placed between the gearbox and the feeder house frame to align the output shaft.

NOTICE:

The arrangement shown in image 2 is recommended starting point, it may need to be adjusted accordingly to the outcome in step 12.



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- (A) 0 mm**
- (B) 3mm**
- (C) 5mm**
- (D) 5mm**
- 4mm (If needed)**

Part Number

- 86511326
- 86639326
- 86639326
- 394631

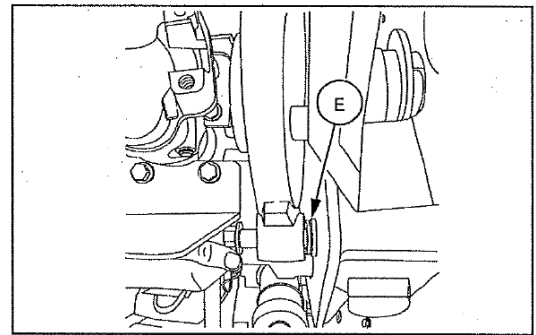
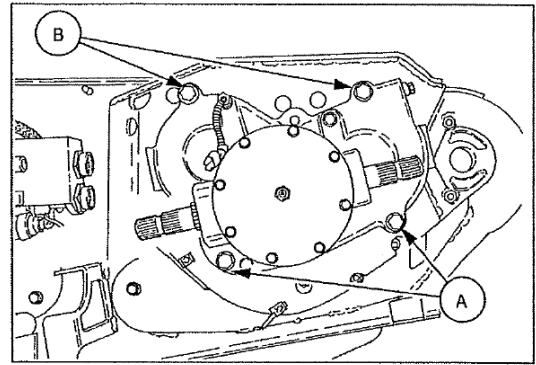
2. Obtain the two M16 x 150mm bolts used to remove the gearbox earlier and install in the two upper holes **(B)**
3. Attach a hoist with a strap to the two bolt holes installed in step 2 and/or use an assistant to move the feeder gearbox to the feeder house.

NOTE: If machine is equipped with rock trap beater, ensure rock trap beater is guided onto output shaft of the feeder gearbox.

4. Install the two M16 x **60mm** lower bolts, washers and appropriate shims at **(A)**.
5. Remove the two bolts installed in step 2 and install the two upper M16 x **60mm** bolts, lock washers and shims at **(B)**.

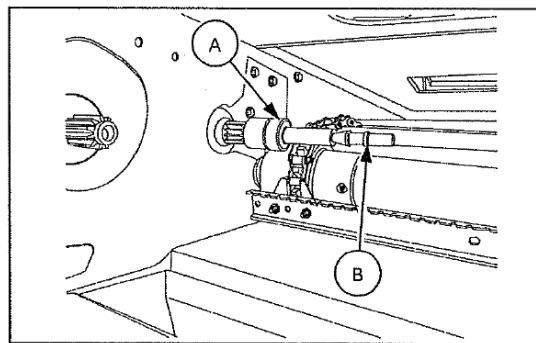
NOTE: Retain the two M16 x 150mm bolts removed in step 5

6. Torque the upper and lower bolts to:
174-220Nm (132-161 In ft)



NOTE: The laser, laser adaptor and target mentioned in steps 7,8 and 9 may be obtained as a kit from CNH, **380003354B**

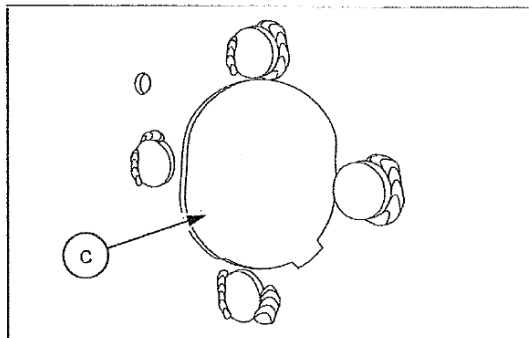
7. Attach the laser adaptor **380003354-5 (A)** to the end of the shaft that drives the top sprocket
8. Insert laser **(B)** into the laser adaptor



9. Provide a target for the laser by installing 3800003354-6 **(C.)** over the welded bolts in the right hand side of the feeder housing

NOTE: You may procure a target locally instead of using 380003354-6

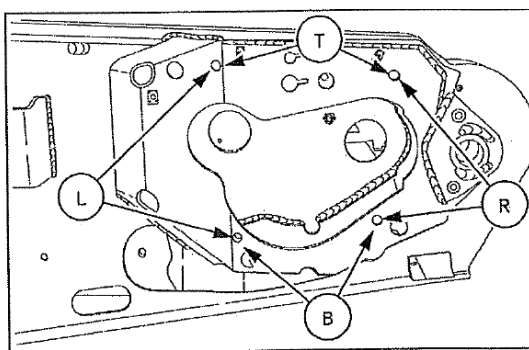
10. Determine the center of the target, and mark it with a marker, white is preferred.
11. Turn on the laser and note where the light hits the right hand side target.
12. The mark created in step 10 and the spot where the laser hits the target should be spaced no more than 6mm apart, otherwise the gearbox shims need to be adjusted, as directed in step 13



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13. Adjusting the gearbox shims:

- A. If the laser light mark is shifted to the right of the center mark, shims must be added to the left mounting points **(L)**
- B. If the laser light is shifted to the left of the center mark, shims must be added to the right mounting points **(R.)**
- C. If the laser light mark is shifted above the center mark, shims must be added to the bottom mounting points **(B)**
- D. If the laser light mark is shifted below the center mark, shims must be added to the top mounting points **(T)**



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14. If required after adjusting the shims as directed in step 13, repeat steps 11 and 12 until the center mark and laser align within **6mm**
15. Obtain a hoist and lift strap and secure gearbox
16. Loosen and remove hardware installed in step 4, replacing the two upper bolts with the two M16 x 150mm bolts removed in 5 and remove gearbox, carefully retaining shims and noting their position.

Feeder DRIVE SYSTEM – Install – Top Shaft

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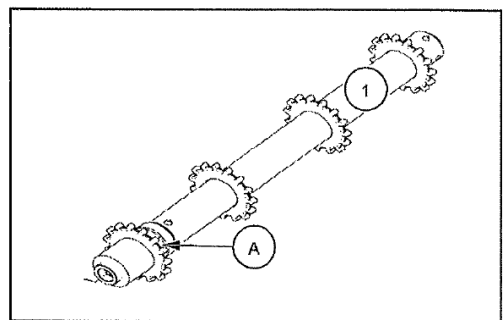
SPROCKET DRIVE SPLINE AND HUB SERVICE LIFE IS DIRECTLY AFFECTED BY INSTALLATION. ACCURATE GEARBOX OUTPUT SHAFT ALIGNMENT PERFORMED IN ACCORDANCE WITH CNH RECOMMENDATIONS WILL ENSURE OPTIMUM SERVICE LIFE.

WEAR OF THE SPLINED HUB AND SHAFT IS DIRECTLY ASSOCIATED WITH THE MISALIGNMENT OF THE GEARBOX AND FEEDER CHAIN TOP SPROCKET DURING INSTALLATION AND/OR OPERATION. ANY WEAR ASSOCIATED WITH THESE PARTS WILL BE CONSIDERED NORMAL WEAR, TEAR OR AN INSTALLATION/OPERATION ISSUE AND WILL NOT BE COVERED BY WARRANTY.

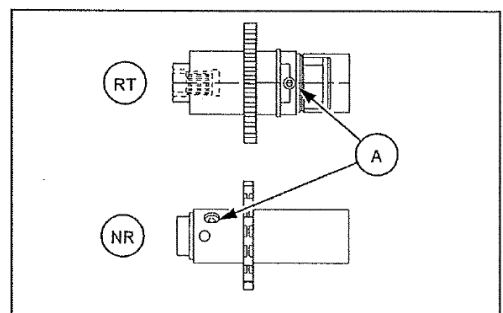
1. Apply good quality molybdenum disulphide based NLGI #2 grease through the grease nipple located at **(NR)** in the Top shaft **(1)** until you see grease entering the spline hub cavity

NOTE: Step 1 ensures that any empty areas inside the top shaft are filled with grease prior to gearbox installation

NOTE: In original CASE top shaft uses felt to seal the drive hub/spline cavity. The C&M WI89 has an integrated rod wiper fitted as an integral part of the top shaft/sprocket. CNH provide steps 2 & 3 in their installation manual to explain how to fit the felt seal, this is not required when installing the C&M WI89.



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RT = With Rock Trap
NR = Without Rock Trap

The WI89 is designed to replace the original Case sprocket fitted to feeder houses with-out a rock trap.

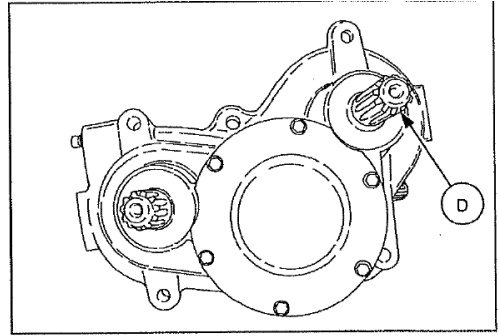
2. Install the felt seal **(5)** over the gearbox output shaft **(D)**.

NOTE: This step is not required for the WI89 as the seal is part of the top shaft.

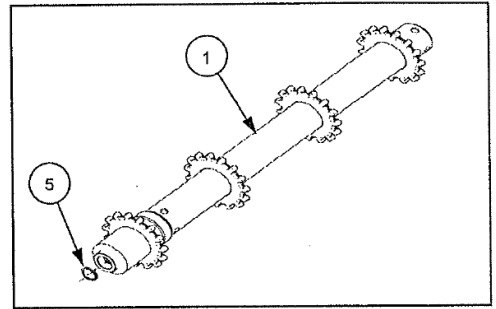
3. Start to install the top shaft over the gearbox output shaft and then push the felt seal in, ensuring that the splines of the felt seal align with the splines on the inside of the top shaft.

NOTE: This step is not required for the WI89 as the seal is part of the top shaft.

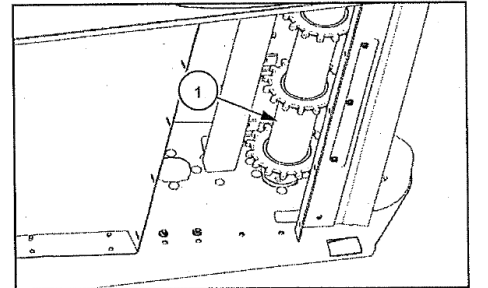
4. Install the Top Shaft **(1)** into the feeder with the threaded end towards the right-hand side. Install materials to support the ends of the sprocket drive shaft.



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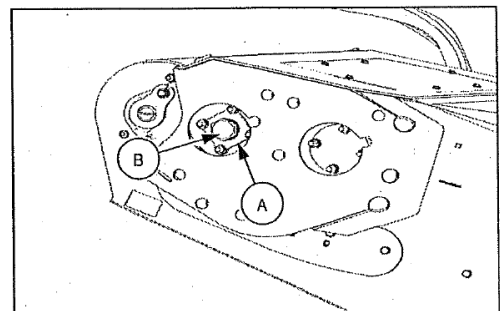
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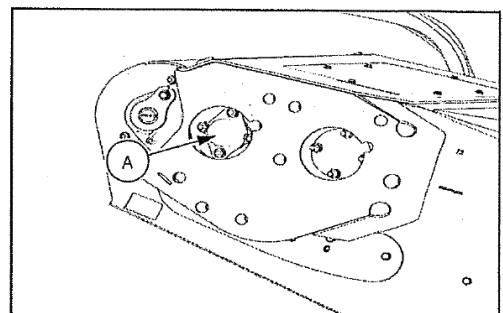
23115117 5

NOTE: In Image 6 and 7 a non rock-trap machine is shown. On a rock trap equipped machine, the top shaft is mounted in the forward mounting position.

5. Engage the bearing assembly **(A)** into the top shaft and tighten the nuts. Install the 1-1/2" in bolt **(B)** and washer into the end of the drive shaft.
6. Block the top shaft sprocket with wood to prevent the shaft from rotation while you tighten bolt **(B)**
7. Torque the 1-1/2" in bolt to 1054-1326 Nm (775-975 In ft)
8. Install dust cap **(A)**



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SECTION 4: BATCH INFORMATION

KIT COMPONENTS

Item	Description	Component	Qty	Detail
WI89	Complete Feeder House Sprocket Assembly	<i>Sprocket Tube</i>	1	Refer to material batch details for more information
		<i>Sprockets</i>	4	
		<i>Precision Splined Hub</i>	1	
		<i>Gearbox Shaft</i>	1	
		<i>Wiper Seal</i>	1	
		<i>Grease Nipple</i>	1	
		<i>Deep Groove Bearing</i>	1	
		<i>Transmission Bearing</i>	1	

Table 1 Kit Components

SECTION 6: WARRANTY

Warranty Policy

Collier & Miller's warranty complies with the Australian Consumer law, this warranty and does not limit or replace your rights under Australian Consumer Guarantee. Collier & Miller warrants to the purchaser, that each WI89 sprocket will be free from defects in material and workmanship for 12 months after delivery and installation.

This warranty is in lieu of all other warranties (except those of title), expressed or implied, and there are no warranties of fitness for the particular purpose. In no event shall Collier & Miller be liable for downtime expenses, loss of machine use, loss of crops, loss of profits, injury or damage arising from accident, direct or indirect loss, or other incidental, consequential or special damages.

Conditions of Warranty

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In the event of a defect which may result in a warranty claim:

- The Owner must provide the Collier & Miller with written notice of the defect within 14 days of its occurrence, and allow reasonable time for replacement or repair.
- At Collier & Miller's request, the owner will ensure any failed parts are freighted to the Collier & Miller factory or another other location advised by a Collier & Miller authorised representative. Transportation of the Collier & Miller product to the factory or other location the owner.
- The Warranty is not transferable to any third party or subsequent purchaser.
- Components and conditions not covered by warranty include:
 - Spline drive shaft and splined hub (This is a wearing part and subject to installation and operational variables)