SERVICE MANUAL

270FP / 280FP / 290FP

Print No. 84291967A

NEW HOLLAND
AGRICULTURE

MidWestTech | New Holland 270FP, 280FP, 290FP Self Propelled Forage Harvester Service Manual | Publication 84291967A

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Chapters

Each Chapter is identified by a letter and number combination e.g. Primary hydraulic power system A.10.A The first letter is identical to the section letter i.e. Chapter A.10 is inside Section A, Distribution systems.
CONTENTS
The Chapter Contents lists all the technical data (specifications), functional data (how it works), service data (remove, install adjust, etc.) and diagnostic data (fault codes and troubleshooting) that have been written in that Chapter for that function or system on the machine.

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Page Header and Footer

The page header will contain the following references:

- Section and Chapter description

The page footer will contain the following references:

- Publication number for that Manual, Section or Chapter.
- Version reference for that publication.
- Publication date
- Section, chapter and page reference e.g. A.10.A / 9

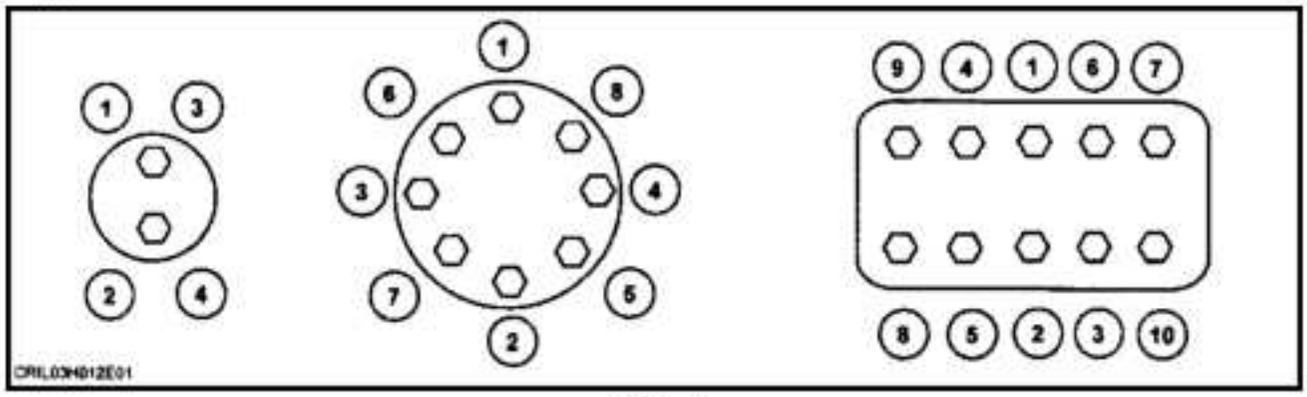
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Torque

Minimum hardware tightening torques (in N m or lb in /lb ft) for normal assembly applications unless otherwise stated

NOTICE: *Shown below is the suggested initial torque tightening sequences for general applications, tighten in sequence from item 1 through to the last item of the hardware.*

The minimum hardware tightening torque on drawings, in specifications etc. have priority.
The applicable CNH Standard is ENS7001.



Metric hardware

	Class 8.8 in N m (lb in or lb ft)			Class 10.9 in N m (lb in or lb ft)		
Nominal Size	Plated nut	Lock nut	Hardened nut	Plated nut	Lock nut	Hardened nut
M3	1.3 N·m (11.5 lb in)	0.7 N·m (6.2 lb in)	1.2 N·m (10.6 lb in)	1.8 N·m (15.9 lb in)	0.9 N·m (8.0 lb in)	1.6 N·m (14.2 lb in)
M4	2.9 N·m (25.7 lb in)	1.6 N·m (14.2 lb in)	2.6 N·m (23.0 lb in)	4.2 N·m (37.2 lb in)	2.3 N·m (20.4 lb in)	3.7 N·m (32.7 lb in)
M5	5.9 N·m (52.2 lb in)	3.2 N·m (28.3 lb in)	5.3 N·m (46.9 lb in)	8.5 N·m (75.2 lb in)	4.6 N·m (40.7 lb in)	7.6 N·m (67.3 lb in)
M6	10.1 N·m (89.4 lb in)	5.5 N·m (48.7 lb in)	9.1 N·m (80.5 lb in)	14.5 N·m (10.7 lb ft)	7.9 N·m (69.9 lb in)	13 N·m (9.6 lb ft)
M8	24.5 N·m (18.1 lb ft)	13.5 N·m (10.0 lb ft)	22 N·m (16.2 lb ft)	35.1 N·m (25.9 lb ft)	19.3 N·m (14.2 lb ft)	31.5 N·m (23.2 lb ft)
M10	48.7 N·m (35.9 lb ft)	26.8 N·m (19.8 lb ft)	43.8 N·m (32.3 lb ft)	69.5 N·m (51.3 lb ft)	38.2 N·m (28.2 lb ft)	62.5 N·m (46.1 lb ft)
M12	85 N·m (62.7 lb ft)	46.7 N·m (34.4 lb ft)	76.5 N·m (56.4 lb ft)	121 N·m (89.2 lb ft)	66.5 N·m (49.0 lb ft)	108.9 N·m (80.3 lb ft)
M14	135 N·m (99.6 lb ft)	74.2 N·m (54.7 lb ft)	121.5 N·m (89.6 lb ft)	193 N·m (142.3 lb ft)	106.1 N·m (78.3 lb ft)	173.7 N·m (128.1 lb ft)
M16	210 N·m (154.9 lb ft)	115.5 N·m (85.2 lb ft)	189 N·m (139.4 lb ft)	301 N·m (222 lb ft)	165.5 N·m (122.1 lb ft)	270.9 N·m (199.8 lb ft)
M18	299 N·m (220.5 lb ft)	164.4 N·m (121.3 lb ft)	269.1 N·m (198.5 lb ft)	414 N·m (305.4 lb ft)	227.7 N·m (167.9 lb ft)	372.6 N·m (274.8 lb ft)
M20	425 N·m (313.5 lb ft)	233.72 N·m (172.4 lb ft)	382.5 N·m (282.1 lb ft)	587 N·m (432.9 lb ft)	322.8 N·m (238.1 lb ft)	528.3 N·m (389.7 lb ft)
M22	579 N·m (427 lb ft)	318.4 N·m (234.8 lb ft)	521.1 N·m (384.3 lb ft)	801 N·m (590.8 lb ft)	440.5 N·m (324.9 lb ft)	720.9 N·m (531.7 lb ft)
M24	735 N·m (542.1 lb ft)	404.2 N·m (298.1 lb ft)	661.5 N·m (487.9 lb ft)	1016 N·m (749.4 lb ft)	558.8 N·m (412.1 lb ft)	914.4 N·m (674.4 lb ft)
M27	1073 N·m (791.4 lb ft)	590.1 N·m (435.2 lb ft)	967.5 N·m (713.6 lb ft)	1486 N·m (1096 lb ft)	817.3 N·m (602.8 lb ft)	1337 N·m (986.1 lb ft)
M30	1461 N·m (1077.6 lb ft)	803.5 N·m (592.6 lb ft)	1315 N·m (969.9 lb ft)	2020 N·m (1489.9 lb ft)	1111 N·m (819.4 lb ft)	1818 N·m (1340.9 lb ft)

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ELECTRICAL POWER SYSTEM - Electrical standard

WIRES

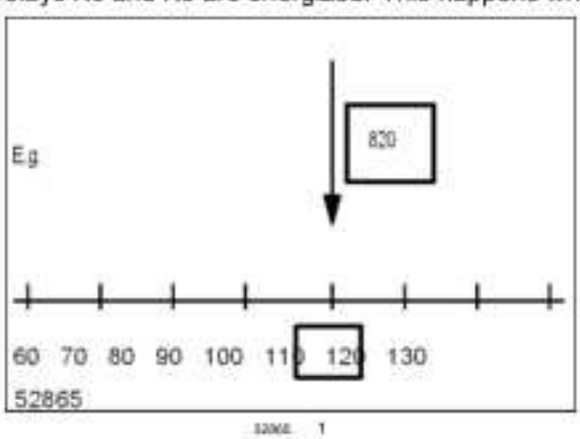
The wiring diagram is drawn following the DIN 40719 standards.
Each page contains a part of the complete wiring diagram, not necessarily a complete group.

Color code

Ten colours of wires are used on the combine, each color having its specific signification.

- Red **(RD)**:+ **12 V** without passing the ignition switch
- Black **(ZW)**: directly earthed to the frame
- White **(WT)**: connected with the pin of a switch which engages a system that increases something
- Grey **(GR)**: connected with the pin of a switch which disengages a system that decreases something
- Blue **(BL)**: earth of sensors
- Green **(GN)**
- Orange **(OR)**: + **12 V** after ignition switch
- Yellow **(GE)**: signal
- Purple **(PU)**: lighting
- Pink **(PK)**.

On the upper part of the page, the + **12 V** lines are drawn.
The line at the top (first line) always is at + **12 V** (when the main battery switch is engaged).
Lines 2 and 3 have + **12 V** when relays K6 and K9 are energized. This happens when the ignition switch is engaged.



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