

**1133, 1144, 1155,
1157 and 1158
Combines**



**John Deere Werke Zweibrücken
TM4476**

Printed in Germany (English)

Combines 1133, 1144, 1155, 1157 and 1158 TECHNICAL MANUAL TM-4476 (JAN-90)

CONTENTS OF SECTIONS

SECTION 10 – GENERAL

Group 05 – Specifications

SECTION 20 – ENGINE REPAIR

Group 05 – Removal and installation, 4-cyl. engine
Group 10 – Removal and installation, 6-cyl. engine

SECTION 30 – FUEL AND AIR REPAIR

Group 05 – Fuel filter with water trap and electrical fuel transfer pump

SECTION 40 – ELECTRICAL SYSTEM REPAIR

Group 05 – Connectors
Group 10 – Electrical system components
Group 15 – Starting motor
Group 20 – Alternator
Group 25 – Low shaft speed monitor system
Group 30 – Electromagnetic transmission brake

SECTION 50 – POWER TRAIN REPAIR

Group 05 – Variable ground speed drive
Group 10 – Engine clutch and mechanical clutch operation (3-speed transmission)
Group 15 – Engine clutch operation (4-speed transmission)
Group 20 – Engine clutch (4-speed transmission)
Group 25 – Three-speed transmission
Group 30 – Four-speed transmission with differential
Group 35 – Final drives, differential (3-speed transmission)
Group 40 – Final drives (4-speed transmission)
Group 45 – Final drive on rice combine (4-speed transmission)

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SECTION 60 – BRAKES, REAR AXLE AND STEERING REPAIR

Group 05 – Parking brake (3-speed transmission)
Group 10 – Parking brake (4-speed transmission)
Group 15 – Brake operation
Group 20 – Foot brakes (3-speed transmission)
Group 25 – Foot brakes (4-speed transmission)
Group 30 – Foot brakes with integrated slave cylinder
Group 35 – Hydrostatic steering unit
Group 40 – Rear axle
Group 45 – V-support for wide rear axle
Group 50 – Steering cylinder

SECTION 70 – HYDRAULIC SYSTEM REPAIR

Group 05 – Hydraulic oil reservoir and lines
Group 10 – Hydraulic pump
Group 15 – 4-spool control valve with flow divider
Group 20 – Hydraulic cylinders
Group 25 – Hydraulic system diaphragm-type accumulator

SECTION 80 – MISCELLANEOUS

Group 05 – Bearings and shafts
Group 10 – Drive belts
Group 15 – Drive chains

SECTION 90 – OPERATOR'S PLATFORM WITH CAB

Group 05 – Safe handling of refrigerants
Group 10 – Air conditioning compressor
Group 15 – Air conditioning system components
Group 20 – Air conditioning system service and tests
Group 25 – Cab ventilation system
Group 30 – Cab heating system
Group 35 – Operator's cab
Group 40 – Control levers
Group 45 – Operator's seat

SECTION 100 – CUTTING PLATFORM AND CORN HEAD

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CONTENTS OF SECTIONS – CONTD.

SECTION 110 – FEEDER HOUSE

- Group 05 – Feeder house drive
- Group 10 – Feeder house with compact cutting platform
- Group 15 – Feeder house with quick-tach cutting platform

SECTION 120 – SEPARATOR AND CLEANING UNIT

- Group 05 – Stone trap
- Group 10 – Separator drive
- Group 15 – Variable cylinder drive
- Group 20 – Threshing cylinder
- Group 25 – Concave
- Group 30 – Beater variable drive
- Group 35 – Beater
- Group 40 – Cross shaker
- Group 45 – Straw walkers
- Group 50 – Cleaning shoe, grain return pan and auger housing
- Group 55 – Fan and variable speed drive

SECTION 130 – GRAIN PROCESSING

- Group 05 – Clean grain and tailings augers
- Group 10 – Clean grain elevator
- Group 15 – Tailings elevator
- Group 20 – Upper tailings auger
- Group 25 – Grain tank leveling auger
- Group 30 – Grain tank center fill auger
- Group 35 – Inner grain tank unloading auger
- Group 40 – Outer grain tank unloading auger
- Group 45 – Discharge tube

SECTION 140 – SPECIAL EQUIPMENT

- Group 05 – Straw chopper drive
- Group 10 – Straw chopper rotor bearings

SECTION 220 – ENGINE OPERATION

SECTION 230 – FUEL AND AIR INTAKE SYSTEM OPERATION

- Group 05 – General information, fuel filter and fuel transfer pump

SECTION 240 – ELECTRICAL SYSTEM – OPERATION AND TESTS

- Group 05 – General information
- Group 10 – Circuit plan, wiring diagram and wiring harnesses
- Group 15 – Checking indicator lights
- Group 20 – Checking low shaft speed monitor system
- Group 25 – Checking straw warning device
- Group 30 – Checking electromagnetic transmission brake

SECTION 250 – POWER TRAIN – OPERATION AND TESTS

- Group 05 – Engine clutch and operation (3-speed)
- Group 10 – Engine clutch and operation (4-speed)
- Group 15 – Three-speed transmission
- Group 20 – Four-speed transmission

SECTION 260 – BRAKES, REAR AXLE AND STEERING – OPERATION AND TESTS

- Group 05 – Brake operation
- Group 06 – Foot brake and brake operation (combines with rice equipment)
- Group 10 – Operation and flow diagram – hydrostatic steering
- Group 15 – Diagnosing steering system malfunctions
- Group 20 – Primary (steering) circuit testing

SECTION 270 – HYDRAULIC SYSTEM – OPERATION AND TESTS

- Group 05 – Hydraulic circuit symbols
- Group 10 – Hydraulic lift circuit
- Group 15 – Lifting system - diagnosing malfunctions
- Group 20 – Hydraulic lift circuit – testing

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CONTENTS OF SECTIONS – CONTD.

SECTION 290 – OPERATOR'S PLATFORM AND CAB – OPERATION AND TESTS

- Group 05 – Cab ventilation system
- Group 10 – Air conditioning system
- Group 15 – Safe handling of refrigerants
- Group 20 – Testing air conditioning system
- Group 25 – Cab heating system

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Section 10 GENERAL

CONTENTS OF THIS SECTION

GROUP 05 – SPECIFICATIONS

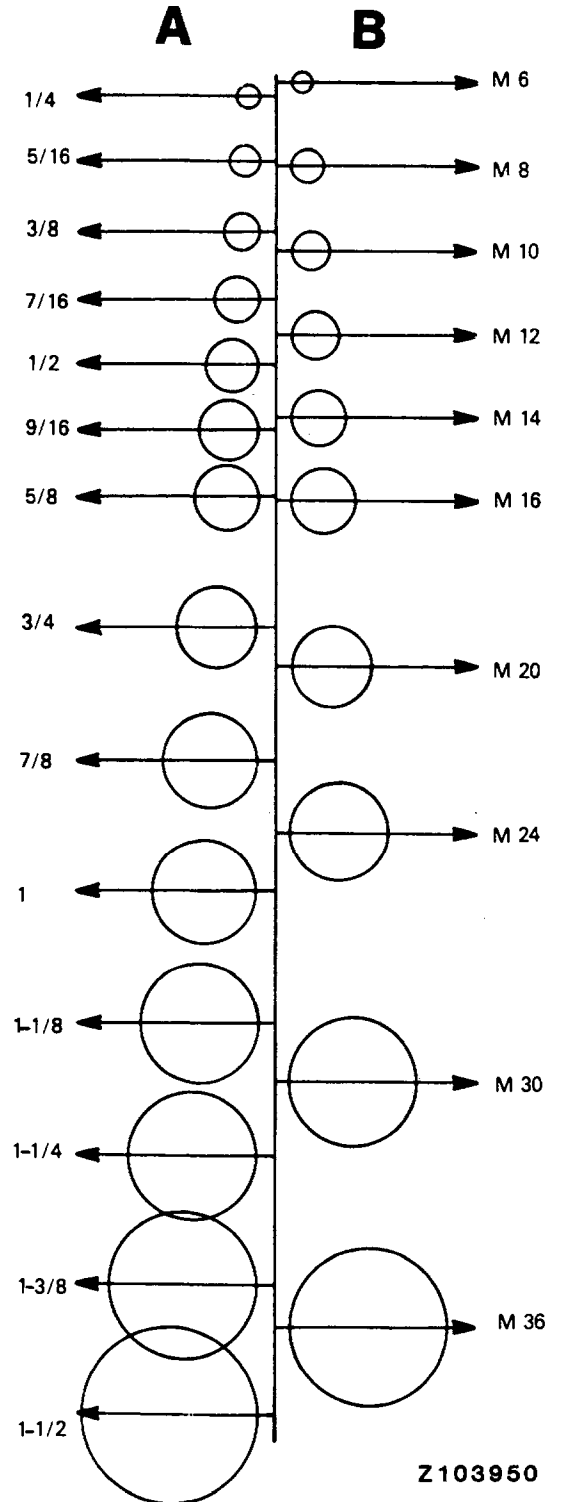
Metric and inch threads	10-05-1
Standard torques	10-05-2

1133	1144	1155	1157	1158
x	x	x	x	x
x	x	x	x	x

METRIC AND INCH THREADS

The adjacent chart compares the diameters of "metric" and "inch" threads.

A-Inch thread
B-Metric thread



Z103950

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STANDARD TORQUES – GENERAL

All specified torques are only valid for non-greased or non-oiled threads.

A variation of $\pm 10\%$ is permissible for all torques specified below.

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**RECOMMENDED TORQUES FOR
UNC AND UNF CAP SCREWS**

A \ B	 10.9		 12.9	
	Nm	ft-lb	Nm	ft-lb
1/4	15	10	20	15
5/16	30	20	40	30
3/8	50	35	70	50
7/16	80	55	110	80
1/2	120	85	170	120
9/16	180	130	240	175
5/8	230	170	320	240
3/4	400	300	580	425
7/8	600	445	930	685
1	910	670	1400	1030
1-1/8	1240	910	1980	1460
1-1/4	1700	1250	2800	2060

Z103947

A—Thread O.D. (in.)
B—Head marking
(identifying strength)

10.9 – Tempered steel high strength cap screws

12.9 – Tempered steel extra high strength cap screws

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Specifications

RECOMMENDED TORQUES FOR METRIC CAP SCREWS

A B	8.8		10.9		12.9	
	Nm	ft-lb	Nm	ft-lb	Nm	ft-lb
M5	7	5	9	6,5	10	8,5
M 6	10	8,5	15	10	20	15
M 8	30	20	40	30	40	30
M 10	50	35	80	60	90	70
M 12	100	75	140	100	160	120
M 14	160	120	210	155	260	190
M 16	240	175	350	260	400	300
M 20	480	355	650	480	780	575
M 24	820	605	1150	850	1350	995
M 30	1640	1210	2250	1660	2700	1990
M 36	2850	2110	4000	2950	4700	3465

Z103948

A-Head marking
(identifying strength)
B-Thread O.D. (mm)

8.8-Regular cap screws
10.9-Tempered steel high
strength cap screws

12.9-Tempered steel extra
high strength cap screws

Z103948-Z121005AE-011084

RECOMMENDED TORQUES FOR PIPE AND HOSE CONNECTIONS

A	B		C	
	Nm	ft-lb	Nm	ft-lb
3/8-24 UNF	7,5	5,5	8	6
7/16-20 UNF	10	7	12	9
1/2-20 UNF	12	9	15	11
9/16-18 UNF	15	11	25	18
3/4-16 UNF	25	20	45	35
7/8-14 UNF	40	30	60	45
1-1/16-12 UNC	60	45	100	75
1-3/16-12 UNC	70	50	120	90
1-5/16-12 UNC	80	60	140	105
1-5/8-12 UNC	110	80	190	140
1-7/8-12 UNC	150	110	220	160

Z103949

A-Thread size

B-With O-ring

C-With cone

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ENGINE REMOVAL AND INSTALLATION

CONTENTS OF THIS SECTION

NOTE: Combine engines are included in a separate engine technical manual. The details in this section apply specifically to combine engine installation.

GROUP 05 – REMOVAL AND INSTALLATION – 4 CYLINDER ENGINE

Special tools	20-05-1
Electrical connections	20-05-1
Fuel lines	20-05-2
Speed control linkage	20-05-2
Hydraulic control valve connections	20-05-2
Drive belts	20-05-3
Separate engine from combine frame	20-05-3
Lifting engine	20-05-4
Engine installation	20-05-4

GROUP 10 – REMOVAL AND INSTALLATION – 6 CYLINDER ENGINE

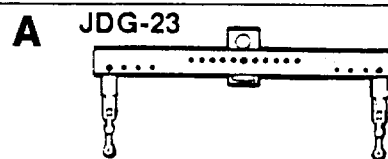
Special tools	20-10-1
Electrical connections	20-10-1
Fuel lines	20-10-2
Speed control linkage	20-10-2
Hydraulic control valve connections	20-10-2
Heater hose connections	20-10-3
Drive belts	20-10-4
Separate engine from combine frame	20-10-4
Lifting engine	20-10-5
Engine installation	20-10-5

	1133	1144	1155	1157	1158
Special tools	x	x	x		
Electrical connections	x	x	x		
Fuel lines	x	x	x		
Speed control linkage	x	x	x		
Hydraulic control valve connections	x	x	x		
Drive belts	x	x	x		
Separate engine from combine frame	x	x	x		
Lifting engine	x	x	x		
Engine installation	x	x	x		
Special tools				x	x
Electrical connections				x	x
Fuel lines				x	x
Speed control linkage				x	x
Hydraulic control valve connections				x	x
Heater hose connections				x	x
Drive belts				x	x
Separate engine from combine frame				x	x
Lifting engine				x	x
Engine installation				x	x

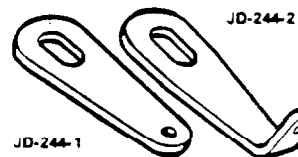
REMOVAL AND INSTALLATION – 4 CYLINDER ENGINE

SPECIAL TOOLS

A—JDG-23 Lifting bracket
B—JD-244 Lifting eyes



B JD-244



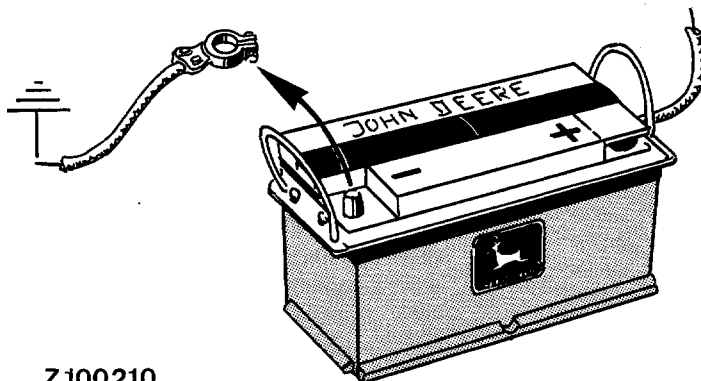
Z103901

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PREPARATIONS

IMPORTANT: Lower feeder conveyor to ground to relieve pressure in hydraulic system.

Disconnect ground (-) and positive (+) cables at the battery and remove battery.

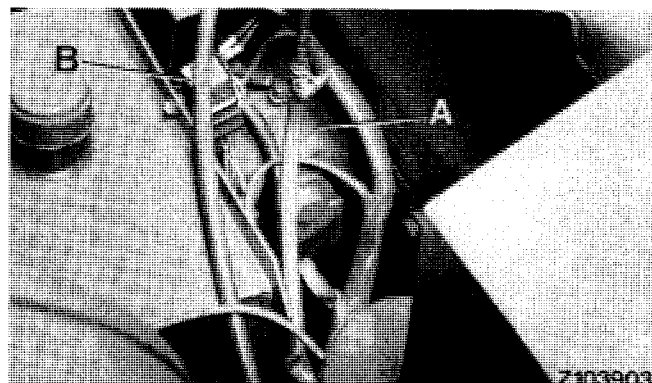


Z100210

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ELECTRICAL CONNECTIONS – STARTING MOTOR

Remove all cable connections at starting motor (A) and starting circuit relay (B).

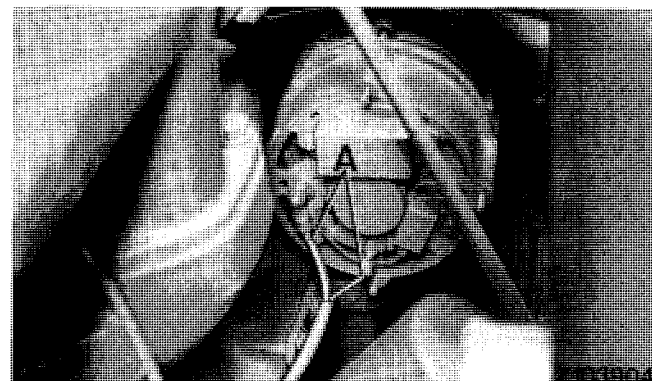


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ELECTRICAL CONNECTIONS – ALTERNATOR

Remove both connections (A) at alternator.



Z103904

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