

F440E/F450E Round Balers

<p>TECNHICAL MANUAL</p> <p>F440E/F450E ROUND BALERS</p> <p>5FBD402 NOV-14 (ENGLISH)</p>

John Deere GmbH & Co. KG
Portfolio Extension Region 2

DEERE & COMPANY
Moline, Illinois
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INTRODUCTION

This manual is written for an experienced technician. Essential tools required in performing certain service work are identified in this manual and are recommended for use.

Live with safety: read the safety messages in the introduction of this manual and the cautions presented throughout the text of the manual.



This is the safety-alert symbol. When you see this symbol on the machine or in this manual, be alert to the potential for personal injury.

Technical Manuals are concise guides for specific machines. They are on-the-job guides containing only the vital information needed for diagnosis, analysis, testing, and repair.

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Group 1.01 Safety information

Prepare for emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



Avoid High-Pressure Fluids

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source.



Support machine properly

Always lower the attachment or implement to the ground before you work on the machine.

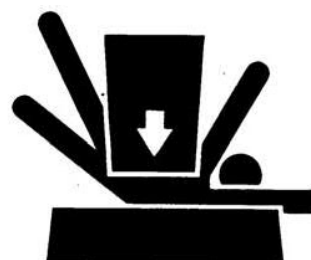
If the work requires that the machine or attachment be lifted, provide secure support for them.

If left in a raised position, hydraulically supported devices can settle or leak down.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

When implements or attachments are used with a machine, always follow safety precautions listed in the implement or attachment operator's manual.

Lift heavy components incorrectly can cause serious injuries or damages to the machine.



Wear protective clothing

Wear close fitting clothing and safety equipment appropriate to the job.

Wear clothes tight enough and safety equipment appropriate to the job. Never use loose clothing that might get hooked and fluttering in the mechanism and moving parts of the machine.

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.



Stay away from rotating drivelines

Entanglement in rotating driveline can cause serious injury or death.

Keep tractor master shield and driveline shields in place at all times. Make sure rotating shields turn freely.

Wear close fitting clothing. Stop the engine and be sure that PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.

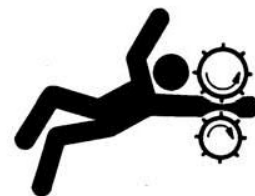
Do not install any adapter device between the tractor and the primary implement PTO drive shaft that will allow a 1000 rpm tractor shaft to power a 540 rpm implement at speeds higher than 540 rpm.



Service machine safely

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.



Work in clean area

Before starting a job:

- Clean work area and machine.
- Make sure you have all the necessary tools to do your job.
- Have the right parts on hand.
- Read all instructions thoroughly; do not attempt shortcuts.

Remove paint before welding or heating

Avoid potentially toxic fumes and dust.

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

Before heating:

- Remove paint a minimum of 100 mm (4 in.) from area to be affected by heating. If paint cannot be removed, wear an approved respirator before heating or welding.
- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area.
- Allow fumes to disperse at least 15 minutes before welding or heating.



Do not use a chlorinated solvent in areas where welding will take place.

Do all work in an area that is well ventilated to carry toxic fumes and dust away.

Dispose of paint and solvent properly.

Avoid Heating Near Pressurized Fluid Lines

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders.

Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can accidentally burst when heat goes beyond the immediate flame area.



Illuminate Work Area Safely

Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage.

The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

Replace Safety Signs

Replace missing or damaged safety signs. See the machine operator's manual for correct safety sign placement.

Service Tires Safety

Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.

Practice Safe Maintenance

Make sure to understand the procedures before beginning to work. Keep the area clean and dry.

Never lubricate, maintain or repair a machine in motion. Keep away your hands, feet and clothes from moving parts; Lower the equipment to the ground; stop the engine; remove the key; allow machine to cool down.

Properly support any machine element that have to be lifted for service work.

Keep all parts in good condition and properly installed.

Immediately repair damages, remove any buildup of grease, oil or debris.

On self-propelled equipment, disconnect the battery ground cable (-) before making adjustments on electrical systems or welding on the machine.

Use proper tools

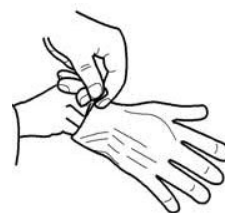
Use tools appropriate to the work. Makeshift tools and procedures can create safety hazards.

Use power tools only to loosen threaded parts and fasteners.

For loosening and tightening hardware, use the correct size tools. DO NOT use U.S. measurement tools on metric fasteners. Avoid bodily injury caused by slipping wrenches.

Managing the binder blades and knives

Wear safety gloves when managing binder blades.



Live With Safety

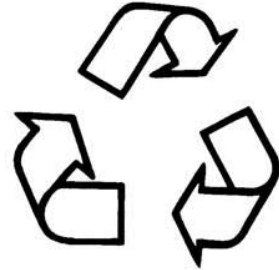
Before returning machine to customer, make sure machine is functioning properly, especially the safety systems.

Install all guards and shields.

Ecology and pollution

Respect the laws in your country concerning the use and disposal of products used for machine operations, maintenance and clearing.

Improper disposal of waste can threaten the environment and ecological system. The components used for **FERABOLI** equipment which are potentially hazardous waste include: oil, brake fluid and filters.



Use airtight containers for drained fluids. Do not use food or beverage containers that may mislead and cause accidental drinking.

Do not drain onto the ground, into sewage systems or in watercourses.

Dispose of any remaining machine packaging in suitable sorted waste containers.

Consult the relevant authorities for disposal or recycling centres. If the machine is scrapped observe the anti-pollution laws of your Country.

Section 2. GENERAL INFORMATION

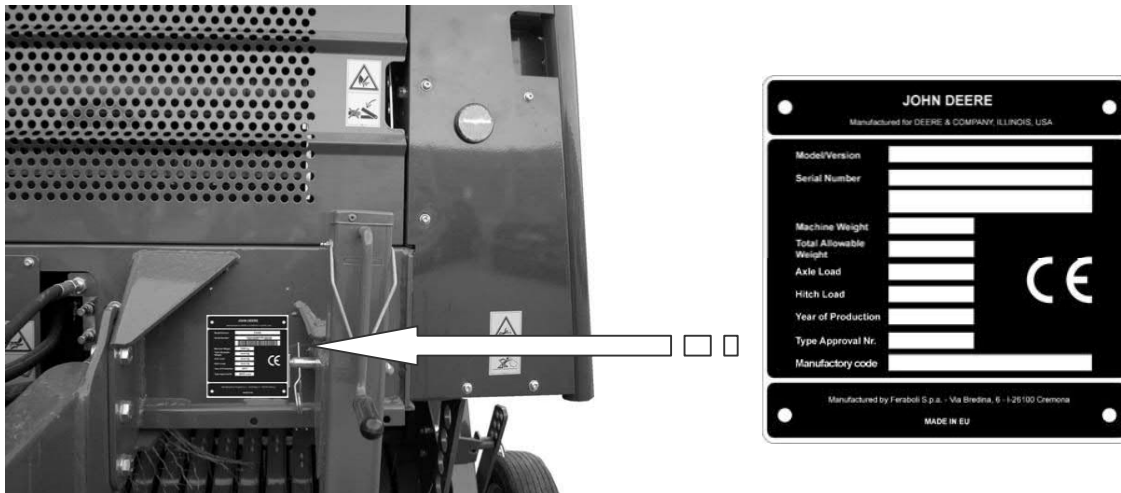
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Group 2.01 Plate

Identification number plate position

The baler identification number plate is located on the front side of the baler, on the lower right side near the drawbar. *



* Except for the machine version intended for the German market, where the identification number plate is located on the left end side, on the cover near the pressure gauge. A drawbar identification plate is required too and is placed on the drawbar, on the left side.

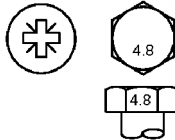
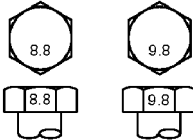
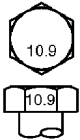
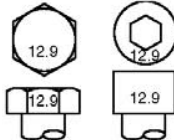
Identification number plate description (English version)

List of data on the plate:

- Model / version
- Serial number
- Machine weight
- Total allowable weight
- Axle load
- Hitch load
- Year of production
- Type approval nr.
- Manufactory code

Group 2.02 Tables and specifications

Torque settings

																
Bolt Ø	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
Screw	Lubricated ^a		Dry ^b		Lubricated ^a		Dry ^b		Screw		Lubricated ^a		Dry ^b		Lubricated ^a	
Dimensions	Nm	lb-in	Nm	lb-in	Dimen	Nm	lb-in	Nm	lb-in	Dimen	Nm	lb-in	Nm	lb-in	Dimen	Nm
M6	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									N m	lb-in	N m	lb-in	N m	lb-in	N m	lb-in
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			N m	lb-in	N m	lb-in	N m	lb-in								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	N m	lb-in														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

The values given above are only for general use and are based on screw or bolt strength. DO NOT use these values if a different torque value or tightening procedure it's prescribed for a specific application. For the stainless steel screws or nuts on the U-brackets, see tightening instructions for the specific application. Tighten plastic insert or steel lock nuts tightening the nut to the dry torque shown in the table, unless it has been given different instructions for the specific application.

The safety plugs are designed to fail under predetermined loads. Always replace with security screws with the same property class. Replace screws with another of equal or greater class. If you use an upper class screw, it must be tightened to the original screws torque. Make sure that bolts threads are clean and bolts are perfectly spoon fed. If possible, grease bolts naked or galvanized (with the exception of locking nuts, bolts or wheel nuts), unless it has been given different instructions for the specific application

^a "Lubricated" means, coated with a lubricant such as engine oil, fixing devices as phosphate coating or oil, or fasteners M20 or greater.

^b "Dry" means zinc plated without any lubrication.