

# 8580 Baler & Accumulator

## Table of Contents

DIVISION / SECTION	SECTION NO.	FORM NO.
<b>1 GENERAL</b>		
Index		Rac 7-81150
Introduction .....	1001	Rac 7-81160
Safety Rules, General Machine Specifications, and Standard Torque Specifications .....	1002	Rac 7-81170
Maintenance and Lubrication .....	1003	Rac 7-81180
Decals .....	1004	Rac 7-81190
<b>2 DRIVE SYSTEM</b>		
Index		Rac 7-81200
Connecting the Tractor, Implement Drive Line, Main Drive Shaft, and Main Drive Clutch .....	2001	Rac 7-81210
Flywheel, Flywheel Brake, and Gearbox .....	2002	Rac 7-81220
Auxiliary Drives .....	2003	Rac 7-81230
<b>3 PICKUP</b>		
Index		Rac 7-81240
Operation, Adjustments, Gauge Wheels, Troubleshooting .....	3001	Rac 7-81250
Pickup Clutch .....	3002	Rac 7-81260
Augers .....	3003	Rac 7-81270
Reel .....	3004	Rac 7-81280
<b>4 ELECTRICAL SYSTEM</b>		
Index		Rac 7-81290
Electrical Schematics and Troubleshooting - Balers With Early Production Electronics .....	4001	Rac 7-81300
Electrical Schematics and Troubleshooting - Balers With Late Production Electronics .....	4010	Rac 7-81310
<b>5 FEEDER AND PLUNGER</b>		
Index		Rac 7-81320
Packer .....	5001	Rac 7-81330
Stuffer .....	5002	Rac 7-81340
Plunger .....	5003	Rac 7-81350

Reprinted



<b>6</b>	<b>KNOTTER SYSTEM</b>		
	Index		Rac 7-81360
	Knotter .....	6001	Rac 7-81370
<b>7</b>	<b>MAINFRAME, BALE TENSION, AND WHEELS</b>		
	Index		Rac 7-81380
	Mainframe, Bale Tension, and Wheels .....	7001	Rac 7-81390
	Axle, Wheels, and Tires .....	7002	Rac 7-81400
<b>8</b>	<b>HYDRAULIC SYSTEM</b>		
	Index		Rac 7-81410
	Hydraulic System Operation, Schematics, and Troubleshooting .....	8001	Rac 7-81420
	Control Valves .....	8002	Rac 7-81430
	Cylinders .....	8003	Rac 7-81440
<b>9</b>	<b>OPTIONAL EQUIPMENT</b>		
	Index		Rac 7-81450
	Centralized Lubrication System .....	9001	Rac 7-81460
	Accumulator, Bale Weight System, and Bale Chute .....	9002	Rac 7-81470

# DIVISION 1

## INDEX

SECTION TITLE	SECTION NUMBER
Introduction .....	1001
Safety Rules, General Machine Specifications, and Standard Torque Specifications .....	1002
Maintenance and Lubrication .....	1003
Decals .....	1004

# Section 1001

## INTRODUCTION

### TABLE OF CONTENTS

General Information .....	1001-2
To Our Customer .....	1001-2
Introduction .....	1001-2
Serial Number Location .....	1001-2
Replacement Parts .....	1001-3
U. S. and Metric Units .....	1001-3
Table of Contents .....	1001-3
Page Numbers .....	1001-3

# GENERAL INFORMATION

## To Our Customer

We appreciate your confidence in our farm equipment and thank you for your patronage. In preparing this manual, we hope we have furnished you with a valuable tool for operating and maintaining this fine machine. Use this manual as your guide. Practicing the instructions given here will result in many years of dependable service from your machine.

Your Dealer can give you assistance with parts and specially trained personnel to assist you in repair and maintenance. Call your Dealer if you need any assistance or information.

## Introduction

This service manual has been prepared with the latest service information available at the time of publication. Read the service manual carefully before doing any service on the baler. This manual is one of the most important tools available to the service technician.

“Right” and “Left” as used throughout this manual is determined by facing in the direction the machine will travel when in use.

The photos, illustrations, and data used in this manual were current at the time of printing, but due to possible production changes, your machine can vary slightly. The Manufacturer reserves the right to redesign and change the machine as necessary without notification.

### **WARNING**

**Some pictures in this manual show the machine with shields or guards removed to allow for a better view of the subject of the picture. All shields and guards must be in position before operating the machine.**

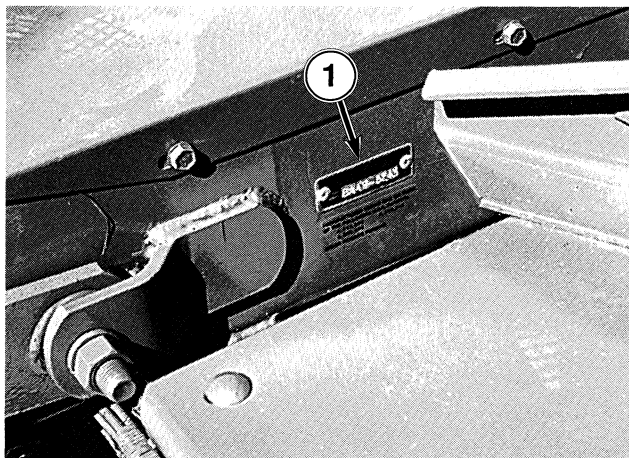
## Serial Number Location

The serial number is important information about the machine. You will need the serial number when ordering some replacement parts. The baler serial number plate is located on the left-hand side of the tongue. The accumulator serial number plate is located on the left-hand side of the accumulator mainframe.



49BB-96064-3

1. Serial Number Location on Baler



49BB-87049-6

1. Serial Number Location on Accumulator

## Replacement Parts

To obtain prompt, efficient service, always remember to give the dealer the following information:

1. Correct part number description.
2. Model number of the machine.
3. Serial number of the machine.

## U.S. and Metric Units

Measurements are given in U.S. units followed by their equivalent in metric units. Hardware sizes are given in inches for U.S. hardware and millimeters for metric hardware.

## Table of Contents

A Table of Contents is in the front of this manual. The Table of Contents shows the divisions and the sections that are in each division. The individual divisions and sections also have a Table of Contents.

## Page Numbers

All page numbers are made of two numbers separated by a dash, such as 4001-9. The number before the dash is the section number. The number following the dash is the page number in that section. Page numbers will be at the upper right or left of each page.

# Section 1002

## SAFETY RULES, GENERAL MACHINE SPECIFICATIONS, AND STANDARD TORQUE SPECIFICATIONS

### TABLE OF CONTENTS

Safety Precautions .....	1002-2
General Machine Specifications .....	1002-5
Standard Torque Specifications .....	1002-8
U.S. Standard Hardware .....	1002-8
Metric Hardware .....	1002-9

## SAFETY PRECAUTIONS

Understand that your safety and the safety of other persons is measured by how you service and operate this machine. Know the positions and operations of all controls before you try to operate this machine. **MAKE SURE YOU CHECK ALL CONTROLS IN A SAFE AREA BEFORE STARTING YOUR WORK.**

**READ THIS MANUAL COMPLETELY** and make sure you understand the controls. All equipment has a limit. Make sure you understand the speed, brakes, steering, stability, and load characteristics of this machine and your power unit before you start to operate the machine.

The safety information given in this manual does not replace safety codes, insurance needs, state and local laws. Make sure your machine has the correct equipment needed by the local laws and regulations.



**THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.**

Read and understand all the operating instructions and precautions before operating the machine.

If equipped with an accumulator, see the Operator's Manual for the accumulator for additional safety precautions.

Before doing any maintenance or service work on the machine, you must:

- Park the machine on a solid level surface.
- Disengage the PTO.
- Put the tractor transmission in PARK or apply the tractor parking brake.
- Turn off the baler control console.
- Stop the tractor engine and take the key with you.
- Apply the baler flywheel brake.
- Look and Listen! Make sure all moving parts have stopped.

After lubricating, servicing, or adjusting the machine, make sure all tools and equipment have been removed.

All shields and guards must be in position before operating the machine.

Always unload bales from the accumulator side carts before working under the accumulator

Before doing any maintenance or service work on the accumulator, put the tractor remote valve in NEUTRAL and shut off the baler control console.

Always disengage the tractor PTO and shut off the tractor engine before:

1. leaving tractor seat
2. lubricating
3. cleaning the machine
4. adjusting the machine

If equipped with an accumulator, stay off the accumulator at all times. The unit operates automatically and without warning.

Do not carry riders on the machine at any time.

Keep children away from the machine at all times.



Entanglement in a rotating drive line can cause serious injury or death. **DO NOT** operate the machine with the drive line shields removed.

Always remove the tractor ignition key when parking machine.

Always lock tractor brakes and block wheels before working on or under the machine.

**DO NOT** attempt servicing or adjustments until the baler flywheel has stopped rotating. Always apply the flywheel brake before working on the baler.

Never check or lubricate the chains while the machine is running.

Whenever doing any maintenance or service work on the top of the baler, always stay within the guard rails.

When climbing on the baler, always use the ladder mounted on the baler.

**BE AWARE** of the size of the machine parts when performing service work. Never stand under or near a part being moved with lifting equipment.

Always install the safety chain between the baler and tractor drawbar.

- Use a safety chain with a strength rating equal to or more than the gross weight of the towed machine.
- Supply only enough slack in the safety chain to permit turning.
- Do not use the safety chain as a tow chain for towing.

Serious injury can result from threading the needles or adjusting the twine tensioners with the baler running. The needle frame can move without putting hay in the baler. **DISENGAGE** the PTO, **SHUT OFF** the tractor engine, and apply the flywheel brake.

Never start the tractor with the PTO engaged.

Always keep hands, feet and clothing away from moving parts.

Never wear loose clothing while operating the machine.

**DO NOT** attempt to remove twine from the bale chamber or knotter while the machine is running.

Do not pull crop or any other article from the pickup assembly while the machine is running.

Always remain seated when operating the machine.

Make sure the tractor is in safe operating condition with enough braking capacity, especially when operating on uneven terrain.

**BE AWARE** of the size of the machine and have sufficient space available for safe operation. When an accumulator is attached, even more area is required for safe turning.

If equipped with an accumulator, stand at least 10 feet away from the accumulator at all times. The unit swings rapidly when turning, and the bale drops off quickly when unloading.

Make sure electrical connectors are both clean and free of dirt or grease before connecting.

Hydraulic fluid under pressure can have enough force to penetrate the skin, causing serious injury. Relieve all pressure before disconnecting any hydraulic lines. Before applying pressure to the system, make sure all the connections are tight and the hoses and lines are not damaged.

Hydraulic fluid escaping from a very small hole can be almost invisible. Always use a piece of cardboard or wood for locating hydraulic leaks. Never use the hands, as escaping fluid under force can penetrate the skin. If not treated immediately, serious infection or reaction can develop. If injured by escaping fluid, see a doctor at once.

The baler, the contents of the baler, and the accumulator, if equipped, must not be more than 1.5 times the weight of the tractor.

Limit the towing speed to 20 mph (32 km/h).

**BE AWARE** of the overall width and length of the machine. Be careful when roading or transporting the machine on narrow roads and across narrow bridges. See Specifications for the overall dimensions.

If equipped with an accumulator, never road or transport the machine with bales on the accumulator.

Check the operation of all warning lamps before roading the machine. Clean the lens covers. If the bulbs are not functional, replace with units available from your dealer. If the lighting does not work after replacing bulbs, see your dealer for immediate repairs.

The warning lamps must be turned on when roading the machine, except where prohibited by law.

Check all reflectors before roading the machine. Clean the reflectors. Replace reflectors that are damaged with units available from your dealer.

Make sure the SMV (Slow Moving Vehicle) emblem is installed in the correct location. Make sure the SMV emblem is clean and visible.

Comply with your state and local laws when roading or transporting the machine.

To reduce the risk of fire or damage if fire occurs, do the following:

- Equip the machine with a water fire extinguisher available from your dealer.
- Check the baler daily for any noises which are not normal. Such noises can indicate a failed bearing which can cause heat buildup.
- Always make sure the pickup area is free of hay crops before leaving the machine after baling.
- Check for hot areas on the machine and clean loose hay from the machine.
- Keep the tractor and machine free of trash.

Because of the flammable nature of many hay crops, it is recommended that a water fire extinguisher be placed in an easily reached location on the tractor or machine when baling.

Tire explosion and/or serious injury can result from over inflation. Do not exceed tire inflation pressures. See Specifications for the correct pressure.

When tire service is necessary, have a qualified tire mechanic service the tire.

Do not weld to the rim when a tire is installed. Welding will cause an explosive air/gas mixture that will ignite with high temperatures. This can happen to tires that are inflated or deflated. Removing air or breaking the bead is NOT enough. The tire must be completely removed from the rim prior to welding.

# GENERAL MACHINE SPECIFICATIONS

**MODEL** ..... 8580 Large Rectangular Baler  
and Optional Bale Accumulator

## WEIGHT (approx.)

Baler, empty ..... 18 600 LB (8440 kg)  
Tongue, empty ..... 2900 LB (1315 kg)  
Bale chute ..... 250 LB (115 kg)  
Baler and accumulator, empty ... 21850 LB (9911 kg)

## LENGTH

Without bale chute ..... 284.5 IN (7230 mm)  
With bale chute ..... 350.5 IN (8900 mm)  
With accumulator ..... 409 IN (10 390 mm)

## WIDTH (overall)

Shipping, less tires ..... 103 IN (2615 mm)  
With 28L x 26 tires ..... 125.5 IN (3190 mm)  
With accumulator ..... 156 IN (3960 mm)

## HEIGHT

Top of knottter shielding ..... 124 IN (3150 mm)  
Top of hand railing ..... 145 IN (3680 mm)

## BALE CHAMBER

Width ..... 46.5 IN (1180 mm)  
Height ..... 50 IN (1270 mm)

## BALE LENGTH

Adjustable ..... up to 108 IN (2743 mm)

## TIRE SIZE

Baler ..... 28L x 26, 12 ply  
Pickup Gauge Wheel ..... 4.00 x 16 (2) pneumatic  
w/inner tube  
Accumulator ..... 9.5L x 14, 6 ply (4) w/inner tube

## TIRE PRESSURE

Baler  
28L x 26, 12 ply ..... 22 psi / 152 kPa  
23.1 X 26, 10 ply ..... 26 psi / 158 kPa  
Pickup Gauge Wheels ..... 40 psi / 276 kPa  
Accumulator ..... 32 psi (193 kPa)

## WHEEL NUTS / BOLTS

Baler  
size ..... 3/4-16 UNF-2B nuts with  
hardened washers (10)  
bolt circle diameter ..... 13.19 IN (335 mm)  
torque ..... 425 to 450 LB·FT  
(575 to 610 N·m)  
Accumulator  
size ..... 9/16-18 UNF-2A bolt  
torque ..... 120 LB·FT (165 N·m)

## MAIN DRIVE

Standard PTO speed ..... 1000 rpm (r/rim)  
PTO optional ..... ASAE type 2, 1-3/8 IN, 21 teeth  
PTO optional ..... ASAE type 3, 1-3/4 IN, 20 teeth  
Drive line category ..... ASAE 6  
Drive protection ..... overrunning and slip  
clutches, and shearbolt  
Flywheel brake ..... direct acting  
Flywheel bearings ..... taper roller (2)  
Flywheel diameter ..... 34.0 IN (864 mm)  
Flywheel weight ..... 460 LBS (209 kg)  
Gearbox  
type ..... enclosed triple reduction  
gears ..... spiral bevel (1st set)  
spur (2nd & 3rd set)  
Bearings ..... taper roller, and spherical  
Lubrication ..... oil bath  
Temperature switch setting ..... 160° to 175° F  
(71° to 80° C)

## PICKUP ASSEMBLY

Pickup outside width ..... 97.5 IN (2475 mm)  
Width tine to tine ..... 77.9 IN (1978 mm)  
Width inside ..... 83.6 IN (2125 mm)  
Overall width incl. tires ..... 110.5 IN (2810 mm)  
Number of bars ..... 5  
Number of tines ..... 120  
Tine spacing ..... 3.375 IN (86 mm)  
Tine bar bearings ..... sealed ball  
Drive ..... RC50 roller chain  
Protection ..... slip and overrunning clutches  
Height control ..... gauge wheels (2) and  
adjustable control arm  
Pickup lift (standard) ..... hydraulic cylinder

## BALE CHAMBER FEEDING SYSTEM

Packers ..... fork type with 6 hard surfaced tines  
crank ..... heavy duty  
drive ..... RC80 roller chain  
protection ..... splined slip clutch  
Charge chamber volume ..... 12.5 FT<sup>3</sup> (.354 m<sup>3</sup>)  
Windrow size compensation ..... automatic charge  
sensor engages stuffer clutch  
Stuffer ..... fork type with 6 tines  
drive ..... RC100 roller chain  
drive protection ..... shearbolt

## PLUNGER

Speed ..... 25.4 strokes/min  
Length of stroke ..... 30.7 IN (780 mm)  
Mounting ..... 4 tapered roller bearings  
(sealed); 2 ball bearing rollers (sealed)

**CONTROL AND MONITORING SYSTEM**

Type ..... microprocessor controlled electronics

**Baler controls**

- Plunger load to control bale density, alarm volume, displays, reset field bale counts and bale weight average, manual hydraulic pressure control

**Accumulator controls**

- Bale shift arm automatic and manual. **Balers with late production electronics also have a lock-out setting.**

**Baler functions monitored**

- Plunger load, bale chamber tension pressure, bale counts - field (**two on balers with late production electronics**) and total, flakes/bale, driving meter, stuffer cycles, knotter and needle performance, feeder performance, stuffer shear bolt, gearbox over heating, automatic electronic system performance checks. **Balers with late production electronics also have a low voltage check.**

**Accumulator functions monitored**

- Bales loaded, direction of next bale, operator alert - manual mode, bale to be unloaded, and bale shift bar malfunctions.

**Baler functions monitored****Bale weight (optional)**

- Automatically weighs each new bale on the left accumulator side cart; informs operator of each new bale weight; auto tare, bale weight average, and bale count for bale weight average. **Balers with late production electronics also have test and calibration functions.**

**Non-Volatile Memory Storage**

- Load and alarm settings, display and control modes, bale counts, bale weight and count

**Display dual LCD with back lighting**

Control switches ..... hermetically sealed membrane with back lighting

On-Off functions ..... both automatic and manual

Electrical protections ..... under and over voltage, output overload (short circuit, etc.), breaker switch, static discharge, etc.

Baler and accumulator switches ..... hermetically sealed reed

**Console size**

width ..... 14 IN (360 mm)

**depth**

without cable ..... 5.25 IN (133 mm)

with cable approx. .... 9 IN (230 mm)

height ..... 6.5 IN (165 mm)

Electrical requirement ..... 12 volt DC

**TYING MECHANISM**

Knotters ..... double knot type

Spacing ..... 6.75 IN (172 mm)

Type tie ..... twine only

Twine storage capacity ..... 24 balls

Type twine ..... high quality split film polypropylene or sisal, 300 LB (1330 N) minimum knot strength

**BALE CHAMBER TENSION SYSTEM**

Type ..... electronic controlled hydraulics

Valve ..... solenoid poppet type

System supply ..... tractor hydraulics type (standard) ..... closed center optional conversion ..... open center

**LIGHTS**

Working ..... three standard

Safety ..... flashing and turn signal, tail light

Power and Control ..... tractor 12 volt by using ASAE 7-pin connector

**TRACTOR REQUIREMENTS****Minimum weight of ballasted tractor**

baler only ..... 19 000 LB (8600 kg)

baler / accumulator ..... 22 500 LB (10 200 kg)

**Horsepower**

minimum ..... 120 HP (90 kw PTO)

recommended ..... 135 HP (100 kw PTO)+

PTO standard speed ..... 1000 rpm (r/min)

**PTO type**

ASAE type 2 ..... 1-3/8 IN, 21 teeth

ASAE type 3 ..... 1-3/4 IN, 20 teeth

Hydraulics ..... dual remote, pickup lift, bale chamber tension control

**TYPE OF HYDRAULIC SYSTEM**

Standard ..... closed center

Optional valve conversion ..... open center

Minimum pressure requirement ..... 2200 psi (15 170 kPa)

**ELECTRICAL SYSTEM**

Voltage ..... 12 volt DC

Lights ..... ASAE 7-pin connector outlet

**CENTRALIZED LUBRICATION SYSTEM** (*Optional, Baler*)

## Main Baler

- Three positive displacement grease divider valves - lubricates 19 points, grease gun holder included

## Knotters

- Four positive displacement manual oil pumps - lubricates 48 points


**ACCUMULATOR**


Weight (approx.) .....	3250 LBS (1475 kg)
Length .....	123 IN (3125 mm)
Width .....	156 IN (3960 mm)
Height .....	46 IN (1170 mm)
Bale size .....	46.5 IN (1180 mm) wide x 50 IN (1270 mm) high x 81 to 102 IN (2057 to 2590) mm long
Bale capacity .....	three bales
Axle type .....	dual wheel caster (2) with stabilizing brake
Bale shift control .....	electronic built into baler control console ( <i>see above</i> )
Bale unload control .....	electrical standard, operator controlled
Monitoring .....	electronic built into baler control console ( <i>see above</i> )
Hydraulics .....	solenoid valve mounted on baler valve - uses same tractor hydraulic circuit
Centralized lubrication system .....	standard, one 12-point positive displacement grease divider valve plus one direct lubrication line
Bale weight kit ( <i>optional</i> ) .....	automatically weighs bales transferred to left-hand side cart ( <i>see above</i> )

# STANDARD TORQUE SPECIFICATIONS

## U.S. Standard Hardware

Use the torques in this chart when special torques are not given. These torques apply to fasteners with both UNC and UNF threads as received from suppliers, dry, or when lubricated with engine oil. Not applicable if special graphites, molydisulfide greases, or other extreme pressure lubricants are used.


<b>Grade 5 Bolts, Nuts, and Studs</b>		
		
<b>Size</b>	<b>Pound-Feet (LB·FT)</b>	<b>Newton meters (N·m)</b>
1/4-20	8.4	11
1/4-28	9.7	13
5/16-18	19	24
5/16-24	19	26
3/8-16	31	42
3/8-24	35	47
7/16-14	49	67
7/16-20	55	75
1/2-13	76	105
1/2-20	85	115
9/16-12	110	150
9/16-18	120	165
5/8-11	150	205
5/8-18	170	230
3/4-10	265	360
3/4-16	295	405
7/8-9	430	585
7/8-14	475	640
1-8	645	875
1-12	705	955
1-1/8-7	795	1080
1-1/8-12	890	1210
1-1/4-7	1120	1520
1-1/4-12	1240	1680
1-3/8-6	1470	1990
1-3/8-12	1670	2270
1-1/2-6	1950	2640
1-1/2-12	2190	2970


<b>Grade 8 Bolts, Nuts, and Studs</b>		
		
<b>Size</b>	<b>Pound-Feet (LB·FT)</b>	<b>Newton meters (N·m)</b>
1/4-20	12	16
1/4-28	14	18
5/16-18	25	33
5/16-24	27	37
3/8-16	44	59
3/8-24	49	67
7/16-14	70	95
7/16-20	78	105
1/2-13	105	145
1/2-20	120	165
9/16-12	155	210
9/16-18	170	235
5/8-11	210	285
5/8-18	240	325
3/4-10	375	510
3/4-16	420	570
7/8-9	605	820
7/8-14	670	905
1-8	910	1230
1-12	995	1350
1-1/8-7	1290	1750
1-1/8-12	1440	1960
1-1/4-7	1820	2460
1-1/4-12	2010	2730
1-3/8-6	2380	3230
1-3/8-12	2710	3680
1-1/2-6	3160	4290
1-1/2-12	3560	4820

## Metric Hardware

Use the following torques when special torques are not given.

These values apply to fasteners with coarse threads as received from supplier, plated or unplated, or when lubricated with engine oil. These values do not apply if graphite or molydisulfide grease or oil are used.

<b>Grade 8.8 Bolts, Nuts, and Studs</b>		
		
<b>Size</b>	<b>Pound-Feet (LB·FT)</b>	<b>Newton meters (N·m)</b>
M5 x 0.8	4.8	6
M6 x 1	8	11
M8 x 1.25	19	26
M8 x 1	21	28
M10 x 1.5	39	52
M10 x 0.75	45	61
M12 x 1.75	67	91
M12 x 1.5	70	95
M12 x 1	77	105
M14 x 2	105	145
M14 x 1.25	115	155
M16 x 2	165	225
M16 x 1.5	180	240
M18 x 2.5	230	310
M18 x 1.5	260	350
M20 x 2.5	325	440
M20 x 1.5	480	650
M24 x 3	560	760
M24 x 2	610	830
M30 x 3.5	1120	1510
M30 x 2	1240	1680
M36 x 3.5	1950	2650
M36 x 2	2190	2960

<b>Grade 10.9 Bolts, Nuts, and Studs</b>		
		
<b>Size</b>	<b>Pound-Feet (LB·FT)</b>	<b>Newton meters (N·m)</b>
M5 x 0.8	6.7	9
M6 x 1	11	15
M8 x 1.25	27	36
M8 x 1	29	39
M10 x 1.5	53	72
M10 x 0.75	62	85
M12 x 1.75	93	125
M12 x 1.5	97	130
M12 x 1	105	145
M14 x 2	150	200
M14 x 1.25	160	215
M16 x 2	230	315
M16 x 1.5	245	335
M18 x 2.5	300	405
M18 x 1.5	355	485
M20 x 2.5	450	610
M20 x 1.5	665	900
M24 x 3	780	1050
M24 x 2	845	1150
M30 x 3.5	1550	2100
M30 x 2	1710	2320
M36 x 3.5	2700	3660
M36 x 2	3020	4100

Thank you so much for reading.  
Please click the “Buy Now!”  
button below to download the  
complete manual.



After you pay.

You can download the most  
perfect and complete manual in  
the world immediately.

Our support email:

[ebooklibonline@outlook.com](mailto:ebooklibonline@outlook.com)