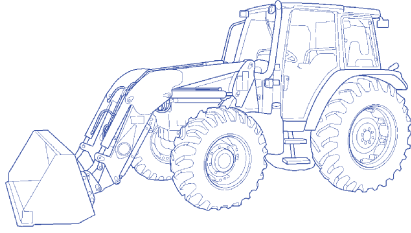


NEW HOLLAND  
52LB

87034406 8/03

OPERATOR'S MANUAL



NEW HOLLAND

---

# TO THE OWNER

This manual contains information concerning the adjustment and maintenance of your 52LB Front End Loader. You have purchased a dependable machine, but only by proper care and operation can you expect to receive the performance and long service built into this loader. Please have all operators read this manual carefully and keep it available for ready reference.

This loader was designed to be used with the TL80, TL90 and TL100 tractors. It is intended to load and move materials with a variety of buckets and attachments.

Your dealer will instruct you in the general operation of your loader. (Refer to the "Delivery Report" at the back of this manual.) Your dealer's staff of trained service technicians will be glad to answer any questions that may arise regarding the operation of your loader.

Your dealer carries a complete line of genuine service parts. These parts are manufactured and carefully inspected to insure high quality and accurate fitting of any necessary replacement parts. Be prepared to give your dealer the model and serial number of the loader, when ordering parts. Locate these numbers now and record them below. Refer to the "General Information" section of this manual for the location of the model and serial numbers of your loader.

Model \_\_\_\_\_ Tractor Model \_\_\_\_\_  
Serial Number \_\_\_\_\_ Tractor Serial Number \_\_\_\_\_



---

 **CAUTION** 

**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.**

---

---

 **CAUTION** 

**Pictures in this manual may show protective shielding open or removed to better illustrate a particular feature or adjustment.**

**Be certain, however, to close or replace all shielding before operating the machine.**

---

## IMPROVEMENTS

New Holland North America, Inc. is continually striving to improve its products. We reserve the right to make improvements or changes when it becomes practical and possible to do so, without incurring any obligation to make changes or additions to the equipment sold previously.

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**CALIFORNIA**

**Proposition 65 Warning**

**Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.**

**Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.**

---

# PRECAUTIONARY STATEMENTS

## PERSONAL SAFETY

Throughout this manual and on machine decals, you will find precautionary statements (“**DANGER**”, “**WARNING**”, and “**CAUTION**”) followed by specific instructions. These precautions are intended for the personal safety of you and those working with you. Please take the time to read them.



**DANGER**



This word “**DANGER**” indicates an immediate hazardous situation that, if not avoided, will result in death or serious injury. The color associated with Danger is **RED**.

---



**WARNING**



This word “**WARNING**” indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. The color associated with Warning is **ORANGE**.

---



**CAUTION**



This word “**CAUTION**” indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is **YELLOW**.

---

**FAILURE TO FOLLOW THE “DANGER”, “WARNING”, AND “CAUTION” INSTRUCTIONS MAY RESULT IN SERIOUS BODILY INJURY OR DEATH.**

## MACHINE SAFETY

The precautionary statement (“**IMPORTANT**”) is followed by specific instructions. This statement is intended for machine safety.

**IMPORTANT:** *The word “IMPORTANT” is used to inform the reader of something he needs to know to prevent minor machine damage if a certain procedure is not followed.*

## INFORMATION

**NOTE:** *Instructions used to identify and present supplementary information.*

---

# SAFETY

## PRECAUTIONARY STATEMENTS

A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. To help prevent accidents, read the following precautions before operating this equipment. Equipment should be operated only by those who are responsible and instructed to do so.

Carefully review the procedures given in this manual with all operators. It is important that all operators be familiar with and follow safety precautions.

### GENERAL

1. Read the Operator's Manual completely and thoroughly before using the tractor or loader. Lack of operating knowledge can lead to serious accidents.
2. Operate the tractor and loader only from the operator's seat.
3. Replace damaged, missing, or illegible safety decals. See the "Safety Decal" section in this manual for proper location of all safety decals.

### THE TRACTOR

1. Use approved rollover protection and seat belt for safe operation. Overturning a tractor without an approved roll bar could result in serious injury or death. If the tractor is not equipped with the proper rollover protection, see your tractor dealer to obtain the proper parts. If the tractor is equipped with a cab, make certain the cab is approved for rollover protection.
2. Equip the tractor with a FOPS (Falling Object Protective Structure) and seat belt before installing or operating a loader.
3. Always use the seat belt on tractors equipped with a roll bar or cab. Do not use a seat belt if operating the tractor without a roll bar or cab.
4. Add the recommended wheel ballast and/or rear weight as recommended in the Operator's Manual to provide adequate stability when using a loader.
5. Position the wheels to the tractor manufacturer's widest recommended settings to increase stability.
6. Move and turn the tractor at low speeds.
7. Before starting the engine, be sure all operating controls are in the neutral or park position. This will eliminate accidental movement of the machine or start up of power driven equipment.

8. Before leaving the tractor, stop the engine, put all controls in neutral, engage the park brake, and remove the key from the key switch.
9. When transporting the loader, engage the loader control neutral lock to prevent accidental cycling of the loader.

### THE LOADER

1. Improper use of a loader can cause serious injury or death.
2. NEVER use the loader to lift or carry anyone with the bucket, frame or attachment. Serious injury or death could result from falling off the tractor or loader during transport or operation.
3. NEVER allow anyone to get under the loader bucket or reach through the lift arms when the bucket is in the raised position.
4. Do not walk or work under a raised loader, bucket, or attachment unless it is securely blocked or held in position. Accidental movement of a control lever or a leak in the hydraulic system could cause the main frame to drop, or attachment to dump, causing severe injury or death.
5. Make sure all dismantled loaders on park stands are on a hard, level surface with all safety devices engaged to prevent the parked loader from falling and being damaged or injuring someone.
6. Do not repair, remove, or replace any parts of the loader while in the dismantled, parked position.
7. Avoid overhead wires and obstacles when the loader is raised. Contacting overhead electrical lines can cause severe electrical burns or death from electrocution. Make certain sufficient clearance is available before raising the loader.

---

## OPERATING THE LOADER

1. The equipment owner is responsible to make certain that all operators read this manual thoroughly and understand the safety precautions and proper operating procedures. Be certain all operators are qualified before allowing operation.
2. Always check with proper authorities for underground utilities before digging.
3. Exercise caution when operating the loader with a raised bucket or attachment.
4. Avoid loose fill, rocks, and holes. These are dangerous conditions for loader operation or transport.
5. Use caution when operating on steep grades. Always carry the bucket or attachment in the lowest possible position to maintain maximum stability. Select the proper gear BEFORE attempting to travel on a steep grade. Avoid shifting on grades and never "free wheel".
6. Be sure to allow for the length of the loader when making turns or working in confined areas.
7. Stop the loader arms gradually when raising or lowering the loader.
8. Carry the bucket or attachment as low as possible to increase visibility and stability during transport.
9. When parked or during servicing of the loader, lower the bucket to the ground, stop the engine, set the park brake and remove the key from the key switch. Special care should be taken to park or store attachments with sharp points or edges in a safe manner.
10. Do not operate loader controls unless properly seated in the operator's seat.
11. NEVER attempt to handle large, heavy objects such as large round or rectangle bales, logs or oil drums, unless the specific special attachments are used. Handling such objects is not recommended without special equipment.
12. Handling large heavy objects can be dangerous due to the following:
  - danger of overturning the tractor
  - danger of upending the tractor
  - danger of the object rolling or sliding down the loader arms onto the operator

13. If the type of work in precaution #12 must be performed adhere to the following:

- always use the proper attachment
- never lift the load higher than necessary to clear the ground while moving
- ballast the rear of the tractor to compensate for the weight of the load
- never lift large or heavy objects with equipment that does not have an anti-rollback device
- move slowly and carefully, avoiding rough or uneven terrain

14. Loader lift capacity and break-away capacity diminish as the loader height is increased. Use care not to grasp more material than the loader is designed to handle.

## MAINTENANCE

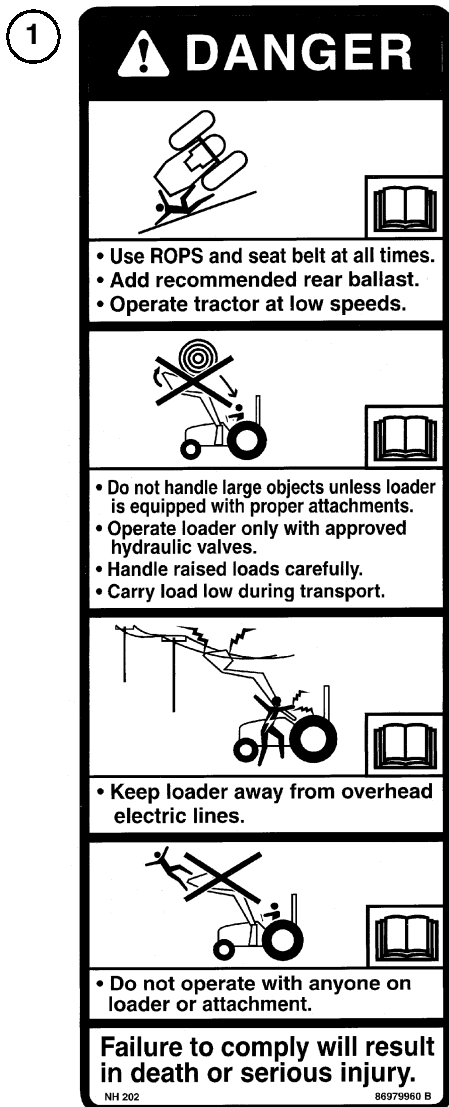
1. Always wear eye protection when servicing or repairing the loader.
2. Do not modify, alter or permit anyone else to modify or alter the loader or any of its components or functions without first consulting your dealer. Contact your dealer with questions about the loader.
3. Escaping hydraulic fluid or diesel fuel under pressure can penetrate the skin causing serious injury. To prevent serious personal injury:
  - DO NOT use your hand to check for suspected leaks under pressure
  - use a piece of cardboard or heavy paper to search for leaks
  - stop the engine and relieve the pressure in the system before connecting or disconnecting hydraulic or diesel lines and fittings
  - tighten all lines and fittings before starting the engine and pressurizing the system
  - if any fluid is injected into the skin, obtain medical attention IMMEDIATELY to avoid the onset of Gangrene
4. DO NOT tamper with or change the relief valve settings. The relief valve is preset by the manufacturer for optimum performance and safety. Changing the settings may cause overloading of the tractor hydraulic system resulting in equipment failure and/or serious operator injury.
5. When servicing or replacing the pins in the cylinder ends, bucket, etc., always use a brass drift. Failure to do so could result in equipment damage and/or personal injury due to flying metal fragments.

## SAFETY DECALS

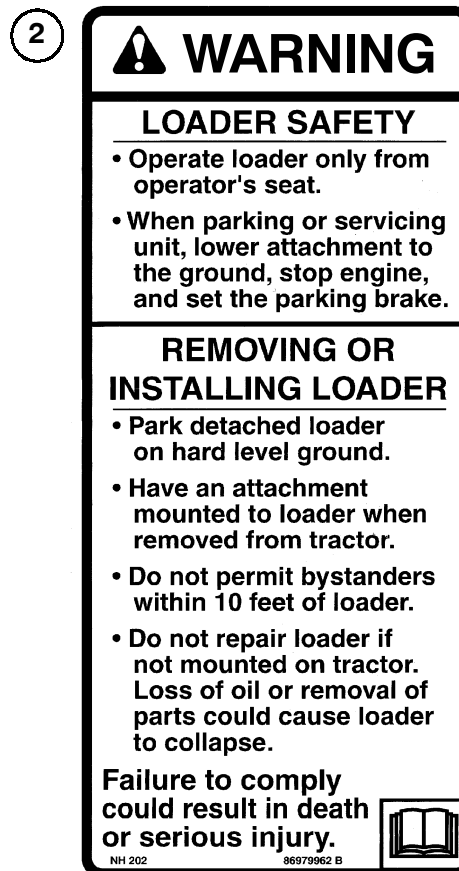
The following safety decals have been placed on your machine in the areas indicated. They are intended for your personal safety and for those working with you. Please take this manual and walk around your machine to note the content and location of these warning signs. Review these warning signs

and the operating instructions detailed in this manual with your machine operators.

Keep the decals legible. If they are not, obtain replacements from your authorized dealer. The decal replacement part numbers are listed with each decal.



DANGER Decal  
Part No.: 86979960  
Location: Loader tower

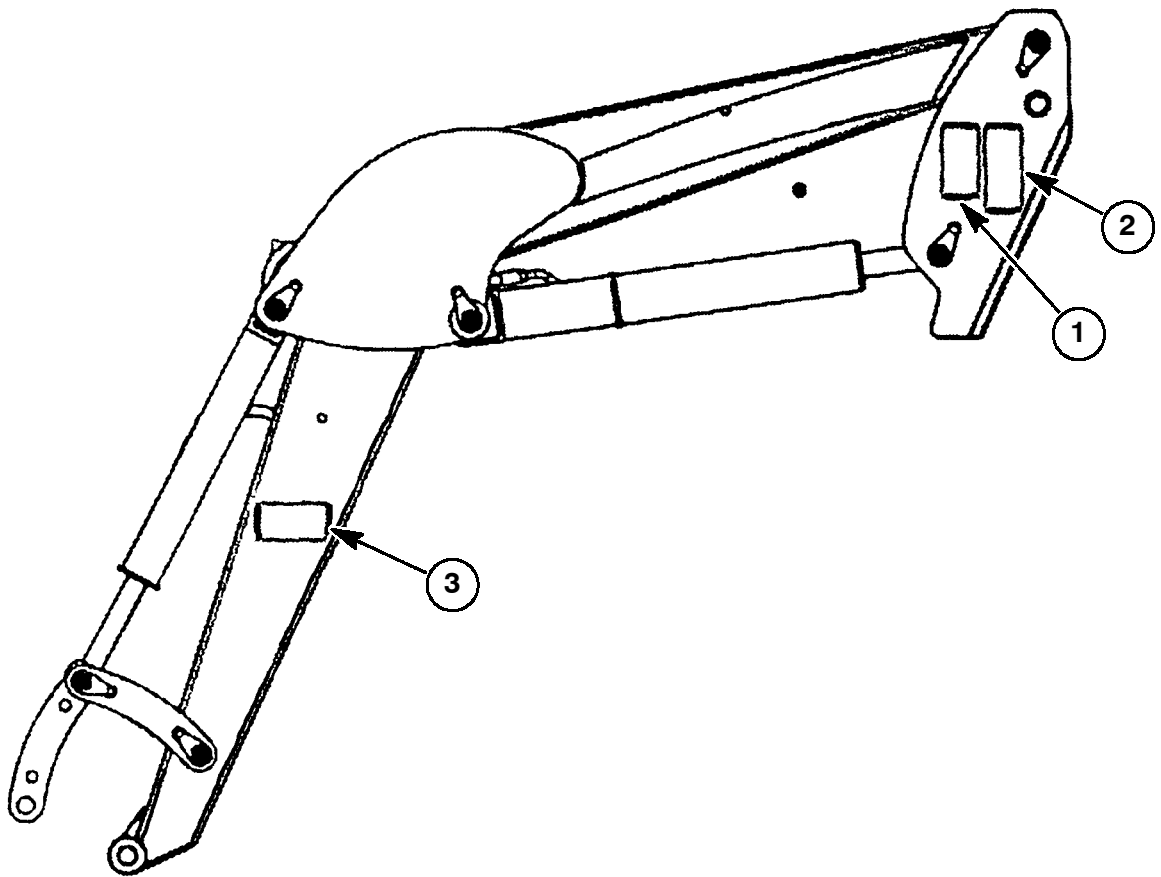


Warning Decal  
Part No.: 86979962  
Location: Loader tower



DANGER Decal  
Part No.: 86979961  
Location: Lower loader boom





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## ECOLOGY AND THE ENVIRONMENT

Soil, air, and water are vital factors of agriculture and life in general. When legislation does not yet rule the treatment of some of the substances which are required by advanced technology, common sense should govern the use and disposal of products of a chemical and petrochemical nature.

The following are recommendations which may be of assistance:

- Become acquainted with and ensure that you understand the relative legislation applicable to your country.
- Where no legislation exists, obtain information from suppliers of oils, filters, batteries, fuels, antifreeze, cleaning agents, etc., with regard to their effect on man and nature and how to safely store, use and dispose of these substances. Agricultural consultants will, in many cases, be able to help you as well.

### HELPFUL HINTS

1. Avoid filling tanks using cans or inappropriate pressurized fuel delivery systems which may cause considerable spillage.
2. In general, avoid skin contact with all fuels, oils, acids, solvents, etc. Most of them contain substances which may be harmful to your health.
3. Modern oils contain additives. Do not burn contaminated fuels and or waste oils in ordinary heating systems.
4. Avoid spillage when draining off used engine coolant mixtures, engine, gearbox and hydraulic oils, brake fluids, etc. Do not mix drained brake fluids or fuels with lubricants. Store them safely until they can be disposed of in a proper way to comply with local legislation and available resources.
5. Modern coolant mixtures, i.e. antifreeze and other additives, should be replaced every two years. They should not be allowed to get into the soil but should be collected and disposed of safely.
6. Do not open the air-conditioning system yourself. It contains gases which should not be released into the atmosphere. Your dealer or air conditioning specialist has a special extractor for this purpose and will have to recharge the system properly.
7. Repair any leaks or defects in the engine cooling or hydraulic system immediately.
8. Do not increase the pressure in a pressurized circuit, as this may lead to a component failure.
9. Protect hoses during welding as penetrating weld splatter may burn a hole or weaken them, allowing the loss of oils, coolant, etc.

# SECTION 1

## GENERAL INFORMATION

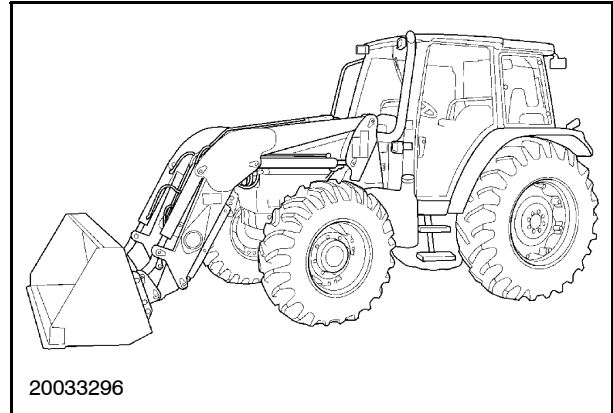
The 52LB loader is designed to be used with the TL80, TL90 and TL100 tractors.

The loader requires only one tool to mount to the tractor or dismount from the tractor. A ratchet or breaker bar and a 1-1/2" socket are required to install or remove the bolts retaining the loader towers to the mounts. A torque wrench is necessary for proper tightening of the bolts during mounting. The loader is equipped with two self-contained park stands for supporting the loader during and after dismounting.

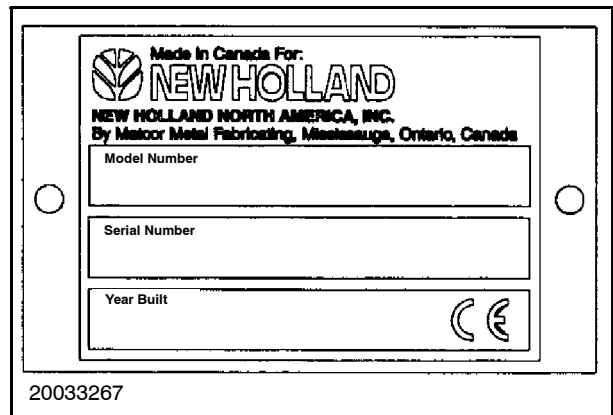
Several buckets and attachments are available to make this loader a multi-purpose attachment. As the capacities of the buckets have been matched to the tractor size, the operator can choose the bucket best suited for the tractor, as well as the task. Bucket sizes and recommendations are listed in the "Specifications" section.

A serial number plate is attached to the loader arm. This plate contains important information regarding your loader. For your convenience, have your dealer record this information in the space provided on the "To The Owner" page in the front of this manual.

All data supplied in this book is subject to production variations. Dimensions and weights are approximate only, and the illustrations do not necessarily depict tractors or loaders in standard condition. For specific information about any tractor or loader, please consult your dealer.

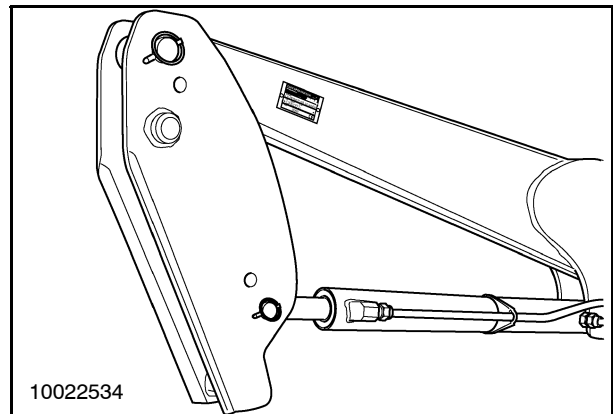


1



2

### Serial Number Plate Location





3

## TORQUE SPECIFICATIONS - DECIMAL 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 graphities, Molydisulfide greases, or other extreme pressure lubricants are used.

Grade 5 Bolts, Nuts, and Studs		
		
Size	Pound-inches	Newton metres
1/4 inch	108 to 132	12 to 15
5/16 inch	204 to 252	23 to 28
3/8 inch	420 to 504	48 to 57
Size	Pound-Feet	Newton metres
7/16	54 to 64	73 to 87
1/2	80 to 96	109 to 130
9/16	110 to 132	149 to 179
5/8	150 to 180	203 to 244
3/4	270 to 324	366 to 439
7/8	400 to 480	542 to 651
1.0 inch	580 to 696	787 to 944
1-1/8 inch	800 to 880	1085 to 1193
1-1/4 inch	1120 to 1240	1519 to 1681
1-3/8 inch	1460 to 1680	1980 to 2278
1-1/2 inch	1940 to 2200	2631 to 2983


Grade 8 Bolts, Nuts, and Studs		
		
Size	Pound-inches	Newton metres
1/4 inch	144 to 180	16 to 20
5/16 inch	288 to 348	33 to 39
3/8 inch	540 to 648	61 to 73
Size	Pound-Feet	Newton metres
7/16	70 to 84	75 to 114
1/2	110 to 132	149 to 179
9/16	160 to 192	217 to 260
5/8	220 to 264	298 to 358
3/4	380 to 456	515 to 618
7/8	600 to 720	814 to 976
1.0 inch	900 to 1080	1220 to 1465
1-1/8 inch	1280 to 1440	1736 to 1953
1-1/4 inch	1820 to 2000	2468 to 2712
1-3/8 inch	2380 to 2720	3227 to 3688
1-1/2 inch	3160 to 3560	4285 to 4827


**NOTE:** Use thick nuts with Grade 8 bolts.

## TORQUE SPECIFICATIONS - METRIC HARDWARE

Use the following torques when specifications 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 is used.

<b>Grade 8.8 Bolts, Nuts, and Studs</b>		
		
Size	Pound-inches	Newton metres
M4	24 to 36	3 to 4
M5	60 to 72	7 to 8
M6	96 to 108	11 to 12
M8	228 to 276	26 to 31
M10	456 to 540	52 to 61
Size	Pound-Feet	Newton metres
M12	66 to 79	90 to 107
M14	106 to 127	144 to 172
M16	160 to 200	217 to 271
M20	320 to 380	434 to 515
M24	500 to 600	675 to 815
M30	920 to 1100	1250 to 1500
M36	1600 to 1950	2175 to 2600

<b>Grade 10.9 Bolts, Nuts, and Studs</b>		
		
Size	Pound-inches	Newton metres
M4	36 to 48	4 to 5
M5	84 to 96	9 to 11
M6	132 to 156	15 to 18
M8	324 to 384	37 to 43
Size	Pound-Feet	Newton metres
M10	54 to 64	73 to 87
M12	93 to 112	125 to 150
M14	149 to 179	200 to 245
M16	230 to 280	310 to 380
M20	450 to 540	610 to 730
M24	780 to 940	1050 to 1275
M30	1470 to 1770	2000 to 2400
M36	2580 to 3090	3500 to 4200

### Grade 12.9 Bolts, Nuts, and Studs



Usually the torques values specified for grade 10.9 fasteners can be used satisfactorily on grade 12.9 fasteners.

## TORQUE SPECIFICATIONS - STEEL HYDRAULIC FITTINGS

Nom. SAE Dash Size	Tube OD	Thread Size	Pound-Inches	Newton metres	Thread Size	Pound-Inches	Newton metres
<b>O-ring Face Seal End</b>					<b>O-ring Boss End Fitting or Lock Nut</b>		
-4	1/4 inch 6.4 mm	9/16-18	120 to 144	14 to 16	7/16-20	204 to 240	23 to 27
-6	3/8 inch 9.5 mm	11/16-16	216 to 240	24 to 27	9/16-18	300 to 360	34 to 41
-8	1/2 inch 12.7 mm	13/16-16	384 to 480	43 to 54	3/4-16	540 to 600	61 to 68
					Thread Size	Pound-Inches	Newton metres
-10	5/8 inch 15.9 mm	1-14	552 to 672	62 to 76	7/8-14	35 to 40	47 to 54
Nom. SAE Dash Size	Tube OD	Thread Size	Pound-Foot	Newton metres	1-1/16-12	60 to 70	81 to 95
					1-3/16-12	70 to 80	95 to 109
-12	3/4 inch 19.0 mm	1-3/16-12	65 to 70	90 to 95	1-5/16-12	80 to 90	108 to 122
-14	7/8 inch 22.2 mm	1-3/16-12	65 to 70	90 to 95	1-5/8-12	95 to 115	129 to 156
-16	1.0 inch 25.4 mm	1-7/16-12	92 to 100	125 to 135	1-7/8-12	120 to 140	163 to 190
-20	1-1/4 inch 31.8 mm	1-11/16-12	125 to 140	170 to 190			
-24	1-1/2 inch 38.1 mm	2-12	150 to 165	200 to 225			

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