

LX192 MSL Loader for MX Magnum Tractors

2WD, MFD, and Suspended MFD Axle
MX180, MX200, MX210, MX220, MX230,
MX240, MX255, MX270 & MX285

Operator's Manual

87026370



TO THE OWNER

This manual contains information concerning the adjustment and maintenance of your Case IH Model LX192 Mechanical Self Leveling (MSL) 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 MX180, MX200, MX210, MX220, MX230, MX240, MX255, MX270 & MX285 tractors. It is intended to load and move materials with a variety of buckets and attachments.

Your Case IH 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 factory-trained service technicians will be glad to answer any questions that may arise regarding the operation of your loader.

Your Case IH dealer carries a complete line of genuine Case IH 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 product identification 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 product identification numbers of your loader.

Model _____ Tractor Model _____

Product Identification Number _____ Tractor Product Identification 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

Case IH 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 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 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 tractor 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, loader, or attachment during transport or operation.
3. NEVER allow anyone to get under the loader bucket or attachment or to reach through the lift arms or attachment when the loader 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 dismounted loaders on park stands are on a hard level surface with a bucket or similar heavy attachment mounted (bale spear or pallet fork alone do not provide enough weight) to prevent the parked loader from falling and injuring someone or causing damage.
6. Do not repair, remove or replace any parts of the loader while in the dismounted, 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 all 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 a 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 during transport.
9. When parked or during servicing of the loader, lower the bucket or attachment to the ground, stop tractor engine, set park brake and remove the key from the key switch. Take special care to park or store attachments with sharp points or edges in a safe manner.
10. Do not operate loader controls unless properly seated in operator's seat.
11. **NEVER** attempt to handle large, heavy objects such as large round or rectangle bales, logs or oil drums unless 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 loader attachment
- never lift the load higher than necessary to clear the ground while moving
- ballast rear of tractor to compensate for weight of 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 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 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 at 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.

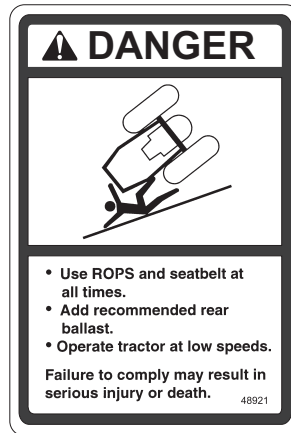
SAFETY DECALS

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

Keep all safety decals legible. If they become damaged or illegible, obtain replacements from your authorized dealer. Decal replacement part numbers are listed with each decal.



④ DANGER Decal
Part No. 8653639
Location: Left Upright



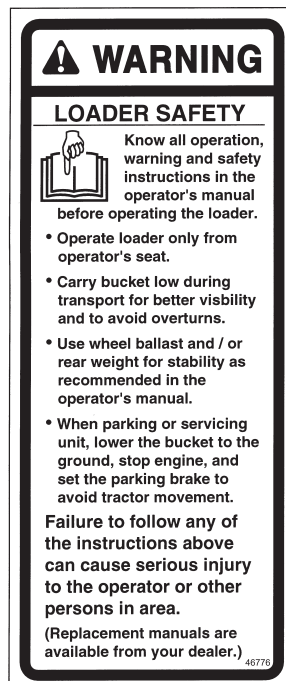
⑥ DANGER Decal
Part No. SML48921
Location: Left Upright



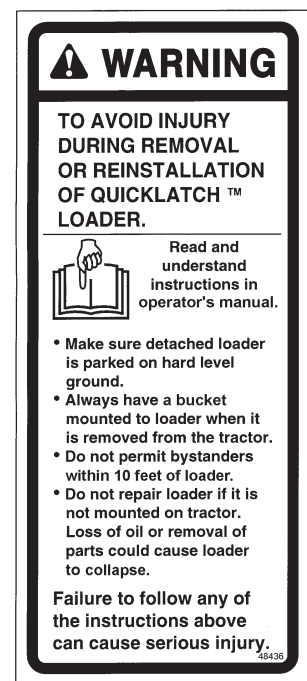
③ DANGER Decal
Part No. 86581705
Location: Left and right boom



⑤ WARNING Decal
Part No. SML46775
Location: Left Upright



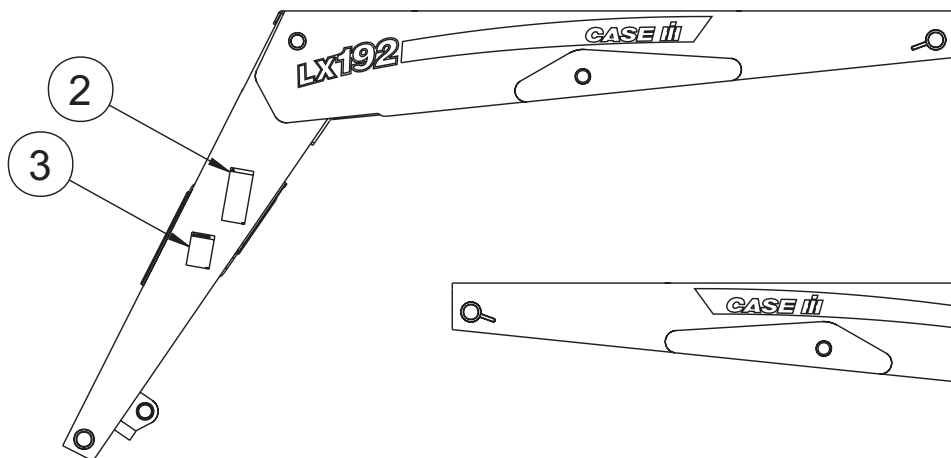
① WARNING Decal
Part No. 86581703
Location: Left Upright



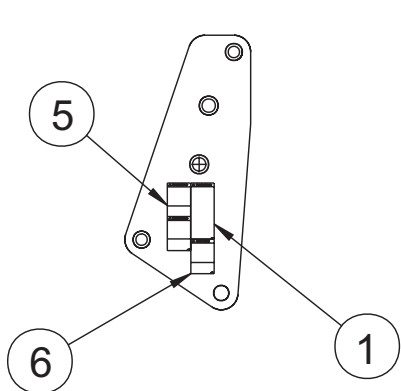
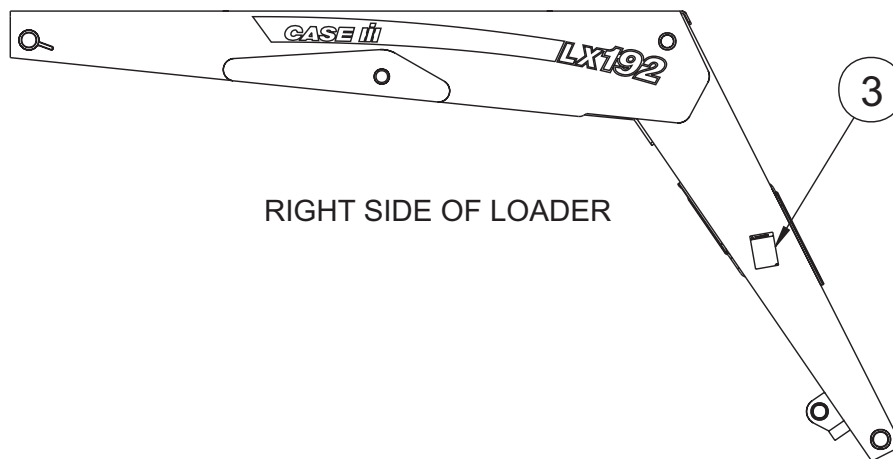
② WARNING Decal
Part No. 86583563
Location: Right Upright

SAFETY DECAL LOCATIONS

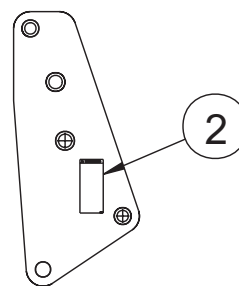
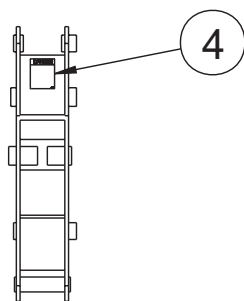
LEFT SIDE OF LOADER



RIGHT SIDE OF LOADER



LEFT SIDE OF LOADER



RIGHT SIDE OF LOADER

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.

INTERNATIONAL SYMBOLS

As a guide to the operation of your tractor, various universal symbols have been utilized on the instruments, controls, switches, and fuse box. The symbols are shown below with an indication of their meaning.

	Thermostart starting aid		Radio		P.T.O.		Position Control
	Alternator charge		Keep alive memory		Transmission in neutral		Draft Control
	Fuel Level		Turn signals		Creeper gears		Accessory socket
	Automatic Fuel shut-off		Turn signals -one trailer		Slow or low setting		Implement socket
	Engine speed (rev/min x 100)		Turn signals -two trailers		Fast or high setting		%age slip
	Hours recorded		Front wind-screen wash/wipe		Ground speed		Hitch raise (rear)
	Engine oil pressure		Rear wind-screen wash/wipe		Differential lock		Hitch lower (rear)
	Engine coolant temperature		Heater temperature control		Rear axle oil temperature		Hitch height limit (rear)
	Coolant level		Heater fan		Transmission oil pressure		Hitch height limit (front)
	Tractor lights		Air conditioner		FWD engaged		Hitch disabled
	Headlamp main beam		Air filter blocked		FWD disengaged		Hydraulic and transmission filters
	Headlamp dipped beam		Parking brake		Warning!		Remote valve extend
	Work lamps		Brake fluid level		Hazard warning lights		Remote valve retract
	Stop lamps		Trailer brake		Variable control		Remote valve float
	Horn		Roof beacon		Pressurized! Open carefully		Malfunction See Operator's Manual
			Warning! Corrosive substance				Malfunction (alternative symbol) See Operator's Manual

SECTION 1

GENERAL INFORMATION

The LX192 MSL loader is designed to be used with Case IH Magnum series tractor models MX180, MX200, MX220, MX230, MX240, MX255, MX270, and MX285 with 2WD, MFD, and Suspended MFD axles.

The loader does not require any tools to mount to or dismount from the tractor, although a shot-filled mallet is recommended to seat attaching pins. The loader is equipped with two self-contained park stands for supporting the loader with an attached bucket during and after dismounting.

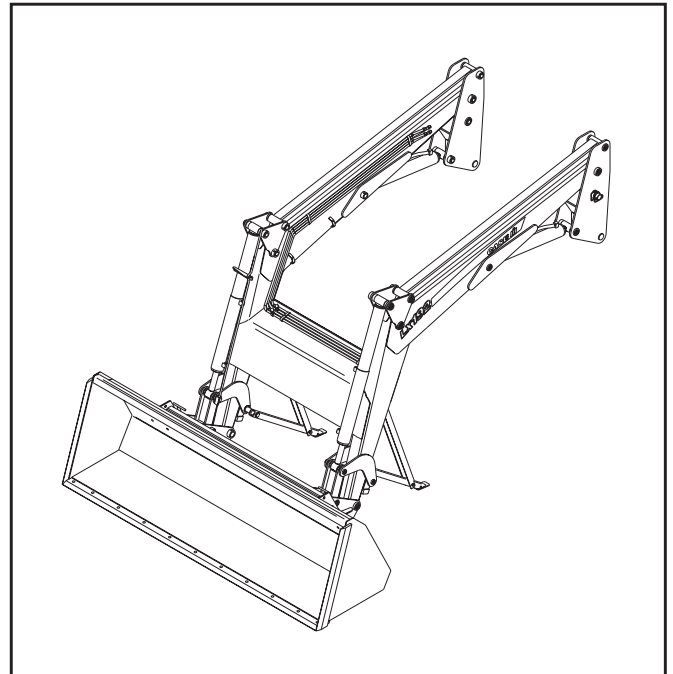
Mounting brackets and loader can be installed onto tractor using tools ordinarily available, including a hoist capable of lifting and supporting the loader for initial mounting, additional tractor hydraulic fluid, a 20mm-2.50 metric thread tap, standard and metric wrenches, and a torque wrench.

Several attachments are available to make this a multi-purpose loader, including a 108" heavy duty material bucket, grapple fork, pallet fork, and bale spear.

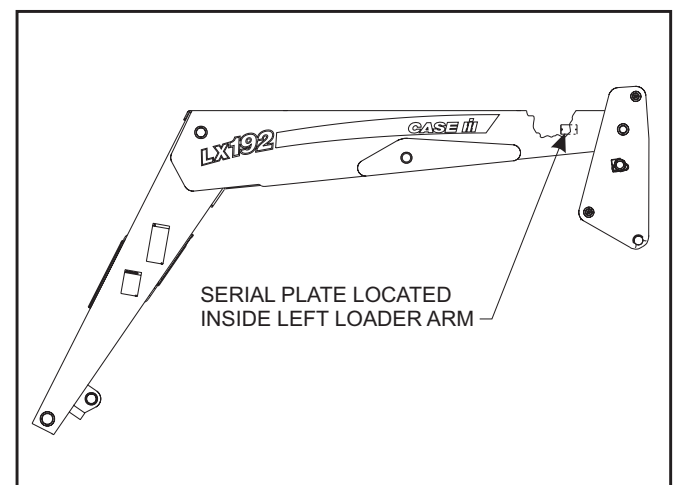
A serial plate is attached to inside of left upper boom arm near left upright. This plate contains important information regarding your loader. For your convenience, have your dealer record this information in spaces provided in the "To The Owner" section on page 0-1 of this manual.

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

Serial Plate Location









CASE CORPORATION Made In U.S.A. RACINE, WI 53404 U.S.A.	
Component / Attachment	
THIS IS NOT A PIN (PRODUCT IDENTIFICATION NUMBER) PLATE	
Model / Number	
Serial Number	



GENERAL TORQUE SPECIFICATIONS

Use the Following Torques When Special Torques Are Not Given

AMERICAN STANDARD CAP SCREWS									METRIC CAP SCREWS								
SAE Grade	5				8				Metric Class	8.8				10.9			
Typical Grade ID Markings on Head									Typical Grade ID Markings on Head	 				 			
Cap Screw	TORQUE				TORQUE				Cap Screw	TORQUE				TORQUE			
Size	FT-LBS		N-m		FT-LBS		N-m		Size	FT-LBS		N-m		FT-LBS		N-m	
Inches	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	Millimeters	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
1/4-20	6.25	7.25	8.5	10	8.25	9.5	11	13	M6 x 1.00	6	8	8	11	9	11	12	15
1/4-28	8	9	11	12	10.5	12	14	16	M8 x 1.25	16	20	21.5	27	23	27	31	36.5
5/16-18	14	15	19	20	18.5	20	25	27	M10 x 1.50	29	35	39	47	42	52	57	70
5/16-24	17.5	19	23	26	23	25	31	34	M12 x 1.75	52	62	70	84	75	91	102	123
3/8-16	26	28	35	38	35	37	47.5	50	M14 x 2.00	85	103	115	139	120	146	163	198
3/8-24	31	34	42	46	41	45	55.5	61	M16 x 2.50	130	158	176	214	176	216	238	293
7/16-14	41	45	55.5	61	55	60	74.5	81	M18 x 2.50	172	210	233	284	240	294	325	398
7/16-20	51	55	69	74.5	68	75	92	102	M20 x 2.50	274	301	335	408	343	426	465	577
1/2-13	65	72	88	97.5	86	96	116	130	M22 x 2.50	332	404	450	547	472	576	639	780
1/2-20	76	84	103	114	102	112	138	152	M24 x 3.00	423	517	573	700	599	732	812	992
9/16-12	95	105	129	142	127	140	172	190	M27 x 3.00	637	779	863	1055	898	1098	1217	1488
9/16-18	111	123	150	167	148	164	200	222	M30 x 3.00	872	1066	1181	1444	1224	1496	1658	2027
5/8-11	126	139	171	188	168	185	228	251	NOTE: These values apply to fasteners as received from the supplier, dry or when lubricated with normal engine oil. They do not apply if special graphite or molydisulphide greases or other extreme pressure lubricants are used.								
5/8-18	152	168	206	228	203	224	275	304									
3/4-10	238	262	322	355	318	350	431	474									
3/4-16	274	305	371	409	365	402	495	544									
7/8-9	350	386	474	523	466	515	631	698									
7/8-14	407	448	551	607	543	597	736	809									
1-8	537	592	728	802	716	790	970	1070									
1-14	670	740	908	1003	894	987	1211	1337									

Torque Specifications for 37° JIC Fittings

Size	Thread Size	Assembly Torque		Tube Connection F.F.F.T.	Swivel Nut or Hose Connection F.F.F.T.
		in.·lb.	ft.·lb.		
-4	7/16-20	140 ± 10	12 ± 1	2	2
-5	1/2-20	180 ± 15	15 ± 1	2	2
-6	9/16-18	250 ± 15	21 ± 1	1 1/2	1 1/4
-8	3/4-16	550 ± 25	45 ± 5	1 1/2	1
-12	1 1/16-12	1000 ± 50	85 ± 5	1 1/4	1
-16	1 5/16-12	1450 ± 50	120 ± 5	1	1
-20	1 5/8-12	2000 ± 100	170 ± 10	1	1
-24	1 7/8-12	2400 ± 150	200 ± 15	1	1
-32	2 1/2-12	3200 ± 200	270 ± 20	1	1

Torque Specifications for SAE O-Ring Fittings

Size	Swivel Nut or Hose	Assembly Torque		F.F.F.T.
		in.·lb.	ft.·lb.	
2	5/16-24	90 ± 5	7.5 ± 0.5	1 ± .25
3	3/8-24	170 ± 10	14 ± 1	1 ± .25
4	7/16-20	220 ± 15	18 ± 1	1 ± .25
5	1/2-20	260 ± 15	22 ± 1	1 ± .25
6	9/16-18	320 ± 20	27 ± 2	1.5 ± .25
8	3/4-16	570 ± 25	48 ± 2	1.5 ± .25
10	7/8-14	1060 ± 50	90 ± 5	1.5 ± .25
12	1 1/16-12	1300 ± 50	110 ± 5	1.5 ± .25
14	1 3/16-12	1750 ± 75	145 ± 6	1.5 ± .25
16	1 5/16-12	1920 ± 125	160 ± 6	1.5 ± .25
20	1 5/8-12	2700 ± 150	225 ± 12	1.5 ± .25
24	1 7/8-12	3000 ± 150	250 ± 12	1.5 ± .25
32	2 1/2-12	3900 ± 200	325 ± 15	1.5 ± .25

INSTALLATION INSTRUCTIONS

LOADER MOUNTING KIT CASE IH LX192 MSL LOADER TO CASE IH MX MAGNUM TRACTORS

MODEL	MFD	Suspended MFD Axle	2WD
MX180	X		X
MX200	X		X
MX210	X	X	X
MX220	X		X
MX230	X	X	X
MX240	X		X
MX255	X	X	X
MX270	X		X
MX285	X	X	X

TRACTOR & LOADER GENERAL INFORMATION

Mounting kit and loader can be installed using tools ordinarily available, including a hoist capable of lifting and supporting the loader for initial mounting, additional tractor hydraulic fluid, a 20mm-2.50 metric thread tap, standard and metric wrenches, and a torque wrench. A shot-filled mallet is recommended to seat attaching pins when mounting loader.

Hose and plumbing kit 716793046 (2-7145) is required to plumb loader to tractor and contains all hoses, sleeves, fittings and straps required to plumb loader to tractor rear hydraulics. It must be installed as part of initial loader mounting, but after loader mounting brackets have been installed. Instructions are provided later in this operator's manual to plumb hose and plumbing kit.

If optional grille guard 87412646 (2-7184) is to be installed, install it before mounting loader. Refer to grille guard instructions provided later in this operator's manual to install grille guard.

Check front tire and fender clearances once loader is installed and adjust tire track width as necessary.

MFD tractors are equipped with front axle oscillation stops that must be used with loader installation.

Tractor steering stops may need to be adjusted to provide a minimum of 3/4 inch clearance between front tires and any part of loader, fender, or tractor hood on full left and right turn with front axle fully oscillated. Be sure lift cylinders are fully retracted when checking tire and fender clearances. Refer to tractor operator's manual for steering stop adjustment.

PREPARING TRACTOR FOR LOADER MOUNTING BRACKET INSTALLATION

Shut off engine and engage brakes during installation.

If tractor is equipped with front weights, remove weights. If grille guard is to be installed, high-capacity front weight bracket (wrap-around style) must be removed.

If tractor is equipped with auxiliary step on left side in front of cab, it must be removed. DO NOT reuse hardware for loader mount installation.

Remove negative ground terminal bushing and attaching hardware from right side of tractor. DO NOT reuse hardware for loader mount installation.

Remove plastic cover panels from each side of tractor, which cover threaded holes required to fasten loader mounting brackets to tractor.

Remove plastic plugs and use a 20mm-2.5 thread tap to clean out threads of holes in sides of tractor, which will be used for loader mountings (see figure 1).

INSTALLING LOADER MID MOUNTING BRACKETS (Figures 1 & 2)

NOTE: *Install all hardware loosely (unless noted otherwise) until mounting kit is completely assembled to facilitate assembly and proper alignment. Unless specified otherwise, tighten all hardware to torques specified in tables on previous pages when assembly is complete.*

IMPORTANT: *Install spring washers with serrated surface facing bolt head.*

1. Lift and position left mid mounting bracket (1) to left side of tractor. Fasten left mid mounting bracket (1) to tractor with seven 20mm x 75mm cap screws (4) and disc spring washers (5).

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perfect and complete manual in
the world immediately.

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