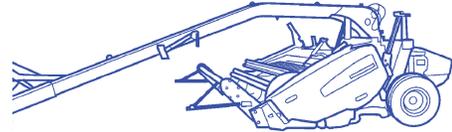


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NEW HOLLAND H7150

SERVICE MANUAL



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H7150

SERVICE MANUAL

CONTENTS

- SECTION 00 - GENERAL INFORMATION**
- SECTION 35 - HYDRAULIC SYSTEM**
- SECTION 39 - FRAME AND TONGUE**
- SECTION 44 - AXLES AND WHEELS**
- SECTION 55 - ELECTRICAL SYSTEM**
- SECTION 90 - SAFETY DECALS**

The sections used through out all New Holland product Service manuals may not be used for each product. Each Service manual will be made up of one or several books. Each book will be labeled as to which sections are in the overall Service manual and which sections are in each book.

The sections listed above are the sections utilized for the H7150.

SECTION 00 - GENERAL INFORMATION

Chapter 1 - General Information

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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.



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.

M1169



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.

M1170



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.

M1171

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

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.

- 1. Always disengage the PTO, lock the tractor brakes, and shut off the tractor engine before:**
 - Leaving the tractor seat.
 - Lubricating.
 - Cleaning or unplugging any part of the machine.
 - Adjusting the machine.
- 2. Always lower the header to the ground or engage the transport stops when parking.**
- 3. Always use the header transport stops and spring-loaded tongue safety lock when transporting the machine.**
- 4. Never work under a raised header unless it is securely locked with the header transport stops.**
- 5. Always block the wheels before working on or under the machine.**
- 6. Do not start the machine until you know that everyone is clear of the machine and have made sure no tools are lying on it.**
- 7. Keep all shields in place. Never work around the machine in loose clothing that could catch in a moving part.**
- 8. Do not modify any shields or operate the machine with any shields removed.**
- 9. Always use adequate lights and safety warning devices when transporting the machine on public roads or after dark. Check with your local law enforcement agencies for specific requirements.**
- 10. Limit towing speeds to 32 km/hr (20 mph) maximum.**
- 11. Never stand behind the trail frame while it is running.**
- 12. Operate the machine only at the PTO speed for which it is designed. Attach a 540 rpm implement only to a 540 rpm PTO and a 1000 rpm implement to a 1000 rpm PTO.**
- 13. Long exposure to loud noise can damage your hearing. Wear a suitable hearing protection device such as earmuffs or ear plugs if you are exposed to uncomfortable noise levels.**
- 14. Be sure no one is standing near or touching the machine before raising or lowering the header.**
- 15. Use the safety chain when transporting the unit on a public road.**
- 16. DO NOT weld on wheels. Welding on wheels may cause high stress and a wheel failure.**
- 17. DO NOT weld on wheels with a mounted tire. Welding on wheels with a mounted tire may cause the tire to burst, causing serious injury or death.**

ECOLOGY AND THE ENVIRONMENT

Soil, air, and water are vital factors of agriculture and life in general. When legislation does not yet rule on 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.

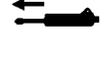
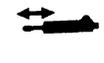
HELPFUL HINTS

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.

UNIVERSAL 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 | KAM | Keep alive memory | N | 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 |

LUBRICATION

Adequate lubrication and maintenance on a regular schedule is vital to maintaining your equipment. To ensure long service and efficient operation, follow the lubrication and maintenance schedules outlined in this manual. The use of proper fuels, oils, grease and filters, as well as keeping the systems clean, will also extend machine and component life.

IMPORTANT: Always use genuine **New Holland** replacement parts, oils and filters to ensure proper operation, filtration of engine and hydraulic systems. See your **New Holland** dealer for additional oil quantities.

GENERAL INFORMATION

Regular lubrication is the best insurance against delays and repairs. Proper lubrication will extend machine life. Refer to the following charts for lubricants and service intervals.

IMPORTANT: Failure to complete the required maintenance at the recommended intervals can cause unnecessary downtime.

The intervals listed in the Lubrication Chart are guidelines to be used when operating in normal conditions. Adjust the intervals for operating in adverse environmental and working conditions. The intervals should be shortened for sandy, dusty and extremely hot operating conditions.

WARNING

All Service, Lubrication and Adjustment procedures in this manual should be performed with the machine on a FIRM level surface, with all attachments down on the surface, engine off and key removed, unless otherwise specified. Failure to comply could result in death or serious injury.

M1404

WARNING

Some illustrations in this manual show shields opened or removed to display areas being serviced. Replace all shields before operating the machine. Failure to comply could result in death or serious injury.

M1213

Always clean the area around dipsticks, fill caps, and check plugs when checking fluid levels. Failure to clean these areas may allow contamination to enter the system. Drain, flush and refill the system anytime you suspect it is contaminated.

Grease Fittings

Wipe dirt from fittings before greasing.

Pump fresh grease into fitting to adequately lubricate the component and force out any contamination from the grease passage.

Wipe off excess grease.

Use a grease gun containing clean high grade of multipurpose grease.

Chains

Stop all drives before lubricating chains.

SECTION 00 - GENERAL INFORMATION - CHAPTER 1

RECOMMENDED LUBRICANTS AND COOLANTS

| Lubricant | Type and Description | Container Size |
|----------------------|---|-----------------------|
| Engine Oil | NEW HOLLAND AMBRA MASTERGOLD HSP 10W30 | 1QT / .946L |
| | | 1G / 3.785L |
| | | 2.5G / 9.46L |
| | | 5G / 18.93L |
| Hydraulic Oil | NEW HOLLAND AMBRA MULTI G 134 | 1QT / .946L |
| | | 1G / 3.785L |
| | | 2.5G / 9.46L |
| | | 5G / 18.93L |
| Gear Oil | NEW HOLLAND AMBRA HYPOIDE 90 GEAR LUBE | 1QT / .946L |
| | | 2.5G / 9.46L |
| | | 16G / 60.6L |
| | NEW HOLLAND AMBRA HYPOIDE SSL GEAR LUBE | 1QT / .946L |
| Grease | NEW HOLLAND AMBRA GR-9 MULTI-PURPOSE GREASE | TUBE - 14 OZ. |
| | NEW HOLLAND AMBRA HI-TEMP GREASE | TUBE - 14 OZ. |
| | NEW HOLLAND AMBRA GR 1000 SYNTHETIC GREASE | TUBE - 14 OZ. |

LUBRICATION AND SERVICE POINTS

Lubrication points and service points are shown on the following pages along with the interval of service to be done. Grease points are indicated by a grease gun symbol with the hour interval following. Under adverse conditions, shorten the lubrication intervals.

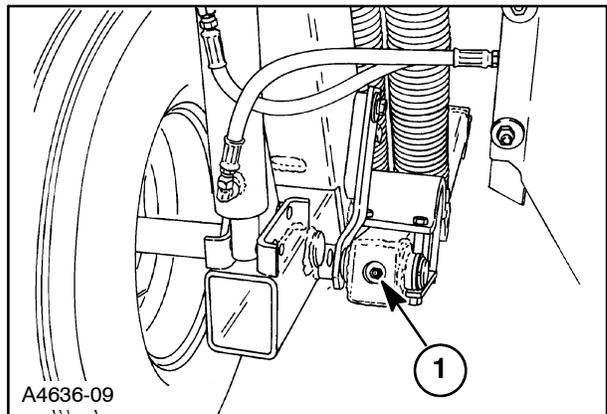


Some illustrations in this manual show shields opened or removed to display areas being serviced. Replace all shields before operating the machine. Failure to comply could result in death or serious injury.

M1213

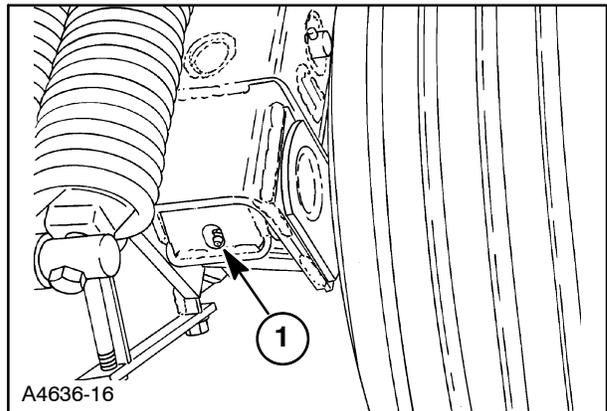
EVERY 10 HOURS OF OPERATION OR DAILY

Grease the header lift arms, 1.
(1 fitting right-hand side, 1 fitting left-hand side)



1

Grease the wheel arms, 1.
(1 fitting right-hand side, 1 fitting left-hand side)



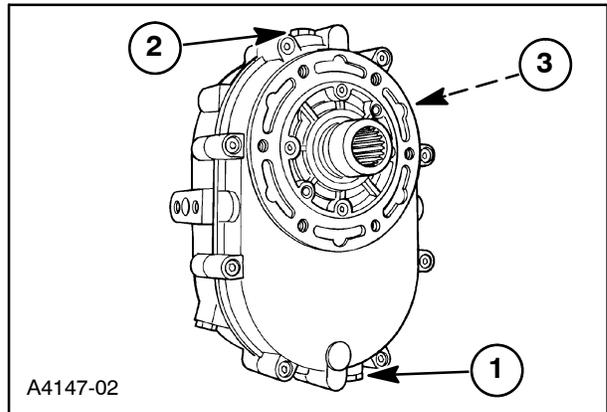
2

AFTER THE FIRST 50 HOURS OF OPERATION

Change the Oil in the Pump Step-up Gearbox

Place a pan under the gearbox. Remove drain plug, 1, from the bottom of the gearbox. Remove the filler plug, 2, so the oil will drain.

The oil is checked using dipstick, 3. Add oil through plug, 2, until the oil is at the proper level. Use only API GL5 80W90 oil to refill the gearbox.



A4147-02

3

EVERY 50 HOURS OF OPERATION OR WEEKLY

Check the Oil in the Pump Step-up Gearbox

The oil is checked using dipstick, 3. Add oil through plug, 2, until the oil is at the proper level. Use only API GL5 80W90 oil to refill the gearbox.

Oil all hinges and latches.

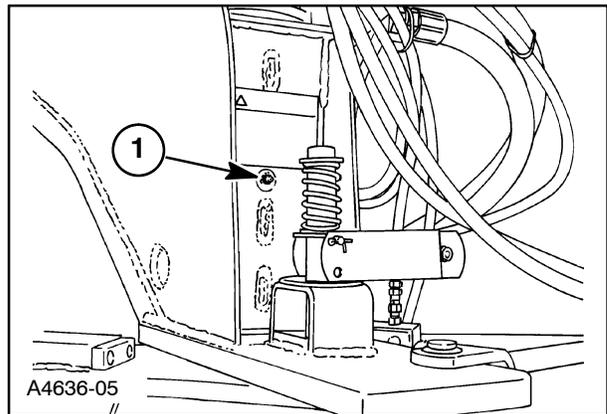
Grease the tongue pivot, 1. (One fitting).

Lubricate the tractor PTO shaft with general purpose grease.

EVERY 100 HOURS OF OPERATION OR MONTHLY

Check Hydrostatic Reservoir Oil Level

IMPORTANT: Lower the header when checking the oil level in the hydrostatic reservoir. The top of the tongue must be level. Clean the area around the filler cap to prevent oil contamination.



A4636-05

4

CAUTION

Pressurized hydraulic system. Before you replace the hydraulic filter or service the hydraulic system, slowly loosen the hydraulic reservoir fill cap to relieve the air pressure. If you do not follow these instructions, you can be injured.

SA047

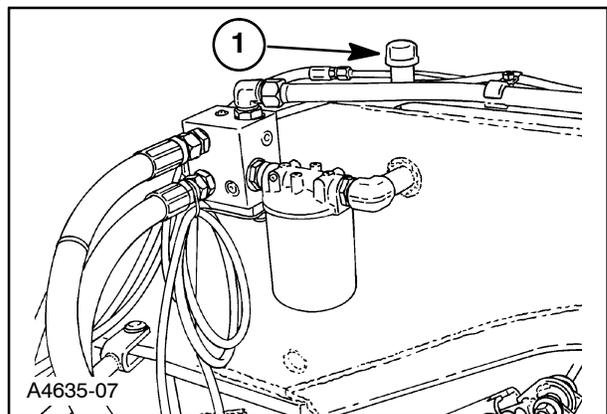
Raise or lower the jackstand to position the top surface of the tongue as level as possible.

Remove the filler cap/dipstick, 1. Replace it finger tight and remove it to check the oil level. The oil level should be between the two marks on the dipstick.

Capacity: 105 L (28 gal.)

Add hydraulic oil to maintain oil at the proper level. Replace the filler cap/dipstick.

IMPORTANT: Not all oils are compatible. Be sure to flush all oil from the hydrostatic/hydraulic system before replacing the fluid with a different type.



A4635-07

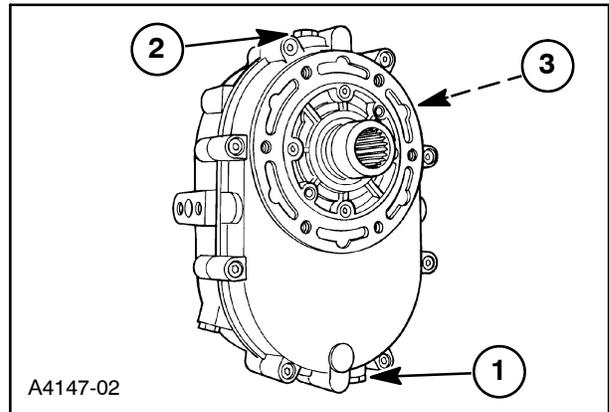
5

EVERY 500 HOURS OF OPERATION OR YEARLY

Change the Oil in the Pump Step-up Gearbox

Place a pan under the gearbox. Remove drain plug, 1, from the bottom of the gearbox. Remove the filler plug, 2, so the oil will drain.

The oil is checked using dipstick, 3. Add oil through plug, 2, until the oil is at the proper level. Use only New Holland Hypoide 90 or New Holland Hypoide SSL gear oil to refill the gearbox.

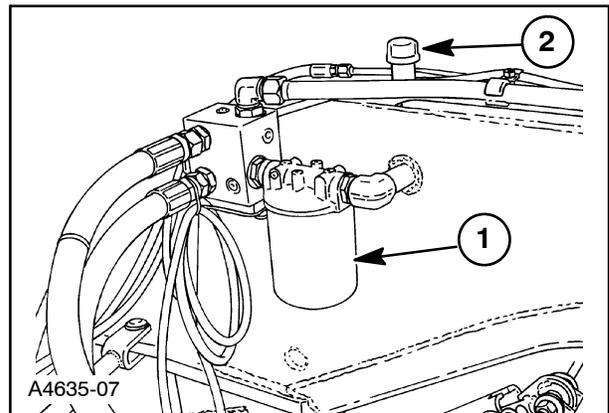


A4147-02

6

Drain Hydrostatic Reservoir and Replace Filter

The hydrostatic oil filter, 1, should be changed after the first 50 hours use to remove contaminants that were filtered out of the system. Then change the oil and oil filter after each 500 hours of use or yearly. Raise or lower the jackstand to position the top surface of the tongue as level as possible. Add hydraulic oil to the tongue reservoir until the oil level is between the two marks on the dipstick, 2. The reservoir holds approximately 105 L (28 gal.).



A4635-07

7

MINIMUM HARDWARE TIGHTENING TORQUES

IN NEWTON-METERS (FOOT POUNDS) FOR NORMAL ASSEMBLY APPLICATIONS

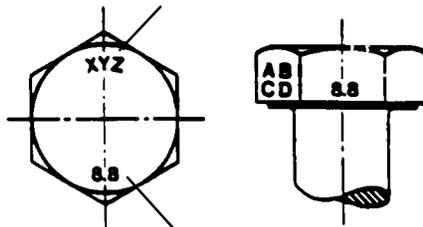
METRIC NON-FLANGED HARDWARE AND LOCKNUTS

| NOMINAL SIZE | CLASS 5.8 | | CLASS 8.8 | | CLASS 10.9 | | LOCKNUT CL.8 W/CL8.8 BOLT |
|--------------|-----------|---------------|-----------|---------------|------------|---------------|---------------------------|
| | UNPLATED | PLATED W/ZnCr | UNPLATED | PLATED W/ZnCr | UNPLATED | PLATED W/ZnCr | |
| M4 | 1.7 (15)* | 2.2 (19)* | 2.6 (23)* | 3.4 (30)* | 3.7 (33)* | 4.8 (42)* | 2.3 (20)* |
| M6 | 5.8 (51)* | 7.6 (67)* | 8.9 (79)* | 12 (102)* | 13 (115)* | 17 (150)* | 7.8 (69)* |
| M8 | 14 (124)* | 18 (159)* | 22 (195)* | 28 (248)* | 31 (274)* | 40 (354)* | 19 (169)* |
| M10 | 28 (21) | 36 (27) | 43 (32) | 56 (41) | 61 (45) | 79 (58) | 38 (28) |
| M12 | 49 (36) | 63 (46) | 75 (55) | 97 (72) | 107 (79) | 138 (102) | 66 (49) |
| M16 | 121 (89) | 158 (117) | 186 (137) | 240 (177) | 266 (196) | 344 (254) | 164 (121) |
| M20 | 237 (175) | 307 (226) | 375 (277) | 485 (358) | 519 (383) | 671 (495) | 330 (243) |
| M24 | 411 (303) | 531 (392) | 648 (478) | 839 (619) | 897 (662) | 1160 (855) | 572 (422) |

NOTE: Torque values shown with * are inch pounds.

IDENTIFICATION HEX CAP SCREW AND CARRIAGE BOLTS CLASSES 5.6 AND UP

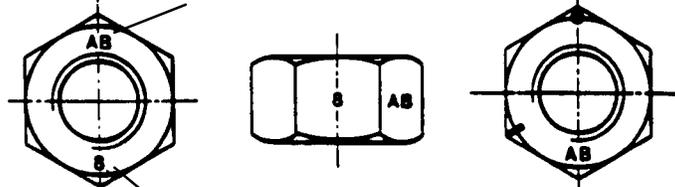
MANUFACTURER'S IDENTIFICATION



PROPERTY CLASS

HEX NUTS AND LOCKNUTS CLASSES 05 AND UP

MANUFACTURER'S IDENTIFICATION



PROPERTY CLASS

CLOCK MARKING

MINIMUM HARDWARE TIGHTENING TORQUES

IN NEWTON-METERS (FOOT POUNDS) FOR NORMAL ASSEMBLY APPLICATIONS

INCH NON-FLANGED HARDWARE AND LOCKNUTS

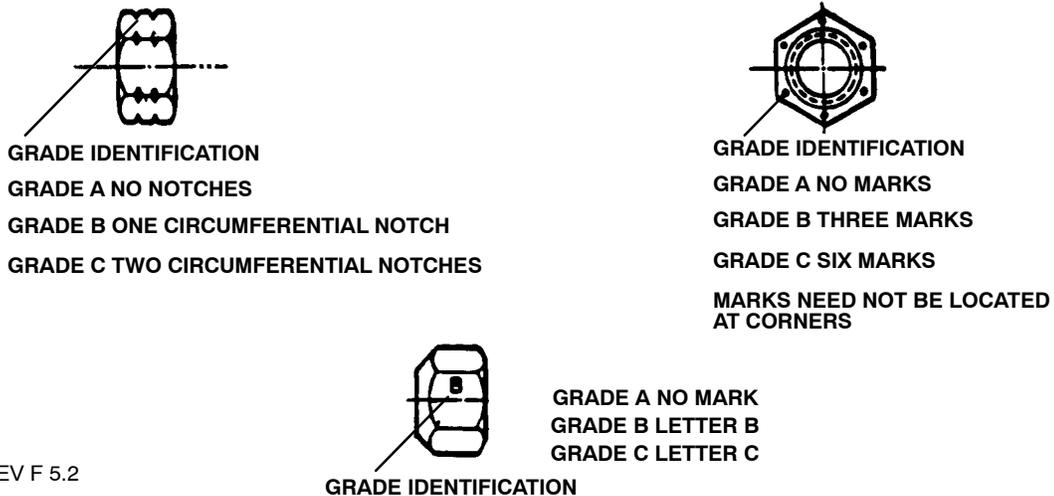
| NOMINAL SIZE | SAE GRADE 2 | | SAE GRADE 5 | | SAE GRADE 8 | | LOCKNUTS | | NOMINAL SIZE |
|--------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|-----------------|-----------------|--------------|
| | UNPLATED or PLATED SILVER | PLATED W/ZnCr GOLD | UNPLATED or PLATED SILVER | PLATED W/ZnCr GOLD | UNPLATED or PLATED SILVER | PLATED W/ZnCr GOLD | GR.B w/GR5 BOLT | GR.C w/GR8 BOLT | |
| 1/4 | 6.2 (55)* | 8.1 (72)* | 9.7 (86)* | 13 (112)* | 14 (121)* | 18 (157)* | 8.5 (75)* | 12.2 (109)* | 1/4 |
| 5/16 | 13 (115)* | 17 (149)* | 20 (178)* | 26 (229)* | 28 (250)* | 37 (324)* | 17.5 (155)* | 25 (220)* | 5/16 |
| 3/8 | 23 (17) | 30 (22) | 35 (26) | 46 (34) | 50 (37) | 65 (48) | 31 (23) | 44 (33) | 3/8 |
| 7/16 | 37 (27) | 47 (35) | 57 (42) | 73 (54) | 80 (59) | 104 (77) | 50 (37) | 71 (53) | 7/16 |
| 1/2 | 57 (42) | 73 (54) | 87 (64) | 113 (83) | 123 (91) | 159 (117) | 76 (56) | 108 (80) | 1/2 |
| 9/16 | 81 (60) | 104 (77) | 125 (92) | 163 (120) | 176 (130) | 229 (169) | 111 (82) | 156 (115) | 9/16 |
| 5/8 | 112 (83) | 145 (107) | 174 (128) | 224 (165) | 244 (180) | 316 (233) | 153 (113) | 215 (159) | 5/8 |
| 3/4 | 198 (146) | 256 (189) | 306 (226) | 397 (293) | 432 (319) | 560 (413) | 271 (200) | 383 (282) | 3/4 |
| 7/8 | 193 (142) | 248 (183) | 495 (365) | 641 (473) | 698 (515) | 904 (667) | 437 (323) | 617 (455) | 7/8 |
| 1 | 289 (213) | 373 (275) | 742 (547) | 960 (708) | 1048 (773) | 1356 (1000) | 654 (483) | 924 (681) | 1 |

NOTE: Torque values shown with * are inch pounds.

IDENTIFICATION CAP SCREWS AND CARRIAGE BOLTS



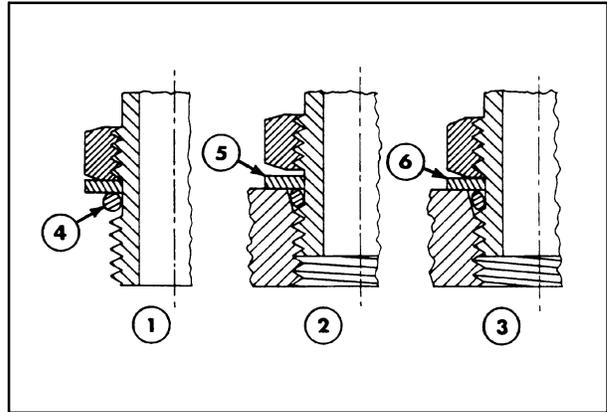
LOCKNUTS



INSTALLATION OF ADJUSTABLE FITTINGS IN STRAIGHT THREAD O RING BOSSES

1. Lubricate the O ring by coating it with a light oil or petroleum. Install the O ring in the groove adjacent to the metal backup washer which is assembled at the extreme end of the groove, 4.
2. Install the fitting into the SAE straight thread boss until the metal backup washer contacts the face of the boss, 5.

NOTE: Do not over tighten and distort the metal backup washer.



3. Position the fitting by turning out (counterclockwise) up to a maximum of one turn. Holding the pad of the fitting with a wrench, tighten the locknut and washer against the face of the boss, 6.

8

STANDARD TORQUE DATA FOR HYDRAULIC TUBES AND FITTINGS

| SIZE | TUBING OD | | THREAD SIZE | TUBE NUTS FOR 37° FLARED FITTINGS | | | | O RING BOSS PLUGS ADJUSTABLE FITTING LOCKNUTS, SWIVEL JIC - 37° SEATS | | | |
|------|-----------|-------|-------------|-----------------------------------|------|---------------|-------------|---|-------------|---------------|-------------|
| | | | | TORQUE | | TORQUE | | TORQUE | | TORQUE | |
| | | | | mm | In. | NEWTON METERS | FOOT POUNDS | NEWTON METERS | FOOT POUNDS | NEWTON METERS | FOOT POUNDS |
| | | | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | |
| 4 | 6.4 | 1/4 | 7/16-20 | 12 | 16 | 9 | 12 | 8 | 14 | 6 | 10 |
| 5 | 7.9 | 5/16 | 1/2-20 | 16 | 20 | 12 | 15 | 14 | 20 | 10 | 15 |
| 6 | 9.5 | 3/8 | 9/16-18 | 29 | 33 | 21 | 24 | 20 | 27 | 15 | 20 |
| 8 | 12.7 | 1/2 | 3/4-18 | 47 | 54 | 35 | 40 | 34 | 41 | 25 | 30 |
| 10 | 15.9 | 5/8 | 7/8-14 | 72 | 79 | 53 | 53 | 47 | 54 | 35 | 40 |
| 12 | 19.1 | 3/4 | 1-1/16-12 | 104 | 111 | 77 | 82 | 81 | 95 | 60 | 70 |
| 14 | 22.2 | 7/8 | 1-3/16-12 | 122 | 136 | 90 | 100 | 95 | 109 | 70 | 80 |
| 16 | 25.4 | 1 | 1-5/16-12 | 149 | 163 | 110 | 120 | 108 | 122 | 80 | 90 |
| 20 | 31.8 | 1-1/4 | 1-5/8-12 | 190 | 204 | 140 | 150 | 129 | 158 | 95 | 115 |
| 24 | 38.1 | 1-1/2 | 1-7/8-12 | 217 | 237 | 160 | 175 | 163 | 190 | 120 | 140 |
| 32 | 50.8 | 2 | 2-1/2-12 | 305 | 325 | 225 | 240 | 339 | 407 | 250 | 300 |

These torques are not recommended for tubes of 12.7 mm (1/2 in) OD and larger with wall thickness of 0.889 mm (0.035 in) or less. The torque is specified for 0.889 mm (0.035 in) wall tubes on each application individually.

solvent or Loctite cleaner and apply hydraulic sealant Loctite no. 569 to the 37° flare and the threads.

Install fitting and torque to specified torque, loosen fitting and retorque to specifications.

Before installing and torquing 37° flared fittings, clean the face of the flare and threads with a clean

PIPE THREAD FITTING TORQUE

Before installing and tightening pipe fittings, clean the threads with a clean solvent or Loctite cleaner and apply sealant Loctite no. 567 for all fittings including stainless steel or no. 565 for most metal fittings. For high filtration/zero contamination systems use no. 545.

| THREAD SIZE | TORQUE (MAXIMUM) |
|---------------|--------------------|
| 1/8 inch - 27 | 13 N·m (10 ft lbs) |
| 1/4 inch - 18 | 16 N·m (12 ft lbs) |
| 3/8 inch - 14 | 22 N·m (16 ft lbs) |
| 1/2 inch - 14 | 41 N·m (30 ft lbs) |
| 3/4 inch - 14 | 54 N·m (40 ft lbs) |

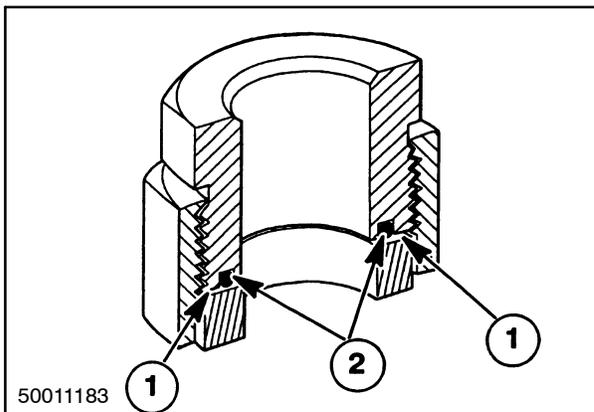
INSTALLATION OF ORFS (O RING FLAT FACED) FITTINGS

When installing ORFS fittings thoroughly clean both flat surfaces of the fitting, 1, and lubricate the O ring, 2, with light oil. Make sure both surfaces are aligned properly. Torque the fitting to specified torque listed throughout the service manual.

IMPORTANT: *If the fitting surfaces are not properly cleaned, the O ring will not seal properly. If the fitting surfaces are not properly aligned, the fittings may be damaged and will not seal properly.*

IMPORTANT: *Always use genuine factory replacement oils and filters to ensure proper lubrication and filtration of engine and hydraulic system oils.*

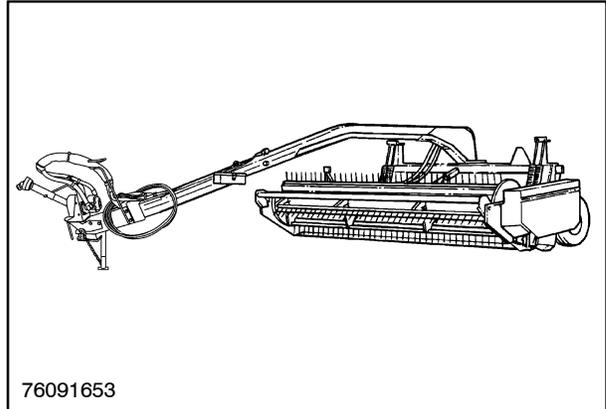
The use of proper oils, grease, and keeping the hydraulic system clean will extend machine and component life.



INTRODUCTION

The H7150 tongue and trail frame will accept Model HS Series headers and Model 2300 Series headers in 14 foot, 16 foot, or 18 foot widths. All 1995 production and older Model 2200 Series headers will not attach to the Model H7150.

The Model HS12 or 2322 12 foot headers are not designed for use on the Model H7150. The tire width of the H7150 is wider than the 12 foot cutting width.



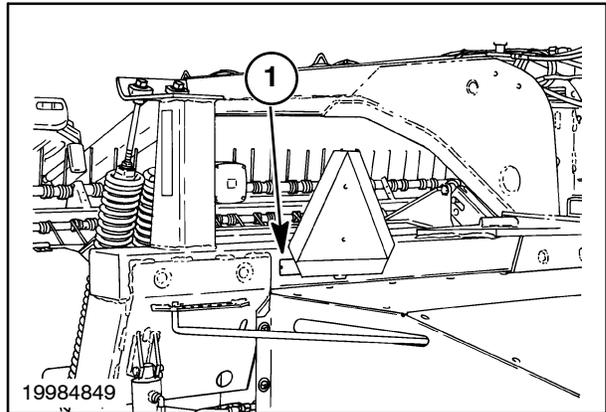
10

PRODUCT IDENTIFICATION NUMBER LOCATIONS

There are two product identification number locations on the pivot tongue frame.

FRAME PRODUCT IDENTIFICATION NUMBER

The product identification number for the frame is located at 1, on the left side of the frame, just above the windrow hood.

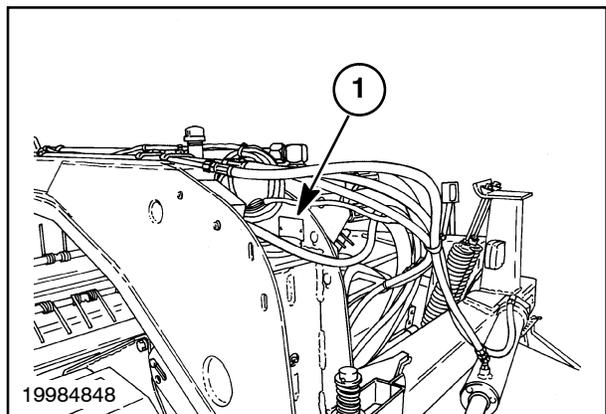


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TONGUE PRODUCT IDENTIFICATION NUMBER

The tongue product identification number is located at 1, right hand side rear of the tongue.

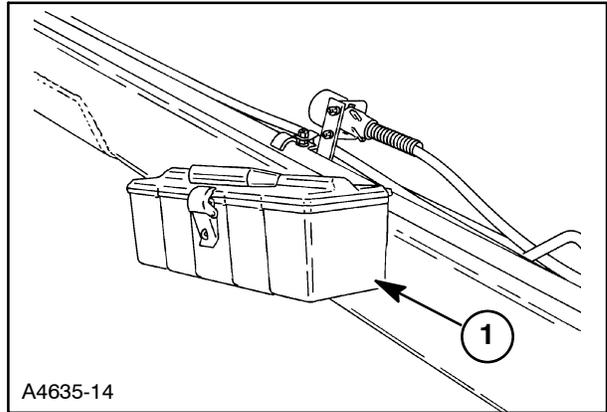
Give the model and product identification numbers of your trail frame when ordering parts. Always order genuine factory parts.



12

TOOLBOX

The unit has a toolbox, 1, for storage of guards, sections and hardware. The toolbox is located on the right hand side of the tongue.

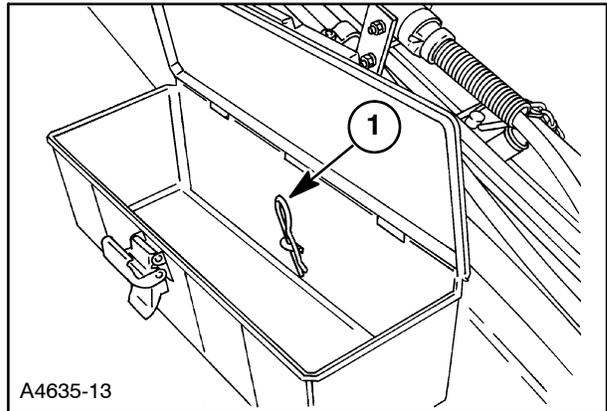


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The toolbox can be removed from the unit by removing hairpin cotter, 1, and tipping the toolbox up off the support bracket.

To reinstall the toolbox, position the lip of the toolbox over the top of the bracket welded to the tongue, and tip the toolbox down over the clip. Open the tool box lid and install the hairpin cotter, 1, through the clip to retain the toolbox.

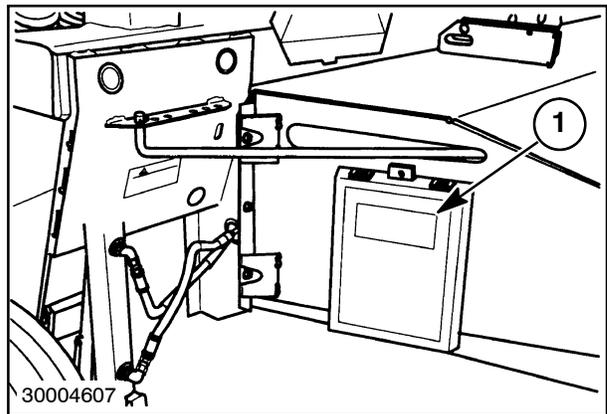


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14

MANUAL HOLDER

A manual holder, 1, is mounted on the left side of the windrow hood and provides a readily accessible storage location for this manual and the header operator's manual.



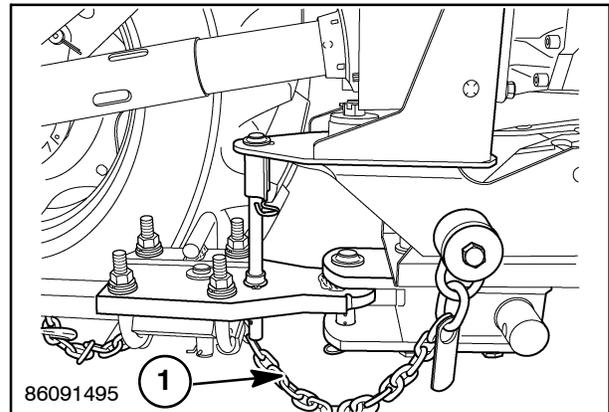
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SAFETY CHAIN

NOTE: The hardware kit is designed for use on several machines, and includes cap screws of several lengths for use on different machines. Not all hardware is used when installing the safety chain on this unit.

The safety chain, 1, shown is intended to keep the machine under control in the event of loss or failure of the hitch pin.

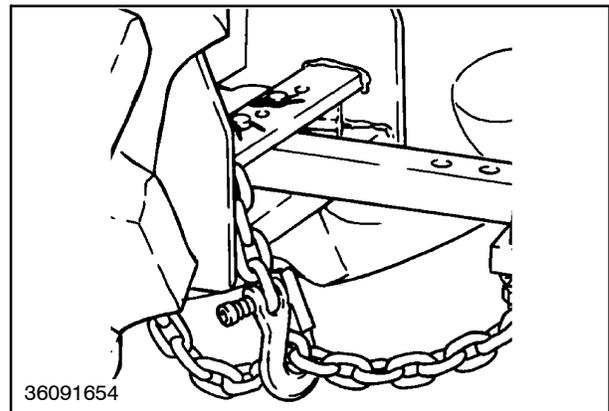


16

Loop the hook end of the chain around the tractor drawbar support, as shown. Depress the spring-loaded hook pivot pin. Slide the hook lock channel on the pin slot so the channel can be pivoted 90 degrees.

Engage the hook on a chain link, realign the lock channel with the hook tip, and slide the channel so the pivot pin snaps into the larger end of the slot. Leave sufficient slack in the chain to allow for turns.

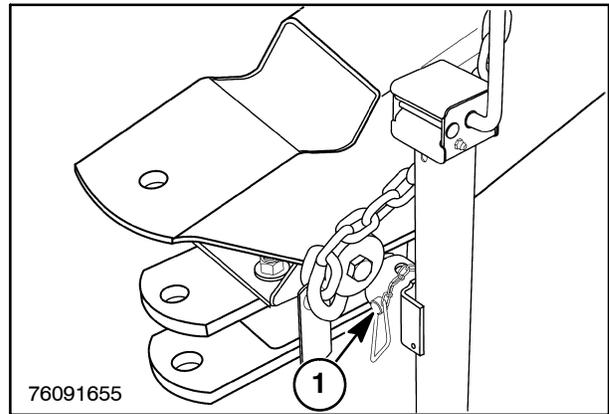
To detach the chain from the tractor, depress the spring-loaded hook pivot pin. Then slide and rotate the lock channel on the pin slot to disengage it from the hook tip.



17

JACK ASSEMBLY

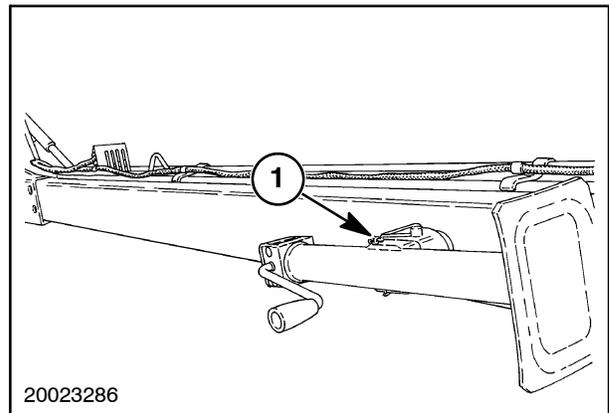
After attaching the mower conditioner to the tractor, retract the jack by turning the hand crank counterclockwise. Pull the pin, 1, and remove the jack.



18

Store the jack on side of the tongue with the pin, 1.

NOTE: To prevent the jack from unwinding during use, loop the chain over the handle before inserting the pin.



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TRACTOR REQUIREMENTS

1. 45 kw (60 Hp) minimum PTO horsepower.
2. Adequate tractor weight, ballast, wheel spacing, and tire inflation to stabilize the tractor on hillsides.
3. Two remote hydraulic circuits with a minimum of 120.65 bar (1750 psi) not to exceed 173 bar (2500 psi). One of the circuits must be two-way for the swing cylinder.
4. ASAE standard hitch and PTO dimensions.
5. 540 or 1000 rpm PTO, depending on the trail frame.

IMPORTANT: Only operate the tractor at the proper PTO speed. Over-speeding of the unit will result in component damage.

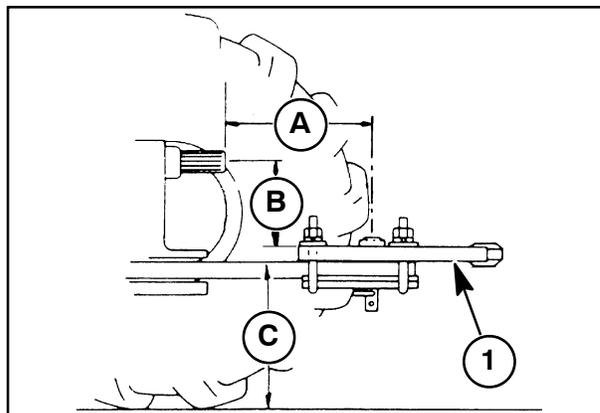
NOTE: If the tractor has a ground drive PTO, disengage the PTO before backing the trail frame. Running the PTO in reverse can damage the hydraulic pump and motor.

TRACTOR DRAWBAR DIMENSIONS

The pivot tongue trail frame requires that the drawbar be adjusted to provide a distance of 559 - 609 mm (22 - 24 in) from the end of the tractor PTO shaft to the center of the hitch point on the tongue of the unit; the same distance is necessary whether using a 540 or 1000 RPM PTO. This dimension may be obtained in two ways:

Option 1

Adjust the tractor drawbar to a distance of 350 mm (14 in) - 540 RPM PTO or 406 mm (16 in) - 1000 RPM PTO, dimension A, from the end of the tractor PTO shaft to the center of the drawbar hole, and install the drawbar extension, 1, that is provided with the pivot tongue trail frame. The drawbar extension increases drawbar length by 203 mm (8 in) to provide the 559 - 609 mm (22 - 24 in) length required.



Option 2

Some newer tractors may be equipped with drawbars that can be adjusted to a distance of 508 - 609 mm (20 - 24 in), dimension A, from the end of the tractor PTO shaft to the center of the drawbar hole. In this case, the pivot tongue may be connected directly to the tractor drawbar.

NOTE: Using a tractor with an incorrect PTO-to-hitch dimension can damage the gearbox, pump, hoses and/or the tractor PTO drive line.

Ideally the top of the tractor drawbar should be 203 - 305 mm (8 - 12 in), dimension B, below the tractor PTO shaft. Locate the drawbar directly below the PTO shaft. Clamp the drawbar so it cannot be moved from side to side.

The drawbar height above the ground, dimension C, should be 330 - 508 mm (13 - 20 in) for tractors up to 125 HP, and 381 - 559 mm (15 - 22 in) for tractors from 125 to 160 HP.

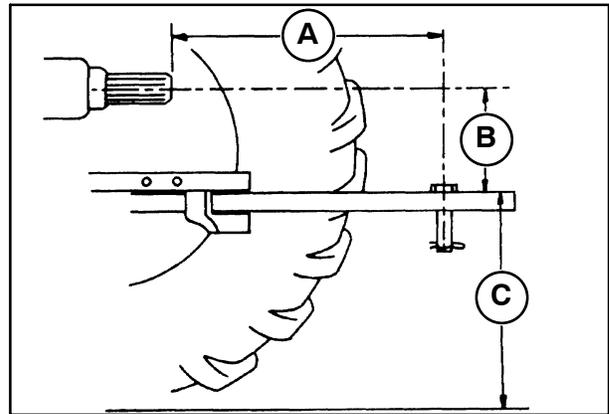
IMPORTANT: If the tractor has a 3-point hitch, raise the lower links as high as possible to prevent pump, hose, or tongue damage when turning, or remove the lower links to avoid damage.

ATTACHING TO THE TRACTOR

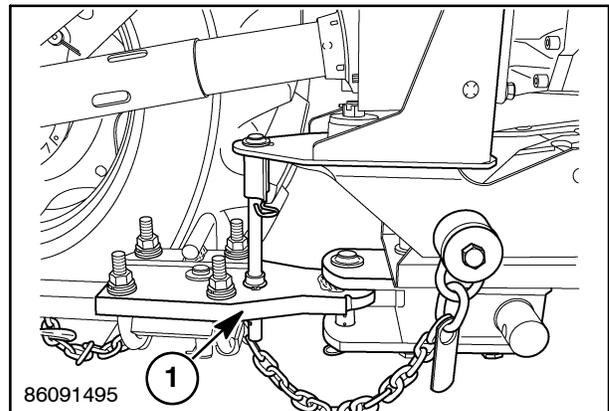
IMPORTANT: On tractors that can not adjust the drawbar to 20 inch or 24 inch, the hitch extension must be installed on the tractor drawbar, so the trail frame tongue clears the tractor tire when cutting around corners, and to prevent damage to the hydrostatic pump, hoses or tongue.

NOTE: Failure to use the extension on tractors that can not adjust the drawbar to 20 inch or 24 inch will result in component damage.

With the tractor on a level hard surface, measure from the ground to the top of the drawbar. If the drawbar is less than 559 mm (22 in) above the ground, install the extension, 1, on top of the drawbar, as shown here.



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22

If the drawbar is 559 mm (22 in) or higher, install the extension, 1, on the bottom of the drawbar, as shown here.

DRAWBAR EXTENSION

Install drawbar extension, 1, and clamp, 2, on the drawbar. Install drilled pin, 3, in the **front** hole in the extension and rear hole in the drawbar. Install hairpin cotter. Tighten the 5/8 inch nuts evenly to 189 N·m (140 ft. lbs.).

NOTE: If the extension is on the bottom of a high drawbar, shorten the clamp bolts to clear the windrow.

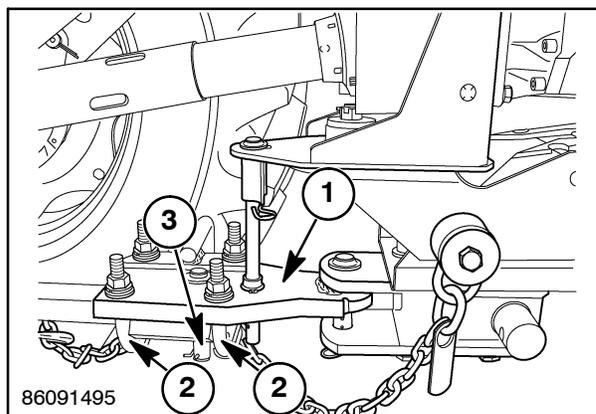
NOTE: Lubricate and be sure the ball in the hitch extension is free to turn. If this is not done the unit will be difficult to hitch to the tractor, and the hitch pin will try to work its way up.

Hitch the trail frame to the drawbar extension with a drilled pin and hairpin cotter.

IMPORTANT: Do not use rear 1 inch hole in the extension. Attach the extension solidly to the tractor drawbar. Pivoting the tongue will put heavy side loads on the tractor.

IMPORTANT: The tractor drawbar must be the correct distance from the end of the PTO shaft to the hole and the drawbar extension must be used to prevent damage to the pump or hoses.

NOTE: When using a TV140 tractor in a push/pull combination with the cab end forward, switch pins 3 & 5 in the trail frame lighting harness socket.



TRANSPORTING THE MOWER-CONDITIONER

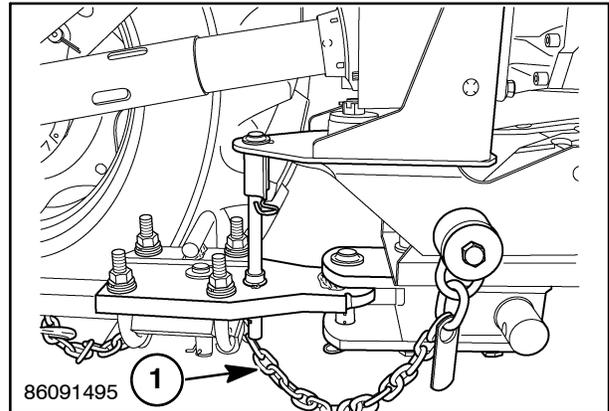
SAFETY CHAIN

The safety chain, 1, should be used when towing the mower-conditioner trailframe on a public road. The safety chain is intended to keep the machine under control in the event of loss or failure of the hitch pin.

Transporting on Highways

Do not tow equipment that does not have brakes:

- At speeds over 32km/hr (20 MPH), or
- That when fully loaded, weighs more than 1.5 ton (3300 lbs.) or more than 1.5 times the weight of the towing unit.

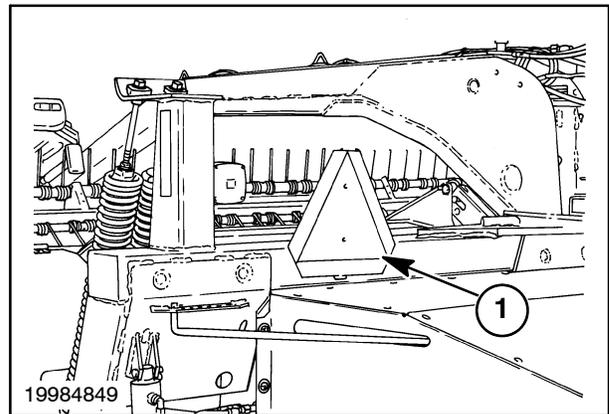


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SMV EMBLEM

Some states and provinces require Slow-Moving Vehicle (SMV) emblems on machines traveling at speeds under 40 km/hr (25 mph). Consult local regulations for specific information and mounting requirements.

An SMV mounting bracket is located on the left rear main frame. The SMV emblem, 1, and the mounting bracket are furnished as standard equipment on the mower-conditioner trailframe.

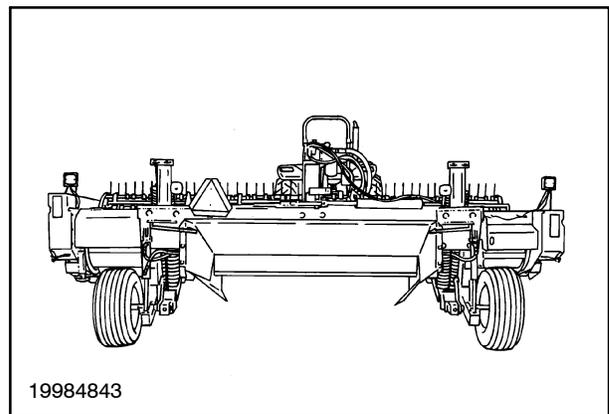


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TRAILING LIGHTS

NOTE: When using a TV140 tractor in a push/pull combination with the cab end forward, switch pins 3 & 5 in the mower-conditioner lighting harness socket.

The trailing lights should be used when towing the mower-conditioner trailframe on a public road.



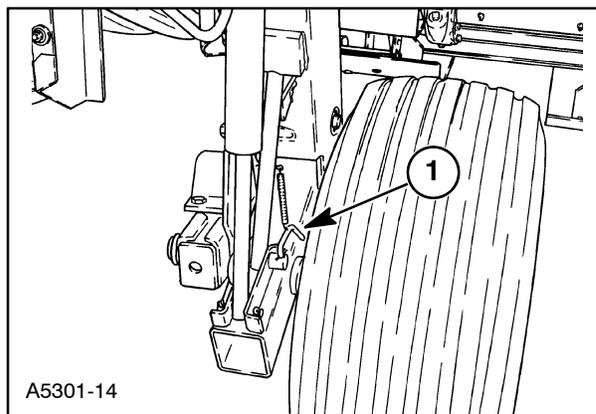
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The mower-conditioner trailing light harness uses a 7-pin trailer connector to connect the mower-conditioner to a tractor electrical outlet, which conforms to SAE J560.

For proper light function, this unit must be connected to a tractor incorporating an SAE standard 7-pin conductor electrical socket which conforms to SAE J560.

TOWING WITH A TRACTOR

1. Ensure the unit is securely attached to an appropriately sized tractor. Refer to "Hitching to the Tractor" section of this manual.
2. Raise the header. Engage the transport stops by pivoting levers, 1, forward. Lower the header onto the stops.



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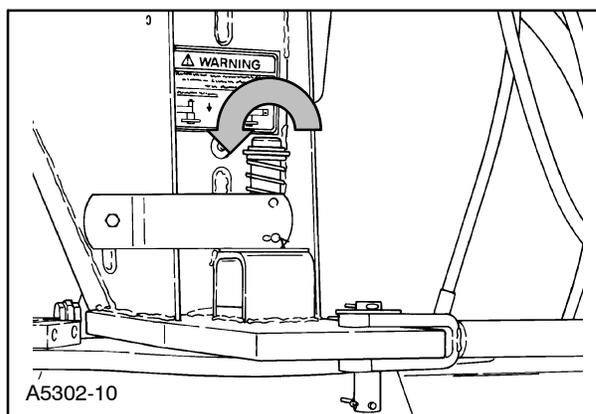
27

3. Rotate the transport lock bracket up and over (one half turn) so that the transport lock pin is spring loaded downwards. Shift the machine into the transport (center) position so that the transport lock pin engages in the trailframe.

⚠ WARNING ⚠

Failure to engage the header lift locks and tongue swing cylinder lock when transporting machine could cause the machine to drop onto the pavement or to swing to the right into roadside obstacles, oncoming traffic or ditches if the tractor hydraulics are accidentally engaged during transport. Failure to comply could result in death or serious injury.

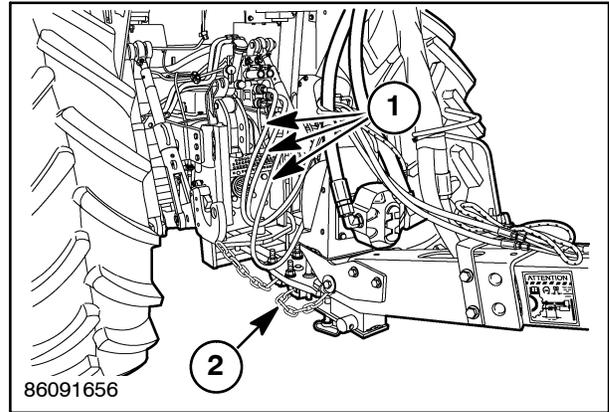
M1188



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28

4. Leave the hydraulic hoses, 1, and PTO shaft connected to the tractor or be sure they are positioned in the hanger and secured to prevent damage.
5. When towing the mower-conditioner trailframe on a road or highway, ensure that the flashing lights harness is attached to the tractor, and the lights are functioning to adequately warn operators of other vehicles. Consult local governmental regulations for specific lighting requirements.
6. Use the safety chain, 2, when transporting the unit on a public highway. The safety chain is intended to keep the machine under control in the event of loss or failure of the hitch pin.



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TOWING WITH A TRUCK

⚠ DANGER ⚠

Transporting the towed equipment with an underweight towing vehicle could cause a loss of control during transport or braking, resulting in serious injury or death.

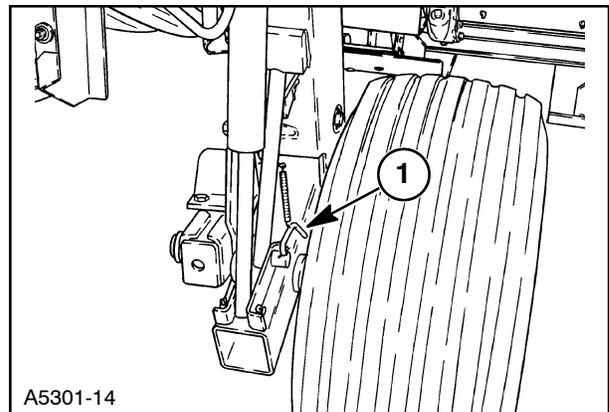
M918

1. Raise the header. Engage the transport stops by pivoting levers, 1, forward. Lower the header onto the stops.
2. Rotate the transport lock bracket up and over (one half turn) so that the transport lock pin is spring loaded downwards. Shift the machine into the transport (center) position so that the transport lock pin engages in the trailframe.

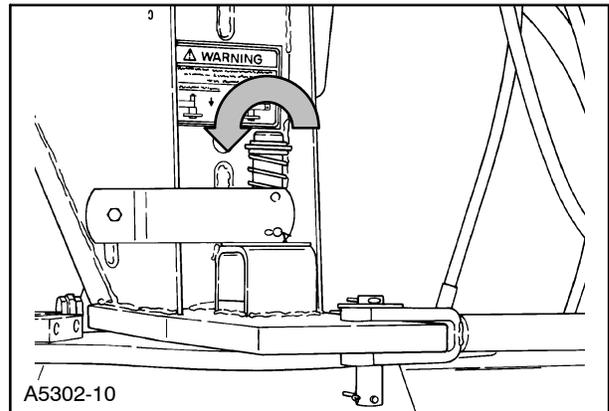
⚠ WARNING ⚠

Failure to engage the header lift locks and tongue swing cylinder lock when transporting machine could cause the machine to drop onto the pavement or to swing to the right into roadside obstacles, oncoming traffic or ditches if the tractor hydraulics are accidentally engaged during transport. Failure to comply could result in death or serious injury.

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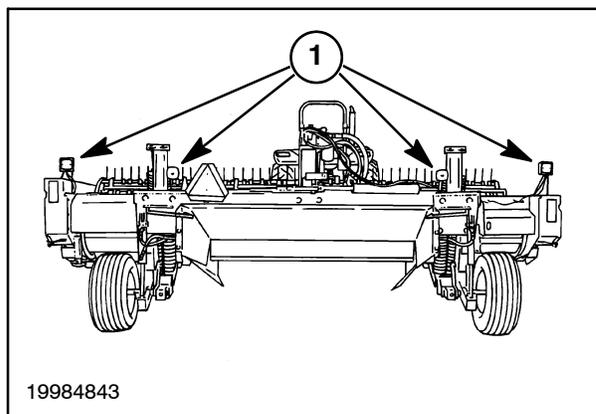


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3. When towing the mower-conditioner trailframe on a road or highway, ensure that the flashing lights harness is connected to the truck, and the lights, 1, are functioning to adequately warn operators of other vehicles. Consult local governmental regulations for specific lighting requirements.
4. Use the safety chain when transporting the unit. The safety chain is intended to keep the machine under control in the event of loss or failure of the hitch pin.
5. Limit highway speeds to 32 kph (20 mph).



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PARKING THE MACHINE

When cutting is finished:

1. Disengage the tractor PTO. Park the machine on a level area.
2. Pivot the header to the center position and engage the spring-loaded lockpin.
3. Lower the header to the ground. Or, let the header rest on the transport stops.
4. Attach the jack to the hitch and lower the jack.
5. Remove the hydraulic pump from the PTO shaft and store the pump on the tongue.



Before disconnecting the lift cylinder hose, be sure the header is resting on the ground or on the Header lift locks. Failure to comply could result in death or serious injury.

M1190

6. Disconnect the hydraulic hoses (swing and lift cylinders) and hang them so the ends do not get dirty.
7. Unhitch the tongue from the drawbar or the drawbar extension, then remove the extension from the tractor drawbar. If the drawbar extension is used, attach the extension to the tongue hitch for storage.

SPECIFICATIONS

H7150 PIVOT TONGUE TRAIL FRAME

| | w/14 Foot Header | w/16 Foot Header | w/18 Foot Header |
|---|--|-------------------------|-------------------------|
| <u>Dimensions</u> | | | |
| Transport/Overall Width, m (ft in) [Defined by Header Width] | 4.95 m (16 ft 3 in) | 5.56 m (18 ft 3 in) | 6.17 m (20 ft 3 in) |
| Overall Length, m (ft in) | 7.90 m (25 ft 11 in) | 7.90 m (25 ft 11 in) | 9.02 m (29 ft 7 in) |
| Overall Height | | | |
| Operating position, mm (in) | 1854 mm (73 in) | 1854 mm (73 in) | 1854 mm (73 in) |
| Transport position, mm (in) | 2032 mm (80 in) | 2032 mm (80 in) | 2032 mm (80 in) |
| Track Width, mm (in) | 3861 mm (152 in) | 3861 mm (152 in) | 3861 mm (152 in) |
| Ground Clearance to Guard Tips, mm (in) | 635 mm (25 in) | 635 mm (25 in) | 635 mm (25 in) |
| <u>Crop Discharge</u> | | | |
| Swath width, mm (in) | 2438 mm (96 in) | 2438 mm (96 in) | 2438 mm (96 in) |
| Windrow width, mm (in) | 38-60 in (965-1524 mm) | 38-60 in (965-1524 mm) | 38-60 in (965-1524 mm) |
| Adjustments | Swath gate adjusted lowered provides 96 inch swath. Swath gate raised allows adjustable windrow shields to produce windrow widths between 38 inch and 60 inch. | | |
| <u>Weight</u> | | | |
| Shipping, less Header kg (lb) | 1598 kg (3522 lb) | 1612 kg (3554 lb) | 1664 kg (3668 lb) |
| Operating, less Header kg (lb) | 1389 kg (3062 lb) | 1403 kg (3094 lb) | 1455 kg (3208 lb) |
| <u>Tractor Requirements</u> | | | |
| Power, Minimum PTO kW (Hp) | 45 kW (60 Hp) | 45 kW (60 Hp) | 45 kW (60 Hp) |
| PTO Shaft Spline/Size Requirement | 21-spline/1-3/8 inch | 21-spline/1-3/8 inch | 21-spline/1-3/8 inch |
| Remotes | 2 | 2 | 2 |
| Relief Pressure, bar (psi) | 121 bar (1750 psi) | 121 bar (1750 psi) | 121 bar (1750 psi) |
| Drawbar | | Category II Minimum | |
| 7-pin Electrical Connector | | Required for Lighting | |
| <u>Hitch Type</u> | Swivel ball in standard hitch extension w/clevis on implement tongue | | |
| <u>Tires</u> | | | |
| Type, Size and Ply Rating | 31 x 13.50-15, 8 ply, I1, agricultural implement rib tire | | |
| Inflation Pressure | 30 psi | | |
| <u>Hydraulics</u> | | | |
| Swing Circuit | Double-Acting, 76.2 mm (3 in) bore X 482.6 mm (19 in) stroke | | |
| Raise/Lower Circuit | Single-Acting, Master/Slave, 63.5 mm (2.5 in) bore X 254 mm (10 in) stroke | | |
| Tilt Circuit | Single-Acting, 50.8 mm (2 in) bore X 254 mm (10 in) stroke | | |

SPECIFICATIONS (CONTINUED)

Hydrostatic Header Drive System

| | |
|---------------------------------|--|
| Pump Drive Speed, rpms | 1000 only |
| Pump Type | Fixed displacement, gear-type, w/thrust bearing on input shaft |
| Pump Drive | Telescoping PTO, category 3 w/standard u-joints |
| Pump Mount | Swivel mounted on 44.5 mm (1.75 in) composite non-greaseable bushing w/steering link attached to hitch extension |
| Flow @ rated Speed, gpm (l/m) | 110 l/m (29 gpm) |
| Relief Valve Setting, bar (psi) | 228 bar (3300 psi) |
| Motor Type | Fixed displacement, gear-type |
| Reservoir Capacity, gal (l) | 105 l (28 gal) |

Operating Speeds

| | |
|----------------------|------------------------|
| Field, k/h (mph) | 0 - 13 k/h (0 - 8 mph) |
| Transport, k/h (mph) | 32 k/h (20 mph) |

Safety Features

| | |
|----------------------|--|
| Lighting | Brake/Flasher/Turn Signal Lights Standard |
| Transport Swing Lock | Standard mechanical stop w/spring loaded locking pin to facilitate ease of actuation |
| Transport Lift Lock | Standard mechanical lift cylinder stops |
| Safety Chain | Standard |

