

4 - OPERATING INSTRUCTIONS

COMMISSIONING THE UNIT

Engine break-in procedure

Your tractor will provide long and dependable service if given proper care during the first 50-hour break-in period. During the first 50 hours of operation:

1. Avoid "lugging" the engine. Operating in too high a gear under heavy load may cause engine lugging, which is indicated when the engine will not respond to a throttle increase.
2. Use the lower gear ratios when pulling heavy loads and avoid continuous operation at constant engine speeds. You will save fuel and minimize engine wear by selecting the correct gear ratio for a particular operation. Operating the tractor in low gear with a light load and high engine speed wastes fuel.
3. Avoid prolonged operation at either high or low engine speeds without a load on the engine.
4. Check the instruments frequently and keep the radiator and oil reservoirs filled to recommended levels. Daily checks include the engine oil level, radiator coolant, and air cleaner.
5. After the first 50 hours of use, be sure to perform the maintenance items listed in the maintenance schedule.

7 - MAINTENANCE

GENERAL INFORMATION

General information

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.

NOTICE: While any company can perform necessary maintenance or repairs on your equipment, NEW HOLLAND strongly recommends that you use only authorized NEW HOLLAND dealers and products that meet the given specifications. Improperly or incorrectly performed maintenance and repair voids the equipment warranty and may affect service intervals.

NOTICE: Always use genuine NEW HOLLAND replacement parts, oils and filters to ensure proper operation, fil-

tration of engine and hydraulic systems. See your NEW HOLLAND dealer for additional oil quantities.

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.

NOTICE: 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

Avoid injury!

1. Disengage all drives.
 2. Engage parking brake.
 3. Lower all attachments to the ground, or raise and engage all safety locks.
 4. Shut off engine.
 5. Remove key from key switch.
 6. Wait for all machine movement to stop.
- Failure to comply could result in death or serious injury.

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⚠ WARNING

Entanglement hazard!

Disengage the Power Take-Off (PTO), turn off the engine, and remove the key. Wait for all movement to stop before leaving the operator's position. Never adjust, lubricate, clean, or unplug machine with the engine running. Failure to comply could result in death or serious injury.

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⚠ WARNING

Illustrations in this manual may show protective shielding open or removed to better illustrate a particular feature or adjustment. Replace all shields before operating the machine. Failure to comply could result in death or serious injury.

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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 any time you suspect it is contaminated.

8 - TROUBLESHOOTING

SYMPTOM(S)

Engine - Troubleshooting

Problem	Possible Cause	Correction
The start motor does not rotate with the key switch in the (START) position.	Low battery charge	Charge or replace
	Loose battery or starter cable terminals	Tighten the terminal
	Key switch faulty	Repair or replace switch
	Safety start switch not completing circuit	Depress clutch pedal fully
	PTO safety switch is not in "OFF" position	Place PTO switch in "OFF" position
	Starter motor faulty	Repair or replace starter motor
The start motor rotates but the engine does not start	Low battery charge	Charge or replace battery
	Air in fuel system	Bleed out the air
	Fuel filter clogged	Clean or replace the filter
	Fuel shutoff valve on fuel filter in closed position	Open the valve
	Fuel shutoff solenoid on fuel injection pump stuck in off position	Check solenoid for proper operation, repair as needed
Engine speed is irregular	Air in fuel system	Bleed the fuel system
	Fuel filter clogged	Clean or replace the filter
	Injection nozzle clogged	Repair or replace nozzle
	Fuel leakage	Repair fuel system
	Irregular fuel injection	Repair or replace fuel injection pump
Engine speed is more than maximum rated high idle speed	Governor malfunction	Repair injection pump as needed
Engine stops suddenly during operation	Fuel shortage	Add fuel and bleed air from fuel system
	Faulty fuel injector	Repair or replace injector
	Faulty fuel injection pump	Repair or replace injection pump
	Internal parts of engine seized due to lack of lubrication	Repair engine as needed
Engine stops at low speed	Faulty injection pump	Repair or replace injection pump as needed
	Engine valve gap is not correct	Adjust the gap
	Low fuel injector pressure	Repair fuel injector as needed
Engine overheating	Lack of coolant	Add coolant as needed
	Fan belt slipping or belt is broken	Adjust belt tension or replace belt
	Dirt attached to the radiator or prescreen	Clean radiator fins or screen as needed
The color of exhaust smoke is white	Low engine operating temperature	Allow engine to obtain higher operating temperature
	Engine burning engine oil	Repair engine as needed
	Engine coolant entering engine exhaust	Repair engine as needed
The color of exhaust gas is black.	Air filter clogged	Clean or replace engine air filter
	Excessive fuel supply	Repair fuel injection pump as needed
	Faulty fuel injector	Repair or replace fuel injector
Low engine power	Fuel injector nozzle clogged	Repair injector as needed
	Carbon accumulation on valve seat	Repair valve and seats as needed
	Incorrect valve gap adjustment	Adjust valve gap to correct amount
	Incorrect fuel injection timing	Check and adjust fuel injection timing as needed
	Lack of fuel supply	Check fuel system for restriction
	Air filter clogged	Clean or replace air filter

9 - SPECIFICATIONS

Wheel tread settings

NOTE: Tread settings are measured from center of tire to center of tire.

Blurred on purpose. The manual you buy has this page in full quality.

Contents

1 GENERAL INFORMATION

Note to the Owner	1-1
Biodiesel fuel	1-2
Tractor intended use.....	1-3
Electro-magnetic compatibility (EMC)	1-4
Product identification	1-5
Operator's manual storage	1-6
Machine orientation.....	1-7
Proposition 65	1-8
Exhaust Gas Recirculation (EGR) - Diesel Particulate Filter (DPF) exhaust treatment - Product overview	1-9

2 SAFETY INFORMATION

Precautionary statements	2-1
Safety rules	2-2
Do not operate tag.....	2-11
Roll Over Protective Structure (ROPS).....	2-12
Ecology and the environment	2-13
Safety signs	2-14
Instructional signs	2-27
International symbols	2-34

3 CONTROLS AND INSTRUMENTS

OPERATOR'S SEAT

Seat belt	3-1
Seat controls	3-2
Roll Over Protective Structure (ROPS)	3-3

FORWARD CONTROLS

Instrument panel.....	3-5
Engine fault codes display.....	3-7
Cruise control.....	3-10
Transmission shuttle shift lever.....	3-11
Clutch pedal	3-12
Brake pedals	3-13
Foot throttle pedal	3-14
Hand throttle lever	3-15
Horn switch	3-16
Hazard light switch	3-17
Power Take-Off (PTO) switch.....	3-18
Key switch	3-19
Differential lock pedal.....	3-20
Hydrostatic transmission (HST) foot pedals	3-21
Tilt steering lever	3-22
Multifunction light switch.....	3-23
DPF switch	3-24

2 - SAFETY INFORMATION

Precautionary statements

Personal safety



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual and on machine safety signs, you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

! DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury. The color associated with DANGER is RED.

! WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury. The color associated with WARNING is ORANGE.

! CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury. The color associated with CAUTION is YELLOW.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

Machine safety

NOTICE: Notice indicates a situation that, if not avoided, could result in machine damage or property damage. The color associated with Notice is BLUE.

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine damage or property damage. The word Notice is used to address practices not related to personal safety.

Information

NOTE: Note indicates additional information that clarifies steps, procedures, or other information in this manual.

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

Index

	1	
12 x 12 Synchronized transmission operation		4-33
	A	
Air cleaner inner element		7-30
Air cleaner primary element		7-26
Air cleaner - Primary element		7-23
Alternator		7-37
Attaching three-point equipment		4-11
	B	
Battery		7-36
Biodiesel fuel.		1-2, 7-3
Brake pedal free play		7-19, 7-43
Brake pedals		3-13
Brakes		4-26
Brakes and controls - Park		4-35
	C	
Carrying the tractor on a transporter.		5-8
Clutch pedal		3-12
Clutch pedal free play		7-18, 7-44
Clutch - Troubleshooting.		8-2
Cold starting aids		4-17
Consumables		7-5
Cruise control		3-10
	D	
Delivery report - dealer copy		11-5
Delivery report - owner copy		11-3
Diesel Particulate Filter (DPF) regeneration		4-2
Differential lock pedal		3-20
Do not operate tag		2-11
DPF switch		3-24
Draft control - optional.		3-30
Driving the vehicle		5-7
	E	
Ecology and the environment.		2-13
Electrical system - Troubleshooting		8-4
Electro-magnetic compatibility (EMC)		1-4
Emergency stopping		4-25
Engine belts		7-20, 7-25, 7-35
Engine break-in procedure		4-1
Engine coolant		7-31
Engine cooling system		7-9
Engine fault codes display		3-7
Engine oil and filter		7-10, 7-25
Engine oil level		7-7
Engine - Troubleshooting		8-1
Exhaust Gas Recirculation (EGR) - Diesel Particulate Filter (DPF) exhaust treatment - Product overview.		1-9
Extendible drawbar		4-14
External lighting - Identification		5-1
	F	
Foot throttle pedal		3-14
Front axle differential fluid		7-28

PARKING THE UNIT

Brakes and controls - Park	4-35
----------------------------------	------

5 TRANSPORT OPERATIONS

ROAD TRANSPORT

External lighting - Identification	5-1
Hazard warning light operation	5-2
Turn signal operation	5-3
Road lights operation	5-4
Work lights operation	5-5
Rear work light (optional)	5-6
Driving the vehicle	5-7

SHIPPING TRANSPORT

Carrying the tractor on a transporter	5-8
---	-----

RECOVERY TRANSPORT

Towing	5-8
--------------	-----

6 WORKING OPERATIONS

GENERAL INFORMATION

Tractor ballasting	6-1
Tractor ballasting weights	6-2
Liquid ballast	6-4

7 MAINTENANCE

GENERAL INFORMATION

General information	7-1
Safety rules diesel fuel	7-3
Biodiesel fuel	7-3
Refueling the tractor	7-4
Consumables	7-5

MAINTENANCE CHART

Maintenance Chart	7-6
-------------------------	-----

Every 10 hours or daily

Engine oil level	7-7
Engine cooling system	7-9

(13)

WARNING**TO JUMP START (Negative Grounded Battery)**

1.

Shield eyes.

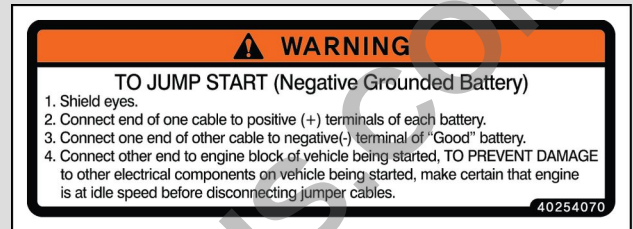
2.

Connect end of one cable to positive (+) terminals of each battery.

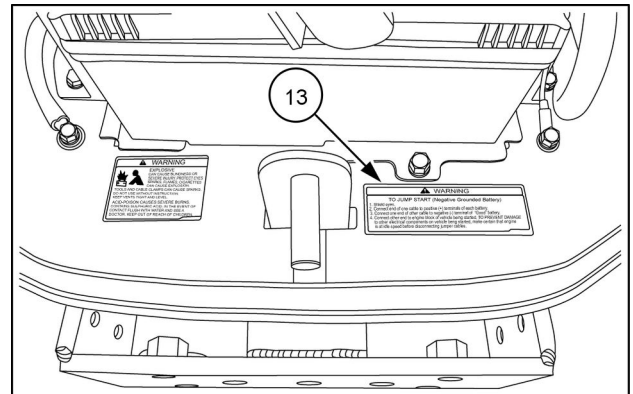
3.

Connect one end of other cable to negative (-) terminal of "Good" battery.

4.

Connect other end to engine block of vehicle being started, TO PREVENT DAMAGE to other electrical components on vehicle being started, make certain that engine is at idle speed before disconnecting jumper cables.**Failure to comply could result in death or serious injury.****Quantity: 1****English Part Number: MT40254070**

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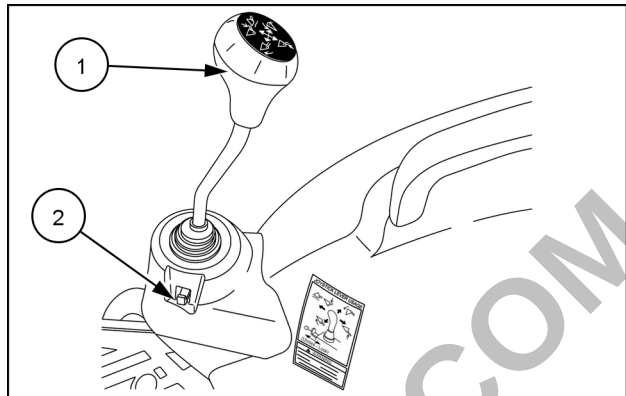
(13) Location : Front left side of battery tray.

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Mid mount two spool control valve

The mid mount two spool control valve **(1)** is mounted to the front of the right-hand fender. This control valve is used mainly for front end loader operation, but may also be used to operate other front mounted implements.

The control valve is equipped with a linkage lockout **(2)** that locks the control valve handle in the neutral position and does not allow the valve to operate.

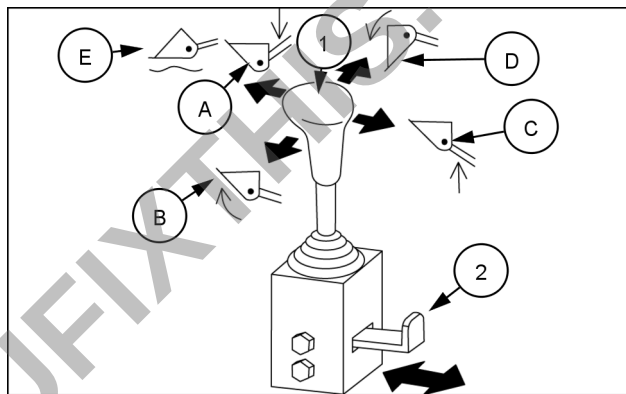


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To operate the control valve, move the control lever **(1)** in any of the four directions.

Release the control lever to stop the cylinder in any position, the lever automatically returns to neutral.

- Move the control lever forward to lower the loader/retract cylinder **(A)**.
- Move the control lever to the left to curl the bucket/retract cylinder **(B)**.
- Move the control lever rearward to raise the loader/extend cylinder **(C)**.
- Move the control lever to the right to dump bucket/extend cylinder **(D)**.
- Move the control lever fully forward to "FLOAT" position **(E)** which allows the loader boom lift cylinders to extend or retract freely. This valve position will allow the loader to follow the ground contour during operation.



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NOTE: Do not use the "FLOAT" position **(E)** if the loader bucket is raised off the ground.

NOTE: Push the lockout tab **(2)** inwards to lock the valve control lever when the two-spool control valve is not used.

NOTE: If you move the control lever diagonally the loader and bucket will operate at the same time.

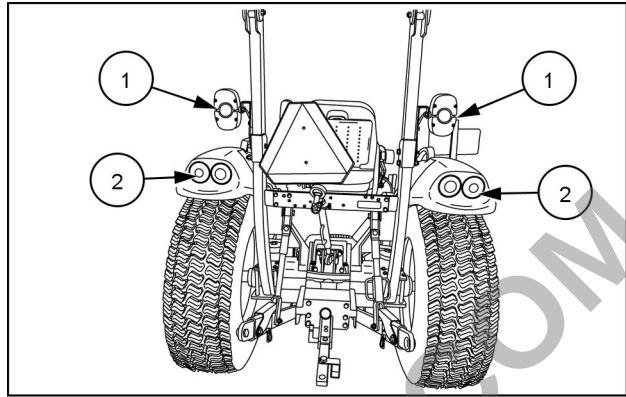
Hazard warning light operation

The side hazard warning lights (1) and tail amber lights (2) are activated by hazard rocker switch (3) located in the center of the steering column shroud.

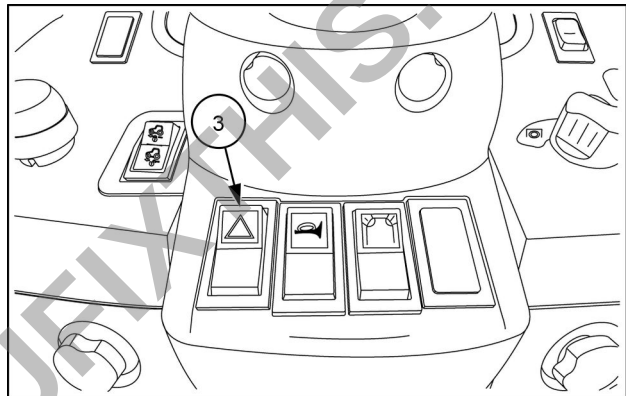
NOTE: The hazard lights can function with the key switch in any position.

1. To activate the hazard lights push the rocker switch (3) down.

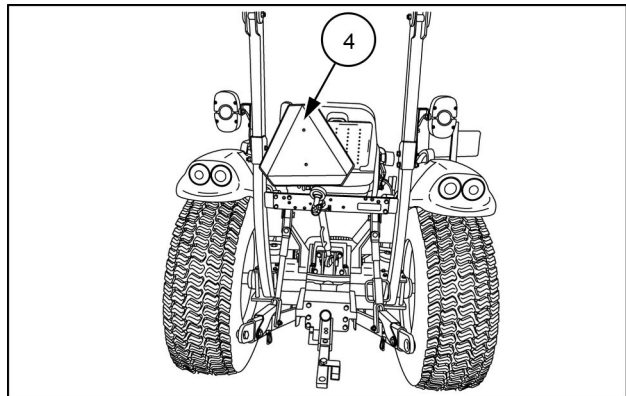
NOTE: For your protection, use the hazard warning lights, the SMV (Slow Moving Vehicle) sign (4) and road lights when traveling on public roads, day or night.



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NHIL13CT01004AA 2



NHIL13CT01013AA 3

Engine coolant

⚠ WARNING

Hot liquid under pressure!

Never remove the filler cap or the recovery tank cap while the engine is running or the coolant is hot. Let the system cool. Turn the filler cap to the first notch and allow any pressure to escape, and then remove the filler cap. Loosen the recovery tank cap slowly to allow any pressure to escape.

Failure to comply could result in death or serious injury.

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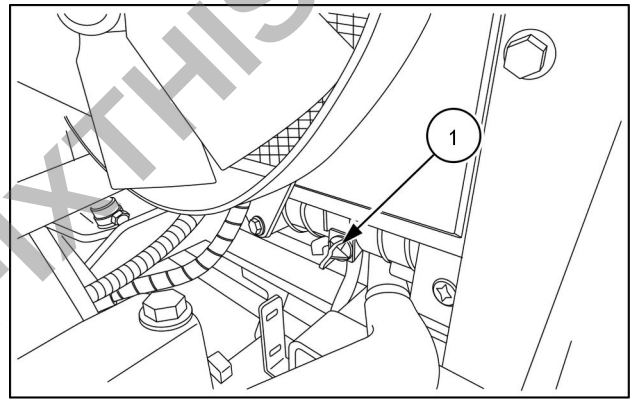
Draining and flushing the cooling system

NOTE: Drain and flush the radiator and engine block every 1000 hours of usage or 24 months, whichever comes first. Refill with a 50/50 mixture of permanent antifreeze and clear water.

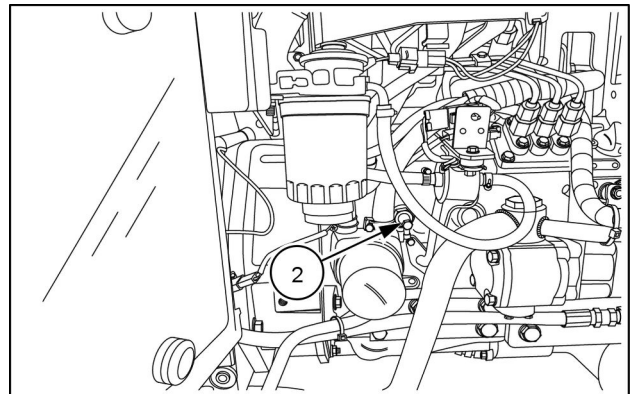
To drain the cooling system:

1. Use a suitable receptacle to catch the used coolant. Remove the radiator cap and open the drain valve (1) on the left- side of radiator to drain the radiator and drain plug (2) on right side of engine block to drain engine block.
2. After the coolant has drained, place a water hose in the radiator filler neck and run water through the system. When water is flowing from the block drain plug port start the engine. When the water flowing from the block port is free from coloration and sediment, stop the engine and remove the hose. Allow all water to drain from the system through the radiator drain valve and block port.
3. Close the radiator drain valve and reinstall the block drain plug. Slowly refill the system with a 50/50 solution of ethylene glycol antifreeze and water. Fill until the coolant level is approximately **4 cm (1.6 in)** below the bottom of the filler neck. Do not fill beyond this level.
4. Clean the radiator cap and cap seal and install the cap.
5. Add coolant to the coolant reservoir (3) until fluid level is between the "LOW" and "HIGH" lines on the side of the reservoir.
6. Run the engine until normal operating temperature is reached, then stop the engine. Recheck the coolant level when the engine is cold and add additional coolant as necessary.

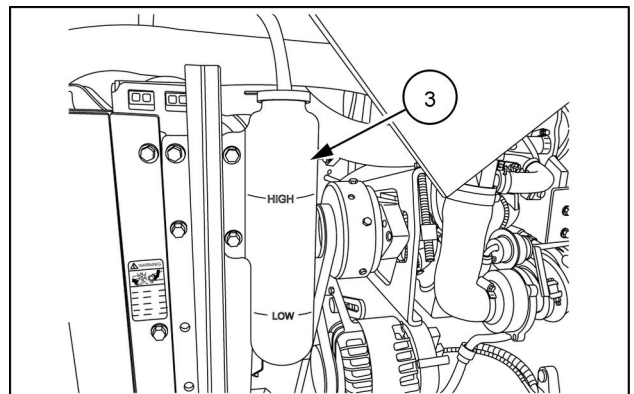
NOTICE: Never run the engine when the cooling system is empty. Do not add cold water or cold antifreeze solution if the engine is hot.



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NHIL13CT01032AA 2



NHIL13CT01235AA 3

NOTE: Cooling system capacity is **5.1 L (5.4 US qt)**

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