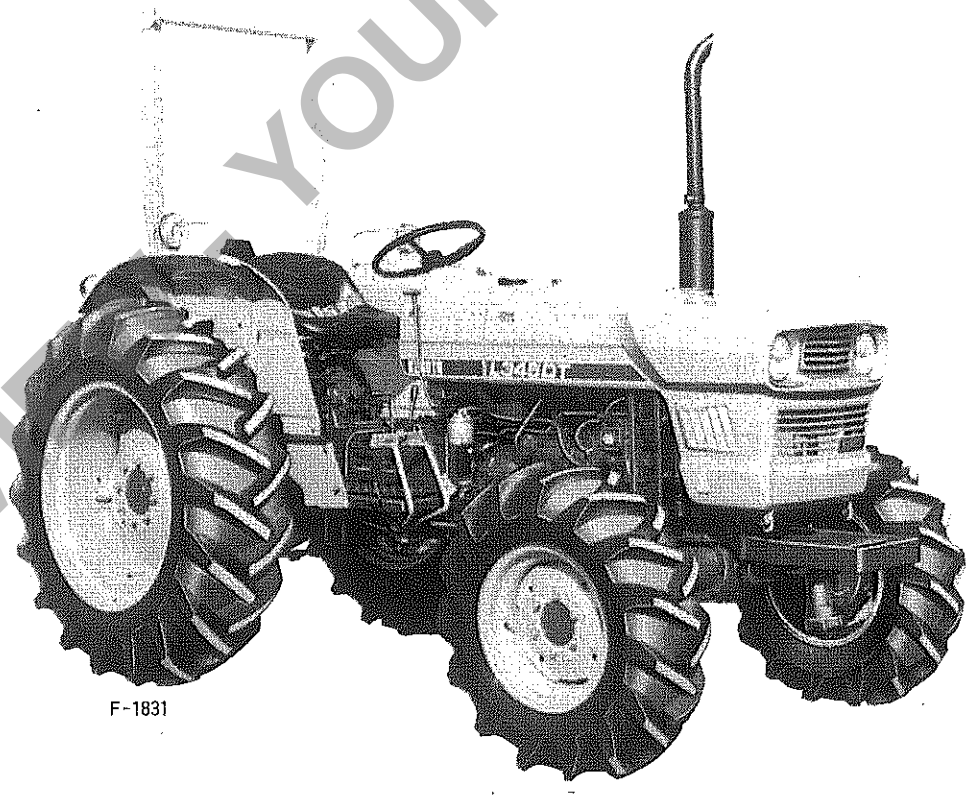
OPERATOR'S MANUAL

KUBOTA TRACTOR

MODELS L305 • L345 • L355SS



F-1831

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READ AND SAVE THIS MANUAL

Kubota

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FOR SAFE OPERATION

1. OPERATING SAFELY

(1) Read this entire manual before attempting to start and operate the tractor.

(2) Pay special attention to the warning and caution labels found on the tractor.

> **⚠ WARNING**
>
> TO AVOID PERSONAL INJURY:
>
> 1. Attach pulled or towed loads to the drawbar only.
> 2. Use the 3-point hitch only with equipment designed for 3-point hitch usage.

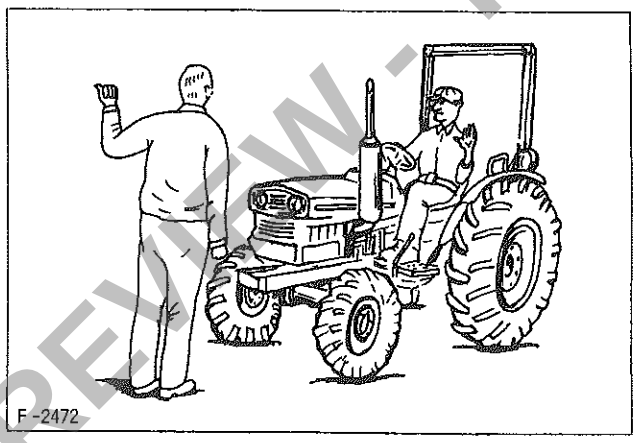
(3) If using an implement or other attachment with the tractor, read the implement Operator's Manual to insure safe operating procedures.

(4) Before allowing other people to use your tractor, explain how to operate and lend this manual beforehand.

(5) Watch where you are going at all times. Watch for and avoid obstacles.

(6) Know your equipment and its limitations.

(7) Never allow passengers on the tractor. Keep bystanders away from the tractor during operation.

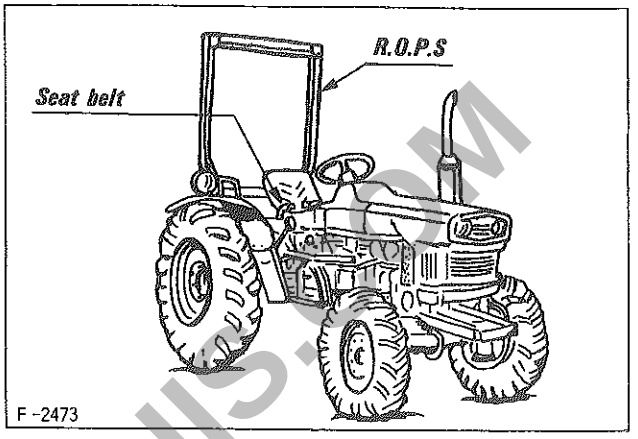

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(8) Avoid operating or working around the tractor when wearing loose, bulky clothing.

(9) Never operate the tractor or any agricultural equipment while under the influence of alcohol or other drugs which impair operation, or while fatigued.

(10) When working in cooperation with other tractors, let the other drivers know what you are doing.

(11) Before starting the engine, sit in the seat, disengage the clutch, and place shift levers in the neutral position. Fasten seat belt if equipped with ROPS.



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(12) Do not start engine by shorting across starter terminals. Machine may start in gear and move if normal starting circuitry is bypassed.

(13) NEVER start engine while standing on the ground.

(14) Before getting off the tractor, be sure to stop the engine, set the brake, remove the key and lower the implement to the ground. On L355SS make sure shuttle shift lever is locked in neutral position before dismounting.

2. OPERATE SENSIBLY — AVOID ROLLOVERS

WARNING:

L345·L345DT models only.

- **Depending on the model year, the hand throttle lever of this product is operated into two directions.**
- **Observe the following steps for your safety.**
  - **(1) Check your tractor serial number to know the type of Hand Throttle lever. (See page 17)**
  - **(2) Make sure that your tractor is equipped with any type of Hand Throttle lever by moving a little forward/rearward before operation.**
- **See detailed precautions in page 17.**

(1) **For your safety, ROPS with a seat belt is recommended by KUBOTA for almost all applications. Check operator's manual and discuss with your local dealer.**

Always use seat belt when the tractor is equipped with a ROPS. Never use the seat belt when the tractor is not equipped with a ROPS.

(ROPS: Roll-Over Protective Structures)

Never modify structural members of ROPS by welding, bending, grinding or cutting, as this may weaken the structure. If any component is damaged, replace it. Do not attempt repairs.

If ROPS is loosened or removed for any reason, make certain all parts are reinstalled correctly. Tighten mounting bolts to proper torque, see ROPS installation instructions.

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2. SPECIFICATIONS

[L305]

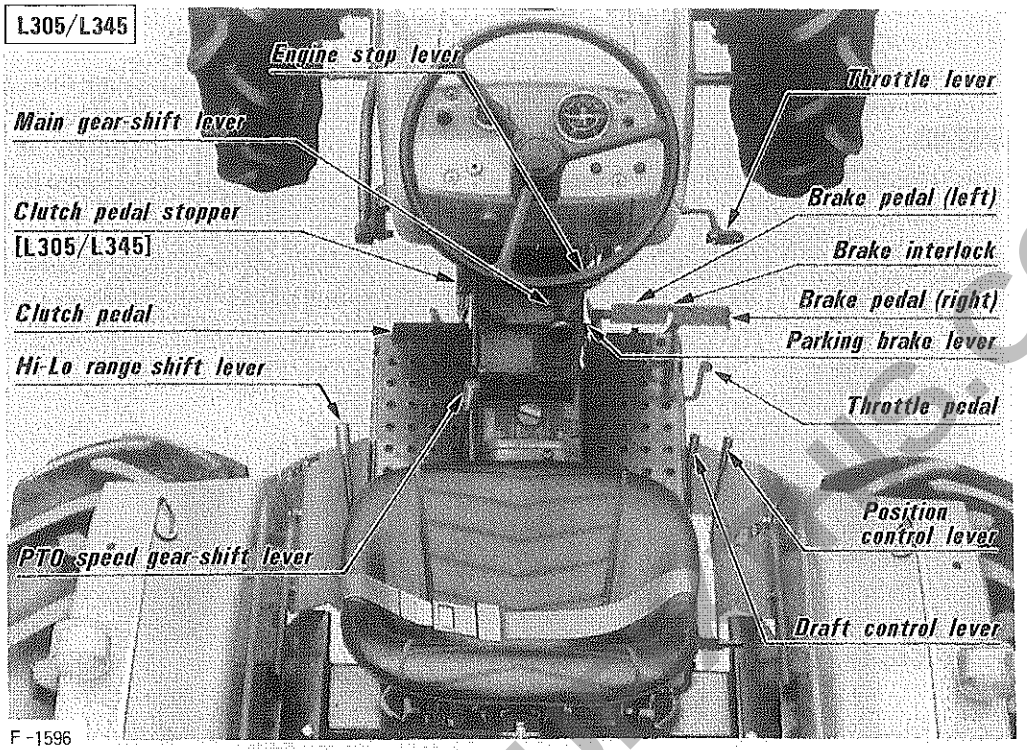
Model				L305 (2WD)		L305DT (4WD)	
Engine gross power				22.4 kW (30 HP)*			
Engine	Model			KUBOTA D1301–DA			
	Type			Vertical, water-cooled, 4-cycle diesel			
	No. of cylinders			3			
	Bore and stroke			82 x 82 mm (3.2 x 3.2 in.)			
	Total displacement			1299 cm^3 (79.3 cu. in.)			
	Rated revolution			46.7 r/s (2800 rpm)			
	Fuel			Diesel fuel No.1 [below −10°C (14°F)] Diesel fuel No.2 [above −10°C (14°F)]			
	Starter			Electric starter with battery, glow plug and decompression device, 12V, 1.4 kW			
	Lubrication			Forced lubrication by trochoidal pump			
	Cooling			Water with pressurized radiator			
	Battery			12V 100Ah			
Capacities	Fuel tank			33.5ℓ (8.8 U.S. gals.)			
	Engine crankcase			6.3ℓ (6.6 U.S. qts.)			
	Engine coolant			5.8ℓ (6.1 U.S. qts.)			
	Transmission case			30ℓ (31.7 U.S. qts.)		31ℓ (32.7 U.S. qts.)	
	Front axle diff. case (total)			—		5ℓ (5.2 U.S. qts.)	
	Front axle gear case			—		0.7ℓ (0.7 U.S. qt.)	
Tires		Front		5.50 – 16	5.50 – 16	8.3 – 16	7 – 16
		Rear		13.6 – 24	12.4 – 24	13.6 – 24	12.4 – 24
Dimensions	Overall length		mm (in.)	3210 (126.4)	3210 (126.4)	3210 (126.4)	3210 (126.4)
	Overall width		mm (in.)	1630 (64.2)	1595 (62.8)	1630 (64.2)	1595 (62.8)
	Overall height with muffler		mm (in.)	2000 (78.7)	2000 (78.7)	2030 (79.9)	2030 (79.9)
	Wheel base		mm (in.)	1840 (72.4)	1840 (72.4)	1850 (72.8)	1850 (72.8)
	Min. ground clearance		mm (in.)	360 (14.2)	360 (14.2)	350 (13.8)	320 (12.6)
	Treads	Front	mm (in.)	1130 (44.5)	1155 (45.5)	1225 (48.2)	1150 (45.3)
				1210 (47.6)	1235 (48.6)		
				1290 (50.8)	1315 (51.8)		
				1370 (53.9)	1395 (54.9)		
				1450 (57.1)	1475 (58.0)		
		Rear	mm (in.)	1275 (50.2)	1275 (50.2)	1275 (50.2)	1275 (50.2)
				1370 (53.9)	1365 (53.7)	1370 (53.9)	1365 (53.7)
				1475 (58.0)	1465 (57.7)	1475 (58.0)	1465 (57.7)
				1575 (62.0)	1545 (60.8)	1575 (62.0)	1545 (60.8)
				1680 (66.1)	1645 (64.8)	1680 (66.1)	1645 (64.8)
Weight			kg (lbs.)	1180 (2600)	1125 (2480)	1355 (2985)	1295 (2855)
PTO Shaft				Transmission case rear (rear PTO) and engine front (front PTO)			
Rear PTO				SAE 1-3/8			
	Revolutions			2 speeds (9 and 17.3 r/s at 42.3 engine r/s) (540 and 1040 rpm at 2540 engine rpm)			
Clutch				Dry dual plates			
Steering				Integral type power steering			
Transmission				Gear shift type, 8 forward and 2 reverse			
Min. turning radius			m (feet)	2.9 (9.5)	2.9 (9.5)	2.8 (9.2)	2.8 (9.2)
Brake				Wet disk type			
Differential				Bevel gear			

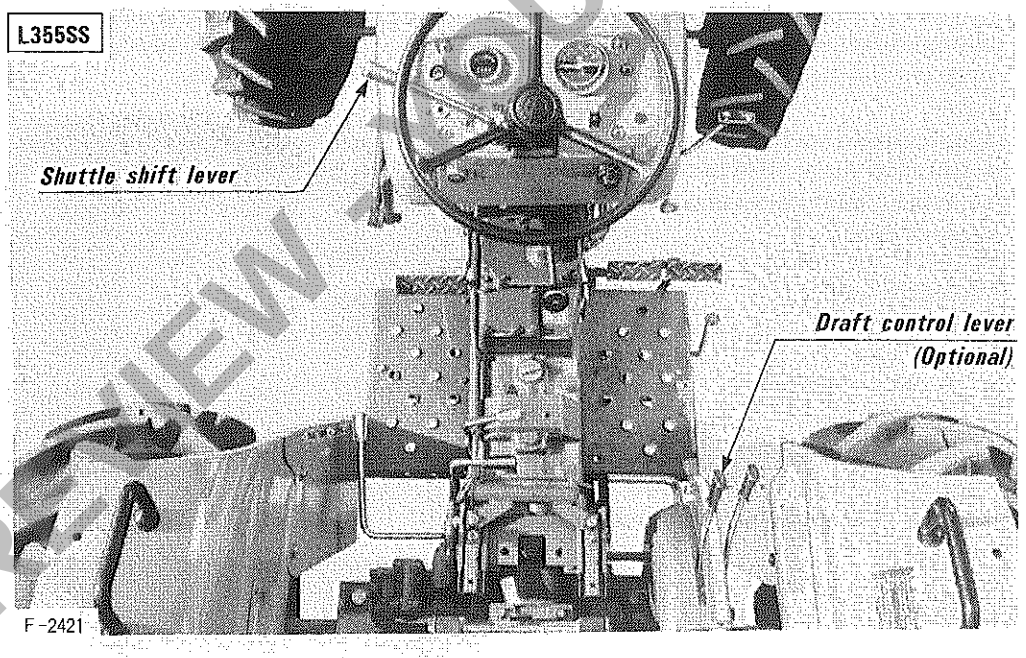
Note: * Manufacturer's estimate.

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4.2 CONTROLS





■ Throttle Lever

WARNING:

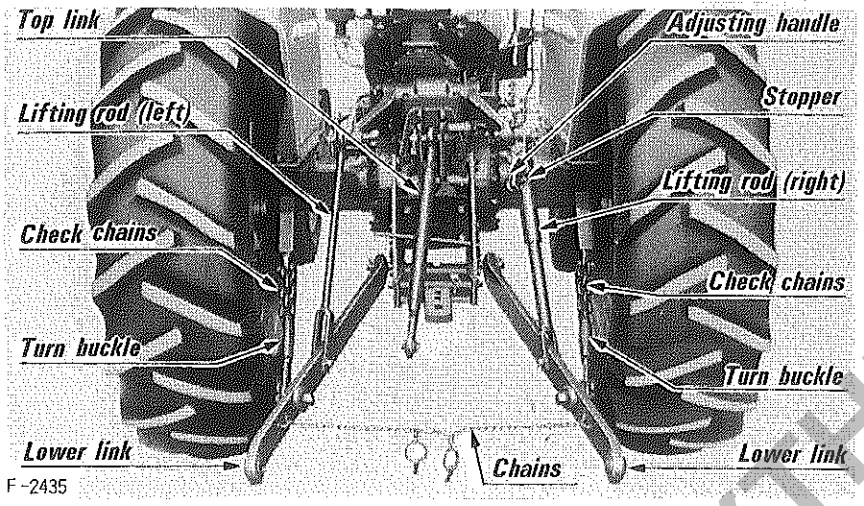
L345•L345DT types only.

- **Depending on the model year, the hand throttle of this product is operated into two directions.**
- **Check and study the control of Hand Throttle lever as the following:**
  - **(1) First of all, please check your tractor serial number to know the type of Hand Throttle lever. The tractor serial number is located on the transmission housing or the mid case on the R.H. side of the tractor.**
  - **(2) Make sure that your tractor is equipped with any type of Hand Throttle lever by moving a little forward/rearward before operation.**
  - **(3) Be particularly careful when backing your tractor. Slowing down will allow you to have much better control.**

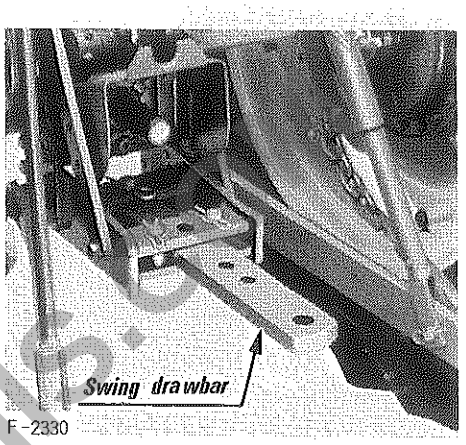
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5. THREE-POINT HITCH & DRAWBAR



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F-2330

CAUTION:

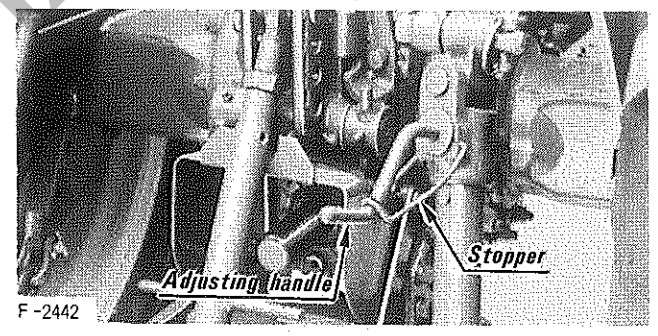
- **Never pull from the top link, the rear axle or any point above the drawbar. Doing so could cause the tractor to tip over rearward causing personal injury.**
  For pulling, attach to the drawbar (fixed or swinging type). Use the 3-point hitch only with equipment designed for 3-point hitch usage.

■ Adjustment of Top Link

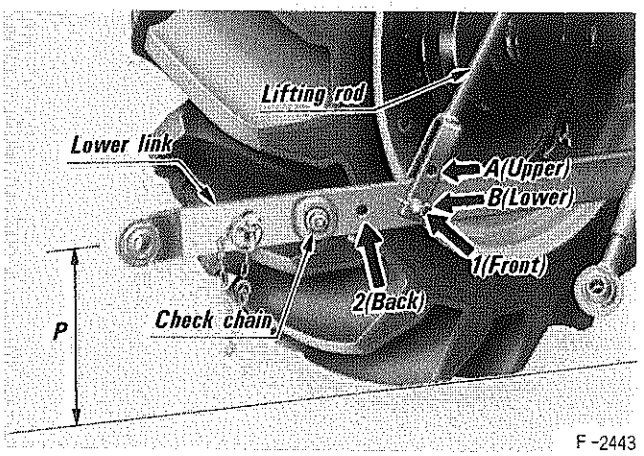
(1) Adjust the angle of the implement to the desired position by shortening or lengthening the Top Link.
(2) The fixed position of the top-hitch varies according to the type of implement being used.

■ Adjustment of Lifting Rod

(1) Level a 3-point mounted implement from side to side by turning the adjusting handle to shorten or lengthen the adjustable lifting rod.
(2) After the adjustment is completed, secure with the stopper.
(3) Correct positioning of the lifting rod to the lower link is shown below. Positioning varies according to the type of implement being used.



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Lower Link End Height (P)

Hole used	L305		L345		L355SS
	with 12.4 – 24 tire	with 13.6 – 24 tire	with 12.4/11–28 tire	with 13.6 – 28 tire	with 13.6 – 24 tire
1 & A	795 mm (31.3 in.)	820 mm (32.3 in.)	860 mm (33.9 in.)	885 mm (34.8 in.)	820 mm (32.3 in.)
1 & B	705 mm (27.8 in.)	730 mm (28.7 in.)	765 mm (30.1 in.)	790 mm (31.1 in.)	720 mm (28.3 in.)

IMPORTANT:

- **Never use lower link 2 (Back) hole.**

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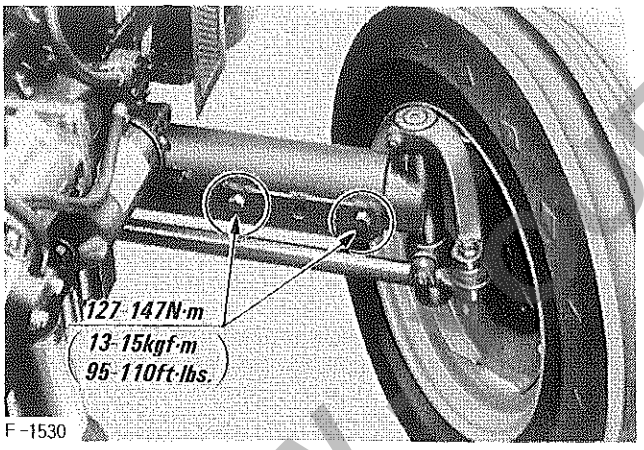
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6. WHEELS, TIRES AND TREAD

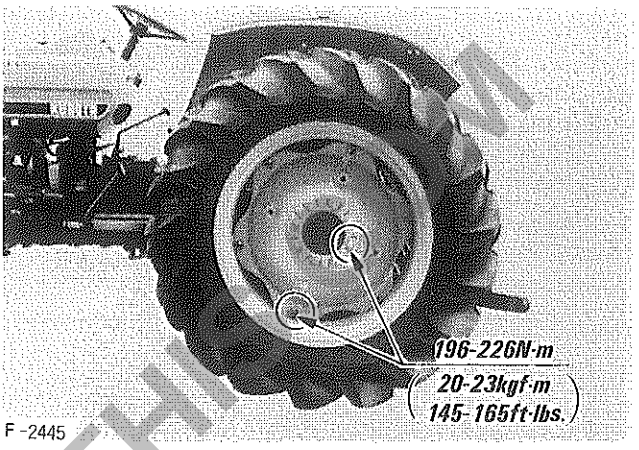
CAUTIONS:
Never operate tractor with a loose rim, wheel, or axle.
(1) Any time bolts are loosened, retighten to specified torque.
(2) Check all bolts frequently and keep them tight.

IMPORTANT:
Follow same checking procedure when tractor is first used.

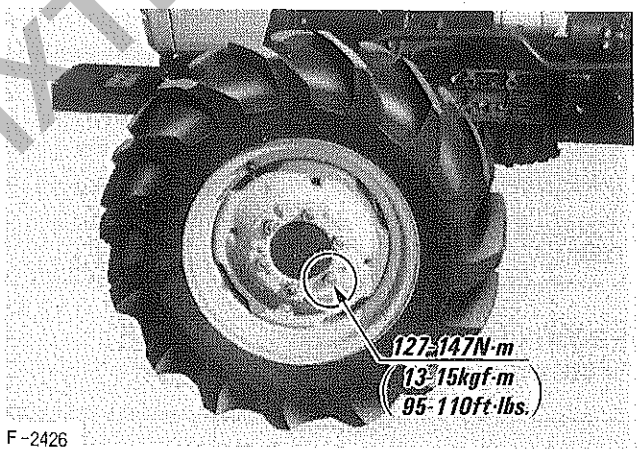
CAUTION:
- **A wide wheel tread decreases danger when working on slopes or hills, or when working with trailer, etc.**



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F-2426

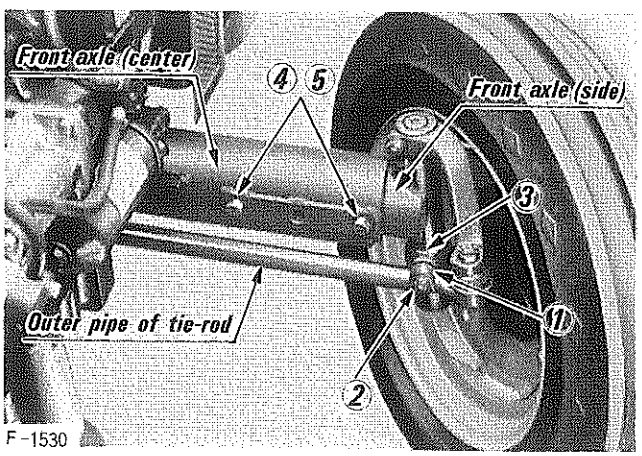
6.1 TREAD

CAUTION:
- **Support the tractor securely on stands before adjusting tread width.**

[FRONT] 2WD

The 2WD front axle is 5 stage adjustable axle.

(1) Loosen nut ② of clamp ① on the outer pipe of tie-rod, and remove bolt ③.
(2) Jack up front end of tractor. Loosen nut ④ and remove bolt ⑤, four bolts. Then it is possible to separate the front axle (left) (right), and (center).
(3) Insert bolt ⑤ into the hole of the desired tread width and tighten with nut ④. Insert bolt ③ into the inner pipe of the tie-rod and tighten.
(4) Select the bolt holes for the front axle (side), and (center) according to the illustration.



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7. OPERATING INSTRUCTIONS

Pre-Start Checks

Prior to starting the engine, make pre-start checks according to the Maintenance Check List on page 36 to 38.

CAUTION:
(1) Read "For Safe Operation" in the front of this manual.
(2) Read the warning and caution label located on the tractor.

7.1 OPERATING THE ENGINE

CAUTIONS:
(1) Do not start the engine in a closed room. Otherwise, the air will be polluted with exhaust gas which is very dangerous.
(2) Make it a rule to set main gear shift lever, Hi-Lo range shift lever, shuttle shift lever and PTO speed gear shift lever to the "neutral" positions before starting the engine.

■ Starting

(1) Sit in the operator's seat. If the tractor is equipped with a ROPS, fasten the seat belt.
(2) Set the parking brake.
(3) Place Main gear shift lever, Hi-Lo range shift lever, shuttle shift lever and PTO speed gear shift lever in the "neutral" positions.
(4) Place hydraulic control lever in lowest position.
(5) Increase the engine speed slightly with hand throttle. (approximately 1500 rpm position) (For operation of the hand throttle, refer to page 17)
(6) Insert the key into the main switch and turn it on.
(7) Make sure that the engine oil pressure lamp and battery charge lamp are on.
(8) Fully depress the clutch pedal and turn the starter switch left, until the glow plug lamp turns red. Though the glow plug lamp turns red in about 10 seconds, it takes at least 20 seconds until the preheating coil in the combustion chamber is fully heated. The lower the ambient temperature, the longer the preheating time. For the necessary preheating time, refer to the table below:

Temperature	Preheating Time
Over 0°C (32°F)	20 – 30 sec.
Below 0°C (32°F)	40 – 60 sec.

(9) Turn the starter switch to the start position and the starter will turn and the engine should start.
(10) Make sure that the engine oil pressure lamp has gone off. If the lamp is still on, immediately stop the engine and check the lubrication system.
(11) Make sure that the battery charge lamp has gone off. If the lamp is still on, immediately stop the engine and check the electric system.
(12) Perform warm-up operations by running the engine at the medium speed.

IMPORTANT:
(1) Do not turn the starter switch while the engine is running.
(2) When the temperature is below 0°C (32°F), place the Hi-Lo range shift lever in the neutral position and keep the engine at medium speed to warm up the lubricant of engine and transmission at least 10 minutes.
And after that depress the clutch pedal several times slowly.
If the tractor is operated before the lubricant of engine and transmission is warm enough, the tractor life will be shortened.
(3) Don't operate the tractor under full load condition until it is sufficiently warmed up.
(4) Don't use starting fluid.

■ Starting with Weak Battery or in Cold Weather

Perform the following procedure between the steps (6) and (10) on Starting:
(1) Pull out the decompression knob.
(2) Depress the clutch pedal all the way and turn the starter switch to the start position.
(3) After the flywheel starts to run at full pitch in 3 to 5 seconds, push the decompression knob back. If necessary, operate preheating before pulling the decompression knob.

IMPORTANT:
- When the ambient temperature is less than −15°C (5°F) and tractor will not be used for a long period, remove the battery from the tractor and store it somewhere warm until next operation.

■ Stopping

(1) Operate the engine stop lever (knob) and hold it until the engine stops. (For operation of the engine stop lever, refer to page 17)
(2) Turn the main switch off and remove the key.

IMPORTANT:
- Although engine can be stopped by drawing the decompression knob, this should never be done except in such an emergency case that the engine cannot be stopped by the engine stop lever (knob). Especially, if the decompression knob is drawn while the engine is running at high speed, there is the danger that the valve seat may be damaged or that the decompression device may malfunction. For this reason, be absolutely sure not to draw the decompression knob when the engine is running except in emergency cases.

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