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MANUAL PREVIEW

Deutz
Service Manual

JENSALES

F2L511 Engine

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DE-S-ENGF2L511

7B—20.2 Installation

Installation is the reverse of removal.

7B—20.3 Disassembly

- (1) Clamp the pulley of the cooling fan in a vice with protective aluminum jaws and unscrew the center bolt (Fig. 7B—139).



Fig. 7B—139 Removing Center Bolt



Fig. 7B—140 Removing Blower Fan

- (2) Remove the blower fan (Fig. 7B—140).
- (3) Remove the drive shaft from the fan housing with a soft metal drift punch.
- (4) Remove the ball bearing from the drive shaft using a bearing puller.
- (5) Remove the snap ring (Fig. 7B—141) from the ball bearing in the housing. Remove the ball bearing using a soft metal drift punch (Fig. 7B—142).



Fig. 7B—141 Removing Snap Ring

7B—20.4 Assembly

- (1) Fill the new bearing with high temperature bearing grease.
- (2) Press the small bearing into the fan housing with the closed side down.
- (3) Install the snap ring to hold the bearing in position.
- (4) Press the large ball bearing over the drive shaft with the closed side toward the V-belt pulley.
- (5) Press the fan shaft (with the bearing on) into the housing.
- (6) Clamp the cooling fan in a vice by the pulley.
- (7) Position the rotor wheel and tighten the bolt to correct torque as specified in Technical Data.



Fig. 7B—142 Removing Bearing

7B—21 CYLINDER HEAD AND VALVES

7B—21.1 Removal and Disassembly

- (1) Remove the blower and air housing.
- (2) Remove the manifold and injector lines.
- (3) Remove the valve covers and the rocker arm brackets (Fig. 7B—143).



Fig. 7B—143 Removing Rocker Arm Bracket

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DEUTZ 631

MANUAL PREVIEW

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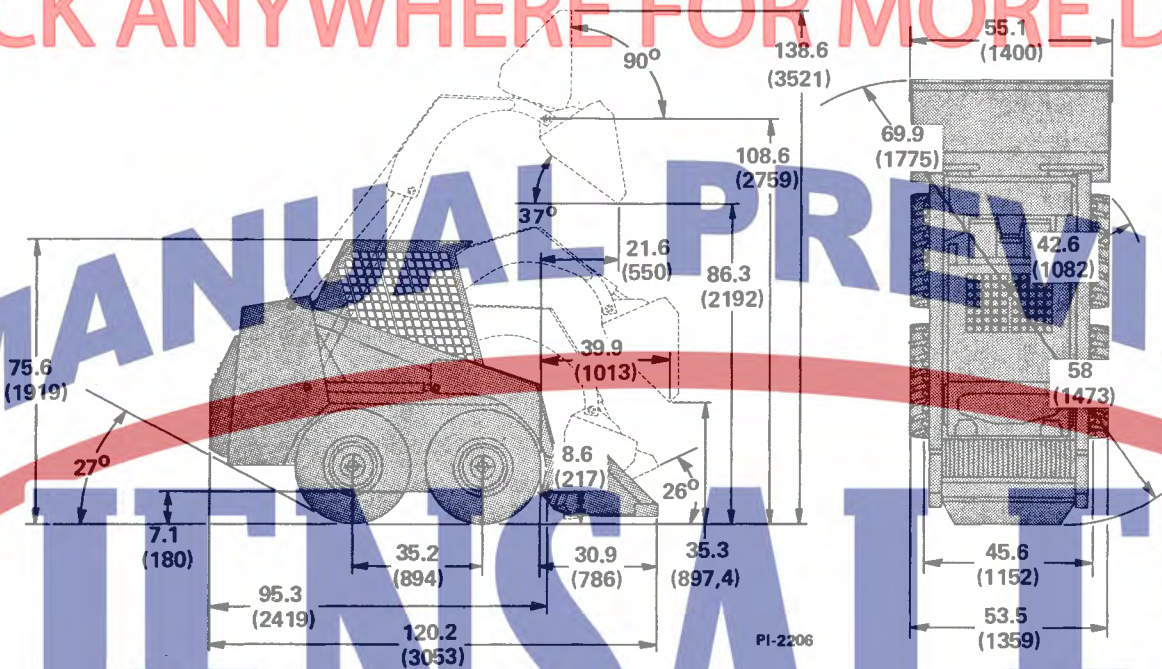
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LOADER SPECIFICATIONS

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Dimensions are given for loader equipped with dirt bucket and may vary with other bucket types. All dimensions are shown in inches. Respective metric dimensions are given in millimeters enclosed by parentheses.

Where applicable specifications conform to ICED & SAE standard and are subject to change without notice.

OPERATIONAL & PERFORMANCE

Operating Weight 3900 lbs. (1760 kg)
 Rated Operating Capacity . . . 1000 lbs. (454 kg)
 Lift Capacity to
 Maximum Height 1200 lbs. (540 kg)
 Tipping Load (SAE) 2100 lbs. (950 kg)
 Hydraulic Function Time
 Move Lift Arms to
 Maximum Height 3.8 seconds
 Lower Lift Arms from
 Maximum Height 3.0 seconds
 Move Bucket to
 Dumping Position 2.8 seconds
 Move Bucket to
 Retracted Position 2.4 seconds
 Travel Speed . . . 0 to 6.6 MPH (0 to 10.6 km/hr)
 Controls:
 Vehicle . . . Direction and speed controlled by
 two hand operated levers.
 Loader Functions Lift and tilt
 functions controlled by separate foot pedals.
 Auxiliary function controlled by
 right steering lever.
 Engine Hand lever throttle and
 key type starter switch.
 Main Drive Hydrostatic
 Brakes Mechanical disc, foot or
 hand operated pedal

Fuel #2 Diesel
 Horsepower 28.5 HP (21 kw)
 Maximum Governed RPM (Full Load) . . 2500 RPM
 Torque 64.9 ft.-lbs. (88 Nm) @ 2000 RPM
 Number of Cylinders 2
 Bore/Stroke 3.973/4.14 (100/105.16)
 Displacement 101 in.³ (1655 cm³)
 Cooling System Air
 Lubrication Pressure—gear pump
 Crankcase Ventilation Open breathing
 Air Cleaner Dry replaceable paper element

LOADER HYDRAULICS

Pump Engine driven vane pump
 Pump Capacity 9.5 gal/min (36 liters/min)
 @ 2500 RPM
 System Relief Setting 1750 psi (12.1 mPa)
 Hydraulic Fluid Filter 40 micron bronze
 filter in port block from
 suction, replaceable element,
 10 micron in return line
 from cooler.
 Cylinder Doubleacting
 Lift Cyl. (2) 2.00 (50.80)
 Tilt Cyl. (1) 3.25 (82.55)
 Bore Dia. 1.25 (31.75)
 Rod Dia. 1.50 (38.10)
 Stroke 25.00 (635.0) 12.20 (312.42)

Control Valves 3 spool, open center type
 w/float-detent on lift, detent on auxiliary
 Fluid Lines SAE standard full flow tubes,
 hoses and fittings.

ELECTRICAL

Alternator Belt driven, 42 amp.
 Battery 12 volt, 410 cold cranking amps.
 @ 0°F (-17.8°C)
 100 min. reserve capacity
 Starter 12 volt

DRIVE SYSTEM

Transmission . . . Hydrostatic, infinitely variable,
 fully reversing (2).
 Final Drive #80 roller chain in sealed
 chaincase with oil lubrication;
 w/gear and chain reduction.

CAPACITIES

Fuel 10 gal. (38 liters)
 Engine Lubricant Includes Filter 1 gal.
 (3.8 liters)
 Hydraulic System 6 gal. (23 liters)
 (Includes 3.5 gallons [13.26 liters]
 reservoir)
 Chaincase Reservoir 5 gal. (19 liters)

TIRES

Standard 7:00 x 15.6 ply rating, nylon
 w/Bar Lug Tread

ENGINE (Engine Manufacturer's Rating)

Make Deutz
 Model F2L511

MACHINE WEIGHT (Without Attachments)

Shipping 4240 lbs. (1914 kg)

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5-3 BOB-TACH

5-3.1 Checking Wedges (Fig. 5-4)

- (1) Install an attachment on Bobcat.
- (2) Engage locking levers.
- (3) Make replacement if wedges are not at least 1/4 inch (6,35 mm) through notches in attachment.

NOTE: Adjustment cannot be made to Bob-Tach wedges.

5-3.2 Bob-Tach Removal (Fig. 5-5)

- (1) Lower lift arms and lower Bob-Tach to ground.
- (2) Stop engine and activate hydraulic controls to release hydraulic pressure from system.
- (3) Remove locking bolt and remove pin from rod end of tilt cylinder.
- (4) Remove bolts and washers from Bob-Tach pivot pins.
- (5) Use hammer and punch to push pivot pins into Bob-Tach frame.
- (6) Remove Bob-Tach.

5-3.3 Bob-Tach Installation

- (1) Install Bob-Tach between lift arms.
- (2) Install pivot pins in Bob-Tach and use a hammer to push pins into lift arms.
- (3) Install bolts and washers in ends of pivot pins.
- (4) Tighten bolts to 125 - 140 ft.-lbs. (169,5 - 189,84 Nm) torque.
- (5) Install pin in Bob-Tach and in rod end of tilt cylinder.
- (6) Install locking bolt in pin and tighten to 35 - 45 ft.-lbs. (48 - 61 Nm) torque.

5-3.4 Bob-Tach Pins

Check bolts (Fig. 5-6, Item 1) at the 30 inspection and every 100 hours. Tighten bolts to 125 - 140 ft.-lbs. (169,5 - 189,84 Nm) torque.

5-3.5 Bob-Tach Over-Center Stop

Install mechanical stops on the Bob-Tach and lift arms when the Bob-Tach goes over-center when moved fully forward.

Install the kit (P/N 6560898) to prevent damage to tilt cylinder parts (Fig. 5-7). Installation Instructions are included in the kit.



Fig. 5-4 Wedge Location



Fig. 5-5 Removing Bob-Tach



Fig. 5-6 Bob-Tach Pins



Fig. 5-7 Bob-Tach Over-Center Stops

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