

## W 320-D – MODEL: 22337CP

<b><u>ENGINE:</u></b>	
MAKE	Kubota diesel
POWER OUTPUT TORQUE (per SAE J1349)	14.9 kW (20.0 hp) @ 3600 rpm 44.0 Nm (32.5 ft-lbs) @ 2600 rpm
MODEL	Super-Mini Series D722
SPECIFICATION NUMBER	D722-E3B-TORO-1
TYPE	4-cycle, diesel
NUMBER of CYLINDERS	3 / in-line
FUEL	Diesel fuel No. 2-D
COOLING SYSTEM	Liquid through water pump
INTAKE SYSTEM	Naturally aspirated, with high capacity dry type remote air cleaner assembly.
HIGH IDLE	3700 +/- 75rpm (installed)
LOW IDLE	1300 +/- 100 rpm
DISPLACEMENT	719.0 cc (43.9 cubic inch)
BORE x STROKE	67.0 x 68.0 mm (2.64 x 2.66 inches)
COMPRESSION RATIO	23.5:1
LUBRICATION	Pressurised lubrication by pump
OIL CAPACITY (WITH FILTER)	3.2 litres (0.70 Imperial gallons)
OIL FILTER	Spin-on type
OIL TYPE	Detergent diesel engine oil (API Service CH-4 or higher). Oil viscosity: SAE 10, 10W-30/40 when operating between 0 degrees C (0 degrees F) and lower temperatures. SAE 20, 10W-30/40 when operating between 0 degrees C (0 degrees F) and 25 degrees C (77 degrees F). SAE 30, 10W-30/40 when operating between 25 degrees C (77 degrees F) and higher.
STARTING SYSTEM	12 volt, with engine glow plugs
ROTATION DIRECTION	Anti-clockwise
CHARGING COIL	12 Volt, 40 Amp
REGULATORY	Exhaust emission comply with EPA Tier 4 with CARB
DRY WEIGHT	70.0 kg (154.3 lbs)

<b><u>FUEL SYSTEM:</u></b>	
FUEL TANK	Single rotationally moulded high-density polyethylene fuel tank with a vented cap. A fuel shut-off valve in the fuel line near the base of the tank.
FUEL CAPACITY	15.1 litres (3.3 Imperial gallons) capacity.
FUEL TYPE	Diesel fuel No. 2-D.
FUEL FILTER	3 micron filtration rating with integral water separator.
DELIVERY	Engine mounted mechanical pump.

<b><u>MUFFLER:</u></b>	Un-insulated steel muffler mounted to the engine.
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<b><u>ELECTRICAL SYSTEM:</u></b>	
BATTERY	Battery not supplied from factory. Recommended battery to fit is a maintenance free, 12 volt, BCI group size 51, with 435 CCA minimum at -18 degrees C (0 degrees F) and, 70 minutes reserve capacity per SAE J537L.
ALTERNATOR	Standard 14.0 amp alternator with voltage regulator.
GAUGES	The control panel contains a hour meter (with service reminder indicators).
FUSES	The machine has a fuse block located beneath the control panel with 10, 25 and 30 amp fuses.
INTERLOCKS	The auxiliary power control lever and traction control levers must be in neutral (centre) position for the engine to start.

<b><u>HYDRAULIC SYSTEM:</u></b>		
PRESSURE	224 bar (3250 psi) system relief pressure.	
FLOW	Low-Flow Circuit	15.5 lpm (3.4 gpm) @ 3600 rpm
	High-Flow Circuit	40.9 lpm (9.0 gpm) @ 3600 rpm
HYDRAULIC PUMP	Tandem gear pump connected to the engine crankshaft with flexible rubber couplers.	
DISPLACEMENTS	11.2 and 4.3 cc/rev (0.69 and 0.26 cubic inch/rev).	
HYDRAULIC OIL RESERVOIR	Integral with the frame with oil-fill tube, dipstick, vent tube and removable access cover.	
	Capacity	57.0 litres (12.5 Imperial gallons)
HYDRAULIC OIL FILTER	Replaceable spin-on type (on the oil return line). The filter has a 10 micron nominal filtration rating.	
HYDRAULIC FLUID	SAE 10 W-30 or 15 W-40 diesel engine oil (API Service CH-4 or higher).	
HYDRAULIC CYLINDERS	Two loader arm cylinders and one bucket curl cylinder. All cylinders are double-acting, single rod with 76 mm (3.0 inch) diameter bore, 203 mm (8.0 inch) stroke and 31.8 mm (1.25 inch) diameter rod.	
AUXILIARY CONNECTORS	Flush-face type hydraulic quick couplers prevent oil leakage when connecting attachments.	

<b><u>TRACTION DRIVE:</u></b>	All four wheels are powered. Each wheel is individually driven by a hydraulic roller vane motor.	
<b>WHEELS</b>	10" x 6.00", five bolt, centre drop, heavy gauge steel.	
<b>TYRES</b>	Standard:	18" x 8.50" – 10, 8 ply pneumatic tyre with 'Skid Steer Loader' style thread.
	Optional:	18" x 9.50" – 8, 8 ply pneumatic tyre/wheel assembly with Chevron thread pattern (Ag style).
	Optional:	18" X 8.50" – 8, 8 ply 'Turf Thread' pneumatic tyre/wheel assembly.
<b>RECOMMENDED TYRE PRESSURE</b>	103.0 – 138.0 kPa (15 – 20 psi).	
<b>TRACTION SPEED</b>	0-4.8 km/h (0.3.0 mph) forward or reverse (infinitely variable).	

<b><u>CONTROLS:</u></b>	
<b>KEY SWITCH</b>	The key switch is control panel mounted with STOP-RUN-START positions.
<b>THROTTLE</b>	The throttle lever controls the engine speed and is mounted on the control panel.
<b>TRACTION/STEERING</b>	Individual control levers for right and left wheels are located on the control panel, allowing forward, reverse, turning and zero radius turning at variable speeds. Push levers forward for forward motion and pull back for reverse.
<b>LOADER ARMS</b>	Lever on the control panel for raising and lowering of the loader arms. Pull lever back to raise and push forward to lower.
<b>ATTACHMENT TILT</b>	Lever on the control panel controls the upward and downward tilt of the attachment tilt plate. Push the lever forward to tilt downward, pull back to tilt the plate upward.
<b>HYDRAULIC PUMP FLOW CONTROL</b>	A high flow/low flow pump selector lever on the front of the control panel allows switching of the high and low flow pump circuits between traction/loader arm circuit and auxiliary circuit.
<b>AUXILIARY POWER CONTROL</b>	As standard, an hydraulic valve lever in the front of the right handgrip above the control panel activates hydraulically powered attachments. Pull the lever rearward (non-detented) to operate the attachment in the forward direction, and push the lever forward (detented) to operate the attachment in the reverse direction.  When non-electric, hydraulic operated 4 in 1 bucket option fitted, detent components maybe removed.

<b><u>FRAME:</u></b>	The frame is an all welded steel construction with integral hydraulic oil reservoir, 8 gauge (4.2 mm thick) side plates, 6.4 mm (0.25 inch) thick high-strength steel wheel motor mounts, welded 25.4 mm (1 inch) thick inner and 12.7 mm (0.5 inch) thick outer loader arm pivot supports, 6.4 mm (0.25 inch) thick engine base and 8 gauge (4.2 mm) thick oil tank.
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<b><u>LOADER ARM ASSEMBLY:</u></b>	The loader arm assembly has 15.9 mm (0.625 inch thick arms with 76.2 mm (3.0 inch) square heavy-wall cross support tube, 25.4 mm (1.0 inch) diameter pivot bushings with grease points. The cast iron attachment mount plate is installed with spring loaded 15.9 mm (0.625 inch) diameter high strength steel pins for quickly installing attachments without tools.
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<b><u>ERGONOMIC</u></b>	Thigh support with vertical adjustment without tools.
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<b><u>FEATURES:</u></b>	Non-skid platform. Foam rubber covered hand grips. Rubber valve control knobs.
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<b><u>LOAD CAPACITY:</u></b>	Rated Operating Load at 50% of Tipping Capacity (per SAE J818):	237.7 kg (524.0 lbs) – with operator and bucket.
	Tipping Capacity with 91.0 kg (200.0 lb) operator (per SAE J732):	475.4 kg (1,048.0 lbs) – with 91.0 kg (146.0 lbs) bucket.

<b><u>WEIGHT:</u></b>	781.1 kg (1,722 lbs) without bucket. 847.3 kg (1,868 lbs) with standard bucket
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WARRANTY Two year limited