PARTS AND SERVICE MANUAL

KUBOTA

MODEL L1720 LOADER
FOR TRACTOR MODELS: L305, L305DT L345, L345DT, L355SS



EFFECTIVE BEGINNING WITH SERIAL NO. 50000

THIS SAFETY ALERT SYMBOL IDENTIFIES IMPORTANT SAFETY MESSAGES IN THIS MANUAL.

FORM 70000-70024 REV. B 5-1-82

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SECTION 2

SAFETY

SAFETY RULES

Your safety and the safety of those around you is dependent upon the care and good judgement you exercise in the use of this equipment.

READ THIS MANUAL THOROUGHLY and make sure you understand its contents. All equipment has limitations.

The safety information presented in this manual is not intended to replace safety codes, insurance requirements, federal, state and local laws, rules and regulations. Know the regulations and laws that apply to your area and be sure that your loader is properly equipped to meet such laws and regulations.

We at Kubota are continuing to contribute to your safety by building loaders with an extra measure of protection, and passing on these suggestions for safer operation.

IMPORTANT: Always replace any safety decals whenever the old decals are destroyed, lost, painted over or illegible. Replace all safety decals when repainting.

OPERATION

WARNING Before starting tractor engine study Operator's Manual safety messages. Read all safety signs. Clear the area of other persons. Learn and practice safe use of controls before operating. It is your responsibility to understand and follow manufacturer's instructions on machine operation, service, and to observe pertinent laws and regulations. Operator Manuals may be obtained from your equipment dealer.

CAUTION Improper use of a loader can cause serious injury or death.

CAUTION Operate the loader from the tractor seat only.

CAUTION Move wheels to widest recommended settings to increase stability.

CAUTION Move, turn and operate tractor at slow ground speeds, especially on irregular ground to avoid tipping.

CAUTION Add recommended rear tire liquid weight, rear wheel weight or rear ballast for increased stability and traction.

CAUTION Do not stand, walk or work under a raised loader or attachment unless it is securely blocked or held in position. Accidental movement of control lever or leak in hydraulic system could cause mainframe to drop, causing severe injury.

CAUTION Do not lift or carry personnel on a loader or attachment; a slip or fall could cause bodily injury.

CAUTION For better stability, use a tractor with wide front axle rather than one with narrow front wheels.

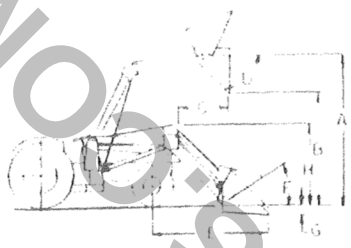
CAUTION Visually check for hydraulic leaks and broken, missing or malfunctioning parts and make necessary repairs.

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SECTION 1

GENERAL SPECIFICATIONS
MODEL L1720 LOADER

These specifications apply to:



	Kubota L345DT Tractor and loader equipped with external (open center-2000 PSI) hydraulic pump system; front tire size 9.5-16; rear tire size 13.6-28; and 66" material bucket less tines. Specifications will vary for tractors and loader equipped differently.	Kubota L305DT Tractor and loader equipped with external (open center-1800 PSI) hydraulic pump system; front tire size 8-16; rear tire size 13.6-24; and 66" material bucket less tines. Specifications will vary for tractors and loader equipped differently.	Kubota L355SS Tractor and loader equipped with external (open center-2000 PSI) hydraulic pump system; front tire size 8.3-16; rear tire size 13.6-24; and 66" material bucket less tines. Specifications will vary for tractors and loader equipped differently.
(A) MAXIMUM LIFT HEIGHT	113.5" (2883mm)	111.5" (2832mm)	112" (2845mm)
(B) CLEARNACE WITH ATTACHMENT DUMPED	89.75" (2280mm)	89.5" (2273mm)	91" (2320mm)
(C) REACH AT MAXIMUM HEIGHT	39" (991mm)	36" (914mm)	38"(965mm)
(D) MAXIMUM DUMP ANGLE	45°	45°	42°
(E) REACH WITH ATTACHMENT ON GROUND	72.25" (1835mm)	76.8" (1951mm)	73" (1845mm)
(F) ATTACHMENT ROLLBACK ANGLE	17°	20°	21°
(G) DIGGING DEPTH	7.5" (191mm)	8" (203mm)	5" (120mm)
(H) OVERALL HEIGHT TO CARRY POSITION	60.25" (1530mm)	57.3" (1455mm)	63.5" (1615mm)
BREAK-AWAY CAPACITY	2550 lbs. (1150Kg)	2220 lbs. (1010Kg)	2360 lbs. (1070Kg)
LIFT CAPACITY AT FULL HEIGHT	1495 lbs. (680Kg)	1300 lbs. (590Kg)	1470 lbs. (669Kg)
RAISING TIME	4.3 sec.*	4.5 sec.*	4.8 sec.*
LOWERING TIME	3.3 sec.*	3.4 sec.*	2.1 sec.*
ATTACHMENT DUMPING TIME	3.0 sec.*	4.3 sec.*	3.7 sec.*
ATTACHMENT ROLL BACK TIME	2.5 sec.*	2.3 sec.*	2.5 sec.*
APPROX. SHIPPING WEIGHT (WITH ATTACHMENT)	1433 lbs. (651Kg)	1433 lbs. (615Kg)	1433 lbs. (651Kg)

*Using External Hydraulic System @ 2800 RPM. Tractor system will be slower.

CYLINDERS:
Number - Type Lift Cylinders . . . . . 2 - 2" dia. Bore with 1.50" dia. Rod, 27.25" Stroke
Number - Type Bucket Cylinders . . . . . 2 - 2" dia. Bore with 1.25" dia. Rod, 22.25" Stroke
Port Thread Spec's . . . . . ¾"-16 SAE O-Ring Boss

VALVE:
External hydraulic control valve made by Cross.
Rated Capacity . . . . . Up to 30 GPM
Rated Pressure . . . . . Up to 2500 PSI
Port Thread Spec's . . . . . ¾"-16 SAE O-Ring Boss

RELIEF VALVE SETTING
L305 & L305DT External Hydraulic System . . . . . 1800 PSI (12411 KPa)
L345, L345DT, & L355SS External Hydraulic System . . . . . 2000 PSI (13790 KPa)

PUMP:
External hydraulic pump made by Webster (077YC)
Direction of Rotation . . . . . Left Hand
Rated Flow: (L305 Tractor) 9.3 GPM (35 liters/m) at 1800 PSI (12441 KPa) @ 2800 Engine RPM
(L345 Tractor) 9.0 GPM (34 liters/m) at 2000 PSI (13790 KPa) @ 2800 Engine RPM
(L355SS Tractor) 9.0 GPM (34 liters/m) at 2000 PSI (13790 KPa) @ 2800 Engine RPM
Suction (in) Port Thread Spec's . . . . . 1-1/16"-12 SAE O-Ring Boss
Pressure (out) Port Thread Spec's . . . . . 7/8"-14 SAE O-Ring Boss
Input Shaft . . . . . ¾" dia. with .19 x 1.12 LG AM STD SQ KEY

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SECTION 3

TOOLS AND TEST EQUIPMENT

SUGGESTED TOOL LIST

The following tool list is recommended to perform routine loader maintenance.

1. Common hand tools including metric sockets and wrenches
2. Air compressor
3. Vise
4. Torque wrench
5. Portable hoist or overhead crane
6. Spanner wrench
7. Oil pressure gauges (low pressure 0 to 100 PSI and high pressure 0 to 4000 PSI)
8. Hydraulic flow meter (series flow through)
9. Steam cleaner or high pressure washer

GENERAL TORQUE SPECIFICATION TABLE

GENERAL TORQUE SPECIFICATION TABLE (Revised 2-74)

USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

NOTE: These values apply to fasteners as received from supplier, dry, or when lubricated with normal engine oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads.

SAE Grade No		2				5				8 *			
Bolt head identification marks as per grade NOTE: Manufacturing Marks Will Vary													
Bolt Size		Torque				Torque				Torque			
		Foot Pounds		Newton-Meters		Foot Pounds		Newton-Meters		Foot Pounds		Newton-Meters	
Inches	Millimeters	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
1/4	6.35	5	6	6.8	8.13	9	11	12.2	14.9	12	15	16.3	20.3
5/16	7.94	10	12	13.6	16.3	17	20.5	23.1	27.8	24	29	32.5	39.3
3/8	9.53	20	23	27.1	31.2	35	42	47.5	57.0	45	54	61.0	73.2
7/16	11.11	30	35	40.7	47.4	54	64	73.2	86.8	70	84	94.9	113.9
1/2	12.70	45	52	61.0	70.5	80	96	108.5	130.2	110	132	149.2	179.0
9/16	14.29	65	75	88.1	101.6	110	132	149.2	179.0	160	192	217.0	260.4
5/8	15.88	95	105	128.7	142.3	150	180	203.4	244.1	220	264	298.3	358.0
3/4	19.05	160	185	203.3	250.7	270	324	366.1	439.3	380	456	515.3	618.3
7/8	22.23	160	200	216.8	271.0	400	480	542.4	650.9	600	720	813.6	976.3
1	25.40	250	300	338.8	406.5	580	696	786.5	943.8	900	1080	1220.4	1464.5
1 1/8	25.58					800	880	1084.8	1193.3	1280	1440	1735.7	1952.6
1 1/4	31.75					1120	1240	1518.7	1681.4	1820	2000	2467.9	2712.0
1 3/8	34.93					1460	1680	1979.8	2278.1	2380	2720	3227.3	3688.3
1 1/2	38.10					1940	2200	2630.6	2983.2	3160	3560	4285.0	4827.4

* Thick nuts must be used with Grade 8 bolts

NOTE: When hardware is plated, reduce torque values by 25%.

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TROUBLE SHOOTING

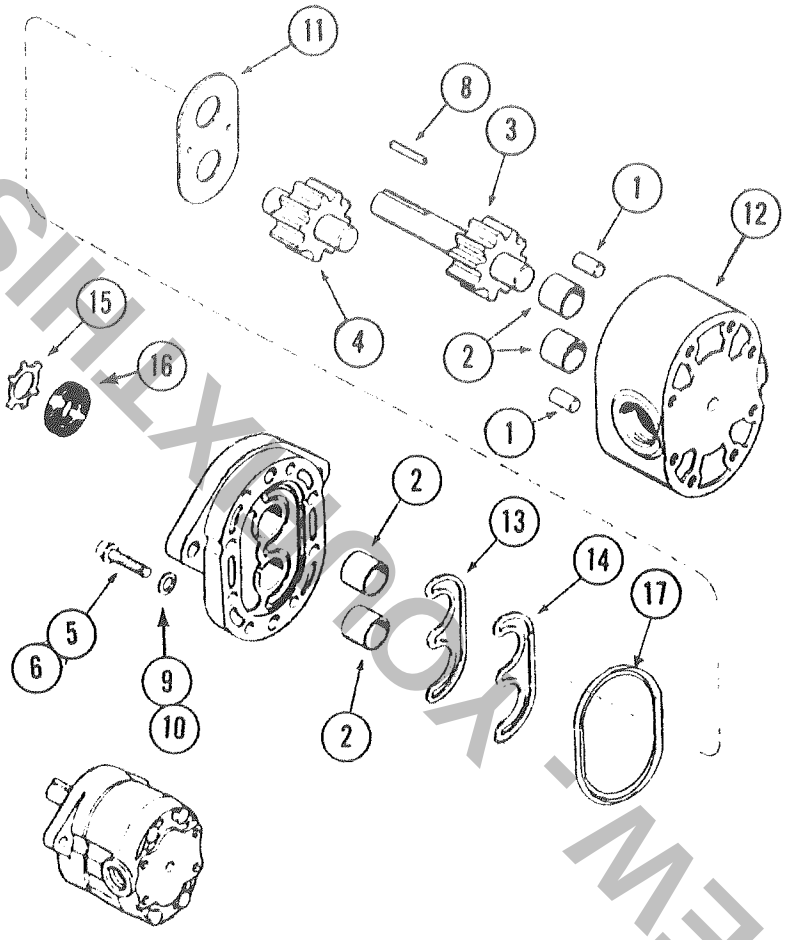
SYMPTOM	POSSIBLE CAUSE	REMEDY
Loader fails to raise	Obstructed or kinked hose	Repair as necessary
	Pump not operating	Check flow. Repair or replace as necessary.
	Main relief valve malfunction	Check relief valve. Replace if not up to specification.
	Control valve worn and/or damaged, or contaminated.	Repair or replace as necessary.
Slow or erratic lift	Engine RPM too low	Increase engine RPM
	Dirty filter	Clean or replace element.
	Low oil level	Maintain proper oil level in reservoir.
	Air in system	Check for loose suction line connections. Tighten fittings and/or replace "O" Ring seals on fitting as necessary.
	Wrong type of oil in system	Drain system and refill with recommended type oil.
	Main relief valve malfunction	Check relief valve. Replace if not up to specification.
	Pump worn or damaged	Check flow. Repair or replace as necessary.
	Misaligned or binding control linkage	Repair as necessary.
	Control valve worn and/or damaged, or contaminated	Repair or replace as necessary.

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EXTERNAL HYDRAULIC PUMP

DISASSEMBLY



1. Clean pump exterior thoroughly with cleaning solvent.
2. Remove key (8) from drive gear shaft (3).
3. Scribe a line across the two housing sections of the pump to act as a guide to properly position sections during reassembly.
4. Remove screws (5,6) and washers (9,10) which hold the two housing sections together. Caution must be used when using a vise to avoid distorting any parts.

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MAINFRAME / SUBFRAMES / MOUNTING BRACKETS

REF. NO.	PART NO.	QTY.	DESCRIPTION
1	70050-01000	1	Mainframe Assembly
2	70050-01019	1	Subframe, L.H. Assembly
3	70050-01020	1	Subframe, R.H. Assembly
4	70050-01021	1	Bumper Assembly
5	70050-01050	1	Bracket, Rear Assembly
6	70050-01047	1	Crossbrace Assembly L.H.
7	70050-01051	1	Crossbrace Assembly R.H.
8	01173-51250	6	Bolt, 12mm x 1.25Pitch x 50mm
9	70050-01003	6	Pin - Also used to attach bucket
10	02174-50120	14	Nut, 12mm x 1.25Pitch
11	70050-01001	2	Pin
12	O/L	6	Bolt, Hex 5/8"-11NC x 5-½" (Grade 5)
13	70050-01049	1	Bracket, Front Assembly
14	70050-01022	2	Pin, Clevis
15	70050-01023	2	Hairpin, Cotter
16	O/L	4	Bolt, Hex 5/8"-11NC x 1-½" (Grade 5)
17	O/L	4	Bolt, Hex 5/8"-11NC x 2" (Grade 5)
18	70050-01142	1	Pin
19	70050-01004	12	Pin, Clevis
20	O/L	12	Pin, Cotter 1/8" x 1"
21	O/L	14	Lockwasher, 5/8"
22	O/L	14	Nut, Hex 5/8"-11NC
23	O/L	4	Flatwasher, 5/8"
24	O/L	8	Flatwasher, ½"
25	O/L	12	Lockwasher, ½"
26	01173-51260	2	Bolt, 12mm x 1.25Pitch x 60mm
27	01173-51235	4	Bolt, 12mm x 1.25Pitch x 35mm
28	01173-51230	4	Bolt, 12mm x 1.25Pitch x 30mm
29	70050-01002	3	Pin
30	70050-01046	3	Kubota Decal
31	70050-01045	1	Decal, Caution
32	70050-01044	1	Decal, Warning
	After Loader S/N 51604		
33	70050-00814	1	Bracket, Front Assembly
34*	70050-00815	1	Pump Mount Assembly
35	70050-00816	6	Stud, 12mm x 60.8mm
35*	70050-00816	2	Stud, 12mm x 60.8mm
36*	70050-00817	4	Stud, 12mm x 79.5mm
37*	O/L	2	Bolt, Hex 3/8"-16NC x 1-¼" (Grade 5)
38*	O/L	2	Lockwasher, 3/8"
39*	O/L	2	Nut, Hex 5/8"-16NC

*External Hydraulic Kit

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